

IN THE CIRCUIT COURT OF DODDRIDGE COUNTY, WEST VIRGINIA

ANTERO RESOURCES CORPORATION,

Petitioner,

DODDRIDGE COUNTY
CIRCUIT COURT

v.

MAR 17 2017

Civil Action No. 17-AA-3
The Honorable Timothy L. Sweeney

MICHELE D. BRITTON
CIRCUIT CLERK

THE HONORABLE DALE STEAGER,
West Virginia State Tax Commissioner,

THE HONORABLE DAVID SPONAUGLE,
Assessor of Doddridge County, and

THE COUNTY COMMISSION OF DODDRIDGE COUNTY,
Sitting as a Board of Equalization and Review,

Respondents.

COMPLAINT OF PETITIONER ANTERO RESOURCES CORPORATION

I. INTRODUCTION

Antero Resources Corporation ("Antero") is a producer of natural gas throughout the state of West Virginia, with 199 Marcellus wells located in Doddridge County.

Those wells are appraised by the West Virginia Department of Revenue, State Tax Department, Property Tax Division (the "Tax Department" or "State") based on a mass appraisal system, state-wide. Certain variables are used by the State to value producing oil and natural gas wells, including, notably for this Brief, operating expenses. Specifically, the Tax Department periodically circulates a survey by which it solicits data from oil and natural gas producing taxpayers regarding operating expenses for their wells, and based on that, the Tax Department determines the operating expense variables used in its mass appraisal system. The amount of operating expenses applied to a well using the mass appraisal system is based on a percentage of

the well's gross receipts not to exceed a maximum amount, and the percentage and maximum vary by the type of well (typical or conventional, Marcellus, etc.). The operating expense calculations are included in a natural resources "valuation variables" document that the Tax Department releases annually.

In addition to the valuation variables document, the Tax Department releases an annual administrative notice that lists the percentages and maximum amounts for operating expense calculations. In prior years, the Tax Department invited taxpayers to submit actual operating expenses that exceed the percentages and maximum amounts listed in the valuation variables document. The 2016 and 2017 administrative notices, unlike administrative notices from 2000 through 2015, however, did not include language that invites taxpayers to submit actual expenses, despite no changes to the West Virginia Code or the Tax Department's Legislative Rule that governs the valuation of producing natural gas wells.

In this matter, Antero evaluated its actual operating expenses for calendar year 2015, and determined that for Marcellus wells in the county, the amount of operating expenses that it was incurring significantly exceeded the percentages and maximum amounts set by the State. For property tax purposes, the operating expense data from calendar year 2015 is used to value the wells for tax year 2017.

When the Tax Department valued Antero's gas well values for tax year 2017, it failed to adhere to its own regulations that direct how it is to consider actual operating expenses. Antero, like many mineral producers, generally reports its operating expenses to the Tax Department on a state-wide basis. For 2015, Antero's average operating expense per well was 36% of revenue, or \$817,000, which includes all operating expenses, gathering and compression expenses,

processing expenses, and transportation expenses, necessary to get the gas to the point of sale. Antero reports its gross receipts based on the point of sale, and the allowed operating expenses should reflect the expenses incurred to get the gas to the point of sale. The goal of the State's calculation is to determine the value of the reserves. Under the current system, if two producers have the same production/reserves but one sells at the wellhead and the other sells to a market further away, the reserves of the producer who sells to a further market are valued substantially higher, which undermines the goal of the State's calculation.

For tax year 2017, the Tax Department calculates operating expenses at the lesser of 20% of gross receipts or \$175,000 for Marcellus wells (the "maximum amount" of \$175,000 of operating expenses per Marcellus well will be referred to alternatively throughout this complaint as the "maximum amount" or "cap"). This cap unduly restricts the amount of operating expenses that should be allowed for each well, and the imposition of a "cap" is not supported by the Tax Department's legislative rule regarding the valuation of producing oil and natural gas properties. The legislative rule, instead, requires that the Tax Department use "average annual industry operating expenses per well" in valuing producing wells, and does not authorize the Tax Department to "cap" operating expenses at a certain amount. In sum, the Tax Department incorrectly and unfairly ignored the actual operating expenses and instead relied on the maximum calculations found in its valuation variables document and administrative notice. By failing to consider Antero's actual operating expenses, the Tax Department overvalued Antero's wells and did not assess them at their true and actual value.

On February 17, 2017, Antero protested the Tax Department's valuation (as adopted by the Doddridge County Assessor) to the Doddridge County Commission sitting as the Doddridge

County Board of Equalization and Review (the "Board"). Antero presented clear and convincing evidence that the Tax Department failed to consider Antero's actual operating expenses in determining the valuation for the wells assessed for Doddridge County. Antero presented a complete analysis of its actual operating expenses from the state and local tax firm Altus Group US, Inc. ("Altus"), supported by testimony from an Altus Senior Consultant, Kirsten Evans, that correctly applies the approach to arrive at allowable operating expenses. Antero also proved by clear and convincing evidence that the State erroneously calculated average operating expenses at the lesser of 20% of gross receipts or \$175,000. Antero demonstrated that it is the largest producer in West Virginia, at 40% of market share, and that its actual operating expenses per well are 36% of gross receipts or \$817,000. Under these circumstances, it is not mathematically possible for the average operating expenses for the industry to be \$175,000. The Board, however, made no adjustment to the Tax Department's valuation.

Antero timely petitioned the Court for appeal of the Board's decision. As explained below, the Tax Department has abused its discretion by failing to consider Antero's actual and allowable operating expenses in a manner contrary to the statutes, regulations and official releases from the Tax Department governing valuation of personal property. Moreover, the Tax Department has failed to support its valuation with substantial evidence. Antero, on the other hand, presented clear and convincing evidence for its allowable operating expenses to be used in valuing its wells for tax year 2017.

II. FACTUAL BACKGROUND

A. Antero's Property.

Antero owns 199 Marcellus wells in Doddridge County. (Certified Transcript of February 17, 2017 Hearing before the Doddridge County Board of Equalization and Review, See Exhibit A, p. 8 (hereinafter "Hr'g Tr.")). Antero pays significant taxes to Doddridge County for its oil and gas wells.

B. Antero's 2015 Operating Expenses.

Antero completed the Tax Department's survey related to operating expenses. (Hr'g Exhibit 6). Phil Yoo of Antero testified, however, that the survey asked for expenses related to lifting the gas out of the ground only, not gathering and compression, transportation, or processing costs, which are necessary to get the gas to the market. (Hr'g Tr., pp. 67:6-68:3; Hr'g Exh. 6). The Tax Department's survey information for horizontal Marcellus wells pertained almost solely to typical lease operating expenses and was based on prior surveys used for conventional wells. (Hr'g Tr. at 67:6-67:19). No line items were included for gathering and compression, processing or transportation. (Hr'g Tr. at 67:6-68:18). If such expense categories had been included in the survey, Antero would have calculated and listed those substantial expenses, and the Tax Department's calculations would have been substantially different, given that Antero is the largest producer for Marcellus wells in West Virginia and represents approximately 40% of the Marcellus well production statewide. (Hr'g Tr., pp. 67:6-69:2; 41:10-42:12; *see also* Hr'g Exhibit 11). Altus demonstrated that it would be mathematically impossible to get a weighted average of \$175,000 in operating expenses for the industry if Antero's average operating expense of \$817,000 per well is taken into consideration. (Hr'g Tr., pp. 41:10-42:12;

see also Hr'g Exhibit 11). Accordingly, the State's cap of \$175,000 in operating expenses does not truly represent the average operating expenses for the industry, as shown by the market share that Antero holds and its operating expenses of \$817,000.

For the 2017 tax year, the Tax Department increased the allowed operating expenses cap from \$150,000 to \$175,000 based on public comments received in 2016. The State's calculation remains erroneous, however, because it relies on data from the faulty 2014 survey, and because the State disregarded the operating expenses of Antero (the largest operator in the State) in calculating the new "average" operating expense.¹

Furthermore, the Tax Department does not attempt to differentiate between different business models in its survey, administrative notice, or the legislative rule. As a result, certain producers are penalized through an understated amount of operating expenses. As required by the State Tax Department, Antero reports its gross receipts based on the point of sale, and the allowed operating expenses should reflect the expenses incurred to get the gas to the point of sale. Requiring gross receipts to be reported based on the point of sale, while not recognizing the substantial expenses incurred to get the gas to the point of sale, results in overvaluation of the produced natural gas.

Antero submitted proof of its actual operating expenses from 2015 to the Tax Department and the Board for consideration for tax year 2017. (*See* Hr'g Tr., pp.12-72; Hr'g Exhibits 2, 3, 4, 5, 7, 11, 12, 13, 14, 15). Antero's average operating costs for Marcellus wells is approximately 36% of gross receipts, or \$817,000. (Hr'g Tr. at p. 15:6-15:23). Ultimately, neither the Tax

¹ The State testified that Antero's operating expenses were thrown out because Antero asserted that it did not include all operating expenses in its survey response. (Hr'g Tr. at 85:10-85:24).

Department nor the Board adjusted the operating expenses used to value Antero's wells in Doddridge County for tax year 2017.

C. The Tax Department's Calculation of Antero's Operating Expenses.

The Tax Department prepares annual natural resource property valuation variables for appraising oil and gas. Further, the Tax Department makes determination of those valuation variables pursuant to Series 1J of Title 110, a legislative rule of the Tax Department, promulgated pursuant to W. Va. Code §§ 11-1C-5(b), 11-1C-5a, and 11-1C-10(d). In order to determine the amount of Antero's operating expenses, and, in turn, the value of Antero's oil and gas wells, the Tax Department further is governed by Administrative Notices.

In the past, the Tax Department included a statement in its Administrative Notices indicating that it was willing to consider actual operating expenses if a taxpayer thought that the value of their wells was overstated. (Hr'g Tr. at pp. 23:19-24:24). In 2016, the Tax Department decided that it would no longer consider actual operating expenses, despite no change in the law. (Hr'g Tr. at pp. 23:19-24:24).

The State calculates the allowed operating expenses at the lesser of 20% of gross receipts, or \$175,000, for Marcellus Wells. (Hr'g Tr. Exh. 8). Antero's operating expenses for Marcellus wells are on average \$817,000. Due to the State's failure to take into account Antero's actual operating expenses, the value of Antero's wells is significantly overstated. The State valued Antero's wells in Doddridge County at \$514.3 million, whereas Antero, using the State's mass appraisal model and Antero's actual operating expenses, appraised them at \$279 million. (Hr'g Tr. Exh. 1; Hr'g Tr. at pp. 45:19-46:4). Antero also hired Hein & Associates to appraise the true

and actual value of the wells. Hein & Associates appraised the wells at \$202.7 million. (*See* Hr'g Tr.45:23:45:7; Hr'g Tr. Exh. 13).

Antero timely noticed the Doddridge County Commission with its Notice of Protest on January 19, 2017. (Hr'g Tr. Exh. 1). The Doddridge County Commission, sitting as the Doddridge County Board of Equalization and Review, held a hearing on February 17, 2017.

At the hearing, the Tax Department offered no credible evidence as the basis for its refusal to accept Antero's calculation of its operating expenses, except to argue that the State's current procedures are in accordance with the legislative rules and the law, and that the Tax Department did not have sufficient "backup data" regarding Antero's actual expenses, despite the abundance of documentation Antero presented. (Hr'g Tr. at pp. 77-106).

D. Antero's Expert Analysis and Testimony.

Antero's expert, Altus, a leading independent state and local tax firm, by Senior Consultant Kirsten Evans, testified before the Board on February 17, 2017, and showed that a correct application of the allowable operating expenses demonstrated that the Tax Department had erred by failing to allow the operating expenses documented by Antero. (*See* Hr'g Tr., pp. 12-66). Detailed charts and documentation of actual operating expenses, with numbers specific to Doddridge County, were also submitted to the Board. (*See* Hr'g Exhibits 2, 3, 4, 5, 7, 11, 12, 13, 14, 15).

Altus explained that by artificially capping operating expenses at \$175,000, which is not permitted by the legislative rule, the State is grossly overvaluing the fair market value of Antero's wells. (Hr'g Tr., at pp.13:7-15:23). The State also does not take into account Antero's point-of-sale, and the operating expenses incurred to get the gas downstream to market. (Hr'g

Tr. at p. 29:10-36:21). Altus testified that Antero volumetrically represented 40% of horizontal production in West Virginia from 2013 through 2015, and that its average operating expense was \$817,000 per well. (Hr'g Tr., p. 41:10-42-12). Altus explained that, under these circumstances, it would be mathematically impossible to get to an average of \$175,000 in operating expenses for the industry if Antero's average operating expenses of \$817,000 per well is taken into consideration. (Hr'g Tr., p. 41:10-42-12).

Ms. Evans also testified that Antero hired Hein & Associates to appraise its wells in Doddridge County. (See Hr'g Tr., 43:23-45:17; Hr'g Tr. Exh. 13). Ms. Evans explained that Hein & Associates found that the Tax Department's valuation did not properly account for the decline rate or actual operating costs of the wells at issue, and used a different discount rate than the rate used by the Tax Department. Hein & Associates appraised the fair market value of Antero's Doddridge County wells at \$202 million, while the State valued them at \$514 million. (See Hr'g Tr., 43:23-46:7; Hr'g Tr. Exh. 13).

Finally, Altus testified that, while Hein & Associates' valuation is the fair market value of the wells, an alternative approach would be to calculate operating costs as 20% of gross production, without any cap. Altus stressed that this method would still overstate the fair market value of the wells, but that 20%, without a cap, is a reasonable resolution. (Hr'g Tr., pp. 45:19-46:16, Hr'g Tr. Exh. 12). This approach would value Antero's wells at approximately \$421 million. (Hr'g Tr., pp. 45:19-46:16, Hr'g Tr. Exh. 12).

E. Antero's Protest to the Doddridge County Board of Equalization and Review.

On January 19, 2017, Antero submitted to the Doddridge County Assessor and the Doddridge County Commission sitting as the Board of Equalization and Review an Application

for Review of Property Assessment with regard to its gas wells, and Antero appeared on February 17, 2017, by counsel, before the Board. (*See* W. Va. Code § 11-3-24). Antero hired a third-party court reporter to produce a certified transcript of the bearing at which it presented the evidence discussed above. Exhibits introduced at the hearing and provided to the Board will be transmitted to the Court within thirty (30) days, as provided by West Virginia Code § 11-3-25. The original transcript of the proceeding was attached to Antero's Petition as Exhibit A. (*See* W. Va. Code § 58-3-4.)

By February 21, 2017 Order, the Board determined to make no adjustment to the State Tax Department's valuation of Antero's gas wells for the 2017 tax year. (*See* Ex. B to Antero's Petition). Antero timely petitioned this Court for relief from the Board's erroneous determination within thirty (30) days of the adjournment of the Board. (*See* W. Va. Code § 11-3-25).

III. ANALYSIS

A. Applicable Legal Standards.

All property in the State of West Virginia is required to "be assessed annually at its true and actual value" W. Va. Code § 11-3-1. The West Virginia State Tax Commissioner² is charged with determining "the fair market value of all natural resource property in the State" and then providing the values to county assessors to use in assessing the property. W. Va. Code § 11-1C-10(d).

² Elsewhere in Brief, the Tax Commissioner is variously referred to as the Tax Department or simply the State. All terms refer to the same entity.

Pursuant to this responsibility to value producing mineral property and reserves, the Tax Commissioner promulgated Title 110, Series 1J of the West Virginia Code of State Rules, which explains the mechanisms to be utilized in valuing taxable property.

To determine the fair market value of producing oil and natural gas property, the Tax Department applies “a yield capitalization model to the net receipts (gross receipts less royalties paid less operating expenses) for the working interest. . . .” W. Va. Code R. § 110-1J-4.1. The methodology set forth in § 110-1J-4.1 is reflected in Tax Department’s 2017 Administrative Notice, in which the Tax Commissioner states that the Tax Department primarily relies upon the income approach in valuing producing oil and gas property.

The Tax Department should consider actual operating expenses to offset the presumed valuation of expenses for each well. According to the Tax Department’s legislative rule, the Tax Commissioner considers “operating expenses” to be “the “ordinary expenses which are directly related to the maintenance of production of natural gas and/or oil. These expenses do not include extraordinary expenses, depreciation, ad valorem taxes, capital expenditures, or expenditures relating to vehicles or other tangible personal property not permanently used in the production of natural gas or oil.” Section 3.16 of Series 1J, Title 110 State Tax Department Legislative Rule for Valuation of Producing and Reserve Oil & Natural Gas for Ad Valorem Property Tax Purposes. Based on the testimony of Antero’s expert, Altus, the report of Hein & Associates, and the documents submitted to the Tax Department and the Board, the operating expenses submitted by Antero are those contemplated in Section 3.16.

Antero’s burden before the Board was to show by clear and convincing evidence that the Tax Department’s valuation (and, hence, the County’s assessment) of its gas well operating

expenses was erroneous. Syl. pts. 5-6, *Stone Brooke*, 224 W. Va. 691, 688 S.E.2d 300. On appeal to this Court, the Court relies on the record developed before the Board and determines whether the challenged property valuation is supported by substantial evidence.³ See W. Va. Code § 58-3-4; syl. pts. 1-2, *Stone Brooke*, 224 W. Va. 691, 688 S.E.2d 300.

In this case, the Tax Department failed to apply the demonstrated actual operating expenses supplied by Antero in both informal and formal testimony. Accordingly, Antero now petitions this Court to find (1) that the Board incorrectly made no changes to the Tax Department's valuation, (2) that the State's "cap" of \$175,000 in operating expenses be removed, and (3) that the value of Antero's Doddridge County gas wells for the 2017 tax year be set at \$421,000,000, based on the compromise value calculated by applying the State's 20% average annual industry operating expense percentage by Antero's gross receipts.⁴

B. The Tax Department Failed to Consider the Actual Operating Expenses of Antero's Gas Wells and, Thus, Failed to Correctly Value that Property; Antero, on the Other Hand, Introduced Clear Evidence of the Allowable Operating Expenses.

While the State Tax Department has discretion to select the appraisal method that it determines should provide the most accurate valuation of personal property, once it chooses a method, it must correctly apply the method.

³ Furthermore, "[p]ursuant to *In Re Pocahontas Land Co.*, 172 W. Va. 53, 61, 303 S.E.2d 691, 699 (1983), once a taxpayer makes a showing that tax appraisals are erroneous, the Assessor is then bound by law to rebut the taxpayer's evidence." *Mountain Am., LLC v. Huffman*, 224 W. Va. 669, 786 n.23, 687 S.E.2d 768, 785 n.23 (2009). While the Court in *In Re Pocahontas Land Co.* suggested that a county assessor could meet that burden by introducing the State Tax Department's valuation, in this case, Antero showed that the State Tax Department's valuation itself is incorrect, so it was incumbent on the State Tax Department to rebut Antero's evidence.

⁴ Antero asserts, however, that in order to calculate the fair market value of the Marcellus wells, as is required of the Tax Commissioner under W. Va. Code § 11-1C-10(d), actual operating expenses must be considered.

For Antero's Marcellus wells in Doddridge County, the Tax Department has not followed its own rules regarding average industry operating expenses, as set forth in Antero's Exhibits and expert testimony at the hearing before the Board on February 17, 2017, and the Tax Department has, therefore, failed to properly calculate the fair market value of Antero's Marcellus wells. It is also improper for the Tax Department to place a cap on operating expenses, another factor resulting in an inflated value for Antero's Marcellus wells. As demonstrated at the hearing, the survey used by the Tax Department to calculate average industry operating expenses for Marcellus wells was poorly drafted and misleading and resulted in the Tax Department calculating an operating expense "cap" well below the amount of operating expenses actually required to operate a Marcellus well. Antero avers that not only is a "cap" not supported by law, but that the Tax Department also calculated a wildly inaccurate "cap."

Additionally, by calculating the allowed operating expenses at the lesser of 20% of gross receipts or \$175,000, the Tax Department treats similarly situated tax payers differently in violation of United States Constitution and the West Virginia Constitution, as the "cap" of \$175,000 only adversely affects tax payers that have wells with gross receipts over a certain threshold.

Finally, the Tax Department's valuation of Antero's wells did not properly account for the decline rate or discount rate. As a result, Antero's wells were overvalued.

IV. CONCLUSION

WHEREFORE, Antero Resources Corporation respectfully requests that the Court:

(i) Find that the Doddridge County Board of Equalization and Review incorrectly upheld the valuation of Antero's Doddridge County gas wells by the West Virginia Department of Revenue, State Tax Department, Property Tax Division for the 2017 tax year;

(ii) Fix the value of Antero's Doddridge County gas wells for the 2017 tax year at \$421,000,000, based on the compromise value calculated by applying the State's 20% average annual industry operating expense percentage by Antero's gross receipts; and

(iii) Order such other relief as the Court deems appropriate.

ANTERO RESOURCES CORPORATION,

By Counsel

Craig Griffith / by Alison Fanel

Craig A. Griffith (WVSB No. 8549)

John J. Meadows (WVSB No. 9442)

Steptoe & Johnson PLLC

Post Office Box 1588

Charleston, West Virginia 25326

Telephone (304) 353-8000

Facsimile (304) 353-8180

EXHIBIT

A

Page 1	Page 2
1 IN RE: 2 3 ALTUS GROUP/ANTERO CORPORATION 4 ASSESSMENT APPEAL 5 DODDRIDGE COUNTY 6 7 8 9 * * * 10 HEARING 11 BEFORE: Doddridge County Board of Equalization & Review 12 DATE: Friday, February 17, 2017 13 TIME: 10:02 a.m. - 12:30 p.m. 14 * * * 15 16 Doddridge County Courthouse 17 118 East Court Street 18 West Union, West Virginia 26456 19 20 * * * 21 22 Whereupon, the above-entitled matter came on 23 for hearing and the proceedings were as follows: 24	1 APPEARANCES: 2 3 On behalf of the Antero Resources: 4 CRAIG A. GRIFFITH, Esquire 5 Steptoe & Johnson, PLLC, 707 Virginia Street, East, 6 17th Floor, Charleston, West Virginia 25301 7 Telephone: (304) 353-8000 8 Fax: (304) 353-8180 9 E-mail: craig.griffith@steptoe-johnson.com 10 11 On behalf of the State of West Virginia, 12 State Tax Department, Property Tax Division: 13 JAN P. MUDRINICH, Esquire 14 State of West Virginia, State Tax Department, 1124 Smith 15 Street, Second Floor, Charleston, West Virginia 25301 16 Telephone: (304) 558-3940 17 Fax: (304) 558-1843 18 E-mail: Jan.P.Mudrinich@wv.gov 19 20 21 22 23 24
Page 3	Page 4
1 APPEARANCES (Cont.): 2 3 ALSO PRESENT: 4 Gregory L. Robinson, President of the Doddridge 5 County Commission 6 Ronald L. Travis, Doddridge County Commissioner 7 Shawn Glaspell, Doddridge County Commissioner 8 Randee Britton, Executive Assistant to 9 Doddridge County Commission 10 Kirsten Evans, Senior Consultant, Altus Group 11 Phil Yoo, Vice President - Accounting, Chief 12 Accounting Officer, Corporate Controller, 13 Antero Resources 14 Jeff Amburgey, Director, WV State Tax Department 15 Cynthia R. Hoover, Tax & Revenue Manager, 16 West Virginia State Tax Department 17 18 Other individuals in the audience 19 20 Connie M. Nichols, Court Reporter 21 22 23 24	1 INDEX 2 PAGE 3 Opening Statement by Mr. Griffith 7 4 Opening Statement by Mr. Mudrinich 9 5 6 WITNESS NAME PAGE 7 KIRSTEN EVANS 8 Direct Examination By Mr. Griffith 12 9 Cross-Examination By Mr. Mudrinich 47 10 11 PHIL YOO 12 Direct Examination By Mr. Griffith 66 13 Cross-Examination By Mr. Mudrinich 73 14 15 JEFF AMBURGEY 16 Direct Examination By Mr. Mudrinich 77 17 Cross-Examination By Mr. Griffith 81 18 Redirect Examination By Mr. Mudrinich 90 19 Recross-Examination By Mr. Griffith 97 20 Redirect Examination By Mr. Mudrinich 97 21 22 23 24

1 (Pages 1 to 4)

Page 5	Page 6
1 INDEX (Cont.) 2 WITNESS PAGE 3 CYNTHIA HOOVER 4 Direct Examination By Mr. Mudrinich..... 99 5 Cross-Examination By Mr. Griffith 100 6 Redirect Examination By Mr. Mudrinich 102 7 Recross-Examination By Mr. Griffith 103 8 Redirect Examination By Mr. Mudrinich 104 9 Recross-Examination By Mr. Griffith 105 10 11 EXHIBITS 12 PAGE 13 Exhibit No. 1 -- 14 (NOTE: Exhibit No. 1 was given to the Reporter, by the 15 West Virginia Tax Department, at the end of the 16 Hearing. All other Exhibits, that were mentioned in 17 the Hearing, were premarked and were retained by Antero 18 Corporation.) 19 20 21 22 23 24	1 * * * 2 PROCEEDINGS 3 * * * 4 COMMISSIONER ROBINSON: I apologize that 5 the Commission room is being used for early voting for a 6 levy election, and so that's why we're in this 7 courtroom. It's obviously not the best -- because I've 8 got the tall chair. Just so everybody will know, my 9 name is Greg Robinson, I'm the president of the 10 Doddridge County Commission. 11 COMMISSIONER TRAVIS: I'm Ron Travis. 12 COMMISSIONER GLASPELL: I'm Shawn Glaspe. 13 COMMISSIONER ROBINSON: I will call the 14 meeting of the Board of Review and Equalization to order 15 at 10:02. 16 In the accordance with Chapter 11, 17 Article 3, Section 24(b) of the West Virginia Code, as 18 amended, the Doddridge County Commission will now 19 convene as a Board of Review and Equalization for the 20 County of Doddridge. It is the Board's objective to be 21 fair and impartial in all decisions while serving the 22 citizenry of Doddridge County. The Doddridge County 23 assessor and the West Virginia tax commissioner will be 24 present as needed and will provide any explanation in
Page 7	Page 8
1 regard to the appraisal or assessments of the property 2 in question. 3 A liberal rule of evidence applies, and as a 4 rule of thumb, most evidence will be allowed into the 5 record, and the Board will give the weight it deserves. 6 The protesting party must prove with clear and 7 convincing evidence that the appraisal of the assessor 8 or the West Virginia Tax Commissioner is incorrect. 9 This is the heaviest burden of proof in noncriminal law. 10 If denied relief, you, as a protestor, have 11 the right to appeal to the Circuit Court. 12 Okay. 13 First on the agenda is Antero Resources. And 14 it indicates Mr. Craig Griffith. 15 MR. GRIFFITH: That's me. 16 COMMISSIONER ROBINSON: The floor is yours. 17 MR. GRIFFITH: Sure. 18 * * * 19 OPENING STATEMENT 20 * * * 21 BY MR. GRIFFITH: 22 I'm Craig Griffith, I'm with Steptoe & 23 Johnson, out of our Charleston office, here on behalf of 24 Antero Resources. We'll have a couple of witnesses here	1 today, Kirsten Evans from the Altus Group, and then Ph 2 Yoo from Antero, came in from Colorado to testify today. 3 The purpose of the hearing is to address the 4 Tax Department's methodology and their assessed values 5 of Antero's producing wells here in Doddridge County. 6 They have 199 Marcellus wells that they operate, or were 7 operating in connection with tax year 2017. Antero 8 believes that the Tax Department's operating expenses, 9 that the allowance that they allow fails to consider and 10 capture all the expenses necessary to get Antero's gas 11 to its point of sale. And that Antero should have been 12 allowed to claim a higher amount of operating expenses 13 for each well than what was ultimately allowed by the 14 Tax Department. And by limiting the operating expense, 15 because you're basing this on a net income, you're 16 valuing wells on a net income basis, that it overvalues 17 those wells. 18 For tax year 2017, the Tax Department rejected 19 the operating expense information that Antero provided 20 to the Tax Department, and instead went with their 21 default percentages. They use a percentage of 22 20 percent gross revenues, or gross receipts, to 23 calculate the operating expense. And then they cap that 24 at \$175,000 per well.

2 (Pages 5 to 8)

Page 9

1 We think that this disproportionately affects
2 Antero, compared to a lot of other producers, because
3 Antero sells its gas -- a lot of its gas miles away from
4 the actual production point. Some of that is sold here
5 in Doddridge County near the Sherwood processing
6 facility, but a lot of it is sold miles away at other
7 points of sale throughout West Virginia or throughout
8 the country.

9 Because Antero is reporting its gross receipts
10 based on those points of sale, all the expenses that are
11 necessary to get that to the point of sale should be
12 considered as well, and we don't think that's being done
13 for Antero.

14 COMMISSIONER ROBINSON: Okay.

15 Is that your --

16 MR. GRIFFITH: That's the opening.

17 COMMISSIONER ROBINSON: Okay.

18 * * *

19 OPENING STATEMENT

20 * * *

21 BY MR. MUDRINICH:

22 My name is Jan Mudrinich, I'm the attorney for
23 the State Tax Department. And to just briefly summarize
24 our case, the oil and gas -- or producing oil and gas is

Page 10

1 valued on a mass appraisal basis. We conduct surveys
2 every so often, every few years, of the expenses of the
3 producers, and come up with an industry average. This
4 is then published with the Secretary of State, and
5 comments are allowed for people to comment and say it's
6 wrong, say it's right, whatever.

7 But once those things are filed, all gas
8 producers must be valued in accordance with the industry
9 average. The surveys here result in an average
10 Marcellus horizontal drilling of \$175,000 a well. And
11 that is done uniform, statewide, to all horizontal
12 wells.

13 And we'll have testimony today about how that
14 is -- how that's been developed. And it's going to be
15 our position that these appraisals have been done in
16 accordance with the laws of the State of West Virginia.

17 And that's pretty much it.

18 Now, Craig, before you start, we do have some
19 housekeeping.

20 MR. GRIFFITH: Uh-huh.

21 MR. MUDRINICH: Do you want to do that
22 before you start?

23 MR. GRIFFITH: That will be fine, yeah.

24 MR. MUDRINICH: Cindi.

Page 11

1 MS. HOOVER: In the front of the packet
2 that we gave you that has the legislative rule and
3 valuation variables, there's just a sheet that lists the
4 working interest partners on these wells and what each
5 portion of that is. The values that are listed on the
6 protest sheet are for the total working interests. This
7 splits out what portion of it is actually Antero.

8 MR. MUDRINICH: Yes, since the other
9 working interest partners did not appeal, if Antero
10 would ultimately prevail, only the values that they are
11 being taxed on would be subject to any reduction. So
12 that's what that housekeeping is for.

13 MR. GRIFFITH: I think we're ready for
14 testimony. If we want to, at the top, have everyone
15 testifying go ahead and be sworn in, so we don't have to
16 do it for each witness, that would that.

17 COMMISSIONER ROBINSON: And that's fine
18 with us. This is kind of my first time with a meeting
19 of this type. So that's fine.

20 MR. GRIFFITH: I think there will be four.
21 You guys have two and we have two.

22 COMMISSIONER ROBINSON: Do you swear to
23 tell the truth, the whole truth and nothing but the
24 truth, so help you God?

Page 12

1 ALL WITNESSES (in unison): I do.

2 COMMISSIONER ROBINSON: Is that sufficient?

3 MR. MUDRINICH: Yeah.

4 MR. GRIFFITH: That will work, yeah.

5 Kirsten's fingers were crossed under the table, but
6 other than that.

7 * * *

8 KIRSTEN EVANS

9 being previously duly sworn, was examined and testified
10 as follows:

11 * * *

12 DIRECT EXAMINATION

13 BY MR. GRIFFITH:

14 Q. Kirsten, if you could state your name for the
15 record and discuss your background in the natural
16 resource industry and property tax industry.

17 A. Sure.

18 I'm Kirsten Evans with Altus Group. We were
19 hired by Antero to look at their properties in
20 West Virginia and prepare their property tax returns,
21 for compliance purposes. I have been doing property
22 taxes, specializing in state and local tax, specifically
23 property taxes, for 15 years, working in the natural gas
24 arena for about 10 of that. I have an educational

3 (Pages 9 to 12)

Page 13

1 background in economics, business and accounting.
2 Q. And Antero is a pretty big taxpayer here in
3 Doddridge County, or a big company here in Doddridge
4 County. I think most folks know what they do. But if
5 you want to just discuss their business, briefly,
6 including their operations in West Virginia.

7 A. So we're here to discuss the Marcellus wells
8 that Antero operates and produces gas out of in the
9 county, and why we appealed those values.

10 Keep going?

11 Q. Yes.

12 A. So in working with Antero and looking at their
13 company structure and looking at the West Virginia
14 methodology for taxing the natural gas wells, we believe
15 that the State is acting outside of their legal
16 authority by placing a maximum on the operating
17 expenses. And why this is a big deal for Antero is
18 because of their company structure. So the methodology
19 used to tax gas wells in West Virginia is an income
20 approach. So you report your revenue, your net
21 operating expenses. That's run through a discounted
22 cash flow to present value.

23 When it was designed, when the calculation was
24 designed, the wells were either conventional or CBM,

Page 14

1 most producers were selling right at the wellhead. So
2 the calculation doesn't necessarily consider a fully
3 integrated producer, who's holding their gas past the
4 wellhead, who's gathering and compressing it, who's
5 paying to process wet gas, and then who's transporting
6 it to places sometimes outside of the state of
7 West Virginia in order to recognize revenues.

8 The State has tried to play catch-up over the
9 years. They've made, you know, they took the operating
10 expense allowance from \$5,000 to 150,000 -- I guess
11 there was a step in-between. It went from 5 to 30 to
12 150 thousand, over the years, for Marcellus to, you
13 know, to try to adjust their template to make up for
14 what's going on in the industry.

15 But we'll provide a hunch of information that
16 says it just doesn't quite get to the right value for
17 those producers who are holding the gas for longer
18 before they sell it.

19 Q. And let's start with Exhibits 2 and 3, these
20 are kind of sister exhibits, responses or information
21 that was provided to the Tax Department for operating
22 expense information.

23 Start with Exhibit 2, which is information
24 that was provided in August to Jeff Amburgey with the

Page 15

1 Property Tax Division. And Jeff, I think, will testify
2 later today.

3 So discuss that information that the
4 calculations for the average operating expense per well
5 included in that, and then move on to Exhibit 3.

6 A. So each year the State publishes tentative
7 variables, and then asks for public comment to those
8 variables. So this was a response to those variables,
9 stating Antero's actual operating expenses. So the
10 State came out with their tentatives that said we're
11 going to allow 20 percent of revenue as an operating
12 expense and we're going to cap it, or the maximum that
13 will be allowed is \$175,000 per well.

14 So the response was -- and we'll just focus on
15 what's in the first, kind of, row there -- is for
16 Marcellus horizontal wells, Antero's actual operating
17 expenses are 36 percent of revenue. That was a huge
18 jump from the year before. The year before we were
19 looking at about 22 percent of revenue. Which was more
20 in line with what the State was allowing.

21 And on the average operating expense per well,
22 we're actually at \$817,000 rather than the \$175,000 that
23 the State is allowing.

24 Q. Okay.

Page 16

1 Let's move on to Exhibit 3. This was an
2 e-mail that was provided to some folks within the
3 Property Tax Division, in December, after the tentative
4 values were received by Antero. Discuss what was
5 included in that e-mail. I believe there was some
6 actual operating expense information per well provided,
7 and then a letter from Antero that was submitted in
8 conjunction with the public comments for the tentative
9 valuation variables that the Tax Department circulates
10 each year.

11 A. So at the end of November, early December, we
12 received tentative values on all the wells that were
13 filed for Antero for the 2017 tax year. And in
14 reviewing them it became evident that the State didn't
15 use any of the actual operating expense data that we
16 submitted, that they used their average variables that
17 were published in August. So this letter, that was
18 written in December, was just to respond that we still
19 believe there's an issue with the values that were
20 placed on the wells, that the operating expenses -- the
21 actual operating expenses are far greater than what's
22 being allowed through the State's calculation.

23 And then the letter that's included was just a
24 copy of the letter that went to the State on August 1,

4 (Pages 13 to 16)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 17

1 with some similar information. You'll notice that the
2 horizontal Marcellus wells, the numbers are a little
3 different than the 36 percent and the 817,000 that we
4 just discussed. And the reason the e-mail was sent in,
5 I believe it was like the end of August, so August 25,
6 was because we realized there was some errors in that
7 letter and we needed to correct them. That it included
8 some numbers that weren't expenses and revenue that
9 weren't related to West Virginia wells.

10 Q. And that, I think the response was also in --
11 Jeff Amburgey had asked for, via an e-mail on August 2,
12 had asked for additional information. And so he was
13 responsive to the original August 1 letter. You got
14 provided the information, we just didn't see quite the
15 change that we were expecting to see in those valuation
16 variables, correct?

17 A. Right. So we submitted the letter on
18 August 1. Jeff replied on August 12, saying we need
19 additional documentation. So we sent the e-mail on
20 August 25, with an attachment of all the wells and all
21 the operating expenses broken down by type. So broken
22 down between LOE, gathering and compression, processing
23 and transportation, to give a total expense by well.

24 Q. You've mentioned that the State uses a net

Page 18

1 income base approach to value these wells. Let's move
2 to Exhibit 4, and you can walk us through kind of a
3 sample well. This isn't necessarily a Doddridge County
4 well, this is just a sample that we've put together to
5 illustrate the valuation process, based on that net
6 income method. If you could walk us through the first
7 sheet, and then we'll move on to the second sheet after
8 that.

9 A. Sure.

10 The numbers at the top, where it's referring
11 to gas income and the working interests and royalty
12 interests, those are the numbers that are reported on
13 the return. Those are gross numbers and they're not net
14 of any expenses that are incurred by a producer.

15 And then the decline rates are determined by
16 the formation of the wells, the formation that you're
17 drilling into, and then what year you're in. So that
18 all drives the template.

19 Now, what happens is the template takes the
20 working interest from the current year and projects it
21 forward 18 months, based on the projected decline. And
22 that is actually the Year 1 working interest that shows
23 up. Based on that Year 1 working interest, the
24 operating expense is determined. So the 1785, that's in

Page 19

1 that first bucket, is multiplied by 20 percent. And if
2 that number is greater than 175,000, then the operating
3 expense or the working cost is 175,000. If it's lower
4 than 175,000, then you actually get the 20 percent.

5 Those two numbers -- the working interest less
6 the working costs is your net income. The net income
7 goes through a discounted cash flow. And then the sum
8 of the discounted cash flow becomes your value.

9 Why this is important and why, you know, I
10 just want to walk you through this template is because
11 if you get the working cost wrong -- and in this case
12 we're testifying that the working cost is too low --
13 that results in a net income that's too high. And when
14 you project forward of net income that's too high, you
15 get a value that's too high. So the farther off that
16 working cost is from actual operating expenses, the
17 bigger discrepancy there is between value of a well and
18 what it's being assessed.

19 Page 2 of this exhibit, kind of just walks us
20 through some scenarios of what I just said, of why this
21 is a problem for Antero wells. So if you look at the
22 top example where it says Year 3 Plus, Horizontal
23 Marcellus Wells, what we did here is an average Year 3
24 well for Antero is producing, on average, 600,000 Mcf

Page 20

1 per well. So if we look the operating expense
2 calculation in tax year 2014, 2015, 2016, how would that
3 one particular well be handled. Well, in 2013, the gas
4 price was \$4.00. So if you run that through, a well
5 that's producing 600,000 Mcf would produce revenue of
6 about 2.4 million. And the State would say: Okay,
7 operating expenses at 20 percent are 236,000, but we're
8 going to cap that at 150,000. So the State is allowing,
9 for a larger well, 13 percent of revenue.

10 In 2014, the gas price changes, revenue goes
11 up for a similarly producing well, revenue goes up to
12 2.5 million. Operating expenses are calculated at
13 250,000. But the State, again, is going to cap it at
14 150,000.

15 So move forward to 2015, gas prices drop to
16 \$2.25. The revenue on that well is 1.3 million now.
17 Nothing has changed about how much gas is being produced
18 out of that well, but the State says it now only costs
19 \$133,000 to produce that same amount of volume out of
20 the well. And then they're going to allow 20 percent
21 operating expense.

22 And why this is importance is, the State is
23 tying operating expenses to revenue. And operating
24 expenses are a function of volume, for the most part.

5 (Pages 17 to 20)

Page 21

1 So by tying it to revenue when gas prices go down, they
2 are allowing less operating expenses. They're saying it
3 actually cost less to run that well than it does when
4 the gas price is high. Which just doesn't make sense.

5 The second grouping talks about the impact of
6 the cap. And so the State doesn't refer to it as "cap,"
7 they call it the average, the 20 percent and the 175,000
8 are both the average. But the way they are using it is
9 as a maximum or a cap of operating expenses.

10 So if you look at a well that has a \$1 million
11 in working interest receipts, the State-allowed expenses
12 are \$119,000, which is 20 percent of revenue. So if a
13 producer has a well that's making a million dollars,
14 they actually get the benefit of the full 20 percent of
15 operating expenses.

16 Fast-forward down to a well that's making
17 \$7 million in working interest receipts, they are going
18 to be capped at \$175,000 of operating expense, which is
19 only 4 percent of revenue.

20 So the State's model says that the bigger the
21 well is, the less percentage of revenue it takes to
22 operate it. And that's not how the model works. Antero
23 has -- they are at 36 percent -- 36 percent of revenue
24 to operate a well, not 4 percent. And that's inequality

Page 22

1 between how they are treating taxpayers. So if I'm a
2 smaller taxpayer with a smaller well, I get the benefit
3 of 20 percent. But if I'm a bigger producer with larger
4 wells, which the Marcellus wells are, I only get
5 4 percent, or sometimes less.

6 Q. And the examples of the 5 to 7 million dollars
7 of working interest receipts, that's not atypical for an
8 Antero well, correct?

9 A. The 7 would be on the high end, the 1 is on
10 the low end. So their average is somewhere in the
11 middle.

12 Q. Okay.

13 COMMISSIONER ROBINSON: Okay, I'm new to
14 this. Once again, can I ask a question at this point?

15 MR. GRIFFITH: Absolutely, yeah.

16 COMMISSIONER ROBINSON: Up here where you
17 indicate average Mcf per well, 600,000. Is that per
18 month?

19 MS. EVANS: That's in total, in a year.

20 COMMISSIONER ROBINSON: Per year.

21 MS. EVANS: Yes.

22 COMMISSIONER ROBINSON: So it would be
23 600 million cubic feet of gas.

24 MS. EVANS: That is the average Year 3

Page 23

1 production for a year, yes.

2 COMMISSIONER ROBINSON: Okay.

3 I'm sorry. Go ahead.

4 MR. GRIFFITH: No, any time you want.

5 BY MR. GRIFFITH:

6 Q. The State's returns, what do the State's
7 returns say about operating expense information, whether
8 or not that's to be included on a return filed by the
9 producer?

10 A. So the return itself asked for gross
11 information. So you're not allowed to put any
12 information about operating expenses on the return
13 itself. The instructions in the past have included
14 information that allows you, or actually suggests that
15 you can submit actual operating expenses for your wells
16 if you feel that the allowances that the State is giving
17 in their calculation aren't representative of what your
18 well is actually doing.

19 Q. And on that issue, has the Tax Department made
20 a change recently in their administrative notices
21 regarding submission of actual operating expenses?

22 A. Yes. So between the 2016 and 2017
23 administrative -- oh, no, between the '15 and '16
24 administrative notices, the State Department changed

Page 24

1 their language with regards to operating expenses and
2 whether producers were invited to provide actual
3 operating expenses if they felt that the variables
4 didn't represent their company structure accurately.

5 Q. You're not aware of any change in the law that
6 would have precipitated that?

7 A. No, there's been no change in the law.

8 Q. One thing the Tax Department is often focused
9 on is tracking these expenses to the wells, to a
10 particular well. Does Antero do that, track revenues
11 and expenses based on the actual well?

12 A. Yes. In past discussions with the State, one
13 of the reasons why they were unwilling to accept actual
14 operating expense data was because the producer didn't
15 track it down to a well level. But Antero does track
16 all of these expenses, all the expense types down to
17 each and every well.

18 Q. And let's move on to Exhibit 5, which is a
19 diagram that Altus put together that I think is very
20 helpful to show where the gross receipts come in, where
21 the operating expenses fall in line during that process.
22 So just walk us through that diagram.

23 A. So what this is is over on the left you'll
24 see -- and just trying to make things simple that are

6 (Pages 21 to 24)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 25

1 little more complex than this diagram -- but you have
2 the wells. And on the topside, the black numbers is
3 we're breaking down revenue. So you'll see the revenue
4 related to natural gas sales and revenue related to NGL
5 sales.

6 So in total for the 2015 calendar year, this
7 is what's used to do the 2017 tax year, there was
8 \$967 million worth of revenue for the State of
9 West Virginia, broken down to 921 for gas sales and
10 46 million for NGL sales.

11 On the bottom side of this diagram we break
12 down operating expenses, between the different buckets,
13 are incurred. So LOE and workover, which will also be
14 referred to as lifting costs later, on average is about
15 \$41,000 per well.

16 And I will note that these numbers -- you
17 know, we talked about 36 percent and \$817,000 on
18 average, that was for Marcellus wells only. These
19 numbers are for all of Antero's holdings in the State of
20 West Virginia. So you'll notice that the average number
21 at the end of the expense of 544,000 is lower than the
22 \$17,000. That's because they have some conventional
23 holdings and a few vertical Marcellus wells that are in
24 there, so bringing the per-well number down.

Page 27

1 on there, it was filled out and provided to the Tax
2 Department. Talk about what's included in that survey
3 and what that kind of reflects the lease operating
4 expenses that Antero is calculating for tax year 2017.

5 A. So this survey has been around for quite a few
6 years, even before the title of vertical and horizontal
7 Marcellus were added to the columns. It's the same
8 survey that's used for conventional wells. And these
9 descriptions of direct expenses, other operating
10 expenses, indirect operating costs -- you know, when
11 you're talking about well tending and swabbing and
12 electrical expenses, you know, all those things are
13 lifting expenses, they're to get the gas out of the
14 ground.

15 There's no place for, you know -- the State
16 doesn't specifically ask for any of those other costs.
17 They don't ask for compression expenses or gathering or
18 processing. Because it typically didn't exist when you
19 have conventional wells.

20 Q. Let's look at -- well, in relation to that
21 survey -- I'm being redundant, I was reading through my
22 notes a little bit, too, while you were talking. But in
23 that survey is there any mention of the other expenses
24 that are necessary to get this gas to the point of sale?

Page 26

1 Anyway, so lifting, LOE, workover is at
2 \$41,000 per well.

3 Gathering and compression, it costs, on
4 average, \$257,000 per well to gather and compress the
5 gas once it's out of the ground. NGL processing is
6 \$68,000, on average. And that number is a little
7 misleading too, because processing is only needed if you
8 have wet gas. So the dry wells would have none, and the
9 wet wells -- or the wet gas wells would have far more
10 than 68,000. But it's just for a presentation.

11 Transportation is, on average, 175,000 per
12 well, for a total of average 544,000 across all their
13 holdings in West Virginia. And what's important to note
14 is the State's allowance of 175,000 doesn't even get you
15 through gathering and compression. It can't even get
16 the gas to the processing plant. It can get it out of
17 the ground, it can get it halfway there, but you can't
18 even process the wet gas for 175,000.

19 Q. And let's walk through each type of listed
20 expenses in a little more detail. Let's -- for lease
21 operating expenses, if we can flip to Exhibit 6, which
22 is a survey that Antero provided to the Tax Department
23 back in 2014.

24 So there's a document that says "Confidential"

Page 28

1 A. There is not.

2 Q. Okay.

3 Let's look at gathering and compression.
4 Those expenses are -- and it's illustrated in the
5 diagram -- that's essentially to get this gas to the
6 Sherwood processing facility that's here in Doddridge
7 County, correct?

8 A. It's to get it to a transportation line or to
9 the processing facility, yeah.

10 Q. And when you're calculating that, that's based
11 on third-party expenses that you're -- other party's
12 gathering lines that Antero is paying for?

13 A. So Antero does own some gathering and
14 compression lines. So to the extent that the expense
15 was an Antero expense, it's not marked up for any
16 profit, it's the actual cost of running the system, and
17 then if they had to pay a third party, it's the
18 third-party expenses.

19 Q. And then transportation -- actually, flip back
20 here to the processing expenses at the facility. That's
21 for the wet gas. And if you want to describe that
22 process a little bit and why that's a necessary part of
23 the process here.

24 A. So the Marcellus shale, certain formations,

7 (Pages 25 to 28)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

Page 29

1 the gas that's produced is very wet and it has to be
2 processed before you can put it into a transportation
3 pipeline. There are certain regulations about the
4 makeup of the gas that can go into the pipeline. So a
5 lot of this gas has to go to the processing facility and
6 you have to separate out the NGLs from the gas before
7 the gas can then go on to the transportation system to
8 be sold into it -- or into the pipeline, the
9 distribution pipeline, to be sold.

10 Q. And it's fair to say that a producer who
11 produces wet gas would have a higher expense related to
12 that processing than a producer that produces dry gas,
13 correct?

14 A. Absolutely.

15 Q. Transportation, discuss that a little bit. We
16 referenced earlier that some of this gas is sold near
17 the Sherwood facility. Discuss what that transportation
18 expense entails, where most of that is being incurred.

19 A. So there's option -- you know, there's
20 different points of sale for natural gas throughout the
21 country, all right. And one of those points of sale is
22 the Dominion pipeline, which is right outside of the
23 processing plant in Sherwood.

24 There's capacity issues. There's supply and

Page 30

1 demand. Right. That all go into the pricing of natural
2 gas. So if you sell it at the back of the plant, where
3 there's a lot of gas being produced in Doddridge County
4 and the surrounding counties, because of the Marcellus
5 shale, the price is lower.

6 So what Antero has done is they've made the
7 business decision to transport their gas outside of
8 Doddridge County to recognize a higher price per Mcf for
9 that gas. In order to do that, they have to incur the
10 expense of transporting that gas to a different point of
11 sale. So the transportation cost is to get it outside
12 of either Doddridge County or Ritchie County or any of
13 the surrounding counties to, you know, maybe southern
14 West Virginia, to the TCO Pool or to Pennsylvania or to
15 Louisiana, to sell it at a different hub that is
16 recognizing a higher price for the gas.

17 Q. You referenced the fact that the survey that
18 was circulated in 2014 didn't list many of these
19 expenses that are necessary to get to a point of sale.
20 Are you aware of whether the return that Antero files
21 with the State, or the survey, made any effort to
22 differentiate producers of wet gas versus dry gas?

23 A. No, right now the State doesn't differentiate
24 or ask any questions to understand whether you're

Page 31

1 producing wet gas, whether you're reporting NGL revenue,
2 whether you own your gathering system or don't own your
3 gathering system, whether you're transporting your gas
4 out of state or whether you're selling it in Doddridge.
5 So everybody is being treated exactly the same, even
6 though operating expenses are significantly different.

7 Q. So it's fair to say that the survey responses
8 included some producers who were reporting -- that were
9 producing dry gas and maybe didn't incur as much expense
10 in relation to these wells, versus wet gas producers
11 that were incurring significantly higher expenses than
12 the dry gas producers, correct?

13 A. I imagine the survey responses, they get
14 very -- everything from people selling the gas right at
15 the wellhead to people transporting it out of state who
16 had to incur the expense of processing as well.

17 Q. And, again, the survey didn't include any
18 information that would have tracked to differentiate
19 between those types of producers?

20 A. No, the return and survey do not.

21 Q. In some of the other hearings -- we've had two
22 other hearings this month, and the Tax Department has
23 provided kind of a simple example of they how calculated
24 their average, their 150,000 or \$175,000 average. And

Page 32

1 the example is they have two wells with a relatively
2 high operating expense figure, and two wells with a
3 relatively low operating expense figure. What happens
4 when you take that large number and you average it with
5 a small number?

6 A. So if you're doing a straight average and not
7 paying attention to the weights of each one of them and
8 how much gas is being produced by one producer versus
9 another, and do a straight average, you're going to take
10 a really high and a really low and come up with probably
11 a number that is too low. Especially if you throw out
12 the outliers who represent a significant part of the
13 market. Which the State has indicated they did.

14 Q. And you indicated earlier that the \$544,000
15 per well, that's for all of Antero's well. And the
16 average for the Marcellus -- horizontal Marcellus wells
17 is \$817,000 per well?

18 A. That's correct.

19 Q. And would you agree -- and, obviously, your
20 testimony supports this -- but the operating expenses
21 increase the farther along the line of the point of sale
22 is the farther away from the well the point of sale is?

23 A. Right. The significant thing that changed the
24 operating expense are whether it is wet gas or dry gas

8 (Pages 29 to 32)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 33

1 and how far you transport it before selling it.
2 Q. How does Antero go about calculating its
3 operating expense? Did Altus do it or is that something
4 that Antero does internally through their record keeping
5 process?

6 A. Antero tracks their operating expenses by
7 well. We don't do anything with allocations or getting
8 it to the well. That comes straight out of their
9 system.

10 Q. Okay.

11 We can move on to Exhibit 7 now, which is some
12 transaction confirmations between Antero and certain
13 purchasers. And then on the backside of that, or the
14 back end of it, there are two -- there's an affidavit
15 that two pages from one of these purchasers that kind of
16 discusses their process.

17 Talk first about the transaction
18 confirmations, what those show, in terms of point of
19 sale and delivery point. And then we'll move on to the
20 affidavit.

21 A. So when working with the State over the years
22 with regards to Antero's operating expense, there has
23 been a lot of question about the point of sale. So
24 these transaction confirmations are just a sample of the

Page 34

1 many, many contracts that exist that show where Antero
2 is delivering their gas to. And then the transaction
3 confirmations also have pricing information that's been
4 redacted out of them for confidentiality reasons.

5 The affidavit itself is from one of the
6 purchasers of the gas, NextEra Energy Marketing, LLC.
7 And the reason this was provided is because the State
8 had some questions with regards to how did they know
9 that the purchaser of the gas isn't reimbursing or
10 incurring some of these transportation expenses. So
11 this affidavit just goes through what the purchase price
12 was for. It was for saleable gas into a distribution
13 pipeline. It doesn't need any additional processing or
14 expenses to be incurred by the purchaser. It is not
15 free on-board shipping. Antero has incurred all the
16 expenses necessary to get the gas to the delivery
17 points, including gathering and compression, processing
18 and transportation, as necessary.

19 Q. And can you comment on the fact that NextEra
20 I think they mention in their affidavit that their
21 delivery point is in Doddridge County. Other
22 purchasers, they have various delivery points that are
23 outside of Doddridge County, correct?

24 And if you want to reference Exhibit 15, which

Page 35

1 has some information about different delivery points and
2 how that drives the pricing, I think that would be
3 helpful.

4 A. Sure.

5 In Exhibit 15, what we have here is a summary
6 of the 2015 sales. So these are sales of processed
7 saleable gas into a distribution system. It lists who
8 the purchaser was, the location at which it was sold,
9 and the index providing that the price was based on. It
10 also shows the price. And at page 2, at the bottom is a
11 summary that shows you what the pricing is, depending on
12 the delivery point.

13 So what you'll notice is that in Doddridge
14 County, where Antero does not have to transport the gas,
15 the price they are receiving for the gas is \$1.51 per
16 MMBTU. By incurring the cost to transport the gas,
17 either to the TCO Pool, which is in southern
18 West Virginia, or the M2 Pool in Delmont, Pennsylvania,
19 or to TGP or Henry Hub, or any other place, the price
20 they are getting for the gas is substantially higher.
21 Sometimes almost a dollar higher per unit.

22 So that's where that transportation cost comes
23 in. The State of West Virginia, and Doddridge County,
24 is recognizing the revenue stream. So gross revenue is

Page 36

1 reported at whatever gas price this gas is sold at. But
2 the operating expenses to get that revenue are not being
3 allowed.

4 I thought it would be interesting to show --
5 so if we took Antero's \$921 million in natural gas sales
6 for the 2015 tax year, and you sold it all at the back
7 of Doddridge -- if they even had the capacity to take it
8 all -- but if you sold it all at the Sherwood plant, it
9 would be almost -- well, it would be \$225 million less
10 in revenue.

11 So in order to get \$225 million more in
12 revenue, they incurred the transportation costs to get
13 it there. The net is still a positive. So it's not a
14 wash. It's not like they spend \$17 million to get
15 \$17 million. The State of West Virginia and the
16 counties are still recognizing extra revenue from this
17 process, and extra tax. We're just asking that the
18 operating expenses that it takes to generate that
19 revenue be included in the calculation of an income
20 approach, because that's how someone would value these
21 wells. What does it take to make that much revenue.

22 Q. We can move on the next exhibit, which is the
23 tentative values that the Tax Department releases every
24 year. And it's not numbered, so if we could flip back,

9 (Pages 33 to 36)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 37

1 I think it's probably about 15 or 16 pages back.
 2 There's a sheet with -- it says Industry Operating
 3 Expense Survey and Results. I think we can focus on the
 4 Marcellus/Utica category there. And I think we can be
 5 relatively brief here. We've brought up these -- what
 6 the State's calculations look like through the period,
 7 what they are using for tax year 2017, for
 8 Marcellus/Utica wells?

9 A. So for 2017, they are using a 20 percent
 10 average working interest percentage, maximum of
 11 \$175,000.

12 Q. Okay.

13 And how did that compare to prior years?

14 A. In the past, the 20 percent was the same, but
 15 the 175 was actually 150,000. So this year, for the
 16 2017 tax year, they increased it slightly.

17 Q. Do you have any idea of how that was only
 18 increased by \$25,000 or why?

19 A. I have no idea how they got to \$175,000.
 20 WVONGA and IOGA both submitted information from the
 21 industry, to the State, indicating that, you know, the
 22 variables were quite low and needed to be increased.

23 I would assert that it's mathematically
 24 impossible, based on Antero's market share, to get to

Page 38

1 175,000 as the industry average, when Antero has over
 2 40 percent market share and has an average of 817,000.

3 Q. And I think you mentioned this during our
 4 discussion of Exhibit 5, but that \$175,000 wouldn't even
 5 cover the lease operating expenses and all the gathering
 6 and compression expenses, correct?

7 A. It would not.

8 Q. Discuss the reason -- one of the exhibits, I
 9 think it's Exhibit 2, shows Antero's operating expense
 10 percentage at 36 percent for 2017, versus the 20 percent
 11 allowed by the Tax Department. What's the reasoning or
 12 what explains that difference in percentage?

13 A. So when we had these hearings last year, we
 14 were in a position where the State's 20 percent
 15 allowance wasn't too far off of the actual percentage of
 16 revenue. So we were discussing, you know, how the cap
 17 impacted the values.

18 So since then there's -- the industry as a
 19 whole, so natural gas is now selling at, I think,
 20 50 percent, roughly 50 percent drop in gas price since
 21 2016 tax year. And when you're basing operating
 22 expenses on revenue, and revenue drops, then that
 23 percentage changes. So Antero's operating expenses
 24 didn't change, but the revenue changed. So as a

Page 39

1 percentage of revenue now, their operating expenses are
 2 36 percent. And that's not just Antero, that is across
 3 the industry.

4 Q. And the basic feedback you've got from the Tax
 5 Department is, number one, they're not allowed to accept
 6 actual operating expenses, but have they ever provided
 7 any feedback about the categories of expenses being
 8 claimed by Antero, that those are invalid? Or do you
 9 think that the decision based here is based primarily on
 10 the amounts being claimed?

11 A. They have not expressly rejected any of the
 12 expenses that we've provided them, so my only assumption
 13 is that it's based on the amount.

14 Q. And let's move on to Exhibit 9. We actually
 15 have two different letters that were provided by two
 16 different trade groups, one being IOGA West Virginia.
 17 That's the first letter. And I think more pertinent for
 18 us, because it focuses more on Marcellus wells, is the
 19 letter from WVONGA that has Spilman Thomas & Battle's
 20 letterhead at the top.

21 At the bottom of page 1, WVONGA makes the
 22 point that, obviously, the Tax Department's variables
 23 haven't changed since 2010 -- or hadn't, prior to the
 24 changes for 2017. That's accurate or consistent with

Page 40

1 your findings as well, correct?

2 A. That is correct.

3 Q. Okay.

4 And you've mentioned this, but natural gas
 5 prices, as mentioned by WVONGA, have decreased
 6 significantly since 2008. And that's consistent with
 7 your findings as well.

8 A. That's correct.

9 Q. And we can look at Exhibit 10, quickly, which
 10 is a document from the US Energy Information
 11 Administration. I think the first graph there is the
 12 most pertinent, that shows pricing -- really, from 2014
 13 forward and how that has dropped significantly since the
 14 beginning of 2014. That's consistent with what Antero
 15 has seen as well, correct?

16 A. That is correct. And it's also important to
 17 note that the EIA bases theirs on Henry Hub pricing,
 18 which is in Louisiana. So we've already shown that it's
 19 higher than what Antero can realize if you sell the gas
 20 in Doddridge County.

21 Q. Probably similar to the TCO?

22 A. Yes, it is. Yes.

23 Q. The chart on page 2 of that WVONGA letter,
 24 that's consistent with what Antero calculated for 2017

10 (Pages 37 to 40)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de8-4059-b36e-b16a2d38f46b

Page 41

1 as well, correct?

2 A. That's correct.

3 So this is -- the WVONGA letter was based on
4 multiple industry participants. And the letter states
5 that on average the industry for Marcellus/Utica
6 horizontal wells was at 38 percent, with an average
7 operating expense per well of 720,000. And that is
8 comparable to Antero's 36 percent we have been
9 discussing in 817,000 per well.

10 Q. Let's move on to Exhibit 11. This is some DEP
11 information that was pulled from their website, and I
12 think you added some columns. The blue information was
13 pulled from the DEP website. The other two columns in
14 each of those areas or tables were added by Altus.

15 Discuss 2015 in particular, what Antero's
16 market share was for the state and the Marcellus
17 industry.

18 A. So the reason we thought this was important is
19 because the State is tasked with developing an average
20 industry operating expense. Antero represents
21 39 percent of the horizontal well production in the
22 state of West Virginia. And we provided all this
23 information to show that their average operating expense
24 is \$817,000 per well. Yet somehow the State has come up

Page 42

1 with an average industry operating expense of \$175,000
2 as a cap. It is mathematically impossible if you are
3 taking into account production and weighting market
4 share to come up with \$175,000 as an average. You would
5 have to have -- I don't even think if you use zero you
6 could come up with that.

7 So this is just for -- and we have CNX on
8 there too, because at one point they were doing the
9 hearings, and we have their operating expense data.

10 So I would just -- it's just to show that it's
11 almost impossible to get to \$175,000 in actual operating
12 expense if you use industry data.

13 Q. And that survey that was submitted in 2014, or
14 circulated in 2014, the Tax Department bases their
15 initial operating expenses on that. There's nothing in
16 the legislative rule that prevents them from reviewing
17 that on an annual basis, correct?

18 A. Not that I'm aware of.

19 Q. That's the reason for the public comments for
20 the tentative values that are circulated each year.

21 A. Right. And they adjusted it this year without
22 a survey being done.

23 Q. Right.

24 But we are still not aware of how that

Page 43

1 \$175,000 was calculated, correct?

2 A. No.

3 Q. Okay.

4 Let's briefly look at, just some
5 Doddridge-specific numbers here. If we look at
6 Exhibit 1, this is what was appealed and what was
7 provided to the county clerk in January. I think we
8 can --

9 COMMISSIONER ROBINSON: Did you say
10 Exhibit 1?

11 MR. GRIFFITH: Yeah, Exhibit 1.

12 BY MR. GRIFFITH:

13 Q. And there are some spreadsheets on there that
14 show -- just walk us through that, what the State's
15 appraised value was for these wells in Doddridge County
16 and what Antero calculated, based on the 36 percent.

17 A. So the taxpayer value was calculated using the
18 State's template, but instead of the 20 percent
19 operating expense, using a 36 percent operating expense
20 allowance, which is indicative what Antero's actual
21 operating expenses are, and then removing the maximum.

22 Q. Okay.

23 And let's look at Exhibit 13. And this is an
24 appraisal that Antero had done on their behalf by a

Page 44

1 company called Hein & Associates. And I think, you
2 know, you've been in contact with those appraisers as
3 well. No one is here to testify to it today, but I
4 think you have a general understanding of what kind of
5 factored into this valuation by Hein.

6 If you could walk us through that. And
7 there's some differences between Hein's calculations
8 and, obviously, what the State's value was, and Antero's
9 value. And if you could just walk us through what the
10 differences were there, in terms of operating expense.
11 I think there was some difference in production decline
12 and the capitalization rate that Hein used.

13 A. Right.

14 So Hein was asked to independently value the
15 wells in Doddridge County to determine a fair market
16 value, based on their methodology, not using the State's
17 value template. It is based on an income approach, a
18 discounted cash flow of the well itself. But where
19 their calculation varies slightly is that they use
20 actual operating expenses and they look at industry
21 participants' operating expenses to ensure that Antero
22 is not including something that wouldn't be indicative
23 of the industry. Because if these wells were going to
24 be sold, you would look at what the well is producing

11 (Pages 41 to 44)

Page 45

1 and then you'd look at what your expenses are going to
2 be to produce that revenue.

3 So Hein went out to the market to determine
4 that the operating expenses were reasonable. They also
5 looked at instead of-- the State breaks down the state
6 of West Virginia into districts, and then determines the
7 decline of wells, based on those districts. Where Hein
8 actually looked at the decline of wells in Doddridge
9 County specifically, to use those declines.

10 And actually ended up having a lower floor, a
11 more conservative floor than the State does, but a more
12 aggressive first year, based on how wells are actually
13 producing in Doddridge County.

14 And then their cap rate was slightly
15 different, because they included a factor for the
16 volatility of the oil and gas market, where the State of
17 West Virginia just uses a rate that is more general.

18 Q. Okay.

19 Let's move on to Exhibit 12. This is kind of
20 a compromised value, for lack of a better term, that
21 Altus calculated on behalf of Antero. Discuss what this
22 compromised value is based on.

23 A. So if we look at the values, right now all of
24 the wells combined in Doddridge County that are under

Page 46

1 appeal are appraised at \$514 million. We had already
2 discussed the value under appeal, on the appeal letter,
3 was \$279 million. And that's based on using the
4 36 percent and no cap.

5 The compromise here -- and what we didn't talk
6 about is the Hein appraisal came in at 202 million,
7 which is even lower than the value appeal.

8 The compromise here is a value of
9 \$421 million. And what that is is we think that the
10 most egregious thing wrong with the West Virginia tax
11 calculation and where they are acting outside of their
12 legal authority is the maximum operating expenses. So
13 if we just removed that maximum, we keep it at
14 20 percent, the valuation variables that calculate
15 operating expense, but we remove the maximum, that gets
16 us to a value of \$421 million.

17 MR. GRIFFITH: I think that's all I have
18 for Kirsten.

19 MR. MUDRINICH: I have some questions.

20 * * *

Page 47

1 CROSS-EXAMINATION
2 BY MR. MUDRINICH:

3 Q. Kirsten, are you familiar with the legislative
4 rule?

5 A. I am.

6 Q. Do you know of any provision in there that
7 allows a taxpayer to submit actual operating expenses in
8 lieu of the Tax Department using the industry average?

9 A. I'm not aware of any place in the legislative
10 rule, but it was in the administrative notices for the
11 past several years, and the return instructions.

12 Q. But it's not in the rule.

13 A. It is not in the rule.

14 Q. And in the rule, on page 4, it talks about the
15 average industry operating expenses, that every five
16 years the tax commissioner shall determine the average
17 annual industry operating expenses per well.

18 And it doesn't specifically say a percentage
19 or anything like that. So if you have two wells -- if
20 you have four operators, two of them submit expenses of
21 50,000, two of them submit expenses of 100,000, the
22 average operating expense, mathematically, would be
23 75,000, correct?

24 A. I would agree. But when you use that in

Page 48

1 conjunction with a percentage and a maximum, then you're
2 no longer applying an average to every taxpayer.

3 Q. And we'll have a witness talk about the
4 percentage.

5 But that would be an average, the 75,000,
6 that's an average.

7 A. Correct, yes.

8 Q. On Exhibit 2, on August 25 -- and we'll just
9 talk about Marcellus horizontal wells. Antero submitted
10 that their average operating expense per well was
11 817,000, correct?

12 A. That's correct.

13 Q. And included in that figure would be all the
14 post-wellhead costs that we talked about on Exhibit --
15 the chart exhibit -- Exhibit 5.

16 A. Yes.

17 Q. And on Exhibit 3, the December 7 e-mail.

18 A. Yeah.

19 Q. What were the average operating expenses that
20 Antero was claiming on those?

21 A. So on the e-mail from December 7, we don't
22 talk about the average operating expenses.

23 Q. Oh, I'm sorry, I'm at the wrong exhibit.

24 There's a --

12 (Pages 45 to 48)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 49

1 MR. GRIFFITH: It is an exhibit.

2 A. It's the same exhibit, I believe.

3 BY MR. MUDRINICH:

4 Q. It's the public comment that Antero filed on
5 August 1.

6 MR. MUDRINICH: Is that in here, Craig?

7 MR. GRIFFITH: Yes.

8 A. That's correct, yes.

9 BY MR. MUDRINICH:

10 Q. What are the industry operating expenses
11 there -- Antero's operating expenses?

12 A. Sure.

13 So in the letter we noted that the average
14 operating expenses were 44 percent of revenue, with the
15 average per well being 1.1 million. And then when we
16 sent the e-mail to Jeff, we did note that we had made a
17 mistake on that letter and that we needed to correct the
18 numbers, and that the new numbers were provided below.
19 Which were the 36 percent and the 817.

20 Q. So the public comment was 1.5 million, and
21 then the corrected letter was 817 million (sic),
22 correct?

23 A. Yes.

24 Q. What's the difference?

Page 51

1 tax year -- we actually walked the State through the
2 calculations from an invoice level down to the well
3 level. So in this packet, we do not, but we have walked
4 the State through those calculations.

5 In this packet we do have the per-well cost,
6 which were provided to Jeff on August 25. And there was
7 no question about that at that time, since we had
8 already been through it in the last year.

9 Q. And this would be your per-well cost that
10 include all those, what I call post-production costs,
11 through the Sherwood facility, through the other -- down
12 the line?

13 A. Yes. And it's broken down by type, yes.

14 Q. Let's go to that diagram, which is Exhibit 5.

15 A. (Witness complies.)

16 Q. Starting at the far left.

17 Do you see these two wells and a well line?

18 A. Yep.

19 Q. Who owns the wells in the well line?

20 A. Antero.

21 Q. So these operating costs cover the well in the
22 well line; is that correct?

23 A. It covers lifting the gas out of the ground.

24 Q. Now, lifting gas out of the ground, which is a

Page 50

1 A. The difference is expenses that were not
2 related to West Virginia wells.

3 Q. But you also stated that they track their
4 expenses on a well-by-well basis.

5 A. They do.

6 Q. Correct?

7 So they would know the expenses from just the
8 West Virginia wells?

9 A. Yes, there was an error in the data we used to
10 combine -- to do the average.

11 Q. Let's talk briefly about this tracking revenue
12 and expenses to well level. Do we have anything in this
13 package showing how that's done?

14 A. Showing how it's done?

15 Q. Yeah. Because I'm curious. You say they
16 track expenses to the well. So we're going to know this
17 well produced this much gas, sold for that price --
18 because you report that price on each well on a
19 return -- and the expense you're claiming, per that
20 well. Do you have the -- how you calculated what you
21 believe were the per-well expenses for any particular
22 well?

23 A. So for the 2016 tax year -- so not in this
24 packet, but we have been through testimony for the 2016

Page 52

1 well line to this.

2 Now we have a gathering line.

3 A. Correct.

4 Q. I believe your testimony was some gathering
5 lines are owned by third parties?

6 A. Uh-huh.

7 Q. And some gathering lines are owned by Antero
8 themselves.

9 A. That's correct.

10 Q. Let's talk briefly about the ones Antero owns
11 themselves.

12 Do we have a breakdown of the gathering
13 expenses for the Antero owned versus the expenses for
14 the Antero not owned?

15 A. Yes, that exists. But I don't have that in
16 this diagram.

17 Q. So this figure includes what a third party
18 charged and what Antero charged themselves?

19 A. It includes what a third party charged and
20 what Antero incurred as an expense to run their
21 gathering and compression lines. They don't charge
22 themselves.

23 Q. What type of expenses were they claiming for
24 their own?

13 (Pages 49 to 52)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 53 1 A. They're significantly lower than third party. 2 But I don't have that exact number. 3 Q. So if we -- assuming, arguendo, you can claim 4 these expenses -- and we have some dispute about that -- 5 we don't know the difference in value between the 6 Antero-owned wells and the third-party gathering wells. 7 Because I would think the Antero-owned wells would be 8 more profitable if they own the gathering line? 9 A. I think that's a fair assumption. 10 Q. But we don't have that broke down? 11 A. I'm certain that the State has been given that 12 information. But, no, it's not in this packet. And 13 it's likely related to the 2016 tax year. 14 Q. Looking further at -- and Antero doesn't own 15 this natural gas processing plant, correct? 16 A. No. MarkWest. 17 Q. So all the gas from Doddridge County goes 18 through that processing plant? 19 A. Wet gas goes through that processing plant. 20 Q. And does Doddridge County have wet gas? 21 A. It does. 22 Q. And I might have another witness that might be 23 better. 24 A. Yeah, it does have wet gas. Yes.	Page 54 1 Q. And on one of these exhibits it shows a lot of 2 the sales at the Sherwood plant. That would be dry gas? 3 A. Once it's processed, is it dry gas? Is that 4 what you're asking? 5 Q. A lot of these, like, for instance, Exhibit 7, 6 which we'll get to in a little more depth later, talks 7 about a delivery point at the Sherwood processing plant. 8 A. Yes. 9 Q. So a lot of gas is going to be sold right 10 there at the processing plant? 11 A. Yes. 12 Q. And then we have these other transportation 13 charges. These are for -- so some of the gas is not 14 sold at the Sherwood plant? 15 A. That's correct. 16 Q. And these are the ones you're claiming the 17 additional transportation costs on? 18 A. That's correct. 19 Q. And who owns that line? 20 A. Who owns the transportation lines? 21 Q. Uh-huh. 22 Who are you paying these -- 23 A. Not Antero. 24 Q. So you're paying various --
Page 55 1 A. We're paying third party. 2 Q. And I guess it's your claim that Antero's 3 field line goes all the way to Louisiana, if that's 4 where the gas is sold? 5 A. So the -- 6 Q. I believe the regulation talks about field 7 line point of sale. 8 A. Correct. 9 Q. So I just want to make it clear of what Antero 10 is claiming. They are claiming that their field line 11 extends to their -- all to the point of sale? 12 A. So the field line point of sale is kind of a 13 funny term, in that there is only one point of sale. 14 The gas changes hands at one point. And that is 15 either -- it depends on the contract of the gas. But, 16 yes, a lot of times it's post-transportation. Most of 17 the time it's post-transportation to a distribution 18 pipeline. 19 So if the State wants gross revenue reported 20 on the return -- which is also in the legislative 21 rule -- I don't know where it says I can report anything 22 but gross revenue. I have to report gross revenue, and 23 my only gross revenue number is where it's sold. So 24 whether you want to call that the field line point of	Page 56 1 sale, yes, I guess we'd have to call it a field-line 2 point of sale, because it is the only point of sale. 3 Q. Is there a meter at the end of the well line, 4 going back at the far left here? 5 A. Is there wellhead meter? 6 Q. Yeah. 7 A. Of volume, yes. 8 Q. Of course Antero -- I don't know if they own 9 any of the mineral land, the oil and gas lands -- or 10 most of theirs is probably leased; is that correct? 11 A. You'd have to ask Phil that question. 12 Q. That seems to be, when you look at the returns 13 they filed, they list all these royalty owners. 14 A. Yes. 15 Q. Kind of an indication that they are actually 16 leasing the gas rights from somebody else. 17 Has there been an analysis done of any of 18 these leases to see if the royalty owner is sharing in 19 the burden of all these expenses you're claiming, to get 20 it to the end users? In other words, all these 21 gathering and compression and processing and 22 transportation costs that you have listed as totaling -- 23 on this one, 357 million, and an average of 544 million, 24 if any of that has come out of the royalty owners'

14 (Pages 53 to 56)

Page 57

1 royalty check, if they share in the expenses?
 2 A. That's on a contract-by-contract basis.
 3 Q. But it's indeed possible?
 4 A. It's possible.
 5 Q. And there's been no analysis done to reduce
 6 any of these claimed expenses by that amount that's
 7 withheld from the royalty owners?
 8 A. And there's also no mechanism in the State's
 9 calculation of value to allow the royalty owner to take
 10 that expense.
 11 Q. But, indeed, if they're sharing in it, then
 12 Antero's burden is not as high as this, what is claimed
 13 here. This isn't netting out anything that was deducted
 14 from the royalty owner's check, correct?
 15 A. That is correct.
 16 Q. And I'm also curious, this has an average
 17 operating cost per well or \$544,000, when the previous
 18 ones -- we've seen 1.153 and an 817 million (sic)
 19 average expense. Which is the average expense?
 20 A. So the 544 average is in the conventional
 21 wells. Which if you look at the letter that was sent
 22 on -- or the e-mail that was sent on August 25, and you
 23 can look at some of the conventional wells and see that
 24 their operating expenses are as low as, you know, 5,700,

Page 59

1 if you have conventional wells, you report that as a
 2 conventional well and get the 5,000, or this year
 3 40 percent, I believe it is.
 4 A. Yeah. And we are not -- we didn't appeal any
 5 of those.
 6 Q. You didn't appeal any of those?
 7 A. We did not. Even though they're operating at
 8 a loss.
 9 Q. But those costs are included in what you're
 10 claiming the costs are?
 11 A. That's a diagram just to illustrate that the
 12 \$175,000 is not even close to being realistic.
 13 Q. But I see their lifting costs are \$41,000, on
 14 that diagram.
 15 A. On average, yes.
 16 Q. And it's all these third-party post-production
 17 costs that you're claiming here today, that's basically
 18 the big dig difference in --
 19 A. Well, gathering and compression is in the
 20 post-production -- well, I guess you can -- yes,
 21 third-party --
 22 Q. There is a meter --
 23 A. Yes.
 24 Q. There's a meter here, so.

Page 58

1 10,000. So when you take those numbers and average them
 2 with the higher Marcellus ones, that's where the 544
 3 comes in. And we've already stated that the million
 4 dollars was an error.
 5 Q. When I say the August 25 response that the
 6 Marcellus, you claimed \$817 million (sic) -- I mean
 7 817,000 -- excuse me -- Marcellus. And we've got these,
 8 on that, there's typical producing wells operating at a
 9 loss and the average expense of 6,100.
 10 How many typical wells are fitting in these
 11 numbers equation?
 12 A. I mean I don't have a count, but there's four
 13 pages of them. And then there's -- the rest are
 14 Marcellus.
 15 Q. The vast majority of them are Marcellus?
 16 A. The vast majority are Marcellus.
 17 But it's not an insignificant number of
 18 conventionals. So when you're doing a straight average,
 19 it brings it down. If we were to do a weighted average,
 20 like we suggested the State should do with their
 21 operating expense, then you'd see a different number
 22 there. But the 544 was a straight average.
 23 Q. You are aware that the convention well is not
 24 given the same expenses or valued as the Marcellus. So

Page 60

1 A. The third-party costs are what's driving the
 2 difference, correct.
 3 Q. Are you aware of anything the regs that
 4 specifically allow you to deduct third-party
 5 post-production costs, post-wellhead production costs?
 6 A. Well, it's double taxation if you don't,
 7 because you're taxing those third parties on their
 8 assets already. So if I include the income stream in my
 9 well value calculation, you're essentially taxing their
 10 income stream as well.
 11 Q. But it's your income stream to maybe -- your
 12 income may be reduced -- your expenses may include
 13 amounts that the royalty owner is bearing the burden?
 14 A. It is possible that there's a fraction of
 15 those costs. But I again would say that even if we took
 16 royalty on average is 12-1/2 percent, correct? So even
 17 if we took 12-1/2 percent and assumed that every single
 18 royalty owner is sharing in 100 percent of the
 19 post-production costs, the most that 817,000 is going to
 20 change is 80, maybe 90 thousand dollars, on average. So
 21 we're still talking about \$780,000, on average,
 22 operating expense. Even if you took the whole
 23 12 percent, 12-1/2 percent out.
 24 Q. But there hasn't been the numbers run to show

15 (Pages 57 to 60)

Page 61 1 the amount, correct? 2 A. That's correct. But we still have an issue, 3 regardless. 4 Q. Let's go to Exhibit 7. These would be the gas 5 transaction confirmations. 6 A. (Witness complies.) 7 Q. So we don't have the actual contract attached 8 here. This says: Pricing details removed. 9 So I take it there's more to these documents 10 than what's been provided? 11 A. The State was provided actual copies that did 12 not have the gas price redacted. But for the hearings, 13 the gas price has been removed. 14 Q. So they are not in the record. 15 A. They are not in here. 16 Q. And the affidavit -- again, this is just an 17 affidavit of one of the purchasers? 18 A. Correct. 19 Q. And, again, we don't have the actual contract 20 to look at? 21 A. No, the actual contract is not, but the 22 delivery confirmation is available. 23 Q. The delivery confirmations for Doddridge 24 County, West Virginia?	Page 62 1 A. That's correct. 2 Q. And I think I -- you can correct me if I'm 3 wrong -- there was an exhibit, I don't believe I've seen 4 in some of the other hearings, about the -- which was 5 the sales? 6 A. Exhibit 15. 7 Q. Yeah. 8 Is this new? 9 A. Is it new? 10 Q. I mean I'm not objecting to it -- 11 A. Yes, it's new. 12 Q. But I haven't seen it before. 13 A. Do you need a copy? Or do you have it? 14 Q. I have it somewhere. 15 So let's turn to Exhibit 15. Can you -- 16 because we haven't really had this before, can you 17 explain to me what this exhibit is showing. 18 A. Sure. 19 The exhibit is showing the purchaser of the 20 gas for the 2015 calendar year, the location at which it 21 was sold, the index in which the price was determined 22 the total sales amount to that purchaser at that place, 23 the amount they purchased, and then the price at which 24 they purchased that.
Page 63 1 And the percentage is the percentage of the 2 total purchases for 2015 that that makes up. Now, this 3 is a lot of information to take in, so at the bottom of 4 page 2, it's been summarized by where the gas was sold. 5 Q. Okay. 6 A. So you'll see that the Doddridge County -- 7 40.5 percent is sold in Doddridge County. And then 8 40 -- almost 44 percent is sold to the TCO Pool in 9 southern West Virginia. 10 Q. And this is companywide, this isn't specific 11 to just the sale of the Doddridge County gas? 12 A. This is specific to West Virginia. 13 Q. West Virginia? 14 A. Yes. 15 Q. So you report the production and the receipts 16 for each well throughout the state. 17 A. Correct. 18 Q. So how did you determine, or how does the 19 company determine -- they got this well here in 20 Doddridge County, what the sales price is that they are 21 getting for that well to determine the gross receipts 22 that they are reporting on the return? 23 A. That's outside of the Tax Department, I 24 believe. I don't have an answer to that.	Page 64 1 Q. So we basically don't -- when we're reporting 2 the gross proceeds for that well, we might have one well 3 that you're reporting all Sherwood Doddridge County 4 delivery price. We may have another well that you may 5 be reporting TCO Pool price. Or we may have a well 6 that's including some of all of this. But we don't know 7 how we got to those. 8 A. And this is a publicly traded company that is 9 audited, and who is responsible to their royalty owners 10 So I imagine there's a very detailed process to go 11 through to allocate the correct revenue to each well and 12 royalty owner. But that's outside of the tax function. 13 Q. So it's allocated to a well and not really 14 tracked to a specific well, just how much they are 15 getting for that gas out of that specific well? 16 A. Jan, this is outside of my expertise. 17 Q. Fair answer. 18 This -- the Hein appraisal, that's Exhibit -- 19 MR. GRIFFITH: It's 12 -- 13. 20 BY MR. MUDRINICH: 21 Q. It says Expert Report of James Harden. 22 He's not here today, is he? 23 A. He's not. 24 Q. So I can't really cross-examine him about any

16 (Pages 61 to 64)

Page 65

1 of the details in this report?
 2 A. No.
 3 Q. And you're just familiar with it because he
 4 was hired to perform -- but you didn't perform any of
 5 the work on this.
 6 A. No.
 7 Q. Give me a second. I may be done.
 8 Just one other thing. It's the survey that
 9 Antero filled out. And that's Exhibit 6, I believe.
 10 You mentioned that, in looking at that survey,
 11 it didn't contain basically any lines to report all
 12 these post-production expenses that you're claiming
 13 should be allowed. Is that correct?
 14 A. That's correct.
 15 Q. And there is a list for "other," to give
 16 people an opportunity if they believe something is a
 17 direct operating expense that they can include. And
 18 nothing was filled out on this report.
 19 A. That's correct.
 20 MR. MUDRINICH: No further questions.
 21 MR. GRIFFITH: I have follow-ups, but you
 22 already addressed them. It's almost like you've done
 23 one of two of these hearings.
 24 So that's all I have for Kirsten.

Page 67

1 A. Sure.
 2 I'm Phil Yoo, I'm the EPA accounting and chief
 3 accounting officer at Antero Resources. I'm a certified
 4 public accountant, and have been a professional
 5 accountant for 25 years.
 6 Q. We've heard a lot about this Exhibit 6, the
 7 survey that was produced or circulated by the Tax
 8 Department in 2014, and then Antero submitted its answer
 9 in 2014. Your name is on that. If you want to talk
 10 about what your understanding was of that survey, when
 11 it was provided to you, and what your thought process
 12 was when you were filling that out.
 13 A. Sure.
 14 This survey lists what we call -- what we
 15 typically refer to as lifting expenses or lease
 16 operating expenses. And so the types of categories are
 17 listed here are basically the cost to get the gas or oil
 18 and gas out of the ground as opposed to taking it any
 19 farther than that.
 20 Q. Okay.
 21 And if there had been some specific line items
 22 on there for some of the expenses we've discussed today,
 23 like compression and gathering and processing,
 24 transportation, that would have been included by Antero,

Page 66

1 COMMISSIONER ROBINSON: Do you have
 2 anything else?
 3 MR. MUDRINICH: Not for her, no.
 4 But they have another witness.
 5 MR. GRIFFITH: Yeah, we have one more
 6 witness, which will be -- it will be briefer. That's
 7 not a commentary on --
 8 COMMISSIONER ROBINSON: Yeah, we're over
 9 the one-hour limit. But go ahead.
 10 * * *
 11 (Brief break)
 12 * * *
 13 MR. GRIFFITH: We have one final witness,
 14 it's Phil Yoo from Antero.
 15 * * *
 16 PHIL YOO
 17 being previously duly sworn, was examined and testified
 18 as follows:
 19 * * *
 20 DIRECT EXAMINATION
 21 BY MR. GRIFFITH:
 22 Q. Phil, if you could just state your name for
 23 the record and discuss your background and what you do
 24 with Antero.

Page 68

1 correct?
 2 A. Absolutely. It would have been a
 3 significantly higher number, obviously.
 4 Q. And we've heard some questions about the
 5 "other expenses" line. Was that something that drew
 6 your attention at all, where you thought you could
 7 provide an additional -- I think the average that we
 8 calculated here was 33,000 per well, where you could
 9 have crammed in an additional 700,000 to 800,000 dollars
 10 of expenses, per average, on just the "other expenses"
 11 line?
 12 A. Yeah. I mean I guess it doesn't really make a
 13 whole lot of sense, because they are listing all these
 14 expenses. The total that we reported for expenses were
 15 \$7.7 million. It would have been like listing at least
 16 20 times that in the "other" category. And we basically
 17 just didn't think we were being asked for those other
 18 expenses.
 19 Q. Would it be possible for any Marcellus
 20 producer to incur only \$33,000 of expense per horizontal
 21 Marcellus well?
 22 A. No, that's just not -- I mean this survey
 23 shows that we incurred \$7.7 million to produce
 24 \$771 million. That would be an incredibly profitable

17 (Pages 65 to 68)

Page 69

1 business. And we're -- we don't make that much money
2 per well.

3 Q. Let's move on to Exhibit 7, the affidavit we
4 discussed from NextEra Energy. It indicates that
5 there's no free on-board shipping point in the contracts
6 between Antero and its purchaser. Is that consistent
7 with other contracts that Antero has with other
8 purchasers?

9 A. Yes. And, in fact, you'll see that one of the
10 transaction confirmations, or most of them, should refer
11 to something called an NAESB, which is kind of a
12 standard contract that we use in the industry. And that
13 contract provides that we deliver gas to point of sale.
14 There's no free on-board shipping.

15 Q. Can you comment on the fact that in this
16 affidavit, NextEra mentions or discusses that fact that
17 its delivery point for this gas that it's purchasing is
18 at the Dominion Transmission line, a couple different
19 Dominion Transmission lines or meters in Doddridge
20 County.

21 Is that consistent with all purchasers, or are
22 there other purchasers that purchase at different
23 delivery points?

24 A. No, that is not -- each purchaser purchases at

Page 70

1 different points. And, in fact, some purchasers even
2 purchase at multiple delivery points. So in Exhibit 15,
3 on the second page, there's a summary of all the
4 individual purchasers. And the summary at the end of
5 that exhibit shows that -- you can see where all the
6 different sales point are, and that Doddridge County
7 sales, back in this year, only made up 40 percent of our
8 sales for the year.

9 Q. And those sales were, as we discussed, the
10 price per MMBTU was much less for those sales than the
11 other sales, correct?

12 A. Correct.

13 Q. Have you in any other context, any other audit
14 by the State, severance tax audit or any other context,
15 had the Tax Department challenge your point of sale, how
16 you're reporting those revenues?

17 A. No. So and, in fact, we have been audited by
18 the State for severance tax purposes. And in that
19 severance tax audit, they -- severance tax requires us
20 to report gross sells as well. But severance tax
21 actually allows the deduction of those types of
22 transportation processing costs, to bring -- to
23 effectively net the cost back to the wellhead.

24 They actually came to our offices, reviewed

Page 71

1 our sales contracts, and took no exception to any of
2 costs that we were deducting.

3 Q. Okay.

4 And let's -- finally, we'll look at
5 Exhibit 14, which is something that we are looking at
6 for first time. This is Antero's SEC Form 10-K for the
7 fiscal year ending December 31, 2015. Flip to pages --
8 this is just an excerpt from that, because it's a large
9 document, but we wanted to include some provisions from
10 that document.

11 Discuss the lease operating expenses, kind of
12 the narrative on pages 46 and 47 about lease operating
13 expenses and gathering and compression, processing and
14 transportation expenses. And then you can move on to
15 the actual income statement information.

16 A. Sure.

17 So, as Craig mentioned, this is a document
18 that we are required to file publicly with the Security
19 and Exchange Commission, it's part of being a public
20 company. And in that document we're required to
21 describe the principal components of our cost structure.
22 The lease operating expenses, as it says there, these
23 are the day-to-day operating costs incurred to maintain
24 production of our natural gas, including monitoring

Page 72

1 wells, produced water treatment, disposal, et cetera.
2 These are the costs that I was referring to as lifting
3 costs or lease operating costs. And those costs would
4 equate to what we filled in and were in the survey, in
5 Exhibit 6. And the types of categories or costs that
6 are listed there are typical of lease operating cost.

7 The next major category of our costs are
8 gathering, compression, processing and transportation.
9 These are all the costs to take the gas from the
10 wellhead beyond -- and in that diagram, in Exhibit 5, is
11 basically once you get past the wellhead, it's the
12 gathering, the processing, and the transportation it
13 takes, our costs to market.

14 And then if you turn to the last page in that
15 exhibit, page F5, you can see -- these are our financial
16 statements for the whole year, so they do include
17 West Virginia and Ohio production. But if you look kind
18 of halfway down the page there, in operating expenses,
19 you'll see our lease operating expenses are \$36 million
20 for 2015, and our gathering, compression and
21 transportation are 659 million. Again, almost 20 fold
22 what our lease operating expenses are.

23 MR. GRIFFITH: That's all I have for Phil.

24 * * *

18 (Pages 69 to 72)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 73

CROSS-EXAMINATION

BY MR. MUDRINICH:

Q. Phil, turn back to the survey.

A. (Witness complies.)

Q. So is it your testimony that you didn't include all these other expenses that you're claiming here today because there wasn't a specific line item for it?

A. Yes.

Q. And you didn't feel -- you didn't see any need to, since you're believing that these are actual operating expenses that should be allowed, you didn't include them in the "other expenses"?

A. My feeling was that we were not asked to list those other expenses. And, once again, I mean I think if we were asked to list those expenses, we would have been -- they would have been listed. And presuming that adding a line item in, that would represent 20 fold what the other categories are, just isn't something I would have expected a survey to ask us.

Q. And you're aware that this expense survey that you and the other producers submitted for this -- expenses for calendar year 2013, would have been first used for the tax year 2015?

Page 74

A. I'm aware of that now. I wasn't at the time I filled it out.

Q. And did Antero dispute any of the values they got for the year 2015?

A. We did not dispute -- or did not appeal the values for 2015. But back in 2015, commodity prices were much higher, and the values -- or this 20 percent rule and 175,000 probably wouldn't have come into play as much. And we also didn't have as much production back in 2015 -- or as many wells on line back in 2015.

Q. But still in 2015, we were at 150,000 per well, and most of your wells are kind of big. So you didn't -- Marcellus didn't really get into the 20 percent. So you didn't see anything wrong with the values, that you weren't getting \$800,000 worth of expenses back then?

A. I wouldn't say that we didn't see anything wrong with the values. We chose not to appeal the values. But back then we also had a lot less of wells in production.

Q. I want to go back to the 10-K.

A. Uh-huh.

Q. Before we go to that, you mentioned that you had been audited for severance tax. Are you aware of

Page 75

anything in the property tax rule that basically links allowable expenses for severance tax to transfer over as to being the allowable expense for property tax?

A. No, I'm not aware of anything.

Q. A different kind of tax, one is taxed on the privilege of getting the gas out of the ground, and property taxes are taxing basically the value of the personal property there?

A. That's my understanding, yes.

Q. And let's go down to the 10-K, the last page.

A. Uh-huh.

Q. I'm curious, I see all these revenues, and I don't see anything for royalties as an expense or anything. Where does that come into the equation?

A. These numbers are all net of royalties. That's the way financial statements for oil and gas producers are prepared.

Q. Oh, okay.

So the natural gas sales would be just -- that would be net of royalties?

A. That's correct.

Q. Okay.

MR. MUDRINICH: I have no further questions for Mr. Yoo.

Page 76

MR. GRIFFITH: I don't have anything further for Phil either.

We will ask that -- we submitted a number of documents, but to the extent that we didn't have those submitted into evidence as we went along, we would ask that that be done.

MR. MUDRINICH: Yeah, I have no objection. I will, as I've done in other hearings, I want to point out that I have no objection to the appraisal of Hein going in, and the affidavit. But I just want to note that we don't have that appraiser who did that here, to cross-examine, nor do we have the actual contracts with respect to the affidavit. I just want to note that for the record, it should go to weight given.

But other than that, no objection.

COMMISSIONER ROBINSON: Have you both presented?

MR. MUDRINICH: We have the State's case now.

COMMISSIONER ROBINSON: Okay. I'm sorry.

MR. MUDRINICH: And I'll call, it's our first witness, Jeff Amburgey.

* * *

19 (Pages 73 to 76)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 77

1 JEFF AMBURGEY

2 having been previously duly sworn, was examined and
3 testified as follows:

4 * * *

5 DIRECT EXAMINATION

6 BY MR. MUDRINICH:

7 Q. State your name for the record.

8 A. Jeff Amburgey.

9 Q. And your position with the Tax Department?

10 A. I'm the director of the property tax division.

11 Q. And in your role as director, I've brought --
12 we have here to talk about the survey and the variables
13 that are published with the Secretary of State. Are you
14 the one responsible for those?

15 A. I am.

16 Q. Let's talk about the -- since we're here,
17 about the Marcellus. We published last year a --
18 we allowed \$150,000 cap -- or \$150,000 average, I would
19 like to say, in the -- not to -- in a 20 percent, not to
20 exceed the 150,000; is that correct?

21 A. That's correct.

22 Q. And when we filed the variables for next year,
23 we had a 175,000 and the 20 percent, correct?

24 A. When we filed them tentative, there was 150.

Page 79

1 said it was a million-one. And now we're down to
2 whatever, 817.3 So all during this process, when we did the
4 review of the previous survey, it was clear to me that
5 what --6 MR. AMBURGEY: What's his name again?
7 Sorry.

8 MS. HOOVER: Phil.

9 A. -- what Phil had filed was not what they were
10 claiming now. So we eliminated Antero's data from the
11 survey.12 And while doing so, we had the survey of
13 maybe -- I'm going to make up the number -- ten
14 producers or so. I can see there were some high
15 numbers, and we also eliminated some low numbers, such
16 as the 50,000 per well or whatever. And ended up with
17 actually what I would call an average operating expense
18 of 175,000.

19 So I increased it, based upon the review.

20

21 BY MR. MUDRINICH:

22 Q. Okay.

23 Now, a review of all -- of course we can't
24 show everybody's survey because we want those to be

Page 78

1 After public comment and review, we increased it to 17.
2 Q. And can you give us some explanation for how
3 that increased.4 A. Yes. Some of the documents that are already
5 in the record, WVONGA and IOGA, two oil and gas
6 associations, submitted data, public comments to the
7 variables, concerning the 150,000 and percentages and
8 things of that nature.9 When we got that information, e-mails were
10 sent to those associations, saying: This is just a
11 summary. I can't use -- I can't use what you've sent
12 me, I need all the backup data.13 Eventually we got some backup data, but time
14 was running out.15 And I spoke with Jan and Cindy. And what we
16 decided to do was to review the previous survey, to see
17 if we could glean anything extra from that. And we
18 increased -- although it's not a -- to discuss here, the
19 conventional wells, we increased the percentage, mainly
20 due to the decline in price.21 With the Marcellus wells, we have been meeting
22 with Antero for a couple of years now, as has been
23 testified to. We've had -- well, the survey said 33,000
24 a well. Then the comments to the first 15 variables

Page 80

1 truthful. And we like to keep those confidential,
2 because we don't want to disclose what somebody's
3 operating expenses are to maybe a competitor.

4 A. Correct.

5 We -- and I think that we put in the letter
6 that it will be kept confidential. And so you are
7 right.8 Q. And all these comments -- you might have
9 testified to that, but when we received the WVONGA and
10 Antero's comments, and there's some others, they
11 included figures ranging from like 800,000 to
12 1.1 million, correct?

13 A. Correct.

14 Q. And did we receive any backup to support how
15 those things were derived?16 A. I think probably at the eleventh hour we saw
17 some backup information. But from my perspective, it
18 was too late to really do a thorough review.

19 Q. Okay.

20 MR. MUDRINICH: I don't have any further
21 questions that I can think of.

22 Craig?

23 MR. GRIFFITH: Yeah, I've got a few.

24

* * *

20 (Pages 77 to 80)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 81

1 CROSS - EXAMINATION
 2 BY MR. GRIFFITH:
 3 Q. We appreciate seeing you today.
 4 A. Good to be here.
 5 Q. Let's talk about that calculation a little
 6 bit. I think one thing you mentioned there, when you
 7 calculated the conventional, that the increase in
 8 percentage from, what, 30 percent to 45 percent, that
 9 was a result of the decrease in gas price?
 10 A. Correct.
 11 Q. There was a concurrent decrease in gas price
 12 for Marcellus wells as well, correct?
 13 A. Right, but the 20 percent did not seem out of
 14 line, after I reviewed it.
 15 Q. Well, okay.
 16 But can you explain that.
 17 A. I'd have to have the data in front of me. But
 18 what I can tell you is when I did that review, basically
 19 we looked at what the prices was during '14, when the
 20 survey went out, and what it was for '16 -- I guess '16.
 21 Am I right -- am I right on the year?
 22 But anyway --
 23 MS. HOOVER: '15.
 24 A. For '15.

Page 83

1 right?
 2 A. That's sounds close enough.
 3 Q. Yeah, that's on Exhibit 2.
 4 So I'm still confused as to how you stated
 5 20 percent, based on calendar year 2015 reporting for
 6 these producers. We've got the largest trade group that
 7 represents Marcellus producers at 38 percent. We've got
 8 the largest producer at 36 percent. Explain again how
 9 that 20 percent didn't move at all.
 10 A. Again, the data that was provided, as you see
 11 here, is just saying: you say 20 percent, we say 38.
 12 It's akin to me coming to here and saying:
 13 you should reduce the value of my house to 100,000
 14 because all the other houses in the neighborhood are
 15 worth 100,000.
 16 That's just a sheet of paper. I need the
 17 backup. Show me.
 18 Q. Pursuant to the e-mail that was sent on
 19 August 25, there were line items for each horizontal
 20 well that Antero owns statewide; is that right?
 21 A. Which one now?
 22 Q. This is Exhibit 2 that was provided pursuant
 23 to the August 25 e-mail to you.
 24 A. Yes, I see that.

Page 82

1 So I looked at the price decrease, decrease to
 2 the revenues on the surveys, and compared the expenses.
 3 And so there was not a significant change in 20 percent
 4 BY MR. GRIFFITH:
 5 Q. WVONGA -- and this is -- the WVONGA public
 6 comment letter had that percentage -- that 38 percent,
 7 is that correct? You saw that letter, that came to you,
 8 correct?
 9 A. I don't have it in front of me, but if you say
 10 that it's in the letter, I'll --
 11 Q. It is.
 12 MR. MUDRINICH: Where did you say the --
 13 MR. GRIFFITH: It's 9.
 14 BY MR. GRIFFITH:
 15 Q. So the percentage that WVONGA calculated was
 16 38 percent, correct?
 17 A. I see that, yes.
 18 Q. And you're aware that Antero is the largest
 19 producer in the state. That doesn't surprise you, I'm
 20 sure, to hear that, correct?
 21 A. I've heard that before.
 22 Q. And, let's see, the letter that they
 23 provided -- or the e-mail that they provided to you in
 24 August 25 had their percentage at 36 percent; is that

Page 84

1 Q. And there's -- there are columns there for
 2 each category that -- of expense that Antero claimed
 3 that feeds into that 36 percent and that \$817,000 per
 4 well; is that right?
 5 A. That's correct.
 6 Q. And Antero had -- I don't think it's a secret
 7 we -- Antero appealed its 2016 values as well with the
 8 Tax Department, correct?
 9 A. Correct.
 10 Q. And leading up to that, there was scads of
 11 information regarding these expenses that were provided
 12 to the Tax Department; is that right?
 13 A. That's correct.
 14 Q. So what else is the Tax Department looking
 15 here for, for these expenses? What other backup
 16 information can Antero or these other producers
 17 statewide possibly provide to move this number?
 18 A. Well, I relied heavily on Cindi and Jan when
 19 reviewing this stuff. And that's why we have been in
 20 hearings in October with Antero, and why we're in
 21 hearings now. Is there is a dispute over whether all
 22 these expenses are allowable. They have changed from
 23 million-one to 817,000. There was an error. Could
 24 there be another error? Did they take out the royalty

21 (Pages 81 to 84)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

Page 85

1 owners out of that \$17,000? There are discrepancies,
2 and we are not comfortable with the data at this point.

3 Q. Antero is -- I mean, and leaving -- setting
4 aside Antero's August 1 public comment letter and then
5 the follow-up. The \$817,000 is still pretty consistent
6 with what WVONGA reported, correct? Which was at
7 \$720,000 per well.

8 A. Correct.

9 Q. Relatively consistent.

10 Let's talk about -- let's talk about your
11 decision to throw out Antero's survey. And we kind of
12 established that Antero is the largest producer. Does
13 it make sense to throw out the survey of the producer
14 that produces 40 percent of the Marcellus gas statewide?
15 Or, instead, follow up with that producer and ask for
16 additional information regarding its expenses, to come
17 to a -- really an accurate calculation of operating
18 expenses?

19 A. Well, again, that's why we have been in these
20 hearings. There is a dispute over what expenses are
21 allowable. So Antero's survey was clearly incomplete,
22 so it was thrown out. There are other producers that
23 did file surveys, that the data looked more consistent.
24 And so those surveys were utilized.

Page 87

1 used to determine the average industry expenses.

2 Q. The legislative rule doesn't tie you to that
3 survey, obviously. Otherwise, you wouldn't have moved
4 up from 150 to 175 for this tax year, correct?

5 A. Correct.

6 Q. In other words, that survey serves as a base
7 for kind of the first year, and then you get public
8 comments based on the variables that you circulate,
9 correct?

10 A. Correct.

11 And we plan to do another survey this year.

12 Q. Ahead of the five-year schedule?

13 A. Correct.

14 Q. Okay.

15 And that -- is that kind of a response to, you
16 know, us being here today and WVONGA reaching out to the
17 Tax Department? Is that fair to say?

18 A. That's fair to say.

19 Q. Let's talk about that calculation a little bit
20 more, of the 175. Walk us through that again. I think
21 you probably discussed it. But with Antero being thrown
22 out, is it a weighted average? What were the
23 discussions with WVONGA? I wasn't really part of that
24 discussion that resulted in you going just from 150 to

Page 86

1 Q. So let's assume that Antero had looked at that
2 "other" line on that survey in 2013, and put all these
3 expenses that are included in the e-mail that came to
4 you on August 25 into that, would the Tax Department
5 have likely calculated a number much higher than 150
6 that was originally calculated? The 150,000 as
7 originally calculated for these wells.

8 A. Well, you -- Cindi would have compiled all
9 that data and she would have brought it to me and we
10 would have said, "Wow! This is a lot higher than
11 anybody else by, like, twofold." And so at that point,
12 we would have gotten to questioning: Why would this be
13 so high?

14 Q. We don't have any opportunity to look at those
15 other surveys to see if Antero actually is twofold
16 higher than any other producer, correct?

17 A. Correct.

18 Q. And, again, Antero's numbers are consistent
19 with what industries reported, pursuant to public
20 comments.

21 A. Correct.

22 But, again, that was not a result of a survey.
23 The legislative rule says the Tax Department shall do a
24 survey. And we did a survey, and that's the data that I

Page 88

1 175 per well.

2 A. We had public comments. We'd get just a
3 summary of the data. I ask for backup. At the eleventh
4 hour, we get some limited backup. And so I discussed
5 with Jan. We decided we would just go back and use the
6 survey that we had, the data that was filed as a result
7 of the survey that's mentioned in the legislative rule.
8 And, again, sensing that Antero's survey was incorrect,
9 it was taken out. And, likewise, there was some other
10 producers who had very small amounts, 50,000, in that
11 range, that were thrown out. And there were a couple of
12 higher ones that were thrown out.

13 But there were reputable -- when I say
14 "reputable," let me rephrase that word. There were
15 large Marcellus producers that were included in the
16 calculation, and the average -- and the weighted average
17 were both very close to 175,000.

18 Q. Did -- in your discussion with WVONGA, did
19 at any point did they just say: We'll live with that
20 for this year, that increasing 150 to 175, and revisit
21 it going forward?

22 A. Not to my knowledge. I don't recall having
23 such a discussion.

24 Q. Okay.

22 (Pages 85 to 88)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 89

1 We've talked about the 2013 survey. No line
2 items -- you would agree, no line items on there for
3 gathering or compression, processing or transportation,
4 correct?

5 A. Correct.

6 Q. And you had separate sheets for conventional
7 wells and Marcellus wells. But the line items on both
8 of those were identical; is that right?

9 A. I believe so.

10 Q. Fair to say that the 2013 survey was based on
11 format of a 2008 survey, where really we only had
12 conventional producers in the state?

13 A. Fair to say.

14 Q. Okay.

15 Does the return of the survey make an effort
16 to determine whether a particular producer is reporting
17 NGL revenue, whether they've got wet gas or dry gas?

18 A. No, that survey did not.

19 Q. The 2013 survey.

20 A. (The witness nodded his head.)

21 Q. Okay.

22 Does the return that is submitted to the
23 State -- or the survey try to determine where the point
24 of sale is for the producer? Or is it basically the

Page 90

1 honor system based on what is being reported by the
2 producer?

3 A. I assume -- Cindi could better answer that
4 when she had testified, but I assume it's pretty much on
5 the honor system.

6 Q. Okay.

7 And so you probably had wet gas producers and
8 dry gas producers, both -- both reporting that
9 information on the survey, based on -- you know, some
10 were selling -- or calculating their expenses near the
11 wellhead, for the dry gas producers. And then others
12 were calculating those expenses, the wet gas producers,
13 based on all these other expenses that go into getting
14 that gas to the well -- or to the point of sale,
15 correct?

16 A. I'm really no expert in knowing which taxpayer
17 has wet versus dry gas.

18 Q. Okay.

19 For the 2018 survey, is that something that's
20 going to be provided to industries so they can provide
21 some input before that's circulated?

22 A. I would imagine the new tax commissioner would
23 like to see that happen.

24 Q. Okay.

Page 91

1 Would you anticipate that there may be some
2 differentiation for dry gas producers or -- to determine
3 some of these other expenses that go into getting this
4 wet gas to the point of sale? Do you think there will
5 be compression and gathering expenses on there,
6 processing, transportation? Do you anticipate that
7 those will be listed on the new survey?

8 A. I anticipate there will be new categories.
9 What they will be, will not be my decision. Cindi is
10 more well aware of that than I am.

11 Q. Okay.

12 It'll likely be -- you'll have some input on
13 it, though, correct?

14 A. Sure.

15 And I'm sure the new tax commissioner, he's
16 the one who sent in the public comment when he worked
17 with the --

18 Q. I wasn't going to bring that up, but since you
19 did.

20 A. So I'm sure he knows plenty about the oil and
21 gas business, and he will have some input on to -- as to
22 what we put on the survey.

23 Q. Okay.

24 And we've touched on this. Administrative

Page 92

1 notices from the Tax Department for about 15 -- at least
2 a 15-year period, anything that's available on the
3 website, did invite producers to -- if they wanted to
4 have actual expenses that exceeded the averages
5 circulated by the State, that that could be submitted by
6 taxpayers, correct?

7 A. Correct.

8 Q. You're not aware of any change in the law that
9 would have precipitated removing that admin notice?

10 A. Not a change in the law. We removed that, we
11 were getting a lot of requests for that sort of thing.
12 And oftentimes when the data was provided, Cindi would
13 look at it and it was -- a lot of times for conventional
14 wells, it would be like "no, that doesn't qualify, that
15 doesn't qualify, that doesn't qualify." And so then
16 they'd end up getting the 5,000.

17 So we were going through a lot of work,
18 without much results. And so we eliminated that. I
19 think eliminating it is in line with the legislative
20 rule, which says that you shall subtract average
21 industry operating expenses.

22 Q. That's fair.

23 One thing on those average expenses, that
24 definition in the legislative rule, it talks about a

23 (Pages 89 to 92)

Page 93

1 single average, correct? It doesn't talk about --
2 there's no mention of two averages or a cap, correct?

3 A. Correct.

4 Q. Okay.

5 So why does the State use two separate
6 averages?

7 A. As I testified once before, when you get a
8 bunch of numbers and you take an average of them, the
9 result is a number. An average of numbers is a number,
10 not a percentage. The Tax Department has -- before I
11 arrived, had -- or at least before I was involved, had
12 this percentage in there as kind of a -- I call it a
13 safeguard, say, for conventional wells. It's 5,000 --

14 MR. AMBURGEY: Or what was the percentage
15 before?

16 MS. HOOVER: 30.

17 A. 5,000 or 30.

18 Well, if the well only produced 4,000, and we
19 allow a 5,000 deduction, you wouldn't have a value for
20 the well. And so the percentage is there to make sure
21 that every well that has production has a value. So if
22 we were to get rid of one or the other, I would get rid
23 of the percentage, because an average industry operating
24 expense is a number.

Page 95

1 these problems would go away. It's just like any
2 taxpayer. Nearly any taxpayer would be happy if they
3 got the value they wanted and wouldn't care how you got
4 there.

5 Q. Okay.

6 Just one final.

7 When this survey's circulated for -- it's
8 going to be circulated 2018; is that right?

9 A. We will send it out hopefully by April.

10 Q. Okay.

11 A. Of '17.

12 Q. Oh, this year. Okay.

13 So, yeah, that would be five years, would
14 2018.

15 Do you anticipate that there's going to be a
16 substantial change in this maximum amount or the
17 \$175,000 per well, based on what you've heard from
18 industry? If you get the proper amount of backup data
19 based on what WVONGA and Antero and other producers have
20 produced to you -- provided to you, do you anticipate a
21 significant increase in that \$175,000 cap that you're
22 using?

23 A. I will not hypothesize. We will get the data,
24 we are going to have to do a lot more looking into the

Page 94

1 BY MR. GRIFFITH:

2 Q. Okay. Let me think.

3 I mean from your discussions with the
4 industry, with WVONGA and some other producers, is it
5 your -- and I'm probably having you put words in their
6 mouth -- is it your thought that a lot of these
7 producers could probably live with that maximum amount
8 even if we don't think it's really necessarily supported
9 by the legislative rule, if we could just get to what we
10 think is a proper number?

11 A. Can you rephrase that? I'm not sure that I
12 caught it exactly.

13 Q. I'm probably trying to think -- asking you to
14 think on behalf of these producers and WVONGA that have
15 reached out to you. From your discussions with these --
16 and I think you've probably had more direct
17 conversations over the last year or so for Marcellus
18 wells with WVONGA -- do you think that they could live
19 with this maximum amount, even if we don't really think
20 that's provided for in the rule, if we would just get to
21 a proper number, not the 175 cap but something that --
22 more appropriate for what the industry sees as their
23 expense per well?

24 A. I would agree that if the number were higher,

Page 96

1 data. I will talk with the new tax commissioner to see
2 if maybe we can get someone from our auditing division
3 to assist us in analyzing these numbers. It's obviously
4 getting more complicated.

5 Q. You're going to live with that number,
6 whatever it comes out at, though, right? Correct? Once
7 you've looked at that backup information, whatever the
8 number spits out, if it's \$700,000 per well, that's what
9 we use going forward.

10 A. We will analyze the data and whatever the
11 number is, the number is.

12 Q. Okay.

13 MR. GRIFFITH: That's all I have.

14 * * *

15 REDIRECT EXAMINATION
16 BY MR. MUDRINICH:

17 Q. These post-production expenses make up the
18 bulk of what this taxpayer, and probably some of these
19 comments, are claiming is to be allowable. We haven't
20 allowed post-production expenses in the past.

21 A. Not to my knowledge.

22 MR. MUDRINICH: Nothing further.

23 MR. GRIFFITH: Just in a follow-up to that
24 question, just one thing.

24 (Pages 93 to 96)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 97

1 * * *

2 RE CROSS - EXAMINATION

3 BY MR. GRIFFITH:

4 Q. In the past, we're talking about mostly
5 conventional wells, though, correct?

6 A. Correct.

7 Q. So these wells are much -- you would agree
8 that these Marcellus wells operate much differently,
9 higher volumes, different sales point than the
10 conventional wells.

11 A. Yes, correct.

12 MR. GRIFFITH: Okay. That's all I have.

13 MR. MUDRINICH: And just one other thing.

14 * * *

15 REDIRECT EXAMINATION

16 BY MR. MUDRINICH:

17 Q. The -- it's been introduced -- and the person
18 is not here from Hein & Associates, with his appraisal.
19 Jeff, did you have something you want to say about that?

20 A. Yeah.

21 Kirsten mentioned that one of the differences
22 between what their appraiser did and what we do is the
23 rate of capitalization. The way we compute the rate of
24 capitalization is in the legislative rule. So we follow

Page 99

1 MR. MUDRINICH: What Cindi will he
2 referencing is that document, that group of appraisals
3 that we've already submitted to you.

4 * * *

5 CINDI HOOVER

6 having been previously duly sworn, was examined and
7 testified as follows:

8 * * *

9 DIRECT EXAMINATION

10 BY MR. MUDRINICH:

11 Q. Would you state your name for the record?

12 A. Cindi Hoover.

13 Q. And what's your position with the Tax
14 Department?15 A. Tax and revenue manager, special property
16 section. Primarily involved in the valuation of all oil
17 and gas for the State of West Virginia.18 Q. And in our packet, the exhibits, those are all
19 the appraisals that are under -- being contested here
20 today?

21 A. That is correct.

22 Q. Have you reviewed those appraisals?

23 A. Yes.

24 Q. And is it your belief that those appraisals

Page 98

1 the legislative rule. He did not.

2 And also to -- as I understand the rules,
3 to -- for the taxpayer to win in these situations, they
4 have to have clear and convincing evidence.5 They have produced an appraisal. They have
6 produced what they think it should be at 30-something
7 percent. And then they have produced what they call a
8 settlement value. So the taxpayer has provided you with
9 three separate values. I'm not sure which one's clear
10 and convincing. However, the Tax Department only has
11 one value.

12 MR. MUDRINICH: No further questions.

13 MR. GRIFFITH: I don't have anything
14 further.15 MR. MUDRINICH: We just need to put Cindi
16 on the stand for a few questions. Craig probably won't
17 have as many for her --

18 MR. GRIFFITH: No.

19 MR. MUDRINICH: -- since we have Jeff here.

20 MR. GRIFFITH: I saved a few that I was
21 going to ask Jeff, but I thought it was outside of his
22 area of expertise, so --23 MR. AMBURGEY: That's easy to get outside
24 of.

Page 100

1 were performed in accordance with the legislative rule
2 regarding producing oil and gas, as well as the
3 variables authorized by the legislative rule?

4 A. That is correct.

5 MR. MUDRINICH: I don't have any further
6 questions for Cindi.

7 * * *

8 CROSS - EXAMINATION

9 BY MR. GRIFFITH:

10 Q. Just a few, Cindi. Like, four questions.

11 I'm sorry, don't hold me to that, it'll be
12 more than four.13 We've heard testimony here today about
14 producers and where they sell their gas. You would
15 agree that there's a difference between where
16 conventional producers typically sell their gas and
17 where horizontal producers sell that gas, correct?

18 A. On some, yes.

19 Q. Okay.

20 And typically a conventional producer -- or a
21 lot of conventional producers will sell that gas right
22 at the wellhead.

23 A. Right.

24 Q. And for the horizontal producers, and what

25 (Pages 97 to 100)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

Page 101 1 we've heard today, a lot of them will sell, to the 2 extent they send it to the Sherwood facility, they may 3 sell it near that facility, right? 4 A. Right. 5 Q. Or they may transmit it farther down the 6 line -- transport it farther down the line and sell at 7 other delivery points; is that right? 8 A. That is correct. 9 Q. You would agree that operating expenses 10 increase for a producer the farther away from that point 11 of sale is from the production point, or the well. 12 A. Yes. 13 Q. And then you are aware that wet gas does have 14 to be processed before it's put into a line. You have 15 basically a separate line for the NGLs and a separate 16 line for the gas once it's processed, right? 17 A. Yes. 18 Q. And it costs something to do that processing, 19 correct? 20 A. Yes. 21 Q. And so, then, is it a logical conclusion that 22 a wet gas producer, like Antero here in Doddridge 23 County, would have a higher expense to get its gas to a 24 point of sale than an operator who produces dry gas?	Page 102 1 A. Yes. 2 MR. GRIFFITH: That's all I have. 3 * * * 4 REDIRECT EXAMINATION 5 BY MR. MUDRINICH: 6 Q. Cindi, we use the average industry operating 7 expenses based on the survey, correct? 8 A. That is correct. 9 Q. And the survey was not -- just not mentioned 10 in -- the word "survey" is not in the legislative rule, 11 but it's the determination of average operating 12 expenses. 13 A. Correct, in 4.3. 14 Q. And that is what you use. 15 A. Correct. 16 Q. And let's talk about additional operating 17 expenses for post-production activities. As far as you 18 know, the -- there's no -- there's been no specific 19 determination ever made that these are allowable 20 expenses. 21 A. Correct. 22 MR. MUDRINICH: Nothing further. 23 * * * 24
Page 103 1 RECROSS - EXAMINATION 2 BY MR. GRIFFITH: 3 Q. The Tax Department requires producers to 4 report their gross receipts based on a -- what's called 5 a field line point of sale, correct? 6 A. That is correct. 7 Q. And the operating expenses are intended to 8 capture all the operating expenses that a producer 9 incurs between the wellhead and where that point of sale 10 is, correct? 11 A. Right. 12 The average operating expenses that -- 13 Q. Okay. So -- 14 A. -- continue throughout the life of the well. 15 Q. And so -- and we already had testimony just a 16 couple minutes ago that there are a tremendous amount of 17 expenses incurred between that wellhead for Marcellus 18 producers and the field line point of sale, correct? 19 A. Correct. 20 Q. So if you didn't allow those, if those were 21 not factored into the calculation, then, as we heard 22 from Kirsten, we would have some double taxation here 23 correct? 24 A. I wouldn't say that, because we don't know	Page 104 1 that what's not been included is an allowable expense, 2 based on the point of sale. 3 Q. So if we're doing a true net income analysis 4 or valuation, part of that net income evaluation is to 5 include operating expenses, correct? 6 A. That is correct. 7 Q. And those operating expenses should include 8 everything that are designed to get that gas to the 9 point of sale, right? 10 A. It should include the average industry 11 operating expenses. 12 Q. We understand your position. Thanks. 13 MR. GRIFFITH: That's all we have. 14 * * * 15 REDIRECT EXAMINATION 16 BY MR. MUDRINICH: 17 Q. I'll turn to their exhibit. 18 Do you know if we consider a field line to 19 extend to Louisiana? 20 A. To my knowledge, no. 21 Q. A field line has generally been -- and, again, 22 we've talked -- we dealt mostly with conventional until 23 the advent of the Marcellus on this exhibit, the field 24 line would have been where?

26 (Pages 101 to 104)

Page 105

1 A. At the meter.
 2 MR. MUDRINICH: Nothing further.
 3 MR. GRIFFITH: A couple questions.
 4 * * *
 5 RE CROSS - EXAMINATION
 6 BY MR. GRIFFITH:
 7 Q. The legislative rule hasn't been updated
 8 since --
 9 A. 2005.
 10 Q. -- 2005.
 11 So that was prior to the Marcellus industry
 12 coming into the state, correct?
 13 A. That is correct.
 14 Q. Has -- is field line point of sale defined
 15 anywhere in that legislative rule or the code?
 16 A. That definition is not included.
 17 Q. Is there any instructions given to taxpayers
 18 to -- that for an alternate field line point of sale
 19 that's not the actual point of sale for the gas?
 20 A. No, there isn't.
 21 Q. So if Antero is selling -- has one sales point
 22 for a particular -- with a particular purchaser, and
 23 that happens to be in Louisiana, where else would they
 24 report that field line point of sale?

Page 107

1 We -- once there's three or four years of production, we
 2 do a three-year average. I think that was the change.
 3 MR. MUDRINICH: That was the only change.
 4 MS. HOOVER: That was the only change that
 5 was implemented in the 2005 legislative rule change. I
 6 think the date that the returns, you know, nothing with
 7 the valuation, but the date that the returns were due.
 8 But other than that, the expense -- the whole process is
 9 the same. The numbers may change yearly based upon
 10 whether --
 11 COMMISSIONER ROBINSON: Actual.
 12 MS. HOOVER: Right, right.
 13 COMMISSIONER ROBINSON: Okay.
 14 Does the State Tax Department have an audit
 15 division that you would utilize to verify the producers'
 16 numbers?
 17 MS. HOOVER: We do.
 18 COMMISSIONER ROBINSON: And is that like on
 19 site or --
 20 MS. HOOVER: We have --
 21 COMMISSIONER ROBINSON: -- just what they
 22 provide?
 23 MS. HOOVER: We have -- we have had our
 24 own, we do some desk audits ourselves. We have had

Page 106

1 A. They would report the gross receipts.
 2 Q. Based on where it's sold in Louisiana.
 3 A. Correct.
 4 MR. GRIFFITH: That's all I have.
 5 MR. MUDRINICH: Nothing further.
 6 Other than I move that the packet that we
 7 submitted, of all the appraisals and the legislative
 8 rule and the --
 9 MR. GRIFFITH: That's fine, yeah.
 10 MR. MUDRINICH: -- administrative notice be
 11 included in the record.
 12 COMMISSIONER ROBINSON: Okay.
 13 Do either of you have anything?
 14 MR. GRIFFITH: No closing, you've probably
 15 heard enough from us.
 16 COMMISSIONER ROBINSON: I've got a couple,
 17 a couple, three questions for the State Tax Department.
 18 Am I understanding that since 2005, the
 19 calculation has been the same basically every year,
 20 other than the variables? The method of calculation has
 21 been the same?
 22 MS. HOOVER: The method of calculation has
 23 been the same since 1992, with the exception of some
 24 updates in 2005, where we added the three-year average.

Page 108

1 auditors go to different producers and actually audit
 2 their books. We request information every year, we
 3 verify what they report to DEP with us. To see if,
 4 number one, we're picking up everyone that's filing
 5 production there, if they tell us they had no
 6 production.
 7 We also do selling price cross-checks, where
 8 we look at the average industry selling price to see if
 9 someone's falling out of line. And then we also at
 10 times look at if they're reporting greater than
 11 25 percent difference in Mcfs to DEP and to us. But
 12 some of those are done every year, some of them are done
 13 every so many, based upon, you know, the time that's
 14 allowed.
 15 COMMISSIONER ROBINSON: Okay.
 16 This question is more directed at the Antero
 17 representatives.
 18 When Antero made the decision -- and you may
 19 not be able to answer this other than assumption -- when
 20 Antero made the decision to come drill in West Virginia
 21 or Doddridge County, specifically -- but it would be in
 22 the state of West Virginia, because the State of
 23 West Virginia laws apply, I'm sure. Was there any
 24 investigation as to how the values would be calculated

27 (Pages 105 to 108)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 109 1 for the taxes at that point in time? Was that a 2 decision -- you may not be able to answer that, I'm 3 sure. But would it have been prudent? 4 MR. YOO: I think it's fair to say that 5 when we decide to drill a well anywhere, we look at all 6 the economic impacts of that well, including what our 7 understanding is of tax law in that area. 8 COMMISSIONER ROBINSON: Okay. 9 So the decision, obviously, was made to go 10 ahead even if you didn't realize that -- or if you 11 investigated, but you made the decision to go ahead and 12 drill. 13 The issue of the royalties and other -- you 14 know, that's something that I personally am concerned 15 with, because I'm a business person. We're all business 16 people. We know that there can be various levels of 17 profit built into some of these costs. And so, you 18 know, I'm concerned with that. And as I'm sure the 19 State Tax Department is. So, you know, that's just a 20 comment. I don't know if you care to respond to my 21 questions or comments, other than what you already have. 22 MR. YOO: Yeah, no. 23 COMMISSIONER ROBINSON: And I just have one 24 other comment, and it is from a personal point of view.	Page 110 1 You know, I'm a tax preparer, I've got corporate and 2 personal clients. And I'm going to just say this as 3 just a good old country boy and not -- obviously, I'm 4 not an attorney. But if I gave a tax return to a client 5 and said, "There's no place for what you call -- on the 6 return, for what you call the specific expenses, so I 7 left them off," I don't think that I would be employed 8 as a tax preparer. But that's merely my opinion. 9 I'm sorry, I did have one other question. 10 And it has to do with the exhibit -- I guess 2, where -- 11 from Craig Griffith, that indicates the cost of the well 12 is 817,000. And then the one from Mr. Shope that 13 indicates the cost is 1 million, 153. The last line 14 on -- or the last line on those schedules there, it says 15 "typical producing wells," and it says, "operating at a 16 loss \$6,100" on both of those. 17 Is there something that I'm not aware of here? 18 Because it would appear to me -- now, maybe I'm 19 misunderstanding, but if your cost is a million and 15, 20 and you're operating at a loss of 6,100, and then you 21 lower it to a cost of 817,000, and you're still saying 22 operating at a loss of 6,100. Is there something I'm 23 missing here? 24 MS. EVANS: So the typical producing wells
Page 111 1 are just the conventional wells. 2 COMMISSIONER ROBINSON: Oh. 3 MS. EVANS: So that line just refers to -- 4 COMMISSIONER ROBINSON: The conventional 5 MS. EVANS: Conventional, correct. 6 COMMISSIONER ROBINSON: All right. That 7 explains it. 8 I don't have any other questions. How about 9 the other? 10 COMMISSIONER TRAVIS: No, I'm good. 11 COMMISSIONER GLASPELL: Do you get paid for 12 your NGLs at MarkWest, or do you just give them to them, 13 for the wet gas? 14 MR. YOO: We market our NGLs. And that is 15 included in the proceeds as well for tax purposes here. 16 COMMISSIONER GLASPELL: And you said there 17 was some major gas producers, that their wellhead -- 18 their costs were substantially lower than Antero's. 19 Now, is that through bad management at the wellhead? 20 Can that be bad management at the wellhead? Was 21 somebody doing something really good? I mean if you own 22 a company and it costs you three times as much to do 23 something as another company, then how can that be 24 justified to continue, right? If that's the case.	Page 112 1 MR. GRIFFITH: Well, I think one of the 2 explanations which came up during this was the way 3 Antero sells its gas. Not all producers sell miles away 4 from the well. 5 COMMISSIONER GLASPELL: So they're selling 6 closer for less money, but more profits. 7 MR. GRIFFITH: Right. So their expense 8 would be lower because they don't have processing 9 expenses or -- 10 COMMISSIONER GLASPELL: So you're running 11 it farther away for less profits. 12 MR. GRIFFITH: Well -- 13 MS. EVANS: It has nothing to do with 14 profits. 15 MR. GRIFFITH: Yeah. 16 MS. EVANS: Because you're looking -- they 17 said they just didn't -- 18 COMMISSIONER GLASPELL: What were the net 19 profits of Antero last year? Net profit. 20 MS. EVANS: Well, if you look at the 21 schedule, you can -- Schedule 5, you can back out. They 22 show revenue and expenses. So -- 23 COMMISSIONER GLASPELL: But there was a net 24 profit.

28 (Pages 109 to 112)

Page 113

1 MS. EVANS: Yes. For the West Virginia
2 wells, I'm not sure about outside of -- the 10-K would
3 have that.

4 MR. YOO: So the other comment I would add
5 there that -- in terms of comparing producers, is that
6 Antero drills the longest laterals in West Virginia, by
7 far. So when you think about the amount of gas that's
8 produced, and by hucketing all Marcellus horizontal
9 wells together, it really doesn't make sense to take a
10 cost per well and decide to use that as an average.

11 Antero drills, on average, 9,000-foot
12 laterals in West Virginia. There are other producers
13 that may only drill wells that are 3 or 4 thousand feet.
14 That -- that implies that that -- those other producers'
15 wells would have half the production of our wells.
16 Let's just say their average was 4,000 and ours was 8.
17 That would imply they would have half the production,
18 which implies that they would have half the cost per
19 well.

20 MS. EVANS: And the other thing --

21 COMMISSIONER ROBINSON: But it shouldn't be
22 half the cost of the wellhead, right? It would be half
23 the cost if they shipped it three times as far.

24 MR. YOO: Yes, other than lifting cost,

Page 114

1 yes.

2 COMMISSIONER GLASPELL: So when you bring
3 it to the top, who cares? I mean, it's the whole --

4 MR. YOO: Absolutely.

5 MS. EVANS: The other thing that there
6 is --

7 MR. YOO: But the majority of the cost, as
8 we've pointed out, are actually beyond wellhead. I mean
9 the total costs at the wellhead are only a very small
10 fraction, like 30 or 40 thousand dollars per well. It's
11 all the other costs that make up --

12 COMMISSIONER ROBINSON: And you're putting
13 NGLs back in as profit on that well.

14 MR. YOO: We are.

15 COMMISSIONER ROBINSON: Okay.

16 MS. EVANS: Yeah. And the reason someone
17 else would have different is: Do they have a fully
18 integrated system where they own the gathering and
19 compression lines? Are they producing dry or wet gas?
20 So like some of the other stuff we talked about. Where
21 are they transporting it after the fact?

22 So if you have somebody who's producing dry
23 gas and owns their gathering and compression system,
24 their survey is going to look very different than

Page 115

1 someone who's producing wet gas who does not own their
2 gathering and compression system.

3 COMMISSIONER ROBINSON: So that's why we've
4 read in the papers that they're going with -- joining
5 with somebody to build five or six of these sites?

6 MR. YOO: Yeah, so what you read in the
7 paper there was that recently we actually entered into
8 an agreement with Mark West where we are going to own,
9 alongside of Mark West, some of the future plants -- the
10 future processing plants at Sherwood.

11 COMMISSIONER ROBINSON: Thank you.

12 MR. MUDRINICH: And I'd like to point out
13 some of that -- is we didn't actually have testimony
14 about it. We use a mass appraisal system. If we are
15 going to be looking at Antero and then looking at
16 everybody individually, we're out of the mass appraisal
17 environment. We'll have to be hiring all these
18 different people to look at everybody's return. Just
19 like the people that want the State to hire people to go
20 out and read the meters at the wellsite. So, you know,
21 you have a cost that's involved.

22 They have chosen a mass appraisal environment
23 to treat everybody similarly. Does that mean everybody
24 pays -- is some company more profitable than another

Page 116

1 paying the same amount of tax? It's possible. But
2 that's what comes in the mass appraisal environment.

3 COMMISSIONER ROBINSON: Okay. Okay. And
4 we --

5 MR. MUDRINICH: I'm done.

6 COMMISSIONER ROBINSON: Are we done?

7 MR. GRIFFITH: We're done.

8 COMMISSIONER ROBINSON: Okay.

9 We have it on our agenda for Tuesday's
10 meeting, I believe, to make a decision. So you will be
11 notified promptly, our decision on Tuesday.

12 MS. BRITTON: They won't be notified on
13 Tuesday, they'll be notified within a reasonable amount
14 of time after I'm able to get the orders out in the
15 mail. I do want a copy of your address to mail it to,
16 since there was a problem last time. I will FedEx it to
17 you.

18 MR. GRIFFITH: Sure.

19 COMMISSIONER ROBINSON: Thank you. Thank
20 you all.

21 * * *

22 (Whereupon, this proceeding was concluded
23 at 12:30 p.m.)

24 * * *

29 (Pages 113 to 116)

STRESKI REPORTING & VIDEO SERVICE 1-800-659-2249

Wheeling, WV Morgantown, WV Martinsburg, WV Charleston, WV Pittsburgh, PA Steubenville, OH

a19d3a6c-4de6-4059-b36e-b16a2d38f46b

Page 117

1 THE STATE OF :
2 WEST VIRGINIA :
3 : SS: CERTIFICATE
4 COUNTY OF OHIO :

5 I, CONNIE M. NICHOLS, Registered Professional
6 Reporter and Notary Public within and for the State of
7 West Virginia, duly commissioned and qualified, do
8 hereby certify that the witnesses herein were first duly
9 sworn to testify to the truth, the whole truth and
10 nothing but the truth in the cause aforesaid; and the
11 testimony then given by the witnesses was by me reduced
12 to stenotype; afterwards reduced to Computer Aided
13 Transcription under my direction and control; that the
14 foregoing is a true and correct transcription of the
15 proceedings.

16 I do further certify that these proceedings
17 were taken at the time and place in the foregoing
18 caption specified, and were completed.

19 I do further certify that I am not a relative,
20 counsel or attorney of either party, or otherwise
21 interested in the event of this action.

22 I, to the best of my ability, do further
23 certify that the attached transcript meets the
24 requirements set forth within Article 27, Chapter 47 of
the West Virginia Code.

IN WITNESS THEREOF, I have hereunto set my
hand and affixed my seal of office at Wheeling,
West Virginia, on the 10th day of March, 2017.



CONNIE M. NICHOLS, RPR
Notary Public within and for
the State of West Virginia

My commission expires:
October 16, 2021



30 (Page 117)

A		
ability 117:14	agreement 115:8	30:6,20 33:2,4,6,12 34:1,15
able 108:19 109:2 116:14	ahead 11:15 23:3 66:9 87:12	35:14 38:1 39:2,8 40:14,19
aboveentitled 1:22	109:10,11	40:24 41:20 43:16,24
absolutely 22:15 29:14 68:2	aided 117:7	44:21 45:21 48:9,20 49:4
114:4	akin 83:12	51:20 52:7,10,13,14,18,20
accept 24:13 39:5	allocate 64:11	53:14 54:23 55:9 56:8 65:9
account 42:3	allocated 64:13	66:14,24 67:3,8,24 69:6,7
accountant 67:4,5	allocations 33:7	74:3 78:22 82:18 83:20
accounting 3:10,10 13:1	allow 8:9 15:11 20:20 57:9	84:2,6,7,16,20 85:3,12 86:1
67:2,3	60:4 93:19 103:20	86:15 87:21 95:19 101:22
accurate 39:24 85:17	allowable 75:2,3 84:22 85:21	105:21 108:16,18,20 112:3
accurately 24:4	96:19 102:19 104:1	112:19 113:6,11 115:15
acting 13:15 46:11	allowance 8:9 14:10 26:14	anteroowned 53:6,7
action 117:13	38:15 43:20	anteros 8:5,10 15:9,16 25:19
activities 102:17	allowances 23:16	32:15 33:22 36:5 37:24
actual 9:4 15:9,16 16:6,15	allowed 7:4 8:12,13 10:5	38:9,23 41:8,15 43:20 44:8
16:21 19:16 23:15,21 24:2	15:13 16:22 23:11 36:3	49:11 55:2 57:12 71:6
24:11,13 28:16 38:15 39:6	38:11 39:5 65:13 73:12	79:10 80:10 85:4,11,21
42:11 43:20 44:20 47:7	77:18 96:20 108:14	86:18 88:8 111:18
61:7,11,19,21 71:15 73:11	allowing 15:20,23 20:8 21:2	anticipate 91:1,6,8 95:15,20
76:12 92:4 105:19 107:11	allows 23:14 47:7 70:21	anybody 86:11
add 113:4	alongside 115:9	anyway 26:1 81:22
added 27:7 41:12,14 106:24	alternate 105:18	apologize 6:4
adding 73:18	altus 1:3 3:9 8:1 12:18 24:19	appeal 1:4 7:11 11:9 46:1,2
additional 17:12,19 34:13	33:3 41:14 45:21	46:2,7 59:4,6 74:5,18
54:17 68:7,9 85:16 102:16	amburgey 3:12 4:15 14:24	appealed 13:9 43:6 84:7
address 8:3 116:15	17:11 76:22 77:1,8 79:6	appear 110:18
addressed 65:22	93:14 98:23	appearances 2:1 3:1
adjust 14:13	amended 6:18	applies 7:3
adjusted 42:21	amount 8:12 20:19 39:13	apply 108:23
admin 92:9	57:6 61:1 62:22,23 94:7,19	applying 48:2
administration 40:11	95:16,18 103:16 113:7	appraisal 7:1,7 10:1 43:24
administrative 23:20,23,24	116:1,13	46:6 64:18 76:9 97:18 98:5
47:10 91:24 106:10	amounts 39:10 60:13 88:10	115:14,16,22 116:2
advent 104:23	analysis 56:17 57:5 104:3	appraisals 10:15 99:2,19,22
affidavit 33:14,20 34:5,11	analyze 96:10	99:24 106:7
34:20 61:16,17 69:3,16	analyzing 96:3	appraised 43:15 46:1
76:10,13	annual 42:17 47:17	appraiser 76:11 97:22
affixed 117:17	answer 63:24 64:17 67:8	appraisers 44:2
aforesaid 117:6	90:3 108:19 109:2	appreciate 81:3
agenda 7:13 116:9	antero 1:3 2:3 3:11 5:15	approach 13:20 18:1 36:20
aggressive 45:12	7:13,24 8:2,7,11,19 9:2,3,9	44:17
ago 103:16	9:13 11:7,9 12:19 13:2,8	appropriate 94:22
agree 32:19 47:24 89:2	13:12,17 16:4,7,13 19:21	april 95:9
94:24 97:7 100:15 101:9	19:24 21:22 22:8 24:10,15	area 98:22 109:7
	26:22 27:4 28:12,13,15	areas 41:14

arena 12:24
arent 23:17
arguendo 53:3
arrived 93:11
article 6:17 117:15
aside 85:4
asked 17:11,12 23:10 44:14
 68:17 73:14,16
asking 36:17 54:4 94:13
asks 15:7
assert 37:23
assessed 8:4 19:18
assessment 1:4
assessments 7:1
assessor 6:23 7:7
assets 60:8
assist 96:3
assistant 3:7
associates 44:1 97:18
associations 78:6,10
assume 86:1 90:3,4
assumed 60:17
assuming 53:3
assumption 39:12 53:9
 108:19
attached 61:7 117:14
attachment 17:20
attention 32:7 68:6
attorney 9:22 110:4 117:12
atypical 22:7
audience 3:14
audit 70:13,14,19 107:14
 108:1
audited 64:9 70:17 74:24
auditing 96:2
auditors 108:1
audits 107:24
august 14:24 16:17,24 17:5
 17:5,11,13,18,18,20 48:8
 49:5 51:6 57:22 58:5 82:24
 83:19,23 85:4 86:4
authority 13:16 46:12
authorized 100:3
available 61:22 92:2
average 10:3,9,9 15:4,21
 16:16 19:23,24 21:7,8

22:10,17,24 25:14,18,20
 26:4,6,11,12 31:24,24 32:4
 32:6,9,16 37:10 38:1,2
 41:5,6,19,23 42:1,4 47:8,15
 47:16,22 48:2,5,6,10,19,22
 49:13,15 50:10 56:23
 57:16,19,19,20 58:1,9,18
 58:19,22 59:15 60:16,20,21
 68:7,10 77:18 79:17 87:1
 87:22 88:16,16 92:20,23
 93:1,8,9,23 102:6,11
 103:12 104:10 106:24
 107:2 108:8 113:10,11,16
averages 92:4 93:2,6
aware 24:5 30:20 42:18,24
 47:9 58:23 60:3 73:21 74:1
 74:24 75:4 82:18 91:10
 92:8 101:13 110:17

B

b 5:11 6:17
back 26:23 28:19 30:2 33:14
 36:6,24 37:1 56:4 70:7,23
 73:3 74:6,10,10,16,19,21
 88:5 112:21 114:13
background 12:15 13:1
 66:23
backside 33:13
backup 78:12,13 80:14,17
 83:17 84:15 88:3,4 95:18
 96:7
bad 111:19,20
base 18:1 87:6
based 9:10 18:5,21,23 24:11
 28:10 35:9 37:24 39:9,9,13
 41:3 43:16 44:16,17 45:7
 45:12,22 46:3 79:19 83:5
 87:8 89:10 90:1,9,13 95:17
 95:19 102:7 103:4 104:2
 106:2 107:9 108:13
bases 40:17 42:14
basic 39:4
basically 59:17 64:1 65:11
 67:17 68:16 72:11 75:1,7
 81:18 89:24 101:15 106:19
basing 8:15 38:21
basis 8:16 10:1 42:17 50:4

57:2
battles 39:19
bearing 60:13
beginning 40:14
behalf 2:3,12 7:23 43:24
 45:21 94:14
belief 99:24
believe 13:14 16:5,19 17:5
 49:2 50:21 52:4 55:6 59:3
 62:3 63:24 65:9,16 89:9
 116:10
believes 8:8
believing 73:11
benefit 21:14 22:2
best 6:7 117:14
better 45:20 53:23 90:3
beyond 72:10 114:8
big 13:2,3,17 59:18 74:12
bigger 19:17 21:20 22:3
bit 27:22 28:22 29:15 81:6
 87:19
black 25:2
blue 41:12
board 1:11 6:14,19 7:5
boards 6:20
books 108:2
bottom 25:11 35:10 39:21
 63:3
boy 110:3
break 25:11 66:11
breakdown 52:12
breaking 25:3
breaks 45:5
brief 37:5 66:11
briefer 66:6
briefly 9:23 13:5 43:4 50:11
 52:10
bring 70:22 91:18 114:2
bringing 25:24
brings 58:19
britton 3:7 116:12
broke 53:10
broken 17:21,21 25:9 51:13
brought 37:5 77:11 86:9
bucket 19:1
bucketing 113:8

buckets 25:12
build 115:5
built 109:17
bulk 96:18
bunch 14:15 93:8
burden 7:9 56:19 57:12
 60:13
business 13:1,5 30:7 69:1
 91:21 109:15,15

C

c 6:2 12:12 47:1 66:20 73:1
 77:5 81:1 96:15 97:2,15
 99:9 100:8 102:4 103:1
 104:15 105:5 117:2,2
calculate 8:23 46:14
calculated 20:12 31:23
 40:24 43:1,16,17 45:21
 50:20 68:8 81:7 82:15 86:5
 86:6,7 108:24
calculating 27:4 28:10 33:2
 90:10,12
calculation 13:23 14:2 16:22
 20:2 23:17 36:19 44:19
 46:11 57:9 60:9 81:5 85:17
 87:19 88:16 103:21 106:19
 106:20,22
calculations 15:4 37:6 44:7
 51:2,4
calendar 25:6 62:20 73:23
 83:5
call 6:13 21:7 51:10 55:24
 56:1 67:14 76:21 79:17
 93:12 98:7 110:5,6
called 44:1 69:11 103:4
cant 26:15,17 64:24 78:11
 78:11 79:23
cap 8:23 15:12 20:8,13 21:6
 21:6,9 38:16 42:2 45:14
 46:4 77:18 93:2 94:21
 95:21
capacity 29:24 36:7
capitalization 44:12 97:23
 97:24
capped 21:18
caption 117:11
capture 8:10 103:8

care 95:3 109:20
cares 114:3
case 9:24 19:11 76:18 111:24
cash 13:22 19:7,8 44:18
catchup 14:8
categories 39:7 67:16 72:5
 73:19 91:8
category 37:4 68:16 72:7
 84:2
caught 94:12
cause 117:6
cbm 13:24
certain 28:24 29:3 33:12
 53:11
certified 67:3
certify 117:5,10,12,14
cetera 72:1
chair 6:8
challenge 70:15
change 17:15 23:20 24:5,7
 38:24 60:20 82:3 92:8,10
 95:16 107:2,3,4,5,9
changed 20:17 23:24 32:23
 38:24 39:23 84:22
changes 20:10 38:23 39:24
 55:14
chapter 6:16 117:15
charge 52:21
charged 52:18,18,19
charges 54:13
charleston 2:6,16 7:23
chart 40:23 48:15
check 57:1,14
chief 3:10 67:2
chose 74:18
chosen 115:22
cindi 10:24 84:18 86:8 90:3
 91:9 92:12 98:15 99:1,5,12
 100:6,10 102:6
cindy 78:15
circuit 7:11
circulate 87:8
circulated 30:18 42:14,20
 67:7 90:21 92:5 95:7,8
circulates 16:9
citizenry 6:22

claim 8:12 53:3 55:2
claimed 39:8,10 57:6,12
 58:6 84:2
claiming 48:20 50:19 52:23
 54:16 55:10,10 56:19
 59:10,17 65:12 73:6 79:10
 96:19
clear 7:6 55:9 79:4 98:4,9
clearly 85:21
clerk 43:7
client 110:4
clients 110:2
close 59:12 83:2 88:17
closer 112:6
closing 106:14
cnx 42:7
code 6:17 105:15 117:15
colorado 8:2
columns 27:7 41:12,13 84:1
com 2:9
combine 50:10
combined 45:24
come 10:3 24:20 32:10 41:24
 42:4,6 56:24 74:8 75:14
 85:16 108:20
comes 33:8 35:22 58:3 96:6
 116:2
comfortable 85:2
coming 83:12 105:12
comment 10:5 15:7 34:19
 49:4,20 69:15 78:1 82:6
 85:4 91:16 109:20,24
 113:4
commentary 66:7
comments 10:5 16:8 42:19
 78:6,24 80:8,10 86:20 87:8
 88:2 96:19 109:21
commission 3:4,8 6:5,10,18
 71:19 114:12 117:22
commissioned 117:5
commissioner 3:5,6 6:4,11
 6:12,13,23 7:8,16 9:14,17
 11:17,22 12:2 22:13,16,20
 22:22 23:2 43:9 47:16 66:1
 66:8 76:16,20 90:22 91:15
 96:1 106:12,16 107:11,13

107:18,21 108:15 109:8,23
 111:2,4,6,10,11,16 112:5
 112:10,18,23 113:21 114:2
 114:15 115:3,11 116:3,6,8
 116:19
commodity 74:6
company 13:3,13,18 24:4
 44:1 63:19 64:8 71:20
 111:22,23 115:24
companywide 63:10
comparable 41:8
compare 37:13
compared 9:2 82:2
comparing 113:5
competitor 80:3
compiled 86:8
completed 117:11
complex 25:1
compliance 12:21
complicated 96:4
complies 51:15 61:6 73:4
components 71:21
compress 26:4
compressing 14:4
compression 17:22 26:3,15
 27:17 28:3,14 34:17 38:6
 52:21 56:21 59:19 67:23
 71:13 72:8,20 89:3 91:5
 114:19,23 115:2
compromise 46:5,8
compromised 45:20,22
compute 97:23
computer 117:7
concerned 109:14,18
concerning 78:7
concluded 116:22
conclusion 101:21
concurrent 81:11
conduct 10:1
confidential 26:24 80:1,6
confidentiality 34:4
confirmation 61:22
confirmations 33:12,18,24
 34:3 61:5,23 69:10
confused 83:4
conjunction 16:8 48:1

connection 8:7
connie 3:15 117:4,20
conservative 45:11
consider 8:9 14:2 104:18
considered 9:12
consistent 39:24 40:6,14,24
 69:6,21 85:5,9,23 86:18
consultant 3:9
cont 3:1 5:1
contact 44:2
contain 65:11
contested 99:19
context 70:13,14
continue 103:14 111:24
contract 55:15 61:7,19,21
 69:12,13
contractbycontract 57:2
contracts 34:1 69:5,7 71:1
 76:12
control 117:8
controller 3:10
convene 6:19
convention 58:23
conventional 13:24 25:22
 27:8,19 57:20,23 59:1,2
 78:19 81:7 89:6,12 92:13
 93:13 97:5,10 100:16,20,21
 104:22 111:1,4,5
conventionals 58:18
conversations 94:17
convincing 7:7 98:4,10
copies 61:11
copy 16:24 62:13 116:15
corporate 3:10 110:1
corporation 1:3
corportion 5:16
correct 17:7,16 22:8 28:7
 29:13 31:12 32:18 34:23
 38:6 40:1,2,8,15,16 41:1,2
 42:17 43:1 47:23 48:7,11
 48:12 49:8,17,22 50:6
 51:22 52:3,9 53:15 54:15
 54:18 55:8 56:10 57:14,15
 60:2,16 61:1,2,18 62:1,2
 63:17 64:11 65:13,14,19
 68:1 70:11,12 75:21 77:20

77:21,23 80:4,12,13 81:10
 81:12 82:7,8,16,20 84:5,8,9
 84:13 85:6,8 86:16,17,21
 87:4,5,9,10,13 89:4,5 90:15
 91:13 92:6,7 93:1,2,3 96:6
 97:5,6,11 99:21 100:4,17
 101:8,19 102:7,8,13,15,21
 103:5,6,10,18,19,23 104:5
 104:6 105:12,13 106:3
 111:5 117:8
corrected 49:21
cost 19:3,11,12,16 21:3
 28:16 30:11 35:16,22 51:5
 51:9 57:17 67:17 70:23
 71:21 72:6 110:11,13,19,21
 113:10,18,22,23,24 114:7
 115:21
costs 19:6 20:18 25:14 26:3
 27:10,16 36:12 48:14
 51:10,21 54:17 56:22 59:9
 59:10,13,17 60:1,5,5,15,19
 70:22 71:2,23 72:2,3,3,3,5
 72:7,9,13 101:18 109:17
 111:18,22 114:9,11
counsel 117:12
count 58:12
counties 30:4,13 36:16
country 9:8 29:21 110:3
county 1:5,11,16 3:4,5,6,8
 6:10,18,20,22,22 8:5 9:5
 13:3,4,9 18:3 28:7 30:3,8
 30:12,12 34:21,23 35:14,23
 40:20 43:7,15 44:15 45:9
 45:13,24 53:17,20 61:24
 63:6,7,11,20 64:3 69:20
 70:6 101:23 108:21 117:2
couple 7:24 69:18 78:22
 88:11 103:16 105:3 106:16
 106:17
course 56:8 79:23
court 1:17 3:15 7:11
courthouse 1:16
courtroom 6:7
cover 38:5 51:21
covers 51:23
craig 2:4,9 7:14,22 10:18

49:6 71:17 80:22 98:16 110:11 crammed 68:9 crosschecks 108:7 crossed 12:5 crosexamination 4:9,13,17 5:5 crosexamine 64:24 76:12 cubic 22:23 curious 50:15 57:16 75:12 current 18:20 cynthia 3:13 5:3	deliver 69:13 delivering 34:2 delivery 33:19 34:16,21,22 35:1,12 54:7 61:22,23 64:4 69:17,23 70:2 101:7 delmont 35:18 demand 30:1 denied 7:10 dep 41:10,13 108:3,11 department 2:13,15 3:12,13 5:14 8:14,18,20 9:23 14:21 16:9 23:19,24 24:8 26:22 27:2 31:22 36:23 38:11 39:5 42:14 47:8 63:23 67:8 70:15 77:9 84:8,12,14 86:4 86:23 87:17 92:1 93:10 98:10 99:14 103:3 106:17 107:14 109:19 departments 8:4,8 39:22 depending 35:11 depends 55:15 depth 54:6 derived 80:15 describe 28:21 71:21 descriptions 27:9 deserves 7:5 designed 13:23,24 104:8 desk 107:24 detail 26:20 detailed 64:10 details 61:8 65:1 determination 102:11,19 determine 44:15 45:3 47:16 63:18,19,21 87:1 89:16,23 91:2 determined 18:15,24 62:21 determines 45:6 developed 10:14 developing 41:19 diagram 24:19,22 25:1,11 28:5 51:14 52:16 59:11,14 72:10 didnt 16:14 17:14 24:4,14 27:18 30:18 31:9,17 38:24 46:5 59:4,6 65:4,11 68:17 73:5,10,10,12 74:9,13,13	74:14,17 76:4 83:9 103:20 109:10 112:17 115:13 difference 38:12 44:11 49:24 50:1 53:5 59:18 60:2 100:15 108:11 differences 44:7,10 97:21 different 17:3 25:12 29:20 30:10,15 31:6 35:1 39:15 39:16 45:15 58:21 69:18 69:22 70:1,6 75:5 97:9 108:1 114:17,24 115:18 differentiate 30:22,23 31:18 differentiation 91:2 differently 97:8 dig 59:18 direct 4:8,12,16 5:4 27:9 65:17 94:16 directed 108:16 direction 117:8 director 3:12 77:10,11 disclose 80:2 discounted 13:21 19:7,8 44:18 discrepancies 85:1 discrepancy 19:17 discuss 12:15 13:5,7 15:3 16:4 29:15,17 38:8 41:15 45:21 66:23 71:11 78:18 discussed 17:4 46:2 67:22 69:4 70:9 87:21 88:4 discusses 33:16 69:16 discussing 38:16 41:9 discussion 38:4 87:24 88:18 88:23 discussions 24:12 87:23 94:3 94:15 disposal 72:1 disproportionately 9:1 dispute 53:4 74:3,5 84:21 85:20 distribution 29:9 34:12 35:7 55:17 districts 45:6,7 division 2:13 15:1 16:3 77:10 96:2 107:15 document 26:24 40:10 71:9
D		
d 4:1 5:1 6:2 12:12 66:20 77:5 96:15 97:15 99:9 102:4 104:15 data 16:15 24:14 42:9,12 50:9 78:6,12,13 79:10 81:17 83:10 85:2,23 86:9 86:24 88:3,6 92:12 95:18 95:23 96:1,10 date 1:12 107:6,7 day 117:17 daytoday 71:23 deal 13:17 dealt 104:22 december 16:3,11,18 48:17 48:21 71:7 decide 109:5 113:10 decided 78:16 88:5 decision 30:7 39:9 85:11 91:9 108:18,20 109:2,9,11 116:10,11 decisions 6:21 decline 18:15,21 44:11 45:7 45:8 78:20 declines 45:9 decrease 81:9,11 82:1,1 decreased 40:5 deduct 60:4 deducted 57:13 deducting 71:2 deduction 70:21 93:19 default 8:21 defined 105:14 definition 92:24 105:16		

71:10,17,20 99:2
documentation 17:19
documents 61:9 76:4 78:4
doddridge 1:5,11,16 3:4,5,6
 3:8 6:10,18,20,22,22 8:5
 9:5 13:3,3 18:3 28:6 30:3,8
 30:12 31:4 34:21,23 35:13
 35:23 36:7 40:20 43:15
 44:15 45:8,13,24 53:17,20
 61:23 63:6,7,11,20 64:3
 69:19 70:6 101:22 108:21
doddridgespecific 43:5
doesnt 14:2,16 21:4,6 26:14
 27:16 30:23 34:13 47:18
 53:14 68:12 82:19 87:2
 92:14,15,15 93:1 113:9
doing 12:21 23:18 32:6 42:8
 58:18 79:12 104:3 111:21
dollar 35:21
dollars 21:13 22:6 58:4
 60:20 68:9 114:10
dominion 29:22 69:18,19
dont 9:12 11:15 27:17 31:2
 33:7 42:5 48:21 52:15,21
 53:2,5,10 55:21 56:8 58:12
 60:6 61:7,19 62:3 63:24
 64:1,6 69:1 75:13 76:1,11
 80:2,20 82:9 84:6 86:14
 88:22 94:8,19 98:13 100:5
 100:11 103:24 109:20
 110:7 111:8 112:8
double 60:6 103:22
drew 68:5
drill 108:20 109:5,12 113:13
drilling 10:10 18:17
drills 113:6,11
drives 18:18 35:2
driving 60:1
drop 20:15 38:20
dropped 40:13
drops 38:22
dry 26:8 29:12 30:22 31:9,12
 32:24 54:2,3 89:17 90:8,11
 90:17 91:2 101:24 114:19
 114:22
due 78:20 107:7

duly 12:9 66:17 77:2 99:6
 117:5,5

E

e 1:10 4:1 5:1,11 6:2,2 7:19
 7:19,19 9:19,19,19 12:12
 12:12 47:1 66:20,20 73:1
 77:5,5 81:1 96:15,15,15
 97:2,2,15,15,15 99:9,9
 100:8 102:4,4,4 103:1,1
 104:15,15,15 105:5,5 117:2
 117:2
earlier 29:16 32:14
early 6:5 16:11
east 1:17 2:5
easy 98:23
economic 109:6
economics 13:1
educational 12:24
effectively 70:23
effort 30:21 89:15
egregious 46:10
eia 40:17
either 13:24 30:12 35:17
 55:15 76:2 106:13 117:12
election 6:6
electrical 27:12
eleventh 80:16 88:3
eliminated 79:10,15 92:18
eliminating 92:19
email 2:9,19 16:2,5 17:4,11
 17:19 48:17,21 49:16
 57:22 82:23 83:18,23 86:3
emails 78:9
employed 110:7
ended 45:10 79:16
energy 34:6 40:10 69:4
ensure 44:21
entails 29:18
entered 115:7
environment 115:17,22
 116:2
epa 67:2
equalization 1:11 6:14,19
equate 72:4
equation 58:11 75:14
error 50:9 58:4 84:23,24

errors 17:6
especially 32:11
esquire 2:4,14
essentially 28:5 60:9
established 85:12
et 72:1
evaluation 104:4
evans 3:9 4:7 8:1 12:8,18
 22:19,21,24 110:24 111:3,5
 112:13,16,20 113:1,20
 114:5,16
event 117:13
eventually 78:13
everybody 6:8 31:5 115:16
 115:23,23
everybodys 79:24 115:18
evidence 7:3,4,7 76:5 98:4
evident 16:14
exact 53:2
exactly 31:5 94:12
examination 4:8,12,16,18,20
 5:4,6,8
examined 12:9 66:17 77:2
 99:6
example 19:22 31:23 32:1
examples 22:6
exceed 77:20
exceeded 92:4
exception 71:1 106:23
excerpt 71:8
exchange 71:19
excuse 58:7
executive 3:7
exhibit 5:13,14 14:23 15:5
 16:1 18:2 19:19 24:18
 26:21 33:11 34:24 35:5
 36:22 38:4,9 39:14 40:9
 41:10 43:6,10,11,23 45:19
 48:8,14,15,15,17,23 49:1,2
 51:14 54:5 61:4 62:3,6,15
 62:17,19 64:18 65:9 67:6
 69:3 70:2,5 71:5 72:5,10
 72:15 83:3,22 104:17,23
 110:10
exhibits 5:15 14:19,20 38:8
 54:1 99:18

exist 27:18 34:1
exists 52:15
expected 73:20
expecting 17:15
expense 8:19,23 14:10,22
 15:4,12,21 16:6,15 17:23
 18:24 19:3 20:1,21 21:18
 23:7 24:14,16 25:21 28:14
 28:15 29:11,18 30:10 31:9
 31:16 32:2,3,24 33:3,22
 37:3 38:9 41:7,20,23 42:1
 42:9,12 43:19,19 44:10
 46:15 47:22 48:10 50:19
 52:20 57:10,19,19 58:9,21
 60:22 65:17 68:20 73:21
 75:3,13 79:17 84:2 93:24
 94:23 101:23 104:1 107:8
 112:7
expenses 8:8,10,12,14 9:10
 10:2 13:17,21 15:9,17
 16:20,21 17:8,21 18:14
 19:16 20:7,12,23,24 21:2,9
 21:11,15 23:12,15,21 24:1
 24:3,9,11,16,21 25:12
 26:20,21 27:4,9,10,12,13
 27:17,23 28:4,11,18,20
 30:19 31:6,11 32:20 33:6
 34:10,14,16 36:2,18 38:5,6
 38:22,23 39:1,6,7,12 42:15
 43:21 44:20,21 45:1,4
 46:12 47:7,15,17,20,21
 48:19,22 49:10,11,14 50:1
 50:4,7,12,16,21 52:13,13
 52:23 53:4 56:19 57:1,6,24
 58:24 60:12 65:12 67:15
 67:16,22 68:5,10,10,14,14
 68:18 71:11,13,14,22 72:18
 72:19,22 73:6,12,13,15,16
 73:23 74:16 75:2 80:3 82:2
 84:11,15,22 85:16,18,20
 86:3 87:1 90:10,12,13 91:3
 91:5 92:4,21,23 96:17,20
 101:9 102:7,12,17,20 103:7
 103:8,12,17 104:5,7,11
 110:6 112:9,22
expert 64:21 90:16

expertise 64:16 98:22
expires 117:22
explain 62:17 81:16 83:8
explains 38:12 111:7
explanation 6:24 78:2
explanations 112:2
expressly 39:11
extend 104:19
extends 55:11
extent 28:14 76:4 101:2
extra 36:16,17 78:17

F

f 117:2
f5 72:15
facility 9:6 28:6,9,20 29:5,17
 51:11 101:2,3
fact 30:17 34:19 69:9,15,16
 70:1,17 114:21
factor 45:15
factored 44:5 103:21
fails 8:9
fair 6:21 29:10 31:7 44:15
 53:9 64:17 87:17,18 89:10
 89:13 92:22 109:4
fall 24:21
falling 108:9
familiar 47:3 65:3
far 16:21 26:9 33:1 38:15
 51:16 56:4 102:17 113:7
 113:23
farther 19:15 32:21,22 67:19
 101:5,6,10 112:11
fastforward 21:16
fax 2:8,18
february 1:12
fedex 116:16
feedback 39:4,7
feeds 84:3
feel 23:16 73:10
feeling 73:14
feet 22:23 113:13
felt 24:3
field 55:3,6,10,12,24 56:1
 103:5,18 104:18,21,23
 105:14,18,24
figure 32:2,3 48:13 52:17

figures 80:11
file 71:18 85:23
filed 10:7 16:13 23:8 49:4
 56:13 77:22,24 79:9 88:6
files 30:20
filing 108:4
filled 27:1 65:9,18 72:4 74:2
filling 67:12
final 66:13 95:6
finally 71:4
financial 72:15 75:16
findings 40:1,7
fine 10:23 11:17,19 106:9
fingers 12:5
first 7:13 11:18 15:15 18:6
 19:1 33:17 39:17 40:11
 45:12 71:6 73:23 76:22
 78:24 87:7 117:5
fiscal 71:7
fitting 58:10
five 47:15 95:13 115:5
fiveyear 87:12
flip 26:21 28:19 36:24 71:7
floor 2:6,16 7:16 45:10,11
flow 13:22 19:7,8 44:18
focus 15:14 37:3
focused 24:8
focuses 39:18
fold 72:21 73:18
folks 13:4 16:2
follow 85:15 97:24
follows 1:23 12:10 66:18
 77:3 99:7
followup 85:5 96:23
followups 65:21
foregoing 117:8,10
form 71:6
format 89:11
formation 18:16,16
formations 28:24
forth 117:15
forward 18:21 19:14 20:15
 40:13 88:21 96:9
four 11:20 47:20 58:12
 100:10,12 107:1
fraction 60:14 114:10

free 34:15 69:5,14
 friday 1:12
 front 11:1 81:17 82:9
 full 21:14
 fully 14:2 114:17
 function 20:24 64:12
 funny 55:13
 further 53:14 65:20 75:23
 76:2 80:20 96:22 98:12,14
 100:5 102:22 105:2 106:5
 117:10,12,14
 future 115:9,10

G

g 1:10 6:2 7:19 9:19
 gas 8:10 9:3,3,24,24 10:7
 12:23 13:8,14,19 14:3,5,17
 18:11 20:3,10,15,17 21:1,4
 22:23 25:4,9 26:5,8,9,16,18
 27:13,24 28:5,21 29:1,4,5,6
 29:7,11,12,16,20 30:2,3,7,9
 30:10,16,22,22 31:1,3,9,10
 31:12,14 32:8,24,24 34:2,6
 34:9,12,16 35:7,14,15,16
 35:20 36:1,1,5 38:19,20
 40:4,19 45:16 50:17 51:23
 51:24 53:15,17,19,20,24
 54:2,3,9,13 55:4,14,15 56:9
 56:16 61:4,12,13 62:20
 63:4,11 64:15 67:17,18
 69:13,17 71:24 72:9 75:6
 75:16,19 78:5 81:9,11
 85:14 89:17,17 90:7,8,11
 90:12,14,17 91:2,4,21
 99:17 100:2,14,16,17,21
 101:13,16,22,23,24 104:8
 105:19 111:13,17 112:3
 113:7 114:19,23 115:1
 gather 26:4
 gathering 14:4 17:22 26:3
 26:15 27:17 28:3,12,13
 31:2,3 34:17 38:5 52:2,4,7
 52:12,21 53:6,8 56:21
 59:19 67:23 71:13 72:8,12
 72:20 89:3 91:5 114:18,23
 115:2
 general 44:4 45:17

generally 104:21
 generate 36:18
 getting 33:7 35:20 63:21
 64:15 74:15 75:6 90:13
 91:3 92:11,16 96:4
 give 7:5 17:23 65:7,15 78:2
 111:12
 given 5:14 53:11 58:24 76:14
 105:17 117:7
 giving 23:16
 glaspell 3:6 6:12,12 111:11
 111:16 112:5,10,18,23
 114:2
 glean 78:17
 go 11:15 21:1 23:3 29:4,5,7
 30:1 33:2 51:14 61:4 64:10
 66:9 74:21,23 75:10 76:14
 88:5 90:13 91:3 95:1 108:1
 109:9,11 115:19
 god 11:24
 goes 19:7 20:10,11 34:11
 53:17,19 55:3
 going 10:14 13:10 14:14
 15:11,12 20:8,13,20 21:17
 32:9 44:23 45:1 50:16 54:9
 56:4 60:19 76:10 79:13
 87:24 88:21 90:20 91:18
 92:17 95:8,15,24 96:5,9
 98:21 110:2 114:24 115:4
 115:8,15
 good 81:4 110:3 111:10,21
 gotten 86:12
 gov 2:19
 graph 40:11
 greater 16:21 19:2 108:10
 greg 6:9
 gregory 3:4
 griffith 2:4,9 4:3,8,12,17,19
 5:5,7,9 7:14,15,17,21,22
 9:16 10:20,23 11:13,20
 12:4,13 22:15 23:4,5 43:11
 43:12 46:17 49:1,7 64:19
 65:21 66:5,13,21 72:23
 76:1 80:23 81:2 82:4,13,14
 94:1 96:13,23 97:3,12
 98:13,18,20 100:9 102:2

103:2 104:13 105:3,6
 106:4,9,14 110:11 112:1,7
 112:12,15 116:7,18
 gross 8:22,22 9:9 18:13
 23:10 24:20 35:24 55:19
 55:22,22,23 63:21 64:2
 70:20 103:4 106:1
 ground 26:5,17 27:14 51:23
 51:24 67:18 75:6
 group 1:3 3:9 8:1 12:18 83:6
 99:2
 grouping 21:5
 groups 39:16
 guess 14:10 55:2 56:1 59:20
 68:12 81:20 110:10
 guys 11:21

H

h 1:10 5:11
 hadnt 39:23
 half 113:15,17,18,22,22
 halfway 26:17 72:18
 hand 117:17
 handled 20:3
 hands 55:14
 happen 90:23
 happens 18:19 32:3 105:23
 happy 95:2
 harden 64:21
 hasnt 60:24 105:7
 havent 39:23 62:12,16 96:19
 head 89:20
 hear 82:20
 heard 67:6 68:4 82:21 95:17
 100:13 101:1 103:21
 106:15
 hearing 1:23 5:15,15 8:3
 hearings 31:21,22 38:13
 42:9 61:12 62:4 65:23 76:8
 84:20,21 85:20
 heaviest 7:9
 heavily 84:18
 hein 44:1,5,12,14 45:3,7
 46:6 64:18 76:9 97:18
 heins 44:7
 help 11:24
 helpful 24:20 35:3

henry 35:19 40:17 hereunto 117:16 hes 64:22,23 91:15 high 19:13,14,15 21:4 22:9 32:2,10 57:12 79:14 86:13 higher 8:12 29:11 30:8,16 31:11 35:20,21 40:19 58:2 68:3 74:7 86:5,10,16 88:12 94:24 97:9 101:23 hire 115:19 hired 12:19 65:4 hiring 115:17 hold 100:11 holding 14:3,17 holdings 25:19,23 26:13 honor 90:1,5 hoover 3:13 5:3 11:1 79:8 81:23 93:16 99:5,12 106:22 107:4,12,17,20,23 hopefully 95:9 horizontal 10:10,11 15:16 17:2 19:22 27:6 32:16 41:6 41:21 48:9 68:20 83:19 100:17,24 113:8 hour 80:16 88:4 house 83:13 housekeeping 10:19 11:12 houses 83:14 hub 30:15 35:19 40:17 huge 15:17 hypothesize 95:23	109:15,18,18 110:1,2,3,9 110:17,18,22 111:10 113:2 116:5,14 imagine 31:13 64:10 90:22 impact 21:5 impacted 38:17 impacts 109:6 impartial 6:21 implemented 107:5 implies 113:14,18 imply 113:17 importance 20:22 important 19:9 26:13 40:16 41:18 impossible 37:24 42:2,11 inbetween 14:11 include 31:17 51:10 60:8,12 65:17 71:9 72:16 73:6,13 104:5,7,10 included 15:5 16:5,23 17:7 23:8,13 27:2 31:8 36:19 45:15 48:13 59:9 67:24 80:11 86:3 88:15 104:1 105:16 106:11 111:15 includes 52:17,19 including 13:6 34:17 44:22 64:6 71:24 109:6 income 8:15,16 13:19 18:1,6 18:11 19:6,6,13,14 36:19 44:17 60:8,10,11,12 71:15 104:3,4 incomplete 85:21 incorrect 7:8 88:8 increase 32:21 81:7 95:21 101:10 increased 37:16,18,22 78:1,3 78:18,19 79:19 increasing 88:20 incredibly 68:24 incur 30:9 31:9,16 68:20 incurred 18:14 25:13 29:18 34:14,15 36:12 52:20 68:23 71:23 103:17 incurring 31:11 34:10 35:16 incurs 103:9 independently 44:14	index 35:9 62:21 indicate 22:17 indicated 32:13,14 indicates 7:14 69:4 110:11 110:13 indicating 37:21 indication 56:15 indicative 43:20 44:22 indirect 27:10 individual 70:4 individually 115:16 individuals 3:14 industries 86:19 90:20 industry 10:3,8 12:16,16 14:14 37:2,21 38:1,18 39:3 41:4,5,17,20 42:1,12 44:20 44:23 47:8,15,17 49:10 69:12 87:1 92:21 93:23 94:4,22 95:18 102:6 104:10 105:11 108:8 inequality 21:24 information 8:19 14:15,20 14:22,23 15:3 16:6 17:1,12 17:14 23:7,11,12,14 31:18 34:3 35:1 37:20 40:10 41:11,12,23 53:12 63:3 71:15 78:9 80:17 84:11,16 85:16 90:9 96:7 108:2 initial 42:15 input 90:21 91:12,21 insignificant 58:17 instance 54:5 instructions 23:13 47:11 105:17 integrated 14:3 114:18 intended 103:7 interest 11:4,9 18:20,22,23 19:5 21:11,17 22:7 37:10 interested 117:13 interesting 36:4 interests 11:6 18:11,12 internally 33:4 introduced 97:17 invalid 39:8 investigated 109:11 investigation 108:24
I id 81:17 115:12 idea 37:17,19 identical 89:8 ill 76:21 82:10 104:17 illustrate 18:5 59:11 illustrated 28:4 im 6:9,11,12 7:22,22 9:22 12:18 22:1,3,13 23:3 27:21 42:18 47:9 48:23,23 50:15 53:11 57:16 62:2,10 67:2,2 67:3 74:1 75:4,12 76:20 77:10 79:13 82:19 83:4 90:16 91:15,20 94:5,11,13 98:9 100:11 108:23 109:2		

invite 92:3
 invited 24:2
 invoice 51:2
 involved 93:11 99:16 115:21
 ioga 37:20 39:16 78:5
 isnt 18:3 34:9 57:13 63:10
 73:19 105:20
 issue 16:19 23:19 61:2
 109:13
 issues 29:24
 item 73:7,18
 items 67:21 83:19 89:2,2,7
 itll 91:12 100:11
 ive 6:7 62:3 76:8 77:11 80:23
 82:21 106:16 110:1

J

james 64:21
 jan 2:14,19 9:22 64:16 78:15
 84:18 88:5
 january 43:7
 jeff 3:12 4:15 14:24 15:1
 17:11,18 49:16 51:6 76:22
 77:1,8 97:19 98:19,21
 johnson 2:5 7:23
 joining 115:4
 jump 15:18
 justified 111:24

K

keep 13:10 46:13 80:1
 keeping 33:4
 kept 80:6
 kind 11:18 14:20 15:15 18:2
 19:19 27:3 31:23 33:15
 44:4 45:19 55:12 56:15
 69:11 71:11 72:17 74:12
 75:5 85:11 87:7,15 93:12
 kirsten 3:9 4:7 8:1 12:8,14
 12:18 46:18 47:3 65:24
 97:21 103:22
 kirstens 12:5
 know 6:8 13:4 14:9,13 19:9
 25:17 27:10,12,15 29:19
 30:13 34:8 37:21 38:16
 44:2 47:6 50:7,16 53:5
 55:21 56:8 57:24 64:6

87:16 90:9 102:18 103:24
 104:18 107:6 108:13
 109:14,16,18,19,20 110:1
 115:20
 knowing 90:16
 knowledge 88:22 96:21
 104:20
 knows 91:20

L

l 3:4,5
 lack 45:20
 land 56:9
 lands 56:9
 language 24:1
 large 32:4 71:8 88:15
 larger 20:9 22:3
 largest 82:18 83:6,8 85:12
 late 80:18
 laterals 113:6,12
 law 7:9 24:5,7 92:8,10 109:7
 laws 10:16 108:23
 leading 84:10
 lease 26:20 27:3 38:5 67:15
 71:11,12,22 72:3,6,19,22
 leased 56:10
 leases 56:18
 leasing 56:16
 leaving 85:3
 left 24:23 51:16 56:4 110:7
 legal 13:15 46:12
 legislative 11:2 42:16 47:3,9
 55:20 86:23 87:2 88:7
 92:19,24 94:9 97:24 98:1
 100:1,3 102:10 105:7,15
 106:7 107:5
 letter 16:7,17,23,24 17:7,13
 17:17 39:17,19 40:23 41:3
 41:4 46:2 49:13,17,21
 57:21 80:5 82:6,7,10,22
 85:4
 letterhead 39:20
 letters 39:15
 level 24:15 50:12 51:2,3
 levels 109:16
 levy 6:6
 liberal 7:3

lieu 47:8
 life 103:14
 lifting 25:14 26:1 27:13
 51:23,24 59:13 67:15 72:2
 113:24
 likewise 88:9
 limit 66:9
 limited 88:4
 limiting 8:14
 line 15:20 24:21 28:8 32:21
 51:12,17,19,22 52:1,2 53:8
 54:19 55:3,7,10,12,24 56:1
 56:3 67:21 68:5,11 69:18
 73:7,18 74:10 81:14 83:19
 86:2 89:1,2,7 92:19 101:6
 101:6,14,15,16 103:5,18
 104:18,21,24 105:14,18,24
 108:9 110:13,14 111:3
 lines 28:12,14 52:5,7,21
 54:20 65:11 69:19 114:19
 links 75:1
 list 30:18 56:13 65:15 73:14
 73:16
 listed 11:5 26:19 56:22 67:17
 72:6 73:17 91:7
 listing 68:13,15
 lists 11:3 35:7 67:14
 little 17:2 25:1 26:6,20 27:22
 28:22 29:15 54:6 81:5
 87:19
 live 88:19 94:7,18 96:5
 llc 34:6
 local 12:22
 location 35:8 62:20
 loe 17:22 25:13 26:1
 logical 101:21
 longer 14:17 48:2
 longest 113:6
 look 12:19 19:21 20:1 21:10
 27:20 28:3 37:6 40:9 43:4
 43:5,23 44:20,24 45:1,23
 56:12 57:21,23 61:20 71:4
 72:17 86:14 92:13 108:8
 108:10 109:5 112:20
 114:24 115:18
 looked 45:5,8 81:19 82:1

85:23 86:1 96:7
looking 13:12,13 15:19
 53:14 65:10 71:5 84:14
 95:24 112:16 115:15,15
loss 58:9 59:8 110:16,20,22
lot 9:2,3,6 29:5 30:3 33:23
 54:1,5,9 55:16 63:3 67:6
 68:13 74:19 86:10 92:11
 92:13,17 94:6 95:24
 100:21 101:1
louisiana 30:15 40:18 55:3
 104:19 105:23 106:2
low 19:12 22:10 32:3,10,11
 37:22 57:24 79:15
lower 19:3 25:21 30:5 45:10
 46:7 53:1 110:21 111:18
 112:8

M

m 1:13,13 3:15 7:19 9:19
 12:12 47:1 66:20 73:1 77:5
 81:1 96:15 97:2,15 99:9
 100:8 102:4 103:1 104:15
 105:5 116:23 117:4,20
m2 35:18
mail 116:15,15
maintain 71:23
major 72:7 111:17
majority 58:15,16 114:7
makeup 29:4
making 21:13,16
management 111:19,20
manager 3:13 99:15
marcellus 8:6 10:10 13:7
 14:12 15:16 17:2 19:23
 22:4 25:18,23 27:7 28:24
 30:4 32:16,16 37:4,8 39:18
 41:5,16 48:9 58:2,6,7,14,15
 58:16,24 68:19,21 74:13
 77:17 78:21 81:12 83:7
 85:14 88:15 89:7 94:17
 97:8 103:17 104:23 105:11
 113:8
march 117:17
marked 28:15
market 32:13 37:24 38:2
 41:16 42:3 44:15 45:3,16

72:13 111:14
marketing 34:6
markwest 53:16 111:12
 115:8,9
mass 10:1 115:14,16,22
 116:2
mathematically 37:23 42:2
 47:22
matter 1:22
maximum 13:16 15:12 21:9
 37:10 43:21 46:12,13,15
 48:1 94:7,19 95:16
mcf 19:24 20:5 22:17 30:8
mefs 108:11
mean 58:6,12 62:10 68:12
 68:22 73:15 85:3 94:3
 111:21 114:3,8 115:23
mechanism 57:8
meeting 6:14 11:18 78:21
 116:10
meets 117:14
mention 27:23 34:20 93:2
mentioned 5:15 17:24 38:3
 40:4,5 65:10 71:17 74:23
 81:6 88:7 97:21 102:9
mentions 69:16
merely 110:8
meter 56:3,5 59:22,24 105:1
meters 69:19 115:20
method 18:6 106:20,22
methodology 8:4 13:14,18
 44:16
middle 22:11
miles 9:3,6 112:3
million 20:6,12,16 21:10,13
 21:17 22:6,23 25:8,10 36:5
 36:9,11,14,15 46:1,3,6,9,16
 49:15,20,21 56:23,23 57:18
 58:3,6 68:15,23,24 72:19
 72:21 80:12 110:13,19
millionone 79:1 84:23
mineral 56:9
minutes 103:16
misleading 26:7
missing 110:23
mistake 49:17

misunderstanding 110:19
mmbtu 35:16 70:10
model 21:20,22
money 69:1 112:6
monitoring 71:24
month 22:18 31:22
months 18:21
mouth 94:6
move 15:5 16:1 18:1,7 20:15
 24:18 33:11,19 36:22
 39:14 41:10 45:19 69:3
 71:14 83:9 84:17 106:6
moved 87:3
mudrinich 2:14,19 4:4,9,13
 4:16,18,20 5:4,6,8 9:21,22
 10:21,24 11:8 12:3 46:19
 47:2 49:3,6,9 64:20 65:20
 66:3 73:2 75:23 76:7,18,21
 77:6 79:21 80:20 82:12
 96:16,22 97:13,16 98:12,15
 98:19 99:1,10 100:5 102:5
 102:22 104:16 105:2 106:5
 106:10 107:3 115:12 116:5
multiple 41:4 70:2
multiplied 19:1

N

n 1:10 4:1 5:1 6:2 7:19,19,19
 9:19,19,19 12:12,12 47:1,1
 66:20,20 73:1,1 77:5,5
 81:1,1 96:15,15 97:2,2,15
 97:15 99:9,9 100:8,8 102:4
 102:4 103:1,1 104:15,15
 105:5,5
naesb 69:11
name 4:6 6:9 9:22 12:14
 66:22 67:9 77:7 79:6 99:11
narrative 71:12
natural 12:15,23 13:14 25:4
 29:20 30:1 36:5 38:19 40:4
 53:15 71:24 75:19
nature 78:8
near 9:5 29:16 90:10 101:3
nearly 95:2
necessarily 14:2 18:3 94:8
necessary 8:10 9:11 27:24
 28:22 30:19 34:16,18

need 17:18 34:13 62:13
 73:10 78:12 83:16 98:15
needed 6:24 17:7 26:7 37:22
 49:17
neighborhood 83:14
net 8:15,16 13:20 17:24 18:5
 18:13 19:6,6,13,14 36:13
 70:23 75:15,20 104:3,4
 112:18,19,23
netting 57:13
new 22:13 49:18 62:8,9,11
 90:22 91:7,8,15 96:1
nextera 34:6,19 69:4,16
ngl 25:4,10 26:5 31:1 89:17
ngls 29:6 101:15 111:12,14
 114:13
nichols 3:15 117:4,20
nodded 89:20
noncriminal 7:9
notary 117:4,20
note 5:14 25:16 26:13 40:17
 49:16 76:10,13
noted 49:13
notes 27:22
notice 17:1 25:20 35:13 92:9
 106:10
notices 23:20,24 47:10 92:1
notified 116:11,12,13
novemher 16:11
number 19:2 25:20,24 26:6
 32:4,5,11 39:5 53:2 55:23
 58:17,21 68:3 76:3 79:13
 84:17 86:5 93:9,9,24 94:10
 94:21,24 96:5,8,11,11
 108:4
numbered 36:24
numbers 17:2,8 18:10,12,13
 19:5 25:2,16,19 43:5 49:18
 49:18 58:1,11 60:24 75:15
 79:15,15 86:18 93:8,9 96:3
 107:9,16

O

o 6:2 7:19 9:19 12:12 47:1,1
 66:20 73:1,1 77:5 81:1,1
 96:15 97:2,2,15 99:9 100:8
 100:8 102:4 103:1,1

104:15 105:5,5
objecting 62:10
objection 76:7,9,15
objective 6:20
obviously 6:7 32:19 39:22
 44:8 68:3 87:3 96:3 109:9
 110:3
october 84:20 117:22
office 7:23 117:17
officer 3:10 67:3
offices 70:24
oftentimes 92:12
oh 23:23 48:23 75:18 95:12
 111:2
ohio 72:17 117:2
oil 9:24,24 45:16 56:9 67:17
 75:16 78:5 91:20 99:16
 100:2
okay 7:12 9:14,17 15:24
 20:6 22:12,13 23:2 28:2
 33:10 37:12 40:3 43:3,22
 45:18 63:5 67:20 71:3
 75:18,22 76:20 79:22
 80:19 81:15 87:14 88:24
 89:14,21 90:6,18,24 91:11
 91:23 93:4 94:2 95:5,10,12
 96:12 97:12 100:19 103:13
 106:12 107:13 108:15
 109:8 114:15 116:3,3,8
old 110:3
onboard 34:15 69:5,14
once 10:7 22:14 26:5 54:3
 72:11 73:15 93:7 96:6
 101:16 107:1
onehour 66:9
ones 52:10 54:16 57:18 58:2
 88:12 98:9
opening 4:3,4 9:16
operate 8:6 21:22,24 97:8
operates 13:8
operating 8:7,8,12,14,19,23
 13:16,21 14:9,21 15:4,9,11
 15:16,21 16:6,15,20,21
 17:21 18:24 19:2,16 20:1,7
 20:12,21,23,23 21:2,9,15
 21:18 23:7,12,15,21 24:1,3

24:14,21 25:12 26:21 27:3
 27:9,10 31:6 32:2,3,20,24
 33:3,6,22 36:2,18 37:2
 38:5,9,21,23 39:1,6 41:7,20
 41:23 42:1,9,11,15 43:19
 43:19,21 44:10,20,21 45:4
 46:12,15 47:7,15,17,22
 48:10,19,22 49:10,11,14
 51:21 57:17,24 58:8,21
 59:7 60:22 65:17 67:16
 71:11,12,22,23 72:3,6,18
 72:19,22 73:12 79:17 80:3
 85:17 92:21 93:23 101:9
 102:6,11,16 103:7,8,12
 104:5,7,11 110:15,20,22
operations 13:6
operator 101:24
operators 47:20
opinion 110:8
opportunity 65:16 86:14
opposed 67:18
option 29:19
order 6:14 14:7 30:9 36:11
orders 116:14
original 17:13
originally 86:6,7
outliers 32:12
outside 13:15 14:6 29:22
 30:7,11 34:23 46:11 63:23
 64:12,16 98:21,23 113:2
overvalues 8:16
owned 52:5,7,13,14
owner 56:18 57:9 60:13,18
 64:12
owners 56:13,24 57:7,14
 64:9 85:1
owns 51:19 52:10 54:19,20
 83:20 114:23

P

p 1:13 2:14,19 6:2 7:19 9:19
 116:23
package 50:13
packet 11:1 50:24 51:3,5
 53:12 99:18 106:6
page 4:2,6 5:2,12 19:19
 35:10 39:21 40:23 47:14

63:4 70:3 72:14,15,18 75:10 pages 33:15 37:1 58:13 71:7 71:12 paid 111:11 paper 83:16 115:7 papers 115:4 part 20:24 28:22 32:12 71:19 87:23 104:4 participants 41:4 44:21 particular 20:3 24:10 41:15 50:21 89:16 105:22,22 parties 52:5 60:7 partners 11:4,9 party 7:6 28:17 52:17,19 53:1 55:1 117:12 partys 28:11 pay 28:17 paying 14:5 28:12 32:7 54:22,24 55:1 116:1 pays 115:24 pennsylvania 30:14 35:18 people 10:5 31:14,15 65:16 109:16 115:18,19,19 percent 8:22 15:11,17,19 17:3 19:1,4 20:7,9,20 21:7 21:12,14,19,23,23,24 22:3 22:5 25:17 37:9,14 38:2,10 38:10,14,20,20 39:2 41:6,8 41:21 43:16,18,19 46:4,14 49:14,19 59:3 60:16,17,18 60:23,23 63:7,8 70:7 74:7 74:14 77:19,23 81:8,8,13 82:3,6,16,24 83:5,7,8,9,11 84:3 85:14 98:7 108:11 percentage 8:21 21:21 37:10 38:10,12,15,23 39:1 47:18 48:1,4 63:1,1 78:19 81:8 82:6,15,24 93:10,12,14,20 93:23 percentages 8:21 78:7 perform 65:4,4 performed 100:1 period 37:6 92:2 person 97:17 109:15 personal 75:8 109:24 110:2	personally 109:14 perspective 80:17 pertinent 39:17 40:12 perwell 25:24 50:21 51:5,9 phil 3:10 4:11 8:1 56:11 66:14,16,22 67:2 72:23 73:3 76:2 79:8,9 picking 108:4 pipeline 29:3,4,8,9,22 34:13 55:18 place 27:15 35:19 47:9 62:22 110:5 117:10 placed 16:20 places 14:6 placing 13:16 plan 87:11 plant 26:16 29:23 30:2 36:8 53:15,18,19 54:2,7,10,14 plants 115:9,10 play 14:8 74:8 plenty 91:20 pllc 2:5 plus 19:22 point 8:11 9:4,11 22:14 27:24 30:10,19 32:21,22 33:18,19,23 34:21 35:12 39:22 42:8 54:7 55:7,11,12 55:13,14,24 56:2,2 69:5,13 69:17 70:6,15 76:8 85:2 86:11 88:19 89:23 90:14 91:4 97:9 101:10,11,24 103:5,9,18 104:2,9 105:14 105:18,19,21,24 109:1,24 115:12 pointed 114:8 points 9:7,10 29:20,21 34:17 34:22 35:1 69:23 70:1,2 101:7 pool 30:14 35:17,18 63:8 64:5 portion 11:5,7 position 10:15 38:14 77:9 99:13 104:12 positive 36:13 possible 57:3,4 60:14 68:19 116:1	possibly 84:17 postproduction 51:10 59:16 59:20 60:5,19 65:12 96:17 96:20 102:17 posttransportation 55:16,17 postwellhead 48:14 60:5 precipitated 24:6 92:9 premarked 5:15 prepare 12:20 prepared 75:17 preparer 110:1,8 present 3:3 6:24 13:22 presentation 26:10 presented 76:17 president 3:4,10 6:9 presuming 73:17 pretty 10:17 13:2 85:5 90:4 prevail 11:10 prevents 42:16 previous 57:17 78:16 79:4 previously 12:9 66:17 77:2 99:6 price 20:4,10 21:4 30:5,8,16 34:11 35:9,10,15,19 36:1 38:20 50:17,18 61:12,13 62:21,23 63:20 64:4,5 70:10 78:20 81:9,11 82:1 108:7,8 prices 20:15 21:1 40:5 74:6 81:19 pricing 30:1 34:3 35:2,11 40:12,17 61:8 primarily 39:9 99:16 principal 71:21 prior 37:13 39:23 105:11 privilege 75:6 probably 32:10 37:1 40:21 56:10 74:8 80:16 87:21 90:7 94:5,7,13,16 96:18 98:16 106:14 problem 19:21 116:16 problems 95:1 proceeding 116:22 proceedings 1:23 117:9,10 proceeds 64:2 111:15 process 14:5 18:5 24:21

26:18 28:22,23 33:5,16
 36:17 64:10 67:11 79:3
 107:8
processed 29:2 35:6 54:3
 101:14,16
processing 9:5 17:22 26:5,7
 26:16 27:18 28:6,9,20 29:5
 29:12,23 31:16 34:13,17
 53:15,18,19 54:7,10 56:21
 67:23 70:22 71:13 72:8,12
 89:3 91:6 101:18 112:8
 115:10
produce 20:5,19 45:2 68:23
produced 20:17 29:1 30:3
 32:8 50:17 67:7 72:1 93:18
 95:20 98:5,6,7 113:8
producer 14:3 18:14 21:13
 22:3 23:9 24:14 29:10,12
 32:8 68:20 82:19 83:8
 85:12,13,15 86:16 89:16,24
 90:2 100:20 101:10,22
 103:8
producers 9:2 10:3,8 14:1
 14:17 24:2 30:22 31:8,10
 31:12,19 73:22 75:17
 79:14 83:6,7 84:16 85:22
 88:10,15 89:12 90:7,8,11
 90:12 91:2 92:3 94:4,7,14
 95:19 100:14,16,17,21,24
 103:3,18 107:15 108:1
 111:17 112:3 113:5,12,14
produces 13:8 29:11,12
 85:14 101:24
producing 8:5 9:24 19:24
 20:5,11 31:1,9 44:24 45:13
 58:8 100:2 110:15,24
 114:19,22 115:1
production 9:4 23:1 41:21
 42:3 44:11 60:5 63:15
 71:24 72:17 74:9,20 93:21
 101:11 107:1 108:5,6
 113:15,17
professional 67:4 117:4
profit 28:16 109:17 112:19
 112:24 114:13
profitable 53:8 68:24 115:24

profits 112:6,11,14,19
project 19:14
projected 18:21
projects 18:20
promptly 116:11
proof 7:9
proper 94:10,21 95:18
properties 12:19
property 2:13 7:1 12:16,20
 12:21,23 15:1 16:3 75:1,3
 75:7,8 77:10 99:15
protest 11:6
protesting 7:6
protestor 7:10
prove 7:6
provide 6:24 14:15 24:2 68:7
 84:17 90:20 107:22
provided 8:19 14:21,24 16:2
 16:6 17:14 26:22 27:1
 31:23 34:7 39:6,12,15
 41:22 43:7 49:18 51:6
 61:10,11 67:11 82:23,23
 83:10,22 84:11 90:20
 92:12 94:20 95:20 98:8
provides 69:13
providing 35:9
provision 47:6
provisions 71:9
prudent 109:3
public 15:7 16:8 42:19 49:4
 49:20 67:4 71:19 78:1,6
 82:5 85:4 86:19 87:7 88:2
 91:16 117:4,20
publicly 64:8 71:18
published 10:4 16:17 77:13
 77:17
publishes 15:6
pulled 41:11,13
purchase 34:11 69:22 70:2
purchased 62:23,24
purchaser 34:9,14 35:8
 62:19,22 69:6,24 105:22
purchasers 33:13,15 34:6,22
 61:17 69:8,21,22 70:1,4
purchases 63:2 69:24
purchasing 69:17

purpose 8:3
purposes 12:21 70:18
 111:15
pursuant 83:18,22 86:19
put 18:4 23:11 24:19 29:2
 80:5 86:2 91:22 94:5 98:15
 101:14
putting 114:12

Q

qualified 117:5
qualify 92:14,15,15
question 7:2 22:14 33:23
 51:7 56:11 96:24 108:16
 110:9
questioning 86:12
questions 30:24 34:8 46:19
 65:20 68:4 75:23 80:21
 98:12,16 100:6,10 105:3
 106:17 109:21 111:8
quickly 40:9
quite 14:16 17:14 27:5 37:22

R

r 1:10 3:13 6:2 12:12 47:1
 66:20 73:1 77:5 81:1 96:15
 96:15 97:2,2,15,15 99:9
 100:8 102:4,4 103:1,1
 104:15,15 105:5,5 117:2
randee 3:7
range 88:11
ranging 80:11
rate 44:12 45:14,17 97:23,23
rates 18:15
reached 94:15
reaching 87:16
read 115:4,6,20
reading 27:21
ready 11:13
realistic 59:12
realize 40:19 109:10
realized 17:6
really 32:10,10 40:12 62:16
 64:13,24 68:12 74:13
 80:18 85:17 87:23 89:11
 90:16 94:8,19 111:21
 113:9

reason 17:4 34:7 38:8 41:18
 42:19 114:16
reasonable 45:4 116:13
reasoning 38:11
reasons 24:13 34:4
recall 88:22
receipts 8:22 9:9 21:11,17
 22:7 24:20 63:15,21 103:4
 106:1
receive 80:14
received 16:4,12 80:9
receiving 35:15
recognize 14:7 30:8
recognizing 30:16 35:24
 36:16
record 7:5 12:15 33:4 61:14
 66:23 76:14 77:7 78:5
 99:11 106:11
recrossexamination 4:19 5:7
 5:9
redacted 34:4 61:12
redirect 4:18,20 5:6,8
reduce 57:5 83:13
reduced 60:12 117:7,7
reduction 11:11
redundant 27:21
refer 21:6 67:15 69:10
reference 34:24
referenced 29:16 30:17
referencing 99:2
referred 25:14
referring 18:10 72:2
refers 111:3
reflects 27:3
regard 7:1
regarding 23:21 84:11 85:16
 100:2
regardless 61:3
regards 24:1 33:22 34:8
registered 117:4
regs 60:3
regulation 55:6
regulations 29:3
reimbursing 34:9
rejected 8:18 39:11
related 17:9 25:4,4 29:11

50:2 53:13
relation 27:20 31:10
relative 117:12
relatively 32:1,3 37:5 85:9
releases 36:23
relied 84:18
relief 7:10
remove 46:15
removed 46:13 61:8,13
 92:10
removing 43:21 92:9
rephrase 88:14 94:11
replied 17:18
report 13:20 50:18 55:21,22
 59:1 63:15 64:21 65:1,11
 65:18 70:20 103:4 105:24
 106:1 108:3
reported 18:12 36:1 55:19
 68:14 85:6 86:19 90:1
reporter 3:15 5:14 117:4
reporting 9:9 31:1,8 63:22
 64:1,3,5 70:16 83:5 89:16
 90:8 108:10
represent 24:4 32:12 73:18
representative 23:17
representatives 108:17
represents 41:20 83:7
reputable 88:13,14
request 108:2
requests 92:11
required 71:18,20
requirements 117:15
requires 70:19 103:3
resource 12:16
resources 2:3 3:11 7:13,24
 67:3
respect 76:13
respond 16:18 109:20
response 15:8,14 17:10 58:5
 87:15
responses 14:20 31:7,13
responsible 64:9 77:14
responsive 17:13
rest 58:13
result 10:9 81:9 86:22 88:6
 93:9

resulted 87:24
results 19:13 37:3 92:18
retained 5:15
return 18:13 23:8,10,12
 30:20 31:20 47:11 50:19
 55:20 63:22 89:15,22
 110:4,6 115:18
returns 12:20 23:6,7 56:12
 107:6,7
revenue 3:13 13:20 15:11,17
 15:19 17:8 20:5,9,10,11,16
 20:23 21:1,12,19,21,23
 25:3,3,4,8 31:1 35:24,24
 36:2,10,12,16,19,21 38:16
 38:22,22,24 39:1 45:2
 49:14 50:11 55:19,22,22,23
 64:11 89:17 99:15 112:22
revenues 8:22 14:7 24:10
 70:16 75:12 82:2
review 1:11 6:14,19 78:1,16
 79:4,19,23 80:18 81:18
reviewed 70:24 81:14 99:22
reviewing 16:14 42:16 84:19
revisit 88:20
rid 93:22,22
right 7:11 10:6 14:1,16
 17:17 29:21,22 30:1,23
 31:14 32:23 42:21,23
 44:13 45:23 54:9 80:7
 81:13,21,21 83:1,20 84:4
 84:12 89:8 95:8 96:6
 100:21,23 101:3,4,7,16
 103:11 104:9 107:12,12
 111:6,24 112:7 113:22
rights 56:16
ritchie 30:12
robinson 3:4 6:4,9,13 7:16
 9:14,17 11:17,22 12:2
 22:13,16,20,22 23:2 43:9
 66:1,8 76:16,20 106:12,16
 107:11,13,18,21 108:15
 109:8,23 111:2,4,6 113:21
 114:12,15 115:3,11 116:3,6
 116:8,19
role 77:11
ron 6:11

ronald 3:5
 room 6:5
 roughly 38:20
 row 15:15
 royalties 75:13,15,20 109:13
 royalty 18:11 56:13,18,24
 57:1,7,9,14 60:13,16,18
 64:9,12 84:24
 rpr 117:20
 rule 7:3,4 11:2 42:16 47:4,10
 47:12,13,14 55:21 74:8
 75:1 86:23 87:2 88:7 92:20
 92:24 94:9,20 97:24 98:1
 100:1,3 102:10 105:7,15
 106:8 107:5
 rules 98:2
 run 13:21 20:4 21:3 52:20
 60:24
 running 28:16 78:14 112:10

S

s 5:11 6:2 7:19 9:19 47:1,1
 73:1,1 81:1,1 97:2,2 100:8
 100:8 103:1,1 105:5,5
 safeguard 93:13
 sale 8:11 9:7,10,11 27:24
 29:20,21 30:11,19 32:21,22
 33:19,23 55:7,11,12,13
 56:1,2,2 63:11 69:13 70:15
 89:24 90:14 91:4 101:11
 101:24 103:5,9,18 104:2,9
 105:14,18,19,24
 saleable 34:12 35:7
 sales 25:4,5,9,10 35:6,6 36:5
 54:2 62:5,22 63:20 70:6,7
 70:8,9,10,11 71:1 75:19
 97:9 105:21
 sample 18:3,4 33:24
 saved 98:20
 saw 80:16 82:7
 saying 17:18 21:2 78:10
 83:11,12 110:21
 says 14:16 19:22 20:18 21:20
 26:24 37:2 55:21 61:8
 64:21 71:22 86:23 92:20
 110:14,15
 scads 84:10

scenarios 19:20
 schedule 87:12 112:21,21
 schedules 110:14
 seal 117:17
 sec 71:6
 second 2:16 18:7 21:5 65:7
 70:3
 secret 84:6
 secretary 10:4 77:13
 section 6:17 99:16
 security 71:18
 see 17:14,15 24:24 25:3
 51:17 56:18 57:23 58:21
 59:13 63:6 69:9 70:5 72:15
 72:19 73:10 74:14,17
 75:12,13 78:16 79:14
 82:17,22 83:10,24 86:15
 90:23 96:1 108:3,8
 seeing 81:3
 seen 40:15 57:18 62:3,12
 sees 94:22
 sell 14:18 30:2,15 40:19
 100:14,16,17,21 101:1,3,6
 112:3
 selling 14:1 31:4,14 33:1
 38:19 90:10 105:21 108:7
 108:8 112:5
 sells 9:3 70:20 112:3
 send 95:9 101:2
 senior 3:9
 sense 21:4 68:13 85:13 113:9
 sensing 88:8
 sent 17:4,19 49:16 57:21,22
 78:10,11 83:18 91:16
 separate 29:6 89:6 93:5 98:9
 101:15,15
 serves 87:6
 serving 6:21
 set 117:15,16
 setting 85:3
 settlement 98:8
 severance 70:14,18,19,19,20
 74:24 75:2
 shale 28:24 30:5
 share 37:24 38:2 41:16 42:4
 57:1

sharing 56:18 57:11 60:18
 shawn 3:6 6:12
 sheet 11:3,6 18:7,7 37:2
 83:16
 sheets 89:6
 sherwood 9:5 28:6 29:17,23
 36:8 51:11 54:2,7,14 64:3
 101:2 115:10
 shipped 113:23
 shipping 34:15 69:5,14
 shope 110:12
 shouldnt 113:21
 show 24:20 33:18 34:1 36:4
 41:23 42:10 43:14 60:24
 79:24 83:17 112:22
 showing 50:13,14 62:17,19
 shown 40:18
 shows 18:22 35:10,11 38:9
 40:12 54:1 68:23 70:5
 sic 49:21 57:18 58:6
 side 25:11
 significant 32:12,23 82:3
 95:21
 significantly 31:6,11 40:6,13
 53:1 68:3
 similar 17:1 40:21
 similarly 20:11 115:23
 simple 24:24 31:23
 single 60:17 93:1
 sister 14:20
 site 107:19
 sites 115:5
 situations 98:3
 six 115:5
 slightly 37:16 44:19 45:14
 small 32:5 88:10 114:9
 smaller 22:2,2
 smith 2:15
 sold 9:4,6 29:8,9,16 35:8
 36:1,6,8 44:24 50:17 54:9
 54:14 55:4,23 62:21 63:4,7
 63:8 106:2
 somebody 56:16 111:21
 114:22 115:5
 somebodys 80:2
 someones 108:9

sorry 23:3 48:23 76:20 79:7
 100:11 110:9
sort 92:11
sounds 83:2
southern 30:13 35:17 63:9
special 99:15
specializing 12:22
specific 63:10,12 64:14,15
 67:21 73:7 102:18 110:6
specifically 12:22 27:16 45:9
 47:18 60:4 108:21
specified 117:11
spend 36:14
spilman 39:19
spits 96:8
splits 11:7
spoke 78:15
spreadsheets 43:13
ss 117:2
stand 98:16
standard 69:12
start 10:18,22 14:19,23
starting 51:16
state 2:12,13,15,15 3:12,13
 9:23 10:4,16 12:14,22
 13:15 14:6,8 15:6,10,20,23
 16:14,24 17:24 20:6,8,13
 20:18,22 21:6 23:16,24
 24:12 25:8,19 27:15 30:21
 30:23 31:4,15 32:13 33:21
 34:7 35:23 36:15 37:21
 41:16,19,22,24 45:5,5,11
 45:16 51:1,4 53:11 55:19
 58:20 61:11 63:16 66:22
 70:14,18 77:7,13 82:19
 89:12,23 92:5 93:5 99:11
 99:17 105:12 106:17
 107:14 108:22,22 109:19
 115:19 117:1,4,21
stateallowed 21:11
stated 50:3 58:3 83:4
statement 4:3,4 71:15
statements 72:16 75:16
states 16:22 21:20 23:6,6
 26:14 37:6 38:14 41:4
 43:14,18 44:8,16 57:8

76:18
statewide 10:11 83:20 84:17
 85:14
stating 15:9
stenotype 117:7
step 14:11
steptoe 2:5 7:22
steptoejohnson 2:9
straight 32:6,9 33:8 58:18
 58:22
stream 35:24 60:8,10,11
street 1:17 2:5,16
structure 13:13,18 24:4
 71:21
stuff 84:19 114:20
subject 11:11
submission 23:21
submit 23:15 47:7,20,21
submitted 16:7,16 17:17
 37:20 42:13 48:9 67:8
 73:22 76:3,5 78:6 89:22
 92:5 99:3 106:7
substantial 95:16
substantially 35:20 111:18
subtract 92:20
sufficient 12:2
suggested 58:20
suggests 23:14
sum 19:7
summarize 9:23
summarized 63:4
summary 35:5,11 70:3,4
 78:11 88:3
supply 29:24
support 80:14
supported 94:8
supports 32:20
sure 7:17 12:17 18:9 35:4
 49:12 62:18 67:1,13 71:16
 82:20 91:14,15,20 93:20
 94:11 98:9 108:23 109:3
 109:18 113:2 116:18
surprise 82:19
surrounding 30:4,13
survey 26:22 27:2,5,8,21,23
 30:17,21 31:7,13,17,20

37:3 42:13,22 65:8,10 67:7
 67:10,14 68:22 72:4 73:3
 73:20,21 77:12 78:16,23
 79:4,11,12,24 81:20 85:11
 85:13,21 86:2,22,24,24
 87:3,6,11 88:6,7,8 89:1,10
 89:11,15,18,19,23 90:9,19
 91:7,22 102:7,9,10 114:24
surveys 10:1,9 82:2 85:23,24
 86:15 95:7
swabbing 27:11
swear 11:22
sworn 11:15 12:9 66:17 77:2
 99:6 117:6
system 28:16 29:7 31:2,3
 33:9 35:7 90:1,5 114:18,23
 115:2,14

T

t 5:11 7:19,19,19 9:19,19,19
 12:12,12 47:1 66:20,20
 73:1 77:5,5 81:1 96:15,15
 97:2,15,15 99:9,9 100:8
 102:4,4 103:1 104:15,15
 105:5 117:2,2
table 12:5
tables 41:14
take 32:4,9 36:7,21 57:9
 58:1 61:9 63:3 72:9 84:24
 93:8 113:9
taken 88:9 117:10
takes 18:19 21:21 36:18
 72:13
talk 27:2 33:17 46:5 48:3,9
 48:22 50:11 52:10 67:9
 77:12,16 81:5 85:10,10
 87:19 93:1 96:1 102:16
talked 25:17 48:14 89:1
 104:22 114:20
talking 27:11,22 60:21 97:4
talks 21:5 47:14 54:6 55:6
 92:24
tall 6:8
tasked 41:19
tax 2:13,13,15 3:12,13,13
 5:14 6:23 7:8 8:4,7,8,14,18
 8:18,20 9:23 12:16,20,22

13:19 14:21 15:1 16:3,9,13	10:17 11:12,17,19 13:21	53:7,9 62:2 68:7,17 73:15
20:2 23:19 24:8 25:7 26:22	16:23 18:24 19:13,14,15	80:5,16,21 81:6 84:6 87:20
27:1,4 31:22 36:6,17,23	20:5 21:13,16,22,24 22:7	91:4 92:19 94:2,8,10,13,14
37:7,16 38:11,21 39:4,22	22:19 23:8 25:22 27:8 28:5	94:16,18,19 98:6 107:2,6
42:14 46:10 47:8,16 50:23	28:6,10,20,22 29:1 32:15	109:4 110:7 112:1 113:7
51:1 53:13 63:23 64:12	32:18 34:3 35:22 36:20	third 28:17 52:5,17,19 53:1
67:7 70:14,15,18,19,20	39:2,17,24 40:6,8,14,24	55:1 60:7
73:24 74:24 75:1,2,3,5	41:2 42:19 46:3,17 48:6,12	thirdparty 28:11,18 53:6
77:9,10 84:8,12,14 86:4,23	49:8 50:13 52:9 53:9 54:15	59:16,21 60:1,4
87:4,17 90:22 91:15 92:1	54:18 55:3 57:2,6 58:2	thomas 39:19
93:10 96:1 98:10 99:13,15	59:11,17 61:2 62:1 63:23	thorough 80:18
103:3 106:17 107:14 109:7	64:6,12,18 65:9,14,19,24	thought 36:4 41:18 67:11
109:19 110:1,4,8 111:15	66:6 68:22 72:23 75:9,16	68:6 94:6 98:21
116:1	75:21 77:21 83:2,3,16 84:5	thousand 14:12 60:20
taxation 60:6 103:22	84:13,19 85:19 86:24	113:13 114:10
taxed 11:11 75:5	87:18 88:7 90:19,21 92:2	three 98:9 106:17 107:1
taxes 12:22,23 75:7 109:1	92:22 94:20 96:8,13 97:12	111:22 113:23
taxing 13:14 60:7,9 75:7	98:23 102:2 104:13 105:19	threeyear 106:24 107:2
taxpayer 13:2 22:2 43:17	106:4,9 108:4,13 109:14,19	throw 32:11 85:11,13
47:7 48:2 90:16 95:2,2	110:8 111:24 113:7 115:3	thrown 85:22 87:21 88:11
96:18 98:3,8	115:21 116:2	88:12
taxpayers 22:1 92:6 105:17	theirs 40:17 56:10	thumb 7:4
tco 30:14 35:17 40:21 63:8	thereof 117:16	tie 87:2
64:5	theres 11:3 16:19 24:7 26:24	time 1:13 11:18 23:4 51:7
telephone 2:7,17	27:15 29:19,19,24,24 30:3	55:17 71:6 74:1 78:13
tell 11:23 81:18 108:5	33:14 37:2 38:18 42:15	108:13 109:1 116:14,16
template 14:13 18:18,19	44:7 48:24 57:5,8 58:8,12	117:10
19:10 43:18 44:17	58:13 59:24 60:14 61:9	times 55:16 68:16 92:13
ten 79:13	64:10 69:5,14 70:3 80:10	108:10 111:22 113:23
tending 27:11	84:1 93:2 95:15 100:15	title 27:6
tentative 15:6 16:3,8,12	102:18,18 107:1 110:5	today 8:1,2 10:13 15:2 44:3
36:23 42:20 77:24	theyll 116:13	59:17 64:22 67:22 73:7
tentatives 15:10	theyre 18:13 20:20 21:2	81:3 87:16 99:20 100:13
term 45:20 55:13	27:13 39:5 53:1 57:11 59:7	101:1
terms 33:18 44:10 113:5	108:10 112:5 115:4	top 11:14 18:10 19:22 39:20
testified 12:9 66:17 77:3	theyve 14:9 30:6 89:17	114:3
78:23 80:9 90:4 93:7 99:7	thing 24:8 32:23 46:10 65:8	topside 25:2
testify 8:2 15:1 44:3 117:6	81:6 92:11,23 96:24 97:13	total 11:6 17:23 22:19 25:6
testifying 11:15 19:12	113:20 114:5	26:12 62:22 63:2 68:14
testimony 10:13 11:14 32:20	things 10:7 24:24 27:12 78:8	114:9
50:24 52:4 73:5 100:13	80:15	totaling 56:22
103:15 115:13 117:7	think 9:1,12 11:13,20 13:4	touched 91:24
tgp 35:19	15:1 17:10 24:19 34:20	track 24:10,15,15 50:3,16
thank 115:11 116:19,19	35:2 37:1,3,4 38:3,9,19	tracked 31:18 64:14
thanks 104:12	39:9,17 40:11 41:12 42:5	tracking 24:9 50:11
thats 6:6 7:15 9:12,16 10:14	43:7 44:1,4,11 46:9,17	tracks 33:6

trade 39:16 83:6	110:24	39:22 46:14 77:12,22 78:7
traded 64:8	typically 27:18 67:15 100:16	78:24 87:8 100:3 106:20
transaction 33:12,17,24 34:2	100:20	varies 44:19
61:5 69:10		various 34:22 54:24 109:16
transcript 117:14	U	vast 58:15,16
transcription 117:8,8	uhhuh 10:20 52:6 54:21	verify 107:15 108:3
transfer 75:2	74:22 75:11	versus 30:22 31:10 32:8
transmission 69:18,19	ultimately 8:13 11:10	38:10 52:13 90:17
transmit 101:5	understand 30:24 98:2	vertical 25:23 27:6
transport 30:7 33:1 35:14,16	104:12	vice 3:10
101:6	understanding 44:4 67:10	view 109:24
transportation 17:23 26:11	75:9 106:18 109:7	virginia 1:18 2:5,6,12,15,16
28:8,19 29:2,7,15,17 30:11	uniform 10:11	3:13 5:14 6:17,23 7:8 9:7
34:10,18 35:22 36:12	union 1:18	10:16 12:20 13:6,13,19
54:12,17,20 56:22 67:24	unison 12:1	14:7 17:9 25:9,20 26:13
70:22 71:14 72:8,12,21	unit 35:21	30:14 35:18,23 36:15
89:3 91:6	unwilling 24:13	39:16 41:22 45:6,17 46:10
transporting 14:5 30:10	updated 105:7	50:2,8 61:24 63:9,12,13
31:3,15 114:21	updates 106:24	72:17 99:17 108:20,22,23
travis 3:5 6:11,11 111:10	use 8:21 16:15 42:5,12 44:19	113:1,6,12 117:1,5,15,17
treat 115:23	45:9 47:24 69:12 78:11,11	117:21
treated 31:5	88:5 93:5 96:9 102:6,14	volatility 45:16
treating 22:1	113:10 115:14	volume 20:19,24 56:7
treatment 72:1	users 56:20	volumes 97:9
tremendous 103:16	uses 17:24 45:17	voting 6:5
tried 14:8	utica 37:4,8 41:5	
true 104:3 117:8	utilize 107:15	W
truth 11:23,23,24 117:6,6,6	utilized 85:24	walk 18:2,6 19:10 24:22
truthful 80:1		26:19 43:14 44:6,9 87:20
try 14:13 89:23	V	walked 51:1,3
trying 24:24 94:13	valuation 11:3 16:9 17:15	walks 19:19
tuesday 116:11,13	18:5 44:5 46:14 99:16	want 10:21 11:14 13:5 19:10
tuesdays 116:9	104:4 107:7	23:4 28:21 34:24 55:9,24
turn 62:15 72:14 73:3	value 13:22 14:16 18:1 19:8	67:9 74:21 76:8,10,13
104:17	19:15,17 36:20 43:15,17	79:24 80:2 97:19 115:19
two 11:21,21 19:5 31:21	44:8,9,14,16,17 45:20,22	116:15
32:1,2 33:14,15 39:15,15	46:2,7,8,16 53:5 57:9 60:9	wanted 71:9 92:3 95:3
41:13 47:19,20,21 51:17	75:7 83:13 93:19,21 95:3	wants 55:19
65:23 78:5 93:2,5	98:8,11	wash 36:14
twofold 86:11,15	valued 10:1,8 58:24	wasnt 38:15 73:7 74:1 87:23
tying 20:23 21:1	values 8:4 11:5,10 13:9 16:4	91:18
type 11:19 17:21 26:19	16:12,19 36:23 38:17	water 72:1
51:13 52:23	42:20 45:23 74:3,6,7,15,18	way 21:8 55:3 75:16 97:23
types 24:16 31:19 67:16	74:19 84:7 98:9 108:24	112:2
70:21 72:5	valuing 8:16	website 41:11,13 92:3
typical 58:8,10 72:6 110:15	variables 11:3 15:7,8,8 16:9	wed 56:1 88:2
	16:16 17:16 24:3 37:22	weight 7:5 76:14

weighted 58:19 87:22 88:16	whats 14:14 15:15 16:21	68:12 76:7 80:23 83:3
weighting 42:3	25:7 26:13 27:2 38:11	95:13 97:20 106:9 109:22
weights 32:7	49:24 60:1 61:10 79:6	112:15 114:16 115:6
wellbywell 50:4	99:13 103:4 104:1	year 8:7,18 15:6,18,18 16:10
wellhead 14:1,4 31:15 56:5	wheeling 117:17	16:13 18:17,20,22,23 19:22
70:23 72:10,11 90:11	whos 14:3,4,4,5 114:22	19:23 20:2 22:19,20,24
100:22 103:9,17 111:17,19	115:1	23:1 25:6,7 27:4 36:6,24
111:20 113:22 114:8,9	win 98:3	37:7,15,16 38:13,21 42:20
wells 8:5,6,16,17 10:12 11:4	withheld 57:7	42:21 45:12 50:23 51:1,8
13:7,14,19,24 15:16 16:12	witness 4:6 5:2 11:16 48:3	53:13 59:2 62:20 70:7,8
16:20 17:2,9,20 18:1,16	51:15 53:22 61:6 66:4,6,13	71:7 72:16 73:23,24 74:4
19:21,23 22:4,4 23:15 24:9	73:4 76:22 89:20 117:16	77:17,22 81:21 83:5 87:4,7
25:2,18,23 26:8,9,9 27:8,19	witnesses 7:24 12:1 117:5,7	87:11 88:20 94:17 95:12
31:10 32:1,2,16 36:21 37:8	wont 98:16 116:12	106:19 108:2,12 112:19
39:18 41:6 43:15 44:15,23	word 88:14 102:10	yearly 107:9
45:7,8,12,24 47:19 48:9	words 56:20 87:6 94:5	years 10:2 12:23 14:9,12
50:2,8 51:17,19 53:6,6,7	work 12:4 65:5 92:17	27:6 33:21 37:13 47:11,16
57:21,23 58:8,10 59:1 72:1	worked 91:16	67:5 78:22 95:13 107:1
74:10,12,19 78:19,21 81:12	working 11:4,6,9 12:23	yep 51:18
86:7 89:7,7 92:14 93:13	13:12 18:11,20,22,23 19:3	yoo 3:10 4:11 8:2 66:14,16
94:18 97:5,7,8,10 110:15	19:5,6,11,12,16 21:11,17	67:2 75:24 109:4,22
110:24 111:1 113:2,9,13,15	22:7 33:21 37:10	111:14 113:4,24 114:4,7,14
113:15	workover 25:13 26:1	115:6
wellsite 115:20	works 21:22	youd 45:1 56:11 58:21
went 8:20 14:11 16:24 45:3	worth 25:8 74:15 83:15	youll 17:1 24:23 25:3,20
76:5 81:20	wouldnt 38:4 44:22 74:8,17	35:13 63:6 69:9 72:19
west 1:18,18 2:6,12,15,16	87:3 93:19 95:3 103:24	91:12
3:13 5:14 6:17,23 7:8 9:7	wow 86:10	youre 8:15,15 18:16,17
10:16 12:20 13:6,13,19	written 16:18	23:11 24:5 27:11 28:10,11
14:7 17:9 25:9,20 26:13	wrong 10:6 19:11 46:10	30:24 31:1,3,4 32:6,9
30:14 35:18,23 36:15	48:23 62:3 74:14,18	38:21 48:1 50:19 54:4,16
39:16 41:22 45:6,17 46:10	wv 2:19 3:12	54:24 56:19 58:18 59:9,17
50:2,8 61:24 63:9,12,13	wvonga 37:20 39:19,21 40:5	60:7,9 64:3 65:3,12 70:16
72:17 99:17 108:20,22,23	40:23 41:3 78:5 80:9 82:5	73:6,11,21 82:18 92:8
113:1,6,12 117:1,5,15,17	82:5,15 85:6 87:16,23	95:21 96:5 110:20,21
117:21	88:18 94:4,14,18 95:19	112:10,16 114:12
wet 14:5 26:8,9,9,18 28:21		youve 17:24 39:4 40:4 44:2
29:1,11 30:22 31:1,10	X	65:22 78:11 94:16 95:17
32:24 53:19,20,24 89:17	x 4:1 5:1,11 12:12 47:1 66:20	96:7 106:14
90:7,12,17 91:4 101:13,22	73:1 77:5 81:1 96:15 97:2	
111:13 114:19 115:1	97:15 99:9 100:8 102:4	Z
weve 18:4 31:21 37:5 39:12	103:1 104:15 105:5	zero 42:5
40:18 57:18 58:3,7 67:6,22	Y	o
68:4 78:23 83:6,7 89:1	yeah 10:23 12:3,4 22:15 28:9	00 20:4
91:24 99:3 100:13 101:1	43:11 48:18 50:15 53:24	000 8:24 10:10 14:10,10
104:22 114:8 115:3	56:6 59:4 62:7 66:5,8	15:13,22,22 17:3 19:2,3,4

19:24 20:5,7,8,13,14,19 21:7,12,18 22:17 25:15,17 25:21,22 26:2,4,6,10,11,12 26:14,18 31:24,24 32:14,17 37:11,15,18,19 38:1,2,4 41:7,9,24 42:1,4,11 43:1 47:21,21,23 48:5,11 57:17 58:1,7 59:2,12,13 60:19,21 68:8,9,9,20 74:8,11,15 77:18,18,20,23 78:7,23 79:16,18 80:11 83:13,15 84:3,23 85:1,5,7 86:6 88:10,17 92:16 93:13,17,18 93:19 95:17,21 96:8 110:12,21 113:16 000foot 113:11 02 1:13 6:15	150 14:10,12 20:8,14 31:24 37:15 74:11 77:18,18,20,24 78:7 86:5,6 87:4,24 88:20 153 57:18 110:13,19 15year 92:2 16 23:23 37:1 81:20,20 117:22 17 1:12 95:11 175 8:24 10:10 15:13,22 19:2 19:3,4 21:7,18 26:14,18 31:24 37:11,15,19 38:1,4 42:1,4,11 43:1 59:12 74:8 77:23 78:1 79:18 87:4,20 88:1,17,20 94:21 95:17,21 178 26:11 1785 18:24 17th 2:6 18 18:21 199 8:6 1992 106:23	25:7 27:4 37:7,9,16 38:10 39:24 40:24 117:17 2018 90:19 95:8,14 202 46:6 2021 117:22 22 15:19 225 36:9,11 236 20:7 24 6:17 25 17:5,20 20:16 37:18 48:8 51:6 57:22 58:5 67:5 82:24 83:19,23 86:4 108:11 250 20:13 25301 2:6,16 257 26:4 26456 1:18 27 117:15 279 46:3
1	2	3
1 5:13,14 16:24 17:13,18 18:22,23 20:16 21:10 22:9 35:15 39:21 43:6,10,11 49:5,15,15,20 57:18 80:12 80:12 85:4 110:13 10 1:13 6:15 12:24 40:9 58:1 100 5:5 47:21 58:9 60:18 83:13,15 110:16,20,22 102 5:6 103 5:7 104 5:8 105 5:9 10k 71:6 74:21 75:10 113:2 10th 117:17 11 6:16 41:10 1124 2:15 117 36:14,15 118 1:17 119 21:12 12 1:13 4:8 17:18 45:19 60:23 64:19 116:23 121 60:16,17,23 13 20:9 43:23 64:19 133 20:19 14 71:5 81:19 15 12:23 23:23 34:24 35:5 37:1 62:6,15 70:2 78:24 81:23,24 92:1	2 14:19,23 17:11 19:19 20:6 20:12,16 35:10 38:9 40:23 48:8 60:16,17,23 63:4 83:3 83:22 110:10 20 8:22 15:11 19:1,4 20:7,20 21:7,12,14 22:3 37:9,14 38:10,14 43:18 46:14 68:16 72:21 73:18 74:7,14 77:19,23 81:13 82:3 83:5,9 83:11 2005 105:9,10 106:18,24 107:5 2008 40:6 89:11 2010 39:23 2013 20:3 73:23 86:2 89:1,10 89:19 2014 20:2,10 26:23 30:18 40:12,14 42:13,14 67:8,9 2015 20:2,15 25:6 35:6 36:6 41:15 62:20 63:2 71:7 72:20 73:24 74:4,6,10,10 74:11 83:5 2016 20:2 23:22 38:21 50:23 50:24 53:13 84:7 2017 1:12 8:7,18 16:13 23:22	3 6:17 14:19 15:5 16:1 19:22 19:23 20:16 22:24 48:17 102:13 113:13 30 1:13 14:11 81:8 93:16,17 114:10 116:23 304 2:7,8,17,18 30something 98:6 31 71:7 33 68:8,20 78:23 3538000 2:7 3538180 2:8 357 56:23 36 15:17 17:3 21:23,23 25:17 38:10 39:2 41:8 43:16,19 46:4 49:19 72:19 82:24 83:8 84:3 38 41:6 82:6,16 83:7,11 39 41:21
	4	
	4 18:2 20:4,6 21:19,24 22:5 47:14 93:18 102:13 113:13 113:16 40 38:2 59:3 63:7,8 70:7 85:14 114:10 41 25:15 26:2 59:13 421 46:9,16	

44 49:14 63:8	49:19,21 57:18 58:6,7	
45 81:8	60:19 79:2 84:3,23 85:1,5	
46 25:10 71:12	110:12,21	
47 4:9 71:12 117:15		
5	9	
5 14:10,11 20:12 22:6 24:18	9 4:4 39:14 82:13 113:11	
38:4 48:15 49:20 51:14	90 60:20	
57:24 59:2 63:7 72:10	921 25:9 36:5	
92:16 93:13,17,19 112:21	96 4:18	
50 38:20,20 47:21 79:16	967 25:8	
88:10	97 4:19,20	
51 35:15	99 5:4	
514 46:1		
544 25:21 26:12 32:14 56:23		
57:17,20 58:2,22		
5581843 2:18		
5583940 2:17		
6		
6 26:21 58:9 65:9 67:6 72:5		
110:16,20,22		
600 19:24 20:5 22:17,23		
659 72:21		
66 4:12		
68 26:6,10		
7		
7 4:3 21:17 22:6,9 33:11		
48:17,21 54:5 61:4 68:15		
68:15,23,23 69:3		
700 57:24 68:9 96:8		
707 2:5		
720 41:7 85:7		
73 4:13		
75 47:23 48:5		
77 4:16		
771 68:24		
780 60:21		
8		
8 113:16		
80 60:20		
800 68:9 74:15 80:11		
81 4:17		
817 15:22 17:3 25:17,22		
32:17 38:2 41:9,24 48:11		

TAB 1



Chase Tower, Eighth Floor

P.O. Box 1588

Charleston, WV 25326-1588

(304) 353-8000 (304) 353-8180 Fax

www.stepToe-johnson.com

Writer's Contact Information

304-353-8190/phone

304-353-8181/fax

Craig.griffith@stepToe-johnson.com

January 19, 2017

VIA FACSIMILE/CERTIFIED MAIL TO FOLLOW

Beth A. Rodgers
Clerk of the Doddridge County Commission
135 Court Street, Room 102
West Union, WV 26456

Re: Antero Resources Corporation
Notice of Protest and Election to have matter heard by the Board of Equalization and
Review for Tax Year 2017

Dear Ms. Rodgers:

This firm serves as West Virginia tax counsel to Antero Resources Corporation ("Antero"). Attached for filing on behalf of Antero please find the company's Tax Year 2017 Notice of Protest and Election to have matter heard by the Board of Equalization and Review. Antero is filing protests in Doddridge, Harrison, Ritchie and Tyler counties. If coordination of hearings among the four counties is feasible, it would be appreciated greatly. Due to the complexity of the matter, we request a hearing time of no less than 60 minutes to allow for all testimony to be presented. If possible, please avoid scheduling the hearings for February 21, 2017 through February 23, 2017.

Please contact me if you have any questions regarding this matter or if any further information or actions is required to lodge this appeal and secure a hearing date in February.

Beth A. Rogers
January 19, 2017
Page 2

A copy of this filing is also being provided to the Assessor and to the Tax Commissioner as indicated below.

Thank you for your assistance.

Very truly yours,
Steph & Johnson PLLC

Craig A. Griffith

CC: David Sponaugle
Dale Steager
Jeff Amburgey
Jan Mudrinich
Todd Workman
Kirsten Evans
Nancy Sitton
Elizabeth Burg



January 20, 2017

Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

VIA FACSIMILE/CERTIFIED MAIL TO FOLLOW

Beth A. Rodgers
Clerk of the Doddridge County Commission
135 Court Street, Room 102
West Union, WV 26456

Re: Antero Resources Corporation
Notice of Protest and Election to have matter heard by the Board of Equalization and Review
Tax Year 2017

Dear Ms. Rodgers:

In accordance with W.Va. Code §§ 11-3-23a, 11-3-24 and 11-6K-6, Antero Resources Corporation hereby protests the assessment of its property identified on the attached spreadsheet.

Generally stated, the primary reason for Antero Resources Corporation's filing of this notice of protest is that the assessments of the properties at issue do not reflect the true and actual value of the properties due to the use of inaccurate operating expenses. The Property Tax Division uses an outdated average operating expense that does not represent actual operating expenses for Antero, or the industry as a whole. Furthermore, they are unlawfully applying a maximum operating expense in their value calculation. These two issues combined results in an appraised value that significantly understates actual operating expenses incurred and as a result, the assessed value for the wells is significantly overstated.

Antero Resources Corporation reserves the right to raise additional grounds during the appeal process, including, but not limited to, the ground that the assessment of the properties at issue are not based on the fair market value of the properties. Please note that with respect to each property identified on the attached spreadsheet, the State Appraised Value, the Taxpayer's Value and the Value the Taxpayer Believes to be in Controversy are all indicated.

January 20, 2017
Page 2

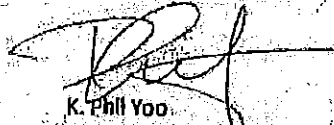
Ms. Rodgers

Furthermore, please be advised that Antero Resources Corporation elects to have this matter heard in February of 2017 when the County Commission sits as the Board of Equalization and Review.

A copy of this letter is also being provided to the County Assessor and State Tax Commissioner.

Best regards,

Antero Resources Corporation



K. Phil Yoo

Vice President of Accounting and Chief
Accounting Officer

CC: David Sponaugle
Dale Steager
Jeff Amburgey
Jan Mudrinich
Todd Workman
Kirsten Evans
Nancy Sitton
Elizabeth Burg

Antero Resources Corporation
Tax Year 7/1/16 - 6/30/17
Doddridge County, WV

Account #	# of Wells	API#	API# for Second Well (if applicable)	Property Description	State Appraised Value	Taxpayer Value	Value the Taxpayer Believes to be in Controversy
0120146079	1	017-06079		VALENTINE UNIT 1H (10205)	1,411,961	906,787	508,174
0120146089	1	017-06089		VALENTINE UNIT 1H (10205)	2,327,079	853,632	471,422
0120156169	1	017-06169		SEABORN UNIT 1H (10295.1)	2,182,893	1,267,302	920,590
0120156170	1	017-06170		SEABORN UNIT 1H (10330.1)	1,991,118	1,176,689	814,419
0120156197	1	017-06197		DOTSON UNIT 1H (10308.1)	1,542,896	839,237	543,659
0120156188	1	017-06188		CENTRAL UNIT 2H (10311.1)	1,357,368	1,040,156	597,112
0120156189	1	017-06189		DOTSON UNIT 2H (10310.1)	1,328,896	990,033	518,463
0120166141	1	017-06141		PIGGOT UNIT 2H (10303.1)	4,710,732	2,342,941	2,368,970
0120166142	1	017-06142		PIGGOT UNIT 1H (10304.1)	3,302,319	1,745,404	1,336,915
0120166190	1	017-06190		HOUSE UNIT 1H (10325.1)	2,612,531	1,351,721	1,290,810
0120166191	1	017-06191		HOUSE UNIT 2H (10387.1)	2,155,834	1,243,864	909,950
0120166192	1	017-06192		CALLIE UNIT 1H (10388.1)	2,061,728	1,218,090	843,618
0120166193	1	017-06193		CALLIE UNIT 2H (10388.1)	3,154,854	1,686,435	1,468,394
0120166201	1	017-06201		SHALE UNIT 1H (10164.1)	3,918,790	2,013,019	1,805,771
0120166108	1	017-06108		VIOLET UNIT 1H (10331.1)	3,682,403	1,988,308	1,903,097
0120166207	1	017-06207		SHALE UNIT 2H (10379.1)	3,372,466	1,781,933	1,590,533
0120166211	1	017-06211		NERO UNIT 1H (10748.1)	2,409,038	1,338,136	1,050,880
0120166212	1	017-06212		NERO UNIT 2H (10747.1)	4,582,322	2,300,331	2,281,975
0120166213	3	017-06213		VONDA UNIT 1H (10745.1)	5,223,849	2,560,565	2,681,064
0120166166	1	017-06166		MARKS UNIT 1H (10340.1)	5,764,778	2,799,353	2,985,425
0120166272	1	017-06272		MASH UNIT 1H (10641.1)	2,632,129	1,469,855	1,162,474
0120166273	1	017-06273		MASH UNIT 2H (10353.1)	3,777,348	1,942,716	2,694,632
0120166289	1	017-06289		PIKE UNIT 2H (10436.1)	2,988,831	1,623,317	1,375,284
0120166291	1	017-06291		LEGGETT UNIT 1H (10394.1)	2,624,398	1,533,868	1,290,530
0120166293	1	017-06293		LEGGETT UNIT 2H (10485.1)	2,370,734	1,349,314	1,027,470
0120166284	1	017-06284		PIKE UNIT 2H (10437.1)	2,858,723	1,573,010	1,317,713
0120166338	1	017-06338		SHEARER UNIT 2H (10501.1)	3,372,830	1,798,331	1,382,577
0120166402	1	017-06402		FWYFORD UNIT 1H (10502.1)	5,303,650	2,602,108	2,701,588
0120166430	1	017-06430		ZELLERBACK UNIT 1H (10503)	3,193,101	1,712,233	1,461,066
0120166431	1	017-06431		AMANDA UNIT 1H (10504.1)	2,054,378	1,656,674	1,397,804
0120166432	1	017-06432		AMANDA UNIT 2H (10503.1)	3,541,154	1,861,333	1,679,893
0120176370	1	017-06370		WASHINGTON UNIT 1H (10362)	1,366,828	895,723	471,103
0120176371	1	017-06371		WASHINGTON UNIT 2H (10325)	2,035,856	1,187,576	848,380
0120176415	1	017-06415		HUDKINS UNIT 1H (10591.1)	1,196,677	791,281	405,398
0120176436	1	017-06436		NUDKINS UNIT 2H (10392.1)	1,298,552	657,389	440,658
0120176464	1	017-06464		HAYDEN UNIT 1H (10564.1)	1,067,320	1,114,148	753,074
0120176463	1	017-06463		HAYDEN UNIT 2H (10562.1)	1,601,843	997,922	609,620
0120176474	1	017-06474		LEASON RUN UNIT 1H (10569)	1,644,019	1,011,871	627,148
0120176475	1	017-06475		LEASON RUN UNIT 2H (10590)	1,333,850	860,648	453,201
0120176561	1	017-06561		BIERSTADT UNIT 1H (10353)	1,865,669	1,216,483	789,100
0120176563	1	017-06562		BIERSTADT UNIT 2H (10358)	1,567,101	960,009	587,292
0120176589	1	017-06581		STELLA UNIT 1H (10356.1)	1,835,841	1,090,093	744,849
0120176564	1	017-06564		STELLA UNIT 2H (10357.1)	1,326,433	959,484	566,951
0120176619	1	017-06619		JAMES UNIT 1H (11407.1)	1,515,126	954,488	560,638
0120176620	3	017-06620		JAMES UNIT 1H (11406.1)	1,169,097	785,347	363,750
0120176621	1	017-06621		MCCOKE UNIT 1H (10546.1)	1,170,132	793,407	376,715
0120176622	1	017-06622		MCCOKE UNIT 2H (10549.1)	1,124,116	767,091	371,015
0320146080	2	017-06080	017-06086	NEELY UNIT 1H AND NEELY U	5,318,909	2,862,185	2,336,744
0320146083	1	017-06083		LEATHERMAN UNIT 2H (10204)	2,567,502	1,431,414	1,115,068
0320156084	1	017-06084		LEATHERMAN UNIT 1H (10103)	2,255,880	633,412	1,601,466
0320156128	1	017-06128		MOORE UNIT 1H (10255.1)	1,390,013	911,700	478,318
0320156129	1	017-06129		MOORE UNIT 1H (10260.1)	1,310,364	867,647	456,717
0320156163	1	017-06163		EMILY UNIT 2H (10282.1)	1,123,063	733,850	387,232
0320156166	1	017-06166		EMILY UNIT 2H (10282.1)	1,227,504	804,346	423,136
0320156194	1	017-06194		COSTLOW UNIT 1H (10333.1)	3,958,018	2,031,273	1,926,740
0320156204	1	017-06204		LANGFITT UNIT 2H (10750.1)	2,034,091	1,220,873	813,216
0320156203	1	017-06203		GASKINS UNIT 2H (10339.1)	3,239,943	1,790,236	1,503,713
0320156221	1	017-06221		LANGFITT UNIT 1H (10749.1)	1,298,362	848,124	448,238
0320156233	1	017-06233		CONNIE UNIT 1H (10336.1)	1,975,402	901,225	474,277
0320156256	1	017-06256		CONNIE UNIT 2H (10337.1)	1,412,532	925,433	487,099
0320156260	1	017-06260		GASKINS UNIT 1H (10368.1)	3,854,739	1,997,368	1,897,371
0320166202	1	017-06202		HOLDER UNIT 1H (10748.1)	1,078,282	705,487	372,798
0320166203	1	017-06203		HOLDER UNIT 2H (10332.1)	873,279	570,019	301,260
0320166220	1	017-06220		COSTLOW UNIT 2H (10345.1)	6,313,354	3,026,095	3,297,859
0320166146	1	017-06146		DUFF UNIT 1H (10400.1)	6,449,791	3,096,956	3,397,835
0320166147	1	017-06147		DUFF UNIT 2H (10406.1)	7,199,372	3,433,843	3,853,529
0320166259	1	017-06259		MISHKA UNIT 1H (10405.1)	3,752,769	1,940,222	1,804,647
0320166282	1	017-06282		VANSCOT UNIT 1H (10448.1)	1,763,091	1,101,975	661,126
0320166263	1	017-06263		MCCONNELL UNIT 2H (10446)	1,912,106	1,172,059	750,047
0320166264	1	017-06264		VANSCOT UNIT 2H (10449.1)	2,342,247	877,908	464,339
0320166267	1	017-06267		KOCH UNIT 2H (10402.1)	3,185,489	1,714,104	1,471,385

Anterra Resources Corporation
 Tax Year: 7/1/15 - 6/30/17
 Oddfella County, WV

Account #	# of Wells	APN	APN for Second Well (If applicable)	Property Description	State Appraised Value	Taxpayer Value	Value the Taxpayer Relies on to be in Controversy
0320166268	1	017-06268		MT SALEM REVIVAL UNIT 2H	1,939,882	1,179,087	760,795
0320166269	1	017-06269		MT SALEM REVIVAL UNIT 1H	2,655,080	1,487,699	1,167,381
0320166281	1	017-06281		GAVIN UNIT 1H (10371.2)	1,527,278	998,993	528,285
0320166301	1	017-06301		HEFJUN UNIT 2H (10349.1)	2,476,513	1,405,749	1,066,764
0320166302	1	017-06302		GAVIN UNIT 2H (10372.2)	1,068,398	697,919	368,677
0320166399	1	017-06399		HOSKINSON UNIT 1H (10452)	6,018,925	3,277,837	3,641,088
0320176218	1	017-06218		GAINS-KOCH UNIT 1H (11363)	1,257,499	824,208	433,291
0320176270	1	017-06270		MILO UNIT 1H (11349.1)	1,949,712	1,160,914	788,798
0320176274	1	017-06274		MISHKA UNIT 2H (10388.1)	2,777,919	1,507,770	1,270,149
0320176373	1	017-06373		ANNE UNIT 1H (10550.1)	1,818,196	1,101,655	716,541
0320176374	1	017-06374		ANNE UNIT 7H (10551.1)	1,995,209	1,172,148	823,063
0320176375	1	017-06375		HAROLD UNIT 1H (10552.1)	2,700,150	1,478,650	1,229,500
0320176395	1	017-06395		GAINS UNIT 1H (10445.1)	1,001,220	1,092,221	703,999
0320176397	1	017-06397		MCARILLAN UNIT 1H (10453.1)	2,469,360	1,378,159	1,091,201
0320176398	1	017-06398		MCARILLAN UNIT 2H (10454.1)	3,148,928	1,883,248	1,485,660
0320176400	1	017-06400		HOSKINSON UNIT 2H (10455)	2,721,878	1,481,725	1,238,151
0320176424	1	017-06424		ZIMKA UNIT 2H (10462.1)	1,319,859	888,996	460,863
0320176485	1	017-06485		MANSEY UNIT 1H (10510.1)	872,881	578,405	302,456
0320176486	1	017-06486		MANSEY UNIT 3H (10511.2)	912,417	598,256	316,161
0320176487	1	017-06487		MANSEY UNIT 3H (10585.1)	913,637	597,066	316,571
0320176498	1	017-06498		DEANO UNIT 2H (10554.1)	1,862,129	1,116,767	749,332
0420156143	1	017-06143		WALTER UNIT 3H (10279.1)	1,488,723	951,408	535,315
0420156144	1	017-06144		FLOSSIE UNIT 2H (20303.1)	1,338,279	861,276	476,953
0420156258	1	017-06258		WALTER UNIT 1H (10293.1)	1,668,308	1,041,743	624,357
0420156162	1	017-06162		WALTER UNIT 2H (10294.1)	1,568,523	991,757	576,766
0420156164	1	017-06164		RUTH UNIT 1H (10292.1)	1,928,915	977,268	551,749
0420156180	1	017-06180		FLOSSIE UNIT 3H (10312.1)	1,611,698	1,014,464	597,236
0420166138	1	017-06138		FURNEY UNIT 2H (10350.1)	2,103,961	1,226,770	877,188
0420166139	1	017-06139		FURNEY UNIT 3H (10349.1)	2,585,040	1,428,935	1,156,085
0420166140	1	017-06140		CECELE UNIT 1H (10297.1)	1,639,436	1,027,566	611,870
0420166159	1	017-06159		ONEACRE UNIT 2H (10339.1)	3,976,444	1,986,814	1,589,610
0420166160	1	017-06160		COX UNIT 2H (10353.1)	1,221,808	781,397	440,411
0420166181	1	017-06181		COX UNIT 1H (10296.1)	1,055,213	670,915	384,298
0420166167	1	017-06167		BOWEN UNIT 2H (10352.1)	1,328,177	847,900	485,277
0420166181	1	017-06181		WELLING UNIT 1H (10491.1)	3,825,344	1,911,685	1,502,659
0420166182	1	017-06182		WHITE UNIT 1H (10490.1)	4,418,757	2,138,180	1,504,577
0420166183	1	017-06183		WELLING UNIT 2H (10348.1)	2,160,695	1,243,990	918,709
0420166210	1	017-06210		GAINER UNIT 1H (10757.1)	2,553,667	1,413,625	1,140,042
0420166219	1	017-06219		BOWEN UNIT 1H (10354.1)	1,831,815	1,100,022	731,743
0420166226	1	017-06226		GAINER UNIT 2H (10395.1)	3,070,048	1,630,630	1,440,210
0420166227	1	017-06227		GOLDEN UNIT 1H (10346.1)	3,777,962	1,805,731	1,872,231
0420166230	1	017-06230		GOLDEN UNIT 2H (10347.1)	2,861,104	1,537,338	1,323,366
0420166245	1	017-06245		ROSS UNIT 1H (10401.1)	3,801,726	1,933,369	1,068,357
0420166278	1	017-06278		BELTON UNIT 3H (10429.2)	3,485,155	1,774,875	1,630,280
0420166279	1	017-06279		CAROLE UNIT 1H (10382.1)	2,914,503	1,550,809	1,363,684
0420166280	1	017-06280		CAROLE UNIT 2H (10490.1)	3,025,163	1,587,906	1,437,257
0420166389	1	017-06389		CASWELL UNIT 1H (10422.1)	5,279,996	2,527,055	2,757,941
0420166377	1	017-06377		CASWELL UNIT 2H (10426.1)	3,630,782	1,848,541	1,782,241
0420166421	1	017-06421		LETTIE UNIT 1H (10470.1)	7,019,839	3,198,116	3,871,623
0420166433	1	017-06433		DOWNS UNIT 1H (10481.1)	4,292,022	2,105,696	2,186,338
0420166434	1	017-06434		DOWNS UNIT 2H (10482.1)	6,102,549	2,856,614	3,265,925
0420166435	1	017-06435		LETTIE UNIT 2H (10471.1)	5,281,446	2,911,742	2,769,704
0420166450	1	017-06450		ARTERS UNIT 1H (10483.1)	7,686,435	3,313,574	4,172,861
0420176231	1	017-06231		RIKK UNIT 2H (10444.1)	2,117,231	1,235,454	881,777
0420176376	1	017-06376		ARTERS UNIT 2H (10422.1)	2,737,523	1,496,976	1,241,139
0420176382	1	017-06382		FUEGO UNIT 1H (10461.1)	972,547	634,935	337,812
0420176387	1	017-06387		FUEGO UNIT 2H (10459.1)	975,522	638,870	338,644
0420176468	1	017-06468		BAKER UNIT 2H (10485.1)	2,305,170	1,314,261	990,908
0420176470	1	017-06470		LIFE UNIT 1H (10486.1)	1,756,520	1,080,417	676,103
0420176471	1	017-06471		LIFE UNIT 2H (10487.1)	2,291,675	1,283,548	948,127
0520145362	2	017-05982	017-06026	R. SWIGER SOUTH UNIT 1H A	3,741,641	2,342,590	1,999,051
0520146027	1	017-06027		TROUT UNIT 1H (10176.1)	3,559,212	1,875,401	2,663,811
0520146028	1	017-06028		TROUT UNIT 2H (10175.1)	3,806,558	1,980,101	1,828,555
0520146044	1	017-06044		WEBB UNIT 1H (10168.1)	2,090,740	1,246,823	842,137
0520146045	1	017-06045		WEBB UNIT 2H (10169.1)	1,828,208	1,131,576	691,632
0520146048	1	017-06046		WEBB UNIT 3H (10170.1)	2,450,719	1,403,103	1,047,614
0520159117	1	017-06117		KEMPER UNIT 1H (10269.1)	2,037,389	1,225,361	812,024
0520159218	1	017-06118		THOMAS UNIT 2H (10272.1)	1,557,427	1,015,211	542,216
0520159120	1	017-06120		THOMAS UNIT 1H (10271.1)	1,238,253	814,037	424,216
0520159121	1	017-06121		KEMPER UNIT 2H (10270.1)	1,255,964	825,680	430,284
0520166119	1	017-06119		STATLER UNIT 1H (10735.1)	3,988,106	2,057,509	1,931,597

Antero Resources Corporation
Tax Year 7/1/10 - 6/30/17
Doddridge County, WV

Account #	# of Wells	API#	API# for Second Well (if applicable)	Property Description	State Appraised Value	Taxpayer Value	Value the Taxpayer Believes to be in Controversy
0520166194	2	017-06194		STATLER UNIT 2H (10738.1)	9,522,220	1,859,743	1,662,477
0520166148	1	017-06148		WELCH UNIT 1H (10733.1)	4,465,136	1,257,767	2,207,369
0620146096	1	017-06096		HEARS UNIT 2H (10240.1)	1,077,963	687,572	390,395
0620146099	1	017-06099		HEARS UNIT 1H (10219.1)	975,690	623,163	332,533
0620136076	1	017-06076		ERWIN UNIT 1H (10212.1)	1,355,309	831,183	504,406
0620156081	2	017-06081		TOM'S FORK UNIT 2H (10217)	1,357,470	841,745	519,727
0620156082	1	017-06082		TOM'S FORK UNIT 2H (10219)	1,312,590	940,307	564,283
0620136094	1	017-06094		RUCKMAN UNIT 1H (10247.1)	1,403,997	807,988	596,009
0620156095	1	017-06095		RUCKMAN UNIT 2H (10227.1)	999,901	624,034	373,667
0620156097	1	017-06097		YOKE UNIT 1H (10210.1)	1,164,224	742,877	422,347
0620156098	1	017-06098		YOKE UNIT 2H (10242.1)	1,283,096	818,769	464,327
0620136100	1	017-06100		CRISUP UNIT 1H (10249.1)	1,475,732	989,287	536,465
0620156102	1	017-06102		HINTEGEO UNIT 2H (10226.1)	1,448,371	904,130	539,241
0620136103	1	017-06103		RUCKMAN UNIT 3H (10246.1)	997,933	621,296	376,637
0620136104	1	017-06104		HINTEGEO UNIT 2H (10248.1)	1,348,150	846,698	499,432
0620156126	1	017-06126		ERWIN UNIT 2HA (10228.1)	1,312,654	878,187	468,487
0620156153	1	017-06153		WEBLEY FORK UNIT 1H (1071)	2,582,414	1,403,232	1,179,192
0620136156	1	017-06156		JOHNSON UNIT 1H (10317.1)	1,320,932	843,672	477,260
0620136157	1	017-06157		LITTLE TOM UNIT 1H (10321)	2,928,872	1,334,897	1,368,975
0620156173	1	017-06173		RIGHT HAND UNIT 1H (10730)	1,518,614	959,841	556,773
0620166165	1	017-06165		SCHULTE UNIT 1H (10323.1)	2,511,788	1,368,432	1,143,366
0620166174	1	017-06174		RIGHT HAND UNIT 2H (10731)	1,746,242	1,061,758	684,444
0620166239	1	017-06239		CROSS UNIT 1H (10362.1)	1,123,527	1,215,525	908,002
0620166240	1	017-06240		CROSS UNIT 2H (10363.1)	1,070,834	1,191,281	879,553
0620166243	1	017-06243		DODOTHY UNIT 1H (10360.1)	1,897,915	1,536,706	1,261,209
0620166244	1	017-06244		DODOTHY UNIT 2H (10361.1)	2,006,310	1,165,068	841,242
0620166261	1	017-06261		JOSE UNIT 2H (10381.1)	1,734,934	1,461,483	1,273,449
0620166265	2	017-06265		JOSE UNIT 1H (10345.1)	2,386,192	1,393,898	1,192,294
0620166295	1	017-06295		SWISHER UNIT 1H (10417.1)	3,161,999	1,626,849	1,534,730
0620166296	1	017-06296		SWISHER UNIT 2H (10428.1)	3,446,889	1,749,926	1,687,063
0620166311	1	017-06311		NICKERS UNIT 2H (10432.1)	4,023,965	2,288,245	2,368,720
0620166316	1	017-06316		PROUDFOOT UNIT 1H (10419)	1,444,979	910,238	574,741
0620166320	1	017-06320		PROUDFOOT UNIT 2H (10499)	1,784,692	1,083,413	859,279
0620166322	1	017-06322		SIBLEY UNIT 1H (10420.1)	1,367,114	874,322	492,791
0620166333	1	017-06333		NICKERS UNIT 3H (10431.1)	4,636,494	2,233,341	2,403,259
0620166334	1	017-06334		GEARHART UNIT 2H (10460.1)	4,736,939	2,250,170	2,486,769
0620166358	1	017-06358		SHUMSDALE UNIT 2H (10418)	1,804,408	1,006,830	397,873
0620166382	1	017-06382		FARROW UNIT 2H (10433.1)	3,678,020	1,933,871	1,944,148
0620166360	1	017-06360		FARROW UNIT 3H (10434.1)	4,035,388	1,994,625	2,040,865
0620166404	1	017-06404		PENNINGTON SOUTH UNIT 1H	3,578,738	2,387,841	2,390,915
0620166419	1	017-06419		DUFFLEMAYER UNIT 2H (1043)	3,611,216	1,797,038	1,819,176
0620166429	1	017-06429		ASENA UNIT 2H (10371.1)	4,677,119	2,229,693	2,447,428
0620166433	1	017-06433		CARO UNIT 2H (10474.1)	7,774,824	3,457,707	4,317,117
0620176408	1	017-06408		LINCOLN UNIT 1H (10580.1)	1,388,283	905,661	480,622
0620176410	1	017-06410		HONEY UNIT 1H (10605.1)	1,330,270	995,541	562,728
0620166223	1	017-06223		LIVINGSTON UNIT 1H (10377)	4,384,327	1,926,783	2,457,544
0620166224	1	017-06224		LIVINGSTON UNIT 2H (10378)	4,333,403	1,887,621	2,445,782
0620166225	1	017-06225		VORONA UNIT 2H (10380.1)	3,254,913	1,664,786	2,390,187
0620166258	1	017-06258		SQUIROEL UNIT 1H (10378.1)	3,091,507	1,519,206	2,572,301
0620166312	1	017-06312		HEFLIN UNIT 1H (10373.1)	4,101,981	2,020,761	2,081,140
0620166316	1	017-06316		JOSEPH UNIT 2H (10438.1)	3,042,677	1,931,397	1,091,480
0620166317	1	017-06317		MCCONNELL UNIT 1H (10447)	2,310,692	2,361,041	1,137,631
0620166318	1	017-06318		OLIVIA UNIT 2H (10439.1)	1,513,301	982,729	530,472
0620176327	1	017-06327		JOSEPH UNIT 1H (10478.1)	2,157,371	1,249,357	908,014
0620176332	1	017-06332		OLIVIA UNIT 1H (10499.1)	1,656,439	2,035,641	622,798
					514,321,245	278,995,310	233,324,935

TAB

2

Craig Griffith

From: Kirsten Evans
Sent: Thursday, August 25, 2016 1:07 PM
To: Amburgey, Jeff A
Cc: Nancy Sifton
Subject: RE: Comments
Attachments: Antero Resources Corporation 2017 TY Operating Expenses.xlsx

Jeff,

Attached please find Antero's 2015 calendar year operating expenses by well and expense type. As previously discussed, Antero reports its expenses at the well level. Also, the transportation costs provided by well reflect only utilized transportation. Antero does not push down its unutilized transportation to the well level in its reporting.

Antero's response to the 2017 tax year valuation variables, dated 8/1/16, provided the average operating expenses as a percent of revenue and the average operating expense per well for certain wells types. Please note that some of the numbers have changed based on further review of the information (see updated summary below). These updates do not change Antero's position that the State's allowance percentages should be increased and the maximum operating expense should be removed.

Well Type	Average Operating Expense as Percent of Revenue	Average Operating Expense per Well
Marcellus, Horizontal Wells	36%	\$817,000
Marcellus, Vertical Wells	73%	\$25,000
Horizontal Wells (Other than Marcellus)	47%	\$382,000
Typical Producing Wells	Operating at a loss	\$6,100

Please let me know if you have any questions.

Kirsten

From: Amburgey, Jeff A [<mailto:Jeff.A.Amburgey@wv.gov>]
Sent: Friday, August 12, 2016 10:17 AM
To: Kirsten Evans
Subject: Comments

Kirsten -- Public comments on behalf of Antero Resources have been reviewed by this office. In order to evaluate your proposals we must see any and all back-up documentation. As the Final Variables are due September 1, in order to receive any consideration, I ask that this documentation be in my office by August 25.

Country	INRA	APM	Total MCF	Total Oil Receipt	Total Gas Receipt	Total Receipts	Well Type	LOE & WOE	Compressor	Gathering and Processing	Transportation	Total Expenses
43	0131819683	4700505693	1,529	-	2,364	2,564	Conventional	5,338	355	0	57,066	57,066
43	09201025465	4701705465	1,303	-	1,803	1,803	Conventional	3,310	364	13	9	10,096
43	0518185466	4701705466	2,112	-	4,490	4,490	Conventional	7,332	437	43	43	7,918
09	0520105467	4701705467	1,497	-	2,428	2,428	Conventional	7,583	310	13	8	7,913
09	1441194462	4703304463	3,040	-	1,732	1,732	Conventional	17,086	242	1	1	17,983
17	1200104053	4703304463	3,040	-	4,493	4,493	Conventional	10,479	659	8	3	11,152
17	0520104053	4703304463	1,268	-	2,344	2,344	Conventional	7,037	237	14	11	7,331
09	0520105506	4701705506	2,444	-	2,454	2,454	Conventional	4,861	237	38	11	5,352
09	0520105531	4701705531	2,444	-	4,474	4,474	Conventional	7,037	503	38	10	8,288
09	0520105532	4701705532	2,653	-	6,776	6,776	Conventional	15,373	862	10	14	16,797
09	0520105535	4701705535	4,167	-	4,254	4,254	Conventional	8,776	862	37	23	9,372
09	0520105537	4701705537	6,987	-	4,254	4,254	Conventional	5,245	859	17	11	5,924
04	0520105549	4701705549	3,156	-	15,909	15,909	Conventional	7,154	771	21	5	13,051
04	1800115288	4703305289	763	-	1,824	1,824	Conventional	4,404	701	31	5	5,530
37	0520105546	4701705546	3,404	-	5,841	5,841	Conventional	10,911	728	48	11	12,298
09	0520105546	4701705546	7,583	-	3,822	3,822	Conventional	8,500	230	21	266	9,048
09	0520105547	4701705547	1,414	-	3,871	3,871	Conventional	8,500	230	21	266	9,048
09	0520105548	4701705548	1,414	-	3,871	3,871	Conventional	8,500	230	21	266	9,048
09	0520105549	4701705549	1,414	-	3,871	3,871	Conventional	8,500	230	21	266	9,048
09	0520105550	4701705550	1,159	-	3,450	3,450	Conventional	15,272	102	-	30	15,374
09	0520105551	4701705551	46	-	4,734	4,734	Conventional	15,272	102	-	30	15,374
09	0520105552	4701705552	46	-	153	153	Conventional	5,433	216	35	170	6,785
09	0520105553	4701705553	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105554	4701705554	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105555	4701705555	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105556	4701705556	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105557	4701705557	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105558	4701705558	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105559	4701705559	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105560	4701705560	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105561	4701705561	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105562	4701705562	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105563	4701705563	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105564	4701705564	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105565	4701705565	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105566	4701705566	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105567	4701705567	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105568	4701705568	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105569	4701705569	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105570	4701705570	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105571	4701705571	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105572	4701705572	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105573	4701705573	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105574	4701705574	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105575	4701705575	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105576	4701705576	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105577	4701705577	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105578	4701705578	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105579	4701705579	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105580	4701705580	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105581	4701705581	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105582	4701705582	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105583	4701705583	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105584	4701705584	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105585	4701705585	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105586	4701705586	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105587	4701705587	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105588	4701705588	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105589	4701705589	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105590	4701705590	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105591	4701705591	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105592	4701705592	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105593	4701705593	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105594	4701705594	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105595	4701705595	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105596	4701705596	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105597	4701705597	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105598	4701705598	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105599	4701705599	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105600	4701705600	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105601	4701705601	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105602	4701705602	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105603	4701705603	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105604	4701705604	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105605	4701705605	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105606	4701705606	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105607	4701705607	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105608	4701705608	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105609	4701705609	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105610	4701705610	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105611	4701705611	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105612	4701705612	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105613	4701705613	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105614	4701705614	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105615	4701705615	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105616	4701705616	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105617	4701705617	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105618	4701705618	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105619	4701705619	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105620	4701705620	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105621	4701705621	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105622	4701705622	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105623	4701705623	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105624	4701705624	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105625	4701705625	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105626	4701705626	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105627	4701705627	1,321	-	3,421	3,421	Conventional	5,433	216	35	170	6,785
09	0520105628	4701705628	1,321	-	3,421	3,421	Conventional					

17	0720125357	4703305359	493,069	493,069	Hor. Marcellus	33,622	327,515	6,470	108,275	775,683
17	0720145682	4703305362	1,089,453	1,089,453	Hor. Marcellus	19,462	291,746	19,475	291,954	349,688
17	0720125361	4703305361	750,369	750,369	Hor. Marcellus	29,017	394,765	9,207	394,964	383,234
17	1420135603	4703305364	883,304	883,304	Hor. Marcellus	35,494	372,464	7,499	114,409	309,505
17	1420125365	4703305365	880,409	880,409	Hor. Marcellus	229,974	373,974	14,089	199,089	403,405
17	0720135429	4703305366	639,105	639,105	Hor. Marcellus	18,347	183,959	18,347	183,972	328,371
17	1420135386	4703305367	637,453	637,453	Hor. Marcellus	153,000	153,000	7,824	137,997	340,240
17	0720135438	4703305368	943,495	943,495	Hor. Marcellus	29,073	294,415	13,027	206,578	486,188
17	0720125369	4703305369	1,434,830	1,434,830	Hor. Marcellus	22,008	966,220	310,259	793,908	793,908
17	0720125370	4703305370	1,157,800	1,157,800	Hor. Marcellus	23,667	286,950	12,248	188,344	573,795
17	1420135392	4703305371	1,094,582	1,094,582	Hor. Marcellus	17,960	253,446	10,676	173,181	466,276
17	0720135393	4703305372	1,371,318	1,371,318	Hor. Marcellus	16,015	394,716	17,409	299,688	987,858
17	0720145394	4703305373	1,184,165	1,184,165	Hor. Marcellus	17,421	289,654	15,006	283,547	656,029
17	0720145395	4703305374	1,184,165	1,184,165	Hor. Marcellus	25,957	307,795	25,008	401,340	928,951
17	0720145396	4703305375	1,235,272	1,235,272	Hor. Marcellus	50,111	304,877	13,630	202,682	356,329
17	0720145397	4703305376	1,465,448	1,465,448	Hor. Marcellus	34,141	346,877	14,877	294,594	490,289
17	0720145398	4703305377	1,465,448	1,465,448	Hor. Marcellus	92,153	166,656	8,288	143,711	953,608
17	0720145399	4703305378	1,465,448	1,465,448	Hor. Marcellus	34,449	269,211	11,795	227,889	589,144
17	0720145400	4703305379	1,465,448	1,465,448	Hor. Marcellus	19,478	239,957	10,740	186,066	483,678
17	0720145401	4703305380	1,465,448	1,465,448	Hor. Marcellus	26,305	186,872	16,074	160,774	478,847
17	0720145402	4703305381	1,465,448	1,465,448	Hor. Marcellus	16,881	239,785	11,615	202,601	478,847
17	0720145403	4703305382	1,465,448	1,465,448	Hor. Marcellus	15,839	151,515	6,517	107,717	297,789
17	0720145404	4703305383	1,465,448	1,465,448	Hor. Marcellus	33,306	304,236	13,536	304,132	555,409
17	0720145405	4703305384	1,465,448	1,465,448	Hor. Marcellus	31,898	300,266	13,179	200,907	555,409
17	0720145406	4703305385	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145407	4703305386	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145408	4703305387	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145409	4703305388	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145410	4703305389	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145411	4703305390	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145412	4703305391	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145413	4703305392	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145414	4703305393	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145415	4703305394	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145416	4703305395	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145417	4703305396	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145418	4703305397	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145419	4703305398	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145420	4703305399	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145421	4703305400	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145422	4703305401	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145423	4703305402	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145424	4703305403	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145425	4703305404	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145426	4703305405	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145427	4703305406	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145428	4703305407	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145429	4703305408	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145430	4703305409	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145431	4703305410	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145432	4703305411	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145433	4703305412	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145434	4703305413	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145435	4703305414	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145436	4703305415	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145437	4703305416	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145438	4703305417	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145439	4703305418	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145440	4703305419	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145441	4703305420	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145442	4703305421	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145443	4703305422	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145444	4703305423	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145445	4703305424	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145446	4703305425	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145447	4703305426	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145448	4703305427	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145449	4703305428	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145450	4703305429	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145451	4703305430	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145452	4703305431	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145453	4703305432	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145454	4703305433	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145455	4703305434	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145456	4703305435	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145457	4703305436	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145458	4703305437	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145459	4703305438	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145460	4703305439	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145461	4703305440	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145462	4703305441	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145463	4703305442	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145464	4703305443	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145465	4703305444	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145466	4703305445	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145467	4703305446	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145468	4703305447	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145469	4703305448	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145470	4703305449	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	11,238	137,084	465,492
17	0720145471	4703305450	1,465,448	1,465,448	Hor. Marcellus	23,714	237,717	1		

[illegible]

02	0201058255	4701706255	677389	9367	1467517	1426544	Her. Marcellus	243355	219326	594611	145177	453069
03	0201058256	4701706256	688256	9364	1467520	1455784	Her. Marcellus	27205	226324	60100	148258	481682
04	0201058257	4701706257	699689	9363	1467523	1473729	Her. Marcellus	79778	1110366	195422	319409	1726337
05	0201058258	4701706258	1465200	9362	1467526	1476539	Her. Marcellus	148498	387403	102482	262544	616431
06	0201058259	4701706259	1468760	9361	1467529	1480015	Her. Marcellus	339432	384215	485025	439372	1349378
07	0201058260	4701706260	14717672	9360	1467532	1483488	Her. Marcellus	339432	384215	485025	439372	1349378
08	0201058261	4701706261	14747672	9359	1467535	1486961	Her. Marcellus	339432	384215	485025	439372	1349378
09	0201058262	4701706262	14777672	9358	1467538	1490434	Her. Marcellus	339432	384215	485025	439372	1349378
10	0201058263	4701706263	14807672	9357	1467541	1493907	Her. Marcellus	339432	384215	485025	439372	1349378
11	0201058264	4701706264	14837672	9356	1467544	1497380	Her. Marcellus	339432	384215	485025	439372	1349378
12	0201058265	4701706265	14867672	9355	1467547	1500853	Her. Marcellus	339432	384215	485025	439372	1349378
13	0201058266	4701706266	14897672	9354	1467550	1504326	Her. Marcellus	339432	384215	485025	439372	1349378
14	0201058267	4701706267	14927672	9353	1467553	1507799	Her. Marcellus	339432	384215	485025	439372	1349378
15	0201058268	4701706268	14957672	9352	1467556	1511272	Her. Marcellus	339432	384215	485025	439372	1349378
16	0201058269	4701706269	14987672	9351	1467559	1514745	Her. Marcellus	339432	384215	485025	439372	1349378
17	0201058270	4701706270	15017672	9350	1467562	1518218	Her. Marcellus	339432	384215	485025	439372	1349378
18	0201058271	4701706271	15047672	9349	1467565	1521691	Her. Marcellus	339432	384215	485025	439372	1349378
19	0201058272	4701706272	15077672	9348	1467568	1525164	Her. Marcellus	339432	384215	485025	439372	1349378
20	0201058273	4701706273	15107672	9347	1467571	1528637	Her. Marcellus	339432	384215	485025	439372	1349378
21	0201058274	4701706274	15137672	9346	1467574	1532110	Her. Marcellus	339432	384215	485025	439372	1349378
22	0201058275	4701706275	15167672	9345	1467577	1535583	Her. Marcellus	339432	384215	485025	439372	1349378
23	0201058276	4701706276	15197672	9344	1467580	1539056	Her. Marcellus	339432	384215	485025	439372	1349378
24	0201058277	4701706277	15227672	9343	1467583	1542529	Her. Marcellus	339432	384215	485025	439372	1349378
25	0201058278	4701706278	15257672	9342	1467586	1546002	Her. Marcellus	339432	384215	485025	439372	1349378
26	0201058279	4701706279	15287672	9341	1467589	1549475	Her. Marcellus	339432	384215	485025	439372	1349378
27	0201058280	4701706280	15317672	9340	1467592	1552948	Her. Marcellus	339432	384215	485025	439372	1349378
28	0201058281	4701706281	15347672	9339	1467595	1556421	Her. Marcellus	339432	384215	485025	439372	1349378
29	0201058282	4701706282	15377672	9338	1467598	1559894	Her. Marcellus	339432	384215	485025	439372	1349378
30	0201058283	4701706283	15407672	9337	1467601	1563367	Her. Marcellus	339432	384215	485025	439372	1349378
31	0201058284	4701706284	15437672	9336	1467604	1566840	Her. Marcellus	339432	384215	485025	439372	1349378
32	0201058285	4701706285	15467672	9335	1467607	1570313	Her. Marcellus	339432	384215	485025	439372	1349378
33	0201058286	4701706286	15497672	9334	1467610	1573786	Her. Marcellus	339432	384215	485025	439372	1349378
34	0201058287	4701706287	15527672	9333	1467613	1577259	Her. Marcellus	339432	384215	485025	439372	1349378
35	0201058288	4701706288	15557672	9332	1467616	1580732	Her. Marcellus	339432	384215	485025	439372	1349378
36	0201058289	4701706289	15587672	9331	1467619	1584205	Her. Marcellus	339432	384215	485025	439372	1349378
37	0201058290	4701706290	15617672	9330	1467622	1587678	Her. Marcellus	339432	384215	485025	439372	1349378
38	0201058291	4701706291	15647672	9329	1467625	1591151	Her. Marcellus	339432	384215	485025	439372	1349378
39	0201058292	4701706292	15677672	9328	1467628	1594624	Her. Marcellus	339432	384215	485025	439372	1349378
40	0201058293	4701706293	15707672	9327	1467631	1598097	Her. Marcellus	339432	384215	485025	439372	1349378
41	0201058294	4701706294	15737672	9326	1467634	1601570	Her. Marcellus	339432	384215	485025	439372	1349378
42	0201058295	4701706295	15767672	9325	1467637	1605043	Her. Marcellus	339432	384215	485025	439372	1349378
43	0201058296	4701706296	15797672	9324	1467640	1608516	Her. Marcellus	339432	384215	485025	439372	1349378
44	0201058297	4701706297	15827672	9323	1467643	1611989	Her. Marcellus	339432	384215	485025	439372	1349378
45	0201058298	4701706298	15857672	9322	1467646	1615462	Her. Marcellus	339432	384215	485025	439372	1349378
46	0201058299	4701706299	15887672	9321	1467649	1618935	Her. Marcellus	339432	384215	485025	439372	1349378
47	0201058300	4701706300	15917672	9320	1467652	1622408	Her. Marcellus	339432	384215	485025	439372	1349378
48	0201058301	4701706301	15947672	9319	1467655	1625881	Her. Marcellus	339432	384215	485025	439372	1349378
49	0201058302	4701706302	15977672	9318	1467658	1629354	Her. Marcellus	339432	384215	485025	439372	1349378
50	0201058303	4701706303	16007672	9317	1467661	1632827	Her. Marcellus	339432	384215	485025	439372	1349378
51	0201058304	4701706304	16037672	9316	1467664	1636300	Her. Marcellus	339432	384215	485025	439372	1349378
52	0201058305	4701706305	16067672	9315	1467667	1639773	Her. Marcellus	339432	384215	485025	439372	1349378
53	0201058306	4701706306	16097672	9314	1467670	1643246	Her. Marcellus	339432	384215	485025	439372	1349378
54	0201058307	4701706307	16127672	9313	1467673	1646719	Her. Marcellus	339432	384215	485025	439372	1349378
55	0201058308	4701706308	16157672	9312	1467676	1650192	Her. Marcellus	339432	384215	485025	439372	1349378
56	0201058309	4701706309	16187672	9311	1467679	1653665	Her. Marcellus	339432	384215	485025	439372	1349378
57	0201058310	4701706310	16217672	9310	1467682	1657138	Her. Marcellus	339432	384215	485025	439372	1349378
58	0201058311	4701706311	16247672	9309	1467685	1660611	Her. Marcellus	339432	384215	485025	439372	1349378
59	0201058312	4701706312	16277672	9308	1467688	1664084	Her. Marcellus	339432	384215	485025	439372	1349378
60	0201058313	4701706313	16307672	9307	1467691	1667557	Her. Marcellus	339432	384215	485025	439372	1349378
61	0201058314	4701706314	16337672	9306	1467694	1671030	Her. Marcellus	339432	384215	485025	439372	1349378
62	0201058315	4701706315	16367672	9305	1467697	1674503	Her. Marcellus	339432	384215	485025	439372	1349378
63	0201058316	4701706316	16397672	9304	1467700	1677976	Her. Marcellus	339432	384215	485025	439372	1349378
64	0201058317	4701706317	16427672	9303	1467703	1681449	Her. Marcellus	339432	384215	485025	439372	1349378
65	0201058318	4701706318	16457672	9302	1467706	1684922	Her. Marcellus	339432	384215	485025	439372	1349378
66	0201058319	4701706319	16487672	9301	1467709	1688395	Her. Marcellus	339432	384215	485025	439372	1349378
67	0201058320	4701706320	16517672	9300	1467712	1691868	Her. Marcellus	339432	384215	485025	439372	1349378
68	0201058321	4701706321	16547672	9299	1467715	1695341	Her. Marcellus	339432	384215	485025	439372	1349378
69	0201058322	4701706322	16577672	9298	1467718	1698814	Her. Marcellus	339432	384215	485025	439372	1349378
70	0201058323	4701706323	16607672	9297	1467721	1702287	Her. Marcellus	339432	384215	485025	439372	1349378
71	0201058324	4701706324	16637672	9296	1467724	1705760	Her. Marcellus	339432	384215	485025	439372	1349378
72	0201058325	4701706325	16667672	9295	1467727	1709233	Her. Marcellus	339432	384215	485025	439372	1349378
73	0201058326	4701706326	16697672	9294	1467730	1712706	Her. Marcellus	339432	384215	485025	439372	1349378
74	0201058327	4701706327	16727672	9293	1467733	1716179	Her. Marcellus	339432	384215	485025	439372	1349378
75	0201058328	4701706328	16757672	9292	1467736	1719652	Her. Marcellus	339432	384215	485025	439372	1349378
76	0201058329	4701706329	16787672	9291	1467739	1723125	Her. Marcellus	339432	384215	485025	439372	1349378
77	0201058330	4701706330	16817672	9290	1467742	1726598	Her. Marcellus	339432	384215	485025	439372	1349378
78	0201058331	4701706331	16847672	9289	1467745	1730071	Her. Marcellus	339432	384215	485025	439372	1349378
79	0201058332	4701706332	16877672	9288	1467748	1733544	Her. Marcellus	339432	384215	485025	439372	1349378
80	0201058333	4701706333	16907672	9287	1467751	1737017	Her. Marcellus	339432	384215	485025	439372	1349378
81	0201058334	4701706334	16937672	9286	1467754	1740490	Her. Marcellus	339432	384215	485025	439372	1349378
82	0201058335	4701706335	169676									

03	0120156253	4701705253	826,093	153,456	2,289,297	3,452,752	Hor. Marcellus	73,467	132,944	289,320	200,303	601,224
09	0120156258	4701705258	951,051	159,415	2,287,574	2,857,988	Hor. Marcellus	96,975	146,411	281,457	201,808	784,711
09	0120156264	4701705264	1,039,600	149,081	2,647,212	2,796,298	Hor. Marcellus	10,885	184,955	182,138	243,786	841,244
09	0120156268	4701705268	1,571,567	96,274	3,476,468	3,522,771	Hor. Marcellus	3,529	311,840	45,676	343,078	1,089,078
09	0820156274	4701705274	1,571,567	14,132	1,775,350	1,775,350	Hor. Marcellus	35,697	291,260	66,778	448,107	988,110
09	0820156278	4701705278	1,796,287	398,723	2,088,526	2,088,526	Hor. Marcellus	58,222	304,466	114,586	209,023	1,382,780
09	0820156284	4701705284	908,166	157,013	2,556,806	2,556,806	Hor. Marcellus	62,225	360,557	111,580	209,898	758,420
09	0820156287	4701705287	1,127,772	27,646	1,848,684	1,848,684	Hor. Marcellus	60,788	283,069	84,133	108,856	597,835
09	0820156291	4701705291	854,914	18,209	1,348,048	1,348,048	Hor. Marcellus	50,707	200,519	76,530	120,088	485,788
09	0820156294	4701705294	14,695	3,209,317	3,402,457	3,402,457	Hor. Marcellus	59,353	395,344	177,784	322,744	1,557,686
09	0820156298	4701705298	1,477,452	3,209	3,510,809	3,510,809	Hor. Marcellus	113,550	774,047	245,728	395,752	1,486,027
09	0820156303	4701705303	2,384,449	123,790	4,084,538	4,084,538	Hor. Marcellus	107,813	470,381	181,155	305,551	1,144,685
09	0820156307	4701705307	1,732,485	12,264	2,680,515	2,680,515	Hor. Marcellus	180,114	154,678	207,107	284,954	754,854
09	0820156311	4701705311	1,154,224	182,518	5,775,771	5,775,771	Hor. Marcellus	72,889	1,345,382	214,251	417,688	2,528,854
09	0820156315	4701705315	2,591,386	1,295	4,514,352	4,514,352	Hor. Marcellus	97,810	715,015	208,765	305,884	1,408,376
09	0820156319	4701705319	2,099,898	44,104	5,244,735	5,244,735	Hor. Marcellus	76,235	1,436,479	260,344	469,063	2,494,105
09	0820156323	4701705323	1,677,178	1,378	3,813,144	3,813,144	Hor. Marcellus	84,728	1,594,612	285,448	556,931	2,813,180
09	0820156327	4701705327	2,296,777	1,678	3,206,775	3,206,775	Hor. Marcellus	70,963	1,021,744	194,355	318,286	1,774,494
09	0820156331	4701705331	3,895,759	4,615	3,918,156	3,918,156	Hor. Marcellus	76,756	1,021,744	194,355	318,286	1,774,494
09	0820156335	4701705335	1,728,288	135	3,449,705	3,449,705	Hor. Marcellus	82,466	1,021,744	194,355	318,286	1,774,494
09	0820156339	4701705339	4,599,086	1,109	2,047,456	2,047,456	Hor. Marcellus	59,293	1,021,744	194,355	318,286	1,774,494
09	0820156343	4701705343	619,288	56,386	3,148,294	3,148,294	Hor. Marcellus	56,946	364,439	919,654	420,980	1,572,313
09	0820156347	4701705347	1,344,423	107,243	4,776,256	4,776,256	Hor. Marcellus	81,118	287,791	287,791	287,791	758,171
09	0820156351	4701705351	1,590,762	70,297	2,889,228	2,889,228	Hor. Marcellus	95,465	185,948	247,791	250,734	758,171
09	0820156355	4701705355	1,231,773	59,998	3,338,505	3,338,505	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156359	4701705359	1,085,175	270,596	4,861,524	4,861,524	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156363	4701705363	1,615,874	1,713,824	4,954,124	4,954,124	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156367	4701705367	1,416,280	312,951	4,212,078	4,212,078	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156371	4701705371	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156375	4701705375	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156379	4701705379	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156383	4701705383	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156387	4701705387	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156391	4701705391	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156395	4701705395	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156399	4701705399	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156403	4701705403	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156407	4701705407	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156411	4701705411	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156415	4701705415	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156419	4701705419	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156423	4701705423	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156427	4701705427	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156431	4701705431	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156435	4701705435	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156439	4701705439	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156443	4701705443	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156447	4701705447	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156451	4701705451	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156455	4701705455	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156459	4701705459	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156463	4701705463	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156467	4701705467	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156471	4701705471	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156475	4701705475	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156479	4701705479	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156483	4701705483	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156487	4701705487	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156491	4701705491	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156495	4701705495	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156499	4701705499	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156503	4701705503	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156507	4701705507	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156511	4701705511	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156515	4701705515	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156519	4701705519	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156523	4701705523	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156527	4701705527	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156531	4701705531	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156535	4701705535	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156539	4701705539	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156543	4701705543	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156547	4701705547	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156551	4701705551	1,034,785	533,698	3,147,578	3,147,578	Hor. Marcellus	118,308	185,948	247,791	250,734	758,171
09	0820156555	4701705555	1,034,785	533,698	3,147,578	3,147,5						

TAB
3

Melissa Beane

From: Nancy Sifton
Sent: Wednesday, December 07, 2016 2:48 PM
To: 'Krista.M.Lawrence@wv.gov'
Cc: Hoover, Cindi R.; Kirsten Evans; Elizabeth Burg
Subject: Antero Resources Corporation - TY17 Tentative Values
Attachments: Antero 7-1-16 New well support.xlsx; 2017 TY valuation variables response signed.pdf; RE: Comments

Krista,

Please see comments below regarding Antero's TY17 tentative appraisal values.

- **Year 1 wells** – We are requesting that the appraised values reflect the actual receipts for the first twelve months rather than annualized estimates based on reported receipts for the 2015 calendar year (see attached). The actual receipts (both WI and royalty) have been provided in columns N-Q. Please note that twelve months of receipts is not yet available for some first year wells. Where twelve months of data is not available, we have also included data for these wells because 8-11 months of data (annualized) provides a more accurate estimate of receipts for the first year than 1-4 months of reported production. Please let me know if there is any additional information we can provide that will save you time in processing this request. I can provide an e-file with updated receipts if that would be helpful.
- **Operating Expenses:**
The tentative values issued reflect the State's variables for operating expenses, which are understated compared to the company's actual operating expenses and result in a total appraised value that exceeds fair market value. Antero previously addressed this concern in its response to the 2017 tax year operating expense variables (attached). Antero also provided the State with back-up documentation for its operating expense as requested in August 2016 (attached). The final valuation variables issued by the State in September 2016 included changes to certain operating expense variables but the variables continue to be understated compared to Antero's actual operating expenses. Additionally, it is our understanding that the State has reversed its long held position of considering actual operating expenses in its appraisals based on language removed from the administrative notice regarding operating expenses and the producer return. As a result, the tentative values for Antero's horizontal Marcellus wells are significantly overstated.

Please let me know if you have any questions or would like to have a call to discuss further.

Thank you,

Nancy

Nancy Sifton, CPA

Manager, State & Local Tax and Advisory, Altus Group US Inc.

D: 410.568.0771 T: 410.568.0800 ext 3771 M: 703.999.3780 F: 410.568.0801

910 Ridgebrook Road, Suite 200, Sparks, Maryland, 21152 USA



If you wish to unsubscribe from receiving commercial electronic messages from Altus Group, please click [here](http://www.altusgroup.com/disclosures/anti-spam-policy) or go to the following web address: <http://www.altusgroup.com/disclosures/anti-spam-policy>.

August 1, 2016



West Virginia State Tax Department
Property Tax Division
Attention: Jeff Amburgey
P.O. Box 2389
Charleston, West Virginia 25328-2389

Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office: 303.357.7310
Fax: 303.357.7315

RE: Public Comment Concerning Property Valuation Variables for the 2017 Tax Year

Dear Mr. Amburgey:

Pursuant to the letter from Mr. Matkovich to Secretary Tennant dated June 30, 2016, this letter serves to provide you with our comments on the tentative natural resource property valuation variables specifically related to gas wells for the 2017 tax year.

Specifically, our concerns regarding these variables relate to the following:

Operating Expenses: Based on a detailed review of actual operating expenses incurred in West Virginia by Antero Resources during the 2015 calendar year, we believe that the tentative maximum operating expenses per well, as well as the percentage of revenue allowances as published by the State of West Virginia are understated. Actual annualized operating expenses incurred as a percentage of revenue, and as an average per well are as follows:

Well Type	Average Operating Expense as Percent of Revenue	Average Operating Expense per Well
Marcellus, Horizontal Wells	44%	\$1,153,000
Horizontal Wells (Other than Marcellus)	73%	\$25,000
Typical Producing Wells	Operating at a loss	\$6,100

Consistent with recent discussions regarding the 2016 tax year, we believe that the State's use of actual operating expenses is the most accurate method of valuing the tax wells. Absent the ability to use actual data, at minimum the State's allowance percentages should be increased to be more consistent with actual data provided, and the maximum operating expense should be removed entirely. Without adjustment of these variables, the State is drastically overstating the value of Antero's property in West Virginia.

We respectfully request that the State modify these variables, based on the information provided above, for use in its appraisal of gas wells for property tax purposes for the 2017 tax year. We would be happy to discuss our comments with and/or provide additional information that the State may need. Please feel free to contact our tax agent, Kirsten Evans at (410) 568-0733.

Sincerely,
Antero Resources Corporation

Alvin A. Schopp, SVP, Treasurer and Chief Administrative Officer

cc: Kirsten Evans; Altus Group US, Inc.

TAB
4

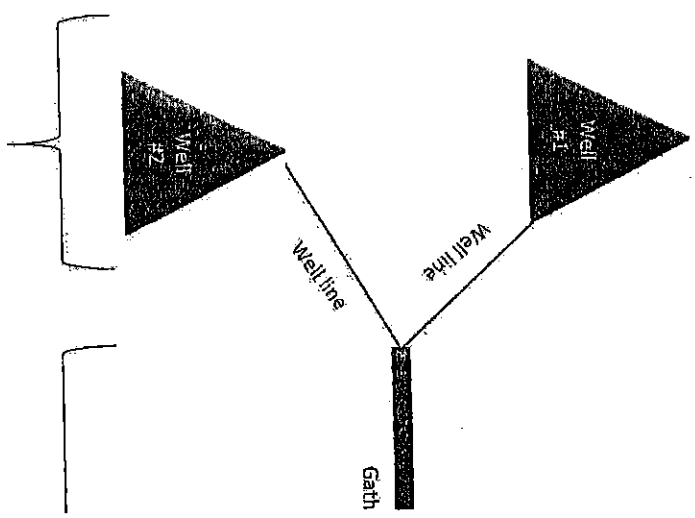
WV Tax Department's Value Calculation for Year 2 Well
2017 Tax Year

NATURAL OIL/GAS DEMONSTRATION APPRAISAL.....FLUSH WELL (Year 2)									
	DECLINE RATES		2015	GAS INCOME	OIL INCOME		GAS CAP IN	OIL CAP IN	
YR1	59%		WRK INT	\$ 3,000,000	\$		\$ 1,785,000	\$	
YR2	29%		ROY INT	\$ 500,000	\$		\$ 297,500	\$	
YR3*	23%								
YEAR	WRK INT INC	WRK COST	NET INC	% FCTR(18.0)	DIS INC	YEAR	ROY INT INC	% FCTR(18.0)	OIS INC
1	\$ 1,705,000	\$ 175,000	\$ 1,610,000	0.926477	\$ 1,494,946	1	\$ 207,500	0.926477	\$ 276,222
2	\$ 1,374,450	\$ 175,000	\$ 1,199,450	0.800411	\$ 980,053	2	\$ 229,075	0.800411	\$ 183,354
3	\$ 1,058,327	\$ 175,000	\$ 883,327	0.890009	\$ 609,503	3	\$ 178,388	0.680009	\$ 121,709
4	\$ 814,911	\$ 175,000	\$ 639,911	0.594836	\$ 380,842	4	\$ 135,819	0.594836	\$ 80,780
5	\$ 627,482	\$ 175,000	\$ 452,482	0.512789	\$ 232,028	5	\$ 104,580	0.512789	\$ 53,828
6	\$ 483,161	\$ 175,000	\$ 308,161	0.442080	\$ 136,225	6	\$ 80,527	0.442080	\$ 35,598
7	\$ 372,034	\$ 175,000	\$ 197,034	0.381086	\$ 75,067	7	\$ 62,006	0.381086	\$ 23,620
8	\$ 286,486	\$ 175,000	\$ 111,486	0.328522	\$ 36,810	8	\$ 47,744	0.328522	\$ 15,885
9	\$ 220,679	\$ 175,000	\$ 45,679	0.283209	\$ 12,908	9	\$ 36,763	0.283209	\$ 10,412
10	\$ 169,846	\$ 175,000	\$ -	0.244146	\$ -	10	\$ 28,308	0.244146	\$ -
11	\$ 130,781	\$ 175,000	\$ -	0.210470	\$ -	11	\$ 21,797	0.210470	\$ -
12	\$ 100,702	\$ 175,000	\$ -	0.181440	\$ -	12	\$ 16,784	0.181440	\$ -
13	\$ 77,540	\$ 175,000	\$ -	0.156414	\$ -	13	\$ 12,923	0.156414	\$ -
14	\$ 59,708	\$ 175,000	\$ -	0.134840	\$ -	14	\$ 9,951	0.134840	\$ -
15	\$ 45,974	\$ 175,000	\$ -	0.116241	\$ -	15	\$ 7,662	0.116241	\$ -
16	\$ 35,400	\$ 175,000	\$ -	0.100208	\$ -	16	\$ 5,900	0.100208	\$ -
17	\$ 27,258	\$ 175,000	\$ -	0.086386	\$ -	17	\$ 4,543	0.086386	\$ -
18	\$ 20,988	\$ 175,000	\$ -	0.074471	\$ -	18	\$ 3,498	0.074471	\$ -
19	\$ 16,161	\$ 175,000	\$ -	0.064199	\$ -	19	\$ 2,694	0.064199	\$ -
20	\$ 12,444	\$ 175,000	\$ -	0.055344	\$ -	20	\$ 2,074	0.055344	\$ -
21	\$ 9,582	\$ 175,000	\$ -	0.047710	\$ -	21	\$ 1,597	0.047710	\$ -
22	\$ 7,378	\$ 175,000	\$ -	0.041129	\$ -	22	\$ 1,230	0.041129	\$ -
23	\$ 5,681	\$ 175,000	\$ -	0.035456	\$ -	23	\$ 947	0.035456	\$ -
24	\$ 4,374	\$ 175,000	\$ -	0.030666	\$ -	24	\$ 729	0.030666	\$ -
25	\$ 3,368	\$ 175,000	\$ -	0.026350	\$ -	25	\$ 561	0.026350	\$ -
26	\$ 2,594	\$ 175,000	\$ -	0.022715	\$ -	26	\$ 432	0.022715	\$ -
27	\$ 1,997	\$ 175,000	\$ -	0.019582	\$ -	27	\$ 333	0.019582	\$ -
28	\$ 1,538	\$ 175,000	\$ -	0.016881	\$ -	28	\$ 256	0.016881	\$ -
29	\$ 1,184	\$ 175,000	\$ -	0.014553	\$ -	29	\$ 197	0.014553	\$ -
30	\$ 912	\$ 175,000	\$ -	0.012546	\$ -	30	\$ 152	0.012546	\$ -
31	\$ 702	\$ 175,000	\$ -	0.010815	\$ -	31	\$ 117	0.010815	\$ -
32	\$ 541	\$ 175,000	\$ -	0.009323	\$ -	32	\$ 90	0.009323	\$ -
33	\$ 418	\$ 175,000	\$ -	0.008037	\$ -	33	\$ 69	0.008037	\$ -
34	\$ 321	\$ 175,000	\$ -	0.006929	\$ -	34	\$ 53	0.006929	\$ -
35	\$ 247	\$ 175,000	\$ -	0.005973	\$ -	35	\$ 41	0.005973	\$ -
36	\$ 190	\$ 175,000	\$ -	0.005149	\$ -	36	\$ 32	0.005149	\$ -
37	\$ 146	\$ 175,000	\$ -	0.004439	\$ -	37	\$ 24	0.004439	\$ -
38	\$ 113	\$ 175,000	\$ -	0.003827	\$ -	38	\$ 19	0.003827	\$ -
39	\$ 87	\$ 175,000	\$ -	0.003299	\$ -	39	\$ 14	0.003299	\$ -
40	\$ 87	\$ 175,000	\$ -	0.002844	\$ -	40	\$ 11	0.002844	\$ -

Note: State allowed operating expenses for Horizontal Marcellus Wells for 2017 Tax Year are 20% of Revenue capped at \$175,000. By capping the allowed operating expenses at the lesser of 20% of working interest revenue of \$175,000, the Tax Department treats similarly situated tax payers differently. The cap of \$175,000 only adversely affects tax payers that have wells over a certain revenue threshold.

TAB
5

Antero Resources Corporation
 Simple Diagram of Natural Gas Sales Including Natural Gas Liquid P
 2015 (rounded)



	LOE and Workover	Gat
WV Operating Costs	\$ (26,800,000)	Co
WV Avg. Operating Costs per Well	\$ (41,000)	\$ (1

Note: All of the amounts are based on the original FY2017 WV Oil and Gas
 WV Oil and Gas Return for Antero.

TAB
6



STATE OF WEST VIRGINIA

Department of Revenue
State Tax Department

Earl Ray Tomblin
Governor

Mark W. Mathiovich
State Tax Commissioner

April 10, 2014

Producers of Marcellus and/or other Horizontal Wells.

RE: Marcellus and/or other Horizontal Wells Operating Expenses Survey.

As you are aware, each summer prior to August 1st, your office is required to file a West Virginia Oil and Gas Producer/Operator Return for the wells that you have in West Virginia. The production and income data involved in these returns is utilized to arrive at an appraised value for each of the royalty owner's interest in the oil/gas rights and for your working interests. In determining the appraised value for the working interest for each well, this office reduces the working interest income that you identify by an estimated² operating expenses amount. Presently that amount for Marcellus wells is 30% of your working interest income (maximum \$30,000 per well) for vertical wells and 20% of your working interest income (maximum \$150,000 per well) for horizontal wells. The remaining amount is then capitalized over the remaining life of the well³ which creates the working interest appraisal.

In order to update the above mentioned operating expense rate(s) that will be applied to your wells for the upcoming Tax Year 2015 appraisals (which involves the income and production for calendar year 2013) this office has attached a copy of the Oil & Gas Operating Expenses Survey for Calendar Year 2013.

I would like to request that you review this survey and provide us with the necessary information on your wells. Please note, that for use in the TY 2015 appraisals, this office must receive copies of the completed survey on or before May 16, 2014.

¹ Under Legislative Rule Title 110, Series 11, Section 3.15, this value involves not only your interest in the remaining oil/gas but the machinery and equipment in and about the well and all other personal property used in oil/gas production from the well to the field-line point of sale.

² If you have supplied operating expenses for these wells in the required format, that data will be considered.

³ Life of well is determined annually and is influenced by income of the well and the decline rate for the formation(s) involved in production.

Producers of Marcellus and other horizontal wells:

April 10, 2014

Page Two

Please mail, email or fax the completed survey to:

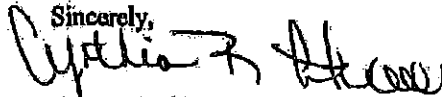
Address: West Virginia State Tax Department
Property Tax Division
Special Properties Section
P. O. Box 1345
Charleston, WV 25325-1345.

Email: cindl.r.hoover@wv.gov

FAX: 304-558-1843

Should you have any questions, please feel free to contact me at any of the above or at 304-558-1077.

Sincerely,



Cynthia R. Hoover
Tax & Revenue Manager
Special Properties Section
Property Tax Division

CRH/ch

Attachments (2)
Survey Form
Instructions

Hoover, Cindi R

From: Phil Yoo <pyoo@anteroresources.com>
Sent: Thursday, May 15, 2014 5:08 PM
To: Hoover, Cindi R
Subject: West Virginia Oil & Gas Operating Expenses Survey
Attachments: SAcounting14051515031.pdf; SAcounting14051515030.pdf

Ms. Hoover,

Please find attached our response to your Oil & Gas Operating Expenses Survey.

Please contact me if you have any questions. Thank you.

K. Phil Yoo, CPA
Chief Accounting Officer & Corporate Controller
Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Work: (303) 357-7364
Mobile: (720) 239-3916
www.anteroresources.com

Confidential

Marcellus Vertical and Horizontal and Other Horizontal
for Calendar Year 2013.

Please submit information to:

Special Properties Section
WV Dept. of Revenue
Property Tax Division
PO Box 1345
Charleston, WV 25325-1345

Company Name: ANTELO RESOURCES CORPORATION Contact Person: Phil Yoo

Per Series 11, Title 110, State Tax Commission Legislative Rule for Valuation of Producing & Reserve Oil & Natural Gas for Ad Valorem Property Tax Purposes:

3.14: "Operating Expenses" means only those ordinary expenses which are directly related to the maintenance and production of natural gas and/or oil. These expenses do not include extraordinary expenses, depreciation, ad valorem taxes, capital expenditures, or expenditures relating to vehicles or other tangible personal property not permanently used in the production of natural gas or oil.*

	Vertical Marcellus	Horizontal Marcellus	Horizontal Other-Please list and
Annual Revenue Net of Royalties:	542,359.9	771,773.728	
Annual Expenses:			
Direct Expenses:			
Well Tending Costs:	779,246	2,150,545	
Additional Supplies:	140,075	669,194	
Charting:	76,274	104,627	
Compressor/Pumping Costs:	4,566.2		
Electrical Costs:	67,027		
Other Expenses:	23,634	152,541	
Other-Operating (3rd Party?) Costs:	115,168	308,091.2	
Swabbing, Service Rig		6,253	
Waste Disposal (e.g. Prod. Fluid)	205,954	381,652	
Roadway-Maint. & ROW	316,134	552,588	
Pipeline-Maint. & ROW			
Indirect Operating Costs:	522,088	437,508.2	
Environmental/Safety Costs:			
Insurance:	114,939	242,473	
Bookkeeping/Revenue Distrib.			
Overhead:			
Other Expenses Not in the above:	163,725.0	735,659.0	
List:			
Total Annual Expenses for the Year:	1,752,096	7739,063	
Plug & Abandonment Expenses/Well			
Number of Wells in above data:	241	226	

*Sand if horizontal and different than Marcellus

- Suggestion: Show totals for all wells. Direct Expenses above are based on a per well situation.

6272 32,994

nothing
given

TAB 7



EDF Trading North America, LLC

GAS TRANSACTION CONFIRMATION

Date Generated: **February 22, 2013**

Contract: ARACD11111G

1. BUYER: EDF Trading North America, LLC	SELLER: Antero Resources Appalachian Corporation	BASE CONTRACT DATE: January 11, 2011	TRADE DATE: February 22, 2013

2. TRANSACTION DETAILS:

Transaction	Start Date	End Date	Quantity	Commodity Price (Settle in US Dollars)	Service Quality (Int., Firm, or EFP)	Del. Point	Del. Pipe
177888 / 2078575	January 01, 2014	December 31, 2016	30,000 MMBTU Daily	See Section 3.1	Firm	East 30 Pools	Texas Eastern Interstate

3. SPECIAL PROVISIONS, INCLUDING PRICE DETAILS (if any):

3.1

(1) New York Mercantile Exchange, Inc. Henry Hub Natural Gas Last Day Financial Policy

* pricing details removed

4. CONTACT INFORMATION:

EDF Trading North America, LLC ("Company")
4700 W. Sam Houston Pkwy N
Suite 250
Houston, Texas
U.S.A. 77041

Attention: Gas Confirmations
Telephone No. 281-653-1763
Fax No. 281-653-1034

Marketing Rep: Welch, Jeff

Antero Resources Appalachian Corporation ("Customer")
1825 17th Street, Suite 300
Denver, Colorado
U.S.A. 80202

Attention: Sherry Anderson
Telephone No. 303-357-7148
Fax No. 313034253412

Marketing Rep: Justin Fowler

5. Please sign this Confirmation and return it to EDF Trading North America, LLC via fax or email (gas.involvinghouston@EDFTrading.com). This Confirmation is subject to the Base Contract between Buyer and Seller referenced above. The terms of this Transaction Confirmation are binding unless disputed in writing within 2 Business Days of receipt unless otherwise specified in the Base Contract.

EDF Trading North America, LLC

Antero Resources Appalachian Corporation

Russell Schneider, VP and Treasurer

2/27/13

Authorized Signature

This Fax is intended only for the addressee and may contain information that is legally privileged, confidential and/or exempt from disclosure under applicable law. Any review, reproduction, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is prohibited. If you have received this communication in error, or are not the named recipient(s), please immediately notify the sender.

4700 W. Sam Houston Pkwy N
Suite 250, Houston, Texas 77041, U.S.A.
281-653-1763. Fax 281-653-1034



*pages not related to delivery
pt were removed.
Pricing also removed

TRANSACTION CONFIRMATION

This Transaction Confirmation (the "Confirmation") is by and between **NextEra Energy Power Marketing, LLC ("NEPM")** and **Antero Resources Corporation ("Antero")**. NEPM and Antero shall be referred to individually as a "Party" and together as the "Parties". This Confirmation confirms the terms and conditions of the transaction (the "Transaction") entered into between the Parties on the Trade Date specified below. The terms of this Transaction are as follows:

Trade Date: July 26, 2013

Buyer: NEPM

Sellers: Antero

Effective Date: The date on which Buyer notifies Seller in writing that it has the necessary Gas transportation capacity (the "Transportation") to move the Gas. It is Buyer's intention to procure all transportation at the earliest possible time. However, it is understood by the Parties that the procurement of Gas Transportation by Buyer is a necessary precondition to this Confirmation coming into effect. Buyer is actively pursuing the acquisition of such Transportation and will use commercially reasonable efforts to secure all such Transportation within ninety (90) days of the Trade Date (the "Transportation Acquisition Date"). The Parties understand that state and/or federal regulatory approval and other matters might delay the acquisition of the Transportation and agree that the Transportation Acquisition Date shall be extended as reasonably needed.



Beginning Date:

November 1, 2013

Termination Date:

October 31, 2016

Term:

The period of time between the Beginning Date and the Termination Date

Commodity:

Natural Gas

Transactions Type:

Firm Purchase and Sale

Total Daily Quantity:

100,000 Dth/Day

Delivery Point(s):

Dominion Transmission, Inc. ("Dominion") Meter EB 360 (also known as ETC Northeast Pipeline [TL-360]) located in Doddridge County, West Virginia ("Delivery Point 1"). All Gas shall be delivered to Delivery Point 1 during the Term, unless Buyer and Seller mutually agree in writing by amending this Confirmation to include Delivery Point 2 (as described below) and the use of Delivery Point is approved by Dominion.

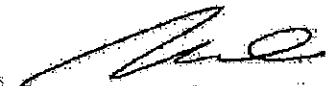
~~Delivery Point 2 shall be Dominion Meter EB 095 (also known as Sherwood [TL-360])~~

Price:

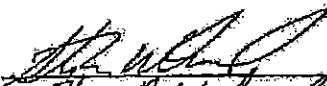
The Price shall be the price per MMBtu quoted for the relevant month in *Platts Inside FERC's Gas Market Report* under the headings "Prices of Spot Gas Delivered to Pipelines, [Month] 1 (\$/MMBtu)," "Dominion Transmission Inc.," "Appalachia," and "Index" (the "Dominion South Point Index")



**NEXTERA ENERGY POWER
MARKETING, LLC**

By: 
Name: _____
Title: _____
Mark Palmiotto
Vice President
Asst. Secretary
Nextera Energy
Power Marketing, LLC

**ANTERO RESOURCES
CORPORATION**

By: 
Name: _____
Title: _____
Steven R. Woodman
V.P. Business Development
J&F
MDM



Transaction Confirmation

This Transaction Confirmation (Confirmation) is entered into the 15th day of November, 2013 as a supplement to the NAESB executed by South Jersey Resources Group, LLC (Buyer) and Antero Resources Appalachian Corporation ("Seller" or "Antero") on 10/1/2010. This Confirmation shall serve as Exhibit A to the NAESB and unless specifically revised herein, the terms of the NAESB shall remain in full force and effect.

Terms

Delivery Period: January 1, 2014 thru December 31, 2014

Delivery Point: EB095 or EB360

Volume: 50,000 Dth/d

Service: Seller may nominate gas as daily priced or first of the month priced gas and will do so monthly at least 5 working days before the start of the month. Buyer will nominate from these delivery points on a secondary basis.

** pricing details removed*

Pricing: For first of the month gas, and for daily priced gas, in the event that the seller fails to timely nominate gas as daily priced or first of the month priced as set forth above, all gas for the applicable month shall be deemed as priced

Credit Support: South Jersey Industries Parental Guarantee for South Jersey Resources Group, Antero Credit with NAESB standards if required.

Antero Resources Appalachian Corp.

By: Mark D. Mauz

Name: Mark D. Mauz
Vice-President

Title: _____

Date: 11-15-2013

South Jersey Resources Group, LLC

By: Greg Nuzzo

Name: Greg Nuzzo

Title: SVP

Date: 11/15/13

**TRANSACTION CONFIRMATION
FOR IMMEDIATE DELIVERY**Date: 20-May-13
Transaction Confirmation #: 305298

This Transaction Confirmation is Subject to the Base Contract between Seller and Buyer dated

The terms of this Transaction Confirmation are binding unless disputed in writing within 2 Business Days of receipt unless otherwise specified in the base contract.

BUYER South Jersey Resources Group 2350 Airport Freeway Suite 605 Bedford, TX 76022 Attn: Ken Barr Phone: 609-561-9000 Fax: 609-704-1304	SELLER Antero Resources Appalachia Resour 1625 17th Street Suite 300 Denver CO 80202 Attn: Sherry Anderson Phone: Fax: 303-825-3112
Price per DTH: * pricing details removed	
Delivery Period: Begin: 1/1/2014 End: 1/31/2014	
Contract Type: Firm	
Contract Quantity: 50000 MMBtus/Day	
Delivery Point: TCO Point Gas	
Special Conditions: Details contained in Signed confirmation This confirmation is a complete and binding agreement between the parties to the transaction. In the case of any conflict between the terms of the master buy/sell agreement (if any) and this confirmation, the terms set forth in this confirmation shall take precedence. Both parties understand that commitments and/or expenditures are being made in reliance upon agreement to this transaction. Absent written notice to the contrary within two (2) business days, these terms will be deemed to correctly reflect your agreement to this transaction. This transaction confirmation will be sufficient for all purposes to evidence a binding agreement between the parties.	
BUYER Nick Turner By: Title: Date:	SELLER Sherry Anderson By: Title: Date:

AFFIDAVIT

STATE OF FLORIDA,
COUNTY OF PALM BEACH, TO WIT:

Michael Toal, being first duly sworn, deposes and says:

1. On August 11, 2011, Antero Resources Corporation ("Antero") and NextEra Energy Power Marketing, LLC (now known as NextEra Energy Marketing, LLC and hereinafter referred to as "NEM") entered into a Base Contract for Sale and Purchase of Natural Gas (the "Contract") pursuant to which Antero agrees to sell natural gas to NEM.
2. In connection with the Contract, Antero and NEM occasionally enter into "Transaction Confirmations."
3. The "Transaction Confirmations" include information pertaining to the delivery period, quantity of gas to be delivered, delivery point and pricing.
4. The attached "Transaction Confirmation," dated July 26, 2013, demonstrates that the delivery period is November 1, 2013 through October 31, 2016, the quantity to be delivered is 100,000 Dth/day, and that the delivery points are the Dominion Transmission, Inc. Meter EB 360 (also known as ETC Northeast Pipeline), or the Dominion Transmission, Inc. Meter EB 095 (also known as the Sherwood Processing Facility), both located in Doddridge County, West Virginia. The pricing details are redacted, since that information is proprietary as between Antero and NEM.
5. The Contract does not provide for Free on Board Shipping Point, and NEM does not take ownership of or assume responsibility for the natural gas prior to the stated delivery points.
6. Pursuant to the Contract and the attached "Transaction Confirmation," the EB 360 or EB 095 delivery points are the points of sale for the natural gas, and NEM takes ownership of and assumes responsibility for the natural gas at the EB 360 or EB 095 delivery points.
7. The price that NEM agrees to pay for the natural gas reflects the purchase price for a saleable product, i.e., Antero has incurred all expenses that are necessary to get the gas to

the delivery points, including gathering and compression, processing and transportation
(as necessary).

And further the affiant saith naught.

none given

NextEra Energy Marketing, LLC

Name Michael Toal

Title Vice President

NextEra Energy

Marketing LLC



Taken, subscribed and sworn to before me this 29th day of January, 2017. My
commission expires: _____

Linda Carol Jones

Notary Public

(NOTARIAL SEAL)



TAB

8



STATE OF WEST VIRGINIA

Department of Revenue
State Tax Department

Earl Ray Tomblin
Governor

Mark W. Matkovich
State Tax Commissioner

September 1, 2016

The Honorable Natalie Tennant
Secretary of State
Building 1, Suite 157-K
State Capitol
Charleston, West Virginia 25305

Dear Secretary Tennant:

Attached are final natural resource property valuation variables for the 2017 Tax Year that have been developed by the State Tax Department for use in appraising oil and gas, managed timberland, coal and other natural resource properties for ad valorem tax purposes.

In accordance with requirements of §§ 110 CSR 1-I, 1-J, and 1-K, tentative variables were made available for public comments on June 30, 2016. The Department received nine comments on the tentative variables. One comment related to the valuation of coal and three comments related to reserve oil and gas values and 5 related to the expenses allowed in the valuation of producing oil and gas wells. The information supplied for coal and reserve oil and gas did not result in any change to the tentative variables. The oil and gas comments resulted in adjustments to the operating expenses allowed in the valuation of producing oil and gas wells. Additionally, the prices for Metallurgical and Steam coal were updated based upon information that was unavailable on June 30.

The final valuation variables are being filed for inclusion in the State Register.

Sincerely,


Mark W. Matkovich
State Tax Commissioner

MWM/jaf

Attachment

cc: All County Assessors

FILED

SEP 14 2016

RECEIVED

OIL AND GAS PROPERTIES ANALYSIS

Tax Year 2017

September 1, 2016
Mark W. Matkovich
State Tax Commissioner
Department of Revenue

OIL AND GAS

TY 2017

Capitalization Rate Analysis and Results

In developing a capitalization rate for use in valuing specific income-producing properties consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands-of-Investment and Summation Technique approaches are utilized in establishing discount rates for producing oil and gas properties. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 13.

Safe Rate: (3-Month Constant Maturity Interest Rates)

January December 2015

0.063%

Risk Rate: (Interest differential between Loan Rate and 3-Month Constant Maturity Interest Rates)Loan Rate:

2015 5.280%

Risk Rate:

5.207%

*Prime plus 2%

Equity: (Differential between Equity Rates and 3-Month Constant Maturity Interest Rates)Equity Rate**2015 $[12.25\% / (1 - .37)]$ 0.053%Risk Rate:

19.891%

** Value Line Investment Survey Analysis

Composite Risk Rate: Loan and Equity Rates weighted by industry estimated capital structureEquity Rate:

2015 12.6042%

Debt Rate:

1.822%

Composite Risk:

15.185%

Notes: Debt/Equity Ratio

Debt:

35%

Equity:

65%

*** Effective severance tax adjustment

0.95

Non Liquidity Rate: Interest differential between 3-month Constant Maturity Interest Rates and a 1-year Constant Maturity Interest Rates which reflects a reasonable time necessary to sell active property

January December 2015

1yr T Bill:

0.322%

90 day T Bill:

0.053%

Non Liquidity Rate:

0.289%

Management Rate: Charges for the management of investment portfolios

Fixed Rate (by Rule)

0.500%

Property Tax Rate: Sixty percent (60%) of State average Class III property tax rate

2015

60% of 2.18

1.314%

Inflation Rate:

January December 2015

0.730%

Capitalization Rate

Since the valuation of oil and gas property is predicated on a three year production, the capitalization rate will be considered in a similar manner.

	2015	2014	2013
Inflation Rate	-0.730%	-0.780%	-1.500%
Safe Rate	0.053%	0.933%	0.958%
Compsalte Risk Rate	15.186%	14.389%	14.654%
Non-Liquidity Rate	0.269%	0.088%	0.974%
Management Rate	0.500%	0.500%	0.500%
Property Tax Rate	1.314%	1.314%	1.314%
Total	16.592%	15.564%	15.080%
	50.000%	33.333%	16.687%
	8.296%	5.188%	2.513%
			15.887%

Capitalization Rate Rounded to:

15.00%

MULTIPLIERS FOR 16.0% MID-YEAR LIFE (ANNUALLY)

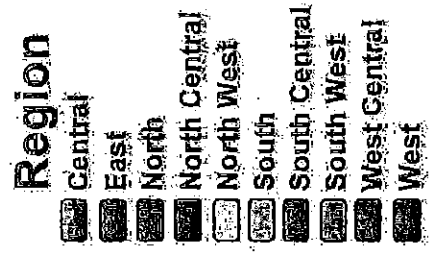
YEAR		YEAR	
1	0.928477	21	0.047710
2	0.800411	22	0.041129
3	0.690009	23	0.035456
4	0.594838	24	0.030556
5	0.512789	25	0.026350
6	0.442060	26	0.022715
7	0.381086	27	0.019582
8	0.328622	28	0.016881
9	0.283209	29	0.014553
10	0.244146	30	0.012546
11	0.210470	31	0.010815
12	0.181340	32	0.009329
13	0.156414	33	0.008027
14	0.134840	34	0.006929
15	0.116241	35	0.005973
16	0.100208	36	0.005149
17	0.086388	37	0.004439
18	0.074471	38	0.003827
19	0.064189	39	0.003299
20	0.056344	40	0.002844

Oil and Natural Gas Decline Rate Regions

Region

- Central
- East
- North
- North Central
- North West
- South
- South Central
- South West
- West Central
- West

Map labels: HANCOCK, BRADLEY, PLEASANTS, WOOD, BIRCHIE, CATER, MADINE, JARROCK, MICHIGAN, WATKINS, FAIRBANK, MCDOWELL, HENRI.



Decline Rates for Natural Gas and Oil Formations: Central				
Central: Braxton, Clay, Fayette, Nicholas, Webster				
Code	Formation	Year 1	Year 2	Year 3 +
12	Alexander, Benson	-0.31	-0.20	-0.10
14	Benson	-0.48	-0.08	-0.08
16	Benson, Balltown*	-0.45	-0.16	-0.12
17	Gordon *	-0.30	-0.07	-0.07
18	Big Injun	-0.34	-0.13	-0.13
19	Big Injun, Big Lime	-0.36	-0.13	-0.13
22	Big Lime	-0.34	-0.34	-0.13
26	Ravencliff	-0.40	-0.40	-0.25
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper *	-0.41	-0.22	-0.09
110	Marcellus *	-0.41	-0.22	-0.09
9	Exception: (Median)	-0.41	-0.22	-0.09
10	Non-Filer	-0.30	-0.07	-0.07

* New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: East				
East: Berkeley, Grant, Greenbrier, Hampshire, Hardy, Jefferson, Mineral, Monroe, Morgan, Pendleton, Pocahontas, Preston, Randolph, Summers, Tucker				
Code	Formation	Year 1	Year 2	Year 3
1	Oniskany	-0.30	-0.30	-0.19
14	Benson	-0.31	-0.17	-0.12
20	Benson *	-0.44	-0.20	-0.08
21	Benson, Fifth	-0.29	-0.28	-0.09
32	Brallier *	-0.48	-0.20	-0.05
33	Elk, Benson	-0.39	-0.21	-0.08
34	Elk, Benson, Riley	-0.53	-0.19	-0.05
35	Elk, Benson, Riley *	-0.36	-0.19	-0.11
36	Elk, Benson, Balltown	-0.34	-0.18	-0.11
37	Elk, Alexander, Benson	-0.50	-0.07	-0.07
38	Elk, Alexander, Benson *	-0.40	-0.16	-0.16
39	Hunterville	-0.31	-0.31	-0.14
40	Fox, Havery	-0.36	-0.21	-0.15
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
110	Marcellus	-0.59	-0.22	-0.17
111	Utica*	-0.59	-0.22	-0.17
9	Exception (Median)	-0.41	-0.22	-0.10
10	Non-Filer	-0.29	-0.07	-0.06

*New Formation(s) involved in recent production. These will be valued with the Marcellus Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: North				
North: Brooke, Hancock, Marshall, Ohio, Tyler, Weitzel				
Code	Formation	Year 1	Year 2	Year 3 +
11	Gordon	-0.47	-0.31	-0.09
13	Alexander, Benson, Riley	-0.26	-0.16	-0.15
15	Benson, Riley	-0.18	-0.16	-0.06
93	4th Sand	-0.42	-0.32	-0.08
94	50-Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
97	Coalbed Methane (Vertical)	-0.23	-0.08	-0.05
110	Marcellus	-0.52	-0.23	-0.18
111	Utica*	-0.52	-0.23	-0.18
9	Exception (Median)	-0.39	-0.23	-0.08
10	Non-Filer	-0.18	-0.16	-0.06

*New Formation(s) involved in recent production. These will be valued with the Marcellus Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations, North Central				
North Central: Barbour, Doddridge, Gliner, Harrison, Lewis, Marion, Monongalia, Taylor, Upshur				
Code	Formation	Year 1	Year 2	Year 3
11	Gordon	-0.41	-0.14	-0.12
12	Alexander, Benson	-0.37	-0.19	-0.11
13	Alexander, Benson, Riley	-0.40	-0.28	-0.05
14	Benson	-0.31	-0.17	-0.12
15	Benson, Riley	-0.34	-0.17	-0.14
18	Big Injun.	-0.38	-0.16	-0.13
21	Benson, Fifth	-0.31	-0.20	-0.14
28	Weir	-0.34	-0.34	-0.07
29	Weir +	-0.28	-0.28	-0.23
33	Elk, Benson	-0.34	-0.16	-0.11
34	Elk, Benson, Riley	-0.42	-0.27	-0.08
37	Elk, Alexander, Benson	-0.49	-0.23	-0.08
38	Elk, Alexander, Benson +	-0.38	-0.20	-0.12
40	Fox, Haverly	-0.46	-0.16	-0.08
50	Rhinestreet	-0.28	-0.03	-0.03
57	Alexander, Benson, Balltown	-0.39	-0.28	-0.08
58	Alexander	-0.35	-0.20	-0.10
59	Alexander +	-0.39	-0.22	-0.10
60	Alexander, Benson, Riley +	-0.39	-0.35	-0.12
61	Balltown	-0.35	-0.20	-0.10
62	Balltown, Speechley	-0.28	-0.22	-0.10
63	Balltown, Speechley +	-0.30	-0.13	-0.10
64	Benson, Balltown, Speechley	-0.28	-0.22	-0.09
65	Benson, Bradford	-0.37	-0.20	-0.10
66	Benson, Balltown	-0.29	-0.23	-0.11
87	Benson, Riley +	-0.38	-0.14	-0.10
88	Benson, Speechley	-0.30	-0.22	-0.14
69	Brallier, Elk	-0.42	-0.20	-0.13
70	Brallier	-0.40	-0.22	-0.15
71	Deeper/Onondaga or Oriskany/Helderberg	-0.24	-0.24	-0.03
72	Elk, Alexander	-0.42	-0.22	-0.09
73	Elk, Benson +	-0.38	-0.20	-0.12
74	Elk	-0.43	-0.12	-0.10
75	Elk, Riley	-0.60	-0.35	-0.17
76	Fox +	-0.46	-0.18	-0.09
77	Haverly, Elk, Benson (No Alexander)	-0.35	-0.16	-0.16
78	Haverly	-0.45	-0.15	-0.16
79	Riley	-0.44	-0.22	-0.10
80	Speechley	-0.30	-0.18	-0.09
81	Alexander, Benson, Speechley	-0.39	-0.24	-0.10
82	Haverly, Elk, Alexander	-0.47	-0.14	-0.14
85	Fifth, Oil	-0.45	-0.25	-0.22
87	Bayard All	-0.30	-0.20	-0.05
88	Fifth	-0.29	-0.18	-0.12
89	Fifth +	-0.25	-0.15	-0.13
90	Gordon, Injun. All	-0.41	-0.23	-0.23
91	Squaw	-0.37	-0.31	-0.06
92	Injun. +	-0.34	-0.22	-0.22
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
97	Coalbed Methane (Vertical)	-0.23	-0.08	-0.05
98	Coalbed Methane (Horizontal)	-0.05	-0.05	-0.32
109	Trenton/Deeper *	-0.38	-0.21	-0.11
110	Marcellus	-0.59	-0.29	-0.23
111	Ulca**	-0.59	-0.29	-0.23
9	Exception (Median)	-0.38	-0.21	-0.11
10	Non-Filler	-0.23	-0.03	-0.03

*New Formation(s) involved in recent production. These will be valued with the Exception Rate until decline information is available.

**New Formation(s) involved in recent production. These will be valued with the Marcellus Rate until decline information is available.

Decline Rates for Natural Gas and Oil Formations: North West				
North West: Pleasant, Ritchie, Wood				
Code	Formation	Year 1	Year 2	Year 3+
2	Huron, Rhinestreet	-0.41	-0.26	-0.07
4	Huron	-0.42	-0.24	-0.14
5	Huron, Shales above Huron	-0.39	-0.25	-0.14
8	Berea	-0.31	-0.15	-0.15
11	Gordon	-0.38	-0.10	-0.10
12	Alexander, Benson (No Riley)	-0.34	-0.23	-0.10
13	Alexander, Benson, Riley	-0.32	-0.20	-0.10
14	Benson	-0.19	-0.19	-0.10
44	Rhinestreet, Huron, Shallow Shale	-0.43	-0.28	-0.11
47	Alexander, Riley, (No Benson)	-0.41	-0.05	-0.05
48	Rhinestreet, Alexander, Benson, Riley	-0.31	-0.24	-0.10
49	Well, Squaw, Big Injun	-0.27	-0.17	-0.07
50	Rhinestreet	-0.40	-0.27	-0.27
51	Rhinestreet	-0.36	-0.21	-0.10
52	All Upper Devonian (Unclv)	-0.48	-0.33	-0.19
53	Huron, Chemung	-0.35	-0.11	-0.09
54	Huron, Hampshire, Pocono	-0.12	-0.12	-0.11
55	Upper Devonian (Above Huron)	-0.46	-0.33	-0.23
56	Chemung-Sands, Riley, Bradford, Balltown, Speechley, Warren (No Benson or Alexander)	-0.28	-0.18	-0.10
83	Huron Oil	-0.74	-0.44	-0.40
93	4th Sand	-0.42	-0.32	-0.08
94	50-Foot	-0.34	-0.26	-0.07
95	Injun/Well	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper*	-0.39	-0.23	-0.13
110	Marcellus	-0.46	-0.29	-0.23
111	Utica**	-0.46	-0.29	-0.23
9	Exception (Median)	-0.39	-0.28	-0.13
10	Non-Filer	-0.12	-0.06	-0.05

*New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

**New Formation(s) involved in recent production. These will be valued with the Marcellus Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: South				
South: McDowell, Mercer, Raleigh, Wyoming				
Code	Formation	Year 1	Year 2	Year 3
8	Berea	-0.34	-0.15	-0.15
22	Big Lime	-0.31	-0.19	-0.07
23	Big Lime, Maxton	-0.31	-0.19	-0.07
24	Big Lime, Ravencloft	-0.29	-0.29	-0.17
25	Berea *	-0.37	-0.12	-0.08
26	Ravencloft	-0.40	-0.08	-0.07
28	Weir	-0.44	-0.20	-0.10
29	Weir *	-0.28	-0.21	-0.08
30	Weir, Big Lime	-0.37	-0.19	-0.13
42	Maxton, Ravencloft	-0.40	-0.08	-0.07
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.27	-0.13	-0.09
97	Coalbed Methane (Vertical)	0.03	0.10	-0.05
98	Coalbed Methane (Horizontal)	-0.05	-0.05	-0.32
110	Marcellus *	-0.36	-0.19	-0.09
9	Exception (Median)	-0.36	-0.19	-0.09
10	Non-Filer	-0.23	-0.08	-0.05

* New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: South Central				
South Central: Boone, Kanawha				
Code	Formation	Year 1	Year 2	Year 3
3	Devonian Shale	-0.23	-0.08	-0.05
4	Huron	-0.31	-0.15	-0.04
8	Berea	-0.23	-0.14	-0.09
18	Big Injun	-0.29	-0.26	-0.12
27	Huron, Shales above Huron	-0.21	-0.08	-0.05
28	Weir	-0.30	-0.21	-0.14
29	Weir +	-0.31	-0.25	-0.09
31	Devonian Shales +	-0.27	-0.07	-0.05
86	Big Injun Oil	-0.19	-0.18	-0.10
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.28	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper *	-0.33	-0.19	-0.08
110	Marcellus *	-0.33	-0.19	-0.08
9	Exception (Median)	-0.33	-0.19	-0.08
10	Non-Filer	-0.19	-0.07	-0.04

* New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: South West				
South West: Cabell, Lincoln, Logan, Mingo, Wayne				
Code	Formation	Year 1	Year 2	Year 3
3	Devonian Shale	-0.31	-0.15	-0.04
8	Berea	-0.36	-0.11	-0.11
18	Big Injun	-0.38	-0.22	-0.04
22	Big Lime	-0.19	-0.19	-0.19
43	Berea, Big Lime	-0.18	-0.18	-0.18
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.61	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper*	-0.38	-0.22	-0.10
110	Marcellus*	-0.38	-0.22	-0.10
9	Exception (Median)	-0.38	-0.22	-0.10
10	Non-Filer	-0.18	-0.11	-0.04

* New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations - West Central				
West Central: Calhoun, Roane, Wirt				
Code	Formation	Year 1	Year 2	Year 3 +
2	Huron, Rhinestreet	-0.49	-0.14	-0.06
4	Huron	-0.33	-0.22	-0.14
27	Huron, Shales above Huron	-0.42	-0.23	-0.12
44	Rhinestreet, Huron, Shallow Shale	-0.51	-0.14	-0.11
45	Devonian Shale, Pocono	-0.25	-0.17	-0.12
46	Pocono	-0.29	-0.25	-0.12
84	Big Injun, Oil	-0.41	-0.41	-0.11
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper *	-0.42	-0.24	-0.10
110	Marcellus *	-0.42	-0.24	-0.10
9	Exception (Median)	-0.42	-0.24	-0.10
10	Non-Filer	-0.25	-0.11	-0.06

* New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations West				
West: Jackson, Mason, Putnam				
Code	Formation	Year 1	Year 2	Year 3
1	Oriskany	-0.40	-0.40	-0.29
2	Huron, Rhinestreet	-0.13	-0.12	-0.03
3	Devonian Shale	-0.31	-0.15	-0.04
4	Huron	-0.29	-0.14	-0.05
5	Huron, Shales above Huron	-0.38	-0.15	-0.06
6	Huron, Berea	-0.29	-0.08	-0.08
7	Berea, Devonian Shale	-0.08	-0.08	-0.08
8	Berea	-0.36	-0.16	-0.16
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Wafr	-0.51	-0.26	-0.09
96	Maxtorr	-0.70	-0.27	-0.08
109	Trenton/Deeper *	-0.35	-0.20	-0.09
110	Marcellus *	-0.35	-0.20	-0.09
9	Exception (Median)	-0.35	-0.20	-0.09
10	Non-Filer	-0.08	-0.08	-0.03

* New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

Industry Operating Expense Survey and Results

This component was determined through a review of responses to a survey distributed by the State Tax Department to producers of all oil and natural gas wells producing in West Virginia and through use of other market data.

GAS

- % Working Interest Expenses for Typical Producing Well	"	45%
- Maximum Operating Expenses	"	\$5,000
- Coal Bed Methane, Vertical Wells Expenses	"	\$9,000

OIL

- % Working Interest Expenses for Typical Producing Well	"	35%
- Maximum Operating Expenses	"	\$3,750
- Maximum Enhanced Operating Expenses	"	\$9,000

MARCELLUS/UTICA

- % Working Interest Expenses for Vertical Producing Well	"	30%
- Maximum Operating Expenses	"	\$30,000
- % Working Interest Expenses for Horizontal Producing Well	"	20%
- Maximum Operating Expenses	"	\$175,000

HORIZONTAL WELLS (OTHER THAN MARCELLUS/UTICA AND COAL BED METHANE)

- % Working Interest Expenses for Horizontal Producing Well	"	30%
- Maximum Operating Expenses	"	\$20,000

Minimum Working Interest Appraisal = \$500 per well

Flat Rate Royalty Multiplier = 5.75

Home Use Only Wells

Appraised at \$500 per well

Industrial Use Only Wells*

MCF usage X \$ 2.62/MCF

BBL usage X \$48.66/BBL

*(Also includes Department of Environmental Protection reported wells.)

Non-Filer Valuations

Working Interest = 150% of previous year's appraisal

Royalty Interest = 90% of previous year's appraisal

Valuation

The previously discussed variables are used to establish a future income stream, converted to present worth through application of a capitalization rate. The sum of the discounted future net income per year represents a reasonable estimate of market value.

Lease Rate/Term Survey and Results

The non-producing property value for each county is determined by multiplying the average delay rental by a factor, which represents the average lease term under present economic conditions.

As a result of higher lease terms being inversely proportional to the value of oil and gas (thus counties with little leasing or production activities reflect inflated values) and with the volatile nature of county activity, necessary adjustments in the review have been made.

A compilation of lease terms produced a statewide average of 5 years. This term (5 years) was applied to all county lease rates and compared to the appraisal rates derived from calculations using individual county data as well as regional data. The resulting calculations were reviewed and considered in the assignment of an appraisal rate per acre.

The appraisal rate/acre amounts shown on the next page are preliminary figures, which may change if additional lease data is received. These rates have been applied to all county magisterial districts with either producing wells, lease activity within the past 5 years or both. Tax districts void of activity within the past 5 years have been assigned the minimum value per acre.

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
BARBOUR	1	1	\$60.00
		2	\$1.00
		3	\$60.00
		4	\$60.00
		5	\$60.00
		6	\$1.00
		7	\$60.00
		8	\$60.00
		9	\$60.00
		10	\$60.00
		11	\$60.00
BERKELEY	2	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
BOONE	3	1	\$20.00
		2	\$1.00
		3	\$1.00
		4	\$20.00
		5	\$20.00
		6	\$20.00
		7	\$1.00
		8	\$20.00
		9	\$1.00
BRAXTON	4	1	\$20.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$20.00
		6	\$20.00
		7	\$20.00
		8	\$1.00
BROOKE	5	1	\$1.00
		2	\$1.00
		3	\$100.00
		4	\$100.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY 2017 \$/AC
CABELL	6	1	\$25.00
		2	\$1.00
		3	\$25.00
		4	\$25.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$25.00
		9	\$1.00
		10	\$25.00
CALHOUN	7	1	\$30.00
		2	\$1.00
		3	\$30.00
		4	\$30.00
		5	\$30.00
		6	\$30.00
CLAY	8	1	\$20.00
		2	\$1.00
		3	\$20.00
		4	\$20.00
		5	\$20.00
		6	\$20.00
DODDGE	9	1	\$90.00
		2	\$90.00
		3	\$90.00
		4	\$90.00
		5	\$90.00
		6	\$90.00
		7	\$90.00
		8	\$90.00
		9	\$1.00
FAYETTE	10	1	\$20.00
		2	\$20.00
		3	\$20.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$1.00
		13	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
GILMER	11	1	\$25.00
		2	\$25.00
		3	\$25.00
		4	\$1.00
		5	\$1.00
		6	\$25.00
GRANT	12	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
GREENBRIER	13	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
HAMPSHIRE	14	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
HANCOCK	15	1	\$25.00
		2	\$1.00
		3	\$25.00
		4	\$25.00
		5	\$1.00
		6	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
HARDY	16	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
HARRISON	17	1	\$90.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$90.00
		6	\$1.00
		7	\$90.00
		8	\$1.00
		9	\$90.00
		10	\$1.00
		11	\$90.00
		12	\$90.00
		13	\$1.00
		14	\$90.00
		15	\$90.00
		16	\$1.00
		17	\$1.00
		18	\$90.00
		19	\$1.00
		20	\$90.00
		21	\$1.00
JACKSON	18	1	\$40.00
		2	\$40.00
		3	\$1.00
		4	\$40.00
		5	\$1.00
		6	\$40.00
		7	\$40.00
JEFFERSON	19	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
KANAWHA	20	1	\$30.00
		2	\$1.00
		3	\$30.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$30.00
		16	\$30.00
		17	\$1.00
		18	\$1.00
		19	\$30.00
		20	\$1.00
		21	\$1.00
		22	\$1.00
		23	\$30.00
		24	\$30.00
		25	\$30.00
		26	\$1.00
		27	\$1.00
		28	\$30.00
		29	\$1.00
		30	\$1.00
		31	\$1.00
LEWIS	21	1	\$35.00
		2	\$35.00
		3	\$35.00
		4	\$35.00
		5	\$1.00
		6	\$35.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
LINCOLN	22	1	\$25.00
		2	\$25.00
		3	\$1.00
		4	\$25.00
		5	\$25.00
		6	\$25.00
		7	\$25.00
		8	\$25.00
		9	\$25.00
		10	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO.#	DISTRICT#	TY2017 \$/AC
LOGAN	23	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$15.00
		9	\$1.00
MARION	24	1	\$1.00
		2	\$90.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$90.00
		10	\$1.00
		11	\$90.00
		12	\$90.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$90.00
		17	\$1.00
		18	\$90.00
		19	\$90.00
		20	\$1.00
		21	\$1.00
		22	\$1.00
MARSHALL	25	1	\$1.00
		2	\$1.00
		3	\$100.00
		4	\$100.00
		5	\$100.00
		6	\$1.00
		7	\$100.00
		8	\$1.00
		9	\$100.00
		10	\$1.00
		11	\$1.00
		12	\$100.00
		13	\$100.00
		14	\$100.00
		15	\$100.00
		16	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
MASON	28	1	\$1.00
		2	\$25.00
		3	\$25.00
		4	\$25.00
		5	\$25.00
		6	\$25.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$25.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$25.00
		15	\$25.00
		16	\$25.00
MC'DOWELL	27	1	\$20.00
		2	\$1.00
		3	\$20.00
		4	\$20.00
		5	\$1.00
		6	\$20.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$20.00
		12	\$1.00
		13	\$20.00
		14	\$1.00
		15	\$1.00
		16	\$1.00
MERGER	29	1	\$1.00
		2	\$15.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$15.00
		7	\$1.00
		8	\$1.00
		9	\$15.00
		10	\$1.00
		11	\$15.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO.#	DISTRICT #	TY2017 \$/AG
MINERAL	29	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
MINGO	30	1	\$1.00
		2	\$1.00
		3	\$20.00
		4	\$20.00
		5	\$20.00
		6	\$20.00
		7	\$20.00
		8	\$1.00
		9	\$20.00
		10	\$20.00
		11	\$20.00
		12	\$1.00
MONONGALIA	31	1	\$30.00
		2	\$1.00
		3	\$30.00
		4	\$30.00
		5	\$30.00
		6	\$1.00
		7	\$30.00
		8	\$30.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$1.00
		17	\$1.00
		18	\$30.00
		19	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AO
MONROE	32	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
MORGAN	33	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
NICHOLAS	34	1	\$1.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$1.00
		6	\$1.00
		7	\$15.00
		8	\$1.00
		9	\$1.00
OHIO	35	1	\$1.00
		2	\$1.00
		3	\$100.00
		4	\$100.00
		5	\$1.00
		6	\$100.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
PENDLETON	36	1	\$1.00
		2	\$10.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$10.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
PLEASANTS	37	1	\$45.00
		2	\$45.00
		3	\$45.00
		4	\$45.00
		5	\$45.00
		6	\$1.00
		7	\$45.00
		8	\$45.00
POCAHONTAS	38	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
PRESTON	38	1	\$30.00
		2	\$30.00
		3	\$30.00
		4	\$30.00
		5	\$30.00
		6	\$30.00
		7	\$1.00
		8	\$30.00
		9	\$1.00
		10	\$30.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$1.00
		17	\$1.00
		18	\$1.00
		19	\$1.00
		20	\$1.00
PUTNAM	40	1	\$25.00
		2	\$25.00
		3	\$1.00
		4	\$25.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$25.00
		9	\$1.00
		10	\$25.00
		11	\$25.00
		12	\$25.00
		13	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	OO #	DISTRICT#	TY2017 \$/AG
RALEIGH	41	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$1.00
		5	\$20.00
		6	\$1.00
		7	\$20.00
		8	\$20.00
		9	\$20.00
		10	\$1.00
		11	\$20.00
		12	\$20.00
RANDOLPH	42	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$20.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$20.00
		11	\$20.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$20.00
		17	\$1.00
		18	\$1.00
RITCHIE	43	1	\$70.00
		2	\$1.00
		3	\$70.00
		4	\$1.00
		5	\$70.00
		6	\$1.00
		7	\$70.00
		8	\$1.00
		9	\$1.00
		10	\$70.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO.#	DISTRICT#	TY2017 \$/AG
ROANE	44	1	\$35.00
		2	\$35.00
		3	\$35.00
		4	\$35.00
		5	\$1.00
		6	\$35.00
		7	\$35.00
		8	\$1.00
		9	\$35.00
SUMMERS	45	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$10.00
		6	\$1.00
		7	\$1.00
TAYLOR	46	1	\$1.00
		2	\$1.00
		3	\$90.00
		4	\$90.00
		5	\$90.00
		6	\$90.00
		7	\$90.00
TUCKER	47	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$1.00
		5	\$20.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$20.00
		10	\$1.00
		11	\$20.00
		12	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CD #	DISTRICT #	TY2017 \$/AC
TYLER	48	1	\$90.00
		2	\$90.00
		3	\$1.00
		4	\$90.00
		5	\$90.00
		6	\$90.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$90.00
UPSHUR	49	1	\$70.00
		2	\$70.00
		3	\$1.00
		4	\$70.00
		5	\$70.00
		6	\$70.00
		7	\$70.00
WAYNE	50	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$20.00
		9	\$20.00
		10	\$20.00
		11	\$1.00
		12	\$20.00
WEBSTER	51	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
WETZEL	52	1	\$90.00
		2	\$90.00
		3	\$90.00
		4	\$90.00
		5	\$90.00
		6	\$1.00
		7	\$1.00
		8	\$90.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$90.00
		13	\$1.00
WIRT	53	1	\$35.00
		2	\$35.00
		3	\$35.00
		4	\$1.00
		5	\$35.00
		6	\$35.00
		7	\$35.00
		8	\$35.00
WOOD	54	1	\$40.00
		2	\$40.00
		3	\$40.00
		4	\$40.00
		5	\$1.00
		6	\$40.00
		7	\$40.00
		8	\$40.00
		9	\$40.00
		10	\$1.00
		11	\$40.00
		12	\$40.00
		13	\$1.00
		14	\$1.00
WYOMING	55	1	\$20.00
		2	\$20.00
		3	\$20.00
		4	\$20.00
		5	\$20.00
		6	\$1.00
		7	\$20.00
		8	\$1.00
		9	\$1.00
		10	\$20.00

**MANAGED TIMBER
PROPERTY ANALYSIS**

Tax Year 2017

September 1, 2016
Mark W. Matkovich
State Tax Commissioner
Department of Revenue

MANAGED TIMBERLAND APPRAISAL RATES **TAX YEAR 2017**

(based on market 2011-2015)

Rates Per Acre

Class II Parcels:

	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
Region 1	\$206	\$140	\$50
Region 2	\$200	\$140	\$50
Region 3	\$265	\$175	\$50
Region 4	\$270	\$185	\$55
Region 5	\$205	\$140	\$50

Class III/IV Parcels:

	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
Region 1	\$225	\$150	\$75
Region 2	\$225	\$150	\$75
Region 3	\$240	\$155	\$75
Region 4	\$245	\$165	\$75
Region 5	\$225	\$150	\$75

Region 1 =	Brooke, Cabell, Hancock, Jackson, Marshall, Mason, Ohio, Pleasants, Putnam, Tyler, Wetzel, and Wood Counties
Region 2 =	Braxton, Calhoun, Clay, Doddridge, Gilmer, Harrison, Lewis, Marion, Monongalia, Ritchie, Roane, Taylor, and Wirt Counties
Region 3 =	Barbour, Greenbrier, Monroe, Nicholas, Pendleton, Pocahontas, Preston, Randolph, Tucker, Upshur, and Webster Counties
Region 4 =	Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral and Morgan Counties
Region 5 =	Boone, Fayette, Kanawha, Lincoln, Logan, McDowell, Mercer, Mingo, Raleigh, Summers, Wayne, and Wyoming Counties

Harvest Volumes per Acre

<u>Harvest Interval</u> <u>Grades</u>	<u>35 yrs.</u>	<u>45 yrs.</u>	<u>55 yrs.</u>	<u>80 yrs.</u>	<u>Total</u>
1 - Site Index 75 or more	4.6 cords 1.6 Mbf	— —	2.0 cords 4.4 Mbf	3.3 cords 8.6 Mbf	10.5 cords 14.6 Mbf
2 - Site Index 65 - 75	3.3 cords 1.0 Mbf	— —	7.0 cords 3.2 Mbf	4.6 cords 6.5 Mbf	14.9 cords 9.7 Mbf
3 - Site Index less than 65	— —	3.1 cords 0.8 Mbf	— —	15.4 cords 3.7 Mbf	18.5 cords 4.6 Mbf

Managed Timberland Statistics

Estimation of Required Rate of Return: Class II Rates

A. Safe Rate of Return (5 Year T-Bill Rate)

Year	Rate	WIA %	WIA Rate
2015	1.5292	26.67%	0.4078
2014	1.6410	33.33%	0.5489
2013	1.4725	13.33%	0.1583
2012	0.7608	6.67%	0.0507
2011	1.6225	20.00%	0.3045

1.486 %

B. Nonliquidity Rate

(2 Month T-Bills vs. 3 Month T-Bills)

Year	Rate	WIA %	WIA Rate
2015	0.2683	33.33%	0.0894
2014	0.0883	26.67%	0.0235
2013	0.0783	20.00%	0.0147
2012	0.1292	13.33%	0.0172
2011	0.1817	6.67%	0.0121

0.167 %

C. Risk Rate (30 yr T-Bills vs 5 yr T-bills)

Year	Rate	WIA %	WIA Rate
2015	1.3117	13.33%	0.1748
2014	1.6992	26.67%	0.4532
2013	2.2758	20.00%	0.4562
2012	2.1608	33.33%	0.7199
2011	2.3883	6.67%	0.1583

1.962 %

D. Management Factor of 0.5%

0.500 %

E. Property Tax Component

(60% of Class II Rate)

Year	Rate	WIA %	WIA Rate
2015	0.714	33.33%	0.2380
2014	0.714	26.67%	0.1904
2013	0.708	20.00%	0.1416
2012	0.714	13.33%	0.0952
2011	0.708	6.67%	0.0472

0.712 %

F. Inflation Rate

(Bureau of Labor Statistics)

Year	Rate	WIA %	WIA Rate
2015	0.730	33.33%	0.2433
2014	0.760	26.67%	0.2027
2013	1.500	20.00%	0.3000
2012	1.700	13.33%	0.2266
2011	3.000	6.67%	0.2000

(1.173) %

TOTAL REQUIRED RATE OF RETURN (REAL)

3.625 %

LESS: PROPERTY TAX COMPONENT

(0.712)

TOTAL DISCOUNT COMPONENT

2.913 %

Stumpage Prices:

	<u>Sawtimber</u>	<u>Pulpwood</u>
Stumpage Price Adjustment Factor	0.00%	1.86%

		1.0000	1.0000	1.0000	1.0000
<u>SAWTIMBER</u>	Current	\$/MBF at age	\$/MBF at age	\$/MBF at age	\$/MBF at age
Region	\$/MBF	35	45	55	60
Region 1	181.34	181.34	181.34	181.34	181.34
Region 2	172.92	172.92	172.92	172.92	172.92
Region 3	239.28	239.28	239.28	239.28	239.28
Region 4	235.49	235.49	235.49	235.49	235.49
Region 5	190.59	190.59	190.59	190.59	190.59

		1.8996	2.2816	2.7407	4.3339
<u>PULPWOOD</u>		\$/cd at age	\$/cd at age	\$/cd at age	\$/cd at age
Region	\$/cd at	35	45	55	60
Region 1	8.54	18.23	19.49	23.41	37.02
Region 2	6.73	12.79	15.38	18.46	29.18
Region 3	5.13	9.76	11.71	14.07	22.24
Region 4	8.10	15.39	18.49	22.21	36.12
Region 5	5.77	10.98	13.16	16.87	25.00

Management Costs:

Region	\$/acre (1)
1	3.17
2	3.17
3	3.17
4	3.17
5	3.17
State	

Tax Rates:

Effective Federal Income Tax Rate	35.00%
Effective WV State Income Tax Rate (9.5% * (1-.35))	4.23%
Effective WV Severance Tax Rate (1.6% * (1-.35))	0.98%

Yield (Volumes) (80 year rotation):

Timberland Productivity Grades	Site Index	Yield - MBF	Yield - Cords
Grade I	75 or more	14.5	10.5
Grade II	65-74	9.7	14.9
Grade III	less than 65	4.5	18.6

Managed Timberland Statistics

Estimation of Required Rate of Return: Class III & IV Blended Rates

A. Safe Rate of Return (5 Year T-Bill Rate)

Year	Rate	W/A %	W/A Rate
2015	1.5292	26.67%	0.4078
2014	1.6410	33.33%	0.5489
2013	1.1725	13.33%	0.1563
2012	0.7608	6.67%	0.0507
2011	1.5225	20.00%	0.3045

1.466 %

B. Nonliquidity Rate

(12 Month T-Bills vs. 9 Month T-Bills)

Year	Rate	W/A %	W/A Rate
2015	0.2683	33.33%	0.0894
2014	0.0883	26.67%	0.0235
2013	0.0733	20.00%	0.0147
2012	0.1292	13.33%	0.0172
2011	0.1817	6.67%	0.0121

0.157 %

C. Risk Rate (30 yr T-bills vs 5 yr T-bills)

Year	Rate	W/A %	W/A Rate
2015	1.3117	13.33%	0.1748
2014	1.6992	26.67%	0.4532
2013	2.2758	20.00%	0.4552
2012	2.1600	33.33%	0.7189
2011	2.3883	6.67%	0.1583

1.962 %

D. Management Factor of 0.5%

0.500 %

E. Property Tax Component

(60% of Blended III&IV Rates)

Year	Rate	W/A %	W/A Rate
2015	1.314	33.33%	0.4380
2014	1.314	26.67%	0.3504
2013	1.314	20.00%	0.2628
2012	1.325	13.33%	0.1768
2011	1.325	6.67%	0.0884

1.316 %

F. Inflation Rate

(Bureau of Labor Statistics)

Year	Rate	W/A %	W/A Rate
2015	0.730	33.33%	0.2433
2014	0.760	26.67%	0.2027
2013	1.500	20.00%	0.3000
2012	1.700	13.33%	0.2269
2011	3.000	6.67%	0.2001

(1.173) %

TOTAL REQUIRED RATE OF RETURN (REAL)

4.229 %

LESS: PROPERTY TAX COMPONENT

(1.316)

TOTAL DISCOUNT COMPONENT

2.913 %

Stumpage Prices:

Stumpage Price Adjustment Factor: Sawtimber 0.00% Pulpwood 1.85%

SAWTIMBER:	Current \$/MBF	1.0000	1.0000	1.0000	1.0000
		\$/MBF at age 35	\$/MBF at age 45	\$/MBF at age 55	\$/MBF at age 80
Region 1	181.34	181.34	181.34	181.34	181.34
Region 2	172.92	172.92	172.92	172.92	172.92
Region 3	239.28	239.28	239.28	239.28	239.28
Region 4	235.49	235.49	235.49	235.49	235.49
Region 5	190.59	190.59	190.59	190.59	190.59

PULPWOOD:	\$/Cord	1.8995	2.2818	2.7407	4.3399
		\$/Cord at age 35	\$/Cord at age 45	\$/Cord at age 55	\$/Cord at age 80
Region 1	8.54	16.23	19.49	23.41	37.02
Region 2	8.73	12.79	16.38	18.48	29.18
Region 3	6.13	9.75	11.73	14.07	22.24
Region 4	8.10	15.39	18.49	22.23	36.12
Region 5	5.77	10.96	13.18	15.81	25.00

Management Costs:

Region	\$/acre (1)
1	3.17
2	3.17
3	3.17
4	3.17
5	3.17

State:

Tax Rates:

Effective Federal Income Tax Rate	35.00%
Effective WV State Income Tax Rate (6.5% * (1-.35))	4.23%
Effective WV Severance Tax Rate (1.5% * (1-.35))	0.98%

Yield (Volumes) (30 year rotation)

Productivity Grades	Site Index	Yield - MBF	Yield - Cords
Grade I	75 or more	14.5	10.6
Grade II	65-74	9.7	14.9
Grade III	less than 65	4.5	18.5

West Virginia Wgt/Avg Managed Timberland Stumpage Prices

REGION 1 - Sawtimber

Year	Volume	\$/MBF	W/A%	\$/MBF
2015	12,561.80	192.85	33.33%	84.28
2014	12,162.06	178.34	26.67%	47.02
2013	19,017.77	177.45	20.00%	35.49
2012	12,628.15	188.56	13.33%	24.87
2011	11,195.24	144.89	6.67%	9.66
	67,566.02			181.34

REGION 1 - Pulpwood

Year	Volume	\$/CORD	W/A%	\$/CORD
2015	7,218.90	15.03	33.33%	5.01
2014	464.40	5.40	26.67%	1.44
2013	6,102.20	2.95	20.00%	0.59
2012	46,387.00	6.42	13.33%	0.86
2011	48.10	9.67	6.67%	0.64
	69,220.80			8.54

REGION 2 - Sawtimber

Year	Volume	\$/MBF	W/A%	\$/MBF
2015	26,487.65	175.25	33.33%	59.42
2014	22,001.80	182.47	26.67%	48.66
2013	26,896.85	177.79	20.00%	35.56
2012	26,640.98	149.01	13.33%	19.87
2011	12,639.41	158.26	6.67%	10.42
	112,866.89			172.92

REGION 2 - Pulpwood

Year	Volume	\$/CORD	W/A%	\$/CORD
2015	42,863.30	6.97	33.33%	1.99
2014	2,168.10	5.04	26.67%	1.34
2013	119,279.40	12.83	20.00%	2.87
2012	22,647.40	2.86	13.33%	0.38
2011	5,235.20	6.78	6.67%	0.45
	192,193.40			6.73

REGION 3 - Sawtimber

Year	Volume	\$/MBF	W/A%	\$/MBF
2015	135,967.80	207.12	33.33%	69.04
2014	91,467.44	230.52	26.67%	74.81
2013	161,397.70	275.83	20.00%	65.13
2012	111,920.60	201.57	13.33%	28.88
2011	102,218.30	201.45	6.67%	13.43
	602,971.84			239.28

REGION 3 - Pulpwood

Year	Volume	\$/CORD	W/A%	\$/CORD
2015	184,907.30	3.85	33.33%	1.28
2014	170,736.30	3.57	26.67%	0.95
2013	153,197.40	7.78	20.00%	1.56
2012	183,132.80	8.39	13.33%	0.85
2011	159,040.70	7.34	6.67%	0.49
	851,014.30			5.13

REGION 4 - Sawtimber

Year	Volume	\$/MBF	WIA%	\$/MBF
2015	6,644.42	223.42	33.33%	74.47
2014	5,020.90	303.89	26.67%	81.04
2013	12,820.20	211.47	20.00%	42.29
2012	4,608.73	196.47	13.33%	25.80
2011	15,517.61	178.40	6.67%	11.69
	44,811.76			235.49

REGION 4 - Pulpwood

Year	Volume	\$/CORD	WIA%	\$/CORD
2015	6,137.40	7.22	33.33%	2.41
2014	7,765.20	8.16	26.67%	2.18
2013	15,466.60	8.32	20.00%	1.68
2012	7,382.20	9.51	13.33%	1.28
2011	21,074.10	8.64	6.67%	0.66
	57,847.60			8.10

REGION 5 - Sawtimber

Year	Volume	\$/MBF	WIA%	\$/MBF
2015	37,714.40	180.16	33.33%	53.38
2014	21,681.40	266.95	26.67%	70.92
2013	31,869.00	198.20	20.00%	39.64
2012	10,987.05	188.63	13.33%	18.48
2011	24,760.43	122.43	6.67%	0.16
	126,982.28			190.59

REGION 5 - Pulpwood

Year	Volume	\$/CORD	WIA%	\$/CORD
2015	2,889.50	4.05	33.33%	1.35
2014	10,181.40	6.18	26.67%	1.65
2013	18,292.60	7.13	20.00%	1.43
2012	8,296.30	6.93	13.33%	0.92
2011	6,432.30	6.26	6.67%	0.42
	48,102.10			5.77

COAL PROPERTIES ANALYSIS

Tax Year 2017

September 1, 2016
Mark W. Matkovich
State Tax Commissioner
Department of Revenue

COAL CAPITALIZATION RATE

Capitalization Rate Analysis and Results

In developing a capitalization rate for use in valuing specific income-producing properties, consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands-of-Investment and Simulation Technique approaches are utilized in establishing discount rates for active coal. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 11.

<u>Safe Rate</u>	90 day Treasury Bill	Safe Rate
January - December	2015:	0.053%
January - December	2014:	0.033%
January - December	2013:	0.046%

<u>Risk Rate</u>	Interest differential between Loan Rate and 90 day Treasury Bill	Debt Risk Rate
2015	5.26%	5.207%
2014	5.25%	5.217%
2013	5.25%	5.192%
	Prime plus .2%	

<u>Equity</u>	Differential between Equity Rates and 90 day Treasury Bill	Equity Risk Rate
2015	$[14.75\% / (1 - .30)] - 0.053$	21.038%
2014	$[15.50\% / (1 - .30)] - 0.033$	22.110%
2013	$[13.25\% / (1 - .30)] - 0.058$	10.871%
	Value Line Investment Survey Analysis	

<u>Composite Risk Rate</u>	Loan and Equity Rates weighted by industry estimated capital structure	Composite Risk
2015	13.675%	18.497%
2014	16.477%	17.042%
2013	11.322%	13.389%
Note: Debt/Equity Ratio	Debt: 35%	Equity: 65%

<u>Non-Liquidity Rate</u>	Interest differential between a 90 day Treasury Bill and a 1-year Treasury Bill which reflects a reasonable time necessary to sell active property	Non-Liquidity Rate
January - December	2015:	0.268%
January - December	2014:	0.088%
January - December	2013:	0.074%
	1yr T-Bill	30 d T-Bill
	0.322%	0.053%
	0.121%	0.033%
	0.132%	0.058%

<u>Management Rate</u>	Charges for the management of investment portfolios
Fixed Rate (by Rule)	0.500%

<u>Inflation Rate</u>	
January - December	2015:
January - December	2014:
January - December	2013:

Capitalization Rate Since the valuation of active coal property is predicated on a three year production average, the capitalization rate is considered in a similar manner:

	2015	2014	2013
Inflation Rate	0.730%	0.760%	1.500%
Safe Rate	0.053%	0.033%	0.058%
Composite Risk Rate	15.497%	17.042%	13.389%
Non-Liquidity Rate	0.268%	0.088%	0.074%
Management Rate	0.500%	0.500%	0.500%
Total	15.888%	19.303%	12.631%
Three Yr Average	15.00%	Rounded to	15.00%

CAPITALIZATION RATE - 15.00%			
MULTIPLIERS	%		%
1YR	0.933	5YR	5.417
2YR	1.743	10YR	5.362
3YR	2.448	11YR	5.813
4YR	3.082	12YR	5.813
5YR	3.598	13YR	5.987
6YR	4.058	14YR	6.139
7YR	4.462	15YR	6.271
8YR	4.812		

COAL

Price and Royalty Rate Analysis

The development of royalty rates for the various categories of mines and markets involves information collection and review from a variety of sources. Coal lease rates have been derived from transaction information provided by county producers, assessors, tax auditors, and by individual lessors/lessees involved in the specific transaction. The prices for mined coal, as per 110 CSR 11, have been calculated from information provided by the WV Public Service Commission and U.S. Energy Information Administration concerning power plant fuel purchases. Prices provided by producers as part of tax filing and from data obtained from market summaries are included for comparison. Because a large portion of the data used in this analysis is by law considered confidential, only a summary of the results are published.

COAL SALE PRICES CY2016 FOR TY2017 APPLICATION

GRAND SUMMARY ALL SOURCES 201	STEAM SPOT	STEAM TERM	MET
PSG	\$54.82	\$54.03	
FERC	\$51.10	\$60.81	
Active Return Summary		\$52.05 52.1 MM Tons	\$74.60 23.6 MM Tons

Coal Market Publication (Plate):
 \$48.09 CAPP (12/1/67) Barge
 \$46.66 PGH (12/3) Rail
 \$87.54 Low Vol HCC

STATE STEAM PRICE (SPOT Market): \$58.15 FERC & PSG, 3 YR AVE
 STATE MET PRICE: \$74.80 Active Return, 1 YR

2016 WVPSG Tons reported in millions: Spot Sales 8,112,303 Term Sales 13,291,898 Total 19,404,199

COAL TY2017 ROYALTY RATES	2016 1YR		2014 2YR		2013 3YR		2012 4YR		2011 5YR	
	%S	%D	%S	%D	%S	%D	%S	%D	%S	%D
TOTAL RECORDS	447	452	1447	903	1354	588	1308	2756	1677	2241
SUM of PERCENT	2904.85	2327.95	8,889.07	4,695.25	8,087.34	3,313.93	11,881.55	14,683.03	8,924.28	11,184.05
STRAIGHT AVERAGE	6.50	5.16	6.13	5.19	5.97	5.53	6.23	5.32	5.32	4.99
MEDIAN	6.00	5.00	6.00	5.00	5.00	5.00	6.00	5.13	5.00	5.00
WEIGHTED AVERAGE (by Mine)	6.80	5.10	5.94	5.49	6.58	5.04	6.45	6.28	5.27	5.72
TENTATIVE RATE DEEP (%)	5.69									
TENTATIVE RATE SURFACE (%)	6.91									

ROYALTY RATE CALCULATIONS

Steam Coal/Deep Mine	\$58.15	per ton X	5.69%		\$3.31	per ton
Metallurgical Coal/Deep Mine	\$74.60	per ton X	5.69%		\$4.24	per ton
Steam Coal/Surface Mine	\$58.15	per ton X	6.91%		\$4.04	per ton
Metallurgical Coal/Surface Mine	\$74.60	per ton X	6.91%		\$5.13	per ton

Explanation of Reserve Coal Valuation

The RCVI consists of a computer model, which utilizes a database consisting of coal beds and characteristics, property locations, mine locations, sales, transportation, etc., for the entire state. An extensive algorithm calculates in-place tonnage, expected time of mining and present value for all the mineable coal on every property.

There are, therefore, no set "rates" available on reserve coal under the Rule. The RCVI values on each property will not be available until all data has been entered, after October 15 of each year. Please refer to the State Register, Legislative Rules, Title 110, Series II for details of the process.

**Title 110, Series 11
Valuation of Active and Reserve Coal Property for Ad Valorem Property Tax Purposes**

The above Legislative Rule was modified during the 2006 Legislative Session requiring biennial (every other year) updating of the geostatistical basis for several valuation factors used in the Reserve Coal Valuation Model. To satisfy that requirement, maps and data files concerning the Market Interest Factor, the Market Mineability Factor, the Use Conflict Factor and the Environmental Factor have been revised for Tax Year 2016. Preliminary research has been conducted to determine the effects of the factors on coal valuation. The results are as follows:

Market Interest Factor

This is the relationship between transactions (sales, leases, prospecta, permit applications, etc.) and mining as it relates to properties and locations. Trans_Ct is the number of transactions counted within the radius.
Radius = 5 miles

If Trans_Ct >= 20 Then TransFactor = 20

If Trans_Ct < 20 And Trans_Ct >= 10 Then TransFactor = 40

Else TransFactor = 80

Market Mineability Factor

This is the relationship between property location and mining, through time. Determining leading is count of mines within the radius.
Radius = 2.5 miles

Surface Mines: Sumine

Deep Mines: Dmine

Booth Mines: Bmine

Historic Mines: Omine

Current Mines: Cmine

To Assign MineFactor:

If Cmine > 0 Then MineFactor = 20

If Cmine = 0 And (Omine > 0 Or Bmine > 0) Then MineFactor = 40

Else MineFactor = 80

Use Conflict Factor

This is the relationship between oil & gas well drilling and mining as it relates to property location. WellDensity is in wells per square mile.

WellDensity <= 5 Then WellFactor = 0

WellDensity >= 5 And WellDensity < 10 Then WellFactor = 20

WellDensity >= 10 And WellDensity < 20 Then WellFactor = 40

WellDensity >= 20 Then WellFactor = 80

Environmental Factor

This is the relationship of known environmental hazards and impediments to the likelihood of mining occurring at this location. The rates are compiled from maps and represent densities of problems mapped.

EnvRate <= 20 or Null Then EnvFactor = 0

EnvRate > 20 and EnvRate <= 40 Then EnvFactor = 20

EnvRate > 40 and EnvRate < 80 Then EnvFactor = 40

EnvRate >= 80 Then EnvFactor = 80

**OTHER MINED MINERAL
PROPERTY ANALYSIS**

Tax Year 2017

September 1, 2016
Mark W. Matkovich
State Tax Commissioner
Department of Revenue

OTHER MINED MINERALS CAPITALIZATION RATE

Capitalization Rate Analysis and Results

In developing a capitalization rate for use in valuing specific income-producing properties, consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands of Investment and Summation Technique approaches are utilized in establishing discount rates for active coal. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 1k.

Safe Rate	90 day Treasury Bills	Safe Rate
January - December	2015	0.053%
January - December	2014	0.033%
January - December	2013	0.058%

Risk Rate: Interest differential between Loan Rate and 90 day Treasury Bills

Loan Rate	Debt Risk Rate
2015: 5.26%	5.207%
2014: 5.26%	5.217%
2013: 5.26%	5.192%

*Prime plus 2%

Equity: Differential between Equity Rates and 90 day Treasury Bills

Equity Rate**	Equity Risk Rate
2015: $\{(1.75\% / (1-.30)) - 0.053\}$	16.733%
2014: $\{(1.75\% / (1-.30)) - 0.033\}$	16.753%
2013: $\{(1.75\% / (1-.30)) - 0.058\}$	16.728%

** Value Line Investment Survey Analysis

Composite Risk Rate: Loan and Equity Rates weighted by industry estimated capital structure

Equity Rate	Debt Rate	Composite Risk
2015: 10.040%	2.083%	12.123%
2014: 10.052%	2.087%	12.139%
2013: 10.037%	2.077%	12.114%

Note: Debt: Equity Ratio = 40%: 60%

Non Liquidity Rate:

Interest differential between 90 day Treasury Bills and a 1 year Treasury Bill which reflects a reasonable time necessary to sell active property.

			<u>1yr T Bill</u>	<u>90 d T Bill</u>	<u>Non-Liquidity Rate</u>
January - December	2015		0.322%	0.063%	0.269%
January - December	2014		0.121%	0.033%	0.088%
January - December	2013		0.132%	0.068%	0.074%

Management Rate: Charges for the management of investment portfolios

Fixed Rate (by Rule) 0.500%

Inflation Rate:

January - December	2015	0.730%
January - December	2014	0.769%
January - December	2013	1.500%

Property Tax Rate: Sixty percent (60%) of State average Class III property tax rate.

January - December	2015	60% of 2.190 =	1.314%
January - December	2014	60% of 2.190 =	1.314%
January - December	2013	60% of 2.190 =	1.314%

Capitalization Rate:

Since the valuation of other mined mineral property is predicated on a three year production average, the capitalization rate is considered in a similar manner:

	2015	2014	2013
Inflation Rate	0.730%	0.769%	1.500%
Safe Rate	0.053%	0.033%	0.058%
Composite Risk Rate	12.123%	12.139%	12.114%
Non Liquidity Rate	0.269%	0.088%	0.074%
Management Rate	0.500%	0.500%	0.500%
Property Tax Rate	1.314%	1.314%	1.314%
Total	13.529%	13.314%	12.560%

Three Yr Average: 13.134%

Rounded to:

13.10%

CAPITALIZATION RATE: 13.10%

MULTIPLIER	%	%
1YR	0.040	5.437
2YR	1.772	5.748
3YR	2.507	6.022
4YR	3.152	6.266
5YR	3.731	6.480
6YR	4.240	6.669
7YR	4.699	6.837
8YR	5.086	

OTHER MINED MINERALS

ROYALTY RATE SURVEY

The determination of royalty rates for other mined minerals within the state of West Virginia is dependent upon the availability of leasehold information. Since this information is limited, the Department has chosen to review data for the most recent thirty year period. A summary of this review is shown below in order to protect the confidentiality of parties involved.

RESOURCE	DATA SOURCES	AVERAGE ROYALTY	MEDIAN ROYALTY	FY2017 RATE
LIMESTONE	16	\$0.22	\$0.20	\$0.22
SANDSTONE	8	\$0.31	\$0.25	\$0.30
CLAY/SHALE	34	\$0.12	\$0.10	\$0.11
SAND/GRAVEL	10	\$0.35	\$0.40	\$0.40
SALT BRINE	1	N/A	N/A	\$0.10

RESERVE VALUES

	number of sales	\$/AC
LIMESTONE	5	\$3,000.00
SANDSTONE	8	\$2,300.00
CLAY/SHALE	16	\$850.00
SAND/GRAVEL	6	\$4,000.00
SALT	2	\$1,140.00



STATE OF WEST VIRGINIA

Department of Revenue
State Tax Department

Earl Ray Tomblin
Governor

Mark W. Matkovich
State Tax Commissioner

June 30, 2016

The Honorable Natalie Tennant
Secretary of State
Building 1, Suite 157-K
State Capitol
Charleston, West Virginia 25305

Dear Secretary Tennant:

Attached are tentative natural resource property valuation variables for the 2017 Tax Year that have been developed by the State Tax Department for use in appraising coal, oil, natural gas, managed timberland and other natural resource properties for ad valorem tax purposes.

The State Tax Department will accept written public comments on all variables until August 1, 2016. Final valuation variables will be filed on or before September 1, 2016.

Public comments concerning the attached variables should be forwarded to the following address:

West Virginia State Tax Department
Property Tax Division
Attention: Jeff Amburgey
P. O. Box 2389
Charleston, West Virginia 25328-2389

Sincerely,

Mark W. Matkovich
State Tax Commissioner

MWM/ja/j

Attachment

FILED

JUN 30 AM 12

DEPT. OF REVENUE
DIVISION OF TAXATION

OIL AND GAS PROPERTIES ANALYSIS

Tax Year 2017

June 30, 2016
Mark W. Matkovich
State Tax Commissioner
Department of Revenue

OIL AND GAS

TY 2017

Capitalization Rate Analysis and Results:

In developing a capitalization rate for use in valuing specific income-producing properties, consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands of Investment and Summation Technique approaches are utilized in establishing discount rates for producing oil and gas properties. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 1J.

Safe Rate (3-Month Constant Maturity Interest Rates)
January December 2015

0.053%

Risk Rate (Interest differential between Loan Rate and 3-Month Constant Maturity Interest Rates)

<u>Loan Rate</u>	<u>Risk Rate</u>
2015 5.260%	5.207%
Prime plus 2%	

Equity (Differential between Equity Rates and 3-Month Constant Maturity Interest Rates)

<u>Equity Rate</u>	<u>Risk Rate</u>
2015 (12.25% (1+37)) 0.053%	19.391%
** Value Line Investment Survey Analysis	

Composite Risk Rate Loan and Equity Rates weighted by industry estimated capital structure

	<u>Equity Rate</u>	<u>Debt Rate</u>	<u>Composite Risk</u>
2015	12.8042%	1.822%	15.186%
Note: Debt/equity Ratio:		Debt: 35%	Equity: 65%
*** Effective severance tax adjustment		0.96	

Non Liquidity Rate Interest differential between 3-month Constant Maturity Interest Rates and a 1 year Constant Maturity Interest Rates which reflects a reasonable time necessary to sell active property

		<u>1yr T Bill</u>	<u>90 day T Bill</u>	<u>Non Liquidity Rate</u>
January	December	2015	0.322%	0.053%
				0.269%

Management Rate Charges for the management of investment portfolios

Fixed Rate (by Rule) 0.500%

Property Tax Rate Sixty percent (60%) of State average Class III property tax rate

2015	80% of 2.18	1.314%

Inflation Rate

January	December	2015	0.730%

Capitalization Rate

Since the valuation of oil and gas property is predicated on a three year production, the capitalization rate will be considered in a similar manner.

	2015	2014	2013
Inflation Rate	-0.730%	-0.760%	-1.500%
Safe Rate	0.053%	0.033%	0.058%
Composite Risk Rate	15.186%	14.388%	14.634%
Non Liquidity Rate	0.269%	0.088%	0.074%
Management Rate	0.500%	0.500%	0.500%
Property Tax Rate	1.314%	1.314%	1.314%
Total	16.592%	15.684%	15.080%
	50.000%	33.333%	16.667%
	8.296%	5.188%	2.513%
			15.997%

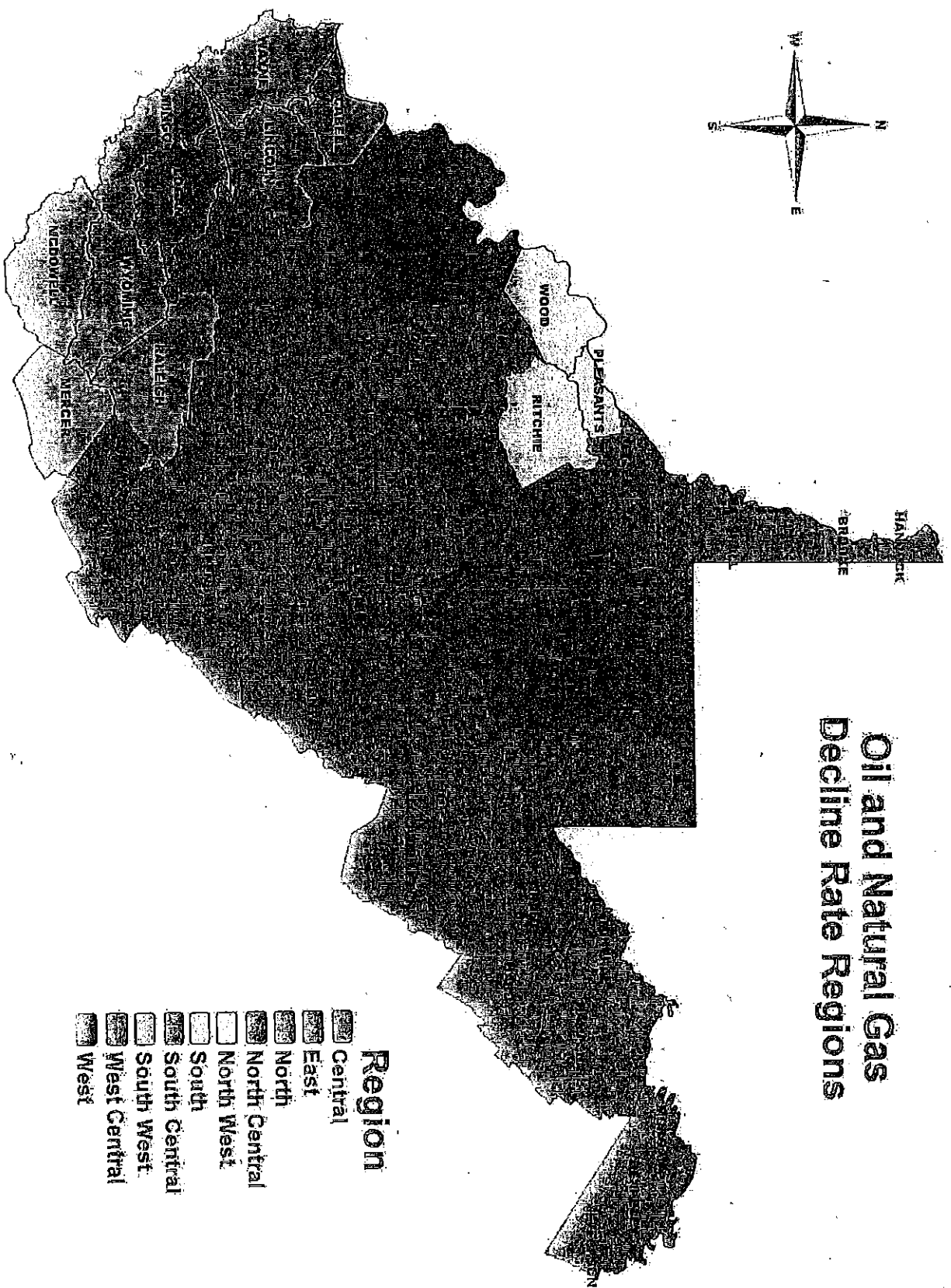
Capitalization Rate Rounded to:

16.00%

MULTIPLIERS FOR 16.0% MID-YEAR LIFE (ANNUALLY)

YEAR		YEAR	
1	0.028477	21	0.047710
2	0.000411	22	0.041129
3	0.090009	23	0.035456
4	0.094838	24	0.030568
5	0.512709	25	0.026350
6	0.442080	26	0.022715
7	0.361086	27	0.019582
8	0.328522	28	0.016881
9	0.283209	29	0.014532
10	0.244146	30	0.012648
11	0.210479	31	0.010815
12	0.181440	32	0.009323
13	0.156412	33	0.008037
14	0.134840	34	0.006929
15	0.116241	35	0.005973
16	0.100206	36	0.005149
17	0.086386	37	0.004439
18	0.074474	38	0.003827
19	0.064199	39	0.003289
20	0.055344	40	0.002844

Oil and Natural Gas Decline Rate Regions



- Region**
- Central
 - East
 - North
 - North Central
 - North West
 - South
 - South Central
 - South West
 - West Central
 - West

Decline Rates for Natural Gas and Oil Formations: Central				
Central: Braxton, Clay, Fayette, Nicholas, Webster				
Code	Formation	Year 1	Year 2	Year 3 +
12	Alexander, Benson	-0.31	-0.20	-0.10
14	Benson	-0.48	-0.08	-0.08
16	Benson, Balltown*	-0.45	-0.16	-0.12
17	Gordon**	-0.30	-0.07	-0.07
18	Big Injun	-0.34	-0.18	-0.13
19	Big Injun, Big Lime	-0.36	-0.13	-0.13
22	Big Lime	-0.34	-0.34	-0.13
26	Ravencloft	-0.40	-0.40	-0.25
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper*	-0.41	-0.22	-0.09
110	Marcellus *	-0.41	-0.22	-0.09
111	Utica*	-0.41	-0.22	-0.09
9	Exception (Median)	-0.41	-0.22	-0.09
10	Non-Filer	-0.30	-0.07	-0.07

* New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: East				
East: Berkeley, Grant, Greenbrier, Hampshire, Hardy, Jefferson, Mineral, Monroe, Morgan, Pendleton, Pocahontas, Preston, Randolph, Summers, Tucker				
Code	Formation	Year 1	Year 2	Year 3 +
1	Oriskany	-0.30	-0.30	-0.19
14	Benson	-0.31	-0.17	-0.12
20	Benson +	-0.44	-0.20	-0.08
21	Benson, Fifth	-0.29	-0.28	-0.09
32	Brallier +	-0.48	-0.20	-0.05
33	Elk, Benson	-0.39	-0.21	-0.08
34	Elk, Benson, Riley	-0.53	-0.19	-0.05
35	Elk, Benson, Riley +	-0.36	-0.19	-0.11
36	Elk, Benson, Balltown	-0.34	-0.18	-0.11
37	Elk, Alexander, Benson	-0.50	-0.07	-0.07
38	Elk, Alexander, Benson +	-0.40	-0.16	-0.16
39	Hunterville	-0.31	-0.31	-0.14
40	Fox, Haverly	-0.36	-0.21	-0.15
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxten	-0.70	-0.27	-0.08
110	Marcellus	-0.59	-0.22	-0.17
111	Utica*	-0.59	-0.22	-0.17
9	Exception (Median)	-0.41	-0.22	-0.10
10	Non-Filer	-0.29	-0.07	-0.05

*New Formation(s) involved in recent production. These will be valued with the Marcellus Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: North				
North: Brooke, Hancock, Marshall, Ohio, Tyler, Wetzel				
Code	Formation	Year 1	Year 2	Year 3
11	Gordon	-0.47	-0.31	-0.09
13	Alexander, Bensort, Riley	-0.26	-0.16	-0.15
15	Bensort, Riley	-0.18	-0.16	-0.06
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Welr	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
97	Coalbed Methane (Vertical)	-0.23	-0.08	-0.05
110	Marcellus	-0.52	-0.23	-0.18
111	Utica*	-0.52	-0.23	-0.18
9	Exception (Median)	-0.39	-0.23	-0.08
10	Non-Filer	-0.18	-0.16	-0.06

*New Formation(s) involved in recent production. These will be valued with the Marcellus Rates until decline information is available

Decline Rates for Natural Gas and Oil Formations: North Central				
North Central: Barbour, Doddridge, Gilmer, Harrison, Lewis, Marion, Monongalia, Taylor, Upshur				
Code	Formation	Year 1	Year 2	Year 3
11	Gordon	-0.41	-0.14	-0.12
12	Alexander, Benson	-0.37	-0.19	-0.11
13	Alexander, Benson, Riley	-0.40	-0.28	-0.05
14	Benson	-0.31	-0.17	-0.12
15	Benson, Riley	-0.34	-0.17	-0.14
18	Big Injun	-0.36	-0.16	-0.13
21	Benson, Fifth	-0.31	-0.20	-0.14
28	Weir	-0.34	-0.34	-0.07
29	Weir +	-0.28	-0.28	-0.23
33	Elk, Benson	-0.34	-0.16	-0.11
34	Elk, Benson, Riley	-0.42	-0.27	-0.08
37	Elk, Alexander, Benson	-0.49	-0.23	-0.08
38	Elk, Alexander, Benson +	-0.38	-0.20	-0.12
40	Fox, Haverly	-0.46	-0.18	-0.08
50	Rhine Street	-0.28	-0.03	-0.03
57	Alexander, Benson, Balltown	-0.39	-0.26	-0.08
58	Alexander	-0.35	-0.20	-0.10
59	Alexander +	-0.39	-0.22	-0.10
60	Alexander, Benson, Riley +	-0.39	-0.35	-0.12
61	Balltown	-0.36	-0.20	-0.10
62	Balltown, Speechley	-0.28	-0.22	-0.10
63	Balltown, Speechley +	-0.30	-0.13	-0.10
64	Benson, Balltown, Speechley	-0.28	-0.22	-0.09
65	Benson, Bradford	-0.37	-0.20	-0.10
66	Benson, Balltown	-0.29	-0.23	-0.11
67	Benson, Riley +	-0.38	-0.14	-0.10
68	Benson, Speechley	-0.30	-0.22	-0.14
69	Brallier, Elk	-0.42	-0.20	-0.13
70	Brallier	-0.40	-0.22	-0.15
71	Deeper/Onondaga or Oriskany/Helderberg	-0.24	-0.24	-0.03
72	Elk, Alexander	-0.42	-0.22	-0.09
73	Elk, Benson +	-0.38	-0.20	-0.12
74	Elk	-0.43	-0.12	-0.10
76	Elk, Riley	-0.60	-0.35	-0.17
76	Fox +	-0.46	-0.18	-0.09
77	Haverly, Elk, Benson (No Alexander)	-0.35	-0.16	-0.16
78	Haverly	-0.45	-0.15	-0.15
79	Riley	-0.44	-0.22	-0.10
80	Speechley	-0.30	-0.18	-0.09
81	Alexander, Benson, Speechley	-0.39	-0.24	-0.10
82	Haverly, Elk, Alexander	-0.47	-0.14	-0.14
85	Fifth, Oil	-0.45	-0.25	-0.22
87	Bayard All	-0.30	-0.20	-0.05
88	Fifth	-0.29	-0.18	-0.12
89	Fifth +	-0.25	-0.15	-0.13
90	Gordon, Injun All	-0.41	-0.23	-0.23
91	Squaw	-0.37	-0.31	-0.06
92	Injun +	-0.34	-0.22	-0.22
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.25	-0.07
95	Injun/Weir	-0.51	-0.25	-0.09
96	Maxton	-0.70	-0.27	-0.08
97	Coalbed Methane (Vertical)	-0.23	-0.08	-0.05
98	Coalbed Methane (Horizontal)	-0.05	-0.05	-0.32
109	Trenton/Deeper*	-0.38	-0.21	-0.11
110	Marcellus	-0.59	-0.29	-0.23
111	Utica**	-0.59	-0.29	-0.23
9	Exception (Median)	-0.38	-0.21	-0.11
10	Non-Filer	-0.23	-0.03	-0.03

*New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

**New Formation(s) involved in recent production. These will be valued with the Marcellus Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: North West				
North West: Pleasant, Ritchie, Wood				
Code	Formation	Year 1	Year 2	Year 3 +
2	Huron, Rhinestreet	-0.41	-0.26	-0.07
4	Huron	-0.42	-0.24	-0.14
5	Huron, Shales above Huron	-0.39	-0.25	-0.14
8	Perea	-0.31	-0.15	-0.16
11	Gordon	-0.38	-0.10	-0.10
12	Alexander, Benson (No Riley)	-0.34	-0.29	-0.10
13	Alexander, Benson, Riley	-0.32	-0.20	-0.10
14	Benson	-0.19	-0.19	-0.10
44	Rhinestreet, Huron, Shallow Shale	-0.43	-0.28	-0.11
47	Alexander, Riley, (No Benson)	-0.41	-0.09	-0.05
48	Rhinestreet, Alexander, Benson, Riley	-0.31	-0.24	-0.10
49	Weir, Squaw, Big Injun	-0.27	-0.17	-0.07
50	Rhinestreet	-0.40	-0.27	-0.27
51	Rhinestreet *	-0.36	-0.21	-0.10
52	All Upper Devonian (Undiv)	-0.48	-0.33	-0.19
53	Huron, Chemung	-0.36	-0.11	-0.09
54	Huron, Hampshire, Pocahontas	-0.12	-0.12	-0.11
55	Upper Devonian (Above Huron)	-0.46	-0.33	-0.23
56	Chemung, Sands= Riley, Bradford, Balltown, Speechley, Warren (No Benson or Alexander)	-0.28	-0.18	-0.10
63	Huron Oil	-0.74	-0.44	-0.40
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.61	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper *	-0.39	-0.23	-0.13
110	Marcellus	-0.46	-0.28	-0.23
111	Utica**	-0.46	-0.29	-0.23
9	Exception (Median)	-0.39	-0.29	-0.13
10	Non-Filer	-0.12	-0.05	-0.05

*New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

**New Formation(s) involved in recent production. These will be valued with the Marcellus Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: South				
South: McDowell, Mercer, Raleigh, Wyoming				
Code	Formation	Year 1	Year 2	Year 3 +
8	Berea	-0.34	-0.15	-0.15
22	Big Lime	-0.31	-0.19	-0.07
23	Big Lime, Maxton	-0.31	-0.19	-0.07
24	Big Lime, Ravencliff	-0.29	-0.29	-0.17
25	Berea *	-0.37	-0.12	-0.08
26	Ravencliff	-0.40	-0.08	-0.07
28	Weir	-0.44	-0.20	-0.10
29	Weir *	-0.28	-0.21	-0.08
30	Weir, Big Lime	-0.37	-0.19	-0.13
42	Maxton, Ravencliff	-0.40	-0.08	-0.07
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.27	-0.13	-0.09
97	Coalbed Methane (Vertical)	0.03	0.10	-0.05
98	Coalbed Methane (Horizontal)	-0.05	-0.05	-0.32
110	Marcellus *	-0.36	-0.19	-0.09
111	Utica*	-0.36	-0.19	-0.09
9	Exception (Median)	-0.36	-0.19	-0.09
10	Non-Filer	-0.23	-0.08	-0.05

* If the formation is listed in the exception list, these will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: South Central				
South Central: Boone, Kanawha				
Code	Formation	Year 1	Year 2	Year 3 +
3	Devonian Shale	-0.23	-0.08	-0.05
4	Huron	-0.31	-0.15	-0.04
8	Berea	-0.23	-0.14	-0.09
18	Big Injun	-0.29	-0.25	-0.12
27	Huron Shales above Huron	-0.24	-0.08	-0.05
28	Weir	-0.30	-0.21	-0.14
29	Weir #	-0.31	-0.25	-0.09
31	Devonian Shales +	-0.27	-0.07	-0.05
80	Big Injun-Oil	-0.19	-0.18	-0.10
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper *	-0.33	-0.19	-0.08
110	Marcellus *	-0.33	-0.19	-0.08
111	Utica *	-0.33	-0.19	-0.08
9	Exception (Median)	-0.33	-0.19	-0.08
10	Non-Filer	-0.19	-0.07	-0.04

Decline Rates for Natural Gas and Oil Formations: South West				
South West: Cabell, Lincoln, Logan, Mingo, Wayne				
Code	Formation	Year 1	Year 2	Year 3+
3	Devonian Shale	-0.31	-0.15	-0.04
8	Berea	-0.36	-0.11	-0.11
18	Big Injun	-0.38	-0.22	-0.04
22	Big Lime	-0.19	-0.19	-0.19
43	Berea, Big Lime	-0.18	-0.18	-0.18
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper *	-0.38	-0.22	-0.10
110	Marcellus *	-0.38	-0.22	-0.10
111	Utica *	-0.38	-0.22	-0.10
9	Exception (Median)	-0.38	-0.22	-0.10
10	Non-Filer	-0.18	-0.11	-0.04

* New Formation(s) involved in recent production. These will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations - West Central				
West Central: Calhoun, Roane, Wirt				
Code	Formation	Year 1	Year 2	Year 3+
2	Huron, Rhinestreet	-0.49	-0.11	-0.06
4	Huron	-0.33	-0.22	-0.14
27*	Huron, Shales above Huron	-0.42	-0.23	-0.12
44	Rhinestreet, Huron, Shallow Shale	-0.51	-0.14	-0.11
45	Devonian Shale, Pocono	-0.25	-0.17	-0.12
46	Pocono	-0.29	-0.25	-0.12
84	Big Injun, Oil	-0.41	-0.41	-0.11
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Wair	-0.51	-0.26	-0.09
96*	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper	-0.42	-0.24	-0.10
110	Marcellus*	-0.42	-0.24	-0.10
111	Utica*	-0.42	-0.24	-0.10
9	Exception (Median)	-0.42	-0.24	-0.10
10	Non-Filer	-0.26	-0.11	-0.06

* New Formation(s) involved in recent production: These will be valued with the Exception Rates until decline information is available.

Decline Rates for Natural Gas and Oil Formations: West				
West: Jackson, Mason, Putnam				
Code	Formation	Year 1	Year 2	Year 3 +
1	Oriskany	-0.40	-0.40	-0.29
2	Huron, Rhinestreet	-0.13	-0.12	-0.03
3	Devonian Shale	-0.31	-0.15	-0.04
4	Huron	-0.29	-0.14	-0.05
5	Huron, Shales above Huron	-0.38	-0.15	-0.06
6	Huron, Berea	-0.29	-0.08	-0.08
7	Berea, Devonian Shale	-0.08	-0.08	-0.08
8	Berea	-0.36	-0.16	-0.16
93	4th Sand	-0.42	-0.32	-0.08
94	50 Foot	-0.34	-0.26	-0.07
95	Injun/Weir	-0.51	-0.26	-0.09
96	Maxton	-0.70	-0.27	-0.08
109	Trenton/Deeper *	-0.35	-0.20	-0.09
110	Marcellus *	-0.35	-0.20	-0.09
111	Utica *	-0.35	-0.20	-0.09
9	Exception (Median)	-0.35	-0.20	-0.09
10	Non-Filer	-0.08	-0.08	-0.03

Industry Operating Expense Survey and Results

This component was determined through a review of responses to a survey distributed by the State Tax Department to producers of all oil and natural gas wells producing in West Virginia and through use of other market data.

GAS

- % Working Interest Expenses for Typical Producing Well	=	30%
- Maximum Operating Expenses	=	\$5,000
- Coal Bed Methane, Vertical Wells Expenses	=	\$9,000

OIL

- % Working Interest Expenses for Typical Producing Well	=	35%
- Maximum Operating Expenses	=	\$5,750
- Maximum Enhanced Operating Expenses	=	\$9,000

MARCELLUS/UTICA

- % Working Interest Expenses for Vertical Producing Well	=	30%
- Maximum Operating Expenses	=	\$30,000
- % Working Interest Expenses for Horizontal Producing Well	=	20%
- Maximum Operating Expenses	=	\$150,000

HORIZONTAL WELLS (OTHER THAN MARCELLUS/UTICA AND COAL BED METHANE)

- % Working Interest Expenses for Horizontal Producing Well	=	30%
- Maximum Operating Expenses	=	\$20,000

Minimum Working Interest Appraisal = \$500 per well

Flat Rate Royalty Multiplier = 5.75

Home Use Only Wells:

Appraised at \$500 per well

Industrial Use Only Wells:*

MCF usage X \$2.62/MCF

BBL usage X \$48.66/BBL

*(Also includes Department of Environmental Protection reported wells.)

Non-Filer Valuations

Working Interest = 150% of previous year's appraisal

Royalty Interest = 90% of previous year's appraisal

Valuation:

The previously discussed variables are used to establish a future income stream converted to present worth through application of a capitalization rate. The sum of the discounted future net income per year represents a reasonable estimate of market value.

Lease Rate/Term Survey and Results

The non-producing property value for each county is determined by multiplying the average delay rental by a factor, which represents the average lease term under present economic conditions.

As a result of higher lease terms being inversely proportional to the value of oil and gas (thus counties with little leasing or production activities reflect inflated values) and with the volatile nature of county activity, necessary adjustments in the review have been made.

A compilation of lease terms produced a statewide average of 5 years. This term (5 years) was applied to all county lease rates and compared to the appraisal rates derived from calculations using individual county data as well as regional data. The resulting calculations were reviewed and considered in the assignment of an appraisal rate per acre.

The appraisal rate/acre amounts shown on the next page are preliminary figures, which may change if additional lease data is received. These rates have been applied to all county magisterial districts with either producing wells, lease activity within the past 5 years or both. Tax districts void of activity within the past 5 years have been assigned the minimum value per acre.

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
BARBOUR	1	1	\$60.00
		2	\$1.00
		3	\$60.00
		4	\$60.00
		5	\$60.00
		6	\$1.00
		7	\$60.00
		8	\$60.00
		9	\$60.00
		10	\$60.00
		11	\$60.00
BERKELEY	2	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
BOONE	3	1	\$20.00
		2	\$1.00
		3	\$1.00
		4	\$20.00
		5	\$20.00
		6	\$20.00
		7	\$1.00
		8	\$20.00
		9	\$1.00
BRAXTON	4	1	\$20.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$20.00
		6	\$20.00
		7	\$20.00
		8	\$1.00
BROOKE	5	1	\$1.00
		2	\$1.00
		3	\$100.00
		4	\$100.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AG
CABELL	8	1	\$25.00
		2	\$1.00
		3	\$25.00
		4	\$25.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$25.00
		9	\$1.00
		10	\$25.00
CALHOUN	7	1	\$30.00
		2	\$1.00
		3	\$30.00
		4	\$30.00
		5	\$30.00
		6	\$30.00
CLAY	8	1	\$20.00
		2	\$1.00
		3	\$20.00
		4	\$20.00
		5	\$20.00
		6	\$20.00
DODDRIDGE	9	1	\$90.00
		2	\$90.00
		3	\$90.00
		4	\$90.00
		5	\$90.00
		6	\$90.00
		7	\$90.00
		8	\$90.00
		9	\$1.00
FAYETTE	10	1	\$20.00
		2	\$20.00
		3	\$20.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$1.00
		13	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO.#	DISTRICT#	TY2017 \$/AO
GILMER	11	1	\$25.00
		2	\$25.00
		3	\$25.00
		4	\$1.00
		5	\$1.00
		6	\$25.00
GRANT	12	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
GREENBRIER	13	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$1.00
		17	\$1.00
		18	\$1.00
HAMPSHIRE	14	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
HANCOCK	15	1	\$25.00
		2	\$1.00
		3	\$25.00
		4	\$25.00
		5	\$1.00
		6	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO.#	DISTRICT#	TY2017 \$/AC
HARDY	16	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
HARRISON	17	1	\$90.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$90.00
		6	\$1.00
		7	\$90.00
		8	\$1.00
		9	\$90.00
		10	\$1.00
		11	\$90.00
		12	\$90.00
		13	\$1.00
		14	\$90.00
		15	\$90.00
		16	\$1.00
		17	\$1.00
		18	\$90.00
		19	\$1.00
		20	\$90.00
		21	\$1.00
JACKSON	18	1	\$40.00
		2	\$40.00
		3	\$1.00
		4	\$40.00
		5	\$1.00
		6	\$40.00
		7	\$40.00
JEFFERSON	19	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
KANAWHA	20	1	\$30.00
		2	\$1.00
		3	\$30.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$30.00
		16	\$30.00
		17	\$1.00
		18	\$1.00
		19	\$30.00
		20	\$1.00
		21	\$1.00
		22	\$1.00
		23	\$30.00
		24	\$30.00
		25	\$30.00
		26	\$1.00
		27	\$1.00
		28	\$30.00
		29	\$1.00
		30	\$1.00
		31	\$1.00
LEWIS	21	1	\$35.00
		2	\$35.00
		3	\$35.00
		4	\$35.00
		5	\$1.00
		6	\$35.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
LINCOLN	22	1	\$25.00
		2	\$25.00
		3	\$1.00
		4	\$25.00
		5	\$25.00
		6	\$25.00
		7	\$25.00
		8	\$25.00
		9	\$25.00
		10	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
LOGAN	23	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$15.00
		9	\$1.00
MARION	24	1	\$1.00
		2	\$90.00
		3	\$1.00
		4	\$7.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$90.00
		10	\$1.00
		11	\$90.00
		12	\$90.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$90.00
		17	\$1.00
		18	\$90.00
		19	\$90.00
		20	\$1.00
		21	\$1.00
		22	\$1.00
MARSHALL	25	1	\$1.00
		2	\$1.00
		3	\$100.00
		4	\$100.00
		5	\$100.00
		6	\$1.00
		7	\$100.00
		8	\$1.00
		9	\$100.00
		10	\$1.00
		11	\$1.00
		12	\$100.00
		13	\$100.00
		14	\$100.00
		15	\$100.00
		16	\$1.00

OIL & GAS RESERVE RATES FOR TY. 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
MASON	25	1	\$1.00
		2	\$25.00
		3	\$25.00
		4	\$25.00
		5	\$25.00
		6	\$25.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$25.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$25.00
		15	\$25.00
		16	\$25.00
		17	\$25.00
MCDOWELL	27	1	\$20.00
		2	\$1.00
		3	\$20.00
		4	\$20.00
		5	\$1.00
		6	\$20.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$20.00
		12	\$1.00
		13	\$20.00
		14	\$1.00
		15	\$1.00
		16	\$1.00
		17	\$1.00
MERCER	28	1	\$1.00
		2	\$15.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$15.00
		7	\$1.00
		8	\$1.00
		9	\$15.00
		10	\$1.00
		11	\$15.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
MINERAL	29	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
MINGO	30	1	\$1.00
		2	\$1.00
		3	\$20.00
		4	\$20.00
		5	\$20.00
		6	\$20.00
		7	\$20.00
		8	\$1.00
		9	\$20.00
		10	\$20.00
		11	\$20.00
		12	\$1.00
MONONGALIA	31	1	\$30.00
		2	\$1.00
		3	\$30.00
		4	\$30.00
		5	\$30.00
		6	\$1.00
		7	\$30.00
		8	\$30.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$1.00
		17	\$1.00
		18	\$30.00
		19	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
MONROE	32	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
MORGAN	33	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
NICHOLAS	34	1	\$1.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$1.00
		6	\$1.00
		7	\$15.00
		8	\$1.00
		9	\$1.00
OHIO	35	1	\$1.00
		2	\$1.00
		3	\$100.00
		4	\$100.00
		5	\$1.00
		6	\$100.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
PENDLETON	36	1	\$1.00
		2	\$10.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$10.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO.#	DISTRICT #	TY2017 \$/AC
PLEASANTS	37	1	\$45.00
		2	\$45.00
		3	\$45.00
		4	\$45.00
		5	\$45.00
		6	\$1.00
		7	\$45.00
		8	\$45.00
POCAHONTAS	36	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
PRESION	09	1	\$30.00
		2	\$30.00
		3	\$30.00
		4	\$30.00
		5	\$30.00
		6	\$30.00
		7	\$1.00
		8	\$30.00
		9	\$1.00
		10	\$30.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$1.00
		17	\$1.00
		18	\$1.00
		19	\$1.00
		20	\$1.00
PUTNAM	40	1	\$25.00
		2	\$25.00
		3	\$1.00
		4	\$25.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$25.00
		9	\$1.00
		10	\$25.00
		11	\$25.00
		12	\$25.00
		13	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AG
RALEIGH	41	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$1.00
		5	\$20.00
		6	\$1.00
		7	\$20.00
		8	\$20.00
		9	\$20.00
		10	\$1.00
		11	\$20.00
		12	\$20.00
RANDOLPH	42	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$20.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$20.00
		11	\$20.00
		12	\$1.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$20.00
		17	\$1.00
		18	\$1.00
RITCHIE	43	1	\$70.00
		2	\$1.00
		3	\$70.00
		4	\$1.00
		5	\$70.00
		6	\$1.00
		7	\$70.00
		8	\$1.00
		9	\$1.00
		10	\$70.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
ROANE	44	1	\$35.00
		2	\$35.00
		3	\$35.00
		4	\$35.00
		5	\$1.00
		6	\$35.00
		7	\$35.00
		8	\$1.00
SUMMERS	45	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$10.00
		6	\$1.00
		7	\$1.00
TAYLOR	46	1	\$1.00
		2	\$1.00
		3	\$90.00
		4	\$90.00
		5	\$90.00
		6	\$90.00
		7	\$90.00
TUCKER	47	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$1.00
		5	\$20.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$20.00
		10	\$1.00
		11	\$20.00
		12	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AO
TYLER	48	1	\$90.00
		2	\$90.00
		3	\$1.00
		4	\$90.00
		5	\$90.00
		6	\$90.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$90.00
UPSHUR	49	1	\$70.00
		2	\$70.00
		3	\$1.00
		4	\$70.00
		5	\$70.00
		6	\$70.00
		7	\$70.00
WAYNE	50	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$20.00
		9	\$20.00
		10	\$20.00
		11	\$1.00
		12	\$20.00
WEBSTER	51	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$1.00

OIL & GAS RESERVE RATES FOR TY 2017			
COUNTY	CO #	DISTRICT #	TY2017 \$/AC
WETZEL	52	1	\$90.00
		2	\$90.00
		3	\$90.00
		4	\$90.00
		5	\$90.00
		6	\$1.00
		7	\$1.00
		8	\$90.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$80.00
		13	\$1.00
WIRT	53	1	\$35.00
		2	\$35.00
		3	\$35.00
		4	\$1.00
		5	\$35.00
		6	\$35.00
		7	\$35.00
		8	\$35.00
WOOD	54	1	\$40.00
		2	\$40.00
		3	\$40.00
		4	\$40.00
		5	\$1.00
		6	\$40.00
		7	\$40.00
		8	\$40.00
		9	\$40.00
		10	\$1.00
		11	\$40.00
		12	\$40.00
		13	\$1.00
		14	\$1.00
WYOMING	55	1	\$20.00
		2	\$20.00
		3	\$20.00
		4	\$20.00
		5	\$20.00
		6	\$1.00
		7	\$20.00
		8	\$1.00
		9	\$1.00
		10	\$20.00

**MANAGED TIMBER
PROPERTY ANALYSIS**

Tax Year 2017

June 30, 2016
Mark W. Matkovich
State Tax Commissioner
Department of Revenue

MANAGED TIMBERLAND APPRAISAL RATES **TAX YEAR 2017**

(based on market 2011-2015)

Rates Per Acre

Class II Parcels

	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
Region 1	\$205	\$140	\$50
Region 2	\$200	\$140	\$50
Region 3	\$265	\$175	\$50
Region 4	\$270	\$185	\$55
Region 5	\$205	\$140	\$50

Class III/IV Parcels

	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
Region 1	\$225	\$150	\$75
Region 2	\$225	\$150	\$75
Region 3	\$240	\$155	\$75
Region 4	\$245	\$165	\$75
Region 5	\$225	\$150	\$75

Region 1 =	Brooke, Cabell, Hancock, Jackson, Marshall, Mason, Ohio, Pleasants, Putnam, Tyler, Wetzel, and Wood Counties
Region 2 =	Braxton, Calhoun, Clay, Doddridge, Gilmer, Harrison, Lewis, Marion, Monongalia, Ritchie, Roane, Taylor, and Wirt Counties
Region 3 =	Barbour, Greenbrier, Monroe, Nicholas, Pendleton, Pocahontas, Preston, Randolph, Tucker, Upshur, and Webster Counties
Region 4 =	Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral and Morgan Counties
Region 5 =	Boone, Fayette, Kanawha, Lincoln, Logan, McDowell, Mercer, Mingo, Raleigh, Summers, Wayne, and Wyoming Counties

Harvest Volumes per Acre

<u>Harvest Interval</u> <u>Grades</u>	<u>35 yrs.</u>	<u>45 yrs.</u>	<u>55 yrs.</u>	<u>80 yrs.</u>	<u>Total</u>
1 - Site Index 75 or more.	4.6 cords 1.5 Mbf	- -	2.6 cords 4.4 Mbf	3.3 cords 8.6 Mbf	10.5 cords 14.5 Mbf
2 - Site Index 65-75	3.3 cords 1.0 Mbf	- -	7.0 cords 3.2 Mbf	4.6 cords 5.5 Mbf	14.9 cords 9.7 Mbf
3 - Site Index less than 65.	- -	3.1 cords 0.8 Mbf	- -	15.4 cords 3.7 Mbf	18.5 cords 4.5 Mbf

Managed Timberland Statistics

Estimation of Required Rate of Return: Class II Rates

A. Safe Rate of Return (5 Year T-Bill Rate)

Year	Rate	W/A %	W/A Rate
2015	1.5292	26.67%	0.4076
2014	1.6410	33.33%	0.5468
2013	1.1725	13.33%	0.1563
2012	0.7608	6.67%	0.0507
2011	1.5225	20.00%	0.3045

1.466 %

B. Nonliquidity Rate

(12 Month T-Bills vs. 3 Month T-Bills)

Year	Rate	W/A %	W/A Rate
2015	0.2863	33.33%	0.0894
2014	0.0883	26.67%	0.0235
2013	0.0733	20.00%	0.0147
2012	0.1292	13.33%	0.0172
2011	0.1817	6.67%	0.0121

0.182 %

C. Risk Rate (30 yr T-bills vs 5 yr T-bills)

Year	Rate	W/A %	W/A Rate
2015	1.3117	13.33%	0.1748
2014	1.6982	26.67%	0.4532
2013	2.2758	20.00%	0.4562
2012	2.1606	33.33%	0.7199
2011	2.3863	6.67%	0.1593

1.962 %

D. Management Factor of 0.5%

0.500 %

E. Property Tax Component

(50% of Class II Rate)

Year	Rate	W/A %	W/A Rate
2015	0.714	33.33%	0.2380
2014	0.714	26.67%	0.1904
2013	0.708	20.00%	0.1416
2012	0.714	13.33%	0.0952
2011	0.708	6.67%	0.0472

0.712 %

F. Inflation Rate

(Bureau of Labor Statistics)

Year	Rate	W/A %	W/A Rate
2015	0.730	33.33%	0.2433
2014	0.760	26.67%	0.2027
2013	1.500	20.00%	0.3000
2012	1.700	13.33%	0.2266
2011	3.000	6.67%	0.2001

(1.173) %

TOTAL REQUIRED RATE OF RETURN (REAL)

3.625 %

LESS: PROPERTY TAX COMPONENT

(0.712)

TOTAL DISCOUNT COMPONENT

2.913 %

Stumpage Prices:

	<u>Sawtimber</u>	<u>Pulpwood</u>
Stumpage Price Adjustment Factor	0.00%	1.85%

		1.0000	1.0000	1.0000	1.0000
<u>SAWTIMBER</u>	Current	\$/MBF at age	\$/MBF at age	\$/MBF at age	\$/MBF at age
Region	\$/MBF	35	45	55	60
Region 1	181.34	181.34	181.34	181.34	181.34
Region 2	172.92	172.92	172.92	172.92	172.92
Region 3	239.28	239.28	239.28	239.28	239.28
Region 4	235.49	235.49	235.49	235.49	235.49
Region 5	190.59	190.59	190.59	190.59	190.59

		1.8995	2.2816	2.7407	4.3339
<u>PULPWOOD</u>		\$/cd at age	\$/cd at age	\$/cd at age	\$/cd at age
Region	\$/Cord	35	45	55	60
Region 1	8.54	18.23	19.49	23.41	37.02
Region 2	6.78	12.79	15.38	18.45	29.18
Region 3	5.13	9.75	11.71	14.07	22.24
Region 4	8.10	16.39	18.49	22.21	35.12
Region 5	5.77	10.98	13.16	16.81	25.00

Management Costs:

Region	\$/acre (1)
1	3.17
2	3.17
3	3.17
4	3.17
5	3.17
State	

Tax Rates:

Effective Federal Income Tax Rate	35.00%
Effective WV State Income Tax Rate (6.5% * (1-.35))	4.23%
Effective WV Severance Tax Rate (1.5% * (1-.35))	0.98%

Yield (Volumes) (80 year rotation)

Timberland	Productivity Grade	Site Index	Yield - MBF	Yield - Cords
Grade I	75 or more		14.8	10.5
Grade II	65-74		9.7	14.8
Grade III	less than 65		4.5	18.5

Managed Timberland Statistics

Estimation of Required Rate of Return: Class III & IV Blended Rates

A. Safe Rate of Return (5-Year T-Bill Rate)

Year	Rate	W/A %	W/A Rate
2015	1.5292	26.67%	0.4078
2014	1.6410	33.33%	0.5489
2013	1.1725	13.33%	0.1563
2012	0.7608	6.67%	0.0507
2011	1.6225	20.00%	0.3045

1.466 %

B. Nonliquidity Rate

(12 Month T-Bills vs. 3 Month T-Bills)

Year	Rate	W/A %	W/A Rate
2015	0.2883	33.33%	0.0994
2014	0.0883	26.67%	0.0235
2013	0.0733	20.00%	0.0147
2012	0.1292	13.33%	0.0172
2011	0.1817	6.67%	0.0121

0.157 %

C. Risk Rate (30-yr T-bills vs. 5-yr T-bills)

Year	Rate	W/A %	W/A Rate
2015	1.3417	13.33%	0.1748
2014	1.6892	26.67%	0.4532
2013	2.2758	20.00%	0.4562
2012	2.1600	33.33%	0.7199
2011	2.3883	6.67%	0.1593

1.962 %

D. Management Factor of 0.5%

0.500 %

E. Property Tax Component

(60% of Blended III&IV Rates)

Year	Rate	W/A %	W/A Rate
2015	1.314	33.33%	0.4380
2014	1.314	26.67%	0.3504
2013	1.314	20.00%	0.2628
2012	1.328	13.33%	0.1760
2011	1.328	6.67%	0.0884

1.318 %

F. Inflation Rate

(Bureau of Labor Statistics)

Year	Rate	W/A %	W/A Rate
2015	0.730	33.33%	0.2433
2014	0.760	26.67%	0.2027
2013	1.500	20.00%	0.3000
2012	1.700	13.33%	0.2260
2011	3.000	6.67%	0.2001

(1.173) %

TOTAL REQUIRED RATE OF RETURN (REAL)

4.229 %

LESS: PROPERTY TAX COMPONENT

(1.318) %

TOTAL DISCOUNT COMPONENT

2.913 %

Stumpage Prices:

	<u>Sawtimber</u>	<u>Pulpwood</u>
Stumpage Price Adjustment Factor:	0.00%	1.85%

		1.0000	1.0000	1.0000	1.0000
		\$/MBF at age	\$/MBF at age	\$/MBF at age	\$/MBF at age
SAWTIMBER	Current \$/MBF	35'	45'	55'	60'
Region 1	181.34	181.34	181.34	181.34	181.34
Region 2	172.92	172.92	172.92	172.92	172.92
Region 3	239.28	239.28	239.28	239.28	239.28
Region 4	235.49	235.49	235.49	235.49	235.49
Region 5	190.59	190.59	190.59	190.59	190.59

		1.8995	2.2815	2.7407	4.3338
		\$/cfd at age	\$/cfd at age	\$/cfd at age	\$/cfd at age
PULPWOOD:	Region \$/Cord	35'	45'	55'	60'
Region 1	8.54	10.23	10.49	23.41	37.02
Region 2	6.73	12.70	16.36	18.46	20.18
Region 3	5.13	9.75	11.74	14.07	22.24
Region 4	8.10	15.39	18.49	22.21	36.12
Region 5	5.77	10.96	13.15	15.81	25.00

Management Costs:

Region	\$/acre (1)
1	3.17
2	3.17
3	3.17
4	3.17
5	3.17
State:	

Tax Rates:

Effective Federal Income Tax Rate:	35.00%
Effective WV State Income Tax Rate: $(8.5\% * (1 - 35\%))$	4.23%
Effective WV Severance Tax Rate: $(1.5\% * (1 - 35\%))$	0.98%

Yield (Volumes) (80 year rotation)

Timberland Productivity Grades	Site Index	Yield - MBF	Yield - Cords
Grade I	75 or more	14.5	10.5
Grade II	65-74	9.7	14.9
Grade III	less than 65	4.5	18.5

West Virginia Wgt/Avg Managed Timberland Stumpage Prices

REGION 1 - Sawtimber

Year	Volume	\$/MBF	WIA%	\$/MBF
2016	12,661.80	102.85	33.33%	64.28
2014	12,162.06	176.34	26.67%	47.02
2013	19,017.77	177.45	20.00%	35.48
2012	12,828.16	186.56	13.33%	24.67
2011	11,196.24	144.39	6.67%	9.66
	67,665.02			181.34

REGION 1 - Pulpwood

Year	Volume	\$/CORD	WIA%	\$/CORD
2016	7,218.80	15.08	33.33%	5.01
2014	464.40	5.40	26.67%	1.44
2013	8,102.20	2.98	20.00%	0.58
2012	46,387.00	6.42	13.33%	0.86
2011	48.10	9.67	6.67%	0.64
	59,220.60			8.54

REGION 2 - Sawtimber

Year	Volume	\$/MBF	WIA%	\$/MBF
2016	26,487.68	176.28	33.33%	58.42
2014	22,001.80	182.47	26.67%	48.88
2013	25,898.88	177.79	20.00%	35.66
2012	25,640.98	149.01	13.33%	19.87
2011	12,639.41	156.26	6.67%	10.42
	112,669.68			172.92

REGION 2 - Pulpwood

Year	Volume	\$/CORD	WIA%	\$/CORD
2016	42,863.30	5.97	33.33%	1.99
2014	2,168.10	5.04	26.67%	1.34
2013	119,278.40	12.83	20.00%	2.57
2012	22,647.40	2.88	13.33%	0.98
2011	5,235.20	6.78	6.67%	0.45
	182,193.40			6.73

REGION 3 - Sawtimber

Year	Volume	\$/MBF	WIA%	\$/MBF
2016	135,987.80	207.12	33.33%	69.04
2014	91,467.44	280.82	26.67%	74.81
2013	161,387.70	275.63	20.00%	55.13
2012	111,920.60	201.57	13.33%	26.88
2011	102,210.30	201.45	6.67%	19.43
	602,971.84			239.28

REGION 3 - Pulpwood

Year	Volume	\$/CORD	WIA%	\$/CORD
2016	104,906.30	3.85	33.33%	1.28
2014	170,738.30	3.57	26.67%	0.95
2013	153,197.40	7.78	20.00%	1.55
2012	183,132.60	6.39	13.33%	0.85
2011	159,040.70	7.34	6.67%	0.49
	851,014.30			5.13

REGION 4 - Sawtimber

Year	Volume	\$/MBF	W/A%	\$/MBF
2015	6,644.42	223.42	33.33%	74.47
2014	5,020.90	303.89	26.67%	91.04
2013	12,820.20	211.47	20.00%	42.29
2012	4,808.73	198.47	13.33%	25.80
2011	15,517.51	178.40	6.67%	11.89
	44,811.76			235.49

REGION 4 - Pulpwood

Year	Volume	\$/CORD	W/A%	\$/CORD
2015	6,137.40	7.22	33.33%	2.41
2014	7,765.20	8.16	26.67%	2.18
2013	15,488.60	8.32	20.00%	1.68
2012	7,302.20	9.61	13.33%	1.28
2011	21,074.10	8.64	6.67%	0.58
	67,847.50			8.10

REGION 5 - Sawtimber

Year	Volume	\$/MBF	W/A%	\$/MBF
2015	37,714.40	160.15	33.33%	53.38
2014	21,661.40	265.95	26.67%	70.92
2013	31,859.00	198.20	20.00%	39.64
2012	10,887.05	138.63	13.33%	18.48
2011	24,780.43	122.43	6.67%	8.18
	126,862.28			190.59

REGION 5 - Pulpwood

Year	Volume	\$/CORD	W/A%	\$/CORD
2015	2,889.50	4.05	33.33%	1.35
2014	10,191.40	6.19	26.67%	1.65
2013	16,292.60	7.13	20.00%	1.43
2012	8,296.30	6.93	13.33%	0.92
2011	6,432.30	8.26	6.67%	0.42
	48,102.10			5.77

COAL PROPERTIES ANALYSIS

Tax Year 2017

June 30, 2016
Mark W. Matkovich
State Tax Commissioner
Department of Revenue

COAL CAPITALIZATION RATE

Capitalization Rate Analysis and Results

In developing a capitalization rate for determining specific income-producing properties, consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands-of-Investment and Summation Technique approaches are utilized in establishing discount rates for active coal. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 11.

Safe Rate	90 day Treasury Bills		Safe Rate
January - December	2015		0.053%
January - December	2014		0.033%
January - December	2013		0.056%

Risk Rate	Interest differential between Loan Rate and 90 day Treasury Bills		Debt Risk Rate
Loan Rate			
2015	5.28%		5.207%
2014	5.25%		5.217%
2013	5.25%		5.192%
	Prime plus 2%		

Equity	Differential between Equity Rates and 90 day Treasury Bills		Equity Risk Rate
Equity Rate			
2015	(14.75%/(1-.30))-0.055		21.038%
2014	(15.50%/(1-.30))-0.033		22.110%
2013	(13.25%/(1-.30))-0.056		18.671%
	Value Line Investment Survey Analysis		

Composite Risk Rate	Loan and Equity Rates Weighted by industry estimated capital structure		Composite Risk
Equity Rate	Debt Rate		
2015	13.675%	1.822%	15.497%
2014	15.477%	1.565%	17.042%
2013	11.322%	2.077%	13.399%
Notes: Debt/Equity Ratio	Debt 35%	Equity 65%	

Non-Liquidity Rate: Interest differential between a 90-day Treasury Bill and a 1-year Treasury Bill which reflects a reasonable time necessary to sell active property.

			1yr T Bill	90 day T Bill	Non-Liquidity Rate
January - December	2015		0.322%	0.053%	0.269%
January - December	2014		0.121%	0.033%	0.088%
January - December	2013		0.132%	0.056%	0.074%

Management Rate: Charges for the management of investment portfolios
Fixed Rate (by Rule) 0.500%

Inflation Rate			
January - December	2015		0.730%
January - December	2014		0.760%
January - December	2013		1.500%

Capitalization Rate: Since the valuation of active coal property is predicated on a three year production average, the capitalization rate is considered in a similar manner.

	2015	2014	2013
Inflation Rate	0.730%	0.760%	1.500%
Safe Rate	0.053%	0.033%	0.056%
Composite Risk Rate	15.497%	17.042%	13.399%
Non-Liquidity Rate	0.269%	0.088%	0.074%
Management Rate	0.500%	0.500%	0.500%
Total:	15.588%	16.803%	12.551%
Three-Yr Average:	15.00%		
		Rounded to:	15.00%

CAPITALIZATION RATE - 15.00%			
MULTIPLIERS	%		%
1YR	0.933	9YR	5.117
2YR	1.743	10YR	5.382
3YR	2.448	11YR	5.613
4YR	3.082	12YR	5.813
5YR	3.595	13YR	5.987
6YR	4.058	14YR	6.139
7YR	4.462	15YR	6.271
8YR	4.812		

COAL

Price and Royalty Rate Analysis

The development of royalty rates for the various categories of mines and markets involves information collection and review from a variety of sources. Coal lease rates have been derived from transaction information provided by county producers, assessors, tax auditors, and by individual lessors/lessees involved in the specific transaction. The prices for mined coal, as per 110 CSR-11, have been calculated from information provided by the WV Public Service Commission and U.S. Energy Information Administration concerning power plant fuel purchases. Prices provided by producers as part of tax filing and from data obtained from market summaries are included for comparison. Because a large portion of the data used in this analysis is, by law, considered confidential, only a summary of the results are published.

* WVPSO Fuel Purchases for 2015 was not available at the time of the publication.

COAL SALE PRICES 6Y2015 FOR FY2017 APPLICATION

GRAND SUMMARY ALL SOURCES 2015	STEAM SPOT	STEAM TERM	MET
PSC	na	na	
FERC	\$51.39	\$60.81	
Active Return Summary		\$66.52 55.0 MM tons	\$87.65 9.1 MM Tons
Coal Market Publication (Platts)		\$46.09 GAPP (12/1, 07) Barge	
		\$48.65 PGH (13/3) Rail	
			\$87.54 Low Vol FCC

STATE STEAM PRICE (SPOT Market)	\$58.88 FERC & PSC 3 YR AVE
STATE MET. PRICE	\$87.65 Active Return, 1 YR

2015 WVPSO Tons Reported in millions	Spot Sales	Term Sales	Total
na	na	na	

COAL FY2017 ROYALTY RATES	2015 1YR		2014 2YR		2013 3YR		2012 4YR		2011 5YR	
	%S	%D	%S	%D	%S	%D	%S	%D	%S	%D
TOTAL RECORDS	447	452	1,447	906	1,354	506	1,908	2,758	1,878	2,241
SUM OF PERCENT	2804.86	2327.95	81869.07	1,695.25	8,087.34	3,343.93	11,881.66	14,883.03	8,824.28	11,181.05
STRAIGHT AVERAGE	6.60	5.15	6.13	5.18	5.97	5.53	6.23	5.32	5.32	4.98
MEDIAN	6.00	5.00	6.00	5.00	6.00	5.00	6.00	5.13	5.00	5.00
WEIGHTED AVERAGE (by Mine Prod)	6.80	6.10	6.34	5.49	6.50	5.84	6.45	6.28	6.27	5.72
TENTATIVE RATE DEEP (%)	6.69									
TENTATIVE RATE SURFACE (%)	6.61									
ROYALTY RATE CALCULATIONS										
Steam Coal Deep Mine	\$58.88	per ton X	5.69%				\$3.36	per ton		
Metallurgical Coal Deep Mine	\$87.65	per ton X	5.69%				\$4.98	per ton		
Steam Coal Surface Mine	\$58.88	per ton X	6.81%				\$3.89	per ton		
Metallurgical Coal Surface Mine	\$87.65	per ton X	6.81%				\$5.73	per ton		

Explanation of Reserve Coal Valuation

The RCVM consists of a computer model, which utilizes a database consisting of coal beds and characteristics, property locations, mine locations, sales, transportation, etc., for the entire state. An extensive algorithm calculates in-place tonnage, expected time of mining and present value for all the mineable coal on every property.

There are, therefore, no set "rates" available on reserve coal under the Rule. The RCVM values on each property will not be available until all data has been entered, after October 15 of each year. Please refer to the State Register, Legislative Rules, Title 110, Series II for details of the process.

Title 110, Series 11
Valuation of Active and Reserve Coal Property for Ad Valorem Property Tax Purposes

The above Legislative Rule was modified during the 2008 Legislative Session requiring biennial (every other year) updating of the geostatistical basis for several valuation factors used in the Reserve Coal Valuation Model. To satisfy that requirement, maps and data files concerning the Market Interest Factor, the Market Mineability Factor, the Use Conflict Factor and the Environmental Factor have been revised for Tax Year 2015. Preliminary research has been conducted to determine the effects of the factors on coal valuation. The results are as follows:

Market Interest Factor

This is the relationship between transactions (sales, leases, prospects, permit applications, etc.) and mining as it relates to properties and locations. Trans_Ct is the number of transactions counted within the radius.

Radius = 5 miles

If Trans_Ct >= 20 Then TransFactor = 20

If Trans_Ct < 20 And Trans_Ct >= 10 Then TransFactor = 40

Else TransFactor = 80

Market Mineability Factor

This is the relationship between property location and mining, through time. Determining feature is count of mines within the radius.

Radius = 2.5 miles

Surface Mines: 6 mines

Deep Mines: 4 mines

Boom Mines: 4 mines

Historic Mines: 0 mines

Current Mines: 0 mines

To assign MineFactor

If Count > 0 Then MineFactor = 20

If Count > 0 And (Count > 0 Or Boom > 0) Then MineFactor = 40

Else MineFactor = 80

Use Conflict Factor

This is the relationship between oil & gas well drilling and mining as it relates to property location. Well density is in wells per square mile.

WellDensity < 3 Then WellFactor = 0

WellDensity >= 3 And WellDensity < 10 Then WellFactor = 20

WellDensity >= 10 And WellDensity < 20 Then WellFactor = 40

WellDensity >= 20 Then WellFactor = 80

Environmental Factor

This is the relationship of known environmental hazards and impediments to the likelihood of mining occurring at this location. The rates are compiled from maps and represent densities of problems mapped.

EnvRate <= 20 or Null Then EnvFactor = 0

EnvRate > 20 and EnvRate <= 40 Then EnvFactor = 20

EnvRate > 40 and EnvRate <= 80 Then EnvFactor = 40

EnvRate >= 80 Then EnvFactor = 80

**OTHER MINED MINERAL
PROPERTY ANALYSIS**

Tax Year 2017

June 30, 2016
Mark W. Matkovich
State Tax Commissioner
Department of Revenue

OTHER MINED MINERALS CAPITALIZATION RATE

Capitalization Rate Analysis and Results:

In developing a capitalization rate for use in valuing specific income-producing properties, consideration is given to the three approaches generally employed in estimating a discount rate. As a matter of practicality, the Bands-of-Investment and Summation Technique approaches are utilized in establishing discount rates for active coal. Data for analysis has been derived in accordance with current Legislative Rule Title 110, Series 1K.

<u>Safe Rate:</u>	90 day Treasury Bills		<u>Safe Rate:</u>
January:	December:	2015:	0.058%
January:	December:	2014:	0.033%
January:	December:	2013:	0.068%

<u>Risk Rate: Interest Differential between Loan Rate and 90 day Treasury Bills</u>		
<u>Loan Rate:</u>		<u>Debt Risk Rate:</u>
2015:	5.29%	5.207%
2014:	5.25%	5.217%
2013:	5.26%	5.192%
	*Prime plus 2%	

Equity:	Differential between Equity Rates and 90-day Treasury Bills	
Equity Rate:		Equity Risk Rate
2015:	$(11.75\% / (1 - .50)) - 0.058$	16.733%
2013:	$(11.75\% / (1 - .50)) - 0.033$	16.753%
2012:	$(11.75\% / (1 - .50)) - 0.058$	16.728%
** Value Line Investment Survey Analysis:		

Composite Risk Rate:		Loan and Equity Rates weighted by industry estimated capital structure.	
	Equity Rate	Debt Rate	Composite Risk
2015:	10.040%	2.083%	12.123%
2014:	10.052%	2.087%	12.139%
2013:	10.037%	2.077%	12.114%
Note: Debt/Equity Ratio:		Debt 40%	Equity 60%

Non-Liquidity Rate: Interest Differential between 90 day Treasury Bills and a 1-year Treasury Bill which reflects a reasonable time necessary to sell active property.

			<u>1yr. T. Bill</u>	<u>90-day T. Bill</u>	<u>Non-Liquidity Rate</u>
January:	December:	2015	0.322%	0.053%	0.268%
January:	December:	2014	0.121%	0.033%	0.088%
January:	December:	2013	0.132%	0.058%	0.074%

Management Rate: Charges for the management of investment portfolios.
Fixed Rate (by Rule): 0.500%

Inflation Rate:	January:	December:	2015:
	January:	December:	2014:
	January:	December:	2013:
			0.730%
			0.760%
			1.500%

Property Tax Rate:	Sixty percent (60%) of State average Class III property tax rate.
January:	December: 2015: 60% of 2.190% = 1.314%
January:	December: 2014: 60% of 2.180% = 1.314%
January:	December: 2013: 60% of 2.190% = 1.314%

Capitalization Rate: Since the valuation of other mined mineral property is predicated on a three year production average, the capitalization rate is considered in a similar manner.

	2013:	2014:	2015:
Inflation Rate:	0.730%	0.760%	1.500%
Safe Rate:	0.053%	0.033%	0.058%
Composite Risk Rate:	12.123%	12.139%	12.114%
Non-Liquidity Rate:	0.289%	0.088%	0.074%
Management Rate:	0.500%	0.500%	0.500%
Property Tax Rate:	1.314%	1.314%	1.314%
Total:	13.528%	13.314%	12.560%

Three Year Average: 13.134% Rounded to: 13.10%

CAPITALIZATION RATE ~ 13.10%

MULTIPLIER:	%	%
1YR	0.540	9YR 5.437
2YR	1.772	10YR 5.748
3YR	2.507	11YR 6.022
4YR	3.157	12YR 6.266
5YR	3.731	13YR 6.480
6YR	4.240	14YR 6.668
7YR	4.688	15YR 6.837
8YR	5.086	

OTHER MINED MINERALS

ROYALTY RATE SURVEY

The determination of royalty rates for other mined minerals within the state of West Virginia is dependent upon the availability of leasehold information. Since this information is limited, the Department has chosen to review data for the most recent thirty year period. A summary only of this review is shown below in order to protect the confidentiality of parties involved.

RESOURCE	DATA SOURCES	AVERAGE ROYALTY	MEDIAN ROYALTY	TY2017 RATE
LIMESTONE	13	\$0.23	\$0.20	\$0.22
SANDSTONE	8	\$0.31	\$0.25	\$0.30
CLAY/SHALE	34	\$0.12	\$0.10	\$0.11
SAND/GRAVEL	10	\$0.35	\$0.40	\$0.40
SALT BRINE	1	N/A	N/A	\$0.10

RESERVE VALUES

	number of sales	\$/AC
LIMESTONE	5	\$3,000.00
SANDSTONE	8	\$2,300.00
CLAY/SHALE	16	\$850.00
SAND/GRAVEL	6	\$4,000.00
SALT	2	\$1,140.00

TAB 9

August 1, 2016

West Virginia State Tax Department
Property Tax Division
Attention: Jeff Amburgey
P.O. Box 2386
Charleston, WV 25326-2386

Dear Mr. Amburgey,

The Independent Oil and Gas Association of West Virginia Inc. (IOGAWV) is hereby filing comments to the tentative natural resource property valuation variables for 2017 Tax Year.

West Virginia Code §11-3-1(a), as amended, states that: "All property, except public service businesses assessed pursuant to article six of this chapter, shall be assessed annually as of July 1 at sixty percent of its true and actual value, that is to say, at the price for which the property would sell if voluntarily offered for sale by the owner thereof, upon the terms as the property, the value of which is sought to be ascertained, is usually sold, and not the price which might be realized if the property were sold at a forced sale."

The Tax Commissioner has chosen the use of an "income approach" as the most appropriate method for the valuation of oil and natural gas properties as set forth in the Tax Commissioner's "Administrative Notice 2016-02, State Tax Commissioner's Statement Concerning Primary Reliance on the Income Approach to Value for Appraisals of Producing and Reserve Coal, Producing Oil and Gas, and Producing Other Mined Minerals Pursuant to §§ 110 CSR, 11-4, 1J-4 and 1K-4". Administrative Notice 2016-02, states, in part, that, "The income approach to value is based upon the assumption that a property is worth the future income, discounted to present worth, that it will generate for a prospective buyer".

The use of the "income approach" to valuation requires the appraiser to consider realistic operating expenses to determine net cash flow as the basis for calculating "true and actual value". The method of calculating operating expenses for oil and gas wells as set forth in the State Tax Department's proposed valuation variables for Tax Year 2017 would result in grossly understated expenses, and further resulting in appraised values which would greatly exceed "true and actual value".

WV CSR §110-1J-4.1 of the Legislative Rule of the State Tax Department regarding Valuation of Producing and Reserve Oil and Natural Gas for Ad Valorem Property Tax Purposes, states that the value of oil and/or natural gas producing property shall be determined through the process of applying a yield capitalization model to the net receipts (gross receipts less royalties paid less operating expenses) for the working interest. Rule 4.1 would seem to require the deduction of actual operating expenses from the gross receipts. Rule 4.3 in that section does state that the Tax Commissioner shall every 5 years, determine the average industry operating expenses per well which will be deducted from working interest gross receipts.

The Tax Commissioner, in the last 10 years, has conducted surveys regarding operating expenses of oil wells in 2007, 2009, 2013, and 2014. In addition, in 2013, a survey specifically for Marcellus wells was conducted and in 2014 a survey for Marcellus wells and horizontal wells other than Marcellus was conducted.

Although surveys have been used several times over the last 10 years, the State Tax Department continues its decades-old practice of basing annual operating expenses for conventional gas wells at

30% of gross revenues with a cap of \$6,000 and for oil wells at 35% with a cap of \$5,750. In the last 10 years natural gas and oil prices have been extremely volatile. That volatility resulted in the dramatic changes in allowable expenses under the current valuation procedures. Those allowable expenses are not reflective of actual operating expenses.

By way of demonstration, the following is a table of published index prices for Appalachian gas delivered to the two primary pipelines in West Virginia, Columbia Gas Transmission and Dominion Transmission, Inc., showing average annual gas prices and the allowable expense per mcf of produced gas utilizing the State Tax Department's proposed expense allowance:

Year	Columbia		Dominion *	
	Index \$/Mcf	Exp @ 30%	Index \$/Mcf	Exp @ 30%
2007	\$7.1242	\$2.1373	\$7.2200	\$2.1660
2008	\$9.3858	\$2.8158	\$9.5292	\$2.8588
2009	\$4.1758	\$1.2528	\$4.2692	\$1.2808
2010	\$4.5267	\$1.3580	\$4.5867	\$1.3760
2011	\$4.1367	\$1.2410	\$4.1983	\$1.2595
2012	\$2.7933	\$0.8380	\$2.7850	\$0.8355
2013	\$3.6525	\$1.0958	\$2.6867	\$0.8660
2014	\$4.3650	\$1.3095	\$2.7383	\$0.8215
2015	\$2.5533	\$0.7660	\$0.8842	\$0.2653

(* Note: The Dominion index prices for 2013, 2014 and 2015 reflect deductions for "Gateway Firm", which most producers delivering to Dominion are obligated to pay.)

In years of peak prices (2007, 2008) excessive expenses were not a factor; due to the \$5,000 expense cap. However, as prices have cratered, the 30% methodology does not reflect actual operating expenses. Whenever expenses are understated, appraised and assessed values are overstated, resulting in unfair property tax assessments.

To further demonstrate that the 30% expensed methodology is not appropriate, suppose a producer has two very similar wells that each produce 10 mcf/day, with one well delivering gas to Columbia and the other well delivering gas to Dominion, subject to Gateway transportation expenses. Using the proposed methodology, allowable expenses would be determined as follows:

	Columbia	Dominion
Mcf/Day	10	10
Days/Year	365	365
Annual Mcf	3650	3650
Gas Price - 2015	<u>\$2.5533</u>	<u>\$0.8842</u>
Total Revenues	\$9,319.67	\$3,227.21
30% Expenses	\$2,795.90	\$968.16

It is simply impossible to operate any oil and gas well in West Virginia for \$368 per year (or \$80 per month). It would be extremely difficult to operate a well for \$2,795.90 per year (\$233 per month) unless the well produced no fluid and required very minimal maintenance. These expenses do not reflect real costs, and, therefore, cannot be used to determine "true and actual value" as required under West Virginia Code §11-3-1(e). The proposed methodology is flawed, and will result in inconsistent and incorrect calculations of expenses, and inaccurate appraised values.

Costs to operators for such things as wages, health insurance, expenses, gasoline for trucks, etc., have dramatically increased since 2007. However, in 2007 and 2008 a well making 10 mcf/day would have

generated in excess of \$25,000 in gross revenues, and allowable expenses (\$7,500) would have been capped at \$5,000 for ad valorem tax calculation purposes. However, as demonstrated above, allowable expenses for that same well for Tax Year 2017 would be just \$2,795, if the well delivered gas on the Columbia system, and just \$968.16 if the well was connected to Dominion and subject to Gateway charges. This is not realistic.

The appropriate mechanism to provide for accurate deductions of well operating expenses is to allow the submission of actual operating expenses as Rule 4.1 seems to require. Rule 4.3 provides for a mechanism (an average based on survey results) that the Tax Department could use to estimate if and when a producer does not provide actual operating expenses in a suitable format to be used in a yield capitalization model.

The State Tax Department has issued Administrative Notices regarding the valuation variable of oil and gas operating expenses in 2014, 2015, and 2016. In 2014, the notice stated that if a producer's ordinary expenses exceeded the stated maximums, then the Tax Department would accept and review documentation on wells for the previous three years provided by the producer as long as submitted on or before August 1st. The 2015 Administrative Notice repeated that option for producer submission of three years of actual operating expenses. However, the 2016 Notice does not even mention that option and IOGAWV has been informed that the Tax Department will not consider or review actual expenses submitted due to lack of personnel to have that accomplished. Entering data from Producer/Operator returns into the State Tax Department's evaluation system is a significant task. It would appear that the average Producer/Operator return has at least 40 data items to enter. Some returns, with extensively fractured royalty ownership, have hundreds of data items (names, addresses, percentages, royalty revenue, etc.). Adding "operating expense" would add just one more data item (likely a four-digit integer), which would be insignificant when considered in the context of the entire data entry operation.

IOGAWV believes that the Tax Department is required by Rule 4.1 to deduct actual operating expenses if accurate verifiable data is provided by the producer. In the absence of such data, if expenses are to be based on a percentage of gross revenues, it would seem appropriate to have a "floor" on operating expenses, recognizing that many legitimate operating costs are not in any way related to gross revenues. To ensure the most accurate appraisal possible, IOGAWV requests the Tax Commissioner to only use actual expenses whenever possible and to only use estimated operating expenses when actuals are not timely submitted.

IOGAWV gathered some samples of well revenue and operating expenses and it showed that the only solution for non-conventional wells is to be able to submit actual operating costs for fair property tax valuation. The current formula at 20% of revenue limited to \$150,000 per year for operating costs does not fit for any non-conventional wells.

Based on the sample wells IOGAWV finds the following recommendations to be appropriate:

- Non-conventional wells be allowed to submit actual operating costs for proper valuation in all cases.
- Conventional wells with flush production be allowed to submit actual operating costs but that would have to be done for all flush production wells submitted in that year.
- Other conventional wells will be part of the normal valuation formula with operating costs at 30% and a maximum of \$5,000 for natural gas but be allowed a minimum in that formula of \$2,500 per year operating costs.
- The minimum value for property tax purposes for a well will be \$500 which is the value assessed for home use wells.

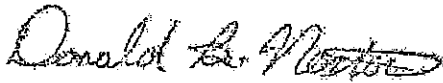
- Conventional Oil wells be allowed a minimum of \$7,500 per year operating costs and also be able to submit actual operating costs for flush production years.

The State Tax Department needs to recognize that during these times of historic low natural gas commodity prices (the lowest in history, when adjusted for inflation), many wells in the State will be operating at a loss until prices recover. Considering recent market conditions, it could be argued that such wells are a liability, not an income producing asset, and have no "true and actual value". Whenever it can be shown that actual allowable expenses exceed production revenues net of royalties, IOGAWV suggests that such wells should be valued at the Minimum Working Interest Appraisal Rate of \$500 (as stated in the 2017 valuation variables).

IOGAWV appreciates the opportunity to file comments on this important matter and looks forward to the response.

Respectfully,

IOGA OF WEST VIRGINIA



Donald B. Nestor, Member
Finance and Taxation Committee

SPILMAN THOMAS & BATTLE, LLC
ATTORNEYS AT LAW

Dale W. Steager
304.340.1692
e-mail: dsteager@spilmanlaw.com

July 29, 2016

RECEIVED

Via Hand Delivery

JUL 29 2016

West Virginia State Tax Department
Property Tax Division
Attention: Jeff Amburgey, Director, Property Tax Division
1124 Smith Street
Charleston, WV 25301

State Tax Department
Property Tax Division

Re: Tentative Natural Resource Property Valuation Variables for 2017 Tax Year

Dear Director Amburgey:

The West Virginia Oil and Natural Gas Association (WVONGA) appreciates the opportunity to comment on the Tentative Natural Resource Property Valuation Variables for the 2017 Tax Year dated June 30, 2016. Our comments are limited to the tentative variables affecting the oil and natural gas industry.

WVONGA is a trade association that serves West Virginia's extensive oil and gas industry. WVONGA members operate in virtually every county in West Virginia. Its members employ thousands of people across the state, having payrolls totaling hundreds of millions of dollars annually. Its members have a cumulative investment of nearly \$10 billion in West Virginia, own about 20,000 oil and gas wells, have more than 15,000 miles of pipeline crisscrossing the state, and provide oil and natural gas to roughly 300,000 West Virginia homes and businesses.

In response to the recently published variables, WVONGA surveyed its members as to their actual operating expenses incurred in West Virginia. Responses received cover 65% of the total gas production and approximately 11,000 of the over 40,000 active wells in West Virginia for the 2015 calendar year. WVONGA's primary concerns with the published variables relate to the Working Interest Expense Allowance and the Maximum Operating Expenses allowed for typically producing wells and horizontal Marcellus wells.

Based on a review of the State's published variables, these two variables have remained unchanged, with the exception of the introduction of Marcellus/Utica and Horizontal well categories, since before tax year 2010 (2008 calendar year production). Conversely, the price of natural gas has decreased 66% during that same time period which includes a 28% decline since 2012 when the Marcellus group was added to the 2013 tax year variables.

Spilman Center 300 Kanawha Boulevard East Post Office Box 273 Charleston, West Virginia 25321-0273
www.spilmanlaw.com 304.340.3800 304.340.5800 fax

West Virginia

North Carolina

Pennsylvania

Virginia

West Virginia State Tax Department
Property Tax Division
Attention Jeff Amburgey, Director, Property Tax Division
July 29, 2016
Page 2

While revenue has been declining for the industry's producers, operating expenses have not. By calculating an allowance for operating expense using the same variables as when gas was at a higher rate per MCF, the State is significantly understating actual operating expenses for the working interest portion of the tax calculation.

It also appears the State's maximum operating expense allowance fails to acknowledge all expenses needed to get natural gas to a salable state. Allowable expenses should not only include lease operating expenses, but also gathering, compression, processing, and transportation charges. The processing charges are especially prevalent for the Marcellus wells where wet gas needs to be processed before it can be sold for distribution, and are incurred, on average, at 17% of revenue. Compression can be upwards of 30% of revenue, depending on whether a company is vertically integrated or otherwise owns its own system.

The data collected from WVONGA members related to operating expense as a percentage of revenue, and average expenditure per well has been aggregated below for your consideration:

Well Type	State Working Interest Expense Allowance	Average WVONGA Participant Operating Expense as % of Revenue
Marcellus/Utica, Horizontal Wells	20%	38%
Typical Producing Wells	30%	41%

Well Type	Allowed Expense	WVONGA Average of Actual Expense
Marcellus/Utica, Horizontal Wells	\$150,000	\$720,000

In the State's calculation, the expense allowance and the maximum work together to determine the appropriate operating expense allowance to use in the discounted cash flow calculation. Unless the State addresses both of these variables, the values assigned to the gas wells for the 2017 tax year will be grossly overstated.

Additionally, WVONGA requests that the State revise the operating expense calculation for wells where both oil and gas are produced. When wells reach the maximum operating expense allowances for oil and gas, the State applies a weighted average approach to the maximum operating expense allowance.

West Virginia State Tax Department
Property Tax Division
Attention Jeff Amburgey, Director, Property Tax Division
July 29, 2016
Page 3

As seen in the example provided below, a well that produces oil and gas at a level that reaches the maximum allowances is actually afforded a lesser operating expense allowance than a well that just produces gas at the same level. We suggest that, instead of a weighted average maximum, the State use a combined maximum in these cases.

Example:

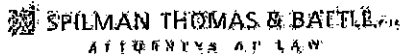
	Gas WI Revenue	Oil WI Revenue	State OpEx Allowance Prior to Maximums	State OpEx Maximum
Gas Only Well	900,000	0	180,000	150,000
Gas & Oil Well	900,000	100,000	275,000	135,575

As the above industry data indicates, the maximum allowances as a percentage of working interest revenue and fixed dollar caps being employed by the State in its valuations is inappropriate as neither adequately reflects actual expenses being incurred by the industry to get produced gas to its point of sale. Accordingly, we believe that both should be eliminated for purposes of property tax valuation.

WVONGA recognizes that under Article X, §1 of the Constitution, all property not exempt from taxation is subject to ad valorem property taxation that must be equal and uniform through the State and no one species of property from which a tax may be collected may be taxed higher than any other species of property of equal value, except as otherwise provided in the Constitution. This means that oil and natural gas property may not be subject to ad valorem property taxation policies and formulas that discriminate against, or in favor of, oil and natural gas real and personal property.

WVONGA is disappointed that the expense percentages and caps included in the 2017 tentative variable for oil and natural gas continue to be low when compared with actual expenses incurred by well operators. WVONGA realizes that the expense percentages and caps are determined by the State Tax Department from surveys of well operators conducted every five years and from other sources not known to WVONGA.

The last survey was made in 2014, and the next survey is scheduled to be made in 2019. This suggests that the survey made prior to the 2014 survey was made in 2009. The attached



West Virginia State Tax Department
Property Tax Division
Attention Jeff Amburgey, Director, Property Tax Division
July 29, 2016
Page 4

spreadsheet shows that the expense percentages and caps on expenses have, except in the case of horizontal wells, remained the same since tax year 2009. Beginning with tax year 2014, Marcellus and Utica horizontal wells have been treated differently than vertically drilled wells. However, even these numbers are unrealistically low.

WVONGA and its members believe that the allowable expenses and the caps on expenses set forth in the tentative 2017 natural resource variables for oil and natural gas properties are unrealistically low and, unless appropriately adjusted, will result in oil and gas wells being over valued for 2017 ad valorem property taxation in violation of the "Equal and Uniform" taxation clause in Article X, § 1 of the Constitution.

We appreciate the opportunity to comment on the tentative variables. This response is intended to work with the State toward a more reasonable mass appraisal of gas producing properties for property tax purposes, but should not deny Taxpayers from being afforded an opportunity to further work with the State based on their individual facts and circumstances. We respectfully request the right to seasonably supplement the response with other information that may be of benefit to the Department and would be happy to discuss the issues with you at your convenience. Please do not hesitate to contact me if you have any questions about these comments or wish to discuss them.

Respectfully submitted,

Spilman Thomas and Battle, PLLC

Dale W. Steager
Counsel for WVONGA

DWS/ljr
Enclosure

cc: Kevin Ellis, Chairman of WVONGA's Board of Directors

8678994 (19087.1)

OIL AND GAS VARIABLES FOR PROPERTY TAX PURPOSE

	Tentative 2017	Final 2016	Final 2015	Final 2014	Final 2013	Final 2012	Final 2011	Final 2010	Final 2009
CAPITALIZATION RATE	16.00%	15.30%	14.80%	14.70%	14.70%	15.90%	18.00%	16.70%	15.10%
GAS									
- % Working Interest Expenses For Typical Producing Well	= 30%		30%	30%	30%	30%	30%	30%	30%
- Maximum Operating Expenses	= \$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
- Coal Bed Methane, Vertical Wells Expenses	= \$9,000	\$9,000	\$9,000	\$8,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
OIL									
- % Working Interest Expenses for Typical Producing Well	= 35%	35%	35%	35%	35%	35%	35%	35%	35%
- Maximum Operating Expenses	= \$5,750	\$5,750	\$5,750	\$5,750	\$5,750	\$5,750	\$5,750	\$5,750	\$5,750
- Maximum Enhanced Operating Expenses	= \$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000
MARCELLUS/JUTICA									
- % Working Interest Expenses for Vertical Producing Well	= 30%	30%	30%	30%	N/A	N/A	N/A	N/A	N/A
- Maximum Operating Expenses	= \$30,000	\$30,000	\$30,000	\$30,000	\$30,000	N/A	N/A	N/A	N/A
- % Working Interest Expenses for Horizontal Producing Well	= 20%	20%	20%	20%	N/A	N/A	N/A	N/A	N/A
- Maximum Operating Expenses	= \$150,000	\$150,000	\$150,000	\$150,000	N/A	N/A	N/A	N/A	N/A
HORIZONTAL WELLS (OTHER THAN MARCELLUS/JUTICA AND COAL BED METHANE)									
- % Working Interest Expenses for Horizontal Producing Well	= 30%	30%	30%	N/A	N/A	N/A	N/A	N/A	N/A
- Maximum Operating Expenses	= \$20,000	\$20,000	\$20,000	N/A	N/A	N/A	N/A	N/A	N/A
- Minimum Working Interest Appraisal	= \$500 per well	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
Flat Rate Royalty Multiplier	= 5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75	5.75
Home Use Only Wells; Appraised at	\$500 per well	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500/well
Industrial Use Only Wells; Appraised at	MCF usage X \$2.62/MCF X \$4.99/MCF BBL usage X \$48.66/BBL X \$93.26	X \$2.62/MCF X \$4.99/MCF X \$48.66/BBL X \$93.26	X \$3.73/MCF X \$3.95/MCF X \$97.58 X \$94.89	X \$2.86/MCF X \$4.16/MCF X \$84.05 X \$79.48	X \$3.95/MCF X \$4.16/MCF X \$94.89 X \$79.48	X \$3.95/MCF X \$4.16/MCF X \$94.89 X \$79.48	X \$3.77/MCF X \$8.07/MCF X \$61.65/BBL X \$98.57/BBL	X \$8.07/MCF X \$8.07/MCF X \$98.57/BBL X \$72.32/BBL	X \$6.38/MCF X \$72.32/BBL
* (Also includes Department of Environmental Protection reported wells.)									
Non-Filer Valuations									
Working Interest	= 150% of previous year's appraisal	Same	Same	Same	Same	Same	Same	Same	Same
Royalty Interest	= 80% of previous year's appraisal	Same	Same	Same	Same	Same	Same	Same	Same

Attachment to WVONGA letter of July 2, 2016

TAB 10



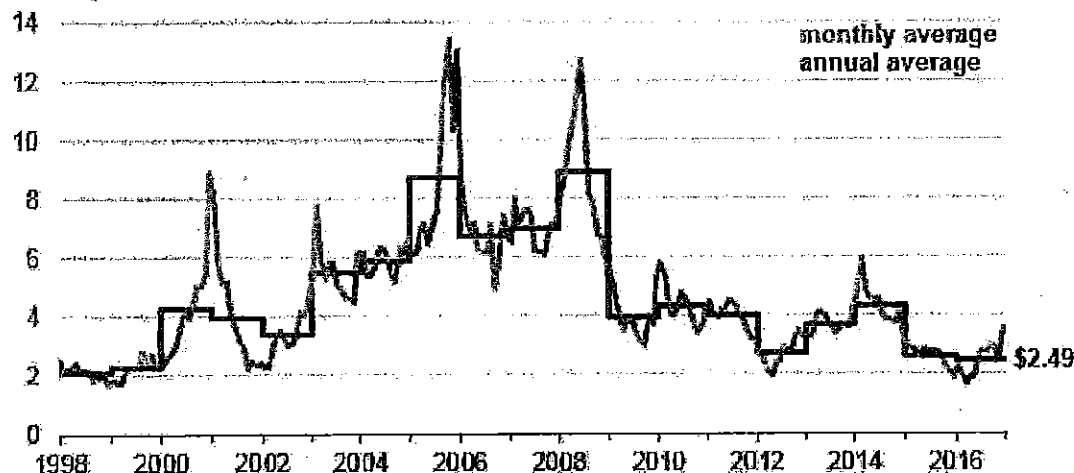
U.S. Energy Information
Administration

Today in Energy

January 13, 2017

Natural gas prices in 2016 were the lowest in nearly 20 years

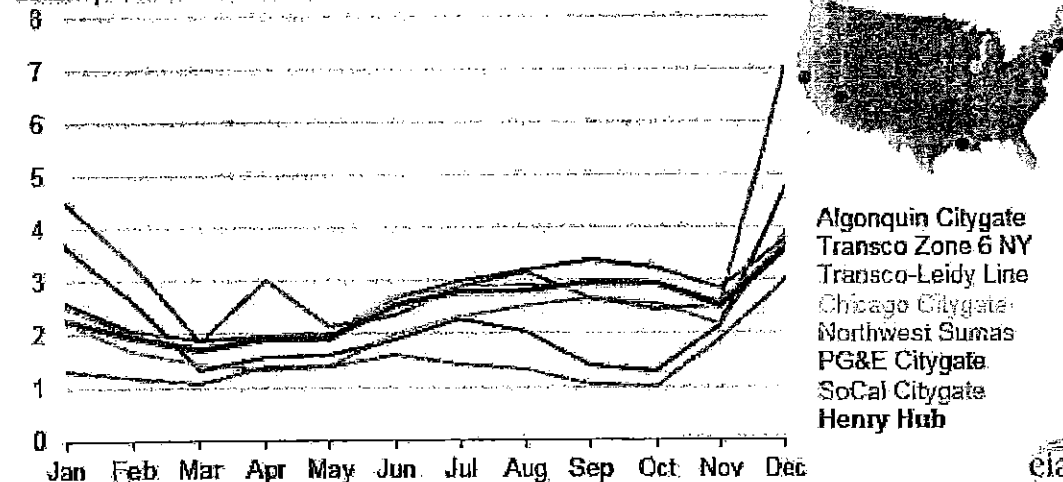
Monthly and annual average natural gas spot price at Henry Hub (1997–2016)
dollars per million British thermal unit



Source: U.S. Energy Information Administration, based on Natural Gas Intelligence

Natural gas spot prices in 2016 averaged \$2.49 per million British thermal units (MMBtu) at the national benchmark Henry Hub, the lowest annual average price since 1999. The monthly average price fell below \$2.00/MMBtu from February through May, but later increased, ending the year at an average of \$3.58/MMBtu in December. Warmer-than-normal temperatures for most of the year and changing natural gas demand were the main drivers of natural gas prices in 2016.

Monthly average natural gas spot prices at key trading hubs, 2016
dollars per million British thermal units



Source: U.S. Energy Information Administration, based on Natural Gas Intelligence

Natural gas prices in U.S. regional markets were volatile in 2016. In the first quarter of the year, much warmer-than-normal winter temperatures and large amounts of natural gas in storage caused prices to decrease. Prices began to gradually increase in late spring, with increased natural gas demand from multiple sectors and decreasing natural gas production, before sharply increasing at the end of the year with the onset of cold temperatures in mid-December.

1/13/2017

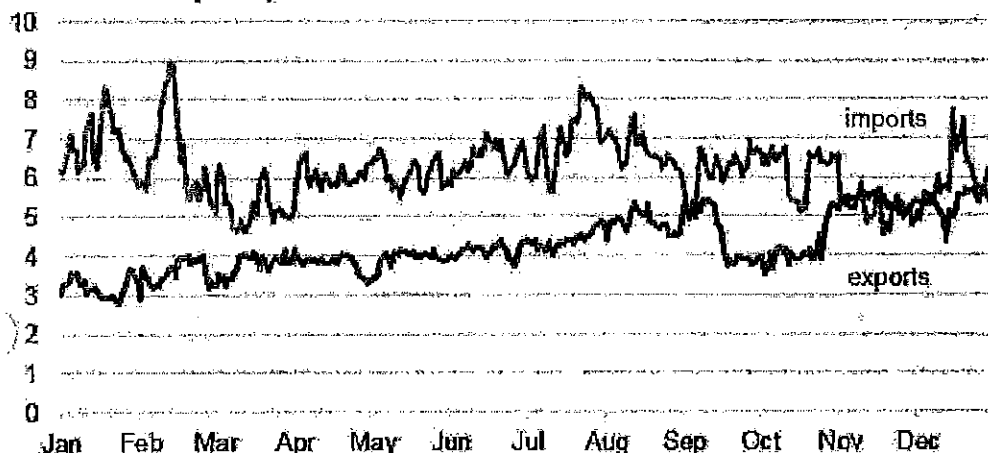
Natural gas prices in 2016 were the lowest in nearly 20 years. Today in Energy: U.S. Energy Information Administration (EIA)

In the Northeast, where natural gas pipeline capacity is often constrained, cold weather can cause monthly average prices at hubs such as Algonquin Citygate (near Boston) and Transco Zone 6 NY (New York) to spike. Although this happened in 2016, new pipeline capacity and increased natural gas production in the Appalachian Basin, along with warmer-than-usual winter weather, contributed to price spikes that were considerably lower than in previous years.

Because of warm weather, natural gas consumption in the residential and commercial sectors in 2016 declined 7% and 4%, respectively, from the previous year. Warmer winter temperatures also limited natural gas storage withdrawals. As a result, natural gas storage inventories were at or near record levels throughout most of the year and reached a record 4,047 billion cubic feet (Bcf) for the week ending November 11.

Despite the overall decrease in residential and commercial demand in 2016, late-year increases in these sectors and increased demand from other sources contributed to increasing natural gas prices later in the year. In 2016, natural gas surpassed coal as the primary fuel used for power generation in the United States, supplying an estimated 34% of the nation's electricity, compared with 30% for coal. Electric power generation in 2016 used an average of 27.6 billion cubic feet per day (Bcf/d), exceeding the previous high of 26.3 Bcf/d in 2015.

U.S. net imports and exports of natural gas in 2016 billion cubic feet per day



Source: U.S. Energy Information Administration, based on Point Logic Energy

In November 2016, the United States became a net exporter of natural gas on a monthly basis for the first time since 1957, based on data from PointLogic. This was supported by infrastructure improvements—including natural gas pipelines and facilities for liquefying natural gas for export—that enabled suppliers to meet increasing demand from foreign markets.

U.S. pipeline exports to Mexico continued to grow throughout 2016, making up 87% of all U.S. natural gas exports. In May 2016, the Sabine Pass liquefaction terminal began commercial operations in the Gulf Coast to export liquefied natural gas (LNG). The expansion of the Panama Canal in July 2016 further aided export ability by reducing time and transportation costs to key markets in Asia and the west coast of South America.

Despite growing demand in the electric power sector and export markets, low demand for space heating and low prices resulted in lower natural gas production in 2016. Based on preliminary data, EIA estimates natural gas marketed production to average 77.5 Bcf/d in 2016, 1.3 Bcf/d less than in 2015 and the first annual decline since 2005. The number of active natural gas drill rigs continued a multi-year decline, reaching 132 by the end of 2016, down 19% from the year-ago count. However, production has not fallen as sharply as the number of active rigs, as producers have continued to make gains in drilling efficiency.

Principal contributors: Kristen Tsai, Jason Upchurch

TAB 11

Company	Class	Production	% of Hqs. Prod.	Total	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341	3342	3343	3344	3345

YEAR	Horizontal Well Indicator	Horizontal	2014
COUNTY		(All)	

[illegible]

YEAR	2015	Horizontal Well Indicator	COUNTY
		Horton	(AUT)

Business	Number of Employees	Oil Production in 2011 (MMbbls)	Share of Production	Year Became Public	Age Dep. Per Well
ANTERO RESOURCES CORPORATION	188	121.23	1.00%	2008	39.0
ANTERO PRODUCTION COMPANY, LLC	258	121.23	1.00%	2008	39.0
ANCON PRODUCTION COMPANY	323	59,377.024			
NOBLE ENERGY, INC.	426	40,064.155			
ASCENT RESOURCES-MARCELLUS, LLC	111	40,577.150			
STONE ENERGY CORPORATION	43	33,673.198			
JAY-BEE OIL & GAS	46	31,242.821			
CNE GAS COMPANY, LLC	77	24,289.643			
GASTAR PRODUCTION, INC.	31	23,576.863			
TRANS ENERGY, INC.	49	70,270.884			
MOUNTAINEER RESOURCES, LLC	21	11,651.863			
NORTHEAST NATURAL ENERGY LLC	38	13,634.101			
STATOIL U.S. ONSHORE PROPERTIES, INC.	27	13,947.782			
XTO ENERGY, INC.	11	4,879.349			
PROSPECTOR ENERGY, LLC	11	2,076.171			
TRIANA ENERGY, LLC	5	2,046.451			
ANTERO RESOURCES KUSTOKEO, LLC	13	1,400.068			
CINISOL GAS COMPANY	11	1,339.387			
VALCO OIL & GAS CO. INC.	54	150.195			
HARD ROCK EXPLORATION, LLC	13	594.833			
CHEM VERDE API ALABAMA, LLC	7	44,031.1			
MOUNTAIN OIL & GAS, INC.	3	404.158			
PERKINS-RESOURCES (USA) CORPORATION	5	763.781			
TENACLY RESOURCES, LLC	18	181.109			
RECO RESOURCES (PA), LLC	11	166.199			
NYTS EXPLORATION COMPANY, LLC	11	107.343			
CHLOCT OIL & GAS CORPORATION	49	61.405			
CORNHAMM EXPLOR, LLC	1	30.482			
WILSON ENERGY CORPORATION	1	20.118			
BUCKLEY OIL PRODUCTION CO.	2	3.167			
HORIZON ENERGY CORPORATION	2	3.025			
RESERVE OIL & GAS, INC.	2	3.025			
DOMINION TRANSMISSION, INC.	1	3.114			
DAUST OIL & GAS CO., INC.	1	7.821			
BASE PETROLEUM, INC.	3	3.663			
STANWATER ENERGY CORPORATION	2	4.654			
QUALITY NATURAL GAS, LLC	1	3.136			
YAMCO ENERGY, INC.	1	3.181			
ABARTO OIL & GAS COMPANY	1	2.724			
TEAM ENERGY CORP.	1	2.079			
UPSTREAM PETROLEUM, INC.	2	3.936			
ENERVEST OPERATING, LLC	2	3.893			
MC ENERGY, LLC	1	3.431			
MC OIL & GAS, INC.	1	3.431			
POWERBRED RESOURCES, INC.	1	2.8			
ECO RESOURCES (NM), INC.	1	2.8			
INC. OPERATING COMPANY, LLC	1	2.8			
CON RUN LTD LIABILITY COMPANY	1	2.8			

DEP Production Report
2015 Calendar Year Production
Horizontal Wells Only

Horizontal Well Indicator	Horizontal				
Row Labels	Count of API	Sum of GAS PRODUCTION N_TOTAL	Average Production per Well	% of Marcellus Production	Average Operating Expenses Per Well
ANTERO RESOURCES CORPORATION	455	439,307,636	965,500	39%	817,000
EQT PRODUCTION COMPANY	618	191,040,463	309,127		
SWN PRODUCTION COMPANY, LLC	289	116,258,698	402,279		
NOBLE ENERGY, INC.	122	99,157,024	812,762		
ASCENT RESOURCES-MARCELLUS, LLC	46	42,064,105	914,437		
STONE ENERGY CORPORATION	111	40,967,150	369,073		
JAY-BEE OIL & GAS	43	33,671,598	783,060		
CNX GAS COMPANY LLC	46	32,040,011	696,522	3%	630,000
GASTAR EXPLORATION INC.	77	24,299,343	315,576		
TRANS ENERGY, INC.	32	23,578,855	736,839		
MOUNTAINEER KEYSTONE, LLC	43	20,270,988	471,418		
NORTHEAST NATURAL ENERGY LLC	21	18,451,803	878,657		
STATOIL USA-ONSHORE PROPERTIES, INC.	22	13,614,301	618,832		
XTO ENERGY, INC.	36	10,941,782	303,938		
CHEVRON APPALACHIA, LLC	27	6,879,589	254,800		
PDC MOUNTAINEER LLC	4	5,796,218	1,449,055		
TRIANA ENERGY, LLC	11	4,916,632	446,967		
ANTERO RESOURCES BLUESTONE LLC	5	2,946,851	589,370		
CONSOL GAS COMPANY	18	2,235,221	124,179		
WACO OIL & GAS CO INC	11	1,400,009	127,274		
HARD ROCK EXPLORATION, INC.	54	1,139,587	21,103		
CHESAPEAKE APPALACHIA, L.L.C.	19	690,935	36,365		
MOUNTAIN V OIL & GAS, INC.	7	544,833	77,833		
ENERPLUS RESOURCES (USA) CORPORATION	3	443,012	147,671		
TENASKA RESOURCES, LLC	5	404,158	80,832		
ENERGY CORPORATION OF AMERICA	18	265,735	14,763		
EXCO RESOURCES (PA), LLC	12	181,504	15,125		
NYTIS EXPLORATION COMPANY, LLC	11	166,199	15,109		
CABOT OIL & GAS CORPORATION	18	107,645	5,980		
CUNNINGHAM ENERGY, LLC	6	61,405	10,234		
TUG FORK DEVELOPMENT	1	30,482	30,482		
NORTHSTAR ENERGY CORPORATION	2	24,123	12,062		
BUCKEYE OIL PRODUCING CO	4	18,228	4,557		
HORIZON ENERGY CORPORATION	2	9,167	4,584		
RESERVE OIL & GAS, INC.	2	8,812	4,406		
DOMINION TRANSMISSION INC	1	8,518	8,518		
DURST OIL & GAS CO., INC.	1	7,821	7,821		
BASE PETROLEUM, INC.	1	5,365	5,365		
STALNAKER ENERGY CORPORATION	2	4,634	2,317		
QUALITY NATURAL GAS, LLC	1	3,138	3,138		
TAPO ENERGY, INC.	1	2,983	2,983		
ABARTA OIL & GAS COMPANY	1	2,714	2,714		
TERM ENERGY CORP.	1	2,070	2,070		
LIPPIZAN PETROLEUM, INC.	2	1,936	968		
ENERVEST OPERATING L. L. C.	6	1,893	316		
HG ENERGY, LLC	2	1,391	696		
P & C OIL & GAS, INC.	1	1,251	1,251		
YOST HERITAGE INC.	1	98	98		
DIVERSIFIED RESOURCES, INC.	1	25	25		
EXCO RESOURCES (WV), INC.	3	-	-		
BRC OPERATING COMPANY, LLC	8	-	-		
COW RUN LTO LIABILITY COMPANY	1	-	-		
Grand Total	2,235	1,133,972,939			

TAB

12

Antero Resources Corporation
Tax Year 7/1/16 - 6/30/17
Doddridge County, WV

Account #	# of Wells	API#	API# for Second Well (if applicable)	Property Description	State Appraised Value	Taxpayer Value	Value the Taxpayer believes to be in Controversy	Value if Operating Expense Cap-Removed
0120146079	1	017-06079		VALENTINE UNIT 2H (10206)	1,411,961	906,787	505,174	1,354,949
0120146083	1	017-06083		VALENTINE UNIT 1H (10205)	1,327,079	855,652	471,427	1,282,416
0120156169	1	017-06169		SEABORN UNIT 1H (10293.1)	2,182,892	1,262,302	920,590	1,864,421
0120156170	1	017-06170		SEABORN UNIT 2H (10330.1)	1,991,118	1,175,689	814,479	1,733,985
0120156187	1	017-06187		DOTSON UNIT 1H (10309.1)	1,542,896	989,237	543,659	1,503,209
0120156188	1	017-06188		CENTRAL UNIT 2H (10311.1)	1,637,368	1,040,158	597,217	1,564,028
0120156189	1	017-06189		DOTSON UNIT 2H (10310.1)	1,528,896	990,033	538,863	1,488,893
0120166141	1	017-06141		PIGGOT UNIT 2H (10305.1)	4,710,731	2,342,361	2,368,370	3,485,893
0120166142	1	017-06142		PIGGOT UNIT 1H (10304.1)	3,302,319	1,745,804	1,556,915	2,590,844
0120166190	1	017-06190		ARHOUSE UNIT 1H (10329.1)	2,822,531	1,531,721	1,290,810	2,250,649
0120166191	1	017-06191		ARHOUSE UNIT 2H (10387.1)	2,155,834	1,245,884	909,950	1,830,625
0120166192	1	017-06192		CALLIE UNIT 1H (10385.1)	2,061,728	1,218,090	843,638	1,815,562
0120166193	1	017-06193		CALLIE UNIT 2H (10386.1)	3,154,854	2,686,458	1,468,398	2,513,318
0120166201	1	017-06201		SHALE UNIT 1H (10364.1)	3,938,790	2,613,019	1,905,771	3,010,363
0120166206	1	017-06206		VIOLET UNIT 1H (10331.1)	3,892,405	1,989,308	1,903,097	2,939,607
0120166207	1	017-06207		SHALE UNIT 2H (10379.1)	3,372,468	1,781,938	1,590,533	2,665,846
0120166211	1	017-06211		NERO UNIT 1H (10746.1)	2,409,038	1,358,158	1,090,880	2,003,612
0120166212	1	017-06212		NERO UNIT 2H (10747.1)	4,582,422	2,300,351	2,281,971	3,472,035
0120166213	1	017-06213		VONDA UNIT 1H (10745.1)	5,222,949	2,560,865	2,662,084	3,826,046
0120166266	1	017-06266		MARKS UNIT 1H (10340.1)	5,784,778	2,789,353	2,985,425	4,196,624
0120166272	1	017-06272		MASH UNIT 1H (10341.1)	2,632,129	1,469,655	1,162,474	2,206,794
0120166275	1	017-06275		MASH UNIT 2H (10355.1)	3,777,348	1,942,718	1,834,632	2,871,512
0120166289	1	017-06289		PIKE UNIT 1H (10436.1)	2,988,811	1,613,527	1,375,284	2,397,610
0120166292	1	017-06292		LEGGETT UNIT 1H (10394.1)	2,824,398	1,533,868	1,290,530	2,257,066
0120166293	1	017-06293		LEGGETT UNIT 2H (10435.1)	2,376,734	1,349,314	1,027,420	2,001,309
0120166294	1	017-06294		PIKE UNIT 2H (10437.1)	2,890,723	1,573,010	1,317,713	2,341,473
0120166359	1	017-06359		SHEARER UNIT 2H (10501.1)	3,372,930	1,790,353	1,582,577	2,704,115
0120166402	1	017-06402		TWYFORD UNIT 1H (10502.1)	5,303,696	2,602,108	2,701,588	3,921,693
0120166430	1	017-06430		ZELLERBAEK UNIT 1H (10503)	3,193,301	1,712,235	1,481,066	2,580,069
0120166431	1	017-06431		AMANDA UNIT 1H (10504.1)	3,054,578	1,656,674	1,397,904	2,505,601
0120166432	1	017-06432		AMANDA UNIT 2H (10505.1)	3,541,254	1,861,359	1,679,895	2,810,410
0120176370	1	017-06370		WASHINGTON UNIT 1H (10562)	1,366,828	895,723	471,105	1,340,146
0120176371	1	017-06371		WASHINGTON UNIT 2H (10520)	2,035,956	1,187,576	848,380	1,787,069
0120176415	1	017-06415		HUDKINS UNIT 1H (10591.1)	1,196,677	791,281	405,396	1,196,677
0120176436	1	017-06436		HUDKINS UNIT 2H (10592.1)	1,298,587	857,889	440,668	1,298,587
0120176464	1	017-06464		HAYDEN UNIT 1H (10564.1)	1,867,970	1,114,246	753,074	1,874,380
0120176465	1	017-06465		HAYDEN UNIT 2H (10563.1)	1,601,542	997,922	603,620	1,485,514
0120176474	1	017-06474		LEASON RUN UNIT 1H (10569)	1,644,019	1,021,871	622,148	1,543,241
0120176475	1	017-06475		LEASON RUN UNIT 2H (10590)	1,333,850	880,648	453,202	1,333,850
0120176561	1	017-06561		BIERSTADT UNIT 1H (10558)	1,885,669	1,116,469	769,200	1,664,932
0120176562	1	017-06562		BIERSTADT UNIT 2H (10559)	1,567,301	980,009	587,292	1,462,317
0120176563	1	017-06563		STELLA UNIT 1H (10556.1)	1,835,842	1,090,893	744,949	1,617,535
0120176564	1	017-06564		STELLA UNIT 2H (10557.1)	1,526,435	959,484	566,951	1,425,978
0120176619	1	017-06619		JAMES UNIT 2H (11407.1)	1,515,126	954,488	560,638	1,418,298
0120176620	1	017-06620		JAMES UNIT 3H (11406.1)	1,169,097	785,347	383,750	1,169,098
0120176621	1	017-06621		MCGEE UNIT 1H (10546.1)	1,170,132	793,407	378,725	1,170,132
0120176622	1	017-06622		MCGEE UNIT 2H (10549.1)	1,134,116	762,091	372,025	1,134,115
0320146080	2	017-06080	017-06086	NEELY UNIT 1H AND NEELY U	5,318,909	2,982,165	2,336,744	4,528,179
0320146085	2	017-06085		LEATHERMAN UNIT 2H (10204)	2,567,502	1,451,414	1,116,088	2,203,252
0320156084	1	017-06084		LEATHERMAN UNIT 1H (10203)	2,255,888	653,422	1,602,466	991,046
0320156128	1	017-06128		MOORE UNIT 1H (10259.1)	1,390,013	911,700	478,313	1,384,419
0320156129	1	017-06129		MOORE UNIT 2H (10260.1)	1,320,364	863,647	456,717	1,308,734
0320156163	1	017-06163		EMILY UNIT 2H (10283.1)	1,123,082	735,850	387,232	1,116,478
0320156166	1	017-06166		EMILY UNIT 1H (10282.1)	1,227,504	804,346	423,158	1,220,507
0320156194	1	017-06194		COSTLOW UNIT 1H (10339.1)	3,958,013	2,031,273	1,926,740	3,043,472
0320156204	1	017-06204		LANGFITT UNIT 2H (10750.1)	2,034,091	1,220,873	813,218	1,850,749
0320156205	1	017-06205		GASKINS UNIT 2H (10339.1)	3,233,949	1,730,236	1,503,713	2,609,559
0320156221	1	017-06221		LANGFITT UNIT 1H (10749.1)	2,296,362	848,124	448,238	1,285,408
0320156255	1	017-06255		CONNIE UNIT 1H (10336.1)	1,375,402	901,125	474,277	1,367,226
0320156256	1	017-06256		CONNIE UNIT 2H (10337.1)	1,412,532	925,483	487,059	1,404,091
0320156260	1	017-06260		GASKINS UNIT 1H (10368.1)	3,894,739	1,997,368	1,897,371	2,968,078
0320166202	1	017-06202		HOLDEN UNIT 1H (10748.1)	1,078,282	705,487	372,795	1,069,234
0320166203	1	017-06203		HOLDEN UNIT 2H (10332.1)	871,273	570,019	301,260	863,833
0320166220	1	017-06220		COSTLOW UNIT 2H (10343.1)	6,323,954	3,026,095	3,297,859	4,544,643
0320166246	1	017-06246		BUFF UNIT 1H (10400.1)	6,489,791	3,098,956	3,397,835	4,660,025
0320166247	1	017-06247		DUFF UNIT 2H (10406.1)	7,299,372	3,435,841	3,863,529	5,174,271
0320166259	1	017-06259		MISHKA UNIT 1H (10405.1)	3,752,768	1,948,122	1,804,647	2,931,770
0320166262	1	017-06262		VANSCHOY UNIT 1H (10448.1)	1,763,091	1,101,975	661,116	1,669,983
0320166263	1	017-06263		MCCONNELL UNIT 2H (10446)	1,922,106	1,172,059	750,047	1,777,158
0320166264	1	017-06264		VANSCHOY UNIT 2H (10449.1)	1,342,247	877,908	464,339	1,330,288
0320166267	1	017-06267		KOCH UNIT 2H (10402.1)	3,185,489	1,714,104	1,471,985	2,598,374
0320166268	1	017-06268		MT SALEM REVIVAL UNIT 2H	1,993,882	1,175,087	760,795	1,786,291
0320166269	1	017-06269		MT SALEM REVIVAL UNIT 1H	2,655,080	1,487,699	1,167,381	2,254,959
0320166281	1	017-06281		GAVIN UNIT 1H (10371.1)	1,527,276	998,995	528,283	1,514,334

Antero Resources Corporation
Tax Year: 7/1/16 - 6/30/17
Doddridge County, WV

Account#	# of Wells	API#	API# for Second Well (if applicable)	Property Description	State Appraised Value	Taxpayer Value	Value the Taxpayer Believes to be in Controversy	Value of Operating Expense Cap. Removed
0320166301	1	017-06301		HEFLIN UNIT 2H (10389.1)	2,476,513	1,409,745	1,066,764	2,133,577
0320166302	1	017-06302		GAVIN UNIT 2H (10372.1)	1,066,596	697,919	568,677	1,057,849
0320166399	1	017-06399		HOSKINSON UNIT 1H (10452)	6,919,923	3,277,837	3,641,088	4,941,935
0320176218	1	017-06218		GAINS-KOCH UNIT 1H (11369)	1,257,499	824,208	433,291	1,257,500
0320176270	1	017-06270		MILO UNIT 1H (11349.1)	1,949,712	1,160,914	788,798	1,771,718
0320176274	1	017-06274		MISHKA UNIT 2H (10388.1)	2,777,919	1,507,770	1,270,149	2,291,860
0320176373	1	017-06373		ANNE UNIT 1H (10550.1)	1,818,195	1,101,655	716,541	1,674,942
0320176374	1	017-06374		ANNE UNIT 2H (10551.1)	1,995,809	1,172,146	823,063	1,768,703
0320176375	1	017-06375		HARDIN UNIT 1H (10552.1)	2,700,159	1,470,650	1,229,500	2,222,519
0320176395	1	017-06395		GAINS UNIT 1H (10445.1)	1,801,220	1,097,221	703,999	1,674,690
0320176397	1	017-06397		MCMILLAN UNIT 1H (10453.1)	2,469,360	1,378,159	1,091,201	2,095,688
0320176398	1	017-06398		MCMILLAN UNIT 2H (10454.1)	3,148,928	1,663,248	1,485,680	2,529,446
0320176400	1	017-06400		HOSKINSON UNIT 2H (10451)	2,721,876	1,483,729	1,238,151	2,253,973
0320176424	1	017-06424		ZIMKA UNIT 2H (10462.1)	1,329,859	869,996	460,863	1,329,859
0320176485	1	017-06485		MANSER UNIT 1H (10510.1)	872,861	570,405	302,456	872,861
0320176486	1	017-06486		MANSER UNIT 2H (10511.1)	912,417	596,256	316,161	912,417
0320176497	1	017-06497		MANSER UNIT 3H (10589.1)	913,637	597,066	316,571	913,637
0320176499	1	017-06499		DEANO UNIT 2H (10554.1)	1,862,129	1,118,797	743,332	1,697,026
0420156143	1	017-06143		WALTER UNIT 3H (10279.1)	1,486,723	951,408	535,315	1,446,888
0420156144	1	017-06144		FLOSSIE UNIT 2H (10303.1)	1,398,229	861,276	476,953	1,310,096
0420156158	1	017-06158		WALTER UNIT 1H (10283.1)	1,666,300	1,041,743	624,557	1,584,110
0420156162	1	017-06162		WALTER UNIT 2H (10294.1)	1,568,523	991,757	576,766	1,508,054
0420156164	1	017-06164		RUTH UNIT 1H (10292.1)	1,528,915	977,166	551,749	1,485,897
0420156180	1	017-06180		FLOSSIE UNIT 1H (10312.1)	1,611,698	1,014,464	597,234	1,549,111
0420166138	1	017-06138		FURBEY UNIT 2H (10350.1)	2,103,961	1,226,728	877,183	1,863,748
0420166139	1	017-06139		FURBEY UNIT 1H (10349.1)	2,585,040	1,428,953	1,156,085	2,171,048
0420166140	1	017-06140		CECELE UNIT 1H (10297.1)	1,639,436	1,027,566	611,870	1,560,991
0420166159	1	017-06159		ONEACRE UNIT 2H (10338.1)	3,976,444	1,986,834	1,989,610	3,021,150
0420166160	1	017-06160		COX UNIT 2H (10358.1)	1,221,808	781,397	440,411	1,187,957
0420166161	1	017-06161		COX UNIT 1H (10298.1)	1,055,213	670,915	384,298	1,019,972
0420166167	1	017-06167		BOWEN UNIT 2H (10352.1)	1,378,177	842,900	485,277	1,281,354
0420166181	1	017-06181		WELLING UNIT 1H (10491.1)	3,825,344	1,922,685	1,902,659	2,924,605
0420166182	1	017-06182		WHITE UNIT 1H (10490.1)	4,434,757	2,130,180	2,304,577	3,240,225
0420166189	1	017-06189		WELLING UNIT 2H (10348.1)	2,160,695	1,243,990	916,705	1,892,282
0420166210	1	017-06210		GAINER UNIT 1H (10757.1)	2,553,667	1,413,625	1,140,042	2,150,290
0420166219	1	017-06219		BOWEN UNIT 1H (10354.1)	1,831,815	1,100,072	731,743	1,672,878
0420166226	1	017-06226		GAINER UNIT 2H (10399.1)	3,070,848	1,630,630	1,440,218	2,480,381
0420166127	1	017-06227		GOLDEN UNIT 1H (10348.1)	3,777,962	1,905,731	1,872,231	2,898,824
0420166230	1	017-06230		GOLDEN UNIT 2H (10347.1)	2,861,104	1,537,538	1,323,566	2,338,761
0420166245	1	017-06245		IRONS UNIT 1H (10401.1)	3,801,726	1,933,369	1,868,357	2,940,889
0420166278	1	017-06278		BELTON UNIT 1H (10429.1)	3,465,156	1,774,875	1,690,280	2,699,686
0420166279	1	017-06279		CAROLE UNIT 1H (10382.1)	2,914,503	1,550,809	1,363,694	2,358,877
0420166280	1	017-06280		CAROLE UNIT 2H (10430.1)	3,025,163	1,587,906	1,437,257	2,415,301
0420166369	1	017-06369		CASWELL UNIT 2H (10422.1)	5,279,996	2,522,055	2,757,981	3,835,129
0420166377	1	017-06377		CASWELL UNIT 1H (10426.1)	3,690,782	1,848,541	1,782,241	2,810,988
0420166422	1	017-06422		LETTIE UNIT 1H (10470.1)	7,019,039	3,198,216	3,821,623	4,864,302
0420166433	1	017-06433		DOWNS UNIT 1H (10481.1)	4,292,022	2,105,686	2,186,336	3,202,602
0420166434	1	017-06434		OWENS UNIT 2H (10482.1)	6,102,549	2,836,624	2,865,925	4,314,275
0420166435	1	017-06435		LETTIE UNIT 2H (10471.1)	5,281,446	2,511,742	2,769,704	3,820,223
0420166450	1	017-06450		ARTERS UNIT 1H (10483.1)	7,686,435	3,513,574	4,172,861	5,342,978
0420176231	1	017-06231		RIKK UNIT 2H (10444.1)	2,117,231	1,235,434	881,777	1,892,365
0420176376	1	017-06376		ARTERS UNIT 2H (10427.1)	2,737,535	1,496,376	1,241,139	2,291,594
0420176382	1	017-06382		FUEGO UNIT 1H (10461.1)	972,547	634,935	337,612	972,547
0420176387	1	017-06387		FUEGO UNIT 2H (10459.1)	975,522	636,878	338,644	975,522
0420176469	1	017-06469		BAKER UNIT 2H (10483.1)	2,305,170	1,314,262	990,908	2,012,210
0420176470	1	017-06470		LIFE UNIT 1H (10486.1)	1,756,520	1,080,417	676,103	1,654,369
0420176471	1	017-06471		LIFE UNIT 2H (10487.1)	2,231,673	1,283,548	948,127	1,965,777
0520145962	2	017-05962	017-06026	R. SWIGER SOUTH UNIT 1H A	3,741,641	2,342,590	1,399,051	3,563,575
0520146027	1	017-06027		TROUT UNIT 1H (10176.1)	3,559,212	1,875,401	1,683,811	2,852,722
0520146028	1	017-06028		TROUT UNIT 2H (10175.1)	3,806,558	1,980,203	1,826,355	3,012,138
0520146044	1	017-06044		WEBB UNIT 1H (10168.1)	2,090,760	1,248,623	842,137	1,897,914
0520146049	1	017-06045		WEBB UNIT 2H (10169.1)	1,823,208	1,131,578	691,632	1,721,271
0520146048	1	017-06046		WEBB UNIT 3H (10170.1)	2,450,719	1,403,105	1,047,614	2,134,300
0520156117	1	017-06117		KEMPER UNIT 1H (10269.1)	2,037,385	1,225,361	812,024	1,863,929
0520156118	1	017-06118		THOMAS UNIT 2H (10272.1)	1,557,427	1,015,211	542,216	1,544,264
0520156120	1	017-06120		THOMAS UNIT 1H (10271.1)	1,238,253	814,037	424,216	1,238,253
0520156121	1	017-06121		KEMPER UNIT 2H (10270.1)	1,255,664	825,680	430,284	1,255,664
0520166119	1	017-06119		STATLER UNIT 1H (10735.1)	3,989,106	2,057,509	1,934,597	3,129,732
0520166134	1	017-06134		STATLER UNIT 2H (10736.1)	3,522,220	1,859,743	1,662,477	2,828,904
0520166148	1	017-06148		WELCH UNIT 1H (10737.1)	4,465,136	2,257,767	2,207,569	3,434,349
0620146096	1	017-06096		HEIRS UNIT 2H (10240.1)	1,077,963	687,572	390,391	1,044,807
0620146099	1	017-06099		HEIRS UNIT 1H (10219.1)	975,696	623,163	352,533	946,928
0620156076	1	017-06076		ERWIN UNIT 1H (10212.1)	1,355,589	851,183	504,406	1,287,061
0620156081	1	017-06081		TOM'S FORK UNIT 1H (10217)	1,357,470	841,743	515,727	1,268,432

TAB
13

Antero Resources Corporation
 Tax Year 7/1/16 - 6/30/17
 Doddridge County, WV

Account #	# of Wells	API#	API# for Second Well (if applicable)	Property Description	State Appraised Value	Taxpayer Value	Value the Taxpayer Believes to be in Controversy	Value if Operating Expense Cap Removed
0620156082	1	017-06082		TOM'S FORK UNIT 2H (10218.1)	1,512,590	948,307	564,283	1,426,772
0620156094	1	017-06094		RUCKMAN UNIT 1H (10247.1)	1,403,997	807,988	596,009	1,220,877
0620156095	1	017-06095		RUCKMAN UNIT 2H (10227.1)	999,801	674,834	375,867	939,883
0620156097	1	017-06097		YOKE UNIT 1H (10210.1)	1,164,224	742,877	421,347	1,128,263
0620156098	1	017-06098		YOKE UNIT 2H (10242.1)	1,283,096	818,769	464,327	1,243,983
0620156100	1	017-06100		CRISUP UNIT 2H (10249.1)	1,475,752	939,287	536,465	1,428,770
0620156102	1	017-06102		HINTERER UNIT 1H (10226.1)	1,943,371	904,130	539,241	1,366,302
0620156103	1	017-06103		RUCKMAN UNIT 3H (10246.1)	997,953	621,296	376,657	934,448
0620156104	1	017-06104		HINTERER UNIT 2H (10248.1)	1,346,150	845,698	499,452	1,280,694
0620156126	1	017-06126		ERWIN UNIT 2HA (10228.1)	1,312,654	826,187	486,467	1,248,835
0620156153	1	017-06153		WEBLEY FORK UNIT 1H (1071.1)	2,582,424	1,403,232	1,179,192	2,130,114
0620156156	1	017-06156		JOHNSON UNIT 1H (10317.1)	1,320,952	843,672	477,280	1,282,259
0620156157	1	017-06157		LITTLE TOM UNIT 1H (10321.1)	2,923,872	1,554,897	1,368,975	2,358,865
0620156173	1	017-06173		RIGHT HAND UNIT 1H (10730.1)	1,516,614	959,841	556,773	1,456,386
0620156185	1	017-06185		SCHULTE UNIT 2H (10323.1)	2,541,798	1,368,432	1,173,366	2,063,635
0620156174	1	017-06174		RIGHT HAND UNIT 2H (10731.1)	1,746,242	1,061,798	684,444	1,613,627
0610166228	1	017-06228		CROSS UNIT 1H (10362.1)	2,133,527	1,215,525	908,002	1,848,607
0620166240	1	017-06240		CROSS UNIT 2H (10363.1)	2,070,834	1,191,281	879,553	1,811,741
0620166243	1	017-06243		DOROTHY UNIT 1H (10360.1)	2,897,915	1,536,706	1,361,205	2,337,109
0620166244	1	017-06244		DOROTHY UNIT 2H (10361.1)	2,006,310	1,165,068	841,242	1,771,890
0620166261	1	017-06261		JOSIE UNIT 2H (10381.1)	2,734,834	1,481,485	1,273,449	2,221,561
0620166265	1	017-06265		JOSIE UNIT 1H (10345.1)	2,586,192	1,333,898	1,192,294	2,118,832
0620166295	1	017-06295		SWISHER UNIT 1H (10417.1)	3,161,599	1,626,849	1,534,750	2,473,701
0620166296	1	017-06296		SWISHER UNIT 2H (10428.1)	3,446,989	1,749,926	1,697,063	2,658,896
0620166311	1	017-06311		NICKERS UNIT 2H (10432.1)	4,623,965	2,238,245	2,385,728	3,400,594
0620166313	1	017-06313		PROUDFOOT UNIT 1H (10419.1)	1,444,979	920,238	524,741	1,399,363
0620166320	1	017-06320		PROUDFOOT UNIT 2H (10494.1)	1,784,692	1,085,413	699,279	1,650,549
0620166321	1	017-06321		SIRLEY UNIT 2H (10420.1)	1,367,114	874,322	492,792	1,329,520
0620166333	1	017-06333		NICKERS UNIT 3H (10431.1)	4,636,494	2,298,341	2,403,153	3,393,351
0620166334	1	017-06334		GEARHART UNIT 2H (10460.1)	4,736,939	2,250,170	2,486,769	3,418,448
0620166358	1	017-06358		GRIMSDALE UNIT 2H (10418.1)	1,604,403	1,006,830	597,573	1,530,127
0620166362	1	017-06362		FARROW UNIT 2H (10433.1)	3,876,620	1,933,871	1,944,149	2,938,383
0620166365	1	017-06365		FARROW UNIT 3H (10434.1)	4,035,588	1,994,823	2,040,965	3,030,636
0620166404	1	017-06404		PENNINGTON SOUTH UNIT 1H	5,578,758	2,587,841	2,890,935	3,932,580
0620166419	1	017-06419		DUFFLEMEYER UNIT 2H (1045.1)	3,611,216	1,792,038	1,819,278	2,724,794
0620166429	1	017-06429		ARENA UNIT 2H (10571.1)	4,677,119	2,229,693	2,447,426	3,390,109
0620166453	1	017-06453		CARR UNIT 2H (10474.1)	7,774,824	3,457,707	4,317,117	5,243,983
0620176403	1	017-06403		LINCOLN UNIT 1H (10580.1)	1,386,783	905,661	480,622	1,386,282
0620176420	1	017-06420		HONEY UNIT 1H (10605.1)	1,558,279	995,541	562,739	1,524,889
0820166223	1	017-06223		LIVINGSTON UNIT 1H (10377.1)	4,384,327	1,926,783	2,457,544	2,845,570
0820166224	1	017-06224		LIVINGSTON UNIT 2H (10376.1)	4,333,403	1,887,521	2,445,782	2,803,759
0820166225	1	017-06225		VONDA UNIT 2H (10380.1)	3,254,913	1,664,746	1,590,167	2,500,159
0820166258	1	017-06258		SQUIRREL UNIT 1H (10378.1)	3,091,507	1,519,206	1,572,301	2,250,622
0820166312	1	017-06312		HEFLIN UNIT 1H (10373.1)	4,101,901	2,020,781	2,081,140	3,061,773
0820166316	1	017-06316		JOSEPH UNIT 2H (10438.1)	3,842,877	1,551,397	1,591,480	2,955,782
0820166317	1	017-06317		MC CONNEL UNIT 1H (10447.1)	2,518,692	1,381,041	1,137,651	2,091,517
0820166318	1	017-06318		OLIVIA UNIT 2H (10439.1)	1,513,201	982,729	530,472	1,486,638
0820176327	1	017-06327		JOSEPH UNIT 1H (10473.1)	2,157,371	1,249,357	908,014	1,908,112
0820176332	1	017-06332		OLIVIA UNIT 1H (10549.1)	1,658,899	1,035,641	622,798	1,580,066
					514,321,245	278,996,310	235,324,935	411,687,034

IN THE MATTER OF THE ASSESSED VALUE OF CERTAIN OIL AND NATURAL GAS
PRODUCING PROPERTIES LOCATED IN DODDRIDGE COUNTY, WEST VIRGINIA FOR THE
2017 TAX YEAR

And In Re:

DODDRIDGE COUNTY TAX ASSESSOR,

ANTERO RESOURCES CORPORATION, TAXPAYER,

Expert Report of James Harden
January 31, 2017

Highly Confidential

Introduction

1. I have been retained by Altus Group US Inc. ("Altus") to assist in assessing the fair market value of certain producing oil and natural gas properties of Antero Resources Corporation ("Antero" or the "Taxpayer") in connection with the Taxpayer's appeal of the tax commissioner of the West Virginia State Tax Department, Property Tax Division 2017 assessed value of natural resource properties.
2. The opinions expressed in this matter are my own, and my compensation is not contingent upon the content of my testimony or the outcome of this matter. This report reflects my opinions as of the date of this report and documents received to date. Should additional information be provided, I reserve the right to amend and/or supplement this report. My opinion is based upon a reasonable probability unless otherwise noted.
3. All capitalized terms not defined herein shall have the meaning ascribed in Title 110 Legislative Rule Series. 1J Valuation of Producing and Reserve Oil and Natural Gas for Ad Valorem Property Tax Purposes.

Professional Biography and Qualifications

4. I am a Principal and the National Valuation Leader for Hein & Associates, LLP, a Certified Professional Geologist and hold the American Society of Appraisers' Accredited Senior Appraiser ("ASA") certification in Oil and Gas Valuation. I have been involved in all aspects of the oil and gas business since 1980, including working on drilling rigs, owning an oil and gas production company, working for Texaco Inc., and was Global Oil & Gas Valuation Leader for Ernst & Young. I have performed hundreds of valuations in the oil and gas industry for a wide variety of purposes ranging from financial reporting, assorted tax matters, mergers and acquisitions, and expert testimony.
5. All work by myself and my staff was performed on an hourly basis. My curriculum vitae with expert testimony experience is attached as Exhibit A.

Highly Confidential

Antero Resources¹

Company Overview

6. Antero Resources Corporation ("Antero" or the "Taxpayer"), an independent oil and natural gas company, acquires, explores, and develops natural gas, natural gas liquids, and oil properties in the United States. As of December 31, 2015, the company had 569,000 net acres of oil and gas properties located in the Appalachian Basin in West Virginia, Ohio, and Pennsylvania. The company was formerly known as Antero Resources Appalachian Corporation and changed its name to Antero Resources Corporation in June 2013. Antero Resources Corporation was founded in 2002 and is headquartered in Denver, Colorado. Antero Resources Corporation is a subsidiary of Antero Resources Investment LLC.

Doddridge County Oil and Natural Gas Properties

7. Subject to this assessment, the Taxpayer holds approximately 199 horizontal wells with an average working interest of approximately 83%. Production from the 199 wells began as early back as June of 2012 to as recent as September of 2015. The wells are gas weighted (approximately 77% gas) and target the Marcellus Shale. Additional information about the Marcellus Shale gas play can be found in the Industry section of this report.

The State Tax Commissioner's Office²

Powers and Duties of the State of West Virginia's Tax Commissioners Office

8. Before I discuss the valuation methodology employed by the State, it is important to discuss the governing body which establishes the Office of the Tax Commissioner and lays out the appointment, powers, and duties of the state tax commissioner ("Tax Commissioner") with respects to implementing, monitoring, and enforcing the policy and procedures for assessing and collecting real and personal property tax.
9. W. Va. Code §11-1 (the "Code") establishes the Office of the Tax Commissioner and defines the powers and duties of the individuals appointed as the West Virginia Tax Commissioner ("Tax Commissioner"). In particular, Article 11 of the Code states, "It shall be the duty of the tax commissioner to see that the laws concerning the assessment and collection of all taxes and levies, whether of the state or of any county, district or municipal corporation thereof, are faithfully enforced. The Code further establishes

¹ Information referenced herein was obtained from S&P CapitalIQ

² Information and, in some cases, direct excerpts in this section were obtained from <http://www.legis.state.wv.us/wv/>.

that the Tax Commissioner shall be responsible for determining the methods of valuation for both real and personal property. Specifically, W.Va. Code §§11-1C-10(b)(1) states, "[T]he state tax commissioner shall value all industrial property in the state at its fair market value within three years of the approval date of the plan for industrial property required The commissioner shall thereafter maintain accurate values for all such property. The tax commissioner shall forward each industrial property appraisal to the county assessor of the county in which that property is located and the assessor shall multiply each such appraisal by sixty percent and include the resulting assessed value in the land book or the personal property book, as appropriate for each tax year. The commissioner shall supply support data that the assessor might need to evaluate the appraisal.

Valuation Methodology Used by the State Tax Commissioner

Defined Terms

10. The following section outlines the methodology used by the State Tax Commissioner to assess the Fair Market Value of producing oil and gas properties. Included below are key terms and definitions for certain terms used by the State. The following defined terms are listed in alphabetical order. For a more comprehensive list of defined terms used by the State, please refer to Title 11D Legislative Rule, Series II.

- **"Average Industry Operating Expenses"** - The Tax Commissioner shall every five years, determine the Average Annual Industry Operating Expenses per well. The Average Annual Industry Operating Expenses shall be deducted from working interest gross receipts to develop an income stream for application of a yield capitalization procedure.
- **"Average Industry Production Decline Rates"** - The Tax Commissioner shall every five years derive and report the average industry production decline rates by reviewing well production records of various State agencies along with data provided by companies and individuals.
- **Capitalization Rate**¹ means a rate used to convert an estimate of income to an estimate of market value. A single statewide capitalization rate for oil and natural gas shall be determined annually by the Tax Commissioner through the use of generally accepted methods. The rate shall be based on the assumption of a declining-terminal, non-inflating income series. The capitalization rate used to value oil and natural gas shall be developed through consideration of: (1) a discount rate determined by the summation technique, and (2) a property tax component.

Highly Confidential

- **"Discount Component"** means a rate reflecting a provision for returning to an investor a sum of money equal to the aggregate of the anticipated return-on-investment over the economic life of an investment. The discount component is composed of the following five subcomponents: (i) safe rate (ii) risk rate (iii) non-liquidity rate, (iv) management rate, and (v) inflation rate.
- **"Flush Production"** means the production of oil and/or natural gas from any well on an oil and/or natural gas property with an initial production date that is two calendar years or less prior to the July 1st assessment date.
- **"Gross Receipts"** means total income received from production on any well, at the field line point of sale, during a calendar year before subtraction of any royalties and/or expenses.
- **"Inflation Rate"** means Nominal interest rates, including the "safe rate" (defined below) are higher than real rates by an amount representing expectation of future inflation; however, net annual income from oil and natural gas property is to be estimated assuming level future royalties (no inflation). The capitalization rate shall be a real rate, net of expectation of inflation. The inflation rate shall be estimated through analysis of the most recent calendar year's urban consumer price index as determined by the U.S. Department of Labor, Bureau of Labor Statistics. The weighted average (sum of year's digits) rate will be used from the data of the three calendar year periods prior to the July 1 assessment date.
- **"Management Rate"** means a rate reflecting a return to an investor for the management of similar investment portfolios. The Management Rate represents the cost of managing the investment, not the cost of managing the oil and natural gas property. Because the Management Rate has historically been one-half of one percent (0.5%) of the value of investment portfolios, for purposes of determining the discount component the Management rate shall be one-half of one percent (0.5%).
- **"Natural Gas Producing Property"** means the property from which natural gas has been produced or extracted at any time during the calendar year preceding the July 1 assessment date. Natural gas producing property includes the interest or interests underlying an area of up to one hundred twenty-five acres of surface per well for property with active wells on the parcel.
- **"Nonliquidity Rate"** means a rate reflecting a return to an investor representing the loss of interest on an investment arising from the time required to sell the investment. The Nonliquidity Rate shall be developed through an annual survey to determine a reasonable estimate of time that oil and natural gas properties, when exposed to the market for sale, remain on the market. The time determined in this manner shall be used to identify United States Constant Maturity Treasury Yields with similar time differentials in excess of thirteen

Highly Confidential

week United States Constant Maturity Treasury Yields. The interest differential between these securities shall be used to represent the Nonliquidity Rate. For example, if it is determined that oil and natural gas property remains on the market for an average of nine months (39 weeks) before being sold, the nonliquidity rate shall be derived by taking the rate on one (1) year United States Constant Maturity Treasury Yields minus the rate on 13-week United States Constant Maturity Treasury Yields. The rate used will be a weighted average (sum of years digits) of the data from the three (3) calendar year periods prior to the July 1 assessment date.

- **"Non-Producing or Shut-in Well"** means a well, which due to the producer's decisions, market reasons and/or product performance, was non-productive during the entire most recent calendar year preceding the July 1st assessment date.
- **"Oil and/or Natural Gas, Non-producing Property"** means properties that were not engaged in production during the previous assessment year period of July 1st through June 30th. This category includes any acreage that has been shut-in for the entire year.
- **"Oil Producing Property"** means property from which oil has been produced or extracted at any time during the calendar year preceding the July 1 assessment date. Oil producing property includes the interest or interests underlying an area of up to forty acres of surface per well with one or more active well(s) on the parcel.
- **"Operating Expenses"** means only those ordinary expenses which are directly related to the maintenance and production of natural gas and/or oil. These expenses do not include extraordinary expenses, depreciation, ad valorem taxes, capital expenditures or expenditures relating to vehicles or other tangible personal property not permanently used in the production of natural gas or oil.
- **"Property Tax Component"** means a rate reflecting a provision for returning to an investor a sum of money equal to property taxes paid over the economic life of an investment. The Property Tax Component shall be estimated by multiplying the assessment rate by the prior tax year's statewide average for Class III property. At the present time, research indicates that royalty rates on oil and natural gas include a component for property tax, with no additional compensation from the producer. As a result, the Property Tax Component shall be used in the capitalization rate; however, if this described general practice changes and property taxes are paid as additional compensation, the use of this component shall be deleted. The rate used will be a weighted average (sum of year's digits) of the data from the three tax year periods prior to the July 1 assessment date.

Highly Confidential

- **"Recapture Component"** means a rate reflecting a provision for returning to an investor a sum of money equal to his or her investment.
- **"Risk Rate"** means a rate reflecting a return to an investor necessary to attract capital to an investment containing a possible loss of principal and/or interest. The relative degree of risk of an investment in oil and natural gas property is difficult to determine from published interest rates. Interest rates required on loans for acquisition and/or development of oil and natural gas properties shall be calculated by adding two percent to the Prime Interest Rate charged by banks as published in the Economic Indicators Prepared By The Council Of Economic Advisors For The Joint Economic Committee for the three (3) calendar years immediately prior to the July 1 assessment date. The loan rate shall be compared to quarterly interest rates offered on thirteen week United States Constant Maturity Treasury Yields for the same three calendar years period. The weighted average (sum of year's digits) difference between the two, combined with bands-of-investment analysis, shall be used as a basis to estimate the risk rate.
- **"Royalty Interest"** means a fractional interest in oil and/or natural gas production that is not subject to development costs or operating expenses and extends undiminished over the life of the property. Typically, it is retained by the oil and/or natural gas rights owner or lessor.
- **"Safe Rate"** means a rate reflecting a return to an investor on an investment which has little, if any, likelihood of loss of principal or of loss in anticipated return on investment.
- **"Settled Production"** means the production of oil and/or natural gas from all wells on a property with an initial production date that is more than two calendar years prior to the July 1st assessment date.
- **"Sum of the Years digit"** means the weighted average that will be used in the calculations. For a 3 year weighted average, the sum of the year's digit method places the first year at 50%, the second year at 33.33% and the third year at 16.67%.
- **"Summation Discount Component"** means a discount rate expressed as the aggregate of a safe rate, risk rate, nonliquidity rate, and management rate, adjusted for inflation.
- **"Well"** means any shaft or hole sunk, drilled, bored or dug into the earth or into underground strata for the extraction of oil or gas.
- **"Working interest"** means the fractional interest in oil and/or natural gas production subject to development and operating expenses and owned by the leaseholder and/or operator.

Highly Confidential

Valuation Methodology Overview

11. The value of Oil and/or Natural Gas Producing Property is determined through the process of applying a Yield Capitalization Model to the Net Receipts (Gross Receipts, less Royalties paid, less Operating Expenses for a Working Interest and a Yield Capitalization Model applied to the gross royalty payments for their royalty interest. Where ownership is split through a lease or royalty arrangement, different values are determined for the Working Interest and the Royalty Interest. If the Well has been in production for less than 12 months during the first calendar year of production, or during the first calendar year of production after being shut-in during the previous calendar year, the Gross Receipts and Royalties are annualized prior to the process of applying a Yield Capitalization Rate.
12. Of note, and as discussed herein, my findings and conclusions contrast significantly from those of the State. It can be shown that the delta between the concluded Fair Market Value arrived at through my analysis and the assessed value calculated by the State can be attributed to (i) differences in the selection and application of oil and natural gas decline curves, (ii) differences in the application of actual versus "one size fits all" ceiling on operating expense assumption, and (iii) methodology selection for calculating the appropriate rate used to discount the expected future cash flows of an investment with this risk profile.

Findings and Methodology

Application of Fair Market Value

13. Based on my experience, the most commonly accepted premise of value is Fair Market Value ("FMV"). Courts typically consider the FMV or what would be the fairly equivalent value of the property, taking into consideration all of the specific circumstances of each case affecting the value of the asset. The American Society of Appraisers ("ASA") defines FMV as: "[a]n opinion expressed in terms of money, at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts, as of a specific date."^{3 4}
14. Further, per West Virginia Code § 11-3-1 (a) "all property shall be assessed at the price for which the property would sell if voluntarily offered for sale by the owner thereof, upon the terms as the property,

³ <http://www.appraisers.org/Disciplines/Machinery-Technical-Specialties/mts-appraiser-resources/DefinitionsOfValue>.

⁴ IRS Revenue ruling 59-60.

the value of which is sought to be ascertained, is usually sold, and not the price which might be realized if the property were sold at a forced sale.³

Valuation Approach

15. In determining the Fair Market Value of the Taxpayer's producing oil and natural gas properties, I relied on the Income Approach, more specifically, the Discounted Cash Flow ("DCF") method, a widely used and accepted valuation method. Per the 2016 Society of Petroleum Evaluation Engineers Thirty Fifth Annual Survey of Parameters used in Property Evaluations, it is reported that 144 out of the 177 market participants surveyed (76%), reported using the DCF as their preferred method for evaluation oil and gas properties.
16. The DCF method of the Income Approach focuses on the income-producing capability of the asset or business being assessed. The underlying premise of this approach is that the value of an asset or business can be measured by the present worth of the net economic benefit (cash receipts less cash outlays) to be received over the life of the subject asset. The steps followed in applying this approach include estimating the expected cash flows attributable to the asset over its life and converting these cash flows to present value through "discounting." The discounting process uses a rate of return, which accounts for both the time value of money and investment risk factors. Finally, the present value of the cash flows over the life of the asset are totaled to arrive at the Fair Market Value of the asset.

Valuation of the Producing Oil & Gas Wells

Overview

17. Due to the inherent nature of oil and gas properties, and in particular, producing oil and gas properties, I utilized the Income Approach, specifically the Discounted Cash Flow ("DCF") method, in our Fair Market Value assessment of the Taxpayer's oil and gas wells. For reference purposes, Exhibit 1 reflects the results of our DCF analyses as of July 1, 2016.⁵

Sources of Information

18. We were provided with historic production and operating financial data which served as the foundation of the cash flow forecast for this analysis. The data provided consisted of gross production volumes, revenues, and all operating costs incurred by the Taxpayer on a well by well basis for the 18 month period ending June 30, 2016. In addition, the provided data contained descriptive information

⁵ The analysis reflected in Exhibit 1 was conducted for the 2017 tax year.

identifying each well's unique identifiers, county and district location, date of first production, well configuration, producing formation, field name, well depth and lateral length, etc. We relied on the unique well level information during our decline curve analysis which was used to develop our decline curve assumptions.

Production Decline Curve Analysis

19. In order to estimate the future production of oil and gas volumes, curve parameters must be developed that best characterize the decline in production over time. We collected the production data for all Antero oil and gas wells drilled in West Virginia using Drillinginfo⁶, a subscription based and widely used data source for the oil and gas industry. We grouped wells by county and normalized the production streams by initial production date. We averaged all normalized production and plotted rate versus time, then generated a best fit curve for the average curve. Each curve for the separate counties was approximated using 3 exponential curves for different stages in the life of an oil and gas well; year one, year two, and year 3 until the economic limit.

Projected Revenues

20. In order to estimate revenues in the first period of our forecast (2018 tax year), we applied our Year 1 production decline rate to the gross (8/8's) revenues corresponding to the most recent 12 month period preceding the July 1st assessment date. The revenue results of this calculation served as the basis for forecasting all future revenues. In Year 2 (2019 tax year) of our forecast, revenue calculated in Year 1 was multiplied by our estimated production decline factor for Year 2. For all periods thereafter, revenues from the preceding period were multiplied by our calculated long-term production decline factor ("Terminal Decline Factor").

Operating Expenses

21. Given the unique production behavior of a particular oil and gas formation, coupled with the existing infrastructure in place to get production volumes to market, obtaining actual operating expenses is crucial to accurately assessing the fair market value of a given well. Further, in keeping with the States definition of Operating Expense⁷ "... only those ordinary expenses which are directly related to the maintenance and production of natural gas and/or oil, . . . do not include extraordinary expenses, depreciation, ad valorem taxes, capital expenditures or expenditures relating to vehicles or other tangible personal property not permanently used in the production of natural gas or oil.", we reviewed

⁶ Drillinginfo is a subscription based service for oil and gas production data. See www.drillinginfo.com

⁷ Per Subsection 3.2 of Title 110 Legislative Rule, Series 11 "Valuation of Producing and Reserve Oil and Natural Gas for Ad Valorem Property Tax Purposes"

historic Operating Expense data of publicly traded upstream oil and gas companies with producing assets located in or near the same West Virginia counties as that of the Taxpayer in order to identify ordinary vs. extraordinary Operating Expenses from a market participants' view point. For further detail behind the Operating Expense assumptions we relied upon, please refer to the section "Comparison of the State's Methodology" provided in later sections of this report.

Discount Rate

22. In estimating the appropriate discount rate for discounting the expected cash flows of an investment of this risk profile, we relied calculated the per-tax weighted average cost of capital ("WACC"). The WACC is a market based weighted average of the cost of debt and cost of equity and as such, we relied on financial data of publicly traded guideline company financial data when developing our assumptions to be used in our discount rate analysis. In developing the cost of equity, we relied on the Capital Asset Pricing Model ("CAPM"), which attempts to measure the systemic risks based on the Company's relationship with the market (i.e. typically against the S&P 500 Index). In my experience, CAPM is the most widely used method of estimating a discount rate when valuing a business enterprise or asset. The discount rate I utilized was 20%. Exhibit 4 reflects our discount rate analysis as of July 1, 2016. The following section discusses our selection of publicly traded guideline companies.

Guideline Comparable Company Selection

23. Selecting companies that are comparable to Debtors is critical in determining an indication of value. One of the initial screening criteria included all publically traded United States oil and gas exploration and production companies operating oil and gas reserves in West Virginia. That selection criteria led us to choosing the following companies as comparable to Debtors:

- Antero Resources Corporation (NYSE:AR)
- Chesapeake Energy Corporation (NYSE:CHK)
- CONSOL Energy Inc. (NYSE:CNX)
- Cabot Oil & Gas Corporation (NYSE:COG)
- Carrizo Oil & Gas Inc. (NasdaqGS:CRZO)
- Eclipse Resources Corporation (NYSE:ECR)
- EQT Corporation (NYSE:EQT)
- Noble Energy, Inc. (NYSE:NBL)

Highly Confidential

- Range Resources Corporation (NYSE:RRC)
- Stone Energy Corp. (NYSE:SGY)

Economic and Industry Factors

24. Valuation analyses are typically accompanied by a detailed examination of the current economic and industry conditions. The intent is to identify the general direction of the economy, survey the general industry sentiment regarding future outlook, and to identify any specific risks that could impact the future value of an investment. To reduce any biased opinions, the following economic and industry overview is generally referenced from publically accessible sources that were available at or before the Valuation Date.

General Economic Overview

25. Although real gross domestic product is reported to have increased at a sluggish rate in the first quarter of 2016, the available data for the second quarter point to a noticeable step-up in the pace of growth. On average, consumer spending so far this year appears to be expanding at a moderate pace, supported by solid income gains and the ongoing effects of the increases in wealth and the declines in oil prices of the past two years. Fiscal policy at all levels of government is now modestly boosting economic activity after exerting a considerable drag in recent years. One area of concern, however, is the softening in business fixed investment in recent quarters even beyond those sectors most directly affected by the plunge in energy prices. In addition, the weakness of exports—following the significant appreciation of the dollar over the past two years and the subdued pace of foreign economic growth—continues to hold back overall output growth.

26. After having raised the target range for the federal funds rate to between 1/4 and 1/2 percent last December, the Committee maintained that target range over the first half of the year. The Committee's decisions to leave the stance of policy unchanged were supported by its assessments earlier in the year that global economic and financial developments posed risks to the economic outlook and that growth in economic activity appeared to have slowed. In June, the Committee noted that recent information indicated that the pace of improvement in the labor market had slowed, while growth in economic activity appeared to have picked up. In addition, the Committee's policy stance so far this year reflected its expectation that inflation would remain low in the near term, in part due to earlier declines in energy prices and in the prices of non-energy imports. The Committee stated that its accommodative stance of

Highly Confidential

policy is intended to support further improvements in labor market conditions and a return to 2 percent inflation.

U.S. Upstream Exploration and Production Industry⁸

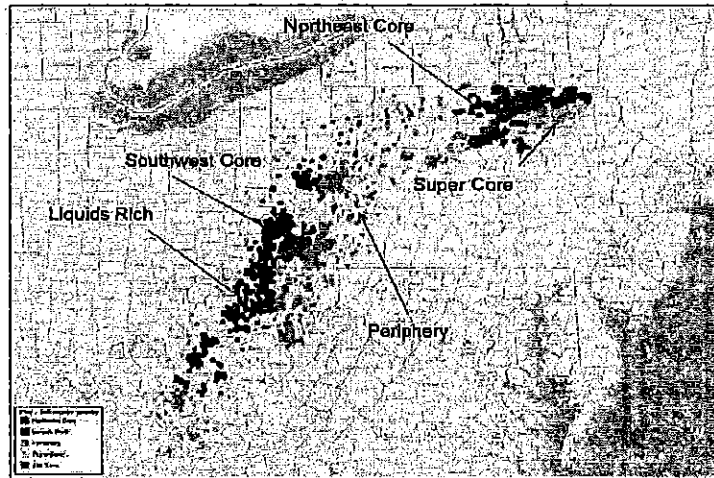
27. Due to unforeseen global market conditions, global oil prices began to plunge in the fall of 2014 and have since remained at depressed levels.⁹
28. Domestic production of oil and gas has steadily increased in the five years to 2016, and industry operators have positioned themselves to continue performing strongly in the five years to 2021 when prices rise. Though the industry remains exposed to global commodity price fluctuations, IBISWorld expects that the industry will continue to profit from its highly lucrative operations. Nevertheless, industry revenue is expected to decline 18.4% in 2016 due to persistently low oil and gas prices.
29. In the five years to 2016, industry revenue is expected to decrease at an annualized rate of 7.4% to total \$202.5 billion. The industry includes several very large, globalized companies that engage in all steps of the oil and gas production process, from exploration to refining; it is these companies that have benefited the most from the emergence of hydraulic fracturing and horizontal drilling techniques. Furthermore, the United States has been seeking to lessen its reliance on foreign sources of oil and gas, most notably those in the Middle East. By reducing exposure to foreign political events and pressure, domestic operators are expected to perform strongly as US-produced oil and gas resources increasingly meet domestic demand.
30. The future of oil and gas is expected to increasingly hinge on improvements to drilling technology and techniques. As industry operators deplete their reserves, it becomes necessary to improve efficiency and minimize waste. Industry operators replenish their reserves through either acquisitions or exploration. The number of industry operators is expected to increase, as previously uneconomical resources have become accessible. In the five years to 2021, IBISWorld expects industry revenue to expand at an annualized rate of 18.1% to total \$466.1 billion. This growth rate, however, is inflated by the anticipated decline in 2016, with 2016 revenue less than half of its 2014 level. Improving technology is anticipated to assist operators in meeting environmental concerns and maximize well efficiency; as a result, IBISWorld expects industry companies will be able to continue operating profitably and successfully in the United States.

⁸ Source: U.S. Federal Reserve System, as prepared at the Federal Reserve Bank of Philadelphia and based on information collected on or before January 4, 2016.

⁹ www.eia.gov.

Upstream Exploration and Production Industry of West Virginia

31. The Marcellus gas play, located in the mountains of Pennsylvania and West Virginia, includes areas with wet and dry gas. Five sub-plays were identified based on high performance variations and depths in the formation. This includes: Liquids Rich, Southwest Core, Periphery, Super Core, and Northeast Core.



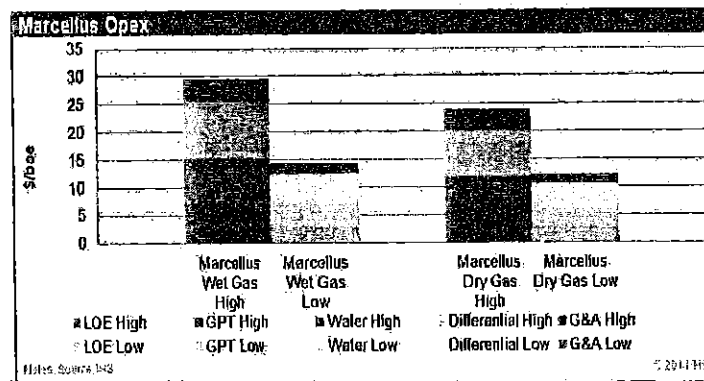
32. Drilling within all sub-plays has leveled off in the past three years. Production began in 2007 and has ramped up quickly to nearly 16 Bcf/day, making it by far the largest gas play in North America. As a result of this run-up in production, the Marcellus serves an over-supplied gas market which precipitated drops in gas price and increased pressure to reduce the number of wells being drilled in the play.
33. Much of the value derived from the Marcellus is from NGL sales, mainly from the Liquids Rich gas area where current drilling is most active. NGLs are processed locally and are either shipped to the Gulf Coast or are marketed locally. Lack of processing and transportation infrastructure is being overcome by new and projected capacity. Production is expected to continue to grow there significantly and thus more infrastructure will be needed. The Marcellus benefits from being fairly close to market. However, logistically infrastructure is still lacking and transport fees are high. Also, water disposal is extremely expensive, averaging over \$5/bbl in some areas.¹⁰ Water disposal fees in other regions in the US typically range from a few cents per bbl. to +/- \$1.00 per bbl. of disposed water.

¹⁰ U.S. Energy Information Administration. *Trends in U.S. Oil and Natural Gas Upstream Costs*. March 2016.

34. Marcellus gas infrastructure is quite substantial, but there is a supply glut in nearby hubs. Reaching the Gulf Coast markets is more complicated. However there is sufficient capacity to move production south to fetch better prices than the local differential affords. Gas marketing is based on a series of complicated arrangements that potentially allocate production to many different nodes and destinations. Dry gas in the Marcellus rarely requires processing as its raw production can meet pipeline specifications. Few companies benefit from vertical integration. Furthermore, gathering and processing is almost a monopoly as most of the capacity is owned by one company. Fees for long haul transport of NGL's are very high since production must be trucked to Mont Belvieu. Ethane production in this play is injected into the gas line maxing out the thermal content limit for pipelines. Transportation differentials are so high that recovered ethane often becomes a net cost. There are alternatives for Ethane in this play as Edmonton can receive production through a specialized Ethane pipeline.

	Units	Marcellus Wet Gas High	Marcellus Wet Gas Low	Marcellus Dry Gas High	Marcellus Dry Gas Low
Gas Gathering	\$/mcf	0.60	0.50	0.60	0.50
Gas Processing	\$/mcf	0.60	0.35	n/a	n/a
Short Transportation Oil	\$/bbl	n/a	n/a	n/a	n/a
Long Transportation Gas	\$/mcf	1.40	0.70	1.40	0.70
Long Transportation Oil	\$/bbl	11.00	8.00	11.00	8.00

35. Operating costs are highly variable in the Marcellus. According to HIS, operating costs can range from \$2.06 to \$4.93 per mcf. This wide range is driven by geology, location, well performance and operator efficiency. Overall, this play offers both very high and very low operating costs rates.



Highly Confidential

Comparison with the States Methodology

36. As previously stated, I have concluded that the difference between the concluded Fair Market Value arrived at through my analysis and the assessed value calculated by the State can be attributed to (i) differences in the selection and application of oil and natural gas decline curves, (ii) differences in the application of actual versus capped "one size fits all" operating expense assumption, and (iii) methodology selection for calculating the appropriate rate used to discount the expected future cash flows of an investment with this risk profile. The following is a discussion of those differences.

Production Decline Curve Assumption

37. The state of West Virginia surveys operating companies in order to determine the decline curve parameters of various oil and gas reservoirs. This approach is too general to be used in estimating the future production of an individual operators' oil and gas wells. This is because not all oil and gas reserves are created equal. Estimated ultimate recovery (EUR) can vary greatly between wells that are in close proximity. Each operator has different investment criteria that influences their investment decisions. Oil and gas leases can contain different quantities of acreage and each operator develops this acreage according to their own engineering insight. Our estimations of Antero's future oil and gas production have been developed using Antero production data, not those of a competing operator.

38. The state of West Virginia bucketed the survey results by region. Each region encompasses multiple counties. Reservoir characteristics can vary drastically over the distance of just a few miles, leading this approach to be an inaccurate representation of the Marcellus play within a particular county. For example, both Lewis and Upshur counties are listed as part of the North Central region according to the state. We performed an EUR analysis of all wells in Lewis and Upshur counties and found that a Lewis County Marcellus gas well is roughly 833 MMcf. The average EUR for an Upshur County Marcellus gas well is nearly twice as much at 1,511 MMcf. Although these counties are adjacent to one another, the reservoir characteristics yield very different results.

Highly Confidential

39. See the table below for a comparison of our decline parameters versus the state of West Virginia.

Marcellus Decline Comparison						
County	Year 1		Year 2		Year 3+	
	WV	Hein	WV	Hein	WV	Hein
Doddridge	-59%	-64%	-29%	-40%	-23%	-15%

40. It is important to point out from the above table that the decline rates I relied on for Years 1 & 2 are significantly higher in most cases. However, given the long life of Marcellus reserves, we have taken a more conservative approach when applying terminal decline rates. As shown in the above table, in all cases, our terminal decline rates are shallower which when applied, has the effect of producing incremental value in the form of revenue, when compared to the State.

Operating Expense Assumption

41. As discussed previously, we reviewed historic operating expense data of the Taxpayer and other publicly traded oil and gas companies that operate in the Marcellus Shale. The purpose of this analysis was to establish if the expenses reported by the Taxpayer were "ordinary" and to ensure we were not burdening a well with expenses related to inefficiencies in production or extraordinary.
42. The results of our analysis and conclusion of actual operating expenses of the Taxpayer contrasts starkly with that of the State. Given the burden of the State tax commissioner of assessing all oil and natural gas properties located in the State, we agree that a mass appraisal system would be the most effective method for assessing and assigning value to said properties. However, although we commend the State on its work in surveying market participants in order to establish Operating Expense variables, the process of applying these variables to every oil and natural gas producing property suggests that all oil and natural gas wells are created equal. This assumption is inherently incorrect as reservoir characteristics, production profiles, and technologies used to extract hydrocarbons differ across fields.
43. The following table shows the Operating Expense variable the State developed to apply to horizontal Marcellus wells for the 2017 tax year.

MARCELLUS	
% W.I. Expenses - Horizontal	20%
Max. Operating Expenses	\$175,000

The above Operating Expenses used by the State do not accurately capture the actual cost to extract hydrocarbons in the Marcellus. Based on our review of the data provided we note that the States variable would be reasonable in terms of LOE alone, however, adding G&C, processing, and transportation, we

Highly Confidential

noted Antero's total Operating Expense exceeds the State's allowable cost dramatically. In the table below, we have calculated the Taxpayer's Operating Expenses by category on a \$/Mcf basis.

Antero Actual 2017 Tax Year Operating Expenses (\$/Mcf)					
County	LOE	G&C	Processing	Transport	Total OPEX
Doddridge	\$0.06	\$0.52	\$0.34	\$0.40	\$1.33

In order to assess the reasonableness of Antero's Operating Expenses, we have surveyed various public data sources in order to identify ordinary Marcellus Operating Expenses. The following table was taken from the Energy Information Administration's *Trends in U.S. Oil and Natural Gas Upstream Costs*. As can be seen, Antero's gathering, compression, and processing costs on a \$/Mcf basis is in line with market participant costs.

	Units	Marcellus Wet Gas High	Marcellus Wet Gas Low	Marcellus Dry Gas High	Marcellus Dry Gas Low
Gas Gathering	\$/mcf	0.60	0.50	0.60	0.50
Gas Processing	\$/mcf	0.60	0.35	n/a	n/a
Short Transportation Oil	\$/bbl	n/a	n/a	n/a	n/a
Long Transportation Gas	\$/mcf	1.40	0.70	1.40	0.70
Long Transportation Oil	\$/bbl	11.00	8.00	11.00	8.00

Discount Rate Methodology

44. In previous sections of this report, I discussed our reliance a per-tax weighted average cost of capital ("WACC") when estimating the appropriate discount rate for discounting the expected cash flows of an investment of this risk profile. I further define the WACC to be a market based weighted average of the cost of debt and cost of equity which is developed based on financial data of publicly traded guideline companies. Similarly, in estimating their selected discount rate, the State relied on the "Band of Investment" method which is viewed as being synonymous to a WACC.

45. The general components of a discount rate can be summarized below:

- **Inflation rate:** the annual rate of price change for a basket of consumer goods. Inflation is normally measured by the Consumer Price Index for All Urban Consumers (CPI-U), calculated by the United States Bureau of Labor Statistics. The inflation rate is the most basic component of a discount rate. An investor's rate of return must equal the rate of inflation just to break even in real dollar terms.
- **Risk-free component:** A return to compensate the investor for a loss of liquidity. This component can also be defined as the risk-free rate minus the inflation rate. The risk-free rate is made up of the inflation rate plus a return to reimburse the investor for a loss of liquidity and

Highly Confidential

is measured by the yield to maturity on federal government securities with a maturity period comparable to the investment under consideration (oil or gas reserves in this case),

- **General risk premium:** A return to compensate the investor for assuming diversified company-wide risk. For property tax purposes, appraisers traditionally estimate the value of individual mineral reserves, not the value of oil companies. Individual reserves are riskier than the stock and debt of an entire company. Companies can spread their risk over many individual mineral reserves and often over several kinds of assets. This asset diversification reduces the company's risk and, as a result, the WACC derived from company financial data is usually lower than an individual producing property's discount rate. However, the WACC is always higher than the risk-free rate. This increase in the rate is a general risk premium to reward investors for assuming the diversified company-wide risk.
- **Property-specific risk premium:** A return that compensates the investor for assuming the unique risks associated with a particular mineral producing property. Investors demand a premium above the WACC to compensate them for this individual property risk. For certain high-risk properties, this premium can be quite high.

46. The basic premise behind calculating a WACC is that investors can create a risk/reward profile that fits their individual risk preferences through diversification. Because our analysis focuses on assessing the Fair Market Value of an individual oil or natural gas well or property, we need to account for the fact that lack of diversification increases the risk of an investment and an investor would need to be compensated for such risk. As such, we have added an additional risk adjustment of 100 basis points to our WACC to account for the fact that we are appraising a non-diversified investment (single well) and the unadjusted WACC has this diversification benefit inherent within it.

47. In continuing with the discussion of accounting for and quantifying risks specific to a particular investment (in this case, a single producing oil and gas well), we have identified several other risk factors for which required an adjustment to capture and that which the State failed to identify. The following table lists the additional property-specific risks we identified and the resulting adjustment we made to our discount rate¹¹.

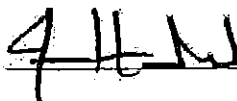
Oil & Gas Property Specific Risks	WACC Adjustment (Basis Points)
Single Completion Risk	100
Limited Production History	100
Steep Production Decline	100
Total	300

Conclusion

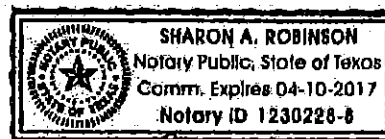
I. For detail of my analysis of the Fair Market Value of these oil and gas wells, please see Exhibits 1 through 4.

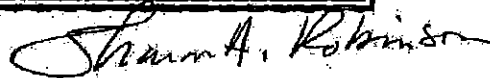
* * * * *

My analyses and opinions are based on the information provided to me as of the date of this report. Should new information become available, I reserve the right to supplement or amend this report as necessary.



James Harden, ASA





¹¹ Adjustments to the calculated WACC for property-specific risks were obtained from the Texas Comptroller of Public Accounts 2014 Property Tax Study: Discount Rate Range for Oil and Gas Properties, August 2015.

Highly Confidential

EXHIBIT A

CURRICULUM VITAE

OF

JAMES HARDEN

Highly Confidential

*Carizzo Oil and Gas, Inc.
Fair Value of Certain Oil and Gas Assets Acquired from Sanchez Energy
Corporation*

James Harden, ASA

500 Dallas Street, Suite 2500 | Houston, TX 77002

D 713.666.7423 | C 713.875.7867

jharden@heincpa.com | www.heincpa.com

James Harden is a Principal and the Business Valuation Leader at Hein & Associates. He has spent his entire thirty year career in various facets of the energy industry. He is one of a handful of professionals globally that holds the American Society of Appraisers' Senior Appraiser certification ("ASA") in Oil and Gas Valuation.

In his 30-year career, he has led hundreds of energy-sector valuations in North and South America, Africa, Russia, Eastern and Western Europe, Middle East and Southeast Asia. Jim's work has supported mergers and acquisitions, financial reporting and purchase price allocations, Federal, state and local and International tax, insurance, solvency opinions, bankruptcy and as expert witness on valuation of pipelines, terminals, refineries, chemical plants, gas processing facilities and oil and gas reserves.

His clients have included major and independent oil and gas companies, midstream MLP's, independent oil refiners, petrochemical companies, onshore and offshore drillers and oilfield service companies, mining companies, gas storage operators, LNG operators, and ammonia and ethanol manufacturers.

Jim has also served energy clients as an expert witness before U.S. Federal Court, U.S. Bankruptcy courts in Delaware, District courts and state tax boards and other tax tribunals, testifying on valuations of oil and gas reserves, gas gathering and processing facilities, oil refineries, and crude and product terminals. As well, he has represented oil and gas companies before the IRS and state, local and international tax authorities.

His professional experience includes serving as the Global Oil and Gas Valuation Leader at Ernst & Young, as a Director at Berkeley Research Group, Texaco Inc., and as a partner in an oil and gas exploration and production company operating in Kansas.

EDUCATION, CERTIFICATIONS AND MEMBERSHIPS

Jim has dual BS degrees from Ft. Hays State University and an MBA from LeTourneau University. He is a Senior Member of the American Society of Appraisers (ASA - Certified in Technical Valuations - Oil and Gas) and a member of the Society of Petroleum Engineers. He has been named a "Who's Who in Energy" by the Houston Business Journal.

MIDSTREAM, DOWNSTREAM AND PETROCHEMICAL EXPERIENCE

His consulting services to the midstream, downstream and petrochemical sectors have included refinery, petrochemical and terminal valuations, useful life and depreciated replacement cost analysis, transaction multiples analysis, valuation of gas processing agreements, valuation of permits and emission credits, product inventory assessments, cost-of-capital and discount rate studies, crude and product supply contracts, general partnership and limited partnership equity valuations, and strategic transaction valuations for global crude and product terminal owners.

*Carrizo Oil and Gas, Inc.
Fair Value of Certain Oil and Gas Assets Acquired from Sanchez Energy
Corporation*

- ✓ Dozens of pipeline engagements for midstream MLP's. Assignments included purchase price allocations, partnership contributions and dropdowns, §704(b) book-ups, GP and LP stock acquisitions, pipeline and gas processing remaining life studies and intangible asset valuations. This included valuation of some of the largest pipelines in the US.
- ✓ Valuation of more than 60 global oil refineries for tax and financial reporting purchase price allocations, Federal and international tax structuring and litigation purposes.
- ✓ Valuation of several world-class petrochemical plants in the North America, Asia and Europe. Products included olefins and aromatics, intermediates and fine/specialty chemicals.
- ✓ Valuation of large crude and refined product pipelines and associated storage terminals in the US, Canada, Central and South America, Europe, Asia and Russia.
- ✓ Valuation of multi-billion dollar GP acquisitions. Analyses included possible distribution splits based upon growth forecasting using dividend discount modeling and Monte Carlo simulations.
- ✓ Valuation and market study of sell-side options of large coastal international crude and product terminal to assist major oil company client. Sensitivities included discount rate analyses of potential buyer capital structures, growth scenarios by product type and capex requirement analysis using Monte Carlo simulation.
- ✓ Valuation of gas processing agreements for purchase price allocation purposes. Agreements included keep-whole, fee-based, percent-of-proceeds arrangements and hybrid arrangements.
- ✓ Right-of-way valuations of pipelines and gathering systems.
- ✓ Valuation of global LNG terminals.
- ✓ Valuation of more than a dozen ethanol facilities for tax and financial reporting and litigation purposes.
- ✓ Anhydrous ammonia and ammonium nitrate facilities in the US, Caribbean and Canada.
- ✓ Valuation of more than 200,000 miles of onshore and offshore gas gathering systems.
- ✓ Gas reserve supply analysis for gas processing plants and gathering systems.
- ✓ Cost-of-capital modeling for MLP's using both CAPM and yield analysis.
- ✓ Replacement cost and depreciation studies of gas gathering systems, gas processing plants and field and station compression facilities.
- ✓ Valuation of gas processing plants in US and Canada.
- ✓ Valuation of more than a dozen gas salt dome and depleted-reservoir storage facilities in US and Canada.
- ✓ Valuation of line-fill and cushion gas on pipelines and gas storage facilities.
- ✓ Valuation of all global midstream and downstream assets (pipelines, terminals, 40+ refineries) of a super-major oil company for §861 tax purposes.
- ✓ Expert witness regarding value of gas gathering, gas processing plants, refineries and product terminals.
- ✓ Valuation of ethanol facilities in for purposes that included bankruptcy, tax and financial reporting.
- ✓ Valuation of coal mines in US and Eastern Europe. Valuations included both reserves and mining equipment.
- ✓ Valuation of coal, gas-fired and hydro-electric power generation facilities.

UPSTREAM OIL AND GAS EXPERIENCE

Jim's upstream valuation exploration and production valuation experience includes hundreds of valuations of oil and gas reserves throughout the United States and in dozens of other countries for mergers and acquisitions, Federal and International tax, financial reporting, bankruptcy and litigation purposes. Some of the North American fields he has worked in include Prudhoe Bay, Gulf of Mexico, Hugoton Gas Field, Central Kansas Uplift, and the Permian Basin. Some of his experience includes:

- ✓ Oil and gas asset valuations and business enterprise (equity) valuations of oil and gas companies; including analyses around market discount rates, transaction multiples, price forecasting and reserve bookings.
- ✓ As co-owner of an independent oil and gas company, performed all phases of oil and gas operations, including leasing, exploration, drilling, well completions and artificial stimulations, operating and lease accounting, and buying and selling of oil and gas working and royalty interests.
- ✓ Valuation of hundreds of thousands of acres of developed and undeveloped mineral acres, including shale gas reserves in Eagle Ford, Barnett, Utica and Marcellus shale.
- ✓ Valuation of ownership rights including complex overriding royalties, back-in carried working interests, volumetric production payments and preferred stock exchanges.
- ✓ Valuation due diligence for large public employee fund of large equity investment into Western Oklahoma Granite Wash, Cleveland and Tonkawa plays.
- ✓ Valuation of North and South American, Asian and African oil and gas reserves for major oil companies. Most of this work also entailed analysis and modeling of various PSC's and tax and concession arrangements.
- ✓ Performed expert testimony in US Federal court (Houston) on value of producing and non-producing oil and gas reserves in South Texas. Client was a major independent oil and gas company.
- ✓ Valuation of production equipment of more than 4,000 producing oil and gas wells and equipment for federal tax purposes.
- ✓ Analysis of intangible drilling costs (IDC's) involving turn-key drilling partnerships.
- ✓ Valuation of working interests in more than one hundred Barnett Shale gas wells for litigation purposes.
- ✓ Valuation of an oil and gas company in Colombia. Reserves included developed and undeveloped leases.
- ✓ Valuation of oil and gas reserves for bankruptcies, including shallow water Gulf of Mexico oil and gas company with value in excess of \$300 million.
- ✓ Valuation of private oil and gas partnerships for tax purposes, including one with more than 1,400 operated oil and gas wells, and over 1,000 overriding royalty interests.
- ✓ Due diligence of oil and gas transactions including analysis of reservoir decline, gas gathering and processing agreements, price hedges, lease operating expenses, and projected capex.

OILFIELD SERVICES EXPERIENCE

- ✓ Valuation of oil and gas service equipment and technology, ranging from commodity tool rentals, completion rigs and fracking equipment to seismic technology, seamless threading, logging, and other downhole tools and applications.

*Carrizo Oil and Gas, Inc.
Fair Value of Certain Oil and Gas Assets Acquired from Sanchez Energy
Corporation*

- ✓ Several valuations for clients of more than 250 offshore drilling rigs in Gulf of Mexico, South America, North Sea, West Africa, Middle East and Southeast Asia for purposes such as acquisitions, purchase price allocations, US and international tax structuring. Rigs valued included jack-ups, semi-submersibles and drillships.
- ✓ Valuations of hundreds of land drilling rigs (up to 3,000 horsepower) and completion/workover rigs in more than a dozen countries in North and South America, Central and Eastern Europe, Russia and Asia.
- ✓ Inspected offshore drilling rigs in Sea of Thailand, Gulf of Mexico, Singapore and North Sea.
- ✓ Developed valuation model to forecast dayrates and utilization for offshore drilling rigs using regression analysis of historical oil prices, correlated to dayrates and utilization by rig class, competitive growth and asset attrition and contract terms.
- ✓ Analysis of drilling contracts, renewal and dayrate probability, and commodity price effect on forecast.
- ✓ Represented client before IRS valuation engineers on value of offshore drilling rigs.
- ✓ Valuation of offshore oil and gas production facilities in Gulf of Mexico, West Africa, North Sea and Southeast Asia. Assets included fixed platforms, FPSO's and subsea oil and gas production facilities.
- ✓ Damage analysis for independent that declared force majeure on semi-submersible drilling rig in GOM.
- ✓ Market value studies of new and used onshore and offshore drilling rigs using transaction analysis.
- ✓ Business enterprise valuations of drilling and oilfield service companies.
- ✓ Damage analysis of force majeure on semi-submersible drilling rig in GOM.
- ✓ Business enterprise valuations of drilling and oilfield service companies.
- ✓ Analysis of intangible drilling costs (IDC's) involving turn-key drilling partnerships.

EXPERT WITNESS AND VALUATION FOR LEGAL MATTERS

- ✓ US Bankruptcy Court (Delaware) – Expert witness regarding value of a crude and product terminal at a Gulf Coast refinery.
- ✓ US Bankruptcy Court (Delaware) – Expert witness regarding value of refinery.
- ✓ District Court (Oklahoma City) – Expert witness regarding value of gas processing plants and associated gas gathering pipeline networks.
- ✓ Kansas State Board of Tax Appeals – Expert witness representing on the value of a Midcontinent crude refinery.
- ✓ US District Court (California) – Expert witness regarding value of Midwestern ethanol plant.
- ✓ US District Court (Kansas) – Expert witness regarding value of chemical company.
- ✓ Valuation expert on bankruptcy matter involving oil and gas reserves in Gulf of Mexico.
- ✓ US Federal Court (Texas) – Expert witness regarding value of developed and undeveloped reserves of large oil and gas fields in South Texas.
- ✓ US District Court (Texas) – Expert witness regarding value of non-operated working interests in Barnett Shale.
- ✓ US District Court (Illinois) – Expert witness regarding agriculture and steel economics.
- ✓ State Tax Appeals – Expert witness regarding Alaska North Slope oil and gas developments.

- ✓ Represented clients in Federal, state and local tax negotiations on several occasions regarding oil and gas valuation.

SELECTED SPEAKING ENGAGEMENTS

- 2014: Society of Petroleum Engineers
Hydrocarbon Evaluation and Economics Symposium
"Development of Discount Rates"
- 2014: Petroleum Accountants Society of Houston
Monthly Meeting
"Purchase Price Allocations: Book and Tax Differences"
- 2014: Financial Executives Institute of Houston
Annual Meeting
"Oil and Gas Price Outlook"
- 2013: American Society of Appraisers
Advanced Business Valuation Conference
"Oil and Gas Reserves: From Rock to Bank"
- 2013: American Society of Appraisers
Annual Oil and Gas School
"Oil and Gas Prices: History and Outlook"
- 2012: American Association of Drilling Contractors
International Tax Conference
"Oil and Gas Prices: Valuation Effect on Drillers?"
- 2012: American Society of Appraisers
Annual Oil and Gas School
"Fundamentals of Reservoir Analysis for Oil and Gas Valuation"
- 2012: Gardere Wynne and Sewell
Energy Luncheon Series
"Oil and Gas Outlook: How we got here and where we're headed"
- 2011: American Institute of Professional Geologists
Annual Conference
"Oil Prices, Currencies and Reserve Valuation"
- 2011: Petroleum Accountants Society of Houston
Annual Conference
"A Funny Thing Happened on the Way to the Bank"
- 2011: Tax Executives Institute
Annual Conference
"Oil, Gas, Money and Value"
- 2011: Haynes Boone
Energy Team
"Oil and Gas Valuation"
- 2010: Society of Petroleum Evaluation Engineers
Spring Meeting
"Currencies and Oil Prices – Where are we headed?"
- 2010: Society of Petroleum Engineers
International Oil and Gas Conference, Beijing, China
"Oil & Gas Prices and Outlook and Effect on Global Drillers"
- 2010: International Association of Drilling Contractors
Contracts and Risk Management Conference

Carrizo Oil and Gas, Inc.
Fair Value of Certain Oil and Gas Assets Acquired from Sanchez Energy
Corporation

"Economic Trends and the Effect on Oil and Gas Companies"

- 2010: Society of Petroleum Engineers
Business Development Conference
"Currencies and the Value-effect on Oil and Gas Price"
- 2009: Mergermarket
Energy M&A Conference (keynote speaker),
"Perspectives on Oil and Gas Trends and Prices"
- 2009: International Association of Drilling Contractors
International Tax Conference
"Oil and Gas Issues in Volatile Times"
- 2008: International Association of Drilling Contractors
International Tax Conference,
"Valuation of Offshore Drilling Rigs"
- 2007: International Association of Drilling Contractors
International Tax Conference,
"Current Issues in Drilling Rig Valuations"
- 2003: American Society of Appraisers
International Business Valuation Conference,
"Oil and Gas Valuation Using Monte Carlo Simulations"

SELECTED ARTICLES

Canadian Institute of Chartered Business Valuators

Probabilities and Sensitivity Analysis in Oil and Gas Valuation

Society of Petroleum Engineers

Currencies and their Effect on the Oil Industry

His articles have also appeared in Oilpro.com, Colorado Energy News and Iraqi Economists Network. Jim was listed by the American City Business Journals as a "Who's Who in Energy" in 2014.

ALTUS GROUP US INC.

FMV Assessment of Doddridge County, WV Gas Wells

Held by Antero Resources Corporation

As of July 1, 2016



Specialty Services Group

ALTUS GROUP US INC.

Fair Market Value Assessment - Antero Resources Corp.

Table of Contents

Valuation as of July 1, 2016

 **HEIN**

Reference #	Exhibit Description
Exhibit 1	FMV Conclusion
Exhibit 2	FMV Detail
Exhibit 3	FMV Comparison
Exhibit 4	Discount Rate Derivation

ALTUS GROUP US INC.**Exhibit 1****Fair Market Value Assessment - Antero Resources Corp.**

EMV Conclusion

Valuation as of July 1, 2016**Income Approach Summary**

County	Well Count ^[1]	Fair Market Value ^[2]
Doddridge	199	\$ 202,700,990
Total	199	\$ 202,700,990

Notes to Exhibit^[1] As provided by management. See Exhibit 3.^[2] See Exhibit 3.

NETUS GROUP US INC.

For Market Value Assessment - Antares Resources Corp.

Valuation as of 10/01/2015

Asset Name		County	900 ±	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28	V29	V30	V31	V32	V33	V34	V35	V36	V37	V38	V39	V40	V41	V42	V43	V44	V45	V46	V47	V48	V49	V50	V51	V52	V53	V54	V55	V56	V57	V58	V59	V60	V61	V62	V63	V64	V65	V66	V67	V68	V69	V70	V71	V72	V73	V74	V75	V76	V77	V78	V79	V80	V81	V82	V83	V84	V85	V86	V87	V88	V89	V90	V91	V92	V93	V94	V95	V96	V97	V98	V99	V100	V101	V102	V103	V104	V105	V106	V107	V108	V109	V110	V111	V112	V113	V114	V115	V116	V117	V118	V119	V120	V121	V122	V123	V124	V125	V126	V127	V128	V129	V130	V131	V132	V133	V134	V135	V136	V137	V138	V139	V140	V141	V142	V143	V144	V145	V146	V147	V148	V149	V150	V151	V152	V153	V154	V155	V156	V157	V158	V159	V160	V161	V162	V163	V164	V165	V166	V167	V168	V169	V170	V171	V172	V173	V174	V175	V176	V177	V178	V179	V180	V181	V182	V183	V184	V185	V186	V187	V188	V189	V190	V191	V192	V193	V194	V195	V196	V197	V198	V199	V200	V201	V202	V203	V204	V205	V206	V207	V208	V209	V210	V211	V212	V213	V214	V215	V216	V217	V218	V219	V220	V221	V222	V223	V224	V225	V226	V227	V228	V229	V230	V231	V232	V233	V234	V235	V236	V237	V238	V239	V240	V241	V242	V243	V244	V245	V246	V247	V248	V249	V250	V251	V252	V253	V254	V255	V256	V257	V258	V259	V260	V261	V262	V263	V264	V265	V266	V267	V268	V269	V270	V271	V272	V273	V274	V275	V276	V277	V278	V279	V280	V281	V282	V283	V284	V285	V286	V287	V288	V289	V290	V291	V292	V293	V294	V295	V296	V297	V298	V299	V300	V301	V302	V303	V304	V305	V306	V307	V308	V309	V310	V311	V312	V313	V314	V315	V316	V317	V318	V319	V320	V321	V322	V323	V324	V325	V326	V327	V328	V329	V330	V331	V332	V333	V334	V335	V336	V337	V338	V339	V340	V341	V342	V343	V344	V345	V346	V347	V348	V349	V350	V351	V352	V353	V354	V355	V356	V357	V358	V359	V360	V361	V362	V363	V364	V365	V366	V367	V368	V369	V370	V371	V372	V373	V374	V375	V376	V377	V378	V379	V380	V381	V382	V383	V384	V385	V386	V387	V388	V389	V390	V391	V392	V393	V394	V395	V396	V397	V398	V399	V400	V401	V402	V403	V404	V405	V406	V407	V408	V409	V410	V411	V412	V413	V414	V415	V416	V417	V418	V419	V420	V421	V422	V423	V424	V425	V426	V427	V428	V429	V430	V431	V432	V433	V434	V435	V436	V437	V438	V439	V440	V441	V442	V443	V444	V445	V446	V447	V448	V449	V450	V451	V452	V453	V454	V455	V456	V457	V458	V459	V460	V461	V462	V463	V464	V465	V466	V467	V468	V469	V470	V471	V472	V473	V474	V475	V476	V477	V478	V479	V480	V481	V482	V483	V484	V485	V486	V487	V488	V489	V490	V491	V492	V493	V494	V495	V496	V497	V498	V499	V500	V501	V502	V503	V504	V505	V506	V507	V508	V509	V510	V511	V512	V513	V514	V515	V516	V517	V518	V519	V520	V521	V522	V523	V524	V525	V526	V527	V528	V529	V530	V531	V532	V533	V534	V535	V536	V537	V538	V539	V540	V541	V542	V543	V544	V545	V546	V547	V548	V549	V550	V551	V552	V553	V554	V555	V556	V557	V558	V559	V560	V561	V562	V563	V564	V565	V566	V567	V568	V569	V570	V571	V572	V573	V574	V575	V576	V577	V578	V579	V580	V581	V582	V583	V584	V585	V586	V587	V588	V589	V590	V591	V592	V593	V594	V595	V596	V597	V598	V599	V600	V601	V602	V603	V604	V605	V606	V607	V608	V609	V610	V611	V612	V613	V614	V615	V616	V617	V618	V619	V620	V621	V622	V623	V624	V625	V626	V627	V628	V629	V630	V631	V632	V633	V634	V635	V636	V637	V638	V639	V640	V641	V642	V643	V644	V645	V646	V647	V648	V649	V650	V651	V652	V653	V654	V655	V656	V657	V658	V659	V660	V661	V662	V663	V664	V665	V666	V667	V668	V669	V670	V671	V672	V673	V674	V675	V676	V677	V678	V679	V680	V681	V682	V683	V684	V685	V686	V687	V688	V689	V690	V691	V692	V693	V694	V695	V696	V697	V698	V699	V700	V701	V702	V703	V704	V705	V706	V707	V708	V709	V710	V711	V712	V713	V714	V715	V716	V717	V718	V719	V720	V721	V722	V723	V724	V725	V726	V727	V728	V729	V730	V731	V732	V733	V734	V735	V736	V737	V738	V739	V740	V741	V742	V743	V744	V745	V746	V747	V748	V749	V750	V751	V752	V753	V754	V755	V756	V757	V758	V759	V760	V761	V762	V763	V764	V765	V766	V767	V768	V769	V770	V771	V772	V773	V774	V775	V776	V777	V778	V779	V780	V781	V782	V783	V784	V785	V786	V787	V788	V789	V790	V791	V792	V793	V794	V795	V796	V797	V798	V799	V800	V801	V802	V803	V804	V805	V806	V807	V808	V809	V810	V811	V812	V813	V814	V815	V816	V817	V818	V819	V820	V821	V822	V823	V824	V825	V826	V827	V828	V829	V830	V831	V832	V833	V834	V835	V836	V837	V838	V839	V840	V841	V842	V843	V844	V845	V846	V847	V848	V849	V850	V851	V852	V853	V854	V855	V856	V857	V858	V859	V860	V861	V862	V863	V864	V865	V866	V867	V868	V869	V870	V871	V872	V873	V874	V875	V876	V877	V878	V879	V880	V881	V882	V883	V884	V885	V886	V887	V888	V889	V890	V891	V892	V893	V894	V895	V896	V897	V898	V899	V900	V901	V902	V903	V904	V905	V906	V907	V908	V909	V910	V911	V912	V913	V914	V915	V916	V917	V918	V919	V920	V921	V922	V923	V924	V925	V926	V927	V928	V929	V930	V931	V932	V933	V934	V935	V936	V937	V938	V939	V940	V941	V942	V943	V944	V945	V946	V947	V948	V949	V950	V951	V952	V953	V954	V955	V956	V957	V958	V959	V960	V961	V962	V963	V964	V965	V966	V967	V968	V969	V970	V971	V972	V973	V974	V975	V976	V977	V978	V979	V980	V981	V982	V983	V984	V985	V986	V987	V988	V989	V990	V991	V992	V993	V994	V995	V996	V997	V998	V999	V1000

100

[illegible]

Ref Name	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Algeria (14)	622	528	517	588	582	638	622	725	744	782	782	828	858	928	978	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728
Algeria (15)	628	538	527	598	592	648	632	745	764	802	802	848	878	948	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748
Algeria (16)	638	548	537	608	602	658	642	755	774	812	812	858	888	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758
Algeria (17)	648	558	547	618	612	668	652	765	784	822	822	868	898	968	1018	1068	1118	1168	1218	1268	1318	1368	1418	1468	1518	1568	1618	1668	1718	1768
Algeria (18)	658	568	557	628	622	678	662	775	794	832	832	878	908	978	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778
Algeria (19)	668	578	567	638	632	688	672	785	804	842	842	888	918	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788
Algeria (20)	678	588	577	648	642	698	682	795	814	852	852	898	928	998	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798
Algeria (21)	688	598	587	658	652	708	692	805	824	862	862	908	938	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808
Algeria (22)	698	608	597	668	662	718	702	815	834	872	872	918	948	1018	1068	1118	1168	1218	1268	1318	1368	1418	1468	1518	1568	1618	1668	1718	1768	1818
Algeria (23)	708	618	607	678	672	728	712	825	844	882	882	928	958	1028	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778	1828
Algeria (24)	718	628	617	688	682	738	722	835	854	892	892	938	968	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838
Algeria (25)	728	638	627	698	692	748	732	845	864	902	902	948	978	1048	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848
Algeria (26)	738	648	637	708	702	758	742	855	874	912	912	958	988	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858
Algeria (27)	748	658	647	718	712	768	752	865	884	922	922	968	998	1068	1118	1168	1218	1268	1318	1368	1418	1468	1518	1568	1618	1668	1718	1768	1818	1868
Algeria (28)	758	668	657	728	722	778	762	875	894	932	932	978	1008	1078	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778	1828	1878
Algeria (29)	768	678	667	738	732	788	772	885	904	942	942	988	1018	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888
Algeria (30)	778	688	677	748	742	798	782	895	914	952	952	998	1028	1098	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898
Algeria (31)	788	698	687	758	752	808	792	905	924	962	962	1008	1038	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
Algeria (32)	798	708	697	768	762	818	802	915	934	972	972	1018	1048	1118	1168	1218	1268	1318	1368	1418	1468	1518	1568	1618	1668	1718	1768	1818	1868	1918
Algeria (33)	808	718	707	778	772	828	812	925	944	982	982	1028	1058	1128	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778	1828	1878	1928
Algeria (34)	818	728	717	788	782	838	822	935	954	992	992	1038	1068	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
Algeria (35)	828	738	727	798	792	848	832	945	964	1002	1002	1048	1078	1148	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898	1948
Algeria (36)	838	748	737	808	802	858	842	955	974	1012	1012	1058	1088	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908	1958
Algeria (37)	848	758	747	818	812	868	852	965	984	1022	1022	1068	1098	1168	1218	1268	1318	1368	1418	1468	1518	1568	1618	1668	1718	1768	1818	1868	1918	1968
Algeria (38)	858	768	757	828	822	878	862	975	994	1032	1032	1078	1108	1178	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778	1828	1878	1928	1978
Algeria (39)	868	778	767	838	832	888	872	985	1004	1042	1042	1088	1118	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938	1988
Algeria (40)	878	788	777	848	842	898	882	995	1014	1052	1052	1098	1128	1198	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898	1948	1998
Algeria (41)	888	798	787	858	852	908	892	1005	1024	1062	1062	1108	1138	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908	1958	2008
Algeria (42)	898	808	797	868	862	918	902	1015	1034	1072	1072	1118	1148	1218	1268	1318	1368	1418	1468	1518	1568	1618	1668	1718	1768	1818	1868	1918	1968	2018
Algeria (43)	908	818	807	878	872	928	912	1025	1044	1082	1082	1128	1158	1228	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778	1828	1878	1928	1978	2028
Algeria (44)	918	828	817	888	882	938	922	1035	1054	1092	1092	1138	1168	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938	1988	2038
Algeria (45)	928	838	827	898	892	948	932	1045	1064	1102	1102	1148	1178	1248	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898	1948	1998	2048
Algeria (46)	938	848	837	908	902	958	942	1055	1074	1112	1112	1158	1188	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908	1958	2008	2058
Algeria (47)	948	858	847	918	912	968	952	1065	1084	1122	1122	1168	1198	1268	1318	1368	1418	1468	1518	1568	1618	1668	1718	1768	1818	1868	1918	1968	2018	2068
Algeria (48)	958	868	857	928	922	978	962	1075	1094	1132	1132	1178	1208	1278	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778	1828	1878	1928	1978	2028	2078
Algeria (49)	968	878	867	938	932	988	972	1085	1104	1142	1142	1188	1218	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938	1988	2038	2088
Algeria (50)	978	888	877	948	942	998	982	1095	1114	1152	1152	1198	1228	1298	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898	1948	1998	2048	2098
Algeria (51)	988	898	887	958	952	1008	992	1105	1124	1162	1162	1208	1238	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908	1958	2008	2058	2108
Algeria (52)	998	908	897	968	962	1018	1002	1115	1134	1172	1172	1218	1248	1318	1368	1418	1468	1518	1568	1618	1668	1718	1768	1818	1868	1918	1968	2018	2068	2118
Algeria (53)	1008	918	907	978	972	1028	1012	1125	1144	1182	1182	1228	1258	1328	1378	1428	1478	1528	1578	1628	1678	1728	1778	1828	1878	1928	1978	2028	2078	2128
Algeria (54)	1018	928	917	988	982	1038	1022	1135	1154	1192	1192	1238	1268	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938	1988	2038	2088	2138
Algeria (55)	1028	938	927	998	992	1048	1032	1145	1164	1202	1202	1248	1278	1348	1398	1448	1498	1548	1598	1648	1698	1748	1798	1848	1898	1948	1998	2048	2098	2148
Algeria (56)	1038	948	937	1008	1002	1058	1042	1155	1174	1212	1212	1258	1288	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908	1958	2008	2058	2108	2158
Algeria (57)	1048	958	947	1018	1012	1068	1052	1165	1184	1222	1222	1268	1298	1368	1418	1468	1518	1568	1618	1668	1718	1768	1818	1868	1918	1968	2018	2068		

Year	Month	Day	Time	Location	Activity	Remarks
2015	1	1	08:00	...	...	...
2015	1	2	08:00	...	...	...
2015	1	3	08:00	...	...	...
2015	1	4	08:00	...	...	...
2015	1	5	08:00	...	...	...
2015	1	6	08:00	...	...	...
2015	1	7	08:00	...	...	...
2015	1	8	08:00	...	...	...
2015	1	9	08:00	...	...	...
2015	1	10	08:00	...	...	...
2015	1	11	08:00	...	...	...
2015	1	12	08:00	...	...	...
2015	1	13	08:00	...	...	...
2015	1	14	08:00	...	...	...
2015	1	15	08:00	...	...	...
2015	1	16	08:00	...	...	...
2015	1	17	08:00	...	...	...
2015	1	18	08:00	...	...	...
2015	1	19	08:00	...	...	...
2015	1	20	08:00	...	...	...
2015	1	21	08:00	...	...	...
2015	1	22	08:00	...	...	...
2015	1	23	08:00	...	...	...
2015	1	24	08:00	...	...	...
2015	1	25	08:00	...	...	...
2015	1	26	08:00	...	...	...
2015	1	27	08:00	...	...	...
2015	1	28	08:00	...	...	...
2015	1	29	08:00	...	...	...
2015	1	30	08:00	...	...	...
2015	1	31	08:00	...	...	...
2015	2	1	08:00	...	...	...
2015	2	2	08:00	...	...	...
2015	2	3	08:00	...	...	...
2015	2	4	08:00	...	...	...
2015	2	5	08:00	...	...	...
2015	2	6	08:00	...	...	...
2015	2	7	08:00	...	...	...
2015	2	8	08:00	...	...	...
2015	2	9	08:00	...	...	...
2015	2	10	08:00	...	...	...
2015	2	11	08:00	...	...	...
2015	2	12	08:00	...	...	...
2015	2	13	08:00	...	...	...
2015	2	14	08:00	...	...	...
2015	2	15	08:00	...	...	...
2015	2	16	08:00	...	...	...
2015	2	17	08:00	...	...	...
2015	2	18	08:00	...	...	...
2015	2	19	08:00	...	...	...
2015	2	20	08:00	...	...	...
2015	2	21	08:00	...	...	...
2015	2	22	08:00	...	...	...
2015	2	23	08:00	...	...	...
2015	2	24	08:00	...	...	...
2015	2	25	08:00	...	...	...
2015	2	26	08:00	...	...	...
2015	2	27	08:00	...	...	...
2015	2	28	08:00	...	...	...
2015	2	29	08:00	...	...	...
2015	2	30	08:00	...	...	...
2015	3	1	08:00	...	...	...
2015	3	2	08:00	...	...	...
2015	3	3	08:00	...	...	...
2015	3	4	08:00	...	...	...
2015	3	5	08:00	...	...	...
2015	3	6	08:00	...	...	...
2015	3	7	08:00	...	...	...
2015	3	8	08:00	...	...	...
2015	3	9	08:00	...	...	...
2015	3	10	08:00	...	...	...
2015	3	11	08:00	...	...	...
2015	3	12	08:00	...	...	...
2015	3	13	08:00	...	...	...
2015	3	14	08:00	...	...	...
2015	3	15	08:00	...	...	...
2015	3	16	08:00	...	...	...
2015	3	17	08:00	...	...	...</

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095																			
1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

TRV Deal
 to include stock of July 1, 2016

Year/Period	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341	3342	3343	3344	3345	3346	3347	3348	3349	3350	3351	3352	3353	3354	3355	3356	3357	3358	3359	3360	3361	3362	3363	3364	3365	3366	3367	3368	

ALFARO SECURITIES INC.
Fair Market Value Asset

FY Detail
Values as of July 1, 2015

Acq. Date	2015	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341	3342	3343	3344	3345	3346	3347	3348	3349	3350	3351	3352	3353	3354	3355	3356	3357	3358	3359	3360	3361	3362	3363	3364	3365

FMV Detail

9102-17 July 1968

[illegible]

NAME	DOB	4017	30M	27.5	25	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458	1457	1456	1455	1454	1453	1452	1451	1450	1449	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410	1409	1408	1407	1406	1405	1404	1403	1402	1401	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296	1295	1294	1293	1292	1291	1290	1289	1288	1287	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268	1267	1266	1265	1264	1263	1262	1261	1260	1259	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174	1173	1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062	1061	1060	1059	1058	1057	1056	1055	1054	1053	1052	1051	1050	1049	1048	1047	1046	1045	1044	1043	1042	1041	1040	1039	1038	1037	1036	1035	1034	1033	1032	1031	1030	1029	1028	1027	1026	1025	1024	1023	1022	1021	1020	1019	1018	1017	1016	1015	1014	1013	1012	1011	1010	1009	1008	1007	1006	1005	1004	1003	1002	1001	1000	999	998	997	996	995	994	993	992	991	990	989	988	987	986	985	984	983	982	981	980	979	978	977	976	975	974	973	972	971	970	969	968	967	966	965	964	963	962	961	960	959	958	957	956	955	954	953	952	951	950	949	948	947	946	945	944	943	942	941	940	939	938	937	936	935	934	933	932	931	930	929	928	927	926	925	924	923	922	921	920	919	918	917	916	915	914	913	912	911	910	909	908	907	906	905	904	903	902	901	900	899	898	897	896	895	894	893	892	891	890	889	888	887	886	885	884	883	882	881	880	879	878	877	876	875	874	873	872	871	870	869	868	867	866	865	864	863	862	861	860	859	858	857	856	855	854	853	852	851	850	849	848	847	846	845	844	843	842	841	840	839	838	837	836	835	834	833	832	831	830	829	828	827	826	825	824	823	822	821	820	819	818	817	816	815	814	813	812	811	810	809	808	807	806	805	804	803	802	801	800	799	798	797	796	795	794	793	792	791	790	789	788	787	786	785	784	783	782	781	780	779	778	777	776	775	774	773	772	771	770	769	768	767	766	765	764	763	762	761	760	759	758	757	756	755	754	753	752	751	750	749	748	747	746	745	744	743	742	741	740	739	738	737	736	735	734	733	732	731	730	729	728	727	726	725	724	723	722	721	720	719	718	717	716	715	714	713	712	711	710	709	708	707	706	705	704	703	702	701	700	699	698	697	696	695	694	693	692	691	690	689	688	687	686	685	684	683	682	681	680	679	678	677	676	675	674	673	672	671	670	669	668	667	666	665	664	663	662	661	660	659	658	657	656	655	654	653	652	651	650	649	648	647	646	645	644	643	642	641	640	639	638	637	636	635	634	633	632	631	630	629	628	627	626	625	624	623	622	621	620	619	618	617	616	615	614	613	612	611	610	609

Account	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	3331	3332	3333	3334	3335	3336	3337	3338	3339	3340	3341	3342	3343	3344	3345	3346	3347	3348	3349	3350	3351	3352	3353	3354	3355	3356	3357	3358	3359	3360

Violation of Article 1, Zurich

WYOMING	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	
132	139	141	147	152	157	161	165	169	173	176	179	182	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245
133	140	142	148	153	158	162	166	170	174	177	180	183	186	189	192	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246
134	141	143	149	154	159	163	167	171	175	178	181	184	187	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247
135	142	144	150	155	160	164	168	172	176	179	182	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248
136	143	145	151	156	161	165	169	173	177	180	183	186	189	192	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249
137	144	146	152	157	162	166	170	174	178	181	184	187	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250
138	145	147	153	158	163	167	171	175	179	182	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251
139	146	148	154	159	164	168	172	176	180	183	186	189	192	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252
140	147	149	155	160	165	169	173	177	181	184	187	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253
141	148	150	156	161	166	170	174	178	182	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254
142	149	151	157	162	167	171	175	179	183	186	189	192	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255
143	150	152	158	163	168	172	176	180	184	187	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256
144	151	153	159	164	169	173	177	181	185	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257
145	152	154	160	165	170	174	178	182	186	189	192	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258
146	153	155	161	166	171	175	179	183	187	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259
147	154	156	162	167	172	176	180	184	188	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260
148	155	157	163	168	173	177	181	185	189	192	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261
149	156	158	164	169	174	178	182	186	190	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262
150	157	159	165	170	175	179	183	187	191	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263
151	158	160	166	171	176	180	184	188	192	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264
152	159	161	167	172	177	181	185	189	193	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262	265
153	160	162	168	173	178	182	186	190	194	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263	266
154	161	163	169	174	179	183	187	191	195	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	267
155	162	164	170	175	180	184	188	192	196	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262	265	268
156	163	165	171	176	181	185	189	193	197	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263	266	269
157	164	166	172	177	182	186	190	194	198	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	267	270
158	165	167	173	178	183	187	191	195	199	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262	265	268	271
159	166	168	174	179	184	188	192	196	200	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263	266	269	272
160	167	169	175	180	185	189	193	197	201	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	267	270	273
161	168	170	176	181	186	190	194	198	202	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262	265	268	271	274
162	169	171	177	182	187	191	195	199	203	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263	266	269	272	275
163	170	172	178	183	188	192	196	200	204	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	267	270	273	276
164	171	173	179	184	189	193	197	201	205	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262	265	268	271	274	277
165	172	174	180	185	190	194	198	202	206	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263	266	269	272	275	278
166	173	175	181	186	191	195	199	203	207	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	267	270	273	276	279
167	174	176	182	187	192	196	200	204	208	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262	265	268	271	274	277	280
168	175	177	183	188	193	197	201	205	209	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263	266	269	272	275	278	281
169	176	178	184	189	194	198	202	206	210	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	267	270	273	276	279	282
170	177	179	185	190	195	199	203	207	211	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262	265	268	271	274	277	280	283
171	178	180	186	191	196	200	204	208	212	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263	266	269	272	275	278	281	284
172	179	181	187	192	197	201	205	209	213	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	267	270	273	276	279	282	285
173	180	182	188	193	198	202	206	210	214	217	220	223	226	229	232	235	238	241	244	247	250	253	256	259	262	265	268	271	274	277	280	283	286
174	181	183	189	194	199	203	207	211	215	218	221	224	227	230	233	236	239	242	245	248	251	254	257	260	263	266	269	272	275	278	281	284	287
175	182	184	190	195	200	204	208	212	216	219	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	2							

Year		2019	2017	2015	2013	2011	2009	2007	2005	2003	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458	1457	1456	1455	1454	1453	1452	1451	1450	1449	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410	1409	1408	1407	1406	1405	1404	1403	1402	1401	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296	1295	1294	1293	1292	1291	1290	1289	1288	1287	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268	1267	1266	1265	1264	1263	1262	1261	1260	1259	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174	1173	1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062	1061	1060	1059	1058	1057	1056	1055	1054	1053	1052	1051	1050	1049	1048	1047	1046	1045	1044	1043	1042	1041	1040	1039	1038	1037	1036	1035	1034	1033	1032	1031	1030	1029	1028	1027	1026	1025	1024	1023	1022	1021	1020	1019	1018	1017	1016	1015	1014	1013	1012	1011	1010	1009	1008	1007	1006	1005	1004	1003	1002	1001	1000	999	998	997	996	995	994	993	992	991	990	989	988	987	986	985	984	983	982	981	980	979	978	977	976	975	974	973	972	971	970	969	968	967	966	965	964	963	962	961	960	959	958	957	956	955	954	953	952	951	950	949	948	947	946	945	944	943	942	941	940	939	938	937	936	935	934	933	932	931	930	929	928	927	926	925	924	923	922	921	920	919	918	917	916	915	914	913	912	911	910	909	908	907	906	905	904	903	902	901	900	899	898	897	896	895	894	893	892	891	890	889	888	887	886	885	884	883	882	881	880	879	878	877	876	875	874	873	872	871	870	869	868	867	866	865	864	863	862	861	860	859	858	857	856	855	854	853	852	851	850	849	848	847	846	845	844	843	842	841	840	839	838	837	836	835	834	833	832	831	830	829	828	827	826	825	824	823	822	821	820	819	818	817	816	815	814	813	812	811	810	809	808	807	806	805	804	803	802	801	800	799	798	797	796	795	794	793	792	791	790	789	788	787	786	785	784	783	782	781	780	779	778	777	776	775	774	773	772	771	770	769	768	767	766	765	764	763	762	761	760	759	758	757	756	755	754	753	752	751	750	749	748	747	746	745	744	743	742	741	740	739	738	737	736	735	734	733	732	731	730	729	728	727	726	725	724	723	722	721	720	719	718	717	716	715	714	713	712	711	710	709	708	707	706	705	704	703	702	701	700	699	698	697	696	695	694	693	692	691	690	689	688	687	686	685	684	683	682	681	680	679	678	677	676	675	674	673	672	671	670	669	668	667	666	665	664	663	662	661	660	659	658	657	656	655	654	653	652	651	650	649	648	647	646	645	644	643	642	641	640	639	638	637	636	635	634	633	632	631	630	629	628	627	626	625	624	623	622	621	620	619	618	617	616	615	614	613	612	611	610	609	608	607	606	605	604	603	602	601	600	599	598	597	596	595	594	593	592	591

STATS GROUP INC.

Fair Market Value As of 7/1/2016

FMV Based

Valuation as of July 1, 2016

Wellhead	NAVS	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Adrian Unit 1H	0420160001	134	144	153	161	169	176	183	189	195	201	207	213	219	225	231	237	243	249	255	261	267	273	279	285	291	297	303	309	315	321	327	333	339	345	351	357	363	369	375	381	387	393	399	405	411	417	423	429	435	441	447	453	459	465	471	477	483	489	495	501	507	513	519	525	531	537	543	549	555	561	567	573	579	585	591	597	603	609	615	621	627	633	639	645	651	657	663	669	675	681	687	693	699	705	711	717	723	729	735	741	747	753	759	765	771	777	783	789	795	801	807	813	819	825	831	837	843	849	855	861	867	873	879	885	891	897	903	909	915	921	927	933	939	945	951	957	963	969	975	981	987	993	999	1005	1011	1017	1023	1029	1035	1041	1047	1053	1059	1065	1071	1077	1083	1089	1095	1101	1107	1113	1119	1125	1131	1137	1143	1149	1155	1161	1167	1173	1179	1185	1191	1197	1203	1209	1215	1221	1227	1233	1239	1245	1251	1257	1263	1269	1275	1281	1287	1293	1299	1305	1311	1317	1323	1329	1335	1341	1347	1353	1359	1365	1371	1377	1383	1389	1395	1401	1407	1413	1419	1425	1431	1437	1443	1449	1455	1461	1467	1473	1479	1485	1491	1497	1503	1509	1515	1521	1527	1533	1539	1545	1551	1557	1563	1569	1575	1581	1587	1593	1599	1605	1611	1617	1623	1629	1635	1641	1647	1653	1659	1665	1671	1677	1683	1689	1695	1701	1707	1713	1719	1725	1731	1737	1743	1749	1755	1761	1767	1773	1779	1785	1791	1797	1803	1809	1815	1821	1827	1833	1839	1845	1851	1857	1863	1869	1875	1881	1887	1893	1899	1905	1911	1917	1923	1929	1935	1941	1947	1953	1959	1965	1971	1977	1983	1989	1995	2001	2007	2013	2019	2025	2031	2037	2043	2049	2055	2061	2067	2073	2079	2085	2091	2097	2103	2109	2115	2121	2127	2133	2139	2145	2151	2157	2163	2169	2175	2181	2187	2193	2199	2205	2211	2217	2223	2229	2235	2241	2247	2253	2259	2265	2271	2277	2283	2289	2295	2301	2307	2313	2319	2325	2331	2337	2343	2349	2355	2361	2367	2373	2379	2385	2391	2397	2403	2409	2415	2421	2427	2433	2439	2445	2451	2457	2463	2469	2475	2481	2487	2493	2499	2505	2511	2517	2523	2529	2535	2541	2547	2553	2559	2565	2571	2577	2583	2589	2595	2601	2607	2613	2619	2625	2631	2637	2643	2649	2655	2661	2667	2673	2679	2685	2691	2697	2703	2709	2715	2721	2727	2733	2739	2745	2751	2757	2763	2769	2775	2781	2787	2793	2799	2805	2811	2817	2823	2829	2835	2841	2847	2853	2859	2865	2871	2877	2883	2889	2895	2901	2907	2913	2919	2925	2931	2937	2943	2949	2955	2961	2967	2973	2979	2985	2991	2997	3003	3009	3015	3021	3027	3033	3039	3045	3051	3057	3063	3069	3075	3081	3087	3093	3099	3105	3111	3117	3123	3129	3135	3141	3147	3153	3159	3165	3171	3177	3183	3189	3195	3201	3207	3213	3219	3225	3231	3237	3243	3249	3255	3261	3267	3273	3279	3285	3291	3297	3303	3309	3315	3321	3327	3333	3339	3345	3351	3357	3363	3369	3375	3381	3387	3393	3399	3405	3411	3417	3423	3429	3435	3441	3447	3453	3459	3465	3471	3477	3483	3489	3495	3501	3507	3513	3519	3525	3531	3537	3543	3549	3555	3561	3567	3573	3579	3585	3591	3597	3603	3609	3615	3621	3627	3633	3639	3645	3651	3657	3663	3669	3675	3681	3687	3693	3699	3705	3711	3717	3723	3729	3735	3741	3747	3753	3759	3765	3771	3777	3783	3789	3795	3801	3807	3813	3819	3825	3831	3837	3843	3849	3855	3861	3867	3873	3879	3885	3891	3897	3903	3909	3915	3921	3927	3933	3939	3945	3951	3957	3963	3969	3975	3981	3987	3993	3999	4005	4011	4017	4023	4029	4035	4041	4047	4053	4059	4065	4071	4077	4083	4089	4095	4101	4107	4113	4119	4125	4131	4137	4143	4149	4155	4161	4167	4173	4179	4185	4191	4197	4203	4209	4215	4221	4227	4233	4239	4245	4251	4257	4263	4269	4275	4281	4287	4293	4299	4305	4311	4317	4323	4329	4335	4341	4347	4353	4359	4365	4371	4377	4383	4389	4395	4401	4407	4413	4419	4425	4431	4437	4443	4449	4455	4461	4467	4473	4479	4485	4491	4497	4503	4509	4515	4521	4527	4533	4539	4545	4551	4557	4563	4569	4575	4581	4587	4593	4599	4605	4611	4617	4623	4629	4635	4641	4647	4653	4659	4665	4671	4677	4683	4689	4695	4701	4707	4713	4719	4725	4731	4737	4743	4749	4755	4761	4767	4773	4779	4785	4791	4797	4803	4809	4815	4821	4827	4833	4839	4845	4851	4857	4863	4869	4875	4881	4887	4893	4899	4905	4911	4917	4923	4929	4935	4941	4947	4953	4959	4965	4971	4977	4983	4989	4995	5001	5007	5013	5019	5025	5031	5037	5043	5049	5055	5061	5067	5073	5079	5085	5091	5097	5103	5109	5115	5121	5127	5133	5139	5145	5151	5157	5163	5169	5175	5181	5187	5193	5199	5205	5211	5217	5223	5229	5235	5241	5247	5253	5259	5265	5271	5277	5283	5289	5295	5301	5307	5313	5319	5325	5331	5337	5343	5349	5355	5361	5367	5373	5379	5385	5391	5397	5403	5409	5415	5421	5427	5433	5439	5445	5451	5457	5463	5469	5475	5481	5487	5493	5499	5505	5511	5517	5523	5529	5535	5541	5547	5553	5559	5565	5571	5577	5583	5589	5595	5601	5607	5613	5619	5625	5631	5637	5643	5649	5655	5661	5667	5673	5679	5685	5691	5697	5703	5709	5715	5721	5727	5733	5739	5745	5751	5757	5763	5769	5775	5781	5787	5793	5799	5805	5811	5817	5823	5829	5835	5841	5847	5853	5859	5865	5871	5877	5883	5889	5895	5901	5907	5913	5919	5925	5931	5937	5943	5949	5955	5961	5967	5973	5979	5985	5991	5997	6003	6009	6015	6021	6027	6033	6039	6045	6051	6057	6063	6069	6075	6081	6087	6093	6099	6105	6111	6117	6123	6129	6135	6141	6147	6153	6159	6165	6171	6177	6183	6189	6195	6201	6207	6213	6219	6225	6231	6237	6243	6249	6255	6261	6267	6273	6279	6285	6291	6297	6303	6309	6315	6321	6327	6333	6339	6345	6351	6357	6363	6369	6375	6381	6387	6393	6399	6405	6411	6417	6423	6429	6435	6441	6447	6453	6459	6465	6471	6477	6483	6489	6495	6501	6507	6513	6519	6525	6531	6537	6543	6549	6555	6561	6567	6573	6579	6585	6591	6597	6603	6609	6615	6621	6627	6633	6639	6645	6651	6657	6663	6669	6675	6681	6687	6693	6699	6705	6711	6717	6723	6729	6735	6741	6747	6753	6759	6765	6771	6777	6783	6789	6795	6801	6807	6813	6819	6825	6831	6837	6843	6849	6855	6861	6867	6873	6879	6885	6891	6897	6903	6909	6915	6921	6927	6933	6939	6945	6951	6957	6963	6969	6975	6981	6987	6993	6999	7005	7011	7017	7023	7029	7035	7041	7047	7053	7059	7065	7071	7077	7083	7089	7095	7101	7107	7113	7119	7125	7131	7137	7143	7149	7155	7161	7167	7173	7179	7185	7191	7197	7203	7209	7215	7221	7227	7233	7239	7245	7251	7257	7263	7269	7275	7281	7287	7293	7299	7305	7311	7317	7323	7329	7335	7341	7347	7353	7359	7365	7371	7377	7383	7389	7395	7401	7407	7413	7419	7425	7431	7437	7443	7449	7455	7461	7467	7473	7479	7485	7491	7497	7503	7509	7515	7521	7527	7533	7539	7545	7551	7557	7563	7569	7575	7581	7587	7593	7599	7605	7611	7617	7623	7629	7635	7641	7647	7653	7659	7665	7671	7677	7683	7689	7695	7701	7707	7713	7719	7725	7731	7737	7743	7749	7755	7761	7767	7773	7779	7785	7791	7797	7803	7809	7815	7821	7827	7833	7839	7845	7851	7857	7863	7869	7875	7881	7887	7893	7899	7905	7911	7917	7923	7929	7935	7941	7947	7953	7959	7965	7971	7977	7983

STANDARD

Valuation as of July 1, 2018:

[illegible]

ALTUS GROUP US INC.
Fair Market Value Assessment - Antero Resources Corp.
 FMV completed - Antero Resources Corp.
 Valuation as of July 1, 2016.

Fair Market Value Summary

Well Name	NBA #	County	Well Type	Target Interval	FMV	% of Total	State Estimate	% of Total
Abasco Unit 2H	0120166150	Doddridge	Horizontal	Marcellus	447,843	0.22%	2,622,531	0.45%
Abasco Unit 2H	0120166151	Doddridge	Horizontal	Marcellus	394,656	0.19%	2,135,834	0.42%
Aranda Unit 1H	0120166431	Doddridge	Horizontal	Marcellus	444,939	0.22%	3,035,457	0.53%
Aranda Unit 2H	0120166432	Doddridge	Horizontal	Marcellus	485,725	0.24%	3,341,254	0.69%
Callie Unit 1H	0120166192	Doddridge	Horizontal	Marcellus	346,019	0.17%	2,051,728	0.49%
Callie Unit 2H	0120166193	Doddridge	Horizontal	Marcellus	481,553	0.24%	3,154,554	0.61%
Central Unit 2H	0120156188	Doddridge	Horizontal	Marcellus	1,600,987	0.79%	1,037,368	0.23%
Doson Unit 1H	0120156187	Doddridge	Horizontal	Marcellus	1,646,581	0.81%	1,542,896	0.30%
Doson Unit 2H	0120156189	Doddridge	Horizontal	Marcellus	1,536,721	0.76%	1,528,896	0.30%
Leggett Unit 1H	0120166282	Doddridge	Horizontal	Marcellus	442,357	0.22%	2,824,398	0.53%
Leggett Unit 2H	0120166283	Doddridge	Horizontal	Marcellus	386,865	0.19%	2,376,734	0.46%
Marka Unit 1H	0120166286	Doddridge	Horizontal	Marcellus	817,933	0.40%	578,474	0.13%
Marka Unit 2H	0120166287	Doddridge	Horizontal	Marcellus	2,510,561	1.24%	2,632,120	0.51%
West Unit 2H	0120166282	Doddridge	Horizontal	Marcellus	2,335,705	1.15%	3,727,348	0.73%
West Unit 2H	0120166281	Doddridge	Horizontal	Marcellus	2,209,833	1.09%	2,409,938	0.47%
Nero Unit 1H	0120166212	Doddridge	Horizontal	Marcellus	687,896	0.34%	4,582,322	0.89%
Nero Unit 2H	0120166212	Doddridge	Horizontal	Marcellus	2,750,360	1.36%	2,302,339	0.46%
Piggott Unit 2H	0120166191	Doddridge	Horizontal	Marcellus	3,665,253	1.81%	4,710,731	0.93%
Pike Unit 1H	0120166199	Doddridge	Horizontal	Marcellus	343,743	0.17%	2,988,811	0.56%
Pike Unit 2H	0120166284	Doddridge	Horizontal	Marcellus	477,710	0.24%	2,890,773	0.56%
Seaborn Unit 1H	0120156169	Doddridge	Horizontal	Marcellus	1,764,821	0.86%	2,192,892	0.42%
Seaborn Unit 2H	0120156170	Doddridge	Horizontal	Marcellus	1,729,236	0.85%	1,991,116	0.39%
Shale Unit 1H	0120166201	Doddridge	Horizontal	Marcellus	3,327,856	1.64%	3,918,790	0.76%
Shale Unit 2H	0120166207	Doddridge	Horizontal	Marcellus	3,785,554	1.87%	3,372,468	0.66%
Shale Unit 2H	0120166359	Doddridge	Horizontal	Marcellus	528,432	0.26%	3,372,930	0.66%
Shale Unit 2H	0120166402	Doddridge	Horizontal	Marcellus	750,873	0.37%	3,303,696	0.63%
Valentine Unit 1H	0120166083	Doddridge	Horizontal	Marcellus	1,238,949	0.61%	1,327,079	0.25%
Valentine Unit 2H	0120166079	Doddridge	Horizontal	Marcellus	1,422,946	0.70%	1,411,961	0.27%
Violet Unit 1H	0120166106	Doddridge	Horizontal	Marcellus	609,735	0.30%	3,092,405	0.61%
Violet Unit 1H	0120166213	Doddridge	Horizontal	Marcellus	720,716	0.36%	5,272,445	1.02%
Zellert Unit 1H	0120166430	Doddridge	Horizontal	Marcellus	455,534	0.22%	3,193,301	0.60%
Zellert Unit 2H	0120166430	Doddridge	Horizontal	Marcellus	650,976	0.31%	1,601,542	0.33%
Hayden Unit 1H	0120176444	Doddridge	Horizontal	Marcellus	696,082	0.34%	1,862,320	0.36%
Hayden Unit 1H	0120176370	Doddridge	Horizontal	Marcellus	628,203	0.31%	1,566,838	0.32%
Washington Unit 2H	0120176371	Doddridge	Horizontal	Marcellus	839,445	0.41%	2,035,956	0.40%
Lesser Run Unit 2H	0120176475	Doddridge	Horizontal	Marcellus	590,603	0.29%	1,333,850	0.26%

ALTUS GROUP US INC.
Fair Market Value Assessment - Antero Resources Corp.

PKV Comparison - Antero Resources Corp.

Valuation as of July 1, 2016

HEIN

Fair Market Value Summary

				West Virginia	
				State Estimate	% of Total
Well Name	NRA #	County	Well Type	FMV	% of Total
Lesson Run Unit 1H	0120176474	Doddridge	Horizontal	697,001	0.34%
Hudson Unit 1H	0120176415	Doddridge	Horizontal	549,972	0.27%
Hudson Unit 2H	0120176436	Doddridge	Horizontal	600,587	0.30%
Mcete Unit 1H	0120176621	Doddridge	Horizontal	620,686	0.31%
Mcete Unit 2H	0120176623	Doddridge	Horizontal	614,433	0.30%
James Unit 1H	0120176623	Doddridge	Horizontal	750,705	0.37%
James Unit 2H	0120176619	Doddridge	Horizontal	961,005	0.46%
Blairmont Unit 1H	0120176541	Doddridge	Horizontal	382,329	0.19%
Blairmont Unit 2H	0120176562	Doddridge	Horizontal	971,920	0.48%
Stella Unit 1H	0120176563	Doddridge	Horizontal	1,110,278	0.55%
Stella Unit 2H	0120176564	Doddridge	Horizontal	1,090,221	0.53%
Conline Unit 1H	0120156255	Doddridge	Horizontal	2,716,201	1.37%
Conline Unit 2H	0120156256	Doddridge	Horizontal	749,304	0.37%
Castlow Unit 1H	0120165209	Doddridge	Horizontal	832,762	0.41%
Castlow Unit 2H	0120165210	Doddridge	Horizontal	904,186	0.45%
Outcrop Unit 1H	0120165247	Doddridge	Horizontal	1,006,557	0.50%
Outcrop Unit 2H	0120156166	Doddridge	Horizontal	896,401	0.44%
Early Unit 1H	0120156168	Doddridge	Horizontal	2,739,022	1.38%
Early Unit 2H	0120156230	Doddridge	Horizontal	2,877,428	1.43%
Gaskins Unit 1H	0120156203	Doddridge	Horizontal	780,897	0.39%
Gaskins Unit 2H	0120156281	Doddridge	Horizontal	1,466,517	0.73%
Gaskins Unit 3H	0120165202	Doddridge	Horizontal	1,940,365	0.96%
Gaskins Unit 4H	0120165201	Doddridge	Horizontal	812,273	0.40%
Halden Unit 1H	0120165202	Doddridge	Horizontal	671,418	0.33%
Halden Unit 2H	0120165203	Doddridge	Horizontal	843,527	0.42%
Halden Unit 3H	0120165204	Doddridge	Horizontal	451,717	0.22%
Halden Unit 4H	0120165205	Doddridge	Horizontal	929,340	0.46%
Halden Unit 5H	0120165206	Doddridge	Horizontal	1,170,593	0.58%
Halden Unit 6H	0120165207	Doddridge	Horizontal	729,488	0.36%
Halden Unit 7H	0120165208	Doddridge	Horizontal	727,576	0.36%
Halden Unit 8H	0120165209	Doddridge	Horizontal	242,894	0.12%
Halden Unit 9H	0120165210	Doddridge	Horizontal	504,505	0.25%
Halden Unit 10H	0120165211	Doddridge	Horizontal	634,178	0.31%
Halden Unit 11H	0120165212	Doddridge	Horizontal	593,790	0.29%
Halden Unit 12H	0120165213	Doddridge	Horizontal	347,842	0.17%
Halden Unit 13H	0120165214	Doddridge	Horizontal	283,382	0.14%
Halden Unit 14H	0120165215	Doddridge	Horizontal	976,005	0.48%
Halden Unit 15H	0120165216	Doddridge	Horizontal	804,482	0.40%
Halden Unit 16H	0120165217	Doddridge	Horizontal	157,781	0.08%
Halden Unit 17H	0120165218	Doddridge	Horizontal	649,161	0.32%
Halden Unit 18H	0120165219	Doddridge	Horizontal	855,554	0.42%
Halden Unit 19H	0120165220	Doddridge	Horizontal	503,905	0.25%
Halden Unit 20H	0120165221	Doddridge	Horizontal	964,921	0.48%

Included in well value below

5,219,509
1,763,091
1,342,747
2,721,876
1,801,220
2,777,919

ALTUS GROUP US INC.

Fair Market Value Assessment - Antero Resources Corp.

RMV Comparison - Antero Resources Corp.

Valuation as of July 1, 2016

Fair Market Value Summary

Well Name	NRA #	County	Well Type	Target Interval	Ben		West Virginia	
					RMV	% of Total	State Estimate	% of Total
Gaines-Moore Unit 3H	0320176218	Doddridge	Horizontal	Marcellus	467,293	0.32%	1,257,498	0.24%
Waller Unit 3H	0320176487	Doddridge	Horizontal	Marcellus	272,366	0.19%	873,837	0.18%
Waller Unit 1H	0320176270	Doddridge	Horizontal	Marcellus	606,844	0.40%	1,949,712	0.38%
Waller Unit 2H	0320176396	Doddridge	Horizontal	Marcellus	932,701	0.66%	3,146,928	0.61%
Waller Unit 3H	0320176275	Doddridge	Horizontal	Marcellus	919,233	0.65%	2,700,160	0.52%
Waller Unit 2H	0320176486	Doddridge	Horizontal	Marcellus	200,003	0.14%	632,417	0.13%
Waller Unit 2H	0320176374	Doddridge	Horizontal	Marcellus	685,823	0.48%	1,995,205	0.39%
Waller Unit 1H	0320176337	Doddridge	Horizontal	Marcellus	772,056	0.54%	2,449,360	0.48%
Waller Unit 2H	0320176485	Doddridge	Horizontal	Marcellus	273,756	0.19%	872,861	0.17%
Waller Unit 2H	0320176484	Doddridge	Horizontal	Marcellus	428,348	0.30%	1,339,859	0.26%
Waller Unit 2H	0320176373	Doddridge	Horizontal	Marcellus	669,705	0.48%	1,978,196	0.39%
Waller Unit 2H	0320176486	Doddridge	Horizontal	Marcellus	674,862	0.48%	1,992,129	0.39%
Waller Unit 1H	0320176485	Doddridge	Horizontal	Marcellus	844,409	0.59%	2,606,435	0.51%
Waller Unit 1H	0320176374	Doddridge	Horizontal	Marcellus	2,105,495	1.49%	6,485,159	1.28%
Waller Unit 1H	0320176275	Doddridge	Horizontal	Marcellus	1,342,665	0.96%	3,991,615	0.78%
Waller Unit 2H	0320176373	Doddridge	Horizontal	Marcellus	956,650	0.68%	2,928,177	0.58%
Waller Unit 2H	0320176275	Doddridge	Horizontal	Marcellus	1,809,893	1.31%	5,514,503	1.09%
Waller Unit 2H	0320176280	Doddridge	Horizontal	Marcellus	1,902,365	1.39%	5,825,163	1.17%
Waller Unit 2H	0320176368	Doddridge	Horizontal	Marcellus	447,521	0.32%	1,379,996	0.27%
Waller Unit 2H	0320176377	Doddridge	Horizontal	Marcellus	824,412	0.59%	2,530,781	0.50%
Waller Unit 2H	0320176340	Doddridge	Horizontal	Marcellus	150,429	0.11%	469,436	0.09%
Waller Unit 2H	0320176433	Doddridge	Horizontal	Marcellus	79,043	0.06%	235,213	0.05%
Waller Unit 2H	0320176433	Doddridge	Horizontal	Marcellus	385,768	0.28%	1,188,222	0.24%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	539,293	0.39%	1,611,488	0.32%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	828,672	0.60%	2,505,440	0.50%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	248,150	0.18%	748,596	0.15%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	1,299,817	0.95%	3,872,961	0.77%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	1,477,568	1.07%	4,500,849	0.90%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	1,651,519	1.21%	5,000,849	1.00%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	1,932,241	1.42%	5,872,961	1.17%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	2,170,947	1.61%	6,512,004	1.30%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	2,485,942	1.85%	7,500,849	1.50%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	3,753,920	2.81%	11,280,444	2.26%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	878,458	0.66%	2,628,915	0.53%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	633,354	0.47%	1,966,500	0.39%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	899,681	0.68%	2,728,523	0.55%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	851,187	0.64%	2,566,723	0.51%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	959,370	0.73%	2,928,177	0.58%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	1,288,054	0.96%	3,900,849	0.78%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	1,472,111	1.10%	4,437,817	0.88%
Waller Unit 2H	0320176434	Doddridge	Horizontal	Marcellus	614,156	0.46%	1,872,513	0.37%

Exhibit 3

(USD in Thousands)

ALTUS GROUP US INC.

Fair Market Value Assessment - Altus Resources Corp.

Fair Market Value Assessment - Altus Resources Corp.

Included as of July 1, 2016

HEIN

Fair Market Value Summary

Well Name	NRA #	County	Well Type	Target Interval	HEIN		West Virginia	
					FMV	% of Total	State Estimate	% of Total
Fargo Unit 21E	0420176887	Doddridge	Horizontal	Marcellus	245,392	0.12%	975,522	0.19%
Fargo Unit 1H	0420176382	Doddridge	Horizontal	Marcellus	245,743	0.12%	975,547	0.19%
Alke Unit 2H	0420176231	Doddridge	Horizontal	Marcellus	493,156	0.24%	2,117,231	0.41%
Baker Unit 2H	0420176469	Doddridge	Horizontal	Marcellus	595,014	0.29%	2,905,170	0.65%
Lila Unit 1H	0420176470	Doddridge	Horizontal	Marcellus	463,472	0.23%	1,756,520	0.34%
Lila Unit 2H	0420176471	Doddridge	Horizontal	Marcellus	558,969	0.28%	2,231,675	0.43%
Kemper Unit 1H	0420176513	Doddridge	Horizontal	Marcellus	1,562,656	0.76%	2,937,395	0.60%
Kemper Unit 2H	0420176512	Doddridge	Horizontal	Marcellus	1,018,627	0.50%	1,255,964	0.24%
R. Switzer South Unit 1H	0420176562	Doddridge	Horizontal	Marcellus	1,051,220	0.52%	3,741,641	0.73%
R. Switzer South Unit 2H	0420176562	Doddridge	Horizontal	Marcellus	1,052,983	0.52%	Included in well value above.	
Stadler Unit 1H	0420176611	Doddridge	Horizontal	Marcellus	2,052,690	1.01%	3,989,106	0.79%
Stadler Unit 2H	0420176614	Doddridge	Horizontal	Marcellus	2,742,538	1.33%	3,522,220	0.68%
Thomas Unit 1H	0420176518	Doddridge	Horizontal	Marcellus	4,031,948	0.53%	1,238,253	0.24%
Thomas Unit 2H	0420176518	Doddridge	Horizontal	Marcellus	1,324,354	0.63%	1,557,427	0.30%
Trout Unit 1H	0420176627	Doddridge	Horizontal	Marcellus	3,276,201	0.63%	3,559,212	0.69%
Trout Unit 2H	0420176628	Doddridge	Horizontal	Marcellus	4,380,634	0.68%	3,806,558	0.74%
Wash Unit 1H	0420176501	Doddridge	Horizontal	Marcellus	187,533	0.09%	21,097,400	0.41%
Wash Unit 2H	0420176501	Doddridge	Horizontal	Marcellus	780,498	0.39%	1,823,208	0.35%
Wash Unit 3H	0420176505	Doddridge	Horizontal	Marcellus	408,432	0.05%	2,450,719	0.48%
Wash Unit 4H	0420176506	Doddridge	Horizontal	Marcellus	3,337,252	0.64%	4,465,136	0.87%
Wash Unit 1H	0420176519	Doddridge	Horizontal	Marcellus	503,969	0.25%	4,677,119	0.91%
Wash Unit 2H	0420176625	Doddridge	Horizontal	Marcellus	1,016,025	0.50%	7,274,824	1.51%
Wash Unit 3H	0420176645	Doddridge	Horizontal	Marcellus	1,133,829	0.67%	1,473,732	0.29%
Wash Unit 4H	0420176645	Doddridge	Horizontal	Marcellus	256,458	0.12%	2,123,527	0.41%
Wash Unit 5H	0420176628	Doddridge	Horizontal	Marcellus	241,068	0.12%	2,070,534	0.40%
Wash Unit 6H	0420176628	Doddridge	Horizontal	Marcellus	348,810	0.17%	2,897,715	0.56%
Wash Unit 7H	0420176628	Doddridge	Horizontal	Marcellus	248,656	0.12%	2,006,310	0.39%
Wash Unit 8H	0420176628	Doddridge	Horizontal	Marcellus	412,905	0.20%	3,611,216	0.70%
Wash Unit 9H	0420176645	Doddridge	Horizontal	Marcellus	1,291,694	0.64%	1,555,549	0.30%
Wash Unit 10H	0420176676	Doddridge	Horizontal	Marcellus	1,243,200	0.61%	1,812,694	0.35%
Wash Unit 11H	0420176626	Doddridge	Horizontal	Marcellus	578,139	0.28%	3,978,020	0.75%
Wash Unit 12H	0420176626	Doddridge	Horizontal	Marcellus	330,991	0.16%	4,035,508	0.78%
Wash Unit 13H	0420176626	Doddridge	Horizontal	Marcellus	459,621	0.23%	4,736,939	0.92%
Wash Unit 14H	0420176626	Doddridge	Horizontal	Marcellus	1,519,336	0.74%	1,804,403	0.31%
Wash Unit 15H	0420176626	Doddridge	Horizontal	Marcellus	832,207	0.41%	976,596	0.19%
Wash Unit 16H	0420176626	Doddridge	Horizontal	Marcellus	945,156	0.47%	1,277,968	0.21%
Wash Unit 17H	0420176626	Doddridge	Horizontal	Marcellus	1,285,394	0.63%	1,443,371	0.28%
Wash Unit 18H	0420176610	Doddridge	Horizontal	Marcellus	1,175,224	0.58%	1,346,150	0.26%
Wash Unit 19H	0420176610	Doddridge	Horizontal	Marcellus	1,125,308	0.56%	1,320,952	0.26%
Wash Unit 20H	0420176610	Doddridge	Horizontal	Marcellus	1,680,574	0.83%	2,566,192	0.50%
Wash Unit 21H	0420176626	Doddridge	Horizontal	Marcellus	1,697,310	0.83%	2,734,534	0.52%
Wash Unit 22H	0420176626	Doddridge	Horizontal	Marcellus	2,236,596	1.10%	2,592,872	0.57%
Wash Unit 23H	0420176617	Doddridge	Horizontal	Marcellus	407,768	0.20%	4,623,965	0.90%
Wash Unit 24H	0420176611	Doddridge	Horizontal	Marcellus	632,306	0.31%	4,635,491	0.90%
Wash Unit 25H	0420176633	Doddridge	Horizontal	Marcellus	729,545	0.36%	5,678,756	1.08%
Wash Unit 26H	0420176640	Doddridge	Horizontal	Marcellus				

Exhibit 3

(USD In Thousands)

ALTUS GROUP US INC.

Fair Market Value Assessment - Antero Resources Corp.

FMY Comparison: Antero Resources Corp.

Valuation as of July 1, 2016

HEIN

Fair Market Value Summary

Well Name	NRA #	County	Well Type	Target Interval	HEIN		West Virginia	
					FMY	% of Total	State Estimate	% of Total
Producers Unit 2H	0620166313	Doddridge	Horizontal	Marcellus	248,985	0.11%	1,444,978	0.28%
Braintree Unit 2H	0620166320	Doddridge	Horizontal	Marcellus	283,597	0.14%	1,794,692	0.35%
Right Hand Unit 1H	0620156173	Doddridge	Horizontal	Marcellus	7,458,061	0.75%	4,516,614	0.29%
Right Hand Unit 2H	0620166374	Doddridge	Horizontal	Marcellus	1,907,818	0.39%	4,746,242	0.34%
Buckman Unit 1H	0620156094	Doddridge	Horizontal	Marcellus	1,313,773	0.45%	1,403,997	0.27%
Buckman Unit 2H	0620156095	Doddridge	Horizontal	Marcellus	909,240	0.48%	989,901	0.19%
Buckman Unit 3H	0620156096	Doddridge	Horizontal	Marcellus	940,183	0.45%	997,955	0.19%
Schultz Unit 1H	0620166165	Doddridge	Horizontal	Marcellus	2,354,010	1.16%	2,511,788	0.49%
Schultz Unit 2H	0620166321	Doddridge	Horizontal	Marcellus	234,712	0.12%	1,367,114	0.27%
Swisher Unit 1H	0620166325	Doddridge	Horizontal	Marcellus	325,933	0.13%	3,161,599	0.61%
Swisher Unit 2H	0620166234	Doddridge	Horizontal	Marcellus	496,022	0.20%	3,446,989	0.67%
Tom's Fork Unit 1H	0620156081	Doddridge	Horizontal	Marcellus	1,236,592	0.43%	1,357,470	0.26%
Tom's Fork Unit 2H	0620156082	Doddridge	Horizontal	Marcellus	1,478,894	0.73%	1,312,590	0.29%
Waller Unit 1H	0620166159	Doddridge	Horizontal	Marcellus	2,065,062	1.02%	2,582,426	0.50%
Yoke Unit 1H	0620156097	Doddridge	Horizontal	Marcellus	1,045,973	0.50%	1,144,274	0.23%
Yoke Unit 2H	0620156098	Doddridge	Horizontal	Marcellus	1,469,571	0.70%	1,681,094	0.33%
Yoke Unit 3H	0620176429	Doddridge	Horizontal	Marcellus	484,936	0.24%	1,558,270	0.30%
Yoke Unit 4H	0620176443	Doddridge	Horizontal	Marcellus	540,820	0.27%	1,386,983	0.27%
Yoke Unit 5H	0620166312	Doddridge	Horizontal	Marcellus	516,491	0.25%	4,301,961	0.80%
Joseph Unit 1H	0620166316	Doddridge	Horizontal	Marcellus	531,991	0.25%	3,842,877	0.75%
Livingston Unit 1H	0620166228	Doddridge	Horizontal	Marcellus	3,516,989	1.74%	4,384,327	0.85%
Livingston Unit 2H	0620166229	Doddridge	Horizontal	Marcellus	3,617,021	1.79%	4,333,493	0.84%
McCormick Unit 1H	0620166317	Doddridge	Horizontal	Marcellus	333,204	0.16%	2,518,692	0.49%
Oliver Unit 1H	0620166318	Doddridge	Horizontal	Marcellus	249,033	0.12%	1,513,281	0.29%
Squire Unit 1H	0620166319	Doddridge	Horizontal	Marcellus	2,794,377	1.38%	3,091,507	0.60%
Verde Unit 1H	0620166225	Doddridge	Horizontal	Marcellus	2,942,873	1.45%	3,254,913	0.63%
Joseph Unit 2H	0620176327	Doddridge	Horizontal	Marcellus	746,882	0.37%	2,157,971	0.40%
Ojima Unit 1H	0620176932	Doddridge	Horizontal	Marcellus	570,716	0.28%	1,658,439	0.32%
					\$ 202,700,990	100.00%	\$ 518,311,245	100.00%

Notes to Exhibit

(1) Individual well data provided by client.

(2) For further detail on the development of the FMY for each individual well, please refer to Exhibit 2.

ALTUS GROUP US, INC.

Fair Market Value Assessment - Axiom Resources Corp.

Disruptive Rate Derivation

Volume 45 July 1, 2016

[illegible]

	12.64	11.11%	\$8,326	\$	76,000	\$	136,410	55.55%	1.00	2.23
Maximum	7.65	7.14%	21,543		21,543		(17,735)	38.88%	1.54	3.72
Upper Quartile	4.22	56.00%	33,494		26,826		(7,668)	76.00%	1.54	3.72
Median	1.03	40.00%	22,225		19,437		(2,788)	37.50%	1.54	3.72
Lower Quartile	0.24	31.25%	14,156		13,493		(663)	32.26%	1.54	3.72
Minimum	0.06	13.98%	12,594		11,800		(794)	27.28%	1.54	3.72
Unlevered	47.51%		72,000		60,137		11,863	43.03%	1.00	2.23

[illegible]

- (1) Source: S&P Capital IQ, "What is S&P 500?"
- (2) Source: S&P Capital IQ, "What is S&P 500?"
- (3) Sum of total book value of equity and market cap.
- (4) 5-year moving total book value of equity.
- (5) 5-year moving total book value of equity.
- (6) Reported 5-year average capital structure data.
- (7) Reported 5-year average capital structure data.
- (8) Additional risk premium as amount for interest.
- (9) Additional risk premium as amount for interest.

TAB 14

Weighted Average Sales Price
2015

Purchaser	Location	State	Index	2015 YTD			
				\$	MM8TU	Price	%
ARM	TCO Pool	WV	Columbia	\$ 49,919	25,600	\$ 1.95	0.01%
ARM	TGP	TN	Tennessee	\$ 1,320,600	620,000	\$ 2.13	0.14%
Atmos	TGP	TN	Tennessee	\$ 100,296	58,088	\$ 1.73	0.01%
8G Energy	M2 Pool Delmont	PA	NYMEX	\$ 26,264,859	10,535,313	\$ 2.49	2.34%
8G Energy	TGP	TN	Tennessee	\$ 1,345,400	620,000	\$ 2.17	0.14%
8G Energy	Sabine	LA	NYMEX	\$ 102,089	52,900	\$ 1.93	0.01%
8G Energy	TCO Pool	WV	Columbia	\$ 10,544	4,950	\$ 2.13	0.00%
BNP Paribas	Ooddridge County	WV	Dominion	\$ 15,219,520	10,551,000	\$ 1.44	2.35%
BNP Paribas	TGP	TN	Tennessee	\$ 1,322,150	620,000	\$ 2.13	0.14%
BP	Ooddridge County	WV	Dominion	\$ 38,746,659	28,271,284	\$ 1.37	6.29%
BP	TCO Pool	WV	Columbia	\$ 1,154,626	615,600	\$ 1.88	0.14%
BP	Sabine	LA	NYMEX	\$ 110,055	56,300	\$ 1.95	0.01%
BTG Pactual	TCO Pool	WV	Columbia	\$ 3,837,963	1,975,838	\$ 1.94	0.44%
Cargill	TCO Pool	WV	Columbia	\$ 45,225	20,000	\$ 2.26	0.00%
Castleton	TCO Pool	WV	Columbia	\$ 450,821	217,082	\$ 2.08	0.05%
Chevron	Sabine	LA	NYMEX	\$ 35,230	16,600	\$ 2.12	0.00%
Chevron	TCO Pool	WV	Columbia	\$ 17,205	8,500	\$ 2.02	0.00%
CNE	TCO Pool	WV	Columbia	\$ 1,831,950	920,000	\$ 1.99	0.20%
Colonial	M2 Pool Delmont	PA	Tetco	\$ (4,800)	(5,000)	\$ 0.96	0.00%
Colonial	TCO Pool	WV	Columbia	\$ 1,184	600	\$ 1.97	0.00%
Concord	M2 Pool Delmont	PA	Tetco	\$ (25,772)	(28,731)	\$ 0.90	0.00%
Conoco	M2 Pool Delmont	PA	Tetco	\$ (4,680)	(4,800)	\$ 0.98	0.00%
Conoco	TCO Pool	WV	Columbia	\$ 20,258,684	7,733,846	\$ 2.62	1.72%
Direct Energy	TCO Pool	WV	Columbia	\$ 20,062,966	7,427,924	\$ 2.70	1.65%
Direct Energy	M2 Pool Delmont	PA	Tetco	\$ (96,576)	(107,700)	\$ 0.90	0.00%
Dominion Field Services	Ooddridge County	WV	Dominion	\$ 207,700	155,000	\$ 1.34	0.03%
Dominion Field Services	M2 Pool Delmont	PA	Tetco	\$ 510,500	450,000	\$ 1.13	0.10%
DTE Energy Trading	TCO Pool	WV	Columbia	\$ 746,088	302,500	\$ 2.47	0.07%
OTE Energy Trading	M2 Pool Delmont	PA	Tetco	\$ 672	560	\$ 1.20	0.00%
ECA	TCO Pool	WV	Columbia	\$ 2,608,002	1,272,196	\$ 2.05	0.28%
EDF Trading	M2 Pool Delmont	PA	NYMEX	\$ 26,213,237	10,513,838	\$ 2.49	2.34%
EDF Trading	TCO Pool	WV	Columbia	\$ 105,982	53,000	\$ 2.00	0.01%
Emera Energy Services	Ooddridge County	WV	Columbia	\$ 18,603,034	7,204,015	\$ 2.58	1.60%
Exelon	TCO Pool	WV	Columbia	\$ 1,980,435	1,039,801	\$ 1.90	0.23%
Exelon	M2 Pool Delmont	PA	Tetco	\$ 91,743	63,186	\$ 1.45	0.01%
Exelon	Sabine	LA	NYMEX	\$ 93,638	42,500	\$ 2.20	0.01%
Exelon	TGP	TN	Tennessee	\$ 4,597,237	2,138,728	\$ 2.15	0.48%
J Aron	TCO Pool	WV	Columbia	\$ 1,687,500	900,000	\$ 1.88	0.20%
J Aron	M2 Pool Delmont	PA	Tetco	\$ 73,430	52,500	\$ 1.40	0.01%
J Aron	TGP	TN	Tennessee	\$ 4,891,301	2,301,641	\$ 2.13	0.51%
Kaiser	TCO Pool	WV	Columbia	\$ 27,165	12,100	\$ 2.25	0.00%
Macquarie	TCO Pool	WV	Columbia	\$ 10,650,773	4,506,349	\$ 2.36	1.00%
Macquarie	M2 Pool Delmont	PA	Tetco	\$ 3,879,200	2,080,000	\$ 1.87	0.46%
Macquarie	Henry Hub	LA	NYMEX	\$ 1,558,445	746,300	\$ 2.09	0.17%
Mercuria	TCO Pool	WV	Columbia	\$ 1,171,286	624,700	\$ 1.87	0.14%
Mercuria	Sabine	LA	NYMEX	\$ 21,609	10,000	\$ 2.16	0.00%
MMGS	TCO Pool	WV	Columbia	\$ 80,891,104	35,518,375	\$ 2.28	7.90%
MMGS	Sabine	LA	NYMEX	\$ 114,400	60,000	\$ 1.91	0.01%
MMGS	TGP	TN	Tennessee	\$ 4,896,946	2,317,173	\$ 2.11	0.52%
NextEra Energy	Ooddridge County	WV	Dominion	\$ 51,804,265	42,747,900	\$ 1.21	9.51%
NextEra Energy	TCO Pool	WV	Columbia	\$ 53,123,096	21,310,757	\$ 2.49	4.74%
NextEra Energy	M2 Pool Delmont	PA	NYMEX	\$ 9,501,834	3,928,120	\$ 2.42	0.87%
NextEra Energy	M2 Pool Delmont	PA	Tetco	\$ 2,183,766	1,773,719	\$ 1.23	0.39%
NJR	M2 Pool Delmont	PA	Tetco	\$ 500,088	295,000	\$ 1.70	0.07%
NJR	Sabine	LA	NYMEX	\$ 21,598	9,600	\$ 2.25	0.00%

Noble Americas Gas & Power	Doddridge County	WV	NYMEX	\$ 32,217,420	14,375,310	\$ 2.24	3.20%
Noble Americas Gas & Power	TCO Pool	WV	Columbia	\$ 553,947	138,821	\$ 3.99	0.03%
Noble Energy	TCO Pool	WV	Columbia	\$ 28,519	14,800	\$ 1.93	0.00%
Pacific Summit Energy	TCO Pool	WV	Columbia	\$ 69,398,141	26,214,267	\$ 2.65	5.83%
Sabine	Sabine	LA	NYMEX	\$ 70,479	35,100	\$ 2.01	0.01%
Sabine	TCO Pool	WV	Columbia	\$ 41,600	20,000	\$ 2.08	0.00%
Sequent Energy	TCO Pool	WV	Columbia	\$ 101,895,149	39,358,896	\$ 2.59	8.76%
Sequent Energy	M2 Pool Delmont	PA	Tetco	\$ 21,990,196	13,179,154	\$ 1.67	2.93%
Sequent Energy	Doddridge County	WV	Dominion	\$ 25,087,957	17,451,632	\$ 1.44	3.88%
Sequent Energy	TGP	TN	Tennessee	\$ 2,641,200	1,240,000	\$ 2.13	0.28%
Shell	Sabine	LA	NYMEX	\$ 28,228	14,800	\$ 1.91	0.00%
Shell	TCO Pool	WV	Columbia	\$ 454,563	248,500	\$ 1.83	0.06%
South Jersey Gas	Doddridge County	WV	Columbia	\$ 10,326,145	7,570,799	\$ 1.36	1.68%
South Jersey Resources	Doddridge County	WV	Columbia	\$ 33,631,953	19,836,166	\$ 1.70	4.41%
South Jersey Resources	TCO Pool	WV	Columbia	\$ 109,334,993	43,663,153	\$ 2.50	9.71%
South Jersey Resources	Doddridge County	WV	Dominion	\$ 49,682,825	33,872,000	\$ 1.47	7.54%
South Jersey Resources	M2 Pool Delmont	PA	Tetco	\$ 26,260,368	15,438,938	\$ 1.70	3.43%
Tenaska	M2 Pool Delmont	PA	Tetco	\$ 50,892	42,600	\$ 1.19	0.01%
Tenaska	TCO Pool	WV	Columbia	\$ 3,142,795	1,797,900	\$ 1.79	0.39%
Tenaska	TGP	TN	Tennessee	\$ 2,746,043	1,296,368	\$ 2.12	0.29%
Tenaska	Henry Hub	LA	NYMEX	\$ 798,907	369,549	\$ 2.16	0.08%
Total	M2 Pool Delmont	PA	Tetco	\$ 472,050	337,500	\$ 1.40	0.08%
Total	TCO Pool	WV	Columbia	\$ 532,531	292,200	\$ 1.82	0.07%
Total	Henry Hub	LA	NYMEX	\$ 18,992	5,125	\$ 3.71	0.00%
Twin Eagle	TCO Pool	WV	Columbia	\$ 18,450	9,000	\$ 2.05	0.00%
United Energy Trading	TCO Pool	WV	Columbia	\$ 80,428	41,500	\$ 1.94	0.01%
Vitol	TCO Pool	WV	Columbia	\$ 42,200	20,000	\$ 2.11	0.00%
WGL	TCO Pool	WV	Columbia	\$ 2,025	1,000	\$ 2.03	0.00%

WAVG Sales Price				\$ 906,461,176	449,475,830	\$ 2.02	100.00%

TCO Pool	WV	\$ 486,237,856	196,269,755	\$ 2.48	43.67%
Doddridge County	WV	\$ 275,527,478	182,033,106	\$ 1.51	40.50%
M2 Pool Delmont	PA	\$ 117,861,000	58,540,197	\$ 2.01	13.02%
TGP	TN	\$ 23,861,174	11,211,998	\$ 2.13	2.49%
Sabine	LA	\$ 597,325	297,800	\$ 2.01	0.07%
Henry Hub	LA	\$ 2,376,344	1,120,974	\$ 2.12	0.25%
		\$ 906,461,176	449,475,830	\$ 2.02	100.00%

	TCO Pool			Doddridge County			M2 Pool DeMont		
	Dollars	Volume	Price	Dollars	Volume	Price	Dollars	Volume	Price
January	\$ 52,209,548	17,950,554	\$ 2.91	\$ 29,177,311	15,628,020	\$ 1.87	\$ 12,893,553	5,528,935	\$ 2.33
February	\$ 43,147,567	17,297,783	\$ 2.49	\$ 28,989,201	13,531,342	\$ 2.14	\$ 15,356,109	5,717,142	\$ 2.69
March	\$ 43,973,658	15,946,524	\$ 2.76	\$ 35,816,736	17,593,243	\$ 2.04	\$ 18,927,806	8,663,412	\$ 2.18
April	\$ 40,117,847	16,339,091	\$ 2.46	\$ 24,986,413	17,171,084	\$ 1.46	\$ 13,142,991	7,740,910	\$ 1.70
May	\$ 40,403,424	16,602,155	\$ 2.43	\$ 25,157,356	18,196,094	\$ 1.38	\$ 11,828,465	6,975,251	\$ 1.70
June	\$ 44,279,640	16,420,244	\$ 2.70	\$ 23,292,187	16,292,998	\$ 1.43	\$ 9,403,789	4,974,977	\$ 1.89
July	\$ 40,114,030	15,145,286	\$ 2.65	\$ 21,374,386	16,395,404	\$ 1.30	\$ 8,517,098	4,842,377	\$ 1.76
August	\$ 45,014,263	16,585,228	\$ 2.71	\$ 23,583,446	17,566,668	\$ 1.34	\$ 7,980,994	3,853,828	\$ 2.07
September	\$ 41,856,440	17,664,723	\$ 2.37	\$ 20,755,450	16,663,550	\$ 1.25	\$ 6,462,481	3,206,715	\$ 2.02
October	\$ 38,020,911	16,281,105	\$ 2.34	\$ 20,081,890	16,355,285	\$ 1.23	\$ 6,269,698	3,221,377	\$ 1.95
November	\$ 29,875,529	15,870,657	\$ 1.88	\$ 15,032,601	12,205,818	\$ 1.23	\$ 4,513,144	2,548,062	\$ 1.77
December	\$ 27,224,997	14,166,405	\$ 1.92	\$ 7,280,502	4,435,600	\$ 1.64	\$ 2,564,874	1,267,211	\$ 2.02
Full year 2015	\$ 486,237,856	196,269,755	\$ 2.48	\$ 275,527,478	182,035,106	\$ 1.51	\$ 117,861,000	58,540,197	\$ 2.01

TGP				Sabine				Henry Hub				2015 Weighted Average			
Dollars	Volume	Price		Dollars	Volume	Price		Dollars	Volume	Price		Dollars	Volume	Price	
\$ 23,861,174	11,211,998	\$ 2.13	#DIV/0!	\$ 597,325	297,800	\$ 2.01	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 94,280,411	39,107,509	\$ 2.41	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 87,492,878	36,546,267	\$ 2.39	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 98,718,200	42,203,179	\$ 2.34	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 78,247,251	41,251,085	\$ 1.90	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 77,389,245	41,773,500	\$ 1.85	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 76,975,616	37,688,219	\$ 2.04	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 70,005,514	36,383,067	\$ 1.92	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 76,578,703	38,005,724	\$ 2.01	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 69,074,870	37,534,988	\$ 1.84	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 64,372,499	35,857,767	\$ 1.80	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 49,421,274	30,624,537	\$ 1.61	
\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	#DIV/0!	\$ -	-	#DIV/0!	\$ -	\$ 53,905,215	32,499,988	\$ 1.97	
\$ 23,861,174	11,211,998	\$ 2.13		\$ 597,325	297,800	\$ 2.01		\$ 2,376,344	1,120,974	\$ 2.12		\$ 906,461,176	449,475,830	\$ 2.02	
\$ 23,861,174	11,211,998	\$ 2.13		\$ 597,325	297,800	\$ 2.01		\$ 2,376,344	1,120,974	\$ 2.12		\$ 906,461,176	449,475,830	\$ 2.02	

Weighted Average Sales Price
2014

Purchaser	Location	State	Index	2014 YTD			
				\$	MMBTU	Price	%
BG Energy	M2 Pool Delmont	PA	NYMEX	\$ 29,314,825	7,519,533	\$ 3.90	2.16%
BNP Paribas	Doddridge County	WV	Dominion	\$ 13,010,852	5,533,994	\$ 2.35	1.59%
BP	Doddridge County	WV	Dominion	\$ 87,031,511	27,752,396	\$ 3.14	7.97%
BP	TCO Pool	WV	Columbia	\$ 7,506,325	1,645,000	\$ 4.56	0.47%
Direct Energy	TCO Pool	WV	Columbia	\$ 14,387,075	3,307,228	\$ 4.35	0.95%
DTE Energy	TCO Pool	WV	Columbia	\$ 1,310,525	310,000	\$ 4.23	0.09%
EDF Trading	M2 Pool Delmont	PA	NYMEX	\$ 37,637,390	9,127,224	\$ 4.12	2.62%
Emera Energy Services	Doddridge County	WV	Columbia	\$ 31,850,105	7,260,000	\$ 4.39	2.08%
Macquarie	M2 Pool Delmont	PA	Tetco	\$ 5,402,758	2,495,625	\$ 2.16	0.72%
MarkWest Hydrocarbons	TCO Pool	WV	Columbia	\$ 6,894,795	1,584,859	\$ 4.35	0.46%
NextEra Energy	Doddridge County	WV	Dominion	\$ 143,494,980	47,306,000	\$ 3.03	13.58%
NextEra Energy	TCO Pool	WV	Columbia	\$ 9,488,984	2,545,590	\$ 3.73	0.73%
NextEra Energy	M2 Pool Delmont	PA	NYMEX	\$ 9,391,255	2,335,000	\$ 4.02	0.67%
NJR	M2 Pool Delmont	PA	Tetco	\$ 705,113	363,100	\$ 1.94	0.10%
Noble Americas Gas & Power	Doddridge County	WV	NYMEX	\$ 57,017,587	14,348,380	\$ 3.97	4.12%
Noble Americas Gas & Power	TCO Pool	WV	Columbia	\$ 89,299	18,945	\$ 4.71	0.01%
Pacific Summit Energy	TCO Pool	WV	Columbia	\$ 117,827,023	27,132,840	\$ 4.34	7.79%
Sequent Energy	TCO Pool	WV	Columbia	\$ 156,383,203	37,275,072	\$ 4.20	10.70%
Sequent Energy	M2 Pool Delmont	PA	Tetco	\$ 11,807,571	5,270,644	\$ 2.24	1.51%
Sequent Energy	Doddridge County	WV	Dominion	\$ 65,129,175	19,901,316	\$ 3.27	5.71%
South Jersey Gas	Doddridge County	WV	Columbia	\$ 29,452,071	7,561,129	\$ 3.90	2.17%
South Jersey Resources	Doddridge County	WV	Columbia	\$ 85,840,830	21,583,000	\$ 3.98	6.20%
South Jersey Resources	TCO Pool	WV	Columbia	\$ 222,061,589	53,136,621	\$ 4.18	15.26%
South Jersey Resources	Doddridge County	WV	Dominion	\$ 100,142,926	33,174,622	\$ 3.02	9.52%
South Jersey Resources	M2 Pool Delmont	PA	Tetco	\$ 14,463,255	7,152,650	\$ 2.02	2.05%
Tenaska	TCO Pool	WV	Columbia	\$ 11,078,255	2,440,882	\$ 4.54	0.70%
Texla	TCO Pool	WV	Columbia	\$ 862,887	205,448	\$ 4.20	0.06%
WGL Midstream	TCO Pool	WV	Columbia	\$ 14,706	3,129	\$ 4.70	0.00%
WAVG Sales Price				\$ 1,269,597,371	348,290,227	\$ 3.65	100.00%
	M2 Pool Delmont	PA	Tetco	\$ 108,722,167	34,263,776	\$ 3.17	9.84%
	Doddridge County	WV	Dominion	\$ 612,970,037	184,420,837	\$ 3.32	52.95%
	TCO Pool	WV	Columbia	\$ 547,905,167	129,605,614	\$ 4.23	37.21%
				\$ 1,269,597,371	348,290,227	\$ 3.65	100.00%

	TCO Pool			Doddridge County			M2 Pool Delmont			2014 Weighted Average		
	Dollars	Volume	Price	Dollars	Volume	Price	Dollars	Volume	Price	Dollars	Volume	Price
January	\$ 37,243,259	8,585,665	\$ 4.34	\$ 50,591,540	13,873,069	\$ 3.65	\$ 1,852,420	495,000	\$ 4.26	\$ 39,687,219	22,893,734	\$ 3.92
February	\$ 52,171,314	9,160,585	\$ 5.70	\$ 72,384,776	13,543,488	\$ 5.34	\$ 214,780	40,000	\$ 5.37	\$ 124,750,870	22,743,893	\$ 5.49
March	\$ 39,481,737	8,208,881	\$ 4.81	\$ 68,261,410	15,122,242	\$ 4.51	\$ 4,878,563	1,055,000	\$ 4.62	\$ 112,621,710	24,386,123	\$ 4.62
April	\$ 41,685,343	9,371,577	\$ 4.45	\$ 56,731,220	13,700,895	\$ 4.14	\$ 4,019,288	915,000	\$ 4.39	\$ 102,415,850	23,997,472	\$ 4.27
May	\$ 46,268,926	10,119,010	\$ 4.57	\$ 52,295,708	15,898,778	\$ 3.92	\$ 4,652,622	974,880	\$ 4.77	\$ 113,218,256	26,992,668	\$ 4.19
June	\$ 45,437,394	10,038,820	\$ 4.53	\$ 51,405,703	14,725,665	\$ 3.49	\$ 6,717,776	1,691,087	\$ 3.97	\$ 103,561,871	26,455,670	\$ 3.91
July	\$ 43,927,090	10,628,458	\$ 4.13	\$ 47,207,564	15,435,911	\$ 3.06	\$ 15,138,365	4,313,000	\$ 3.51	\$ 106,293,019	30,377,369	\$ 3.50
August	\$ 38,728,360	10,189,429	\$ 3.80	\$ 43,314,700	16,870,473	\$ 2.57	\$ 12,189,448	4,067,446	\$ 3.00	\$ 94,252,502	31,127,048	\$ 3.03
September	\$ 38,937,741	9,974,770	\$ 3.90	\$ 39,274,613	16,328,784	\$ 2.41	\$ 16,022,056	6,133,939	\$ 2.61	\$ 84,234,410	32,436,893	\$ 2.91
October	\$ 45,309,230	11,637,833	\$ 3.89	\$ 35,717,432	16,742,530	\$ 2.13	\$ 35,822,317	6,134,425	\$ 2.58	\$ 96,848,868	34,514,838	\$ 2.81
November	\$ 55,034,961	14,684,328	\$ 3.75	\$ 35,621,636	15,320,873	\$ 2.33	\$ 10,649,892	3,094,900	\$ 3.44	\$ 101,312,480	33,100,201	\$ 3.06
December	\$ 63,699,813	17,006,358	\$ 3.75	\$ 30,155,746	16,848,031	\$ 2.98	\$ 16,544,746	5,403,949	\$ 3.06	\$ 130,400,305	39,264,388	\$ 3.32
Full year 2014	\$ 547,905,157	128,565,614	\$ 4.25	\$ 632,970,037	184,420,837	\$ 3.32	\$ 108,722,167	34,263,776	\$ 3.17	\$ 1,259,597,371	348,290,227	\$ 3.68

TAB 15

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2015

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File No. 001-36120

ANTERO RESOURCES CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

80-0162034
(IRS Employer
Identification No.)

161.5 Wyukoop Street
Denver Colorado
(Address of principal executive offices)

80202
(Zip Code)

(303) 357-7310

(Registrant's telephone number, including area code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on which Registered
Common Stock, Par Value \$0.01 Per Share	New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act: ☒ Yes ☐ No.

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act: ☐ Yes ☒ No.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days: ☒ Yes ☐ No.

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files): ☒ Yes ☐ No.

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K: ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act): ☐ Yes ☒ No

The aggregate market value of the voting common stock held by non-affiliates of the registrant as of June 30, 2015, the last business day of the registrant's most recently completed second fiscal quarter, was approximately \$2.6 billion.

The registrant had 277,061,336 shares of common stock outstanding as of February 19, 2016.

Documents incorporated by reference: Portions of the registrant's proxy statement for its annual meeting of stockholders to be filed pursuant to Regulation 14A within 120 days after the registrant's fiscal year end are incorporated by reference into Part III of this Annual Report on Form 10-K.

Table of Contents

In response to these market conditions and concerns about access to capital markets, many U.S. exploration and development companies significantly reduced their capital spending in 2015. Our capital spending for drilling, completions, and land for 2015 was \$1.8 billion, a reduction of approximately 44% from our 2014 capital expenditures. In conjunction with the reduction in our capital expenditures during 2015, we deferred the completion of 50 wells.

Our capital budget for drilling, completions, and land for 2016 is \$1.4 billion, a 24% reduction from our 2015 capital expenditures. We plan to operate an average of 7 drilling rigs in 2016 as compared to an average of 14 rigs in 2015, and we plan to complete 115 horizontal wells in the Marcellus and Utica Shales in 2016 as compared to 130 in 2015. We believe that our 2016 capital budget will be fully funded through operating cash flow and available borrowing capacity under our revolving credit facility or capital market transactions. We will continue to monitor commodity prices and may revise the capital budget if conditions warrant.

We evaluate the carrying amount of our proved natural gas, NGLs, and oil properties for impairment on a field-by-field basis whenever events or changes in circumstances (such as the decline in commodity prices during 2015) indicate that a property's carrying amount may not be recoverable. If the carrying amount exceeded the estimated undiscounted future cash flows (measured using strip prices at the end of a quarter), we would further evaluate our proved properties and record an impairment charge if the carrying amount of our proved properties exceeded the estimated fair value of the properties. Due to the current commodity price environment, we compared the carrying values of our proved properties to estimated future cash flows. As estimated future cash flows remained higher than the carrying value of our properties at December 31, 2015, we did not further evaluate our proved properties for impairment. See "Critical Accounting Policies and Estimates" for a discussion of such evaluation.

Source of Our Revenues

Our revenues are primarily derived from the sale of natural gas and oil production, as well as the sale of NGLs that are extracted from our natural gas during processing. Our production is entirely from within the continental United States. During 2015, our revenues from production were comprised of approximately 76% from the sale of natural gas and 24% from the sale of NGLs and oil. Natural gas, NGLs, and oil prices are inherently volatile and are influenced by many factors outside of our control. All of our production is derived from natural gas wells, some of which also produce NGLs, after processing, and limited quantities of oil. To achieve more predictable cash flows and to reduce our exposure to downward price fluctuations, we utilize derivative instruments to hedge future sales prices on a significant portion of our production.

We currently enter into fixed price natural gas and propane swap contracts in which we receive or pay the difference between a fixed price and the variable market price received. We enter into these contracts in order to reduce the variability in cash flows associated with our expected future production. In the past, we have also used fixed-price oil swaps. In addition, we also use basis swap contracts in order to hedge the difference between the New York Mercantile Exchange ("NYMEX") index price and a local index price. At the end of each accounting period, we estimate the fair value of these swaps and, because we have not elected hedge accounting, we recognize changes in the fair value of these derivative instruments in earnings. We expect continued volatility in the prices we receive for our production and the fair value of our derivative instruments.

Revenues from our gathering and compression and water handling and treatment operations are primarily derived from intersegment transactions for services Antero Midstream provides to our exploration and production operations. The portion of such fees shown in our consolidated financial statements represent amounts charged to outside working interest owners in Company-operated wells, as well as fees charged to other third parties for water handling and treatment services provided by the Company or usage of Antero Midstream's gathering pipelines.

Marketing revenues are primarily derived from activities to purchase and sell third-party natural gas and NGLs and to market excess firm transportation capacity to third parties.

Principal Components of Our Cost Structure

- *Lease operating expenses.* These are the day-to-day operating costs incurred to maintain production of our natural gas, NGLs, and oil. Such costs include labor-related costs to monitor producing wells; produced water treatment and disposal, maintenance, repairs, and workover expenses. Cost levels for these expenses can vary based on supply and demand for oilfield services, and activity levels.
- *Gathering, compression, processing and transportation.* These are costs incurred to bring natural gas, NGLs, and oil to the market. Such costs include the costs to operate and maintain our low- and high-pressure gathering and compression

Table of Contents

systems held by Antero Midstream, as well as fees paid to third parties who operate low- and high-pressure gathering systems that transport our gas. They also include costs to process and extract NGLs from our produced gas and to transport our NGLs and oil to market. We often enter into fixed price long-term contracts that secure transportation and processing capacity which may include minimum volume commitments, the cost for which is included in these expenses to the extent that they are not excess capacity. Costs associated with excess capacity are included in marketing expenses.

- *Production and ad valorem taxes.* Production and ad valorem taxes consist of severance and ad valorem taxes. Severance taxes are paid on produced natural gas and oil based on a percentage of realized prices (not hedged prices) and at fixed per-unit rates established by federal, state or local taxing authorities. Ad valorem taxes are paid based on the value of our property and equipment in service, as well as the value of our reserves.
- *Marketing expenses.* In 2014, we began to purchase and sell third-party natural gas and NGLs and to market our excess firm transportation capacity in order to utilize this excess capacity. Marketing costs include the cost of purchased third-party natural gas and NGLs. We also classify firm transportation costs related to capacity contracted for in advance of having sufficient production and infrastructure to fully utilize the capacity (excess capacity) as marketing expenses since we are marketing this excess capacity to third parties. We enter into long-term firm transportation agreements for a significant part of our current and expected future production in order to secure capacity on major pipelines.
- *Exploration expense.* These are geological and geophysical costs and include seismic costs, costs related to unsuccessful leasing efforts, and costs of unsuccessful exploratory dry holes. We have not recorded any costs related to exploratory dry holes in the three years ended December 31, 2015.
- *Impairment of unproved and proved properties.* These costs include unproved property impairment and costs associated with lease expirations. We would also record impairment charges for proved properties if the carrying values were to exceed estimated future cash flows. Through December 31, 2015, we have not recorded any impairment for proved properties.
- *Depletion, depreciation, and amortization.* Depletion, depreciation, and amortization, or DD&A, includes the systematic expensing of the capitalized costs incurred to acquire, explore, and develop natural gas, NGLs, and oil. As a "successful efforts" company, we capitalize all costs associated with our acquisition and development efforts and all successful exploration efforts, and allocate these costs to each unit of production using the units of production method.
- *General and administrative expense.* These costs include overhead, including payroll and benefits for our staff, costs of maintaining our headquarters, costs of managing our production and development operations, franchise taxes, audit and other professional fees, and legal compliance expenses. General and administrative expense also includes non-cash equity-based compensation expense (see note 8 to the consolidated financial statements included elsewhere in this report).
- *Interest expense.* We finance a portion of our capital expenditures, working capital requirements and acquisitions with borrowings under our revolving credit facilities, which have variable rates of interest based on LIBOR or the prime rate. As a result, we incur substantial interest expense that is affected by both fluctuations in interest rates and our financing decisions. At December 31, 2015 we had a fixed interest rate of 6.00% on our senior notes due 2020 having a principal balance of \$525 million, a fixed interest rate of 5.375% on our senior notes due 2021 having a principal balance of \$1 billion, a fixed interest rate of 5.125% on our senior notes due 2022 having a principal balance of \$1.1 billion, and a fixed interest rate of 5.625% on our senior notes due 2023 having a principal balance of \$750 million. We expect to continue to incur significant interest expense as we continue to grow our operations.
- *Income tax expense.* We are subject to state and federal income taxes, but are currently not in a tax paying position for regular federal income taxes, primarily due to the differences in the tax and financial statement treatment of oil and gas properties, and the deferral of unsettled commodity hedge gains for tax purposes until they are settled in an exchange of cash. We do pay some state income or franchise taxes where state income or franchise taxes are determined on a basis other than income. We have recorded deferred income tax expense to the extent our deferred tax liabilities exceed our deferred tax assets. Our deferred tax assets and liabilities result from temporary differences between tax and financial statement income primarily from derivatives, oil and gas properties, and net operating loss carryforwards. At December 31, 2015, we had approximately \$1.4 billion of U.S. federal net operating loss carryforwards (NOLs) and approximately \$1.2 billion of state NOLs, which expire from 2024 through 2035. We recorded valuation allowances for deferred tax assets at December 31,

Table of Contents

ANTERO RESOURCES CORPORATION
Consolidated Statements of Operations and Comprehensive Income (Loss)
Years Ended December 31, 2013, 2014, and 2015
(In thousands, except share and per share amounts)

	2013	2014	2015
Revenue:			
Natural gas sales	\$ 689,198	1,301,349	1,039,892
Natural gas liquids sales	111,663	328,323	264,483
Oil sales	20,584	107,080	70,753
Gathering, compression, and water handling and treatment	—	22,075	22,000
Marketing	—	53,604	176,229
Commodity derivative fair value gains	491,689	868,201	2,381,501
Gain on sale of gathering system	—	40,000	—
Total revenue	1,313,134	2,720,632	3,954,858
Operating expenses:			
Lease operating	9,439	29,341	36,011
Gathering, compression, processing, and transportation	218,428	461,413	659,361
Production and ad valorem taxes	50,481	87,919	78,325
Marketing	—	103,435	299,062
Exploration	22,272	27,893	3,846
Impairment of unproved properties	10,928	15,198	104,321
Depletion, depreciation, and amortization	233,876	477,896	709,763
Accretion of asset retirement obligations	1,065	1,271	1,655
General and administrative (including equity-based compensation expense of \$365,280, \$112,252, and \$97,877 in 2013, 2014, and 2015, respectively)	425,438	216,533	233,697
Contract termination and rig stacking	—	—	38,531
Total operating expenses	971,927	1,420,898	2,164,572
Operating income	341,207	1,299,734	1,790,286
Other expenses:			
Interest	(136,617)	(160,051)	(234,400)
Loss on early extinguishment of debt	(42,567)	(20,386)	—
Total other expenses	(179,184)	(180,437)	(234,400)
Income from continuing operations before income taxes and discontinued operations	162,023	1,119,297	1,555,886
Provision for income tax expense	(186,210)	(445,672)	(575,890)
Income (loss) from continuing operations	(24,187)	673,625	979,996
Discontinued operations:			
Income from sale of discontinued operations, net of income tax expense of \$3,249 and \$1,354 in 2013 and 2014, respectively	\$ 257	2,210	—
Net income (loss) and comprehensive income (loss) including noncontrolling interest	(18,930)	675,835	979,996
Net income and comprehensive income attributable to noncontrolling interest	—	2,248	38,632
Net income (loss) and comprehensive income (loss) attributable to Antero Resources Corporation	\$ (18,930)	673,587	941,364
Earnings (loss) per common share:			
Continuing operations	\$ (0.09)	2.56	3.43
Discontinued operations	0.02	0.01	—
Total	\$ (0.07)	2.57	3.43
Earnings (loss) per common share—assuming dilution:			
Continuing operations	\$ (0.09)	2.56	3.43
Discontinued operations	0.02	0.01	—
Total	\$ (0.07)	2.57	3.43
Weighted average number of shares outstanding:			
Basic	262,049,659	262,053,868	274,122,567
Diluted	262,049,659	262,068,106	274,143,341

See accompanying notes to consolidated financial statements.

TAX DEPT. EXHIBITS

FEB-15-2017
01:32 PM

COUNTY:09 DODDRIDGE COUNTY, WV

PRODUCING VALUE ABSTRACT

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0115154830	OG	2017	ANTERO RESOURCES CORPORAT	10382	0	0	0	0	
	PP	20070432	ANTERO RESOURCES						
	PP	20150975	NICOLS RAE ELLEN						6903
	PP	20161686	DAVID C NICHOLS II REVOCABLE LIV TRUST						
0120146079	OG	2017	ANTERO RESOURCES CORPORAT	1889226	0	0	0	0	179
	PP	20142100	ANTERO RESOURCES APPALACHIAN CORPORATIO	1777318	0	0	0	0	1411961
0120146083	OG	2017	ANTERO RESOURCES CORPORAT	2759113	0	0	0	0	1327079
	PP	20142099	ANTERO RESOURCES APPALACHIAN CORPORATIO	2759113	0	0	0	0	
0120156169	OG	2017	ANTERO RESOURCES CORPORAT	2518517	0	0	0	0	1906359
	PP	20150591	STATOIL USA ONSHORE PROPERTY INC SUS	2518517	0	0	0	0	61933
	PP	20150593	ANTERO RESOURCES CORPORATIO	2053548	0	0	0	0	1738879
0120156170	OG	2017	ANTERO RESOURCES CORPORAT	2137407	0	0	0	0	56491
	PP	20150594	ANTERO RESOURCES CORPORATIO	2137407	0	0	0	0	
	PP	20150595	STATOIL USA ONSHORE PROPERTY INC SUS	2053548	0	0	0	0	1542896
0120156187	OG	2017	ANTERO RESOURCES CORPORAT	2034858	0	0	0	0	1637368
	PP	20150596	ANTERO RESOURCES CORPORATIO	2034858	0	0	0	0	
0120156188	OG	2017	ANTERO RESOURCES CORPORAT	5780487	0	0	0	0	1528896
	PP	20150597	ANTERO RESOURCES CORPORATIO	5780487	0	0	0	0	
0120156189	OG	2017	ANTERO RESOURCES CORPORAT	4092993	0	0	0	0	4420765
	PP	20150598	STATOIL USA ONSHORE PROPERTIES INC	4092993	0	0	0	0	75391
	PP	20161033	SWN PRODUCTION COMPANY LLC	4092993	0	0	0	0	214575
0120166141	OG	2017	ANTERO RESOURCES CORPORAT	3569632	0	0	0	0	3165111
	PP	20161036	ANTERO RESOURCES CORPORATIO	3569632	0	0	0	0	137208
0120166142	OG	2017	ANTERO RESOURCES CORPORAT	2752550	0	0	0	0	2822531
	PP	20161038	ANTERO RESOURCES CORPORATIO	2752550	0	0	0	0	
0120166190	OG	2017	ANTERO RESOURCES CORPORAT	2652938	0	0	0	0	2155834
	PP	20161040	ANTERO RESOURCES CORPORATIO	2652938	0	0	0	0	
0120166191	OG	2017	ANTERO RESOURCES CORPORAT	3999499	0	0	0	0	2061728
	PP	20161042	ANTERO RESOURCES CORPORATIO	3999499	0	0	0	0	
0120166192	OG	2017	ANTERO RESOURCES CORPORAT	4911926	0	0	0	0	3154854
	PP	20161044	ANTERO RESOURCES CORPORATIO	4911926	0	0	0	0	
0120166193	OG	2017	ANTERO RESOURCES CORPORAT	4865256	0	0	0	0	3905401
	PP	20161046	STATOIL USA ONSHORE PROPERTIES INC	4865256	0	0	0	0	13389
0120166201	OG	2017	ANTERO RESOURCES CORPORAT	4251598	0	0	0	0	3731100
	PP	20161048	ANTERO RESOURCES CORPORATIO	4251598	0	0	0	0	161305
0120166206	OG	2017	ANTERO RESOURCES CORPORAT	3008766	0	0	0	0	3372468
	PP	20161050	ANTERO RESOURCES CORPORATIO	3008766	0	0	0	0	
0120166207	OG	2017	ANTERO RESOURCES CORPORAT	5619167	0	0	0	0	2409038
	PP	20161052	ANTERO RESOURCES CORPORATIO	5619167	0	0	0	0	
0120166211	OG	2017	ANTERO RESOURCES CORPORAT	6397116	0	0	0	0	4582322
	PP	20161054	ANTERO RESOURCES CORPORATIO	6397116	0	0	0	0	
0120166212	OG	2017	ANTERO RESOURCES CORPORAT	7289863	0	0	0	0	5222949
	PP	20161056	ANTERO RESOURCES CORPORATIO	7289863	0	0	0	0	
0120166213	OG	2017	ANTERO RESOURCES CORPORAT						
	PP	20161058							
0120166266	OG	2017	ANTERO RESOURCES CORPORAT						
	PP	20161060							

FEB-15-2017
01:32 PM

COUNTY:09 DODDRIDGE COUNTY, WV

PRODUCING VALUE ABSTRACT

PAGE 2
NR100

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0120166266	OG	2017	PP ANTERO RESOURCES CORPORAT	7289863	0	0	0	0	5784778
0120166272	OG	2017	PP ANTERO RESOURCES CORPORAT	3314478	0	0	0	0	2546897
			PP 20161530	ANTERO RESOURCES CORPORATION	0	0	0	0	2252
			PP 20161531	STATOIL USA ONSHORE PROPERTIES INC	0	0	0	0	62981
0120166275	OG	2017	PP ANTERO RESOURCES CORPORAT	SWN PRODUCTION COMPANY LLC	0	0	0	0	3686966
			PP 20161528	ANTERO RESOURCES CORPORATION	0	0	0	0	90382
0120166289	OG	2017	PP ANTERO RESOURCES CORPORAT	SWN PRODUCTION COMPANY LLC	0	0	0	0	2988811
			PP 20161529	ANTERO RESOURCES CORPORATION	0	0	0	0	2824398
0120166292	OG	2017	PP ANTERO RESOURCES CORPORAT	3771550	0	0	0	0	2376734
			PP 20161225	ANTERO RESOURCES CORPORATION	0	0	0	0	2890723
0120166293	OG	2017	PP ANTERO RESOURCES CORPORAT	3667325	0	0	0	0	3372930
			PP 20161227	ANTERO RESOURCES CORPORATION	0	0	0	0	5303696
0120166294	OG	2017	PP ANTERO RESOURCES CORPORAT	3118047	0	0	0	0	2780171
			PP 20161229	ANTERO RESOURCES CORPORATION	0	0	0	0	3054578
0120166359	OG	2017	PP ANTERO RESOURCES CORPORAT	3653762	0	0	0	0	3541254
			PP 20161231	ANTERO RESOURCES CORPORATION	0	0	0	0	1478291
0120166402	OG	2017	PP ANTERO RESOURCES CORPORAT	4275103	0	0	0	0	2182027
			PP 20161652	ANTERO RESOURCES CORPORATION	0	0	0	0	1991706
0120166402	OG	2017	PP ANTERO RESOURCES CORPORAT	6683118	0	0	0	0	1669302
			PP 20161233	ANTERO RESOURCES CORPORATION	0	0	0	0	1769258
0120166430	OG	2017	PP ANTERO RESOURCES CORPORAT	3978442	0	0	0	0	47460
			PP 20161235	ANTERO RESOURCES CORPORATION	0	0	0	0	1409235
0120166431	OG	2017	PP ANTERO RESOURCES CORPORAT	3791922	0	0	0	0	37803
			PP 20161237	ANTERO RESOURCES CORPORATION	0	0	0	0	2868815
0120166432	OG	2017	PP ANTERO RESOURCES CORPORAT	4369693	0	0	0	0	150991
			PP 20161239	ANTERO RESOURCES CORPORATION	0	0	0	0	2581559
0120176370	OG	2017	PP ANTERO RESOURCES CORPORAT	1898760	1757024	0	0	0	3189943
			PP 20171404	ANTERO RESOURCES CORPORATION	0	0	0	0	2979966
0120176371	OG	2017	PP ANTERO RESOURCES CORPORAT	2754424	2580186	0	0	0	
			PP 20171406	ANTERO RESOURCES CORPORATION	0	0	0	0	
0120176464	OG	2017	PP ANTERO RESOURCES CORPORAT	2520892	2372230	0	0	0	
			PP 20171408	ANTERO RESOURCES CORPORATION	0	0	0	0	
0120176465	OG	2017	PP ANTERO RESOURCES CORPORAT	2134732	2053650	0	0	0	
			PP 20171410	ANTERO RESOURCES CORPORATION	0	0	0	0	
0120176474	OG	2017	PP ANTERO RESOURCES CORPORAT	2241944	2040488	0	0	0	
			PP 20171412	ANTERO RESOURCES CORPORATION	0	0	0	0	
0120176475	OG	2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORPORATION	0	0	0	0	
			PP 20171413	XTO ENERGY INC	1665325	0	0	0	
			PP 20171415	1808428	1665325	0	0	0	
0120176561	OG	2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORPORATION	0	0	0	0	
			PP 20171417	XTO ENERGY INC	3844576	0	0	0	
			PP 20171418	3844576	2450728	0	0	0	
0120176562	OG	2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORPORATION	0	0	0	0	
			PP 20171420	MUTSHELKNAUS DRILLING PROGRAM 1A 2	3310720	0	0	0	
0120176563	OG	2017	PP ANTERO RESOURCES CORPORAT	3310720	2063318	0	0	0	
			PP 20171421	ANTERO RESOURCES CORPORATION	0	0	0	0	
0120176564	OG	2017	PP ANTERO RESOURCES CORPORAT	3947268	2316559	0	0	0	
			PP 20171423	ANTERO RESOURCES CORPORATION	0	0	0	0	
			PP ANTERO RESOURCES CORPORAT	3688597	1949313	0	0	0	
			PP 20171425	ANTERO RESOURCES CORPORATION	0	0	0	0	

PAGE 3
NR100

NR100

Account	Rt TaxYr	Name	System	PTD	ASSR	COMM	CRT	Final
0120176619	OG 2017	PP ANTERO RESOURCES CORPORAT	2999296	2036861	0	0	0	
0120176620	OG 2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORPORATION					
0120176621	OG 2017	PP ANTERO RESOURCES CORPORAT	2380700	1585533	0	0	0	2282137
0120176622	OG 2017	PP ANTERO RESOURCES CORPORAT	2167142	1581S21	0	0	0	1792736
0300520001	OG 2017	PP ANTERO RESOURCES CORPORAT	2287837	1529515	0	0	0	1629261
0300520002	OG 2017	PP ANTERO RESOURCES CORPORAT	2488	0	0	0	0	1725159
0300520004	OG 2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES					
0300520005	OG 2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES	0	0	0	0	1851
0300520007	OG 2017	PP ANTERO RESOURCES CORPORAT	2198	0	0	0	0	1334
0300520012	OG 2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES					
0300735001	OG 2017	PP ANTERO RESOURCES CORPORAT	6527	0	0	0	0	1412
0300735002	OG 2017	PP ANTERO RESOURCES CORPORAT	500	0	0	0	0	4232
0300735004	OG 2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORPORATION					
0300745001	OG 2017	PP ANTERO RESOURCES CORPORAT	652	0	0	0	0	500
0300745002	OG 2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES					
0300745004	OG 2017	PP ANTERO RESOURCES CORPORAT	5738	0	0	0	0	500
0300745001	OG 2017	PP ANTERO RESOURCES CORPORAT	8082	0	0	0	0	4287
0316164971	OG 2017	PP ANTERO RESOURCES CORPORAT	1041	0	0	0	0	6112
0317171697	OG 2017	PP ANTERO RESOURCES CORPORAT	1175	0	0	0	0	768
0317171706	OG 2017	PP ANTERO RESOURCES CORPORAT	16060	0	0	0	0	777
0317171795	OG 2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES					
0318185307	OG 2017	PP ANTERO RESOURCES CORPORAT	662	0	0	0	0	10657
0318185320	OG 2017	PP ANTERO RESOURCES CORPORAT	522	0	0	0	0	500
0318185470	OG 2017	PP ANTERO RESOURCES CORPORAT	ANTERO RESOURCES					
0318185471	OG 2017	PP ANTERO RESOURCES CORPORAT	946	0	0	0	0	500
0320104585	OG 2017	PP ANTERO RESOURCES CORPORAT	4134	0	0	0	0	627
			ANTERO RESOURCES BLUESTONE LLC					
			4950	0	0	0	0	2771
			8497	0	0	0	0	3318
			2996	0	0	0	0	5286
			ANTERO RESOURCES					
			69832	0	0	0	0	1866
			ANTERO RESOURCES BLUESTONE LLC					
			DEEM PATRICK D					
			HAUGHT WARREN					
			INTEPID ENERGY FUNDING LLC					
			J5 ENERGY LLC					

FEB-15-2017
01:32 PM

COUNTY:09 DODDRIDGE COUNTY, WV

PRODUCING VALUE ABSTRACT

PAGE 4
NR100

Account	St Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0320104585	OG 2017	ANTERO RESOURCES CORPORAT	69832	0	0	0	0	
		PP 20100515	JOHNSON CHAD W					1332
		PP 20100516	MUTSCHELKNAUS MARY F					6130
		PP 20100518	MUTSCHELKNAUS CLARENCE W JR					1066
0320105308	OG 2017	ANTERO RESOURCES CORPORAT	4817	0	0	0	0	
		PP 20120560	ANTERO RESOURCES ELUESTONE LLC					3231
0320105657	OG 2017	ANTERO RESOURCES CORPORAT	48465	0	0	0	0	
		PP 20100520	ANTERO RESOURCES ELUESTONE LLC					27318
		PP 20100521	INTREPID ENERGY LLC					729
		PP 20100522	MUTSCHELKNAUS MARY F					3643
		PP 20100523	MUTSCHELKNAUS CLARENCE W JR					729
		PP 20100525	ROMINGER JOHN					3643
		PP 20100526	SIDERS JOYCE					364
0320105672	OG 2017	ANTERO RESOURCES CORPORAT	86559	0	0	0	0	
		PP 20100425	ANTERO RESOURCES ELUESTONE LLC					48789
		PP 20100426	DEEM PAT					1301
		PP 20100427	INTREPID ENERGY LLC					1627
		PP 20100428	J5 ENERGY LLC					1627
		PP 20100429	JOHNSON CHAD					1627
		PP 20100430	MUTSCHELKNAUS MARY F					7806
		PP 20100431	MUTSCHELKNAUS CLARENCE W JR					1627
0320115585	OG 2017	ANTERO RESOURCES CORPORAT	53593	0	0	0	0	
		PP 20110504	ANTERO RESOURCES ELUESTONE LLC					651
		PP 20110505	DEEM PATRICK D					30210
		PP 20110506	INTREPID ENERGY FUNDING LLC					806
		PP 20110507	J5 ENERGY LLC					1007
		PP 20110508	JOHNSON CHAD W					1007
		PP 20110509	MUTSCHELKNAUS CLARENCE W JR					1007
		PP 20110510	MUTSCHELKNAUS MARY F					1007
0320115586	OG 2017	ANTERO RESOURCES CORPORAT	85820	0	0	0	0	
		PP 20110511	SIDERS JOYCE					4834
		PP 20110513	ANTERO RESOURCES ELUESTONE LLC					403
		PP 20110514	DEEM PATRICK D					0
		PP 20110515	INTREPID ENERGY FUNDING LLC					0
		PP 20110516	J5 ENERGY LLC					0
		PP 20110517	JOHNSON CHAD W					0
		PP 20110518	MUTSCHELKNAUS CLARENCE W JR					0
		PP 20110519	MUTSCHELKNAUS MARY F					0
0320115604	OG 2017	ANTERO RESOURCES CORPORAT	41875	0	0	0	0	
		PP 20110520	SIDERS JOYCE					0
		PP 20110521	ANTERO RESOURCES CORP (FORMERLY ANTERO					26749
		PP 20110522	INTREPID ENERGY FUNDING LLC					629
		PP 20110523	J5 ENERGY LLC					787
		PP 20110524	JOHNSON CHAD W					787
		PP 20110525	MUTSCHELKNAUS CLARENCE W JR					629
		PP 20110526	MUTSCHELKNAUS MARY F					1574
0320115605	OG 2017	ANTERO RESOURCES CORPORAT	56262	0	0	0	0	
		PP 20110527	SIDERS JOYCE					316

FEB-15-2017
01:32 PM

COUNTY:09 DODDRIDGE COUNTY, WV

PRODUCING VALUE ABSTRACT

PAGE 5
NR100

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0320115605	OG	2017	ANTERO RESOURCES CORPORAT	56262	0	0	0	0	
			PP 20110530	ANTERO RESOURCES BLUESTONE LLC					40346
			PP 20110531	J5 ENERGY LLC					672
			PP 20110532	JOHNSON ANTHONY E					449
			PP 20110533	JOHNSON CHAD W					672
			PP 20110534	JOHNSON WILLIAM R					449
			PP 20110535	MUTSHELKNAUS MARY F					2242
0320115609	OG	2017	ANTERO RESOURCES CORPORAT	77303	0	0	0	0	
			PP 20110536	ANTERO RESOURCES BLUESTONE LLC					43582
			PP 20110537	DEEM PATRICK D					1163
			PP 20110538	INTREPID ENERGY FUNDING LLC					1452
			PP 20110539	J5 ENERGY LLC					872
			PP 20110540	JOHNSON ANTHONY B					581
			PP 20110541	JOHNSON CHAD W					872
			PP 20110542	JOHNSON WILLIAM R					581
			PP 20110543	MUTSHELKNAUS CLARENCE W JR					1452
			PP 20110544	MUTSHELKNAUS MARY F					6972
			PP 20110545	SIDERS JOYCE					581
0320115638	OG	2017	ANTERO RESOURCES CORPORAT	82562	0	0	0	0	
			PP 20110547	J5 ENERGY LLC					1551
			PP 20110548	JOHNSON CHAD W					1551
			PP 20110549	MUTSHELKNAUS MARY F					3103
			PP 20170489	ANTERO RESOURCES CORPORATION					55845
0320115647	OG	2017	ANTERO RESOURCES CORPORAT	27481	0	0	0	0	
			PP 20110550	ANTERO RESOURCES BLUESTONE LLC					19765
			PP 20110551	J5 ENERGY LLC					521
			PP 20110552	JOHNSON CHAD W					521
0320115665	OG	2017	ANTERO RESOURCES CORPORAT	82725	0	0	0	0	
			PP 20110554	ANTERO RESOURCES BLUESTONE LLC					46618
			PP 20110555	DEEM PATRICK D					1243
			PP 20110556	INTREPID ENERGY FUNDING LLC					1554
			PP 20110557	J5 ENERGY LLC					932
			PP 20110558	JOHNSON ANTHONY E					622
			PP 20110559	JOHNSON CHAD W					932
			PP 20110560	JOHNSON WILLIAM R					622
			PP 20110561	MUTSHELKNAUS CLARENCE W JR					1554
			PP 20110562	MUTSHELKNAUS MARY F					7461
			PP 20110563	SIDERS JOYCE					622
0320115669	OG	2017	ANTERO RESOURCES CORPORAT	38995	0	0	0	0	
			PP 20110564	ANTERO RESOURCES BLUESTONE LLC					26373
			PP 20120534	J5 ENERGY LLC					440
			PP 20120535	JOHNSON ANTHONY E					294
			PP 20120536	JOHNSON CHAD W					440
			PP 20120537	JOHNSON WILLIAM R					294
			PP 20120538	MUTSHELKNAUS MARY F					1466
0320115680	OG	2017	ANTERO RESOURCES CORPORAT	64338	0	0	0	0	
			PP 20110565	ANTERO RESOURCES BLUESTONE LLC					36264
			PP 20110566	J5 ENERGY LLC					4836
			PP 20110567	JOHNSON CHAD W					4836

FEB-15-2017
01:32 PM

COUNTY:09 DODDRIDGE COUNTY, WV

PRODUCING VALUE ABSTRACT

PAGE 6
NR100

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0320115680	OG	2017	PP ANTERO RESOURCES CORPORAT	64338	0	0	0	0	2417
0320115691	OG	2017	PP ANTERO RESOURCES CORPORAT	100984	0	0	0	0	56920
			PP 20110570	MUTSHELKNAUS MARY F					1518
			PP 20110571	ANTERO RESOURCES BLUESTONE LLC					1897
			PP 20110572	DEEM PAT					1139
			PP 20110573	INTREPID ENERGY FUNDING LLC					760
			PP 20110574	J5 ENERGY LLC					1139
			PP 20110575	JOHNSON ANTHONY B					760
			PP 20110576	JOHNSON CHAD W					1897
			PP 20110577	JOHNSON WILLIAM R					9107
			PP 20110578	MUTSHELKNAUS CLARENCE W JR					760
			PP 20110579	MUTSHELKNAUS MARY F					
			PP 20110579	SIDERS JOYCE					
0320115751	OG	2017	PP ANTERO RESOURCES CORPORAT	21674	0	0	0	0	14769
			PP 20110580	ANTERO RESOURCES BLUESTONE LLC					1640
			PP 20110582	MIDWEST ENERGY INC					
0320115774	OG	2017	PP ANTERO RESOURCES CORPORAT	58149	0	0	0	0	32778
			PP 20110584	ANTERO RESOURCES BLUESTONE LLC					874
			PP 20110585	DEEM PATRICK D					1092
			PP 20110586	INTREPID ENERGY FUNDING LLC					655
			PP 20110587	J5 ENERGY LLC					438
			PP 20110588	JOHNSON ANTHONY B					655
			PP 20110589	JOHNSON CHAD W					438
			PP 20110590	JOHNSON WILLIAM R					1092
			PP 20110591	MUTSHELKNAUS CLARENCE W JR					5244
			PP 20110592	MUTSHELKNAUS MARY F					438
			PP 20110593	SIDERS JOYCE					
0320115776	OG	2017	PP ANTERO RESOURCES CORPORAT	87954	0	0	0	0	49576
			PP 20110594	ANTERO RESOURCES BLUESTONE LLC					1323
			PP 20110595	DEEM PAT					1653
			PP 20110596	INTREPID ENERGY FUNDING LLC					992
			PP 20110597	J5 ENERGY LLC					661
			PP 20110598	JOHNSON ANTHONY B					992
			PP 20110599	JOHNSON CHAD W					661
			PP 20110600	JOHNSON WILLIAM R					661
			PP 20110601	MUTSHELKNAUS MARY F					9585
			PP 20110602	SIDERS JOYCE					661
0320115777	OG	2017	PP ANTERO RESOURCES CORPORAT	59786	0	0	0	0	38192
			PP 20110603	ANTERO RESOURCES BLUESTONE LLC					899
			PP 20110604	INTREPID ENERGY FUNDING LLC					1124
			PP 20110605	J5 ENERGY LLC					1124
			PP 20110606	JOHNSON CHAD W					899
			PP 20110607	MUTSHELKNAUS CLARENCE W JR					2246
			PP 20110608	MUTSHELKNAUS MARY F					450
			PP 20110609	SIDERS JOYCE					
0320115781	OG	2017	PP ANTERO RESOURCES CORPORAT	55156	0	0	0	0	33155
			PP 20110741	ANTERO RESOURCES BLUESTONE LLC					830
			PP 20110742	DEEM PATRICK D					1658
			PP 20110743	J5 ENERGY LLC					

FEB-15-2017
01:32 PM

COUNTY: 09 DODDRIDGE COUNTY, WV

PRODUCING VALUE ABSTRACT

Account	Rt Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0320115781	OG 2017	ANTERO RESOURCES CORPORAT	55156	0	0	0	0	
		PP 20110744	JOHNSON ANTHONY B					415
		PP 20110745	JOHNSON CHAD W					1658
		PP 20110746	JOHNSON WILLIAM R					415
		PP 20110747	MUTSCHELKNAUS MARY F					3316
0320115814	OG 2017	ANTERO RESOURCES CORPORAT	10736	0	0	0	0	
		PP 20110738	ANTERO RESOURCES BLUESTONE LLC					4006
		PP 20110740	TAO ENERGY LLC					4006
0320115817	OG 2017	ANTERO RESOURCES CORPORAT	92644	0	0	0	0	
		PP 20110610	ANTERO RESOURCES BLUESTONE LLC					52221
		PP 20110611	J5 ENERGY LLC					6267
		PP 20110612	JOHNSON ANTHONY B					696
		PP 20110613	JOHNSON CHAD W					6267
		PP 20110614	JOHNSON WILLIAM R					696
		PP 20110615	MUTSCHELKNAUS MARY F					3482
0320115839	OG 2017	ANTERO RESOURCES CORPORAT	73392	0	0	0	0	
		PP 20110750	ANTERO RESOURCES BLUESTONE LLC					41369
		PP 20110751	DEEM PAT					1104
		PP 20110752	J5 ENERGY LLC					828
		PP 20110753	JOHNSON ANTHONY B					551
		PP 20110754	JOHNSON CHAD W					828
		PP 20110755	JOHNSON WILLIAM R					551
		PP 20110756	MUTSCHELKNAUS MARY F					9377
		PP 20110757	SIDERS JOYCE					551
0320115846	OG 2017	ANTERO RESOURCES CORPORAT	57942	0	0	0	0	
		PP 20110616	ANTERO RESOURCES BLUESTONE LLC					41869
0320115858	OG 2017	ANTERO RESOURCES CORPORAT	218304	0	0	0	0	
		PP 20110619	ANTERO RESOURCES BLUESTONE LLC					89583
		PP 20110620	J5 ENERGY LLC					35836
		PP 20110621	JOHNSON ANTHONY B					8958
		PP 20110622	JOHNSON CHAD W					35836
		PP 20110623	JOHNSON WILLIAM R					8958
0320115862	OG 2017	ANTERO RESOURCES CORPORAT	50778	0	0	0	0	
		PP 20110624	ANTERO RESOURCES BLUESTONE LLC					34348
		PP 20120539	J5 ENERGY LLC					571
		PP 20120540	JOHNSON ANTHONY B					383
		PP 20120541	JOHNSON CHAD W					571
		PP 20120542	JOHNSON WILLIAM R					383
		PP 20120543	MUTSCHELKNAUS MARY F					1908
0320125761	OG 2017	ANTERO RESOURCES CORPORAT	55017	0	0	0	0	
		PP 20120721	ANTERO RESOURCES BLUESTONE LLC					32526
		PP 20120722	HAYDEN HARPER DIRECT ENERGY 2009A DRILL					6829
		PP 20120723	J5 ENERGY LLC					658
		PP 20120724	JOHNSON ANTHONY B					438
		PP 20120725	JOHNSON CHAD W					658
		PP 20120726	JOHNSON WILLIAM R					438
		PP 20120727	MUTSCHELKNAUS MARY F					2192
0320125966	OG 2017	ANTERO RESOURCES CORPORAT	29207	0	0	0	0	
		PP 20120779	ANTERO RESOURCES CORP (FORMERLY ANTERO					21951
0320146080	OG 2017	ANTERO RESOURCES CORPORAT	6616512	0	0	0	0	

FEB-15-2017
01:32 PM

COUNTY: 09 DODDRIDGE COUNTY, WV

PRODUCING VALUE ABSTRACT

PAGE 8
NR100

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0320146080	OG	2017	ANTERO RESOURCES CORPORAT PP 20141152	6616512 ANTERO RESOURCES CORPORATION FUND 1 DR LLC	0	0	0	0	5280722 38187
0320146085	OG	2017	ANTERO RESOURCES CORPORAT PP 20141155	3155179 ANTERO RESOURCES CORPORATION	0	0	0	0	2567502
0320156084	OG	2017	ANTERO RESOURCES CORPORAT PP 20141165	2789497 ANTERO RESOURCES CORPORATION	0	0	0	0	2255888
0320156128	OG	2017	ANTERO RESOURCES CORPORAT PP 20150713	1820059 ANTERO RESOURCES CORPORATION	0	0	0	0	1340309 49704
0320156129	OG	2017	ANTERO RESOURCES CORPORAT PP 20150749	1737813 ANTERO RESOURCES CORPORATION	0	0	0	0	1273151 47213
0320156163	OG	2017	ANTERO RESOURCES CORPORAT PP 20150796	1456823 ANTERO RESOURCES CORPORATION	0	0	0	0	1123082
0320156166	OG	2017	ANTERO RESOURCES CORPORAT PP 20170913	152310 ANTERO RESOURCES CORPORATION	0	0	0	0	1227504
0320156194	OG	2017	ANTERO RESOURCES CORPORAT PP 20150807	4726747 ANTERO RESOURCES CORPORATION	0	0	0	0	3958013
0320156204	OG	2017	ANTERO RESOURCES CORPORAT PP 20150726	2477845 ANTERO RESOURCES CORPORATION	0	0	0	0	2034091
0320156205	OG	2017	ANTERO RESOURCES CORPORAT PP 20150728	3942873 ANTERO RESOURCES CORPORATION	0	0	0	0	3233349
0320156221	OG	2017	ANTERO RESOURCES CORPORAT PP 20150730	1604638 ANTERO RESOURCES CORPORATION	0	0	0	0	1296362
0320156255	OG	2017	ANTERO RESOURCES CORPORAT PP 20150732	1837747 ANTERO RESOURCES CORPORATION	0	0	0	0	1375402
0320156256	OG	2017	ANTERO RESOURCES CORPORAT PP 20150734	1887350 ANTERO RESOURCES CORPORATION	0	0	0	0	1412532
0320156260	OG	2017	ANTERO RESOURCES CORPORAT PP 20150738	4713088 ANTERO RESOURCES CORPORATION	0	0	0	0	3894739
0320166202	OG	2017	ANTERO RESOURCES CORPORAT PP 20170961	1343957 ANTERO RESOURCES CORPORATION	0	0	0	0	1078282
0320166203	OG	2017	ANTERO RESOURCES CORPORAT PP 20160992	1085941 ANTERO RESOURCES CORPORATION	0	0	0	0	871279
0320166220	OG	2017	ANTERO RESOURCES CORPORAT PP 20160993	7485093 ANTERO RESOURCES CORPORATION	0	0	0	0	6323954
0320166246	OG	2017	ANTERO RESOURCES CORPORAT PP 20162778	7667521 ANTERO RESOURCES CORPORATION	0	0	0	0	6489791
0320166247	OG	2017	ANTERO RESOURCES CORPORAT PP 20160915	8606018 ANTERO RESOURCES CORPORATION	0	0	0	0	7299372
0320166259	OG	2017	ANTERO RESOURCES CORPORAT PP 20160916	4502417 ANTERO RESOURCES CORPORATION	0	0	0	0	3752769
0320166262	OG	2017	ANTERO RESOURCES CORPORAT PP 20160914	2287835 ANTERO RESOURCES CORPORATION	0	0	0	0	1763091
0320166263	OG	2017	ANTERO RESOURCES CORPORAT PP 20160994	2508912 ANTERO RESOURCES CORPORATION	0	0	0	0	1922106
0320166264	OG	2017	ANTERO RESOURCES CORPORAT PP 20160913	1760297 ANTERO RESOURCES CORPORATION	0	0	0	0	1342247
0320166267	OG	2017	ANTERO RESOURCES CORPORAT PP 20160995	3955386 ANTERO RESOURCES CORPORATION	0	0	0	0	

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 9
NR100

COUNTY:09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0320166267	OG	2017	ANTERO RESOURCES CORPORAT	3955386	0	0	0	0	
	PP	20160912	ANTERO RESOURCES CORPORATION	2478249	0	0	0	0	3185489
0320166268	OG	2017	ANTERO RESOURCES CORPORAT	3347951	0	0	0	0	1939882
	PP	20160907	ANTERO RESOURCES CORPORATION	1978001	0	0	0	0	2655080
0320166269	OG	2017	ANTERO RESOURCES CORPORAT	3128555	0	0	0	0	1473826
	PP	20160908	ANTERO RESOURCES CORPORATION	1381484	0	0	0	0	43703
0320166281	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	9747
	PP	20160910	ANTERO RESOURCES CORPORATION	8230123	0	0	0	0	2476513
	PP	20160917	SWN PRODUCTION COMPANY LLC	1667395	1593330	0	0	0	1025881
	PP	20160917	XTO ENERGY INC	1667395	1593330	0	0	0	33832
	PP	20171444	ANTERO RESOURCES CORPORATION	1381484	0	0	0	0	6883
0320166301	OG	2017	ANTERO RESOURCES CORPORAT	3128555	0	0	0	0	6918925
	PP	20160996	ANTERO RESOURCES CORPORATION	1381484	0	0	0	0	30904
0320166302	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	67015
	PP	20160911	ANTERO RESOURCES CORPORATION	8230123	0	0	0	0	1072856
	PP	20160918	SWN PRODUCTION COMPANY LLC	1667395	1593330	0	0	0	139184
	PP	20171447	XTO ENERGY INC	1667395	1593330	0	0	0	2038615
0320166399	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	2861226
	PP	20160909	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	2000091
0320176218	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	2156189
	PP	20171449	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	2863835
	PP	20171451	XTO ENERGY INC	1667395	1593330	0	0	0	93693
	PP	20171457	STATOIL USA ONSHORE PROPERTIES INC	1667395	1593330	0	0	0	43206
	PP	20171457	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	1499948
	PP	20171458	SWN PRODUCTION COMPANY LLC	1667395	1593330	0	0	0	194592
0320176270	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	2594118
	PP	20170988	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	3290439
0320176274	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	2758451
	PP	20171459	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	1288304
0320176373	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	135159
	PP	20170922	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	912651
0320176374	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	30830
	PP	20170924	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
0320176375	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	
	PP	20170926	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
0320176395	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	
	PP	20171455	STATOIL USA ONSHORE PROPERTIES INC	1667395	1593330	0	0	0	
	PP	20171455	XTO ENERGY INC	1667395	1593330	0	0	0	
	PP	20171456	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
	PP	20171460	SWN PRODUCTION COMPANY LLC	1667395	1593330	0	0	0	
	PP	20171461	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
0320176397	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	
	PP	20170947	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
0320176398	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	
	PP	20170951	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
0320176400	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	
	PP	20170956	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
0320176424	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	
	PP	20170901	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
	PP	20170903	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
0320176485	OG	2017	ANTERO RESOURCES CORPORAT	1667395	1593330	0	0	0	
	PP	20170904	ANTERO RESOURCES CORPORATION	1667395	1593330	0	0	0	
	PP	20170906	XTO ENERGY INC	1667395	1593330	0	0	0	

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 10
NR100

COUNTY: 09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0320176486	OG	2017	ANTERO RESOURCES CORPORAT	1260430	1175622	0	0	0	940188
	PP	20170907	ANTERO RESOURCES CORPORATION						31760
0320176487	OG	2017	ANTERO RESOURCES CORPORAT	1227178	1177200	0	0	0	915394
	PP	20170910	ANTERO RESOURCES CORPORATION						30923
0320176498	OG	2017	ANTERO RESOURCES CORPORAT	258227	2357143	0	0	0	2115235
	PP	20170912	ANTERO RESOURCES CORPORATION						0
0390004406	OG	2017	ANTERO RESOURCES CORPORAT	10564	0	0	0	0	7991
	PP	00031732	ANTERO RESOURCES CORPORATION						6352
	PP	00031732	ANTERO RESOURCES CORPORATION						7
0400875001	OG	2017	ANTERO RESOURCES CORPORAT	9375	0	0	0	0	44701
	PP	20161785	ANTERO RESOURCES CORPORATION						1117
	PP	20161786	ANTERO RESOURCES CORPORATION						10059
0420115874	OG	2017	ANTERO RESOURCES CORPORAT	74348	0	0	0	0	1486723
	PP	20110628	ANTERO RESOURCES BLUESTONE LLC						1338229
	PP	20120564	DEEM PATRICK D						1582386
	PP	20120565	MUTSHELKNAUS MARY F						83314
0420156143	OG	2017	ANTERO RESOURCES CORPORAT	2006129	0	0	0	0	78426
	PP	20150676	ANTERO RESOURCES CORPORATION						1490097
0420156144	OG	2017	ANTERO RESOURCES CORPORAT	1625263	0	0	0	0	1528915
	PP	20150678	ANTERO RESOURCES CORPORATION						1611598
0420156158	OG	2017	ANTERO RESOURCES CORPORAT	2331261	0	0	0	0	2103961
	PP	20150697	ANTERO RESOURCES CORPORATION						2585040
	PP	20161830	MUTSHELKNAUS MARY F & CLARENCE W						1639436
0420156162	OG	2017	ANTERO RESOURCES CORPORAT	2110710	0	0	0	0	3777622
	PP	20150702	MUTSHELKNAUS MARY F & CLARENCE W						198822
	PP	20161907	ANTERO RESOURCES CORPORATION						1221808
0420156164	OG	2017	ANTERO RESOURCES CORPORAT	2018778	0	0	0	0	1055213
	PP	20150695	ANTERO RESOURCES CORPORATION						1328177
0420156180	OG	2017	ANTERO RESOURCES CORPORAT	1950679	0	0	0	0	3825344
	PP	20150703	ANTERO RESOURCES CORPORATION						0
0420166138	OG	2017	ANTERO RESOURCES CORPORAT	2828853	0	0	0	0	0
	PP	20161787	ANTERO RESOURCES CORPORATION						0
0420166139	OG	2017	ANTERO RESOURCES CORPORAT	3196426	0	0	0	0	0
	PP	20161789	ANTERO RESOURCES CORPORATION						0
0420166140	OG	2017	ANTERO RESOURCES CORPORAT	2048256	0	0	0	0	0
	PP	20161791	ANTERO RESOURCES CORPORATION						0
0420166159	OG	2017	ANTERO RESOURCES CORPORAT	5107821	0	0	0	0	0
	PP	20161831	ANTERO RESOURCES CORPORATION						0
0420166160	OG	2017	ANTERO RESOURCES CORPORAT	1562214	0	0	0	0	0
	PP	20161833	MUTSHELKNAUS MARY F & CLARENCE W						0
0420166161	OG	2017	ANTERO RESOURCES CORPORAT	1349198	0	0	0	0	0
	PP	20161834	ANTERO RESOURCES CORPORATION						0
0420166167	OG	2017	ANTERO RESOURCES CORPORAT	1729373	0	0	0	0	0
	PP	20161906	ANTERO RESOURCES CORPORATION						0
0420166181	OG	2017	ANTERO RESOURCES CORPORAT	4674611	0	0	0	0	0
	PP	20161917	ANTERO RESOURCES CORPORATION						0
0420166182	OG	2017	ANTERO RESOURCES CORPORAT	5420599	0	0	0	0	0
	PP	20161990	ANTERO RESOURCES CORPORATION						0

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 11
NR100

COUNTY:09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0420166182	OG	2017	ANTERO RESOURCES CORPORAT	5420599	0	0	0	0	
0420166183	OG	2017	ANTERO RESOURCES CORPORAT	2699787	0	0	0	0	4434757
0420166210	OG	2017	ANTERO RESOURCES CORPORAT	3081866	0	0	0	0	2160695
	PP	20161996	ANTERO RESOURCES CORPORAT	3081866	0	0	0	0	2160695
	PP	20161997	CNX GAS CO LLC	CNX GAS CO LLC	0	0	0	0	2457808
	PP	20171224	CNX GAS CO LLC	CNX GAS CO LLC	0	0	0	0	3697
	PP	20171226	XTO ENERGY INC	XTO ENERGY INC	0	0	0	0	3907
0420166219	OG	2017	ANTERO RESOURCES CORPORAT	2353752	0	0	0	0	88256
0420166226	OG	2017	ANTERO RESOURCES CORPORAT	3687817	0	0	0	0	1831815
	PP	20162000	ANTERO RESOURCES CORPORAT	3687817	0	0	0	0	1831815
	PP	20162001	ANTERO RESOURCES CORPORAT	3598053	0	0	0	0	2812097
	PP	20162003	CNX GAS CO LLC	CNX GAS CO LLC	0	0	0	0	4452
	PP	20171229	MUTSHELKNAUS DRILLING PROGRAM 1A 2011	MUTSHELKNAUS DRILLING PROGRAM 1A 2011	0	0	0	0	148005
0420166227	OG	2017	ANTERO RESOURCES CORPORAT	4708456	0	0	0	0	106293
0420166230	OG	2017	ANTERO RESOURCES CORPORAT	3598053	0	0	0	0	3777962
0420166245	OG	2017	ANTERO RESOURCES CORPORAT	4605301	0	0	0	0	2861104
	PP	20162008	ANTERO RESOURCES CORPORAT	4605301	0	0	0	0	2861104
	PP	20162009	CNX GAS CO LLC	CNX GAS CO LLC	0	0	0	0	3677746
	PP	20171286	XTO ENERGY INC	XTO ENERGY INC	0	0	0	0	5844
0420166278	OG	2017	ANTERO RESOURCES CORPORAT	4333260	0	0	0	0	118136
0420166279	OG	2017	ANTERO RESOURCES CORPORAT	3665462	0	0	0	0	3465155
0420166280	OG	2017	ANTERO RESOURCES CORPORAT	3808353	0	0	0	0	2914503
0420166369	OG	2017	ANTERO RESOURCES CORPORAT	6170380	0	0	0	0	3025163
	PP	20162019	ANTERO RESOURCES CORPORAT	6170380	0	0	0	0	3025163
	PP	20162020	CNX GAS CO LLC	CNX GAS CO LLC	0	0	0	0	4743904
0420166377	OG	2017	ANTERO RESOURCES CORPORAT	4277812	0	0	0	0	536092
	PP	20162022	ANTERO RESOURCES CORPORAT	4277812	0	0	0	0	536092
	PP	20162023	CNX GAS CO LLC	CNX GAS CO LLC	0	0	0	0	3262139
0420166422	OG	2017	ANTERO RESOURCES CORPORAT	8441124	0	0	0	0	368643
0420166433	OG	2017	ANTERO RESOURCES CORPORAT	5252802	0	0	0	0	7019839
0420166434	OG	2017	ANTERO RESOURCES CORPORAT	7404475	0	0	0	0	4292022
0420166435	OG	2017	ANTERO RESOURCES CORPORAT	6386054	0	0	0	0	6102549
0420166450	OG	2017	ANTERO RESOURCES CORPORAT	9315956	0	0	0	0	5281446
	PP	20162031	ANTERO RESOURCES CORPORAT	9315956	0	0	0	0	5281446
	PP	20162032	CNX GAS CO LLC	CNX GAS CO LLC	0	0	0	0	7245263
	PP	20162034	MUTSHELKNAUS DRILLING PROGRAM 1A 2011	MUTSHELKNAUS DRILLING PROGRAM 1A 2011	0	0	0	0	60816
0420176231	OG	2017	ANTERO RESOURCES CORPORAT	2801699	2679153	0	0	0	380357
	PP	20171316	ANTERO RESOURCES CORPORAT	2801699	2679153	0	0	0	2210372

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 12
NR100

COUNTY: 09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0420176376	OG	2017	PP 20171330 ANTERO RESOURCES CORPORAT	3435110 ANTERO RESOURCES CORPORATION	3406195	0	0	0	2740003
0420176382	OG	2017	PP 20171333 ANTERO RESOURCES CORPORAT	CNX GAS CO LLC 1358508	1307749	0	0	0	21852
0420176387	OG	2017	PP 20171312 PP 20171317 ANTERO RESOURCES CORPORAT	CNX GAS CO LLC 1352205 1311750		0	0	0	152253 858042
0420176470	OG	2017	PP 20171313 PP 20171318 ANTERO RESOURCES CORPORAT	CNX GAS CO LLC 2399719 2242522		0	0	0	151547 854061
0420176471	OG	2017	PP 20171319 PP 20171315 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORPORATION 2982219 2820579		0	0	0	1888295
0500520003	OG	2017	PP 20171320 ANTERO RESOURCES CORPORAT	NUTSHELKNAUS DRILLING PROGRAM 1A 2 ANTERO RESOURCES CORPORATION 4726	0	0	0	0	118358 2248810
0500520007	OG	2017	PP 20080703 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES 611	0	0	0	0	3514
0500520010	OG	2017	PP 20080704 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES 3983	0	0	0	0	500
0500520015	OG	2017	PP 20080685 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES 3861	0	0	0	0	2560
0500875002	OG	2017	PP 20080686 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORPORATION 8264	0	0	0	0	2504
0500875003	OG	2017	PP 03006118 PP 20150811 PP 20150813 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORP CNX GAS CO LLC WINN CHARLES T (WVV) 5608	0	0	0	0	2574 2690 3
0500875004	OG	2017	PP 20150816 PP 20150825 PP 20150817 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORP WINN CHARLES T 3142	0	0	0	0	5195 5
0500875005	OG	2017	PP 03006142 PP 20150818 PP 20150819 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES WINN CHARLES T (WVV) 7779	0	0	0	0	2382 2
0500875006	OG	2017	PP 03006150 PP 20150819 PP 00648508 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORP WINN CHARLES T (WVV) 5161	0	0	0	0	5270 5
0510003178	OG	2017	PP 20150819 PP 00648508 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES WINN CHARLES T (WVV) 10963	0	0	0	0	3496 3
0514144704	OG	2017	PP 20080687 PP 20080687 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES 11724	0	0	0	0	7518
0514144705	OG	2017	PP 20080688 PP 20080688 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORP 7424	0	0	0	0	8265
0514144743	OG	2017	PP 20080688 PP 20080688 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORPORATION 6866	0	0	0	0	4745
0515154829	OG	2017	PP 20080689 PP 20150820 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES CORP 10589	0	0	0	0	4840
0515154831	OG	2017	PP 20150820 ANTERO RESOURCES CORPORAT	ANTERO RESOURCES NICOLS RAE ELLEN TRUSTEE OF DAVID NICOL 7961	0	0	0	0	7043 182

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 13
NR100

COUNTY: 09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0515154831	OG	2017	ANTERO RESOURCES CORPORAT	7961	0	0	0	0	
	PP	20080691	ANTERO RESOURCES CORP						
	PP	20150820	NICOLS DAVIO C II REV LIV TRUST						4484
0515154832	OG	2017	ANTERO RESOURCES CORPORAT	2799	0	0	0	0	125
	PP	20080692	ANTERO RESOURCES CORP						
0515154843	OG	2017	ANTERO RESOURCES CORPORAT	11167	0	0	0	0	1606
	PP	20150820	NICOLS DAVID C II REV LIV TRUST						44
	PP	20080694	ANTERO RESOURCES CORP						
0515154844	OG	2017	ANTERO RESOURCES CORPORAT	7813	0	0	0	0	6403
	PP	20150820	NICOLS DAVID C II REV LIV TRUST						180
	PP	20080695	ANTERO RESOURCES CORP						
	PP	20150820	NICOLS DAVID C II REV LIV TRUST						4362
	PP	20150821	UNDERWOOD CHARLES						126
0515185420	OG	2017	ANTERO RESOURCES CORPORAT	16351	0	0	0	0	190
	PP	20090561	ANTERO RESOURCES BLUESTONE						
	PP	20090563	SPENCER ENTERPRISES						8147
0516164931	OG	2017	ANTERO RESOURCES CORPORAT	7757	0	0	0	0	2716
	PP	20080696	ANTERO RESOURCES CORP						
0516164951	OG	2017	ANTERO RESOURCES CORPORAT	7627	0	0	0	0	4797
	PP	20080697	ANTERO RESOURCES CORP						
0516164953	OG	2017	ANTERO RESOURCES CORPORAT	8025	0	0	0	0	4761
	PP	20162840	ANTERO RESOURCES CORP						
0517171714	OG	2017	ANTERO RESOURCES CORPORAT	3138	0	0	0	0	5251
	PP	20080699	ANTERO RESOURCES CORP						
0517174932	OG	2017	ANTERO RESOURCES CORPORAT	5032	0	0	0	0	2334
	PP	20080701	ANTERO RESOURCES CORP						
0517174952	OG	2017	ANTERO RESOURCES CORPORAT	7081	0	0	0	0	3114
	PP	20080702	ANTERO RESOURCES CORP						
0518180602	OG	2017	ANTERO RESOURCES CORPORAT	2128	0	0	0	0	4380
	PP	20100578	ANTERO RESOURCES BLUESTONE						
0518185004	OG	2017	ANTERO RESOURCES CORPORAT	137500	0	0	0	0	1475
	PP	20090566	ANTERO RESOURCES BLUESTONE						
0518185322	OG	2017	ANTERO RESOURCES CORPORAT	9133	0	0	0	0	111243
	PP	20151324	ANTERO RESOURCES CORPORATION						
0518185324	OG	2017	ANTERO RESOURCES CORPORAT	8630	0	0	0	0	7029
	PP	20150823	ANTERO RESOURCES CORP						
0518185355	OG	2017	ANTERO RESOURCES CORPORAT	6590	0	0	0	0	6642
	PP	20090571	ANTERO RESOURCES BLUESTONE						
	PP	20090572	CONTINENTAL PETROLEUM						2262
	PP	20090573	CRYSTAL ROBERTS						1470
0518185403	OG	2017	RDT INVESTMENTS LLC	9774	0	0	0	0	566
	PP	20090574	ANTERO RESOURCES BLUESTONE						225
	PP	20090576	SPENCER ENTERPRISES						
0518185450	OG	2017	ANTERO RESOURCES CORPORAT	35308	0	0	0	0	5247
	PP	20090577	ANTERO RESOURCES BLUESTONE						1748
0518185451	OG	2017	ANTERO RESOURCES CORPORAT	9595	0	0	0	0	25916
	PP	20090581	ANTERO RESOURCES BLUESTONE						
0518185466	OG	2017	ANTERO RESOURCES BLUESTONE	8213	0	0	0	0	6584
	PP	20100536	ANTERO RESOURCES BLUESTONE						
	PP	20090582	ANTERO RESOURCES BLUESTONE						5566

FEE-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

COUNTY: 09 DODDRIDGE COUNTY, WV

Account	Rt Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0518185499	OG 2017	ANTERO RESOURCES CORPORAT	1245 ANTERO RESOURCES BLUESTONE	0	0	0	0	854
0518185500	PP 20090584	ANTERO RESOURCES CORPORAT	9077 ANTERO RESOURCES BLUESTONE	0	0	0	0	6280
0518185529	PP 20090585	ANTERO RESOURCES CORPORAT	10830 ANTERO RESOURCES BLUESTONE	0	0	0	0	7433
0520105005	PP 20090864	ANTERO RESOURCES CORPORAT	3164 ANTERO RESOURCES BLUESTONE	0	0	0	0	2171
0520105285	PP 20100592	ANTERO RESOURCES CORPORAT	13168 ANTERO RESOURCES BLUESTONE	0	0	0	0	9035
0520105286	PP 20100571	ANTERO RESOURCES CORPORAT	881 ANTERO RESOURCES BLUESTONE	0	0	0	0	606
0520105287	PP 20100572	ANTERO RESOURCES CORPORAT	111872 ANTERO RESOURCES BLUESTONE	0	0	0	0	8146
0520105330	PP 20100573	ANTERO RESOURCES CORPORAT	3513 ANTERO RESOURCES BLUESTONE	0	0	0	0	2412
0520105331	PP 20100574	ANTERO RESOURCES CORPORAT	5479 ANTERO RESOURCES BLUESTONE	0	0	0	0	3760
0520105332	PP 20100575	ANTERO RESOURCES CORPORAT	8465 ANTERO RESOURCES BLUESTONE	0	0	0	0	5810
0520105356	PP 20100576	ANTERO RESOURCES CORPORAT	2319 ANTERO RESOURCES BLUESTONE	0	0	0	0	1593
0520105402	PP 20090569	ANTERO RESOURCES CORPORAT	6177 SPENCER ENTERPRISES	0	0	0	0	11311
0520105434	PP 20100577	ANTERO RESOURCES CORPORAT	214324 ANTERO RESOURCES BLUESTONE	0	0	0	0	33933
0520105449	PP 20100893	ANTERO RESOURCES CORPORAT	30431 SPENCER ENTERPRISES	0	0	0	0	135160
0520105452	PP 20100894	ANTERO RESOURCES CORPORAT	14627 ANTERO RESOURCES BLUESTONE	0	0	0	0	45052
0520105465	PP 20100581	ANTERO RESOURCES CORPORAT	3816 ANTERO RESOURCES BLUESTONE	0	0	0	0	22023
0520105467	PP 20100582	ANTERO RESOURCES CORPORAT	8937 ANTERO RESOURCES BLUESTONE	0	0	0	0	10040
0520105474	PP 20100583	ANTERO RESOURCES CORPORAT	4722 ANTERO RESOURCES BLUESTONE	0	0	0	0	2586
0520105475	PP 20100584	ANTERO RESOURCES CORPORAT	15989 ANTERO RESOURCES BLUESTONE	0	0	0	0	6055
0520105501	PP 20100585	ANTERO RESOURCES CORPORAT	567 ANTERO RESOURCES BLUESTONE	0	0	0	0	3270
0520105502	PP 20100587	ANTERO RESOURCES CORPORAT	17406 SPENCER ENTERPRISES LLC	0	0	0	0	8855
0520105503	PP 20100891	ANTERO RESOURCES CORPORAT	18364 ANTERO RESOURCES BLUESTONE	0	0	0	0	23955
0520105504	PP 20100589	ANTERO RESOURCES CORPORAT	67969 ANTERO RESOURCES BLUESTONE	0	0	0	0	500
0520105506	PP 20100590	ANTERO RESOURCES CORPORAT	7838 ANTERO RESOURCES BLUESTONE	0	0	0	0	12868
	PP 20100591	ANTERO RESOURCES CORPORAT		0	0	0	0	13575
	PP 20100591	ANTERO RESOURCES CORPORAT		0	0	0	0	55975

FEE-15-2017
01:32 PM

COUNTY:09 DODDRIDGE COUNTY, WV

PRODUCING VALUE ABSTRACT

PAGE 15
NR100

Account	Rt Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0520105506	OG 2017	ANTERO RESOURCES CORPORAT	7838	0	0	0	0	
		PP 20090572	CONTINENTAL PETROLEUM					1749
		PP 20090573	ROBERTS CRYSTAL					672
		PP 20090574	RDT INVESTMENTS					269
		PP 20100593	ANTERO RESOURCES ELUESTONE					2690
0520105512	OG 2017	ANTERO RESOURCES CORPORAT	205884	0	0	0	0	
		PP 20100594	ANTERO RESOURCES ELUESTONE					168791
0520105514	OG 2017	ANTERO RESOURCES CORPORAT	7959	0	0	0	0	
		PP 20100595	ANTERO RESOURCES ELUESTONE					5463
0520105545	OG 2017	ANTERO RESOURCES CORPORAT	15268	0	0	0	0	
		PP 20100596	ANTERO RESOURCES ELUESTONE					8467
		PP 20100597	SPENCER ENTERPRISES					2821
0520105553	OG 2017	ANTERO RESOURCES CORPORAT	59445	0	0	0	0	
		PP 20100598	ANTERO RESOURCES ELUESTONE					33510
		PP 20100599	DEEM PATRICK D					1005
		PP 20100600	INTREPID ENERGY					1005
		PP 20100601	MUTSCHELKNAUS MARY W					7708
		PP 20100602	MUTSCHELKNAUS CLARENCE W JR					1005
		PP 20100603	SIDERS RICK L					447
0520105635	OG 2017	ANTERO RESOURCES CORPORAT	29742	0	0	0	0	
		PP 20100604	ANTERO RESOURCES ELUESTONE					10441
		PP 20100605	HUDSON RICHARD					5222
		PP 20100606	SMITH CLARENCE					5222
0520105636	OG 2017	ANTERO RESOURCES CORPORAT	3333	0	0	0	0	
		PP 20100607	ANTERO RESOURCES ELUESTONE					1111
		PP 20100608	HUDSON RICHARD					561
		PP 20100609	SMITH CLARENCE					561
0520105646	OG 2017	ANTERO RESOURCES CORPORAT	77848	0	0	0	0	
		PP 20100610	ANTERO RESOURCES ELUESTONE					43895
		PP 20100611	DEEM PAT					1170
		PP 20100612	INTREPID ENERGY					1463
		PP 20100613	J5 ENERGY					1463
		PP 20100614	JOHNSON CHAD					1463
		PP 20100615	MUTSCHELKNAUS MARY F					7020
		PP 20100616	MUTSCHELKNAUS CLARENCE W JR					1463
		PP 20100617	SIDERS RICK L					585
0520105693	OG 2017	ANTERO RESOURCES CORPORAT	65636	0	0	0	0	
		PP 20100618	ANTERO RESOURCES ELUESTONE					44370
		PP 20100619	SPENCER ENTERPRISES					4932
0520115645	OG 2017	ANTERO RESOURCES CORPORAT	33454	0	0	0	0	
		PP 20110636	ANTERO RESOURCES ELUESTONE					24063
		PP 20110637	J5 ENERGY					633
		PP 20110638	JOHNSON CHAD W					633
0520115749	OG 2017	ANTERO RESOURCES CORPORAT	33877	0	0	0	0	
		PP 20110640	ANTERO RESOURCES ELUESTONE					18413
		PP 20150833	HUTSON ROBERT R JR					2302
		PP 20150834	POST ROBERT M					2302
0520115865	OG 2017	ANTERO RESOURCES CORPORAT	62043	0	0	0	0	
		PP 20110633	ANTERO RESOURCES ELUESTONE					34973
		PP 20120590	J5 ENERGY					4197

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 16
NR100

COUNTY:09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0520115865	OG	2017	ANTERO RESOURCES CORPORAT	62043	0	0	0	0	
	PP	20120591	JOHNSON ANTHONY E	JOHNSON ANTHONY E					466
	PP	20120592	JOHNSON CHAD W	JOHNSON CHAD W					4197
	PP	20120593	JOHNSON WILLIAM R	JOHNSON WILLIAM R					466
	PP	20120594	MUTSHELKNAUS MARY F	MUTSHELKNAUS MARY F					2331
0520115866	OG	2017	ANTERO RESOURCES CORPORAT	76308	0	0	0	0	
	PP	20110634	ANTERO RESOURCES BLUESTONE	ANTERO RESOURCES BLUESTONE					43012
	PP	20120596	J5 ENERGY	J5 ENERGY					5162
	PP	20120597	JOHNSON ANTHONY B	JOHNSON ANTHONY B					573
	PP	20120598	JOHNSON CHAD W	JOHNSON CHAD W					5162
	PP	20120599	JOHNSON WILLIAM R	JOHNSON WILLIAM R					573
	PP	20120600	MUTSHELKNAUS MARY F	MUTSHELKNAUS MARY F					2867
0520125673	OG	2017	ANTERO RESOURCES CORPORAT	5667	0	0	0	0	
	PP	20150835	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					4376
0520135880	OG	2017	ANTERO RESOURCES CORPORAT	2509	0	0	0	0	
	PP	20131385	ANTERO RESOURCES	ANTERO RESOURCES					1697
	PP	20131386	J5 ENERGY	J5 ENERGY					19
	PP	20131387	JOHNSON ANTHONY E	JOHNSON ANTHONY E					19
	PP	20131388	JOHNSON CHAD W	JOHNSON CHAD W					19
	PP	20131389	JOHNSON WILLIAM R	JOHNSON WILLIAM R					19
	PP	20131390	MUTSHELKNAUS MARY F	MUTSHELKNAUS MARY F					96
0520145962	OG	2017	ANTERO RESOURCES CORPORAT	466868	0	0	0	0	
	PP	20141374	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					3478665
	PP	20150839	J5 ENERGY LLC	J5 ENERGY LLC					50896
	PP	20150840	JOHNSON ANTHONY E	JOHNSON ANTHONY E					5655
	PP	20150841	JOHNSON CHAD W	JOHNSON CHAD W					50896
	PP	20150842	JOHNSON WILLIAM R	JOHNSON WILLIAM R					5655
	PP	20150844	MUTSHELKNAUS DRILL PROG 1A	MUTSHELKNAUS DRILL PROG 1A					149873
0520146027	OG	2017	ANTERO RESOURCES CORPORAT	4376613	0	0	0	0	
	PP	20141407	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					3559212
0520146028	OG	2017	ANTERO RESOURCES CORPORAT	4669710	0	0	0	0	
	PP	20141413	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					3806558
0520146043	OG	2017	ANTERO RESOURCES CORPORAT	2042417	0	0	0	0	
	PP	20141419	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					1610388
	PP	20141441	MUTSHELKNAUS DRILLING PROG	MUTSHELKNAUS DRILLING PROG					84758
0520146044	OG	2017	ANTERO RESOURCES CORPORAT	2621118	0	0	0	0	
	PP	20141453	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					1986630
0520146045	OG	2017	ANTERO RESOURCES CORPORAT	2294316	0	0	0	0	
	PP	20141456	MUTSHELKNAUS DRILLING PROG 1A 2011	MUTSHELKNAUS DRILLING PROG 1A 2011					104130
	PP	20141459	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					1732403
0520146046	OG	2017	ANTERO RESOURCES CORPORAT	3046697	0	0	0	0	
	PP	20141462	MUTSHELKNAUS DRILLING PROG	MUTSHELKNAUS DRILLING PROG					90805
0520156117	OG	2017	ANTERO RESOURCES CORPORAT	2536377	0	0	0	0	
	PP	20141463	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					2450719
	PP	20150910	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					1919067
0520156118	OG	2017	ANTERO RESOURCES CORPORAT	XTO ENERGY INC	0	0	0	0	
	PP	20150951	ANTERO RESOURCES CORP	XTO ENERGY INC					118318
	PP	20150951	ANTERO RESOURCES CORP	XTO ENERGY INC					74766
0520156120	OG	2017	ANTERO RESOURCES CORPORAT	1553438	0	0	0	0	
	PP	20150968	ANTERO RESOURCES CORP	ANTERO RESOURCES CORP					1482661

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 17
NR100

COUNTY:09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0520156120	OG	2017	ANTERO RESOURCES CORPORAT	1553438	0	0	0	0	1178809
	PP	20150969	ANTERO RESOURCES INC	1553438	0	0	0	0	59444
0520156121	OG	2017	ANTERO RESOURCES CORPORAT	1592198	0	0	0	0	1183027
	PP	20150971	ANTERO RESOURCES INC	1592198	0	0	0	0	72937
0520166119	OG	2017	ANTERO RESOURCES CORPORAT	4882715	0	0	0	0	3989106
	PP	20150972	ANTERO RESOURCES5 CORP	4882715	0	0	0	0	3522220
0520166134	OG	2017	ANTERO RESOURCES CORPORAT	4329937	0	0	0	0	4465136
	PP	20162900	ANTERO RESOURCES CORP	4329937	0	0	0	0	3543
0520166148	OG	2017	ANTERO RESOURCES CORPORAT	5412603	0	0	0	0	3
	PP	20162901	ANTERO RESOURCES CORP	5412603	0	0	0	0	4327
0580003141	OG	2017	ANTERO RESOURCES CORPORAT	4676	0	0	0	0	4
	PP	20010827	ANTERO RESOURCES	4676	0	0	0	0	1158
0580003156	OG	2017	WINN CHARLES T (WVV)	5712	0	0	0	0	0
	PP	20151261	ANTERO RESOURCES	5712	0	0	0	0	3806
0580003173	OG	2017	ANTERO RESOURCES CORPORAT	1529	0	0	0	0	3978
	PP	20010829	WINN CHARLES T (WVV)	1529	0	0	0	0	3
0580003181	OG	2017	ANTERO RESOURCES CORPORAT	12223	0	0	0	0	500
	PP	20151260	ANTERO RESOURCES	12223	0	0	0	0	500
	PP	20010830	CNX GAS CO LLC	674	0	0	0	0	500
	PP	20162947	WINN CHARLES T (WVV)	674	0	0	0	0	500
	PP	20162948	ANTERO RESOURCES CORPORATION	674	0	0	0	0	2489
0600735001	OG	2017	ANTERO RESOURCES CORPORAT	515	0	0	0	0	3
	PP	20030415	ANTERO RESOURCES	515	0	0	0	0	4900
0600735002	OG	2017	ANTERO RESOURCES CORPORAT	674	0	0	0	0	3459
	PP	03009342	ANTERO RESOURCES	674	0	0	0	0	3
0600735003	OG	2017	ANTERO RESOURCES CORPORAT	628	0	0	0	0	0
	PP	03009341	ANTERO RESOURCES	628	0	0	0	0	0
0600875001	OG	2017	ANTERO RESOURCES CORPORAT	3635	0	0	0	0	500
	PP	09639586	ANTERO RESOURCES	3635	0	0	0	0	2489
0600875002	OG	2017	WINN CHARLES T	7081	0	0	0	0	3
	PP	20150348	ANTERO RESOURCES	7081	0	0	0	0	4900
0600875006	OG	2017	ANTERO RESOURCES CORPORAT	6358	0	0	0	0	3459
	PP	03005227	WINN CHARLES T WV	6358	0	0	0	0	3
	PP	09639667	ANTERO RESOURCES	5023	0	0	0	0	0
0600930002	OG	2017	ANTERO RESOURCES CORPORAT	8444	0	0	0	0	0
	PP	20150352	ANTERO RESOURCES	8444	0	0	0	0	4973
0600930003	OG	2017	ANTERO RESOURCES CORPORAT	7256	0	0	0	0	556
	PP	20020288	HADDAD & ASSOCIATES LLC	7256	0	0	0	0	4279
0600930004	OG	2017	ANTERO RESOURCES CORPORAT	4132	0	0	0	0	475
	PP	20150353	ANTERO RESOURCES	4132	0	0	0	0	2680
0600930005	OG	2017	ANTERO RESOURCES CORPORAT	1095	0	0	0	0	0
	PP	20010767	ANTERO RESOURCES CORPORATION	1095	0	0	0	0	0
0600930007	OG	2017	ANTERO RESOURCES CORPORAT	0	0	0	0	0	0
	PP	20150354	SILVERSTEIN SAM	0	0	0	0	0	0
	PP	20010768	ANTERO RESOURCES CORPORATION	0	0	0	0	0	0
	PP	20150355	ANTERO RESOURCES CORPORATION	0	0	0	0	0	0

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 18
NR100

COUNTY: 09 DODDRIDGE COUNTY, WV

Account	Rt Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0600930007	OG 2017	ANTERO RESOURCES CORPORAT	1095	0	0	0	0	
	PP 20010769	ANTERO RESOURCES						
	PP 20150356	SILVERSTEIN SAM						0
0600930008	OG 2017	ANTERO RESOURCES CORPORAT	7256	0	0	0	0	0
	PP 00000408	ANTERO RESOURCES						
	PP 20150357	SILVERSTEIN SAM						0
0610003177	OG 2017	ANTERO RESOURCES CORPORAT	4416	0	0	0	0	0
	PP 00000409	ANTERO RESOURCES						
	PP 20150442	CNX GAS CO LLC SUSPENSE						1551
0612122390	OG 2017	ANTERO RESOURCES CORPORAT	716	0	0	0	0	1505
	PP 20030417	ANTERO RESOURCES						
0616164485	OG 2017	ANTERO RESOURCES CORPORAT	5431	0	0	0	0	500
	PP 20141743	ANTERO RESOURCES						
0618185431	OG 2017	ANTERO RESOURCES CORPORAT	12112	0	0	0	0	4220
	PP 20090643	ANTERO RESOURCES ELUESTONE LLC						
0620145899	OG 2017	ANTERO RESOURCES CORPORAT	152919	0	0	0	0	8955
	PP 20141640	ANTERO RESOURCES APPALACHIAN CORPORATIO						
	PP 20141641	HAYDEN HARPER DIRECT ENERGY 2009A DRILL						89431
	PP 20141642	MUTSCHELKNAUS MARY F						17537
0620146096	OG 2017	ANTERO RESOURCES CORPORAT	1401295	0	0	0	0	5632
	PP 20142098	ANTERO RESOURCES APPALACHIAN CORPORATIO						
0620146099	OG 2017	ANTERO RESOURCES CORPORAT	1268354	0	0	0	0	1077963
	PP 20142097	ANTERO RESOURCES APPALACHIAN CORPORATIO						
0620156076	OG 2017	ANTERO RESOURCES CORPORAT	1714826	0	0	0	0	975696
	PP 20151128	ANTERO RESOURCES CORPORATION						
0620156081	OG 2017	ANTERO RESOURCES CORPORAT	1712672	0	0	0	0	0
	PP 20151132	ANTERO RESOURCES CORPORATION						
0620156082	OG 2017	ANTERO RESOURCES CORPORAT	1907565	0	0	0	0	1357470
	PP 20151131	ANTERO RESOURCES CORPORATION						
0620156094	OG 2017	ANTERO RESOURCES CORPORAT	1785293	0	0	0	0	1512590
	PP 20151161	ANTERO RESOURCES CORPORATION						
0620156095	OG 2017	ANTERO RESOURCES CORPORAT	1270309	0	0	0	0	1403997
	PP 20151162	ANTERO RESOURCES CORPORATION						
0620156097	OG 2017	ANTERO RESOURCES CORPORAT	1515869	0	0	0	0	999901
	PP 20151151	ANTERO RESOURCES CORPORATION						
0620156098	OG 2017	ANTERO RESOURCES CORPORAT	1670813	0	0	0	0	1164224
	PP 20151149	ANTERO RESOURCES CORPORATION						
0620156100	OG 2017	ANTERO RESOURCES CORPORAT	1936174	0	0	0	0	1283096
	PP 20151150	ANTERO RESOURCES CORPORATION						
0620156102	OG 2017	ANTERO RESOURCES CORPORAT	1804297	0	0	0	0	1475752
	PP 20151130	ANTERO RESOURCES CORPORATION						
0620156103	OG 2017	ANTERO RESOURCES CORPORAT	1267403	0	0	0	0	1443371
	PP 20151160	ANTERO RESOURCES CORPORATION						
0620156104	OG 2017	ANTERO RESOURCES CORPORAT	1683134	0	0	0	0	997953
	PP 20151129	ANTERO RESOURCES CORPORATION						
0620156126	OG 2017	ANTERO RESOURCES CORPORAT	1660372	0	0	0	0	1346150
	PP 20151127	ANTERO RESOURCES CORP						
0620156153	OG 2017	ANTERO RESOURCES CORPORAT	3264635	0	0	0	0	1312654
	PP 20150423	ANTERO RESOURCES CORP						
0620156156	OG 2017	ANTERO RESOURCES CORPORAT	1694674	0	0	0	0	2582424

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 20
NR100

COUNTY:09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0620166419	OG	2017	ANTERO RESOURCES CORPORAT	4599628	0	0	0	0	
0620166429	OG	2017	PP 20160477 ANTERO RESOURCES CORP	ANTERO RESOURCES CORP	0	0	0	0	3611216
0620166453	OG	2017	PP 20160479 ANTERO RESOURCES CORP	5952169	0	0	0	0	4677119
0660000714	OG	2017	PP 20160481 ANTERO RESOURCES CORP	9285594	0	0	0	0	7774824
0660000745	OG	2017	PP 03009341 ANTERO RESOURCES CORP	ANTERO RESOURCES CORPORATION	0	0	0	0	500
0660000783	OG	2017	PP 20010770 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0660000784	OG	2017	PP 20010771 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0660000788	OG	2017	PP 20010772 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0660000840	OG	2017	PP 20010773 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0660001145	OG	2017	PP 20010775 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0660003336	OG	2017	PP 20010776 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0660003474	OG	2017	PP 20010778 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0660003477	OG	2017	PP 20010779 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0680001386	OG	2017	PP 00656526 ANTERO RESOURCES CORP	ANTERO RESOURCES CORPORATION	0	0	0	0	500
0680003134	OG	2017	PP 20010780 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	500
0680003139	OG	2017	PP 00061571 ANTERO RESOURCES CORP	1090	0	0	0	0	744
0680003174	OG	2017	PP 20160447 ANTERO RESOURCES CORP	WINN CHARLES T	0	0	0	0	0
0690004481	OG	2017	PP 20010782 ANTERO RESOURCES CORP	516	0	0	0	0	516
0700950001	OG	2017	PP 20160447 ANTERO RESOURCES CORP	WINN CHARLES T	0	0	0	0	0
0800735003	OG	2017	PP 00000434 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	6014
0800735005	OG	2017	PP 00061574 ANTERO RESOURCES CORP	1018	0	0	0	0	0
0800735007	OG	2017	PP 00000461 ANTERO RESOURCES CORP	20802	0	0	0	0	0
0800735008	OG	2017	PP 20150483 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	6704
0800735009	OG	2017	PP 03009335 ANTERO RESOURCES CORP	WACO OIL AND GAS CO INC	0	0	0	0	6704
			PP 00669075 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	6918
			PP 03009323 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	3992
			PP 00647794 ANTERO RESOURCES CORP	ANTERO RESOURCES	0	0	0	0	3628
			PP ANTERO RESOURCES CORP	4702	0	0	0	0	0

FEB-15-2017
01:32 PM

PRODUCING VALUE ABSTRACT

PAGE 21
NR100

COUNTY:09 DODDRIDGE COUNTY, WV

Account	Rt	Taxyr	Name	System	PTD	ASSR	COMM	CRT	Final
0800735009	OG	2017	PP 00000616	ANTERO RESOURCES CORPORAT	4702	0	0	0	0
0810003790	OG	2017	PP 00648095	ANTERO RESOURCES CORPORAT	6587	0	0	0	0
0816165096	OG	2017	PP 20070821	ANTERO RESOURCES CORPORAT	6896	0	0	0	0
0820166223	OG	2017	PP 20162139	ANTERO RESOURCES CORPORAT	5555328	0	0	0	0
0820166224	OG	2017	PP 20162141	ANTERO RESOURCES CORPORAT	5495741	0	0	0	0
0820166225	OG	2017	PP 20162143	ANTERO RESOURCES CORPORAT	4044341	0	0	0	0
0820166258	OG	2017	PP 20163545	ANTERO RESOURCES CORPORAT	4012234	0	0	0	0
0820166312	OG	2017	PP 20162147	ANTERO RESOURCES CORPORAT	5095185	0	0	0	0
0820166316	OG	2017	PP 20162231	ANTERO RESOURCES CORPORAT	4769467	0	0	0	0
			PP 20162232	ANTERO RESOURCES CORPORAT	3248255	0	0	0	0
0820166317	OG	2017	PP 20162312	ANTERO RESOURCES CORPORAT	2016913	0	0	0	0
0820166318	OG	2017	PP 20162314	ANTERO RESOURCES CORPORAT	2831094	2742196	0	0	0
0820176327	OG	2017	PP 20171338	ANTERO RESOURCES CORPORAT	2274868	2196915	0	0	0
			PP 20171362	ANTERO RESOURCES CORPORAT	5224	0	0	0	0
0820176332	OG	2017	PP 20171339	ANTERO RESOURCES CORPORAT	7571	0	0	0	0
0830003784	OG	2017	PP 00000505	ANTERO RESOURCES CORPORAT	4771	0	0	0	0
0840003856	OG	2017	PP 00646266	ANTERO RESOURCES CORPORAT	4612	0	0	0	0
0860002698	OG	2017	PP 20010909	ANTERO RESOURCES CORPORAT	5924	0	0	0	0
			PP 20030377	ANTERO RESOURCES CORPORAT	4071	0	0	0	0
0860003782	OG	2017	PP 00000618	ANTERO RESOURCES CORPORAT	5476	0	0	0	0
0860003783	OG	2017	PP 20162316	ANTERO RESOURCES CORPORAT	0	0	0	0	0
0860003794	OG	2017	PP 00081297	ANTERO RESOURCES					
0860003875	OG	2017							

STATE OF WEST VIRGINIA
TAX AND REVENUE - PROPERTY TAX DIVISION
NATURAL RESOURCES GAS/OIL VALUE ABSTRACT FOR EXCEL
FOR TAXYR: 2017

NR128PTD

PRODUCER	CY ACCOUNT	RTN FIL WELLS APT	CHVPTD	OWIVPTD	TOTAL OPERATOR
ANTERO RESOURCES CORPORATION	09 0115154830 C	1 04830	7082	0	7082 SADLER 3 (11256.1)
	09 0120145079 C	1 08079	1317134	94827	1411961 VALENTINE UNIT 2H (10206.1)
	09 0120146083 C	1 06083	1252748	74331	1321079 VALENTINE UNIT 1H (10205.1)
	09 0120156169 C	1 06169	1961011	221881	2182892 SEABORN UNIT 1H (10295.1)
	09 0120156170 C	1 06170	1767519	223599	1991118 SEABORN UNIT 2H (10330.1)
	09 0120156187 C	1 06187	1477649	65247	1542896 DOTSON UNIT 1H (10309.1)
	09 0120156188 C	1 06188	1566535	70333	1637368 CENTRAL UNIT 2H (10311.1)
	09 0120156189 C	1 06189	1462428	66468	1528896 DOTSON UNIT 2H (10310.1)
	09 0120166141 C	1 06141	4407723	303008	4710731 FIGGOT UNIT 2H (10305.1)
	09 0120166142 C	1 06142	3049462	252857	3302319 FIGGOT UNIT 1H (10304.1)
	09 0120166190 C	1 06190	2502799	319732	2822531 AHOUSE UNIT 1H (10329.1)
	09 0120166191 C	1 06191	1896252	259582	2155834 AHOUSE UNIT 2H (10387.1)
	09 0120166192 C	1 06192	1916066	145662	2061728 CALLIE UNIT 1H (10385.1)
	09 0120166193 C	1 06193	2951117	203737	3154854 CALLIE UNIT 2H (10386.1)
	09 0120166201 C	1 06201	3715940	202850	3918790 SHALE UNIT 1H (10364.1)
	09 0120166206 C	1 06206	3521485	370920	3892405 VIOLET UNIT 1H (10331.1)
	09 0120166207 C	1 06207	3197223	175245	3372468 SHALE UNIT 2H (10379.1)
	09 0120166211 C	1 06211	2159922	249116	2409038 NERO UNIT 1H (10746.1)
	09 0120166212 C	1 06212	4475993	106329	4582322 NERO UNIT 2H (10747.1)
	09 0120166213 C	1 06213	4950352	272597	5222349 VONDA UNIT 1H (10745.1)
	09 0120166266 C	1 06266	5542744	242034	5784778 MARKS UNIT 1H (10340.1)
	09 0120166272 C	1 06272	2519681	112448	2632129 MASH UNIT 1H (10341.1)
	09 0120166275 C	1 06275	3443692	333656	3777348 MASH UNIT 2H (10355.1)
	09 0120166289 C	1 06289	2765990	22821	2988811 PIKE UNIT 1H (10436.1)
	09 0120166292 C	1 06292	2518120	306278	2824398 LEGGETT UNIT 1H (10394.1)
	09 0120166293 C	1 06293	2175013	201721	2376734 LEGGETT UNIT 2H (10435.1)
	09 0120166294 C	1 06294	2689954	200769	2890723 PIKE UNIT 2H (10437.1)
	09 0120166359 C	1 06359	3297511	75419	3372930 SHEARER UNIT 2H (10501.1)
	09 0120166402 C	1 06402	5160441	143255	5303696 TWYFORD UNIT 1H (10502.1)
	09 0120166430 C	1 06430	3097460	95841	3193301 ZELLERBACK UNIT 1H (10503.1)
	09 0120166431 C	1 06431	2998129	56449	3054578 AMANDA UNIT 1H (10504.1)
	09 0120166432 C	1 06432	3459082	82172	3541254 AMANDA UNIT 2H (10505.1)
	09 0120176370 C	1 06370	1366828	0	1366828 WASHINGTON UNIT 1H (10562.1)
	09 0120176371 C	1 06371	2035956	0	2035956 WASHINGTON UNIT 2H (10520.1)
	09 0120176415 C	1 06415	1196677	0	1196677 HUDKINS UNIT 1H (10591.1)
	09 0120176436 C	1 06436	1298557	0	1298557 HUDKINS UNIT 2H (10592.1)
	09 0120176464 C	1 06464	1867320	0	1867320 HAYDEN UNIT 1H (10564.1)
	09 0120176465 C	1 06465	1601542	0	1601542 HAYDEN UNIT 2H (10563.1)
	09 0120176474 C	1 06474	1644019	0	1644019 LEASON RUN UNIT 1H (10569.1)
	09 0120176475 C	1 06475	1333850	0	1333850 LEASON RUN UNIT 2H (10590.1)
	09 0120176561 C	1 06561	1885669	0	1885669 BIERSTADT UNIT 1H (10558.1)
	09 0120176562 C	1 06562	1567301	0	1567301 BIERSTADT UNIT 2H (10559.1)
	09 0120176563 C	1 06563	1838842	0	1838842 STELLA UNIT 1H (10556.1)
	09 0120176564 C	1 06564	1526435	0	1526435 STELLA UNIT 2H (10557.1)
	09 0120176619 C	1 06619	1515126	0	1515126 JAMES UNIT 2H (11407.1)
	09 0120176620 C	1 06620	1169097	0	1169097 JAMES UNIT 1H (11406.1)
	09 0120176621 C	1 06621	1170132	0	1170132 MCGEE UNIT 1H (10546.1)
	09 0120176622 C	1 06622	1134116	0	1134116 MCGEE UNIT 2H (10545.1)
	09 0300520001 C	1 01728	1851	0	1851 CLINE 3 (11192.1)
	09 0300520002 C	1 01695	1334	0	1334 DAVIS 1 (11196.1)
	09 0300520004 Y	1 01730	1412	0	1412 H B DAVIS #1
	09 0300520005 C	1 01661	4232	0	4232 DOAK 1 (11206.1)
	09 0300520007 C	1 01756	500	0	500 POWELL 1 (11248.1)
	09 0300530012 C	1 01658	500	0	500 DAVIS 4 (11198.1)
	09 0300735001 C	1 00170	4287	0	4287 SMITH ALVADORE 1 (11261.1)
	09 0300735002 C	1 03862	6112	0	6112 UNDERWOOD PH 2 (11269.1)
	09 0300735004 C	1 02778	768	0	768 UNDERWOOD MW 1 (11271.1)
	09 0300745001 C	1 01794	777	0	777 RANDOLPH 1 (11249.1)
	09 0316164971 C	1 04971	10657	0	10657 BOND 1 (11187.1)

09 0317171697 C	1 01697	500	0	500 DAVIS 3 (11197.1)
09 0317171706 C	1 01706	500	0	500 DAVIS 6 (11199.1)
09 0317171795 C	1 01795	627	0	627 RANDOLPH 2 (11250.1)
09 0318185307 C	1 05307	2771	0	2771 AG LEATHERMAN 1 (10806.1)
09 0318185320 C	1 05320	3318	0	3318 AG LEATHERMAN 3 (10808.1)
09 0318185470 C	1 05470	5286	0	5286 DAVIS HB 2 (11203.1)
09 0318185471 C	1 05471	1866	0	1866 DAVIS HB 3 (11204.1)
09 0320104585 C	1 04585	53299	0	53299 UNDERWOOD 1 (10871.1)
09 0320105308 C	1 05308	3231	0	3231 AG LEATHERMAN 2 (10807.1)
09 0320105657 C	1 05657	36425	0	36425 RONINGER 1 (10862.1)
09 0320108672 C	1 05672	65055	0	65055 MUTSCHELKNAUS 6 (10856.1)
09 0320115585 C	1 05585	40280	0	40280 NEWLON 1 (10857.1)
09 0320115586 C	1 05586	64500	0	64500 NEWLON 2 (10858.1)
09 0320115604 C	1 05604	31472	0	31472 VAN SCOY 1 (10873.1)
09 0320115605 C	1 05605	44830	0	44830 SHAGHNESSY 1 (10865.1)
09 0320115609 C	1 05609	58109	0	58109 FRUM 1 (10842.1)
09 0320115638 C	1 05638	62050	0	62050 S HURST 1 (10863.1)
09 0320115647 C	1 05647	20806	0	20806 CHESS 1 (10835.1)
09 0320115665 C	1 05665	62161	0	62161 UNDERWOOD 2 (10872.1)
09 0320115669 C	1 05669	29307	0	29307 M WELCH 1 (10847.1)
09 0320115680 C	1 05680	48354	0	48354 J L COTTRILL 1 (10846.1)
09 0320115691 C	1 05691	75897	0	75897 MALONEY 1 (10848.1)
09 0320115751 C	1 05751	16409	0	16409 FRANCIS ASH 1 (10828.1)
09 0320115774 C	1 05774	43704	0	43704 HICKMAN FORD 1 (10844.1)
09 0320115776 C	1 05776	66103	0	66103 MALONEY 2 (10849.1)
09 0320115777 C	1 05777	44933	0	44933 VAN SCOY 2 (10874.1)
09 0320115781 C	1 05781	41445	0	41445 WELCH PRY 1 (10875.1)
09 0320115814 C	1 05814	8012	0	8012 D POWELL 7 (10839.1)
09 0320115817 C	1 05817	69629	0	69629 CONNELLY 1 (10837.1)
09 0320115839 C	1 05839	55159	0	55159 J F ESTLACK 1 (10845.1)
09 0320115846 C	1 05846	41869	0	41869 J YAREMCO 1 (10879.1)
09 0320115858 C	1 05858	179171	0	179171 CONNELLY 3 (10825.1)
09 0320115862 C	1 05862	38164	0	38164 S HURST 2 (10864.1)
09 0320125761 C	1 05761	43839	0	43839 SHAGHNESSY 3 (10866.1)
09 0320125966 C	1 05966	21951	0	21951 TAYLOR CHARTER 1 (10870.1)
09 0320146080 C	2 06080	5287323	31586	5318909 NEELY UNIT 1H AND NEELY U
09 0320146085 C	1 06085	2549770	17732	2567502 LEATHERMAN UNIT 2H (10204
09 0320156084 C	1 06084	2241650	14238	2255888 LEATHERMAN UNIT 1H (10203
09 0320156128 C	1 06128	1380709	9304	1390013 MOORE UNIT 1H (10259.1)
09 0320156129 C	1 06129	1301010	19354	1320364 MOORE UNIT 2H (10260.1)
09 0320156163 C	1 06163	1112067	11015	1123082 EMILY UNIT 2H (10283.1)
09 0320156166 C	1 06166	1215849	11655	1227504 EMILY UNIT 1H (10282.1)
09 0320156194 C	1 06194	3776112	181901	3958013 COSTLOW UNIT 1H (10333.1)
09 0320156204 C	1 06204	2009271	24820	2034091 LANGFITT UNIT 1H (10749.1
09 0320156205 C	1 06205	3146359	87590	3233949 GASKINS UNIT 2H (10750.1
09 0320156221 C	1 06221	1278131	18231	1296362 LANGFITT UNIT 1H (10336.1)
09 0320156235 C	1 06235	1361803	13599	1375402 CONNIE UNIT 1H (10337.1)
09 0320156256 C	1 06256	1398496	14036	1412532 CONNIE UNIT 2H (10337.1)
09 0320156260 C	1 06260	3618842	275897	3894739 GASKINS UNIT 1H (10368.1)
09 0320156202 C	1 06202	1063186	15096	1078282 HOLDEN UNIT 1H (10748.1)
09 0320166203 C	1 06203	858813	12466	871279 HOLDEN UNIT 2H (10332.1)
09 0320166220 C	1 06220	6094073	229881	6323954 COSTLOW UNIT 2H (10343.1)
09 0320166246 C	1 06246	6289763	200028	6489791 DUFF UNIT 1H (10400.1)
09 0320166247 C	1 06247	7094344	205028	7299372 DUFF UNIT 2H (10406.1)
09 0320166259 C	1 06259	3628916	12383	3752765 MISHKA UNIT 1H (10405.1)
09 0320166262 C	1 06262	1786679	24412	1763091 VANSOY UNIT 1H (10448.1)
09 0320166263 C	1 06263	1899895	22211	1922106 MCCONNELL UNIT 2H (10445
09 0320166264 C	1 06264	1322349	19898	1342247 VANSOY UNIT 2H (10449.1)
09 0320166267 C	1 06267	3150243	35246	3185489 KOCH UNIT 2H (10402.1)
09 0320166268 C	1 06268	1911590	28292	1939882 MT SALEM REVIVAL UNIT 2H
09 0320166269 C	1 06269	2623697	31383	2655080 MT SALEM REVIVAL UNIT 1H
09 0320166281 C	1 06281	1506793	20483	1527276 GAVIN UNIT 1H (10371.1)
09 0320166301 C	1 06301	2434153	42360	2476513 HEFLIN UNIT 2H (10389.1)
09 0320166302 C	1 06302	1051999	14537	1066596 GAVIN UNIT 2H (10372.1)
09 0320166399 C	1 06399	6745477	173448	6918925 HOSKINSON UNIT 1H (10452
09 0320176218 C	1 06218	1257499	0	1257499 GAINS-KOCH UNIT 1H (11363

09 0320176270 C	1 06270	1949712	0	1349712	MIL0 UNIT 1H (11349.1)
09 0320176274 C	1 06274	2777919	0	2777919	MISHKA UNIT 2H (10388.1)
09 0320176373 C	1 06373	1818196	0	1818196	ANNE UNIT 1H (10550.1)
09 0320176374 C	1 06374	1985209	0	1985209	ANNE UNIT 2H (10551.1)
09 0320176375 C	1 06375	2730331	133504	2863835	HARDIN UNIT 1H (10552.1)
09 0320176395 C	1 06395	1801220	0	1801220	GAINS UNIT 1H (10445.1)
09 0320176397 C	1 06397	2469360	0	2469360	MCNILLAN UNIT 1H (10453.1)
09 0320176398 C	1 06398	3148928	0	3148928	MCNILLAN UNIT 2H (10454.1)
09 0320176400 C	1 06400	2721876	0	2721876	HOSKINSON UNIT 2H (10451.1)
09 0320176404 C	1 06404	1329859	0	1329859	ZIMKA UNIT 2H (10462.1)
09 0320176485 C	1 06485	872861	0	872861	MANSER UNIT 1H (10510.1)
09 0320176486 C	1 06486	912417	0	912417	MANSER UNIT 2H (10511.1)
09 0320176487 C	1 06487	913637	0	913637	MANSER UNIT 3H (10585.1)
09 0320176498 C	1 06498	1862129	0	1862129	DEANO UNIT 2H (10554.1)
09 0330004406 C	1 04406	7391	0	7391	UNDERWOOD PH 3 (11270.1)
09 0400875001 C	1 03131	6359	0	6359	COX 1 (11195.1)
09 0420115874 C	1 05874	55877	0	55877	MJ SMITH 1 (10876.1)
09 0420156143 C	1 06143	1484686	2017	1486723	WALTER UNIT 3H (10279.1)
09 0420156144 C	1 06144	1338176	53	1338229	FLOSSIE UNIT 2H (10303.1)
09 0420156158 C	1 06158	1664300	2000	1666300	WALTER UNIT 1H (10293.1)
09 0420156162 C	1 06162	1566446	2077	1568523	WALTER UNIT 2H (10294.1)
09 0420156164 C	1 06164	1526632	2283	1528915	RUTH UNIT 1H (10292.1)
09 0420156166 C	1 06166	1611630	68	1611698	FLOSSIE UNIT 1H (10312.1)
09 0420156180 C	1 06180	2054821	9140	2103961	FURBEY UNIT 2H (10350.1)
09 0420166138 C	1 06138	2574941	10099	2585040	FURBEY UNIT 1H (10349.1)
09 0420166139 C	1 06139	1631385	8051	1639436	CECELE UNIT 1H (10297.1)
09 0420166140 C	1 06140	3972221	4223	3976444	ONEACRE UNIT 2H (10338.1)
09 0420166159 C	1 06159	1319297	2511	1221808	COX UNIT 2H (10353.1)
09 0420166160 C	1 06160	1052991	2222	1052213	COX UNIT 1H (10298.1)
09 0420166161 C	1 06161	1325055	3122	1328177	BOWEN UNIT 2H (10352.1)
09 0420166167 C	1 06167	3825179	165	3825344	WELLING UNIT 1H (10491.1)
09 0420166181 C	1 06181	4434571	186	4434757	WHITE UNIT 1H (10490.1)
09 0420166182 C	1 06182	2160604	91	2160695	WELLING UNIT 2H (10348.1)
09 0420166183 C	1 06183	2553620	47	2553667	GAINER UNIT 1H (10757.1)
09 0420166210 C	1 06210	1828032	3783	1831815	BOWEN UNIT 1H (10354.1)
09 0420166219 C	1 06219	3070793	55	3070848	GAINER UNIT 2H (10399.1)
09 0420166226 C	1 06226	3777827	135	3777962	GOLDEN UNIT 1H (10346.1)
09 0420166227 C	1 06227	2860988	116	2861104	GOLDEN UNIT 2H (10347.1)
09 0420166230 C	1 06230	3801664	62	3801726	IRONS UNIT 1H (10401.1)
09 0420166245 C	1 06245	3454710	445	3465155	BELTON UNIT 1H (10429.1)
09 0420166278 C	1 06278	2914114	389	2914503	CAROLE UNIT 1H (10382.1)
09 0420166279 C	1 06279	3024756	407	3025163	CAROLE UNIT 2H (10430.1)
09 0420166369 C	1 06369	5275140	4856	5275996	CASWELL UNIT 1H (10422.1)
09 0420166377 C	1 06377	3627322	3460	3630782	CASWELL UNIT 2H (10426.1)
09 0420166422 C	1 06422	7017522	2317	7019839	LETTIE UNIT 1H (10470.1)
09 0420166433 C	1 06433	4290399	1623	4292022	DOMNS UNIT 1H (10481.1)
09 0420166434 C	1 06434	6100233	2316	6102549	DOMNS UNIT 2H (10482.1)
09 0420166435 C	1 06435	5279651	1795	5281446	LETTIE UNIT 2H (10471.1)
09 0420166450 C	1 06450	7680079	6356	7686435	ARTERS UNIT 1H (10483.1)
09 0420176231 C	1 06231	2117231	0	2117231	RICK UNIT 2H (10444.1)
09 0420176376 C	1 06376	2737515	0	2737515	ARTERS UNIT 2H (10427.1)
09 0420176382 C	1 06382	972547	0	972547	FUEGO UNIT 1H (10461.1)
09 0420176387 C	1 06387	975522	0	975522	FUEGO UNIT 2H (10459.1)
09 0420176469 C	1 06469	2305170	0	2305170	BAKER UNIT 2H (10485.1)
09 0420176470 C	1 06470	1756520	0	1756520	LIFE UNIT 1H (10486.1)
09 0420176471 C	1 06471	2231675	0	2231675	LIFE UNIT 2H (10487.1)
09 0500520003 C	1 01713	3514	0	3514	DOWNES 1 (11209.1)
09 0500520007 C	1 01708	500	0	500	POPE 2 (11245.1)
09 0500520010 C	1 01752	2560	0	2560	SECKMAN 2 (11260.1)
09 0500520015 C	1 01660	2504	0	2504	VINCENT 1 (11272.1)
09 0500875002 C	1 03143	5266	0	5266	DUDLEY 1 (11211.1)
09 0500875003 C	1 03125	5200	0	5200	ESTLACK B1 (11213.1)
09 0500875004 C	1 03126	2384	0	2384	ESTLACK S1 (11215.1)
09 0500875005 C	1 03157	5275	0	5275	JOHNSTON K1 (11236.1)
09 0500875006 C	1 03193	3499	0	3499	WILSON 1 (11277.1)
09 0510003178 C	1 03178	7524	0	7524	WOLFE 1 (11278.1)

09 0514144704 C	1 04704	8265	0	8265 SADLER 5 (11258.1)
09 0514144705 C	1 04705	4745	0	4745 POPE 4 (11247.1)
09 0514144743 C	1 04743	4840	0	4840 BOGESS 3 (11185.1)
09 0515154829 C	1 04829	7225	0	7225 HARBERT 1 (11234.1)
09 0515154831 C	1 04831	4609	0	4609 VINCENT 2 (11273.1)
09 0515154832 C	1 04832	1650	0	1650 SECTOAN 1 (11259.1)
09 0515154843 C	1 04843	6583	0	6583 BOGESS 1 (11183.1)
09 0515154844 C	1 04844	4678	0	4678 POPE 3 (11246.1)
09 0515185420 C	1 05420	10863	0	10863 J BUNNELL 1 (10786.1)
09 0516164931 C	1 04931	4797	0	4797 BOYCE 4 (11188.1)
09 0516164951 C	1 04951	4761	0	4761 VINCENT 3 (11274.1)
09 0516164953 C	1 04953	5251	0	5251 SADLER 4 (11257.1)
09 0517171714 C	1 01714	2334	0	2334 DOWNES 2 (11210.1)
09 0517174932 C	1 04932	3114	0	3114 BOYCE 5 (11189.1)
09 0517174952 C	1 04952	4380	0	4380 VINCENT 4 (11275.1)
09 0518180602 C	1 06002	1475	0	1475 ASHCRAFT WD3 (10824.1)
09 0518185004 C	1 05004	111243	0	111243 MCQUAID 1 (10809.1)
09 0518185322 C	1 05322	7029	0	7029 BOGESS 2 (11184.1)
09 0518185324 C	1 05324	6642	0	6642 BOGESS 4 (11186.1)
09 0518185355 C	1 05355	4523	0	4523 HIGHLAND 10 (10770.1)
09 0518185403 C	1 05403	6995	0	6995 BRAUN 1 (10784.1)
09 0518185450 C	1 05450	25916	0	25916 JW STARK 2 (10818.1)
09 0518185451 C	1 05451	6584	0	6584 JW STARK 3 (10819.1)
09 0518185466 C	1 05466	5566	0	5566 COTTRILL 2 (10766.1)
09 0518185499 C	1 05499	854	0	854 IB HUTSON 1 (10792.1)
09 0518185500 C	1 05500	5451	829	6280 IB HUTSON 2 (10793.1)
09 0518185529 Y	1 05529	7433	0	7433 KILE B-1
09 0520105005 C	1 05005	2171	0	2171 MCQUAID 2 (10810.1)
09 0520105285 C	1 05285	9035	0	9035 HIGHLAND 3 (10774.1)
09 0520105286 C	1 05286	606	0	606 HIGHLAND 4 (10791.1)
09 0520105287 C	1 05287	8146	0	8146 HIGHLAND 5 (10775.1)
09 0520105330 C	1 05330	2412	0	2412 HIGHLAND 17 (10788.1)
09 0520105331 C	1 05331	3760	0	3760 HIGHLAND 18 (10772.1)
09 0520105332 C	1 05332	5810	0	5810 HIGHLAND 19 (10773.1)
09 0520105356 C	1 05356	1593	0	1593 HIGHLAND 23 (10790.1)
09 0520105402 C	1 05402	45244	0	45244 J BUNNELL 3 (10834.1)
09 0520105434 C	1 05434	180212	0	180212 BRAUN 2 (10785.1)
09 0520105449 C	1 05449	22023	0	22023 JW STARK 1 (10776.1)
09 0520105452 C	1 05452	10040	0	10040 JW STARK 4 (10820.1)
09 0520105465 C	1 05465	2586	0	2586 COTTRILL 1 (10765.1)
09 0520105467 C	1 05467	6055	0	6055 COTTRILL 3 (10767.1)
09 0520105474 C	1 05474	3270	0	3270 PIPPIN 1 (10815.1)
09 0520105475 C	1 05475	11820	0	11820 S SMITH 1 (10817.1)
09 0520105501 Y	1 05501	500	0	500 HUTSON 3
09 0520105502 C	1 05502	12868	0	12868 KILE A1 (10797.1)
09 0520105503 C	1 05503	13575	0	13575 KILE A2 (10798.1)
09 0520105504 C	1 05504	55975	0	55975 KILE A3 (10799.1)
09 0520105506 C	1 05506	5380	0	5380 HIGHLAND 14 (10771.1)
09 0520105512 C	1 05512	168791	0	168791 TATE 1 (10822.1)
09 0520105514 C	1 05514	5463	0	5463 TATE 3 (10823.1)
09 0520105545 C	1 05545	11288	0	11288 BALLOUZ 1 (10783.1)
09 0520105553 C	1 05553	44680	0	44680 TATE 4 (10869.1)
09 0520105635 C	1 05635	20885	0	20885 P FORD 1 (10813.1)
09 0520105636 C	1 05636	2232	0	2232 P FORD 2 (10814.1)
09 0520105646 C	1 05646	58521	0	58521 TATE 2 (10868.1)
09 0520105693 C	1 05693	49302	0	49302 BOOHER 4 (10832.1)
09 0520115645 C	1 05645	25329	0	25329 CHRESS 2 (10836.1)
09 0520115749 C	1 05749	23017	0	23017 TANEY 1 (10867.1)
09 0520115865 C	1 05865	46631	0	46631 WL ESTACK 1 (10877.1)
09 0520115866 C	1 05866	57350	0	57350 WL ESTACK 2 (10878.1)
09 0520125673 Y	1 05673	4376	0	4376 ASH RALPH & REVA TALKINGT
09 0520135880 C	1 05880	1871	0	1871 E SWIGER 1 (10821.1)
09 0520145962 C	2 05962	3741641	0	3741641 R. SWIGER SOUTH UNIT 1H A
09 0520146027 C	1 06027	3559212	0	3559212 TROUT UNIT 1H (10176.1)
09 0520146028 C	1 06028	3806558	0	3806558 TROUT UNIT 2H (10175.1)
09 0520146043 C	1 06043	1695146	0	1695146 R. SWIGER SOUTH UNIT 3H (

09 0520146044 C	1 06044	2090760	0	2090760	WEBB UNIT 1H (10188.1)
09 0520146045 C	1 06045	1823208	0	1823208	WEBB UNIT 2H (10169.1)
09 0520146046 C	1 06046	2450719	0	2450719	WEBB UNIT 3H (10170.1)
09 0520156117 C	1 06117	2037385	0	2037385	KEMPER UNIT 1H (10269.1)
09 0520156118 C	1 06118	1557427	0	1557427	THOMAS UNIT 2H (10272.1)
09 0520156120 C	1 06120	1238253	0	1238253	THOMAS UNIT 1H (10271.1)
09 0520156121 C	1 06121	1255964	0	1255964	KEMPER UNIT 2H (10270.1)
09 0520156119 C	1 06119	3989106	0	3989106	STATLER UNIT 1H (10735.1)
09 0520156113 C	1 06113	3522220	0	3522220	STATLER UNIT 2H (10736.1)
09 0520166148 C	1 06148	4465136	0	4465136	WELCH UNIT 1H (10737.1)
09 0580003141 C	1 03141	3546	0	3546	ESTLACK S2 (11216.1)
09 0580003156 C	1 03156	4331	0	4331	ESTLACK S3 (11217.1)
09 0580003173 C	1 03173	1158	0	1158	ESTLACK S4 (11218.1)
09 0580003181 C	1 03181	7787	0	7787	DUDLEY 3 (11212.1)
09 0600735001 C	1 0401	500	0	500	PEARCY BL (11243.1)
09 0600735002 C	1 00727	500	0	500	HURST SR 1 (11232.1)
09 0600735003 C	1 00728	500	0	500	HURST JR 2 (11226.1)
09 0600875001 C	1 03109	2492	0	2492	BARTON 1 (11180.1)
09 0600875002 C	1 03169	4306	0	4306	COX B BATTEN 1 (11194.1)
09 0600875006 C	1 03192	3462	0	3462	STEWART 1 (11268.1)
09 0600930002 C	1 02648	3289	0	3289	DOUGLAS 1A (11207.1)
09 0600930003 C	1 03485	5529	0	5529	DOUGLAS W HRS 1A (11208.1)
09 0600930004 C	1 03347	4754	0	4754	NICHOLSON 2A (11241.1)
09 0600930005 C	1 02315	2680	0	2680	RANDOLPH FF 1A (11254.1)
09 0600930007 C	1 03480	725	0	725	WARNER 3 (11276.1)
09 0600930008 C	1 03360	4754	0	4754	NICHOLSON 6 (11242.1)
09 0610003177 C	1 03177	3056	0	3056	DAVIS RA 3 (11205.1)
09 0612122390 C	1 02390	500	0	500	RANDOLPH AF 2 (11252.1)
09 0616164485 C	1 04485	4320	0	4320	RANDOLPH FF 5 (11255.1)
09 0618185431 C	1 05431	8955	0	8955	NICHOLSON AL (10811.1)
09 0620145899 C	1 05899	112600	0	112600	F MAXWELL 1 (10841.1)
09 0620146096 C	1 06096	1073797	4166	1077963	HEIRS UNIT 2H (10240.1)
09 0620146099 C	1 06099	971305	3791	975696	HEIRS UNIT 1H (10219.1)
09 0620156076 C	1 06076	1325883	29906	1355589	ERWIN UNIT 1H (10212.1)
09 0620156081 C	1 06081	1310377	46493	1357470	TOM'S FORK UNIT 1H (10217
09 0620156082 C	1 06082	1451390	61200	1512590	TOM'S FORK UNIT 2H (10218
09 0620156094 C	1 06094	1372208	31789	1403997	RUCKMAN UNIT 1H (10247.1)
09 0620156095 C	1 06095	963781	36120	999901	RUCKMAN UNIT 2H (10227.1)
09 0620156097 C	1 06097	1157457	6767	1164224	YOKE UNIT 1H (10210.1)
09 0620156098 C	1 06098	1277390	5706	1283096	YOKE UNIT 2H (10242.1)
09 0620156100 C	1 06100	1467950	7802	1475752	CRISLIP UNIT 1H (10249.1)
09 0620156102 C	1 06102	1408404	34967	1443371	HINTERER UNIT 1H (10226.1
09 0620156103 C	1 06103	956939	41014	997953	RUCKMAN UNIT 3H (10246.1)
09 0620156104 C	1 06104	1318014	28136	1346150	HINTERER UNIT 2H (10248.1
09 0620156126 C	1 06126	1281377	30677	1312654	ERWIN UNIT 2HA (10228.1)
09 0620156153 C	1 06153	2565291	17133	2582424	WEBLEY FORK UNIT 1H (1071
09 0620156156 C	1 06156	1316787	4165	1320952	JOHNSON UNIT 1H (10317.1)
09 0620156157 C	1 06157	2903075	20797	2923872	LITTLE TOM UNIT 1H (10321
09 0620156173 C	1 06173	1502393	14221	1516614	RIGHT TOM UNIT 1H (10323.1)
09 0620166165 C	1 06165	2433865	77933	2511798	SCHULTE UNIT 1H (10323.1)
09 0620166174 C	1 06174	1740387	5955	1746242	RIGHT HAND UNIT 2H (10731
09 0620166238 C	1 06238	2122121	1406	2123527	CROSS UNIT 1H (10362.1)
09 0620166240 C	1 06240	2069474	1360	2070834	CROSS UNIT 2H (10363.1)
09 0620166243 C	1 06243	2896291	1624	2897915	DOROTHY UNIT 1H (10360.1)
09 0620166244 C	1 06244	2005041	1269	2006310	DOROTHY UNIT 2H (10361.1)
09 0620166261 C	1 06261	2728898	6036	2734934	JOSIE UNIT 2H (10381.1)
09 0620166265 C	1 06265	2580466	5726	2586192	JOSIE UNIT 1H (10345.1)
09 0620166295 C	1 06295	3150093	11506	3161599	SWISHER UNIT 1H (10417.1)
09 0620166296 C	1 06296	3435373	11616	3466989	SWISHER UNIT 2H (10428.1)
09 0620166311 C	1 06311	4609589	14376	4623965	NICKERS UNIT 2H (10432.1)
09 0620166313 C	1 06313	1443212	1767	1444979	PROUDFOOT UNIT 1H (10419
09 0620166320 C	1 06320	1782733	1959	1784692	PROUDFOOT UNIT 2H (10494
09 0620166321 C	1 06321	1365430	1684	1367114	SIBLEY UNIT 1H (10420.1)
09 0620166333 C	1 06333	4621400	15094	4636494	NICKERS UNIT 3H (10431.1)
09 0620166334 C	1 06334	4719868	17071	4736939	GEARHART UNIT 2H (10460.1
09 0620166358 C	1 06358	1598992	5411	1604403	GRINSDALE UNIT 2H (10418

09 0620166362 C	1 06362	3865164	12856	3878020 FARROW UNIT 2H (10433.1)
09 0620166366 C	1 06366	4022095	13493	4035588 FARROW UNIT 3H (10434.1)
09 0620166404 C	1 06404	5562822	15934	5578756 PENNINGTON SOUTH UNIT 1H
09 0620166419 C	1 06419	3606811	4405	3611216 DUFFLEMEYER UNIT 2H (10445
09 0620166429 C	1 06429	4671085	6034	4677119 ASENSA UNIT 2H (10571.1)
09 0620166453 C	1 06453	7713293	61531	7774824 CARR UNIT 2H (10474.1)
09 0620176403 C	1 06403	1386283	0	1386283 LINCOLN UNIT 1H (10580.1)
09 0620176420 C	1 06420	1598241	29	1598270 HONEY UNIT 1H (10605.1)
09 0650000714 C	1 00714	500	0	500 HURST JR 1 (11225.1)
09 0660000745 C	1 00745	500	0	500 HURST JR 3 (11227.1)
09 0660000783 C	1 00783	500	0	500 HURST JR 4 (11228.1)
09 0660000784 C	1 00784	500	0	500 HURST JR 5 (11229.1)
09 0660000788 C	1 00788	500	0	500 HURST JR 9 (11231.1)
09 0660000840 C	1 00840	500	0	500 HURST SR 3 (11233.1)
09 0660001145 C	1 01145	500	0	500 HURST JR 6 (11230.1)
09 0660003336 Y	1 03336	500	0	500 HURST SR #4
09 0660003474 C	1 03474	500	0	500 HURST SR 5 (11235.1)
09 0660003477 C	1 03477	500	0	500 PEARCY B3 (11244.1)
09 0660001386 C	1 01386	500	0	500 RANDOLPH AF 3 (11253.1)
09 0680003134 C	1 03134	744	0	744 MAXWELL 3 (11237.1)
09 0680003139 C	1 03139	516	0	516 BARTON 2 (11181.1)
09 0680003174 C	1 03174	6019	0	6019 COX B BATTEN 2 (11193.1)
09 0690004481 C	1 04481	667	0	667 RANDOLPH AF 1 (11251.1)
09 0700950001 C	1 03614	13407	0	13407 HARSLEY D-11 1 (11327.1)
09 0800735003 C	1 01058	6918	0	6918 FREEMAN JOSEPH 1 (11222.1)
09 0800735005 C	1 03434	3992	0	3992 SPENCER SILAS 2 (11267.1)
09 0800735007 C	1 03344	3628	0	3628 SMITH WF 4 (11262.1)
09 0800735008 C	1 03726	4161	0	4161 SMITH WF 5 (11263.1)
09 0800735009 C	1 03735	3497	0	3497 MAXWELL HEIRS 2 (11238.1)
09 0810003790 C	1 03790	4896	0	4896 SMITH WF 6 (11264.1)
09 0816165096 C	1 05096	4770	0	4770 FREEMAN P16 (11221.1)
09 0820166223 C	1 06223	4042615	341712	4384327 LIVINGSTON UNIT 1H (10377
09 0820166224 C	1 06224	4067194	266209	4333403 LIVINGSTON UNIT 2H (10376
09 0820166225 C	1 06225	3128985	125928	3254913 VONDA UNIT 2H (10380.1)
09 0820166258 C	1 06258	2852505	239002	3091507 SQUIRREL UNIT 1H (10378.1
09 0820166312 C	1 06312	4054560	47341	4101301 HEFLIN UNIT 1H (10373.1)
09 0820166315 C	1 06316	3793475	49402	3842877 JOSEPH UNIT 2H (10438.1)
09 0820166317 C	1 06317	2481835	36857	2518692 MCCONNELL UNIT 1H (10447.
09 0820166318 C	1 06318	1481291	31910	1513201 OLIVIA UNIT 2H (10439.1)
09 0820176327 C	1 06327	2157371	0	2157371 JOSEPH UNIT 1H (10473.1)
09 0820176332 C	1 06332	1658439	0	1658439 OLIVIA UNIT 1H (10549.1)
09 0830003784 C	1 03784	2083	0	2083 FREEMAN 1 (11219.1)
09 0840003856 C	1 03856	5286	0	5286 FREEMAN 2 (11220.1)
09 0860002698 C	1 02698	3550	0	3550 FREEMAN JOSEPH 2 (11223.1
09 0860003782 C	1 03782	3429	0	3429 SMITH WF 7 (11265.1)
09 0860003783 C	1 03783	4403	0	4403 SMITH WF 8 (11266.1)
09 0860003794 C	1 03794	3011	0	3011 MAXWELL HEIRS 4 (11239.1)
09 0860003875 C	1 03875	4032	0	4032 MAXWELL HEIRS 5 (11240.1)

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 1

FEB 15, 2017
01:26 PM

ACCOUNT: 0115154830
STATUS: A API#: 04830
DATE: 05/17/2004
DAYS: 365
BBLs: 0.000
MCFS: 0.000
RCPTS: 3387
RCPTS: 7702
GWI: 6479
OWI: 0

RESOURCE: GS
OWNER: ANTERO RESOURCES CORPORATION
LOCATION: SADLER 3 (11256.1)

SYSTEM RATES:
CAP RATE: 16.000
DECLINE RATE: 0.310
0.170
0.120
WELL LIFE: 99
EXPENSE: 5000
5000
5000

RATES USED:
CAP RATE: 16.000
DECLINE RATE: 0.45
0.45
5000
5000
5000

SETTLED YEARS: 12

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	5,313	2,922	2,713	1,003	931	0.928						
2	4,675	2,284	1,829	883	706	0.800						
3	4,114	1,723	1,189	777	536	0.690						
4	3,621	1,230	732	683	407	0.595						
5	3,186	795	408	601	308	0.513						
6	2,804	413	183	529	234	0.442						
7	2,467	77	29	466	177	0.381						
8	2,171	0	0	410	0	0.329						
TOTAL:			7,082			3,300						
EXPENSE:	2391		2391			2391						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 2

ACCOUNT: 0120146079 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATION LOCATION: VALENTINE UNIT 2H (10206.1)
 STATUS: Z API#: 06079 DATE: 08/17/2013 DAYS: 365 BBLs: 1863.000 MCFS: 634663 RCPTS: 1491431 GWI: 1159101 OWI: 53331
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 OL EXPENSE: 0.2 5750 5750 5750
 SETTLED YEARS: 3 GS EXPENSE: 0.2 175000 175000 175000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	759,211	607,369	563,928	174,706	162,210	0.928	34,932	34,679	32,199	8,039	7,464	0.928
2	584,593	432,750	346,378	134,523	107,674	0.800	26,897	26,645	21,327	6,190	4,954	0.800
3	450,136	298,294	205,826	103,583	71,473	0.690	20,711	20,458	14,116	4,766	3,289	0.690
4	346,605	194,763	115,852	79,759	47,443	0.595	15,948	15,695	9,336	3,670	2,183	0.595
5	266,886	115,044	58,993	61,414	31,493	0.513	12,280	12,037	6,167	2,826	1,449	0.513
6	205,502	53,660	23,721	47,289	20,905	0.442	9,455	9,202	4,068	2,176	962	0.442
7	158,237	6,394	2,437	36,413	13,876	0.381	7,281	7,028	2,678	1,675	638	0.381
8	121,842	0	0	28,038	0	0.329	5,606	5,353	1,759	1,290	424	0.329
9							4,317	4,064	1,151	993	281	0.283
10							3,324	3,071	750	765	187	0.244
11							2,559	2,306	485	589	124	0.210
12							1,971	1,718	312	454	82	0.181
13							1,517	1,265	198	349	55	0.156
14							1,168	916	123	269	36	0.135
15							900	647	75	207	24	0.116
16							693	440	44	159	16	0.100
17							533	281	24	123	11	0.086
18							411	158	12	95	7	0.074
19							316	63	4	73	5	0.064
20							244	0	0	56	0	0.055

TOTAL: 1,317,134 455,074 94,827 22,191

OL EXPENSE: 253 253
 GS EXPENSE: 151842 151842

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 3

FEB 15, 2017
01:26 PM

ACCOUNT: 0120146083 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: VALENTINE UNIT 1H (10205.1)
STATUS: 2 API#: 06083 DATE: 08/17/2013 DAYS: 365 BLS: 1431.000 MCPS: 606222 RPTS: 1407603 GWI: 1102440 OWI: 41846
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	722,098	577,679	144,420	166,166	154,281	0.928	27,409	27,199	25,254	6,307	5,856	0.928
2	556,016	411,596	144,420	127,948	102,411	0.800	21,105	20,895	16,724	4,856	3,887	0.800
3	428,132	283,712	144,420	98,520	67,979	0.690	16,251	16,041	11,068	3,739	2,580	0.690
4	329,662	185,242	144,420	75,860	45,124	0.595	12,513	12,303	7,318	2,879	1,713	0.595
5	253,839	109,420	144,420	58,412	29,953	0.513	9,635	9,425	4,833	2,217	1,137	0.513
6	195,456	51,037	144,420	44,977	19,883	0.442	7,419	7,209	3,187	1,707	755	0.442
7	150,501	6,082	144,420	34,633	13,198	0.381	5,713	5,502	2,097	1,315	501	0.381
8	115,886	0	115,886	26,667	0	0.329	4,399	4,188	1,376	1,012	333	0.329
9							3,387	3,177	900	779	221	0.283
10							2,608	2,398	585	600	147	0.244
11							2,008	1,798	378	462	97	0.210
12							1,546	1,336	242	356	65	0.181
13							1,191	980	153	274	43	0.156
14							917	707	95	211	28	0.135
15							706	496	58	162	19	0.116
16							544	333	33	125	13	0.100
17							419	208	18	96	8	0.086
18							322	112	8	74	6	0.074
19							248	38	2	57	4	0.064
20							191	0	0	44	0	0.055
TOTAL:		1,252,748			432,829				74,331			17,410

GS EXPENSE: 144420 144420 144420
OL EXPENSE: 210 210 210

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 4

ACCOUNT: 0120156169
STATUS: Z API#: 06169
SYSTEM RATES: 16.000 DECLINE RATE: 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750

GAS WORKING INTEREST				GAS ROYALTY INTEREST				OIL WORKING INTEREST				OIL ROYALTY INTEREST			
GROSS INCOME	DISCOUNT INCOME	NET INCOME		GROSS INCOME	DISCOUNT INCOME	NET INCOME		GROSS INCOME	DISCOUNT INCOME	NET INCOME		GROSS INCOME	DISCOUNT INCOME	NET INCOME	
1 1,023,284	799,577	861,171		200,283	185,958	0.928		81,346	75,135	80,922		15,922	14,783	0.928	
2 787,928	500,910	625,815		154,218	123,438	0.800		62,636	49,796	62,213		12,260	9,813	0.800	
3 606,705	306,772	444,592		118,748	81,937	0.690		48,230	32,987	47,806		9,440	6,514	0.690	
4 467,163	181,455	305,050		91,436	54,389	0.595		37,137	21,839	36,714		7,269	4,324	0.595	
5 359,715	101,328	197,602		70,406	36,103	0.513		28,595	14,446	28,172		5,597	2,870	0.513	
6 276,981	50,779	114,868		54,212	23,965	0.442		22,019	9,546	21,595		4,310	1,905	0.442	
7 213,275	19,497	51,162		41,744	15,908	0.381		16,954	6,300	16,531		3,318	1,265	0.381	
8 164,222	693	2,109		32,143	10,560	0.329		13,055	4,150	12,631		2,555	839	0.329	
9 126,451	0	0		24,750	0	0.283		10,052	2,727	9,629		1,968	557	0.283	
10								7,740	7,317	7,317		1,515	370	0.244	
11								5,960	5,537	5,537		1,167	246	0.210	
12								4,589	4,166	4,166		898	163	0.181	
13								3,534	3,110	3,110		692	108	0.156	
14								2,721	2,297	2,297		533	72	0.135	
15								2,095	1,672	1,672		410	48	0.116	
16								1,613	1,190	1,190		316	32	0.100	
17								1,242	819	711		243	21	0.086	
18								956	533	40		187	14	0.074	
19								735	313	20		144	9	0.064	
20								567	144	8		111	6	0.055	
21								437	13	1		85	4	0.048	
22								336	0	0		66	0	0.041	

TOTAL: 1,961,011 532,259 221,881 43,962

GS EXPENSE: 162113 162113
OL EXPENSE: 423 423

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 5

FEB 15, 2017
01:26 PM

ACCOUNT:0120156170 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:SEABORN UNIT 2H (10330.1) 125265
STATUS:Z API#:06170 DATE:09/01/2013 DAYS:365 BBLUS: 4237.000 MCFS: 692073 RCPTS: 1879475 GWI: 1446562 OWI: 175000
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	947,498	730,196	786,445	185,450	172,186	0.928	82,049	75,755	81,590	16,059	14,911	0.928
2	729,574	455,050	568,520	142,797	114,296	0.800	63,177	50,201	62,719	12,366	9,898	0.800
3	561,772	276,499	400,718	109,953	75,869	0.690	48,164	33,250	48,188	9,522	6,570	0.690
4	432,564	161,504	271,511	84,664	50,361	0.595	37,458	22,009	37,000	7,332	4,361	0.595
5	333,074	88,210	172,021	65,191	33,429	0.513	28,843	14,555	28,384	5,645	2,895	0.513
6	256,467	42,179	95,414	50,197	23,190	0.442	22,209	9,615	21,751	4,347	1,922	0.442
7	197,480	13,882	36,426	38,652	14,730	0.381	17,101	6,342	16,643	3,347	1,276	0.381
8	152,059	0	0	29,762	0	0.329	13,168	4,175	12,709	2,577	847	0.329
9							10,139	2,742	9,681	1,985	562	0.283
10							7,807	1,794	7,349	1,528	373	0.244
11							6,011	1,169	5,553	1,177	248	0.210
12							4,629	866	4,171	906	164	0.181
13							3,564	486	3,106	698	109	0.156
14							2,744	308	2,286	537	72	0.135
15							2,113	192	1,655	414	48	0.116
16							1,627	117	1,169	318	32	0.100
17							1,253	69	795	245	21	0.086
18							965	38	507	189	14	0.074
19							743	18	285	145	9	0.064
20							572	6	114	112	6	0.055
21							440	0	0	86	0	0.048

TOTAL: 1,767,519 483.062 223,599 44,337

GS EXPENSE: 161054 161054 161054
OL EXPENSE: 458 458 458

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 7

ACCOUNT: 0120156188 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: CENTRAL UNIT 2H (10311.1)
STATUS: Z API#: 06188 DATE: 08/01/2013 DAYS: 365 BBLs: 1353.000 MCFS: 726980 RCPTS: 1683901 GWI: 1351571 OWI: 39750
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	885,279	664,120	715,279	186,165	172,850	0.928	26,036	24,022	25,872	5,475	5,084	0.928
2	681,665	409,542	511,665	143,347	114,736	0.800	20,048	15,915	19,884	4,216	3,374	0.800
3	524,882	244,872	354,882	110,377	76,161	0.690	15,437	10,538	15,273	3,246	2,240	0.690
4	404,159	139,286	234,159	84,990	50,555	0.595	11,886	6,973	11,722	2,500	1,487	0.595
5	311,202	72,407	141,202	65,443	33,558	0.513	9,153	4,609	8,988	1,925	987	0.513
6	239,626	30,779	69,626	50,391	22,276	0.442	7,047	3,043	6,883	1,482	655	0.442
7	184,512	5,530	14,512	38,801	14,786	0.381	5,427	2,005	5,262	1,141	435	0.381
8	142,074	0	0	29,877	0	0.329	4,178	1,319	4,014	879	289	0.329
9							3,217	865	3,053	677	192	0.283
10							2,477	565	2,313	521	127	0.244
11							1,908	367	1,743	401	84	0.210
12							1,489	237	1,305	309	56	0.181
13							1,131	151	967	238	37	0.156
14							871	95	707	183	25	0.135
15							671	59	506	141	16	0.116
16							516	35	352	109	11	0.100
17							398	20	233	84	7	0.086
18							306	11	142	64	5	0.074
19							236	5	71	50	3	0.064
20							182	1	17	38	2	0.055
21							140	0	0	29	0	0.048

TOTAL:

1,566,535

484,923

70,833

15,116

GS EXPENSE: 170000 170000 170000

OL EXPENSE: 164 164 164

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 8

ACCOUNT: 0120156189 RESOURCE.0G OWNER: ANTERO RESOURCES CORPORATI LOCATION: DOTSON UNIT 2H (10310.1)
STATUS: Z API# 06189 DATE: 08/01/2013 DAYS: 365 BBLs: 1321.000 MCFS: 697310 RCPTS: 1620342 GWI: 1286962 OWI: 37328
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	842,960	674,368	626,135	188,448	174,970	0.928	24,450	24,288	22,551	5,466	5,075	0.928
2	649,079	480,487	384,587	145,105	116,144	0.800	18,826	18,664	14,939	4,209	3,369	0.800
3	499,791	331,199	228,530	111,731	77,095	0.690	14,496	14,334	9,891	3,241	2,236	0.690
4	384,839	215,247	128,632	86,033	51,175	0.595	11,162	11,000	6,543	2,495	1,484	0.595
5	296,326	127,734	65,501	66,245	33,970	0.513	8,595	8,433	4,324	1,921	985	0.513
6	228,171	59,579	26,338	51,009	22,549	0.442	6,618	6,456	2,854	1,480	654	0.442
7	175,692	7,100	2,706	39,277	14,968	0.381	5,096	4,934	1,880	1,139	434	0.381
8	135,283	0	0	30,243	0	0.329	3,924	3,762	1,236	877	288	0.329
9				3,021	2,859		2,326	2,164	528	675	191	0.283
10				1,791	1,629		1,379	1,217	343	400	84	0.210
11				1,062	900		1,062	900	141	237	56	0.181
12				818	656		630	468	88	183	25	0.135
13				485	323		373	211	32	141	16	0.116
14				287	125		221	59	9	108	11	0.100
15				170	8		131	0	4	64	5	0.074
16									0	38	3	0.064
17									0	29	2	0.055
18									0	0	0	0.048
19												
20												
21												
TOTAL:			1,462,428		490,871				66,468		15,091	

GS EXPENSE: 168592 168592 168592

OL EXPENSE: 162 162 162

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 9

ACCOUNT: 0120166141 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATION LOCATION: PIGGOT UNIT 2H (10305.1)
 STATUS: Z API#: 06141 DATE: 06/27/2014 DAYS: 365 BBLs: 6142.000 MCFS: 1486061 RCPTS: 4108237 GWT: 3261160 OWI: 185647
 SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 OL EXPENSE: 0.2 5750 5750 5750
 SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,940,390	1,774,816	1,647,876	372,354	345,722	0.928	110,460	110,150	102,272	21,197	19,681	0.928
2	1,494,100	1,328,526	1,063,367	286,713	229,488	0.800	85,054	84,744	67,830	16,322	13,064	0.800
3	1,150,457	984,883	679,578	220,763	152,332	0.690	65,492	65,182	44,976	12,568	8,672	0.690
4	885,852	720,278	428,447	169,932	101,117	0.595	50,429	50,119	29,813	9,677	5,756	0.595
5	682,106	516,532	264,872	130,894	67,121	0.513	38,830	38,520	19,753	7,451	3,821	0.513
6	525,222	359,647	158,986	100,788	44,554	0.442	29,899	29,589	13,080	5,738	2,536	0.442
7	404,421	238,846	91,021	77,607	29,575	0.381	23,022	22,713	8,655	4,418	1,684	0.381
8	311,404	145,830	47,908	59,757	17,727	0.329	17,727	17,417	5,722	3,402	1,118	0.329
9	239,781	74,207	21,016	46,013	13,632	0.283	13,650	13,340	3,778	2,619	742	0.283
10	184,631	19,057	4,653	35,430	13,031	0.244	10,510	10,201	2,490	2,017	492	0.244
11	142,166	0	0	27,281	8,650	0.210	8,093	7,783	1,638	1,553	327	0.210
12					0		6,232	5,922	1,074	1,196	217	0.181
13							4,798	4,489	702	921	144	0.156
14							3,695	3,385	456	709	96	0.135
15							2,845	2,535	295	546	63	0.116
16							2,191	1,881	188	420	42	0.100
17							1,687	1,377	119	324	28	0.086
18							1,299	989	74	249	19	0.074
19							1,000	690	44	192	12	0.064
20							770	460	25	148	8	0.055
21							593	283	14	114	5	0.048
22							457	147	6	88	4	0.041
23							352	42	1	67	2	0.035
24							271	0	0	52	0	0.031

TOTAL: 4,407,723 1,011,223 303,008 58,533

GS EXPENSE: 165574 165574
 OL EXPENSE: 310 310

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 10

ACCOUNT: 0120166142 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: PIGGOT UNIT 1H (10304.1)
 STATUS: 2 API#: 06142 DATE: 06/20/2014 DAYS: 365 BBLs: 5113.00Q MCFS: 1149962 RCPTS: 3060709 GWI: 2412659 OWI: 155273
 SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 OL EXPENSE: 0.2 5750 5750 5750
 SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,435,532	1,271,114	1,180,200	275,474	255,771	0.928	92,387	92,040	85,457	17,729	16,461	0.928
2	1,105,360	940,941	753,140	212,115	169,779	0.800	71,138	70,791	56,662	13,651	10,926	0.800
3	851,127	686,709	473,835	163,328	112,698	0.690	54,777	54,429	37,556	10,511	7,253	0.690
4	655,368	490,949	292,034	125,763	74,808	0.595	42,178	41,830	24,882	8,094	4,814	0.595
5	504,633	340,215	174,458	96,837	49,657	0.513	32,477	32,129	16,476	6,232	3,196	0.513
6	388,568	224,149	99,087	74,565	32,962	0.442	25,007	24,660	10,901	4,799	2,121	0.442
7	299,197	134,779	51,362	57,415	21,880	0.381	19,256	18,908	7,206	3,695	1,408	0.381
8	230,382	65,963	21,670	44,209	14,524	0.329	14,827	14,479	4,757	2,845	935	0.329
9	177,394	12,975	3,675	34,041	9,641	0.283	11,417	11,069	3,135	2,191	620	0.283
10	136,593	0	0	26,212	0	0.244	8,791	8,443	2,061	1,687	412	0.244
11							6,769	6,421	1,351	1,299	273	0.210
12							5,212	4,864	883	1,000	181	0.181
13							4,013	3,666	573	770	120	0.156
14							3,090	2,743	370	593	80	0.135
15							2,379	2,032	236	457	53	0.116
16							1,832	1,485	149	352	35	0.100
17							1,411	1,063	92	271	23	0.086
18							1,086	1,739	55	208	16	0.074
19							836	489	31	161	10	0.064
20							644	296	16	124	7	0.055
21							496	148	7	95	5	0.048
22							382	34	1	73	3	0.041
23							294	0	0	56	0	0.035

TOTAL: 3,049,462 741,720 252,857 48,954

GS EXPENSE: 164418 164418

OL EXPENSE: 348 348

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 11

ACCOUNT: 0120166190 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: AHOUSE UNIT 1H (10329.1) 196584
STATUS: 2 API#: 06190 DATE: 08/12/2014 DAYS: 365 BELS: 6601.000 MCFS: 952040 RCPTS: 2722835 GWI: 2055372 OWI: 196584

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	1,222,946	1,063,223	987,178	255,716	237,426	0.928	116,967	108,136	116,466	24,457	22,708	0.928
2	941,669	781,945	625,878	196,901	157,602	0.800	90,065	71,687	89,563	18,832	15,074	0.800
3	725,085	565,361	390,105	151,614	104,615	0.690	69,350	47,506	68,848	14,501	10,006	0.690
4	558,315	398,592	237,097	116,743	69,443	0.595	53,400	31,465	52,898	11,166	6,642	0.595
5	429,903	270,179	138,545	89,892	46,096	0.513	41,118	20,827	40,616	8,598	4,409	0.513
6	331,025	171,302	75,726	31,661	30,598	0.442	31,661	13,774	31,159	6,620	2,926	0.442
7	254,889	95,166	36,266	24,379	20,311	0.381	24,379	9,099	23,877	5,097	1,943	0.381
8	196,265	36,541	12,005	18,772	13,482	0.329	18,772	5,002	18,270	3,925	1,289	0.329
9	151,124	0	0	14,454	0	0.283	14,454	3,951	13,952	3,022	856	0.283
10	111,130	0	0	11,130	0	0.244	11,130	2,595	10,628	2,327	568	0.244
11	8,570	0	0	8,570	0	0.210	8,570	1,698	8,068	1,792	377	0.210
12	6,599	0	0	6,599	0	0.181	6,599	1,106	6,097	1,380	250	0.181
13	5,081	0	0	5,081	0	0.156	5,081	716	4,579	1,062	166	0.156
14	3,912	0	0	3,912	0	0.135	3,912	460	3,410	818	110	0.135
15	3,013	0	0	3,013	0	0.116	3,013	292	2,511	630	73	0.116
16	2,320	0	0	2,320	0	0.100	2,320	182	1,818	485	49	0.100
17	1,786	0	0	1,786	0	0.086	1,786	111	1,284	373	32	0.086
18	1,375	0	0	1,375	0	0.074	1,375	65	873	288	21	0.074
19	1,059	0	0	1,059	0	0.064	1,059	36	557	221	14	0.064
20	815	0	0	815	0	0.055	815	17	313	171	9	0.055
21	628	0	0	628	0	0.048	628	6	126	131	6	0.048
22	483	0	0	483	0	0.041	483	0	0	101	0	0.041

TOTAL: 2,502,799 679,571 319,732 67,530

GS EXPENSE: 159723 159723 159723

OL EXPENSE: 502 502 502

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 13

FEB 15, 2017
01:26 PM

ACCOUNT: 0120166192
RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: CALLIE UNIT 1H (10385.1)
STATUS: 2 API#: 06192 DATE: 08/12/2014 DAYS: 365 BELLS: 3212.000 MCPS: 765215 RCPTS: 2172929 GWI: 1702819 OWI: 89791
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	1,013,177	846,943	786,367	214,955	199,581	0.928	53,426	49,337	53,138	11,335	10,524	0.928
2	780,147	613,912	491,382	165,515	132,480	0.800	41,138	32,697	40,850	8,728	6,986	0.800
3	600,713	434,478	299,794	127,447	87,939	0.690	31,676	21,658	31,388	6,720	4,637	0.690
4	452,549	296,315	176,259	98,134	58,374	0.595	24,391	14,337	24,103	5,175	3,078	0.595
5	356,163	189,928	97,393	75,563	38,748	0.513	18,781	9,483	18,493	3,985	2,043	0.513
6	274,245	108,011	47,747	58,184	25,721	0.442	14,451	6,265	14,173	3,068	1,356	0.442
7	211,169	44,934	17,124	44,801	17,073	0.381	11,135	4,134	10,847	2,362	900	0.381
8	162,600	0	0	34,497	0	0.329	8,574	2,722	8,286	1,819	598	0.329
9				6,602	6,314	1,788	6,314	1,788	6,314	1,401	263	0.283
10				5,084	4,796	1,171	4,796	1,171	4,796	1,079	244	0.244
11				3,914	3,626	763	3,626	763	3,626	830	175	0.210
12				3,014	2,726	495	2,726	495	2,726	639	116	0.181
13				2,321	2,033	318	2,033	318	2,033	492	77	0.156
14				1,787	1,499	202	1,499	202	1,499	379	51	0.135
15				1,376	1,088	126	1,088	126	1,088	292	34	0.116
16				1,060	772	77	772	77	772	225	23	0.100
17				816	528	46	528	46	528	173	15	0.086
18				628	340	25	340	25	340	133	10	0.074
19				484	196	13	196	13	196	103	7	0.064
20				372	84	5	84	5	84	79	4	0.055
21				287	0	0	287	0	0	61	0	0.048
TOTAL:			1,916,066		559,916			145,662			31,294	

GS EXPENSE: 166234 166234
OL EXPENSE: 288 288

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 14

ACCOUNT: 0120166193
RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: CALLIE UNIT 2H (10386.1)
STATUS: Z API#: 06193 DATE: 08/28/2014 DAYS: 365 BRUS: 4419.000 MCFS: 1080075 RCPTS: 3008411 GWI: 2356714 OWI: 125148
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	1,402,245	1,236,069	1,147,662	297,499	276,221	0.928	74,463	74,173	68,868	15,798	14,668	0.928
2	1,079,729	913,553	731,218	229,074	183,353	0.800	57,337	57,047	45,661	12,164	9,736	0.800
3	831,391	665,215	459,005	176,387	121,709	0.690	44,149	43,859	30,263	9,367	6,463	0.690
4	640,171	473,995	281,950	135,818	80,789	0.595	33,995	33,705	20,049	7,212	4,290	0.595
5	492,932	326,756	167,557	104,580	53,627	0.513	26,176	25,886	13,274	5,553	2,848	0.513
6	379,557	213,382	94,328	80,527	35,598	0.442	20,156	19,866	8,782	4,276	1,890	0.442
7	292,259	126,084	48,049	62,005	23,629	0.381	15,520	15,230	5,804	3,293	1,255	0.381
8	225,040	58,864	19,338	47,744	15,685	0.329	11,950	11,660	3,831	2,535	833	0.329
9	173,280	7,105	2,012	36,763	10,412	0.283	9,202	8,912	2,524	1,952	553	0.283
10	133,426	0	0	28,308	0	0.244	7,085	6,795	1,659	1,503	367	0.244
11							5,456	5,166	1,087	1,157	244	0.210
12							4,201	3,911	710	891	162	0.181
13							3,235	2,945	461	686	107	0.156
14							2,491	2,201	297	528	71	0.135
15							1,918	1,628	189	407	47	0.116
16							1,477	1,187	119	313	31	0.100
17							1,137	847	73	241	21	0.086
18							876	586	44	186	14	0.074
19							674	384	25	143	9	0.064
20							519	229	13	110	6	0.055
21							400	110	5	85	4	0.048
22							308	18	1	65	3	0.041
23							237	0	0	50	0	0.035

TOTAL: 2,951,117 801,023 203,737 43,622

GS EXPENSE: 166176 166176

OL EXPENSE: 290 290

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 15

ACCOUNT: 0120166201 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: SHALE UNIT 1H (10364.1)
STATUS: Z API# 06201 DATE: 06/08/2014 DAYS: 365 BBLs: 4264.000 MCFS: 1351465 RCPTS: 3582356 GWI: 2838688 OWI: 124417
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,689,019	1,521,367	1,412,555	352,983	327,737	0.928	74,028	73,787	68,509	15,471	14,365	0.928
2	1,300,545	1,132,893	906,780	271,797	217,549	0.800	57,002	56,760	45,432	11,913	9,535	0.800
3	1,001,420	833,768	575,307	209,284	144,408	0.690	43,891	43,650	30,119	9,173	6,329	0.690
4	771,093	603,441	358,948	161,148	95,857	0.595	33,796	33,555	19,960	7,063	4,201	0.595
5	593,742	426,090	218,494	124,084	63,629	0.513	26,023	25,782	13,221	5,439	2,789	0.513
6	457,181	289,529	127,989	95,545	42,237	0.442	20,038	19,796	8,751	4,188	1,851	0.442
7	352,029	184,377	70,264	73,570	28,036	0.381	15,429	15,188	5,788	3,225	1,229	0.381
8	271,063	103,411	33,973	56,649	18,610	0.329	11,880	11,639	3,824	2,483	816	0.329
9	208,718	41,066	11,630	43,619	12,353	0.283	9,148	8,906	2,522	1,912	541	0.283
10	160,713	0	0	33,587	0	0.244	7,044	6,802	1,661	1,472	359	0.244
11							5,424	5,182	1,091	1,134	239	0.210
12							4,176	3,935	714	873	158	0.181
13							3,216	2,974	465	672	105	0.156
14							2,476	2,235	301	517	70	0.135
15							1,907	1,665	194	398	46	0.116
16							1,468	1,227	123	307	31	0.100
17							1,130	889	77	236	20	0.086
18							870	629	47	182	14	0.074
19							670	429	28	140	9	0.064
20							516	275	15	108	6	0.055
21							397	156	7	83	4	0.048
22							306	65	3	64	3	0.041
23							236	0	0	49	0	0.035

TOTAL: 3,715,940 950,416 202,850 42,720

GS EXPENSE: 167652 167652

OL EXPENSE: 241 241

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 16

ACCOUNT:0120166206 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:VIOLET UNIT 1H (10331.1)
 STATUS:Z API#:06206 DATE:10/20/2014 DAYS:365 BELS: 7841.000 MCPS: 1275194 RCPTS: 3531489 GWI: 2697915 OWI: 227525
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,605,259	1,443,870	1,340,600	332,554	308,769	0.928	135,377	134,930	125,280	28,045	26,039	0.928
2	1,236,050	1,074,660	860,170	256,066	204,958	0.800	104,241	103,793	83,077	21,595	17,285	0.800
3	951,758	790,369	545,362	197,171	136,050	0.690	80,265	79,818	55,075	16,628	11,474	0.690
4	732,854	571,464	339,928	151,822	90,309	0.595	61,804	61,357	36,497	12,804	7,616	0.595
5	564,298	402,908	206,607	116,903	59,946	0.513	47,589	47,142	24,174	9,859	5,055	0.513
6	434,509	273,120	120,735	90,015	39,792	0.442	36,644	36,197	16,001	7,591	3,356	0.442
7	334,572	173,183	65,997	69,312	26,414	0.381	28,216	27,768	10,582	5,845	2,228	0.381
8	257,620	96,231	31,614	53,370	17,533	0.329	21,726	21,279	6,991	4,501	1,479	0.329
9	198,368	36,978	10,473	41,095	11,638	0.283	16,729	16,282	4,611	3,466	982	0.283
10	152,743	0	0	31,643	0	0.244	12,881	12,434	3,036	2,669	652	0.244
11							9,919	9,471	1,993	2,055	432	0.210
12							7,637	7,190	1,305	1,582	287	0.181
13							5,881	5,434	850	1,218	191	0.156
14							4,528	4,081	550	938	126	0.135
15							3,487	3,040	353	722	84	0.116
16							2,685	2,238	224	556	56	0.100
17							2,067	1,620	140	428	37	0.086
18							1,592	1,145	85	330	25	0.074
19							1,226	778	50	254	16	0.064
20							944	497	27	196	11	0.055
21							727	280	13	151	7	0.048
22							560	112	5	116	5	0.041
23							431	0	0	89	0	0.035
TOTAL:			3,521,485		895,410				370,920		77,441	

GS EXPENSE: 161389 161389
 OL EXPENSE: 447 447

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 17

ACCOUNT: 0120166207
STATUS: Z API#: 06207
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: SHALE UNIT 2H (10379.1)
DATE: 06/14/2014 DAYS: 365 BBLS: 3661.000 MCFS: 1112040 RCPTS: 3171202 GWI: 251S431 OWI: 107S93

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,496,681	1,328,860	1,233,816	312,787	290,416	0.928	64,018	63,782	59,220	13,379	12,422	0.928
2	1,152,445	984,623	788,103	240,846	192,776	0.800	49,294	49,058	39,266	10,302	8,245	0.800
3	887,382	719,561	496,503	185,452	127,963	0.690	37,956	37,720	26,027	7,932	5,473	0.690
4	683,284	515,463	306,616	142,798	84,941	0.595	29,226	28,990	17,245	6,108	3,633	0.595
5	526,129	358,307	183,736	109,984	56,383	0.513	22,504	22,268	11,419	4,703	2,412	0.513
6	405,119	237,298	104,900	84,665	37,427	0.442	17,328	17,092	7,556	3,621	1,601	0.442
7	311,942	144,120	54,922	65,192	24,844	0.381	13,343	13,107	4,995	2,788	1,063	0.381
8	240,195	72,374	23,776	50,198	16,491	0.329	10,274	10,038	3,298	2,147	708	0.329
9	184,990	17,129	4,851	38,652	10,947	0.283	7,911	7,675	2,174	1,653	468	0.283
10	142,412	0	0	29,762	10,947	0.244	6,091	5,856	1,430	1,273	311	0.244
11							4,690	4,455	938	980	206	0.210
12							3,612	3,376	612	755	137	0.181
13							2,781	2,545	398	581	91	0.156
14							2,141	1,905	257	447	60	0.135
15							1,649	1,413	164	345	40	0.116
16							1,270	1,034	104	265	27	0.100
17							978	742	64	204	18	0.086
18							753	517	38	157	12	0.074
19							580	344	22	121	8	0.064
20							446	210	12	93	5	0.055
21							344	108	S	72	3	0.048
22							265	29	1	SS	2	0.041
23							204	0	0	43	0	0.035

TOTAL:

3,197,223

842,188

175,245

36,942

GS EXPENSE: 167822 167822 167822

OL EXPENSE: 236 236 236

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 18

ACCOUNT: 0120166211
STATUS: 2 API#: 06211
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: NERO UNIT IH (10746.1)
DATE: 01/29/2014 DAYS: 365 BLS: 4998.000 MCFS: 978452 RCPTS: 2375484 GWI: 1843972 OWI: 153364

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT	INCOME FACTOR
1	1,097,163	935,601	868,684	207,722	192,865	0.928	91,252	90,810	84,315	17,276	16,041	0.928
2	844,816	683,253	546,883	159,946	128,022	0.800	70,264	69,822	55,886	13,303	10,648	0.800
3	650,508	488,945	337,377	123,158	84,980	0.690	54,103	53,662	37,027	10,243	7,068	0.690
4	500,891	339,329	201,845	94,832	56,409	0.595	41,659	41,218	24,518	7,887	4,692	0.595
5	385,686	224,124	114,928	73,020	37,444	0.513	32,078	31,636	16,223	6,073	3,114	0.513
6	296,978	135,416	59,862	56,226	24,855	0.442	24,700	24,258	10,724	4,676	2,067	0.442
7	228,673	67,111	25,575	43,294	16,499	0.381	19,019	18,577	7,080	3,601	1,372	0.381
8	176,079	14,516	4,769	33,336	10,952	0.329	14,645	14,203	4,666	2,773	911	0.329
9	135,580	0	0	25,669	0	0.283	11,276	10,835	3,069	2,135	605	0.283
10							8,683	8,241	2,012	1,644	401	0.244
11							6,686	6,244	1,314	1,266	266	0.210
12							5,148	4,706	854	975	177	0.181
13							3,964	3,522	551	750	117	0.156
14							3,052	2,611	352	578	78	0.135
15							2,350	1,909	222	445	52	0.116
16							1,810	1,368	137	343	34	0.100
17							1,393	82	82	264	23	0.086
18							1,073	631	47	203	15	0.074
19							826	385	25	156	10	0.064
20							636	195	11	120	7	0.055
21							490	48	2	93	4	0.048
22							377	0	0	71	0	0.041

TOTAL:	2,159,922	552,026	249,116	47,702
GS EXPENSE:	161563	161563	161563	
OL EXPENSE:	442	442		

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 19

FEB 15, 2017
01:26 PM

ACCOUNT: 0120166212

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: NERO UNIT 2H (10747.1)

STATUS: Z API#: 06212 DATE: 09/13/2014 DAYS: 365 BELS: 2405.000 MCFS: 1588186 RCPIS: 4029540 GWI: 3322933 OWI: 65153

SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED: CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,977,145	1,805,510	1,676,375	374,326	347,553	0.928	38,766	38,655	35,891	7,339	6,814	0.928
2	1,522,402	1,350,767	1,081,169	288,231	230,703	0.800	29,850	29,739	23,804	5,651	4,523	0.800
3	1,172,249	1,000,615	690,433	221,938	153,139	0.690	22,984	22,874	15,783	4,351	3,003	0.690
4	902,632	730,997	434,823	170,892	101,653	0.595	17,698	17,587	10,462	3,351	1,993	0.595
5	695,027	523,392	268,390	131,587	67,476	0.513	13,627	13,517	6,931	2,580	1,323	0.513
6	535,171	363,536	160,705	101,322	44,790	0.442	10,493	10,383	4,590	1,987	878	0.442
7	412,081	240,447	91,631	78,018	29,732	0.381	8,080	7,969	3,037	1,530	583	0.381
8	317,303	145,668	47,855	60,074	19,736	0.329	6,221	6,111	2,008	1,178	387	0.329
9	244,323	72,688	20,586	46,257	13,100	0.283	4,790	4,680	1,325	907	257	0.283
10	188,129	15,494	4,027	35,618	8,696	0.244	3,689	3,578	874	698	170	0.244
11	144,859	0	0	27,426	0	0.210	2,840	2,730	575	538	113	0.210
12							2,187	2,076	377	414	75	0.181
13							1,684	1,573	246	319	50	0.156
14							1,297	1,186	160	245	33	0.135
15							998	888	103	189	22	0.116
16							769	658	66	146	15	0.100
17							592	481	42	112	10	0.086
18							456	345	26	86	6	0.074
19							351	240	15	66	4	0.064
20							270	160	9	51	3	0.055
21							208	98	5	39	2	0.048
22							160	50	2	30	1	0.041
23							123	13	0	23	1	0.035
24							95	0	0	18	0	0.031
TOTAL:			4,475,993						106,329			
												20,267

GS EXPENSE: 171635 171635 171635

OL EXPENSE: 111 111 111

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 20

ACCOUNT:0120166213 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:VONDA UNIT 1H (10745.1) 166920
STATUS:Z API#:06213 DATE:10/01/2014 DAYS:365 BBLs: 5770.000 MCPS: 1703097 RCPTS: 4495394 GWI: 3602370 OWI: 166920
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	2,143,410	1,976,160	1,834,819	412,900	383,368	0.928	99,317	99,063	91,978	19,132	17,764	0.928
2	1,650,426	1,483,176	1,187,150	317,933	254,477	0.800	76,474	76,220	61,007	14,732	11,792	0.800
3	1,270,828	1,103,578	761,478	244,808	188,502	0.690	58,885	58,631	40,456	11,343	7,827	0.690
4	978,537	811,287	482,583	188,502	112,128	0.595	45,342	45,087	26,819	8,734	5,196	0.595
5	753,474	586,224	300,609	145,147	74,430	0.513	34,913	34,658	17,772	6,726	3,449	0.513
6	580,175	412,925	182,537	111,763	49,406	0.442	26,883	26,628	11,771	5,179	2,289	0.442
7	446,735	279,484	106,508	86,058	32,795	0.381	20,700	20,445	7,791	3,988	1,520	0.381
8	343,986	176,735	58,061	66,264	21,769	0.329	15,939	15,684	5,153	3,070	1,009	0.329
9	264,869	97,619	27,646	51,024	14,450	0.283	12,273	12,018	3,404	2,364	670	0.283
10	203,949	36,699	8,960	39,288	9,592	0.244	9,450	9,196	2,245	1,820	444	0.244
11	157,041	0	0	30,252	0	0.210	7,277	7,022	1,478	1,402	295	0.210
12							5,603	5,348	970	1,079	196	0.181
13							4,314	4,060	635	831	130	0.156
14							3,322	3,067	414	640	86	0.135
15							2,558	2,303	268	493	57	0.116
16							1,970	1,715	172	379	38	0.100
17							1,517	1,262	109	292	25	0.086
18							1,168	913	68	225	17	0.074
19							899	645	41	173	11	0.064
20							692	438	24	133	7	0.055
21							533	279	13	103	5	0.048
22							411	156	6	79	3	0.041
23							316	61	2	61	2	0.035
24							243	0	0	47	0	0.031

TOTAL: 4,950,352 1,121,335 272,597 52,832

GS EXPENSE: 167250 167250 167250
OL EXPENSE: 255 255 255

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 21

FEB 15, 2017
01:26 PM

ACCOUNT: 0120166266
RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: MARKS UNIT 1H (10340.1)
STATUS: Z API#: 06266 DATE: 10/20/2014 DAYS: 365 BELS: 5056.000 MCPS: 1866760 RCPTS: 5047031 GWI: 3973095 OWI: 148128
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,363,992	2,038,268	2,198,282	531,057	493,074	0.928	88,136	81,641	87,929	19,799	18,383	0.928
2	1,820,273	1,321,930	1,551,563	408,914	327,239	0.800	67,865	54,154	67,658	15,245	12,203	0.800
3	1,401,611	850,712	1,232,901	314,863	217,259	0.690	52,256	35,914	52,049	11,739	8,100	0.690
4	1,079,240	541,616	910,530	242,445	144,215	0.595	40,237	23,812	40,030	9,039	5,377	0.595
5	831,015	339,623	652,305	186,683	95,729	0.513	30,983	15,782	30,776	6,960	3,569	0.513
6	639,881	208,286	471,171	143,746	63,544	0.442	23,857	10,455	23,650	5,359	2,369	0.442
7	492,709	123,471	323,999	110,684	42,180	0.381	18,370	6,922	18,163	4,127	1,573	0.381
8	379,386	69,212	210,676	85,227	27,999	0.329	14,145	4,579	13,538	3,177	1,044	0.329
9	292,127	34,953	123,417	65,625	18,585	0.283	10,891	3,026	10,688	2,447	693	0.283
10	224,938	13,728	56,228	50,531	12,337	0.244	8,386	1,997	8,180	1,884	460	0.244
11	173,202	0	4,492	38,909	8,189	0.210	6,457	1,316	6,251	1,451	203	0.210
12	133,366	0	0	29,960	0	0.181	4,972	868	4,766	1,117	135	0.181
13							3,829	567	3,622	860	135	0.156
14							2,948	370	2,741	662	89	0.135
15							2,270	240	2,063	510	59	0.116
16							1,748	154	1,541	393	39	0.100
17							1,346	98	1,139	302	26	0.086
18							1,036	62	830	233	17	0.074
19							798	38	591	179	12	0.064
20							614	23	408	138	8	0.055
21							473	13	266	106	5	0.048
22							364	6	158	82	3	0.041
23							281	3	74	63	2	0.035
24							216	0	9	49	1	0.031
25							166	0	0	37	0	0.026

TOTAL:

5,542,744

242,034

54,675

GS EXPENSE: 168710 168710 168710

OL EXPENSE: 207 207 207

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 22

ACCOUNT:0120166272

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:MASH UNIT 1H (10341.1)

STATUS:Z API#:06272 DATE:02/18/2014 DAYS:365 BBLs: 2575.000 MCFS: 1124981 RCPTS: 2594856 GWI: 2094696 OWI: 69166

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,246,344	1,076,938	169,406	248,245	230,490	0.928	41,154	38,040	40,970	8,197	7,610	0.928
2	959,685	790,279	169,406	191,148	152,997	0.800	31,688	25,217	31,505	6,311	5,052	0.800
3	738,957	569,551	169,406	147,184	101,558	0.690	24,400	16,709	24,216	4,860	3,353	0.690
4	568,997	399,591	169,406	113,332	67,414	0.595	18,788	11,066	18,604	3,742	2,226	0.595
5	438,128	268,722	169,406	87,266	44,749	0.513	14,467	7,324	14,283	2,881	1,478	0.513
6	337,358	167,952	169,406	67,194	29,704	0.442	11,139	4,843	10,956	2,219	981	0.442
7	259,766	90,360	169,406	51,740	19,717	0.381	8,577	3,199	8,394	1,708	651	0.381
8	200,020	30,614	169,406	39,840	13,088	0.329	6,605	2,109	6,421	1,315	432	0.329
9	154,015	0	154,015	30,677	0	0.283	5,086	1,388	4,902	1,013	287	0.283
10							3,916	911	3,732	780	190	0.244
11							3,015	596	2,831	601	126	0.210
12							2,322	388	2,138	462	84	0.181
13							1,788	251	1,604	356	56	0.156
14							1,377	161	1,193	274	37	0.135
15							1,060	102	876	211	25	0.116
16							816	63	632	163	16	0.100
17							628	38	445	125	11	0.086
18							484	22	300	96	7	0.074
19							373	12	189	74	5	0.055
20							287	6	103	57	3	0.048
21							221	2	37	44	2	0.041
22							170	0	0	34	0	0.041

TOTAL:

2,519,681

659,717

112,448

22,632

GS EXPENSE: 169406

169406

OL EXPENSE: 184

184

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 23

FEB 15, 2017
01:26 PM

ACCOUNT:0120166275 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:MASH UNIT 2H (10355.1)
STATUS:Z API#:06275 DATE:02/09/2014 DAYS:365 BHLS: 6706.000 MCFS: 1333639 RCPTS: 3426515 GWI: 2652681 OWI: 204705

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,578,345	1,415,882	1,314,614	314,372	291,887	0.928	121,799	121,388	112,706	24,260	22,525	0.928
2	1,215,326	1,052,863	842,723	242,066	193,753	0.800	93,786	93,374	74,737	18,680	14,952	0.800
3	935,801	773,338	533,610	186,391	128,612	0.690	72,215	71,803	49,545	14,384	9,925	0.690
4	720,567	558,104	331,980	143,521	85,372	0.595	55,605	55,194	32,831	11,075	6,588	0.595
5	554,836	392,373	201,205	110,511	56,669	0.513	42,816	42,404	21,744	8,528	4,373	0.513
6	427,224	284,761	117,040	85,094	37,617	0.442	32,968	32,557	14,392	6,567	2,903	0.442
7	328,962	166,500	63,451	65,522	24,970	0.381	25,386	24,974	9,517	5,056	1,927	0.381
8	253,301	90,838	29,842	50,452	16,575	0.329	19,547	19,135	6,286	3,893	1,279	0.329
9	195,042	32,579	9,227	38,848	11,002	0.283	15,051	14,639	4,146	2,998	849	0.283
10	150,182	0	0	29,913	0	0.244	11,589	11,177	2,729	2,308	564	0.244
11							8,924	8,512	1,792	1,777	374	0.210
12							6,871	6,459	1,172	1,369	248	0.181
13							5,291	4,879	763	1,054	165	0.156
14							4,074	3,662	494	811	109	0.135
15							3,137	2,725	317	625	73	0.116
16							2,415	2,004	201	481	48	0.100
17							1,860	1,448	125	370	32	0.086
18							1,432	1,020	76	285	21	0.074
19							1,103	691	44	220	14	0.064
20							849	437	24	169	9	0.055
21							654	242	12	130	6	0.048
22							503	92	4	100	4	0.041
23							388	0	0	77	0	0.035
TOTAL:			3,443,692		846,454				333,656		66,989	

GS EXPENSE: 162463 162463 162463

OL EXPENSE: 412 412 412

ACCOUNT: 0120166289
 STATUS: Z API#: 06289
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1 1,331,107	1,082,790	1,166,200	276,925	257,118	0.928	81,472	75,337	81,141	16,950	15,737	0.928
2 1,024,952	588,390	860,045	213,232	170,673	0.800	62,734	49,947	62,402	13,051	10,446	0.800
3 789,213	430,777	624,306	164,189	113,292	0.690	48,305	33,102	47,973	10,050	6,934	0.690
4 607,694	263,386	442,787	126,425	75,202	0.595	37,195	21,927	36,863	7,738	4,603	0.595
5 467,924	155,384	303,018	97,348	49,919	0.513	28,640	14,516	28,308	5,958	3,055	0.513
6 360,302	86,376	195,395	74,958	33,136	0.442	22,053	9,602	21,721	4,588	2,028	0.442
7 277,432	42,882	112,526	57,717	21,995	0.381	16,981	6,345	16,649	3,533	1,346	0.381
8 213,623	16,004	48,716	44,442	14,600	0.329	13,075	4,187	12,743	2,720	894	0.329
9 164,490	0	34,221	34,221	0	0.283	10,068	2,757	9,736	2,095	593	0.283
10			7,752	7,421	1,812	5,969	1,187	5,638	1,613	394	0.283
11			4,596	4,265	774	3,539	502	4,265	1,242	261	0.210
12			2,725	2,394	323	2,098	205	3,208	736	173	0.181
13			1,616	1,284	13	1,616	129	3,394	567	115	0.156
14			1,244	912	79	1,244	205	1,767	437	76	0.135
15			958	626	47	958	26	1,284	336	51	0.116
16			738	406	26	738	13	912	259	34	0.100
17			568	236	13	568	5	626	199	15	0.074
18			437	106	5	437	0	406	153	10	0.064
19			337	5	0	337	0	236	118	7	0.055
20			259	0	0	259	0	106	91	4	0.048
21								5	70	3	0.041
22								0	54	0	0.035
23								0			

TOTAL: 2,765,990 735,936 222,821 46,803

GS EXPENSE: 164907 164907
 OL EXPENSE: 332 332

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 25

ACCOUNT: 0120166292 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: LEGGETT UNIT 1H (10394.1) 188309
STATUS: Z API#: 06292 DATE: 11/05/2014 DAYS: 365 BBLs: 6439.000 MCPS: 949835 RCPTS: 2786692 GWI: 2067029 OWI: 188309
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,229,882	993,000	1,069,494	289,758	269,034	0.928	112,044	103,584	111,564	26,397	24,509	0.928
2	947,009	629,620	786,621	223,114	178,583	0.800	86,274	68,670	85,794	20,326	16,269	0.800
3	729,197	392,483	568,809	171,798	118,542	0.690	66,431	45,507	65,951	15,651	10,799	0.690
4	561,482	238,585	401,093	132,284	78,687	0.595	51,152	30,141	50,672	12,051	7,168	0.595
5	432,341	139,454	271,953	101,859	52,232	0.513	39,387	19,951	38,907	9,279	4,758	0.513
6	332,903	76,262	172,514	78,431	34,671	0.442	30,328	13,195	29,848	7,145	3,159	0.442
7	256,335	36,564	95,947	60,392	23,015	0.381	23,352	8,716	22,872	5,502	2,097	0.381
8	197,378	12,152	36,990	46,502	15,277	0.329	17,981	5,750	17,501	4,236	1,392	0.329
9	151,981	0	0	35,807	0	0.283	13,846	3,785	13,366	3,262	924	0.283
10							10,661	2,486	10,181	2,512	613	0.244
11							8,209	1,627	7,729	1,934	407	0.210
12							6,321	1,060	5,841	1,489	270	0.181
13							4,867	686	4,387	1,147	179	0.156
14							3,748	441	3,268	883	119	0.135
15							2,886	280	2,406	680	79	0.116
16							2,222	175	1,742	524	52	0.100
17							1,711	106	1,231	403	35	0.086
18							1,317	62	837	310	23	0.074
19							1,014	34	534	239	15	0.064
20							781	17	301	184	10	0.055
21							601	6	121	142	7	0.048
22							463	0	0	109	0	0.041

TOTAL: 2,518,120 770,041 306,278 72,886

GS EXPENSE: 160388 160388 160388

OL EXPENSE: 480 480 480

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 26

FEB 15, 2017
01:26 PM

ACCOUNT: 0120166293 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: LEGGETT UNIT 2H (10435.1) 124195
STATUS: Z API#: 06293 DATE: 11/12/2014 DAYS: 365 BBLs: 4454.000 MCPS: 826093 RCPTS: 2452753 GWI: 1860878 OWI: 175000
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,107,222	943,171	875,713	260,859	242,202	0.928	73,896	73,536	68,277	17,410	16,165	0.928
2	852,561	688,510	551,091	200,862	160,772	0.800	56,900	56,540	45,255	13,406	10,730	0.800
3	656,472	492,421	339,775	154,663	106,719	0.690	43,813	43,453	29,983	10,323	7,123	0.690
4	505,484	341,432	203,096	119,091	70,840	0.595	33,736	33,376	19,853	7,948	4,728	0.595
5	389,222	225,171	115,465	91,700	47,023	0.513	25,977	25,617	13,136	6,120	3,138	0.513
6	299,701	135,650	59,965	70,609	31,213	0.442	20,002	19,642	8,683	4,713	2,083	0.442
7	230,770	66,719	25,426	54,369	20,719	0.381	15,402	15,042	5,732	3,629	1,383	0.381
8	177,693	13,642	4,482	41,864	13,753	0.329	11,859	11,499	3,778	2,794	918	0.329
9	136,823	0	0	32,235	0	0.283	9,132	8,772	2,484	2,151	609	0.283
10							7,031	6,672	1,629	1,657	404	0.244
11							5,414	5,054	1,064	1,276	268	0.210
12							4,169	3,809	691	982	178	0.181
13							3,210	2,850	446	756	118	0.156
14							2,472	2,112	285	582	79	0.135
15							1,903	1,543	179	448	52	0.116
16							1,465	1,106	111	345	35	0.100
17							1,128	769	66	266	23	0.086
18							869	509	38	205	15	0.074
19							669	309	20	158	10	0.064
20							515	155	9	121	7	0.055
21							397	37	2	93	4	0.048
22							305	0	0	72	0	0.041
TOTAL:			2,175,013		693,241				201,721		48,072	
GS EXPENSE:	164051			164051								
OL EXPENSE:	360			360								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 28

ACCOUNT: 0120166359 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: SHEARER UNIT 2H (10501.1) 46302
STATUS: 2 API#: 06359 DATE: 10/15/2014 DAYS: 365 BBLs: 1636.000 MCFS: 1341423 RCPTS: 3199930 GWI: 2590745 OWI: 46302
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,541,493	1,369,566	1,271,611	329,034	305,501	0.928	27,550	27,449	25,486	5,881	5,460	0.928
2	1,186,950	1,015,023	812,435	253,356	202,789	0.800	21,213	21,112	16,899	4,528	3,625	0.800
3	913,951	742,024	512,003	195,084	134,610	0.690	16,334	16,233	11,201	3,487	2,406	0.690
4	703,743	531,815	316,343	150,215	89,353	0.595	12,577	12,476	7,421	2,685	1,597	0.595
5	541,882	369,954	189,709	115,666	59,312	0.513	9,685	9,584	4,914	2,067	1,060	0.513
6	417,249	245,322	108,447	89,083	39,371	0.442	7,457	7,356	3,252	1,592	704	0.442
7	321,282	149,354	56,917	68,578	26,134	0.381	5,742	5,641	2,150	1,226	467	0.381
8	247,387	75,460	24,790	52,805	17,348	0.329	4,421	4,320	1,419	944	310	0.329
9	190,488	18,561	5,257	40,660	11,515	0.283	3,404	3,303	936	727	206	0.283
10	146,676	0	0	31,308	0	0.244	2,621	2,520	615	560	137	0.244
11							2,018	1,918	404	431	91	0.210
12							1,554	1,453	264	332	60	0.181
13							1,197	1,096	171	255	40	0.156
14							922	821	111	197	27	0.135
15							710	609	71	151	18	0.116
16							545	445	45	117	12	0.100
17							421	320	28	90	8	0.086
18							324	223	17	69	5	0.074
19							249	148	10	53	3	0.064
20							192	91	5	41	2	0.055
21							148	47	2	32	2	0.048
22							114	13	1	24	1	0.041
23							88	0	0	19	0	0.035

TOTAL: 3,297,511 171927 171927 885,934 75,419 16,239

GS EXPENSE: 171927 171927

OL EXPENSE: 101 101

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 29

ACCOUNT: 0120166402 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: TWYFORD UNIT 1H (10502.1) 87711
STATUS: 2 API#: 06402 DATE: 10/23/2014 DAYS: 365 BBLs: 3112.000 MCFS: 1831114 RCPTS: 4685499 GWI: 3744448 OWI: 87711
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,227,947	2,056,952	1,909,833	496,116	460,632	0.928	52,188	52,056	48,333	11,622	10,790	0.928
2	1,715,519	1,544,524	1,236,254	382,009	305,764	0.800	40,185	40,053	32,059	8,949	7,163	0.800
3	1,320,950	1,149,955	793,479	294,147	202,964	0.690	30,942	30,811	21,260	6,890	4,754	0.690
4	1,017,131	846,137	503,312	226,493	134,726	0.595	23,826	23,694	14,094	5,306	3,156	0.595
5	783,191	612,196	313,928	174,400	89,430	0.513	18,346	18,214	9,340	4,085	2,095	0.513
6	603,057	432,062	190,998	134,288	59,363	0.442	14,126	13,995	6,186	3,146	1,391	0.442
7	464,354	293,359	111,795	103,402	39,405	0.381	10,877	10,746	4,095	2,422	923	0.381
8	357,553	186,558	61,288	79,619	26,157	0.329	8,375	8,244	2,708	1,865	613	0.329
9	275,315	104,321	29,545	61,307	17,363	0.283	6,449	6,317	1,789	1,436	407	0.283
10	211,993	40,998	10,010	47,206	11,525	0.244	4,966	4,834	1,180	1,106	270	0.244
11	163,235	0	0	36,349	0	0.210	3,824	3,692	510	851	179	0.210
12							2,944	2,813	334	656	119	0.181
13							2,267	2,135	218	505	79	0.156
14							1,746	1,614	141	389	52	0.135
15							1,344	1,213	91	299	35	0.116
16							1,035	903	57	230	23	0.100
17							797	665	36	177	15	0.086
18							614	482	22	137	10	0.074
19							473	341	13	105	7	0.064
20							364	232	7	81	4	0.055
21							280	149	3	62	3	0.048
22							216	84	1	48	2	0.041
23							166	34	1	37	1	0.035
24							128	0	0	28	0	0.031

TOTAL:

5,160,441

143,255

32,092

GS EXPENSE: 170995 170995

OL EXPENSE: 132 132

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 30

ACCOUNT:0120166430 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:ZELLERBACK UNIT 1H (10503.1) 58863
STATUS:Z API#:06430 DATE:12/08/2014 DAYS:365 BELLS: 1971.000 MCPS: 1150762 RCPTS: 3011393 GWI: 2462738 OWI: 58863
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,465,329	1,294,414	1,201,834	284,623	264,266	0.928	35,023	32,394	34,889	6,803	6,317	0.928
2	1,128,303	957,389	766,304	219,160	175,418	0.800	26,968	21,478	26,834	5,238	4,193	0.800
3	868,794	697,879	481,543	168,753	116,441	0.690	20,765	14,236	20,631	4,034	2,783	0.690
4	668,971	498,056	296,262	129,940	77,293	0.595	15,989	9,431	15,855	3,106	1,848	0.595
5	515,108	344,193	176,498	100,054	51,306	0.513	12,312	6,245	12,178	2,392	1,226	0.513
6	396,633	225,718	99,781	77,041	34,057	0.442	9,480	4,131	9,346	1,841	814	0.442
7	305,407	134,492	51,253	59,322	22,607	0.381	7,300	2,731	7,165	1,418	540	0.381
8	235,164	64,249	21,107	45,678	15,006	0.329	5,621	1,802	5,487	1,092	359	0.329
9	181,076	10,161	2,878	35,172	9,961	0.283	4,328	1,188	4,194	647	238	0.283
10	139,429	0	0	27,082	0	0.244	3,333	781	3,198	158	158	0.244
11							2,566	512	2,432	498	105	0.210
12							1,975	334	1,842	384	70	0.181
13							1,521	217	1,387	296	46	0.156
14							1,171	140	1,037	228	31	0.135
15							902	89	768	175	20	0.116
16							695	56	560	135	14	0.100
17							535	35	401	104	9	0.086
18							412	21	278	80	6	0.074
19							317	12	183	62	4	0.064
20							244	6	110	47	3	0.055
21							188	3	54	37	2	0.048
22							145	0	11	28	1	0.041
23							111	0	0	22	0	0.035

TOTAL:

3,097,460

766,355

95,841

18,786

GS EXPENSE: 170915 170915

OL EXPENSE: 134 134

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 31

ACCOUNT: 0120166431
STATUS: Z API#: 06431
DATE: 12/16/2014 DAYS: 365
RESOURCE: OG
OWNER: ANTERO RESOURCES CORPORATI
LOCATION: AMANDA UNIT 1H (10504.1)
1085175 RCPTS: 2900447 GWI: 2405685 OWI: 34680
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,431,383	1,258,869	1,168,831	269,859	250,558	0.928	20,635	20,553	19,083	3,890	3,612	0.928
2	1,102,165	929,652	744,103	207,791	166,318	0.800	15,889	15,807	12,652	2,995	2,398	0.800
3	848,667	676,154	466,552	159,999	110,401	0.690	12,234	12,153	8,385	2,306	1,591	0.690
4	653,473	480,960	286,093	123,199	73,283	0.595	9,420	9,339	5,555	1,776	1,056	0.595
5	503,175	330,661	169,560	94,864	48,645	0.513	7,254	7,172	3,678	1,367	701	0.513
6	387,444	214,931	95,013	73,045	32,290	0.442	5,585	5,504	2,433	1,053	465	0.442
7	298,332	125,819	47,948	56,245	21,434	0.381	4,301	4,219	1,608	811	309	0.381
8	229,716	57,203	18,792	43,308	14,228	0.329	3,312	3,230	1,061	624	205	0.329
9	176,881	4,368	1,237	33,347	9,444	0.283	1,963	1,882	459	481	136	0.283
10	136,198	0	0	25,678	0	0.244	1,512	1,430	301	370	90	0.244
11							1,164	1,082	196	285	60	0.210
12							896	815	127	219	40	0.181
13							690	608	82	169	26	0.156
14							531	450	52	130	18	0.135
15							409	328	33	100	12	0.116
16							315	233	20	77	8	0.100
17							243	161	12	59	5	0.086
18							187	105	7	46	3	0.074
19							144	62	3	35	2	0.064
20							111	29	1	27	2	0.055
21							85	4	0	21	1	0.048
22							66	0	0	16	1	0.041
23										12	0	0.035
TOTAL:			2,998,129		726,602				56,449		10,742	

GS EXPENSE: 172513 172513 172513
OL EXPENSE: 82 82 82

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 32

ACCOUNT:0120166432

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:AMANDA UNIT 2H (10505.1)

STATUS:Z API#:06432 DATE:12/23/2014 DAYS:365 BBLs: 1708.000 MCPS: 1231373 RCPTS: 3258443 GWI: 2691144 OWI: 50431

SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED: CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	1,601,231	1,429,450	1,327,211	301,880	280,288	0.928	30,006	29,901	27,762	5,657	5,252	0.928
2	1,232,948	1,061,167	849,370	232,447	186,053	0.800	23,105	22,999	18,409	4,356	3,486	0.800
3	949,370	777,589	536,543	178,985	123,501	0.690	17,791	17,685	12,203	3,354	2,314	0.690
4	731,015	559,234	332,652	137,818	81,979	0.595	13,699	13,593	8,086	2,582	1,536	0.595
5	562,881	391,100	200,552	105,120	54,417	0.513	10,548	10,442	5,355	1,988	1,020	0.513
6	433,419	261,638	115,660	81,712	36,122	0.442	8,122	8,016	3,544	1,531	677	0.442
7	333,732	161,951	61,717	62,919	23,977	0.381	6,254	6,148	2,343	1,179	449	0.381
8	256,974	85,193	27,988	48,447	15,916	0.329	4,816	4,710	1,547	908	298	0.329
9	197,870	26,089	7,389	37,304	10,565	0.283	3,708	3,602	1,020	699	198	0.283
10	152,360	0	0	28,724	0	0.244	2,855	2,749	671	538	131	0.244
11							2,198	2,093	440	414	87	0.210
12							1,693	1,587	288	319	58	0.181
13							1,303	1,198	187	246	38	0.156
14							1,004	898	121	189	26	0.135
15							773	667	78	146	17	0.116
16							595	489	49	112	11	0.100
17							458	352	30	86	7	0.086
18							353	247	18	67	5	0.074
19							272	166	11	51	3	0.064
20							209	103	6	39	2	0.055
21							161	55	3	30	1	0.048
22							124	18	1	23	1	0.041
23							96	0	0	18	0	0.035

TOTAL: 3,459,082 812,819 82,172 15,620

GS EXPENSE: 171781 171781 171781

OL EXPENSE: 106 106 106

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)											
DECLINE RATES		2015	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
YR 1	59%	WRK INT	\$	1,018,898	\$	187,337	YR1	\$	1,038,313	\$	49,838
YR 2	29%	ROY INT	\$	755,768	\$	36,177		\$	200,327	\$	9,587
YR3+	23%						YR2	\$	788,498	\$	36,741
								\$	148,388	\$	7,094
\$ 2,035,956		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST				\$ 546,230
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.6%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.6%)	DIS INC		
1	\$ 1,088,180	\$ 187,278	\$ 920,883	0.928477	\$ 855,018	1	\$ 210,114	0.928477	\$ 195,088		
2	\$ 805,239	\$ 187,278	\$ 637,881	0.800411	\$ 510,831	2	\$ 155,484	0.800411	\$ 124,451		
3	\$ 820,034	\$ 187,278	\$ 452,758	0.890009	\$ 312,408	3	\$ 119,723	0.890009	\$ 82,810		
4	\$ 477,428	\$ 187,278	\$ 310,148	0.594838	\$ 184,487	4	\$ 92,187	0.594838	\$ 54,838		
5	\$ 387,818	\$ 187,278	\$ 200,340	0.512789	\$ 102,732	5	\$ 70,884	0.512788	\$ 38,400		
6	\$ 283,088	\$ 187,278	\$ 115,788	0.442060	\$ 51,185	6	\$ 54,857	0.442060	\$ 24,182		
7	\$ 217,981	\$ 187,278	\$ 50,883	0.381088	\$ 19,315	7	\$ 42,088	0.381088	\$ 18,038		
8	\$ 187,830	\$ 187,278	\$ 552	0.328522	\$ 181	8	\$ 32,406	0.328522	\$ 10,848		
9	\$ 129,229	\$ 187,278	\$ -	0.283209	\$ -	9	\$ 24,853	0.283209	\$ -		
10	\$ 99,508	\$ 187,278	\$ -	0.224148	\$ -	10	\$ 19,214	0.224148	\$ -		
11	\$ 78,820	\$ 187,278	\$ -	0.210470	\$ -	11	\$ 14,796	0.210470	\$ -		
12	\$ 58,997	\$ 187,278	\$ -	0.181440	\$ -	12	\$ 11,382	0.181440	\$ -		
13	\$ 45,428	\$ 187,278	\$ -	0.150414	\$ -	13	\$ 8,772	0.158414	\$ -		
14	\$ 34,979	\$ 187,278	\$ -	0.134840	\$ -	14	\$ 6,764	0.134840	\$ -		
15	\$ 26,934	\$ 187,278	\$ -	0.118241	\$ -	15	\$ 5,201	0.118241	\$ -		
16	\$ 20,738	\$ 187,278	\$ -	0.100208	\$ -	16	\$ 4,005	0.100208	\$ -		
17	\$ 16,988	\$ 187,278	\$ -	0.086388	\$ -	17	\$ 3,084	0.086388	\$ -		
18	\$ 12,296	\$ 187,278	\$ -	0.074471	\$ -	18	\$ 2,374	0.074471	\$ -		
19	\$ 9,488	\$ 187,278	\$ -	0.064198	\$ -	19	\$ 1,828	0.064199	\$ -		
20	\$ 7,291	\$ 187,278	\$ -	0.055344	\$ -	20	\$ 1,408	0.055344	\$ -		
21	\$ 5,814	\$ 187,278	\$ -	0.047710	\$ -	21	\$ 1,084	0.047710	\$ -		
22	\$ 4,323	\$ 187,278	\$ -	0.041129	\$ -	22	\$ 835	0.041128	\$ -		
23	\$ 3,328	\$ 187,278	\$ -	0.035458	\$ -	23	\$ 643	0.035458	\$ -		
24	\$ 2,583	\$ 187,278	\$ -	0.030588	\$ -	24	\$ 495	0.030588	\$ -		
25	\$ 1,973	\$ 187,278	\$ -	0.026350	\$ -	25	\$ 381	0.026350	\$ -		
26	\$ 1,520	\$ 187,278	\$ -	0.022715	\$ -	26	\$ 293	0.022715	\$ -		
27	\$ 1,170	\$ 187,278	\$ -	0.019582	\$ -	27	\$ 228	0.019582	\$ -		
28	\$ 901	\$ 187,278	\$ -	0.016881	\$ -	28	\$ 174	0.016881	\$ -		
29	\$ 894	\$ 187,278	\$ -	0.014553	\$ -	29	\$ 134	0.014553	\$ -		
30	\$ 534	\$ 187,278	\$ -	0.012548	\$ -	30	\$ 103	0.012548	\$ -		
31	\$ 411	\$ 187,278	\$ -	0.010815	\$ -	31	\$ 79	0.010815	\$ -		
32	\$ 317	\$ 187,278	\$ -	0.009323	\$ -	32	\$ 61	0.008323	\$ -		
33	\$ 244	\$ 187,278	\$ -	0.008037	\$ -	33	\$ 47	0.008037	\$ -		
34	\$ 188	\$ 187,278	\$ -	0.006929	\$ -	34	\$ 36	0.006929	\$ -		
35	\$ 145	\$ 187,278	\$ -	0.005973	\$ -	35	\$ 28	0.005873	\$ -		
36	\$ 111	\$ 187,278	\$ -	0.005149	\$ -	36	\$ 21	0.005148	\$ -		
37	\$ 88	\$ 187,278	\$ -	0.004439	\$ -	37	\$ 17	0.004438	\$ -		
38	\$ 68	\$ 187,278	\$ -	0.003827	\$ -	38	\$ 13	0.003827	\$ -		
39	\$ 51	\$ 187,278	\$ -	0.003299	\$ -	39	\$ 10	0.003299	\$ -		
40	\$ 36	\$ 187,278	\$ -	0.002844	\$ -	40	\$ 8	0.003812	\$ -		
WORKING INTEREST APPRAISAL					\$ 2,034,956	ROYALTY INTEREST APPRAISAL					\$ 544,230

09-0120174371

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)											
		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
DECLINE RATES		WRK INT		\$ 2,547,184	\$ 89,808	YR1	\$ 701,489	\$ 23,799			
YR 1	55%	ROY INT		\$ 518,512	\$ 17,489		\$ 134,611	\$ 4,435			
YR 2	29%					YR2	\$ 519,409	\$ 17,811			
YR3+	23%						\$ 181,482	\$ 3,438			
\$ 1,198,677		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 147,810	
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC		
1	\$ 725,297	\$ 148,629	\$ 576,668	0.928477	\$ 535,423	1	\$ 141,245	0.828477	\$ 131,143		
2	\$ 538,720	\$ 148,626	\$ 386,091	0.800411	\$ 310,832	2	\$ 104,521	0.800411	\$ 83,660		
3	\$ 413,274	\$ 148,629	\$ 264,645	0.690009	\$ 182,607	3	\$ 60,462	0.690009	\$ 55,533		
4	\$ 316,221	\$ 148,629	\$ 169,592	0.594836	\$ 100,676	4	\$ 61,671	0.594836	\$ 36,882		
5	\$ 245,030	\$ 148,629	\$ 96,401	0.512789	\$ 48,433	5	\$ 47,716	0.512789	\$ 24,489		
6	\$ 188,673	\$ 148,629	\$ 40,044	0.442080	\$ 17,702	6	\$ 36,742	0.442080	\$ 18,242		
7	\$ 145,276	\$ 148,629	\$ -	0.381066	\$ -	7	\$ 26,292	0.381066	\$ -		
8	\$ 111,864	\$ 148,629	\$ -	0.328522	\$ -	8	\$ 21,785	0.328522	\$ -		
9	\$ 88,138	\$ 148,629	\$ -	0.283209	\$ -	9	\$ 18,774	0.283209	\$ -		
10	\$ 68,324	\$ 148,629	\$ -	0.224146	\$ -	10	\$ 12,618	0.224146	\$ -		
11	\$ 51,070	\$ 148,629	\$ -	0.210470	\$ -	11	\$ 9,945	0.210470	\$ -		
12	\$ 36,324	\$ 148,629	\$ -	0.181440	\$ -	12	\$ 7,658	0.181440	\$ -		
13	\$ 30,276	\$ 148,629	\$ -	0.158414	\$ -	13	\$ 5,897	0.158414	\$ -		
14	\$ 23,315	\$ 148,629	\$ -	0.134840	\$ -	14	\$ 4,540	0.134840	\$ -		
15	\$ 17,953	\$ 148,629	\$ -	0.118241	\$ -	15	\$ 3,466	0.118241	\$ -		
16	\$ 13,823	\$ 148,629	\$ -	0.100206	\$ -	16	\$ 2,692	0.100206	\$ -		
17	\$ 10,644	\$ 148,629	\$ -	0.088386	\$ -	17	\$ 2,073	0.088386	\$ -		
18	\$ 8,196	\$ 148,629	\$ -	0.074471	\$ -	18	\$ 1,598	0.074471	\$ -		
19	\$ 6,311	\$ 148,629	\$ -	0.064196	\$ -	19	\$ 1,229	0.064199	\$ -		
20	\$ 4,859	\$ 148,629	\$ -	0.055344	\$ -	20	\$ 946	0.055344	\$ -		
21	\$ 3,742	\$ 148,629	\$ -	0.047710	\$ -	21	\$ 729	0.047710	\$ -		
22	\$ 2,881	\$ 148,629	\$ -	0.041129	\$ -	22	\$ 561	0.041129	\$ -		
23	\$ 2,218	\$ 148,629	\$ -	0.035466	\$ -	23	\$ 432	0.035466	\$ -		
24	\$ 1,706	\$ 148,629	\$ -	0.030588	\$ -	24	\$ 333	0.030588	\$ -		
25	\$ 1,315	\$ 148,629	\$ -	0.026350	\$ -	25	\$ 256	0.026350	\$ -		
26	\$ 1,013	\$ 148,629	\$ -	0.022715	\$ -	26	\$ 167	0.022715	\$ -		
27	\$ 780	\$ 148,626	\$ -	0.018582	\$ -	27	\$ 152	0.019582	\$ -		
28	\$ 600	\$ 148,629	\$ -	0.016881	\$ -	28	\$ 117	0.018881	\$ -		
29	\$ 482	\$ 148,629	\$ -	0.014553	\$ -	29	\$ 90	0.014553	\$ -		
30	\$ 358	\$ 148,629	\$ -	0.012546	\$ -	30	\$ 89	0.012546	\$ -		
31	\$ 274	\$ 148,629	\$ -	0.010815	\$ -	31	\$ 53	0.010815	\$ -		
32	\$ 211	\$ 148,629	\$ -	0.009323	\$ -	32	\$ 41	0.009323	\$ -		
33	\$ 183	\$ 148,629	\$ -	0.008037	\$ -	33	\$ 32	0.008037	\$ -		
34	\$ 125	\$ 148,629	\$ -	0.006929	\$ -	34	\$ 24	0.006929	\$ -		
35	\$ 96	\$ 148,629	\$ -	0.005873	\$ -	35	\$ 19	0.005973	\$ -		
36	\$ 74	\$ 148,629	\$ -	0.005146	\$ -	36	\$ 14	0.005146	\$ -		
37	\$ 57	\$ 148,626	\$ -	0.004436	\$ -	37	\$ 11	0.004436	\$ -		
38	\$ 44	\$ 148,629	\$ -	0.003827	\$ -	38	\$ 9	0.003827	\$ -		
39	\$ 34	\$ 148,629	\$ -	0.003299	\$ -	39	\$ 7	0.003299	\$ -		
40	\$ 29	\$ 148,629	\$ -	0.002844	\$ -	40	\$ 5	0.003612	\$ -		
WORKING INTEREST APPRAISAL					\$ 1,198,677	ROYALTY INTEREST APPRAISAL					\$ 147,810

09-012017 6415

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)											
		2015	GAS INCOME		OIL INCOME	GAS CAP INCOME		OIL CAP INCOME			
DECLINE RATE		WRK INT	\$	2,876,828	\$	80,622	YR1	\$	782,388	\$	14,015
YR 1	59%	ROY INT	\$	360,257	\$	17,848		\$	148,888	\$	4,877
YR 2	28%						YR2	\$	854,185	\$	17,779
YR3+	23%							\$	109,886	\$	4,481
\$ 1,238,557		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 177,221	
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC		
1	\$ 788,400	\$ 180,882	\$ 625,518	0.928477	\$ 560,779	1	\$ 153,145	0.928477	\$ 142,191		
2	\$ 581,936	\$ 180,882	\$ 421,054	0.800411	\$ 337,018	2	\$ 113,327	0.800411	\$ 90,708		
3	\$ 448,091	\$ 180,882	\$ 267,209	0.890009	\$ 198,177	3	\$ 87,262	0.890009	\$ 80,212		
4	\$ 345,030	\$ 180,882	\$ 184,148	0.584838	\$ 109,538	4	\$ 87,192	0.594838	\$ 39,968		
5	\$ 285,873	\$ 180,882	\$ 104,791	0.512789	\$ 63,738	5	\$ 61,738	0.512789	\$ 28,530		
6	\$ 204,688	\$ 180,882	\$ 43,686	0.442080	\$ 19,312	6	\$ 39,838	0.442080	\$ 17,811		
7	\$ 157,518	\$ 180,882	\$ -	0.381088	\$ -	7	\$ 30,875	0.381088	\$ -		
8	\$ 121,299	\$ 180,882	\$ -	0.328522	\$ -	8	\$ 23,820	0.328522	\$ -		
9	\$ 93,392	\$ 180,882	\$ -	0.283209	\$ -	9	\$ 18,187	0.283209	\$ -		
10	\$ 71,912	\$ 180,882	\$ -	0.224148	\$ -	10	\$ 14,004	0.224148	\$ -		
11	\$ 55,372	\$ 180,882	\$ -	0.210470	\$ -	11	\$ 10,783	0.210470	\$ -		
12	\$ 42,837	\$ 180,882	\$ -	0.181440	\$ -	12	\$ 8,303	0.181440	\$ -		
13	\$ 32,830	\$ 180,882	\$ -	0.158414	\$ -	13	\$ 6,393	0.158414	\$ -		
14	\$ 25,279	\$ 180,882	\$ -	0.134840	\$ -	14	\$ 4,923	0.134840	\$ -		
15	\$ 19,405	\$ 180,882	\$ -	0.118241	\$ -	15	\$ 3,791	0.118241	\$ -		
16	\$ 14,988	\$ 180,882	\$ -	0.100208	\$ -	16	\$ 2,919	0.100208	\$ -		
17	\$ 11,541	\$ 180,882	\$ -	0.086388	\$ -	17	\$ 2,247	0.086388	\$ -		
18	\$ 8,888	\$ 180,882	\$ -	0.074471	\$ -	18	\$ 1,731	0.074471	\$ -		
19	\$ 8,843	\$ 180,882	\$ -	0.084199	\$ -	19	\$ 1,333	0.084199	\$ -		
20	\$ 6,288	\$ 180,882	\$ -	0.055344	\$ -	20	\$ 1,028	0.055344	\$ -		
21	\$ 4,067	\$ 180,882	\$ -	0.047710	\$ -	21	\$ 790	0.047710	\$ -		
22	\$ 3,124	\$ 180,882	\$ -	0.041129	\$ -	22	\$ 808	0.041129	\$ -		
23	\$ 2,405	\$ 180,882	\$ -	0.035458	\$ -	23	\$ 488	0.035458	\$ -		
24	\$ 1,852	\$ 180,882	\$ -	0.030588	\$ -	24	\$ 381	0.030588	\$ -		
25	\$ 1,428	\$ 180,882	\$ -	0.028350	\$ -	25	\$ 278	0.028350	\$ -		
26	\$ 1,098	\$ 180,882	\$ -	0.022715	\$ -	26	\$ 214	0.022715	\$ -		
27	\$ 848	\$ 180,882	\$ -	0.019582	\$ -	27	\$ 165	0.019582	\$ -		
28	\$ 851	\$ 180,882	\$ -	0.018881	\$ -	28	\$ 127	0.018881	\$ -		
29	\$ 501	\$ 180,882	\$ -	0.014553	\$ -	29	\$ 98	0.014553	\$ -		
30	\$ 388	\$ 180,882	\$ -	0.012548	\$ -	30	\$ 76	0.012548	\$ -		
31	\$ 297	\$ 180,882	\$ -	0.010815	\$ -	31	\$ 58	0.010815	\$ -		
32	\$ 229	\$ 180,882	\$ -	0.009323	\$ -	32	\$ 46	0.009323	\$ -		
33	\$ 178	\$ 180,882	\$ -	0.008037	\$ -	33	\$ 34	0.008037	\$ -		
34	\$ 136	\$ 180,882	\$ -	0.008929	\$ -	34	\$ 28	0.008929	\$ -		
35	\$ 104	\$ 180,882	\$ -	0.005973	\$ -	35	\$ 20	0.005973	\$ -		
36	\$ 80	\$ 180,882	\$ -	0.005149	\$ -	36	\$ 18	0.005149	\$ -		
37	\$ 82	\$ 180,882	\$ -	0.004439	\$ -	37	\$ 12	0.004439	\$ -		
38	\$ 46	\$ 180,882	\$ -	0.003827	\$ -	38	\$ 9	0.003827	\$ -		
39	\$ 37	\$ 180,882	\$ -	0.003299	\$ -	39	\$ 7	0.003299	\$ -		
40	\$ 28	\$ 180,882	\$ -	0.002844	\$ -	40	\$ 8	0.003612	\$ -		
WORKING INTEREST APPRAISAL					\$ 1,238,557	ROYALTY INTEREST APPRAISAL					\$ 177,221

09 - 01 2017 6436

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (YR#1)									
2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
DECLINE RATES	WRK INT		\$ 1,020,677		\$ 188,388	YR1	\$ 970,354		\$ 10,923
YR 1 69%	ROY INT		\$ 713,555		\$ 36,850	YR2	\$ 189,100		\$ 9,723
YR 2 28%							\$ 193,306		\$ 30,940
YR3+ 23%							\$ 139,934		\$ 7,185
\$ 1,067,320		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC
1	\$ 1,020,677	\$ 188,723	\$ 864,153	0.828477	\$ 793,062	1	\$ 196,623	0.928477	\$ 184,602
2	\$ 755,449	\$ 188,723	\$ 588,725	0.800411	\$ 471,222	2	\$ 147,129	0.800411	\$ 117,764
3	\$ 581,896	\$ 188,723	\$ 414,672	0.690009	\$ 266,335	3	\$ 113,289	0.690009	\$ 76,171
4	\$ 447,606	\$ 188,723	\$ 261,182	0.594836	\$ 167,257	4	\$ 87,233	0.594836	\$ 51,889
5	\$ 344,867	\$ 188,723	\$ 178,184	0.512769	\$ 81,361	5	\$ 67,166	0.512769	\$ 34,444
6	\$ 265,563	\$ 188,723	\$ 98,840	0.442060	\$ 43,693	6	\$ 51,720	0.442060	\$ 22,663
7	\$ 204,484	\$ 188,723	\$ 37,760	0.361086	\$ 14,390	7	\$ 39,625	0.361086	\$ 15,177
8	\$ 157,452	\$ 188,723	\$ -	0.328522	\$ -	8	\$ 30,665	0.328522	\$ -
9	\$ 121,238	\$ 188,723	\$ -	0.283209	\$ -	9	\$ 23,612	0.283206	\$ -
10	\$ 93,354	\$ 188,723	\$ -	0.224146	\$ -	10	\$ 16,161	0.224146	\$ -
11	\$ 71,682	\$ 188,723	\$ -	0.210470	\$ -	11	\$ 14,000	0.210470	\$ -
12	\$ 55,846	\$ 188,723	\$ -	0.161440	\$ -	12	\$ 10,780	0.161440	\$ -
13	\$ 42,619	\$ 188,723	\$ -	0.156414	\$ -	13	\$ 8,300	0.156414	\$ -
14	\$ 32,617	\$ 188,723	\$ -	0.134840	\$ -	14	\$ 6,391	0.134840	\$ -
15	\$ 25,269	\$ 188,723	\$ -	0.116241	\$ -	15	\$ 4,621	0.116241	\$ -
16	\$ 19,467	\$ 188,723	\$ -	0.100206	\$ -	16	\$ 3,766	0.100206	\$ -
17	\$ 14,962	\$ 188,723	\$ -	0.068386	\$ -	17	\$ 2,916	0.068386	\$ -
18	\$ 11,536	\$ 188,723	\$ -	0.074471	\$ -	18	\$ 2,247	0.074471	\$ -
19	\$ 8,863	\$ 188,723	\$ -	0.064166	\$ -	19	\$ 1,730	0.064199	\$ -
20	\$ 6,840	\$ 188,723	\$ -	0.055344	\$ -	20	\$ 1,332	0.055344	\$ -
21	\$ 5,267	\$ 188,723	\$ -	0.047710	\$ -	21	\$ 1,026	0.047710	\$ -
22	\$ 4,055	\$ 188,723	\$ -	0.041129	\$ -	22	\$ 790	0.041129	\$ -
23	\$ 3,123	\$ 188,723	\$ -	0.035458	\$ -	23	\$ 806	0.035458	\$ -
24	\$ 2,404	\$ 188,723	\$ -	0.030586	\$ -	24	\$ 466	0.030586	\$ -
25	\$ 1,851	\$ 188,723	\$ -	0.026350	\$ -	25	\$ 361	0.026350	\$ -
26	\$ 1,426	\$ 188,723	\$ -	0.022715	\$ -	26	\$ 276	0.022715	\$ -
27	\$ 1,096	\$ 188,723	\$ -	0.019582	\$ -	27	\$ 214	0.019582	\$ -
28	\$ 845	\$ 188,723	\$ -	0.016661	\$ -	28	\$ 165	0.016661	\$ -
29	\$ 651	\$ 188,723	\$ -	0.014553	\$ -	29	\$ 127	0.014553	\$ -
30	\$ 501	\$ 188,723	\$ -	0.012546	\$ -	30	\$ 96	0.012546	\$ -
31	\$ 386	\$ 188,723	\$ -	0.010615	\$ -	31	\$ 75	0.010615	\$ -
32	\$ 267	\$ 188,723	\$ -	0.009323	\$ -	32	\$ 58	0.009323	\$ -
33	\$ 229	\$ 188,723	\$ -	0.008037	\$ -	33	\$ 45	0.008037	\$ -
34	\$ 176	\$ 188,723	\$ -	0.006829	\$ -	34	\$ 34	0.006826	\$ -
35	\$ 136	\$ 188,723	\$ -	0.005973	\$ -	35	\$ 26	0.005973	\$ -
36	\$ 104	\$ 188,723	\$ -	0.005149	\$ -	36	\$ 20	0.005146	\$ -
37	\$ 60	\$ 188,723	\$ -	0.004436	\$ -	37	\$ 16	0.004436	\$ -
38	\$ 52	\$ 188,723	\$ -	0.003827	\$ -	38	\$ 12	0.003827	\$ -
39	\$ 46	\$ 188,723	\$ -	0.003299	\$ -	39	\$ 9	0.003269	\$ -
40	\$ 37	\$ 188,723	\$ -	0.002844	\$ -	40	\$ 7	0.003612	\$ -
WORKING INTEREST APPRAISAL		\$ 1,067,320				ROYALTY INTEREST APPRAISAL		\$ 504,910	

09-012017 6464

NATURAL OIL/GAS APPRAISAL - FLEMING WELL (YHWT-1)										
DECLINE RATES		2015	GAS INCOME		OIL INCOME	GAS CAP INCOME		OIL CAP INCOME		
YR 1	50%	WRK INT	\$	1,205,808	\$	183,692	YR1	\$	882,789	
YR 2	28%	ROY INT	\$	834,091	\$	37,723		\$	188,034	
YR3+	23%						YR2	\$	838,484	
								\$	124,345	
\$ 1,601,542		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 452,108
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(10.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(10.0%)	DIS INC	
1	\$ 914,118	\$ 185,498	\$ 748,621	0.928477	\$ 695,077	1	\$ 176,031	0.928477	\$ 165,297	
2	\$ 876,447	\$ 185,498	\$ 510,950	0.800411	\$ 406,970	2	\$ 131,743	0.800411	\$ 105,448	
3	\$ 520,884	\$ 185,498	\$ 356,386	0.690009	\$ 245,207	3	\$ 101,442	0.690009	\$ 69,996	
4	\$ 401,065	\$ 185,498	\$ 235,569	0.594838	\$ 140,125	4	\$ 76,110	0.594838	\$ 46,463	
5	\$ 306,620	\$ 185,498	\$ 143,324	0.512789	\$ 73,495	5	\$ 60,145	0.512789	\$ 30,842	
6	\$ 237,782	\$ 185,498	\$ 72,295	0.442080	\$ 31,956	6	\$ 46,312	0.442080	\$ 20,472	
7	\$ 183,100	\$ 185,498	\$ 17,603	0.381068	\$ 6,706	7	\$ 35,660	0.381068	\$ 13,589	
8	\$ 140,667	\$ 185,498	\$ -	0.328522	\$ -	8	\$ 27,468	0.328522	\$ -	
9	\$ 106,580	\$ 185,498	\$ -	0.283209	\$ -	9	\$ 21,143	0.283209	\$ -	
10	\$ 83,591	\$ 185,498	\$ -	0.224146	\$ -	10	\$ 16,280	0.224146	\$ -	
11	\$ 64,365	\$ 185,498	\$ -	0.210470	\$ -	11	\$ 12,538	0.210470	\$ -	
12	\$ 46,561	\$ 185,498	\$ -	0.181440	\$ -	12	\$ 9,652	0.181440	\$ -	
13	\$ 38,162	\$ 185,498	\$ -	0.168414	\$ -	13	\$ 7,432	0.168414	\$ -	
14	\$ 29,385	\$ 185,498	\$ -	0.134840	\$ -	14	\$ 5,723	0.134840	\$ -	
15	\$ 22,826	\$ 185,498	\$ -	0.116241	\$ -	15	\$ 4,407	0.116241	\$ -	
16	\$ 17,422	\$ 185,498	\$ -	0.100208	\$ -	16	\$ 3,363	0.100208	\$ -	
17	\$ 13,416	\$ 185,498	\$ -	0.088398	\$ -	17	\$ 2,613	0.088398	\$ -	
18	\$ 10,330	\$ 185,498	\$ -	0.074471	\$ -	18	\$ 2,012	0.074471	\$ -	
19	\$ 7,854	\$ 185,498	\$ -	0.064199	\$ -	19	\$ 1,549	0.064199	\$ -	
20	\$ 6,124	\$ 185,498	\$ -	0.055344	\$ -	20	\$ 1,183	0.055344	\$ -	
21	\$ 4,716	\$ 185,498	\$ -	0.047710	\$ -	21	\$ 916	0.047710	\$ -	
22	\$ 3,631	\$ 185,498	\$ -	0.041129	\$ -	22	\$ 707	0.041129	\$ -	
23	\$ 2,795	\$ 185,498	\$ -	0.035456	\$ -	23	\$ 545	0.035456	\$ -	
24	\$ 2,153	\$ 185,498	\$ -	0.030566	\$ -	24	\$ 419	0.030566	\$ -	
25	\$ 1,656	\$ 185,498	\$ -	0.026350	\$ -	25	\$ 323	0.026350	\$ -	
26	\$ 1,276	\$ 185,498	\$ -	0.022715	\$ -	26	\$ 249	0.022715	\$ -	
27	\$ 983	\$ 185,498	\$ -	0.019582	\$ -	27	\$ 191	0.019582	\$ -	
28	\$ 757	\$ 185,498	\$ -	0.016881	\$ -	28	\$ 147	0.016881	\$ -	
29	\$ 583	\$ 185,498	\$ -	0.014553	\$ -	29	\$ 113	0.014553	\$ -	
30	\$ 449	\$ 185,498	\$ -	0.012546	\$ -	30	\$ 87	0.012546	\$ -	
31	\$ 348	\$ 185,498	\$ -	0.010815	\$ -	31	\$ 87	0.010815	\$ -	
32	\$ 266	\$ 185,498	\$ -	0.009323	\$ -	32	\$ 52	0.009323	\$ -	
33	\$ 205	\$ 185,498	\$ -	0.008037	\$ -	33	\$ 40	0.008037	\$ -	
34	\$ 156	\$ 185,498	\$ -	0.006829	\$ -	34	\$ 31	0.006829	\$ -	
35	\$ 121	\$ 185,498	\$ -	0.005973	\$ -	35	\$ 24	0.005973	\$ -	
36	\$ 94	\$ 185,498	\$ -	0.005146	\$ -	36	\$ 16	0.005149	\$ -	
37	\$ 72	\$ 185,498	\$ -	0.004436	\$ -	37	\$ 14	0.004436	\$ -	
38	\$ 55	\$ 185,498	\$ -	0.003827	\$ -	38	\$ 11	0.003827	\$ -	
39	\$ 43	\$ 185,498	\$ -	0.003299	\$ -	39	\$ 6	0.003299	\$ -	
40	\$ 33	\$ 185,498	\$ -	0.002844	\$ -	40	\$ 6	0.003612	\$ -	
WORKING INTEREST APPRAISAL					\$ 1,601,542	ROYALTY INTEREST APPRAISAL				\$ 452,108

09-0120176465

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)												
DECLINE RATES		2015	GAS INCOME		OIL INCOME		GAS GRV INCOME		OIL GRV INCOME			
YR 1	50%	WRK INT	\$	3,405,803	\$	128,795	YR1	\$	902,488	\$	34,707	
YR 2	29%	ROY INT	\$	587,892	\$	21,455	YR2	\$	150,438	\$	5,888	
YR3+	23%							\$	887,819	\$	23,239	
								\$	115,323	\$	4,207	
\$ 1,644,019		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST					\$ 398,489
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC			
1	\$ 936,585	\$ 168,836	\$ 767,720	0.928477	\$ 712,816	1	\$ 158,121	0.928477	\$ 144,855			
2	\$ 693,058	\$ 168,836	\$ 524,222	0.800411	\$ 419,593	2	\$ 115,530	0.800411	\$ 92,471			
3	\$ 533,855	\$ 168,836	\$ 384,818	0.690009	\$ 251,726	3	\$ 86,958	0.690009	\$ 61,382			
4	\$ 410,914	\$ 168,836	\$ 242,078	0.594838	\$ 143,997	4	\$ 66,496	0.594838	\$ 40,745			
5	\$ 318,404	\$ 168,836	\$ 147,567	0.512788	\$ 75,671	5	\$ 52,743	0.512788	\$ 27,048			
6	\$ 243,831	\$ 168,836	\$ 74,795	0.442080	\$ 33,084	6	\$ 40,812	0.442080	\$ 17,953			
7	\$ 187,696	\$ 168,836	\$ 18,759	0.381088	\$ 7,149	7	\$ 31,271	0.381088	\$ 11,917			
8	\$ 144,449	\$ 168,836	\$ -	0.328522	\$ -	8	\$ 24,079	0.328522	\$ -			
9	\$ 111,228	\$ 168,836	\$ -	0.283209	\$ -	9	\$ 18,541	0.283209	\$ -			
10	\$ 85,644	\$ 168,836	\$ -	0.224148	\$ -	10	\$ 14,278	0.224148	\$ -			
11	\$ 66,948	\$ 168,836	\$ -	0.210470	\$ -	11	\$ 10,993	0.210470	\$ -			
12	\$ 50,778	\$ 168,836	\$ -	0.181440	\$ -	12	\$ 8,484	0.181440	\$ -			
13	\$ 39,099	\$ 168,836	\$ -	0.158414	\$ -	13	\$ 6,516	0.158414	\$ -			
14	\$ 30,108	\$ 168,836	\$ -	0.134840	\$ -	14	\$ 5,019	0.134840	\$ -			
15	\$ 23,182	\$ 168,836	\$ -	0.118241	\$ -	15	\$ 3,884	0.118241	\$ -			
16	\$ 17,850	\$ 168,836	\$ -	0.100208	\$ -	16	\$ 2,976	0.100208	\$ -			
17	\$ 13,745	\$ 168,836	\$ -	0.088386	\$ -	17	\$ 2,291	0.088386	\$ -			
18	\$ 10,583	\$ 168,836	\$ -	0.074471	\$ -	18	\$ 1,784	0.074471	\$ -			
19	\$ 8,149	\$ 168,836	\$ -	0.064199	\$ -	19	\$ 1,356	0.064199	\$ -			
20	\$ 6,275	\$ 168,836	\$ -	0.055344	\$ -	20	\$ 1,048	0.055344	\$ -			
21	\$ 4,832	\$ 168,836	\$ -	0.047710	\$ -	21	\$ 805	0.047710	\$ -			
22	\$ 3,720	\$ 168,836	\$ -	0.041129	\$ -	22	\$ 620	0.041129	\$ -			
23	\$ 2,885	\$ 168,836	\$ -	0.035456	\$ -	23	\$ 476	0.035456	\$ -			
24	\$ 2,206	\$ 168,836	\$ -	0.030588	\$ -	24	\$ 388	0.030588	\$ -			
25	\$ 1,696	\$ 168,836	\$ -	0.026350	\$ -	25	\$ 283	0.026350	\$ -			
26	\$ 1,308	\$ 168,836	\$ -	0.022715	\$ -	26	\$ 218	0.022715	\$ -			
27	\$ 1,007	\$ 168,836	\$ -	0.019582	\$ -	27	\$ 168	0.019582	\$ -			
28	\$ 775	\$ 168,836	\$ -	0.018881	\$ -	28	\$ 129	0.018881	\$ -			
29	\$ 597	\$ 168,836	\$ -	0.014553	\$ -	29	\$ 100	0.014553	\$ -			
30	\$ 460	\$ 168,836	\$ -	0.012546	\$ -	30	\$ 77	0.012546	\$ -			
31	\$ 354	\$ 168,836	\$ -	0.010815	\$ -	31	\$ 59	0.010815	\$ -			
32	\$ 273	\$ 168,836	\$ -	0.009323	\$ -	32	\$ 45	0.009323	\$ -			
33	\$ 210	\$ 168,836	\$ -	0.008037	\$ -	33	\$ 35	0.008037	\$ -			
34	\$ 182	\$ 168,836	\$ -	0.006929	\$ -	34	\$ 27	0.006929	\$ -			
35	\$ 124	\$ 168,836	\$ -	0.005973	\$ -	35	\$ 21	0.005973	\$ -			
36	\$ 98	\$ 168,836	\$ -	0.005149	\$ -	36	\$ 16	0.005149	\$ -			
37	\$ 74	\$ 168,836	\$ -	0.004439	\$ -	37	\$ 12	0.004439	\$ -			
38	\$ 57	\$ 168,836	\$ -	0.003827	\$ -	38	\$ 9	0.003827	\$ -			
39	\$ 44	\$ 168,836	\$ -	0.003299	\$ -	39	\$ 7	0.003299	\$ -			
40	\$ 34	\$ 168,836	\$ -	0.002844	\$ -	40	\$ 6	0.002844	\$ -			
WORKING INTEREST APPRAISAL					\$ 1,644,019	ROYALTY INTEREST APPRAISAL					\$ 398,489	

09-012017 4474

09-01 2017 6475

09-01 2017 6475

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Yr 1)												
DECLINE RATE		2015	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME			
YR 1	58%	WRK INT	\$	3,892,783	\$	288,173	YR1	\$	942,082	\$	79,271	
YR 2	28%	ROY INT	\$	781,942	\$	57,719	YR2	\$	207,215	\$	15,294	
YR3+	23%							\$	704,341	\$	82,000	
								\$	153,339	\$	11,318	
\$ 1,845,669		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST					\$ 593,058
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC			
1	\$ 1,022,353	\$ 183,367	\$ 856,986	0.928477	\$ 797,549	1	\$ 222,509	0.928477	\$ 206,594			
2	\$ 756,541	\$ 183,367	\$ 583,176	0.800411	\$ 474,783	2	\$ 184,856	0.800411	\$ 131,793			
3	\$ 582,537	\$ 183,367	\$ 419,170	0.690009	\$ 289,231	3	\$ 126,785	0.690009	\$ 87,483			
4	\$ 448,553	\$ 183,367	\$ 285,187	0.594838	\$ 189,839	4	\$ 97,825	0.594838	\$ 58,071			
5	\$ 345,386	\$ 183,367	\$ 182,019	0.512789	\$ 93,336	5	\$ 75,171	0.512789	\$ 38,547			
6	\$ 265,947	\$ 183,367	\$ 102,581	0.442080	\$ 45,347	6	\$ 67,862	0.442080	\$ 25,587			
7	\$ 204,779	\$ 183,367	\$ 41,413	0.381086	\$ 16,782	7	\$ 44,569	0.381086	\$ 16,985			
8	\$ 157,880	\$ 183,367	\$ -	0.328522	\$ -	8	\$ 34,316	0.328522	\$ -			
9	\$ 121,414	\$ 183,367	\$ -	0.283209	\$ -	9	\$ 26,426	0.283209	\$ -			
10	\$ 93,489	\$ 183,367	\$ -	0.224146	\$ -	10	\$ 20,347	0.224146	\$ -			
11	\$ 71,986	\$ 183,367	\$ -	0.210470	\$ -	11	\$ 15,667	0.210470	\$ -			
12	\$ 55,429	\$ 183,367	\$ -	0.181440	\$ -	12	\$ 12,064	0.181440	\$ -			
13	\$ 42,661	\$ 183,367	\$ -	0.156414	\$ -	13	\$ 9,289	0.156414	\$ -			
14	\$ 32,664	\$ 183,367	\$ -	0.134640	\$ -	14	\$ 7,153	0.134640	\$ -			
15	\$ 25,305	\$ 183,367	\$ -	0.116241	\$ -	15	\$ 5,506	0.116241	\$ -			
16	\$ 19,485	\$ 183,367	\$ -	0.100208	\$ -	16	\$ 4,241	0.100208	\$ -			
17	\$ 15,004	\$ 183,367	\$ -	0.088388	\$ -	17	\$ 3,265	0.088388	\$ -			
18	\$ 11,553	\$ 183,367	\$ -	0.074471	\$ -	18	\$ 2,514	0.074471	\$ -			
19	\$ 8,896	\$ 183,367	\$ -	0.064199	\$ -	19	\$ 1,938	0.064199	\$ -			
20	\$ 6,850	\$ 183,367	\$ -	0.055344	\$ -	20	\$ 1,491	0.055344	\$ -			
21	\$ 5,274	\$ 183,367	\$ -	0.047710	\$ -	21	\$ 1,148	0.047710	\$ -			
22	\$ 4,061	\$ 183,367	\$ -	0.041129	\$ -	22	\$ 664	0.041129	\$ -			
23	\$ 3,127	\$ 183,367	\$ -	0.035456	\$ -	23	\$ 681	0.035456	\$ -			
24	\$ 2,408	\$ 183,367	\$ -	0.030566	\$ -	24	\$ 524	0.030566	\$ -			
25	\$ 1,854	\$ 183,367	\$ -	0.026350	\$ -	25	\$ 404	0.026350	\$ -			
26	\$ 1,428	\$ 183,367	\$ -	0.022715	\$ -	26	\$ 311	0.022715	\$ -			
27	\$ 1,099	\$ 183,367	\$ -	0.019582	\$ -	27	\$ 239	0.019582	\$ -			
28	\$ 846	\$ 183,367	\$ -	0.016861	\$ -	28	\$ 164	0.016861	\$ -			
29	\$ 652	\$ 183,367	\$ -	0.014553	\$ -	29	\$ 142	0.014553	\$ -			
30	\$ 502	\$ 183,367	\$ -	0.012548	\$ -	30	\$ 109	0.012548	\$ -			
31	\$ 366	\$ 183,367	\$ -	0.010815	\$ -	31	\$ 84	0.010815	\$ -			
32	\$ 296	\$ 183,367	\$ -	0.009323	\$ -	32	\$ 65	0.009323	\$ -			
33	\$ 229	\$ 183,367	\$ -	0.008037	\$ -	33	\$ 50	0.008037	\$ -			
34	\$ 176	\$ 183,367	\$ -	0.006929	\$ -	34	\$ 36	0.006929	\$ -			
35	\$ 138	\$ 183,367	\$ -	0.005973	\$ -	35	\$ 30	0.005973	\$ -			
36	\$ 105	\$ 183,367	\$ -	0.005149	\$ -	36	\$ 23	0.005149	\$ -			
37	\$ 81	\$ 183,367	\$ -	0.004439	\$ -	37	\$ 18	0.004439	\$ -			
38	\$ 62	\$ 183,367	\$ -	0.003827	\$ -	38	\$ 13	0.003827	\$ -			
39	\$ 48	\$ 183,367	\$ -	0.003299	\$ -	39	\$ 10	0.003299	\$ -			
40	\$ 37	\$ 183,367	\$ -	0.002844	\$ -	40	\$ 6	0.002812	\$ -			
WORKING INTEREST APPRAISAL					\$ 1,845,669	ROYALTY INTEREST APPRAISAL				\$ 593,058		

09 0120176561

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Yrly 1)									
DECLINE RATES		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME	
YR 1	50%	WRK INT	\$	3,156,988	\$	227,447	YR1	\$	847,127
YR 2	20%	ROY INT	\$	687,530	\$	49,831	YR2	\$	182,195
YR3+	23%							\$	819,474
								\$	134,828
								\$	9,713
\$ 1,567,301		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC
1	\$ 897,432	\$ 183,627	\$ 733,805	0.928477	\$ 681,321	1	\$ 195,321	0.928477	\$ 181,351
2	\$ 864,100	\$ 183,627	\$ 500,473	0.800411	\$ 400,584	2	\$ 144,638	0.800411	\$ 116,890
3	\$ 511,367	\$ 183,627	\$ 347,730	0.890009	\$ 239,937	3	\$ 111,294	0.890009	\$ 78,794
4	\$ 383,746	\$ 183,627	\$ 230,118	0.594838	\$ 138,882	4	\$ 85,986	0.594838	\$ 50,976
5	\$ 303,183	\$ 183,627	\$ 139,557	0.512789	\$ 71,563	5	\$ 85,986	0.512789	\$ 33,637
6	\$ 233,451	\$ 183,627	\$ 69,824	0.442080	\$ 30,867	6	\$ 60,809	0.442080	\$ 22,461
7	\$ 179,757	\$ 183,627	\$ 16,131	0.381088	\$ 6,147	7	\$ 39,123	0.381088	\$ 14,909
8	\$ 138,413	\$ 183,627	\$ -	0.328522	\$ -	8	\$ 30,126	0.328522	\$ -
9	\$ 108,576	\$ 183,627	\$ -	0.283209	\$ -	9	\$ 23,196	0.283209	\$ -
10	\$ 82,085	\$ 183,627	\$ -	0.224146	\$ -	10	\$ 17,881	0.224146	\$ -
11	\$ 83,190	\$ 183,627	\$ -	0.210470	\$ -	11	\$ 13,753	0.210470	\$ -
12	\$ 46,856	\$ 183,627	\$ -	0.181440	\$ -	12	\$ 10,580	0.181440	\$ -
13	\$ 37,486	\$ 183,627	\$ -	0.168414	\$ -	13	\$ 8,154	0.168414	\$ -
14	\$ 28,848	\$ 183,627	\$ -	0.134840	\$ -	14	\$ 6,279	0.134840	\$ -
15	\$ 22,213	\$ 183,627	\$ -	0.118241	\$ -	15	\$ 4,835	0.118241	\$ -
16	\$ 17,104	\$ 183,627	\$ -	0.100208	\$ -	16	\$ 3,723	0.100208	\$ -
17	\$ 13,170	\$ 183,627	\$ -	0.088386	\$ -	17	\$ 2,688	0.088386	\$ -
18	\$ 10,141	\$ 183,627	\$ -	0.074471	\$ -	18	\$ 2,207	0.074471	\$ -
19	\$ 7,609	\$ 183,627	\$ -	0.084199	\$ -	19	\$ 1,700	0.084199	\$ -
20	\$ 6,013	\$ 183,627	\$ -	0.055344	\$ -	20	\$ 1,308	0.055344	\$ -
21	\$ 4,630	\$ 183,627	\$ -	0.047710	\$ -	21	\$ 1,006	0.047710	\$ -
22	\$ 3,585	\$ 183,627	\$ -	0.041129	\$ -	22	\$ 778	0.041129	\$ -
23	\$ 2,745	\$ 183,627	\$ -	0.035456	\$ -	23	\$ 597	0.035456	\$ -
24	\$ 2,114	\$ 183,627	\$ -	0.030586	\$ -	24	\$ 460	0.030586	\$ -
25	\$ 1,627	\$ 183,627	\$ -	0.028350	\$ -	25	\$ 354	0.028350	\$ -
26	\$ 1,253	\$ 183,627	\$ -	0.022715	\$ -	26	\$ 273	0.022715	\$ -
27	\$ 985	\$ 183,627	\$ -	0.019582	\$ -	27	\$ 210	0.019582	\$ -
28	\$ 743	\$ 183,627	\$ -	0.016861	\$ -	28	\$ 162	0.016861	\$ -
29	\$ 672	\$ 183,627	\$ -	0.014553	\$ -	29	\$ 125	0.014553	\$ -
30	\$ 441	\$ 183,627	\$ -	0.012546	\$ -	30	\$ 98	0.012546	\$ -
31	\$ 339	\$ 183,627	\$ -	0.010815	\$ -	31	\$ 74	0.010815	\$ -
32	\$ 261	\$ 183,627	\$ -	0.009323	\$ -	32	\$ 57	0.009323	\$ -
33	\$ 201	\$ 183,627	\$ -	0.008037	\$ -	33	\$ 44	0.008037	\$ -
34	\$ 155	\$ 183,627	\$ -	0.008929	\$ -	34	\$ 34	0.008929	\$ -
35	\$ 119	\$ 183,627	\$ -	0.005973	\$ -	35	\$ 28	0.005973	\$ -
36	\$ 92	\$ 183,627	\$ -	0.005149	\$ -	36	\$ 20	0.005149	\$ -
37	\$ 71	\$ 183,627	\$ -	0.004439	\$ -	37	\$ 16	0.004439	\$ -
38	\$ 54	\$ 183,627	\$ -	0.003827	\$ -	38	\$ 12	0.003827	\$ -
39	\$ 42	\$ 183,627	\$ -	0.003299	\$ -	39	\$ 9	0.003299	\$ -
40	\$ 32	\$ 183,627	\$ -	0.002844	\$ -	40	\$ 7	0.002812	\$ -
WORKING INTEREST APPRAISAL					\$ 1,567,301	ROYALTY INTEREST APPRAISAL			

09 012017 6642

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)											
DECLINE RATES		2015	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
YR 1	50%	YR1 WT	\$	3,484,498	\$	119,357	YR1	\$	918,442	\$	83,093
YR 2	20%	ROYR1	\$	854,884	\$	59,442	YR2	\$	173,844	\$	15,752
YR3+	23%							\$	877,427	\$	81,489
								\$	128,423	\$	11,657
\$ 1,435,842			TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 480,717
YEAR	WKR INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC		
1	\$ 998,535	\$ 180,918	\$ 837,619	0.928477	\$ 777,710	1	\$ 189,298	0.928477	\$ 175,757		
2	\$ 738,918	\$ 180,918	\$ 578,000	0.800411	\$ 462,837	2	\$ 140,079	0.800411	\$ 112,121		
3	\$ 588,986	\$ 180,918	\$ 408,049	0.690009	\$ 281,558	3	\$ 107,881	0.690009	\$ 74,425		
4	\$ 438,103	\$ 180,918	\$ 277,187	0.594838	\$ 164,881	4	\$ 83,053	0.594838	\$ 49,403		
5	\$ 337,339	\$ 180,918	\$ 178,423	0.512789	\$ 90,488	5	\$ 63,951	0.512789	\$ 32,783		
6	\$ 269,761	\$ 180,918	\$ 98,836	0.442060	\$ 43,691	6	\$ 49,242	0.442060	\$ 21,768		
7	\$ 200,009	\$ 180,918	\$ 39,093	0.381088	\$ 14,898	7	\$ 37,918	0.381088	\$ 14,449		
8	\$ 164,007	\$ 180,918	\$ -	0.328522	\$ -	8	\$ 29,198	0.328522	\$ -		
9	\$ 118,585	\$ 180,918	\$ -	0.283209	\$ -	9	\$ 22,481	0.283209	\$ -		
10	\$ 91,310	\$ 180,918	\$ -	0.224148	\$ -	10	\$ 17,310	0.224148	\$ -		
11	\$ 70,309	\$ 180,918	\$ -	0.210470	\$ -	11	\$ 13,329	0.210470	\$ -		
12	\$ 54,138	\$ 180,918	\$ -	0.181440	\$ -	12	\$ 10,283	0.181440	\$ -		
13	\$ 41,688	\$ 180,918	\$ -	0.166414	\$ -	13	\$ 7,903	0.166414	\$ -		
14	\$ 32,098	\$ 180,918	\$ -	0.134840	\$ -	14	\$ 6,085	0.134840	\$ -		
15	\$ 24,718	\$ 180,918	\$ -	0.116241	\$ -	15	\$ 4,888	0.116241	\$ -		
16	\$ 19,031	\$ 180,918	\$ -	0.100208	\$ -	16	\$ 3,808	0.100208	\$ -		
17	\$ 14,854	\$ 180,918	\$ -	0.088388	\$ -	17	\$ 2,778	0.088388	\$ -		
18	\$ 11,284	\$ 180,918	\$ -	0.074471	\$ -	18	\$ 2,139	0.074471	\$ -		
19	\$ 8,888	\$ 180,918	\$ -	0.064199	\$ -	19	\$ 1,647	0.064199	\$ -		
20	\$ 6,690	\$ 180,918	\$ -	0.055344	\$ -	20	\$ 1,288	0.055344	\$ -		
21	\$ 5,161	\$ 180,918	\$ -	0.047710	\$ -	21	\$ 977	0.047710	\$ -		
22	\$ 3,987	\$ 180,918	\$ -	0.041129	\$ -	22	\$ 752	0.041129	\$ -		
23	\$ 3,054	\$ 180,918	\$ -	0.035458	\$ -	23	\$ 579	0.035458	\$ -		
24	\$ 2,352	\$ 180,918	\$ -	0.030588	\$ -	24	\$ 448	0.030588	\$ -		
25	\$ 1,811	\$ 180,918	\$ -	0.026350	\$ -	25	\$ 343	0.026350	\$ -		
26	\$ 1,394	\$ 180,918	\$ -	0.022715	\$ -	26	\$ 264	0.022715	\$ -		
27	\$ 1,074	\$ 180,918	\$ -	0.019582	\$ -	27	\$ 204	0.019582	\$ -		
28	\$ 827	\$ 180,918	\$ -	0.016881	\$ -	28	\$ 157	0.016881	\$ -		
29	\$ 637	\$ 180,918	\$ -	0.014553	\$ -	29	\$ 121	0.014553	\$ -		
30	\$ 480	\$ 180,918	\$ -	0.012548	\$ -	30	\$ 93	0.012548	\$ -		
31	\$ 377	\$ 180,918	\$ -	0.010815	\$ -	31	\$ 72	0.010815	\$ -		
32	\$ 291	\$ 180,918	\$ -	0.009323	\$ -	32	\$ 55	0.009323	\$ -		
33	\$ 224	\$ 180,918	\$ -	0.008037	\$ -	33	\$ 42	0.008037	\$ -		
34	\$ 172	\$ 180,918	\$ -	0.006929	\$ -	34	\$ 33	0.006929	\$ -		
35	\$ 133	\$ 180,918	\$ -	0.005973	\$ -	35	\$ 25	0.005973	\$ -		
36	\$ 102	\$ 180,918	\$ -	0.005149	\$ -	36	\$ 19	0.005149	\$ -		
37	\$ 79	\$ 180,918	\$ -	0.004439	\$ -	37	\$ 16	0.004439	\$ -		
38	\$ 61	\$ 180,918	\$ -	0.003827	\$ -	38	\$ 11	0.003827	\$ -		
39	\$ 47	\$ 180,918	\$ -	0.003299	\$ -	39	\$ 9	0.003299	\$ -		
40	\$ 38	\$ 180,918	\$ -	0.002844	\$ -	40	\$ 7	0.003812	\$ -		
WORKING INTEREST APPRAISAL			\$ 1,435,842				ROYALTY INTEREST APPRAISAL			\$ 480,717	

09 0120176563

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (YR01-1)											
DECLINE RATES		2015	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
YR 1	50%	WRK INT	\$	1,058,282	\$	288,821	YR1	\$	610,439	\$	87,944
YR 2	29%	ROY INT	\$	579,768	\$	48,812	YR2	\$	153,820	\$	12,882
YR3+	23%							\$	599,724	\$	60,288
								\$	112,591	\$	8,534
\$ 1,526,435			TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 422,878
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(10.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(10.0%)	DIS INC		
1	\$ 870,393	\$ 161,907	\$ 716,467	0.928477	\$ 685,241	1	\$ 168,621	0.928477	\$ 154,811		
2	\$ 650,011	\$ 161,907	\$ 468,104	0.800411	\$ 390,684	2	\$ 123,225	0.800411	\$ 96,631		
3	\$ 500,506	\$ 161,907	\$ 338,602	0.690009	\$ 233,638	3	\$ 94,883	0.690009	\$ 65,470		
4	\$ 385,391	\$ 161,907	\$ 223,485	0.594836	\$ 132,937	4	\$ 73,060	0.594836	\$ 43,459		
5	\$ 296,761	\$ 161,907	\$ 134,845	0.512789	\$ 69,147	5	\$ 56,256	0.512789	\$ 26,846		
6	\$ 228,499	\$ 161,907	\$ 66,582	0.442060	\$ 29,438	6	\$ 43,317	0.442060	\$ 19,149		
7	\$ 176,944	\$ 161,907	\$ 14,037	0.381068	\$ 5,349	7	\$ 33,354	0.381068	\$ 12,711		
8	\$ 135,477	\$ 161,907	\$ -	0.328522	\$ -	8	\$ 25,863	0.328522	\$ -		
9	\$ 104,317	\$ 161,907	\$ -	0.283209	\$ -	9	\$ 19,776	0.283209	\$ -		
10	\$ 80,324	\$ 161,907	\$ -	0.224146	\$ -	10	\$ 15,227	0.224146	\$ -		
11	\$ 61,850	\$ 161,907	\$ -	0.210470	\$ -	11	\$ 11,726	0.210470	\$ -		
12	\$ 47,624	\$ 161,907	\$ -	0.161440	\$ -	12	\$ 9,028	0.161440	\$ -		
13	\$ 36,871	\$ 161,907	\$ -	0.156414	\$ -	13	\$ 6,952	0.156414	\$ -		
14	\$ 26,236	\$ 161,907	\$ -	0.134840	\$ -	14	\$ 5,353	0.134840	\$ -		
15	\$ 21,742	\$ 161,907	\$ -	0.116241	\$ -	15	\$ 4,122	0.116241	\$ -		
16	\$ 16,741	\$ 161,907	\$ -	0.100206	\$ -	16	\$ 3,174	0.100206	\$ -		
17	\$ 12,891	\$ 161,907	\$ -	0.068388	\$ -	17	\$ 2,444	0.068388	\$ -		
18	\$ 9,926	\$ 161,907	\$ -	0.074471	\$ -	18	\$ 1,882	0.074471	\$ -		
19	\$ 7,643	\$ 161,907	\$ -	0.084199	\$ -	19	\$ 1,448	0.084199	\$ -		
20	\$ 5,885	\$ 161,907	\$ -	0.055344	\$ -	20	\$ 1,116	0.055344	\$ -		
21	\$ 4,532	\$ 161,907	\$ -	0.047710	\$ -	21	\$ 859	0.047710	\$ -		
22	\$ 3,469	\$ 161,907	\$ -	0.041129	\$ -	22	\$ 661	0.041129	\$ -		
23	\$ 2,667	\$ 161,907	\$ -	0.035456	\$ -	23	\$ 509	0.035456	\$ -		
24	\$ 2,089	\$ 161,907	\$ -	0.030588	\$ -	24	\$ 392	0.030588	\$ -		
25	\$ 1,593	\$ 161,907	\$ -	0.026350	\$ -	25	\$ 302	0.026350	\$ -		
26	\$ 1,227	\$ 161,907	\$ -	0.022715	\$ -	26	\$ 233	0.022715	\$ -		
27	\$ 944	\$ 161,907	\$ -	0.019582	\$ -	27	\$ 179	0.019582	\$ -		
28	\$ 727	\$ 161,907	\$ -	0.016661	\$ -	28	\$ 136	0.016661	\$ -		
29	\$ 560	\$ 161,907	\$ -	0.014553	\$ -	29	\$ 106	0.014553	\$ -		
30	\$ 431	\$ 161,907	\$ -	0.012546	\$ -	30	\$ 82	0.012546	\$ -		
31	\$ 332	\$ 161,907	\$ -	0.010616	\$ -	31	\$ 63	0.010616	\$ -		
32	\$ 256	\$ 161,907	\$ -	0.009323	\$ -	32	\$ 48	0.009323	\$ -		
33	\$ 197	\$ 161,907	\$ -	0.006037	\$ -	33	\$ 37	0.006037	\$ -		
34	\$ 152	\$ 161,907	\$ -	0.006929	\$ -	34	\$ 29	0.006929	\$ -		
35	\$ 117	\$ 161,907	\$ -	0.005973	\$ -	35	\$ 22	0.005973	\$ -		
36	\$ 90	\$ 161,907	\$ -	0.005149	\$ -	36	\$ 17	0.005149	\$ -		
37	\$ 69	\$ 161,907	\$ -	0.004439	\$ -	37	\$ 13	0.004439	\$ -		
38	\$ 53	\$ 161,907	\$ -	0.003827	\$ -	38	\$ 10	0.003827	\$ -		
39	\$ 41	\$ 161,907	\$ -	0.003299	\$ -	39	\$ 8	0.003299	\$ -		
40	\$ 32	\$ 161,907	\$ -	0.002844	\$ -	40	\$ 6	0.003612	\$ -		
WORKING INTEREST APPRAISAL			\$ 1,526,435				ROYALTY INTEREST APPRAISAL			\$ 422,878	

09 012017 4544

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (YMM F)													
		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME			
DECLINE RATES		WRK INT		\$ 3,040,790		\$ 288,597		YR1 \$ 805,409		\$ 67,198			
YR 1	50%	ROY INT		\$ 718,915		\$ 80,323		\$ 169,463		\$ 15,385			
YR 2	29%							YR2 \$ 538,299		\$ 50,319			
YR3+	23%							\$ 140,203		\$ 11,828			
\$ 1,515,120				TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 521,735	
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC				
1	\$ 873,808	\$ 181,829	\$ 711,978	0.928477	\$ 681,056	1	\$ 205,448	0.928477	\$ 190,764				
2	\$ 848,818	\$ 181,829	\$ 484,788	0.800411	\$ 388,030	2	\$ 152,032	0.800411	\$ 121,888				
3	\$ 497,898	\$ 181,829	\$ 338,068	0.690009	\$ 231,889	3	\$ 117,085	0.690009	\$ 80,778				
4	\$ 383,380	\$ 181,829	\$ 221,550	0.594838	\$ 131,788	4	\$ 90,140	0.594838	\$ 53,618				
5	\$ 295,202	\$ 181,829	\$ 133,373	0.512789	\$ 88,392	5	\$ 69,408	0.512789	\$ 35,591				
6	\$ 227,308	\$ 181,829	\$ 65,478	0.442080	\$ 28,945	6	\$ 53,444	0.442080	\$ 23,825				
7	\$ 175,025	\$ 181,829	\$ 13,196	0.381088	\$ 5,029	7	\$ 41,152	0.381088	\$ 16,862				
8	\$ 134,770	\$ 181,829	\$ -	0.328522	\$ -	8	\$ 31,867	0.328522	\$ -				
9	\$ 103,773	\$ 181,829	\$ -	0.283209	\$ -	9	\$ 24,399	0.283209	\$ -				
10	\$ 79,905	\$ 181,829	\$ -	0.224148	\$ -	10	\$ 18,787	0.224148	\$ -				
11	\$ 61,527	\$ 181,829	\$ -	0.210470	\$ -	11	\$ 14,486	0.210470	\$ -				
12	\$ 47,378	\$ 181,829	\$ -	0.181440	\$ -	12	\$ 11,139	0.181440	\$ -				
13	\$ 38,479	\$ 181,829	\$ -	0.158414	\$ -	13	\$ 8,577	0.158414	\$ -				
14	\$ 28,089	\$ 181,829	\$ -	0.134840	\$ -	14	\$ 6,804	0.134840	\$ -				
15	\$ 21,829	\$ 181,829	\$ -	0.118241	\$ -	15	\$ 5,086	0.118241	\$ -				
16	\$ 16,654	\$ 181,829	\$ -	0.100208	\$ -	16	\$ 3,916	0.100208	\$ -				
17	\$ 12,824	\$ 181,829	\$ -	0.088386	\$ -	17	\$ 3,015	0.088386	\$ -				
18	\$ 9,874	\$ 181,829	\$ -	0.074471	\$ -	18	\$ 2,322	0.074471	\$ -				
19	\$ 7,803	\$ 181,829	\$ -	0.064199	\$ -	19	\$ 1,788	0.064199	\$ -				
20	\$ 5,854	\$ 181,829	\$ -	0.055344	\$ -	20	\$ 1,378	0.055344	\$ -				
21	\$ 4,508	\$ 181,829	\$ -	0.047710	\$ -	21	\$ 1,080	0.047710	\$ -				
22	\$ 3,471	\$ 181,829	\$ -	0.041129	\$ -	22	\$ 816	0.041129	\$ -				
23	\$ 2,673	\$ 181,829	\$ -	0.035458	\$ -	23	\$ 628	0.035458	\$ -				
24	\$ 2,058	\$ 181,829	\$ -	0.030588	\$ -	24	\$ 484	0.030588	\$ -				
25	\$ 1,585	\$ 181,829	\$ -	0.026350	\$ -	25	\$ 373	0.026350	\$ -				
26	\$ 1,220	\$ 181,829	\$ -	0.022715	\$ -	26	\$ 287	0.022715	\$ -				
27	\$ 940	\$ 181,829	\$ -	0.019582	\$ -	27	\$ 221	0.019582	\$ -				
28	\$ 723	\$ 181,829	\$ -	0.018981	\$ -	28	\$ 170	0.018981	\$ -				
29	\$ 557	\$ 181,829	\$ -	0.014553	\$ -	29	\$ 131	0.014553	\$ -				
30	\$ 429	\$ 181,829	\$ -	0.012548	\$ -	30	\$ 101	0.012548	\$ -				
31	\$ 330	\$ 181,829	\$ -	0.010815	\$ -	31	\$ 78	0.010815	\$ -				
32	\$ 254	\$ 181,829	\$ -	0.009323	\$ -	32	\$ 60	0.009323	\$ -				
33	\$ 198	\$ 181,829	\$ -	0.008037	\$ -	33	\$ 48	0.008037	\$ -				
34	\$ 151	\$ 181,829	\$ -	0.006929	\$ -	34	\$ 35	0.006929	\$ -				
35	\$ 118	\$ 181,829	\$ -	0.005973	\$ -	35	\$ 27	0.005973	\$ -				
36	\$ 89	\$ 181,829	\$ -	0.005149	\$ -	36	\$ 21	0.005149	\$ -				
37	\$ 89	\$ 181,829	\$ -	0.004439	\$ -	37	\$ 18	0.004439	\$ -				
38	\$ 53	\$ 181,829	\$ -	0.003827	\$ -	38	\$ 12	0.003827	\$ -				
39	\$ 41	\$ 181,829	\$ -	0.003299	\$ -	39	\$ 10	0.003299	\$ -				
40	\$ 31	\$ 181,829	\$ -	0.002844	\$ -	40	\$ 7	0.002844	\$ -				
WORKING INTEREST APPRAISAL				\$ 1,515,120		ROYALTY INTEREST APPRAISAL				\$ 521,735			

09 01/2017 6619

NATURAL OIL/GAS APPRAISAL..... FLUSH WELL (Year 1)											
DECLINE RATES		2015	GAS INCOME		OIL INCOME	GAS CAP INCOME		OIL CAP INCOME			
YR 1	50%	WRK INT	\$	2,814,531	\$	198,357	YR1	\$	658,450	\$	44,628
YR 2	20%	ROY INT	\$	591,291	\$	46,898	YR2	\$	158,892	\$	12,373
YR3+	23%							\$	492,155	\$	38,945
								\$	115,982	\$	8,158
\$ 1,169,097			TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 418,438
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC		
1	\$ 719,058	\$ 151,705	\$ 567,351	0.928477	\$ 528,772	1	\$ 169,065	0.928477	\$ 156,973		
2	\$ 532,101	\$ 151,705	\$ 380,396	0.800411	\$ 304,473	2	\$ 125,108	0.800411	\$ 100,138		
3	\$ 408,716	\$ 151,705	\$ 258,013	0.690009	\$ 178,031	3	\$ 96,334	0.690009	\$ 68,471		
4	\$ 315,483	\$ 151,705	\$ 183,778	0.594836	\$ 97,421	4	\$ 74,177	0.594836	\$ 44,123		
5	\$ 242,922	\$ 151,705	\$ 91,217	0.512789	\$ 46,775	5	\$ 57,118	0.512789	\$ 29,289		
6	\$ 187,050	\$ 151,705	\$ 35,345	0.442080	\$ 15,825	6	\$ 43,979	0.442080	\$ 19,442		
7	\$ 144,028	\$ 151,705	\$ -	0.381088	\$ -	7	\$ 33,884	0.381088	\$ -		
8	\$ 110,902	\$ 151,705	\$ -	0.328522	\$ -	8	\$ 28,075	0.328522	\$ -		
9	\$ 85,394	\$ 151,705	\$ -	0.283209	\$ -	9	\$ 20,076	0.283209	\$ -		
10	\$ 65,754	\$ 151,705	\$ -	0.224146	\$ -	10	\$ 15,480	0.224146	\$ -		
11	\$ 50,630	\$ 151,705	\$ -	0.210470	\$ -	11	\$ 11,804	0.210470	\$ -		
12	\$ 38,985	\$ 151,705	\$ -	0.181440	\$ -	12	\$ 9,166	0.181440	\$ -		
13	\$ 30,019	\$ 151,705	\$ -	0.158414	\$ -	13	\$ 7,056	0.158414	\$ -		
14	\$ 23,114	\$ 151,705	\$ -	0.134840	\$ -	14	\$ 5,435	0.134840	\$ -		
15	\$ 17,798	\$ 151,705	\$ -	0.118241	\$ -	15	\$ 4,185	0.118241	\$ -		
16	\$ 13,705	\$ 151,705	\$ -	0.100208	\$ -	16	\$ 3,222	0.100208	\$ -		
17	\$ 10,552	\$ 151,705	\$ -	0.088386	\$ -	17	\$ 2,481	0.088386	\$ -		
18	\$ 8,125	\$ 151,705	\$ -	0.074471	\$ -	18	\$ 1,910	0.074471	\$ -		
19	\$ 6,257	\$ 151,705	\$ -	0.064199	\$ -	19	\$ 1,471	0.064199	\$ -		
20	\$ 4,816	\$ 151,705	\$ -	0.055344	\$ -	20	\$ 1,133	0.055344	\$ -		
21	\$ 3,710	\$ 151,705	\$ -	0.047710	\$ -	21	\$ 872	0.047710	\$ -		
22	\$ 2,856	\$ 151,705	\$ -	0.041129	\$ -	22	\$ 672	0.041129	\$ -		
23	\$ 2,199	\$ 151,705	\$ -	0.035456	\$ -	23	\$ 517	0.035456	\$ -		
24	\$ 1,694	\$ 151,705	\$ -	0.030588	\$ -	24	\$ 398	0.030588	\$ -		
25	\$ 1,304	\$ 151,705	\$ -	0.028350	\$ -	25	\$ 307	0.028350	\$ -		
26	\$ 1,004	\$ 151,705	\$ -	0.022716	\$ -	26	\$ 236	0.022716	\$ -		
27	\$ 773	\$ 151,705	\$ -	0.019582	\$ -	27	\$ 182	0.019582	\$ -		
28	\$ 595	\$ 151,705	\$ -	0.016861	\$ -	28	\$ 140	0.016861	\$ -		
29	\$ 456	\$ 151,705	\$ -	0.014553	\$ -	29	\$ 108	0.014553	\$ -		
30	\$ 363	\$ 151,705	\$ -	0.012548	\$ -	30	\$ 83	0.012548	\$ -		
31	\$ 272	\$ 151,705	\$ -	0.010815	\$ -	31	\$ 64	0.010815	\$ -		
32	\$ 209	\$ 151,705	\$ -	0.009323	\$ -	32	\$ 49	0.009323	\$ -		
33	\$ 161	\$ 151,705	\$ -	0.008037	\$ -	33	\$ 38	0.008037	\$ -		
34	\$ 124	\$ 151,705	\$ -	0.006929	\$ -	34	\$ 29	0.006929	\$ -		
35	\$ 98	\$ 151,705	\$ -	0.005973	\$ -	35	\$ 22	0.005973	\$ -		
36	\$ 74	\$ 151,705	\$ -	0.005149	\$ -	36	\$ 17	0.005149	\$ -		
37	\$ 57	\$ 151,705	\$ -	0.004439	\$ -	37	\$ 13	0.004439	\$ -		
38	\$ 44	\$ 151,705	\$ -	0.003827	\$ -	38	\$ 10	0.003827	\$ -		
39	\$ 34	\$ 151,705	\$ -	0.003299	\$ -	39	\$ 8	0.003299	\$ -		
40	\$ 28	\$ 151,705	\$ -	0.002844	\$ -	40	\$ 6	0.002844	\$ -		
WORKING INTEREST APPRAISAL			\$ 1,169,097			ROYALTY INTEREST APPRAISAL			\$ 418,438		

09-012017 6620

		NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)										
		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
DECLINE RATES		WKR INT	\$	2,474,339	\$	285,128	YR1	\$	658,708	\$	70,238	
YR 1	50%	ROY INT	\$	889,238	\$	80,893		\$	150,853	\$	16,184	
YR 2	20%						YR2	\$	488,222	\$	81,391	
YR3+	23%							\$	111,531	\$	11,361	
\$ 1,170,132		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST					\$ 411,388
YEAR	WKR INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.8%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.8%)	DIS INC			
1	\$ 725,983	\$ 155,731	\$ 570,232	0.928477	\$ 529,447	1	\$ 187,017	0.928477	\$ 155,071			
2	\$ 537,213	\$ 155,731	\$ 381,481	0.800411	\$ 305,342	2	\$ 123,692	0.800411	\$ 98,925			
3	\$ 413,854	\$ 155,731	\$ 257,922	0.890009	\$ 177,989	3	\$ 95,188	0.890009	\$ 86,665			
4	\$ 318,513	\$ 155,731	\$ 182,782	0.594838	\$ 98,829	4	\$ 73,278	0.594838	\$ 43,588			
5	\$ 245,266	\$ 155,731	\$ 89,524	0.612789	\$ 45,907	5	\$ 58,424	0.612789	\$ 28,934			
6	\$ 188,847	\$ 155,731	\$ 33,115	0.442080	\$ 14,839	6	\$ 43,448	0.442080	\$ 19,208			
7	\$ 145,412	\$ 155,731	\$ -	0.381088	\$ -	7	\$ 33,454	0.381088	\$ -			
8	\$ 111,987	\$ 155,731	\$ -	0.328622	\$ -	8	\$ 26,769	0.328622	\$ -			
9	\$ 88,215	\$ 155,731	\$ -	0.283208	\$ -	9	\$ 19,836	0.283208	\$ -			
10	\$ 88,385	\$ 155,731	\$ -	0.224148	\$ -	10	\$ 15,273	0.224148	\$ -			
11	\$ 51,117	\$ 155,731	\$ -	0.210470	\$ -	11	\$ 11,780	0.210470	\$ -			
12	\$ 39,380	\$ 155,731	\$ -	0.181440	\$ -	12	\$ 9,055	0.181440	\$ -			
13	\$ 30,307	\$ 155,731	\$ -	0.158414	\$ -	13	\$ 8,973	0.158414	\$ -			
14	\$ 23,338	\$ 155,731	\$ -	0.134840	\$ -	14	\$ 5,389	0.134840	\$ -			
15	\$ 17,969	\$ 155,731	\$ -	0.118241	\$ -	15	\$ 4,134	0.118241	\$ -			
16	\$ 13,638	\$ 155,731	\$ -	0.100208	\$ -	16	\$ 3,183	0.100208	\$ -			
17	\$ 10,854	\$ 155,731	\$ -	0.088388	\$ -	17	\$ 2,451	0.088388	\$ -			
18	\$ 8,203	\$ 155,731	\$ -	0.074471	\$ -	18	\$ 1,887	0.074471	\$ -			
19	\$ 8,317	\$ 155,731	\$ -	0.084199	\$ -	19	\$ 1,453	0.084199	\$ -			
20	\$ 4,884	\$ 155,731	\$ -	0.055344	\$ -	20	\$ 1,119	0.055344	\$ -			
21	\$ 3,745	\$ 155,731	\$ -	0.047710	\$ -	21	\$ 882	0.047710	\$ -			
22	\$ 2,884	\$ 155,731	\$ -	0.041129	\$ -	22	\$ 883	0.041129	\$ -			
23	\$ 2,221	\$ 155,731	\$ -	0.035458	\$ -	23	\$ 511	0.035458	\$ -			
24	\$ 1,710	\$ 155,731	\$ -	0.030588	\$ -	24	\$ 393	0.030588	\$ -			
25	\$ 1,317	\$ 155,731	\$ -	0.028350	\$ -	25	\$ 303	0.028350	\$ -			
26	\$ 1,014	\$ 155,731	\$ -	0.022715	\$ -	26	\$ 233	0.022715	\$ -			
27	\$ 781	\$ 155,731	\$ -	0.019582	\$ -	27	\$ 180	0.019582	\$ -			
28	\$ 601	\$ 155,731	\$ -	0.016881	\$ -	28	\$ 138	0.016881	\$ -			
29	\$ 483	\$ 155,731	\$ -	0.014553	\$ -	29	\$ 108	0.014553	\$ -			
30	\$ 358	\$ 155,731	\$ -	0.012548	\$ -	30	\$ 82	0.012548	\$ -			
31	\$ 274	\$ 155,731	\$ -	0.010815	\$ -	31	\$ 63	0.010815	\$ -			
32	\$ 211	\$ 155,731	\$ -	0.009323	\$ -	32	\$ 49	0.009323	\$ -			
33	\$ 163	\$ 155,731	\$ -	0.008037	\$ -	33	\$ 37	0.008037	\$ -			
34	\$ 125	\$ 155,731	\$ -	0.008029	\$ -	34	\$ 29	0.008029	\$ -			
35	\$ 98	\$ 155,731	\$ -	0.005973	\$ -	35	\$ 22	0.005973	\$ -			
36	\$ 74	\$ 155,731	\$ -	0.005149	\$ -	36	\$ 17	0.005149	\$ -			
37	\$ 57	\$ 155,731	\$ -	0.004439	\$ -	37	\$ 13	0.004439	\$ -			
38	\$ 44	\$ 155,731	\$ -	0.003827	\$ -	38	\$ 10	0.003827	\$ -			
39	\$ 34	\$ 155,731	\$ -	0.003299	\$ -	39	\$ 8	0.003299	\$ -			
40	\$ 28	\$ 155,731	\$ -	0.002844	\$ -	40	\$ 8	0.003812	\$ -			
WORKING INTEREST APPRAISAL		\$ 1,170,132					ROYALTY INTEREST APPRAISAL		\$ 411,388			

09-012017 6621

NATURAL OIL/GAS APPRAISAL - FLEISH WELLS (YRMT 1)												
DECLINE RATES		2015	GAS INCOME		OIL INCOME	GAS CAP INCOME		OIL CAP INCOME				
YR 1	50%	WK INT	\$	2,436,170	\$	184,340	YR1	\$	648,118	\$	61,633	
YR 2	20%	ROY INT	\$	560,950	\$	44,825	YR2	\$	148,845	\$	11,879	
YR3+	23%							\$	478,125	\$	38,208	
								\$	100,988	\$	8,798	
\$ 1,134,118		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST					\$ 395,389
YEAR	WK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC			
1	\$ 897,748	\$ 147,294	\$ 580,453	0.929477	\$ 511,083	1	\$ 180,625	0.829477	\$ 149,044			
2	\$ 518,333	\$ 147,294	\$ 389,039	0.800411	\$ 295,363	2	\$ 118,789	0.800411	\$ 95,080			
3	\$ 397,577	\$ 147,294	\$ 250,282	0.690009	\$ 172,887	3	\$ 91,487	0.690009	\$ 63,113			
4	\$ 308,134	\$ 147,294	\$ 156,840	0.594836	\$ 94,483	4	\$ 70,430	0.594836	\$ 41,894			
5	\$ 235,723	\$ 147,294	\$ 88,429	0.512788	\$ 46,345	5	\$ 54,231	0.512789	\$ 27,809			
6	\$ 181,507	\$ 147,294	\$ 34,212	0.442080	\$ 15,124	6	\$ 41,756	0.442080	\$ 18,459			
7	\$ 138,780	\$ 147,294	\$ -	0.381088	\$ -	7	\$ 32,153	0.381088	\$ -			
8	\$ 107,815	\$ 147,294	\$ -	0.328522	\$ -	8	\$ 24,758	0.328522	\$ -			
9	\$ 82,864	\$ 147,294	\$ -	0.283209	\$ -	9	\$ 19,084	0.283209	\$ -			
10	\$ 63,806	\$ 147,294	\$ -	0.224148	\$ -	10	\$ 14,679	0.224148	\$ -			
11	\$ 48,130	\$ 147,294	\$ -	0.210470	\$ -	11	\$ 11,303	0.210470	\$ -			
12	\$ 37,830	\$ 147,294	\$ -	0.181440	\$ -	12	\$ 8,703	0.181440	\$ -			
13	\$ 29,129	\$ 147,294	\$ -	0.156414	\$ -	13	\$ 8,702	0.156414	\$ -			
14	\$ 22,429	\$ 147,294	\$ -	0.134840	\$ -	14	\$ 5,180	0.134840	\$ -			
15	\$ 17,271	\$ 147,294	\$ -	0.118241	\$ -	15	\$ 3,973	0.118241	\$ -			
16	\$ 13,298	\$ 147,294	\$ -	0.100208	\$ -	16	\$ 3,058	0.100208	\$ -			
17	\$ 10,240	\$ 147,294	\$ -	0.088386	\$ -	17	\$ 2,368	0.088386	\$ -			
18	\$ 7,885	\$ 147,294	\$ -	0.074471	\$ -	18	\$ 1,814	0.074471	\$ -			
19	\$ 6,071	\$ 147,294	\$ -	0.064199	\$ -	19	\$ 1,397	0.064199	\$ -			
20	\$ 4,575	\$ 147,294	\$ -	0.055344	\$ -	20	\$ 1,075	0.055344	\$ -			
21	\$ 3,800	\$ 147,294	\$ -	0.047710	\$ -	21	\$ 828	0.047710	\$ -			
22	\$ 2,772	\$ 147,294	\$ -	0.041129	\$ -	22	\$ 838	0.041129	\$ -			
23	\$ 2,134	\$ 147,294	\$ -	0.035456	\$ -	23	\$ 491	0.035456	\$ -			
24	\$ 1,843	\$ 147,294	\$ -	0.030588	\$ -	24	\$ 378	0.030588	\$ -			
25	\$ 1,265	\$ 147,294	\$ -	0.028350	\$ -	25	\$ 291	0.028350	\$ -			
26	\$ 974	\$ 147,294	\$ -	0.022715	\$ -	26	\$ 224	0.022715	\$ -			
27	\$ 750	\$ 147,294	\$ -	0.019582	\$ -	27	\$ 173	0.019582	\$ -			
28	\$ 578	\$ 147,294	\$ -	0.018881	\$ -	28	\$ 133	0.018881	\$ -			
29	\$ 445	\$ 147,294	\$ -	0.014553	\$ -	29	\$ 102	0.014553	\$ -			
30	\$ 343	\$ 147,294	\$ -	0.012546	\$ -	30	\$ 78	0.012546	\$ -			
31	\$ 264	\$ 147,294	\$ -	0.010815	\$ -	31	\$ 61	0.010815	\$ -			
32	\$ 203	\$ 147,294	\$ -	0.009323	\$ -	32	\$ 47	0.009323	\$ -			
33	\$ 156	\$ 147,294	\$ -	0.008037	\$ -	33	\$ 36	0.008037	\$ -			
34	\$ 120	\$ 147,294	\$ -	0.006929	\$ -	34	\$ 28	0.006929	\$ -			
35	\$ 93	\$ 147,294	\$ -	0.005973	\$ -	35	\$ 21	0.005973	\$ -			
36	\$ 71	\$ 147,294	\$ -	0.005149	\$ -	36	\$ 18	0.005149	\$ -			
37	\$ 55	\$ 147,294	\$ -	0.004439	\$ -	37	\$ 13	0.004439	\$ -			
38	\$ 42	\$ 147,294	\$ -	0.003827	\$ -	38	\$ 10	0.003827	\$ -			
39	\$ 33	\$ 147,294	\$ -	0.003299	\$ -	39	\$ 7	0.003299	\$ -			
40	\$ 25	\$ 147,294	\$ -	0.002844	\$ -	40	\$ 8	0.003812	\$ -			
WORKING INTEREST APPRAISAL					\$ 1,134,118	ROYALTY INTEREST APPRAISAL					\$ 395,389	

09-012017 6623

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 49

ACCOUNT:0300520001 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:CLINE 3 (11192.1)

STATUS:A API#01728 DATE: DAYS:365 BBLs: 0.000 MCFS: 901 RCPTS: 2074 GWI: 1815 OWI: 0

SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED: CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 99

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,461	804	746	208	194	0.928						
2	1,271	614	491	181	145	0.800						
3	1,106	448	309	158	109	0.690						
4	962	305	181	137	82	0.595						
5	837	180	92	119	61	0.513						
6	728	71	31	104	46	0.442						
7	634	0	0	90	0	0.381						
TOTAL:			1,851			637						

EXPENSE: 657 657 657

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 50

ACCOUNT:0300520002

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DAVIS 1 (11196.1)

STATUS:A API#:01695

DATE:05/30/1973 DAYS:365 BELS: 0.000 MCFS: 629 RCPTS: 1609 GWI: 1308 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 43

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT		GROSS INCOME	DISCOUNT		GROSS INCOME	NET DISCOUNT		GROSS INCOME	DISCOUNT	
1	1,053	579		242	225	0.928						
2	916	442		211	169	0.800						
3	797	323		183	127	0.690						
4	693	220		160	95	0.595						
5	603	129		139	71	0.513						
6	525	51		121	53	0.442						
7	457	0		105	0	0.381						
TOTAL:		1,334				740						
EXPENSE:	474			474								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 51

ACCOUNT: 0300520004 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: H B DAVIS #1
STATUS: A API#: 01730 DATE: 03/20/1975 DAYS: 365 BELS: MCFS: 459 RCPTS: 1704 GWI: 1384 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 41

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,114	613	569	258	239	0.928						
2	969	468	375	224	179	0.800						
3	843	342	236	195	135	0.690						
4	734	232	138	170	101	0.595						
5	638	137	70	148	76	0.513						
6	555	54	24	128	57	0.442						
7	483	0	0	112	0	0.381						

TOTAL: 1,412 786

EXPENSE: 501 501

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 52

ACCOUNT: 0300520005 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: DOAK 1 (11206.1)
STATUS: A API#: 01661 DATE: 04/17/1972 DAYS: 365 BBLs: 0.000 MCFS: 1658 RCPTS: 5083 GWI: 4149 OWI: 0
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED: CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 44

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,340	1,837	1,706	752	698	0.928						
2	2,906	1,403	1,123	654	524	0.800						
3	2,528	1,025	707	569	393	0.690						
4	2,199	696	414	495	295	0.595						
5	1,913	410	210	431	221	0.513						
6	1,665	162	71	375	166	0.442						
7	1,448	0	0	326	0	0.381						

TOTAL: 4,232 2,295

EXPENSE: 1503 1503 1503

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 53

ACCOUNT:0300520007 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:POWELL 1 (11248.1)
STATUS:A API#:01756 DATE:01/13/1974 DAYS:365 ABLS: 0.000 MCFS: 1 RCPTS: 77 GWI: 0 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000 5000
SETTLED YEARS: 42

GAS WORKING INTEREST	GAS ROYALTY INTEREST	OIL WORKING INTEREST	OIL ROYALTY INTEREST
GROSS	GROSS	GROSS	GROSS
DISCOUNT	DISCOUNT	NET DISCOUNT	DISCOUNT
INCOME	INCOME	INCOME	INCOME
INCOME FACTOR	INCOME FACTOR		INCOME FACTOR

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 54

ACCOUNT:0300520012 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DAVIS 4 (11198.1)
STATUS:A API#:01698 DATE:11/20/1972 DAYS:365 BELS: 0.000 MCPS: 159 RCPTS: 331 GWI: 0 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 44

GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
GROSS	NET	GROSS	DISCOUNT	GROSS	NET	GROSS	DISCOUNT
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 55

ACCOUNT: 0300735001

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: SMITH ALVADORE 1 (11261.1)

STATUS: A API#: 00170

DATE: 10/21/1946 DAYS: 365 BBLs: 0.000 MCFS: 1026 RCPTS: 4482 GWI: 3922 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 70

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	3,216	1,769	1,642	459	426	0.928						
2	2,830	1,383	1,107	404	323	0.800						
3	2,491	1,043	720	356	245	0.690						
4	2,192	744	443	313	186	0.595						
5	1,929	481	247	275	141	0.513						
6	1,697	250	111	242	107	0.442						
7	1,494	46	18	213	81	0.381						
8	1,314	0	0	188	0	0.329						

TOTAL:

4,287 1,511

EXPENSE:

1447 1447 1447

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 56

ACCOUNT: 0300735002 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: UNDERWOOD FH 2 (11269.1)
STATUS: A API#: 03862 DATE: 11/27/1990 DAYS: 365 BELLS: 0.000 MCPS: 1441 RCPTS: 7237 GWI: 6404 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.340 0.170 0.140 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000 5000
RATES USED: 16.000 DECLINE RATE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000 5000
SETTLED YEARS: 26

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	DISCOUNT	INCOME	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
1	5,059	2,584	2,783	658	611	0.928						
2	4,351	1,660	2,074	566	453	0.800						
3	3,742	1,011	1,465	487	336	0.690						
4	3,218	560	941	419	249	0.595						
5	2,767	252	491	360	185	0.513						
6	2,380	46	103	310	137	0.442						
7	2,047	0	0	266	0	0.381						

TOTAL:

6,112

1,970

EXPENSE: 2277

2277

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 57

FEB 15, 2017
01:26 PM

ACCOUNT:0300735004

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:UNDERWOOD MV 1 (11271.1)

STATUS:S API#:02778

DATE:10/15/1956 DAYS:365 BBLs: 0.000 MCFS: 162 RCPTS: GWI: OWI:

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.120 WELLLIFE:99 EXPENSE:

RATES USED:

WELLLIFE:99

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS:

GAS WORKING INTEREST	GAS ROYALTY INTEREST	OIL WORKING INTEREST	OIL ROYALTY INTEREST
GROSS	GROSS	GROSS	GROSS
INCOME	INCOME	INCOME	INCOME
DISCOUNT	DISCOUNT	NET	DISCOUNT
INCOME	INCOME FACTOR	INCOME	INCOME FACTOR

TOTAL:

FEB 15, 2017
01:26 PM
'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 58

ACCOUNT: 0300745001
RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: RANDOLPH 1 (11249.1)
STATUS: A API#: 01794 DATE: 02/14/1976 DAYS: 365 BBLs: 0.000 MCFS: 444 RCPTS: 924 GWI: 762 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE: 99 EXPENSE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 40

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	613	337	313	130	121	0.928						
2	534	258	206	113	91	0.800						
3	464	188	130	99	68	0.690						
4	404	128	76	86	51	0.595						
5	351	75	39	75	38	0.513						
6	306	30	13	65	29	0.442						
7	266	0	0	57	0	0.381						
TOTAL:			777			398						
EXPENSE:	276		276	276								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 59

ACCOUNT: 0316164971

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: BOND 1 (11187.1)

STATUS: A API#: 04971

DATE: 08/29/2005 DAYS: 365 BBLs: 0.000 MCPS: 4678 RCPTS: 10992 GWI: 9069 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.380 0.210 0.110 WELLLIFE: 99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 11

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	7,573	4,165	3,867	1,606	1,491	0.928						
2	6,740	3,332	2,667	1,429	1,144	0.800						
3	5,998	2,591	1,788	1,272	878	0.690						
4	5,338	1,931	1,148	1,132	673	0.595						
5	4,751	1,344	689	1,007	517	0.513						
6	4,229	821	363	897	396	0.442						
7	3,763	356	136	798	304	0.381						
8	3,349	0	0	710	0	0.329						

TOTAL:

10,657 5,403

EXPENSE: 3408

3408

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 60

ACCOUNT:0317171697

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DAVIS 3 (11197.1)

STATUS:A API#:01697

DATE:10/17/1972 DAYS:365 BBLs: 0.000 MCPS: 153 RCPTS: 354 GWI: 0 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 44

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT		GROSS	NET	DISCOUNT	GROSS	DISCOUNT	
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME FACTOR	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME FACTOR

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 61

FEB 15, 2017
01:26 PM

ACCOUNT:0317171706 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DAVIS 6 (11199.1)

STATUS:A API#:01706 DATE:12/15/1972 DAYS:365 BBLs: 0.000 MCFS: 13 RCPTS: 49 GWI: 0 OWI: 0

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 44

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	GROSS	DISCOUNT
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 62

ACCOUNT:0317171795 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:RANDOLPH 2 (11250.1)
STATUS:A API#:01795 DATE:12/01/1975 DAYS:365 BBLs: 0.000 MCPS: 288 RCPTS: 745 GWI: 615 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 41

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	495	272	253	105	97	0.928						
2	431	208	166	91	73	0.800						
3	375	152	105	79	55	0.690						
4	326	103	61	69	41	0.595						
5	284	61	31	60	31	0.513						
6	247	24	11	52	23	0.442						
7	215	0	0	45	0	0.381						
TOTAL:			627			319						
EXPENSE:	223		223			223						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 63

ACCOUNT: 0318185307 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: AG LEATHERMAN 1 (10806.1)
STATUS: A API#: 05307 DATE: 06/01/2007 DAYS: 365 BBLs: 0.000 MCPS: 678 RCPTS: 3040 GWI: 2535 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,079	1,143	1,062	414	384	0.928						
2	1,829	894	715	364	292	0.800						
3	1,610	674	465	321	221	0.690						
4	1,417	481	286	282	168	0.595						
5	1,247	311	160	248	127	0.513						
6	1,097	162	71	219	97	0.442						
7	965	30	11	192	73	0.381						
8	850	0	0	169	0	0.329						
TOTAL:			2,771			1,363						
EXPENSE:	935			935								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 64

ACCOUNT:0318185320

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:AG LEATHERMAN 3 (10808.1)

STATUS:A API#:05320

DATE:06/01/2007 DAYS:365 BBLs: 0.000 MCFS: 996 RCPTS: 3641 GWI: 3036 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 5000 5000 5000

SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,490	1,271	1,369	496	461	0.928						
2	2,191	857	1,070	437	349	0.800						
3	1,928	557	808	384	265	0.690						
4	1,697	343	576	338	201	0.595						
5	1,493	191	373	298	153	0.513						
6	1,314	86	194	262	116	0.442						
7	1,156	14	36	230	88	0.381						
8	1,017	0	0	203	0	0.329						
TOTAL:		3,318			1,632							

EXPENSE: 1120 1120 1120

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 65

ACCOUNT: 0318185470 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: DAVIS HB 2 (11203.1)
STATUS: A API#: 05470 DATE: 01/01/2008 DAYS: 365 BBLs: 0.000 MCFS: 1891 RCPTS: 6026 GWI: 4836 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 8

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	3,966	2,181	976	0.928	906	0.928		
2	3,490	1,705	859	0.800	687	0.800		
3	3,071	1,286	756	0.690	521	0.690		
4	2,702	918	665	0.595	396	0.595		
5	2,378	594	585	0.513	300	0.513		
6	2,093	308	515	0.442	228	0.442		
7	1,842	57	453	0.381	173	0.381		
8	1,621	0	399	0.329	0	0.329		
TOTAL:		5,286		3,211				

EXPENSE: 1784 1784 1784

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 66

ACCOUNT:0318185471

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DAVIS HB 3 (11204.1)

STATUS:A API#:05471

DATE:01/31/2008 DAYS:365 BBLs: 0.000 MCFS: 987 RCPTS: 2126 GWI: 1707 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	
1	1,400	770	715	344	319	0.928						
2	1,232	602	482	302	242	0.800						
3	1,084	454	313	266	184	0.690						
4	954	324	193	234	139	0.595						
5	839	210	107	206	106	0.513						
6	739	109	48	181	80	0.442						
7	650	20	8	160	61	0.381						
8	572	0	0	140	0	0.329						
TOTAL:			1,866			1,130						

EXPENSE: 630

630

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 67

ACCOUNT: 0320104585 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: UNDERWOOD 1 (10871.1)
STATUS: M API#: 04585 DATE: 10/08/2008 DAYS: 365 BELLS: 0.000 MCFS: 16149 RCPTS: 70868 GWI: 60376 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	39,546	27,682	25,702	6,872	6,381	0.928						
2	30,451	18,587	14,877	5,292	4,235	0.800						
3	23,447	11,583	7,992	4,075	2,811	0.690						
4	18,054	6,190	3,682	3,137	1,866	0.595						
5	13,902	2,038	1,045	2,416	1,239	0.513						
6	10,704	0	0	1,860	0	0.442						
TOTAL:			53,299			16,533						
EXPENSE:	11864		11864			11864						

'DOBDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 68

ACCOUNT: 0320105308

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: AG LEATHERMAN 2 (10807.1)

STATUS: A API#: 05308

DATE: 06/01/2007 DAYS: 365 BEELS: 0.000 MCPS: 753 RCPTS: 3544 GWI: 2956 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	2,424	1,333	1,238	482	448	0.928						
2	2,133	1,042	834	424	340	0.800						
3	1,877	786	543	373	258	0.690						
4	1,652	561	334	329	195	0.595						
5	1,454	363	186	289	148	0.513						
6	1,279	188	83	254	112	0.442						
7	1,126	35	13	224	85	0.381						
8	991	0	0	197	0	0.329						
TOTAL:			3,231		1,586							
EXPENSE:	1091		1091	1091								

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 69

ACCOUNT:0320105657 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:ROMINGER 1 (10862.1)
STATUS:M API#:05657 DATE:05/23/2008 DAYS:365 BBLs: 0.000 MCFS: 12548 RCPTS: 48902 GWI: 41261 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	27,026	18,918	17,565	5,005	4,647	0.928						
2	20,810	12,702	10,167	3,854	3,085	0.800						
3	16,024	7,916	5,462	2,967	2,048	0.690						
4	12,338	4,230	2,516	2,285	1,359	0.595						
5	9,500	1,393	714	1,759	902	0.513						
6	7,315	0	0	1,355	0	0.442						
TOTAL:			36,425			12,040						

EXPENSE: 8108 8108 8108

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 70

ACCOUNT:0320105672

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:MUTSHELKNAUS 6 (10856.1)

STATUS:M API#:05672

DATE:07/29/2008 DAYS:365 BHLS: 0.000 MCFS: 20678 RCPTS: 87340 GWI: 73693 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 30000 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 30000 30000 30000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	48,269	33,788	31,372	8,939	8,299	0.928						
2	37,167	22,686	18,158	6,883	5,509	0.800						
3	28,619	14,138	9,755	5,300	3,657	0.690						
4	22,036	7,556	4,494	4,081	2,427	0.595						
5	16,968	2,487	1,275	3,142	1,611	0.513						
6	13,065	0	0	2,420	0	0.442						

TOTAL:

65,055

21,504

EXPENSE:

14481

14481

14481

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 71

FEB 15, 2017
01:26 PM

ACCOUNT:0320115585 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:NEWLON 1 (10857.1)
STATUS:M API#:05585 DATE:01/29/2009 DAYS:365 BBLs: 0.000 MCPS: 15850 RCPTS: 54077 GWI: 45628 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	29,886	19,424	20,920	5,534	5,136	0.928						
2	23,012	11,243	14,047	4,261	3,411	0.800						
3	17,720	6,040	8,754	3,281	2,264	0.690						
4	13,644	2,783	4,678	2,526	1,503	0.595						
5	10,506	790	1,540	1,945	998	0.513						
6	8,090	0	0	1,498	0	0.442						

TOTAL: 40,280 13,313

EXPENSE: 8966 8966

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 72

ACCOUNT: 0320115586

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:NEWLON 2 (10858.1)

STATUS:M API#: 05586

DATE: 01/07/2009 DAYS: 365 BELS: 0.000 MCFS: 20348 RCPTS: 86594 GWI: 73064 OWI: 0

SYSTEM RATES:

SYSTEM RATES:			
CAP RATE:	16.000	DECLINE RATE:	0.590
			0.290
		0.230 WELLIFE:	99
		EXPENSE:	0.3
			30000
			30000

RATES USED:

RATES USED:		
CAP RATE:	16.000	DECLINE RATE:
		WELLIFE:99
		EXPENSE:
		0.3
		30000
		30000

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	47,857	33,500	31,104	8,862	8,228	0.928						
2	36,850	22,493	18,003	6,824	5,462	0.800						
3	28,374	14,017	9,672	5,254	3,626	0.690						
4	21,848	7,491	4,456	4,046	2,407	0.595						
5	16,823	2,466	1,265	3,115	1,597	0.513						
6	12,954	0	0	2,399	0	0.442						

TOTAL:

64,500

21,320

EXPENSE:

14357
14357
14357

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 73

FEB 15, 2017
01:26 PM

ACCOUNT: 0320115604 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: VAN SCOY 1 (10873.1)
 STATUS: M API#: 05604 DATE: 04/25/2009 DAYS: 365 BBLs: 0.000 MCFS: 9331 RCPPTS: 42253 GWI: 35651 OWI: 0
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
 SETTLED YEARS: 7

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	23,351	16,346	15,177	4,324	4,015	0.928		
2	17,981	10,975	8,785	3,330	2,665	0.800		
3	13,845	6,840	4,719	2,564	1,769	0.690		
4	10,661	3,655	2,174	1,974	1,174	0.595		
5	8,209	1,203	617	1,520	780	0.513		
6	6,321	0	0	1,170	0	0.442		
TOTAL:			31,472				10,403	
EXPENSE:	7005		7005				7005	

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 74

ACCOUNT:0320115605 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:SHAUGHNESSY 1 (10865.1)
STATUS:M API#:05605 DATE:07/28/2009 DAYS:365 BBLs: 0.000 MCFS: 13907 RCPTS: 58037 GWI: 50782 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME FACTOR	
1	33,262	23,284	21,618	4,752	4,412	0.928						
2	25,612	15,633	12,513	3,659	2,929	0.800						
3	19,721	9,743	6,722	2,817	1,944	0.690						
4	15,185	5,207	3,097	2,169	1,290	0.595						
5	11,693	1,714	879	1,670	857	0.513						
6	9,003	0	0	1,286	0	0.442						

TOTAL:

44,830

11,432

EXPENSE:

9979

9979

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 75

ACCOUNT: 0320115609 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: FRUM 1 (10842.1)
 STATUS: M API#: 05609 DATE: 07/01/2009 DAYS: 365 BBLs: 0.000 MCFS: 18709 RCPTS: 78006 GWI: 65825 OWI: 0
 SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
 CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE:
 SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	43,115	30,181	28,022	7,979	7,408	0.928						
2	33,199	20,264	16,220	6,143	4,917	0.800						
3	25,563	12,628	8,714	4,730	3,264	0.690						
4	19,684	6,749	4,015	3,642	2,167	0.595						
5	15,156	2,222	1,139	2,805	1,438	0.513						
6	11,670	0	0	2,160	0	0.442						
TOTAL:			58,109		19,194							
EXPENSE:	12935		12935				12935					

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 76

ACCOUNT: 0320115638 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: S HURST 1 (10863.1)
STATUS: M API#: 05638 DATE: 06/24/2009 DAYS: 365 BBLs: 0.000 MCFS: 18657 RCPIS: 83306 GMI: 70289 OWI: 0
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 30000 30000 30000
CAP RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000
RATES USED: CAP RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME	DISCOUNT INCOME	GROSS INCOME	NET DISCOUNT INCOME	DISCOUNT INCOME	GROSS INCOME	NET DISCOUNT INCOME	DISCOUNT INCOME	GROSS INCOME	NET DISCOUNT INCOME	DISCOUNT INCOME
1	46,039	32,228	29,922	8,526	7,916	0.928						
2	35,450	21,638	17,320	6,565	5,255	0.800						
3	27,297	13,485	9,305	5,055	3,488	0.690						
4	21,018	7,207	4,287	3,892	2,315	0.595						
5	16,184	2,372	1,217	2,997	1,537	0.513						
6	12,462	0	0	2,308	0	0.442						
TOTAL:			62,050			20,512						

EXPENSE: 13812 13812 13812 13812

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 77

ACCOUNT:0320115647 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:CHESS 1 (10835.1)
STATUS:M API#:05647 DATE:04/06/2009 DAYS:365 HBLS: 0.000 MCFS: 4673 RCPTS: 27804 GWI: 23568 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE:16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
SETTLED YEARS: 7

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	15,437	10,806	2,775	0.928	2,575	0.928		
2	11,887	7,255	2,136	0.800	1,710	0.800		
3	9,153	4,522	1,645	0.690	1,135	0.690		
4	7,048	2,416	1,267	0.595	753	0.595		
5	5,427	795	975	0.513	500	0.513		
6	4,178	0	751	0.442	0	0.442		
TOTAL:		20,806		6,675				

EXPENSE: 4631 4631 4631

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 78

ACCOUNT:0320115665

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:UNDERWOOD 2 (10872.1)

STATUS:M API#:05665

DATE:07/11/2009 DAYS:365 BBLs: 0.000 MCFS: 18938 RCPTS: 83465 GWI: 70415 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	46,122	29,976	32,285	8,548	7,936	0.928						
2	35,514	17,351	21,677	6,582	5,268	0.800						
3	27,346	9,321	13,509	5,068	3,497	0.690						
4	21,056	4,294	7,220	3,902	2,321	0.595						
5	16,213	1,219	2,377	3,005	1,541	0.513						
6	12,484	0	0	2,314	0	0.442						
TOTAL:		62,161			20,564							

EXPENSE: 13837 13837 13837

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 79

ACCOUNT:0320115669

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:M WELCH 1 (10847.1)

STATUS:M API#:05669

DATE:11/20/2009 DAYS:365 BBLs: 0.000 MCFS: 7342 RCPTS: 39346 GWI: 33198 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	21,745	14,133	15,221	4,027	3,739	0.928						
2	16,743	8,180	10,220	3,101	2,482	0.800						
3	12,892	4,395	6,369	2,388	1,647	0.690						
4	9,927	2,025	3,404	1,838	1,094	0.595						
5	7,644	575	1,121	1,416	726	0.513						
6	5,886	0	0	1,090	0	0.442						
TOTAL:		29,307			9,688							

EXPENSE: 6523

6523

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 80

ACCOUNT:0320115680

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:JL COTTRILL 1 (10846.1)

STATUS:M API#:05680

DATE:03/18/2009 DAYS:365 BBLs: 0.000 MCFS: 15122 RCPTS: 64918 GWI: 54774 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE:99 EXPENSE: 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 30000 30000

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	35,877	25,114	23,318	6,644	6,169	0.928						
2	27,625	16,862	13,497	5,116	4,095	0.800						
3	21,271	10,508	7,251	3,939	2,718	0.690						
4	16,379	5,616	3,341	3,033	1,804	0.595						
5	12,612	1,849	948	2,336	1,198	0.513						
6	9,711	0	0	1,798	0	0.442						

TOTAL:

48,354 15,984

EXPENSE:

10763 10763 10763

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 81

ACCOUNT:0320115691 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:MALONEY 1 (10848.1)
STATUS:M API#:05691 DATE:10/15/2009 DAYS:365 BBLs: 0.000 MCFS: 24636 RCPTS: 101895 GWI: 85974 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	56,313	39,419	36,600	10,428	9,682	0.928						
2	43,361	26,467	21,185	8,030	6,427	0.800						
3	33,388	16,494	11,381	6,183	4,266	0.690						
4	25,709	8,815	5,243	4,761	2,832	0.595						
5	19,796	2,902	1,488	3,666	1,880	0.513						
6	15,243	0	0	2,823	0	0.442						

TOTAL: 75,897 25,087

EXPENSE: 16894 16894 16894

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 82

ACCOUNT: 0320115751

RESOURCE: CS OWNER: ANTERO RESOURCES CORPORATI LOCATION: FRANCIS ASH 1 (10828.1)

STATUS: M API#: 05751

DATE: 09/05/2009 DAYS: 365 BBLs: 0.000 MCFS: 6126 RCPTS: 21929 GWI: 18588 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 30000 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 30000 30000 30000

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	12,175	7,913	8,523	2,188	2,032	0.928						
2	9,375	4,580	5,722	1,685	1,349	0.800						
3	7,219	2,461	3,566	1,297	895	0.690						
4	5,558	1,134	1,906	999	594	0.595						
5	4,280	322	627	769	394	0.513						
6	3,296	0	0	592	0	0.442						

TOTAL:

16,409

5,265

EXPENSE:

3653

3653

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 83

ACCOUNT:0320115774 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HICKMAN FORD 1 (10844.1)
STATUS:M API#:05774 DATE:08/21/2009 DAYS:365 BBLs: 0.000 MCFS: 12973 ROPTS: 58674 GWI: 49507 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE:16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	32,427	22,699	21,075	6,004	5,575	0.928						
2	24,969	15,241	12,199	4,623	3,701	0.800						
3	19,226	9,498	6,554	3,560	2,456	0.690						
4	14,804	5,076	3,019	2,741	1,631	0.595						
5	11,399	1,671	857	2,111	1,082	0.513						
6	8,777	0	0	1,625	0	0.442						
TOTAL:			43,704		14,445							

EXPENSE: 9728 9728 9728

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 84

ACCOUNT:0320115776

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:MALONEY 2 (10849.1)

STATUS:M API#:05776

DATE:08/31/2009 DAYS:365 BBLs: 0.000 MCFS: 22627 RCPTS: 88747 GWI: 74880 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	49,046	34,332	31,877	9,083	8,433	0.928						
2	37,766	23,052	18,451	6,994	5,598	0.800						
3	29,080	14,366	9,912	5,385	3,716	0.690						
4	22,391	7,677	4,567	4,147	2,467	0.595						
5	17,241	2,527	1,296	3,193	1,637	0.513						
6	13,276	0	0	2,459	0	0.442						

TOTAL:

66,103

21,851

EXPENSE:

14714

14714

14714

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 85

ACCOUNT:0320115777 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:VAN SCOY 2 (10874.1)
STATUS:M API#:05777 DATE:03/05/2009 DAYS:365 BBLs: 0.000 MCFS: 16493 RCPTS: 60325 GWI: 50899 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE:16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
SETTLED YEARS: 7

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS	DISCOUNT	GROSS	DISCOUNT	GROSS	NET	GROSS	DISCOUNT
	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
1	33,339	23,337	6,174	5,732	0.928			
2	25,671	15,669	4,754	3,805	0.800			
3	19,767	9,765	3,661	2,526	0.690			
4	15,220	5,219	2,819	1,677	0.595			
5	11,720	1,718	2,170	1,113	0.513			
6	9,024	0	1,671	0	0.442			
TOTAL:		44,933		14,853				
EXPENSE:	10002	10002	10002	10002				

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 86

ACCOUNT: 0320115781

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: WELCH FRY 1 (10875.1)

STATUS: M API#: 05781

DATE: 09/03/2009 DAYS: 365 BELLS: 0.000 MCFS: 14691 RCPTS: 55649 GWI: 46948 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000

SETTLE YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	30,751	19,986	21,526	5,699	5,292	0.928						
2	23,678	11,568	14,453	4,388	3,512	0.800						
3	18,232	6,215	9,007	3,379	2,332	0.690						
4	14,039	2,863	4,814	2,602	1,548	0.595						
5	10,810	813	1,585	2,003	1,037	0.513						
6	8,324	0	0	1,543	0	0.442						

TOTAL:

41,445

13,711

EXPENSE:

9225

9225

ACCOUNT: 0320115814

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:D POWELL 7 (10839.1)

STATUS: M API#: 05814

DATE: 05/01/2009	DAYS: 365	BBLs:	0.000	MCPS:	2496	RCPTS:	10805	GWI:	9076	OWI:	0

SYSTEM RATES:				
CAP RATE:	16.000	DECLINE RATE:	0.290	0.230 WELLLIFE:99
				EXPENSE:
				0.3
				30000
				30000

RATES USED:			
CAP RATE:	16.000	DECLINE RATE:	0.3
		WELL LIFE:	99
		EXPENSE:	30000
			30000

SETTLED YEARS: 7

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS	NET	GROSS	DISCOUNT	GROSS	NET	GROSS	DISCOUNT
	INCOME	INCOME	INCOME	INCOME FACTOR	INCOME	INCOME	INCOME	INCOME FACTOR
1	5,945	4,161	3,864		1,132	1,051	0.928	
2	4,577	2,794	2,236		872	698	0.800	
3	3,525	1,741	1,201		671	463	0.690	
4	2,714	931	554		517	308	0.595	
5	2,090	306	157		398	204	0.513	
6	1,609	0	0		307	0	0.442	
TOTAL:			8,012			2,724		
EXPENSE:	1783		1783		1783			

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 88

ACCOUNT:0320115817 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:CONNELLY 1 (10837.1)
STATUS:M API#:05817 DATE:08/23/2009 DAYS:365 BBLs: 0.000 MCPS: 19785 RCPTS: 93480 GWI: 78874 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME
	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
1	51,662	33,577	36,164	9,567	8,883	0.928						
2	39,780	19,435	24,281	7,367	5,886	0.800						
3	30,631	10,441	15,132	5,672	3,914	0.690						
4	23,586	4,810	8,087	4,368	2,598	0.595						
5	18,161	1,365	2,662	3,363	1,725	0.513						
6	13,984	0	0	2,590	0	0.442						

TOTAL: 69,629 23,015

EXPENSE: 15499 15499

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 89

ACCOUNT: 0320115839 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: JF ESTLACK 1 (10845.1)
STATUS: M API#: 05839 DATE: 10/29/2009 DAYS: 365 BBLs: 0.000 MCFS: 16098 RCPIS: 74054 GWI: 62483 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	40,926	28,648	26,599	7,579	7,037	0.928						
2	31,513	19,235	15,396	5,836	4,671	0.800						
3	24,265	11,987	8,271	4,494	3,101	0.690						
4	18,684	6,406	3,811	3,460	2,058	0.595						
5	14,387	2,109	1,081	2,664	1,366	0.513						
6	11,078	0	0	2,051	0	0.442						
TOTAL:			55,159			18,233						

EXPENSE: 12278 12278 12278

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 90

ACCOUNT:0320115846

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:J YAREMKO 1 (10879.1)

STATUS:M API#:05846

DATE:09/25/2009 DAYS:365 BELS: 0.000 MCFS: 11214 RCPTS: 57628 GWI: 47428 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 30000 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 30000 30000 30000

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	31,065	21,746	20,190	6,681	6,203	0.928						
2	23,920	14,601	11,687	5,144	4,118	0.800						
3	18,419	9,099	6,278	3,961	2,733	0.690						
4	14,182	4,863	2,893	3,050	1,814	0.595						
5	10,920	1,601	821	2,349	1,204	0.513						
6	8,409	0	0	1,808	0	0.442						

TOTAL:

41,869

16,073

EXPENSE:

9320

9320

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 91

FEB 15, 2017
01:26 PM

ACCOUNT: 0320115858
STATUS: A API#: 05858
DATE: 08/09/2009 DAYS: 365
RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: CONNELLY 3 (10825.1)
BELS: 0.000 MCFS: 15934 RCPTS: 79039 GWI: 63693 OWI: 2997
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.380 0.210 0.110 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	53,184	48,184	44,737	9,848	9,144	0.928						
2	47,333	42,333	33,884	8,765	7,015	0.800						
3	42,127	37,127	25,618	7,801	5,382	0.690						
4	37,493	32,493	19,328	6,943	4,130	0.595						
5	33,369	28,369	14,547	6,179	3,168	0.513						
6	29,698	24,698	10,918	5,499	2,431	0.442						
7	26,431	21,431	8,167	4,894	1,865	0.381						
8	23,524	18,524	6,085	4,356	1,431	0.329						
9	20,936	15,936	4,513	3,877	1,098	0.283						
10	18,633	13,633	3,329	3,450	842	0.244						
11	16,584	11,584	2,438	3,071	646	0.210						
12	14,759	9,759	1,771	2,733	496	0.181						
13	13,136	8,136	1,273	2,432	380	0.156						
14	11,691	6,691	902	2,165	292	0.135						
15	10,405	5,405	628	1,927	224	0.116						
16	9,260	4,260	427	1,715	172	0.100						
17	8,242	3,242	280	1,526	132	0.086						
18	7,335	2,335	174	1,358	101	0.074						
19	6,528	1,528	98	1,209	78	0.064						
20	5,810	810	45	1,076	60	0.055						
21	5,171	171	8	958	46	0.048						
22	4,502	0	0	852	0	0.041						
TOTAL:			179,171			39,133						
EXPENSE:	5000		5000	5000								

FEB 15, 01:26 PM

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:S HURST 2 (10864.1)

DATE:12/17/2009 DAYS:365 BBLs: 0.000 MCFS: 7914 RCPTS: 51236 GWI: 43231 OWI:

16.000	DECLINE RATE:	0.590	0.230	WEILLIFE:99	EXPENSE:	0.3	30000

16.000	DECLINE RATE:	WEILLIFE:99	EXPENSE:	0.3	30000	30000

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	28,316	19,821	18,404	5,243	4,868	0.928						
2	21,804	13,309	10,652	4,037	3,232	0.800						
3	16,789	8,294	5,723	3,109	2,145	0.690						
4	12,927	4,432	2,637	2,394	1,424	0.595						
5	9,954	1,459	748	1,843	945	0.513						
6	7,665	0	0	1,419	0	0.442						

TOTAL:

30,164

12,614

EXPENSE: 8495

8495

8495

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 93

ACCOUNT:0320125761 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:SHAUGHNESSY 3 (10866.1)
STATUS:M API#:05761 DATE:04/01/2010 DAYS:365 BELS: 0.000 MCFS: 18018 RCPTS: 56754 GWI: 49660 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 6

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME
	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
1	32,527	21,141	22,769	4,647	4,314	0.928						
2	25,046	12,237	15,288	3,578	2,864	0.800						
3	19,285	6,574	9,527	2,755	1,901	0.690						
4	14,850	3,029	5,092	2,121	1,262	0.595						
5	11,434	860	1,676	1,633	838	0.513						
6	8,804	0	0	1,258	0	0.442						

TOTAL: 43,839 11,178

EXPENSE: 9758 9758

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 94

ACCOUNT: 0320125966 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: TAYLOR CHARTER 1 (10870.1)
STATUS: M API#: 05966 DATE: 09/01/2010 DAYS: 365 BBLs: 0.000 MCFS: 7339 RCPTS: 29471 GWI: 24866 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
SETTLED YEARS: 6

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME
	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
1	16,287	10,586	11,401	3,016	2,801	0.928						
2	12,541	6,127	7,655	2,323	1,859	0.800						
3	9,657	3,292	4,771	1,788	1,234	0.690						
4	7,436	1,517	2,549	1,377	819	0.595						
5	5,725	430	839	1,060	544	0.513						
6	4,409	0	0	816	0	0.442						

TOTAL: 21,951 7,256

EXPENSE: 4886 4886

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 95

FEB 15, 2017
01:26 PM

ACCOUNT: 0320146080 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: NEELY UNIT 1H AND NEELY UNIT 2H (7573
STATUS: Z API#: 06080 DATE: 12/30/2012 DAYS: 365 BBLs: 202.000 MCFS: 475115 RCPTS: 2157631 GWI: 1812590 OWI: 7573
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 4 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,187,246	1,012,975	940,524	220,122	204,378	0.928	4,960	4,936	4,583	920	854	0.928
2	914,180	739,908	592,230	169,494	135,665	0.800	3,819	3,796	3,038	708	567	0.800
3	703,918	529,647	365,461	130,510	90,053	0.690	2,941	2,917	2,013	545	376	0.690
4	542,017	367,745	218,748	100,493	59,777	0.595	2,265	2,241	1,333	420	250	0.595
5	417,353	243,081	124,649	77,380	39,679	0.513	1,744	1,720	882	323	166	0.513
6	321,362	147,090	65,023	59,582	26,339	0.442	1,343	1,319	583	249	110	0.442
7	247,449	73,177	27,887	45,878	17,484	0.381	1,034	1,010	385	192	73	0.381
8	190,536	16,264	5,343	35,326	11,605	0.329	796	772	254	148	48	0.329
9	146,712	0	0	27,201	0	0.283	613	589	167	114	32	0.283
10							472	448	109	88	21	0.244
11							363	340	71	67	14	0.210
12							280	256	46	52	9	0.181
13							215	192	30	40	6	0.156
14							166	142	19	31	4	0.135
15							128	104	12	24	3	0.116
16							98	74	7	18	2	0.100
17							76	52	4	14	1	0.086
18							58	34	3	11	1	0.074
19							45	21	1	8	1	0.064
20							35	11	1	6	0	0.055
21							27	3	0	5	0	0.048
22							21	0	0	4	0	0.041
TOTAL:			2,339,865		584,980				13,542		2,539	

GS EXPENSE: 174272 174272
OL EXPENSE: 24 24

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 96

ACCOUNT: 0320146080 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: NEELY UNIT 1H AND NEELY UNIT 2H (10072
STATUS: Z API#: 06086 DATE: 12/23/2012 DAYS: 365 BBLs: 253.000 MCPS: 592837 RCPTS: 2573954 GWI: 2161298 OWI: 10072
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 OL EXPENSE: 0.2 5750 5750
SETTLED YEARS: 4 GS EXPENSE: 0.2 175000 175000 175000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,415,650	1,241,462	1,152,669	262,469	243,696	0.928	6,597	6,101	6,570	1,224	1,136	0.928
2	1,090,051	915,862	733,066	202,101	161,764	0.800	5,080	4,045	5,053	942	754	0.800
3	839,339	665,151	458,960	155,618	107,378	0.690	3,911	2,681	3,885	725	501	0.690
4	646,291	472,103	280,824	119,826	71,277	0.595	3,012	1,776	2,985	559	332	0.595
5	497,644	323,456	165,865	92,266	47,313	0.513	2,319	1,176	2,292	430	221	0.513
6	383,186	208,998	92,390	71,045	31,406	0.442	1,786	778	1,759	331	146	0.442
7	295,053	120,865	46,060	54,704	20,847	0.381	1,375	514	1,348	255	97	0.381
8	227,191	53,003	17,413	42,122	13,838	0.329	1,059	339	1,032	196	65	0.329
9	174,937	749	212	32,434	9,186	0.283	815	223	789	151	43	0.283
10	134,702	0	0	24,974	0	0.244	628	147	601	116	28	0.244
11							483	96	457	90	19	0.210
12							372	63	346	69	13	0.181
13							287	41	260	53	8	0.156
14							221	26	194	41	6	0.135
15							170	17	143	32	4	0.116
16							131	10	104	24	2	0.100
17							101	6	74	19	2	0.086
18							78	4	51	14	1	0.074
19							60	2	33	11	1	0.064
20							46	1	19	9	0	0.055
21							35	0	9	7	0	0.048
22							27	0	1	5	0	0.041
23							21	0	0	4	0	0.035

TOTAL:

2,947,458

706,705

18,044

3,379

OL EXPENSE: 27

27

GS EXPENSE: 174188

174188

174188

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 97

FEB 15, 2017
01:26 PM

ACCOUNT:0320145085 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:LEATHERMAN UNIT 2H (10204.1) 9909
STATUS:Z API#:06085 DATE:12/24/2012 DAYS:365 BBLS: 184.000 MCFS: 449194 RCPTS: 2280191 GWI: 1932736 OWI: 1932736
SYSTEM RATES: EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE:99
RATES USED: GS EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 OL EXPENSE: 0.2 5750 5750 5750
SETTLED YEARS: 4

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	1,265,942	1,091,835		219,965	204,232	0.928	6,490	6,461		1,128	1,047	0.928
2	974,775	800,668		169,373	135,568	0.800	4,998	4,968		868	635	0.800
3	750,577	576,470		130,417	89,989	0.690	3,848	3,819		669	461	0.690
4	577,944	403,837		100,421	59,734	0.595	2,963	2,934		515	306	0.595
5	445,017	270,910		77,324	39,651	0.513	2,282	2,252		396	203	0.513
6	342,663	168,556		59,540	26,320	0.442	1,757	1,727		305	135	0.442
7	263,851	89,743		45,846	17,471	0.381	1,353	1,323		235	90	0.381
8	203,165	29,058		35,301	11,597	0.329	1,042	1,012		181	59	0.329
9	156,437	0		27,182	0	0.283	802	773		139	39	0.283
10				618	588		476	446		107	26	0.244
11				476	446		366	337		83	17	0.210
12				366	337		282	253		64	12	0.181
13				282	253		217	188		49	8	0.156
14				217	188		167	138		38	5	0.135
15				167	138		129	99		29	3	0.116
16				99	70		99	6		22	2	0.100
17				76	47		76	3		17	1	0.086
18				59	29		59	2		13	1	0.074
19				45	16		45	1		10	1	0.064
20				35	6		35	0		8	0	0.055
21				27	0		27	0		6	0	0.048
22										5	0	0.041
TOTAL:				2,549,770				17,732			3,114	
GS EXPENSE:	174107			174107								
OL EXPENSE:	29			29								

584,563

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 98

ACCOUNT: 0320156084 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: LEATHERMAN UNIT 1H (10203.1)
STATUS: Z API#: 06084 DATE: 01/01/2013 DAYS: 365 BELLS: 196.000 MCPS: 468876 RCPTS: 2070463 GWI: 1756000 OWI: 7965
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,150,180	975,970	906,166	199,850	185,556	0.928	5,217	5,191	4,820	907	842	0.928
2	885,639	711,429	569,435	153,884	123,171	0.800	4,017	3,991	3,195	698	559	0.800
3	681,942	507,732	350,340	118,491	81,760	0.690	3,093	3,067	2,116	537	371	0.690
4	525,095	350,885	208,719	91,238	54,272	0.595	2,382	2,356	1,401	414	246	0.595
5	404,323	230,113	118,000	70,253	36,025	0.513	1,834	1,808	927	319	163	0.513
6	311,329	137,119	60,615	54,095	23,913	0.442	1,412	1,386	613	245	108	0.442
7	239,723	65,513	24,966	41,653	15,873	0.381	1,087	1,061	404	189	72	0.381
8	184,587	10,377	3,409	32,073	10,537	0.329	837	811	267	145	48	0.329
9	142,132	0	0	24,696	0	0.283	645	619	175	112	32	0.283
10				496			496	470	115	86	21	0.244
11				382			382	356	75	66	14	0.210
12				294			294	268	49	51	9	0.181
13				227			227	201	31	39	6	0.156
14				175			175	149	20	30	4	0.135
15				134			134	108	13	23	3	0.116
16				103			103	77	8	18	2	0.100
17				80			80	54	5	14	1	0.086
18				61			61	35	3	11	1	0.074
19				47			47	21	1	8	1	0.064
20				36			36	10	1	6	0	0.055
21				28			28	2	0	5	0	0.048
22				22			22	0	0	4	0	0.041

TOTAL: 2,241,650 531,106 14,238 2,503

GS EXPENSE: 174210 174210

OL EXPENSE: 26 26

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 99

FEB 15, 2017
01:26 PM

ACCOUNT: 0320156128
STATUS: Z API#: 06128
RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: MOORE UNIT 1H (10259.1)
DATE: 06/01/2013 DAYS: 365 BBLs: 163.000 MCFS: 661081 RCPTS: 1472272 GWI: 1215048 OWI: 5232
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	795,856	636,685	591,148	164,347	152,593	3,402	3,427	3,402	3,159	707	657	0.928
2	612,809	453,638	363,097	126,547	101,290	2,614	2,639	2,614	2,092	545	436	0.800
3	471,863	312,692	215,760	97,442	67,236	2,007	2,032	2,007	1,385	419	289	0.690
4	363,335	204,163	121,444	75,030	44,631	1,540	1,565	1,540	916	323	192	0.595
5	279,768	120,596	61,841	57,773	29,625	1,180	1,205	1,180	605	249	128	0.513
6	215,421	56,250	24,866	44,485	19,665	0.442	928	903	399	191	85	0.442
7	165,874	6,703	2,554	34,254	13,054	0.381	714	690	263	147	56	0.381
8	127,723	0	0	26,375	0	0.329	550	525	173	114	37	0.329
9				423	399	113	423	399	113	87	25	0.283
10				326	301	74	326	301	74	67	16	0.244
11				251	226	48	251	226	48	52	11	0.210
12				193	169	31	193	169	31	40	7	0.181
13				149	124	19	149	124	19	31	5	0.156
14				115	90	12	115	90	12	24	3	0.135
15				88	64	7	88	64	7	18	2	0.116
16				68	43	4	68	43	4	14	1	0.100
17				52	28	2	52	28	2	11	1	0.086
18				40	16	1	40	16	1	8	1	0.074
19				31	6	0	31	6	0	6	0	0.064
20				24	0	0	24	0	0	5	0	0.055

TOTAL: 1,380,709 428,093 9,304 1,953

GS EXPENSE: 159171 159171
OL EXPENSE: 25 25

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 100

ACCOUNT: 0320156129 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: MOORE UNIT 2H (10260.1)
STATUS: Z API#: 06129 DATE: 06/01/2013 DAYS: 365 BELS: 356.000 MCPS: 638838 RCPTS: 1394483 GNI: 1144911 OWI: 10894
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	749,917	557,024	599,933	154,861	143,785	0.928	7,136	6,575	7,081	1,473	1,368	0.928
2	577,436	342,138	427,453	119,243	95,443	0.800	5,494	4,354	5,440	1,134	908	0.800
3	444,626	203,306	294,642	91,817	63,355	0.690	4,231	2,882	4,176	673	603	0.690
4	342,362	114,434	192,378	70,699	42,054	0.595	3,258	1,906	3,203	518	400	0.595
5	263,619	58,271	113,635	54,438	27,915	0.513	2,508	1,258	2,454	399	266	0.513
6	202,986	23,430	53,003	41,918	18,530	0.442	1,931	830	1,877	307	175	0.442
7	156,299	2,407	6,316	32,276	12,300	0.381	1,487	546	1,433	236	117	0.381
8	120,351	0	0	24,853	0	0.329	1,145	358	1,091	182	78	0.329
9							882	234	828	140	52	0.283
10							679	153	625	108	34	0.244
11							523	99	469	83	23	0.210
12							403	63	348	64	15	0.181
13							310	40	256	49	10	0.156
14							239	25	184	38	7	0.135
15							184	15	130	29	4	0.116
16							142	9	87	22	3	0.100
17							109	5	55	17	2	0.086
18							84	2	30	13	1	0.074
19							65	1	10	10	0	0.064
20							50	0	0	10	0	0.055
TOTAL:		1,301,010		403,383				19,354			4,066	

GS EXPENSE: 149983 149983 149983
OL EXPENSE: 54 54 54

FEB 15, 2017
01:26 PM

NR105: 101

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

ACCOUNT: 0320156163
RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: EMILY UNIT 2H (10283.1)
STATUS: Z API#: 06163 DATE: 06/01/2013 DAYS: 365 BBLS: 183.000 MCFS: 531538 RCPTS: 1180394 GWI: 978638 OWI: 5219
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	641,008	512,806	476,129	127,268	118,165	0.928	4,073	4,037	3,748	809	751	0.928
2	493,576	365,374	292,450	97,996	78,437	0.800	3,137	3,100	2,481	623	499	0.800
3	380,054	251,852	173,780	75,457	52,066	0.690	2,415	2,379	1,641	480	331	0.690
4	292,641	164,440	97,815	58,102	34,561	0.595	1,860	1,823	1,085	369	220	0.595
5	225,334	97,132	49,808	44,739	22,941	0.513	1,432	1,396	716	284	146	0.513
6	173,507	45,305	20,028	34,449	15,228	0.442	1,103	1,066	471	219	97	0.442
7	133,600	5,399	2,057	26,525	10,108	0.381	849	813	310	169	64	0.381
8	102,872	0	0	20,425	0	0.329	654	617	203	130	43	0.329
9							503	467	132	100	28	0.283
10							388	351	86	77	19	0.244
11							298	262	55	59	12	0.210
12							230	193	35	46	8	0.181
13							177	141	22	35	5	0.156
14							136	100	13	27	4	0.135
15							105	69	8	21	2	0.116
16							81	44	4	16	2	0.100
17							62	26	2	12	1	0.086
18							48	12	1	10	1	0.074
19							37	1	0	7	0	0.064
20							28	0	0	6	0	0.055

TOTAL: 1,112,067 331,508 11,015 2,233

GS EXPENSE: 128202 128202 128202

OL EXPENSE: 36 36 36

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 102

FEB 15, 2017
01:26 PM

ACCOUNT: 0320156166 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: EMILY UNIT 1H (10282.1)
STATUS: Z API#: 06166 DATE: 06/01/2013 DAYS: 365 BBLs: 194,000 MCFS: 576799 RCPTS: 1290277 GWI: 1069968 OWI: 6569
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 OL EXPENSE: 0.2 5750 5750 5750
SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	FACTOR
1	700,829	560,663	520,563	139,145	129,193	0.928	4,303	4,268	3,962	855	794	0.928
2	539,638	399,473	319,742	107,142	85,757	0.800	3,313	3,278	2,624	658	527	0.800
3	415,522	275,356	189,998	82,499	56,925	0.690	2,551	2,516	1,736	507	350	0.690
4	319,952	179,786	106,943	63,524	37,787	0.595	1,964	1,929	1,148	390	232	0.595
5	246,363	106,197	54,457	48,914	25,082	0.513	1,513	1,477	758	300	154	0.513
6	189,699	49,533	21,897	37,664	16,650	0.442	1,165	1,130	499	231	102	0.442
7	146,068	5,903	2,249	29,001	11,052	0.381	897	862	328	178	68	0.381
8	112,473	0	0	22,331	0	0.329	691	655	215	137	45	0.329
9							532	497	141	106	30	0.283
10							409	374	91	81	20	0.244
11							315	280	59	63	13	0.210
12							243	208	38	48	9	0.181
13							187	152	24	37	6	0.156
14							144	109	15	29	4	0.135
15							111	76	9	22	3	0.116
16							85	50	5	17	2	0.100
17							66	31	3	13	1	0.086
18							51	16	1	10	1	0.074
19							39	4	0	8	0	0.064
20							30	0	0	6	0	0.055

TOTAL: 1,215,849 362,446 11,655 2,360

GS EXPENSE: 140166 140166
OL EXPENSE: 35 35

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 103

FEB 15, 2017
01:26 PM

ACCOUNT: 0320156194
STATUS: Z API#: 06194
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590
SETTLED YEARS: 3

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: COSTLOW UNIT 1H (10333.1)
DATE: 12/01/2013 DAYS: 365 BBLs: 3257.000 MCFS: 1331615 RCPTS: 3151893 GWI: 2615079 OWI: 101341

0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000

0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000

OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,712,877	1,544,405	1,433,945	274,594	254,954	0.928	66,378	66,164	61,432	10,641	9,880	0.928
2	1,318,915	1,150,444	920,828	211,437	169,237	0.800	51,111	50,897	40,738	8,194	6,558	0.800
3	1,015,565	847,093	584,502	162,807	112,338	0.690	39,356	39,141	27,008	6,309	4,353	0.690
4	781,985	613,513	364,940	125,361	74,569	0.595	30,304	30,089	17,898	4,858	2,890	0.595
5	602,128	433,657	222,375	95,528	49,499	0.513	23,334	23,119	11,855	3,741	1,918	0.513
6	463,639	295,167	130,482	74,327	32,857	0.442	17,967	17,753	7,848	2,880	1,273	0.442
7	357,002	188,531	71,846	57,231	21,810	0.381	13,835	13,620	5,190	2,218	845	0.381
8	274,891	106,420	34,961	44,068	14,477	0.329	10,653	10,438	3,429	1,708	561	0.329
9	211,666	43,195	12,233	33,933	9,610	0.283	8,203	7,988	2,262	1,315	372	0.283
10	162,983	0	0	26,128	0	0.244	6,316	6,101	1,490	1,013	247	0.244
11				4,863	4,649		4,863	4,649	978	780	164	0.210
12				3,745	3,530		3,745	3,530	641	600	109	0.181
13				2,883	2,669		2,883	2,669	417	462	72	0.156
14				2,220	2,006		2,220	2,006	270	356	48	0.135
15				1,710	1,495		1,710	1,495	174	274	32	0.116
16				1,316	1,102		1,316	1,102	110	211	21	0.100
17				1,014	799		1,014	799	69	162	14	0.086
18				780	566		780	566	42	125	9	0.074
19				601	386		601	386	25	96	6	0.064
20				463	248		463	248	14	74	4	0.055
21				356	142		356	142	7	57	3	0.048
22				274	60		274	60	2	44	2	0.041
23				211	0		211	0	0	34	0	0.035
TOTAL:			3,776,112		739,351				181,901		29,383	
GS EXPENSE:	168471		168471	168471								
OL EXPENSE:	215		215	215								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 104

FEB 15, 2017
01:26 PM

ACCOUNT: 0320156204
STATUS: Z API#: 06204
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: LANGFITT UNIT 2H (10750.1)
DATE: 12/01/2013 DAYS: 365 BBLs: 437.000 MCPS: 856552 RCPTS: 1893874 GWI: 1620017 OWI: 13898

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,061,111	824,116	887,600	168,825	156,750	0.928	9,103	8,407	9,054	1,448	1,345	0.928
2	817,056	515,100	643,544	129,995	104,050	0.800	7,009	5,571	6,961	1,115	893	0.800
3	629,133	314,383	455,621	100,096	69,067	0.690	5,397	3,690	5,348	859	592	0.690
4	484,432	184,947	310,921	77,074	45,846	0.595	4,156	2,443	4,107	661	393	0.595
5	373,013	102,302	199,501	59,347	30,433	0.513	3,200	1,616	3,151	509	261	0.513
6	287,220	50,266	113,708	45,697	20,201	0.442	2,464	1,068	2,415	392	173	0.442
7	221,159	18,158	47,648	35,187	13,409	0.381	1,897	704	1,848	302	115	0.381
8	170,293	0	0	27,094	0	0.329	1,461	464	1,412	232	76	0.329
9							1,125	305	1,076	179	51	0.283
10							866	200	817	138	34	0.244
11							667	130	618	106	22	0.210
12							514	84	465	82	15	0.181
13							395	54	347	63	10	0.156
14							304	34	256	48	7	0.135
15							234	22	186	37	4	0.116
16							181	13	132	29	3	0.100
17							107	8	90	22	2	0.086
18							82	4	58	17	1	0.074
19							63	2	34	13	1	0.064
20							49	1	15	10	1	0.055
21								0	0	8	0	0.048
TOTAL:		2,009,271			439,756			24,820			3,998	

GS EXPENSE: 173511
OL EXPENSE: 49

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 105

FEB 15, 2017
01:26 PM

ACCOUNT: 0320156205

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: GASKINS UNIT 2H (10339.1)

STATUS: Z API# 06205 DATE: 12/01/2013 DAYS: 365 BBLs: 1595.000 MCFS: 1165200 RCPTS: 2716592 GWI: 2265971 OWI: 48863

SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 OL EXPENSE: 0.2 5750 5750 5750

SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,484,211	1,312,905	1,219,002	257,597	239,173	0.928	32,005	31,884	29,603	5,554	5,157	0.928
2	1,142,842	971,535	777,628	198,350	158,761	0.800	24,644	24,523	19,628	4,277	3,423	0.800
3	879,989	708,683	488,997	152,729	105,385	0.690	18,976	18,855	13,010	3,293	2,272	0.690
4	677,591	506,285	301,157	117,602	69,954	0.595	14,611	14,490	8,619	2,536	1,508	0.595
5	521,745	350,439	179,701	90,553	46,435	0.513	11,251	11,129	5,707	1,953	1,001	0.513
6	401,744	230,438	101,867	69,726	30,823	0.442	8,663	8,542	3,776	1,503	665	0.442
7	309,343	138,037	52,604	53,689	20,460	0.381	6,671	6,549	2,496	1,158	441	0.381
8	238,194	66,888	21,974	41,341	13,581	0.329	5,136	5,015	1,648	891	293	0.329
9	183,409	12,103	3,428	31,832	9,015	0.283	3,955	3,834	1,086	686	194	0.283
10	141,225	0	0	24,511	0	0.244	3,045	2,924	714	529	129	0.244
11							2,345	2,224	468	407	86	0.210
12							1,806	1,684	306	313	57	0.181
13							1,390	1,269	198	241	38	0.156
14							1,071	949	128	186	25	0.135
15							824	703	82	143	17	0.116
16							635	513	51	110	11	0.100
17							489	367	32	85	7	0.086
18							376	255	19	65	5	0.074
19							290	168	11	50	3	0.064
20							223	102	6	39	2	0.055
21							172	50	2	30	1	0.048
22							132	11	0	23	1	0.041
23							102	0	0	18	0	0.035

TOTAL:

87,590

15,337

GS EXPENSE: 171306 171306 171306

OL EXPENSE: 121 121 121

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 106

ACCOUNT:0320156221 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:LANGFITT UNIT 1H (10749.1) 10265
STATUS:Z AP-#:06221 DATE:12/01/2013 DAYS:365 BBL5: 325.000 MCPS: 603093 RCPTS: 1315630 GWI: 1124777 OWI: 10265
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OIL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	736,729	547,229	589,383	117,215	108,831	0.928	6,724	6,194	6,672	1,070	994	0.928
2	567,281	336,121	419,935	90,255	72,241	0.800	5,177	4,102	5,125	824	660	0.800
3	436,807	199,731	289,461	69,497	47,953	0.690	3,986	2,715	3,934	635	438	0.690
4	336,341	112,421	188,995	53,512	31,831	0.595	3,070	1,795	3,018	489	291	0.595
5	258,983	57,246	111,637	41,205	21,139	0.513	2,364	1,185	2,312	376	193	0.513
6	199,417	23,018	52,071	31,728	14,025	0.442	1,820	782	1,768	290	128	0.442
7	153,551	2,365	6,205	24,430	9,310	0.381	1,401	514	1,349	223	85	0.381
8	116,234	0	0	18,811	0	0.329	1,079	337	1,027	172	56	0.329
9							831	221	779	132	37	0.283
10							640	143	588	102	25	0.244
11							493	93	441	78	17	0.210
12							379	59	327	60	11	0.181
13							292	38	240	46	7	0.156
14							225	23	173	36	5	0.135
15							173	14	121	28	3	0.116
16							133	8	81	21	2	0.100
17							103	4	51	16	1	0.086
18							79	2	27	13	1	0.074
19							61	1	9	10	1	0.064
20							47	0	0	7	0	0.055

TOTAL: 1,278,131 305,322 18,231 2,954

G5 EXPENSE: 147346 147346 147346

OIL EXPENSE: 52 52 52

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 107

FEB 15, 2017
01:26 PM

ACCOUNT: 0320156255 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: CONNIE UNIT 1H (10336.1) 7649
STATUS: Z API#: 06255 DATE: 10/04/2013 DAYS: 365 BELLS: 251.000 MCPS: 677383 RCPTS: 1476944 GWI: 1198410 OWI: 175000
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 OL EXPENSE: 0.2 5750 5750 5750
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	784,959	627,967	583,053	176,304	163,695	0.928	5,010	4,974	4,618	1,125	1,045	0.928
2	604,418	447,426	358,125	135,754	108,659	0.800	3,858	3,821	3,059	866	694	0.800
3	465,402	308,410	212,806	104,531	72,127	0.690	2,970	2,934	2,024	667	460	0.690
4	358,359	201,368	119,781	80,489	47,878	0.595	2,287	2,251	1,339	514	306	0.595
5	275,937	118,945	60,994	61,976	31,781	0.513	1,761	1,725	884	396	203	0.513
6	212,471	55,480	24,525	47,722	21,096	0.442	1,356	1,320	583	305	135	0.442
7	163,603	6,611	2,519	36,746	14,003	0.381	1,044	1,008	384	235	89	0.381
8	125,974	0	0	28,294	0	0.329	804	768	252	181	59	0.329
9							619	583	165	139	39	0.283
10							477	440	107	107	26	0.244
11							367	331	70	82	17	0.210
12							283	246	45	63	12	0.181
13							218	181	28	49	8	0.156
14							168	131	18	38	5	0.135
15							129	93	11	29	3	0.116
16							99	63	6	22	2	0.100
17							77	40	3	17	1	0.086
18							59	22	2	13	1	0.074
19							45	9	1	10	1	0.064
20							35	0	0	8	0	0.055
TOTAL:			1,361,803		459,239				13,599		3,106	

GS EXPENSE: 156992 156992 156992
OL EXPENSE: 36 36 36

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 108

FEB 15, 2017
01:26 PM

ACCOUNT: 0320156256 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: CONNIE UNIT 2H (10337.1)
STATUS: Z API#: 06256 DATE: 10/01/2013 DAYS: 365 BBLs: 259.000 MCFS: 698256 RCPTS: 1516784 GWI: 1230701 OWI: 7891
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	806,109	644,887	598,763	181,054	168,105	0.928	5,169	5,132	4,765	1,161	1,078	0.928
2	620,704	459,482	367,775	139,412	111,587	0.800	3,980	3,943	3,156	894	715	0.800
3	477,942	316,720	218,540	107,347	74,071	0.590	3,064	3,028	2,089	689	475	0.590
4	368,015	206,794	123,008	82,657	49,168	0.595	2,360	2,323	1,382	530	315	0.595
5	283,372	122,150	62,637	63,846	32,637	0.513	1,817	1,780	913	408	209	0.513
6	218,196	56,975	25,186	49,008	21,664	0.442	1,399	1,362	602	314	139	0.442
7	168,011	6,789	2,587	37,736	14,381	0.381	1,077	1,041	397	242	92	0.381
8	129,369	0	0	29,057	0	0.329	829	793	260	186	61	0.329
9							639	602	171	144	41	0.283
10							492	455	111	111	27	0.244
11							379	342	72	85	18	0.210
12							292	255	46	66	12	0.181
13							225	188	29	50	8	0.156
14							173	136	18	39	5	0.135
15							133	96	11	30	3	0.116
16							103	66	7	23	2	0.100
17							79	42	4	18	2	0.086
18							61	24	2	14	1	0.074
19							47	10	1	11	1	0.064
20							36	0	0	8	0	0.055
TOTAL:			1,398,496		471,612				14,036		3,206	

GS EXPENSE: 161222 161222
OL EXPENSE: 37 37

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 110

ACCOUNT:0320166202 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:HOLDEN UNIT 1H (10748.1) 9391
STATUS:Z API#:06202 DATE:01/03/2014 DAYS:365 BELS: 298.000 MCFS: 552275 RCPTS: 1210688 GWI: 1029970 OWI: 9391
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT	INCOME FACTOR
1	612,832	490,266	455,200	101,019	93,794	0.928	5,588	5,536	5,140	920	855	0.928
2	471,881	349,314	279,595	77,785	62,260	0.800	4,302	4,251	3,402	709	567	0.800
3	363,348	240,782	166,142	59,894	41,328	0.690	3,313	3,261	2,250	546	377	0.690
4	279,778	157,212	93,515	46,119	27,433	0.595	2,551	2,499	1,486	420	250	0.595
5	215,429	92,863	47,619	35,151	18,210	0.513	1,964	1,912	981	324	166	0.513
6	165,880	43,314	19,147	27,344	12,088	0.442	1,512	1,461	646	249	110	0.442
7	127,728	5,162	1,967	21,055	8,024	0.381	1,165	1,113	424	192	73	0.381
8	98,351	0	0	16,212	0	0.329	897	845	278	148	49	0.329
9							690	639	181	114	32	0.283
10							532	480	117	88	21	0.244
11							409	357	75	67	14	0.210
12							315	263	48	52	9	0.181
13							243	191	30	40	6	0.156
14							187	135	18	31	4	0.135
15							144	92	11	24	3	0.116
16							111	59	6	18	2	0.100
17							85	33	3	14	1	0.086
18							66	14	1	11	1	0.074
19							51	0	0	8	0	0.064
TOTAL:			1,063,186		263,135				15,096		2,540	

GS EXPENSE: 122566 122566 122566
OL EXPENSE: 52 52 52

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 111

FEB 15, 2017
01:26 PM

ACCOUNT: 0320166203

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: HOLDEN UNIT 2H (10332.1)

STATUS: Z API#: 06203

DATE: 01/11/2014 DAYS: 365 BBLs: 253.000 MCPS: 458181 RCPTS: 978205 GWI: 831982 OWI: 7795

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	495,029	396,023	367,699	81,600	75,764	0.928	4,638	4,585	4,257	765	710	0.928
2	381,173	282,167	225,849	62,832	50,291	0.800	3,571	3,518	2,816	589	471	0.800
3	293,503	194,497	134,205	48,381	33,383	0.690	2,750	2,697	1,861	453	313	0.690
4	225,997	126,991	75,539	37,253	22,160	0.595	2,117	2,064	1,228	349	208	0.595
5	174,018	75,012	38,465	28,685	14,709	0.513	1,630	1,577	809	269	138	0.513
6	133,994	34,988	15,467	22,087	9,764	0.442	1,255	1,202	531	207	91	0.442
7	103,175	4,169	1,589	17,007	6,481	0.381	967	913	348	159	61	0.381
8	79,445	0	0	13,096	0	0.329	744	691	227	123	40	0.329
9							573	520	147	94	27	0.283
10							441	388	95	73	18	0.244
11							340	286	60	56	12	0.210
12							262	208	38	43	8	0.181
13							201	148	23	33	5	0.156
14							155	102	14	26	3	0.135
15							119	66	8	20	2	0.116
16							92	39	4	15	2	0.100
17							71	17	2	12	1	0.086
18							55	1	0	9	1	0.074
19							42	0	0	7	0	0.064

TOTAL:

858,813

212,552

12,466

2,110

GS EXPENSE: 99006

99006

OL EXPENSE: 53

53

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 112

FEB 15, 2017
01:26 PM

ACCOUNT:0320166220 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:COSTLOW UNIT 2H (10343.1)
STATUS:Z API#:06220 DATE:09/03/2014 DAYS:365 BELS: 4486.000 MCFS: 1921278 RCPTS: 5169824 GWI: 4314918 OWI: 140631
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 G5 EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,567,376	2,397,900	2,226,395	411,579	382,142	0.928	83,675	83,494	77,522	13,414	12,455	0.928
2	1,976,880	1,807,403	1,446,665	316,916	253,663	0.800	64,430	64,249	51,425	10,329	8,267	0.800
3	1,522,197	1,352,721	933,390	244,025	168,380	0.690	49,611	49,430	34,107	7,953	5,488	0.690
4	1,172,092	1,002,616	596,392	187,900	111,769	0.595	38,201	38,019	22,615	6,124	3,643	0.595
5	902,511	733,034	375,892	144,683	74,192	0.513	29,414	29,233	14,990	4,716	2,418	0.513
6	694,933	525,457	232,283	111,406	49,248	0.442	22,649	22,468	9,932	3,631	1,805	0.442
7	535,099	365,622	139,334	85,782	32,690	0.381	17,440	17,258	6,577	2,796	1,065	0.381
8	412,026	242,550	79,683	66,052	21,700	0.329	13,429	13,247	4,352	2,153	707	0.329
9	317,260	147,784	41,854	50,860	14,404	0.283	10,340	10,159	2,877	1,658	469	0.283
10	244,290	74,814	18,265	39,162	9,561	0.244	7,962	7,780	1,900	1,276	312	0.244
11	188,103	18,627	3,920	30,155	6,347	0.210	6,131	5,949	1,252	983	207	0.210
12	144,840	0	0	23,219	0	0.181	4,721	4,539	824	757	137	0.181
13							3,635	3,453	540	583	91	0.156
14							2,799	2,617	353	449	61	0.135
15							2,155	1,974	229	345	40	0.116
16							1,659	1,478	148	265	27	0.100
17							1,278	1,096	95	205	18	0.086
18							984	802	60	158	12	0.074
19							758	576	37	121	8	0.064
20							583	402	22	94	5	0.055
21							449	268	13	72	3	0.048
22							346	164	7	55	2	0.041
23							266	85	3	43	2	0.035
24							205	24	1	33	1	0.031
25							158	0	0	25	0	0.026
TOTAL:			6,094,073		1,124,096				229,881		37,043	

GS EXPENSE: 169476 169476

OL EXPENSE: 181 181

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 113

FEB 15, 2017
01:26 PM

ACCOUNT: 032016246 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: DUFF UNIT 1H (10400.1) 122354
STATUS: Z API#: 06246 DATE: 08/24/2014 DAYS: 365 BHLS: 4017.000 MCFS: 2222100 RCPTS: 5284973 GWI: 4438100 OWI: 122354
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 175000 175000
RATES USED: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,640,670	2,470,365	2,293,677	419,523	389,518	0.928	72,801	72,646	67,450	11,566	10,738	0.928
2	2,033,316	1,863,011	1,491,174	323,033	258,559	0.800	56,056	55,902	44,745	8,906	7,128	0.800
3	1,565,653	1,395,348	962,803	248,735	171,630	0.690	43,163	43,009	29,677	6,857	4,732	0.690
4	1,205,553	1,035,248	615,803	191,526	113,927	0.595	33,236	33,082	19,678	5,280	3,141	0.595
5	928,276	757,971	388,679	147,475	75,624	0.513	25,592	25,437	13,044	4,066	2,085	0.513
6	714,772	544,467	240,687	113,556	50,199	0.442	19,706	19,551	8,643	3,131	1,384	0.442
7	550,375	380,070	144,839	87,438	33,321	0.381	15,173	15,019	5,724	2,411	919	0.381
8	423,788	253,484	83,275	67,327	22,118	0.329	11,683	11,529	3,788	1,856	610	0.329
9	326,317	156,012	44,184	51,842	14,682	0.283	8,996	8,842	2,504	1,429	405	0.283
10	251,264	80,959	19,766	39,918	9,746	0.244	6,927	6,773	1,654	1,100	269	0.244
11	193,473	23,169	4,876	30,737	6,469	0.210	5,334	5,180	1,090	847	178	0.210
12	148,975	0	0	23,668	0	0.181	4,107	3,953	717	652	118	0.181
13							3,162	3,008	471	502	79	0.156
14							2,435	2,281	308	387	52	0.135
15							1,875	1,721	200	298	35	0.116
16							1,444	1,289	129	229	23	0.100
17							1,112	957	83	177	15	0.086
18							856	702	52	136	10	0.074
19							659	505	32	105	7	0.064
20							508	353	20	81	4	0.055
21							391	237	11	62	3	0.048
22							301	147	6	48	2	0.041
23							232	77	3	37	1	0.035
24							178	24	1	28	1	0.031
25							137	0	0	22	0	0.026

TOTAL: 6,289,763 1,145,792 200,028 31,938

GS EXPENSE: 170305 170305 170305

OL EXPENSE: 154 154 154

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 114

ACCOUNT:032016247
STATUS:Z API#:06247
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:DUFF UNIT 2H (10406.1)
DATE:09/03/2014 DAYS:365 BBLs: 3947.000 MCFS: 2485204 RCPTS: 5863604 GWI: 4934410 OWI: 125350

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,935,974	2,765,309	2,567,526	466,438	433,077	0.928	74,583	74,441	69,117	11,849	11,001	0.928
2	2,260,700	2,090,035	1,672,887	359,158	287,474	0.800	57,429	57,287	45,853	9,124	7,303	0.800
3	1,740,739	1,570,074	1,083,365	276,551	190,823	0.690	44,220	44,078	30,414	7,025	4,847	0.690
4	1,340,369	1,169,704	695,782	212,944	126,667	0.595	34,050	33,907	20,169	5,409	3,218	0.595
5	1,032,084	861,420	441,726	163,967	84,081	0.513	26,218	26,076	13,371	4,165	2,136	0.513
6	794,705	624,040	275,863	126,255	55,812	0.442	20,188	20,046	8,861	3,207	1,418	0.442
7	611,923	441,258	168,157	97,216	37,048	0.381	15,545	15,402	5,870	2,470	0,381	0.381
8	471,180	300,516	98,726	74,856	24,592	0.329	11,970	11,827	3,885	1,902	625	0.329
9	362,809	192,144	54,417	57,639	16,324	0.283	9,217	9,074	2,570	1,464	415	0.283
10	279,363	108,598	26,538	44,382	10,836	0.244	7,097	6,954	1,698	1,127	275	0.244
11	215,109	44,445	9,354	34,174	7,193	0.210	5,464	5,322	1,120	868	183	0.210
12	165,634	0	0	26,314	0	0.181	4,208	4,065	738	668	121	0.181
13							3,240	3,097	484	515	81	0.156
14							2,495	2,352	317	396	53	0.135
15							1,921	1,778	207	305	35	0.116
16							1,479	1,337	134	235	24	0.100
17							1,139	1,096	86	181	16	0.086
18							877	735	55	139	10	0.074
19							675	533	34	107	7	0.064
20							520	378	21	83	5	0.055
21							400	258	12	64	3	0.048
22							308	166	7	49	2	0.041
23							237	95	3	38	1	0.035
24							183	40	1	29	1	0.031
25							141	0	0	22	0	0.026

TOTAL: 7,094,344 1,273,926 205,028 32,720

GS EXPENSE: 170665 170665
OL EXPENSE: 142 142

'DODDRIDGE' COUNTY, WV
 YIELD CAP MODEL REPORT FOR - 2017
 NR105: 115

FEB 15, 2017
 01:26 PM

ACCOUNT: 0320166259
 STATUS: Z API#: 06259
 DATE: 08/24/2014 DAYS: 365
 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: MISHKA UNIT 1H (10405.1)
 BLS: 2504.000 MCPS: 1411315 RCPTS: 3336366 GWI: 2792769 OWI: 75984
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	1,661,698	1,384,668	1,491,333	270,860	251,487	0.928	45,210	41,835	45,058	7,370	6,843	0.928
2	1,279,507	887,770	1,109,142	208,562	166,936	0.800	34,812	27,742	34,660	5,675	4,542	0.800
3	985,220	562,258	814,856	160,593	110,811	0.690	26,805	18,391	26,653	4,369	3,015	0.690
4	758,620	349,915	588,255	123,657	73,555	0.595	20,640	12,187	20,488	3,364	2,001	0.595
5	584,137	212,178	413,772	95,216	48,825	0.513	15,893	8,072	15,741	2,591	1,328	0.513
6	449,786	123,521	279,421	73,316	32,410	0.442	12,238	5,342	12,085	1,995	882	0.442
7	346,335	67,060	175,970	56,453	21,514	0.381	9,423	3,533	9,271	1,536	585	0.381
8	266,678	31,641	96,313	43,469	14,281	0.329	7,256	2,334	7,103	1,183	389	0.329
9	205,342	9,906	34,977	33,471	9,479	0.283	5,587	1,539	5,435	911	258	0.283
10	158,113	0	0	25,773	0	0.244	4,302	1,013	4,150	701	171	0.244
11							3,312	665	3,160	540	114	0.210
12							2,551	435	2,398	416	75	0.181
13							1,964	283	1,812	320	50	0.156
14							1,512	183	1,360	247	33	0.135
15							1,164	118	1,012	190	22	0.116
16							897	75	744	146	15	0.100
17							690	46	538	113	10	0.086
18							532	28	379	87	6	0.074
19							409	17	257	67	4	0.064
20							315	9	163	51	3	0.055
21							243	4	90	40	2	0.048
22							187	1	35	30	1	0.041
23							144	0	0	23	0	0.035

TOTAL: 3,628,916 123,853 729,298 20,350

GS EXPENSE: 170365 170365 170365
 OL EXPENSE: 152 152 152

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 116

ACCOUNT: 0320166262 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATION LOCATION: VANS COY UNIT 1H (10448.1) 15068
STATUS: 2 API#: 06262 DATE: 07/04/2014 DAYS: 365 BBLs: 499.000 MCFS: 854914 RCPIS: 1961863 GWI: 1608408 OWI: 15068
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	957,003	783,627	727,580	199,471	185,205	0.928	8,965	8,912	8,275	1,869	1,735	0.928
2	736,892	563,516	451,045	153,593	122,937	0.800	6,903	6,850	5,483	1,439	1,152	0.800
3	567,407	394,031	271,885	118,267	81,605	0.690	5,316	5,262	3,631	1,108	765	0.690
4	436,903	263,528	156,756	91,065	54,169	0.595	4,093	4,040	2,403	853	508	0.595
5	336,416	163,040	83,605	70,120	35,957	0.513	3,152	3,098	1,589	657	337	0.513
6	259,040	85,664	37,869	53,993	23,858	0.442	2,427	2,373	1,049	506	224	0.442
7	199,461	26,085	9,941	41,574	15,843	0.381	1,869	1,815	692	390	148	0.381
8	153,585	0	0	32,012	0	0.329	1,439	1,385	455	300	99	0.329
9							1,108	1,055	299	231	65	0.283
10							853	800	195	178	43	0.244
11							657	604	127	137	29	0.210
12							506	452	82	105	19	0.181
13							389	336	53	81	13	0.156
14							300	247	33	63	8	0.135
15							231	178	21	48	6	0.116
16							178	124	12	37	4	0.100
17							137	84	7	29	2	0.086
18							105	52	4	22	2	0.074
19							81	28	2	17	1	0.064
20							63	9	1	13	1	0.055
21							48	0	0	10	0	0.048
TOTAL:			1,738,679		519,584				24,412		5,160	

GS EXPENSE: 173376 173376 173376

OL EXPENSE: 53 53 53

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 117

FEB 15, 2017
01:26 PM

ACCOUNT: 0320166263

STATUS: Z API#: 06263

DATE: 07/11/2014

DAYS: 365

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATION LOCATION: MCCONNELL UNIT 2H (10446.1)

BBLs: 455,000 MCFS: 908566 RCPTS: 2105227 GWI: 1713090 OWI: 13698

SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,019,289	845,677	785,191	223,384	207,407	0.928	8,150	8,105	7,525	1,787	1,659	0.928
2	784,852	611,240	489,244	172,006	137,675	0.800	6,276	6,230	4,987	1,376	1,101	0.800
3	604,336	430,724	297,204	132,445	91,388	0.690	4,832	4,787	3,303	1,059	731	0.690
4	465,339	291,727	173,530	101,982	60,663	0.595	3,721	3,675	2,186	816	485	0.595
5	358,311	184,699	94,712	78,526	40,267	0.513	2,865	2,819	1,446	628	322	0.513
6	275,899	102,288	45,217	60,465	26,729	0.442	2,206	2,161	955	484	214	0.442
7	212,443	38,831	14,798	46,558	17,743	0.381	1,699	1,653	630	372	142	0.381
8	163,581	0	0	35,850	0	0.329	1,308	1,262	415	287	94	0.329
9							1,007	962	272	221	63	0.283
10							776	730	178	170	42	0.244
11							597	552	116	131	28	0.210
12							460	414	75	101	18	0.181
13							354	308	48	78	12	0.156
14							273	227	31	60	8	0.135
15							210	164	19	46	5	0.116
16							162	116	12	35	4	0.100
17							124	79	7	27	2	0.086
18							96	50	4	21	2	0.074
19							74	28	2	16	1	0.064
20							57	11	1	12	1	0.055
21							44	0	0	10	0	0.048
TOTAL:			1,899,895		581,873				22,211		4,933	
GS EXPENSE:	173612			173612								
OL EXPENSE:	46			46								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 118

ACCOUNT: 0320166264
STATUS: 2 API#: 06264
DATE: 06/28/2014 DAYS: 365
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590
SETTLED YEARS: 2

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATION LOCATION: VANS COY UNIT 2H (10449.1)
DATE: 06/28/2014 DAYS: 365
BBLs: 408.000 MCFS: 678685 RCPTS: 1562943
GWI: 1281037 OWI: 12326

EXPENSE: 0.2
EXPENSE: 0.2
EXPENSE: 0.2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	762,217	609,774	566,161	158,872	147,509	0.928	7,334	7,279	6,759	1,529	1,419	0.928
2	586,907	434,464	347,750	122,331	97,915	0.800	5,647	5,592	4,476	1,177	942	0.800
3	451,918	299,475	206,640	94,195	64,995	0.690	4,348	4,294	2,963	906	625	0.690
4	347,977	195,534	116,311	72,530	43,144	0.595	3,348	3,293	1,959	698	415	0.595
5	267,942	115,499	59,227	55,848	28,638	0.513	2,578	2,523	1,294	537	276	0.513
6	206,316	53,872	23,815	43,003	19,010	0.442	1,985	1,930	853	414	183	0.442
7	158,863	6,420	2,446	33,112	12,619	0.381	1,529	1,474	562	319	121	0.381
8	122,325	0	0	25,497	0	0.329	1,177	1,122	369	245	81	0.329
9							906	851	241	189	53	0.283
10							698	643	157	145	36	0.244
11							537	483	102	112	24	0.210
12							414	359	65	86	16	0.181
13							319	264	41	66	10	0.156
14							245	191	26	51	7	0.135
15							189	134	16	39	5	0.116
16							145	91	9	30	3	0.100
17							112	57	5	23	2	0.086
18							86	31	2	18	1	0.074
19							66	12	1	14	1	0.064
20							51	0	0	11	0	0.055
TOTAL:			1,322,349		413,830				19,898		4,220	

GS EXPENSE: 152443
OL EXPENSE: 55

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 119

FEB 15, 2017
01:26 PM

ACCOUNT: 0320166267
STATUS: Z API#: 06267
DATE: 07/09/2014 DAYS: 365
RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: KOCH UNIT 2H (10402.1)
BBLs: 694.000 MCFS: 1290818 RCPTS: 3005802 GWI: 2503691 OWI: 21647
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,489,696	1,316,196	1,222,058	283,425	263,154	0.928	12,880	12,831	11,913	2,451	2,276	0.928
2	1,147,066	973,566	779,253	218,237	174,680	0.800	9,918	9,868	7,899	1,887	1,510	0.800
3	883,241	709,741	489,728	168,043	115,951	0.690	7,637	7,587	5,235	1,453	1,003	0.690
4	680,095	506,596	301,341	129,393	76,968	0.595	5,880	5,831	3,468	1,119	666	0.595
5	523,673	350,174	179,565	99,633	51,091	0.513	4,528	4,478	2,296	862	442	0.513
6	403,229	229,729	101,554	76,717	33,914	0.442	3,486	3,437	1,519	663	293	0.442
7	310,486	136,986	52,203	59,072	22,512	0.381	2,684	2,635	1,004	511	195	0.381
8	239,074	65,574	21,543	45,486	14,943	0.329	2,067	2,018	663	393	129	0.329
9	184,087	10,587	2,998	35,024	9,919	0.283	1,592	1,542	437	303	86	0.283
10	141,747	0	0	26,968	0	0.244	1,226	1,176	287	233	57	0.244
11							944	894	188	180	38	0.210
12							727	677	123	138	25	0.181
13							560	510	80	106	17	0.156
14							431	382	51	82	11	0.135
15							332	282	33	63	7	0.116
16							255	206	21	49	5	0.100
17							197	147	13	37	3	0.086
18							151	102	8	29	2	0.074
19							117	67	4	22	1	0.064
20							90	41	2	17	1	0.055
21							69	20	1	13	1	0.048
22							53	4	0	10	0	0.041
23							41	0	0	8	0	0.035

TOTAL:	3,150,243	763,130	35,246	6,767

GS EXPENSE:	173500	173500	173500
OL EXPENSE:	49	49	49

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 120

ACCOUNT:0320166268 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:MT SALEM REVIVAL UNIT 2H (10404.1
STATUS:2 API#:06268 DATE:07/15/2014 DAYS:365 BBLs: 567,000 MCPS: 954920 RCPTS: 2084202 GWI: 1719599 OWI: 17447
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,023,161	849,919	789,130	204,483	189,858	0.928	10,381	10,323	9,585	2,075	1,926	0.928
2	787,834	614,592	491,926	157,452	126,026	0.800	7,993	7,936	6,352	1,598	1,279	0.800
3	606,632	433,390	299,043	121,238	83,655	0.690	6,155	6,097	4,207	1,230	849	0.690
4	467,107	293,865	174,801	93,353	55,530	0.595	4,739	4,682	2,785	947	563	0.595
5	359,672	186,430	95,599	71,882	36,860	0.513	3,649	3,591	1,842	729	374	0.513
6	276,948	103,705	45,844	55,349	24,468	0.442	2,810	2,752	1,217	562	248	0.442
7	213,250	40,007	15,246	42,619	16,241	0.381	2,164	2,106	803	432	165	0.381
8	164,202	0	0	32,817	0	0.329	1,666	1,608	528	333	109	0.329
9							1,283	1,225	347	256	73	0.283
10							988	930	227	197	48	0.244
11							761	703	148	152	32	0.210
12							586	528	96	117	21	0.181
13							451	393	62	90	14	0.156
14							347	289	39	69	9	0.135
15							267	210	24	53	6	0.116
16							206	148	15	41	4	0.100
17							159	101	9	32	3	0.086
18							122	64	5	24	2	0.074
19							94	36	2	19	1	0.064
20							72	15	1	14	1	0.055
21							56	0	0	11	0	0.048
TOTAL:			1,911,590		532,639				28,292		5,728	

GS EXPENSE: 173242 173242 173242

OL EXPENSE: 58 58 58

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NRI05: 121

FEB 15, 2017
01:26 PM

ACCOUNT: 0320166269 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: MT SALEM REVIVAL UNIT IH (10403.1
STATUS: Z API#: 06269 DATE: 07/10/2014 DAYS: 365 BBLs: 622.000 MCFS: 1144066 RCPTS: 2629803 GWI: 2172468 OWI: 19301

SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	1,292,618	1,039,114	1,119,160	258,335	239,858	0.928	11,484	10,616	11,433	2,295	2,131	0.928
2	995,316	657,824	821,857	198,918	159,216	0.800	8,843	7,037	8,792	1,767	1,414	0.800
3	766,393	409,130	592,935	153,167	105,687	0.690	6,809	4,663	6,758	1,361	939	0.690
4	590,123	247,847	416,664	117,939	70,154	0.595	5,243	3,089	5,192	1,048	623	0.595
5	454,395	144,061	300,813	90,813	46,568	0.513	4,037	2,044	3,986	807	414	0.513
6	349,884	77,990	280,936	69,926	30,911	0.442	3,108	1,352	3,058	621	275	0.442
7	269,411	36,566	176,435	53,843	20,519	0.381	2,394	893	2,343	478	182	0.381
8	207,446	11,166	95,952	41,459	13,620	0.329	1,843	589	1,792	368	121	0.329
9	159,734	0	33,987	31,923	0	0.283	1,419	388	1,368	284	80	0.283
10			0				1,093	254	1,042	218	53	0.210
11							841	166	791	168	35	0.210
12							648	108	597	129	23	0.181
13							499	70	448	100	16	0.156
14							384	45	333	77	10	0.135
15							296	28	245	59	7	0.116
16							228	18	177	46	5	0.100
17							175	11	125	35	3	0.086
18							135	6	84	27	2	0.074
19							104	3	53	21	1	0.064
20							80	2	29	16	1	0.055
21							62	1	11	12	1	0.048
22							47	0	0	9	0	0.041

TOTAL: 2,623,697 686,534 31,383 6,337

GS EXPENSE: 173459 173459 173459

OL EXPENSE: 51 51 51

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 122

ACCOUNT: 0320166281
STATUS: Z API#: 06281
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 12661
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	868,179	694,684	644,998	171,459	159,196	0.928	7,533	7,484	6,949	1,488	1,382	0.928
2	668,498	495,003	396,206	132,023	105,673	0.800	5,801	5,751	4,603	1,146	917	0.800
3	514,743	341,249	235,465	101,658	70,145	0.690	4,466	4,417	3,048	882	609	0.690
4	396,352	222,858	132,564	78,277	46,562	0.595	3,439	3,390	2,016	679	404	0.595
5	305,191	131,697	67,533	60,273	30,907	0.513	2,648	2,599	1,333	523	268	0.513
6	234,997	61,503	27,188	46,410	20,516	0.442	2,039	1,990	880	403	178	0.442
7	180,948	7,453	2,840	35,736	13,618	0.381	1,570	1,521	579	310	118	0.381
8	139,330	0	0	27,517	0	0.329	1,209	1,160	381	239	78	0.329
9				931			717	667	250	184	52	0.283
10				552			425	502	163	142	35	0.244
11				327			252	376	106	109	23	0.210
12				194			149	278	68	84	15	0.181
13				115			89	203	43	65	10	0.156
14				68			53	145	27	50	7	0.135
15				49			40	100	17	38	4	0.116
16				3			0	66	10	30	3	0.100
17				0			0	39	6	23	2	0.086
18				0			0	19	3	17	1	0.074
19				0			0	3	1	13	1	0.064
20				0			0	0	0	10	1	0.055
21				0			0	0	0	8	0	0.048
TOTAL:			1,506,793		446,617				20,483		4,108	
GS EXPENSE:	173495			173495								
OL EXPENSE:	49			49								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 123

FEB 15, 2017
01:26 PM

ACCOUNT: 0320166301 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: HEFLIN UNIT 2H (10389.1) 26067
STATUS: Z API#: 06301 DATE: 03/18/2014 DAYS: 365 BELLS: 813.000 MCPS: 1078414 RCPTS: 2488892 GWI: 2050657 OWI: 175000
SYSTEM RATES: EXPENSE: 0.2 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99
RATES USED: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,220,141	1,047,338	972,429	242,162	224,842	0.928	15,510	15,438	14,334	3,078	2,858	0.928
2	939,509	766,705	613,679	186,465	149,248	0.800	11,943	11,870	9,501	2,370	1,897	0.800
3	723,422	550,618	379,931	143,578	99,070	0.590	9,196	9,124	6,295	1,825	1,259	0.690
4	557,035	384,231	228,555	110,555	65,762	0.595	7,081	7,009	4,169	1,405	836	0.595
5	428,917	256,113	131,332	85,127	43,652	0.513	5,452	5,380	2,759	1,082	555	0.513
6	330,266	157,462	69,608	65,548	28,976	0.442	4,198	4,126	1,824	833	368	0.442
7	254,305	81,501	31,059	50,472	19,234	0.381	3,233	3,160	1,204	642	244	0.381
8	195,815	23,011	7,560	38,863	12,767	0.329	2,489	2,417	794	494	162	0.329
9	150,777	0	0	29,925	0	0.283	1,917	1,844	522	380	108	0.283
10							1,476	1,404	343	233	72	0.210
11							1,136	1,064	224	226	47	0.210
12							875	803	146	174	32	0.181
13							674	602	94	134	21	0.156
14							519	447	60	103	14	0.135
15							399	327	38	79	9	0.116
16							308	235	24	61	6	0.100
17							237	165	14	47	4	0.086
18							182	110	8	36	3	0.074
19							140	68	4	28	2	0.064
20							108	36	2	21	1	0.055
21							83	11	1	17	1	0.048
22							64	0	0	13	0	0.041

TOTAL: 2,434,153 643,553 42,360 8,499

GS EXPENSE: 172803 172803
OL EXPENSE: 72 72

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 124

ACCOUNT: 0320166302

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:GAVIN UNIT 2H (10372.1)

STATUS:Z	API#:	06302	DATE:	03/25/2014	DAYS:	365	BBL:	296.000	MCFS:	571141	RCPTS:	1231281	GWI:	1019133	OWI:	9083

SYSTEM RATES:

CAP RATE:	16.000	DECLINE RATE:	0.590	0.230	WELL LIFE: 99	EXPENSE:	0.2	175000	175000

RATES USED:

CAP RATE:	16.000	DECLINE RATE:	0.590	0.290	0.230	WELLIFE:99	0.2	GS EXPENSE:	175000	175000

SETTLED YEARS: 2

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME
1	606,384	485,107	119,756	111,191	5,404	5,354	1,067	991
2	466,916	345,639	92,212	73,808	4,161	4,111	832	658
3	359,525	238,248	71,003	48,993	3,204	3,153	633	437
4	276,834	155,558	54,673	32,521	2,467	2,416	487	290
5	213,162	91,886	42,098	21,587	1,900	1,849	375	192
6	164,135	42,858	32,415	14,330	1,463	1,412	289	128
7	126,384	18,946	24,960	9,512	1,126	1,076	222	85
8	97,316	5,107	19,219	0	867	817	171	56
9		0			668	617	132	37
10					514	463	102	25
11					356	345	78	16
12					305	254	60	11
13					235	184	46	7
14					181	130	36	5
15					139	88	27	3
16					107	56	21	2
17					83	32	16	1
18					64	13	13	1
19					49	0	10	0
TOTAL:		1,051,999		311,942				2,946

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 125

ACCOUNT: 0320166399 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATION LOCATION: HOSKINSON UNIT 1H (10452.1)
STATUS: Z API#: 06399 DATE: 12/30/2014 DAYS: 365 BBLs: 3404.000 MCPS: 2384449 RCPTS: 5634099 GWI: 4721364 OWI: 106066
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

GAS WORKING INTEREST				GAS ROYALTY INTEREST				OIL WORKING INTEREST				OIL ROYALTY INTEREST			
GROSS INCOME	NET INCOME	DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME			GROSS INCOME	NET INCOME	DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME		
1 2,809,212	2,638,057	2,449,375		469,422	435,848	0.928	63,109	62,983	58,478	58,478		10,546	9,792	0.928	0.800
2 2,163,093	1,991,938	1,594,369		361,455	289,313	0.800	48,594	48,468	38,794	38,794		8,120	6,500	0.800	0.690
3 1,665,582	1,494,427	1,031,168		278,320	192,044	0.690	37,417	37,291	25,731	25,731		6,253	4,314	0.690	0.595
4 1,282,498	1,111,343	661,067		214,307	127,477	0.595	28,811	28,685	17,063	17,063		4,814	2,864	0.595	0.513
5 987,523	816,368	418,625		165,016	84,618	0.513	22,185	22,058	11,311	11,311		3,707	1,901	0.513	0.442
6 760,393	589,238	260,479		127,062	56,169	0.442	17,082	16,956	7,496	7,496		2,855	1,262	0.442	0.381
7 585,503	414,348	157,902		97,838	37,285	0.381	13,153	13,027	4,964	4,964		2,198	838	0.381	0.329
8 450,837	279,682	91,882		75,335	24,749	0.329	10,128	10,002	3,286	3,286		1,692	556	0.329	0.283
9 347,144	175,989	49,842		58,008	16,428	0.283	7,799	7,672	2,173	2,173		1,303	369	0.283	0.244
10 267,301	96,146	23,474		44,666	10,905	0.244	6,005	5,879	1,435	1,435		1,003	245	0.244	0.210
11 205,822	34,667	7,296		34,393	7,239	0.210	4,624	4,497	947	947		773	163	0.210	0.181
12 158,483	0	0		26,483	0	0.181	3,560	3,434	623	623		595	108	0.181	0.156
13 14							2,741	2,615	409	409		458	72	0.156	0.135
14 15							2,111	1,985	268	268		353	48	0.135	0.116
15 16							1,625	1,499	174	174		272	32	0.116	0.100
16 17							1,252	1,125	113	113		209	21	0.100	0.086
17 18							964	837	72	72		161	14	0.086	0.074
18 19							742	616	46	46		124	9	0.074	0.064
19 20							571	445	29	29		95	6	0.064	0.055
20 21							440	314	17	17		74	4	0.055	0.048
21 22							339	212	10	10		57	3	0.048	0.041
22 23							261	135	6	6		44	2	0.041	0.035
23 24							201	75	3	3		34	1	0.035	0.031
24 25							155	28	1	1		26	1	0.031	0.026
25							119	0	0	0		20	0	0.026	

TOTAL: 6,745,477 1,282,076 173,448 29,122

GS EXPENSE: 171155 171155 171155

OL EXPENSE: 126 126 126

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)											
DECLINE RATES		2016	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
YR 1	50%	WRK INT	\$	2,821,070	\$	28,674	YR1	\$	745,354	\$	7,690
YR 2	20%	ROY INT	\$	508,524	\$	5,172		\$	134,971	\$	1,371
YR3+	23%						YR2	\$	553,782	\$	4,823
								\$	89,878	\$	1,014
\$ 1,257,499		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 335,831	
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC		
1	\$ 755,953	\$ 152,330	\$ 603,623	0.928477	\$ 560,450	1	\$ 138,341	0.928477	\$ 128,590		
2	\$ 569,405	\$ 152,330	\$ 407,075	0.800411	\$ 325,827	2	\$ 100,893	0.800411	\$ 80,758		
3	\$ 430,742	\$ 152,330	\$ 278,412	0.690009	\$ 192,107	3	\$ 77,687	0.690009	\$ 53,805		
4	\$ 331,871	\$ 152,330	\$ 179,541	0.594836	\$ 108,678	4	\$ 59,619	0.594836	\$ 35,583		
5	\$ 255,367	\$ 152,330	\$ 103,037	0.512789	\$ 52,846	5	\$ 46,081	0.512789	\$ 23,619		
6	\$ 196,648	\$ 152,330	\$ 44,318	0.442080	\$ 19,591	6	\$ 35,467	0.442080	\$ 15,678		
7	\$ 151,419	\$ 152,330	\$ -	0.381088	\$ -	7	\$ 27,309	0.381088	\$ -		
8	\$ 116,593	\$ 152,330	\$ -	0.328522	\$ -	8	\$ 21,028	0.328522	\$ -		
9	\$ 89,776	\$ 152,330	\$ -	0.283209	\$ -	9	\$ 16,192	0.283209	\$ -		
10	\$ 69,128	\$ 152,330	\$ -	0.224148	\$ -	10	\$ 12,488	0.224148	\$ -		
11	\$ 53,228	\$ 152,330	\$ -	0.210470	\$ -	11	\$ 9,600	0.210470	\$ -		
12	\$ 40,986	\$ 152,330	\$ -	0.181440	\$ -	12	\$ 7,392	0.181440	\$ -		
13	\$ 31,559	\$ 152,330	\$ -	0.158414	\$ -	13	\$ 5,892	0.158414	\$ -		
14	\$ 24,301	\$ 152,330	\$ -	0.134840	\$ -	14	\$ 4,383	0.134840	\$ -		
15	\$ 18,711	\$ 152,330	\$ -	0.118241	\$ -	15	\$ 3,375	0.118241	\$ -		
16	\$ 14,408	\$ 152,330	\$ -	0.100208	\$ -	16	\$ 2,599	0.100208	\$ -		
17	\$ 11,094	\$ 152,330	\$ -	0.088388	\$ -	17	\$ 2,001	0.088388	\$ -		
18	\$ 8,542	\$ 152,330	\$ -	0.074471	\$ -	18	\$ 1,541	0.074471	\$ -		
19	\$ 6,578	\$ 152,330	\$ -	0.064199	\$ -	19	\$ 1,186	0.064199	\$ -		
20	\$ 5,086	\$ 152,330	\$ -	0.055344	\$ -	20	\$ 913	0.055344	\$ -		
21	\$ 3,900	\$ 152,330	\$ -	0.047710	\$ -	21	\$ 703	0.047710	\$ -		
22	\$ 3,003	\$ 152,330	\$ -	0.041129	\$ -	22	\$ 542	0.041129	\$ -		
23	\$ 2,312	\$ 152,330	\$ -	0.035466	\$ -	23	\$ 417	0.035466	\$ -		
24	\$ 1,780	\$ 152,330	\$ -	0.030588	\$ -	24	\$ 321	0.030588	\$ -		
25	\$ 1,371	\$ 152,330	\$ -	0.026350	\$ -	25	\$ 247	0.026350	\$ -		
26	\$ 1,058	\$ 152,330	\$ -	0.022715	\$ -	26	\$ 190	0.022715	\$ -		
27	\$ 813	\$ 152,330	\$ -	0.019582	\$ -	27	\$ 147	0.019582	\$ -		
28	\$ 626	\$ 152,330	\$ -	0.016881	\$ -	28	\$ 113	0.016881	\$ -		
29	\$ 482	\$ 152,330	\$ -	0.014553	\$ -	29	\$ 87	0.014553	\$ -		
30	\$ 371	\$ 152,330	\$ -	0.012548	\$ -	30	\$ 67	0.012548	\$ -		
31	\$ 286	\$ 152,330	\$ -	0.010815	\$ -	31	\$ 52	0.010815	\$ -		
32	\$ 220	\$ 152,330	\$ -	0.009323	\$ -	32	\$ 40	0.009323	\$ -		
33	\$ 169	\$ 152,330	\$ -	0.008037	\$ -	33	\$ 31	0.008037	\$ -		
34	\$ 130	\$ 152,330	\$ -	0.006929	\$ -	34	\$ 24	0.006929	\$ -		
35	\$ 100	\$ 152,330	\$ -	0.005973	\$ -	35	\$ 18	0.005973	\$ -		
36	\$ 77	\$ 152,330	\$ -	0.005149	\$ -	36	\$ 14	0.005149	\$ -		
37	\$ 60	\$ 152,330	\$ -	0.004439	\$ -	37	\$ 11	0.004439	\$ -		
38	\$ 46	\$ 152,330	\$ -	0.003827	\$ -	38	\$ 8	0.003827	\$ -		
39	\$ 35	\$ 152,330	\$ -	0.003299	\$ -	39	\$ 6	0.003299	\$ -		
40	\$ 27	\$ 152,330	\$ -	0.002844	\$ -	40	\$ 5	0.002812	\$ -		
WORKING INTEREST APPRAISAL			\$ 1,257,499			ROYALTY INTEREST APPRAISAL			\$ 335,831		

09-0320176218

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)									
		2015		DAY INCOME		OIL INCOME		DAS CAP INCOME	
DECLINE RATES		WRK INT		\$ 3,880,682		\$ 17,422		\$ 1,084,881	\$ 8,917
YR 1	39%	ROY INT		\$ 888,435		\$ 5,353		\$ 150,800	\$ 1,419
YR 2	29%							\$ 780,812	\$ 7,488
YR3+	23%							\$ 117,886	\$ 1,050
\$ 1,349,712		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC
1	\$ 1,084,798	\$ 173,424	\$ 891,374	0.928477	\$ 827,820	1	\$ 152,319	0.928477	\$ 141,425
2	\$ 787,950	\$ 173,424	\$ 614,526	0.800411	\$ 491,874	2	\$ 112,716	0.800411	\$ 90,219
3	\$ 608,722	\$ 173,424	\$ 433,298	0.690009	\$ 296,979	3	\$ 86,791	0.690009	\$ 59,887
4	\$ 487,178	\$ 173,424	\$ 293,752	0.594838	\$ 174,734	4	\$ 68,829	0.594838	\$ 39,752
5	\$ 359,725	\$ 173,424	\$ 186,302	0.512789	\$ 95,533	5	\$ 51,459	0.512789	\$ 28,387
6	\$ 278,968	\$ 173,424	\$ 103,595	0.442080	\$ 45,782	6	\$ 39,823	0.442080	\$ 17,516
7	\$ 213,281	\$ 173,424	\$ 39,857	0.381088	\$ 15,189	7	\$ 30,510	0.381088	\$ 11,827
8	\$ 164,228	\$ 173,424	\$ -	0.328522	\$ -	8	\$ 23,493	0.328522	\$ -
9	\$ 128,454	\$ 173,424	\$ -	0.283209	\$ -	9	\$ 18,089	0.283209	\$ -
10	\$ 97,370	\$ 173,424	\$ -	0.224146	\$ -	10	\$ 13,929	0.224146	\$ -
11	\$ 74,876	\$ 173,424	\$ -	0.210470	\$ -	11	\$ 10,725	0.210470	\$ -
12	\$ 57,731	\$ 173,424	\$ -	0.181440	\$ -	12	\$ 8,258	0.181440	\$ -
13	\$ 44,453	\$ 173,424	\$ -	0.156414	\$ -	13	\$ 6,359	0.156414	\$ -
14	\$ 34,228	\$ 173,424	\$ -	0.134840	\$ -	14	\$ 4,898	0.134840	\$ -
15	\$ 26,356	\$ 173,424	\$ -	0.118241	\$ -	15	\$ 3,770	0.118241	\$ -
16	\$ 20,294	\$ 173,424	\$ -	0.100208	\$ -	16	\$ 2,903	0.100208	\$ -
17	\$ 15,628	\$ 173,424	\$ -	0.088388	\$ -	17	\$ 2,235	0.088388	\$ -
18	\$ 12,032	\$ 173,424	\$ -	0.074471	\$ -	18	\$ 1,721	0.074471	\$ -
19	\$ 9,285	\$ 173,424	\$ -	0.064199	\$ -	19	\$ 1,325	0.064199	\$ -
20	\$ 7,134	\$ 173,424	\$ -	0.055344	\$ -	20	\$ 1,021	0.055344	\$ -
21	\$ 5,499	\$ 173,424	\$ -	0.047710	\$ -	21	\$ 786	0.047710	\$ -
22	\$ 4,230	\$ 173,424	\$ -	0.041129	\$ -	22	\$ 605	0.041129	\$ -
23	\$ 3,257	\$ 173,424	\$ -	0.035458	\$ -	23	\$ 488	0.035458	\$ -
24	\$ 2,508	\$ 173,424	\$ -	0.030588	\$ -	24	\$ 359	0.030588	\$ -
25	\$ 1,931	\$ 173,424	\$ -	0.026350	\$ -	25	\$ 278	0.026350	\$ -
26	\$ 1,487	\$ 173,424	\$ -	0.022715	\$ -	26	\$ 213	0.022715	\$ -
27	\$ 1,145	\$ 173,424	\$ -	0.019582	\$ -	27	\$ 164	0.019582	\$ -
28	\$ 882	\$ 173,424	\$ -	0.016881	\$ -	28	\$ 128	0.016881	\$ -
29	\$ 679	\$ 173,424	\$ -	0.014553	\$ -	29	\$ 97	0.014553	\$ -
30	\$ 523	\$ 173,424	\$ -	0.012548	\$ -	30	\$ 75	0.012548	\$ -
31	\$ 402	\$ 173,424	\$ -	0.010815	\$ -	31	\$ 58	0.010815	\$ -
32	\$ 310	\$ 173,424	\$ -	0.009323	\$ -	32	\$ 44	0.009323	\$ -
33	\$ 239	\$ 173,424	\$ -	0.008037	\$ -	33	\$ 34	0.008037	\$ -
34	\$ 184	\$ 173,424	\$ -	0.006929	\$ -	34	\$ 28	0.006929	\$ -
35	\$ 141	\$ 173,424	\$ -	0.005973	\$ -	35	\$ 20	0.005973	\$ -
36	\$ 109	\$ 173,424	\$ -	0.005149	\$ -	36	\$ 16	0.005149	\$ -
37	\$ 84	\$ 173,424	\$ -	0.004439	\$ -	37	\$ 12	0.004439	\$ -
38	\$ 65	\$ 173,424	\$ -	0.003827	\$ -	38	\$ 9	0.003827	\$ -
39	\$ 50	\$ 173,424	\$ -	0.003299	\$ -	39	\$ 7	0.003299	\$ -
40	\$ 38	\$ 173,424	\$ -	0.002844	\$ -	40	\$ 5	0.002812	\$ -
		WORKING INTEREST APPRAISAL				\$ 1,349,712		ROYALTY INTEREST APPRAISAL	
								\$ 388,813	

09-0320176270

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Yr 1)									
2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
DEEDLINE RATES		WRK INT							
YR 1	50%		\$ 1,144,347	\$ 182,783		\$ 1,359,102	\$ 47,237		
YR 2	29%		\$ 833,848	\$ 18,754		\$ 220,817	\$ 4,440		
YR3+	23%					\$ 1,002,323	\$ 29,158		
						\$ 183,478	\$ 3,288		
\$ 2,777,919		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC
1	\$ 1,382,539	\$ 171,888	\$ 1,210,651	0.928477	\$ 1,124,269	1	\$ 225,357	0.928477	\$ 209,239
2	\$ 1,023,079	\$ 171,888	\$ 851,191	0.800411	\$ 681,181	2	\$ 188,784	0.800411	\$ 133,480
3	\$ 787,771	\$ 171,888	\$ 615,883	0.690009	\$ 425,116	3	\$ 128,408	0.690009	\$ 88,803
4	\$ 608,584	\$ 171,888	\$ 436,696	0.594838	\$ 258,705	4	\$ 98,874	0.594838	\$ 58,814
5	\$ 467,089	\$ 171,888	\$ 295,201	0.512789	\$ 151,480	5	\$ 78,133	0.512789	\$ 39,040
6	\$ 359,843	\$ 171,888	\$ 187,955	0.442080	\$ 83,097	6	\$ 58,823	0.442080	\$ 25,916
7	\$ 278,925	\$ 171,888	\$ 107,037	0.381088	\$ 40,113	7	\$ 45,139	0.381088	\$ 17,202
8	\$ 213,233	\$ 171,888	\$ 41,345	0.328522	\$ 13,858	8	\$ 34,757	0.328522	\$ 11,419
9	\$ 184,188	\$ 171,888	\$ -	0.283209	\$ -	9	\$ 28,763	0.283209	\$ -
10	\$ 126,428	\$ 171,888	\$ -	0.224148	\$ -	10	\$ 20,508	0.224148	\$ -
11	\$ 97,348	\$ 171,888	\$ -	0.210470	\$ -	11	\$ 15,888	0.210470	\$ -
12	\$ 74,958	\$ 171,888	\$ -	0.181440	\$ -	12	\$ 12,218	0.181440	\$ -
13	\$ 57,717	\$ 171,888	\$ -	0.158414	\$ -	13	\$ 9,408	0.158414	\$ -
14	\$ 44,442	\$ 171,888	\$ -	0.134840	\$ -	14	\$ 7,244	0.134840	\$ -
15	\$ 34,221	\$ 171,888	\$ -	0.118241	\$ -	15	\$ 5,578	0.118241	\$ -
16	\$ 28,350	\$ 171,888	\$ -	0.100208	\$ -	16	\$ 4,295	0.100208	\$ -
17	\$ 20,289	\$ 171,888	\$ -	0.088388	\$ -	17	\$ 3,307	0.088388	\$ -
18	\$ 15,623	\$ 171,888	\$ -	0.074471	\$ -	18	\$ 2,547	0.074471	\$ -
19	\$ 12,030	\$ 171,888	\$ -	0.064199	\$ -	19	\$ 1,981	0.064199	\$ -
20	\$ 9,283	\$ 171,888	\$ -	0.055344	\$ -	20	\$ 1,510	0.055344	\$ -
21	\$ 7,132	\$ 171,888	\$ -	0.047710	\$ -	21	\$ 1,163	0.047710	\$ -
22	\$ 5,492	\$ 171,888	\$ -	0.041129	\$ -	22	\$ 895	0.041129	\$ -
23	\$ 4,229	\$ 171,888	\$ -	0.035458	\$ -	23	\$ 689	0.035458	\$ -
24	\$ 3,258	\$ 171,888	\$ -	0.030588	\$ -	24	\$ 531	0.030588	\$ -
25	\$ 2,507	\$ 171,888	\$ -	0.028350	\$ -	25	\$ 409	0.028350	\$ -
26	\$ 1,931	\$ 171,888	\$ -	0.022715	\$ -	26	\$ 315	0.022715	\$ -
27	\$ 1,487	\$ 171,888	\$ -	0.019582	\$ -	27	\$ 242	0.019582	\$ -
28	\$ 1,145	\$ 171,888	\$ -	0.016881	\$ -	28	\$ 187	0.016881	\$ -
29	\$ 881	\$ 171,888	\$ -	0.014553	\$ -	29	\$ 144	0.014553	\$ -
30	\$ 679	\$ 171,888	\$ -	0.012548	\$ -	30	\$ 111	0.012548	\$ -
31	\$ 523	\$ 171,888	\$ -	0.010815	\$ -	31	\$ 85	0.010815	\$ -
32	\$ 402	\$ 171,888	\$ -	0.009323	\$ -	32	\$ 68	0.009323	\$ -
33	\$ 310	\$ 171,888	\$ -	0.008037	\$ -	33	\$ 51	0.008037	\$ -
34	\$ 239	\$ 171,888	\$ -	0.006929	\$ -	34	\$ 39	0.006929	\$ -
35	\$ 184	\$ 171,888	\$ -	0.005973	\$ -	35	\$ 30	0.005973	\$ -
36	\$ 141	\$ 171,888	\$ -	0.005149	\$ -	36	\$ 23	0.005149	\$ -
37	\$ 109	\$ 171,888	\$ -	0.004439	\$ -	37	\$ 18	0.004439	\$ -
38	\$ 84	\$ 171,888	\$ -	0.003827	\$ -	38	\$ 14	0.003827	\$ -
39	\$ 65	\$ 171,888	\$ -	0.003299	\$ -	39	\$ 11	0.003299	\$ -
40	\$ 50	\$ 171,888	\$ -	0.002844	\$ -	40	\$ 8	0.002844	\$ -
WORKING INTEREST APPRAISAL			\$ 2,777,919			ROYALTY INTEREST APPRAISAL			\$ 183,711

09-0320176274

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)									
		2015		GAS INCOME		OIL INCOME			
DECLINE RATES		WRK INT	\$ 1,739,182	\$ 72,809	YR1	\$ 490,478	\$ 19,294		
YR 1	58%	ROY INT	\$ 720,815	\$ 14,238	YR2	\$ 191,042	\$ 3,720		
YR 2	28%					\$ 733,250	\$ 14,278		
YR3+	23%					\$ 141,371	\$ 2,753		
\$ 1,818,196			TY2017 WORKING INTEREST			TY2017 ROYALTY INTEREST			\$ 494,598
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC
1	\$ 1,010,172	\$ 171,787	\$ 838,405	0.928477	\$ 776,440	1	\$ 194,763	0.928477	\$ 160,833
2	\$ 747,528	\$ 171,787	\$ 575,760	0.800411	\$ 480,845	2	\$ 144,124	0.800411	\$ 115,359
3	\$ 575,598	\$ 171,787	\$ 403,829	0.690009	\$ 278,848	3	\$ 110,976	0.690009	\$ 76,574
4	\$ 443,209	\$ 171,787	\$ 271,442	0.594838	\$ 181,483	4	\$ 85,451	0.594838	\$ 50,830
5	\$ 341,271	\$ 171,787	\$ 169,504	0.512789	\$ 88,920	5	\$ 65,797	0.512789	\$ 33,740
6	\$ 282,779	\$ 171,787	\$ 91,011	0.442080	\$ 40,232	6	\$ 50,884	0.442080	\$ 22,397
7	\$ 202,340	\$ 171,787	\$ 30,572	0.381088	\$ 11,851	7	\$ 39,011	0.381088	\$ 14,887
8	\$ 155,801	\$ 171,787	\$ -	0.328522	\$ -	8	\$ 30,039	0.328522	\$ -
9	\$ 119,987	\$ 171,787	\$ -	0.283208	\$ -	9	\$ 23,130	0.283209	\$ -
10	\$ 92,375	\$ 171,787	\$ -	0.224148	\$ -	10	\$ 17,810	0.224146	\$ -
11	\$ 71,129	\$ 171,787	\$ -	0.210470	\$ -	11	\$ 13,714	0.210470	\$ -
12	\$ 54,789	\$ 171,787	\$ -	0.181440	\$ -	12	\$ 10,560	0.181440	\$ -
13	\$ 42,172	\$ 171,787	\$ -	0.158414	\$ -	13	\$ 8,131	0.158414	\$ -
14	\$ 32,473	\$ 171,787	\$ -	0.134840	\$ -	14	\$ 6,281	0.134840	\$ -
15	\$ 25,004	\$ 171,787	\$ -	0.118241	\$ -	15	\$ 4,821	0.118241	\$ -
16	\$ 19,253	\$ 171,787	\$ -	0.100208	\$ -	16	\$ 3,712	0.100208	\$ -
17	\$ 14,825	\$ 171,787	\$ -	0.088388	\$ -	17	\$ 2,858	0.088388	\$ -
18	\$ 11,415	\$ 171,787	\$ -	0.074471	\$ -	18	\$ 2,201	0.074471	\$ -
19	\$ 8,790	\$ 171,787	\$ -	0.064199	\$ -	19	\$ 1,695	0.064199	\$ -
20	\$ 6,768	\$ 171,787	\$ -	0.055344	\$ -	20	\$ 1,305	0.055344	\$ -
21	\$ 5,211	\$ 171,787	\$ -	0.047710	\$ -	21	\$ 1,005	0.047710	\$ -
22	\$ 4,013	\$ 171,787	\$ -	0.041129	\$ -	22	\$ 774	0.041129	\$ -
23	\$ 3,090	\$ 171,787	\$ -	0.035456	\$ -	23	\$ 598	0.035456	\$ -
24	\$ 2,379	\$ 171,787	\$ -	0.030588	\$ -	24	\$ 459	0.030588	\$ -
25	\$ 1,832	\$ 171,787	\$ -	0.026350	\$ -	25	\$ 363	0.026350	\$ -
26	\$ 1,411	\$ 171,787	\$ -	0.022715	\$ -	26	\$ 272	0.022715	\$ -
27	\$ 1,088	\$ 171,787	\$ -	0.019582	\$ -	27	\$ 209	0.019582	\$ -
28	\$ 838	\$ 171,787	\$ -	0.016881	\$ -	28	\$ 161	0.016881	\$ -
29	\$ 644	\$ 171,787	\$ -	0.014553	\$ -	29	\$ 124	0.014553	\$ -
30	\$ 498	\$ 171,787	\$ -	0.012548	\$ -	30	\$ 98	0.012548	\$ -
31	\$ 382	\$ 171,787	\$ -	0.010815	\$ -	31	\$ 74	0.010815	\$ -
32	\$ 284	\$ 171,787	\$ -	0.009323	\$ -	32	\$ 57	0.009323	\$ -
33	\$ 228	\$ 171,787	\$ -	0.008037	\$ -	33	\$ 44	0.008037	\$ -
34	\$ 174	\$ 171,787	\$ -	0.006929	\$ -	34	\$ 34	0.006929	\$ -
35	\$ 134	\$ 171,787	\$ -	0.005973	\$ -	35	\$ 25	0.005973	\$ -
36	\$ 103	\$ 171,787	\$ -	0.005149	\$ -	36	\$ 20	0.005149	\$ -
37	\$ 80	\$ 171,787	\$ -	0.004439	\$ -	37	\$ 15	0.004439	\$ -
38	\$ 61	\$ 171,787	\$ -	0.003827	\$ -	38	\$ 12	0.003827	\$ -
39	\$ 47	\$ 171,787	\$ -	0.003299	\$ -	39	\$ 9	0.003299	\$ -
40	\$ 36	\$ 171,787	\$ -	0.002844	\$ -	40	\$ 7	0.003612	\$ -
WORKING INTEREST APPRAISAL					\$ 1,818,196	ROYALTY INTEREST APPRAISAL			

09-032017 6373

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)									
DECLINE RATES		2015	GAS INCOME		OIL INCOME	GAS CAP INCOME		OIL CAP INCOME	
YR 1	50%	WRK INT	\$	1,032,784	\$	158,368	YR1	\$	1,032,784
YR 2	29%	ROY INT	\$	751,411	\$	90,147	YR2	\$	199,124
YR3+	23%							\$	754,264
								\$	147,362
\$ 1,995,209		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.8%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.8%)	DIS INC
1	\$ 1,074,231	\$ 188,471	\$ 905,760	0.928477	\$ 840,977	1	\$ 207,113	0.928477	\$ 192,300
2	\$ 794,931	\$ 188,471	\$ 626,460	0.800411	\$ 501,425	2	\$ 153,264	0.809411	\$ 122,874
3	\$ 612,097	\$ 188,471	\$ 443,625	0.690009	\$ 308,106	3	\$ 116,013	0.690009	\$ 81,430
4	\$ 471,315	\$ 188,471	\$ 302,843	0.594838	\$ 180,142	4	\$ 90,870	0.594838	\$ 54,083
5	\$ 382,912	\$ 188,471	\$ 194,441	0.512769	\$ 99,707	5	\$ 89,970	0.512769	\$ 35,880
6	\$ 279,442	\$ 188,471	\$ 110,971	0.442060	\$ 49,056	6	\$ 53,677	0.442060	\$ 23,617
7	\$ 216,171	\$ 188,471	\$ 48,699	0.381088	\$ 17,798	7	\$ 41,485	0.381088	\$ 15,809
8	\$ 185,881	\$ 188,471	\$ -	0.328522	\$ -	8	\$ 31,944	0.328522	\$ -
9	\$ 127,576	\$ 188,471	\$ -	0.283209	\$ -	9	\$ 24,597	0.283209	\$ -
10	\$ 98,233	\$ 188,471	\$ -	0.224148	\$ -	10	\$ 18,939	0.224148	\$ -
11	\$ 75,839	\$ 188,471	\$ -	0.210470	\$ -	11	\$ 14,583	0.210470	\$ -
12	\$ 58,242	\$ 188,471	\$ -	0.181440	\$ -	12	\$ 11,229	0.181440	\$ -
13	\$ 44,846	\$ 188,471	\$ -	0.158414	\$ -	13	\$ 8,848	0.158414	\$ -
14	\$ 34,532	\$ 188,471	\$ -	0.134840	\$ -	14	\$ 6,558	0.134840	\$ -
15	\$ 26,589	\$ 188,471	\$ -	0.116241	\$ -	15	\$ 5,126	0.116241	\$ -
16	\$ 20,474	\$ 188,471	\$ -	0.100206	\$ -	16	\$ 3,947	0.100206	\$ -
17	\$ 15,765	\$ 188,471	\$ -	0.088388	\$ -	17	\$ 3,039	0.088388	\$ -
18	\$ 12,139	\$ 188,471	\$ -	0.074471	\$ -	18	\$ 2,340	0.074471	\$ -
19	\$ 9,347	\$ 188,471	\$ -	0.064199	\$ -	19	\$ 1,802	0.064199	\$ -
20	\$ 7,197	\$ 188,471	\$ -	0.055344	\$ -	20	\$ 1,388	0.055344	\$ -
21	\$ 5,642	\$ 188,471	\$ -	0.047710	\$ -	21	\$ 1,068	0.047710	\$ -
22	\$ 4,287	\$ 188,471	\$ -	0.041129	\$ -	22	\$ 823	0.041129	\$ -
23	\$ 3,266	\$ 188,471	\$ -	0.035458	\$ -	23	\$ 633	0.035458	\$ -
24	\$ 2,530	\$ 188,471	\$ -	0.030568	\$ -	24	\$ 466	0.030568	\$ -
25	\$ 1,948	\$ 188,471	\$ -	0.026350	\$ -	25	\$ 376	0.026350	\$ -
26	\$ 1,500	\$ 188,471	\$ -	0.022716	\$ -	26	\$ 289	0.022716	\$ -
27	\$ 1,155	\$ 188,471	\$ -	0.019582	\$ -	27	\$ 223	0.019582	\$ -
28	\$ 889	\$ 188,471	\$ -	0.018661	\$ -	28	\$ 171	0.018661	\$ -
29	\$ 885	\$ 188,471	\$ -	0.014553	\$ -	29	\$ 132	0.014553	\$ -
30	\$ 527	\$ 188,471	\$ -	0.012546	\$ -	30	\$ 102	0.012546	\$ -
31	\$ 408	\$ 188,471	\$ -	0.010815	\$ -	31	\$ 78	0.010815	\$ -
32	\$ 313	\$ 188,471	\$ -	0.009323	\$ -	32	\$ 60	0.009323	\$ -
33	\$ 241	\$ 188,471	\$ -	0.008037	\$ -	33	\$ 46	0.008037	\$ -
34	\$ 185	\$ 188,471	\$ -	0.006929	\$ -	34	\$ 36	0.006929	\$ -
35	\$ 143	\$ 188,471	\$ -	0.005973	\$ -	35	\$ 28	0.005973	\$ -
36	\$ 110	\$ 188,471	\$ -	0.005149	\$ -	36	\$ 21	0.005149	\$ -
37	\$ 85	\$ 188,471	\$ -	0.004439	\$ -	37	\$ 16	0.004439	\$ -
38	\$ 65	\$ 188,471	\$ -	0.003827	\$ -	38	\$ 13	0.003827	\$ -
39	\$ 50	\$ 188,471	\$ -	0.003299	\$ -	39	\$ 10	0.003299	\$ -
40	\$ 39	\$ 188,471	\$ -	0.002844	\$ -	40	\$ 7	0.003612	\$ -
\$ 1,995,209		WORKING INTEREST APPRAISAL				ROYALTY INTEREST APPRAISAL			
\$ 1,995,209									

09-0320174374

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (YEAR 1)											
		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
DECLINE RATES		WRK INT		\$ 1,910,340	\$ 178,248	YR1	\$ 1,301,340	\$ 48,708			
YR 1	50%	ROY INT		\$ 562,485	\$ 34,187		\$ 352,409	\$ 1,060			
YR 2	20%					YR2	\$ 582,916	\$ 34,682			
YR3+	23%						\$ 188,782	\$ 8,704			
\$ 2,709,150			TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 677,248
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC		
1	\$ 1,347,945	\$ 189,136	\$ 1,178,810	0.928477	\$ 1,094,496	1	\$ 261,488	0.928477	\$ 242,767		
2	\$ 997,480	\$ 189,136	\$ 828,344	0.800411	\$ 863,016	2	\$ 193,488	0.800411	\$ 154,889		
3	\$ 768,059	\$ 189,136	\$ 596,924	0.690009	\$ 413,263	3	\$ 148,985	0.690009	\$ 102,801		
4	\$ 591,406	\$ 169,136	\$ 422,270	0.594836	\$ 251,161	4	\$ 114,716	0.594836	\$ 66,236		
5	\$ 455,382	\$ 189,136	\$ 266,247	0.512789	\$ 146,784	5	\$ 86,333	0.512789	\$ 45,296		
6	\$ 350,844	\$ 189,136	\$ 161,509	0.442060	\$ 80,236	6	\$ 68,016	0.442080	\$ 30,067		
7	\$ 269,996	\$ 189,136	\$ 100,861	0.361066	\$ 38,437	7	\$ 52,373	0.361066	\$ 19,958		
8	\$ 207,897	\$ 189,136	\$ 38,761	0.328522	\$ 12,734	8	\$ 40,327	0.328522	\$ 13,248		
9	\$ 160,061	\$ 189,136	\$ -	0.283209	\$ -	9	\$ 31,052	0.283209	\$ -		
10	\$ 123,262	\$ 189,136	\$ -	0.224146	\$ -	10	\$ 23,910	0.224146	\$ -		
11	\$ 94,912	\$ 189,136	\$ -	0.210470	\$ -	11	\$ 18,411	0.210470	\$ -		
12	\$ 73,082	\$ 189,136	\$ -	0.181440	\$ -	12	\$ 14,176	0.181440	\$ -		
13	\$ 58,273	\$ 189,136	\$ -	0.158414	\$ -	13	\$ 10,918	0.158414	\$ -		
14	\$ 43,330	\$ 189,136	\$ -	0.134840	\$ -	14	\$ 8,405	0.134840	\$ -		
15	\$ 33,384	\$ 189,136	\$ -	0.116241	\$ -	15	\$ 6,472	0.116241	\$ -		
16	\$ 25,891	\$ 189,136	\$ -	0.100206	\$ -	16	\$ 4,983	0.100206	\$ -		
17	\$ 19,782	\$ 189,136	\$ -	0.088388	\$ -	17	\$ 3,637	0.088386	\$ -		
18	\$ 15,232	\$ 189,136	\$ -	0.074471	\$ -	18	\$ 2,955	0.074471	\$ -		
19	\$ 11,729	\$ 189,136	\$ -	0.064199	\$ -	19	\$ 2,275	0.064199	\$ -		
20	\$ 9,031	\$ 189,136	\$ -	0.055344	\$ -	20	\$ 1,752	0.055344	\$ -		
21	\$ 6,954	\$ 189,136	\$ -	0.047710	\$ -	21	\$ 1,349	0.047710	\$ -		
22	\$ 5,354	\$ 189,136	\$ -	0.041129	\$ -	22	\$ 1,039	0.041129	\$ -		
23	\$ 4,123	\$ 189,136	\$ -	0.035456	\$ -	23	\$ 800	0.035456	\$ -		
24	\$ 3,175	\$ 189,136	\$ -	0.030566	\$ -	24	\$ 616	0.030566	\$ -		
25	\$ 2,445	\$ 189,136	\$ -	0.026350	\$ -	25	\$ 474	0.026350	\$ -		
26	\$ 1,862	\$ 189,136	\$ -	0.022715	\$ -	26	\$ 365	0.022715	\$ -		
27	\$ 1,449	\$ 189,136	\$ -	0.019582	\$ -	27	\$ 261	0.019582	\$ -		
28	\$ 1,116	\$ 189,136	\$ -	0.016881	\$ -	28	\$ 216	0.016881	\$ -		
29	\$ 859	\$ 189,136	\$ -	0.014553	\$ -	29	\$ 167	0.014553	\$ -		
30	\$ 662	\$ 189,136	\$ -	0.012546	\$ -	30	\$ 128	0.012546	\$ -		
31	\$ 509	\$ 189,136	\$ -	0.010615	\$ -	31	\$ 99	0.010615	\$ -		
32	\$ 392	\$ 189,136	\$ -	0.009323	\$ -	32	\$ 76	0.009323	\$ -		
33	\$ 302	\$ 189,136	\$ -	0.008037	\$ -	33	\$ 59	0.008037	\$ -		
34	\$ 233	\$ 189,136	\$ -	0.006929	\$ -	34	\$ 45	0.006929	\$ -		
35	\$ 179	\$ 189,136	\$ -	0.005973	\$ -	35	\$ 35	0.005973	\$ -		
36	\$ 136	\$ 189,136	\$ -	0.005149	\$ -	36	\$ 27	0.005149	\$ -		
37	\$ 108	\$ 189,136	\$ -	0.004439	\$ -	37	\$ 21	0.004439	\$ -		
38	\$ 82	\$ 189,136	\$ -	0.003827	\$ -	38	\$ 16	0.003827	\$ -		
39	\$ 63	\$ 189,136	\$ -	0.003299	\$ -	39	\$ 12	0.003299	\$ -		
40	\$ 48	\$ 189,136	\$ -	0.002844	\$ -	40	\$ 9	0.003812	\$ -		
WORKING INTEREST APPRAISAL					\$ 2,709,150	ROYALTY INTEREST APPRAISAL					\$ 677,248

09-0320176375

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)												
DECLINE RATES		2015	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME			
YR 1	55%	WRK INT	\$	3,753,345	\$	14,385	YR1	\$	997,247	\$	8,113	
YR 2	28%	ROY INT	\$	578,745	\$	6,193		\$	179,385	\$	1,641	
YR3+	23%						YR2	\$	737,362	\$	6,743	
								\$	138,162	\$	1,214	
\$ 1,801,220		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST					\$ 460,841
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC			
1	\$ 1,008,400	\$ 173,487	\$ 832,932	0.928477	\$ 773,356	1	\$ 161,509	0.928477	\$ 166,527			
2	\$ 744,736	\$ 173,487	\$ 571,208	0.800411	\$ 457,249	2	\$ 134,317	0.800411	\$ 107,508			
3	\$ 573,446	\$ 173,487	\$ 399,979	0.690009	\$ 275,989	3	\$ 103,424	0.690009	\$ 71,383			
4	\$ 441,654	\$ 173,487	\$ 268,086	0.594836	\$ 159,487	4	\$ 79,636	0.594836	\$ 47,371			
5	\$ 339,996	\$ 173,487	\$ 186,529	0.512769	\$ 85,394	5	\$ 61,320	0.512769	\$ 31,444			
6	\$ 261,797	\$ 173,487	\$ 88,330	0.442080	\$ 39,047	6	\$ 47,216	0.442080	\$ 20,672			
7	\$ 201,584	\$ 173,487	\$ 28,116	0.381088	\$ 10,715	7	\$ 36,357	0.381088	\$ 13,855			
8	\$ 155,220	\$ 173,487	\$ -	0.328522	\$ -	8	\$ 27,695	0.328522	\$ -			
9	\$ 119,519	\$ 173,487	\$ -	0.283209	\$ -	9	\$ 21,556	0.283209	\$ -			
10	\$ 92,030	\$ 173,487	\$ -	0.224146	\$ -	10	\$ 16,598	0.224146	\$ -			
11	\$ 70,883	\$ 173,487	\$ -	0.210470	\$ -	11	\$ 12,780	0.210470	\$ -			
12	\$ 54,584	\$ 173,487	\$ -	0.181440	\$ -	12	\$ 9,841	0.181440	\$ -			
13	\$ 42,015	\$ 173,487	\$ -	0.156414	\$ -	13	\$ 7,576	0.156414	\$ -			
14	\$ 32,351	\$ 173,487	\$ -	0.134840	\$ -	14	\$ 5,635	0.134840	\$ -			
15	\$ 24,910	\$ 173,487	\$ -	0.118241	\$ -	15	\$ 4,493	0.118241	\$ -			
16	\$ 19,181	\$ 173,487	\$ -	0.100208	\$ -	16	\$ 3,459	0.100208	\$ -			
17	\$ 14,769	\$ 173,487	\$ -	0.086386	\$ -	17	\$ 2,684	0.086386	\$ -			
18	\$ 11,372	\$ 173,487	\$ -	0.074471	\$ -	18	\$ 2,051	0.074471	\$ -			
19	\$ 8,757	\$ 173,487	\$ -	0.064199	\$ -	19	\$ 1,579	0.064199	\$ -			
20	\$ 6,743	\$ 173,487	\$ -	0.055344	\$ -	20	\$ 1,216	0.055344	\$ -			
21	\$ 5,192	\$ 173,487	\$ -	0.047710	\$ -	21	\$ 938	0.047710	\$ -			
22	\$ 3,998	\$ 173,487	\$ -	0.041129	\$ -	22	\$ 721	0.041129	\$ -			
23	\$ 3,076	\$ 173,487	\$ -	0.035456	\$ -	23	\$ 555	0.035456	\$ -			
24	\$ 2,370	\$ 173,487	\$ -	0.030566	\$ -	24	\$ 427	0.030566	\$ -			
25	\$ 1,825	\$ 173,487	\$ -	0.026350	\$ -	25	\$ 329	0.026350	\$ -			
26	\$ 1,405	\$ 173,487	\$ -	0.022715	\$ -	26	\$ 253	0.022715	\$ -			
27	\$ 1,082	\$ 173,487	\$ -	0.019582	\$ -	27	\$ 195	0.019582	\$ -			
28	\$ 833	\$ 173,487	\$ -	0.016881	\$ -	28	\$ 150	0.016881	\$ -			
29	\$ 642	\$ 173,487	\$ -	0.014553	\$ -	29	\$ 116	0.014553	\$ -			
30	\$ 494	\$ 173,487	\$ -	0.012546	\$ -	30	\$ 89	0.012546	\$ -			
31	\$ 380	\$ 173,487	\$ -	0.010815	\$ -	31	\$ 69	0.010815	\$ -			
32	\$ 293	\$ 173,487	\$ -	0.009323	\$ -	32	\$ 53	0.009323	\$ -			
33	\$ 226	\$ 173,487	\$ -	0.008037	\$ -	33	\$ 41	0.008037	\$ -			
34	\$ 174	\$ 173,487	\$ -	0.006929	\$ -	34	\$ 31	0.006929	\$ -			
35	\$ 134	\$ 173,487	\$ -	0.005973	\$ -	35	\$ 24	0.005973	\$ -			
36	\$ 103	\$ 173,487	\$ -	0.005149	\$ -	36	\$ 19	0.005149	\$ -			
37	\$ 79	\$ 173,487	\$ -	0.004439	\$ -	37	\$ 14	0.004439	\$ -			
38	\$ 61	\$ 173,487	\$ -	0.003827	\$ -	38	\$ 11	0.003827	\$ -			
39	\$ 47	\$ 173,487	\$ -	0.003299	\$ -	39	\$ 8	0.003299	\$ -			
40	\$ 36	\$ 173,487	\$ -	0.002844	\$ -	40	\$ 7	0.003812	\$ -			
WORKING INTEREST APPRAISAL			\$ 1,801,220			ROYALTY INTEREST APPRAISAL			\$ 460,841			

0320176395

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (YMW-1)												
		2016		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
DECLINE RATES		WRK INT		\$	4,978,791	\$	58,008	YR1	\$	1,240,148	\$	23,588
YR1	50%	ROY INT		\$	737,338	\$	14,023		\$	195,402	\$	3,719
YR2	29%							YR2	\$	912,707	\$	17,453
YR3	23%								\$	144,387	\$	2,750
\$ 2,469,360		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST					\$ 515,748
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC			
1	\$ 1,283,730	\$ 171,841	\$ 1,091,888	0.928477	\$ 1,013,793	1	\$ 199,118	0.928477	\$ 184,877			
2	\$ 935,180	\$ 171,841	\$ 763,319	0.800411	\$ 810,989	2	\$ 147,347	0.800411	\$ 117,938			
3	\$ 720,073	\$ 171,841	\$ 548,232	0.690009	\$ 378,285	3	\$ 113,457	0.690009	\$ 78,287			
4	\$ 554,458	\$ 171,841	\$ 382,616	0.594838	\$ 227,593	4	\$ 87,362	0.594838	\$ 51,988			
5	\$ 428,931	\$ 171,841	\$ 256,090	0.512789	\$ 130,807	5	\$ 67,269	0.512789	\$ 34,495			
6	\$ 328,737	\$ 171,841	\$ 156,896	0.442080	\$ 68,357	6	\$ 61,797	0.442080	\$ 22,897			
7	\$ 253,128	\$ 171,841	\$ 81,288	0.381088	\$ 30,877	7	\$ 39,884	0.381088	\$ 15,199			
8	\$ 194,908	\$ 171,841	\$ 23,087	0.328522	\$ 7,578	8	\$ 30,710	0.328522	\$ 10,089			
9	\$ 150,079	\$ 171,841	\$ -	0.283209	\$ -	9	\$ 23,847	0.283209	\$ -			
10	\$ 115,581	\$ 171,841	\$ -	0.224148	\$ -	10	\$ 18,208	0.224148	\$ -			
11	\$ 88,982	\$ 171,841	\$ -	0.210470	\$ -	11	\$ 14,020	0.210470	\$ -			
12	\$ 88,518	\$ 171,841	\$ -	0.181440	\$ -	12	\$ 10,798	0.181440	\$ -			
13	\$ 52,757	\$ 171,841	\$ -	0.158414	\$ -	13	\$ 8,313	0.158414	\$ -			
14	\$ 40,823	\$ 171,841	\$ -	0.134840	\$ -	14	\$ 8,401	0.134840	\$ -			
15	\$ 31,280	\$ 171,841	\$ -	0.118241	\$ -	15	\$ 4,929	0.118241	\$ -			
16	\$ 24,088	\$ 171,841	\$ -	0.100208	\$ -	16	\$ 3,796	0.100208	\$ -			
17	\$ 18,548	\$ 171,841	\$ -	0.086388	\$ -	17	\$ 2,922	0.086388	\$ -			
18	\$ 14,280	\$ 171,841	\$ -	0.074471	\$ -	18	\$ 2,250	0.074471	\$ -			
19	\$ 10,998	\$ 171,841	\$ -	0.064199	\$ -	19	\$ 1,733	0.064199	\$ -			
20	\$ 8,487	\$ 171,841	\$ -	0.055344	\$ -	20	\$ 1,334	0.055344	\$ -			
21	\$ 8,519	\$ 171,841	\$ -	0.047710	\$ -	21	\$ 1,027	0.047710	\$ -			
22	\$ 6,020	\$ 171,841	\$ -	0.041129	\$ -	22	\$ 791	0.041129	\$ -			
23	\$ 3,865	\$ 171,841	\$ -	0.035458	\$ -	23	\$ 809	0.035458	\$ -			
24	\$ 2,978	\$ 171,841	\$ -	0.030588	\$ -	24	\$ 489	0.030588	\$ -			
25	\$ 2,292	\$ 171,841	\$ -	0.026350	\$ -	25	\$ 381	0.026350	\$ -			
26	\$ 1,785	\$ 171,841	\$ -	0.022715	\$ -	26	\$ 278	0.022715	\$ -			
27	\$ 1,359	\$ 171,841	\$ -	0.019582	\$ -	27	\$ 214	0.019582	\$ -			
28	\$ 1,048	\$ 171,841	\$ -	0.018881	\$ -	28	\$ 185	0.018881	\$ -			
29	\$ 808	\$ 171,841	\$ -	0.014553	\$ -	29	\$ 127	0.014553	\$ -			
30	\$ 820	\$ 171,841	\$ -	0.012548	\$ -	30	\$ 98	0.012548	\$ -			
31	\$ 478	\$ 171,841	\$ -	0.010815	\$ -	31	\$ 75	0.010815	\$ -			
32	\$ 368	\$ 171,841	\$ -	0.009323	\$ -	32	\$ 58	0.009323	\$ -			
33	\$ 263	\$ 171,841	\$ -	0.008037	\$ -	33	\$ 45	0.008037	\$ -			
34	\$ 218	\$ 171,841	\$ -	0.008929	\$ -	34	\$ 34	0.008929	\$ -			
35	\$ 168	\$ 171,841	\$ -	0.005973	\$ -	35	\$ 28	0.005973	\$ -			
36	\$ 129	\$ 171,841	\$ -	0.005149	\$ -	36	\$ 20	0.005149	\$ -			
37	\$ 100	\$ 171,841	\$ -	0.004439	\$ -	37	\$ 16	0.004439	\$ -			
38	\$ 77	\$ 171,841	\$ -	0.003827	\$ -	38	\$ 12	0.003827	\$ -			
39	\$ 59	\$ 171,841	\$ -	0.003299	\$ -	39	\$ 9	0.003299	\$ -			
40	\$ 45	\$ 171,841	\$ -	0.002844	\$ -	40	\$ 7	0.003812	\$ -			
WORKING INTEREST APPRAISAL					\$ 2,469,360	ROYALTY INTEREST APPRAISAL					\$ 515,748	

09-0320176397

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)											
DECLINE RATES		2015	GAS INCOME		OIL INCOME	GAS CAP INCOME		OIL CAP INCOME			
YR 1	59%	WRK INT	\$	6,546,308	\$	158,808	YR1	\$	1,487,048	\$	28,042
YR 2	29%	ROY INT	\$	896,127	\$	18,703		\$	235,394	\$	4,428
YR3+	23%						YR2	\$	1,107,829	\$	20,788
								\$	174,964	\$	3,278
\$ 1,188,928		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST \$ 830,824				
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC		
1	\$ 1,525,156	\$ 171,883	\$ 1,353,276	0.928477	\$ 1,258,488	1	\$ 240,310	0.828477	\$ 223,122		
2	\$ 1,128,617	\$ 171,883	\$ 956,735	0.800411	\$ 785,761	2	\$ 177,829	0.800411	\$ 142,337		
3	\$ 869,035	\$ 171,883	\$ 697,153	0.690009	\$ 481,042	3	\$ 138,928	0.690009	\$ 94,482		
4	\$ 669,157	\$ 171,883	\$ 497,275	0.594838	\$ 295,797	4	\$ 105,435	0.594838	\$ 62,717		
5	\$ 515,251	\$ 171,883	\$ 343,368	0.512789	\$ 176,078	5	\$ 81,185	0.512789	\$ 41,831		
6	\$ 396,743	\$ 171,883	\$ 224,861	0.442080	\$ 99,402	6	\$ 62,512	0.442080	\$ 27,834		
7	\$ 305,492	\$ 171,883	\$ 133,610	0.381088	\$ 50,917	7	\$ 46,135	0.381088	\$ 18,343		
8	\$ 235,229	\$ 171,883	\$ 63,347	0.328522	\$ 20,811	8	\$ 37,084	0.328522	\$ 12,178		
9	\$ 181,128	\$ 171,883	\$ 9,244	0.283209	\$ 2,818	9	\$ 28,536	0.283209	\$ 8,082		
10	\$ 139,487	\$ 171,883	\$ -	0.224146	\$ -	10	\$ 21,975	0.224146	\$ -		
11	\$ 107,390	\$ 171,883	\$ -	0.210470	\$ -	11	\$ 18,921	0.210470	\$ -		
12	\$ 82,890	\$ 171,883	\$ -	0.181440	\$ -	12	\$ 13,029	0.181440	\$ -		
13	\$ 63,871	\$ 171,883	\$ -	0.156414	\$ -	13	\$ 10,032	0.156414	\$ -		
14	\$ 49,027	\$ 171,883	\$ -	0.134840	\$ -	14	\$ 7,725	0.134840	\$ -		
15	\$ 37,761	\$ 171,883	\$ -	0.118241	\$ -	15	\$ 5,948	0.118241	\$ -		
16	\$ 29,086	\$ 171,883	\$ -	0.100208	\$ -	16	\$ 4,580	0.100208	\$ -		
17	\$ 22,382	\$ 171,883	\$ -	0.088388	\$ -	17	\$ 3,627	0.088388	\$ -		
18	\$ 17,234	\$ 171,883	\$ -	0.074471	\$ -	18	\$ 2,718	0.074471	\$ -		
19	\$ 13,271	\$ 171,883	\$ -	0.064199	\$ -	19	\$ 2,091	0.064199	\$ -		
20	\$ 10,218	\$ 171,883	\$ -	0.055344	\$ -	20	\$ 1,810	0.055344	\$ -		
21	\$ 7,886	\$ 171,883	\$ -	0.047710	\$ -	21	\$ 1,240	0.047710	\$ -		
22	\$ 6,068	\$ 171,883	\$ -	0.041129	\$ -	22	\$ 965	0.041129	\$ -		
23	\$ 4,866	\$ 171,883	\$ -	0.035458	\$ -	23	\$ 735	0.035458	\$ -		
24	\$ 3,592	\$ 171,883	\$ -	0.030588	\$ -	24	\$ 588	0.030588	\$ -		
25	\$ 2,788	\$ 171,883	\$ -	0.026350	\$ -	25	\$ 436	0.026350	\$ -		
26	\$ 2,130	\$ 171,883	\$ -	0.022715	\$ -	26	\$ 338	0.022715	\$ -		
27	\$ 1,640	\$ 171,883	\$ -	0.018582	\$ -	27	\$ 258	0.018582	\$ -		
28	\$ 1,283	\$ 171,883	\$ -	0.018881	\$ -	28	\$ 199	0.018881	\$ -		
29	\$ 872	\$ 171,883	\$ -	0.014653	\$ -	29	\$ 153	0.014653	\$ -		
30	\$ 749	\$ 171,883	\$ -	0.012548	\$ -	30	\$ 118	0.012548	\$ -		
31	\$ 578	\$ 171,883	\$ -	0.010815	\$ -	31	\$ 91	0.010815	\$ -		
32	\$ 444	\$ 171,883	\$ -	0.009323	\$ -	32	\$ 70	0.009323	\$ -		
33	\$ 342	\$ 171,883	\$ -	0.008037	\$ -	33	\$ 54	0.008037	\$ -		
34	\$ 283	\$ 171,883	\$ -	0.008929	\$ -	34	\$ 41	0.008929	\$ -		
35	\$ 208	\$ 171,883	\$ -	0.005973	\$ -	35	\$ 32	0.005973	\$ -		
36	\$ 158	\$ 171,883	\$ -	0.005149	\$ -	36	\$ 25	0.005149	\$ -		
37	\$ 120	\$ 171,883	\$ -	0.004439	\$ -	37	\$ 19	0.004439	\$ -		
38	\$ 93	\$ 171,883	\$ -	0.003827	\$ -	38	\$ 15	0.003827	\$ -		
39	\$ 71	\$ 171,883	\$ -	0.003299	\$ -	39	\$ 11	0.003299	\$ -		
40	\$ 55	\$ 171,883	\$ -	0.002844	\$ -	40	\$ 9	0.003612	\$ -		
WORKING INTEREST APPRAISAL					\$ 3,148,328	ROYALTY INTEREST APPRAISAL					\$ 830,824

09-0320176398

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Y6697)											
DECLINE RATES		2015	GAS INCOME		OIL INCOME	GAS CAP INCOME		OIL CAP INCOME			
YR 1	59%	WRK INT	\$	5,024,887	\$	189,018	YR1	\$	1,331,348	\$	28,889
YR 2	29%	ROY INT	\$	839,343	\$	18,217	YR2	\$	223,431	\$	4,928
YR3+	23%							\$	383,343	\$	24,378
\$ 2,721,878		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 888,838	
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC		
1	\$ 1,380,434	\$ 171,408	\$ 1,189,028	0.928477	\$ 1,103,985	1	\$ 227,258	0.928477	\$ 211,004		
2	\$ 1,008,721	\$ 171,408	\$ 835,316	0.800411	\$ 868,596	2	\$ 168,171	0.800411	\$ 134,606		
3	\$ 775,176	\$ 171,408	\$ 603,789	0.690009	\$ 418,608	3	\$ 129,492	0.690009	\$ 89,351		
4	\$ 606,885	\$ 171,408	\$ 425,479	0.594838	\$ 253,090	4	\$ 99,709	0.594838	\$ 59,310		
5	\$ 459,801	\$ 171,408	\$ 288,195	0.512789	\$ 147,783	5	\$ 78,778	0.512789	\$ 39,370		
6	\$ 353,893	\$ 171,408	\$ 182,487	0.442080	\$ 80,870	6	\$ 59,117	0.442080	\$ 28,133		
7	\$ 272,498	\$ 171,408	\$ 101,092	0.381088	\$ 38,626	7	\$ 45,620	0.381088	\$ 17,347		
8	\$ 209,823	\$ 171,408	\$ 38,417	0.328522	\$ 12,821	8	\$ 35,051	0.328522	\$ 11,516		
9	\$ 161,684	\$ 171,408	\$ -	0.283209	\$ -	9	\$ 28,889	0.283209	\$ -		
10	\$ 124,404	\$ 171,408	\$ -	0.224148	\$ -	10	\$ 20,782	0.224148	\$ -		
11	\$ 95,781	\$ 171,408	\$ -	0.210470	\$ -	11	\$ 18,002	0.210470	\$ -		
12	\$ 73,759	\$ 171,408	\$ -	0.181440	\$ -	12	\$ 12,321	0.181440	\$ -		
13	\$ 66,796	\$ 171,408	\$ -	0.158414	\$ -	13	\$ 9,487	0.158414	\$ -		
14	\$ 43,732	\$ 171,408	\$ -	0.134840	\$ -	14	\$ 7,305	0.134840	\$ -		
15	\$ 33,874	\$ 171,408	\$ -	0.116241	\$ -	15	\$ 5,826	0.116241	\$ -		
16	\$ 25,929	\$ 171,408	\$ -	0.100208	\$ -	16	\$ 4,331	0.100208	\$ -		
17	\$ 19,985	\$ 171,408	\$ -	0.088388	\$ -	17	\$ 3,335	0.088388	\$ -		
18	\$ 15,373	\$ 171,408	\$ -	0.074471	\$ -	18	\$ 2,588	0.074471	\$ -		
19	\$ 11,837	\$ 171,408	\$ -	0.064199	\$ -	19	\$ 1,977	0.064199	\$ -		
20	\$ 9,115	\$ 171,408	\$ -	0.055344	\$ -	20	\$ 1,523	0.055344	\$ -		
21	\$ 7,018	\$ 171,408	\$ -	0.047710	\$ -	21	\$ 1,172	0.047710	\$ -		
22	\$ 5,404	\$ 171,408	\$ -	0.041129	\$ -	22	\$ 903	0.041129	\$ -		
23	\$ 4,181	\$ 171,408	\$ -	0.036458	\$ -	23	\$ 695	0.036458	\$ -		
24	\$ 3,204	\$ 171,408	\$ -	0.030588	\$ -	24	\$ 535	0.030588	\$ -		
25	\$ 2,487	\$ 171,408	\$ -	0.026350	\$ -	25	\$ 412	0.026350	\$ -		
26	\$ 1,900	\$ 171,408	\$ -	0.022716	\$ -	26	\$ 317	0.022716	\$ -		
27	\$ 1,483	\$ 171,408	\$ -	0.019582	\$ -	27	\$ 244	0.019582	\$ -		
28	\$ 1,128	\$ 171,408	\$ -	0.016881	\$ -	28	\$ 188	0.016881	\$ -		
29	\$ 867	\$ 171,408	\$ -	0.014553	\$ -	29	\$ 145	0.014553	\$ -		
30	\$ 688	\$ 171,408	\$ -	0.012548	\$ -	30	\$ 112	0.012548	\$ -		
31	\$ 514	\$ 171,408	\$ -	0.010815	\$ -	31	\$ 88	0.010815	\$ -		
32	\$ 398	\$ 171,408	\$ -	0.009323	\$ -	32	\$ 68	0.009323	\$ -		
33	\$ 305	\$ 171,408	\$ -	0.008037	\$ -	33	\$ 51	0.008037	\$ -		
34	\$ 235	\$ 171,408	\$ -	0.006929	\$ -	34	\$ 39	0.006929	\$ -		
35	\$ 181	\$ 171,408	\$ -	0.005973	\$ -	35	\$ 30	0.005973	\$ -		
36	\$ 139	\$ 171,408	\$ -	0.005149	\$ -	36	\$ 23	0.005149	\$ -		
37	\$ 107	\$ 171,408	\$ -	0.004439	\$ -	37	\$ 18	0.004439	\$ -		
38	\$ 83	\$ 171,408	\$ -	0.003827	\$ -	38	\$ 14	0.003827	\$ -		
39	\$ 64	\$ 171,408	\$ -	0.003299	\$ -	39	\$ 11	0.003299	\$ -		
40	\$ 49	\$ 171,408	\$ -	0.002844	\$ -	40	\$ 8	0.002844	\$ -		
WORKING INTEREST APPRAISAL			\$ 2,721,878			ROYALTY INTEREST APPRAISAL			\$ 888,838		

09-03 297 6400

NATURAL OIL/GAS APPRAISAL.....FLUSH WELL (Year 1)											
DECLINE RATES		2015	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
YR 1	59%	WRK INT	\$	3,001,778	\$	8,450	YR1	\$	798,478	\$	1,738
YR 2	28%	ROY INT	\$	578,188	\$	1,244		\$	151,082	\$	330
YR3+	23%						YR2	\$	598,842	\$	1,284
								\$	111,808	\$	244
\$ 1,329,859			TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 372,877
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.8%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.8%)	DIS INC		
1	\$ 797,206	\$ 159,702	\$ 637,505	0.928477	\$ 591,908	1	\$ 151,422	0.928477	\$ 140,592		
2	\$ 589,933	\$ 159,702	\$ 430,231	0.800411	\$ 344,362	2	\$ 112,052	0.800411	\$ 89,888		
3	\$ 454,248	\$ 159,702	\$ 294,546	0.690009	\$ 203,240	3	\$ 86,280	0.690009	\$ 59,534		
4	\$ 349,771	\$ 159,702	\$ 190,069	0.594836	\$ 113,060	4	\$ 68,436	0.584836	\$ 39,518		
5	\$ 269,324	\$ 159,702	\$ 109,622	0.512789	\$ 58,213	5	\$ 51,166	0.512789	\$ 26,232		
6	\$ 207,379	\$ 159,702	\$ 47,676	0.442080	\$ 21,078	6	\$ 39,390	0.442080	\$ 17,413		
7	\$ 159,882	\$ 159,702	\$ -	0.381086	\$ -	7	\$ 30,330	0.381086	\$ -		
8	\$ 122,955	\$ 159,702	\$ -	0.328522	\$ -	8	\$ 23,354	0.326522	\$ -		
9	\$ 94,675	\$ 159,702	\$ -	0.283209	\$ -	9	\$ 17,983	0.283209	\$ -		
10	\$ 72,900	\$ 159,702	\$ -	0.224146	\$ -	10	\$ 13,847	0.224148	\$ -		
11	\$ 58,133	\$ 159,702	\$ -	0.210470	\$ -	11	\$ 10,682	0.210470	\$ -		
12	\$ 43,222	\$ 159,702	\$ -	0.161440	\$ -	12	\$ 8,210	0.161440	\$ -		
13	\$ 33,281	\$ 159,702	\$ -	0.158414	\$ -	13	\$ 6,321	0.158414	\$ -		
14	\$ 25,827	\$ 159,702	\$ -	0.134840	\$ -	14	\$ 4,868	0.134840	\$ -		
15	\$ 19,732	\$ 159,702	\$ -	0.118241	\$ -	15	\$ 3,748	0.118241	\$ -		
16	\$ 15,194	\$ 159,702	\$ -	0.100208	\$ -	16	\$ 2,888	0.100206	\$ -		
17	\$ 11,699	\$ 159,702	\$ -	0.086386	\$ -	17	\$ 2,222	0.086386	\$ -		
18	\$ 9,009	\$ 159,702	\$ -	0.074471	\$ -	18	\$ 1,711	0.074471	\$ -		
19	\$ 6,937	\$ 159,702	\$ -	0.064199	\$ -	19	\$ 1,318	0.064199	\$ -		
20	\$ 5,341	\$ 159,702	\$ -	0.055344	\$ -	20	\$ 1,015	0.055344	\$ -		
21	\$ 4,113	\$ 159,702	\$ -	0.047710	\$ -	21	\$ 781	0.047710	\$ -		
22	\$ 3,167	\$ 159,702	\$ -	0.041129	\$ -	22	\$ 601	0.041129	\$ -		
23	\$ 2,436	\$ 159,702	\$ -	0.035466	\$ -	23	\$ 463	0.035458	\$ -		
24	\$ 1,878	\$ 159,702	\$ -	0.030566	\$ -	24	\$ 357	0.030566	\$ -		
25	\$ 1,446	\$ 159,702	\$ -	0.026350	\$ -	25	\$ 275	0.026350	\$ -		
26	\$ 1,113	\$ 159,702	\$ -	0.022715	\$ -	26	\$ 211	0.022715	\$ -		
27	\$ 867	\$ 159,702	\$ -	0.019582	\$ -	27	\$ 163	0.019582	\$ -		
28	\$ 660	\$ 159,702	\$ -	0.018881	\$ -	28	\$ 125	0.018881	\$ -		
29	\$ 506	\$ 159,702	\$ -	0.014553	\$ -	29	\$ 97	0.014563	\$ -		
30	\$ 391	\$ 159,702	\$ -	0.012548	\$ -	30	\$ 74	0.012548	\$ -		
31	\$ 301	\$ 159,702	\$ -	0.010815	\$ -	31	\$ 57	0.010815	\$ -		
32	\$ 232	\$ 159,702	\$ -	0.008323	\$ -	32	\$ 44	0.009323	\$ -		
33	\$ 179	\$ 159,702	\$ -	0.008037	\$ -	33	\$ 34	0.008037	\$ -		
34	\$ 138	\$ 159,702	\$ -	0.006929	\$ -	34	\$ 26	0.006929	\$ -		
35	\$ 108	\$ 159,702	\$ -	0.005973	\$ -	35	\$ 20	0.005973	\$ -		
36	\$ 82	\$ 159,702	\$ -	0.005149	\$ -	36	\$ 15	0.005149	\$ -		
37	\$ 63	\$ 159,702	\$ -	0.004439	\$ -	37	\$ 12	0.004439	\$ -		
38	\$ 48	\$ 159,702	\$ -	0.003627	\$ -	38	\$ 9	0.003627	\$ -		
39	\$ 37	\$ 159,702	\$ -	0.003299	\$ -	39	\$ 7	0.003299	\$ -		
40	\$ 29	\$ 159,702	\$ -	0.002844	\$ -	40	\$ 5	0.003612	\$ -		
WORKING INTEREST APPRAISAL					\$ 1,329,859	ROYALTY INTEREST APPRAISAL					\$ 372,877

09-0320176424

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)									
		2018		GAS INCOME		OIL INCOME		DAS CAP INCOME	
DECLINE RATED		WYK INT		\$ 1,970,031		\$ 1,412		\$ 122,048	\$ 1,222
YR 1	59%	ROY INT		\$ 384,850		\$ 901		\$ 101,885	\$ 239
YR 2	29%							\$ 100,323	\$ 904
YR3+	23%							\$ 78,488	\$ 177
\$ 572,661		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WYK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC
1	\$ 523,280	\$ 104,839	\$ 418,441	0.928477	\$ 388,513	1	\$ 102,224	0.928477	\$ 94,913
2	\$ 387,227	\$ 104,839	\$ 282,388	0.800411	\$ 228,027	2	\$ 75,848	0.800411	\$ 60,548
3	\$ 298,185	\$ 104,839	\$ 193,328	0.890009	\$ 133,397	3	\$ 58,247	0.890009	\$ 40,191
4	\$ 229,587	\$ 104,839	\$ 124,748	0.594838	\$ 74,204	4	\$ 44,850	0.594838	\$ 28,879
5	\$ 178,782	\$ 104,839	\$ 71,943	0.512789	\$ 38,891	5	\$ 34,535	0.512789	\$ 17,709
6	\$ 138,122	\$ 104,839	\$ 31,283	0.442080	\$ 13,829	6	\$ 28,592	0.442080	\$ 11,755
7	\$ 104,814	\$ 104,839	\$ -	0.381088	\$ -	7	\$ 20,478	0.381088	\$ -
8	\$ 80,707	\$ 104,839	\$ -	0.328522	\$ -	8	\$ 15,768	0.328522	\$ -
9	\$ 62,144	\$ 104,839	\$ -	0.283209	\$ -	9	\$ 12,140	0.283209	\$ -
10	\$ 47,851	\$ 104,839	\$ -	0.224148	\$ -	10	\$ 9,348	0.224148	\$ -
11	\$ 38,845	\$ 104,839	\$ -	0.210470	\$ -	11	\$ 7,198	0.210470	\$ -
12	\$ 28,371	\$ 104,839	\$ -	0.181440	\$ -	12	\$ 5,642	0.181440	\$ -
13	\$ 21,848	\$ 104,839	\$ -	0.158414	\$ -	13	\$ 4,288	0.158414	\$ -
14	\$ 18,821	\$ 104,839	\$ -	0.134840	\$ -	14	\$ 3,288	0.134840	\$ -
15	\$ 12,952	\$ 104,839	\$ -	0.116241	\$ -	15	\$ 2,530	0.116241	\$ -
16	\$ 9,973	\$ 104,839	\$ -	0.100208	\$ -	16	\$ 1,948	0.100208	\$ -
17	\$ 7,679	\$ 104,839	\$ -	0.088388	\$ -	17	\$ 1,500	0.088388	\$ -
18	\$ 5,913	\$ 104,839	\$ -	0.074471	\$ -	18	\$ 1,155	0.074471	\$ -
19	\$ 4,553	\$ 104,839	\$ -	0.064199	\$ -	19	\$ 889	0.064199	\$ -
20	\$ 3,608	\$ 104,839	\$ -	0.055344	\$ -	20	\$ 685	0.055344	\$ -
21	\$ 2,700	\$ 104,839	\$ -	0.047710	\$ -	21	\$ 527	0.047710	\$ -
22	\$ 2,079	\$ 104,839	\$ -	0.041129	\$ -	22	\$ 408	0.041129	\$ -
23	\$ 1,801	\$ 104,839	\$ -	0.036456	\$ -	23	\$ 318	0.036456	\$ -
24	\$ 1,232	\$ 104,839	\$ -	0.030598	\$ -	24	\$ 241	0.030598	\$ -
25	\$ 949	\$ 104,839	\$ -	0.026350	\$ -	25	\$ 185	0.026350	\$ -
26	\$ 731	\$ 104,839	\$ -	0.022715	\$ -	26	\$ 143	0.022715	\$ -
27	\$ 583	\$ 104,839	\$ -	0.019582	\$ -	27	\$ 110	0.019582	\$ -
28	\$ 433	\$ 104,839	\$ -	0.018881	\$ -	28	\$ 85	0.018881	\$ -
29	\$ 334	\$ 104,839	\$ -	0.014553	\$ -	29	\$ 85	0.014553	\$ -
30	\$ 267	\$ 104,839	\$ -	0.012548	\$ -	30	\$ 50	0.012548	\$ -
31	\$ 198	\$ 104,839	\$ -	0.010815	\$ -	31	\$ 39	0.010815	\$ -
32	\$ 162	\$ 104,839	\$ -	0.009323	\$ -	32	\$ 30	0.009323	\$ -
33	\$ 117	\$ 104,839	\$ -	0.008037	\$ -	33	\$ 23	0.008037	\$ -
34	\$ 90	\$ 104,839	\$ -	0.008929	\$ -	34	\$ 18	0.008929	\$ -
35	\$ 70	\$ 104,839	\$ -	0.005973	\$ -	35	\$ 14	0.005973	\$ -
36	\$ 54	\$ 104,839	\$ -	0.005149	\$ -	36	\$ 10	0.005149	\$ -
37	\$ 41	\$ 104,839	\$ -	0.004439	\$ -	37	\$ 8	0.004439	\$ -
38	\$ 32	\$ 104,839	\$ -	0.003827	\$ -	38	\$ 6	0.003827	\$ -
39	\$ 24	\$ 104,839	\$ -	0.003299	\$ -	39	\$ 5	0.003299	\$ -
40	\$ 19	\$ 104,839	\$ -	0.002844	\$ -	40	\$ 4	0.003812	\$ -
WORKING INTEREST APPRAISAL					\$ 873,861	ROYALTY INTEREST APPRAISAL			

09-0320176485

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)									
2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
DECLINE RATES		WRK INT				YR1			
YR 1	59%		\$ 1,033,304	\$ 4,428		\$ 845,716	\$ 1,280		
YR 2	29%	ROY INT	\$ 402,288	\$ 343		\$ 106,807	\$ 230		
YR3	23%					\$ 403,330	\$ 447		
						\$ 78,888	\$ 185		
\$ 912,417		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.8%)	DIS INC
1	\$ 546,995	\$ 109,591	\$ 437,404	0.928477	\$ 408,120	1	\$ 108,656	0.928477	\$ 99,214
2	\$ 404,776	\$ 109,591	\$ 295,185	0.800411	\$ 236,270	2	\$ 79,074	0.800411	\$ 63,292
3	\$ 311,676	\$ 109,591	\$ 202,087	0.690009	\$ 139,442	3	\$ 60,887	0.690009	\$ 42,012
4	\$ 239,992	\$ 109,591	\$ 130,401	0.594836	\$ 77,697	4	\$ 46,883	0.594836	\$ 27,868
5	\$ 184,794	\$ 109,591	\$ 75,203	0.512789	\$ 38,583	5	\$ 36,100	0.512789	\$ 16,512
6	\$ 142,291	\$ 109,591	\$ 32,700	0.442080	\$ 14,455	6	\$ 27,797	0.442080	\$ 12,288
7	\$ 109,564	\$ 109,591	\$ -	0.381068	\$ -	7	\$ 21,404	0.381068	\$ -
8	\$ 84,264	\$ 109,591	\$ -	0.328522	\$ -	8	\$ 16,461	0.328522	\$ -
9	\$ 64,961	\$ 109,591	\$ -	0.283209	\$ -	9	\$ 12,690	0.283209	\$ -
10	\$ 50,020	\$ 109,591	\$ -	0.224146	\$ -	10	\$ 9,771	0.224146	\$ -
11	\$ 38,516	\$ 109,591	\$ -	0.210470	\$ -	11	\$ 7,524	0.210470	\$ -
12	\$ 29,857	\$ 109,591	\$ -	0.161440	\$ -	12	\$ 5,793	0.161440	\$ -
13	\$ 22,838	\$ 109,591	\$ -	0.158414	\$ -	13	\$ 4,461	0.158414	\$ -
14	\$ 17,583	\$ 109,591	\$ -	0.134840	\$ -	14	\$ 3,435	0.134840	\$ -
15	\$ 13,539	\$ 109,591	\$ -	0.116241	\$ -	15	\$ 2,645	0.116241	\$ -
16	\$ 10,425	\$ 109,591	\$ -	0.100208	\$ -	16	\$ 2,037	0.100208	\$ -
17	\$ 8,027	\$ 109,591	\$ -	0.086386	\$ -	17	\$ 1,586	0.086386	\$ -
18	\$ 6,161	\$ 109,591	\$ -	0.074471	\$ -	18	\$ 1,207	0.074471	\$ -
19	\$ 4,759	\$ 109,591	\$ -	0.064199	\$ -	19	\$ 930	0.064199	\$ -
20	\$ 3,665	\$ 109,591	\$ -	0.055344	\$ -	20	\$ 718	0.055344	\$ -
21	\$ 2,822	\$ 109,591	\$ -	0.047710	\$ -	21	\$ 561	0.047710	\$ -
22	\$ 2,173	\$ 109,591	\$ -	0.041129	\$ -	22	\$ 424	0.041129	\$ -
23	\$ 1,673	\$ 109,591	\$ -	0.035456	\$ -	23	\$ 327	0.035456	\$ -
24	\$ 1,288	\$ 109,591	\$ -	0.030566	\$ -	24	\$ 252	0.030566	\$ -
25	\$ 992	\$ 109,591	\$ -	0.026350	\$ -	25	\$ 194	0.026350	\$ -
26	\$ 764	\$ 109,591	\$ -	0.022715	\$ -	26	\$ 149	0.022715	\$ -
27	\$ 588	\$ 109,591	\$ -	0.019582	\$ -	27	\$ 115	0.019582	\$ -
28	\$ 453	\$ 109,591	\$ -	0.016881	\$ -	28	\$ 88	0.016881	\$ -
29	\$ 349	\$ 109,591	\$ -	0.014553	\$ -	29	\$ 66	0.014553	\$ -
30	\$ 269	\$ 109,591	\$ -	0.012546	\$ -	30	\$ 52	0.012546	\$ -
31	\$ 207	\$ 109,591	\$ -	0.010615	\$ -	31	\$ 40	0.010615	\$ -
32	\$ 159	\$ 109,591	\$ -	0.009323	\$ -	32	\$ 31	0.009323	\$ -
33	\$ 123	\$ 109,591	\$ -	0.008037	\$ -	33	\$ 24	0.008037	\$ -
34	\$ 94	\$ 109,591	\$ -	0.006929	\$ -	34	\$ 16	0.006929	\$ -
35	\$ 73	\$ 109,591	\$ -	0.005973	\$ -	35	\$ 14	0.005973	\$ -
36	\$ 58	\$ 109,591	\$ -	0.005149	\$ -	36	\$ 11	0.005149	\$ -
37	\$ 43	\$ 109,591	\$ -	0.004439	\$ -	37	\$ 8	0.004439	\$ -
38	\$ 33	\$ 109,591	\$ -	0.003827	\$ -	38	\$ 6	0.003827	\$ -
39	\$ 28	\$ 109,591	\$ -	0.003299	\$ -	39	\$ 5	0.003299	\$ -
40	\$ 20	\$ 109,591	\$ -	0.002844	\$ -	40	\$ 4	0.002844	\$ -
WORKING INTEREST APPRAISAL					\$ 912,417	ROYALTY INTEREST APPRAISAL			

09-020176480

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Y60-1)									
DECLINE RATES		2015	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME
YR 1	58%	WIK INT	\$ 2,081,881	\$ 4,983	YR1	\$ 148,428	\$ 1,313		
YR 2	28%	ROY INT	\$ 402,812	\$ 888	YR2	\$ 108,745	\$ 237		
YR3+	23%					\$ 78,381	\$ 190		
\$ 913,637			TY2017 WORKING INTEREST			TY2017 ROYALTY INTEREST			\$ 283,583
YEAR	WIK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.8%)	DIG INC	YEAR	ROY INT INCOME	PRCT FCTR(18.8%)	DIG INC
1	\$ 547,738	\$ 109,744	\$ 437,993	0.928477	\$ 408,687	1	\$ 107,002	0.928477	\$ 99,349
2	\$ 405,328	\$ 109,744	\$ 295,581	0.800411	\$ 236,567	2	\$ 79,181	0.800411	\$ 63,376
3	\$ 312,101	\$ 109,744	\$ 202,356	0.690009	\$ 139,628	3	\$ 60,970	0.690009	\$ 42,070
4	\$ 240,318	\$ 109,744	\$ 130,573	0.594836	\$ 77,670	4	\$ 46,947	0.594836	\$ 27,926
5	\$ 185,045	\$ 109,744	\$ 75,300	0.512788	\$ 38,613	5	\$ 36,149	0.512788	\$ 18,537
6	\$ 142,484	\$ 109,744	\$ 32,740	0.442080	\$ 14,473	6	\$ 27,835	0.442080	\$ 12,305
7	\$ 109,713	\$ 109,744	\$ -	0.381086	\$ -	7	\$ 21,433	0.381086	\$ -
8	\$ 84,479	\$ 109,744	\$ -	0.328522	\$ -	8	\$ 16,503	0.328522	\$ -
9	\$ 65,049	\$ 109,744	\$ -	0.283209	\$ -	9	\$ 12,707	0.283209	\$ -
10	\$ 50,088	\$ 109,744	\$ -	0.224146	\$ -	10	\$ 9,785	0.224146	\$ -
11	\$ 38,587	\$ 109,744	\$ -	0.210470	\$ -	11	\$ 7,534	0.210470	\$ -
12	\$ 29,687	\$ 109,744	\$ -	0.181440	\$ -	12	\$ 5,801	0.181440	\$ -
13	\$ 22,887	\$ 109,744	\$ -	0.158414	\$ -	13	\$ 4,467	0.158414	\$ -
14	\$ 17,807	\$ 109,744	\$ -	0.134840	\$ -	14	\$ 3,440	0.134840	\$ -
15	\$ 13,558	\$ 109,744	\$ -	0.116241	\$ -	15	\$ 2,649	0.116241	\$ -
16	\$ 10,439	\$ 109,744	\$ -	0.100206	\$ -	16	\$ 2,039	0.100206	\$ -
17	\$ 8,038	\$ 109,744	\$ -	0.088386	\$ -	17	\$ 1,570	0.088386	\$ -
18	\$ 6,190	\$ 109,744	\$ -	0.074471	\$ -	18	\$ 1,209	0.074471	\$ -
19	\$ 4,786	\$ 109,744	\$ -	0.064199	\$ -	19	\$ 931	0.064199	\$ -
20	\$ 3,670	\$ 109,744	\$ -	0.055344	\$ -	20	\$ 717	0.055344	\$ -
21	\$ 2,828	\$ 109,744	\$ -	0.047710	\$ -	21	\$ 562	0.047710	\$ -
22	\$ 2,178	\$ 109,744	\$ -	0.041129	\$ -	22	\$ 425	0.041129	\$ -
23	\$ 1,676	\$ 109,744	\$ -	0.035458	\$ -	23	\$ 327	0.035458	\$ -
24	\$ 1,290	\$ 109,744	\$ -	0.030588	\$ -	24	\$ 252	0.030588	\$ -
25	\$ 993	\$ 109,744	\$ -	0.026350	\$ -	25	\$ 194	0.026350	\$ -
26	\$ 785	\$ 109,744	\$ -	0.022715	\$ -	26	\$ 149	0.022715	\$ -
27	\$ 589	\$ 109,744	\$ -	0.019582	\$ -	27	\$ 115	0.019582	\$ -
28	\$ 463	\$ 109,744	\$ -	0.016881	\$ -	28	\$ 89	0.016881	\$ -
29	\$ 349	\$ 109,744	\$ -	0.014553	\$ -	29	\$ 88	0.014553	\$ -
30	\$ 289	\$ 109,744	\$ -	0.012548	\$ -	30	\$ 53	0.012548	\$ -
31	\$ 207	\$ 109,744	\$ -	0.010815	\$ -	31	\$ 40	0.010815	\$ -
32	\$ 159	\$ 109,744	\$ -	0.009323	\$ -	32	\$ 31	0.009323	\$ -
33	\$ 123	\$ 109,744	\$ -	0.008037	\$ -	33	\$ 24	0.008037	\$ -
34	\$ 95	\$ 109,744	\$ -	0.006929	\$ -	34	\$ 18	0.006929	\$ -
35	\$ 73	\$ 109,744	\$ -	0.005973	\$ -	35	\$ 14	0.005973	\$ -
36	\$ 56	\$ 109,744	\$ -	0.005149	\$ -	36	\$ 11	0.005149	\$ -
37	\$ 43	\$ 109,744	\$ -	0.004439	\$ -	37	\$ 8	0.004439	\$ -
38	\$ 33	\$ 109,744	\$ -	0.003827	\$ -	38	\$ 6	0.003827	\$ -
39	\$ 26	\$ 109,744	\$ -	0.003299	\$ -	39	\$ 5	0.003299	\$ -
40	\$ 20	\$ 109,744	\$ -	0.002844	\$ -	40	\$ 4	0.002844	\$ -
WORKING INTEREST APPRAISAL					\$ 913,637	ROYALTY INTEREST APPRAISAL			

09-0320176487

NATURAL OIL/GAS APPRAISAL - FLOSH WELL (Year 1)											
		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
DECLINE RATES		WRK INT		\$ 4,773,200		\$ 87,142		YR1 \$ 189,823		\$ 28,788	
YR 1	50%	ROY INT		\$ 737,071		\$ 16,499		YR2 \$ 190,924		\$ 4,802	
YR 2	20%							YR3 \$ 738,944		\$ 19,588	
YR3+	21%							YR4 \$ 140,818		\$ 8,628	
\$ 1,862,129		TY2017 WORKING INTEREST						TY2017 ROYALTY INTEREST \$ 488,814			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC		
1	\$ 1,025,719	\$ 170,744	\$ 854,975	0.928477	\$ 793,825	1	\$ 194,928	0.928477	\$ 180,984		
2	\$ 769,032	\$ 170,744	\$ 598,288	0.800411	\$ 470,872	2	\$ 144,245	0.800411	\$ 115,468		
3	\$ 584,455	\$ 170,744	\$ 413,711	0.690009	\$ 285,464	3	\$ 111,089	0.690009	\$ 78,839		
4	\$ 450,030	\$ 170,744	\$ 279,286	0.594836	\$ 166,130	4	\$ 85,523	0.594836	\$ 50,672		
5	\$ 348,523	\$ 170,744	\$ 175,780	0.512789	\$ 90,138	5	\$ 65,853	0.512789	\$ 33,789		
6	\$ 266,823	\$ 170,744	\$ 88,079	0.442060	\$ 42,473	6	\$ 50,707	0.442060	\$ 22,415		
7	\$ 205,454	\$ 170,744	\$ 34,710	0.381088	\$ 13,227	7	\$ 39,044	0.381088	\$ 14,879		
8	\$ 158,199	\$ 170,744	\$ -	0.328522	\$ -	8	\$ 30,084	0.328522	\$ -		
9	\$ 121,813	\$ 170,744	\$ -	0.283209	\$ -	9	\$ 23,149	0.283209	\$ -		
10	\$ 93,798	\$ 170,744	\$ -	0.224146	\$ -	10	\$ 17,825	0.224146	\$ -		
11	\$ 72,223	\$ 170,744	\$ -	0.210470	\$ -	11	\$ 13,725	0.210470	\$ -		
12	\$ 56,812	\$ 170,744	\$ -	0.181440	\$ -	12	\$ 10,568	0.181440	\$ -		
13	\$ 42,821	\$ 170,744	\$ -	0.158414	\$ -	13	\$ 8,138	0.158414	\$ -		
14	\$ 32,972	\$ 170,744	\$ -	0.134840	\$ -	14	\$ 6,288	0.134840	\$ -		
15	\$ 25,389	\$ 170,744	\$ -	0.116241	\$ -	15	\$ 4,825	0.116241	\$ -		
16	\$ 19,549	\$ 170,744	\$ -	0.100208	\$ -	16	\$ 3,715	0.100208	\$ -		
17	\$ 15,063	\$ 170,744	\$ -	0.086388	\$ -	17	\$ 2,881	0.086388	\$ -		
18	\$ 11,591	\$ 170,744	\$ -	0.074471	\$ -	18	\$ 2,203	0.074471	\$ -		
19	\$ 8,925	\$ 170,744	\$ -	0.064199	\$ -	19	\$ 1,698	0.064199	\$ -		
20	\$ 6,872	\$ 170,744	\$ -	0.055344	\$ -	20	\$ 1,306	0.055344	\$ -		
21	\$ 5,292	\$ 170,744	\$ -	0.047710	\$ -	21	\$ 1,008	0.047710	\$ -		
22	\$ 4,075	\$ 170,744	\$ -	0.041129	\$ -	22	\$ 774	0.041129	\$ -		
23	\$ 3,137	\$ 170,744	\$ -	0.035458	\$ -	23	\$ 598	0.035458	\$ -		
24	\$ 2,418	\$ 170,744	\$ -	0.030588	\$ -	24	\$ 459	0.030588	\$ -		
25	\$ 1,880	\$ 170,744	\$ -	0.026350	\$ -	25	\$ 353	0.026350	\$ -		
26	\$ 1,432	\$ 170,744	\$ -	0.022715	\$ -	26	\$ 272	0.022715	\$ -		
27	\$ 1,103	\$ 170,744	\$ -	0.019582	\$ -	27	\$ 210	0.019582	\$ -		
28	\$ 849	\$ 170,744	\$ -	0.016881	\$ -	28	\$ 181	0.016881	\$ -		
29	\$ 654	\$ 170,744	\$ -	0.014553	\$ -	29	\$ 124	0.014553	\$ -		
30	\$ 504	\$ 170,744	\$ -	0.012546	\$ -	30	\$ 98	0.012546	\$ -		
31	\$ 388	\$ 170,744	\$ -	0.010815	\$ -	31	\$ 74	0.010815	\$ -		
32	\$ 299	\$ 170,744	\$ -	0.009323	\$ -	32	\$ 57	0.009323	\$ -		
33	\$ 230	\$ 170,744	\$ -	0.008037	\$ -	33	\$ 44	0.008037	\$ -		
34	\$ 177	\$ 170,744	\$ -	0.006929	\$ -	34	\$ 34	0.006929	\$ -		
35	\$ 138	\$ 170,744	\$ -	0.005973	\$ -	35	\$ 26	0.005973	\$ -		
36	\$ 105	\$ 170,744	\$ -	0.005149	\$ -	36	\$ 20	0.005149	\$ -		
37	\$ 81	\$ 170,744	\$ -	0.004439	\$ -	37	\$ 15	0.004439	\$ -		
38	\$ 62	\$ 170,744	\$ -	0.003827	\$ -	38	\$ 12	0.003827	\$ -		
39	\$ 48	\$ 170,744	\$ -	0.003299	\$ -	39	\$ 9	0.003299	\$ -		
40	\$ 37	\$ 170,744	\$ -	0.002844	\$ -	40	\$ 7	0.002812	\$ -		
WORKING INTEREST APPRAISAL				\$ 1,862,129		ROYALTY INTEREST APPRAISAL				\$ 488,814	

032017 6498

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 141

ACCOUNT:01900004406 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:UNDERWOOD FH 3 (11270.1)
STATUS:A API#:04406 DATE:10/30/1997 DAYS:365 BBLs: 0.000 MCFS: 2267 RCPTS: 9461 GWI: 8373 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.340 0.170 0.140 WELLLIFE:99 EXPENSE: 5000 5000 5000
RATES USED:
CAP RATE:16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 5000 5000 5000
SETTLED YEARS: 19

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	6,615	3,638	3,378	860	798	0.928						
2	5,689	2,712	2,171	739	592	0.800						
3	4,892	1,916	1,322	636	439	0.690						
4	4,207	1,231	732	547	325	0.595						
5	3,618	642	329	470	241	0.513						
6	3,112	135	60	404	179	0.442						
7	2,676	0	0	348	0	0.381						

TOTAL: 7,991 2,573

EXPENSE: 2977 2977

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 142

ACCOUNT: 0400875001 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: COX 1 (11195.1)
STATUS: A API#: 03131 DATE: 08/19/1982 DAYS: 365 BBLs: 0.000 MCFS: 2747 RCPTS: 6936 GWI: 5818 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	4,771	2,624	2,436	917	851	0.928						
2	4,198	2,051	1,642	807	646	0.800						
3	3,694	1,548	1,068	710	490	0.690						
4	3,251	1,104	657	625	372	0.595						
5	2,861	714	366	550	282	0.513						
6	2,518	371	164	484	214	0.442						
7	2,216	69	26	426	162	0.381						
8	1,950	0	0	375	0	0.329						

TOTAL: 6,359 3,016

EXPENSE: 2147 2147

'DODDLEDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 143

ACCOUNT: 0420115874 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: WJ SMITH 1 (10876.1)
STATUS: M API#: 05874 DATE: 11/09/2009 DAYS: 365 BELLS: 0.000 MCPS: 17414 RCPTS: 75018 GWI: 53296 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
CAP RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000
RATES USED: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000
CAP RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	41,459	29,021	26,946	7,678	7,129	0.928						
2	31,923	19,486	15,597	5,912	4,732	0.800						
3	24,581	12,143	8,379	4,552	3,141	0.690						
4	18,927	6,490	3,860	3,505	2,085	0.595						
5	14,574	2,136	1,096	2,699	1,384	0.513						
6	11,222	0	0	2,078	0	0.442						

TOTAL: 55,877 18,471

EXPENSE: 12438 12438

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 144

ACCOUNT: 0420156143
STATUS: Z API#: 06143
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000 1144
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000 5750
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000 5750
SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	855,790	635,665	684,632	199,218	184,970	0.928	749	691	744	174	162	0.928
2	658,958	390,441	487,800	153,398	122,781	0.800	577	458	572	134	107	0.800
3	507,398	232,008	335,240	118,117	81,501	0.690	444	303	439	103	71	0.690
4	390,696	130,589	219,538	90,950	54,100	0.595	342	200	337	80	47	0.595
5	300,836	66,498	129,678	70,031	35,911	0.513	263	132	258	61	31	0.513
6	231,644	26,738	60,486	53,924	23,838	0.442	203	87	198	47	21	0.442
7	178,366	2,747	7,208	41,522	15,823	0.381	156	58	151	36	14	0.381
8	137,342	0	0	31,972	0	0.329	120	38	115	28	9	0.329
9							93	25	88	22	6	0.283
10							71	16	66	17	4	0.244
11							55	10	50	13	3	0.210
12							42	7	37	10	2	0.181
13							33	4	28	8	1	0.156
14							25	3	20	6	1	0.135
15							19	2	14	4	1	0.116
16							15	1	10	3	0	0.100
17							11	1	6	3	0	0.086
18							9	0	4	2	0	0.074
19							7	0	2	2	0	0.064
20							5	0	0	1	0	0.055
21							4	0	0	1	0	0.048
TOTAL:		1,484,686			518,925			2,037			481	

GS EXPENSE: 171158 171158
OL EXPENSE: 5 5

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 145

FEB 15, 2017
01:26 PM

ACCOUNT:0420156144

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:FLOSSIE UNIT 2H (10303.1)

STATUS:Z API#:06144

DATE:08/01/2013 DAYS:365 BBLs: 1.000 MCPS: 528484 RCPTS: 1345883 GWI: 1177618 OWI: 30

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 3

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	771,340	617,072	572,937	110,191	102,310	0.928	20	20	18	3	2	0.928
2	593,932	439,664	351,912	84,847	67,913	0.800	15	15	12	2	2	0.800
3	457,327	303,059	209,114	65,332	45,080	0.690	12	12	8	2	1	0.690
4	352,142	197,874	117,703	50,306	29,924	0.595	9	9	5	1	1	0.595
5	271,149	116,881	59,936	38,736	19,863	0.513	7	7	3	1	0	0.513
6	208,785	54,517	24,100	29,826	13,185	0.442	5	5	2	1	0	0.442
7	160,764	6,497	2,476	22,966	8,752	0.381	4	4	2	1	0	0.381
8	123,789	0	0	17,684	0	0.329	3	3	1	0	0	0.329
9							2	2	1	0	0	0.283
10							2	2	0	0	0	0.244
11							1	1	0	0	0	0.210
12							1	1	0	0	0	0.181
13							1	1	0	0	0	0.156
14							1	1	0	0	0	0.135
15							1	1	0	0	0	0.116
16							0	0	0	0	0	0.100
17							0	0	0	0	0	0.086
18							0	0	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055

TOTAL:

1,338,176

53

287,027

7

GS EXPENSE: 154268 154268

OL EXPENSE: 0 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 146

ACCOUNT: 0420156158
STATUS: Z API#: 06158
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590
SETTLED YEARS: 3

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: WALTER UNIT 1H (10293.1)
DATE: 09/01/2013 DAYS: 365 BBLs: 33.000 MCPS: 824894 RCPTS: 1753506 GWI: 1421267 OWI: 1122

0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000
0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000
OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	930,930	701,992	216,711	201,211	0.928	735	730	678	171	159	0.928	
2	716,816	433,786	166,867	133,562	0.800	566	561	449	132	105	0.800	
3	551,948	260,193	128,488	88,658	0.690	436	431	298	101	70	0.690	
4	425,000	148,791	98,936	58,850	0.595	336	331	197	78	46	0.595	
5	327,250	78,143	76,180	39,064	0.513	258	254	130	60	31	0.513	
6	251,983	34,092	58,659	25,931	0.442	199	194	86	46	20	0.442	
7	194,027	7,303	45,167	17,213	0.381	153	149	57	36	14	0.381	
8	149,400	0	34,779	0	0.329	118	113	37	27	9	0.329	
9						91	86	24	21	6	0.283	
10						70	65	16	16	4	0.244	
11						54	49	10	13	3	0.210	
12						41	37	7	10	2	0.181	
13						32	27	4	7	1	0.156	
14						25	20	3	6	1	0.135	
15						19	14	2	4	1	0.116	
16						15	10	1	3	0	0.100	
17						11	7	1	3	0	0.086	
18						9	4	0	2	0	0.074	
19						7	2	0	2	0	0.064	
20						5	1	0	1	0	0.055	
21						4	0	0	1	0	0.048	
TOTAL:		1,664,300		564,489				2,000		472		

GS EXPENSE: 174862
OL EXPENSE: 5

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 147

ACCOUNT:0420156162 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:WALTER UNIT 2H (10294.1)
STATUS:Z API#:06162 DATE:09/01/2013 DAYS:365 BLS: 34.000 MCFS: 776098 RCPTS: 1682818 GWI: 1363884 OWI: 1166
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 OL EXPENSE: 0.2 5750 5750 5750
SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACOR
1	893,344	718,494	567,105	207,960	193,086	0.928	764	759	705	178	165	0.928
2	687,875	513,024	410,630	160,129	128,169	0.800	588	583	467	137	110	0.800
3	529,664	354,813	244,824	123,299	85,078	0.690	453	448	309	106	73	0.690
4	407,841	232,991	138,591	94,941	56,474	0.595	349	344	204	81	48	0.595
5	314,038	139,187	71,374	73,104	37,487	0.513	268	264	135	63	32	0.513
6	241,809	66,958	29,600	56,290	24,884	0.442	207	202	89	48	21	0.442
7	186,193	11,342	4,322	43,343	16,518	0.381	159	154	59	37	14	0.381
8	143,369	0	0	33,374	0	0.329	123	118	39	29	9	0.329
9							94	89	25	22	6	0.283
10							73	68	17	17	4	0.244
11							56	51	11	13	3	0.210
12							43	38	7	10	2	0.181
13							33	28	4	8	1	0.156
14							26	21	3	6	1	0.135
15							20	15	2	5	1	0.116
16							15	10	1	4	0	0.100
17							12	7	1	3	0	0.086
18							9	4	0	2	0	0.074
19							7	2	0	2	0	0.064
20							5	0	0	1	0	0.055
21							4	0	0	1	0	0.048

TOTAL: 1,566,446 541,695 2,077 492

GS EXPENSE: 174851 174851 174851
OL EXPENSE: 5 5 5

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 149

ACCOUNT: 0420156180 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: FLOSSIE UNIT 1H (10312.1)
STATUS: Z API#: 06180 DATE: 08/01/2013 DAYS: 365 BELLS: 1.000 MCFS: 739132 RCPTS: 1589456 GWI: 1390736 OWI: 38
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	910,932	683,300	735,937	130,133	120,826	0.928	25	23	25	3	3	0.928
2	701,418	421,354	526,422	100,203	80,203	0.800	19	15	19	3	2	0.800
3	540,092	251,920	365,096	77,156	53,238	0.690	15	10	15	2	1	0.690
4	415,871	143,281	240,875	59,410	35,339	0.595	11	7	11	1	1	0.595
5	320,220	74,470	145,225	45,746	23,458	0.513	9	4	9	1	1	0.513
6	246,570	31,640	71,574	35,224	15,571	0.442	7	3	7	1	0	0.442
7	189,859	5,664	14,863	27,123	10,336	0.381	5	2	5	1	0	0.381
8	146,191	0	0	20,884	0	0.329	4	1	4	1	0	0.329
9							3	1	3	0	0	0.283
10							2	1	2	0	0	0.244
11							2	0	2	0	0	0.210
12							1	0	1	0	0	0.181
13							1	0	1	0	0	0.156
14							1	0	1	0	0	0.135
15							1	0	1	0	0	0.116
16							0	0	0	0	0	0.100
17							0	0	0	0	0	0.086
18							0	0	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
TOTAL:		1,611,630			338,972			68			9	

GS EXPENSE: 174995 174995 174995
OL EXPENSE: 0 0 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 150

ACCOUNT:0420166138 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:FURBEY UNIT 2H (10350.1) 5632

STATUS:2 API#:06138 DATE:08/06/2014 DAYS:365 BBLs: 184.000 MCFS: 1021235 RCPTS: 2178521 GWI: 1840977 OWI: 5632

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,095,381	920,915	855,048	196,886	182,804	0.928	3,351	3,334	3,095	602	559	0.928
2	843,444	668,977	535,457	151,602	121,344	0.800	2,580	2,563	2,051	464	371	0.800
3	649,452	474,985	327,744	116,733	80,547	0.690	1,987	1,969	1,359	357	246	0.690
4	500,078	325,611	193,685	89,885	53,467	0.595	1,530	1,512	900	275	164	0.595
5	385,060	210,594	107,990	69,211	35,491	0.513	1,178	1,160	595	212	109	0.513
6	296,496	122,030	53,945	53,293	23,559	0.442	907	890	393	163	72	0.442
7	228,302	53,836	20,516	41,035	15,638	0.381	698	681	259	126	48	0.381
8	175,793	1,326	436	31,597	10,380	0.329	538	520	171	97	32	0.329
9	135,360	0	0	24,330	0	0.283	414	397	112	74	21	0.283
10							319	301	74	57	14	0.244
11							246	228	48	44	9	0.210
12							189	172	31	34	6	0.181
13							146	128	20	26	4	0.156
14							112	95	13	20	3	0.135
15							86	69	8	16	2	0.116
16							66	49	5	12	1	0.100
17							51	34	3	9	1	0.086
18							39	22	2	7	1	0.074
19							30	13	1	5	0	0.064
20							23	6	0	4	0	0.055
21							18	0	0	3	0	0.048
22							14	0	0	2	0	0.041
TOTAL:			2,094,821		523,229				9,140		1,663	

GS EXPENSE: 174466 174466

OL EXPENSE: 18 18

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 151

ACCOUNT: 0420166139 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: FURBEX UNIT 1H (10349.1)
 STATUS: Z API#: 06139 DATE: 08/12/2014 DAYS: 365 BHLS: 202.000 MCFS: 1190421 RCPTS: 2537519 GWI: 2144698 OWI: 6212
 SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
 RATES USED: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
 SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,276,095	1,101,601	1,022,811	229,368	212,963	0.928	3,696	3,680	3,416	665	617	0.928
2	982,593	808,099	646,811	176,613	141,363	0.800	2,846	2,829	2,265	512	410	0.800
3	756,597	582,102	401,656	135,992	93,836	0.690	2,191	2,175	1,501	394	272	0.690
4	582,580	408,085	242,744	104,714	62,288	0.595	1,687	1,671	994	303	180	0.595
5	448,586	274,092	140,551	80,630	41,346	0.513	1,299	1,283	658	234	120	0.513
6	345,411	170,917	75,556	62,085	27,445	0.442	1,000	984	435	180	80	0.442
7	265,967	91,472	34,859	47,805	18,218	0.381	770	754	287	139	53	0.381
8	204,794	30,300	9,954	36,810	12,093	0.329	593	577	189	107	35	0.329
9	157,692	0	0	28,344	0	0.283	457	440	125	82	23	0.283
10							352	335	82	63	15	0.244
11							271	254	54	49	10	0.210
12							209	192	35	37	7	0.181
13							161	144	23	29	5	0.156
14							124	107	14	22	3	0.135
15							95	79	9	17	2	0.116
16							73	57	6	13	1	0.100
17							56	40	3	10	1	0.086
18							43	27	2	8	1	0.074
19							33	17	1	6	0	0.064
20							26	9	1	5	0	0.055
21							20	3	0	4	0	0.048
22							15	0	0	3	0	0.041

TOTAL:	2,574,941	174,495	174,495	609,551	10,099	1,835
GS EXPENSE:	174,495	174,495	174,495			
OL EXPENSE:	17	17	17			

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 152

FEB 15, 2017
01:26 PM

ACCOUNT:0420166140
STATUS:Z API#:06140
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:CECELE UNIT 1H (10297.1)
DATE:07/31/2014 DAYS:365 BBLs: 162.000 MCPS: 851051 RCPTS: 1810860 GWI: 1542159 OWI: 4973

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	917,585	743,147	689,995	156,414	145,226	0.928	2,959	2,940	2,730	505	468	0.928
2	706,540	532,103	425,901	120,438	96,400	0.800	2,278	2,260	1,809	389	311	0.800
3	544,036	369,598	255,026	92,738	63,990	0.690	1,754	1,736	1,198	299	206	0.690
4	418,908	244,470	145,420	71,408	42,476	0.595	1,351	1,332	793	230	137	0.595
5	322,559	148,121	75,955	54,984	28,195	0.513	1,040	1,022	524	177	91	0.513
6	248,370	73,933	32,683	42,338	18,716	0.442	801	782	346	137	60	0.442
7	191,245	16,808	6,405	32,600	12,423	0.381	617	598	228	105	40	0.381
8	147,289	0	0	25,102	0	0.329	475	456	150	81	27	0.329
9							366	347	98	62	18	0.283
10							282	263	64	48	12	0.244
11							217	198	42	37	8	0.210
12							167	148	27	28	5	0.181
13							129	110	17	22	3	0.156
14							99	80	11	17	2	0.135
15							76	58	7	13	2	0.116
16							59	40	4	10	1	0.100
17							45	27	2	8	1	0.086
18							35	16	1	6	0	0.074
19							27	8	1	5	0	0.064
20							21	2	0	4	0	0.055
21							16	0	0	3	0	0.048

TOTAL:	1,631,385	407,427	8,051	1,393
GS EXPENSE:	174437	174437		
OL EXPENSE:	18	18		

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 153

FEB 15, 2017
01:26 PM

ACCOUNT:0420166159 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:ONEACRE UNIT 2H (10338.1)
 STATUS:Z API#:06159 DATE:12/11/2014 DAYS:365 BBLs: 74.000 MCFS: 1678369 RCPTS: 3729729 GWI: 3020950 OWI: 2590
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,797,465	1,506,561	1,622,615	419,822	389,796	0.928	1,541	1,536	1,426	360	334	0.928
2	1,384,048	967,856	1,209,198	323,263	258,744	0.800	1,187	1,182	946	277	222	0.800
3	1,065,717	614,706	890,867	248,913	171,752	0.690	914	909	627	213	147	0.690
4	820,602	384,117	645,752	191,663	114,008	0.595	704	699	416	164	98	0.595
5	631,864	234,352	457,014	147,580	75,878	0.513	542	537	275	127	65	0.513
6	486,535	137,783	311,685	113,637	50,234	0.442	417	412	182	97	43	0.442
7	374,632	76,134	219,782	87,500	32,345	0.381	321	316	121	75	29	0.381
8	288,467	37,326	113,617	67,375	22,134	0.329	247	242	80	58	19	0.329
9	223,119	13,387	47,269	51,879	14,633	0.283	190	186	53	44	13	0.283
10	171,032	0	0	39,947	0	0.244	147	142	35	34	8	0.244
11							113	108	23	26	6	0.210
12							87	82	15	20	4	0.181
13							67	62	10	16	2	0.156
14							52	47	6	12	2	0.135
15							40	35	4	9	1	0.116
16							31	26	3	7	1	0.100
17							24	19	2	5	0	0.086
18							18	13	1	4	0	0.074
19							14	9	1	3	0	0.064
20							11	6	0	2	0	0.055
21							8	3	0	1	0	0.048
22							6	1	0	1	0	0.041
23							5	0	0	1	0	0.035
TOTAL:			3,972,221		1,130,383				4,223		994	

GS EXPENSE: 174850 174850 174850

OL EXPENSE: 5 5 5

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 154

ACCOUNT: 0420166160
STATUS: Z API#: 06160
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590
SETTLED YEARS: 2
RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: COX UNIT 2H (10353.1)
DATE: 01/15/2014 DAYS: 365 BHLS: 42.000 MCPS: 648719 RCPTS: 1402381 GWI: 1181204 OWI: 1558
EXPENSE: 0.2
GS EXPENSE: 0.2
OL EXPENSE: 0.2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	702,816	562,253	522,039	130,501	121,168	0.928	927	919	854	172	160	0.928
2	541,169	400,605	320,649	100,486	80,430	0.800	714	706	565	132	106	0.800
3	416,700	276,137	190,537	77,374	53,389	0.690	550	542	374	102	70	0.690
4	320,859	180,296	107,246	59,578	35,439	0.595	423	416	247	79	47	0.595
5	247,061	106,498	54,611	45,875	23,524	0.513	326	318	163	60	31	0.513
6	190,237	49,674	21,959	35,324	15,615	0.442	251	243	108	47	21	0.442
7	146,483	5,919	2,256	27,199	10,365	0.381	193	186	71	36	14	0.381
8	112,792	0	0	20,944	0	0.329	149	141	46	28	9	0.329
9							115	107	30	21	6	0.283
10							88	81	20	16	4	0.244
11							68	60	13	13	3	0.210
12							52	45	8	10	2	0.181
13							40	33	5	7	1	0.156
14							31	23	3	6	1	0.135
15							24	16	2	4	1	0.116
16							18	11	1	3	0	0.100
17							14	7	1	3	0	0.086
18							11	3	0	2	0	0.074
19							8	1	0	2	0	0.064
20							6	0	0	1	0	0.055

TOTAL: 1,219,297 339,931 2,511 475

GS EXPENSE: 140563 140563

OL EXPENSE: 8 8

'DODDORRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 155

ACCOUNT: 0420166161 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: COX UNIT 1H (10298.1) 1383
STATUS: Z API#: 06161 DATE: 01/07/2014 DAYS: 365 BBLs: 38.000 MCPS: 551064 RCPTS: 1211147 GWI: 1020094 OWI: 1383

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	606,956	485,565	450,836	112,701	104,641	0.928	823	815	757	152	141	0.928
2	467,356	345,965	276,914	86,780	69,460	0.800	634	626	501	117	94	0.800
3	359,864	238,473	164,549	66,821	46,107	0.690	488	480	331	90	62	0.690
4	277,095	155,704	92,618	51,452	30,605	0.595	376	368	219	70	41	0.595
5	213,363	91,972	47,162	39,618	20,316	0.513	289	281	144	54	27	0.513
6	164,290	42,899	18,964	30,506	13,485	0.442	223	215	95	41	18	0.442
7	126,503	5,112	1,948	23,489	8,952	0.381	172	164	62	32	12	0.381
8	97,407	0	0	18,087	0	0.329	132	124	41	24	8	0.329
9							102	94	27	19	5	0.283
10							78	71	17	14	4	0.244
11							60	53	11	11	2	0.210
12							46	39	7	9	2	0.181
13							36	28	4	7	1	0.156
14							28	20	3	5	1	0.135
15							21	13	2	4	0	0.116
16							16	9	1	3	0	0.100
17							13	5	0	2	0	0.086
18							10	2	0	1	0	0.074
19							7	0	0	1	0	0.064
TOTAL:			1,052,991		293,565				2,222		420	

GS EXPENSE: 121391 121391
OL EXPENSE: 8 8

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 156

FEB 15, 2017
01:26 PM

ACCOUNT: 0420166167 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: BOWEN UNIT 2H (10352.1) 1934
STATUS: Z API#: 06167 DATE: 01/27/2014 DAYS: 365 BBLs: 53.000 MCFS: 693140 RCPTS: 1544428 GWI: 1283658 OWI: 1934
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	763,777	611,021	567,319	153,776	142,777	0.928	1,151	1,142	1,060	231	215	0.928
2	588,108	435,353	348,461	118,407	94,775	0.800	886	877	702	178	143	0.800
3	452,843	300,088	207,063	91,174	62,911	0.690	682	674	465	137	95	0.690
4	348,689	195,934	116,549	70,204	41,760	0.595	525	517	307	106	63	0.595
5	268,491	115,735	59,348	54,057	27,720	0.513	405	396	203	81	42	0.513
6	206,738	53,983	23,864	41,624	18,400	0.442	311	303	134	63	28	0.442
7	159,188	6,433	2,451	32,050	12,214	0.381	240	231	88	48	18	0.381
8	122,575	0	0	24,679	0	0.329	185	176	58	37	12	0.329
9							142	134	38	29	8	0.283
10							109	101	25	22	5	0.244
11							84	76	16	17	4	0.210
12							65	56	10	13	2	0.181
13							50	41	6	10	2	0.156
14							38	30	4	8	1	0.135
15							30	21	2	6	1	0.116
16							23	14	1	5	0	0.100
17							18	9	1	4	0	0.086
18							14	5	0	3	0	0.074
19							10	2	0	2	0	0.064
20							8	0	0	2	0	0.055
TOTAL:			1,325,055		400,557				3,122		639	

GS EXPENSE: 152755 152755
OL EXPENSE: 9 9

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 157

ACCOUNT: 0420166181
STATUS: Z API#: 06181
DATE: 12/06/2014 DAYS: 365
BELS: 3.000 MCFS: 1559036 RCPTS: 3459824 GWI: 2929612 OWI: 101
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,743,119	1,568,125	1,455,968	315,405	292,847	0.928	60	60	56	11	10	0.928
2	1,342,202	1,167,208	934,246	242,862	194,390	0.800	46	46	37	8	7	0.800
3	1,033,495	858,501	592,374	187,004	129,034	0.690	36	35	24	6	4	0.690
4	795,791	620,797	369,273	143,993	85,652	0.595	27	27	16	5	3	0.595
5	612,759	437,765	224,481	110,875	56,855	0.513	21	21	11	4	2	0.513
6	471,825	296,831	131,217	85,373	37,740	0.442	16	16	7	3	1	0.442
7	363,305	188,311	71,763	65,738	25,052	0.381	13	12	5	2	1	0.381
8	279,745	104,751	34,413	50,618	16,629	0.329	10	9	3	2	1	0.329
9	215,404	40,410	11,444	38,976	11,038	0.283	7	7	2	1	0	0.283
10	165,861	0	0	30,011	0	0.244	6	6	1	1	0	0.244
11							4	4	1	1	0	0.210
12							3	3	1	1	0	0.181
13							3	2	0	0	0	0.156
14							2	2	0	0	0	0.135
15							2	1	0	0	0	0.116
16							1	1	0	0	0	0.100
17							1	1	0	0	0	0.086
18							1	1	0	0	0	0.074
19							1	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
22							0	0	0	0	0	0.041
23							0	0	0	0	0	0.035

TOTAL: 3,825,179 849,237 165 30

GS EXPENSE: 174994 174994 174994

OL EXPENSE: 0 0 0

'DODDRIDGE', COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 158

FEB 15, 2017
01:26 PM

ACCOUNT: 0420166182

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: WHITE UNIT 1H (10490.1)

STATUS: 2 API#: 06182

DATE: 11/29/2014 DAYS: 365 BBLS: 3.000 MCFS: 1729383 RCPTS: 3918331 GWI: 3308120 OWI: 114

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,968,331	1,793,337	1,665,073	362,995	337,033	0.928	68	68	63	12	12	0.928
2	1,515,615	1,340,621	1,073,048	279,506	223,720	0.800	52	52	42	10	8	0.800
3	1,167,024	992,030	684,509	215,220	148,504	0.690	40	40	28	7	5	0.690
4	898,608	723,614	430,432	165,719	98,576	0.595	31	31	18	6	3	0.595
5	691,928	516,934	265,078	127,604	65,434	0.513	24	24	12	4	2	0.513
6	532,785	357,791	158,165	98,255	43,435	0.442	18	18	8	3	1	0.442
7	410,244	235,250	89,651	75,656	28,832	0.381	14	14	5	3	1	0.381
8	315,888	140,894	46,287	58,255	19,138	0.329	11	11	4	2	1	0.329
9	243,234	68,240	19,326	44,857	12,704	0.283	8	8	2	2	0	0.283
10	187,290	12,296	3,002	34,540	8,433	0.244	6	6	2	1	0	0.244
11	144,213	0	0	26,596	0	0.210	5	5	1	1	0	0.210
12							4	4	1	1	0	0.181
13							3	3	0	1	0	0.156
14							2	2	0	0	0	0.135
15							2	2	0	0	0	0.116
16							1	1	0	0	0	0.100
17							1	1	0	0	0	0.086
18							1	1	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
22							0	0	0	0	0	0.041
23							0	0	0	0	0	0.035
24							0	0	0	0	0	0.031

TOTAL:

4,434,571

985,807

186

35

GS EXPENSE: 174994 174994 174994

OL EXPENSE: 0 0 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 159

ACCOUNT: 0420166183
STATUS: Z API#: 06183 DATE: 05/03/2014 DAYS: 365 BBLs: 2,000 MCFS: 1021348 RCPTS: 2225131 GWI: 1884143 OWI: 56
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,121,065	946,070	878,405	202,849	188,340	0.928	33	33	31	6	6	0.928
2	863,220	688,225	550,863	156,193	125,019	0.800	26	25	20	5	4	0.800
3	664,679	489,585	337,887	120,269	82,987	0.690	20	20	14	4	2	0.690
4	511,803	336,808	200,346	92,607	55,086	0.595	15	15	9	3	2	0.595
5	394,088	219,094	112,349	71,307	36,566	0.513	12	12	6	2	1	0.513
6	303,448	128,453	56,784	54,907	24,272	0.442	9	9	4	2	1	0.442
7	233,655	58,660	22,355	42,278	16,112	0.381	7	7	3	1	0	0.381
8	179,914	4,920	1,616	32,554	10,695	0.329	5	5	2	1	0	0.329
9	138,534	0	0	25,067	0	0.283	4	4	1	1	0	0.283
10							3	3	1	0	0	0.244
11							2	2	0	0	0	0.210
12							2	2	0	0	0	0.181
13							1	1	0	0	0	0.156
14							1	1	0	0	0	0.135
15							1	1	0	0	0	0.116
16							1	0	0	0	0	0.100
17							1	0	0	0	0	0.086
18							1	0	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
22							0	0	0	0	0	0.041
TOTAL:											91	
											16	

GS EXPENSE: 174995 174995
OL EXPENSE: 0 0

2,160,604 539,076

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 160

FEB 15, 2017
01:26 PM

ACCOUNT:0420166210 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:GAINER UNIT 1H (10757.1) 29
STATUS:Z API#:06210 DATE:05/30/2014 DAYS:365 BBLs: 1.000 MCFS: 1149645 RCPTS: 2466774 GWI: 2132702 OWI: 29
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,268,958	1,093,960	1,015,717	198,753	184,538	0.928	17	17	16	2	2	0.928
2	977,097	802,100	642,010	153,040	122,495	0.800	13	13	11	2	1	0.800
3	752,365	577,367	398,389	117,841	81,311	0.690	10	10	7	1	1	0.690
4	579,321	404,323	240,506	90,737	53,974	0.595	8	8	5	1	1	0.595
5	446,077	271,080	139,007	69,868	35,827	0.513	6	6	3	1	0	0.513
6	343,479	168,482	74,479	53,798	23,782	0.442	5	5	2	1	0	0.442
7	264,479	89,482	34,100	41,425	15,786	0.381	4	4	1	0	0	0.381
8	203,649	28,651	9,413	31,897	10,479	0.329	3	3	1	0	0	0.329
9	156,810	0	0	24,561	0	0.283	2	2	1	0	0	0.283
10							2	2	0	0	0	0.244
11							1	1	0	0	0	0.210
12							1	1	0	0	0	0.181
13							1	1	0	0	0	0.156
14							1	0	0	0	0	0.135
15							0	0	0	0	0	0.116
16							0	0	0	0	0	0.100
17							0	0	0	0	0	0.086
18							0	0	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
22							0	0	0	0	0	0.041
TOTAL:			2,553,620		528,192				47			7

GS EXPENSE: 174998 174998 174998
OL EXPENSE: 0 0 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 161

FEB 15, 2017
01:26 PM

ACCOUNT: 0420166219 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: BOWEN UNIT 1H (10354.1)
STATUS: Z API#: 06219 DATE: 01/27/2014 DAYS: 365 BBLs: 64,000 MCFS: 912013 RCPTS: 2009003 GWI: 1669933 OWI: 2334
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	993,610	818,854	760,287	200,078	185,768	0.928	1,389	1,381	1,282	280	260	0.928
2	765,080	590,324	472,502	154,060	123,312	0.800	1,069	1,061	849	215	172	0.800
3	589,111	414,356	285,909	118,626	81,853	0.690	823	815	563	166	114	0.690
4	453,616	278,860	165,876	91,342	54,334	0.595	634	626	372	128	76	0.595
5	349,284	174,528	89,496	70,334	36,066	0.513	488	480	246	98	50	0.513
6	268,949	94,193	41,639	54,157	23,941	0.442	376	368	163	76	33	0.442
7	207,091	32,335	12,322	41,701	15,892	0.381	289	281	107	58	22	0.381
8	159,460	0	0	32,110	0	0.329	223	215	71	45	15	0.329
9							172	164	46	35	10	0.283
10							132	124	30	27	6	0.244
11							102	94	20	20	4	0.210
12							78	70	13	16	3	0.181
13							60	52	8	12	2	0.156
14							46	38	5	9	1	0.135
15							36	28	3	7	1	0.116
16							28	20	2	6	1	0.100
17							21	13	1	4	0	0.086
18							16	8	1	3	0	0.074
19							13	5	0	3	0	0.064
20							10	2	0	2	0	0.055
21							7	0	0	2	0	0.048

TOTAL: 1,828,032 521,165 3,783 772

GS EXPENSE: 174756 174756 174756
OL EXPENSE: 8 8 8

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 162

FEB 15, 2017
01:26 PM

ACCOUNT: 0420166226
STATUS: 2 API#: 06226
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 34
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 OL EXPENSE: 0.2 5750 5750 5750
SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,462,948	1,287,950	1,195,832	229,137	212,749	0.928	20	20	19	4	3	0.928
2	1,126,470	951,472	761,569	176,436	141,221	0.800	16	15	12	3	2	0.800
3	867,382	692,384	477,751	135,856	93,742	0.690	12	12	8	2	1	0.690
4	667,884	492,886	293,187	104,609	62,225	0.595	9	9	5	2	1	0.595
5	514,271	339,273	173,976	80,549	41,305	0.513	7	7	4	1	1	0.513
6	395,988	220,991	97,691	62,023	27,418	0.442	5	5	2	1	0	0.442
7	304,911	129,914	49,508	47,757	18,200	0.381	4	4	2	1	0	0.381
8	234,782	59,784	19,640	36,773	12,081	0.329	3	3	1	1	0	0.329
9	180,782	5,784	1,638	28,315	8,019	0.283	2	2	1	0	0	0.283
10	139,202	0	0	21,803	0	0.244	2	2	0	0	0	0.244
11							1	1	0	0	0	0.210
12							1	1	0	0	0	0.181
13							1	1	0	0	0	0.156
14							1	1	0	0	0	0.135
15							1	1	0	0	0	0.116
16							0	0	0	0	0	0.100
17							0	0	0	0	0	0.086
18							0	0	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
22							0	0	0	0	0	0.041
23							0	0	0	0	0	0.035
TOTAL:			3,070,793		616,959				55			10

GS EXPENSE: 174998 174998
OL EXPENSE: 0 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 163

ACCOUNT:0420166227 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:GOLDEN UNIT 1H (10346.1)
STATUS:Z API#:06227 DATE:04/09/2014 DAYS:365 BBLs: 3.000 MCPS: 1588907 RCPTS: 3480954 GWI: 2900058 OWI: 83
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,725,535	1,550,540	1,439,640	345,574	320,857	0.928	49	49	46	10	9	0.928
2	1,328,662	1,153,667	923,407	266,092	212,983	0.800	38	38	30	8	6	0.800
3	1,023,069	848,074	585,179	204,891	141,376	0.690	29	29	20	6	4	0.690
4	787,763	612,768	364,497	157,766	93,845	0.595	23	22	13	5	3	0.595
5	606,578	431,583	221,311	121,480	62,293	0.513	17	17	9	4	2	0.513
6	467,065	292,070	129,112	93,539	41,350	0.442	13	13	6	3	1	0.442
7	359,640	184,645	70,366	72,025	27,448	0.381	10	10	4	2	1	0.381
8	276,923	101,928	33,486	55,459	18,220	0.329	8	8	3	2	1	0.329
9	213,231	38,236	10,829	42,704	12,094	0.283	6	6	2	1	0	0.283
10	164,188	0	0	32,882	0	0.244	5	5	1	1	0	0.244
11							4	3	1	1	0	0.210
12							3	3	0	1	0	0.181
13							2	2	0	0	0	0.156
14							2	1	0	0	0	0.135
15							1	1	0	0	0	0.116
16							1	1	0	0	0	0.100
17							1	1	0	0	0	0.086
18							1	1	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
22							0	0	0	0	0	0.041
23							0	0	0	0	0	0.035

TOTAL: 3,777,827 930,466 135 28

GS EXPENSE: 174995 174995
OL EXPENSE: 0 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 164

FEB 15, 2017
01:26 PM

ACCOUNT: 0420166230 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: GOLDEN UNIT 2H (10347.1) 71
STATUS: 2 API#: 06230 DATE: 04/24/2014 DAYS: 365 BBLs: 2.000 MCFS: 1286595 RCPTS: 2793210 GWI: 2327079 OWI: 71
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	1,384,612	1,123,102	1,209,617	277,297	257,464	0.928	42	39	42	8	8	0.928
2	1,066,151	713,292	891,157	213,519	170,903	0.800	33	26	32	6	5	0.800
3	820,936	445,706	645,942	164,410	113,444	0.690	25	17	25	3	3	0.690
4	632,121	271,915	457,126	126,595	75,304	0.595	19	11	19	4	2	0.595
5	486,733	159,856	311,739	97,478	49,986	0.513	15	8	15	3	2	0.513
6	374,785	88,319	199,790	75,058	33,180	0.442	11	5	11	2	1	0.442
7	288,584	43,287	113,589	57,795	22,025	0.381	9	3	9	2	1	0.381
8	222,210	15,511	47,215	44,502	14,620	0.329	7	2	7	1	0	0.329
9	171,102	0	0	34,257	0	0.283	5	1	5	1	0	0.283
10							4	1	4	1	0	0.244
11							3	1	3	1	0	0.210
12							2	0	2	0	0	0.181
13							2	0	2	0	0	0.156
14							1	0	1	0	0	0.135
15							1	0	1	0	0	0.116
16							1	0	1	0	0	0.100
17							1	0	1	0	0	0.086
18							0	0	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
22							0	0	0	0	0	0.041
TOTAL:		2,860,988			736,926			116			23	

GS EXPENSE: 174995 174995 174995
OL EXPENSE: 0 0 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 165

ACCOUNT: 0420166245 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: IRONS UNIT 1H (10401.1) 38
STATUS: Z API#: 06245 DATE: 06/13/2014 DAYS: 365 BELLS: 1.000 MCPS: 1592531 RCPTS: 3416574 GWI: 2914946 OWI: 38

SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,734,393	1,559,395	1,447,863	298,442	277,096	0.928	23	23	21	4	4	0.928
2	1,335,483	1,160,485	928,865	229,800	183,935	0.800	17	17	14	3	3	0.800
3	1,028,322	853,324	588,801	176,946	122,094	0.690	13	13	9	2	2	0.690
4	791,808	616,810	366,901	136,249	81,046	0.595	10	10	6	1	1	0.595
5	609,692	434,694	222,906	104,911	53,797	0.513	8	8	4	1	1	0.513
6	469,463	294,465	130,171	80,782	35,710	0.442	6	6	3	1	1	0.442
7	361,486	186,489	71,068	62,202	23,704	0.381	5	5	2	1	1	0.381
8	278,344	103,347	33,952	47,896	15,735	0.329	4	4	1	1	1	0.329
9	214,325	39,328	11,138	36,880	10,445	0.283	3	3	1	1	1	0.283
10	165,030	0	0	28,397	0	0.244	2	2	1	0	0	0.244
11							2	2	0	0	0	0.210
12							1	1	0	0	0	0.181
13							1	1	0	0	0	0.156
14							1	1	0	0	0	0.135
15							1	1	0	0	0	0.116
16							0	0	0	0	0	0.100
17							0	0	0	0	0	0.086
18							0	0	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
22							0	0	0	0	0	0.041
23							0	0	0	0	0	0.035

TOTAL: 3,801,664 803,563 62 12

GS EXPENSE: 174998 174998 174998
OL EXPENSE: 0 0 0

FEB 15, 2017
01:26 PM
'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 166

ACCOUNT:0420166278

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:BELTON UNIT 1H (10429.1)

STATUS:Z API#:06278

DATE:07/01/2014 DAYS:365 BHLS: 10.000 MCFS: 1470423 RCPTS: 3246714 GWI: 2704572 OWI: 273

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,609,220	1,434,238	1,331,657	322,379	299,322	0.928	162	162	150	33	30	0.928
2	1,239,100	1,064,117	851,731	248,232	198,688	0.800	125	124	100	25	20	0.800
3	954,107	779,124	537,603	191,139	131,887	0.690	96	96	66	19	13	0.690
4	734,662	559,680	332,918	147,177	87,546	0.595	74	74	44	15	9	0.595
5	565,690	390,708	200,351	113,326	58,112	0.513	57	57	29	12	6	0.513
6	435,581	260,599	115,200	87,261	38,575	0.442	44	43	19	9	4	0.442
7	335,398	160,415	61,132	67,191	25,606	0.381	34	33	13	7	3	0.381
8	258,256	83,274	27,357	51,737	16,997	0.329	26	25	8	5	2	0.329
9	198,857	23,875	6,762	39,838	11,282	0.283	20	19	6	4	1	0.283
10	153,120	0	0	30,675	0	0.244	15	15	4	3	1	0.244
11							12	11	2	2	1	0.210
12							9	9	2	2	0	0.181
13							7	6	1	1	0	0.156
14							5	5	1	1	0	0.135
15							4	4	0	1	0	0.116
16							3	3	0	1	0	0.100
17							2	2	0	0	0	0.086
18							1	1	0	0	0	0.074
19							1	1	0	0	0	0.064
20							1	1	0	0	0	0.055
21							1	1	0	0	0	0.048
22							1	1	0	0	0	0.041
23							1	0	0	0	0	0.035
TOTAL:			3,464,710		868,015				445			90

GS EXPENSE: 174982 174982 174982
OL EXPENSE: 1 1 1

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 167

ACCOUNT: 0420166279 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: CAROLE UNIT 1H (10382.1) 239
STATUS: Z API#: 06279 DATE: 06/27/2014 DAYS: 365 BELS: 9.000 MCFS: 1292624 RCPTS: 2835798 GWI: 2360640 OWI: 239
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,404,581	1,229,599	1,141,654	282,548	262,340	0.928	142	142	131	29	27	0.928
2	1,081,527	906,545	725,609	217,562	174,139	0.800	109	109	87	22	18	0.800
3	832,776	657,794	453,884	167,523	115,592	0.690	84	84	58	17	12	0.690
4	641,237	466,255	277,345	128,993	76,729	0.595	65	64	38	13	8	0.595
5	493,753	318,771	163,462	99,324	50,932	0.513	50	49	25	10	5	0.513
6	380,190	205,207	90,714	76,480	33,809	0.442	38	38	17	8	3	0.442
7	292,746	117,764	44,878	58,889	22,442	0.381	30	29	11	6	2	0.381
8	225,414	50,432	16,568	45,345	14,897	0.329	23	22	7	5	2	0.329
9	173,569	0	0	34,916	0	0.283	18	17	5	4	1	0.283
10							14	13	3	3	1	0.244
11							10	10	2	2	0	0.210
12							8	7	1	2	0	0.181
13							6	6	1	1	0	0.156
14							5	4	1	1	0	0.135
15							4	3	0	1	0	0.116
16							3	2	0	1	0	0.100
17							2	2	0	0	0	0.086
18							2	1	0	0	0	0.074
19							1	1	0	0	0	0.064
20							1	0	0	0	0	0.055
21							1	0	0	0	0	0.048
22							1	0	0	0	0	0.041
23							0	0	0	0	0	0.035
TOTAL:			2,914,114		750,880				389			79

GS EXPENSE: 174982 174982 174982
OL EXPENSE: 1 1 1

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 168

ACCOUNT:0420166280 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:CAROLE UNIT 2H (10430.1)
STATUS:Z API#:05280 DATE:06/26/2014 DAYS:365 BBLs: 9.000 MCPS: 1311810 RCPTS: 2919067 GWI: 2429952 OWI: 250
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,445,821	1,270,839	1,179,945	290,844	270,042	0.928	149	148	138	30	28	0.928
2	1,113,283	938,301	751,026	223,950	179,252	0.800	115	114	91	23	19	0.800
3	857,228	682,246	470,756	172,442	118,986	0.690	88	88	60	18	12	0.690
4	660,065	485,083	288,545	132,780	78,982	0.595	68	67	40	14	8	0.595
5	508,250	333,268	170,896	102,241	52,428	0.513	52	52	27	11	5	0.513
6	391,353	216,371	95,649	78,725	34,801	0.442	40	40	18	8	4	0.442
7	301,342	126,360	48,154	60,618	23,101	0.381	31	30	12	6	2	0.381
8	232,033	57,051	18,743	46,676	15,334	0.329	24	23	8	5	2	0.329
9	178,665	3,683	1,043	35,941	10,179	0.283	18	18	5	4	1	0.283
10	137,572	0	0	27,674	0	0.244	14	14	3	3	1	0.244
11							11	10	2	2	0	0.210
12							8	8	1	2	0	0.181
13							6	6	1	1	0	0.156
14							5	4	1	1	0	0.135
15							4	3	0	1	0	0.116
16							3	2	0	1	0	0.100
17							2	2	0	0	0	0.086
18							2	1	0	0	0	0.074
19							1	1	0	0	0	0.064
20							1	0	0	0	0	0.055
21							1	0	0	0	0	0.048
22							1	0	0	0	0	0.041
23							0	0	0	0	0	0.035

TOTAL:

3,024,756

783,106

407

84

GS EXPENSE: 174982 174982 174982

OL EXPENSE: 1 1 1

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 169

ACCOUNT: 0420166369 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: CASWELL UNIT 1H (10422.1) 2973
STATUS: Z API#: 06369 DATE: 11/25/2014 DAYS: 365 BELS: 80.000 MCFS: 1995103 RCPTS: 4381884 GWI: 3827896 OWI: 2973
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,277,598	2,102,734	1,952,340	327,600	304,159	0.928	1,769	1,764	1,638	254	236	0.928
2	1,753,751	1,578,886	1,263,758	252,252	201,905	0.800	1,362	1,358	1,087	196	157	0.800
3	1,350,388	1,175,524	811,122	194,234	134,023	0.690	1,049	1,044	721	151	104	0.690
4	1,039,799	864,935	514,494	149,560	88,964	0.595	808	803	478	116	69	0.595
5	800,645	625,781	320,894	115,161	59,053	0.513	622	617	317	89	46	0.513
6	616,497	441,632	195,228	88,674	39,199	0.442	479	474	210	69	30	0.442
7	474,702	299,838	114,264	68,279	26,020	0.381	369	364	139	53	20	0.381
8	365,521	190,657	62,635	52,575	17,272	0.329	284	279	92	41	13	0.329
9	281,451	106,587	30,186	40,483	11,465	0.283	219	214	61	31	9	0.283
10	216,717	41,853	10,218	31,172	7,610	0.244	168	164	40	24	6	0.244
11	166,872	0	0	24,002	0	0.210	130	125	26	19	4	0.210
12							100	95	17	14	3	0.181
13							77	72	11	11	2	0.156
14							59	55	7	8	1	0.135
15							46	41	5	7	1	0.116
16							35	31	3	5	1	0.100
17							27	23	2	4	0	0.086
18							21	16	1	3	0	0.074
19							16	12	1	2	0	0.064
20							12	8	0	2	0	0.055
21							9	5	0	1	0	0.048
22							7	3	0	1	0	0.041
23							6	1	0	1	0	0.035
24							4	0	0	1	0	0.031

TOTAL: 5,275,140 889,682 4,856 702

GS EXPENSE: 174864 174864 174864

OL EXPENSE: 4 4 4

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 170

ACCOUNT:0420166377 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:CASWELL UNIT 2H (10426.1)
 STATUS:Z API#:06377 DATE:08/19/2014 DAYS:365 BBLs: 57.000 MCFS: 1468229 RCPTS: 3211710 GWI: 2805719 OWI: 2123
SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,663,403	1,494,535	1,387,641	240,120	222,946	0.928	1,263	1,259	1,169	181	168	0.928
2	1,285,440	1,110,572	888,914	184,892	147,990	0.800	973	968	775	140	112	0.800
3	989,789	814,921	562,303	142,367	98,235	0.690	749	745	514	108	74	0.690
4	762,137	587,270	349,329	109,623	65,208	0.595	577	572	340	83	49	0.595
5	586,846	411,978	211,258	84,409	43,284	0.513	444	440	225	64	33	0.513
6	451,871	277,004	122,452	64,995	28,732	0.442	342	338	149	49	22	0.442
7	347,941	173,073	65,956	50,046	19,072	0.381	263	259	99	38	14	0.381
8	267,914	93,047	30,568	38,536	12,660	0.329	203	198	65	29	10	0.329
9	206,294	31,426	8,900	29,672	8,404	0.283	156	152	43	22	6	0.283
10	158,847	0	0	22,848	0	0.244	120	116	28	17	4	0.244
11							93	88	19	13	3	0.210
12							71	67	12	10	2	0.181
13							55	51	8	8	1	0.156
14							42	38	5	6	1	0.135
15							33	28	3	5	1	0.116
16							25	21	2	4	0	0.100
17							19	15	1	3	0	0.086
18							15	11	1	2	0	0.074
19							11	7	0	2	0	0.064
20							9	4	0	1	0	0.055
21							7	2	0	1	0	0.048
22							5	1	0	1	0	0.041
23							4	0	0	1	0	0.035
TOTAL:			3,627,322		646,529				3,460		501	

GS EXPENSE: 174868 174868
 OL EXPENSE: 4 4

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 171

ACCOUNT:0420166422 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:LETTIE UNIT 1H (10470.1)
 STATUS:Z API#:06422 DATE:12/02/2014 DAYS:365 BBLs: 35.000 MCFS: 2591389 RCPTS: 5777441 GWI: 4901417 OWI: 1417
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,916,343	2,741,394	2,545,321	520,241	483,031	0.928	843	841	781	151	140	0.928
2	2,245,584	2,070,635	1,657,359	400,585	320,633	0.800	649	648	518	116	93	0.800
3	1,729,100	1,554,150	1,072,378	308,451	212,834	0.690	500	498	344	89	62	0.690
4	1,331,407	1,156,457	687,903	237,507	141,278	0.595	385	383	228	69	41	0.595
5	1,025,183	850,234	435,991	182,880	93,779	0.513	296	295	151	53	27	0.513
6	789,391	614,442	271,620	140,818	62,250	0.442	228	227	100	41	18	0.442
7	607,831	432,882	164,955	108,430	41,321	0.381	176	174	66	31	12	0.381
8	468,030	293,081	96,283	83,491	27,429	0.329	135	134	44	24	8	0.329
9	360,383	185,434	52,516	64,288	18,207	0.283	104	103	29	19	5	0.283
10	277,495	102,546	25,036	49,502	12,086	0.244	80	79	19	14	3	0.244
11	213,671	38,722	8,150	38,116	8,022	0.210	62	60	13	11	2	0.210
12	164,527		0	29,350	0	0.181	48	46	8	8	2	0.181
13							37	35	5	7	1	0.156
14							28	27	4	5	1	0.135
15							22	20	2	4	0	0.116
16							17	15	2	3	0	0.100
17							13	11	1	2	0	0.086
18							10	8	1	2	0	0.074
19							8	6	0	1	0	0.064
20							6	4	0	1	0	0.055
21							5	3	0	1	0	0.048
22							3	2	0	1	0	0.041
23							3	1	0	0	0	0.035
24							2	0	0	0	0	0.031
25							2	0	0	0	0	0.026

TOTAL: 7,017,522 1,420,869 2,317 416

GS EXPENSE: 174949 174949

OL EXPENSE: 2 2

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 172

FEB 15, 2017
01:26 PM

ACCOUNT: 0420166433
STATUS: Z API#: 06433
DATE: 11/24/2014 DAYS: 365 BBLs: 25.000 MCPS: 1749957 RCPTS: 3814323 GWI: 3218743 OWI: 995
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,915,152	1,740,206	1,615,741	353,669	328,373	0.928	592	548	590	109	102	0.928
2	1,474,667	1,299,721	1,040,311	272,325	217,972	0.800	456	363	454	84	67	0.800
3	1,135,494	960,548	662,787	209,690	144,688	0.690	351	241	349	65	45	0.690
4	874,330	699,384	416,019	161,461	96,043	0.595	270	160	269	50	30	0.595
5	673,234	498,288	255,517	124,325	63,753	0.513	208	106	206	38	20	0.513
6	518,390	343,444	151,823	95,730	42,319	0.442	160	70	158	30	13	0.442
7	399,161	224,215	85,445	73,712	28,091	0.381	123	46	122	23	9	0.381
8	307,354	132,408	43,499	56,759	18,646	0.329	95	31	93	18	6	0.329
9	236,662	61,716	17,479	43,704	12,377	0.283	73	20	71	14	4	0.283
10	182,230	7,284	1,778	33,652	8,216	0.244	56	13	55	10	3	0.244
11	140,317	0	0	25,912	0	0.210	43	9	42	8	2	0.210
12							33	6	32	6	1	0.181
13							26	4	24	5	1	0.156
14							20	2	18	4	0	0.135
15							15	2	13	3	0	0.116
16							12	1	10	2	0	0.100
17							9	1	7	2	0	0.086
18							7	0	5	1	0	0.074
19							5	0	4	1	0	0.064
20							4	0	2	1	0	0.055
21							3	0	1	1	0	0.048
22							2	0	1	0	0	0.041
23							2	0	0	0	0	0.035
24							1	0	0	0	0	0.031

TOTAL: 4,290,399 960,478 1,623 302

GS EXPENSE: 174946 174946
OL EXPENSE: 2 2

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 173

ACCOUNT: 0420166434 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: DOWNS UNIT 2H (10482.1)
STATUS: Z API#: 06434 DATE: 12/03/2014 DAYS: 365 BBLs: 36.000 MCFS: 2298777 RCPTS: 5139502 GMI: 4336927 OWI: 1417

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELL LIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,580,472	2,405,529	2,233,478	476,533	442,450	0.928	843	841	781	156	145	0.928
2	1,986,963	1,812,020	1,450,361	366,931	293,695	0.800	649	647	518	120	96	0.800
3	1,529,962	1,355,019	934,975	282,536	194,953	0.690	500	498	344	92	64	0.690
4	1,178,070	1,003,128	596,696	217,553	129,408	0.595	385	383	228	71	42	0.595
5	907,114	732,171	375,449	167,516	85,900	0.513	296	295	151	55	28	0.513
6	698,478	523,535	231,434	128,987	57,020	0.442	228	226	100	42	19	0.442
7	537,828	362,885	138,290	99,320	37,850	0.381	176	174	66	32	12	0.381
8	414,128	239,185	78,577	76,477	25,124	0.329	135	133	44	25	8	0.329
9	318,878	143,935	40,764	58,887	16,677	0.283	104	102	29	19	5	0.283
10	245,536	70,593	17,235	45,343	11,070	0.244	80	78	19	15	4	0.244
11	189,063	14,120	2,972	34,914	7,348	0.210	62	60	13	11	2	0.210
12	145,578	0	0	26,884	0	0.181	48	46	8	9	2	0.181
13							37	35	5	7	1	0.156
14							28	26	4	5	1	0.135
15							22	20	2	4	0	0.116
16							17	15	1	3	0	0.100
17							13	11	1	2	0	0.086
18							10	8	1	2	0	0.074
19							8	6	0	1	0	0.064
20							6	4	0	1	0	0.055
21							5	3	0	1	0	0.048
22							3	2	0	1	0	0.041
23							3	1	0	0	0	0.035
24							2	0	0	0	0	0.031
25							2	0	0	0	0	0.026
TOTAL:			6,100,233		1,301,496				2,316		430	

GS EXPENSE: 174943 174943
OL EXPENSE: 2 2

FEB 15, 2017
01:26 PM
YIELD CAP MODEL REPORT FOR - 2017

NR105: 174

ACCOUNT:0420165435
STATUS:Z API#:06435
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE:0.590 0.290 0.230 WELLLIFE:99 EXPENSE:0.2 175000 175000
RATES USED:16.000 DECLINE RATE:0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE:0.2 175000 175000
CAP RATE:16.000 DECLINE RATE:0.590 0.290 0.230 WELLLIFE:99 OL EXPENSE:0.2 5750 5750
SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,279,424	2,104,474	1,953,955	406,622	377,539	0.928	654	652	606	117	108	0.928
2	1,755,156	1,580,206	1,264,815	313,099	250,608	0.800	504	502	402	90	72	0.800
3	1,351,470	1,176,520	811,810	241,086	166,352	0.690	388	386	266	69	48	0.690
4	1,040,632	865,682	514,939	185,636	110,423	0.595	299	297	177	53	32	0.595
5	801,287	626,337	321,179	142,940	73,298	0.513	230	228	117	41	21	0.513
6	616,991	442,041	195,409	110,064	48,655	0.442	177	175	78	32	14	0.442
7	475,083	300,133	114,377	84,749	32,297	0.381	136	135	51	24	9	0.381
8	365,814	190,864	62,703	65,257	21,438	0.329	105	103	34	19	6	0.329
9	281,677	106,727	30,226	50,248	14,231	0.283	81	79	22	14	4	0.283
10	216,891	41,941	10,240	38,691	9,446	0.244	62	61	15	11	3	0.244
11	167,006	0	0	29,792	0	0.210	48	46	10	9	2	0.210
12							37	35	6	7	1	0.181
13							28	27	4	5	1	0.156
14							22	20	3	4	1	0.135
15							17	15	2	3	0	0.116
16							13	11	1	2	0	0.100
17							10	8	1	2	0	0.086
18							8	6	0	1	0	0.074
19							6	4	0	1	0	0.064
20							5	3	0	1	0	0.055
21							4	2	0	1	0	0.048
22							3	1	0	0	0	0.041
23							2	0	0	0	0	0.035
24							2	0	0	0	0	0.031
TOTAL:			5,279,651		1,104,286				1,795		322	

GS EXPENSE: 174950 174950
OL EXPENSE: 2 2

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 175

ACCOUNT: 0420166450 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: ARTERS UNIT 1H (10483.1) 3885
STATUS: Z API#: 06450 DATE: 12/27/2014 DAYS: 365 BELLS: 108.000 MCFS: 2893799 RCPTS: 6311390 GWI: 5308503 OWI: 3885
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	3,158,559	2,983,687	2,770,285	593,972	551,489	0.928	2,312	2,307	2,142	434	403	0.928
2	2,432,091	2,257,219	1,806,703	457,358	366,075	0.800	1,780	1,776	1,421	334	268	0.800
3	1,872,710	1,697,838	1,171,523	352,166	242,998	0.690	1,371	1,366	943	258	178	0.690
4	1,441,987	1,267,115	753,725	271,168	161,300	0.595	1,055	1,051	625	198	118	0.595
5	1,110,330	935,458	479,692	208,799	107,070	0.513	813	808	415	153	78	0.513
6	854,954	680,082	300,637	160,775	71,072	0.442	626	621	275	118	52	0.442
7	658,314	483,442	184,233	123,797	47,177	0.381	482	478	182	91	34	0.381
8	505,902	332,030	109,079	95,324	31,316	0.329	371	367	120	70	23	0.329
9	380,315	215,443	61,015	73,399	20,787	0.283	286	281	80	54	15	0.283
10	300,542	125,670	30,682	56,517	13,799	0.244	220	216	53	41	10	0.244
11	231,418	56,546	11,901	43,518	9,159	0.210	169	165	35	32	7	0.210
12	178,192	3,319	602	33,509	6,080	0.181	130	126	23	25	4	0.181
13	137,207	0	0	25,802	0	0.156	100	96	15	19	3	0.156
14							77	73	10	15	2	0.135
15							60	55	6	11	1	0.116
16							46	42	4	9	1	0.100
17							35	31	3	7	1	0.086
18							27	23	2	5	0	0.074
19							21	17	1	4	0	0.064
20							16	12	1	3	0	0.055
21							12	8	0	2	0	0.048
22							10	5	0	2	0	0.041
23							7	3	0	1	0	0.035
24							6	3	0	1	0	0.031
25							4	0	0	1	0	0.026
26							3	0	0	1	0	0.023

TOTAL:

7,680,079

1,628,322

6,356

1,199

GS EXPENSE: 174872 174872

OL EXPENSE: 4 4

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Yr 1)									
DECLINE RATES		2015	GAS INCOME		OIL INCOME	GAS CAP INCOME		OIL CAP INCOME	
YR 1	50%	WRK INT	\$	1,133,438	\$	72	YR1	\$	1,133,438
YR 2	28%	ROY INT	\$	838,743	\$	18	YR2	\$	221,273
YR3+	23%							\$	183,742
\$ 2,117,231		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC
1	\$ 1,133,458	\$ 174,997	\$ 958,461	0.928477	\$ 889,909	1	\$ 221,273	0.928477	\$ 205,447
2	\$ 838,759	\$ 174,997	\$ 663,762	0.800411	\$ 531,282	2	\$ 183,742	0.800411	\$ 131,061
3	\$ 645,845	\$ 174,997	\$ 470,847	0.690009	\$ 324,889	3	\$ 128,081	0.690009	\$ 88,967
4	\$ 497,300	\$ 174,997	\$ 322,303	0.594836	\$ 191,718	4	\$ 97,083	0.594836	\$ 67,746
5	\$ 382,921	\$ 174,997	\$ 207,924	0.512786	\$ 106,521	5	\$ 74,754	0.512786	\$ 36,333
6	\$ 294,849	\$ 174,997	\$ 119,852	0.442080	\$ 52,982	6	\$ 57,580	0.442080	\$ 25,446
7	\$ 227,034	\$ 174,997	\$ 52,037	0.381088	\$ 19,631	7	\$ 44,321	0.381088	\$ 16,890
8	\$ 174,816	\$ 174,997	\$ -	0.328522	\$ -	8	\$ 34,128	0.328522	\$ -
9	\$ 134,808	\$ 174,997	\$ -	0.283208	\$ -	9	\$ 26,278	0.283208	\$ -
10	\$ 103,849	\$ 174,997	\$ -	0.224146	\$ -	10	\$ 20,234	0.224146	\$ -
11	\$ 79,809	\$ 174,997	\$ -	0.210470	\$ -	11	\$ 15,580	0.210470	\$ -
12	\$ 61,453	\$ 174,997	\$ -	0.181440	\$ -	12	\$ 11,997	0.181440	\$ -
13	\$ 47,319	\$ 174,997	\$ -	0.166414	\$ -	13	\$ 9,238	0.166414	\$ -
14	\$ 38,436	\$ 174,997	\$ -	0.134840	\$ -	14	\$ 7,113	0.134840	\$ -
15	\$ 28,055	\$ 174,997	\$ -	0.118241	\$ -	15	\$ 5,477	0.118241	\$ -
16	\$ 21,803	\$ 174,997	\$ -	0.100208	\$ -	16	\$ 4,217	0.100208	\$ -
17	\$ 16,634	\$ 174,997	\$ -	0.088368	\$ -	17	\$ 3,247	0.088368	\$ -
18	\$ 12,806	\$ 174,997	\$ -	0.074471	\$ -	18	\$ 2,500	0.074471	\$ -
19	\$ 9,882	\$ 174,997	\$ -	0.064199	\$ -	19	\$ 1,925	0.064199	\$ -
20	\$ 7,564	\$ 174,997	\$ -	0.055344	\$ -	20	\$ 1,482	0.055344	\$ -
21	\$ 5,847	\$ 174,997	\$ -	0.047710	\$ -	21	\$ 1,142	0.047710	\$ -
22	\$ 4,502	\$ 174,997	\$ -	0.041129	\$ -	22	\$ 879	0.041129	\$ -
23	\$ 3,467	\$ 174,997	\$ -	0.035458	\$ -	23	\$ 677	0.035458	\$ -
24	\$ 2,670	\$ 174,997	\$ -	0.030586	\$ -	24	\$ 521	0.030586	\$ -
25	\$ 2,058	\$ 174,997	\$ -	0.026350	\$ -	25	\$ 401	0.026350	\$ -
26	\$ 1,583	\$ 174,997	\$ -	0.022715	\$ -	26	\$ 309	0.022715	\$ -
27	\$ 1,219	\$ 174,997	\$ -	0.019582	\$ -	27	\$ 238	0.019582	\$ -
28	\$ 938	\$ 174,997	\$ -	0.018681	\$ -	28	\$ 183	0.018681	\$ -
29	\$ 723	\$ 174,997	\$ -	0.014553	\$ -	29	\$ 141	0.014553	\$ -
30	\$ 556	\$ 174,997	\$ -	0.012548	\$ -	30	\$ 109	0.012548	\$ -
31	\$ 428	\$ 174,997	\$ -	0.010815	\$ -	31	\$ 84	0.010815	\$ -
32	\$ 330	\$ 174,997	\$ -	0.009323	\$ -	32	\$ 64	0.009323	\$ -
33	\$ 254	\$ 174,997	\$ -	0.008037	\$ -	33	\$ 50	0.008037	\$ -
34	\$ 198	\$ 174,997	\$ -	0.006929	\$ -	34	\$ 38	0.006929	\$ -
35	\$ 151	\$ 174,997	\$ -	0.005973	\$ -	35	\$ 29	0.005973	\$ -
36	\$ 118	\$ 174,997	\$ -	0.005149	\$ -	36	\$ 23	0.005149	\$ -
37	\$ 89	\$ 174,997	\$ -	0.004439	\$ -	37	\$ 17	0.004439	\$ -
38	\$ 69	\$ 174,997	\$ -	0.003827	\$ -	38	\$ 13	0.003827	\$ -
39	\$ 53	\$ 174,997	\$ -	0.003299	\$ -	39	\$ 10	0.003299	\$ -
40	\$ 41	\$ 174,997	\$ -	0.002844	\$ -	40	\$ 8	0.003812	\$ -
WORKING INTEREST APPRAISAL			\$ 2,117,231			ROYALTY INTEREST APPRAISAL			\$ 581,922

09-0420176231

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (YR 1)									
2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
DECLINE RATES		WRK INT	1,372,000	2,402	YR1	1,372,185	537		
YR 1	50%	ROY INT	973,741	452		258,841	120		
YR 2	28%				YR2	1,015,417	471		
YR3+	23%					190,951	88		
\$ 2,737,515		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC
1	\$ 1,372,821	\$ 174,922	\$ 1,197,900	0.928477	\$ 1,112,222	1	\$ 258,181	0.928477	\$ 236,897
2	\$ 1,015,888	\$ 174,922	\$ 840,966	0.800411	\$ 673,116	2	\$ 191,039	0.800411	\$ 152,910
3	\$ 762,234	\$ 174,922	\$ 607,312	0.690009	\$ 419,051	3	\$ 147,100	0.690009	\$ 101,500
4	\$ 602,320	\$ 174,922	\$ 427,398	0.594836	\$ 254,232	4	\$ 113,267	0.594836	\$ 87,375
5	\$ 463,768	\$ 174,922	\$ 288,846	0.512768	\$ 146,127	5	\$ 87,216	0.512768	\$ 44,723
6	\$ 357,115	\$ 174,922	\$ 182,194	0.442080	\$ 80,541	6	\$ 87,158	0.442080	\$ 29,667
7	\$ 274,979	\$ 174,922	\$ 100,057	0.381088	\$ 36,130	7	\$ 51,710	0.381088	\$ 19,706
8	\$ 211,734	\$ 174,922	\$ 36,812	0.326522	\$ 12,094	8	\$ 36,817	0.326522	\$ 13,081
9	\$ 163,035	\$ 174,922	\$ -	0.283208	\$ -	9	\$ 30,658	0.283209	\$ -
10	\$ 125,537	\$ 174,922	\$ -	0.224146	\$ -	10	\$ 23,807	0.224146	\$ -
11	\$ 98,883	\$ 174,922	\$ -	0.210470	\$ -	11	\$ 18,178	0.210470	\$ -
12	\$ 74,431	\$ 174,922	\$ -	0.181440	\$ -	12	\$ 13,997	0.181440	\$ -
13	\$ 57,312	\$ 174,922	\$ -	0.158414	\$ -	13	\$ 10,776	0.158414	\$ -
14	\$ 44,130	\$ 174,922	\$ -	0.134840	\$ -	14	\$ 8,296	0.134840	\$ -
15	\$ 33,960	\$ 174,922	\$ -	0.116241	\$ -	15	\$ 6,390	0.116241	\$ -
16	\$ 26,165	\$ 174,922	\$ -	0.100206	\$ -	16	\$ 4,920	0.100206	\$ -
17	\$ 20,147	\$ 174,922	\$ -	0.086368	\$ -	17	\$ 3,789	0.086368	\$ -
18	\$ 15,513	\$ 174,922	\$ -	0.074471	\$ -	18	\$ 2,617	0.074471	\$ -
19	\$ 11,945	\$ 174,922	\$ -	0.064199	\$ -	19	\$ 2,246	0.064189	\$ -
20	\$ 8,198	\$ 174,922	\$ -	0.055344	\$ -	20	\$ 1,730	0.055344	\$ -
21	\$ 7,062	\$ 174,922	\$ -	0.047710	\$ -	21	\$ 1,332	0.047710	\$ -
22	\$ 5,453	\$ 174,922	\$ -	0.041129	\$ -	22	\$ 1,026	0.041129	\$ -
23	\$ 4,199	\$ 174,922	\$ -	0.035458	\$ -	23	\$ 790	0.035458	\$ -
24	\$ 3,233	\$ 174,922	\$ -	0.030566	\$ -	24	\$ 606	0.030566	\$ -
25	\$ 2,490	\$ 174,922	\$ -	0.026350	\$ -	25	\$ 488	0.026350	\$ -
26	\$ 1,917	\$ 174,922	\$ -	0.022715	\$ -	26	\$ 380	0.022715	\$ -
27	\$ 1,476	\$ 174,922	\$ -	0.018582	\$ -	27	\$ 276	0.018582	\$ -
28	\$ 1,137	\$ 174,922	\$ -	0.016681	\$ -	28	\$ 214	0.016681	\$ -
29	\$ 875	\$ 174,922	\$ -	0.014553	\$ -	29	\$ 165	0.014553	\$ -
30	\$ 674	\$ 174,922	\$ -	0.012548	\$ -	30	\$ 127	0.012548	\$ -
31	\$ 519	\$ 174,922	\$ -	0.010815	\$ -	31	\$ 98	0.010815	\$ -
32	\$ 400	\$ 174,922	\$ -	0.009323	\$ -	32	\$ 75	0.009323	\$ -
33	\$ 306	\$ 174,922	\$ -	0.008037	\$ -	33	\$ 58	0.008037	\$ -
34	\$ 237	\$ 174,922	\$ -	0.006929	\$ -	34	\$ 45	0.006928	\$ -
35	\$ 182	\$ 174,922	\$ -	0.005973	\$ -	35	\$ 34	0.005973	\$ -
36	\$ 140	\$ 174,922	\$ -	0.005149	\$ -	36	\$ 26	0.005149	\$ -
37	\$ 106	\$ 174,922	\$ -	0.004439	\$ -	37	\$ 20	0.004438	\$ -
38	\$ 83	\$ 174,922	\$ -	0.003827	\$ -	38	\$ 18	0.003827	\$ -
39	\$ 64	\$ 174,922	\$ -	0.003299	\$ -	39	\$ 12	0.003299	\$ -
40	\$ 49	\$ 174,922	\$ -	0.002844	\$ -	40	\$ 8	0.002812	\$ -
WORKING INTEREST APPRAISAL					\$ 2,737,515	ROYALTY INTEREST APPRAISAL			

09-04 2017 6376

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)												
		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
DECLINE RATES		WRK INT	\$ 2,204,901				YR1	\$ 584,299	\$ -			
YR 1	58%	ROY INT	\$ 408,621					\$ 192,400	\$ -			
YR 2	28%						YR2	\$ 432,381	\$ -			
YR3+	23%							\$ 87,916	\$ -			
\$ 975,522		TY2017 WORKING INTEREST					TY2017 ROYALTY INTEREST					\$ 192,228
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC			
1	\$ 584,299	\$ 116,880	\$ 467,439	0.928477	\$ 434,008	1	\$ 192,400	0.928477	\$ 122,930			
2	\$ 432,381	\$ 116,880	\$ 315,521	0.800411	\$ 252,547	2	\$ 97,978	0.800411	\$ 76,421			
3	\$ 332,933	\$ 116,880	\$ 216,074	0.690009	\$ 149,093	3	\$ 75,441	0.690009	\$ 52,055			
4	\$ 258,359	\$ 116,880	\$ 139,499	0.594838	\$ 82,979	4	\$ 58,090	0.594838	\$ 34,554			
5	\$ 197,398	\$ 116,880	\$ 80,538	0.512760	\$ 41,298	5	\$ 44,729	0.512760	\$ 22,937			
6	\$ 151,995	\$ 116,880	\$ 35,135	0.442080	\$ 16,532	6	\$ 34,441	0.442080	\$ 15,225			
7	\$ 117,036	\$ 116,880	\$ 178	0.381086	\$ 67	7	\$ 26,520	0.381086	\$ 10,106			
8	\$ 90,116	\$ 116,880	\$ -	0.328522	\$ -	8	\$ 20,420	0.328522	\$ -			
9	\$ 69,391	\$ 116,880	\$ -	0.283209	\$ -	9	\$ 15,724	0.283209	\$ -			
10	\$ 53,431	\$ 116,880	\$ -	0.224148	\$ -	10	\$ 12,107	0.224148	\$ -			
11	\$ 41,142	\$ 116,880	\$ -	0.210470	\$ -	11	\$ 9,323	0.210470	\$ -			
12	\$ 31,679	\$ 116,880	\$ -	0.181440	\$ -	12	\$ 7,178	0.181440	\$ -			
13	\$ 24,393	\$ 116,880	\$ -	0.156414	\$ -	13	\$ 5,527	0.156414	\$ -			
14	\$ 18,783	\$ 116,880	\$ -	0.134840	\$ -	14	\$ 4,266	0.134840	\$ -			
15	\$ 14,463	\$ 116,880	\$ -	0.118241	\$ -	15	\$ 3,277	0.118241	\$ -			
16	\$ 11,138	\$ 116,880	\$ -	0.100208	\$ -	16	\$ 2,523	0.100208	\$ -			
17	\$ 8,575	\$ 116,880	\$ -	0.086388	\$ -	17	\$ 1,943	0.086388	\$ -			
18	\$ 6,603	\$ 116,880	\$ -	0.074471	\$ -	18	\$ 1,496	0.074471	\$ -			
19	\$ 5,084	\$ 116,880	\$ -	0.064199	\$ -	19	\$ 1,152	0.064199	\$ -			
20	\$ 3,915	\$ 116,880	\$ -	0.055344	\$ -	20	\$ 887	0.055344	\$ -			
21	\$ 3,014	\$ 116,880	\$ -	0.047710	\$ -	21	\$ 683	0.047710	\$ -			
22	\$ 2,321	\$ 116,880	\$ -	0.041129	\$ -	22	\$ 528	0.041129	\$ -			
23	\$ 1,787	\$ 116,880	\$ -	0.035458	\$ -	23	\$ 405	0.035458	\$ -			
24	\$ 1,378	\$ 116,880	\$ -	0.030588	\$ -	24	\$ 312	0.030588	\$ -			
25	\$ 1,080	\$ 116,880	\$ -	0.026350	\$ -	25	\$ 240	0.026350	\$ -			
26	\$ 818	\$ 116,880	\$ -	0.022715	\$ -	26	\$ 185	0.022715	\$ -			
27	\$ 628	\$ 116,880	\$ -	0.019582	\$ -	27	\$ 142	0.019582	\$ -			
28	\$ 484	\$ 116,880	\$ -	0.016981	\$ -	28	\$ 110	0.016981	\$ -			
29	\$ 372	\$ 116,880	\$ -	0.014553	\$ -	29	\$ 84	0.014553	\$ -			
30	\$ 287	\$ 116,880	\$ -	0.012546	\$ -	30	\$ 65	0.012546	\$ -			
31	\$ 221	\$ 116,880	\$ -	0.010815	\$ -	31	\$ 50	0.010815	\$ -			
32	\$ 170	\$ 116,880	\$ -	0.009323	\$ -	32	\$ 39	0.009323	\$ -			
33	\$ 131	\$ 116,880	\$ -	0.008037	\$ -	33	\$ 30	0.008037	\$ -			
34	\$ 101	\$ 116,880	\$ -	0.006929	\$ -	34	\$ 23	0.006929	\$ -			
35	\$ 78	\$ 116,880	\$ -	0.005973	\$ -	35	\$ 16	0.005973	\$ -			
36	\$ 60	\$ 116,880	\$ -	0.005149	\$ -	36	\$ 14	0.005149	\$ -			
37	\$ 46	\$ 116,880	\$ -	0.004439	\$ -	37	\$ 10	0.004439	\$ -			
38	\$ 35	\$ 116,880	\$ -	0.003827	\$ -	38	\$ 8	0.003827	\$ -			
39	\$ 27	\$ 116,880	\$ -	0.003299	\$ -	39	\$ 6	0.003299	\$ -			
40	\$ 21	\$ 116,880	\$ -	0.002844	\$ -	40	\$ 5	0.003812	\$ -			
WORKING INTEREST APPRAISAL					\$ 975,522	ROYALTY INTEREST APPRAISAL					\$ 192,228	

09-0420176387

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (YEAR 1)											
DECLINE RATES		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
YR 1	50%	WRK INT	\$	4,545,188	\$	4,713	YR1	\$	1,104,365	\$	1,200
YR 2	28%	ROY INT	\$	851,032	\$	302	YR2	\$	228,055	\$	228
YR3+	23%							\$	881,305	\$	550
								\$	187,280	\$	175
\$ 2,305,170		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 586,125	
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC		
1	\$ 1,205,728	\$ 174,823	\$ 1,030,902	0.828477	\$ 957,188	1	\$ 226,290	0.828477	\$ 210,105		
2	\$ 892,237	\$ 174,823	\$ 717,414	0.800411	\$ 674,228	2	\$ 187,454	0.800411	\$ 134,032		
3	\$ 687,022	\$ 174,823	\$ 512,199	0.890009	\$ 353,422	3	\$ 128,940	0.890008	\$ 88,970		
4	\$ 529,007	\$ 174,823	\$ 354,184	0.594838	\$ 210,681	4	\$ 99,284	0.594838	\$ 59,058		
5	\$ 407,338	\$ 174,823	\$ 232,512	0.512789	\$ 119,230	5	\$ 78,449	0.512789	\$ 39,202		
6	\$ 313,648	\$ 174,823	\$ 138,825	0.442080	\$ 81,389	6	\$ 58,885	0.442080	\$ 28,022		
7	\$ 241,508	\$ 174,823	\$ 66,686	0.381086	\$ 25,413	7	\$ 45,328	0.381086	\$ 17,273		
8	\$ 185,982	\$ 174,823	\$ 11,138	0.328522	\$ 3,859	8	\$ 34,801	0.328522	\$ 11,468		
9	\$ 143,181	\$ 174,823	\$ -	0.283209	\$ -	9	\$ 26,874	0.283209	\$ -		
10	\$ 110,257	\$ 174,823	\$ -	0.224148	\$ -	10	\$ 20,883	0.224148	\$ -		
11	\$ 84,898	\$ 174,823	\$ -	0.210470	\$ -	11	\$ 15,934	0.210470	\$ -		
12	\$ 65,371	\$ 174,823	\$ -	0.181440	\$ -	12	\$ 12,288	0.181440	\$ -		
13	\$ 50,336	\$ 174,823	\$ -	0.158414	\$ -	13	\$ 9,447	0.158414	\$ -		
14	\$ 38,759	\$ 174,823	\$ -	0.134840	\$ -	14	\$ 7,274	0.134840	\$ -		
15	\$ 29,844	\$ 174,823	\$ -	0.118241	\$ -	15	\$ 5,801	0.118241	\$ -		
16	\$ 22,980	\$ 174,823	\$ -	0.100208	\$ -	16	\$ 4,313	0.100208	\$ -		
17	\$ 17,895	\$ 174,823	\$ -	0.088388	\$ -	17	\$ 3,321	0.088388	\$ -		
18	\$ 13,825	\$ 174,823	\$ -	0.074471	\$ -	18	\$ 2,557	0.074471	\$ -		
19	\$ 10,481	\$ 174,823	\$ -	0.064188	\$ -	19	\$ 1,988	0.064188	\$ -		
20	\$ 8,078	\$ 174,823	\$ -	0.055344	\$ -	20	\$ 1,516	0.055344	\$ -		
21	\$ 6,220	\$ 174,823	\$ -	0.047710	\$ -	21	\$ 1,187	0.047710	\$ -		
22	\$ 4,790	\$ 174,823	\$ -	0.041129	\$ -	22	\$ 899	0.041129	\$ -		
23	\$ 3,868	\$ 174,823	\$ -	0.035458	\$ -	23	\$ 692	0.035458	\$ -		
24	\$ 2,840	\$ 174,823	\$ -	0.030586	\$ -	24	\$ 533	0.030586	\$ -		
25	\$ 2,187	\$ 174,823	\$ -	0.026350	\$ -	25	\$ 410	0.026350	\$ -		
26	\$ 1,884	\$ 174,823	\$ -	0.022715	\$ -	26	\$ 318	0.022715	\$ -		
27	\$ 1,298	\$ 174,823	\$ -	0.019582	\$ -	27	\$ 243	0.019582	\$ -		
28	\$ 998	\$ 174,823	\$ -	0.016881	\$ -	28	\$ 187	0.016881	\$ -		
29	\$ 769	\$ 174,823	\$ -	0.014553	\$ -	29	\$ 144	0.014553	\$ -		
30	\$ 592	\$ 174,823	\$ -	0.012546	\$ -	30	\$ 111	0.012546	\$ -		
31	\$ 458	\$ 174,823	\$ -	0.010815	\$ -	31	\$ 88	0.010815	\$ -		
32	\$ 351	\$ 174,823	\$ -	0.009323	\$ -	32	\$ 68	0.009323	\$ -		
33	\$ 270	\$ 174,823	\$ -	0.008037	\$ -	33	\$ 51	0.008037	\$ -		
34	\$ 208	\$ 174,823	\$ -	0.006929	\$ -	34	\$ 39	0.006929	\$ -		
35	\$ 180	\$ 174,823	\$ -	0.005973	\$ -	35	\$ 30	0.005973	\$ -		
36	\$ 123	\$ 174,823	\$ -	0.005148	\$ -	36	\$ 23	0.005148	\$ -		
37	\$ 95	\$ 174,823	\$ -	0.004439	\$ -	37	\$ 18	0.004439	\$ -		
38	\$ 73	\$ 174,823	\$ -	0.003827	\$ -	38	\$ 14	0.003827	\$ -		
39	\$ 58	\$ 174,823	\$ -	0.003299	\$ -	39	\$ 11	0.003299	\$ -		
40	\$ 43	\$ 174,823	\$ -	0.002844	\$ -	40	\$ 8	0.003012	\$ -		
WORKING INTEREST APPRAISAL					\$ 2,305,170	ROYALTY INTEREST APPRAISAL					\$ 586,125

042017 6469

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)													
		2016		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME			
DECLINE RATES		WRK INT		\$ 1,737,492		\$ 2,462		YR1 \$ 190,438		\$ 764			
YR 1	59%	ROY INT		\$ 731,523		\$ 858		YR2 \$ 191,230		\$ 147			
YR 2	28%							YR3 \$ 132,922		\$ 588			
YR 3	23%							\$ 147,510		\$ 168			
\$ 1,756,520				TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST				\$ 486,002	
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC				
1	\$ 981,199	\$ 174,870	\$ 818,330	0.928477	\$ 757,943	1	\$ 191,377	0.928477	\$ 177,890				
2	\$ 733,487	\$ 174,870	\$ 568,618	0.800411	\$ 447,124	2	\$ 141,819	0.800411	\$ 113,354				
3	\$ 584,786	\$ 174,870	\$ 389,918	0.690089	\$ 269,045	3	\$ 109,047	0.690089	\$ 76,243				
4	\$ 434,885	\$ 174,870	\$ 280,015	0.594838	\$ 154,888	4	\$ 83,988	0.594838	\$ 49,848				
5	\$ 334,881	\$ 174,870	\$ 159,992	0.512788	\$ 82,042	5	\$ 64,854	0.512789	\$ 33,154				
6	\$ 257,843	\$ 174,870	\$ 82,974	0.442060	\$ 38,879	6	\$ 49,783	0.442080	\$ 22,007				
7	\$ 198,539	\$ 174,870	\$ 23,870	0.381088	\$ 9,020	7	\$ 38,333	0.381088	\$ 14,608				
8	\$ 152,875	\$ 174,870	\$ -	0.328522	\$ -	8	\$ 29,517	0.328522	\$ -				
9	\$ 117,714	\$ 174,870	\$ -	0.283209	\$ -	9	\$ 22,728	0.283209	\$ -				
10	\$ 90,840	\$ 174,870	\$ -	0.224148	\$ -	10	\$ 17,500	0.224148	\$ -				
11	\$ 89,793	\$ 174,870	\$ -	0.210470	\$ -	11	\$ 13,475	0.210470	\$ -				
12	\$ 53,740	\$ 174,870	\$ -	0.181440	\$ -	12	\$ 10,378	0.181440	\$ -				
13	\$ 41,380	\$ 174,870	\$ -	0.158414	\$ -	13	\$ 7,990	0.158414	\$ -				
14	\$ 31,883	\$ 174,870	\$ -	0.134840	\$ -	14	\$ 6,152	0.134840	\$ -				
15	\$ 24,534	\$ 174,870	\$ -	0.118241	\$ -	15	\$ 4,737	0.118241	\$ -				
16	\$ 18,891	\$ 174,870	\$ -	0.100208	\$ -	16	\$ 3,847	0.100208	\$ -				
17	\$ 14,548	\$ 174,870	\$ -	0.088388	\$ -	17	\$ 2,809	0.088388	\$ -				
18	\$ 11,201	\$ 174,870	\$ -	0.074471	\$ -	18	\$ 2,163	0.074471	\$ -				
19	\$ 8,825	\$ 174,870	\$ -	0.064199	\$ -	19	\$ 1,865	0.064199	\$ -				
20	\$ 8,841	\$ 174,870	\$ -	0.055344	\$ -	20	\$ 1,282	0.055344	\$ -				
21	\$ 5,113	\$ 174,870	\$ -	0.047710	\$ -	21	\$ 987	0.047710	\$ -				
22	\$ 3,937	\$ 174,870	\$ -	0.041129	\$ -	22	\$ 760	0.041129	\$ -				
23	\$ 3,032	\$ 174,870	\$ -	0.035458	\$ -	23	\$ 585	0.035458	\$ -				
24	\$ 2,334	\$ 174,870	\$ -	0.030588	\$ -	24	\$ 451	0.030588	\$ -				
25	\$ 1,798	\$ 174,870	\$ -	0.028350	\$ -	25	\$ 347	0.028350	\$ -				
26	\$ 1,384	\$ 174,870	\$ -	0.022715	\$ -	26	\$ 287	0.022715	\$ -				
27	\$ 1,086	\$ 174,870	\$ -	0.019582	\$ -	27	\$ 208	0.019582	\$ -				
28	\$ 821	\$ 174,870	\$ -	0.018881	\$ -	28	\$ 158	0.018881	\$ -				
29	\$ 832	\$ 174,870	\$ -	0.014553	\$ -	29	\$ 122	0.014553	\$ -				
30	\$ 487	\$ 174,870	\$ -	0.012548	\$ -	30	\$ 94	0.012548	\$ -				
31	\$ 375	\$ 174,870	\$ -	0.010815	\$ -	31	\$ 72	0.010815	\$ -				
32	\$ 288	\$ 174,870	\$ -	0.009323	\$ -	32	\$ 58	0.009323	\$ -				
33	\$ 222	\$ 174,870	\$ -	0.008037	\$ -	33	\$ 43	0.008037	\$ -				
34	\$ 171	\$ 174,870	\$ -	0.006929	\$ -	34	\$ 33	0.006929	\$ -				
35	\$ 132	\$ 174,870	\$ -	0.005973	\$ -	35	\$ 25	0.005973	\$ -				
36	\$ 101	\$ 174,870	\$ -	0.005149	\$ -	36	\$ 20	0.005149	\$ -				
37	\$ 78	\$ 174,870	\$ -	0.004439	\$ -	37	\$ 15	0.004439	\$ -				
38	\$ 60	\$ 174,870	\$ -	0.003827	\$ -	38	\$ 12	0.003827	\$ -				
39	\$ 48	\$ 174,870	\$ -	0.003299	\$ -	39	\$ 9	0.003299	\$ -				
40	\$ 38	\$ 174,870	\$ -	0.002844	\$ -	40	\$ 7	0.003812	\$ -				
WORKING INTEREST APPRAISAL				\$ 1,756,520		ROYALTY INTEREST APPRAISAL				\$ 486,002			

09-0420176470

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)									
2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME	
DECLINE RATES		WRK INT	\$ 1,442,210	\$ 1,445	YR1	\$ 1,177,186	\$ 483		
YR 1	50%	ROY INT	\$ 837,880	\$ 279		\$ 227,268	\$ 74		
YR 2	20%				YR2	\$ 373,719	\$ 289		
YR3+	23%					\$ 188,182	\$ 65		
\$ 2,231,675		TY2017 WORKING INTEREST				TY2017 ROYALTY INTEREST			
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC
1	\$ 1,177,571	\$ 174,945	\$ 1,002,626	0.928477	\$ 930,915	1	\$ 227,382	0.928477	\$ 211,100
2	\$ 871,403	\$ 174,945	\$ 696,458	0.800411	\$ 557,452	2	\$ 186,248	0.800411	\$ 134,867
3	\$ 670,980	\$ 174,945	\$ 496,035	0.690009	\$ 342,269	3	\$ 129,551	0.690009	\$ 89,391
4	\$ 518,055	\$ 174,945	\$ 343,110	0.564836	\$ 203,281	4	\$ 99,754	0.564836	\$ 59,337
5	\$ 397,824	\$ 174,945	\$ 222,879	0.512789	\$ 114,290	5	\$ 78,811	0.512789	\$ 39,388
6	\$ 306,324	\$ 174,945	\$ 131,380	0.442080	\$ 58,078	6	\$ 59,144	0.442080	\$ 28,145
7	\$ 235,670	\$ 174,945	\$ 60,725	0.391088	\$ 23,218	7	\$ 45,541	0.391088	\$ 17,355
8	\$ 181,820	\$ 174,945	\$ 6,875	0.328522	\$ 2,193	8	\$ 35,067	0.328522	\$ 11,520
9	\$ 139,847	\$ 174,945	\$ -	0.283209	\$ -	9	\$ 27,001	0.283209	\$ -
10	\$ 107,682	\$ 174,945	\$ -	0.224146	\$ -	10	\$ 20,791	0.224146	\$ -
11	\$ 82,915	\$ 174,945	\$ -	0.210470	\$ -	11	\$ 18,009	0.210470	\$ -
12	\$ 63,845	\$ 174,945	\$ -	0.181440	\$ -	12	\$ 12,327	0.181440	\$ -
13	\$ 49,181	\$ 174,945	\$ -	0.158414	\$ -	13	\$ 9,492	0.158414	\$ -
14	\$ 37,854	\$ 174,945	\$ -	0.134840	\$ -	14	\$ 7,309	0.134840	\$ -
15	\$ 29,147	\$ 174,945	\$ -	0.118241	\$ -	15	\$ 5,828	0.118241	\$ -
16	\$ 22,443	\$ 174,945	\$ -	0.100208	\$ -	16	\$ 4,333	0.100208	\$ -
17	\$ 17,281	\$ 174,945	\$ -	0.086388	\$ -	17	\$ 3,337	0.086388	\$ -
18	\$ 13,307	\$ 174,945	\$ -	0.074471	\$ -	18	\$ 2,589	0.074471	\$ -
19	\$ 10,248	\$ 174,945	\$ -	0.064189	\$ -	19	\$ 1,978	0.064189	\$ -
20	\$ 7,890	\$ 174,945	\$ -	0.055344	\$ -	20	\$ 1,523	0.055344	\$ -
21	\$ 6,075	\$ 174,945	\$ -	0.047710	\$ -	21	\$ 1,173	0.047710	\$ -
22	\$ 4,678	\$ 174,945	\$ -	0.041129	\$ -	22	\$ 903	0.041129	\$ -
23	\$ 3,602	\$ 174,945	\$ -	0.035458	\$ -	23	\$ 695	0.035458	\$ -
24	\$ 2,773	\$ 174,945	\$ -	0.030586	\$ -	24	\$ 535	0.030586	\$ -
25	\$ 2,138	\$ 174,945	\$ -	0.026350	\$ -	25	\$ 412	0.026350	\$ -
26	\$ 1,644	\$ 174,945	\$ -	0.022715	\$ -	26	\$ 317	0.022715	\$ -
27	\$ 1,268	\$ 174,945	\$ -	0.019582	\$ -	27	\$ 244	0.019582	\$ -
28	\$ 975	\$ 174,945	\$ -	0.016881	\$ -	28	\$ 188	0.016881	\$ -
29	\$ 751	\$ 174,945	\$ -	0.014553	\$ -	29	\$ 145	0.014553	\$ -
30	\$ 578	\$ 174,945	\$ -	0.012546	\$ -	30	\$ 112	0.012546	\$ -
31	\$ 445	\$ 174,945	\$ -	0.010816	\$ -	31	\$ 88	0.010816	\$ -
32	\$ 343	\$ 174,945	\$ -	0.009323	\$ -	32	\$ 68	0.009323	\$ -
33	\$ 264	\$ 174,945	\$ -	0.008037	\$ -	33	\$ 51	0.008037	\$ -
34	\$ 203	\$ 174,945	\$ -	0.006929	\$ -	34	\$ 39	0.006929	\$ -
35	\$ 156	\$ 174,945	\$ -	0.005973	\$ -	35	\$ 30	0.005973	\$ -
36	\$ 120	\$ 174,945	\$ -	0.005149	\$ -	36	\$ 23	0.005149	\$ -
37	\$ 93	\$ 174,945	\$ -	0.004439	\$ -	37	\$ 18	0.004439	\$ -
38	\$ 71	\$ 174,945	\$ -	0.003827	\$ -	38	\$ 14	0.003827	\$ -
39	\$ 55	\$ 174,945	\$ -	0.003299	\$ -	39	\$ 11	0.003299	\$ -
40	\$ 42	\$ 174,945	\$ -	0.002844	\$ -	40	\$ 8	0.002812	\$ -
WORKING INTEREST APPRAISAL					\$ 2,231,675	ROYALTY INTEREST APPRAISAL			

09-0420176471

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 183

ACCOUNT:0500520003 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DOWNES 1 (11209.1)

STATUS:S API#:01713 DATE:12/11/1973 DAYS:365 BBLs: 0.000 MCPS: 1710 RCPTS: OWI: GWI:

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.360 0.130 WELLLIFE:99 EXPENSE:

RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99

SETTLED YEARS:

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT		GROSS	NET	DISCOUNT	GROSS	DISCOUNT	
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME FACTOR	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME FACTOR
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL: -----

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 184

FEB 15, 2017
01:26 PM

ACCOUNT: 0500520007

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: POPE 2 (11245.1)

STATUS: A API#: 01708

DATE: 01/01/1972 DAYS: 365 BBLs: 0.000 MCFS: 103 RCPTS: 250 GWI: 0 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.360

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 44

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
TOTAL:			-----			-----			-----		
EXPENSE:			0								

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 185

ACCOUNT: 0500520010

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: SECKMAN 2 (11260.1)

STATUS: A API#: 01752

DATE: 07/06/1973 DAYS: 365 BBLS: 0.000 MCPS: 188 RCPTS: 3089 GWI: 2510 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 43

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,021	1,111	1,032	466	433	0.928						
2	1,758	849	679	406	325	0.800						
3	1,529	620	428	353	243	0.690						
4	1,331	421	251	307	183	0.595						
5	1,158	248	127	267	137	0.513						
6	1,007	98	43	232	103	0.442						
7	876	0	0	202	0	0.381						

TOTAL:

2,560 1,423

EXPENSE: 909

909

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 186

PER 15, 2017
01:26 PM

ACCOUNT: 0500520015

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: VINCENT 1 (11272.1)

STATUS: A API#: 01660

DATE: 01/08/1973 DAYS: 365 BBLs: 0.000 MCFS: 1551 RCPTS: 3007 GWI: 2455 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 43

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	1,976	1,087	1,009	444	413	0.928						
2	1,719	830	664	387	309	0.800						
3	1,496	607	419	336	232	0.690						
4	1,301	412	245	293	174	0.595						
5	1,132	243	125	255	131	0.513						
6	985	96	42	221	98	0.442						
7	857	0	0	193	0	0.381						

TOTAL:

2,504

1,357

EXPENSE: 889

889

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 187

ACCOUNT:0500875002 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DUDLEY 1 (112111.1)
STATUS:A API#:03143 DATE:10/20/1982 DAYS:365 BELS: 0.000 MCFS: 2843 RCPTS: 5929 GWI: 4818 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE:16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	3,951	2,018	2,173	911	846	0.928						
2	3,477	1,360	1,699	802	642	0.800						
3	3,059	884	1,282	705	487	0.690						
4	2,692	544	914	621	369	0.595						
5	2,369	303	591	546	280	0.513						
6	2,085	136	307	481	213	0.442						
7	1,835	22	57	423	161	0.381						
8	1,615	0	0	372	0	0.329						

TOTAL: 5,266 2,998

EXPENSE: 1778 1778

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 188

FEB 15, 2017
01:26 PM

ACCOUNT:0500875003

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:ESTLACK B1 (11213.1)

STATUS:A API#:03125

DATE:09/29/1982 DAYS:365 BELLS: 0.000 MCPS: 2024 RCPTS: 5279 GWI: 4757 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	3,901	1,992	2,145	428	397	0.928						
2	3,433	1,343	1,677	377	301	0.800						
3	3,021	873	1,265	331	229	0.690						
4	2,658	537	903	292	174	0.595						
5	2,339	299	584	257	132	0.513						
6	2,059	134	303	226	100	0.442						
7	1,812	21	56	199	76	0.381						
8	1,594	0	0	175	0	0.329						
TOTAL:		5,200			1,408							
EXPENSE:	1755			1755								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 189

ACCOUNT:0500875004 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:ESTLACK S1 (11215.1)
STATUS:A API#:03126 DATE:08/05/1982 DAYS:365 BALS: 0.000 MCFS: 927 RCPTS: 2462 GWI: 2181 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE:16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME	GROSS	DISCOUNT	NET	GROSS	DISCOUNT	INCOME
	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
1	1,788	913	984	230	214	0.928						
2	1,574	616	769	203	162	0.800						
3	1,385	400	580	178	123	0.690						
4	1,219	246	414	157	93	0.595						
5	1,073	137	268	138	71	0.513						
6	944	61	139	122	54	0.442						
7	831	10	26	107	41	0.381						
8	731	0	0	94	0	0.329						
TOTAL:		2,384				758						
EXPENSE:	805			805								

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 190

ACCOUNT: 0500875005

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:JOHNSTON K1 (11236.1)

STATUS: A API#: 03157

DATE:11/03/1982 DAYS:365 BEELS: 0.000 MCFS: 2299 RCPTS: 5754 GWT: 4826 OWI:

SYSTEM RATES:

CAP RATE:	16.000	DECLINE RATE:	0.310	0.170	0.120	WFL1175.99
EVIDENCE:						

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	3,957	2,177	2,021	761	707	0.928						
2	3,482	1,702	1,362	670	536	0.800						
3	3,065	1,284	886	589	407	0.690						
4	2,697	916	545	519	308	0.595						
5	2,373	592	304	456	234	0.513						
6	2,088	308	136	402	178	0.442						
7	1,838	57	22	353	135	0.381						
8	1,617	0	0	311	0	0.329						
TOTAL:			5,275		2,504							
EXPENSE:	1781		1781	1781								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 191

ACCOUNT:0500875006 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:WILSON 1 (11277.1)
STATUS:A API#:03193 DATE:09/01/1984 DAYS:365 BBLs: 0.000 MCPS: 1470 RCPTS: 3817 GWI: 3201 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: 0.45 0.45 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.45 0.45 0.45 5000 5000 5000
SETTLED YEARS: 32

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,625	1,444	1,340	505	469	0.928						
2	2,310	1,129	903	445	356	0.800						
3	2,033	851	588	391	270	0.690						
4	1,789	608	361	344	205	0.595						
5	1,574	393	201	303	155	0.513						
6	1,385	204	90	267	118	0.442						
7	1,219	38	14	235	89	0.381						
8	1,073	0	0	206	0	0.329						

TOTAL: 3,499 1,662

EXPENSE: 1181 1181 1181

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 192

FEB 15, 2017
01:26 PM

ACCOUNT:0510003178

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:WOLFE 1 (11278.1)

STATUS:A API#:03178

DATE:11/15/1982 DAYS:365 BHLS: 0.000 MCPS: 1849 RCPTS: 5986 GWI: 5020 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.390 0.260 0.080 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	4,418	2,430	2,256	850	789	0.928						
2	4,064	2,076	1,662	782	626	0.800						
3	3,739	1,751	1,208	720	496	0.690						
4	3,440	1,452	864	662	394	0.595						
5	3,165	1,177	603	609	312	0.513						
6	2,912	924	408	560	248	0.442						
7	2,679	691	263	515	196	0.381						
8	2,464	476	157	474	156	0.329						
9	2,267	279	79	436	124	0.283						
10	2,086	98	24	401	98	0.244						
11	1,919	0	0	369	0	0.210						
TOTAL:			7,524			3,439						
EXPENSE:	1988			1988								

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

MR105: 193

ACCOUNT: 0514144704 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: SADLER 5 (11258.1)
STATUS: A API#: 04704 DATE: 10/01/2003 DAYS: 365 BBLs: 0.000 MCFS: 4439 RCPTS: 8843 GWI: 7561 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 13

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	6,200	3,410	3,166	1,051	976	0.928		
2	5,456	2,666	2,134	925	740	0.800		
3	4,801	2,011	1,388	814	562	0.690		
4	4,225	1,435	854	716	426	0.595		
5	3,718	928	476	630	323	0.513		
6	3,272	482	213	555	245	0.442		
7	2,879	89	34	488	186	0.381		
8	2,534	0	0	430	0	0.329		
TOTAL:			8,265				3,459	
EXPENSE:	2790		2790				2790	

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 194

FEB 15, 2017
01:26 PM

ACCOUNT: 0514144705 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: POPE 4 (11247.1)
STATUS: A API#: 04705 DATE: 12/01/2003 DAYS: 365 BELS: 0.000 MCFS: 1806 RCPTS: 4614 GWI: 3738 OWI: 0
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.390 0.220 0.100 WELLLIFE: 99 EXPENSE: 0.45 5000 5000
RATES USED: CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 13

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,177	1,748	1,623	745	691	0.928						
2	2,860	1,430	1,144	670	536	0.800						
3	2,574	1,144	1,789	603	416	0.690						
4	2,316	886	527	543	323	0.595						
5	2,085	655	336	489	251	0.513						
6	1,876	446	197	440	194	0.442						
7	1,689	259	99	396	151	0.381						
8	1,520	90	30	356	117	0.329						
9	1,368	0	0	321	0	0.283						
TOTAL:			4,745			2,679						
EXPENSE:	1430		1430	1430								

'DODDRIDGE', COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 195

ACCOUNT:0514144743
STATUS:A API#:04743
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.310
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 13

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:BOGGESS 3 (1118S.1)

DATE:09/01/2003 DAYS:365 BELS: 0.000 MCPS: 1640 RCPTS: 5179 GWI: 4428 OWI: 0

EXPENSE: 5000 5000 5000

EXPENSE: 5000 5000 5000

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	GROSS INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME
1	3,631	1,997	616	572	0.928			
2	3,195	1,561	542	434	0.800			
3	2,812	1,178	477	329	0.690			
4	2,474	840	420	250	0.595			
5	2,177	544	369	189	0.513			
6	1,916	282	325	144	0.442			
7	1,686	52	286	109	0.381			
8	1,484	0	252	0	0.329			
TOTAL:		4,840		2,026				
EXPENSE:	1634		1634					

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 196

FEB 15, 2017
01:26 PM

ACCOUNT:0515154829

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HARBERT 1 (11224.1)

STATUS:A API#:04829

DATE:09/01/2004 DAYS:365 BELLS: 0.000 MCFS: 3553 RCPTS: 7857 GWI: 6610 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 12

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	5,420	2,981	2,768	1,023	949	0.928						
2	4,770	2,331	1,866	900	720	0.800						
3	4,197	1,758	1,213	792	546	0.690						
4	3,694	1,255	746	697	415	0.595						
5	3,250	811	416	613	314	0.513						
6	2,860	421	186	540	239	0.442						
7	2,517	78	30	475	181	0.381						
8	2,215	0	0	418	0	0.329						

TOTAL:

7,225 3,364

EXPENSE: 2439

2439

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 197

ACCOUNT: 0515154831 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: VINCENT 2 (11273.1)
STATUS: A API#: 04831 DATE: 10/01/2004 DAYS: 365 BBLs: 0.000 MCFS: 2377 RCPTS: 6246 GWI: 4829 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.340 0.170 0.140 WELL LIFE: 99 EXPENSE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: WELL LIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 12

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	3,815	2,098	1,948	1,119	1,039	0.928						
2	3,281	1,564	1,252	963	771	0.800						
3	2,822	1,105	762	828	571	0.690						
4	2,426	710	422	712	424	0.595						
5	2,087	370	190	612	314	0.513						
6	1,795	78	34	527	233	0.442						
7	1,543	0	0	453	0	0.381						
TOTAL:			4,609			3,352						
EXPENSE:	1717		1717	1717		1717						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 198

FEB 15, 2017
01:26 PM

ACCOUNT: 0515154832

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: SECKMAN 1 (11259.1)

STATUS: A API#: 04832

DATE: 10/01/2004 DAYS: 365

BBLs: 0.000

MCFS: 120

RCPTS: 1936

GWI: 1510

OWI: 0

SYSTEM RATES:

CAP RATE: 16.000

DECLINE RATE: 0.310

WELL LIFE: 99

EXPENSE: 0.45

5000

5000

RATES USED:

CAP RATE: 16.000

DECLINE RATE: 0.45

WELL LIFE: 99

EXPENSE: 0.45

5000

5000

SETTLED YEARS: 12

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,238	681	632	349	324	0.928						
2	1,090	532	426	307	246	0.800						
3	959	402	277	271	187	0.690						
4	844	287	170	238	142	0.595						
5	743	185	95	209	107	0.513						
6	653	96	43	184	81	0.442						
7	575	18	7	162	62	0.381						
8	506	0	0	143	0	0.329						

TOTAL:

1,650

1,149

EXPENSE: 557

557

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 199

ACCOUNT:0515154843 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:BOGGESS 1 (11183.1)
STATUS:A API#:04843 DATE:09/01/2004 DAYS:365 BBLs: 0.000 MCFS: 2830 RCPTS: 7722 GWI: 6023 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE:16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 12

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	4,939	2,716	2,522	1,393	1,294	0.928						
2	4,346	2,124	1,700	1,226	981	0.800						
3	3,825	1,602	1,106	1,079	744	0.690						
4	3,366	1,143	680	949	565	0.595						
5	2,962	739	379	835	428	0.513						
6	2,606	384	170	735	325	0.442						
7	2,294	71	27	647	247	0.381						
8	2,018	0	0	569	0	0.329						
TOTAL:			6,583		4,584							
EXPENSE:	2222		2222	2222								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 200

ACCOUNT:0515154844

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:POPE 3 (11246.1)

STATUS:S API#:04844

DATE:09/01/2004 DAYS:365 BHLS: 0.000 MCPS: 2299 RCPTS: GWI: OWI:

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE:

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99

SETTLED YEARS:

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL:

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 201

ACCOUNT: 0515185420 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: J BUNNEL 1 (10786.1)
STATUS: A API#: 05420 DATE: 09/01/2007 DAYS: 365 BBLs: 0.000 MCPS: 2585 RCPTS: 11972 GWI: 9938 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 9

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS	DISCOUNT	GROSS	DISCOUNT	GROSS	DISCOUNT	GROSS	DISCOUNT
	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
1	8,149	4,482	1,668	1,549	0.928			
2	7,171	3,504	1,468	1,175	0.800			
3	6,311	2,644	1,292	891	0.690			
4	5,553	1,886	1,137	676	0.595			
5	4,887	1,220	1,000	513	0.513			
6	4,301	633	880	389	0.442			
7	3,785	117	775	295	0.381			
8	3,330	0	682	0	0.329			

TOTAL: 10,863 5,488

EXPENSE: 3667 3667

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 202

ACCOUNT: 0516164931

RESOURCE:G5 OWNER:ANTERO RESOURCES CORPORATI LOCATION:BOYCE 4 (11188.1)

STATUS: A API#: 04931

DATE:09/19/2005 DAYS:365 BBLs: 0.000 MCFS: 2420 RCPT5: 5486 GWI: 4389 GWI: 0

SYSTEM RATES:

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
84

CAP RATE:

EXPENSE.

RATES USED:

CAP RATE:

DEPENDENCE.

SETTLED YEARS: 11

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST
	GROSS INCOME	NET DISCOUNT	GROSS INCOME	DISCOUNT FACTOR	GROSS INCOME	NET DISCOUNT	GROSS INCOME
	-----	-----	-----	-----	-----	-----	-----
1	3,599	1,979	900	835	0.928		
2	3,167	1,239	792	634	0.800		
3	2,787	1,168	697	481	0.690		
4	2,453	833	613	365	0.595		
5	2,158	539	539	277	0.513		
6	1,899	280	475	210	0.442		
7	1,671	52	418	159	0.381		
8	1,471	0	368	0	0.329		
TOTAL:		4,797		2,960			
EXPENSE:	1620	1620		1620			

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 203

ACCOUNT: 0516164951 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: VINCENT 3 (11274.1)
 STATUS: A API#: 04951 DATE: 10/01/2005 DAYS: 365 BBLs: 0.000 MCPS: 2634 RCPTS: 4688 GWI: 3751 OWI: 0
 SYSTEM RATES: 16.000 DECLINE RATE: 0.350 0.200 0.100 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
 CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE:
 SETTLED YEARS: 11

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	3,188	1,754	796	0.928	739	0.928		
2	2,870	1,435	717	0.800	574	0.800		
3	2,583	1,148	645	0.690	445	0.690		
4	2,324	890	581	0.595	345	0.595		
5	2,092	657	523	0.513	268	0.513		
6	1,883	448	470	0.442	208	0.442		
7	1,694	260	423	0.381	161	0.381		
8	1,525	90	381	0.329	125	0.329		
9	1,372	0	343	0.283	0	0.283		
TOTAL:		4,761						
EXPENSE:	1435		1435					

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 204

FEB 15, 2017
01:26 PM

ACCOUNT:0516164953 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:SADLER 4 (11257.1)
STATUS:A API#:04953 DATE:09/20/2005 DAYS:365 BBLs: 0.000 MCFS: 2689 RCPTS: 5832 GWI: 4804 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 11

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,939	2,167	2,012	843	783	0.928						
2	3,467	1,694	1,356	742	594	0.800						
3	3,051	1,278	882	653	450	0.690						
4	2,685	912	542	574	342	0.595						
5	2,362	590	302	506	259	0.513						
6	2,079	306	135	445	197	0.442						
7	1,829	57	22	391	149	0.381						
8	1,610	0	0	344	0	0.329						
TOTAL:			5,251			2,774						

EXPENSE: 1773 1773

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 205

ACCOUNT: 0517171714 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: DOWNES 2 (11210.1)
STATUS: A API#: 01714 DATE: 01/01/1972 DAYS: 365 BBLs: 0.000 MCFS: 1113 RCPTS: 2615 GWI: 2288 OWI: 0
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED: CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 44

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,842	1,013	941	263	244	0.928						
2	1,502	774	619	229	183	0.800						
3	1,394	565	390	199	137	0.690						
4	1,213	384	228	173	103	0.595						
5	1,055	226	116	151	77	0.513						
6	918	89	39	131	58	0.442						
7	799	0	0	114	0	0.381						

TOTAL: 2,334 804

EXPENSE: 829 829

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 206

ACCOUNT:0517174932

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:BOYCE 5 (11189.1)

STATUS:A API#:04932

DATE:09/07/2005 DAYS:365 BELS: 0.000 MCFS: 1930 RCPTS: 3560 GWI: 2849 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 11

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	
1	2,336	1,285	1,193	583	541	0.928						
2	2,056	1,005	804	513	411	0.800						
3	1,809	758	523	451	312	0.690						
4	1,592	541	322	397	236	0.595						
5	1,401	350	179	350	179	0.513						
6	1,233	182	80	308	136	0.442						
7	1,085	34	13	271	103	0.381						
8	955	0	0	238	0	0.329						
TOTAL:			3,114			1,918						

EXPENSE: 1051

1051

1051

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 207

ACCOUNT: 0517174952 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: VINCENT 4 (11275.1)
STATUS: A API#: 04952 DATE: 09/22/2005 DAYS: 365 BBLs: 0.000 MCFS: 2387 RCPTS: 5008 GWI: 4007 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE:
SETTLED YEARS: 11

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,286	1,807	1,678	821	762	0.928						
2	2,891	1,413	1,131	722	578	0.800						
3	2,544	1,066	735	636	439	0.690						
4	2,239	761	452	559	333	0.595						
5	1,970	492	252	492	252	0.513						
6	1,734	255	113	433	191	0.442						
7	1,526	47	18	381	145	0.381						
8	1,343	0	0	335	0	0.329						
TOTAL:			4,380		2,701							
EXPENSE:	1479		1479	1479								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 209

ACCOUNT:0518185004

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:MCQUAID 1 (10809.1)

STATUS:S API#:05004

DATE:09/01/2007 DAYS:365 BBLs: 0.000 MCFS: 11164 RCPTS: OWI:

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.120 WELLLIFE:99 EXPENSE:

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99

SETTLED YEARS:

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
TOTAL:			-----			-----			-----		

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 210

ACCOUNT:0518185322

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:BOGGESS 2 (11184.1)

STATUS:Z API#:05322

DATE:09/08/2007 DAYS:365 BBLs: 0.000 MCFS: 2625 RCPTS: 7419 GWI: 6186 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 17S000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.2 175000 175000

SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	4,052	3,241	3,010	808	750	0.928						
2	3,120	2,310	1,849	622	498	0.800						
3	2,402	1,592	1,098	479	330	0.690						
4	1,850	1,039	618	369	219	0.595						
5	1,424	614	315	284	146	0.513						
6	1,097	286	127	219	97	0.442						
7	844	34	13	168	64	0.381						
8	650	0	0	130	0	0.329						

TOTAL:

7,029 2,104

EXPENSE:

810 810

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 211

ACCOUNT:0518185324 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:BOGESS 4 (11186.1)
STATUS:Z API#:05324 DATE:09/18/2007 DAYS:365 BBLs: 0.000 MCFS: 2139 RCPTS: 7010 GWI: 5845 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE:16.000 DECLINE RATE:
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	3,828	3,063	2,844	763	708	0.928						
2	2,948	2,182	1,747	588	470	0.800						
3	2,270	1,504	1,038	452	312	0.690						
4	1,748	982	584	348	207	0.595						
5	1,346	580	297	268	138	0.513						
6	1,036	271	120	207	91	0.442						
7	798	32	12	159	61	0.381						
8	614	0	0	122	0	0.329						
TOTAL:			6,642			1,988						
EXPENSE:	766			766								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 212

FEB 15, 2017
01:26 PM

ACCOUNT:0518185355
STATUS:A API#:05355
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.310
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 9

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HIGHLAND 10 (10770.1)
DATE:12/01/2007 DAYS:365 BELS: 0.000 MCFS: 1388 RCPTS: 4904 GWI: 4138 OWI: 0
0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000
WELLLIFE:99 EXPENSE: 0.45 5000 5000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,393	1,866	1,733	628	583	0.928						
2	2,986	1,459	1,168	553	442	0.800						
3	2,628	1,101	760	486	336	0.690						
4	2,312	785	467	428	258	0.595						
5	2,038	508	260	377	193	0.513						
6	1,791	264	117	331	147	0.442						
7	1,576	49	19	292	111	0.381						
8	1,387	0	0	257	0	0.329						

TOTAL:

4,523

2,067

EXPENSE:

1527

1527

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 213

ACCOUNT:0518185403
STATUS:A API#:05403
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.410
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 9

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:BRAUN 1 (10784.1)
DATE:08/01/2007 DAYS:365 BBLs: 0.000 MCFS: 1583 RCPTS: 7430 GWI: 6400 OWI: 0
EXPENSE: 0.45
EXPENSE: 0.45

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	5,248	2,886	2,680	845	784	0.928						
2	4,618	2,257	1,806	743	595	0.800						
3	4,064	1,702	1,175	654	451	0.690						
4	3,576	1,215	723	576	342	0.595						
5	3,147	786	403	507	260	0.513						
6	2,770	408	180	446	197	0.442						
7	2,437	76	29	392	149	0.381						
8	2,145	0	0	343	0	0.329						
TOTAL:			6,995			2,779						
EXPENSE:	2362		2362			2362						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 214

FEB 15, 2017
01:26 PM

ACCOUNT:0518185450 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:JW STARK 2 (10818.1)
STATUS:A API#:05450 DATE:11/01/2007 DAYS:365 BELLS: 0.000 MCFS: 6234 RCPTS: 20789 GWI: 17541 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE:16.000 DECLINE RATE:
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	14,384	9,384	8,712	2,663	2,473	0.928						
2	12,658	7,658	6,129	2,344	1,876	0.800						
3	11,139	6,139	4,236	2,063	1,423	0.690						
4	9,802	4,802	2,856	1,815	1,080	0.595						
5	8,626	3,626	1,859	1,597	819	0.513						
6	7,591	2,591	1,145	1,406	621	0.442						
7	6,680	1,680	640	1,237	471	0.381						
8	5,878	878	289	1,088	358	0.329						
9	5,173	173	49	958	271	0.283						
10	4,552	0	0	843	0	0.244						
TOTAL:			25,916		9,392							

EXPENSE: 5000 5000 5000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 215

ACCOUNT: 0518185451 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: JW STARK 3 (10819.1)
STATUS: A API#: 05451 DATE: 11/01/2007 DAYS: 365 BELLS: 0.000 MCFS: 1505 RCPTS: 7140 GWI: 6024 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	4,940	2,717	2,523	915	850	0.928						
2	4,347	2,124	1,700	805	645	0.800						
3	3,825	1,602	1,106	709	489	0.690						
4	3,366	1,143	680	624	371	0.595						
5	2,962	739	379	549	281	0.513						
6	2,607	384	170	483	213	0.442						
7	2,294	71	27	425	162	0.381						
8	2,019	0	0	374	0	0.329						
TOTAL:			6,584			3,011						
EXPENSE:	2223		2223	2223								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 216

FEB 15, 2017
01:26 PM

ACCOUNT:0518185466

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:COTTRILL 2. (10766.1)

STATUS:A API#:05466

DATE:11/01/2007 DAYS:365 BLS: 0.000 MCFS: 2112 RCPTS: 6073 GWI: 5092 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT		GROSS	NET	DISCOUNT	GROSS	DISCOUNT	
	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME FACTOR	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME FACTOR
1	4,175	2,296	2,132	804	747	0.928						
2	3,674	1,795	1,437	708	567	0.800						
3	3,233	1,355	935	623	430	0.690						
4	2,845	966	575	548	326	0.595						
5	2,504	625	321	482	247	0.513						
6	2,204	325	143	425	188	0.442						
7	1,939	60	23	374	142	0.381						
8	1,706	0	0	329	0	0.329						

TOTAL:

5,566 2,647

EXPENSE: 1879

1879

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 217

ACCOUNT:0518185499 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:IB HUTSON 1 (10792.1)

STATUS:S API#:05499 DATE:12/01/2007 DAYS:365 BBLs: 0.000 MCFS: 63 RCPTS: GWI: OWI:

SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE:

RATES USED:
CAP RATE:16.000 DECLINE RATE: WELLLIFE:99

SETTLED YEARS:

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL:

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 218

ACCOUNT:0518185500
 STATUS:A API#:05500
 DATE:12/01/2007 DAYS:365 BELS: 20.000 MCFS: 1159 RCPTS: 6581 GWI: 4987 OWI: 565
 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:IB HUTSON 2 (10793.1)
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 GS EXPENSE: 0.45 5000 5000
 SETTLED YEARS: 9 OL EXPENSE: 0.45 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	4,089	2,249	2,088	758	703	0.928	463	301	280	86	80	0.928
2	3,599	1,758	1,407	667	534	0.800	408	246	197	76	61	0.800
3	3,167	1,327	915	587	405	0.690	359	197	136	67	46	0.690
4	2,787	947	563	516	307	0.595	316	154	91	59	35	0.595
5	2,452	612	314	454	233	0.513	278	116	59	52	26	0.513
6	2,158	318	141	400	177	0.442	244	82	36	45	20	0.442
7	1,899	59	22	352	134	0.381	215	53	20	40	15	0.381
8	1,671	0	0	310	0	0.329	189	27	9	35	12	0.329
9							167	4	1	31	9	0.283
10							147	0	0	27	0	0.244
TOTAL:			5,451		2,493				829		304	
GS EXPENSE:	1840			1840								
OL EXPENSE:	162			162								

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 219

ACCOUNT: 0518185529 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: KILE B-1
STATUS: A API#: 05529 DATE: 12/01/2007 DAYS: 365 BELLS: MCFS: 3464 RCPTS: 8059 GWI: 6800 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000 5000
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	5,576	3,067	2,847	1,032	959	0.928						
2	4,907	2,398	1,919	908	727	0.800						
3	4,318	1,809	1,248	799	552	0.690						
4	3,800	1,291	768	704	416	0.595						
5	3,344	835	428	619	317	0.513						
6	2,943	433	192	545	241	0.442						
7	2,590	80	31	479	183	0.381						
8	2,279	0	0	422	0	0.329						
TOTAL:			7,433			3,397						
EXPENSE:	2509		2509	2509								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017

01:26 PM

NR105: 220

ACCOUNT:0520105005

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:MCQUAID 2 (10810.1)

STATUS:S API#:05005

DATE:08/01/2007 DAYS:365 BBLs: 0.000 MCFS: 88 RCPTS: GWI: OWI:

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE:

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99

SETTLED YEARS:

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	

TOTAL:

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 221

ACCOUNT:0520105285 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HIGHLAND 3 (10774.1)
STATUS:A API#:05285 DATE:07/01/2007 DAYS:365 BELS: 0.000 MCPS: 4167 RCPTS: 9798 GWI: 8266 OWI: 0
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE:16.000 DECLINE RATE:
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	6,778	3,461	3,728	1,286	1,166	0.928						
2	5,965	2,333	2,915	1,105	885	0.800						
3	5,249	1,517	2,199	973	671	0.690						
4	4,619	933	1,569	856	509	0.595						
5	4,065	520	1,015	753	386	0.513						
6	3,577	233	827	663	293	0.442						
7	3,148	37	98	583	222	0.381						
8	2,770	0	0	513	0	0.329						
TOTAL:		9,035			4,133							
EXPENSE:	3050	3050		3050								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017

01:26 PM

NR105: 222

ACCOUNT:0520105286

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HIGHLAND 4 (10791.1)

STATUS:A API#:05286

DATE:07/01/2007 DAYS:365 BBLs: 0.000 MCFS: 143 RCPTS: 556 GWI: 554 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 9

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	454	250	84	0.928	78	0.800	59	0.800
2	400	195	74	0.800	59	0.800	45	0.690
3	352	147	65	0.690	45	0.690	34	0.595
4	310	105	57	0.595	34	0.595	26	0.513
5	272	68	50	0.513	26	0.442	20	0.442
6	240	35	44	0.442	20	0.381	15	0.381
7	211	7	39	0.381	15	0.329	0	0.329
8	186	0	34	0.329	0			
TOTAL:		606		275				

EXPENSE: 204

204

'DOODRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 223

ACCOUNT: 0520105287 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: HIGHLAND 5 (10775.1)
STATUS: A API#: 05287 DATE: 07/01/2007 DAYS: 365 BBLs: 0.000 MCFS: 3126 RCPTS: 8634 GWI: 7453 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	6,111	3,361	3,121	1,132	1,051	0.928						
2	5,378	2,628	2,103	997	798	0.800						
3	4,733	1,983	1,368	877	605	0.690						
4	4,165	1,415	841	772	459	0.595						
5	3,665	915	469	679	348	0.513						
6	3,225	475	210	598	264	0.442						
7	2,838	88	34	526	200	0.381						
8	2,498	0	0	463	0	0.329						
TOTAL:			6,146		3,726							
EXPENSE:	2750		2750	2750								

FEB 15, 2017
01:26 PM

'DODDRIDGE', COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 224

ACCOUNT: 0520105330

ACCOUNT:0520105330
STATUS: A
RESOURCE:GS
OWNER:ANTERO RESOURCES CORPORATI
LOCATION:HIGHLAND 17 (10788.1)

STATUS: A API#: 05330

STATUS: A API#: 05330 DATE: 08/01/2007 DAYS: 365 BBL: 0.000 MCFS: 1059 RCPTS: 2615 GWI: 2207 OWI: 17 (10/08.1)

SYSTEM RATES:

CAP RATE:	16.000	DECLINE RATE:	0.410	0.140

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 9

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	1,810	995	335	311	0.928			
2	1,593	778	294	236	0.800			
3	1,401	587	259	179	0.690			
4	1,233	419	228	136	0.595			
5	1,085	271	201	103	0.513			
6	955	141	177	78	0.442			
7	840	26	155	59	0.381			
8	740	0	137	0	0.329			
TOTAL:		2,412		1,101				
EXPENSE:	814	814		814				

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 225

ACCOUNT: 0520105331 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: HIGHLAND 18 (10772.1)
STATUS: A API#: 05331 DATE: 09/01/2007 DAYS: 365 BBLs: 0.000 MCFS: 1346 RCPTS: 4077 GWI: 3440 OWI: 0
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELL LIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED: CAP RATE: 16.000 DECLINE RATE: WELL LIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,821	1,551	1,440	522	485	0.928						
2	2,482	1,213	971	460	368	0.800						
3	2,184	915	631	405	279	0.690						
4	1,922	653	388	356	212	0.595						
5	1,692	422	217	313	161	0.513						
6	1,489	219	97	276	122	0.442						
7	1,310	41	15	243	92	0.381						
8	1,153	0	0	213	0	0.329						
TOTAL:			3,760									
EXPENSE:	1269			1269								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 226

FEB 15, 2017
01:26 PM

ACCOUNT:0520105332
STATUS:A API#:05332
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 2633 RCPTS: 6299 GWI: 5315 OWI: 0
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	4,358	2,397	2,226	807	749	0.928						
2	3,835	1,874	1,500	710	568	0.800						
3	3,375	1,414	976	625	431	0.690						
4	2,970	1,009	600	550	327	0.595						
5	2,614	652	335	484	248	0.513						
6	2,300	339	150	426	188	0.442						
7	2,024	63	24	375	143	0.381						
8	1,781	0	0	330	0	0.329						
TOTAL:			5,810			2,655						
EXPENSE:	1961		1961			1961						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 227

ACCOUNT:0520105356
STATUS:A API#:05356
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.410
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 9

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HIGHLAND 23 (10790.1)
DATE:07/01/2007 DAYS:365 BELS: 0.000 MCFS: 763 RCPTS: 1726 GWI: 1457 OWI: 0

EXPENSE: 5000
EXPENSE: 5000
EXPENSE: 5000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,195	657	610	221	205	0.928						
2	1,051	514	411	194	155	0.800						
3	925	388	267	171	118	0.690						
4	814	277	165	150	89	0.595						
5	716	179	92	132	68	0.513						
6	631	93	41	116	51	0.442						
7	555	17	7	102	39	0.381						
8	488	0	0	90	0	0.329						
TOTAL:			1,593			726						
EXPENSE:	538			538								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 228

FEB 15, 2017
01:26 PM

ACCOUNT: 0520105402
STATUS: M API#: 05402
DATE: 08/01/2007 DAYS: 365 BBLs: 0.000 MCFS: 13565 RCPTS: 61743 GWI: 51251 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.3 30000 30000
SETTLED YEARS: 9

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	33,569	23,499	21,818	6,872	6,381	0.928		
2	25,848	15,778	12,629	5,232	4,235	0.800		
3	19,903	9,832	6,784	4,075	2,811	0.690		
4	15,326	5,255	3,126	3,137	1,866	0.595		
5	11,801	1,730	887	2,416	1,239	0.513		
6	9,087	0	0	1,860	0	0.442		

TOTAL:

45,244

16,533

EXPENSE: 10071

10071

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 230

ACCOUNT:0520105449

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:JW STARK 1 (10776.1)

STATUS:A API#:05449

DATE:11/01/2007 DAYS:365 BBLs: 0.000 MCFS:

6987 RCPTS: 19166 GWI: 16172 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	13,261	8,261	7,670	2,455	2,279	0.928						
2	11,670	6,670	5,339	2,160	1,729	0.800						
3	10,269	5,269	3,636	1,901	1,312	0.690						
4	9,037	4,037	2,401	1,673	995	0.595						
5	7,953	2,953	1,514	1,472	755	0.513						
6	6,998	1,998	883	1,296	573	0.442						
7	6,158	1,158	441	1,140	434	0.381						
8	5,419	419	138	1,003	330	0.329						
9	4,769	0	0	883	0	0.283						
TOTAL:			22,023			8,408						
EXPENSE:	5000		5000	5000								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 231

FEB 15, 2017
01:26 PM

ACCOUNT: 0520105452 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: JW STARK 4 (10820.1)
 STATUS: A API#: 05452 DATE: 11/01/2007 DAYS: 365 BBLs: 0.000 MCPS: 3189 RCPTS: 10885 GWI: 9185 OWI: 0
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000
 SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	7,532	4,142	3,846	1,394	1,294	0.928						
2	6,628	3,239	2,592	1,227	982	0.800						
3	5,833	2,443	1,686	1,080	745	0.690						
4	5,133	1,743	1,037	950	565	0.595						
5	4,517	1,127	578	836	429	0.513						
6	3,975	585	259	736	325	0.442						
7	3,498	108	41	647	247	0.381						
8	3,078	0	0	570	0	0.329						
TOTAL:			10,040		4,587							
EXPENSE:	3389			3389								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 232

FEB 15, 2017
01:26 PM

ACCOUNT:0520105465

STATUS:A API#:05465 DATE:10/01/2007 DAYS:365 BBLs: 0.000 MCFS: 1756 RCPTS: 2822 GWI: 2366 OWI: 0

SYSTEM RATES: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000 5000

RATES USED: 16.000 DECLINE RATE:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,940	1,067	991	374	347	0.928						
2	1,707	834	658	329	263	0.800						
3	1,502	629	434	290	200	0.690						
4	1,322	449	267	255	152	0.595						
5	1,163	290	149	224	115	0.513						
6	1,024	151	67	197	87	0.442						
7	901	28	11	174	66	0.381						
8	793	0	0	153	0	0.329						
TOTAL:			2,586			1,230						
EXPENSE:	873		873			873						

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 233

ACCOUNT: 0520105467 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: COTTRILL 3 (10767.1)
STATUS: A API#: 05467 DATE: 11/01/2007 DAYS: 365 BBLs: 0.000 MCFS: 1497 RCPTS: 6608 GWI: 5540 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	4,543	2,499	2,320	876	813	0.928						
2	3,998	1,953	1,564	771	617	0.800						
3	3,518	1,474	1,017	678	468	0.690						
4	3,096	1,052	625	597	355	0.595						
5	2,724	680	349	525	269	0.513						
6	2,397	353	156	462	204	0.442						
7	2,110	65	25	407	155	0.381						
8	1,857	0	0	358	0	0.329						

TOTAL: 6,055 2,882

EXPENSE: 2044 2044

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 234

FEB 15, 2017
01:26 PM

ACCOUNT:0520105474

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:PIPPIN 1 (10815.1)

STATUS:A API#:05474

DATE:01/03/2008 DAYS:365 BBL5: 0.000 MCFS: 622 RCPTS: 3530 GWI: 2992 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,453	1,349	1,253	441	410	0.928						
2	2,159	1,055	844	388	311	0.800						
3	1,900	796	549	342	236	0.690						
4	1,672	568	338	301	179	0.595						
5	1,471	367	188	265	136	0.513						
6	1,295	191	84	233	103	0.442						
7	1,139	35	13	205	78	0.381						
8	1,003	0	0	180	0	0.329						

TOTAL:

3,270 1,452

EXPENSE: 1104

1104 1104

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 235

ACCOUNT:0520105475
STATUS:A API#:05475 DATE:05/05/2008 DAYS:365 BELS: 0.000 MCFS: 4445 RCPTS: 12359 GWI: 10814 OWI: 0
RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:S SMITH 1 (10817.1)
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT	INCOME FACTOR
1	8,867	4,877	4,528	1,267	1,176	0.928						
2	7,803	3,813	3,052	1,115	892	0.800						
3	6,867	2,877	1,985	981	677	0.690						
4	6,043	2,053	1,221	863	514	0.595						
5	5,318	1,327	681	760	390	0.513						
6	4,680	689	305	659	296	0.442						
7	4,118	128	49	588	224	0.381						
8	3,624	0	0	518	0	0.329						
TOTAL:			11,820			4,169						
EXPENSE:	3990			3990								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 236

ACCOUNT:0520105501

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HUTSON 3
STATUS:A API#:05501 DATE:10/20/2007 DAYS:365 BHLS: 62 RCPTS: 159 GWI: 0 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 5000 5000 5000

SETTLED YEARS: 9

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 237

ACCOUNT:0520105502 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:KILE A1 (10797.1)
STATUS:A API#:05502 DATE:01/31/2008 DAYS:365 BBLs: 0.000 MCFS: 1537 RCPTS: 13455 GWI: 11773 OWI: 0
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000
RATES USED: CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	
1	9,654	5,310	4,930	1,379	1,281	0.928						
2	8,495	4,151	3,323	1,214	971	0.800						
3	7,476	3,132	2,161	1,068	737	0.690						
4	6,579	2,235	1,329	940	559	0.595						
5	5,789	1,445	741	827	424	0.513						
6	5,095	750	332	728	322	0.442						
7	4,483	139	53	641	244	0.381						
8	3,945	0	0	564	0	0.329						
TOTAL:			12,868		4,538							

EXPENSE: 4344 4344 4344

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 238

FEB 15, 2017
01:26 PM

ACCOUNT:0520105503

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:KILE A2 (10798.1)

STATUS:A API#:05503

DATE:01/03/2008 DAYS:365 BELLS: 0.000 MCFS: 187 RCPTS: 14194 GWI: 12419 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	10,184	5,601	5,200	1,456	1,351	0.928						
2	8,562	4,379	3,505	1,281	1,025	0.800						
3	7,886	3,304	2,279	1,127	778	0.690						
4	6,940	2,357	1,402	992	590	0.595						
5	6,107	1,524	782	873	448	0.513						
6	5,374	792	350	768	340	0.442						
7	4,729	147	56	676	258	0.381						
8	4,162	0	0	595	0	0.329						
TOTAL:			13,575		4,789							
EXPENSE:	4583		4583	4583								

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 239

ACCOUNT: 0520105504

RESOURCE: CS OWNER: ANTERO RESOURCES CORPORATI LOCATION: KILE A3 (10799.1)

STATUS: A API#: 05504

DATE: 01/24/2008 DAYS: 365 BBLs: 0.000 MCFS: 9456 RCPTS: 31569 GWI: 27623 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	22,651	17,651	16,388	3,236	3,004	0.928						
2	19,933	14,933	11,952	2,847	2,279	0.800						
3	17,541	12,541	8,653	2,506	1,729	0.690						
4	15,436	10,436	6,208	2,205	1,312	0.595						
5	13,584	8,584	4,402	1,940	995	0.513						
6	11,954	6,954	3,074	1,708	755	0.442						
7	10,519	5,519	2,103	1,503	573	0.381						
8	9,257	4,257	1,398	1,322	434	0.329						
9	8,146	3,146	891	1,164	330	0.283						
10	7,169	2,169	529	1,024	250	0.244						
11	6,308	1,308	275	901	190	0.210						
12	5,551	551	100	793	144	0.181						
13	4,885	0	0	698	0	0.156						

TOTAL:

55,975

11,994

EXPENSE: 5000

5000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 240

FEB 15, 2017
01:26 PM

ACCOUNT:0520105506

STATUS:A API#:05506

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HIGHLAND 14 (10771.1)

DATE:12/01/2007 DAYS:365

BELS: 0.000 MCFS:

2414 RCPTS:

5833 GWI:

4922 OWI:

SYSTEM RATES: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 0

CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

RATES USED: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 9

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	4,036	2,220	2,061	747	694	0.928						
2	3,552	1,735	1,389	657	526	0.800						
3	3,126	1,309	903	578	399	0.690						
4	2,750	934	556	509	303	0.595						
5	2,420	604	310	448	230	0.513						
6	2,130	314	139	394	174	0.442						
7	1,874	58	22	347	132	0.381						
8	1,649	0	0	305	0	0.329						

TOTAL: 5,380 2,458

EXPENSE: 1816 1816 1816

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 241

ACCOUNT: 0520105512 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: TATE 1 (10822.1)
STATUS: A API#: 5512 DATE: 04/25/2008 DAYS: 365 BBLs: MCFS: 35557 RCPTS: 75706 GWI: 63884 OWI: 0
SYSTEM RATES: DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000
CAP RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000
RATES USED: CAP RATE: 16.000 DECLINE RATE: 16.000 DECLINE RATE: 16.000
SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	52,385	47,385	43,996	9,694	9,001	0.928						
2	46,099	41,099	32,896	8,531	6,828	0.800						
3	40,567	35,567	24,541	7,507	5,180	0.690						
4	35,699	30,699	18,261	6,606	3,930	0.595						
5	31,415	26,415	13,545	5,813	2,981	0.513						
6	27,645	22,645	10,011	5,116	2,262	0.442						
7	24,328	19,328	7,366	4,502	1,716	0.381						
8	21,408	16,408	5,391	3,962	1,302	0.329						
9	18,839	13,839	3,519	3,486	987	0.283						
10	16,579	11,579	2,827	3,068	749	0.244						
11	14,589	9,589	2,018	2,700	568	0.210						
12	12,839	7,839	1,422	2,376	431	0.181						
13	11,298	6,298	985	2,091	327	0.156						
14	9,942	4,942	666	1,840	248	0.135						
15	8,749	3,749	436	1,619	188	0.116						
16	7,699	2,699	270	1,425	143	0.100						
17	6,775	1,775	153	1,254	108	0.086						
18	5,962	962	72	1,103	82	0.074						
19	5,247	247	16	971	62	0.064						
20	4,617	0	0	854	0	0.055						
TOTAL:			168,791			37,093						

EXPENSE: 5000 5000 5000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017

01:26 PM

NR105: 242

ACCOUNT: 0520105514

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATION LOCATION: TATE 3 (10823.1)

STATUS: A API#: 05514

DATE: 05/06/2008 DAYS: 365 BELS: 0.000 MCFS: 2976 RCPTS: 5923 GWI: 4998 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	4,098	2,254	2,093	759	704	0.928						
2	3,607	1,762	1,411	667	534	0.800						
3	3,174	1,330	917	587	405	0.690						
4	2,793	949	564	517	307	0.595						
5	2,458	614	315	455	233	0.513						
6	2,163	319	141	400	177	0.442						
7	1,903	59	22	352	134	0.381						
8	1,675	0	0	310	0	0.329						
TOTAL:			5,463		2,496							

EXPENSE: 1844

1844

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 243

FEB 15, 2017
01:26 PM

ACCOUNT: 0520105545 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: BALLOUZ 1 (10783.1)
STATUS: A API#: 05545 DATE: 07/11/2008 DAYS: 365 BBLs: 0.000 MCPS: 3404 RCPTS: 11802 GWI: 10327 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	8,458	4,557	4,324	1,210	1,123	0.928						
2	7,452	3,641	2,915	1,064	852	0.800						
3	6,558	2,747	1,895	937	646	0.690						
4	5,771	1,960	1,166	824	490	0.595						
5	5,078	1,288	650	725	372	0.513						
6	4,469	658	291	638	282	0.442						
7	3,933	122	46	562	214	0.381						
8	3,451	0	0	494	0	0.329						

TOTAL: 11,288 3,980

EXPENSE: 3811 3811

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 244

FEB 15, 2017
01:26 PM

ACCOUNT: 0520105553

STATUS: M APT#: 05553

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: TATE 4 (10869.1)

DATE: 05/05/2008 DAYS: 365 BBLS: 0.000 MCPS: 19621 RCPTS: 59984 GWI: 50613 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000

RATES USED: 16.000 DECLINE RATE: 0.3 30000 30000

CAP RATE: 16.000 DECLINE RATE: 0.3 30000 30000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	33,152	21,546	23,206	6,138	5,699	0.928						
2	25,527	12,471	15,581	4,726	3,783	0.800						
3	19,656	6,700	9,710	3,639	2,511	0.690						
4	15,135	3,087	5,189	2,802	1,667	0.595						
5	11,654	876	1,708	2,158	1,106	0.513						
6	8,973	0	0	1,661	0	0.442						

TOTAL:

44,680

14,766

EXPENSE: 9945

9945

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 245

ACCOUNT: 0520105635

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: P FORD 1 (10813.1)

STATUS: A API#: 05635

DATE: 04/28/2008 DAYS: 365 BELLS: 0.000 MCPS: 3012 RCPTS: 18921 GWI: 15767 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	12,929	7,929	7,362	2,586	2,401	0.928						
2	11,377	6,377	5,105	2,276	1,822	0.800						
3	10,012	5,012	3,458	2,003	1,382	0.690						
4	8,811	3,811	2,267	1,762	1,048	0.595						
5	7,753	2,753	1,412	1,551	795	0.513						
6	6,823	1,823	806	1,365	603	0.442						
7	6,004	1,004	383	1,201	458	0.381						
8	5,284	284	93	1,057	347	0.329						
9	4,650	0	0	930	0	0.283						

TOTAL:

20,885 8,857

EXPENSE:

5000 5000 5000

FEB 15, 2017
01:26 PM
'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 246

ACCOUNT:0520105636

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:P FORD 2 (10814.1)

STATUS:A API#:05636

DATE:04/15/2008 DAYS:365

BBLs: 0.000 MCFS:

109 RCPTS:

2450 GWI:

2042 OWI:

0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE:

0.410

0.140

0.120 WELLLIFE:99

EXPENSE:

0.45

5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

0.410

WELLLIFE:99

EXPENSE:

0.45

5000

5000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,674	921	855	335	311	0.928						
2	1,474	720	576	294	236	0.800						
3	1,297	543	375	259	179	0.690						
4	1,141	388	231	228	136	0.595						
5	1,004	251	129	201	103	0.513						
6	884	130	58	177	78	0.442						
7	778	24	9	155	59	0.381						
8	684	0	0	137	0	0.329						

TOTAL:

2,232

1,101

EXPENSE: 753

753

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MOOEL REPORT FOR - 2017

NR105: 247

ACCOUNT:0520105646

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:TATE 2 (10868.1)

STATUS:M API#:05646

DATE:06/21/2008 DAYS:365 BBLs: 0.000 MCPS: 23932 RCPTS: 78556 GWI: 66291 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000 30000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	43,421	30,394	26,221	8,034	7,459	0.928						
2	33,434	20,408	16,335	6,186	4,951	0.800						
3	25,744	12,718	8,775	4,763	3,287	0.690						
4	19,823	6,797	4,043	3,668	2,182	0.595						
5	15,264	2,237	1,147	2,824	1,448	0.513						
6	11,753	0	0	2,175	0	0.442						

TOTAL:

58,521 19,327

EXPENSE:

13026 13026 13026

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 248

ACCOUNT:0520105693

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:BOOHER 4 (10832.1)

STATUS:M API#:05693

DATE:06/27/2008 DAYS:365 BBLs: 0.000 MCFS: 15346 RCPTS: 66214 GWI: 55848 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 30000 30000

SETTLED YEARS: 8

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	36,580	25,606	23,775	6,790	6,304	0.928						
2	28,167	17,193	13,761	5,228	4,185	0.800						
3	21,689	10,714	7,393	4,026	2,778	0.690						
4	16,700	5,726	3,406	3,100	1,844	0.595						
5	12,859	1,885	967	2,387	1,224	0.513						
6	9,902	0	0	1,838	0	0.442						

TOTAL:

49,302 16,334

EXPENSE: 10974

10974 10974

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 250

FEB 15, 2017
01:26 PM

ACCOUNT:0520115749
STATUS:M API#:05749
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.000 MCFS: 11527 RCPTS: 32965 GWI: 26073 OWI: 0
DATE:06/08/2009 DAYS:365 BRIS: 0.230 WELLLIFE:99
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	17,078	11,954	11,099	4,514	4,191	0.928						
2	13,150	8,027	6,425	3,476	2,782	0.800						
3	10,125	5,002	3,451	2,677	1,847	0.690						
4	7,797	2,673	1,590	2,061	1,226	0.595						
5	6,003	880	451	1,587	814	0.513						
6	4,623	0	0	1,222	0	0.442						

TOTAL: 23,017 10,860
EXPENSE: 5123 5123

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 251

FEB 15, 2017
01:26 PM

ACCOUNT: 0520115865 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: WL ESTLACK 1 (10877.1)
STATUS: M API#: 05865 DATE: 11/03/2009 DAYS: 365 BHLS: 0.000 MCPS: 17146 RCPTS: 62603 GWI: 52822 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.3 30000 30000 30000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT	INCOME FACTOR
1	34,598	24,219	22,487	6,407	5,948	0.928						
2	26,641	16,261	13,016	4,933	3,948	0.800						
3	20,513	10,134	6,992	3,798	2,621	0.690						
4	15,795	5,416	3,222	2,925	1,740	0.595						
5	12,162	1,783	914	2,252	1,155	0.513						
6	9,365	0	0	1,734	0	0.442						

TOTAL: 46,631 15,412

EXPENSE: 10380 10380 10380

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017

01:26 PM

NR105: 252

ACCOUNT:0520115866

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:WL ESTLACK 2 (10878.1)

STATUS:M API#:05866

DATE:12/10/2009 DAYS:365 BBLs: 0.000 MCFS: 23330 RCPTS: 76996 GWI: 64965 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE:99 EXPENSE: 0.3 30000 30000

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 7

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	42,552	29,786	27,656	7,880	7,317	0.928						
2	32,765	19,999	16,008	6,068	4,857	0.800						
3	25,229	12,464	8,600	4,672	3,224	0.690						
4	19,426	6,661	3,962	3,598	2,140	0.595						
5	14,958	2,193	1,124	2,770	1,421	0.513						
6	11,518	0	0	2,133	0	0.442						
TOTAL:			57,350			18,958						

EXPENSE: 12766 12766 12766

NR105: 253

ACCOUNT: 0520125673

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:ASH RALPH & REVA TALKINGTON 4

STATUS: B API#: 05673

DATE:06/01/2015 DAYS:214 BBLs:

MCF5:

2016 RCPTS:

GWI:

OWI:

SYSTEM RATES:

SYSTEM RATES: 16.000 DECLINE RATE:

0.110 WELLIFE:99

EXPENSE:

RATES USED:

RATES USED: 16.000 DECLINE RATE:
CAP RATE:

WELLIFE: 99

SETTLED YEARS:

GAS WORKING INTEREST	DISCOUNT
GROSS NET	INCOME
INCOME	INCOME

GAS ROYALTY INTEREST
GROSS DISCOUNT
INCOME INCOME FACT

	OIL WORKING INTEREST	
GROSS	NET	DISCOUNT
INCOME	INCOME	INCOME

OIL ROYALTY INTEREST
GROSS DISCOUNT
INCOME INCOME FACTOR

TOTAL:

FBP 15, 2017
01:26 PM
'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 2S4

ACCOUNT: 0520135880
STATUS: A API#: 05880
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.380
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 5
RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: E SWIGER 1 (10821.1)
DATE: 01/01/2011 DAYS: 365 BBLs: 0.000 MCFS: 56 RCPTS: 1819 GWI: 1592 OWI: 0
0.210 0.110 WELLLIFE: 99 EXPENSE: 0.45 5000 5000
WELLLIFE: 99 EXPENSE: 0.45 5000 5000

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	1,329	731	190	0.928	176	0.928		
2	1,183	585	169	0.800	135	0.800		
3	1,053	455	150	0.690	104	0.690		
4	937	339	134	0.595	79	0.595		
5	834	236	119	0.513	61	0.513		
6	742	144	106	0.442	47	0.442		
7	661	62	94	0.381	36	0.381		
8	588	0	84	0.329	0	0.329		
TOTAL:		1,871		638				
EXPENSE:	598	598	598					

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 255

FEB 15, 2017
01:26 PM

ACCOUNT: 0520145962

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: R. SWIGER SOUTH UNIT 1H AND R. SW

STATUS: Z API#: 05962

DATE: 06/21/2012 DAYS: 365 BELS: 0.000 MCFS: 592985 RCPTS: 1607960 GWI: 1358941 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 4

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	890,106	715,106	663,960	163,107	151,442	0.928						
2	685,382	510,382	408,515	125,593	100,526	0.800						
3	527,744	352,744	243,397	96,706	66,728	0.690						
4	406,363	231,363	137,623	74,464	44,294	0.595						
5	312,899	137,899	70,713	57,337	29,402	0.513						
6	240,933	65,933	29,146	44,150	19,517	0.442						
7	185,518	10,518	4,008	33,995	12,955	0.381						
8	142,849	0	0	26,176	0	0.329						
TOTAL:			1,557,362		424,863							

EXPENSE: 175000 175000 175000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 256

ACCOUNT:0520145962

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:R. SWIGER SOUTH UNIT 1H AND R. SW
STATUS:Z API#:06026 DATE:06/29/2012 DAYS:365 BBLs: 0.000 MCFS: 578497 RCPTS: 2128561 GWI: 1725165 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 4

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	1,129,983	954,983	886,680	264,224	245,326	0.928						
2	870,087	695,087	556,355	203,453	162,846	0.800						
3	669,967	494,967	341,532	156,659	108,096	0.690						
4	515,875	340,875	202,764	120,627	71,753	0.595						
5	397,223	222,223	113,954	92,883	47,629	0.513						
6	305,862	130,862	57,849	71,520	31,616	0.442						
7	235,514	60,514	23,061	55,070	20,987	0.381						
8	181,346	6,346	2,085	42,404	13,931	0.329						
9	139,636	0	0	32,651	0	0.283						
TOTAL:			2,184,279			702,184						

EXPENSE: 175000 175000 175000

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 257

ACCOUNT:0520146027

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:TROUT UNIT IH (10176.1)

STATUS:Z API#:06027

DATE:12/06/2012 DAYS:365 BBLs: 0.000 MCFS: 698343 RCPTS: 2973942 GWI: 2510459 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.2 175000 175000

SETTLED YEARS: 4

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,644,351	1,469,351	1,364,258	303,581	281,868	0.928						
2	1,266,150	1,091,150	873,368	233,758	187,102	0.800						
3	974,935	799,935	551,963	179,993	124,197	0.690						
4	750,700	575,700	342,447	138,595	82,441	0.595						
5	578,039	403,039	206,674	106,718	54,724	0.513						
6	445,090	270,090	119,396	82,173	36,325	0.442						
7	342,719	167,719	63,916	63,273	24,113	0.381						
8	263,894	88,894	29,204	48,720	16,006	0.329						
9	203,198	28,198	7,986	37,515	10,624	0.283						
10	156,463	0	0	28,886	0	0.244						

TOTAL:

3,559,212

817,401

EXPENSE:

175000

175000

175000

NR105: 258

ACCOUNT: 0520146028

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:TROUT UNIT 2H (10175.1)

STATUS:Z API#:06028

STATUS:Z API#:06028 DATE:12/13/2012 DAYS:365 BBLs: 0.000 MCFS: 756606 RCPTS: 3140134 GNI: 2650709 OWI: 0

SYSTEM RATES:

CAP RATE:	16.000	DECLINE RATE:	0.590	0.230	WELL LIFE: 99	EXPENSE:	0.2	175000	175000

RATES USED:

<u>CAP RATE:</u>	16.000	DECLINE RATE:	0.2	WELLIFE:99	175000	175000

SETTLED YEARS: 4

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	GROSS INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME
1	1,736,214	1,561,214	320,573	297,645	320,573	297,645	320,573	297,645
2	1,336,885	1,161,885	246,841	197,575	246,841	197,575	246,841	197,575
3	1,029,402	854,402	190,068	131,149	190,068	131,149	190,068	131,149
4	792,639	617,639	146,352	87,056	146,352	87,056	146,352	87,056
5	610,332	435,332	112,691	57,787	112,691	57,787	112,691	57,787
6	469,956	294,956	86,772	38,359	86,772	38,359	86,772	38,359
7	361,866	186,866	66,815	25,462	66,815	25,462	66,815	25,462
8	278,637	103,637	51,447	16,902	51,447	16,902	51,447	16,902
9	214,550	39,550	39,614	11,219	39,614	11,219	39,614	11,219
10	165,204	0	30,503	0	30,503	0	30,503	0

TOTAL:

EXPENSE:	175000	175000	175000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 259

ACCOUNT:0520146043 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:R. SWIGER SOUTH UNIT 3H (10172.1)
STATUS:L API#:06043 DATE:06/22/2012 DAYS:365 BBLS: 0.000 MCFS: 349712 RCPTS: 1198089 GWI: 1005485 OWI: 0

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.3 20000 20000 20000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.3 20000 20000 20000

SETTLED YEARS: 4

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	658,593	638,593	592,919	126,156	117,133	0.928		
2	507,116	487,116	389,893	97,140	77,752	0.800		
3	390,480	370,480	255,634	74,798	51,611	0.690		
4	300,669	280,669	166,952	57,594	34,259	0.595		
5	231,515	211,515	108,463	44,348	22,741	0.513		
6	178,267	158,267	69,963	34,148	15,095	0.442		
7	137,265	117,265	44,688	26,294	10,020	0.381		
8	105,694	85,694	28,152	20,246	6,651	0.329		
9	81,385	61,385	17,385	15,530	4,415	0.283		
10	62,666	42,666	10,417	12,004	2,931	0.244		
11	48,253	28,253	5,946	9,243	1,945	0.210		
12	37,155	17,155	3,113	7,117	1,291	0.181		
13	28,609	8,609	1,347	5,480	857	0.156		
14	22,029	2,029	274	4,220	569	0.135		
15	16,962	0	0	3,249	0	0.116		

TOTAL: 1,695,146 347,271

EXPENSE: 20000 20000 20000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 260

ACCOUNT: 0520146044

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: WEBB UNIT 1H (10168.1)

STATUS: Z API#: 06044

DATE: 09/28/2012 DAYS: 365 BELLS: 0.000 MCPS: 507662 RCPTS: 1976123 GWI: 1671439 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000

SETTLED YEARS: 4

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,094,793	919,793	854,006	199,568	185,294	0.928						
2	842,990	667,990	534,667	153,667	122,997	0.800						
3	649,103	474,103	327,135	118,324	81,645	0.690						
4	499,809	324,809	193,208	91,109	54,198	0.595						
5	384,853	209,853	107,610	70,154	35,974	0.513						
6	296,337	121,337	53,638	54,019	23,880	0.442						
7	228,179	53,179	20,266	41,894	15,851	0.381						
8	175,698	698	229	32,028	10,522	0.329						
9	135,287	0	0	24,661	0	0.283						

TOTAL:

2,090,760 530,358

EXPENSE:

175000 175000 175000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 261

ACCOUNT: 0520146045

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: WEBB UNIT 2H (10169.1)

STATUS: Z API#: 06045 DATE: 10/01/2012 DAYS: 365 BBLs: 0.000 MCFS: 452271 RCPTS: 1790881 GWI: 1514757 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 4

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	992,166	817,166	758,720	180,861	167,925	0.928						
2	763,568	588,968	471,416	139,263	111,468	0.800						
3	588,255	413,255	285,150	107,233	73,991	0.690						
4	452,956	277,956	165,339	82,569	49,115	0.595						
5	348,776	173,776	89,111	63,578	32,602	0.513						
6	268,558	93,558	41,358	48,955	21,641	0.442						
7	206,790	31,790	12,115	37,696	14,365	0.381						
8	159,228	0	0	29,026	0	0.329						

TOTAL:

1,823,208

471,108

EXPENSE: 175000

175000

175000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 262

FEB 15, 2017
01:26 PM

ACCOUNT:0520146046

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:WEBB UNIT 3H (10170.1)

STATUS:Z API#:06046

DATE:10/04/2012 DAYS:365 BBLs: 0.000 MCFS: 574717 RCPTS: 2220613 GWI: 1878231 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 4

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,230,241	1,055,241	979,767	224,260	208,220	0.928						
2	947,286	772,286	618,146	172,680	138,215	0.800						
3	729,410	554,410	382,548	132,964	91,746	0.690						
4	561,646	386,646	229,991	102,382	60,901	0.595						
5	432,467	257,467	132,026	78,834	40,425	0.513						
6	333,000	158,000	69,845	60,702	26,834	0.442						
7	256,410	81,410	31,024	46,741	17,812	0.381						
8	197,436	22,436	7,371	35,990	11,824	0.329						
9	152,025	0	0	27,713	0	0.283						
TOTAL:			2,450,719		595,978							
EXPENSE:	175000		175000	175000								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 263

FEB 15, 2017
01:26 PM

ACCOUNT: 0520156117 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: KEMPER UNIT 1H (10269.1) 0
STATUS: Z API#: 06117 DATE: 08/01/2013 DAYS: 365 BBLs: 0.000 MCFS: 921908 RCPTS: 1932757 GWI: 1640290 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,074,390	899,390	835,063	191,566	177,865	0.928						
2	827,280	652,280	522,092	147,506	118,065	0.800						
3	637,006	462,006	318,788	113,579	78,371	0.690						
4	490,494	315,494	187,667	87,456	52,022	0.595						
5	377,681	202,681	103,932	67,341	34,532	0.513						
6	290,814	115,814	51,197	51,853	22,922	0.442						
7	223,927	48,927	18,645	39,927	15,215	0.381						
8	172,424	0	0	30,743	0	0.329						
TOTAL:			2,037,385		498,992							
EXPENSE:	175000		175000	175000								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 264

FEB 15, 2017
01:26 PM

ACCOUNT:0520156118

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:THOMAS UNIT 2H (10272.1)

STATUS:Z API#:06118

DATE:04/01/2013 DAYS:365 BBLs: 0.000 MCPS: 762953 RCPTS: 1589368 GWI: 1358979 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	890,131	715,131	663,983	150,905	140,112	0.928						
2	685,401	510,401	408,531	116,197	93,005	0.800						
3	527,759	352,759	243,407	89,471	61,736	0.690						
4	406,374	231,374	137,630	68,893	40,980	0.595						
5	312,908	137,908	70,718	53,048	27,202	0.513						
6	240,939	65,939	29,149	40,847	18,057	0.442						
7	185,523	10,523	4,010	31,452	11,986	0.381						
8	142,853	0	0	24,218	0	0.329						

TOTAL:

1,557,427 393,078

EXPENSE: 175000 175000 175000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NRL05: 265

FEB 15, 2017
01:26 PM

ACCOUNT: 0520156120 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: THOMAS UNIT 1H (10271.1)
STATUS: Z API# 06120 DATE: 04/01/2013 DAYS: 365 BBLS: 0.000 MCPS: 610491 RCPTS: 1274419 GWI: 1089684 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	713,743	570,994	530,155	121,001	112,347	0.928						
2	549,582	406,834	325,634	93,171	74,575	0.800						
3	423,178	280,430	193,499	71,742	49,502	0.690						
4	325,847	183,099	108,914	55,241	32,859	0.595						
5	250,902	108,154	55,460	42,536	21,812	0.513						
6	193,195	50,446	22,300	32,752	14,479	0.442						
7	148,760	6,011	2,291	25,219	9,611	0.381						
8	114,545	0	0	19,419	0	0.329						
TOTAL:			1,238,253		315,185							
EXPENSE:	142749		142749	142749		142749						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 266

FEB 15, 2017
01:26 PM

ACCOUNT: 0520156121

STATUS: Z API#: 06121

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: KEMPER UNIT 2H (10270.1)

DATE: 04/01/2013 DAYS: 365 HBL: 0.000 MCFS: 623403 RCPTS: 1302342 GWI: 1105270 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	FACTOR
1	723,952	579,161	537,738	129,082	119,850	0.928						
2	557,443	412,653	330,292	99,393	79,555	0.800						
3	429,231	284,441	196,267	76,533	52,808	0.690						
4	330,508	185,718	110,471	58,930	35,054	0.595						
5	254,491	109,701	56,253	45,376	23,268	0.513						
6	195,958	51,168	22,619	34,940	15,445	0.442						
7	150,888	6,097	2,324	26,904	10,253	0.381						
8	116,184	0	0	20,716	0	0.329						

TOTAL:

1,255,964 336,234

EXPENSE: 144790 144790 144790

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 267

FEB 15, 2017
01:26 PM

ACCOUNT: 0520166119

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: STATLER UNIT 1H (10735.1)

STATUS: Z API#: 06119

DATE: 05/06/2014 DAYS: 365 BBLs: 0.000 MCFS: 1679735 RCPTS: 3589744 GMI: 3031954 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,804,013	1,629,013	1,512,501	331,885	308,148	0.928						
2	1,389,090	1,214,090	971,771	255,551	204,546	0.800						
3	1,069,599	894,599	617,281	196,775	135,776	0.690						
4	823,591	648,591	385,805	151,516	90,127	0.595						
5	634,165	459,165	235,455	116,668	59,826	0.513						
6	488,307	313,307	138,501	89,834	39,712	0.442						
7	375,997	200,997	76,597	69,172	26,361	0.381						
8	289,517	114,517	37,621	53,263	17,498	0.329						
9	222,928	47,928	13,574	41,012	11,615	0.283						
10	171,655	0	0	31,579	0	0.244						

TOTAL:

3,989,106

893,609

EXPENSE:

175000

175000

175000

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 268

FEB 15, 2017
01:26 PM

ACCOUNT:0520166134

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:STATLER UNIT 2H (10736.1)

STATUS:2 API#:06134

DATE:04/27/2014 DAYS:365 BBLs: 0.000 MCFS: 1521359 RCPTS: 3244700 GWI: 2740524 OWI: 0

SYSTEM RATES:

CAP RATE:16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED: 16.000 DECLINE RATE:

CAP RATE:

SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,630,612	1,455,612	1,351,502	299,985	278,529	0.928						
2	1,255,571	1,080,571	864,901	230,988	184,886	0.800						
3	966,790	791,790	546,342	177,861	122,726	0.690						
4	744,428	569,428	338,716	136,953	81,465	0.595						
5	573,210	398,210	204,198	105,454	54,076	0.513						
6	441,371	266,371	117,752	81,199	35,895	0.442						
7	339,856	164,856	62,824	62,524	23,827	0.381						
8	261,689	86,689	28,479	48,143	15,816	0.329						
9	201,501	26,501	7,505	37,070	10,499	0.283						
10	155,155	0	0	28,544	0	0.244						
TOTAL:			3,522,220			807,717						

EXPENSE: 175000 175000 175000

ACCOUNT: 0520166148

RESOURCE-GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:WELCH UNIT 1H (10737.1)

STATUS: Z API#: 06148

DATE:04/20/2014 DAYS:365 BBLIS: 0.000 MCFS: 1824384 RCPTS: 3913404 GWI: 3327055 OWI:

SYSTEM RATES:

CAP RATE:	16.000	DECLINE RATE:	0.590	0.230	WEILLIFE: 99	EXPENSE:	0.2	175000	175000
SYSTEM RATES:									

RATES USED:

RATES USED:	16.000	DECLINE RATE:	0.2	175000	175000
CAGE RATE:					
WEILLIIFE: 99					
EXPENSE:					

SETTLED YEARS: 2

	GAS		WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET INCOME	DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	GROSS INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME
1	1,979,598	1,804,598	1,675,527		348,878	323,925	0.928			
2	1,524,290	1,349,290	1,079,987		268,636	215,019	0.800			
3	1,173,703	998,703	683,114		206,850	142,728	0.690			
4	903,752	728,752	433,488		159,274	94,742	0.595			
5	695,889	520,889	267,106		122,841	62,889	0.513			
6	535,834	360,834	159,510		94,434	41,745	0.442			
7	412,592	237,592	90,543		72,714	27,710	0.381			
8	317,696	142,696	45,879		55,990	18,394	0.329			
9	244,626	69,626	19,719		43,112	12,210	0.283			
10	188,362	13,362	3,262		33,196	8,105	0.244			
11	145,039	0	0		25,561	0	0.210			

TOTAL:

4,465,136 947,467

EXPENSE:

175000

175000

175000

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 270

ACCOUNT:0580003141	RESOURCE:GS	OWNER:ANTERO RESOURCES	CORPORATI	LOCATION:ESTLACK S2 (11216.1)	
STATUS:A API#:03141	DATE:10/05/1982	DAYS:365	BBLs:	0.000	MCFS:
				1506	RCPTS:
				3663	GWI:
				3244	OWI:
					0
SYSTEM RATES:					
CAP RATE:	16.000	DECLINE RATE:	0.310	0.170	0.120
					WELLLIFE:99
RATES USED:					
CAP RATE:	16.000	DECLINE RATE:			EXPENSE:
				0.45	5000
					5000
SETTLED YEARS: 34					
				0.45	5000
					5000

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	2,660	1,463	344	319	0.928			
2	2,341	1,144	302	242	0.800			
3	2,060	863	266	184	0.690			
4	1,813	616	234	139	0.595			
5	1,595	398	206	106	0.513			
6	1,404	207	181	80	0.442			
7	1,235	38	160	61	0.381			
8	1,087	0	140	0	0.329			
TOTAL:		3,546		1,130				
EXPENSE:	1197	1197						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 271

ACCOUNT:0580003156

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:ESTLACK S3 (11217.1)

STATUS:A API#:03156

DATE:10/29/1982 DAYS:365 BBLS: 0.000 MCFS: 2290 RCPTS: 4474 GWI: 3962 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.310

EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

EXPENSE: 0.45 5000 5000

SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,249	1,787	1,659	420	390	0.928						
2	2,859	1,397	1,118	369	296	0.800						
3	2,516	1,054	727	325	224	0.690						
4	2,214	752	447	286	170	0.595						
5	1,948	486	249	252	129	0.513						
6	1,715	253	112	222	98	0.442						
7	1,509	47	18	195	74	0.381						
8	1,328	0	0	172	0	0.329						
TOTAL:			4,331		1,381							
EXPENSE:	1462		1462	1462								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 272

FEB 15, 2017
01:26 PM

ACCOUNT:0580003173

STATUS:A API#:03173

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:ESTLACK S4 (11218.1)
DATE:11/06/1982 DAYS:365 BELLS: 0.000 MCPS: 235 RCPTS: 1370 GWI: 1213 OWI: 0

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340 0.170 0.140 WELLLIFE:99 EXPENSE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	958	527	489	124	115	0.928						
2	824	393	314	107	85	0.800						
3	709	278	191	92	63	0.690						
4	610	178	106	79	47	0.595						
5	524	93	48	68	35	0.513						
6	451	20	9	58	26	0.442						
7	388	0	0	50	0	0.381						
TOTAL:			1,158			371						
EXPENSE:	431		431	431								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 273

FEB 15, 2017
01:26 PM

ACCOUNT: 0580003181
STATUS: A API#: 03181
DATE: 11/12/1982 DAYS: 365 BBLs: 0.000 MCFS: 3637 RCPTS: 8768 GWI: 7124 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE: 99 EXPENSE: 0.45 5000 5000
CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	5,842	3,213	2,983	1,348	1,252	0.928						
2	5,141	2,512	2,011	1,186	950	0.800						
3	4,524	1,895	1,308	1,044	720	0.690						
4	3,981	1,352	804	919	546	0.595						
5	3,503	874	448	808	415	0.513						
6	3,083	454	201	711	314	0.442						
7	2,713	84	32	626	239	0.381						
8	2,387	0	0	551	0	0.329						
TOTAL:			7,787		4,436							
EXPENSE:	2629		2629	2629								

FEB 15, 2017
01:26 PM

NR105: 274

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:PEARCY B1 (11243.1)

DATE:08/31/1966 DAYS:365
B9LS: 0.000 MCFS: 1 RCPTS: 30 GMT.
LOCATION:FEARCY BI (11243.1)

1 RCPTS:

0.000 MCF5:

5188 :

AYS:365

DATE: 08/31/1966

NOTES: 4TBY 1:00:00

0.360

DECLINE RATE:

CAP RATE: 16.000

EXPENSE:

0.130 WELLIFE: 99

0.160

0.360

THE FIRST

0
0
0
.
0
4

.
1
1
7
1

7
4

100

RATES USED:

EXPENSE:

WELLIFE: 99

ECLINE RATE:

ETHY: 000.9T

EXPENSE:

WELLIFE: 99

DECLINE RATE:

0
0
0
.
0
4

[illegible]

TOTAL:

EXPENSE: 0

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 275

ACCOUNT: 0600735002

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: HURST SR 1 (11232.1)

STATUS: A API#: 00727 DATE: 03/28/1962 DAYS: 365 BELLS: 0.000 MCFS: 53 RCPTS: 3085 GWI: 376 OWI: 1986

SYSTEM RATES: 16.000 DECLINE RATE: 0.340 0.220 0.220 WELLLIFE: 99 EXPENSE: 0.45 5000 5000

RATES USED: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 54

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	
1	252	139	129	77	72	0.928						
2	196	83	67	60	48	0.800						
3	153	40	28	47	32	0.690						
4	120	6	4	37	22	0.595						
5	93	0	0	29	0	0.513						

TOTAL:

174

EXPENSE: 113

113

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017

01:26 PM

NR105: 276

ACCOUNT:0600735003

STATUS:A API#:00728

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HURST JR 2 (11226.1)

DATE:03/02/1962 DAYS:365 BBLs: 0.000 MCFS: 57 RCPTS: 350 GWI: 0 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.340 0.220 WELLLIFE:99 EXPENSE: 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 5000 5000

SETTLED YEARS: 54

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME

TOTAL:

EXPENSE: 0

NR105: 277

797 797

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 278

ACCOUNT: 0600875002

ACCOUNT:0600875002
STATES: N ADIA 01150
RESOURCE:CS
OWNER:ANTERO RESOURCES CORPORATI
LOCATION:COX B BATTEN 1 (11194.1)

SYSTEM RATES: 3884 GWI: 3273 OWI: 0

CAP RATE:	16.000	DECLINE RATE:	0.390	0.250	0.000

[illegible]

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 34

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	2,880	1,584	538	499	0.928			
2	2,650	1,354	495	396	0.800			
3	2,438	1,142	455	314	0.690			
4	2,243	947	419	249	0.595			
5	2,063	767	385	198	0.513			
6	1,898	602	354	157	0.442			
7	1,746	450	326	124	0.381			
8	1,607	311	300	99	0.329			
9	1,478	182	276	78	0.283			
10	1,360	64	254	62	0.244			
11	1,251	0	234	0	0.210			

TOTAL:

EXPENSE: 1296

1296
1296

1296

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 279

ACCOUNT: 0600875006 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: STEWART 1 (11268.1)
STATUS: A API#: 03192 DATE: 12/18/1982 DAYS: 365 BBLs: 0.000 MCFS: 1358 RCPTS: 2834 GWI: 2310 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.390 0.260 0.080 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 34

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	2,033	1,118	461	0.928	428	0.928		
2	1,870	955	424	0.800	340	0.800		
3	1,721	806	390	0.690	269	0.690		
4	1,583	668	359	0.595	214	0.595		
5	1,456	542	330	0.513	169	0.513		
6	1,340	425	304	0.442	134	0.442		
7	1,233	318	280	0.381	107	0.381		
8	1,134	219	257	0.329	85	0.329		
9	1,043	129	237	0.283	67	0.283		
10	960	45	218	0.244	53	0.244		
11	883	0	200	0.210	0	0.210		
TOTAL:		3,462		1,866				

EXPENSE: 915 915 915

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 280

ACCOUNT:0600930002

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DOUGLAS 1A (11207.1)

STATUS:A API#:02648

DATE:01/01/1981 DAYS:365 BBLs: 0.000 MCFS: 89 RCPTS: 3158 GWI: 2591 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.350 0.200 0.100 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 35

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	2,202	1,211	1,125	482	447	0.928						
2	1,982	991	793	434	347	0.800						
3	1,784	793	547	390	269	0.690						
4	1,606	614	366	351	209	0.595						
5	1,445	454	233	316	162	0.513						
6	1,300	309	137	285	126	0.442						
7	1,170	179	68	256	98	0.381						
8	1,053	62	20	231	76	0.329						
9	948	0	0	207	0	0.283						
TOTAL:			3,289		1,734							
EXPENSE:	991		991	991								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 281

FEB 15, 2017
01:26 PM

ACCOUNT: 0600930003

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: DOUGLAS W HRS 1A (11208.1)

STATUS: A API#: 03485

DATE: 03/01/1986 DAYS: 365 BELS: 0.000 MCFS: 390 RCPTS: 5309 GWI: 4356 OWI: 0

SYSTEM RATES: 16.000 DECLINE RATE: 0.350 0.200 0.100 WELLIFE: 99 EXPENSE: 0.45 5000 5000

RATES USED: 16.000 DECLINE RATE: 0.45 5000 5000

SETTLED YEARS: 30

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,703	2,036	1,891	810	752	0.928						
2	3,332	1,666	1,334	729	584	0.800						
3	2,999	1,333	1,020	656	453	0.690						
4	2,699	1,033	614	591	351	0.595						
5	2,429	763	391	531	273	0.513						
6	2,186	520	230	478	211	0.442						
7	1,968	302	115	430	164	0.381						
8	1,771	105	34	387	127	0.329						
9	1,594	0	0	349	0	0.283						
TOTAL:			5,529		2,915							
EXPENSE:	1666		1666	1666								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 282

FEB 15, 2017
01:26 PM

ACCOUNT:0600930004

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:NICHOLSON 2A (11241.1)

STATUS:A API#:03347

DATE:01/01/1985 DAYS:365 BBLs: 0.000 MCFS: 1179 RCPTS: 4563 GWI: 3745 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.350 0.200 0.100 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 31

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	3,183	1,751	1,626	695	646	0.928						
2	2,865	1,432	1,147	626	501	0.800						
3	2,578	1,146	791	563	389	0.590						
4	2,321	888	528	507	302	0.595						
5	2,089	656	336	456	234	0.513						
6	1,880	447	198	411	181	0.442						
7	1,692	259	99	370	141	0.381						
8	1,523	90	30	333	109	0.329						
9	1,370	0	0	299	0	0.283						
TOTAL:			4,754		2,502							
EXPENSE:	1432			1432								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 284

FEB 15, 2017
01:26 PM

ACCOUNT:0600930007
STATUS:A API#:03480
DATE:09/01/1986 DAYS:365
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.350
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 30

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:WARNER 3 (11276.1)
BALS: 0.000 MCFS: 363 RCPTS: 692 GWI: 571 OWI: 0
0.200 0.100 WELLLIFE:99
EXPENSE: 0.45 5000 5000 5000
WELLLIFE:99
EXPENSE: 0.45 5000 5000 5000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	485	267	248	103	95	0.928						
2	437	218	175	93	74	0.800						
3	393	175	121	83	57	0.690						
4	354	135	81	75	45	0.595						
5	318	100	51	67	35	0.513						
6	287	68	30	61	27	0.442						
7	258	40	15	55	21	0.381						
8	232	14	5	49	16	0.329						
9	209	0	0	44	0	0.283						
TOTAL:			725			370						
EXPENSE:	218		218	218								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 285

FEB 15, 2017
01:26 PM

ACCOUNT:0600930008
STATUS:A API#:03360
DATE:01/01/1985 DAYS:365 BBLs: 0.000 MCFS: 1179 RCPTS: 4563 GWI: 3745 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.350 0.200 0.100 WELLLIFE:99 EXPENSE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 31

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	3,183	1,751	1,626	695	646	0.928						
2	2,865	1,432	1,147	626	501	0.800						
3	2,578	1,146	791	563	389	0.690						
4	2,321	888	528	507	302	0.595						
5	2,089	656	336	456	234	0.513						
6	1,880	447	198	411	181	0.442						
7	1,692	259	99	370	141	0.381						
8	1,523	90	30	333	109	0.329						
9	1,370	0	0	299	0	0.283						
TOTAL:			4,754			2,502						
EXPENSE:	1432		1432			1432						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 286

FEB 15, 2017
01:26 PM

ACCOUNT:0610003177

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:DAVIS RA 3 (11205.1)

STATUS:S API#:03177

DATE:11/21/1982 DAYS:365 BBLs: 0.000 MCFS: 702 RCPTS: OWI:

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.390 0.260 0.080 WELLLIFE:99 EXPENSE:

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99

SETTLED YEARS:

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL:

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 287

FEB 15, 2017
01:26 PM

ACCOUNT:0612122390
STATUS:A API#:02390
DATE:10/09/1918 DAYS:365 BBLs: 0.000 MCFS: 131 RCPTS: 4324 GWI: 400 OWI: 3147
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 98

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	
1	322	177	164	71	66	0.928						
2	280	135	108	62	49	0.800						
3	244	99	68	54	37	0.690						
4	212	67	40	47	28	0.595						
5	184	40	20	41	21	0.513						
6	160	16	7	35	16	0.442						
7	140	0	0	31	0	0.381						
TOTAL:			408			216						
EXPENSE:	145		145			145						

'DODD BRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 288

FEB 15, 2017
01:26 PM

ACCOUNT: 0616164485

STATUS: A API#: 04485

RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATE LOCATION: RANDOLPH FF 5 (11255.1)

DATE: 09/01/1998 DAYS: 365 BELLS: 0.000 MCFS: 1259 RCPTS: 11624 GWI: 3591 OWI: 5944

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.380 0.210 0.110 WELL LIFE: 99 EXPENSE: 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELL LIFE: 99 EXPENSE: 5000 5000 5000

SETTLED YEARS: 18

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,998	1,649	1,531	657	610	0.928						
2	2,669	1,319	1,056	585	468	0.800						
3	2,375	1,026	708	521	359	0.690						
4	2,114	765	455	463	276	0.595						
5	1,881	532	273	412	211	0.513						
6	1,674	325	144	367	162	0.442						
7	1,490	141	54	327	124	0.381						
8	1,326	0	0	291	0	0.329						
TOTAL:			4,220		2,211							
EXPENSE:	1349			1349								

FEB 15, 2017
01:26 PM

ACCOUNT:0618185431

STATUS:A API#:05431

DATE:10/01/2007 DAYS:365 BELS: 0.000 MCFS: 1132 RCPTS: 9363 GWI: 8193 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.410 0.140 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 9

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 289

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:NICHOLSON A1 (10811.1)

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	6,718	3,695	3,431	959	891	0.928						
2	5,912	2,889	2,312	844	676	0.800						
3	5,203	2,179	1,504	743	513	0.690						
4	4,578	1,555	925	654	389	0.595						
5	4,029	1,006	516	575	295	0.513						
6	3,545	522	231	506	224	0.442						
7	3,120	97	37	446	170	0.381						
8	2,746	0	0	392	0	0.329						

TOTAL:

8,955

3,157

EXPENSE:

3023

3023

3023

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 290

ACCOUNT:0620145899

RESOURCE:CS OWNER:ANTERO RESOURCES CORPORATI LOCATION:F MAXWELL 1 (10841.1)

STATUS:M API#:05899

DATE:05/10/2010 DAYS:365 RBLS: 0.000 MCFS:

8936 RCPTS: 75582 GWI: 62783 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.380 0.210 0.110 WELLLIFE:99

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS: 6

EXPENSE:

30000

EXPENSE:

30000

WELLLIFE:99

0.3

30000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	52,424	36,697	34,072	10,687	9,923	0.928						
2	46,657	30,930	24,757	9,512	7,613	0.800						
3	41,525	25,798	17,801	8,465	5,841	0.690						
4	36,957	21,230	12,638	7,534	4,482	0.595						
5	32,892	17,165	8,802	6,705	3,438	0.513						
6	29,274	13,547	5,988	5,968	2,638	0.442						
7	26,054	10,327	3,935	5,311	2,024	0.381						
8	23,188	7,461	2,451	4,727	1,553	0.329						
9	20,637	4,910	1,391	4,207	1,191	0.283						
10	18,367	2,640	645	3,744	914	0.244						
11	16,347	620	130	3,332	701	0.210						
12	14,549	0	0	2,966	0	0.181						
TOTAL:			112,600		40,319							

EXPENSE: 15727

15727

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 291

ACCOUNT: 0620146096 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: HEIRS UNIT 2H (10240.1)
STATUS: Z API#: 06096 DATE: 01/16/2013 DAYS: 365 BBLs: 84.000 MCFS: 505622 RCPTS: 1136796 GWI: 944960 OWI: 2354
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE: 99 OL EXPENSE: 0.2 5750 5750
SETTLED YEARS: 3

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	618,949	459,744	495,159	123,802	114,948	0.928	1,542	1,418	1,528	309	286	0.928
2	476,591	282,386	352,801	95,328	76,301	0.800	1,187	939	1,173	238	190	0.800
3	366,975	187,800	243,185	73,402	50,648	0.690	914	621	900	183	126	0.690
4	282,571	94,449	158,781	56,520	33,620	0.595	704	410	690	141	84	0.595
5	217,579	48,094	93,790	43,520	22,317	0.513	542	271	528	108	56	0.513
6	167,536	19,338	43,746	33,511	14,814	0.442	417	178	403	84	37	0.442
7	129,003	1,987	5,213	25,803	9,833	0.381	321	117	307	64	25	0.381
8	99,332	0	0	19,868	0	0.329	247	77	233	50	16	0.329
9							191	50	176	38	11	0.283
10							147	32	132	29	7	0.244
11							113	21	99	23	5	0.210
12							87	13	73	17	3	0.181
13							67	8	53	13	2	0.156
14							52	5	37	10	1	0.135
15							40	3	25	8	1	0.116
16							31	2	16	6	1	0.100
17							24	1	9	5	0	0.086
18							18	0	4	4	0	0.074
19							14	0	0	3	0	0.064

TOTAL: 1,073,797 322,481 4,166 851

GS EXPENSE: 123790 123790 123790
OL EXPENSE: 14 14 14

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 292

FEB 15, 2017
01:26 PM

ACCOUNT:0620146099

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:HEIRS UNIT 1H (10219.1)
STATUS:Z API#:06099 DATE:01/16/2013 DAYS:365 BBLs: 76.000 MCPS: 465183 RCPTS: 1028946 GWI: 855293 OWI: 2147
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	560,217	448,174	416,119	112,055	104,040	0.928	1,406	1,392	1,292	282	262	0.928
2	431,367	319,324	255,590	86,282	69,061	0.800	1,083	1,068	855	217	174	0.800
3	332,153	220,109	151,877	66,437	45,842	0.690	834	819	565	167	115	0.690
4	255,758	143,714	85,486	51,157	30,430	0.595	642	628	373	129	76	0.595
5	196,933	84,890	43,531	39,391	20,199	0.513	494	480	246	99	51	0.513
6	151,639	39,595	17,503	30,331	13,408	0.442	381	366	162	76	34	0.442
7	116,762	4,718	1,798	23,355	8,900	0.381	293	279	106	59	22	0.381
8	89,907	0	0	17,983	0	0.329	226	211	69	45	15	0.329
9							174	159	45	35	10	0.329
10							134	119	29	27	7	0.283
11							103	89	19	21	4	0.244
12							79	85	12	16	3	0.210
13							61	47	7	12	1	0.181
14							47	33	4	9	2	0.156
15							36	22	3	7	1	0.135
16							28	13	1	6	1	0.116
17							21	7	1	4	0	0.100
18							17	2	0	3	0	0.086
19							13	0	0	3	0	0.074
TOTAL:			971,905		291,881				3,791			777

GS EXPENSE: 112043 112043
OL EXPENSE: 14 14

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 293

ACCOUNT: 0620156076
STATUS: Z API#: 06076
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590
SETTLED YEARS: 3

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: ERWIN UNIT 1H (10212.1)
DATE: 02/01/2013 DAYS: 365 BBLs: 511,000 MCPS: 604998 RCPTS: 1393826 GWI: 1166624 OWI: 16826
BLS: 0.230 WELL LIFE: 99 EXPENSE: 0.2
GS EXPENSE: 0.2
OL EXPENSE: 0.2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	764,139	567,588	611,311	135,838	126,122	0.928	11,021	10,157	10,939	1,958	1,818	0.928
2	588,387	348,626	435,559	104,595	83,719	0.800	8,486	6,727	8,404	1,508	1,207	0.800
3	453,058	207,161	300,230	80,538	55,572	0.690	6,534	4,452	6,453	1,161	801	0.690
4	348,855	116,604	196,027	62,014	36,888	0.595	5,031	2,944	4,950	894	532	0.595
5	268,618	59,376	115,790	47,751	24,486	0.513	3,874	1,945	3,792	688	353	0.513
6	206,836	23,875	54,008	36,768	16,254	0.442	2,983	1,283	2,901	530	234	0.442
7	159,264	2,453	6,436	28,312	10,789	0.381	2,297	844	2,215	408	156	0.381
8	122,633	0	0	21,800	0	0.329	1,769	554	1,687	314	103	0.329
9				1,362	967	1,280	1,049	236	967	242	69	0.283
10				807	726	726	1,049	153	726	186	45	0.244
11				622	479	540	622	98	540	143	30	0.210
12				369	287	397	479	62	397	110	20	0.181
13				284	202	202	369	23	202	85	13	0.156
14				219	137	137	284	14	137	66	9	0.135
15				168	87	87	219	7	87	50	6	0.116
16				130	48	48	168	4	48	39	4	0.100
17				100	18	18	130	1	18	30	3	0.086
18				77	0	0	100	0	0	23	2	0.074
19							77			18	1	0.064
20										14	0	0.055

TOTAL: 1,325,683 353,831 29,906 5,406

GS EXPENSE: 152828 152828 152828
OL EXPENSE: 82 82 82

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 294

FEB 15, 2017
01:26 PM

ACCOUNT: 0620156081

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: TOM'S FORK UNIT 1H (10217.1)
STATUS: Z API#: 06081 DATE: 02/01/2013 DAYS: 365 BELLS: 880.000 MCFS: 591221 RCPTS: 1387756 GWI: 1153682 OWI: 26160
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED: CAP RATE: 16.000 DECLINE RATE: 0.590 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	755,662	604,529	561,292	133,164	123,640	0.928	17,135	17,007	15,791	3,020	2,804	0.928
2	581,860	430,727	344,759	102,536	82,071	0.800	13,194	13,066	10,458	2,325	1,861	0.800
3	448,032	296,899	204,863	78,953	54,478	0.690	10,159	10,032	6,922	1,790	1,235	0.690
4	344,985	193,852	115,310	60,794	36,162	0.595	7,823	7,695	4,577	1,379	820	0.595
5	265,638	114,506	58,717	46,811	24,004	0.513	6,023	5,896	3,023	1,061	544	0.513
6	204,541	53,409	23,610	36,045	15,934	0.442	4,638	4,511	1,994	817	361	0.442
7	157,497	6,364	2,425	27,754	10,577	0.381	3,571	3,444	1,312	629	240	0.381
8	121,273	0	0	21,371	0	0.329	2,750	2,622	862	485	159	0.329
9							2,117	1,990	564	373	106	0.283
10							1,630	1,503	367	287	70	0.244
11							1,255	1,128	237	221	47	0.210
12							967	839	152	170	31	0.181
13							744	617	96	131	21	0.156
14							573	446	60	101	14	0.135
15							441	314	36	78	9	0.116
16							340	212	21	60	6	0.100
17							262	134	12	46	4	0.086
18							201	74	6	36	3	0.074
19							155	28	2	27	2	0.064
20							119	0	0	21	0	0.055
TOTAL:			1,310,977						46,493			8,335
GS EXPENSE:	151132			151132								
OL EXPENSE:	127			127								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 295

FEB 15, 2017
01:26 PM

ACCOUNT:0620156082
STATUS:Z API#:06082
RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:TOM'S FORK UNIT 2H (10318.1)
DATE:02/01/2013 DAYS:365 BBLs: 1140.000 MCFS: 673283 RCPTS: 1542761 GWI: 1277248 OWI: 34375
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	836,597	669,278	621,409	147,427	136,883	0.928	22,516	22,365	20,765	3,968	3,684	0.928
2	644,180	476,861	381,684	113,519	90,862	0.800	17,337	17,186	13,756	3,055	2,446	0.800
3	496,019	328,699	226,805	87,410	60,313	0.690	13,350	13,199	9,107	2,353	1,623	0.690
4	381,934	214,615	127,661	67,305	40,036	0.595	10,279	10,128	6,025	1,812	1,078	0.595
5	294,089	126,770	65,006	51,825	26,575	0.513	7,915	7,764	3,981	1,395	715	0.513
6	226,449	59,129	26,139	39,905	17,641	0.442	6,094	5,944	2,628	1,074	475	0.442
7	174,366	7,046	2,685	30,727	11,710	0.381	4,693	4,542	1,731	827	315	0.381
8	134,262	0	0	23,660	0	0.329	3,613	3,463	1,138	637	209	0.329
9				2,782			2,142	2,632	1,745	490	139	0.283
10				2,142			1,992	1,992	486	378	92	0.244
11				1,650			1,499	1,499	315	291	61	0.210
12				1,270			1,120	1,120	203	224	41	0.181
13				978			827	827	129	172	27	0.156
14				753			602	602	81	133	18	0.135
15				580			429	429	50	102	12	0.116
16				447			296	296	30	79	8	0.100
17				344			193	193	17	61	5	0.086
18				265			114	114	8	47	3	0.074
19				204			53	53	3	36	2	0.064
20				157			6	6	0	28	2	0.055
21				121			0	0	0	21	0	0.048

TOTAL: 1,451,390 384,020 61,200 10,955

GS EXPENSE: 167319 167319 167319

OL EXPENSE: 151 151 151

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 296

ACCOUNT: 0620156094
STATUS: Z API#: 06094
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OIL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	790,956	587,508	632,765	144,121	133,813	0.928	11,708	10,793	11,624	2,133	1,981	0.928
2	609,036	360,861	450,845	110,973	88,824	0.800	9,015	7,149	8,931	1,643	1,315	0.800
3	468,958	214,432	310,767	85,449	58,961	0.690	6,942	4,732	6,858	1,265	873	0.690
4	361,098	120,696	202,906	65,796	39,138	0.535	5,345	3,130	5,261	974	579	0.535
5	278,045	61,460	119,854	50,663	25,979	0.513	4,116	2,068	4,032	750	385	0.513
6	214,095	24,713	55,904	39,010	17,245	0.442	3,169	1,364	3,085	577	255	0.442
7	164,853	2,539	6,662	30,038	11,447	0.381	2,440	898	2,356	445	169	0.381
8	126,937	0	0	23,129	0	0.329	1,879	590	1,795	342	112	0.329
9							1,447	386	1,363	264	75	0.283
10							1,114	252	1,030	203	50	0.244
11							858	163	774	156	33	0.210
12							661	66	577	120	22	0.181
13							509	41	425	93	14	0.156
14							392	25	308	71	10	0.135
15							302	15	218	55	6	0.116
16							232	8	148	42	4	0.100
17							179	4	95	33	3	0.086
18							138	1	54	25	2	0.074
19							106	0	22	15	1	0.064
20							82	0	0	15	0	0.055
TOTAL:		1,372,208			375,407			31,789			5,889	

GS EXPENSE: 158191 158191
OIL EXPENSE: 84 84

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 297

ACCOUNT: 0620156095
STATUS: Z API#: 06095
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590
SETTLED YEARS: 3

RESOURCE: OG
DATE: 04/01/2013 DAYS: 365
BBLs: 716.000 MCFS: 439820 RCPTS: 1026862 GWI: 848144 OWI: 20450

OWNER: ANTERO RESOURCES CORPORATI
LOCATION: RUCKMAN UNIT 2H (10227.1)

EXPENSE: 0.2
GS EXPENSE: 0.2
OL EXPENSE: 0.2

175000
175000
5750
175000
175000
5750
5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	555,534	444,427	412,641	101,225	93,985	0.928	13,395	13,259	12,311	2,441	2,266	0.928
2	427,761	316,655	253,454	77,943	62,387	0.800	10,314	10,179	8,147	1,879	1,504	0.800
3	329,376	218,269	150,608	60,016	41,412	0.690	7,942	7,806	5,385	1,447	998	0.690
4	253,620	142,513	84,772	46,213	27,489	0.595	6,115	5,980	3,557	1,114	663	0.595
5	195,287	84,180	43,167	35,584	18,247	0.513	4,709	4,573	2,345	858	440	0.513
6	150,371	39,264	17,357	27,399	12,112	0.442	3,626	3,490	1,543	661	292	0.442
7	115,786	4,679	1,783	21,098	8,040	0.381	2,792	2,656	1,012	509	194	0.381
8	89,155	0	0	16,245	0	0.329	2,150	2,014	662	392	129	0.329
9							1,655	1,520	430	302	85	0.283
10							1,275	1,139	278	232	57	0.244
11							981	846	178	179	38	0.210
12							756	620	113	138	25	0.181
13							582	446	70	106	17	0.156
14							448	313	42	62	11	0.135
15							345	210	24	63	7	0.116
16							266	130	13	48	5	0.100
17							205	69	6	37	3	0.086
18							157	22	2	29	2	0.074
19							121	0	0	22	0	0.064
TOTAL:			963,781		263,672				36,120		6,736	

GS EXPENSE: 111107
OL EXPENSE: 135

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 298

FEB 15, 2017
01:26 PM

ACCOUNT:0620156097

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:YOKE UNIT 1H (10210.1)

STATUS:Z API#:06097

DATE:03/01/2013 DAYS:365 BBLs: 105.000 MCFS: 552350 RCPTS: 1228459 GWI: 1018582 OWI: 3818

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 3

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	667,171	495,562	533,737	134,464	124,847	2,501	2,479	2,302	504	468	0.928	0.928
2	513,722	304,386	380,288	103,538	82,873	1,926	1,904	1,524	388	311	0.800	0.800
3	395,566	180,873	262,132	79,724	55,010	1,483	1,461	1,008	299	206	0.690	0.690
4	304,586	101,807	171,151	61,387	36,515	1,142	1,120	666	230	137	0.595	0.595
5	234,531	51,841	101,097	47,268	24,239	879	858	440	177	91	0.513	0.513
6	180,589	20,845	47,155	36,597	16,089	677	655	290	137	60	0.442	0.442
7	139,053	2,141	5,619	28,025	10,680	521	500	190	105	40	0.381	0.381
8	107,071	0	0	21,580	0	401	380	125	81	27	0.329	0.329
9						309	288	81	62	18	0.283	0.283
10						238	216	53	48	12	0.244	0.244
11						183	162	34	37	8	0.210	0.210
12						141	120	22	28	5	0.181	0.181
13						109	87	14	22	3	0.156	0.156
14						84	62	8	17	2	0.135	0.135
15						64	43	5	13	2	0.116	0.116
16						50	28	3	10	1	0.100	0.100
17						38	17	1	8	1	0.086	0.086
18						29	8	1	6	0	0.074	0.074
19						23	1	0	5	0	0.064	0.064
20						17	0	0	4	0	0.055	0.055
TOTAL:			1,157,457		350,253			6,767			1,392	

GS EXPENSE: 133434 133434

OL EXPENSE: 21 21

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 299

ACCOUNT:0620156098 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:YOKE UNIT 2H (10242.1) 3213
STATUS:Z API#:06098 DATE:03/01/2013 DAYS:365 BELLS: 90.000 MCFS: 612836 RCPTS: 1354546 GWI: 1124125 OWI: 3213
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	736,302	589,042	546,911	148,397	137,784	0.928	2,105	2,088	1,939	424	393	0.928
2	566,952	419,692	335,926	114,266	91,460	0.800	1,620	1,604	1,284	326	261	0.800
3	436,553	289,293	199,615	87,985	60,710	0.690	1,248	1,231	850	251	173	0.690
4	336,146	188,886	112,356	67,748	40,299	0.595	961	944	562	193	115	0.595
5	258,833	111,572	57,213	52,166	26,750	0.513	740	723	371	149	76	0.513
6	199,301	52,041	23,005	40,168	17,757	0.442	570	553	245	115	51	0.442
7	153,462	6,201	2,363	30,929	11,787	0.381	439	422	161	88	34	0.381
8	118,166	0	0	23,816	0	0.329	338	321	106	68	22	0.329
9							260	244	69	52	15	0.283
10							200	184	45	40	10	0.244
11							154	138	29	31	7	0.210
12							119	102	19	24	4	0.181
13							91	75	12	18	3	0.156
14							70	54	7	14	2	0.135
15							54	38	4	11	1	0.116
16							42	25	3	8	1	0.100
17							32	16	1	6	1	0.086
18							25	8	1	5	0	0.074
19							19	3	0	4	0	0.064
20							15	0	0	3	0	0.055

TOTAL: 1,277,390 386,547 5,706 1,170

GS EXPENSE: 147260 147260 147260

OL EXPENSE: 16 16 16

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 300

ACCOUNT: 0620156100
STATUS: Z API#: 06100
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000 4383
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	846,143	676,914	628,499	176,125	163,528	0.928	2,871	2,851	2,647	598	555	0.928
2	651,530	482,301	386,039	135,616	108,549	0.800	2,211	2,191	1,754	460	369	0.800
3	501,678	332,449	229,393	104,424	72,054	0.690	1,702	1,683	1,161	355	245	0.690
4	386,292	217,064	129,117	80,407	47,829	0.595	1,311	1,291	768	273	162	0.595
5	297,445	128,216	65,748	61,913	31,748	0.513	1,009	990	508	210	108	0.513
6	229,033	59,804	26,437	47,673	21,074	0.442	777	758	335	162	72	0.442
7	176,355	7,127	2,716	36,708	13,989	0.381	598	579	221	125	47	0.381
8	135,793	0	0	28,265	0	0.329	461	441	145	96	32	0.329
9							355	335	95	74	21	0.283
10							273	254	62	57	14	0.244
11							210	191	40	44	9	0.210
12							162	143	26	34	6	0.181
13							125	105	16	26	4	0.156
14							96	77	10	20	3	0.135
15							74	54	6	15	2	0.116
16							57	37	4	12	1	0.100
17							44	24	2	9	1	0.086
18							34	14	1	7	1	0.074
19							26	7	0	5	0	0.064
20							20	1	0	4	0	0.055
21							15	0	0	3	0	0.048

TOTAL: 1,467,950 458,771 7,802 1,651

GS EXPENSE: 169229 169229 169229
OL EXPENSE: 19 19 19

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 301

FEB 15, 2017
01:26 PM

ACCOUNT:0620155102 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:HINTERER UNIT 1H (10226.1)
STATUS:Z API#:06102 DATE:07/01/2013 DAYS:365 BHLS: 663.000 MCFS: 636612 RCPTS: 1470420 GWI: 1239420 OWI: 19653
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	811,820	649,456	603,005	136,271	126,525	0.928	12,873	12,783	11,869	2,161	2,006	0.928
2	625,101	462,737	370,380	104,929	83,986	0.800	9,912	9,822	7,862	1,664	1,332	0.800
3	481,328	318,964	220,088	80,795	55,750	0.690	7,632	7,542	5,204	1,281	884	0.690
4	370,623	208,259	123,880	62,212	37,006	0.595	5,877	5,787	3,442	986	587	0.595
5	285,379	123,015	63,081	47,904	24,564	0.513	4,525	4,435	2,274	760	390	0.513
6	219,742	57,378	25,365	36,886	16,306	0.442	3,484	3,395	1,501	585	259	0.442
7	169,201	6,837	2,606	28,402	10,824	0.381	2,683	2,593	988	450	172	0.381
8	130,285	0	0	21,870	0	0.329	2,066	1,976	649	347	114	0.329
9							1,591	1,501	425	267	76	0.283
10							1,225	1,135	277	206	50	0.244
11							943	853	180	158	33	0.210
12							726	636	115	122	22	0.181
13							559	469	73	94	15	0.156
14							431	341	46	72	10	0.135
15							332	242	28	56	6	0.116
16							255	166	17	43	4	0.100
17							197	107	9	33	3	0.086
18							151	62	5	25	2	0.074
19							117	27	2	20	1	0.064
20							90	0	0	15	0	0.055

TOTAL: 1,408,404 354,961 34,967 5,965

GS EXPENSE: 162364 162364 162364
OL EXPENSE: 90 90 90

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 302

FEB 15, 2017
01:26 PM

ACCOUNT:0620156103

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:RUCKMAN UNIT 3H (10246.1)
STATUS:Z API#:06103 DATE:04/01/2013 DAYS:365 BBLs: 804.000 MCFS: 435421 RCPTS: 1023023 GWI: 842123 OWI: 23223

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE:99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 3

OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	551,591	441,272	409,711	100,506	93,318	0.928	15,211	15,057	13,980	2,772	2,574	0.928
2	424,725	314,407	251,655	77,390	61,944	0.800	11,713	11,558	9,251	2,134	1,708	0.800
3	327,038	216,720	149,539	59,590	41,118	0.690	9,019	8,864	6,116	1,643	1,134	0.690
4	251,819	141,501	84,170	45,885	27,294	0.595	6,944	6,790	4,039	1,265	753	0.595
5	193,901	83,583	42,860	35,331	18,117	0.513	5,347	5,193	2,663	974	500	0.513
6	149,304	38,986	17,234	27,205	12,026	0.442	4,117	3,963	1,752	750	332	0.442
7	114,964	4,646	1,770	20,948	7,983	0.381	3,170	3,016	1,149	578	220	0.381
8	88,522	0	0	16,130	0	0.329	2,441	2,287	751	445	146	0.329
9							1,880	1,725	489	343	97	0.283
10							1,447	1,293	316	264	64	0.244
11							1,114	960	202	203	43	0.210
12							858	704	128	156	28	0.181
13							661	506	79	120	19	0.156
14							509	354	48	93	13	0.135
15							392	237	28	71	8	0.116
16							302	147	15	55	6	0.100
17							232	78	7	42	4	0.086
18							179	25	2	33	2	0.074
19							138	0	0	25	0	0.064
TOTAL:			956,939		261,800				41,014		7,650	

GS EXPENSE: 110318 110318

OL EXPENSE: 154 154

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 303

FEB 15, 2017
01:26 PM

ACCOUNT: 0620156104
STATUS: Z API#: 06104
DATE: 10/01/2013
DAYS: 365
BBLs: 481.000
MCPS: 598654
RCPTS: 1373060
GWI: 1159875
OWI: 15832
RESOURCE: OG
OWNER: ANTERO RESOURCES CORPORATION
LOCATION: HINTERER UNIT 2H (10248.1)
SYSTEM RATES:
CAP RATE: 16.000
DECLINE RATE: 0.590
0.290
0.230
WELL LIFE: 99
EXPENSE: 0.2
175000
175000
175000
RATES USED:
CAP RATE: 16.000
DECLINE RATE: 0.590
0.290
0.230
WELL LIFE: 99
GS EXPENSE: 0.2
175000
175000
5750
SETTLED YEARS: 3
OL EXPENSE: 0.2
5750
5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	759,718	564,305	607,775	127,526	118,405	0.928	10,370	10,293	9,556	1,740	1,616	0.928
2	584,983	346,609	433,039	98,195	78,596	0.800	7,985	7,907	6,329	1,340	1,073	0.800
3	450,437	205,963	298,493	75,610	52,172	0.690	6,148	6,071	4,189	1,032	712	0.690
4	346,836	115,929	194,893	58,220	34,631	0.595	4,734	4,657	2,770	795	473	0.595
5	267,064	59,032	115,120	44,829	22,988	0.513	3,645	3,568	1,830	612	314	0.513
6	205,639	23,737	53,696	34,519	15,259	0.442	2,807	2,729	1,207	471	208	0.442
7	158,342	2,438	6,399	26,579	10,129	0.381	2,161	2,084	794	363	138	0.381
8	121,924	0	0	20,466	0	0.329	1,664	1,587	521	279	92	0.329
9							1,281	1,204	341	215	61	0.283
10							987	909	222	166	40	0.244
11							760	682	144	128	27	0.210
12							585	508	92	98	18	0.181
13							450	373	58	76	12	0.156
14							347	269	36	58	8	0.135
15							267	190	22	45	5	0.116
16							206	128	13	35	3	0.100
17							158	81	7	27	2	0.086
18							122	45	3	20	2	0.074
19							94	16	1	16	1	0.064
20							72	0	0	12	0	0.055
TOTAL:		1,318,014			332,180				28,136		4,804	

GS EXPENSE: 151944
OL EXPENSE: 77

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 305

ACCOUNT: 0620156153

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:WEBLEY FORK UNIT 1H (10719.1)

STATDS:Z API#:06153

DATE:07/01/2013 DAYS:365 BBLS: 338.000 MCFS: 1024233 RCPTS: 2343165 GWI: 1941744 OWI: 9574

SYSTEM RATES:
CAP RATE:

EXPENSE:	0.2	175000	175000	175000

RATES USED:

RATES USED:	0.290	0.230	0.590	0.2	175000
CAP RATE:	16.000	DECLINE RATE:	0.230	WELL LIFE:	99
			GS EXPENSE:		175000

SETTLED YEARS: 3

OL EXPENSE:	0.2	5750	5750

	GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	GROSS INCOME	NET DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR
1	1,271,842	1,097,701	255,400	0.928	6,271	6,243	1,260	0.928
2	979,319	805,177	196,658	0.800	4,829	4,800	970	0.800
3	754,075	400,160	151,427	0.690	3,718	3,690	747	0.690
4	580,638	241,799	116,599	0.595	2,863	2,835	575	0.595
5	447,091	139,966	89,781	0.513	2,204	2,176	443	0.513
6	344,260	75,203	69,131	0.442	1,697	1,669	341	0.442
7	265,080	34,656	53,231	0.381	1,307	1,279	263	0.381
8	204,112	9,846	40,988	0.329	1,006	978	202	0.329
9	157,166	0	31,561	0.283	775	747	156	0.283
10					597	568	120	0.244
11					459	431	92	0.210
12					354	326	71	0.181
13					272	244	55	0.156
14					210	182	42	0.135
15					162	133	32	0.116
16					124	96	25	0.100
17					96	68	19	0.086
18					74	46	15	0.074
19					57	29	11	0.064
20					44	16	9	0.055
21					34	5	7	0.048
22					26	0	5	0.041
TOTAL								

GS EXPENSE:	174141	174141

OL EXPENSE:	28	28

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 306

ACCOUNT: 0620156156
STATUS: 2 API#: 06156
DATE: 08/01/2013 DAYS: 365 BBLs: 72.000 MCFS: 624625 RCPTS: 1380157 GWI: 1158795 OWI: 2344
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	759,011	563,779	607,209	143,167	132,928	0.928	1,535	1,524	1,415	290	269	0.928
2	584,438	346,287	432,636	110,239	88,236	0.800	1,182	1,171	937	223	178	0.800
3	450,017	205,771	298,215	84,884	58,571	0.690	910	899	620	172	118	0.690
4	346,513	115,821	194,711	65,361	38,879	0.595	701	689	410	132	79	0.595
5	266,815	58,978	115,013	50,328	25,807	0.513	540	528	271	102	52	0.513
6	205,448	23,715	53,646	38,752	17,131	0.442	416	404	179	78	35	0.442
7	158,195	2,436	6,393	29,839	11,371	0.381	320	308	118	60	23	0.381
8	121,810	0	0	22,976	0	0.329	246	235	77	46	15	0.329
9							190	178	50	36	10	0.283
10							146	134	33	28	7	0.244
11							112	101	21	21	4	0.210
12							87	75	14	16	3	0.181
13							67	55	9	13	2	0.156
14							51	40	5	10	1	0.135
15							40	28	3	7	1	0.116
16							30	19	2	6	1	0.100
17							23	12	1	4	0	0.086
18							18	6	0	3	0	0.074
19							14	2	0	3	0	0.064
20							11	0	0	2	0	0.055
TOTAL:		1,316,787			372,923				4,165		799	

GS EXPENSE: 151802 151802
OL EXPENSE: 12 12

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 307

ACCOUNT:0620156157 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:LITTLE TOM UNIT 1H (10321.1)
STATUS:Z API#:06157 DATE:07/01/2013 DAYS:365 BBLs: 363.000 MCFS: 1148768 RCPTS: 2578262 GWI: 2135561 OWI: 11610
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 3 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,398,792	1,224,739	1,137,142	280,838	260,751	0.928	7,605	7,573	7,032	1,527	1,418	0.928
2	1,077,070	903,016	722,784	216,245	173,085	0.800	5,856	5,824	4,662	1,176	941	0.800
3	829,344	655,290	452,156	166,509	114,893	0.690	4,509	4,478	3,090	905	625	0.690
4	638,595	464,541	276,326	128,212	76,265	0.595	3,472	3,441	2,047	697	415	0.595
5	491,718	317,664	162,895	98,723	50,624	0.513	2,673	2,642	1,355	537	275	0.513
6	378,623	204,569	90,432	76,017	33,604	0.442	2,058	2,027	896	413	183	0.442
7	291,540	117,486	44,772	58,533	22,306	0.381	1,585	1,554	592	318	121	0.381
8	224,486	50,432	16,568	45,070	14,807	0.329	1,220	1,189	391	245	80	0.329
9	172,854	0	0	34,704	0	0.283	940	909	257	189	53	0.283
10				724	692		557	526	169	145	35	0.244
11				429	398		429	398	111	112	24	0.210
12				330	299		330	299	72	86	16	0.181
13				254	223		254	223	47	66	10	0.156
14				196	165		196	165	30	51	7	0.135
15				151	120		151	120	19	39	5	0.116
16				116	85		116	85	12	30	3	0.100
17				89	58		89	58	7	23	2	0.086
18				69	38		69	38	4	18	1	0.074
19				53	22		53	22	2	14	1	0.064
20				41	10		41	10	1	11	1	0.055
21				31	0		31	0	0	8	0	0.048
22				24	0		24	0	0	6	0	0.041
23					0			0	0	5	0	0.035

TOTAL: 2,903,075 746,335 20,797 4,216

GS EXPENSE: 174054 174054 174054

OL EXPENSE: 31 31 31

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 308

ACCOUNT:0620156173

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:RIGHT HAND UNIT 1H (10730.1)
DATE:08/01/2013 DAYS:365 BBLs: 245.000 MCFS: 733514 RCPTS: 1662069 GWI: 1322132 OWI: 7986

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 3

OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	865,996	643,246	692,797	216,122	200,665	0.928	5,231	4,825	5,196	1,305	1,212	0.928
2	666,817	395,097	493,618	166,414	133,200	0.800	4,028	3,196	3,993	1,005	805	0.800
3	513,449	234,776	340,250	128,139	88,417	0.590	3,101	2,116	3,067	774	534	0.690
4	395,356	132,147	222,157	98,667	58,691	0.595	2,388	1,400	2,354	596	355	0.595
5	304,424	67,291	131,225	75,174	38,958	0.513	1,839	925	1,804	459	235	0.513
6	234,407	27,057	61,207	58,500	25,860	0.442	1,416	611	1,381	353	156	0.442
7	180,493	2,780	7,294	45,045	17,166	0.381	1,090	402	1,056	272	104	0.381
8	138,980	0	0	34,684	0	0.329	839	264	805	210	69	0.329
9				646	612		498	173	463	161	46	
10				383	113		295	73	261	124	30	
11				227	349		193	47	193	96	20	
12				175	30		140	30	140	74	13	
13				135	19		104	12	100	44	9	
14				104	7		69	7	69	34	6	
15				80	45		45	4	45	26	3	
16				62	27		27	2	27	20	2	
17				47	13		13	1	13	15	1	
18				36	2		2	0	2	12	1	
19				28	0		0	0	0	9	1	
20										7	0	
21												
TOTAL:		1,502,393			562,957			14,221			3,604	
GS EXPENSE:	173199	173199		173199								
OL EXPENSE:	35	35		35								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 309

ACCOUNT: 0620166165 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: SCHULTE UNIT 1H (10323.1) 47953
STATUS: Z API#: 06165 DATE: 01/13/2014 DAYS: 365 BELLS: 1638.000 MCFS: 1057376 RCPTS: 2500326 GWI: 2045112 OWI: 47953
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,216,842	1,045,851	971,049	236,769	219,835	0.928	28,532	28,400	26,369	5,551	5,154	0.928
2	936,968	765,977	613,097	182,312	145,925	0.800	21,970	21,838	17,479	4,275	3,421	0.800
3	721,465	550,475	379,833	140,380	96,864	0.690	16,917	16,785	11,582	3,251	2,271	0.690
4	555,528	384,538	228,737	108,093	64,298	0.595	13,026	12,894	7,670	2,534	1,508	0.595
5	427,757	256,766	131,667	83,231	42,680	0.513	10,030	9,898	5,076	1,951	1,001	0.513
6	329,373	158,382	70,014	64,088	28,331	0.442	7,723	7,591	3,356	1,503	664	0.442
7	253,617	82,626	31,488	49,348	18,806	0.381	5,947	5,815	2,216	1,157	441	0.381
8	195,285	24,294	7,981	37,998	12,483	0.329	4,579	4,447	1,461	891	293	0.329
9	150,370	0	0	29,258	0	0.283	3,526	3,394	961	686	194	0.283
10							2,715	2,583	631	528	129	0.244
11							2,090	1,959	412	407	86	0.210
12							1,610	1,478	268	313	57	0.181
13							1,239	1,108	173	241	38	0.156
14							954	823	111	186	25	0.135
15							735	603	70	143	17	0.116
16							566	434	44	110	11	0.100
17							436	304	26	85	7	0.086
18							335	204	15	65	5	0.074
19							258	127	8	50	3	0.064
20							199	67	4	39	2	0.055
21							153	21	1	30	1	0.048
22							118	0	0	23	0	0.041
TOTAL:			2,433,865		629,220				77,933		15,328	

GS EXPENSE: 170991 170991
OL EXPENSE: 132 132

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 310

ACCOUNT:0620166174 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:RIGHT HAND UNIT 2H (10731.1) 3614
 STATUS:Z API#:06174 DATE:02/18/2014 DAYS:365 RBLS: 119.000 MCPS: 890597 RCPTS: 2020026 GWI: 1612970 OWI: 3614
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	959,717	785,108	174,609	239,511	222,381	17,130	2,150	1,985	165	537	498	49
2	738,982	564,373	174,609	184,424	147,615	36,809	1,656	1,315	341	413	331	80
3	569,016	394,408	174,609	142,006	97,986	44,020	1,275	871	404	318	220	90
4	438,143	263,534	174,609	109,345	65,042	44,303	982	576	406	245	146	99
5	337,370	162,761	174,609	84,196	43,175	41,021	756	381	375	189	97	188
6	259,775	85,166	174,609	64,831	28,659	36,172	582	252	330	145	64	171
7	200,027	25,418	174,609	49,920	19,024	30,896	448	166	282	112	43	139
8	154,020	0	154,020	38,438	0	154,020	345	109	236	86	28	158
9							266	72	194	66	19	175
10							205	47	158	51	12	146
11							158	30	128	39	12	116
12							121	20	101	30	8	93
13							93	13	80	23	4	76
14							72	8	64	18	2	62
15							55	5	50	14	2	48
16							43	3	40	11	1	39
17							33	2	31	8	1	23
18							25	1	24	6	0	18
19							19	0	19	5	0	14
20							15	0	15	4	0	11
21							12	0	12	3	0	9
TOTAL:	1,740,387	1,740,387	0	623,880	623,880	0	5,855	5,855	0	1,482	1,482	0

GS EXPENSE: 174609 174609 174609

OL EXPENSE: 13 13 13

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 312

FEB 15, 2017
01:26 PM

ACCOUNT:0620166240

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:CROSS UNIT 2H (10363.1)

STATUS:Z API#:06240

DATE:07/09/2014 DAYS:365 BBLs: 30.000 MCFS: 973141 RCPTS: 2171248 GWI: 1826176 OWI: 838

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,086,575	911,655	846,451	204,725	190,083	0.928	499	496	461	94	87	0.928
2	836,663	661,743	529,666	157,638	126,176	0.800	384	381	305	72	58	0.800
3	644,230	469,310	323,828	121,382	83,754	0.690	296	293	202	56	38	0.690
4	496,057	321,137	191,024	93,464	55,596	0.595	228	225	134	43	26	0.595
5	381,964	207,044	106,170	71,967	36,904	0.513	175	173	89	33	17	0.513
6	294,112	119,193	52,690	55,415	24,497	0.442	135	132	58	25	11	0.442
7	226,456	51,547	19,644	42,669	16,261	0.381	104	101	39	20	7	0.381
8	174,379	0	0	32,855	0	0.329	80	77	25	15	5	0.329
9				62			62	59	17	12	3	0.283
10				47			47	45	11	9	2	0.244
11				37			37	34	7	7	1	0.210
12				28			28	25	5	5	1	0.181
13				22			22	19	3	4	1	0.156
14				17			17	14	2	3	0	0.135
15				13			13	10	1	2	0	0.116
16				10			10	7	1	2	0	0.100
17				8			8	5	0	1	0	0.086
18				6			6	3	0	1	0	0.074
19				5			5	2	0	1	0	0.064
20				3			3	1	0	1	0	0.055
21				3			3	0	0	1	0	0.048
22				2			2	0	0	0	0	0.041
TOTAL:			2,069,474		533,269				1,360		260	

GS EXPENSE: 174920 174920 174920

OL EXPENSE: 3 3 3

'DODDLEDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 313

FEB 15, 2017
01:26 PM

ACCOUNT: 0620166243
STATUS: Z API#: 06243
DATE: 07/26/2014
DAYS: 365
BELS: 37.000
MCPS: 1285596
RCPTS: 2853772
GWI: 2349201
OWI: 998
RESOURCE: OG
OWNER: ANTERO RESOURCES CORPORATI
LOCATION: DOROTHY UNIT 1H (10360.1)
SYSTEM RATES:
CAP RATE: 16.000
DECLINE RATE: 0.590
0.290
0.230
WELLLIFE: 99
EXPENSE: 0.2
175000
175000
175000
RATES USED:
CAP RATE: 16.000
DECLINE RATE: 0.590
0.290
0.230
WELLLIFE: 99
GS EXPENSE: 0.2
175000
175000
175000
SETTLED YEARS: 2
OL EXPENSE: 0.2
5750
5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,397,775	1,135,387	1,222,849	299,499	278,078	0.928	594	591	549	127	118	0.928
2	1,076,286	721,459	901,361	230,614	184,586	0.800	457	455	364	98	78	0.800
3	828,741	451,138	653,815	177,573	122,527	0.690	352	350	241	75	52	0.690
4	638,130	275,531	463,205	136,731	81,333	0.595	271	269	160	58	35	0.595
5	491,360	162,264	316,435	105,283	53,988	0.513	209	206	106	45	23	0.513
6	378,347	89,925	203,432	81,068	35,837	0.442	161	158	70	34	15	0.442
7	291,328	44,359	116,402	62,422	23,788	0.381	124	121	46	27	10	0.381
8	224,322	16,228	49,396	48,065	15,790	0.329	95	93	31	20	7	0.329
9	172,728	0	0	37,010	0	0.283	73	71	20	16	4	0.283
10				57			54	54	13	12	3	0.244
11				44			41	41	9	9	2	0.210
12				34			31	31	6	7	1	0.181
13				26			23	23	4	6	1	0.156
14				20			17	17	2	4	1	0.135
15				15			13	13	1	3	0	0.116
16				12			9	9	1	3	0	0.100
17				7			7	7	1	2	0	0.086
18				5			5	5	0	1	0	0.074
19				4			3	3	0	1	0	0.064
20				3			2	2	0	1	0	0.055
21				2			1	1	0	1	0	0.048
22				2			0	0	0	1	0	0.041
23				2			0	0	0	0	0	0.035
TOTAL:		2,896,291			795,926				1,624		352	

GS EXPENSE: 174926
OL EXPENSE: 2

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 314

ACCOUNT:0620166244
 STATUS:Z API#:06244
 DATE:07/19/2014 DAYS:365
 OWNER:ANTERO RESOURCES CORPORATI LOCATION:DOROTHY UNIT 2H (10361.1)
 BBLs: 29.000 MCPS: 946788 RCPTS: 2167949 GWI: 1784613 OWI: 782
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,061,845	823,486	886,921	227,520	211,247	0.928	465	430	463	100	93	0.928
2	817,620	514,422	642,697	175,190	140,224	0.800	358	285	356	77	62	0.800
3	629,568	313,709	454,644	134,896	93,080	0.690	276	189	273	59	41	0.690
4	484,767	184,306	309,844	103,870	61,786	0.595	212	125	210	46	27	0.595
5	373,271	101,710	198,347	79,980	41,013	0.513	164	83	161	35	18	0.513
6	287,418	49,730	112,495	61,585	27,224	0.442	126	55	123	27	12	0.442
7	221,312	17,678	46,389	47,420	18,071	0.381	97	36	94	21	8	0.381
8	170,410	0	0	36,514	0	0.329	75	24	72	16	5	0.329
9							57	16	55	12	3	0.283
10							44	10	42	10	2	0.244
11							34	7	32	7	2	0.210
12							26	4	24	6	1	0.181
13							20	3	18	4	1	0.156
14							16	2	13	3	0	0.135
15							12	1	9	3	0	0.116
16							9	1	7	2	0	0.100
17							7	0	5	2	0	0.086
18							5	0	3	1	0	0.074
19							4	0	2	1	0	0.064
20							3	0	1	1	0	0.055
21							2	0	0	1	0	0.048
TOTAL:		2,005,041			592,645			1,269			276	

GS EXPENSE: 174923 174923
 OL EXPENSE: 3 3

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 315

FEB 15, 2017
01:26 PM

ACCOUNT: 0620166261
 STATUS: 2 API#: 06261
 RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: JOSIE UNIT 2H (10381.1)
 DATE: 07/01/2014 DAYS: 365 BBLs: 124.000 MCFS: 1176992 RCPTS: 2657081 GWI: 2242703 OWI: 3711
 SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,334,408	1,159,697	1,076,752	243,943	226,495	0.928	2,208	2,199	2,041	404	375	0.928
2	1,027,494	852,783	682,577	187,836	150,346	0.800	1,700	1,691	1,353	311	249	0.800
3	791,171	616,460	425,363	144,634	99,799	0.690	1,309	1,300	897	240	165	0.690
4	609,201	434,491	258,451	111,368	66,246	0.595	1,008	999	594	184	110	0.595
5	469,085	294,374	150,952	85,753	43,973	0.513	776	767	393	142	73	0.513
6	361,196	186,485	82,437	66,030	29,189	0.442	598	588	260	109	48	0.442
7	278,121	103,410	39,408	50,843	19,376	0.381	460	451	172	84	32	0.381
8	214,153	39,442	12,958	39,149	12,861	0.329	354	345	113	65	21	0.329
9	164,898	0	0	30,145	0	0.283	273	263	75	50	14	0.283
10				210			210	201	49	38	9	0.244
11				162			162	152	32	30	6	0.210
12				125			125	115	21	23	4	0.181
13				96			96	86	14	18	3	0.156
14				74			74	64	9	14	2	0.135
15				57			57	47	6	10	1	0.116
16				44			44	34	3	8	1	0.100
17				34			34	24	2	6	1	0.086
18				26			26	16	1	5	0	0.074
19				20			20	10	0	4	0	0.064
20				15			15	6	0	3	0	0.055
21				12			12	2	0	2	0	0.048
22				9			9	0	0	2	0	0.041
TOTAL:			2,728,898		648,285				6,036		1,116	

GS EXPENSE: 174711 174711
 OL EXPENSE: 9 9

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR10S: 316

ACCOUNT:06201662365
STATUS:2 API#:06265
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 3522
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2
OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	1,278,560	1,103,846	1,024,896	233,733	217,016	0.928	2,096	1,937	1,886	383	356	0.928
2	984,491	809,777	648,155	179,975	144,054	0.800	1,614	1,284	1,233	295	236	0.800
3	758,058	583,344	402,513	138,580	95,522	0.690	1,242	1,091	947	227	187	0.690
4	583,705	408,991	243,283	106,707	63,473	0.595	957	827	727	175	104	0.595
5	449,453	274,739	140,883	82,164	42,133	0.513	737	637	558	135	69	0.513
6	346,079	171,365	75,754	63,267	27,968	0.442	567	477	427	104	46	0.442
7	266,480	91,767	34,971	48,715	18,565	0.381	437	361	327	80	30	0.381
8	205,190	30,476	10,012	37,511	12,323	0.329	336	259	250	61	20	0.329
9	157,996	0	0	28,883	0	0.283	259	199	190	47	13	0.283
10							199	154	144	36	9	0.244
11							154	118	109	28	6	0.210
12							118	109	82	22	4	0.181
13							109	82	61	17	3	0.156
14							82	61	45	13	2	0.135
15							70	54	45	10	1	0.116
16							54	42	32	8	1	0.100
17							42	32	23	6	1	0.086
18							32	25	15	5	0	0.074
19							25	19	10	3	0	0.064
20							19	15	5	2	0	0.055
21							15	11	2	2	0	0.048
22							11	9	0	2	0	0.041
TOTAL:				2,580,466	621,153		5,726			1,058		

GS EXPENSE: 174714 174714
OL EXPENSE: 9 9

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 317

ACCOUNT:0620166295
STATUS:2 API#:06295
DATE:07/03/2014 DAYS:365
RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:SWISHER UNIT 1K (10417.1)
BBLS: 235.000 MCFS: 1328993 RCPTS: 3014893 GWI: 2506719 OWI: 7067
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,491,498	1,316,990	1,222,795	297,321	276,056	0.928	4,205	4,189	3,889	838	778	0.928
2	1,148,453	973,945	779,557	228,937	183,244	0.800	3,238	3,222	2,579	645	516	0.800
3	884,309	709,801	489,769	176,282	121,636	0.690	2,493	2,477	1,709	497	343	0.690
4	680,918	506,410	301,231	135,737	80,741	0.595	1,920	1,903	1,132	382	228	0.595
5	524,307	349,799	179,373	104,517	53,595	0.513	1,478	1,462	1,750	294	151	0.513
6	403,716	229,208	101,324	80,478	35,576	0.442	1,138	1,122	496	227	100	0.442
7	310,862	136,354	51,962	61,968	23,615	0.381	876	860	328	175	67	0.381
8	239,363	64,855	21,306	47,716	15,676	0.329	675	659	216	134	44	0.329
9	184,310	9,802	2,776	36,741	10,405	0.283	520	503	143	104	29	0.283
10	141,919	0	0	28,291	0	0.244	400	384	94	80	19	0.244
11							308	292	61	61	13	0.210
12							237	221	40	47	9	0.181
13							183	166	26	36	6	0.156
14							141	124	17	28	4	0.135
15							108	92	11	22	3	0.116
16							83	67	7	17	2	0.100
17							64	48	4	13	1	0.086
18							49	33	2	10	1	0.074
19							38	22	1	8	0	0.064
20							29	13	1	6	0	0.055
21							23	6	0	4	0	0.048
22							17	1	0	3	0	0.041
23							13	0	0	3	0	0.035

TOTAL: 3,150,093 800,544 11,506 2,313

GS EXPENSE: 174508 174508 174508

OL EXPENSE: 16 16 16

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 318

ACCOUNT:0620166296

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:SWISHER UNIT 2H (10428.1)

STATUS:Z API#:06296

DATE:07/03/2014 DAYS:365 BELLS: 237.000 MCFS: 1431781 RCPTS: 3228645 GWI: 2684879 OWI: 7130

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,597,503	1,422,967	1,321,192	318,452	295,676	0.928	4,242	4,227	3,925	846	786	0.928
2	1,230,077	1,055,541	844,866	245,208	196,267	0.800	3,267	3,251	2,602	651	521	0.800
3	947,160	772,623	533,117	188,810	130,281	0.690	2,515	2,500	1,725	502	346	0.690
4	729,313	554,776	330,001	145,384	86,480	0.595	1,937	1,922	1,143	386	230	0.595
5	561,571	387,034	198,467	111,946	57,405	0.513	1,491	1,476	757	297	153	0.513
6	432,410	257,873	113,995	86,198	38,105	0.442	1,148	1,133	501	229	101	0.442
7	332,955	158,419	60,371	66,373	25,294	0.381	884	869	331	176	67	0.381
8	256,376	81,839	26,886	51,107	16,790	0.329	681	666	219	136	45	0.329
9	197,409	22,873	6,478	39,352	11,145	0.283	524	509	144	105	30	0.283
10	152,005	0	0	30,301	0	0.244	404	388	95	81	20	0.244
11							311	296	62	62	13	0.210
12							239	224	41	48	9	0.181
13							184	169	26	37	6	0.156
14							142	127	17	28	4	0.135
15							109	94	11	22	3	0.116
16							84	69	7	17	2	0.100
17							65	50	4	13	1	0.086
18							50	35	3	10	1	0.074
19							38	23	1	8	0	0.064
20							30	14	1	6	0	0.055
21							23	8	0	5	0	0.048
22							18	2	0	3	0	0.041
23							14	0	0	3	0	0.035
TOTAL:			3,435,373		857,441				11,616		2,336	

GS EXPENSE: 174536 174536 174536

OL EXPENSE: 15 15 15

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 319

ACCOUNT: 0620166311
STATUS: Z API#: 06311
DATE: 11/26/2014 DAYS: 365
BELS: 287,000 MCFS: 1809774 RCPTS: 4123649 GWI: 3415001 OWI: 8808
RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: NICKERS UNIT 2H (10432.1)
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,031,926	1,857,376	1,724,531	415,334	385,628	0.928	5,241	5,226	4,852	1,071	994	0.928
2	1,564,583	1,390,033	1,112,598	319,807	255,977	0.800	4,035	4,021	3,218	825	660	0.800
3	1,204,729	1,030,179	710,833	246,251	169,916	0.690	3,107	3,092	2,134	635	438	0.690
4	927,641	753,091	447,966	189,614	112,789	0.595	2,393	2,378	1,414	489	291	0.595
5	714,284	539,734	276,770	146,002	74,868	0.513	1,842	1,827	937	376	193	0.513
6	549,998	375,449	165,971	112,422	49,697	0.442	1,419	1,404	621	290	128	0.442
7	423,499	248,949	94,871	86,565	32,989	0.381	1,092	1,077	411	223	85	0.381
8	326,094	151,544	49,786	66,655	21,898	0.329	841	826	271	172	56	0.329
9	251,092	76,543	21,678	51,324	14,536	0.283	648	633	179	132	37	0.283
10	193,341	18,791	4,588	39,520	9,649	0.244	499	484	118	102	25	0.244
11	148,873	0	0	30,430	0	0.210	384	369	78	78	17	0.210
12							296	281	51	60	11	0.181
13							228	213	33	47	7	0.156
14							175	161	22	36	5	0.135
15							135	120	14	28	3	0.116
16							104	89	9	21	2	0.100
17							80	65	6	16	1	0.086
18							62	47	3	13	1	0.074
19							47	33	2	10	1	0.064
20							37	22	1	7	0	0.055
21							28	13	1	6	0	0.048
22							22	7	0	4	0	0.041
23							17	2	0	3	0	0.035
24							13	0	0	3	0	0.031
TOTAL:			4,609,589		1,127,946				14,376		2,957	

GS EXPENSE: 174550

OL EXPENSE: 15

174550

15

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 320

FEB 15, 2017
01:26 PM

ACCOUNT:0620166313
STATUS:Z API#:06313
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	831,884	665,507	617,908	206,029	191,294	0.928	650	646	600	161	150	0.928
2	640,551	474,174	379,534	158,643	126,979	0.800	501	496	397	124	99	0.800
3	493,224	326,847	225,527	122,155	84,288	0.690	386	381	263	96	66	0.690
4	379,782	213,406	126,941	94,059	55,950	0.595	297	292	174	74	44	0.595
5	292,432	126,056	64,640	72,426	37,139	0.513	229	224	115	57	29	0.513
6	225,173	58,796	25,991	55,768	24,653	0.442	176	172	76	44	19	0.442
7	173,383	7,006	2,670	42,941	16,364	0.381	136	131	50	34	13	0.381
8	133,505	0	0	33,065	0	0.329	104	100	33	26	9	0.329
9							80	76	21	20	6	0.283
10							62	57	14	15	4	0.244
11							48	43	9	12	2	0.210
12							37	32	6	9	2	0.181
13							28	24	4	7	1	0.156
14							22	17	2	5	1	0.135
15							17	12	1	4	0	0.116
16							13	8	1	3	0	0.100
17							10	5	0	2	0	0.086
18							8	3	0	2	0	0.074
19							6	1	0	1	0	0.064
20							5	0	0	1	0	0.055
21							3	0	0	1	0	0.048

TOTAL: 1,443,212 536,667 1,767 445

GS EXPENSE: 166377 166377
OL EXPENSE: 4 4

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 321

ACCOUNT: 0620166320
STATUS: Z API#: 06320
SYSTEM RATES: 16.000 DECLINE RATE: 0.590
CAP RATE: 16.000 DECLINE RATE: 0.590
RATES USED: 16.000 DECLINE RATE: 0.590
CAP RATE: 16.000 DECLINE RATE: 0.590
SETTLED YEARS: 2

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: PROUDFOOT UNIT 2H (10494.1)
DATE: 12/06/2014 DAYS: 365 BBLs: 45,000 MCFS: 919288 RCPTS: 2048965 GWI: 1641029 OWI: 1209
EXPENSE: 0.2
GS EXPENSE: 0.2
OL EXPENSE: 0.2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	976,412	801,541	744,212	241,824	224,528	0.928	719	664	715	179	166	0.928
2	751,837	576,956	461,810	186,205	149,040	0.800	554	440	550	137	110	0.800
3	578,915	404,044	278,794	143,377	98,932	0.690	427	291	422	106	73	0.690
4	445,764	270,893	161,137	110,401	65,670	0.595	328	193	324	81	48	0.595
5	343,239	168,357	86,337	85,009	43,591	0.513	253	129	249	63	32	0.513
6	264,294	89,423	39,530	55,457	28,936	0.442	195	84	190	48	21	0.442
7	203,506	28,635	10,912	50,402	19,207	0.381	150	56	146	37	14	0.381
8	156,700	0	0	38,809	0	0.329	115	37	111	29	9	0.329
9							89	24	85	22	6	0.283
10							68	16	64	17	4	0.244
11							53	10	48	13	3	0.210
12							41	7	36	10	2	0.181
13							31	4	27	8	1	0.156
14							24	3	20	6	1	0.135
15							19	2	14	5	1	0.116
16							14	1	10	4	0	0.100
17							11	0	7	3	0	0.086
18							8	0	4	2	0	0.074
19							7	0	2	1	0	0.064
20							5	0	1	1	0	0.055
21							4	0	0	1	0	0.048

TOTAL:

1,782,733

1,959

493

GS EXPENSE: 174871 174871 174871

OL EXPENSE: 4 4 4

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 322

ACCOUNT:0620166321
STATUS:2 API#:06321
SYSTEM RATES:
CAP RATE:16.000 DECLINE RATE:0.590 0.290 0.230 WELLLIFE:99 EXPENSE:0.2 175000 175000 175000
CAP RATE:16.000 DECLINE RATE:0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE:0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE:0.2 5750 5750 5750

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:SIBLEY UNIT 1H (10420.1)
DATE:11/29/2014 DAYS:365 BBLs: 39.000 MCFS: 750720 RCPTS: 1674101 GWI: 1322772 OWI: 1043

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	787,049	584,606	629,639	208,256	193,361	621	616	572	164	152	0.928	0.928
2	606,028	359,079	448,618	160,357	128,352	478	473	379	126	101	0.800	0.800
3	466,642	213,373	309,232	123,475	85,199	368	363	251	97	67	0.690	0.690
4	359,314	120,100	201,904	95,076	56,554	283	279	166	75	45	0.595	0.595
5	276,672	61,156	119,262	73,208	37,540	218	214	110	58	30	0.513	0.513
6	213,037	24,591	55,627	56,370	24,919	168	163	72	44	20	0.442	0.442
7	164,039	2,526	6,629	43,405	16,541	129	125	48	34	13	0.381	0.381
8	126,310	0	0	33,422	0	100	95	31	26	9	0.329	0.329
9						77	72	20	20	6	0.283	0.283
10						59	55	13	16	4	0.244	0.244
11						45	41	9	12	3	0.210	0.210
12						35	30	6	9	2	0.181	0.181
13						27	22	4	7	1	0.156	0.156
14						21	16	2	5	1	0.135	0.135
15						16	11	1	4	0	0.116	0.116
16						12	8	1	3	0	0.100	0.100
17						9	5	0	3	0	0.086	0.086
18						7	3	0	2	0	0.074	0.074
19						6	1	0	1	0	0.064	0.064
20						4	0	0	1	0	0.055	0.055
TOTAL:		1,365,430			542,466			1,684				453

GS EXPENSE: 157410 157410 157410
OL EXPENSE: 5 5 5

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 323

ACCOUNT:0620166333 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:NICKERS UNIT 3H (10431.1) 9248
STATUS:Z API#:06333 DATE:11/15/2014 DAYS:365 BBLs: 299.000 MCFS: 1784350 RCPTS: 4132898 GWI: 3422241 OWI: 175000
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,036,233	1,861,705	1,728,550	416,214	386,445	0.928	5,503	5,487	5,095	1,125	1,044	0.928
2	1,567,900	1,393,371	1,115,270	320,485	256,519	0.800	4,237	4,221	3,379	866	693	0.800
3	1,207,283	1,032,754	712,610	246,773	170,276	0.690	3,262	3,247	2,240	667	460	0.690
4	929,608	755,079	449,148	190,015	113,028	0.595	2,512	2,497	1,485	513	305	0.595
5	715,798	541,270	277,557	146,312	75,027	0.513	1,934	1,919	984	395	203	0.513
6	551,164	376,636	166,496	112,660	49,803	0.442	1,489	1,474	652	304	135	0.442
7	424,397	249,868	95,221	86,748	33,059	0.381	1,147	1,131	431	234	89	0.381
8	326,785	152,257	50,020	66,796	21,944	0.329	883	868	285	180	59	0.329
9	251,625	77,096	21,834	51,433	14,566	0.283	680	664	188	139	39	0.283
10	193,751	19,223	4,693	39,603	9,669	0.244	524	508	124	107	26	0.244
11	149,188	0	0	30,495	0	0.210	403	388	82	82	17	0.210
12							310	295	54	63	12	0.181
13							239	224	35	49	8	0.156
14							184	169	23	38	5	0.135
15							142	126	15	29	3	0.116
16							109	94	9	22	2	0.100
17							84	69	6	17	1	0.086
18							65	49	4	13	1	0.074
19							50	34	2	10	1	0.064
20							38	23	1	8	0	0.055
21							30	14	1	6	0	0.048
22							23	7	0	5	0	0.041
23							18	2	0	4	0	0.035
24							13	0	0	3	0	0.031

TOTAL: 4,621,400 1,130,336 15,094 3,105

GS EXPENSE: 174528 174528 174528

OL EXPENSE: 15 15 15

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 324

ACCOUNT: 0620166334

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATE LOCATION: GEARHART UNIT 2H (10460.1)

STATUS: Z API#: 06334

DATE: 11/08/2014 DAYS: 365 BELS: 325.000 MCPS: 1732435 RCPTS: 4096803 GWI: 3483011 OWI: 10458

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,072,392	1,897,915	1,762,171	357,909	332,310	0.928	6,223	6,205	5,761	1,075	998	0.928
2	1,595,741	1,421,265	1,137,596	275,590	220,585	0.800	4,791	4,774	3,821	827	662	0.800
3	1,228,721	1,054,245	727,438	212,204	146,423	0.690	3,689	3,672	2,534	637	440	0.690
4	946,115	771,639	458,999	163,397	97,195	0.595	2,841	2,824	1,680	491	292	0.595
5	728,509	554,033	284,102	125,816	64,517	0.513	2,187	2,170	1,113	378	194	0.513
6	560,952	386,476	170,845	96,878	42,826	0.442	1,684	1,667	737	291	129	0.442
7	431,933	257,457	98,113	74,596	28,428	0.381	1,297	1,280	488	224	85	0.381
8	332,588	158,112	51,943	57,439	18,870	0.329	999	981	322	172	57	0.329
9	256,093	81,617	23,115	44,228	12,526	0.283	769	752	213	133	38	0.283
10	197,192	22,715	5,546	34,056	8,315	0.244	592	575	140	102	25	0.244
11	151,838	0	0	26,223	0	0.210	456	439	92	79	17	0.210
12							351	334	61	61	11	0.181
13							270	253	40	47	7	0.156
14							208	191	26	36	5	0.135
15							160	143	17	28	3	0.116
16							123	106	11	21	2	0.100
17							95	78	7	16	1	0.086
18							73	56	4	13	1	0.074
19							56	39	3	10	1	0.064
20							43	26	1	7	0	0.055
21							33	16	1	6	0	0.048
22							26	9	0	4	0	0.041
23							20	3	0	3	0	0.035
24							15	0	0	3	0	0.031
TOTAL:			4,719,868		971,994				17,071		2,967	

GS EXPENSE: 174476 174476 174476

OL EXPENSE: 17 17 17

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 325

ACCOUNT:0620166358

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:GRIMSDALE UNIT 2H (10418.1)

STATUS:Z API#:06358 DATE:02/24/2014 DAYS:365 BEHS: 111.000 MCFS: 860242 RCPTS: 1905716 GWI: 1521761 OWI: 3343

SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

GAS WORKING INTEREST				GAS ROYALTY INTEREST				OIL WORKING INTEREST				OIL ROYALTY INTEREST			
GROSS INCOME	NET INCOME	DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME			GROSS INCOME	NET INCOME	DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME		
1 905,448	730,831	678,560		225,968	209,806	0.928		1,989	1,976	1,835		496	461	0.928	
2 697,195	522,578	418,277		173,995	139,268	0.800		1,532	1,519	1,216		382	306	0.800	
3 536,840	362,224	249,938		133,976	92,445	0.690		1,179	1,167	805		294	203	0.690	
4 413,367	238,750	142,017		103,162	61,364	0.595		908	895	533		227	135	0.595	
5 318,292	143,676	73,675		79,435	40,733	0.513		699	687	352		174	89	0.513	
6 245,085	70,469	31,151		61,165	27,038	0.442		538	526	232		134	59	0.442	
7 188,716	14,099	5,373		47,097	17,948	0.381		415	402	153		103	39	0.381	
8 145,311	0	0		36,265	0	0.329		319	307	101		80	26	0.329	
9								246	233	66		61	17	0.283	
10								189	177	43		47	12	0.244	
11								146	133	28		36	8	0.210	
12								112	100	18		28	5	0.181	
13								86	74	12		22	3	0.156	
14								67	54	7		17	2	0.135	
15								51	39	4		13	1	0.116	
16								39	27	3		10	1	0.100	
17								30	18	2		8	1	0.086	
18								23	11	1		6	0	0.074	
19								18	5	0		4	0	0.064	
20								14	1	0		3	0	0.055	
21								11	0	0		3	0	0.048	

TOTAL: 1,598,992 588,603 5,411 1,370

GS EXPENSE: 174616 174616 174616

OL EXPENSE: 13 13 13

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 326

ACCOUNT:0620166362

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:FARROW UNIT 2H (10433.1)

STATUS:Z API#:06362

DATE:11/26/2014 DAYS:365 BBLs: 258.000 MCFS: 1523766 RCPTS: 3496316 GWI: 2953146 OWI: 7885

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,757,122	1,582,588	1,469,396	317,646	294,927	0.928	4,692	4,676	4,342	848	788	0.928
2	1,352,984	1,178,450	943,244	244,588	195,771	0.800	3,613	3,597	2,879	653	523	0.800
3	1,041,798	867,264	598,420	188,332	129,951	0.690	2,782	2,766	1,909	503	347	0.690
4	802,184	627,650	373,349	145,016	86,261	0.595	2,142	2,127	1,265	387	230	0.595
5	617,682	443,148	227,241	111,662	57,259	0.513	1,649	1,634	838	298	153	0.513
6	475,615	301,081	133,096	85,980	38,008	0.442	1,270	1,255	555	230	102	0.442
7	366,224	191,690	73,050	66,205	25,230	0.381	978	963	367	177	67	0.381
8	281,992	107,458	35,302	50,978	16,747	0.329	753	738	242	136	45	0.329
9	217,134	42,600	12,065	39,253	11,117	0.283	580	564	160	105	30	0.283
10	167,193	0	0	30,225	0	0.244	446	431	105	81	20	0.244
11							344	328	69	62	13	0.210
12							265	249	45	48	9	0.181
13							204	188	29	37	6	0.156
14							157	142	19	28	4	0.135
15							121	106	12	22	3	0.116
16							93	78	8	17	2	0.100
17							72	56	5	13	1	0.086
18							55	40	3	10	1	0.074
19							42	27	2	8	0	0.064
20							33	17	1	6	0	0.055
21							25	10	0	5	0	0.048
22							19	4	0	4	0	0.041
23							15	0	0	3	0	0.035
TOTAL:			3,865,164		855,270				12,856		2,343	

GS EXPENSE: 174534

174534

OL EXPENSE: 15

15

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 327

FEB 15, 2017
01:26 PM

ACCOUNT:0620166366
RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:FARROW UNIT 3H (10434.1)
STATUS:Z API#:06366 DATE:11/08/2014 DAYS:365 BBLS: 271.000 MCFS: 1569007 RCPTS: 3612413 GWI: 3051080 OWI: 8274
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,815,393	1,640,865	1,523,506	328,180	304,708	0.928	4,923	4,907	4,556	890	826	0.928
2	1,397,852	1,223,326	979,163	252,699	203,263	0.800	3,791	3,775	3,022	685	549	0.800
3	1,076,346	901,820	622,264	194,578	134,261	0.690	2,919	2,903	2,003	528	364	0.690
4	828,787	654,260	389,177	149,825	89,121	0.595	2,248	2,232	1,328	405	242	0.595
5	638,166	463,639	237,749	115,365	59,158	0.513	1,731	1,715	879	313	160	0.513
6	491,388	316,861	140,072	88,831	39,269	0.442	1,333	1,317	582	241	107	0.442
7	378,368	203,842	77,681	68,400	26,066	0.381	1,026	1,011	385	186	71	0.381
8	291,344	116,817	38,377	52,668	17,303	0.329	790	775	254	143	47	0.329
9	224,335	49,808	14,106	40,554	11,485	0.283	608	593	168	110	31	0.283
10	172,738	0	0	31,227	0	0.244	468	453	111	85	21	0.244
11							361	345	73	65	14	0.210
12							278	262	48	50	9	0.181
13							214	198	31	39	6	0.156
14							165	149	20	30	4	0.135
15							127	111	13	23	3	0.116
16							98	82	8	18	2	0.100
17							75	60	5	14	1	0.086
18							58	42	3	10	1	0.074
19							45	29	2	8	1	0.064
20							34	19	1	6	0	0.055
21							26	11	1	5	0	0.048
22							20	5	0	4	0	0.041
23							16	0	0	3	0	0.035
24							12	0	0	2	0	0.031
TOTAL:			4,022,095		883,633				13,493		2,458	

GS EXPENSE: 174527 174527

OL EXPENSE: 16 16

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 328

FEB 15, 2017
01:26 PM

ACCOUNT:0620166404
STATUS:Z API#:06404
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:PENNINGTON SOUTH UNIT 1H (10582.1
DATE:12/25/2014 DAYS:365 BHLS: 300.000 MCFS: 2042371 RCPTS: 4791890 GWI: 4004997 OWI: 9753

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	2,382,973	2,050,447	2,208,398	461,275	428,283	0.928	5,803	5,375	5,789	1,123	1,043	0.928
2	1,834,889	1,328,934	1,660,315	355,182	284,291	0.800	4,468	3,565	4,454	865	692	0.800
3	1,412,865	854,431	1,238,290	273,490	188,711	0.690	3,441	2,364	3,427	566	460	0.690
4	1,087,906	543,282	913,331	210,587	125,265	0.595	2,649	1,568	2,635	513	305	0.595
5	837,688	340,037	663,113	162,152	83,150	0.513	2,040	1,039	2,026	395	202	0.513
6	645,019	207,965	470,445	124,857	55,194	0.442	1,571	688	1,557	304	134	0.442
7	496,665	122,744	322,090	96,140	36,638	0.381	1,209	456	1,196	234	89	0.381
8	382,432	68,286	207,857	74,028	24,320	0.329	931	301	917	180	59	0.329
9	294,473	33,956	119,898	57,001	16,143	0.283	717	199	703	139	39	0.283
10	226,744	12,737	52,169	43,891	10,716	0.244	425	131	411	107	26	0.244
11	174,593	4	18	33,796	7,113	0.210	327	87	313	82	17	0.210
12	134,436	0	0	26,023	0	0.181	252	57	238	63	11	0.181
13							194	37	180	49	8	0.156
14							149	24	135	38	5	0.135
15							115	16	101	29	3	0.116
16							89	10	75	22	2	0.100
17							68	6	54	17	1	0.086
18							53	4	39	13	1	0.074
19							40	2	26	10	1	0.064
20							31	1	17	8	0	0.055
21							24	0	10	6	0	0.048
22							18	0	5	5	0	0.041
23							14	0	0	4	0	0.035
24							11	0	0	3	0	0.031
25								0	0	2	0	0.026

TOTAL:

5,562,822 1,259,824 15,934 3,102

GS EXPENSE: 174575 174575 174575

OL EXPENSE: 14 14 14

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 329

ACCOUNT:0620166419

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:DUFFLEMEYER UNIT 2H (10450.1)

STATUS:Z API#:06419

DATE:12/27/2014 DAYS:365 BELLS: 105.000 MCFS: 1471452 RCPTS: 3412456 GWI: 2792802 OWI: 2703

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	1,661,717	1,486,886	1,380,540	366,731	340,502	0.928	1,608	1,603	1,488	355	329	0.928
2	1,279,522	1,104,691	884,207	282,383	226,022	0.800	1,238	1,233	987	273	219	0.800
3	985,232	810,401	559,184	217,435	150,032	0.690	954	948	654	210	145	0.690
4	758,629	583,798	347,264	167,425	99,590	0.595	734	729	433	162	96	0.595
5	584,144	409,313	209,891	128,917	66,107	0.513	565	560	287	125	64	0.513
6	449,791	274,960	121,549	99,266	43,882	0.442	435	430	190	96	42	0.442
7	346,339	171,508	65,359	76,435	29,128	0.381	335	330	126	74	28	0.381
8	266,681	91,850	30,175	58,855	19,335	0.329	258	253	83	57	19	0.329
9	205,344	30,514	8,642	45,318	12,835	0.283	199	193	55	44	12	0.283
10	158,115	0	0	34,895	0	0.244	153	147	36	34	8	0.244
11							118	112	24	26	5	0.210
12							91	85	15	20	4	0.181
13							70	64	10	15	2	0.156
14							54	48	7	12	2	0.135
15							41	36	4	9	1	0.116
16							32	26	3	7	1	0.100
17							25	19	2	5	0	0.086
18							19	13	1	4	0	0.074
19							15	9	1	3	0	0.064
20							11	6	0	2	0	0.055
21							9	3	0	2	0	0.048
22							7	1	0	1	0	0.041
23							5	0	0	1	0	0.035
TOTAL:			3,606,811		987,433				4,405		979	

GS EXPENSE: 174831 174831

OL EXPENSE: 6 6

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 330

ACCOUNT:0620166429
RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:ASENA UNIT 2H (10571.1)
STATUS:Z API#:06429 DATE:12/20/2014 DAYS:365 BBLIS: 143.000 MCFS: 1847747 RCPTS: 4246666 GWI: 3453906 OWI: 3697
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	2,055,074	1,880,261	1,745,779	468,991	435,447	0.928	2,200	2,194	2,037	502	465	0.928
2	1,582,407	1,407,594	1,126,654	361,123	289,047	0.800	1,694	1,688	1,351	386	309	0.800
3	1,218,453	1,043,641	720,121	278,065	191,867	0.690	1,304	1,298	896	297	205	0.690
4	938,209	763,396	454,096	214,110	127,360	0.595	1,004	998	594	229	136	0.595
5	722,421	547,608	280,807	164,865	84,541	0.513	773	767	393	176	90	0.513
6	556,264	381,451	168,624	125,946	56,118	0.442	595	589	260	136	60	0.442
7	428,323	253,511	96,609	97,748	37,250	0.381	458	452	172	105	40	0.381
8	329,809	154,996	50,920	75,266	24,727	0.329	353	347	114	80	26	0.329
9	253,953	79,140	22,413	57,955	16,413	0.283	272	266	75	62	18	0.283
10	195,544	20,731	5,061	44,625	10,895	0.244	209	203	50	48	12	0.244
11	150,569	0	0	34,361	0	0.210	161	155	33	37	8	0.210
12							124	118	21	28	5	0.181
13							96	89	14	22	3	0.156
14							74	67	9	17	2	0.135
15							57	51	6	13	2	0.116
16							44	37	4	10	1	0.100
17							34	27	2	8	1	0.086
18							26	20	1	6	0	0.074
19							20	14	1	5	0	0.064
20							15	9	1	3	0	0.055
21							12	6	0	3	0	0.048
22							9	3	0	2	0	0.041
23							7	1	0	2	0	0.035
24							5	0	0	1	0	0.031
TOTAL:			4,671,085		1,273,665				6,034		1,385	

GS EXPENSE: 174813 174813
OL EXPENSE: 6 6

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Yr 1)												
DECLINE RATES		2015	GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME			
YR 1	50%	WRK INT	\$	3,130,210	\$	5,082	YR1	\$	429,508	\$	1,348	
YR 2	28%	ROY INT	\$	657,488	\$	1,078	YR2	\$	174,234	\$	284	
YR3+	23%							\$	813,534	\$	368	
								\$	148,933	\$	210	
\$ 1,368,283		172017 WORKING INTEREST					172017 ROYALTY INTEREST					\$ 443,187
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC			
1	\$ 830,856	\$ 188,373	\$ 644,482	0.928477	\$ 618,958	1	\$ 174,518	0.928477	\$ 162,038			
2	\$ 614,833	\$ 188,373	\$ 448,459	0.800411	\$ 358,952	2	\$ 129,143	0.800411	\$ 103,368			
3	\$ 473,421	\$ 188,373	\$ 307,048	0.690009	\$ 211,868	3	\$ 99,440	0.690009	\$ 68,616			
4	\$ 384,534	\$ 188,373	\$ 196,161	0.594836	\$ 117,873	4	\$ 78,589	0.594836	\$ 45,548			
5	\$ 280,691	\$ 188,373	\$ 114,318	0.512789	\$ 58,621	5	\$ 58,958	0.512789	\$ 30,233			
6	\$ 216,132	\$ 188,373	\$ 49,759	0.442080	\$ 21,996	6	\$ 45,398	0.442080	\$ 20,089			
7	\$ 168,422	\$ 188,373	\$ 49	0.381088	\$ 18	7	\$ 34,956	0.381088	\$ 13,321			
8	\$ 128,145	\$ 188,373	\$ -	0.328522	\$ -	8	\$ 26,918	0.328522	\$ -			
9	\$ 98,672	\$ 188,373	\$ -	0.283209	\$ -	9	\$ 20,728	0.283209	\$ -			
10	\$ 75,977	\$ 188,373	\$ -	0.224148	\$ -	10	\$ 16,959	0.224148	\$ -			
11	\$ 58,502	\$ 188,373	\$ -	0.210470	\$ -	11	\$ 12,288	0.210470	\$ -			
12	\$ 45,047	\$ 188,373	\$ -	0.181440	\$ -	12	\$ 9,482	0.181440	\$ -			
13	\$ 34,886	\$ 188,373	\$ -	0.158414	\$ -	13	\$ 7,288	0.158414	\$ -			
14	\$ 26,708	\$ 188,373	\$ -	0.134840	\$ -	14	\$ 5,810	0.134840	\$ -			
15	\$ 20,685	\$ 188,373	\$ -	0.118241	\$ -	15	\$ 4,320	0.118241	\$ -			
16	\$ 15,835	\$ 188,373	\$ -	0.100208	\$ -	16	\$ 3,328	0.100208	\$ -			
17	\$ 12,193	\$ 188,373	\$ -	0.086388	\$ -	17	\$ 2,681	0.086388	\$ -			
18	\$ 9,389	\$ 188,373	\$ -	0.074471	\$ -	18	\$ 1,972	0.074471	\$ -			
19	\$ 7,229	\$ 188,373	\$ -	0.064199	\$ -	19	\$ 1,518	0.064199	\$ -			
20	\$ 5,587	\$ 188,373	\$ -	0.055344	\$ -	20	\$ 1,189	0.055344	\$ -			
21	\$ 4,286	\$ 188,373	\$ -	0.047710	\$ -	21	\$ 900	0.047710	\$ -			
22	\$ 3,300	\$ 188,373	\$ -	0.041129	\$ -	22	\$ 693	0.041129	\$ -			
23	\$ 2,541	\$ 188,373	\$ -	0.035458	\$ -	23	\$ 534	0.035458	\$ -			
24	\$ 1,957	\$ 188,373	\$ -	0.030588	\$ -	24	\$ 411	0.030588	\$ -			
25	\$ 1,507	\$ 188,373	\$ -	0.026350	\$ -	25	\$ 318	0.026350	\$ -			
26	\$ 1,180	\$ 188,373	\$ -	0.022715	\$ -	26	\$ 244	0.022715	\$ -			
27	\$ 893	\$ 188,373	\$ -	0.019582	\$ -	27	\$ 186	0.019582	\$ -			
28	\$ 688	\$ 188,373	\$ -	0.016881	\$ -	28	\$ 144	0.016881	\$ -			
29	\$ 530	\$ 188,373	\$ -	0.014553	\$ -	29	\$ 111	0.014553	\$ -			
30	\$ 408	\$ 188,373	\$ -	0.012548	\$ -	30	\$ 86	0.012548	\$ -			
31	\$ 314	\$ 188,373	\$ -	0.010815	\$ -	31	\$ 68	0.010815	\$ -			
32	\$ 242	\$ 188,373	\$ -	0.009323	\$ -	32	\$ 51	0.009323	\$ -			
33	\$ 186	\$ 188,373	\$ -	0.008037	\$ -	33	\$ 39	0.008037	\$ -			
34	\$ 143	\$ 188,373	\$ -	0.006929	\$ -	34	\$ 30	0.006929	\$ -			
35	\$ 110	\$ 188,373	\$ -	0.005973	\$ -	35	\$ 23	0.005973	\$ -			
36	\$ 85	\$ 188,373	\$ -	0.005149	\$ -	36	\$ 18	0.005149	\$ -			
37	\$ 65	\$ 188,373	\$ -	0.004439	\$ -	37	\$ 14	0.004439	\$ -			
38	\$ 50	\$ 188,373	\$ -	0.003827	\$ -	38	\$ 11	0.003827	\$ -			
39	\$ 39	\$ 188,373	\$ -	0.003299	\$ -	39	\$ 8	0.003299	\$ -			
40	\$ 30	\$ 188,373	\$ -	0.002844	\$ -	40	\$ 6	0.002844	\$ -			
WORKING INTEREST APPRAISAL			\$ 1,368,283			ROYALTY INTEREST APPRAISAL			\$ 443,187			

09-062017 6403

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 333

ACCOUNT:0620176420 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:HONEY UNIT 1H (10605.1) 41
STATUS:Z API#:06420 DATE:01/01/2015 DAYS:365 BELS: 1.000 MCFS: 1824672 RCPTS: 4200611 GWI: 3446569 OWI: 41
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 1 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	913,341	685,534	738,343	199,808	185,517	0.928	11	11	11	2	2	0.928
2	675,872	400,905	500,874	147,858	118,347	0.800	8	8	8	2	2	0.800
3	520,422	238,345	345,424	113,851	78,558	0.690	6	6	6	1	1	0.690
4	400,725	134,270	225,727	87,665	52,146	0.595	5	5	5	1	1	0.595
5	308,558	68,488	133,560	67,502	34,614	0.513	4	4	4	1	1	0.513
6	237,590	27,669	62,592	51,977	22,977	0.442	3	3	3	1	1	0.442
7	182,944	3,028	7,946	40,022	15,252	0.381	2	2	2	0	0	0.381
8	140,867	0	0	30,817	0	0.329	2	2	2	0	0	0.329
9							1	1	1	0	0	0.283
10							1	1	1	0	0	0.244
11							1	1	1	0	0	0.210
12							1	1	1	0	0	0.181
13							0	0	0	0	0	0.156
14							0	0	0	0	0	0.135
15							0	0	0	0	0	0.116
16							0	0	0	0	0	0.100
17							0	0	0	0	0	0.086
18							0	0	0	0	0	0.074
19							0	0	0	0	0	0.064
20							0	0	0	0	0	0.055
21							0	0	0	0	0	0.048
TOTAL:		1,558,241			507,412							6

GS EXPENSE: 174998 174998 174998
OL EXPENSE: 0 0 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 334

ACCOUNT: 06600000714 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: HURST JR 1 (11225.1)
STATUS: A API#: 00714 DATE: 02/16/1962 DAYS: 365 BBLs: 0.000 MCFS: 57 RCPTS: 350 GWI: 0 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340 0.220 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 54

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 335

ACCOUNT:06600000745
STATUS:A API#:00745
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 54

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HURST JR 3 (11227.1)

DATE:03/20/1962 DAYS:365 BBLs: 0.000 MCFS: 57 RCPTS: 350 GWI: 0 OWI: 0

GAS WORKING INTEREST	GAS ROYALTY INTEREST	OIL WORKING INTEREST	OIL ROYALTY INTEREST
GROSS	GROSS	GROSS	GROSS
DISCOUNT	DISCOUNT	NET DISCOUNT	DISCOUNT
INCOME	INCOME	INCOME	INCOME
INCOME FACTOR	INCOME FACTOR	INCOME	INCOME FACTOR

TOTAL: 0
EXPENSE: 0

NR105: 336

ACCOUNT: 0660000783

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HURST JR 4 (11228.1)

STATUS: A API#: 00783

DATE:06/13/1962 DAYS:365 BBLs: 0.000 MCFS: 57 RCPTS: 350 GWI: 0

SYSTEM RATES:

CAP RATE:	16.000	DECLINE RATE:	0.340	0.220	WELLIFE:99	EXPENSE:	0.45	5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 16.000
WEYTLIFE.CO WEYTLIFE.CO
EVIDENCE EVIDENCE

SETTLED YEARS: 54

GAS WORKING INTEREST	GAS ROYALTY INTEREST	OIL WORKING INTEREST	OIL ROYALTY INTEREST
GROSS	GROSS	GROSS	GROSS
DISCOUNT	DISCOUNT	NET	DISCOUNT
INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----
	INCOME FACTOR		INCOME FACTOR

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 337

ACCOUNT:0660000784 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HURST JR 5 (11229.1)
STATUS:A API#:00784 DATE:05/23/1962 DAYS:365 BBLs: 0.000 MCPS: 57 RCPTS: 350 GWI: 0 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340 0.220 WELLLIFE:99 EXPENSE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 54

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 338

ACCOUNT:06600000788
RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HURST JR 9 (11231.1)
STATUS:A API#:00788 DATE:09/15/1962 DAYS:365 BBL: 0.000 MCFS: 57 RCPTS: 350 GWI: 0 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.340 0.220 WELLLIFE:99 EXPENSE: 5000 5000
CAP RATE: 16.000 DECLINE RATE: 0.45 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.45 0.45 5000 5000
SETTLED YEARS: 54

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL: -----
EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 339

ACCOUNT: 0660000840 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: HURST SR 3 (11233.1)
STATUS: A API#: 00840 DATE: 08/20/1962 DAYS: 365 BBLs: 0.000 MCFS: 53 RCPTS: 491 GWI: 0 OWI: 0
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.340 0.220 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
RATES USED: CAP RATE: 16.000 DECLINE RATE: 0.45 WELLLIFE: 99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 54

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL: -----

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 340

ACCOUNT:0660001145

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HURST JR 6 (11230.1)

STATUS:A API#:01145

DATE:07/21/1964 DAYS:365 BBLs: 0.000 MCFS: 57 RCPTS: 350 GWI: 0 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.340 0.220 0.220 WELLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 52

GAS WORKING INTEREST		GAS ROYALTY INTEREST		OIL WORKING INTEREST		OIL ROYALTY INTEREST	
GROSS	DISCOUNT	GROSS	DISCOUNT	GROSS	DISCOUNT	GROSS	DISCOUNT
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 341

ACCOUNT:0660003336 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HURST SR #4
STATUS:A API#:03336 DATE:07/18/1984 DAYS:365 BELLS: MCFS: 53 RCPTS: 93 GWI: 0 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 32

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL: -----
EXPENSE: 0

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 342

ACCOUNT: 0660003474

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HURST SR 5 (11235.1)

STATUS: A	API#: 03474	DATE: 11/01/1985	DAYS: 365	BBLs:	53 RCPTS:	0.000 MCFS:	3085 GWI:	376 OWI:	1986

SYSTEM RATES:

CAP RATE:	0.220	DECLINE RATE:	0.45
EXPENSE:	0.220	WELL LIFE:	99
			5000
			5000

RATES USED:

16.000	DECLINE RATE:	WELL LIFE: 99	EXPENSE:	0.45	5000	5000
CAP RATE:						

SETTLED YEARS: 31

	GAS WORKING INTEREST	GAS ROYALTY INTEREST	OIL WORKING INTEREST	OIL ROYALTY INTEREST
	GROSS INCOME	DISCOUNT INCOME	GROSS INCOME	GROSS DISCOUNT INCOME
	NET INCOME	FACOR	NET INCOME	FACOR
1	252	129	77	0.928
2	196	67	60	0.800
3	153	28	47	0.590
4	120	4	37	0.595
5	93	0	29	0.513
TOTAL:		226		174

EXPENSE:	113	113

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 343

ACCOUNT:0660003477

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:PEARCY B3 (11244.1)

STATUS:A API#:03477

DATE:12/06/1985 DAYS:365 BELS: 0.000 MCPS: 1 RCPTS: 30 GWI: 0 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.340 0.220 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 31

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
TOTAL:			-----			-----			-----		
EXPENSE:			0								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 344

ACCOUNT:0680001386

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:RANDOLPH AF 3 (11253.1)

STATUS:A API#:01386

DATE:07/01/1966 DAYS:365 BBLs: 0.000 MCFS: 131 RCPTS: 1729 GWI: 400 OWI: 1018

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 50

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	322	177	164	71	66	0.928						
2	280	135	108	62	49	0.800						
3	244	99	68	54	37	0.690						
4	212	67	40	47	28	0.595						
5	184	40	20	41	21	0.513						
6	160	16	7	35	16	0.442						
7	140	0	0	31	0	0.381						

TOTAL:

408

216

EXPENSE: 145

145

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 345

ACCOUNT:0680003134 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:MAXWELL 3 (11237.1)
STATUS:A API#:03134 DATE:08/28/1982 DAYS:365 BELS: 0.000 MCPS: 248 RCPTS: 699 GWI: 586 OWI: 0
SYSTEM RATES: 16.000 DECLINE RATE: 0.390 0.220 0.100 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
	INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
1	498	274	254	96	89	0.928						
2	448	224	179	85	69	0.800						
3	403	179	124	78	54	0.690						
4	363	139	83	70	42	0.595						
5	327	103	53	63	32	0.513						
6	294	70	31	57	25	0.442						
7	265	41	15	51	19	0.381						
8	238	14	5	46	15	0.329						
9	214	0	0	41	0	0.283						
TOTAL:			744			346						
EXPENSE:	224		224			224						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 345

ACCOUNT:0680003139 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:BARTON 2 (11181.1)
STATUS:A API#:03139 DATE:09/29/1982 DAYS:365 BBLs: 0.000 MCFS: 1 RCPTS: 448 GWI: 0 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.420 0.220 0.090 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 34

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL:

EXPENSE: 0

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 347

ACCOUNT:0680003174 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:COX B BATTEN 2 (11193.1)
 STATUS:A API#:03174 DATE:11/26/1982 DAYS:365 BRLS: 0.000 MCPS: 1465 RCPTS: 5627 GWI: 4742 OWI: 0
SYSTEM RATES:
 CAP RATE: 16.000 DECLINE RATE: 0.350 0.200 0.100 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
 CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
 SETTLED YEARS: 34

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
1	4,031	2,217	2,058	752	698	0.928						
2	3,628	1,814	1,452	677	542	0.800						
3	3,265	1,451	1,001	609	420	0.690						
4	2,938	1,125	669	548	326	0.595						
5	2,645	831	426	494	253	0.513						
6	2,380	566	250	444	196	0.442						
7	2,142	328	125	400	152	0.381						
8	1,928	114	37	360	118	0.329						
9	1,735	0	0	324	0	0.283						
TOTAL:			6,019			2,707						
EXPENSE:	1814			1814								

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 348

ACCOUNT:0690004481

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:RANDOLPH AF 1 (11251.1)

STATUS:A API#:04481

DATE:07/01/1918 DAYS:365 BELLS: 0.000 MCPS: 505 RCPTS: 3953 GWI: 654 OWI: 2589

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLEO YEARS: 98

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	526	290	269	115	107	0.928						
2	458	221	177	100	80	0.800						
3	398	162	111	87	60	0.690						
4	347	110	65	76	45	0.595						
5	302	65	33	66	34	0.513						
6	262	25	11	57	25	0.442						
7	228	0	0	50	0	0.381						

TOTAL:

667

351

EXPENSE: 237

237

237

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 349

ACCOUNT:0700950001

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:HAESLEY D-11 1 (11327.1)

STATUS:A API#:03614

DATE:12/20/1987 DAYS:365 BELS: 0.000 MCFS: 5561 RCPTS: 14041 GWI: 11409 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.380 0.210 0.110 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000

SETTLED YEARS: 29

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	
1	9,527	5,240	4,865	2,198	2,041	0.928						
2	8,479	4,192	3,355	1,956	1,566	0.800						
3	7,546	3,259	2,249	1,741	1,201	0.690						
4	6,716	2,429	1,445	1,549	922	0.595						
5	5,977	1,690	867	1,379	707	0.513						
6	5,320	1,033	457	1,227	543	0.442						
7	4,734	448	171	1,092	416	0.381						
8	4,214	0	0	972	0	0.329						

TOTAL:

13,407

7,395

EXPENSE: 4287

4287

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 350

ACCOUNT:0800735003
STATUS:A API#:01058
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340 0.170 0.140 WELLLIFE:99 EXPENSE: 0.45 5000 5000
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 103

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:FREEMAN JOSEPH 1 (11222.1)
DATE:05/24/1913 DAYS:365 BBLS: 0.000 MCFS: 2239 RCPTS: 8283 GWI: 7248 OWI: 0

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	5,726	3,149	2,924	818	759	0.928						
2	4,924	2,348	1,879	703	563	0.800						
3	4,235	1,658	1,144	605	417	0.690						
4	3,642	1,065	634	520	309	0.595						
5	3,132	555	285	447	229	0.513						
6	2,694	117	52	385	170	0.442						
7	2,317	0	0	331	0	0.381						
TOTAL:			6,918		2,448							
EXPENSE:	2577		2577	2577								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 351

ACCOUNT:0800735005 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:SPENCER SILAS 2 (11267.11)
STATUS:A API#:03434 DATE:07/08/1985 DAYS:365 BBLs: 0.000 MCFS: 908 RCPTS: 4174 GWI: 3652 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.390 0.350 0.120 WELLLIFE:99 EXPENSE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000
SETTLED YEARS: 31

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,995	1,647	1,529	428	397	0.928						
2	2,635	1,288	1,031	377	301	0.800						
3	2,319	971	670	331	229	0.690						
4	2,041	693	412	292	174	0.595						
5	1,796	488	230	257	132	0.513						
6	1,580	233	103	226	100	0.442						
7	1,391	43	16	199	76	0.381						
8	1,224	0	0	175	0	0.329						
TOTAL:			3,992			1,408						
EXPENSE:	1348		1348	1348								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 352

ACCOUNT:0800735007 RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:SMITH WF 4 (11262.1)
STATUS:A API#:03344 DATE:09/12/1984 DAYS:365 BELLS: 0.000 MCFS: 1029 RCPTS: 4331 GWI: 3801 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340 0.170 0.140 WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000 5000
SETTLED YEARS: 32

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME FACTOR	
1	3,003	1,652		419	389	0.928						
2	2,582	1,231		360	288	0.800						
3	2,221	870		310	214	0.690						
4	1,910	559		266	158	0.595						
5	1,643	291		229	117	0.513						
6	1,413	61		197	87	0.442						
7	1,215	0		169	0	0.381						
TOTAL:		3,628			1,254							
EXPENSE:	1351			1351								

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 353

ACCOUNT:0800735008
STATUS:A API#:03726
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 27

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:SMITH WF 5 (11263.1)
DATE:08/10/1989 DAYS:365 BELS: 0.000 MCFS: 1441 RCPTS: 4968 GWI: 4360 OMI: 0
EXPENSE: 0.45 5000 5000
EXPENSE: 0.45 5000 5000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,444	1,894	1,759	480	446	0.928						
2	2,962	1,412	1,130	413	331	0.800						
3	2,547	997	688	355	245	0.690						
4	2,191	641	381	306	182	0.595						
5	1,884	334	171	263	135	0.513						
6	1,620	70	31	226	100	0.442						
7	1,393	0	0	194	0	0.381						
TOTAL:			4,161			1,438						
EXPENSE:	1550			1550								

FEB 15, 2017
01:26 PM

ACCOUNT:0800735009

STATUS:S API#:03735

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.440

RATES USED:

CAP RATE: 16.000 DECLINE RATE:

SETTLED YEARS:

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:MAXWELL HEIRS 2 (11238.1)

DATE:08/03/1989 DAYS:365 BELS: 0.000 MCFS: 778 RCPTS:

GWI: OWI:

EXPENSE:

0.100 WELLLIFE:99

WELLLIFE:99

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	GROSS	GROSS	DISCOUNT	GROSS	DISCOUNT	GROSS	DISCOUNT
INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME	INCOME
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TOTAL:

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 355

ACCOUNT:0810003790
STATUS:A API#:03790
DATE:04/06/1990 DAYS:365
BRLS: 0.000 MCFS: 1006 RCPTS: 5845 GWI: 5130 OWI: 0
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340 0.170 0.140 WELLLIFE:99 EXPENSE: 0.45 5000 5000
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 26

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	4,053	2,229	2,070	565	524	0.928						
2	3,485	1,662	1,330	486	389	0.800						
3	2,997	1,174	810	418	288	0.690						
4	2,578	754	449	359	214	0.595						
5	2,217	393	202	309	158	0.513						
6	1,907	83	37	266	117	0.442						
7	1,640	0	0	229	0	0.381						

TOTAL:

4,896
1,691

EXPENSE: 1824 1824 1824

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 356

ACCOUNT:0816165096

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION: FREEMAN P16 (11221.1)

STATUS:A API#:05096

DATE:10/06/2005 DAYS:365 BELS: 0.000 MCFS: 959 RCPTS: 5897 GWI: 4998 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.340 0.170 0.140 WELLLIFE:99 EXPENSE: 5000 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 5000 5000 5000

SETTLED YEARS: 11

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	3,948	2,172	2,016	710	659	0.928						
2	3,396	1,619	1,296	611	489	0.800						
3	2,920	1,143	789	525	362	0.690						
4	2,511	735	437	452	269	0.595						
5	2,160	383	196	388	199	0.513						
6	1,857	81	36	334	148	0.442						
7	1,597	0	0	287	0	0.381						
TOTAL:			4,770			2,126						
EXPENSE:	1777		1777	1777		1777						

FEB 15, 2017
01:26 PM
'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 357

ACCOUNT: 0820168223
STATUS: 2 API#: 06223
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 EXPENSE: 0.2 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE: 99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2

RESOURCE: OG OWNER: ANTERO RESOURCES CORPORATI LOCATION: LIVINGSTON UNIT 1H (10377.1)
DATE: 06/07/2014 DAYS: 365 BELLS: 7196.000 MCPS: 1439812 RCPTS: 3962461 GWI: 3029113 OWI: 209450

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,802,322	1,638,640	1,521,440	402,863	374,049	0.928	124,623	124,251	115,364	27,857	25,864	0.928
2	1,387,788	1,224,106	979,788	310,204	248,291	0.800	95,960	95,588	76,509	21,450	17,169	0.800
3	1,068,597	904,515	624,399	238,857	164,814	0.690	73,889	73,517	50,727	16,516	11,396	0.690
4	822,820	659,137	392,079	183,920	109,402	0.595	56,894	56,523	33,622	12,718	7,565	0.595
5	633,571	469,889	240,954	141,618	72,620	0.513	43,809	43,437	22,274	9,792	5,021	0.513
6	487,850	324,168	143,302	109,046	48,205	0.442	33,733	33,361	14,747	7,540	3,333	0.442
7	375,644	211,962	80,776	83,966	31,998	0.381	25,974	25,602	9,757	5,806	2,213	0.381
8	289,246	125,564	41,251	64,653	21,240	0.329	20,000	19,628	6,448	4,471	1,469	0.329
9	222,719	59,037	16,720	49,783	14,099	0.283	15,400	15,028	4,256	3,442	975	0.283
10	171,494	7,812	1,907	38,333	9,359	0.244	11,858	11,486	2,804	2,651	647	0.244
11	132,050	0	0	29,516	0	0.210	9,131	8,759	1,843	2,041	430	0.210
12							7,031	6,659	1,208	1,572	285	0.181
13							5,414	5,042	789	1,210	189	0.156
14							4,168	3,797	512	932	126	0.135
15							3,210	2,838	330	717	83	0.116
16							2,471	2,100	210	552	55	0.100
17							1,903	1,531	132	425	37	0.086
18							1,465	1,093	81	328	24	0.074
19							1,128	756	49	252	16	0.064
20							869	497	28	194	11	0.055
21							669	297	14	150	7	0.048
22							515	143	6	115	5	0.041
23							397	25	1	89	3	0.035
24							305	0	0	68	0	0.031

TOTAL: 4,042,615 1,094,077 341,712 76,924

GS EXPENSE: 163682 163682 372
OL EXPENSE: 372 372

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 358

ACCOUNT:0820166234

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:LIVINGSTON UNIT 2H (10376.1)

STATUS:Z API#:06224 DATE:06/23/2014 DAYS:365 BELS: 5406.000 MCPS: 1426639 RCPTS: 3934064 GWI: 3052174 OWI: 163179

SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000

RATES USED: CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000

SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,816,044	1,649,925	1,531,917	405,930	376,897	0.928	97,092	96,800	89,876	21,703	20,150	0.928
2	1,398,354	1,232,235	986,294	312,566	250,182	0.800	74,760	74,469	59,606	16,711	13,376	0.800
3	1,076,732	910,613	628,331	240,676	166,069	0.690	57,566	57,274	39,519	12,867	8,879	0.690
4	829,084	662,965	394,355	185,321	110,235	0.595	44,325	44,034	26,193	9,908	5,894	0.595
5	638,395	472,276	242,178	142,697	73,173	0.513	34,131	33,839	17,352	7,629	3,912	0.513
6	491,564	325,445	143,866	109,877	48,572	0.442	26,281	25,989	11,489	5,874	2,537	0.442
7	378,504	212,385	80,937	84,605	32,242	0.381	20,236	19,944	7,600	4,523	1,724	0.381
8	291,448	125,329	41,173	65,146	21,402	0.329	15,582	15,290	5,023	3,483	1,144	0.329
9	224,415	58,296	16,510	50,162	14,206	0.283	11,998	11,706	3,315	2,682	760	0.283
10	172,800	6,681	1,631	38,625	9,430	0.244	9,238	8,947	2,184	2,065	504	0.244
11	133,056	0	0	29,741	0	0.210	7,114	6,822	1,436	1,590	335	0.210
12							5,477	5,186	941	1,224	222	0.181
13							4,218	3,926	614	943	147	0.156
14							3,248	2,956	399	726	98	0.135
15							2,501	2,209	257	559	65	0.116
16							1,925	1,634	164	430	43	0.100
17							1,483	1,191	103	331	29	0.086
18							1,142	850	63	255	19	0.074
19							879	587	38	196	13	0.064
20							677	385	21	151	8	0.055
21							521	229	11	117	6	0.048
22							401	110	5	90	4	0.041
23							309	17	1	69	2	0.035
24							238	0	0	53	0	0.031

TOTAL:

4,067,194

266,209

59,930

GS EXPENSE: 166119 166119

OL EXPENSE: 292 292

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 359

ACCOUNT:0820166235 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:VONDA UNIT 2H (10380.1)
STATUS:Z API#:06225 DATE:06/10/2014 DAYS:365 BEIS: 2606.000 MCFS: 1299149 RCPTS: 3048382 GWI: 2478670 OWI: 77332
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED: CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,474,809	1,305,103	1,211,758	284,102	263,783	0.928	46,013	45,839	42,560	8,864	8,230	0.928
2	1,135,603	965,897	773,115	218,759	175,097	0.800	35,430	35,256	28,219	6,825	5,463	0.800
3	874,414	704,709	486,255	168,444	116,228	0.690	27,281	27,107	18,704	5,255	3,626	0.690
4	673,299	503,593	299,556	129,702	77,151	0.595	21,006	20,832	12,392	4,047	2,407	0.595
5	518,440	348,735	178,827	99,871	51,213	0.513	16,175	16,001	8,205	3,116	1,598	0.513
6	399,199	229,494	101,450	76,900	33,995	0.442	12,455	12,281	5,429	2,399	1,061	0.442
7	307,383	137,678	52,467	59,213	22,565	0.381	9,590	9,416	3,588	1,847	704	0.381
8	236,685	66,980	22,004	45,594	14,979	0.329	7,384	7,210	2,369	1,422	467	0.329
9	182,247	12,542	3,552	35,108	9,943	0.283	5,686	5,512	1,561	1,095	310	0.283
10	140,331	0	0	27,033	0	0.244	4,378	4,204	1,026	843	206	0.244
11							3,371	3,197	673	649	137	0.210
12							2,596	2,422	439	500	91	0.181
13							1,999	1,825	285	385	60	0.156
14							1,839	1,365	184	296	40	0.135
15							1,185	1,011	118	228	27	0.116
16							913	739	74	176	18	0.100
17							703	529	46	135	12	0.086
18							541	367	27	104	8	0.074
19							417	243	16	80	5	0.064
20							321	147	8	62	3	0.055
21							247	73	3	48	2	0.048
22							190	16	1	37	2	0.041
23							146	0	0	28	0	0.035

TOTAL: 3,128,985 764,953 125,928 24,475

GS EXPENSE: 169705 169705 169705
OL EXPENSE: 174 174 174

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 360

ACCOUNT:0820166258
STATUS:Z API#:06258
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 146835
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	FACTOR
1	1,362,449	1,197,994	1,112,310	320,856	297,908	0.928	87,367	87,020	80,796	20,575	19,104	0.928
2	1,049,086	884,631	708,069	247,059	197,749	0.800	67,272	66,926	53,568	15,843	12,681	0.800
3	807,796	643,342	443,911	190,236	131,264	0.690	51,800	51,453	35,503	12,199	8,417	0.690
4	622,003	457,548	272,166	146,481	87,132	0.595	39,886	39,539	23,519	9,393	5,587	0.595
5	478,942	314,488	161,266	112,791	57,838	0.513	30,712	30,366	15,571	7,233	3,709	0.513
6	368,785	204,331	90,327	86,849	38,392	0.442	23,648	23,302	10,301	5,569	2,462	0.442
7	283,965	119,510	45,544	66,874	25,485	0.381	18,209	17,863	6,807	4,288	1,634	0.381
8	218,653	54,199	17,805	51,493	16,916	0.329	14,021	13,675	4,492	3,302	1,085	0.329
9	168,363	3,908	1,107	39,649	11,229	0.283	10,796	10,450	2,959	2,543	720	0.283
10	129,639	0	0	30,530	0	0.244	8,313	7,967	1,945	1,958	478	0.244
11							6,401	6,055	1,274	1,507	317	0.210
12							4,929	4,582	831	1,161	211	0.181
13							3,795	3,449	539	894	140	0.156
14							2,922	2,576	347	688	93	0.135
15							2,250	1,904	221	530	62	0.116
16							1,733	1,386	139	408	41	0.100
17							1,334	988	85	314	27	0.086
18							1,027	681	51	242	18	0.074
19							791	445	29	186	12	0.064
20							509	263	15	143	8	0.055
21							469	122	6	110	5	0.048
22							361	15	1	85	3	0.041
23							278	0	0	65	0	0.035

TOTAL: 2,852,505 863,913 239,002 56,814

GS EXPENSE: 164454 164454 164454
OL EXPENSE: 346 346 346

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 361

ACCOUNT:0820166312

RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:HEFLIN UNIT 1H (10373.1)

STATUS:Z API#:06312

DATE:08/18/2014 DAYS:365 BBLs: 956.000 MCFS: 1620795 RCPTS: 3711315 GWI: 3067682 OWI: 29027

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000

SETTLED YEARS: 2

OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,825,271	1,651,911	1,533,762	362,263	336,353	0.928	17,271	17,217	15,986	3,428	3,183	0.928
2	1,405,459	1,232,039	986,185	278,942	223,269	0.800	13,299	13,245	10,601	2,639	2,113	0.800
3	1,082,203	908,843	627,110	214,786	148,204	0.690	10,240	10,186	7,029	2,032	1,402	0.690
4	833,296	659,937	392,554	165,385	98,377	0.595	7,885	7,831	4,658	1,565	931	0.595
5	641,638	468,279	240,128	127,346	65,302	0.513	6,071	6,017	3,086	1,205	618	0.513
6	494,061	320,702	141,769	98,057	43,347	0.442	4,675	4,621	2,043	928	410	0.442
7	380,427	207,058	78,911	75,504	28,773	0.381	3,600	3,546	1,351	714	272	0.381
8	292,929	119,569	39,281	58,138	19,100	0.329	2,772	2,718	893	550	181	0.329
9	225,555	52,136	14,782	44,766	12,678	0.283	2,134	2,080	589	424	120	0.283
10	173,678	318	78	34,470	8,416	0.244	1,643	1,589	388	326	80	0.244
11	133,732	0	0	26,542	0	0.210	1,265	1,211	255	251	53	0.210
12							974	920	167	193	35	0.181
13							750	696	109	149	23	0.156
14							578	524	71	115	15	0.135
15							445	391	45	88	10	0.116
16							343	289	29	68	7	0.100
17							264	210	18	52	5	0.086
18							203	149	11	40	3	0.074
19							156	102	7	31	2	0.064
20							120	67	4	24	1	0.055
21							93	39	2	18	1	0.048
22							71	17	1	14	1	0.041
23							55	1	0	11	0	0.035
24							42	0	0	8	0	0.031

TOTAL:

4,054,560

983,818

47,341

9.466

GS EXPENSE: 173360

173360

173360

OL EXPENSE: 54

54

54

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 362

ACCOUNT:0820166316 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:JOSEPH UNIT 2H (10438.1)
STATUS:Z API#:06316 DATE:08/14/2014 DAYS:365 BELS: 995.000 MCFS: 1571367 RCPTS: 3512772 GWI: 2904245 OWI: 30303
SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 OL EXPENSE: 0.2 5750 5750
SETTLED YEARS: 2

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	1,728,026	1,554,833	1,443,627	340,491	316,138	0.928	18,030	17,971	16,686	3,553	3,299	0.928
2	1,330,580	1,157,387	926,385	262,178	209,850	0.800	13,883	13,824	11,065	2,736	2,190	0.800
3	1,024,546	851,354	587,442	201,877	139,297	0.690	10,690	10,631	7,335	2,106	1,453	0.690
4	788,901	615,708	366,245	155,445	92,464	0.595	8,231	8,172	4,861	1,622	965	0.595
5	607,454	434,261	222,684	119,693	61,377	0.513	6,338	6,279	3,220	1,249	640	0.513
6	467,739	294,546	130,207	92,163	40,742	0.442	4,880	4,821	2,131	1,262	425	0.442
7	360,159	186,966	71,250	70,966	27,044	0.381	3,758	3,699	1,409	740	282	0.381
8	277,323	104,130	34,209	54,644	17,952	0.329	2,894	2,834	931	570	187	0.329
9	213,538	40,346	11,426	42,076	11,916	0.283	2,228	2,169	614	439	124	0.283
10	164,425	0	0	32,398	0	0.244	1,716	1,656	404	338	83	0.244
11							1,321	1,262	266	260	55	0.210
12							1,017	958	174	200	36	0.181
13							783	724	113	154	24	0.156
14							603	544	73	119	16	0.135
15							464	405	47	92	11	0.116
16							358	298	30	70	7	0.100
17							275	216	19	54	5	0.086
18							212	153	11	42	3	0.074
19							163	104	7	32	2	0.064
20							126	66	4	25	1	0.055
21							97	37	2	19	1	0.048
22							75	15	1	15	1	0.041
23							57	0	0	11	0	0.035

TOTAL: 3,793,475 916,780 49,402 9,810

GS EXPENSE: 173193 173193
OL EXPENSE: 59 59

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 363

ACCOUNT:0820166317 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:MCCONNELL UNIT 1H (10447.1)
STATUS:2 API#:06317 DATE:08/21/2014 DAYS:365 BELS: 751.000 MCFS: 1127772 RCPTS: 2565605 GWI: 2081732 OWI: 22677
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000
RATES USED:
CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000
SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	1,238,631	989,307	1,065,516	271,455	252,040	0.928	13,493	12,470	13,431	2,957	2,745	0.928
2	953,746	624,826	780,631	209,020	167,302	0.800	10,389	8,266	10,328	2,277	1,822	0.800
3	734,384	387,281	561,270	160,946	111,054	0.690	8,000	5,477	7,938	1,753	1,210	0.690
4	565,476	233,391	392,362	123,928	73,717	0.595	6,160	3,627	6,098	1,350	803	0.595
5	435,416	134,506	262,302	95,425	48,933	0.513	4,743	2,400	4,681	1,039	533	0.513
6	335,271	71,683	162,156	73,477	32,481	0.442	3,652	1,587	3,590	800	354	0.442
7	258,158	32,409	85,044	56,577	21,561	0.381	2,812	1,048	2,750	616	235	0.381
8	198,782	8,432	25,668	43,565	14,312	0.329	2,165	691	2,103	474	156	0.329
9	153,062	0	0	33,545	0	0.283	1,667	455	1,605	365	103	0.283
10				1,284	1,222		989	298	1,927	217	69	0.244
11				761	127		586	127	699	167	46	0.210
12				451	82		348	53	389	128	30	0.181
13				268	33		206	33	286	99	20	0.156
14				159	12		144	7	206	76	13	0.135
15				122	4		97	4	144	59	9	0.116
16				94	2		72	2	144	45	6	0.100
17				56	0		56	0	144	35	4	0.086
18									144	27	3	0.074
19									144	21	2	0.064
20									144	16	1	0.055
21									144	12	0	0.048
22									144	12	0	0.041

TOTAL:

2,481,835

36,857

8,163

GS EXPENSE: 173114 173114 173114

OL EXPENSE: 62 62 62

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 354

ACCOUNT:0820166318 RESOURCE:OG OWNER:ANTERO RESOURCES CORPORATI LOCATION:OLIVIA UNIT 2H (10439.1)
 STATUS:Z API#:06318 DATE:08/29/2014 DAYS:365 BBLs: 664.000 MCFS: 830509 RCPTS: 1779482 GWI: 1435013 OWI: 19728
 SYSTEM RATES: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 EXPENSE: 0.2 175000 175000 175000
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
 RATES USED:
 CAP RATE: 16.000 DECLINE RATE: 0.590 0.290 0.230 WELLLIFE:99 GS EXPENSE: 0.2 175000 175000 175000
 SETTLED YEARS: 2 OL EXPENSE: 0.2 5750 5750 5750

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME	GROSS INCOME	DISCOUNT INCOME	NET INCOME
1	853,833	634,211	683,066	190,601	176,968	0.928	11,738	11,660	10,826	2,620	2,433	0.928
2	557,451	389,548	486,685	146,762	117,470	0.800	9,038	8,960	7,172	2,018	1,615	0.800
3	506,237	335,471	335,471	113,007	77,976	0.690	6,960	6,882	4,748	1,554	1,072	0.690
4	389,803	219,036	219,036	87,015	51,760	0.595	5,359	5,281	3,141	1,196	712	0.595
5	300,148	129,382	129,382	67,002	34,358	0.513	4,126	4,048	2,076	921	472	0.513
6	231,114	60,348	60,348	51,591	22,807	0.442	3,177	3,099	1,370	709	314	0.442
7	177,958	2,741	7,191	39,725	15,139	0.381	2,446	2,369	903	546	208	0.381
8	137,028	0	0	30,589	0	0.329	1,884	1,806	593	421	138	0.329
9				1,451	1,373	389	1,117	1,039	254	324	92	0.283
10				860	782	165	662	584	106	192	61	0.244
11				510	432	68	393	315	42	114	27	0.181
12				302	224	26	302	224	16	88	12	0.135
13				233	155	16	233	155	16	52	5	0.100
14				179	101	9	179	101	9	40	3	0.086
15				138	60	4	138	60	4	31	2	0.074
16				106	28	2	106	28	2	24	2	0.064
17				82	4	0	82	4	0	18	1	0.055
18				63	0	0	63	0	0	14	0	0.048
19												
20												
21												
TOTAL:		1,481,291			496,477				31,910		7,235	

GS EXPENSE: 170767

OL EXPENSE: 78

78

170767

78

NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Year 1)													
		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME			
DECLINE RATES		WRK INT		\$	1,286,420	\$	43,708	YR1	\$	1,134,311	\$	(1,542)	
YR 1	58%	ROY INT		\$	843,414	\$	8,812						
YR 2	20%							YR2	\$	223,505	\$	2,282	
YR3+	23%								\$	839,350	\$	8,571	
									\$	185,392	\$	1,689	
\$ 2,157,371		TY2017 WORKING INTEREST						TY2017 ROYALTY INTEREST \$ 584,825					
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(18.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(18.0%)	DIS INC				
1	\$ 1,145,893	\$ 173,289	\$ 972,604	0.928477	\$ 903,041	1	\$ 225,787	0.928477	\$ 209,638				
2	\$ 847,981	\$ 173,288	\$ 674,692	0.800411	\$ 540,015	2	\$ 167,082	0.800411	\$ 133,736				
3	\$ 652,930	\$ 173,289	\$ 479,641	0.690009	\$ 330,958	3	\$ 128,853	0.690009	\$ 88,772				
4	\$ 502,758	\$ 173,288	\$ 329,467	0.594836	\$ 185,979	4	\$ 99,063	0.594836	\$ 58,926				
5	\$ 387,122	\$ 173,289	\$ 213,833	0.512789	\$ 108,851	5	\$ 78,279	0.512789	\$ 39,116				
6	\$ 298,064	\$ 173,289	\$ 124,795	0.442080	\$ 55,187	6	\$ 58,735	0.442080	\$ 25,984				
7	\$ 229,525	\$ 173,289	\$ 58,235	0.381086	\$ 21,431	7	\$ 45,228	0.381086	\$ 17,235				
8	\$ 178,734	\$ 173,288	\$ 5,445	0.328522	\$ 1,132	8	\$ 34,824	0.328522	\$ 11,440				
9	\$ 138,085	\$ 173,289	\$ -	0.283209	\$ -	9	\$ 28,814	0.283209	\$ -				
10	\$ 104,788	\$ 173,289	\$ -	0.224146	\$ -	10	\$ 20,847	0.224146	\$ -				
11	\$ 80,685	\$ 173,289	\$ -	0.210470	\$ -	11	\$ 15,896	0.210470	\$ -				
12	\$ 62,127	\$ 173,288	\$ -	0.181440	\$ -	12	\$ 12,242	0.181440	\$ -				
13	\$ 47,638	\$ 173,289	\$ -	0.158414	\$ -	13	\$ 9,428	0.158414	\$ -				
14	\$ 36,635	\$ 173,289	\$ -	0.134840	\$ -	14	\$ 7,258	0.134840	\$ -				
15	\$ 28,363	\$ 173,289	\$ -	0.118241	\$ -	15	\$ 5,589	0.118241	\$ -				
16	\$ 21,840	\$ 173,289	\$ -	0.100208	\$ -	16	\$ 4,303	0.100208	\$ -				
17	\$ 18,817	\$ 173,289	\$ -	0.088388	\$ -	17	\$ 3,314	0.088388	\$ -				
18	\$ 12,949	\$ 173,289	\$ -	0.074471	\$ -	18	\$ 2,551	0.074471	\$ -				
19	\$ 8,871	\$ 173,289	\$ -	0.064199	\$ -	19	\$ 1,965	0.064199	\$ -				
20	\$ 7,677	\$ 173,289	\$ -	0.055344	\$ -	20	\$ 1,513	0.055344	\$ -				
21	\$ 5,912	\$ 173,289	\$ -	0.047710	\$ -	21	\$ 1,185	0.047710	\$ -				
22	\$ 4,552	\$ 173,289	\$ -	0.041129	\$ -	22	\$ 897	0.041129	\$ -				
23	\$ 3,505	\$ 173,289	\$ -	0.035458	\$ -	23	\$ 881	0.035458	\$ -				
24	\$ 2,899	\$ 173,289	\$ -	0.030588	\$ -	24	\$ 532	0.030588	\$ -				
25	\$ 2,078	\$ 173,289	\$ -	0.028350	\$ -	25	\$ 409	0.028350	\$ -				
26	\$ 1,600	\$ 173,289	\$ -	0.022715	\$ -	26	\$ 315	0.022715	\$ -				
27	\$ 1,232	\$ 173,289	\$ -	0.019582	\$ -	27	\$ 243	0.019582	\$ -				
28	\$ 949	\$ 173,289	\$ -	0.016881	\$ -	28	\$ 187	0.016881	\$ -				
29	\$ 731	\$ 173,289	\$ -	0.014553	\$ -	29	\$ 144	0.014553	\$ -				
30	\$ 582	\$ 173,289	\$ -	0.012548	\$ -	30	\$ 111	0.012548	\$ -				
31	\$ 433	\$ 173,289	\$ -	0.010815	\$ -	31	\$ 85	0.010815	\$ -				
32	\$ 334	\$ 173,289	\$ -	0.009323	\$ -	32	\$ 68	0.009323	\$ -				
33	\$ 257	\$ 173,289	\$ -	0.008037	\$ -	33	\$ 51	0.008037	\$ -				
34	\$ 198	\$ 173,289	\$ -	0.006929	\$ -	34	\$ 39	0.006929	\$ -				
35	\$ 152	\$ 173,289	\$ -	0.005973	\$ -	35	\$ 30	0.005973	\$ -				
36	\$ 117	\$ 173,289	\$ -	0.005149	\$ -	36	\$ 23	0.005148	\$ -				
37	\$ 90	\$ 173,289	\$ -	0.004438	\$ -	37	\$ 18	0.004439	\$ -				
38	\$ 70	\$ 173,289	\$ -	0.003827	\$ -	38	\$ 14	0.003827	\$ -				
39	\$ 54	\$ 173,288	\$ -	0.003299	\$ -	39	\$ 11	0.003299	\$ -				
40	\$ 41	\$ 173,289	\$ -	0.002844	\$ -	40	\$ 8	0.003812	\$ -				
WORKING INTEREST APPRAISAL					\$ 2,157,371	ROYALTY INTEREST APPRAISAL					\$ 584,825		

09-0820176327

		NATURAL OIL/GAS APPRAISAL - FLUSH WELL (Yr 1)										
		2015		GAS INCOME		OIL INCOME		GAS CAP INCOME		OIL CAP INCOME		
DECLINE RATES		WRK INT		\$ 1,548,284		\$ 38,147		YR1	\$ 940,298		\$ 2,579	
YR 1	50%								\$ 209,902		\$ 7,138	
YR 2	20%	ROY INT		\$ 702,909		\$ 8,889		YR2	\$ 895,826		\$ 7,085	
YR3+	23%								\$ 185,320		\$ 1,582	
\$ 1,558,439		TY2017 WORKING INTEREST						TY2017 ROYALTY INTEREST				\$ 538,478
YEAR	WRK INT INCOME	WORKING COST	NET INC	PRCT FCTR(16.0%)	DIS INC	YEAR	ROY INT INCOME	PRCT FCTR(16.0%)	DIS INC			
1	\$ 949,877	\$ 173,293	\$ 776,584	0.928477	\$ 721,040	1	\$ 212,041	0.928477	\$ 199,876			
2	\$ 702,909	\$ 173,293	\$ 529,619	0.800411	\$ 423,910	2	\$ 159,910	0.800411	\$ 125,592			
3	\$ 541,240	\$ 173,293	\$ 367,947	0.690009	\$ 253,888	3	\$ 120,921	0.690009	\$ 83,367			
4	\$ 419,756	\$ 173,293	\$ 246,463	0.594838	\$ 144,820	4	\$ 93,032	0.594838	\$ 65,339			
5	\$ 320,901	\$ 173,293	\$ 147,608	0.512789	\$ 75,892	5	\$ 71,835	0.512789	\$ 38,733			
6	\$ 247,094	\$ 173,293	\$ 73,801	0.442080	\$ 32,924	6	\$ 55,169	0.442080	\$ 24,983			
7	\$ 190,282	\$ 173,293	\$ 16,989	0.381088	\$ 8,467	7	\$ 42,472	0.381088	\$ 18,188			
8	\$ 148,602	\$ 173,293	\$ -	0.328522	\$ -	8	\$ 32,704	0.328522	\$ -			
9	\$ 112,808	\$ 173,293	\$ -	0.283209	\$ -	9	\$ 25,192	0.283209	\$ -			
10	\$ 89,881	\$ 173,293	\$ -	0.224148	\$ -	10	\$ 19,390	0.224148	\$ -			
11	\$ 68,983	\$ 173,293	\$ -	0.210470	\$ -	11	\$ 14,830	0.210470	\$ -			
12	\$ 51,500	\$ 173,293	\$ -	0.181440	\$ -	12	\$ 11,498	0.181440	\$ -			
13	\$ 39,855	\$ 173,293	\$ -	0.158414	\$ -	13	\$ 8,852	0.158414	\$ -			
14	\$ 30,534	\$ 173,293	\$ -	0.134840	\$ -	14	\$ 6,819	0.134840	\$ -			
15	\$ 23,511	\$ 173,293	\$ -	0.118241	\$ -	15	\$ 5,248	0.118241	\$ -			
16	\$ 18,104	\$ 173,293	\$ -	0.100208	\$ -	16	\$ 4,041	0.100208	\$ -			
17	\$ 13,940	\$ 173,293	\$ -	0.088388	\$ -	17	\$ 3,112	0.088388	\$ -			
18	\$ 10,734	\$ 173,293	\$ -	0.074471	\$ -	18	\$ 2,398	0.074471	\$ -			
19	\$ 9,285	\$ 173,293	\$ -	0.064199	\$ -	19	\$ 1,845	0.064199	\$ -			
20	\$ 6,384	\$ 173,293	\$ -	0.055344	\$ -	20	\$ 1,421	0.055344	\$ -			
21	\$ 4,900	\$ 173,293	\$ -	0.047710	\$ -	21	\$ 1,094	0.047710	\$ -			
22	\$ 3,773	\$ 173,293	\$ -	0.041129	\$ -	22	\$ 842	0.041129	\$ -			
23	\$ 2,905	\$ 173,293	\$ -	0.035458	\$ -	23	\$ 649	0.035458	\$ -			
24	\$ 2,237	\$ 173,293	\$ -	0.030588	\$ -	24	\$ 499	0.030588	\$ -			
25	\$ 1,723	\$ 173,293	\$ -	0.026350	\$ -	25	\$ 385	0.026350	\$ -			
26	\$ 1,329	\$ 173,293	\$ -	0.022715	\$ -	26	\$ 298	0.022715	\$ -			
27	\$ 1,021	\$ 173,293	\$ -	0.019592	\$ -	27	\$ 229	0.019592	\$ -			
28	\$ 788	\$ 173,293	\$ -	0.016881	\$ -	28	\$ 178	0.016881	\$ -			
29	\$ 608	\$ 173,293	\$ -	0.014553	\$ -	29	\$ 135	0.014553	\$ -			
30	\$ 499	\$ 173,293	\$ -	0.012546	\$ -	30	\$ 104	0.012546	\$ -			
31	\$ 359	\$ 173,293	\$ -	0.010815	\$ -	31	\$ 80	0.010815	\$ -			
32	\$ 279	\$ 173,293	\$ -	0.009323	\$ -	32	\$ 62	0.009323	\$ -			
33	\$ 213	\$ 173,293	\$ -	0.008037	\$ -	33	\$ 48	0.008037	\$ -			
34	\$ 164	\$ 173,293	\$ -	0.006929	\$ -	34	\$ 37	0.006929	\$ -			
35	\$ 128	\$ 173,293	\$ -	0.005973	\$ -	35	\$ 28	0.005973	\$ -			
36	\$ 97	\$ 173,293	\$ -	0.005149	\$ -	36	\$ 22	0.005149	\$ -			
37	\$ 75	\$ 173,293	\$ -	0.004439	\$ -	37	\$ 17	0.004439	\$ -			
38	\$ 59	\$ 173,293	\$ -	0.003827	\$ -	38	\$ 13	0.003827	\$ -			
39	\$ 44	\$ 173,293	\$ -	0.003299	\$ -	39	\$ 10	0.003299	\$ -			
40	\$ 34	\$ 173,293	\$ -	0.002844	\$ -	40	\$ 8	0.002844	\$ -			
WORKING INTEREST APPRAISAL					\$ 1,558,439	ROYALTY INTEREST APPRAISAL					\$ 538,478	

09-08 20176332

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 367

ACCOUNT:0830003784
STATUS:A API#:03784
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 27

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:FREEMAN 1 (11219.1)
DATE:12/01/1989 DAYS:365 BLS: 0.000 MCFS: 80 RCPTS: 2573 GWI: 2182 OWI: 0
EXPENSE: 0.45 5000 5000 5000
EXPENSE: 0.45 5000 5000 5000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
1	1,724	948	880	309	287	0.928						
2	1,482	707	566	266	213	0.800						
3	1,275	499	344	228	158	0.690						
4	1,096	321	191	196	117	0.595						
5	943	167	86	169	87	0.513						
6	811	35	16	145	64	0.442						
7	697	0	0	125	0	0.381						

TOTAL: 2,083 925

EXPENSE: 775 776 775

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 369

ACCOUNT:0860002698

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:FREEMAN JOSEPH 2 (11223.1)

STATUS:A API#:02698

DATE:09/29/1984 DAYS:365 BELLS: 0.000 MCFS: 1452 RCPTS: 3977 GWI: 3480 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.360 0.160 0.130 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 32

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	INCOME FACTOR
1	2,801	1,541	1,431	400	371	0.928						
2	2,437	1,177	942	348	279	0.800						
3	2,120	860	593	303	209	0.690						
4	1,845	584	347	263	157	0.595						
5	1,605	344	177	229	118	0.513						
6	1,396	136	60	199	88	0.442						
7	1,215	0	0	173	0	0.381						

TOTAL:

3,550

1,221

EXPENSE: 1261

1261 1261

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 370

ACCOUNT:0860003782
STATUS:A API#:03782
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 32

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:SMITH WF 7 (11265.1)
DATE:09/12/1984 DAYS:365 BLS: 0.000 MCPS: 889 RCPTS: 4093 GWI: 3593 OWI: 0
0.170 0.140 WELLLIFE:99 EXPENSE: 0.45 5000 5000
WELLLIFE:99 EXPENSE: 0.45 5000 5000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME FACTOR		GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME FACTOR	
1	2,838	1,561	1,450	395	367	0.928						
2	2,441	1,164	931	340	272	0.800						
3	2,099	822	567	292	202	0.690						
4	1,805	528	314	251	149	0.595						
5	1,553	275	141	216	111	0.513						
6	1,335	58	26	186	82	0.442						
7	1,148	0	0	160	0	0.381						
TOTAL:			3,429			1,183						
EXPENSE:	1277		1277	1277		1277						

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 371

ACCOUNT:0860003783

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORATI LOCATION:SMITH WF 8 (11266.1)

STATUS:A API#:03783

DATE:04/06/1990 DAYS:365 BBLs: 0.000 MCFS: 550 RCPTS: 5256 GWI: 4613 OWI: 0

SYSTEM RATES:

CAP RATE: 16.000 DECLINE RATE: 0.340 0.170 0.140 WELLLIFE:99 EXPENSE: 0.45 5000 5000

RATES USED:

CAP RATE: 16.000 DECLINE RATE: WELLLIFE:99 EXPENSE: 0.45 5000 5000

SETTLED YEARS: 26

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME		GROSS INCOME	NET DISCOUNT INCOME		GROSS INCOME	DISCOUNT INCOME	
1	3,644	2,004	1,861	508	472	0.928						
2	3,134	1,494	1,196	437	350	0.800						
3	2,695	1,055	728	376	259	0.690						
4	2,318	678	403	323	192	0.595						
5	1,993	354	181	278	142	0.513						
6	1,714	74	33	239	106	0.442						
7	1,474	0	0	206	0	0.381						

TOTAL:

4,403

1,521

EXPENSE: 1640

1640 1640

FEB 15, 2017
01:26 PM

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

NR105: 372

ACCOUNT: 0860003794 RESOURCE: GS OWNER: ANTERO RESOURCES CORPORATI LOCATION: MAXWELL HEIRS 4 (11239-1)
STATUS: S API#: 03794 DATE: 03/27/1990 DAYS: 365 BBLs: 0.000 MCFS: 778 RCPTS: GWI: OWI:
SYSTEM RATES: CAP RATE: 16.000 DECLINE RATE: 0.310 0.170 0.120 WELLLIFE: 99 EXPENSE:
RATES USED: CAP RATE: 16.000 DECLINE RATE: WELLLIFE: 99
SETTLED YEARS:

GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR	GROSS	NET	DISCOUNT	GROSS	DISCOUNT	INCOME FACTOR
INCOME	INCOME	INCOME	INCOME	INCOME		INCOME	INCOME	INCOME	INCOME	INCOME	
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
TOTAL:			-----			-----			-----		

'DODDRIDGE' COUNTY, WV
YIELD CAP MODEL REPORT FOR - 2017

FEB 15, 2017
01:26 PM

NR105: 373

ACCOUNT:0860003875
STATUS:A API#:03875
SYSTEM RATES:
CAP RATE: 16.000 DECLINE RATE: 0.340
RATES USED:
CAP RATE: 16.000 DECLINE RATE:
SETTLED YEARS: 24

RESOURCE:GS OWNER:ANTERO RESOURCES CORPORAT1 LOCATION:MAXWELL HEIRS 5 (11240.1)

DATE:08/13/1992 DAYS:365 BELLS: 0.000 MCFS: 2866 RCPTS: 7652 GWI: 6696 OWI: 0

EXPENSE: 0.45 5000 5000
EXPENSE: 0.45 5000 5000

	GAS WORKING INTEREST			GAS ROYALTY INTEREST			OIL WORKING INTEREST			OIL ROYALTY INTEREST		
	GROSS INCOME	NET INCOME	DISCOUNT	GROSS INCOME	DISCOUNT INCOME	FACTOR	GROSS INCOME	NET INCOME	DISCOUNT INCOME	GROSS INCOME	DISCOUNT INCOME	FACTOR
1	4,486	2,467	2,291	641	595	0.928						
2	3,499	1,480	1,185	500	400	0.800						
3	2,729	711	490	390	269	0.690						
4	2,129	110	66	304	181	0.595						
5	1,661	0	0	237	0	0.513						
TOTAL:			4,032									
EXPENSE:	2019	2019	2019	2019	2019							

1,444

EXHIBIT

B

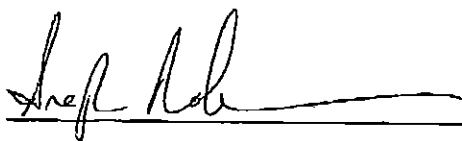
BEFORE THE COUNTY COMMISSION OF DODDRIDGE COUNTY, WEST VIRGINIA

ORDER

Pursuant to W.Va. Code §11-3-24 et seq, a full hearing was held before the County Commission of Doddridge County sitting as a board of review and equalization on the 17th day of February, 2017, upon Antero Resources, Inc.'s protest of the value of personal property as appraised by the W.V. State Tax Department and then entered on the tax assessment records by the Assessor of Doddridge County for the tax year 2017. Craig A. Griffith appeared as counsel on behalf of Antero Resources, Inc., Doddridge County Assessor, David Sponaugle, appeared in person, and Jan P. Mudrinich appeared as counsel for the W.V. State Tax Department.

Subsequent to the admission of exhibits into evidence and the testimony and cross examination by Jan P. Mudrinich, the County Commission ruled in favor of the W.V. State Tax Department for the reasons set forth in the record on the 21st day of February, 2017.

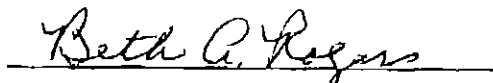
Dated this 21st day of February, 2017.



President of the Doddridge County Commission



Attest to:



Doddridge County Clerk

PLAINTIFF: Antero Resources

CASE NUMBER: 17-AA-3

DEFENDANTS: Dale W. Steager, West Virginia State Tax Commissioner,
David Sponaugle, Assessor of Doddridge County, and
The County Commission of Doddridge County

II. TYPE OF CASE:

☐ General Civil

☐ Asbestos

☐ Adoption

☐ Appeal from Magistrate Court

☐ Professional
Malpractice

☐ Contract

☒ Miscellaneous Civil Petition

☐ Administrative Agency Appeal

☐ Magistrate Sentence

DODDRIDGE COUNTY
CIRCUIT COURT

☐ Personal Injury ☐ Real Property

APR 19 2017

☐ Product Liability ☐ Mental Health

☐ Other

MICHELE D. BRITTON
CIRCUIT CLERK

☐ Other Tort

III. JURY DEMAND: ☐ Yes ☒ No

CASE WILL BE READY FOR TRIAL BY:

IV. DO YOU OR ANY OF YOUR CLIENTS OR WITNESSES IN THIS CASE REQUIRE SPECIAL ACCOMMODATIONS DUE TO A DISABILITY OR AGE?

☐ Yes

☒ No

IF YES, PLEASE SPECIFY:

☐ Wheelchair accessible hearing room and other facilities

☐ Interpreter or other auxiliary aid for the hearing impaired

☐ Reader or other auxiliary aid for the visually impaired

☐ Spokesperson or other auxiliary aid for the speech impaired

☐ Other: _____

Attorney Name: L. Wayne Williams,
Assistant Att'y Gen. (WVSB #4370)

Representing: Dale W. Steager, West Virginia State Tax
Commissioner and David Sponaugle, Assessor of
Doddridge County

Firm: WV Attorney General's Office

Address: Bldg. 1, Room W-435

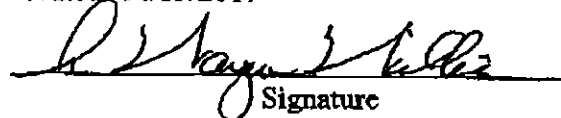
1900 Kanawha Blvd., E.
Charleston, WV 25305

Telephone: (304) 558-2522

☐ Plaintiff ☒ Defendant

☐ Cross-Complainant ☐ Cross-Defendant

Dated: 04/19/2017


Signature

☐ Pro Se

IN THE CIRCUIT COURT OF DODDRIDGE COUNTY, WEST VIRGINIA
ANTERO RESOURCES CORPORATION,

Petitioner,

v.

Civil Action No. 17-AA-3

THE HONORABLE DALE W. STEAGER,
West Virginia State Tax Commissioner,
THE HONORABLE DAVID SPONAGLE,
Assessor of Doddridge County, and
THE COUNTY COMMISSION OF DODDRIDGE COUNTY,

DODDRIDGE COUNTY
CIRCUIT COURT

APR 19 2017

Respondents.

MICHELE D. BRITTON
CIRCUIT CLERK

ANSWER OF
WEST VIRGINIA STATE TAX DEPARTMENT AND
ASSESSOR DAVID SPONAGLE TO COMPLAINT

COME NOW Dale W. Steager, State Tax Commissioner of the State of West Virginia and the Honorable David Sponagle, Assessor of Doddridge County, (hereinafter, collectively referred to as "Tax Commissioner" or "Tax Department"), by counsel, in order to Answer the *Complaint* filed in this matter and states as follows.

ANSWER TO COMPLAINT

The paragraphs in the *Complaint* are not individually numbered as required pursuant to the Rules of Civil Procedure; nevertheless, the Tax Department will respond to the *Complaint* as if the paragraphs were numbered as required.

1. The Tax Department admits the allegations set forth in Paragraph 1 of the *Complaint*.

2. Paragraph 2 of the *Complaint* summarizes the law and mechanical procedures regarding the valuation of property for *ad valorem* tax purposes. No response is required. To the extent that a response may be applicable, the Tax Department denies that it failed to correctly value the Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court. Furthermore, the procedures applied by the Tax Department are set forth in the testimony of Jeff Amburgey, Director of the Property Tax Divisions, and Cindi Hoover, Senior Appraiser, as recorded in the transcript of the February 17, 2017 hearing.

3. The Tax Department states that sentence 1 of Paragraph 3 of the *Complaint* generally summarizes the law and mechanical procedures regarding the valuation of property for *ad valorem* tax purposes. No response is required. The Tax Department admits that in prior years it invited taxpayers to submit actual operating expenses per well for review and consideration by the Property Tax Division as alleged in the first part of sentence 2 of Paragraph 3. The Tax Department lacks sufficient information to form an opinion with regards to the truth or falsity of the remaining allegations in of sentence 2; consequently, those allegations are denied. The Tax Department states that the applicable legislative rules do not authorize the Tax Department to utilize statewide allocated operating expenses or actual operating expenses for each well under protest for taxpayers as demanded by Antero Resources Corporation (hereinafter referred to as "Antero"); furthermore, Antero has failed to cite any statutory authority for the use of statewide allocated operating expenses for individual taxpayers as demanded by the Taxpayer. The Tax Department admits that 2016 and 2017 Administrative Notices did not invite taxpayers to submit actual operating expenses per well for review and consideration by the Property Tax Division as in prior years as alleged in the first part of sentence 3 of Paragraph 3. The Tax Department denies the remaining allegations set forth in Paragraph 3 of the *Complaint*. To the extent that a further

response may be applicable, the Tax Department denies that it failed to correctly value the Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court.

4. The Tax Department denies that Antero provided actual operating expenses per well as alleged in Paragraph 4 of the *Complaint*. The Tax Department lacks sufficient information to determine the truth or falsity of the remaining allegations set forth in the first sentence of Paragraph 4 of the *Complaint* regarding the basis on which Antero calculated operating expenses; consequently, those allegations are denied. The Tax Department admits that the valuation for the 2017 TY is based on the 2015 CY income data as alleged in Paragraph 4 of the *Complaint*. The Tax Department denies the remaining allegations set forth in Paragraph 4 of the *Complaint*.

5. The Tax Department denies allegations set forth in sentence 1 of Paragraph 5 of the *Complaint*. The Tax Department lacks sufficient information to determine the truth or falsity of the allegations set forth in sentences 2, 3, and 4, of Paragraph 5, of the *Complaint* regarding the basis on which Antero calculated operating expenses; consequently, those allegations are denied. The Tax Department states that the procedure to calculate the "average annual industry operating expenses per well" used to value operating oil and gas wells is set forth in the legislative rules, administrative notices and other supporting documents, as alleged in Paragraph 5 of the *Complaint*. See W. Va. St. R. § 110-1J-4.3. The Tax Department further states that the legislative rules, administrative notices and other documents from the Tax Department speak for themselves; the Tax Department objects to any attempts to characterize the supporting documentation issued by the Tax Department. The Tax Department denies that the legislative rule values different gas well operators inconsistently based upon the distance of the gas well from the market as alleged in

sentence 5 Paragraph 5 of the *Complaint*. The Tax Department denies the remaining allegations set forth in Paragraph 5 of the *Complaint*.

6. Based on a review of Administrative Notice 2017-08, the Tax Department admits that maximum operating expense for Marcellus horizontal wells is 20% of gross receipts derived from gas production not to exceed \$175,000 as alleged in sentence 1 of Paragraph 6 of the *Complaint*. The Tax Department lacks sufficient information to determine the truth or falsity of the remaining allegations set forth in sentence 1 of Paragraph 6, of the *Complaint* regarding the basis on which Antero calculated operating expenses; consequently, those allegations are denied. The Tax Department states that the expenses for calculating the value of operating oil and gas wells are set forth in the legislative rules, administrative notices and other supporting documents as alleged in sentence 2 of Paragraph 6 of the *Complaint*. The Tax Department further states that the legislative rules, administrative notices and other documents, from the Tax Department speak for themselves; the Tax Department objects to any attempts to characterize the supporting documentation issued by the Tax Department. The Tax Department denies the remaining allegations set forth in sentence 2 of Paragraph 6 of the *Complaint*. The Tax Department denies that it has erroneously calculated the average annual industry operating expense as alleged in sentences 3 Paragraph 6. The Tax Department denies the remaining allegations in sentence 3 of Paragraph 6. The Tax Department denies the allegations set forth in sentences 4 and 5 of Paragraph 6 of the *Complaint*. The Tax Department denies that it has failed to value Antero's gas wells incorrectly in any manner as alleged in Paragraph 6 of the *Complaint*.

7. The Tax Department admits that Antero appeared at a Board of Assessment Appeals hearing in February 2017, presented a report from Altus group, and that the BAA made no changes to the Tax Department's valuation as alleged in Paragraph 7 of the *Complaint*.

However, the Tax Department denies that Antero presented clear and convincing evidence to support its protest, that Antero provided actual operating expenses for each well, and the remaining allegations set forth in Paragraph 7 of the *Complaint*.

8. The Tax Department lacks sufficient information to determine whether the appeal before the Circuit Court of Doddridge County was filed timely; consequently, that allegation is denied. The Tax Department denies the remaining allegations set forth in Paragraph 8 of the *Complaint*.

9. The Tax Department admits the allegations set forth in Paragraph 9 of the *Complaint*.

10. The Tax Department denies that the expense survey was inaccurate or incomplete in any manner as alleged in Paragraph 10 of the *Complaint*. The Tax Department further denies that it has valued Antero's operating gas wells erroneously in any manner under the laws of this State as alleged in Paragraph 10 of the *Complaint*. The Tax Department lacks sufficient information to determine the truth or falsity of the remaining allegations set forth Paragraph 10 of the *Complaint*; consequently, those allegations are denied.

11. The Tax Department admits that it recalculated the average annual industry operating expenses from \$150,000 used in the 2016 TY to \$175,000 for the 2017 TY based upon information received from Antero Resources in 2016 as alleged in sentence 1 of Paragraph 11 of the *Complaint*. According to the testimony of Jeff Amburgey, Director of the Property Tax Division, the Tax Department removed the survey data previously provided by Antero Resources since it became apparent to Mr. Amburgey that Antero was claiming different expenses than what Antero reported on the survey. The Tax Department also removed the outlying data (highest and lowest data points) from the 2014 survey and recalculated the average annual industry operating

expense deduction. See Transcript of February 17, 2017 Hearing at PP. 77-80; 87-88. As a result, the Tax Department increased the allowable expense deduction by \$25,000 per well. The Tax Department denies that the recalculation is erroneous and that the 2014 survey is flawed as alleged in sentence 2 of Paragraph 11. The Tax Department further denies that excluding incomplete, inconsistent, and different data, provided by Antero invalidates the 2014 survey as alleged in sentence 2 of Paragraph 11. The Tax Department further denies that it has valued Antero's operating gas wells erroneously in any manner under the laws of this State as alleged in Paragraph 11 of the *Complaint*.

12. The Tax Department lacks sufficient information to determine the truth or falsity of the allegations set forth Paragraph 12 of the *Complaint*; consequently, those allegations are denied. The Tax Department further denies that it has valued Antero's operating gas wells erroneously in any manner under the laws of this State as alleged in Paragraph 12 of the *Complaint*.

13. The Tax Department denies that Antero provided actual operating expenses for each of the 199 gas wells being challenged in Doddridge County for the 2017 TY as alleged in Paragraph 13 of the *Complaint*. The Tax Department denies that it is authorized by statute or legislative rule to use actual operating expenses for each well for individual taxpayers in valuing the property instead of the "average annual industry operating expenses" required pursuant to W.Va. St. R. § 110-1J-4.3 as alleged in Paragraph 13 of the *Complaint*; the Tax Department demands strict proof thereof. The Tax Department denies that it has erroneously valued Antero's gas wells under the applicable laws of this State as alleged in Paragraph 13 of the *Complaint*. The Tax Department admits that it did not change the expenses used to value Antero's property and that it utilized the "average annual industry operating expenses" required pursuant to W.Va. St. R. § 110-1J-4.3 as alleged in the last sentence of Paragraph 13 of the *Complaint*.

14. Paragraph 14 of the *Complaint* summarizes some of the mechanical procedures regarding the valuation of property for *ad valorem* tax purposes. No response is required. To the extent that a response may be applicable, the Tax Department denies that it failed to correctly value the Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court.

15. The Tax Department admits that in prior years the Tax Department stated in the administrative notices that it would consider, and possibly use, the actual operating expenses from individual producers in the valuation of the property as alleged in the first sentence of Paragraph 15 of the *Complaint*. The Tax Department denies that it is authorized by statute or legislative rule to use actual operating expenses per well for individual taxpayers in valuing the property instead of the "average annual industry operating expenses" required pursuant to W.Va. St. R. § 110-1J-4.3 as alleged in Paragraph 15 of the *Complaint*; the Tax Department demands strict proof thereof. The Tax Department denies that Antero has submitted the actual operating expenses for each of the 199 gas wells being challenged in Doddridge County as alleged in the second sentence of Paragraph 15 of the *Complaint*.

16. The Tax Department states that the proper expense deductions for valuing operating oil and gas wells are set forth in the legislative rules, administrative notices and other supporting documentation issued by the Tax Department as alleged in the first sentence of Paragraph 16 of the *Complaint*. The Tax Department further states that the legislative rules, administrative notices and other documents from the Tax Department speak for themselves; the Tax Department objects to any attempts to characterize the supporting documentation issued by the Tax Department. The Tax Department denies that Antero has proven that the average operating expenses for each of the 199 gas wells being challenged in Doddridge County is \$817,000 as alleged in the second sentence

of Paragraph 16 of the *Complaint*. The Tax Department denies that Antero has submitted the actual operating expenses for each of the gas wells being challenged in Doddridge County as alleged in the second sentence of Paragraph 16 of the *Complaint*. The Tax Department denies that it has valued Antero's gas wells erroneously in any manner as alleged in the third sentence of Paragraph 16 of the *Complaint*. The Tax Department admits that Antero hired Hein & Associates as alleged in the fourth sentence of Paragraph 16 of the *Complaint*; the Tax Department denies that the value calculated by Hein & Associates represents the true and actual value of Antero's property as alleged in the fourth sentence of Paragraph 16. The Tax Department denies the remaining allegations set forth in Paragraph 16 of the *Complaint*.

17. The Tax Department admits the allegations set forth in Paragraph 17 of the *Complaint*.

18. The Tax Department denies that it failed to support the refusal to accept Antero's proffered allocated expenses with credible evidence as alleged in the first part of Paragraph 18. Furthermore, the Tax Department admits that the procedures utilized by the State Tax Department are in alignment with the legislative rules and the law as alleged in the remaining portion of Paragraph 18. The Tax Department lacks sufficient information to determine the truth or falsity of the allegations regarding Antero's point of sale for natural gas as alleged in the first part of Paragraph 18; consequently, those allegations are denied. The Tax Department further denies that Antero submitted adequate back up information and that the Tax Department has valued Antero's gas wells erroneously in any manner as alleged in Paragraph 18 of the *Complaint*.

19. The Tax Department admits that Kirsten Evans, of Altus, testified on behalf of Antero at the Board of Assessment Appeals hearing in February 2017, and that numerous documents were admitted into the record at the Board of Assessment Appeals hearing as alleged

in Paragraph 19. The Tax Department denies the remaining allegations set forth in Paragraph 19 of the *Complaint*. The Tax Department further denies that Antero's proffered evidence constitutes clear and convincing evidence to demonstrate that the Tax Department's valuation is erroneous in any manner as alleged in Paragraph 19 of the *Complaint*.

20. The Tax Department admits that Antero presented testimony from Altus, a consulting company, at the Board of Assessment Appeal hearing in February 2017 as alleged in Paragraph 20 of the *Complaint*. The Tax Department denies that Antero has submitted the actual operating expenses for each of the 199 gas wells being challenged in Doddridge County as alleged Paragraph 20 of the *Complaint*. The Tax Department further denies that it has valued Antero's gas wells erroneously in any manner as alleged in Paragraph 20 of the *Complaint*. The Tax Department denies the remaining allegations set forth in Paragraph 20 of the *Complaint*.

21. The Tax Department admits the allegations set forth in the first sentence of Paragraph 21 of the *Complaint*. The Tax Department denies the allegations contained in the second sentence of paragraph 21 and demands strict proof thereof. The Tax Department denies that Ms. Evan's testimony demonstrates that Antero's gas wells have been valued incorrectly under West Virginia law. The Tax Department admits that the Tax Department and Hein & Associates calculated different values as set forth in the third sentence of Paragraph 21 of the *Complaint*. The Tax Department denies that Hein & Associates value represents the true and actual value of Antero's property as alleged in the third sentence of Paragraph 21

22. The Tax Department admits that Altus proposed "an alternate approach" to valuing Antero's gas wells in Doddridge County as alleged in Paragraph 22 of the *Complaint*. The Tax Department denies that the "an alternate approach" advocated by Antero is authorized under the legislative rule and the applicable statutes as alleged in Paragraph 22 of the *Complaint*; the Tax

Department demands strict proof thereof. The Tax Department further denies that it valued Antero's operating gas wells erroneously in any manner as alleged in Paragraph 22 of the *Complaint*.

23. The Tax Department lacks sufficient information to form an opinion with regards to the truth or falsity of the allegations that the complete record will be filed with the Circuit Court of Doddridge County timely as required by law and alleged in the third sentence of Paragraph 23 of the *Complaint*; consequently, those allegations are denied. The Tax Department admits the remaining allegations set forth in Paragraph 23 of the *Complaint*.

24. The Tax Department admits that the Board of Assessment Appeals affirmed the Tax Department's valuation of the gas wells by an order and that Antero appealed the decision to the Circuit Court of Doddridge County as alleged in Paragraph 24 of the *Complaint*. The Tax Department lacks sufficient information to form an opinion with regards to the truth or falsity of the remaining allegations in Paragraph 24; consequently, those allegations are denied.

25. Paragraph 25 of the *Complaint* summarizes the law regarding the valuation of property for *ad valorem* tax purposes. No response is required. To the extent that a response may be applicable, the Tax Department denies that it failed to correctly value the Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court.

26. Paragraph 26 of the *Complaint* summarizes the law and legislative rule regarding the valuation of property for *ad valorem* tax purposes. No response is required. To the extent that a response may be applicable, the Tax Department denies that it failed to correctly value the Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court.

27. Paragraph 27 of the *Complaint* summarizes the law and mechanical procedures regarding the valuation of property for *ad valorem* tax purposes. No response is required. To the extent that a response may be applicable, the Tax Department denies that it failed to correctly value the Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court.

28. The Tax Department denies the allegations set forth in the first sentence of Paragraph 28 of the *Complaint*; the Tax Department states that the Taxpayers have failed to cite any statutory authority or legislative rule requiring the use of an individual taxpayer's actual operating expenses in calculating the value of gas wells and demands strict proof thereof. The Tax Department denies that Antero presented actual operating expenses for each well under protest and that the information provided by Antero is the type of information contemplated by the legislative rule as alleged in the last sentence of Paragraph 28. The remaining allegations set forth in Paragraph 28 of the *Complaint* summarize the law and mechanical procedures regarding the valuation of property for *ad valorem* tax purposes. No response is required. To the extent that a response may be applicable, the Tax Department denies that it failed to correctly value the Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court.

29. Paragraph 29 of the *Complaint* summarizes the law regarding the burden of proof for taxpayers challenging the valuation of property and the record to be reviewed in circuit court for the valuation of property for *ad valorem* tax purposes. No response is required. To the extent that a response may be applicable, the Tax Department denies that it failed to correctly value the Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court.

30. The Tax Department denies the allegations set forth in the first sentence of Paragraph 30 of the *Complaint*. The remainder of Paragraph 30 recites Antero's prayer for relief. No response is necessary. To the extent that a response may be applicable, the Tax Department denies that any relief is warranted in this case.

31. The Tax Department denies that it has discretion to select the appraisal methodology for operating oil and natural gas wells as alleged in Paragraph 31 of the *Complaint*. According to the applicable legislative rules, the value of oil and natural gas producing properties "...shall be determined through the process of applying a yield capitalization model to the net receipts...." See W. Va. St. R. § 110-1J-4.1. The Tax Department is required to use the income approach to value for operating oil and gas wells under the legislative rule. The Tax Department further denies that it failed to correctly apply the yield capitalization model to Petitioner's property for tax purposes and states that legal conclusions will be determined by the Court.

32. The Tax Department denies the allegations set forth in Paragraph 32 of the *Complaint*.

33. The Tax Department denies the allegations set forth in Paragraph 33 of the *Complaint*.

34. The Tax Department denies the allegations set forth in Paragraph 34 of the *Complaint*.

35. The Tax Department denies every allegation in the *Complaint* which has not been specifically admitted.

WHEREFORE, State Tax Commissioner and the Honorable David Sponagle, Assessor

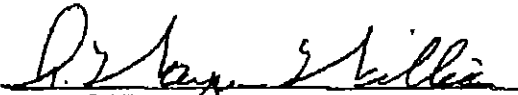
of Doddridge County, pray the Honorable Court DISMISS the Complaint with prejudice and for such additional relief as the Court deems just and proper.

Respectfully submitted,

DALE W. STEAGER,
STATE TAX COMMISSIONER
OF WEST VIRGINIA,
HONORABLE DAVID SPONAGLE,
ASSESSOR OF DODDRIDGE COUNTY

By counsel,

PATRICK MORRISSEY
ATTORNEY GENERAL

A handwritten signature in dark ink, appearing to read "L. Wayne Williams", is written over a horizontal line.

L. WAYNE WILLIAMS (WVSB# 4370)
ASSISTANT ATTORNEY GENERAL
1900 Kanawha Boulevard, East
Building 1, Room W-435
Charleston, West Virginia 25305
304-558-2522

IN THE CIRCUIT COURT OF DODDRIDGE COUNTY, WEST VIRGINIA

ANTERO RESOURCES CORPORATION,

Petitioner,

v.

Civil Action No. 17-AA-3
Honorable Timothy L. Sweeney

THE HONORABLE DALE STEAGER ,
West Virginia State Tax Commissioner,
THE HONORABLE DAVID SPONAUGLE,
Assessor of Doddridge County, and
THE COUNTY COMMISSION OF DODDRIDGE COUNTY,
Sitting as a Board of Equalization and Review,

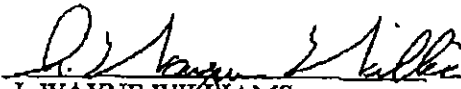
Respondents.

CERTIFICATE OF SERVICE

I, L. Wayne Williams, Assistant Attorney General, do hereby certify that the foregoing
"Answer Of West Virginia State Tax Department and Honorable Assessor David Sponaugle To
Complaints" was served upon the following by depositing a copy of the same in the United States
Mail, via first-class postage prepaid, this 19th day of April, 2017, addressed as follows:

Craig A. Griffith, Esq.
John J. Meadows, Esq.
Steptoe & Johnson, PLLC
P.O. Box 1588
Charleston, WV 25326-1588
Counsel for Petitioner

County Commission of Doddridge County
118 E Court Street, Room 102
West Union, WV 26456


L. WAYNE WILLIAMS

