



STATE OF WEST VIRGINIA
Department of Revenue
State Tax Department

Joe Manchin III
Governor

Virgil T. Helton
State Tax Commissioner

September 4, 2007

The Honorable Betty Ireland
Secretary of State
Capitol Complex
Building 1, Suite 157-K
Charleston, West Virginia 25305

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE
2007 SEP -4 AM 9:48
FBI

Dear Secretary Ireland:

Attached are final natural resource property valuation variables for the 2008 Tax Year as 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.

In accordance with requirements of §§ 110 CSR 1-I, 1-J, and 1-K, tentative variables were made available for public comments on June 29, 2007. The Department received a comment on the tentative variables from Consol Energy during the comment period. Consol provided additional information regarding the tons of coal they produced and prices they received for both metallurgical and steam coal. After incorporating the data into our analysis, the variable State Steam Price was reduced from \$41.23 per ton to \$39.00 per ton and the variable State Metallurgical Price was increased from \$58.56 to \$59.37.

The Department also received a comment from the Independent Oil and Gas Association of West Virginia concerning potential changes to the oil and gas tentative variables; however since no additional data was provided for our analysis, no change was made.

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

Sincerely,

Virgil T. Helton
State Tax Commissioner

VTH/dh/cb/j
Attachment

cc: All County Assessors
State of West Virginia

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COAL PROPERTIES ANALYSIS

Tax Year 2008

September 4, 2007
Virgil T. Helton
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 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.

<u>Safe Rate</u>	90 day Treasury Bills			<u>Safe Rate</u>
	January	December	2006	4.850%
	January	December	2005	3.210%
	January	December	2004	1.400%

<u>Risk Rate</u>	Interest differential between Loan Rate and 90 day Treasury Bills		
	<u>Loan Rate*</u>		<u>Debt Risk Rate</u>
	2006	9.96%	5.110%
	2005	8.19%	4.980%
	2004	6.34%	4.940%
	*Prime plus 2%		

<u>Equity</u>	Differential between Equity Rates and 90 day Treasury Bills		
	<u>Equity Rate**</u>		<u>Equity Risk Rate</u>
	2006	$[13.0\%/(1-.30)]-4.85$	13.721%
	2005	$[13.0\%/(1-.30)]-3.21$	15.361%
	2004	$[12.75\%/(1-.30)]-1.40$	16.814%
	** <i>Moody's Handbook on Common Stocks and Value Line Investment Analysis</i>		

<u>Composite Risk Rate</u>	Loan and Equity Rates weighted by industry estimated capital structure.		
	Equity Rate	Debt Rate	Composite Risk
2006	8.233%	2.044%	10.277%
2005	9.217%	1.992%	11.209%
2004	10.089%	1.976%	12.065%
Note: Debt equity Ratio		Debt 40%	Equity 60%

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.

			<u>1yr T Bill</u>	<u>90 d T Bill</u>	<u>Non Liquidity Rate</u>
January	December	2006	4.930%	4.850%	0.080%
January	December	2005	3.620%	3.210%	0.410%
January	December	2004	1.890%	1.400%	0.490%

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

Inflation Rate

January	December	2006	2.500%
January	December	2005	3.400%
January	December	2004	3.300%

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

	<u>2006</u>	<u>2005</u>	<u>2004</u>
Inflation Rate	-2.500%	-3.400%	-3.300%
Safe Rate	4.850%	3.210%	1.400%
Composite Risk Rate	10.277%	11.209%	12.065%
Non Liquidity Rate	0.080%	0.410%	0.490%
Management Rate	0.500%	0.500%	0.500%
Total	13.207%	11.929%	11.155%

Three Yr Average: 12.097 Rounded to: 12.10%

CAPITALIZATION RATE - 12.1%			
MULTIPLIERS:		%	%
1YR	0.944	9YR	5.62
2YR	1.787	10YR	5.958
3YR	2.539	11YR	6.259
4YR	3.209	12YR	6.528
5YR	3.807	13YR	6.768
6YR	4.341	14YR	6.982
7YR	4.817	15YR	7.173
8YR	5.241		

COAL

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. Research data for coal lease rates have been derived from recorded lease transactions provided by county assessors, tax auditors, producers, and by individual lessors/lessees involved in the specific transaction. The prices for mined coal have been calculated from data published in "COAL WEEK", from pricing information provided by producers as part of the most recent tax filing, and from data obtained from the WV Public Service Commission and U S Energy Information Administration concerning power plant fuel purchases. 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 2004, 2005 & 2006 FOR TY2008 APPLICATION

GRAND SUMMARY ALL SOURCES

	STEAM SPOT	STEAM TERM	MET
PSC *	\$50.60	\$37.70	
Coal Week Publication	\$50.65		merged w coal outlook in 2003
Active Return Summary	\$36.77	<--S+T	\$59.37 30 3 mm tons

STATE STEAM PRICE	\$39.00	Weighted according to the 73/27 from the PSC tons below
STATE MET PRICE	\$59.37	
STATE STEAM SPOT PRICE	\$45.97	EIA & PSC. 3 YR AVE

	Spot Sales	Term Sales	Total
PSC Tons reported in thousands. 2006.	4.124	10956	15.080

COAL TY 2008 ROYALTY RATES

	5YR		6YR		7YR		8YR	
	%S	%D	%S	%D	%S	%D	%S	%D
TOTAL RECORDS	24	74	32	97	42	128	75	179
SUM of PERCENT	159.75	424.43	214.25	554.53	272.75	712.53	455.2	991.83
STRAIGHT AVERAGE	6.56	5.74	6.70	5.72	6.49	5.57	6.07	5.54
MEDIAN	6.25	6.00	6.25	6.00	6.00	6.00	6.00	6.00
WEIGHTED AVERAGE	6.66	5.74	6.67	5.73	6.64	5.70	7.31	6.31
TENTATIVE RATE SURFACE	7.01							
TENTATIVE RATE DEEP	5.84							

ROYALTY RATE CALCULATIONS

Steam Coal/ Deep Mine	\$39.00 per ton X 5.84% =	\$2.28
Metallurgical Coal/ Deep Mine	\$59.37 per ton X 5.84% =	\$3.47
Steam Coal/ Surface Mine	\$39.00 per ton X 7.01% =	\$2.73
Metallurgical Coal/ Surface Mine	\$59.37 per ton X 7.01% =	\$4.16

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 November 15 of each year. Please refer to the State Register, Legislative Rules, Title 110, Series 1I 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 2005 Legislative Session to allow biannual revisiting of the geostatistical basis for several valuation factors used in the Reserve Coal Valuation Model. Preliminary research has been conducted and 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 >= 48 Then TransFactor = 20

If Trans_Ct < 48 And Trans_Ct >= 18 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 = 5 miles

Surface Mines: Smine

Deep Mines: Dmine

Boom 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. Well density is in wells per square mile

WellDensity < 3 Then WellFactor = 0

WellDensity >= 3 And WellDensity < 13 Then WellFactor = 20

WellDensity >= 13 And WellDensity < 25 Then WellFactor = 40

WellDensity > 25. 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 = <=30 and Null Then EnvFactor = 0

Envrate >30 and Envrate <= 60 Then EnvFactor = 20

Envrate > 60 and Envrate <= 100 Then EnvFactor = 40

Envrate > 100 Then EnvFactor = 80

OIL AND GAS PROPERTIES ANALYSIS

Tax Year 2008

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OIL AND GAS

TY 2008

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 1.J

Safe Rate (3-Month Constant Maturity Interest Rates)
 January December 2006 **4.8483%**

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

<u>Loan Rate*</u>	<u>Risk Rate</u>
2006 9.9575%	5.11%
*Prime plus 2%	

Equity (Differential between Equity Rates and 3-Month Constant Maturity Interest Rates)

<u>Equity Rate**</u>	<u>Safe Rate</u>
2006 [12.5%/(1-.37)]-1.048483	14.993%

 ** Moody's Handbook on Common Stocks and Value Line Investment 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>	
2006	9.7454%	1.788%		12.141%	***
Note: 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

			<u>1yr T Bill</u>	<u>90 day T Bill</u>	<u>Non Liquidity Rate</u>
January	December	2006	4.9328%	4.8483%	0.084%

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

2006	60% of 2.21%	1.326%
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Inflation Rate
 January December 2006 **2.5%**

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

	<u>2006</u>	<u>2005</u>	<u>2004</u>
Inflation Rate	-2.500%	-3.400%	-3.300%
Safe Rate	4.848%	3.213%	1.395%
Composite Risk Rate	12.141%	13.210%	14.172%
Non Liquidity Rate	0.084%	0.406%	0.492%
Management Rate	0.500%	0.500%	0.500%
Property Tax Rate	1.326%	1.344%	1.356%
Total	16.399%	15.273%	14.615%
	50.000%	33.333%	16.667%
	8.200%	5.091%	2.436%
			15.727%

Capitalization Rate Rounded to:

15.75%

MULTIPLIERS FOR 15.75 MID-YEAR LIFE (ANNUALLY)

<u>YEAR</u>		<u>YEAR</u>	
1	0.929479	21	0.049868
2	0.803005	22	0.043082
3	0.693741	23	0.037220
4	0.599344	24	0.032156
5	0.517792	25	0.027780
6	0.447337	26	0.024000
7	0.386468	27	0.020734
8	0.333882	28	0.017913
9	0.288451	29	0.015476
10	0.249201	30	0.013370
11	0.215293	31	0.011551
12	0.185998	32	0.009979
13	0.160690	33	0.008621
14	0.138825	34	0.007448
15	0.119935	35	0.006435
16	0.103615	36	0.005559
17	0.089517	37	0.004803
18	0.077336	38	0.004149
19	0.066813	39	0.003585
20	0.057722	40	0.003097

Decline Rates for Natural Gas and Oil Formations

Code		Central	Central	Central	
		Year 1	Year 2	Year 3+	Braxton
12	Alexander, Benson	-0.31	-0.20	-0.10	Clay
14	Benson	-0.48	-0.08	-0.08	Fayette
16	Benson, Balltown	-0.45	-0.16	-0.12	Nicholas
17	Gordon +	-0.30	-0.07	-0.07	Webster
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*	-0.38	-0.23	-0.10	
9	Exception (median)	-0.38	-0.23	-0.10	
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

Code			East	East	East	
			Year 1	Year 2	Year 3+	
						Berkeley
1	Oriskany		-0.30	-0.30	-0.19	Grant
14	Benson		-0.31	-0.17	-0.12	Greenbrier
20	Benson +		-0.44	-0.20	-0.08	Hampshire
21	Benson, Fifth		-0.29	-0.28	-0.09	Hardy
32	Brallier +		-0.48	-0.20	-0.05	Jefferson
33	Elk, Benson		-0.39	-0.21	-0.08	Mineral
34	Elk, Benson, Riley		-0.53	-0.19	-0.05	Monroe
35	Elk, Benson, Riley +		-0.36	-0.19	-0.11	Morgan
36	Elk, Benson, Balltown		-0.34	-0.18	-0.11	Pendelton
37	Elk, Alexander, Benson		-0.50	-0.07	-0.07	Pocahontas
38	Elk, Alexander, Benson +		-0.40	-0.16	-0.16	Preston
39	Hunterville		-0.31	-0.31	-0.14	Randolph
40	Fox, Haverly		-0.36	-0.21	-0.15	Summers
93	4th Sand		-0.42	-0.32	-0.08	Tucker
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	
9	Exception (median)		-0.39	-0.21	-0.09	
10	Non-Filer		-0.29	-0.07	-0.05	

Decline Rates for Natural Gas and Oil Formations

Code			North	North	North	
			Year 1	Year 2	Year 3+	Brooke
11	Gordon		-0.47	-0.31	-0.09	Hancock
13	Alexander, Benson, Riley		-0.26	-0.16	-0.15	Marshall
15	Benson, Riley		-0.18	-0.16	-0.06	Ohio
93	4th Sand		-0.42	-0.32	-0.08	Tyler
94	50 Foot		-0.34	-0.26	-0.07	Wetzel
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	
9	Exception (median)		-0.38	-0.26	-0.08	
10	Non-Filer		-0.18	-0.16	-0.06	

Decline Rates for Natural Gas and Oil Formations

Code		North	North	North	
		Central	Central	Central	
		Year 1	Year 2	Year 3+	Barbour
11	Gordon	-0.41	-0.14	-0.12	Doddridge
12	Alexander, Benson	-0.37	-0.19	-0.11	Gilmer
13	Alexander, Benson, Riley	-0.40	-0.28	-0.05	Harrison
14	Benson	-0.31	-0.17	-0.12	Lewis
15	Benson, Riley	-0.34	-0.17	-0.14	Marion
18	Big Injun	-0.36	-0.16	-0.13	Monongalia
21	Benson, Filth	-0.31	-0.20	-0.14	Taylor
28	Weir	-0.34	-0.34	-0.07	Upshur
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, Haverty	-0.46	-0.16	-0.08	
50	Rhinestreet	-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	-0.35	-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	
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/Onondago or Oriskany/Heiderberg	-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	Haverty, Elk, Benson (no Alexander)	-0.35	-0.16	-0.16	
78	Haverty	-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	Haverty, Elk, Alexander	-0.47	-0.14	-0.14	
85	Filth Oil	-0.45	-0.25	-0.22	
87	Bayard All	-0.30	-0.20	-0.05	
88	Filth	-0.29	-0.18	-0.12	
89	Filth +	-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	
109	Trenton/Deeper*	-0.37	-0.20	-0.10	
9	Exception (median)	-0.37	-0.20	-0.10	
10	Non-Filer	-0.23	-0.03	-0.03	
98	Coalbed Methane (Horizontal)	-0.50	-0.60	-0.50	

* 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

Code		North	North	North	Pleasants
		West	West	West	
		Year 1	Year 2	Year 3+	
2	Huron, Rhinestreet	-0.41	-0.26	-0.07	Ritchie
4	Huron	-0.42	-0.24	-0.14	Wood
5	Huron, Shale, 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	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	-0.35	-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/Weir	-0.51	-0.26	-0.09	
96	Maxton	-0.70	-0.27	-0.08	
109	Trenton/Deeper*	-0.39	-0.24	-0.10	
9	Exception (median)	-0.39	-0.24	-0.10	
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

Annual Production Rate Changes for Natural Gas and Oil Formations

Code			South	South	South	
			Year 1	Year 2	Year 3+	McDowell
8	Berea		-0.34	-0.15	-0.15	Mercer
22	Big Lime		-0.31	-0.19	-0.07	Raleigh
23	Big Lime, Maxton		-0.31	-0.19	-0.07	Wyoming
24	Blg Lime, Ravencloff		-0.29	-0.29	-0.17	
25	Berea +		-0.37	-0.12	-0.08	
26	Ravencloff		-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, Ravencloff		-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	
9	Exception (median)		-0.36	-0.19	-0.08	
10	Non-Filer		-0.23	-0.08	-0.05	
98	Coalbed Methane (Horizontal)		-0.50	-0.60	-0.50	

Decline Rates for Natural Gas and Oil Formations

Code			South Central	South Central	South Central	
			Year 1	Year 2	Year 3+	
3	Devonian Shale		-0.23	-0.08	-0.05	Kanawha
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		-0.21	-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	-0.26	-0.09	
96	Maxton		-0.70	-0.27	-0.08	
109	Trenton/Deeper*		-0.30	-0.21	-0.08	
9	Exception (median)		-0.30	-0.21	-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

Code			South West	South West	South West	
			Year 1	Year 2	Year 3+	Cabell
3	Devonian Shale		-0.31	-0.15	-0.04	Lincoln
8	Berea		-0.36	-0.11	-0.11	Logan
18	Big Injun		-0.38	-0.22	-0.04	Mingo
22	Big Lime		-0.19	-0.19	-0.19	Wayne
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*		-0.36	-0.22	-0.08	
9	Exception (median)		-0.36	-0.22	-0.08	
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

Code		West Central	West Central	West Central	
		Year 1	Year 2	Year 3+	Calhoun
2	Huron, Rhinestreet	-0.49	-0.11	-0.06	Roane
4	Huron	-0.33	-0.22	-0.14	Wirt
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	-0.25	-0.11	
9	Exception (median)	-0.42	-0.25	-0.11	
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

Code		West	West	West	
		Year 1	Year 2	Year 3+	Jackson
1	Oriskany	-0.40	-0.40	-0.29	Mason
2	Huron, Rhinestreet	-0.13	-0.12	-0.03	Putnam
3	Devonian Shale	-0.31	-0.15	-0.04	
4	Huron	-0.29	-0.14	-0.05	
5	Huron, Shale, Above Huron	-0.38	-0.15	-0.06	
6	Huron, Berea	-0.29	-0.08	-0.08	
7	Berea, Devonian Shales	-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	-0.16	-0.08	
9	Exception (median)	-0.35	-0.16	-0.08	
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. The survey requested working costs for the 2004 calendar year producing wells.

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

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 \$ 6.42/MCF
BBL usage X \$65.61/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. The two 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 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
BARBOUR	1	1	\$15.00
		2	\$1.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$1.00
		7	\$15.00
		8	\$15.00
		9	\$15.00
		10	\$15.00
		11	\$15.00
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	\$15.00
		2	\$1.00
		3	\$1.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$1.00
		8	\$15.00
		9	\$1.00
BRAXTON	4	1	\$15.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$15.00
		6	\$15.00
		7	\$15.00
		8	\$1.00
BROOKE	5	1	\$1.00
		2	\$1.00
		3	\$10.00
		4	\$10.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
CABELL	6	1	\$15.00
		2	\$1.00
		3	\$15.00
		4	\$15.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$15.00
		9	\$1.00
		10	\$15.00
CALHOUN	7	1	\$15.00
		2	\$1.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
CLAY	8	1	\$15.00
		2	\$1.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
DODDRIDGE	9	1	\$20.00
		2	\$20.00
		3	\$20.00
		4	\$20.00
		5	\$20.00
		6	\$20.00
		7	\$20.00
		8	\$20.00
		9	\$20.00
FAYETTE	10	1	\$10.00
		2	\$10.00
		3	\$10.00
		4	\$1.00
		5	\$10.00
		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 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
GILMER	11	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$1.00
		6	\$15.00
GRANT	12	1	\$1.00
		2	\$1.00
		3	\$15.00
		4	\$1.00
		5	\$15.00
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	\$10.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$10.00
		10	\$1.00
HANCOCK	15	1	\$10.00
		2	\$1.00
		3	\$10.00
		4	\$10.00
		5	\$1.00
		6	\$1.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
HARDY	16	1	\$1.00
		2	\$10.00
		3	\$10.00
		4	\$1.00
		5	\$10.00
		6	\$1.00
HARRISON	17	1	\$15.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$15.00
		6	\$1.00
		7	\$15.00
		8	\$1.00
		9	\$15.00
		10	\$1.00
		11	\$15.00
		12	\$15.00
		13	\$1.00
		14	\$15.00
		15	\$15.00
		16	\$1.00
		17	\$1.00
		18	\$15.00
		19	\$1.00
		20	\$15.00
		21	\$1.00
JACKSON	18	1	\$15.00
		2	\$15.00
		3	\$1.00
		4	\$15.00
		5	\$1.00
		6	\$15.00
		7	\$15.00
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 2008					
COUNTY	CO #	DISTRICT #	TY2008 \$/AC		
KANAWHA	20	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
				14	\$1.00
				15	\$20.00
				16	\$20.00
				17	\$1.00
				18	\$1.00
				19	\$20.00
				20	\$1.00
				21	\$1.00
				22	\$1.00
				23	\$20.00
				24	\$20.00
				25	\$20.00
				26	\$1.00
				27	\$1.00
				28	\$20.00
				29	\$1.00
				30	\$1.00
				31	\$1.00
LEWIS	21	1	\$15.00		
		2	\$15.00		
		3	\$15.00		
		4	\$15.00		
		5	\$1.00		
		6	\$15.00		
		7	\$1.00		
		8	\$1.00		
		9	\$15.00		
LINCOLN	22	1	\$15.00		
		2	\$15.00		
		3	\$1.00		
		4	\$15.00		
		5	\$15.00		
		6	\$15.00		
		7	\$15.00		
		8	\$15.00		
		9	\$15.00		
		10	\$1.00		

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
LOGAN	23	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$1.00
		6	\$1.00
		7	\$15.00
		8	\$15.00
		9	\$1.00
MARION	24	1	\$20.00
		2	\$20.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$20.00
		10	\$1.00
		11	\$20.00
		12	\$20.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$20.00
		17	\$1.00
		18	\$20.00
		19	\$20.00
		20	\$1.00
		21	\$1.00
		22	\$1.00
MARSHALL	25	1	\$1.00
		2	\$1.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$1.00
		7	\$15.00
		8	\$1.00
		9	\$15.00
		10	\$1.00
		11	\$1.00
		12	\$15.00
		13	\$1.00
		14	\$15.00
		15	\$15.00
		16	\$1.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
MASON	26	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$15.00
		11	\$1.00
		12	\$1.00
		13	\$1.00
		14	\$15.00
		15	\$15.00
		16	\$15.00
MC DOWELL	27	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$1.00
		6	\$15.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
		11	\$15.00
		12	\$1.00
		13	\$15.00
		14	\$1.00
		15	\$1.00
		16	\$1.00
MERCER	28	1	\$1.00
		2	\$10.00
		3	\$1.00
		4	\$1.00
		5	\$10.00
		6	\$10.00
		7	\$1.00
		8	\$1.00
		9	\$10.00
		10	\$1.00
		11	\$10.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
MINERAL	29	1	\$15.00
		2	\$15.00
		3	\$1.00
		4	\$15.00
		5	\$1.00
		6	\$15.00
		7	\$1.00
		8	\$15.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
MINGO	30	1	\$15.00
		2	\$1.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$15.00
		8	\$1.00
		9	\$15.00
		10	\$15.00
		11	\$15.00
		12	\$1.00
MONONGALIA	31	1	\$15.00
		2	\$1.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$1.00
		7	\$15.00
		8	\$15.00
		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	\$15.00
		19	\$15.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
MONROE	32	1	\$1.00
		2	\$1.00
		3	\$5.00
		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	\$5.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
NICHOLAS	34	1	\$1.00
		2	\$20.00
		3	\$20.00
		4	\$20.00
		5	\$1.00
		6	\$1.00
		7	\$20.00
		8	\$1.00
		9	\$20.00
OHIO	35	1	\$1.00
		2	\$1.00
		3	\$10.00
		4	\$1.00
		5	\$1.00
		6	\$10.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$1.00
PENDLETON	36	1	\$1.00
		2	\$15.00
		3	\$1.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$15.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
PLEASANTS	37	1	\$1.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$1.00
		7	\$15.00
		8	\$15.00
POCAHONTAS	38	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$10.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
PRESTON	39	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$1.00
		7	\$1.00
		8	\$15.00
		9	\$1.00
		10	\$15.00
		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	\$20.00
		2	\$20.00
		3	\$20.00
		4	\$20.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$20.00
		9	\$1.00
		10	\$20.00
		11	\$20.00
		12	\$20.00
		13	\$1.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
RALEIGH	41	1	\$15.00
		2	\$15.00
		3	\$1.00
		4	\$1.00
		5	\$15.00
		6	\$1.00
		7	\$15.00
		8	\$15.00
		9	\$15.00
		10	\$1.00
		11	\$15.00
		12	\$15.00
RANDOLPH	42	1	\$15.00
		2	\$15.00
		3	\$1.00
		4	\$15.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$15.00
		10	\$15.00
		11	\$15.00
		12	\$15.00
		13	\$1.00
		14	\$1.00
		15	\$1.00
		16	\$15.00
		17	\$15.00
		18	\$1.00
RITCHIE	43	1	\$15.00
		2	\$1.00
		3	\$15.00
		4	\$1.00
		5	\$15.00
		6	\$1.00
		7	\$15.00
		8	\$1.00
		9	\$1.00
		10	\$15.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
ROANE	44	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$15.00
		8	\$1.00
		9	\$15.00
SUMMERS	45	1	\$10.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$10.00
		6	\$10.00
		7	\$1.00
TAYLOR	46	1	\$1.00
		2	\$1.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$15.00
TUCKER	47	1	\$10.00
		2	\$10.00
		3	\$1.00
		4	\$1.00
		5	\$10.00
		6	\$1.00
		7	\$1.00
		8	\$1.00
		9	\$10.00
		10	\$1.00
		11	\$10.00
		12	\$1.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
TYLER	48	1	\$15.00
		2	\$15.00
		3	\$1.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$1.00
		8	\$1.00
		9	\$1.00
		10	\$15.00
UPSHUR	49	1	\$15.00
		2	\$15.00
		3	\$1.00
		4	\$15.00
		5	\$15.00
		6	\$15.00
		7	\$15.00
WAYNE	50	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$1.00
		5	\$1.00
		6	\$1.00
		7	\$1.00
		8	\$15.00
		9	\$15.00
		10	\$15.00
		11	\$1.00
		12	\$15.00
WEBSTER	51	1	\$1.00
		2	\$1.00
		3	\$1.00
		4	\$1.00
		5	\$15.00
		6	\$15.00
		7	\$1.00

OIL & GAS RESERVE RATES FOR TY 2008			
COUNTY	CO #	DISTRICT #	TY2008 \$/AC
WETZEL	52	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$15.00
		5	\$15.00
		6	\$1.00
		7	\$1.00
		8	\$15.00
		9	\$1.00
		10	\$1.00
		11	\$1.00
		12	\$15.00
		13	\$1.00
WIRT	53	1	\$15.00
		2	\$15.00
		3	\$15.00
		4	\$1.00
		5	\$15.00
		6	\$15.00
		7	\$15.00
		8	\$15.00
WOOD	54	1	\$20.00
		2	\$20.00
		3	\$20.00
		4	\$20.00
		5	\$1.00
		6	\$20.00
		7	\$20.00
		8	\$20.00
		9	\$20.00
		10	\$1.00
		11	\$20.00
		12	\$20.00
		13	\$1.00
		14	\$1.00
WYOMING	55	1	\$10.00
		2	\$10.00
		3	\$10.00
		4	\$10.00
		5	\$10.00
		6	\$10.00
		7	\$10.00
		8	\$1.00
		9	\$10.00
		10	\$10.00

**MANAGED TIMBER
PROPERTY ANALYSIS**

Tax Year 2008

September 4, 2007
Virgil T. Helton
State Tax Commissioner
Department of Revenue

MANAGED TIMBERLAND APPRAISAL RATES TAX YEAR 2008

(based on market 2002-2006)

Final Rates Per Acre

Class II Parcels	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
Region 1	\$290	\$185	\$50
Region 2	\$245	\$155	\$60
Region 3	\$360	\$230	\$60
Region 4	\$290	\$185	\$50
Region 5	\$255	\$160	\$50
Class III Parcels	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
Region 1	\$250	\$160	\$75
Region 2	\$225	\$150	\$75
Region 3	\$310	\$200	\$75
Region 4	\$250	\$160	\$75
Region 5	\$225	\$150	\$75
Class IV Parcels	<u>Grade 1</u>	<u>Grade 2</u>	<u>Grade 3</u>
Region 1	\$235	\$150	\$75
Region 2	\$225	\$150	\$75
Region 3	\$295	\$190	\$75
Region 4	\$230	\$150	\$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

Harvest Interval <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

**OTHER MINED MINERAL
PROPERTY ANALYSIS**

Tax Year 2008

September 4, 2007
Virgil T. Helton
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	2006	4.850%
January	December	2005	3.210%
January	December	2004	1.400%

<u>Risk Rate</u>	Interest differential between Loan Rate and 90 day Treasury Bills		
	<u>Loan Rate*</u>		<u>Debt Risk Rate</u>
	2006	9.96%	5.110%
	2005	8.19%	4.980%
	2004	6.34%	4.940%
	*Prime plus 2%		

<u>Equity</u>	Differential between Equity Rates and 90 day Treasury Bills		
	<u>Equity Rate**</u>		<u>Equity Risk Rate</u>
	2006	[12.75%/(1-.32)]-4.85	13.900%
	2005	[12.5%/(1-.32)]-3.21	15.172%
	2004	[12.5%/(1-.32)]-1.40	16.982%
	** Moody's Handbook on Common Stocks and Value Line Investment Analysis		

<u>Composite Risk Rate</u>	Loan and Equity Rates weighted by industry estimated capital structure.			
	Equity Rate	Debt Rate	Composite Risk	
2006	9.730%	1.533%	11.263%	
2005	10.621%	1.494%	12.115%	
2004	11.039%	1.729%	12.768%	
Note:	Debt equity Ratio	Debt	30%	Equity 70%

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	2006	4.930%	4.850%	0.080%
January	December	2005	3.620%	3.210%	0.410%
January	December	2004	1.890%	1.400%	0.490%

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

<u>Inflation Rate</u>			
January	December	2006	2.500%
January	December	2005	3.400%
January	December	2004	3.300%

<u>Property Tax Rate</u>	Sixty percent (60%) of State average Class III property tax rate.			
January	December	2006	60% of 2.210 =	1.326%
January	December	2005	60% of 2.240 =	1.344%
January	December	2004	60% of 2.260 =	1.356%

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.

	<u>2006</u>	<u>2005</u>	<u>2004</u>
Inflation Rate	-2.500%	-3.400%	-3.300%
Safe Rate	4.850%	3.210%	1.400%
Composite Risk Rate	11.263%	12.115%	12.768%
Non Liquidity Rate	0.080%	0.410%	0.490%
Management Rate	0.500%	0.500%	0.500%
Property Tax Rate	1.326%	1.344%	1.356%
<u>Total</u>	15.519%	14.179%	13.214%

Three Yr Average: 14.304% Rounded to: 14.30%

CAPITALIZATION RATE - 14.30%

MULTIPLIERS:	%		%
1YR	0.935	9YR	5.231
2YR	1.754	10YR	5.512
3YR	2.47	11YR	5.758
4YR	3.096	12YR	5.973
5YR	3.644	13YR	6.161
6YR	4.123	14YR	6.325
7YR	4.543	15YR	6.469
8YR	4.91		

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	WTD			TY2008 RATE
		AVERAGE PRICE	AVERAGE ROYALTY	MEDIAN ROYALTY	
LIMESTONE	14	\$6 52	\$0 22	\$0 20	\$0.22
SANDSTONE	6	\$4 67	\$0 29	\$0 25	\$0.45
CLAY/SHALE	33	N/A	\$0 11	\$0 10	\$0.11
SAND/GRAVEL	11	\$5 17	\$0 34	\$0 40	\$0.48
SALT BRINE	1	N/A	N/A	N/A	\$0.10

RESERVE VALUES

	number of sales	\$/AC
LIMESTONE	40	\$927.00
SANDSTONE	5	\$2,565.00
CLAY/SHALE	16	\$850.00
SAND/GRAVEL	20	\$3,285.00
SALT	6	\$1,140.00