



STATE OF WEST VIRGINIA  
Department of Revenue  
State Tax Department

COPY

Joe Manchin III  
Governor

Christopher G. Morris  
State Tax Commissioner

ADMINISTRATIVE NOTICE 2010-08

**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 2010, Pursuant to § 110 CSR 1J-4.4.

On August 28, 2009, 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 2010.

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.

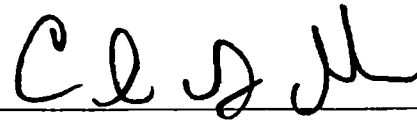
The Survey has divided the State into ten (10) regions that contain similar oil and gas geological characteristics. Attachment I is a map of the State depicting each of these ten (10) regions. A complete list of the oil and gas decline rates (see Attachment II) can also be found in the above referenced variables filed on August 28, 2009.

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.

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

Issued: 1-29-2010



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

State Tax Department  
Property Tax Division  
P. O. Box 2389  
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Operator on Duty 8:30 am - 5:00 pm  
Monday through Friday  
Phone: (304) 558-3940  
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## 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	Ravencloff	-0.40	-0.40	-0.25	
93	4th Sand	-0.42	-0.32	-0.08	
94	50 Foot	-0.34	-0.26	-0.07	
95	Injun/Weir	-0.51	-0.26	-0.09	
96	Maxton	-0.70	-0.27	-0.08	
109	Trenton/Deeper*	-0.41	-0.22	-0.09	
110	Marcellus*	-0.41	-0.22	-0.09	
9	Exception (median)	-0.41	-0.22	-0.09	
10	Non-Filer	-0.30	-0.07	-0.07	

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

## Decline Rates for Natural Gas and Oil Formations

Code			East	East	East	Berkeley
			Year 1	Year 2	Year 3	
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	Pendleton
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	
110	Marcellus*		-0.41	-0.22	-0.10	
9	Exception (median)		-0.41	-0.22	-0.10	
10	Non-Filer		-0.29	-0.07	-0.05	

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

## Decline Rates for Natural Gas and Oil Formations

Code			North	North	North	
			Year 1	Year 2	Year 3	
11	Gordon		-0.47	-0.31	-0.09	Brooke
13	Alexander, Benson, Riley		-0.26	-0.16	-0.15	Hancock
15	Benson, Riley		-0.18	-0.16	-0.06	Marshall
93	4th Sand		-0.42	-0.32	-0.08	Ohio
94	50 Foot		-0.34	-0.26	-0.07	Tyler
95	Injun/Weir		-0.51	-0.26	-0.09	Weizel
96	Maxton		-0.70	-0.27	-0.08	
97	Coalbed Methane (vertical)		-0.23	-0.08	-0.05	
110	Marcellus*		-0.39	-0.23	-0.08	
9	Exception (median)		-0.39	-0.23	-0.08	
10	Non-Filer		-0.18	-0.16	-0.06	

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

**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	Baraboo
12	Alexander, Benson	-0.37	-0.19	-0.11	Dodge
13	Alexander, Benson, Riley	-0.40	-0.28	-0.05	Gilman
14	Benson	-0.31	-0.17	-0.12	Hanson
15	Benson, Riley	-0.34	-0.17	-0.14	Lewis
18	Big Injun	-0.36	-0.15	-0.13	Manson
21	Benson, Fifth	-0.31	-0.20	-0.14	Monongalia
25	Weir	-0.34	-0.34	-0.07	Raynor
29	Weir +	-0.28	-0.28	-0.23	Upshur
33	Elk, Benson	-0.34	-0.15	-0.11	
34	Elk, Benson, Riley	-0.42	-0.27	-0.08	
37	Elk, Alexander, Benson	-0.49	-0.23	-0.08	
38	Elk, Alexander, Benson +	-0.38	-0.20	-0.12	
40	Fox, Haverly	-0.46	-0.16	-0.08	
50	Rhinestreet	-0.28	-0.03	-0.03	
57	Alexander, Benson, Balltown	-0.39	-0.26	-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	
65	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	Bradler, Elk	-0.42	-0.20	-0.13	
70	Bradler	-0.40	-0.22	-0.15	
71	Deepar/Onondago or Oniskany/Heiderberg	-0.24	-0.24	-0.03	
72	Elk, Alexander	-0.42	-0.22	-0.09	
73	Elk, Benson +	-0.36	-0.20	-0.12	
74	Elk	-0.43	-0.12	-0.10	
75	Elk, Riley	-0.50	-0.35	-0.17	
76	Fox +	-0.46	-0.18	-0.09	
77	Haverly, Elk, Benson (no Alexander)	-0.35	-0.15	-0.16	
78	Haverly	-0.45	-0.15	-0.15	
79	Riley	-0.44	-0.22	-0.10	
80	Speechley	-0.30	-0.18	-0.09	
81	Alexander, Benson, Speechley	-0.39	-0.24	-0.10	
82	Haverly, Elk, Alexander	-0.47	-0.14	-0.14	
85	Fifth Oil	-0.45	-0.25	-0.22	
87	Bayard All	-0.30	-0.20	-0.05	
88	Fifth	-0.29	-0.18	-0.12	
89	Fifth +	-0.25	-0.15	-0.13	
90	Gordon/Injun All	-0.41	-0.23	-0.23	
91	Souraw	-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	-0.25	-0.09	
95	Maxton	-0.70	-0.27	-0.08	
97	Coalbed Methane (vertical)	-0.23	-0.08	-0.05	
98	Coalbed Methane (horizontal)	-0.05	-0.05	-0.32	
103	Trenton/Desper*	-0.38	-0.21	-0.11	
110	Marcellus Shale*	-0.38	-0.21	-0.11	
9	Exception (median)	-0.38	-0.21	-0.11	
10	Non-Fier	-0.23	-0.03	-0.03	

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

**Decline Rates for Natural Gas and Oil Formations**

Code		North	North	North	Reserves
		West	West	West	
		Annual	Annual	Annual	Reserves
2	Huron, Rhinestreet	-0.41	-0.25	-0.07	Rhine
4	Huron	-0.42	-0.24	-0.14	Wespa
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, Srazaw, 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	-0.06	
109	Trenton/Deer*	-0.39	-0.23	-0.13	
110	Marcellus*	-0.39	-0.23	-0.13	
9	Exception (median)	-0.39	-0.23	-0.13	
10	Non-Filer	-0.12	-0.05	-0.05	

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



## 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	Merced
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	
98	Coalbed Methane (Horizontal)		-0.05	-0.05	-0.32	
110	Marcellus*		-0.36	-0.19	-0.09	
10	Exception (median)		-0.36	-0.19	-0.09	
10	Non-Filer		-0.23	-0.08	-0.05	

**Decline Rates for Natural Gas and Oil Formations**

Code			South Central	South Central	South Central	Boonville
			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	
85	Big Injun-Oil		-0.19	-0.18	-0.10	
93	4th Sand		-0.42	-0.32	-0.08	
94	50 Foot		-0.34	-0.26	-0.07	
95	Injun/Weir		-0.51	-0.26	-0.09	
96	Maxton		-0.70	-0.27	-0.08	
109	Trenton/Deeper*		-0.33	-0.19	-0.08	
110	Marcellus*		-0.33	-0.19	-0.08	
9	Exception (median)		-0.33	-0.19	-0.08	
10	Non-Filer		-0.19	-0.07	-0.04	

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

**Decline Rates for Natural Gas and Oil Formations**

Code			South	South	South	
			West	West	West	
			Year	Year	Year	
3	Devonian Shale		-0.31	-0.15	-0.04	Cabell
8	Berea		-0.36	-0.11	-0.11	Lincoln
18	Big Injun		-0.38	-0.22	-0.04	Logan
22	Big Lime		-0.19	-0.19	-0.19	Mingo
43	Berea, Big Lime		-0.18	-0.18	-0.18	Wayne
93	4th Sand		-0.42	-0.32	-0.08	
94	50 Foot		-0.34	-0.25	-0.07	
95	Injun/Weir		-0.51	-0.26	-0.09	
96	Maxton		-0.70	-0.27	-0.03	
109	Tranton/Deeper*		-0.38	-0.22	-0.10	
110	Marcellus*		-0.38	-0.22	-0.10	
9	Exception (median)		-0.38	-0.22	-0.10	
10	Non-Filer		-0.18	-0.11	-0.04	

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

## Decline Rates for Natural Gas and Oil Formations

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

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

**Decline Rates for Natural Gas and Oil Formations**

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	-0.20	-0.09	
110	Marcellus*	-0.35	-0.20	-0.09	
9	Exception (median)	-0.35	-0.20	-0.09	
10	Non-Filer	-0.08	-0.08	-0.03	

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