



2013 TENTATIVE OIL AND GAS UNIT OF PRODUCTION VALUES



NEW YORK STATE DEPARTMENT OF TAXATION AND FINANCE OFFICE OF REAL PROPERTY TAX SERVICES VALUATION SERVICES BUREAU

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TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION	1
II. THE TENTATIVE UNIT OF PRODUCTION VALUES	3
III. METHODOLOGY FOR COMPUTING DISCOUNTED NET CASH FLOW	4
IV. ECONOMIC PROFILES - GAS	6
V. ECONOMIC PROFILES - OIL	7
VI. COMPANY REPORTS	7
VII. ELEMENTS OF THE GAS ECONOMIC PROFILES	8
VIII. ELEMENTS OF THE OIL ECONOMIC PROFILES	11
IX. SUMMARY	12

X. TABLES	14
i. Listing of Medina Regions by Municipalities	14
ii. Map of New York State Delineating Various Formations	17
iii. Sample Company Reporting Form – No. 7019 (Rev. 03/11)	18
iv. Computation of Discount Rates 2007 - 2011	19
(2007 – 2011 Gas Economic Profile Factors used in determining Net Cash Flow and Unit of Production Values)	
v. Medina Region 1 and 4	20
vi. Medina Region 2	21
vii. Medina Region 3	22
viii. Trenton Black River Formation	23
ix. Oriskany and Onondaga Formation	24
x. All Other Gas Production Formations	25
(2007 – 2011 Oil Economic Profile Factors used in determining Net Cash Flow and Unit of Production Values)	
xi. Stripper Wells	26
xii. Enhanced Recovery Wells	27
xiii. Other Wells	28

INTRODUCTION

The purpose of this report is to set forth the methodology and economic profiles used to calculate the tentative unit of production values. These unit values are intended for use with the assessment rolls completed and filed in 2013.

Oil and gas producing properties are real property for taxation purposes, as are wells, pipes, and oil and gas under the land which has not yet been extracted (General Construction Law, Section 39; Real Property Tax Law, Section 102(12)(a),(e)).

Title 5 of Article 5 of the Real Property Tax Law (RPTL) provides a uniform, statewide method of valuing oil and gas producing properties for real property tax purposes. It mandates that oil and gas producing properties in production be assessed separately from all other interests in the property (RPTL, Section 594(1)). Chapter 207 of the Laws of 1986 amended Title 5, Article 5 (Section 592) clarifies the procedures for determining unit of production values. It stipulates that the net cash flow resulting from compiling and deriving net cash for each economic profile be divided by the discount rate to yield the unit of production value for each economic profile. An average of the discounted net cash flow for each of the five calendar years, preceding the year in which the values are to be certified, results in the appropriate unit of production value. For a more detailed discussion of the methodology, see Section III of this report entitled, "Methodology For Computing Discounted Net Cash Flow."

Oil and gas producing properties are to be assessed in terms of economic units. An economic unit is all real property, subject to taxation and assessed pursuant to Title 5, associated with the exercise of oil and gas rights, including the un-extracted oil and gas, oil and gas rights, and any and all wells, equipment, fixtures and pipeline, necessary to drill, mine, operate, develop, extract, produce, collect, deliver or sell the oil or gas to a point of sale, to a commercial purchaser, a pipeline or equipment of a user.

The provisions of Title 5 direct the Commissioner of Taxation and Finance to annually establish unit of production values and certify them to assessors for use in assessing oil and gas economic units. For oil, the unit of production value is a dollar amount per barrel (BBL) of oil produced. For gas, the unit of production value is a dollar amount per 1,000 cubic feet (MCF) of gas produced.

The rules for property tax administration (Title 20 NYCRR chapter XVI, Part 8196), which implement Title 5, require the Commissioner to annually establish tentative unit of production values, provide notice to producers and local assessment officials, and allow producers and assessors an opportunity to comment before final unit of production values are determined.

For gas, to determine which tentative unit of production value applies to a particular economic unit, it is necessary to know in which region the economic unit is drilled. Traditionally, there were six regions including four different Medina regions. Although most counties are wholly within one Medina Formation region, eleven counties (Cattaraugus, Cayuga, Chautauqua, Chenango, Erie, Livingston, Madison, Onondaga,

Ontario, Seneca and Yates) are divided between two Medina regions. An assessing unit may have gas economic units located in only the Medina region, but may also have gas economic units in the Onondaga Reef, Oriskany Sandstone, or other formations. The Trenton-Black River gas field is an underground geological formation stretching from Ontario through New York and Pennsylvania and into West Virginia. Currently, in NYS, there are wells in Broome, Chemung, Ontario, Schuyler, Steuben, and Yates counties.

For oil, there are three classifications that relate to method of extraction and the amount of production. They include enhanced recovery method, stripper well and other wells. Enhanced recovery method was formerly known as secondary recovery method. Stripper wells are defined as those primary recovery wells whose annual field production is less than 3,650 barrels per year while other wells are defined as those primary recovery wells whose annual field production is more than 3,650 barrels per year.

To assess an oil or gas economic unit, the assessor is required to multiply the appropriate final unit of production value by the number of barrels of oil or 1,000 cubic feet (MCF) of gas produced in the production year multiplied by the latest State equalization rate or special equalization rate, except where such rate exceeds or would exceed one hundred. In these cases a special equalization rate of one hundred will be established for the purpose of determining the valuation of oil and gas economic units. It is necessary to apply an equalization rate because unit of production values are at full or market value.

Chapter 869 of the Laws of 1985 amended Title 5 to provide for the assessment of gas economic units where annual production may be non-existent due to non-connection, non-completion, shut-in or other circumstances which prevent production of oil or gas.

Upon the exercise of gas rights, each gas economic unit is subject to a minimum assessment of two one-year periods based on a minimum annual production equivalent to 2,400,000 cubic feet. Such minimums shall be applied, during the life of the well, in consecutive or non-consecutive years, whenever such well has an annual production of less than 2,400,000 cubic feet. Upon completion of the second year minimum assessment, a gas economic unit shall be assessed on actual measured annual production of gas. No minimum assessment shall be applied to any gas economic unit existing on or before January 1, 1986, and such economic units may be assessed only on actual measured annual production.

Oil economic units are assessed only on the basis of actual measured annual production.

Please contact Valuation Services Bureau at (518) 474-1071 for additional information.

THE TENTATIVE UNIT OF PRODUCTION VALUES

On January 22, 2013, ten tentative unit of production values were established for use in computing the assessment of oil and gas economic units. Following a hearing and a review of comments, the Commissioner will establish final unit of production values and certify them to assessors. This process is normally completed and the values finalized around the middle of March. To assess an economic unit, the assessor is required to multiply the appropriate certified unit of production value by the annual amount of production from the economic unit, and by the latest State equalization rate or special equalization rate, except where such rate exceeds or would exceed one hundred, a special equalization rate of one hundred will be established for purposes of determining the valuation of oil and gas economic units.

The recommended 2013 tentative gas unit of production values and the 2012 final gas unit of production values are as follows:

Gas Economic Profile*	Recommended 2013 Tentative Gas Unit of Production Value **	2012 Final Gas Unit of Production Value	% Difference
Medina Region 1	\$8.13	\$9.54	-14.80%
Medina Region 2	\$8.13	\$9.54	-14.80%
Medina Region 3	\$8.13	\$9.54	-14.80%
Medina Region 4	\$8.13	\$9.54	-14.80%
Onondaga & Oriskany Formations	\$9.34	\$9.12	2.43%
Trenton Black River	\$7.08	\$9.56	-25.92%
All Other Formations	\$9.34	\$9.12	2.43%

*See Table 1 for assessing units located in each Medina region.

** These recommended 2013 roll tentative unit of production values are based on calendar year 2011 rates and expense data.

The changing values are attributable to several factors including variations in sale price, expenses, overriding royalty, discount rate, and the five year average which is used to compute the final unit of production value.

The recommended 2013 tentative oil unit of production values and the 2012 final oil unit of production values are as follows:

Oil Economic Profile	Recommended 2013 Tentative Oil Unit of Production Value**	2012 Final Oil Unit of Production Value	% Difference
Enhanced Recovery Method	\$45.84	\$48.38	-5.25%
Stripper Wells	\$88.08	\$72.39	21.67%
Other Wells	\$88.08	\$72.39	21.67%

**These recommended 2013 roll tentative unit of production values are based on calendar year 2011 rates and expense data.

METHODOLOGY FOR COMPUTING DISCOUNTED NET CASH FLOW

Discounted net cash flow is an income capitalization method of valuation used in estimating the present value of future earnings. The statutorily mandated procedure for determining discounted net cash flow is to deduct from gross income the operating expenses, landowner royalty payments, and other costs, if any, such as overriding royalty interests not retained by the owner of the working interest, dry hole costs, additional capital investment required, depletion and depreciation. In determining the unit of production values, the minimum discount rate is derived from the average of the sum of the discount rates established by the United States Federal Reserve Board on the first business day of each month for the preceding five calendar years. In addition, a factor of seventeen and one-half percent is added to the Federal Reserve Discount Rate to develop the interest rate to discount the net cash flow to account for risk, non-liquidity, management, intangible drilling cost, real property and income taxes.

Discounted net cash flow methodology is applied to the average of typical income, expense and operating data for the five calendar years by the three steps outlined as follows:

- Step I Net Cash Flow:** Gross Income
 - Royalty
 - Overriding royalty interests
 = Producer's Gross Income
 - Operating Expenses
 - dry hole costs
 - depreciation
 - depletion
 = NET CASH FLOW
- Step II Discount Rate:** + xxxxx Five years average rate for U.S. Federal Reserve
 + .1750 Representing risk, non-liquidity, management, intangible drilling cost, real property and income taxes
 = TOTAL DISCOUNT RATE
- Step III Process:** Net cash flow divided by the yearly average discount rate equals the discounted net cash flow. The average five proceeding discounted net cash flows results in the unit of production value. A separate unit of production value is calculated for the ten gas and oil formations in this report.

Samples of the procedure to calculate an assessment of oil and gas well economic unit are as follows:

Selected Unit of Production Value (x) Annual Production (x) the Equalization Rate (=) the Assessed Value

An assessed value of a gas economic unit located in Region 3 of the Medina Region is calculated as follows:

The gas unit of production value for Region 3 of the Medina Region, at \$8.13 per MCF of gas, (x) the annual production of 6,000 MCF for a gas economic unit, (x) the equalization rate of .80, (=) the assessed value \$39,024.

An assessed value of an oil economic unit for an Enhanced Recovery Well is calculated as follows:

The oil unit of production value for an independent producer with enhanced recovery wells at \$45.84 per barrel of oil, (x) the annual production of 500 barrels of oil for an oil economic unit, (x) the equalization rate of .80, (=) the assessed value of \$18,336.

ECONOMIC PROFILES-GAS

There are seven economic profiles used for establishing unit of production values for gas. The following is a brief discussion of the significant characteristics of each economic profile.

Medina Regions

The State has been divided into four (4) Medina regions and an economic profile has been developed to represent each region. A significant portion of the gas wells in New York State are drilled in and produce gas from the Medina rock formation, including the subformations of Grimsby, Whirlpool and Queenston.

The Medina formation is present at different elevations with well depths ranging from 1,000 feet deep at the northwestern section of western New York to 4,000 feet or more at the southern boundary of the State.

The operating expenses differ slightly through the various formations, but capital investment tends to increase as the well depth increases.

The Medina Economic Profiles 1 and 4 are the same. Economic Profile 4 applies to the small number of Medina wells located outside the other specific economic profile areas. In addition, there are separate economic profiles for Medina Region 2 and 3.

Onondaga Reef and Oriskany Sandstone

Wells drilled in the Onondaga Reef and Oriskany Sandstone formations exhibit similar gas liberation characteristics. They have a large initial production, which reduces rapidly over their economic life of five to ten years. These wells are located mainly in Steuben, Allegany and Cattaraugus Counties.

Trenton Black River

Wells drilled in the Trenton Black River Formation are referred to as deep wells. They are wells drilled 5,280 feet deep or more. They generally produce large amounts of gas initially and are expected to be very productive for a number of years. The average productive life of the wells has yet to be determined. These wells are located mainly in Cortland, Chemung, Schuyler, Steuben, and Tompkins Counties.

All Other Formations

A tentative unit of production value has been established for wells in gas producing formations other than those described above. The unit of production values for these wells is calculated with this economic profile regardless of where they occur in the State.

The map highlights general locations of each formation in Table 2.

ECONOMIC PROFILES-OIL

There are only three unit of production values for oil wells. These economic profiles are a reflection of production type and amount rather than location.

The three oil production types result in varying operating expenses that yield oil economic profiles by three production methods. A brief discussion of the production types is as follows:

1. **Enhanced Recovery Wells** represent all oil wells using secondary recovery methods, including the fluid injection process. The operating expenses for this process are significantly higher than the operating expenses for the primary recovery method.
2. **Stripper Wells** represent oil wells utilizing only pumping equipment to recover the oil. The annual production of this field is typically less than 3,650 barrels per year. The operating expenses for this type of recovery method are lower than the secondary recovery method.
3. **Other Wells** represent oil wells utilizing only pumping equipment to recover the oil. The annual production of the field is typically more than 3,650 barrels per year.

COMPANY REPORTS

The oil and gas companies were requested to file reports containing information for various operating and geological conditions as related to field, formation and economic unit. See Table 3 for a copy of the company economic profile form, RP-7019.

Gas and Oil Company Reports

The yearly number of gas and oil economic profile reports received from companies, with yearly production and the number of wells are as follows:

Summary of Economic Profile Reports

<u>Gas</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Companies Reporting	11	23	21	22	22
No. of Reports Submitted	135	234	169	125	121
No. of Wells Submitted	4,030	4,212	4,462	4,956	5,055
Production Reported (MMCF) ¹	49,871	45,428	38,946	24,064	24,945
Percent of NYS Production ²	90.8%	90.3%	87%	67.2%	80.15%
Production of Mandated Reporters	51,973	47,240	38,946	29,289	27,891
Reporting Percentage of Mandated ³	95.95%	94.11%	93.03%	82.16%	87.1%
<u>Oil</u>					
Companies Reporting	27	30	22	28	28
No. of Reports	35	41	31	39	41
No. of Wells	1,432	1,600	1,653	1,770	1,856
Production Reported (BBL) ¹	363,101	330,657	278,113	309,944	289,947
Percent of NYS Production ²	93.8%	86.1%	86%	80%	74.12%
Production of Mandated Reporters	356,873	365,074	277,309	334,056	350,006
Reporting Percentage of Mandated ³	89%	84.07%	100%	92.78%	82.11%

¹ The total annual production from all company reports received as of December 31, 2011. The 2011 reports were not received from 9 mandated oil companies and from 3 mandated gas companies.

² Total NYS production per NY DEC was 31,124 MMCF of gas and 391,176 BBL of oil. This does not include tax-exempt oil and gas wells.

³ Reported production from mandated companies received, expressed as a percent of the estimated production of all mandated companies.

ELEMENTS OF THE GAS ECONOMIC PROFILES

Operating Gross Income

The gross income is the revenue generated from the sale of the gas by the producer to the purchaser, either under contract or on the open market.

The Sales Price is computed using the Gross Income divided by production.

The operating gross income is the revenue generated from the sale of the gas minus royalty payments.

From all of the reported sale prices, the representative average sale price for each of the five-year period was determined as follows:

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Average Sale Price - Medina	\$7.05	\$9.41	\$4.51	\$4.62	\$4.30
Average Sale Price - TBR	\$7.05	\$9.41	\$4.51	\$4.62	\$4.30

It should be noted that a typical gas lease includes a one-eighth royalty payment to the owner of the land; this yields a seven-eighths remaining working interest. Therefore, each of the sales prices for the five year periods are adjusted for a one-eighth royalty to represent the 87.5 percent working interest of the producers.

An overriding royalty (ORI) is defined as a fractional interest in the gross production of oil and gas under a lease, in addition to the usual royalties paid to the lessor, free of any expense for exploration, drilling, development, operating, marketing and other costs incidental to the production and sale of oil and gas produced from the lease. It is an interest carved out of the lessee's share of the oil and gas, ordinarily called the working interest, as distinguished from the owner's reserved royalty interest. While usage varies, any royalty created out of the working interest in a lease is overriding royalty and many people also refer to any royalty reserved by the lessor in addition to the usual one-eighth royalty as overriding royalty.

The following sales prices for each of the five-year periods have been adjusted for the one-eighth royalty, as well as the overriding royalty interest:

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Adjusted Sales Price After Royalties - Medina	\$6.07	\$8.12	\$3.90	\$3.97	\$3.67
Adjusted Sales Price After Royalties - TBR	\$6.07	\$8.12	\$3.91	\$4.00	\$3.72

Total Operating Expenses and Other Costs

Total Operating Expenses and Other Costs include operating expenses, dry hole costs, abandonment and well plugging costs, depreciation, tangible capital investment, and depletion. Total Operating Expenses and Other Costs for each of the five-year periods are listed below, followed by a brief explanation of each component.

Year	Medina 1&4	Medina 2	Medina 3	Oriskany	Trenton	Other
2007	\$3.73	\$3.73	\$3.73	\$3.73	\$3.21	\$3.73
2008	\$3.82	\$3.82	\$3.82	\$4.96	\$4.05	\$4.96
2009	\$2.60	\$2.60	\$2.60	\$3.06	\$3.66	\$3.06
2010	\$3.36	\$3.36	\$3.36	\$2.26	\$3.57	\$2.26
2011	\$3.50	\$3.50	\$3.50	\$1.99	\$3.70	\$1.99

Operating expenses are the costs for labor, fuel, repairs, hauling, supplies, etc., necessary to maintain and operate producing wells plus related facilities on the property used in the production of oil or gas. It does not include depreciation, capital expenditures, or the cost of developing new wells.

Other costs are the costs of operating a well or field which are significant and are normally encountered in the operation of a well or field. These include items such as dry hole costs, abandonment and well plugging costs, depreciation, additional capital investment required, depletion and overriding royalty interests not retained by the owner of the working interest.

Dry hole cost is the cost of drilling dry holes encountered in developing a productive field or an economic unit, and does not allow for the cost of drilling dry holes during exploration. Another cost, depreciation, is an allowance for the recapture of tangible assets having a useful life of one year or more. Capital investments are a third cost associated with the operation of a well or field. They include tangible and intangible drilling costs having a useful life of more than one year and are necessary to maintain production. The drilling and completion costs of a well are comprised of approximately 20 to 30 percent tangible cost and 70 to 80 percent intangible costs. These costs vary due to the different drilling depths, pressure and fracturing methods. Finally, depletion is an allowance against income which accounts for the reduction in the value of the oil and gas property as the resource is removed or extracted.

ELEMENTS OF OIL ECONOMIC PROFILES

Operating Gross Income

The gross income is the revenue generated from the sale of the gas by the producer to the purchaser, either under contract or on the open market.

The Sales Price is computed using the Gross Income divided by production.

The operating gross income is the revenue generated from the sale of the gas minus royalty payments.

The five year average sale prices per barrel of oil are as follows:

<u>Year</u>	<u>Per Barrel Price</u>
2007	\$65.36
2008	\$85.28
2009	\$50.98
2010	\$73.11
2011	\$83.77

It should be noted that a typical oil lease includes a one-eighth royalty payment (based on the yearly average of reported per barrel sale prices of oil) to the owner of the land. This yields a seven-eighths remaining interest. Overriding royalty interests are also calculated into the operating gross income. Therefore, the price per barrel is adjusted to represent the seven-eighths working interest of the producers, in addition to any overriding royalty as follows:

<u>Production Type</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Enhanced Recovery	\$57.19	\$72.80	\$44.61	\$63.97	\$73.19
Stripper Wells	\$57.19	\$72.80	\$44.61	\$63.97	\$73.30
Other Wells	\$57.19	\$72.80	\$44.61	\$63.97	\$73.30

Total Operating Expenses and Other Costs

Total Operating Expenses and Other Costs include operating expenses, dry hole costs, abandonment and well plugging costs, depreciation, and depletion. Total Operating Expenses and Other Costs for each of the five-year periods are listed below, followed by a brief explanation of each component.

<u>Production Type</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Enhanced Recovery	\$50.57	\$55.77	\$40.71	\$47.03	\$69.42
Stripper Wells	\$43.21	\$52.37	\$36.33	\$43.20	\$45.65
Other Wells	\$43.21	\$52.37	\$36.33	\$43.20	\$45.65

Operating expenses are the cost of maintaining the production of oil and do not include depreciation, capital investments or the cost of developing new wells.

Other costs include the cost of operating a well or field which is significant and is normally encountered in the operation of a well or field or an economic unit, and does not allow for the cost of drilling dry holes during exploration. A large majority of companies that reported indicated no costs for dry holes over a series of years.

Depreciation is the capitalized costs incurred for the drilling of the well and related equipment allocated over the estimated life of the well. These costs are classified as long-term investments, and are not charged to current operations. Some examples are casings, wellhead fittings, pumping units, tanks, meters, pipelines and installation, drilling, logging and fracking. Costs that are capitalized should not be duplicated again in operating expenses.

In the case of secondary recovery methods, many of the fields reported were mature and established, and therefore, displayed a small amount of capital investment to maintain the present productions. Depletion is an allowance against income, which accounts for the reduction in the value of the oil or gas property as the resource is removed or extracted.

SUMMARY

Pursuant to Title 5, the Office of Real Property Tax Services established the tentative unit of production values for use in computing the assessment of oil and gas economic units in production for assessment rolls completed in 2013.

For gas, to determine which tentative unit of production value applies to a particular economic unit, it is necessary to know in which region the economic unit is drilled. In addition, the Medina Formation has been divided into four regions. Although most counties are wholly within one Medina region, eleven counties (Cattaraugus, Cayuga, Chautauqua, Chenango, Erie, Livingston, Madison, Onondaga, Ontario, Seneca and Yates) are divided between two Medina regions. An assessing unit may have a gas economic unit located in only one Medina region, but may also have gas economic units in the Onondaga Reef, Oriskany Sandstone or other formations.

For oil, it is necessary to determine which oil production type is being used in a particular oil economic unit to determine which tentative oil unit of production value applies to it.

Real Property Tax Laws, Article 5 (section 592), provide that the Commissioner will annually establish tentative unit of production values, provide notice to producers and local assessment officials and allow producers and assessors an opportunity to comment.

Following a hearing and a review of comments, the Commissioner will establish final unit of production values and certify them to assessors for use in the assessment of oil and gas economic units of production.

The methodology to be applied in using certified final unit of production values to determine the assessment of oil and gas economic units of production, is set forth in Article 5 (section 594), as follows:

- (1) “No less than 45 days before the applicable date provided by law for the filing of the tentative assessment roll each year, each producer shall submit, to the appropriate assessor, a true and accurate copy of the production report for the production year required to be filed with the Department of Environmental Conservation for each appropriate economic unit.”
- (2) “Upon receipt of the appropriate final unit of production value certified by the Commissioner, each assessor shall compute and determine the assessing value of oil and gas economic units located in that assessment unit. Except as otherwise provided, economic units shall be assessed as follows:
 - (a) multiply the appropriate unit of production value, by
 - (b) the amount of production from that economic unit in the production year, by
 - (c) the latest State equalization rate or special equalization rate, except where such rate exceeds or would exceed one hundred, a special equalization rate of one hundred will be established for purposes of determining the valuation of oil and gas economic units.”

TABLE 1

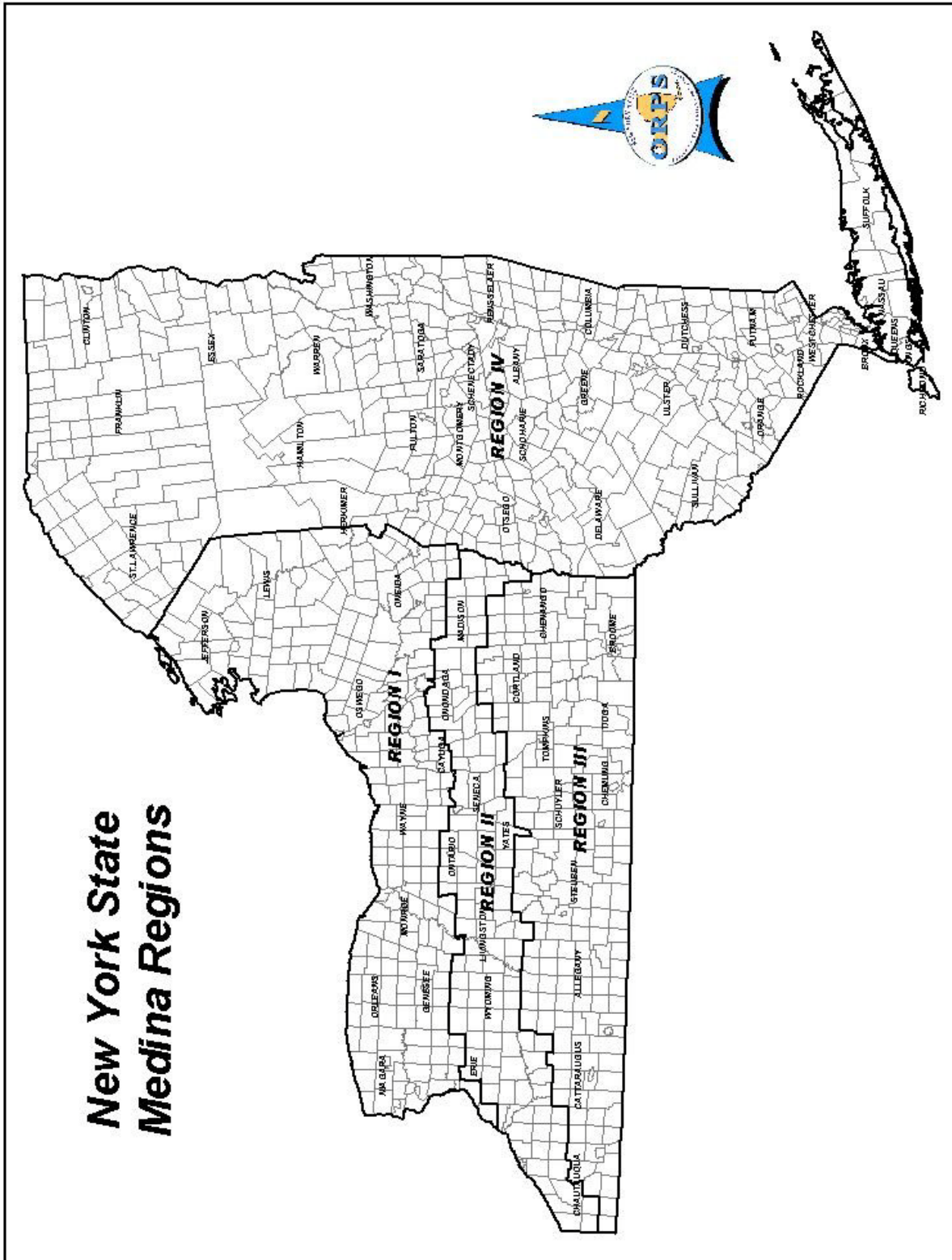
Chart of Medina Formation Regions for the Valuation of Gas and Oil Wells of New York State

Region 1	Region 2	Region 3	Region 4
CAYUGA Auburn (City) Aurelius Brutus Cato Conquest Ira Mentz Montezuma Sennett Sterling Throop Victory	CATTARAUGUS Ashford Dayton East Otto Leon Machias Otto Perrysburg Persia Yorkshire CAYUGA Fleming Genoa Ledyard Moravia Niles Owasco Scipio Sempronius Springport Venice CHAUTAUQUA Arkwright Charlotte Chautauqua Cherry Creek Dunkirk (City) Dunkirk Hanover Mina Pomfret Portland Ripley Sheridan Sherman Stockton Villanova Westfield	ALLEGANY All towns BROOME All towns CATTARAUGUS Allegany Carrollton Cold Spring Conewango Ellicottville Farmersville Franklinville Freedom Great Valley Hinsdale Humphrey Ischua Little Valley Lyndon Mansfield Napoli New Albion Olean (City) Olean Portville Randolph Red House Salamanca (City) Salamanca South Valley CAYUGA Locke Summerhill	ALBANY All towns CLINTON All towns COLUMBIA All towns DELAWARE All towns DUTCHESS All towns ESSEX All towns FRANKLIN All towns FULTON All towns GREENE All towns HAMILTON All towns HERKIMER All towns MONTGOMERY All towns NASSAU All towns

Region 1	Region 2	Region 3	Region 4
LIVINGSTON Avon Caledonia Lima York MADISON Fenner Lenox Lincoln Oneida (City) Smithfield Stockbridge Sullivan MONROE All towns NIAGARA All towns ONEIDA All towns ONONDAGA Camillus Cicero Clay DeWitt Elbridge Geddes Lysander Manlius Salina Syracuse (City) VanBuren ONTARIO Farmington Manchester Phelps Victor ORLEANS All towns	CHENANGO Columbus New Berlin Sherburne ERIE Aurora Boston Brant Colden Collins Concord Eden Holland North Collins Orchard Park Sardinia Wales LIVINGSTON Conesus Geneseo Groveland Leicester Livonia Mount Morris North Dansville Nunda Ossian Portage Sparta Springwater West Sparta MADISON Brookfield Cazenovia DeRuyter Eaton Georgetown Hamilton Lebanon Madison Nelson	CHAUTAUQUA Busti Carroll Clymer Ellery Ellicott Ellington French Creek Gerry Harmony Jamestown (City) Kiantone North Harmony Poland CHEMUNG All towns CHENANGO Afton Bainbridge Coventry German Greene Guilford Lincklaen McDonough North Norwich Norwich (City) Norwich Otselic Oxford Pharsalia Pitcher Plymouth Preston Smithville Smyrna CORTLAND All towns SCHUYLER All towns	ORANGE All towns OTSEGO All towns PUTNAM All towns RENSSELAER All towns ROCKLAND All towns ST. LAWRENCE All towns SARATOGA All towns SCHENECTADY All towns SCHOHARIE All towns SUFFOLK All towns SULLIVAN All towns ULSTER All towns WARREN All towns WASHINGTON All towns WESTCHESTER All towns

Region 1	Region 2	Region 3	Region 4
<p>OSWEGO All towns</p> <p>SENECA Junius Seneca Falls Tyre Waterloo</p> <p>WAYNE All towns</p>	<p>ONONDAGA Fabius Lafayette Marcellus Onondaga Otisco Pompey Skaneateles Spafford Tully</p> <p>ONTARIO Bristol Canadice Canandaigua (City) Canandaigua East Bloomfield Geneva(City) Geneva Gorham Hopewell Naples Richmond Seneca South Bristol West Bloomfield</p> <p>SENECA Fayette Ovid Romulus Varick</p> <p>WYOMING All towns</p> <p>YATES Benton Italy Jerusalem Middlesex Milo Potter Torrey</p>	<p>SENECA Covert Lodi</p> <p>STEUBEN All towns</p> <p>TIOGA All towns</p> <p>TOMPKINS All towns</p> <p>YATES Barrington Starkey</p>	

TABLE 2





**NEW YORK STATE DEPARTMENT OF TAXATION AND FINANCE
OFFICE OF REAL PROPERTY TAX SERVICES**

Oil and Gas Economic Profile Form For the Year Ending December 31, 20__

Producers of more than 1,000 barrels of oil or 200,000 mcf's of gas are required by law to submit this form.

Please fill out all information accurately and completely. Additional information may be attached if necessary.

Section 1: Producer Information			
Producer Name: _____ Address: _____ Representative: _____ Phone Number: _____	Formation*: _____ Average Well Age: _____ Average Well Depth: _____ County: _____ Town/City: _____		
Section 2: Well Type and Royalty Information			
<u>Well Type (please check box)</u>		<u>Production Type (for oil wells)</u>	
Oil <input type="checkbox"/>	<input type="checkbox"/>	Stripper wells <input type="checkbox"/>	<input type="checkbox"/>
Gas <input type="checkbox"/>	<input type="checkbox"/>	Enhanced recovery wells <input type="checkbox"/>	<input type="checkbox"/>
Both** <input type="checkbox"/>	<input type="checkbox"/>	Other <input type="checkbox"/>	<input type="checkbox"/>
<u>Gas Well Royalties:</u>		<u>Oil Well Royalties:</u>	
Land Owner royalties: \$ _____ %		Land Owner royalties: \$ _____ %	
Overriding royalties \$ _____ %		Overriding royalties \$ _____ %	
Total royalties \$ _____ %		Total royalties \$ _____ %	
Section 3: Production and Income Information			
<u>Gas Wells</u>		<u>Oil Wells</u>	
Total Number of wells reported on this form: _____		Total Number of wells reported on this form: _____	
Total Production of wells (Mcf's): _____		Total Production of wells (barrels): _____	
Total Gross Income: \$ _____		Total Gross Income: \$ _____	
Section 4: Expense Information			
<u>Gas Wells</u>		<u>Oil Wells</u>	
Total operating expenses: (10e's) \$ _____		Total operating expenses: (10e's) \$ _____	
Depreciation: \$ _____		Depreciation: \$ _____	
Depletion: \$ _____		Depletion: \$ _____	
Dry Hole Costs: \$ _____		Dry Hole Costs: \$ _____	
Reserve for abandonment \$ _____		Reserve for abandonment \$ _____	
<p>Certification: I, _____, of _____</p> <p align="center">(name) (title) (Company name)</p> <p align="center">Certify that the above information for the calendar year of 20__ is true to the best of my knowledge and belief.</p> <p align="center">_____</p> <p align="center">(Signature) (Date)</p> <p align="center">Mail this form to: NYS Department of Taxation and Finance, Office of Real Property Tax Services Jeremy Kergel, Oil and Gas Unit, Building 8a, W.A. Harriman State Campus, Albany NY 12227 Any questions regarding this form or the program can be directed to Jeremy Kergel at 518-474-1562.</p> <p>* If drilling in Medina, please indicate which medina region. A breakdown can be found at: http://www.orps.state.ny.us/sas/oil_gas/table1.htm , or by contacting Jeremy Kergel at 518-474-1562</p> <p>** If your wells are producing both gas and oil, please make every attempt to separate the expenses, income, and royalty.</p>			

RP - 7019 02/2011

TABLE 4

**Computation of the Discount Rate
For the Valuation of Gas and Oil Wells
In New York State**

I. Average Yearly Discount Rates as established by the U.S. Federal Reserve

<u>Month</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
January	6.25	4.48	.5	.5	.75
February	6.25	3.50	.5	.59	.75
March	6.25	3.04	.5	.75	.75
April	6.25	2.49	.5	.75	.75
May	6.25	2.25	.5	.75	.75
June	6.25	2.25	.5	.75	.75
July	6.25	2.25	.5	.75	.75
August	6.01	2.25	.5	.75	.75
September	5.53	2.25	.5	.75	.75
October	5.24	1.81	.5	.75	.75
November	5.00	1.25	.5	.75	.75
December	<u>4.83</u>	<u>0.86</u>	<u>.5</u>	<u>.75</u>	<u>.75</u>
Annual	5.86	2.39	.5	.716	.75

II. Statute Factor

Representing risk, non-liquidity, management, intangible drilling cost, real property and income taxes of 17.5% (RPTL Title 5, Section 592).

III. Total Overall Discount Rates by Year

The discount rate is derived from a sum of the average of the discount rates established by the U. S. Federal Reserve Board on the first business day of each month for each of the five calendar years upon which the economic profiles are based and that preceding the year in which the unit of production values are to be certified plus a factor of seventeen and one-half percent.

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Annual Averages	.0586	.0239	.005	.00716	.0075
Statute Factor	<u>+.1750</u>	<u>+.1750</u>	<u>+.1750</u>	<u>+.1750</u>	<u>+.1750</u>
Total Overall Discount Rates	.2336	.1989	.1800	.1822	.1825

The final discount rate of .1954 is computed by taking the average of the total overall discount rates for the period of 2007-2011.

2013 UNIT OF PRODUCTION VALUE

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

MEDINA 1 AND 4

Reporting Year:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price	\$7.05	\$9.41	\$4.51	\$4.62	\$4.30
Royalty (12.5%)	- \$0.88	\$1.18	\$0.56	\$0.58	\$0.54
Overriding Royalty	- \$0.10	\$0.11	\$0.05	\$0.07	\$0.09
Operating Gross Income	= \$6.07	\$8.12	\$3.90	\$3.97	\$3.67
Operating Expenses	- \$2.82	\$2.60	\$2.01	\$2.41	\$2.92
Depletion	- \$0.91	\$1.22	\$0.59	\$0.95	\$0.58
Total Operating Expenses and Depletion	= \$3.73	\$3.82	\$2.60	\$3.36	\$3.50
Net Cash Flow	\$2.34	\$4.30	\$1.30	\$0.61	\$0.17
Final Discount Rate	/ 0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	= \$10.84	\$19.86	\$6.11	\$2.96	\$0.87

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$8.13

last year

\$9.54

**2013 UNIT OF PRODUCTION
VALUE**

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

MEDINA 2

Reporting Year:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price	\$7.05	\$9.41	\$4.51	\$4.62	\$4.30
Royalty (12.5%)	- \$0.88	\$1.18	\$0.56	\$0.58	\$0.54
Overriding Royalty	- \$0.10	\$0.11	\$0.05	\$0.07	\$0.09
Operating Gross Income	= \$6.07	\$8.12	\$3.90	\$3.97	\$3.67
Operating Expenses	- \$2.82	\$2.60	\$2.01	\$2.41	\$2.92
Depletion	- \$0.91	\$1.22	\$0.59	\$0.95	\$0.58
Total Operating Expenses and Depletion	= \$3.73	\$3.82	\$2.60	\$3.36	\$3.50
Net Cash Flow	\$2.34	\$4.30	\$1.30	\$0.61	\$0.17
Final Discount Rate	/ 0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	= \$10.84	\$19.86	\$6.11	\$2.96	\$0.87

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$8.13

last year \$9.54

**2013 UNIT OF PRODUCTION
VALUE**

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

MEDINA 3

Reporting Year:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price	\$7.05	\$9.41	\$4.51	\$4.62	\$4.30
Royalty (12.5%)	- \$0.88	\$1.18	\$0.56	\$0.58	\$0.54
Overriding Royalty	- \$0.10	\$0.11	\$0.05	\$0.07	\$0.09
Operating Gross Income	= \$6.07	\$8.12	\$3.90	\$3.97	\$3.67
Operating Expenses	- \$2.82	\$2.60	\$2.01	\$2.41	\$2.92
Depletion	- \$0.91	\$1.22	\$0.59	\$0.95	\$0.58
Total Operating Expenses and Depletion	= \$3.73	\$3.82	\$2.60	\$3.36	\$3.50
Net Cash Flow	\$2.34	\$4.30	\$1.30	\$0.61	\$0.17
Final Discount Rate	/ 0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	= \$10.84	\$19.86	\$6.11	\$2.96	\$0.87

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$8.13

last
year

\$9.54

2013 UNIT OF PRODUCTION VALUE

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

TRENTON BLACK RIVER

Reporting Year:		<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price		\$7.05	\$9.41	\$4.51	\$4.62	\$4.30
Royalty (12.5%)	-	\$0.88	\$1.18	\$0.56	\$0.58	\$0.54
Overriding Royalty	-	\$0.10	\$0.11	\$0.04	\$0.04	\$0.04
Operating Gross Income	=	\$6.07	\$8.12	\$3.91	\$4.00	\$3.72
Operating Expenses	-	\$1.69	\$2.43	\$3.07	\$2.97	\$3.14
Depletion	-	\$1.52	\$1.62	\$0.59	\$0.60	\$0.56
Total Operating Expenses and Depletion	=	\$3.21	\$4.05	\$3.66	\$3.57	\$3.70
Net Cash Flow		\$2.86	\$4.07	\$0.25	\$0.43	\$0.02
Final Discount Rate	/	0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	=	\$13.25	\$18.80	\$1.17	\$2.09	\$0.10

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$7.08

last year \$9.56

**2013 UNIT OF PRODUCTION
VALUE**

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

**ORISKANY /
ONONDAGA**

Reporting Year:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price	\$7.05	\$9.41	\$4.51	\$4.62	\$4.30
Royalty (12.5%)	- \$0.88	\$1.18	\$0.56	\$0.58	\$0.54
Overriding Royalty	- \$0.10	\$0.09	\$0.11	\$0.04	\$0.00
Operating Gross Income	= \$6.07	\$8.14	\$3.84	\$4.00	\$3.76
Operating Expenses	- \$2.82	\$3.74	\$2.48	\$1.66	\$1.43
Depletion	- \$0.91	\$1.22	\$0.58	\$0.60	\$0.56
Total Operating Expenses and Depletion	= \$3.73	\$4.96	\$3.06	\$2.26	\$1.99
Net Cash Flow	\$2.34	\$3.18	\$0.78	\$1.74	\$1.77
Final Discount Rate	/ 0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	= \$10.84	\$14.69	\$3.67	\$8.45	\$9.06

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$9.34

last year

\$9.12

**2013 UNIT OF PRODUCTION
VALUE**

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

OTHER

Reporting Year:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price	\$7.05	\$9.41	\$4.51	\$4.62	\$4.30
Royalty (12.5%)	- \$0.88	\$1.18	\$0.56	\$0.58	\$0.54
Overriding Royalty	- \$0.10	\$0.09	\$0.11	\$0.04	\$0.00
Operating Gross Income	= \$6.07	\$8.14	\$3.84	\$4.00	\$3.76
Operating Expenses	- \$2.82	\$3.74	\$2.48	\$1.66	\$1.43
Depletion	- \$0.91	\$1.22	\$0.58	\$0.60	\$0.56
Total Operating Expenses and Depletion	= \$3.73	\$4.96	\$3.06	\$2.26	\$1.99
Net Cash Flow	\$2.34	\$3.18	\$0.78	\$1.74	\$1.77
Final Discount Rate	/ 0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	= \$10.84	\$14.69	\$3.67	\$8.45	\$9.06

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$9.34

last year \$9.12

**2013 UNIT OF PRODUCTION
VALUE**

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

STRIPPER WELLS

Reporting Year:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price	\$65.36	\$85.28	\$50.98	\$73.11	\$83.77
Royalty (12.5%)	- \$8.17	\$10.66	\$6.37	\$9.14	\$10.47
Overriding Royalty	- \$0.00	\$1.82	\$0.00	\$0.00	\$0.00
Operating Gross Income	= \$57.19	\$72.80	\$44.61	\$63.97	\$73.30
Operating Expenses	- \$34.63	\$41.45	\$29.64	\$28.20	\$34.65
Depletion	- \$8.58	\$10.92	\$6.69	\$15.00	\$11.00
Total Operating Expenses and Depletion	= \$43.21	\$52.37	\$36.33	\$43.20	\$45.65
Net Cash Flow	\$13.98	\$20.43	\$8.28	\$20.77	\$27.65
Final Discount Rate	/ 0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	= \$64.75	\$94.36	\$38.91	\$100.87	\$141.50

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$88.08

last year \$72.39

**2013 UNIT OF PRODUCTION
VALUE**

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

ENHANCED RECOVERY METHOD

Reporting Year:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price	\$65.36	\$85.28	\$50.98	\$73.11	\$83.77
Royalty (12.5%)	- \$8.17	\$10.66	\$6.37	\$9.14	\$10.47
Overriding Royalty	- \$0.00	\$1.82	\$0.00	\$0.00	\$0.11
Operating Gross Income	= \$57.19	\$72.80	\$44.61	\$63.97	\$73.19
Operating Expenses	- \$41.99	\$44.85	\$34.02	\$37.43	\$58.08
Depletion	- \$8.58	\$10.92	\$6.69	\$9.60	\$11.34
Total Operating Expenses and Depletion	= \$50.57	\$55.77	\$40.71	\$47.03	\$69.42
Net Cash Flow	\$6.62	\$17.03	\$3.90	\$16.94	\$3.77
Final Discount Rate	/ 0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	= \$30.66	\$78.66	\$18.33	\$82.27	\$19.29

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$45.84

last year \$48.38

**2013 UNIT OF PRODUCTION
VALUE**

The Net Cashflow for Each Economic Profile;
Annual Unit of Production Values; and
5 Year Average Unit of Production Value for:

OTHER WELLS

Reporting Year:	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Sale Price	\$65.36	\$85.28	\$50.98	\$73.11	\$83.77
Royalty (12.5%) Overriding Royalty	- \$8.17	\$10.66	\$6.37	\$9.14	\$10.47
	- \$0.00	\$1.82	\$0.00	\$0.00	\$0.00
Operating Gross Income	= \$57.19	\$72.80	\$44.61	\$63.97	\$73.30
Operating Expenses	- 34.63	\$41.45	\$29.64	\$28.20	\$34.65
Depletion	- \$8.58	\$10.92	\$6.69	\$15.00	\$11.00
Total Operating Expenses and Depletion	= \$43.21	\$52.37	\$36.33	\$43.20	\$45.65
Net Cash Flow	\$13.98	\$20.43	\$8.28	\$20.77	\$27.65
Final Discount Rate	/ 0.2159	0.2165	0.2128	0.2059	0.1954
Unit Of Production Value	= \$64.75	\$94.36	\$38.91	\$100.87	\$141.50

5 Year Unit of Production Value ((Columns 1+2+3+4+5) / 5) =

\$88.08

last year **\$72.39**