

## APPENDIX A: SOUTHWESTERN PENNSYLVANIA OIL AND GAS ACTIVITY DASHBOARD<sup>129</sup>

### Unconventional Oil and Gas Permits Issued, 2001-2012

County	2001-2012	2010	2011	2012
Allegheny	63	2	9	43
Armstrong	338	66	127	61
Beaver	98	5	29	55
Butler	480	92	192	118
Fayette	416	83	103	74
Greene	1,239	228	423	281
Indiana	110	34	26	15
Lawrence	69	1	14	54
Washington	1,507	276	374	430
Westmoreland	527	92	158	115
<b>10-County Total</b>	<b>4,847</b>	<b>879</b>	<b>1,455</b>	<b>1,246</b>
<b>Pennsylvania Total</b>	<b>14,710</b>	<b>3,691</b>	<b>4,618</b>	<b>3,397</b>
<b>SWPA % of State Total</b>	<b>32.95%</b>	<b>23.81%</b>	<b>31.51%</b>	<b>36.68%</b>

<sup>129</sup> Dashboard based on data from the Pennsylvania Department of Environmental Protection, the Pennsylvania Public Utility Commission, the Carnegie Museum of Natural History, Baker Hughes, EnergyDigger.com, and RigData.

## U.S. and Pennsylvania Oil and Gas Rig Counts

County	Rig Count 3/31/12	Rig Count 12/31/12
Allegheny	0	2
Armstrong	3	1
Beaver	2	0
Butler	3	6
Fayette	4	3
Greene	8	7
Indiana	0	0
Lawrence	2	0
Washington	14	10
Westmoreland	6	1
<b>10-County Total</b>	<b>42</b>	<b>30</b>
<b>PA Total</b>	<b>98</b>	<b>70</b>
<b>SWPA % of State Total</b>	<b>42.86%</b>	<b>42.86%</b>

In December 2012, all but two of PA's rigs were reported as gas rigs. This represented 15.7 percent of all gas rigs in the nation at that time.

### Oil and Gas Rig Counts<sup>130</sup>

Date	PA Total	U.S. Total	PA % of U.S. Total	U.S. Oil Rigs	U.S. Gas Rigs
Dec. 2012	70	1,763	4.0	1,327	431
April 2012	101	1,950	5.2	1,322	624
April 2011	105	1,790	5.9	926	882
April 2010	77	1,479	5.2	513	958
April 2007	16	1,750	0.9	283	1,460

<sup>130</sup> Numbers of U.S. oil rigs and gas rigs (the right two columns) may not equal the U.S. total rig count (third column from left) as some rigs are reported without an oil or gas designation, or as both an oil and gas rig. These categories are not represented in the table.

## Unconventional Oil and Gas Wells Drilled, 2002-2012

County	2002-12	2010	2011	2012
Allegheny	22	0	5	13
Armstrong	146	37	34	44
Beaver	25	1	6	17
Butler	176	35	35	70
Fayette	244	44	54	47
Greene	520	103	121	108
Indiana	45	7	21	2
Lawrence	19	0	2	17
Washington	758	167	156	195
Westmoreland	234	49	41	42
<b>10-County Total</b>	<b>2,189</b>	<b>443</b>	<b>475</b>	<b>555</b>
<b>PA Total</b>	<b>6,283</b>	<b>1,608</b>	<b>1,968</b>	<b>1,359</b>
<b>SWPA % of State Total</b>	<b>34.84%</b>	<b>27.55%</b>	<b>24.14%</b>	<b>40.84%</b>

### Unconventional % of Total Gas Wells Drilled

PA (2002-12)	16%
SWPA (2002-12)	15%
SWPA 2010	50%
SWPA 2011	70%
SWPA 2012	90%

### Top PA Operators by Active Wells

1. Chesapeake (1,636)	6. Chevron (393)
2. Range (846)	7. Cabot (377)
3. Talisman (780)	8. Atlas (376)*
4. Shell (732)	9. Anadarko (367)
5. EQT (405)	10. Consol/CNX (306)

\*Some acquired by Chevron in early 2011

### Unconventional Wells Drilled by Year

2002	1
2003	5
2004	2
2005	9
2006	37
2007	118
2008	353
2009	823
2010	1,608
2011	1,968
2012	1,359

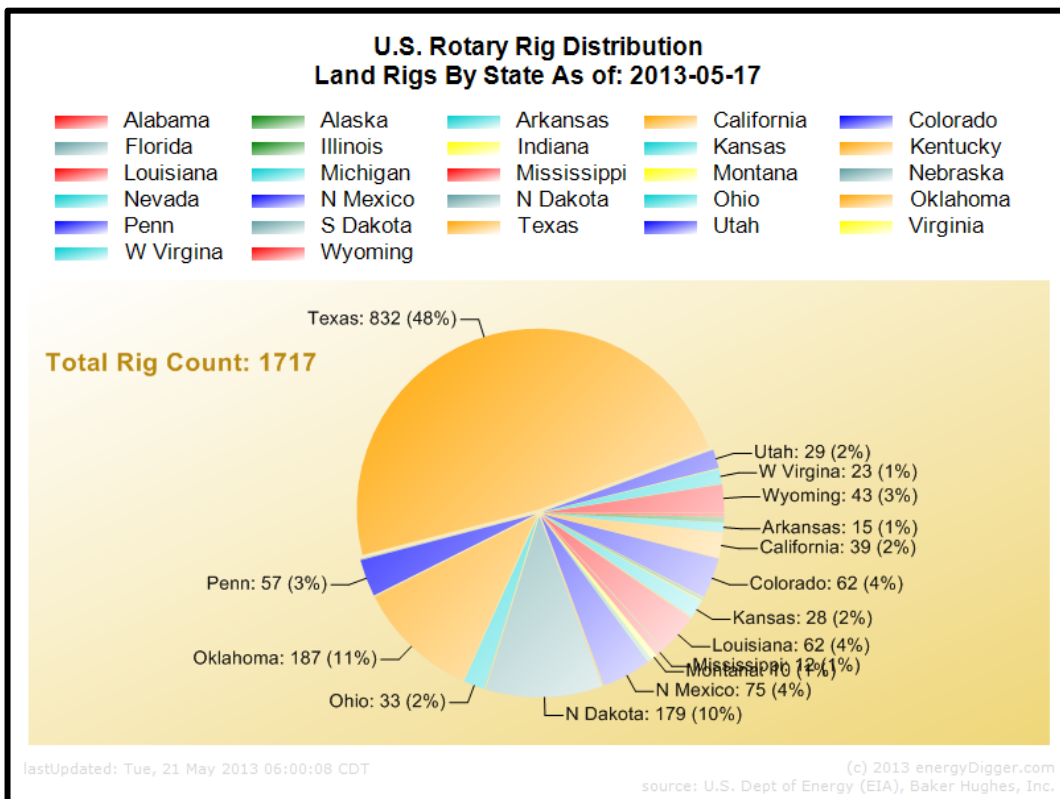
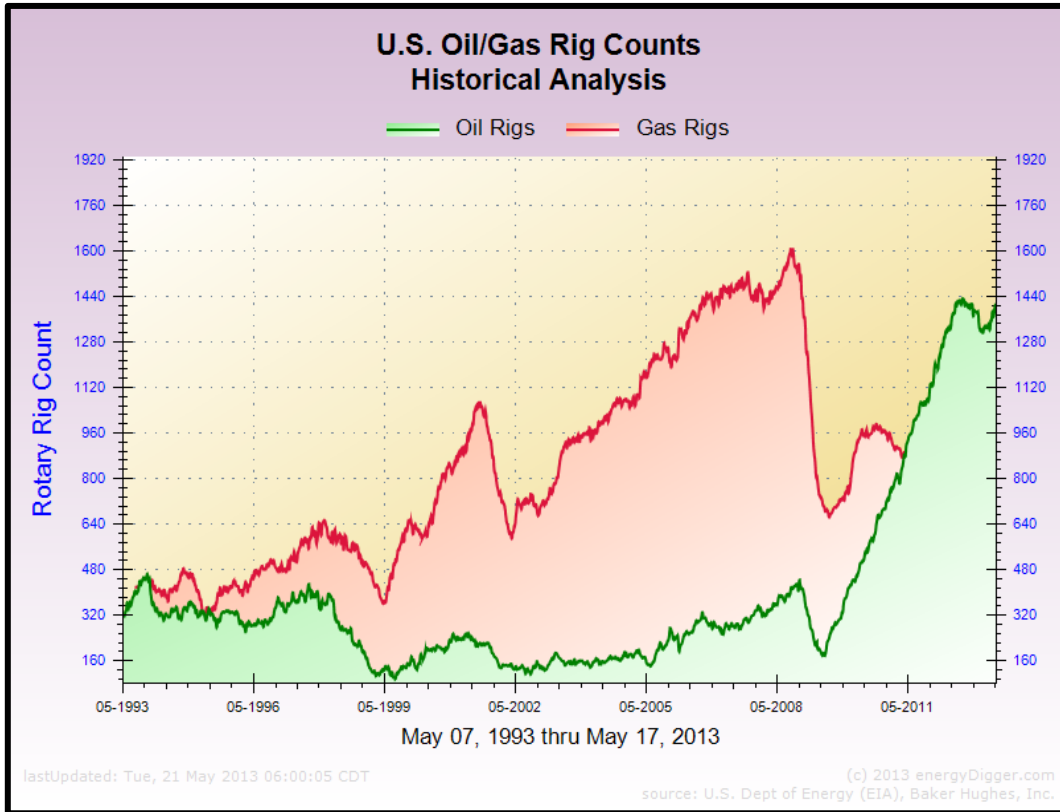
## Unconventional Oil and Gas Pad Estimates as of December 2012

Pad Estimates Summary	
•	2,726 well pads with at least one well drilled on the pad
•	900 additional pads are projected to be needed based on permits issued (where no wells have yet been drilled on that site)
•	2.3 average wells per pad (1.89 standard deviation)
•	Maximum of 12 wells on one pad

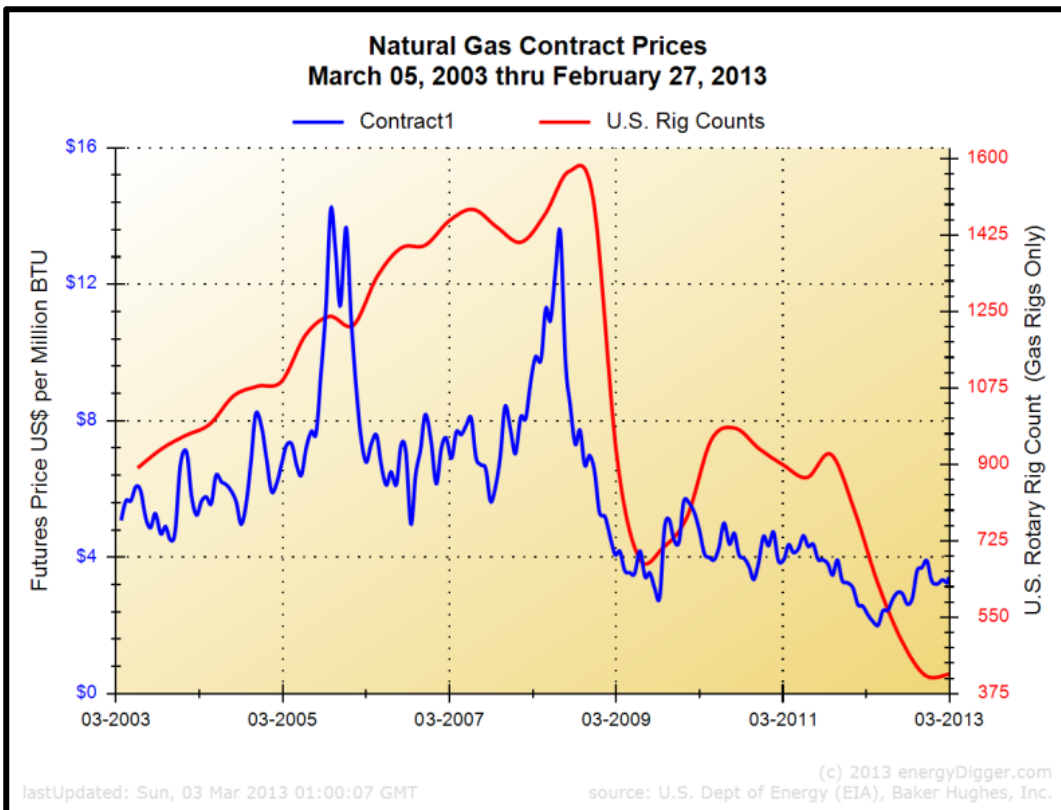
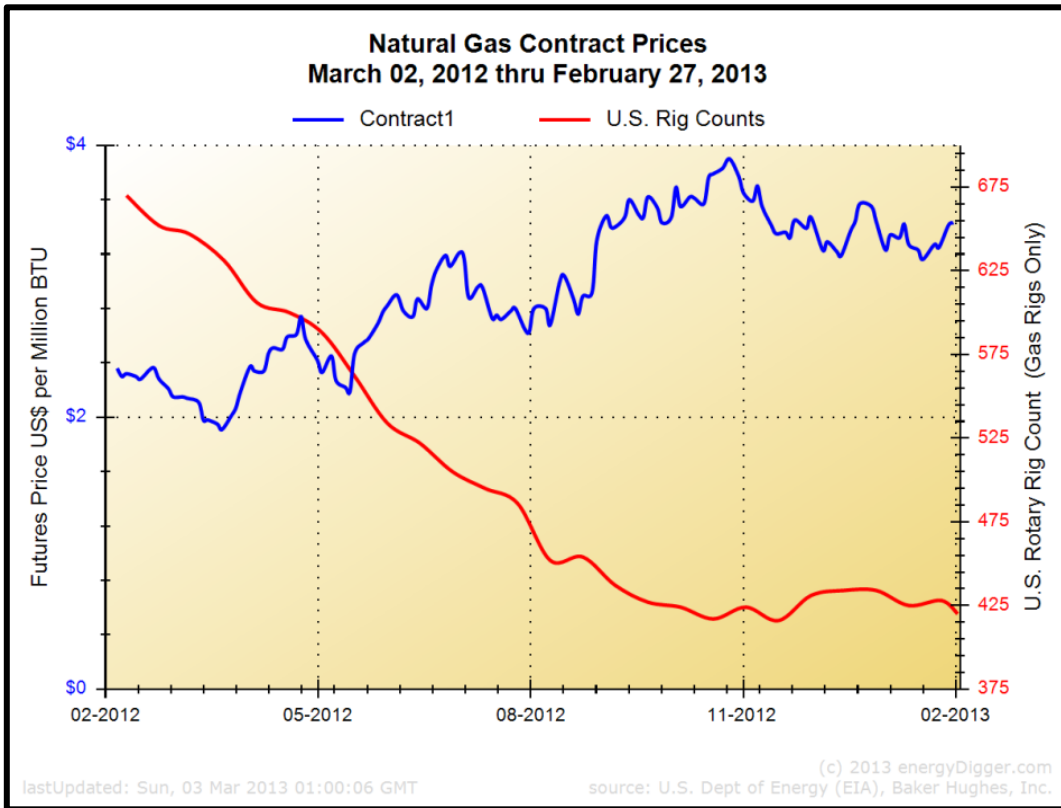


Wells per Pad	Number of Pads
1	1,422
2	485
3	250
4	208
5	94
6	152
7	53
8	40
9	8
10	9
11	4
12	1

## U.S. Rig Counts



## Comparison of Natural Gas Prices and Natural Gas Rig Counts



## Unconventional Wells in Production as of December 2012

County	Producing Wells (as of 12/31/12)	Wells Drilled (2002-2012)	% of Drilled Wells Producing
Allegheny	13	22	59%
Armstrong	121	146	83%
Beaver	5	25	20%
Butler	90	176	51%
Fayette	143	244	59%
Greene	378	520	73%
Indiana	24	45	53%
Lawrence	5	19	26%
Washington	495	758	65%
Westmoreland	161	234	69%
<b>10-County Total</b>	<b>1,435</b>	<b>2,189</b>	<b>66%</b>
<b>PA Total</b>	<b>3,561</b>	<b>6,283</b>	<b>57%</b>
<b>SWPA % of State Total</b>	<b>40.30%</b>	<b>34.84%</b>	

2012 PA Wells	% of Producing Wells	% of Total Production
Conventional	94.99%	9.9%
Unconventional	5.01%	90.1%

2,878 wells in the state were producing as of 7/1/12, an increase of 683 producing wells in six months (to 3,561 as of 12/31/12).

## Unconventional Gas, Condensate, and Oil Production - 2011 and 2012

County	Gas Production (2011, Mcf)	Condensate (2011, Bbl)	Oil (2011, Bbl)	Gas Production (2012, Mcf)	Condensate (2012, Bbl)	Oil (2012, Bbl)
Allegheny	2,480,604	10	0	8,340,837	0	0
Armstrong	6,231,128	0	0	17,707,185	0	0
Beaver	535,809	0	8	1,694,178	5,119	0
Butler	11,645,411	154,407	648	20,937,599	70,329	7,488
Fayette	25,985,313	0	0	34,434,673	0	0
Greene	120,992,169	0	0	180,500,506	0	229
Indiana	2,677,176	0	0	4,112,246	0	0
Lawrence	0	0	0	428,812	147	45
Washington	115,521,695	529,685	393,081.63	179,674,832	1,710,904	52,239
Westmoreland	21,781,663	0	170	59,230,652	0	0
<b>10-County Total</b>	<b>307,850,968</b>	<b>684,102</b>	<b>393,907.63</b>	<b>507,061,520</b>	<b>1,786,499</b>	<b>60,001</b>
<b>PA Total</b>	<b>1,071,594,167</b>	<b>684,334</b>	<b>394,079</b>	<b>2,042,052,369</b>	<b>1,786,820</b>	<b>64,108</b>
<b>SWPA % of State Total</b>	<b>28.73%</b>	<b>99.97%</b>	<b>99.96%</b>	<b>24.83%</b>	<b>99.98%</b>	<b>93.59%</b>

3.7 Tcf of unconventional gas has been produced since 2002 in PA, 85 percent of that total in 2011 and 2012.



## Act 13 Impact Fee Disbursements by Category

Impact Fee Recipients	2011	2012
County Conservation Districts/State Conservation Commission	\$2,500,000	\$5,000,000
Fish and Boat Commission	1,000,000	1,000,000
Pennsylvania Public Utility Commission	1,000,000	1,000,000
Department of Environmental Protection	6,000,000	6,000,000
Pennsylvania Emergency Management Agency	750,000	750,000
Office of State Fire Commissioner	750,000	750,000
Department of Transportation	1,000,000	1,000,000
Natural Gas Energy Development Program*	10,000,000	7,500,000
Counties and Municipalities (and Housing Fund)‡	108,726,000	107,683,200
Marcellus Legacy Fund§	72,484,000	71,788,800
<b>Total Disbursement</b>	<b>204,210,000</b>	<b>202,472,000</b>

\* Act 13 created a new three-year Natural Gas Energy Development Program, to be administered by the Department of Environmental Protection. Over three years, this program will make \$20 million in grant funds available on a competitive basis to purchase or convert eligible vehicles to natural gas fuel.

‡ Act 13 created 13 categories that are eligible for impact fee spending by counties and municipalities. Annual municipal disbursements are not permitted to exceed the greater of \$500,000 or 50 percent of the total municipal budget. Any excess funds are reallocated to the Housing Affordability and Rehabilitation Enhancement Fund.

§ Fifteen percent of the Marcellus Legacy Fund is distributed to all counties, regardless of whether the county has wells located within its borders, to be used for certain environmental initiatives. Other funds making up the Marcellus Legacy Fund include the Highway Bridge Improvement Fund and the Environmental Stewardship Fund (Growing Greener).

## Act 13 Impact Fee Disbursements by Southwestern Pennsylvania County

County	2011	2012
Allegheny	\$1,117,320	\$1,172,557
Armstrong	570,375	591,342
Beaver	197,639	294,312
Butler	897,340	1,156,721
Fayette	1,448,563	1,346,605
Greene	3,130,610	2,906,301
Indiana	357,825	292,302
Lawrence	94,947	207,647
Washington	4,430,258	4,696,284
Westmoreland	1,721,907	1,577,394
<b>10-County Total</b>	<b>13,966,784</b>	<b>14,241,464</b>
<b>Total to PA Counties</b>	<b>108,726,000</b>	<b>107,683,200</b>
<b>SWPA % of State Total</b>	<b>12.8%</b>	<b>13.2%</b>