

ADMINISTRATIVE NOTICE 2009-09

SUBJECT: Property Tax -- State Tax Commissioner's Statement for the Determination of Production Decline Rates for Producing Oil and Gas Properties for Property Tax Purposes for Tax Year 2008, Pursuant to § 110 CSR 1J-4.4.

On September 4, 2007, the State Tax Department filed valuation variables to be used in conjunction with the legislative rule for the appraisal of oil and gas properties. (See: § 110 CSR 1J-1 et seq.) This notice will address one of the variables, the production decline rate(s), setting forth the procedures used in developing the rate(s) for Tax Year 2008.

DISCUSSION

The income stream generated from a producing oil or gas well is directly dependent upon the quantity of the natural resource produced from the well. Once drilled an oil or gas well will experience a sharper production decline, typically for the first two-(2) years of production. This is known as flush production. Thereafter production decline levels off into what is known as settled production. The rate of production decline is dependent upon the physical location of the well and the stratigraphic formation(s) from which the well is producing.

The West Virginia Geological and Economic Survey ("Survey") has in past years created a database that contains well-by-well production data by producing formation(s). The Tax Department contracted with the Survey to develop an analytical model to plot production declines by location/formation throughout the State using data available at the time of the contract.

The Survey has divided the State into ten (10) regions that contain similar oil and gas geological characteristics. Attachment I is a map of the State depicting each of these ten (10) regions. The regions were then analyzed by producing formation(s), and production decline curves were plotted (see Attachment II for example) for each formation. A complete list of the oil and gas decline rates (see Attachment III) can also be found in the above referenced variables filed on September 4, 2007.

The appropriate production decline rate(s) are applied to individual well gross receipts to develop a probable future income series for the respective wells. The income streams from these wells are then discounted to present value. (See Administrative Notice 2008-09).

For more information concerning the development of oil and gas well production decline rates contact the State Tax Department at (304) 558-3940.

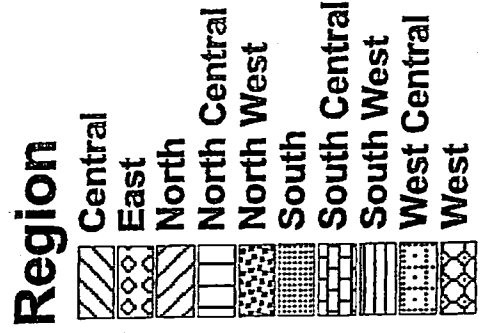
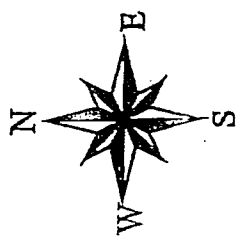
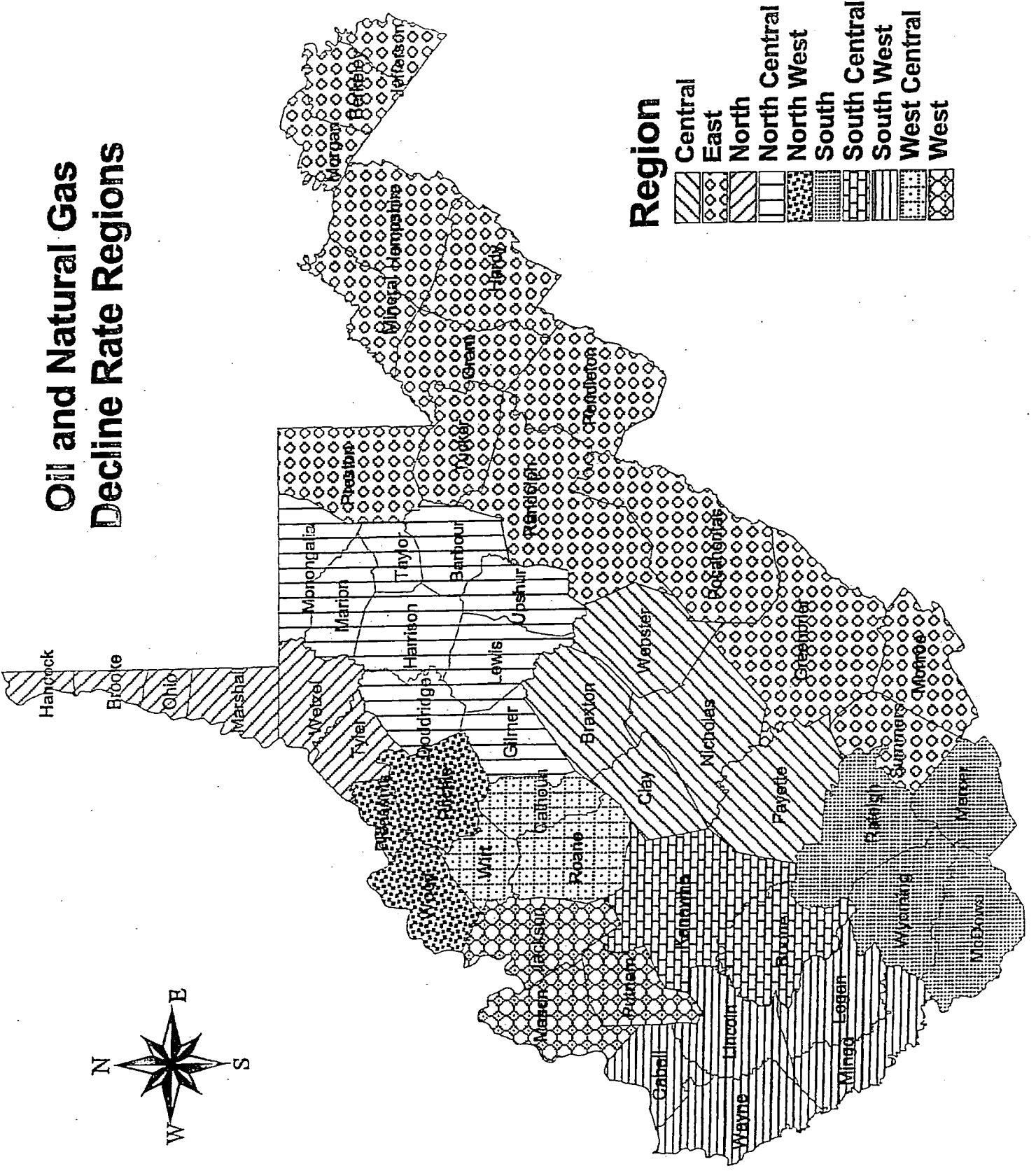
Issued: January 30, 2009

Christopher G. Morris
State Tax Commissioner
West Virginia State Tax Department

State Tax Department
Property Tax Division
P. O. Box 2389
Charleston, WV 25328-2389

Operator on Duty 8:30 am - 5:00 pm
Monday through Friday
Phone: (304) 558-3940
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Oil and Natural Gas Decline Rate Regions





WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY



State of West Virginia
Gaston Caperton
Governor

Department of Commerce, Labor,
& Environmental Resources
Leonard A. Harvey, Secretary

Geological and Economic Survey
Larry O. Woodcock, Director
Carl J. Smith, Deputy Director

Central Region:

Formation = Big Lime

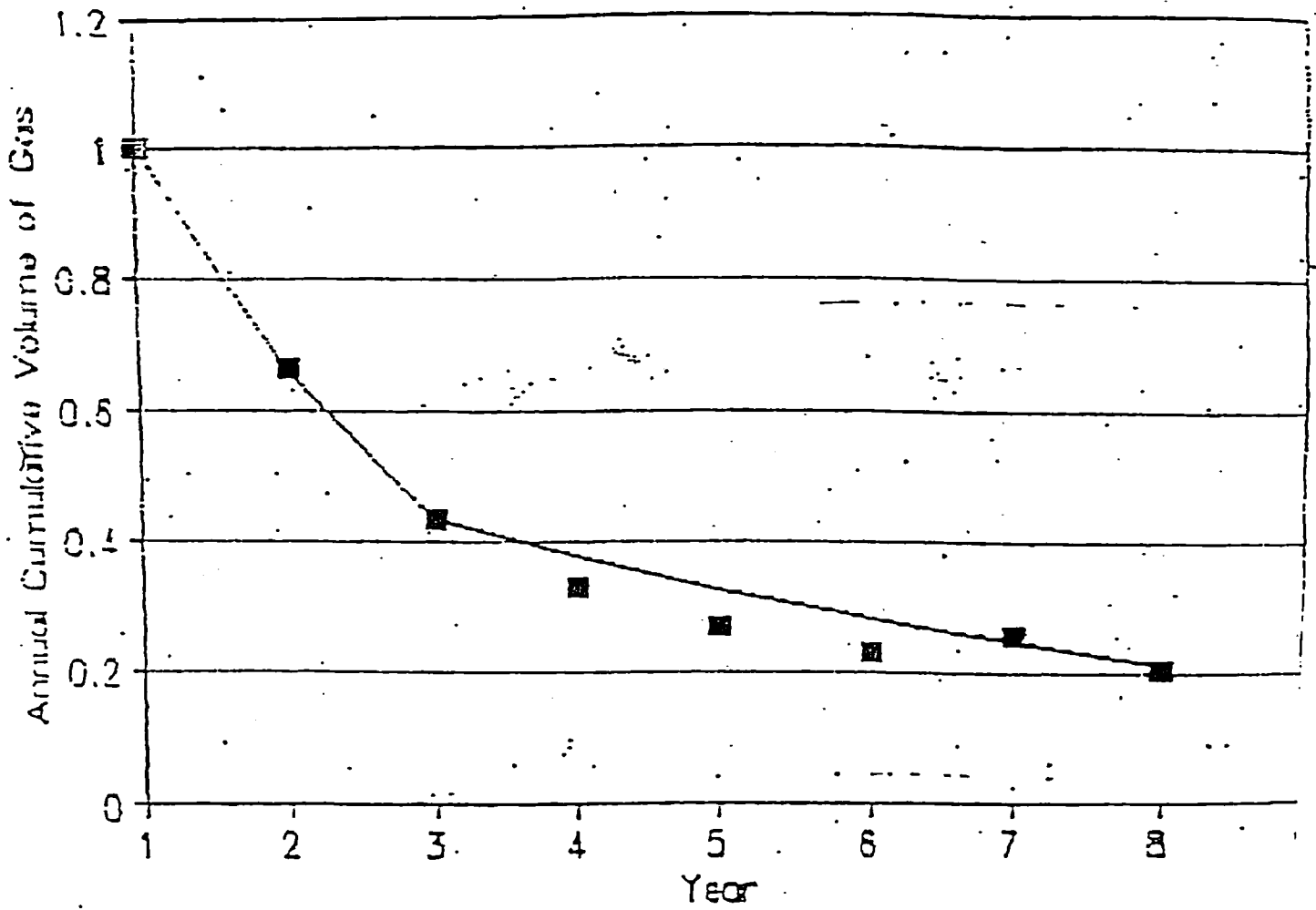
Model

Decline from 1st to 2nd year = .34	(# observations used = 78)
Decline from 2nd to 3rd year = .34	(# observations used = 63)
Decline after 3rd year = .13	(# observations used ranged from 37 to 5)

Normalized Decline

<u>Year</u>	<u>Observed</u>	<u>Model</u>
1	1.00	1.00
2	.66	.66
3	.43	.43
4	.33	.38
5	.27	.33
6	.23	.28
7	.26	.24
8	.20	.21

BIG LIME



■ OBSERVED — FITTED

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, Haverty		-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+	
11	Gordon	-0.41	-0.14	-0.12	Barbour
12	Alexander, Benson	-0.37	-0.19	-0.11	Doddridge
13	Alexander, Benson, Riley	-0.40	-0.28	-0.05	Gilmer
14	Benson	-0.31	-0.17	-0.12	Harrison
15	Benson, Riley	-0.34	-0.17	-0.14	Lewis
18	Big Injun	-0.36	-0.16	-0.13	Marion
21	Benson, Fifth	-0.31	-0.20	-0.14	Monongalia
28	Weir	-0.34	-0.34	-0.07	Taylor
29	Weir +	-0.28	-0.28	-0.23	Upshur
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	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	
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	
		West	West	West	
		Year 1	Year 2	Year 3+	Pleasants
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,Baltown,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	InjunWeir	-0.51	-0.26	-0.09	
96	Madon	-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	Big 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+	Boone
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.