# WEST VIRGINIA DEPARTMENT OF COMMERCE GEOLOGICAL & ECONOMIC SURVEY

# 2013 Marcellus Shale Production and Utica Information Summary

Prepared by Philip A Dinterman August 7, 2014

This summary was prepared by the West Virginia Geological and Economic Survey (WVGES). The data summarized herein were reported by operators to the West Virginia Department of Environmental Protection (WVDEP) Office of Oil and Gas for calendar year 2013. Marcellus Shale production in West Virginia increased dramatically from 2012 to 2013. This report documents the increases in both gas production as well as natural gas "liquids" production. This report also documents emerging activity in the Utica-Point Pleasant play.



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### **2013 Marcellus Shale Production Summary**

Wells included in this overview all report production from the Marcellus Shale, but volumes may also include gas or liquids produced from commingled formations. "Liquids" refer to all heavier-chain hydrocarbons produced and may include oil as well as the natural gas liquids ethane, pentane, butane, hexane, etc. Beginning in 2013, WVDEP Office of Oil and Gas reporting requirements stated that natural gas liquids (NGLs) were to be reported separately from oil production. An examination of the numbers shows that many operators still included NGLs in oil production, therefore reported oil and NGL numbers were combined and are referred to as "Liquids" in this report. Selected 2012 data is shown in red for comparison.

### Number of horizontal Marcellus wells reporting production: 947 (2012: 631 wells)

Average length of lateral leg: 5,586 ft. Longest lateral leg reported: 11,322 ft.

Number of vertical Marcellus wells reporting production: 1192 (2012: 1458)

Lower number of vertical wells is due to lack of a complete 2013 dataset at time of this report. This Number, and horizontal well numbers, will increase once an updated production file is released by WVDEP Office of Oil and Gas.

**Total 2013 Marcellus Liquids Production\***: 4,684,729 bbl (2012: 715,639 bbl)

### **Top Liquids Producing Counties\***

1. Ohio (1,261,039 bbl, 55 wells; 55 with liquids);
2. Wetzel (1,259,949 bbl, 183 wells; 143 with liquids);
3. Marshall (1,011,794 bbl, 167 wells; 155 with liquids);
4. Brooke (635,076 bbl, 31 wells; 30 with liquids);
5. Tyler (245,240 bbl, 40 wells; 15 with liquids);
6. Doddridge (126,606 bbl, 197 wells; 115 with liquids);
(2012: Wetzel, 283,421 bbl)
(2012: Ohio, 145,120 bbl)
(2012: Marshall, 94,411 bbl)
(2012: Tyler, 35,201 bbl)
(2012: Ritchie, 30,728 bbl)

### **Top Operators for Liquids Production\***

 1. Chesapeake Energy Appalachia (2,017,647 bbl)
 (2012: Chesapeake Energy Appalachia, 301,187 bbl)

 2. GASTAR Exploration USA Inc (784,702bbl)
 (2012: Stone Energy, 209,190 bbl)

 3. Stone Energy Corp (620,686 bbl)
 (2012: EQT Production (129,397 bbl)

 4. HG Energy LLC (586,422 bbl)
 (2012: Triad Hunter (30,456 bbl)

 5. JAY-BEE Oil & Gas (232,163 bbl)
 (2012: CNX Gas/Consol Gas (13,567 bbl)

### **Top Liquids Wells**

- 1. **4710302645**, L S Hoyt Unit 402 5H (60,476 bbl; HG Energy LLC; Wetzel County, Completed December, 2012)
- 2. **4710302641**, L S Hoyt Unit 402 1H (58,757 bbl; HG Energy LLC; Wetzel County, Completed November, 2012)
- 3. **4706900064**, Glenn Didriksen 8H (49,654 bbl; Chesapeake Appalachia LLC; Ohio County, Completed June, 2011)
- 4. **4706900105**, Shawn Couch OHI 8H (48,096 bbl; Chesapeake Appalachia LLC; Ohio County, Completed June, 2012)
- 5. **4709502025**, McIntyre 1HE (47,745 bbl; JAY-BEE Oil & Gas; Tyler County, Completed December, 2012)

### **Total 2013 Marcellus Gas Production\*:** 541.3 Bcf (2012: 301.7 Bcf)

### **Top Gas Producing Counties \***

1. Harrison (147.4 Bcf) 2012: Harrison (104.5 Bcf) 2. Wetzel (102.7 Bcf) 2012: Wetzel (51.0 Bcf) 3. Doddridge (94.8 Bcf) 2012: Doddridge (36.5 Bcf) 4. Marshall (66.3 Bcf) 2012: Marshall (35.2 Bcf) 5. Ohio (21.3 Bcf) 2012: Upshur (15.8 Bcf) 6. Marion (21.0 Bcf) 2012: Taylor (15.2 Bcf) 7. Ritchie (17.3 Bcf) *2012: Marion (11.5 Bcf)* 8. Taylor (15.6 Bcf) 2012: Tyler (6.8 Bcf) 9. Tyler (14.5 Bcf) 2012: Monongalia (3.3 Bcf) 10. Upshur (14.2 Bcf) 2012: Ohio (2.7 Bcf)

### **Top Operators for Gas Production\***

1. Antero Resources Corp (205.9 Bcf) 2012: Antero Resources Appalachia (105.7 Bcf) 2. Chesapeake Appalachia LLC (95.2 Bcf) 2012: Chesapeake Energy Appalachia (73.6 Bcf) 3. EQT Production (82.5 Bcf) 2012: EQT Production (42.2 Bcf) 4. Stone Energy (25.8 Bcf) 2012: XTO Energy (13.0 Bcf) 5. CNX Gas/Consol Gas (24.6 Bcf) 2012: Stone Energy (8.9 Bcf) 2012: Grenadier Energy Partners (8.1 Bcf) 6. GASTAR Exploration USA Inc (22.5 Bcf) 7. HG Energy LLC (14.7 Bcf) 2012: PDC Mountaineer (6.9 Bcf) 8. XTO Energy (14.0 Bcf) 2012: CNX Gas/ Consol Gas (6.5 Bcf) 9. JAY-Bee Oil & Gas (13.7 Bcf) *2012: Trans Energy (5.9 Bcf)* 10. PDC Mountaineer (12.6) *2012: Triad Hunter (5.8 Bcf)* 

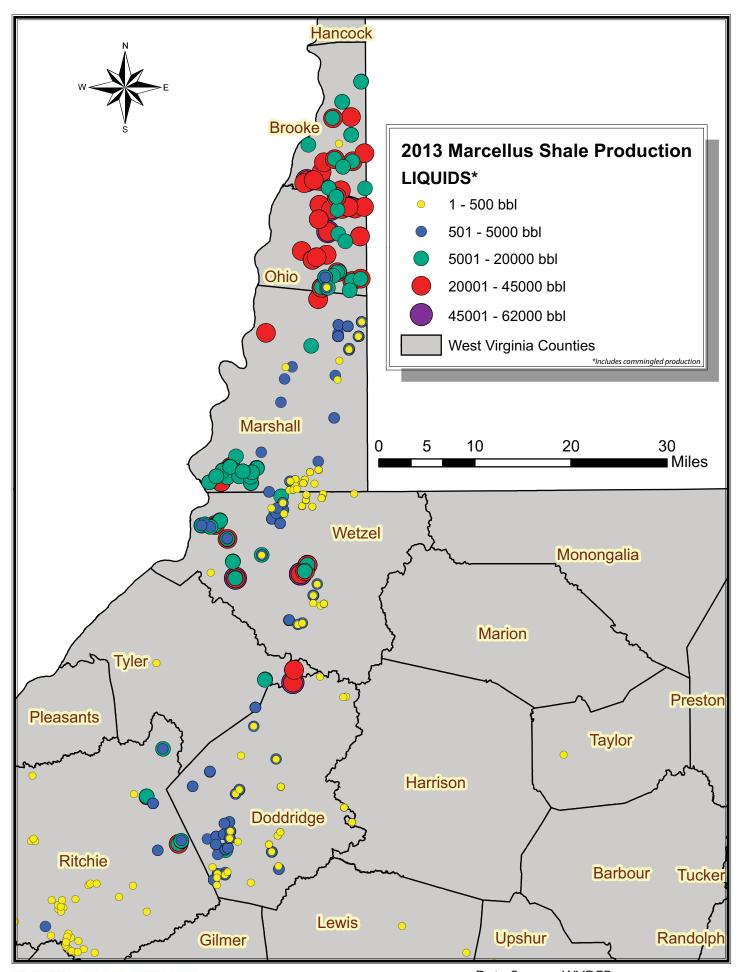
### **Top Gas Wells**

- 1. **4703305638**, Ora Unit 1H (2.3 Bcf; Antero Resources Appalachia Corp; Harrison County, Completed November, 2012)
- 2. **471032730**, WV513507 (2.28 Bcf; EQT Production Company; Wetzel County, Completed January, 2013)
- 3. **4703305629**, Boring Unit 1H (2.22 Bcf; Antero Resources Appalachia Corp; Harrison County, Completed July, 2012)
- 4. **4701706028**, Trout Unit 2H (2.2 Bcf; Antero Resources Appalachia Corp; Doddridge County, Completed December, 2012)
- 5. **4703305631**, George Unit 1H (2.18 Bcf; Antero Resources Appalachia Corp; Harrison County, Completed February 2013)

<sup>\*</sup>These production volumes represent data acquired by WVGES as of August 6, 2014. This dataset uses the data posted by WVDEP as of 7/11/2014. WVDEP states that this file includes 90% of all wells and 99% of all horizontal wells in West Virginia. 2013 Production data from several operators reporting Marcellus production in 2012 were not available at the time of this report. Therefore, the values listed above may change as more data become available. Also, these volumes represent the total production from a given well and may be commingled from multiple formations, including the Marcellus Shale.

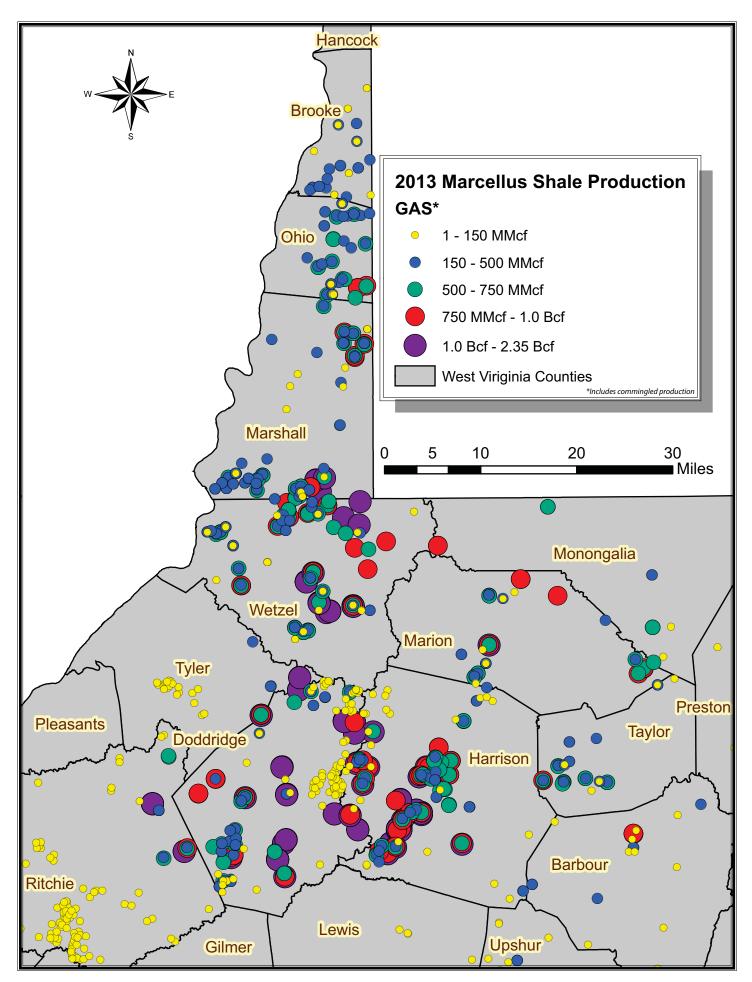
## **2013 Activity in Utica-Point Pleasant Play**

Development of the Utica-Point Pleasant play in West Virginia is in the very early stages. Using records currently on file with WVDEP and/or WVGES, one well, completed in Brooke County, West Virginia reported 832 MMcf of gas from June thru December, 2013. Nine wells have had plats approved and are in various stages of completion. Two wells are in the permitting process. Other wells targeting the Utica-Point Pleasant interval may be in the permitting process but may target other geologic intervals. Several other wells that may have been completed will likely show production for 2014.

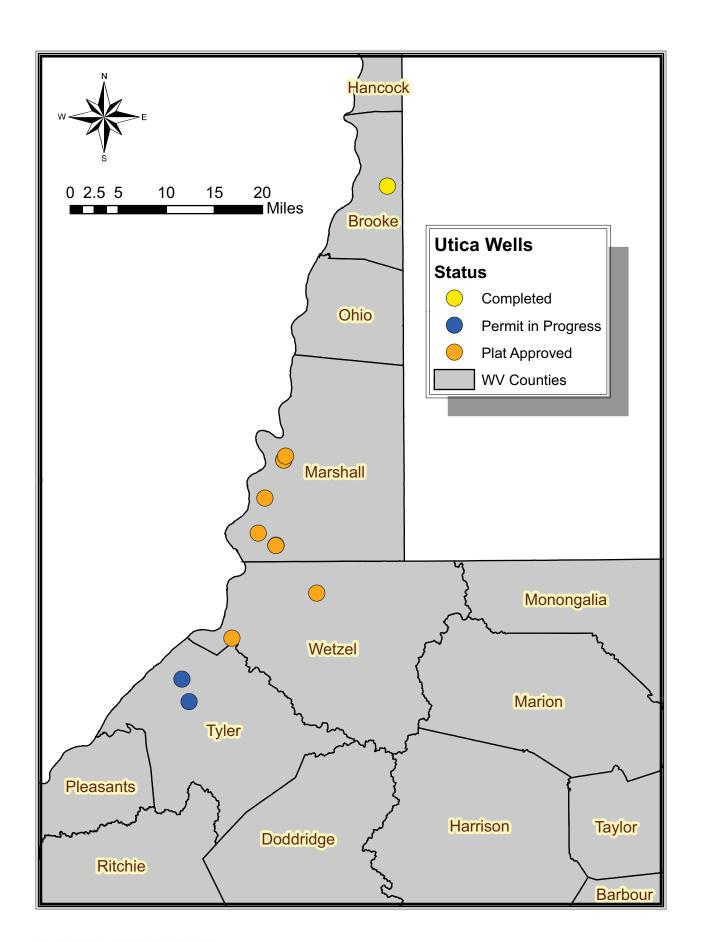




Data Source: WVDEP Prepared by Philip Dinterman, WVGES August 7, 2014









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