

2014 Marcellus Shale Production and Utica Information Summary

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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 2014. Marcellus Shale production in West Virginia increased dramatically from 2012 to 2014. 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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2014 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 2013 data is shown in blue for comparison.

Number of horizontal Marcellus wells reporting production: 1420 (2013: 947 wells)

Average length of lateral leg: 5,838 ft.

Longest lateral leg reported: 12,074 ft.

Number of vertical Marcellus wells reporting production: 1458 (2013: 1192 wells)

Lower number of horizontal and particularly vertical wells in 2013 was due to lack of a complete dataset at time of 2013 report. There were 1458 vertical Marcellus wells reporting production in 2012.

Total 2014 Marcellus Liquids Production*: 8,356,593 bbl (2013: 4,684,729 bbl)

Top Liquids Producing Counties In 2014*

1. Marshall (2,464,528 bbl)	2013: Ohio, 1,261,039 bbl
2. Ohio (1,652,949 bbl)	2013: Wetzel, 1,259,949 bbl
3. Tyler (1,572,566 bbl)	2013: Marshall, 1,011,794 bbl
4. Brooke (1,013,904 bbl)	2013: Brooke, 635,076 bbl
5. Wetzel (928,718 bbl)	2013: Tyler, 245,240 bbl
6. Ritchie (361,484 bbl)	2013: Doddridge, 126,606 bbl
7. Doddridge (348,242 bbl)	

Top Operators for Liquids Production In 2014*

1. Chesapeake Energy Appalachia (2,834,473 bbl)	2013: Chesapeake Energy Appalachia (2,017,647 bbl)
2. Noble Energy Inc (2,112,414 bbl)	2013: Gastar Exploration USA Inc (784,702 bbl)
3. Jay-Bee Oil & Gas (782,050 bbl)	2013: Stone Energy Corp (620,686 bbl)
4. Triad Hunter LLC (743,413 bbl)	2013: HG Energy LLC (586,422 bbl)
5. Stone Energy Corp (723,788 bbl)	2013: Jay-Bee Oil & Gas (232,163 bbl)
6. Gastar Exploration USA Inc (446,164 bbl)	
7. Antero Resources Corp (411,919 bbl)	

Top Liquids Wells In 2014

1. **4709502043**, Collins Unit 1119 (109,418 bbl; Triad Hunter LLC; Tyler County, Completed November, 2013)
 2. **4709502041**, Collins Unit 1117 (100,643 bbl; Triad Hunter LLC; Tyler County, Completed November, 2013)
 3. **4705101604**, SHL17DHS (98,550 bbl; Noble Energy Inc; Marshall County, Completed December, 2013)
 4. **4705101603**, SHL17EHS (97,496 bbl; Noble Energy Inc; Marshall County, Completed November, 2013)
 5. **4709502042**, Collins Unit 1118 (96,648 bbl; Triad Hunter LLC; Tyler County, Completed November, 2013)
 6. **4709502040**, Collins Unit 1116 (92,640 bbl; Triad Hunter LLC; Tyler County, Completed November, 2013)
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Total 2014 Marcellus Gas Production In 2014*: 851.8 Bcf (*2013: 541.3 Bcf*)

Top Gas Producing Counties In 2014 *

- | | |
|--------------------------|-----------------------------------|
| 1. Doddridge (225.0 Bcf) | <i>2013: Harrison (147.4 Bcf)</i> |
| 2. Harrison (173.6 Bcf) | <i>2013: Wetzel (102.7 Bcf)</i> |
| 3. Wetzel (151.7 Bcf) | <i>2013: Doddridge (94.8 Bcf)</i> |
| 4. Marshall (90.2 Bcf) | <i>2013: Marshall (66.3 Bcf)</i> |
| 5. Tyler (40.0 Bcf) | <i>2013: Ohio (21.3 Bcf)</i> |
| 6. Ritchie (33.0 Bcf) | <i>2013: Marion (21.0 Bcf)</i> |
| 7. Ohio (32.1 Bcf) | <i>2013: Ritchie (17.3 Bcf)</i> |
| 8. Taylor (23.9 Bcf) | <i>2013: Taylor (15.6 Bcf)</i> |
| 9. Marion (19.9 Bcf) | <i>2013: Tyler (14.5 Bcf)</i> |
| 10. Barbour (17.4 Bcf) | <i>2013: Upshur (14.2 Bcf)</i> |

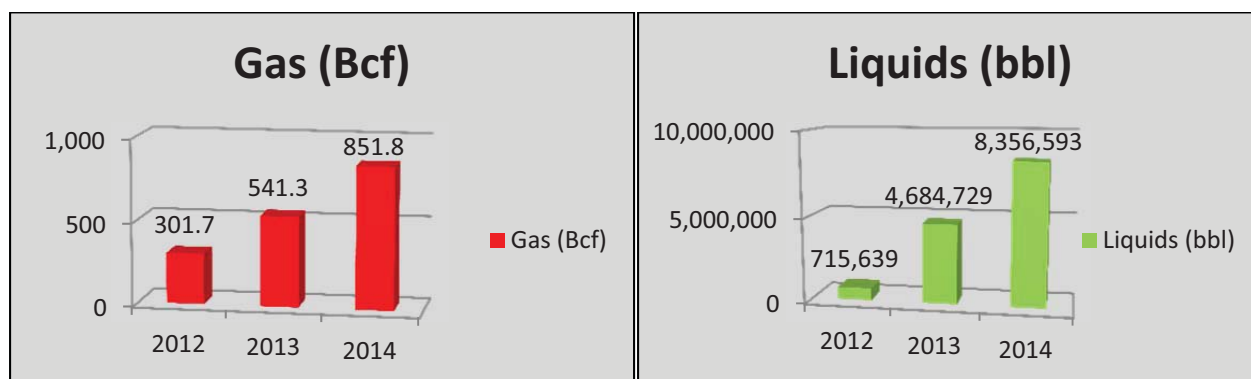
Top Operators for Gas Production In 2014*

- | | |
|---|--|
| 1. Antero Resources Corp (344.2 Bcf) | <i>2013: Antero Resources Corp (205.9 Bcf)</i> |
| 2. EQT Production (128.6 Bcf) | <i>2013: Chesapeake Energy Appalachia (95.2 Bcf)</i> |
| 3. Chesapeake Appalachia (112.7 Bcf) | <i>2013: EQT Production (82.5 Bcf)</i> |
| 4. Noble Energy Inc (43.4 Bcf) | <i>2013: Stone Energy (25.8 Bcf)</i> |
| 5. Stone Energy (41.0 Bcf) | <i>2013: CNX Gas/Consol Gas (24.6 Bcf)</i> |
| 6. CNX Gas/Consol Gas (30.5 Bcf) | <i>2013: Gastar Exploration USA Inc (22.5 Bcf)</i> |
| 7. Jay-Bee Oil & Gas (27.9 Bcf) | <i>2013: HG Energy LLC (14.7 Bcf)</i> |
| 8. HG Energy LLC (27.2 Bcf) | <i>2013: XTO Energy (14.0 Bcf)</i> |
| 9. PDC Mountaineer (19.0 Bcf) | <i>2013: JAY-Bee Oil & Gas (13.7 Bcf)</i> |
| 10. Gastar Exploration USA Inc (18.6 Bcf) | <i>2013: PDC Mountaineer (12.6 Bcf)</i> |

Top Gas Wells In 2014

1. **4710302807**, WV512753 (3.2 Bcf; EQT Production Company; Wetzel County, Completed January, 2013)
2. **4703305710**, Clark Unit 1H (2.72 Bcf; Antero Resources Corp; Harrison County, December , 2013)
3. **4703305731**, Huffman Unit 1H (2.69 Bcf; Antero Resources Corp; Harrison County, Completed September, 2013)
4. **4703305730**, Riffe Unit 1H (2.67 Bcf; Antero Resources Corp; Harrison County, Completed August, 2013)
5. **4703305724**, Isaac Unit 1H (2.54 Bcf; Antero Resources Corp; Harrison County, Completed April, 2014)

Yearly Comparison



*These production volumes represent data acquired by WVGES as of July 22, 2015. This dataset uses the data posted by WVDEP as of 6/4/2015. 2014 production data from several operators reporting Marcellus production in 2013 may not have been available at the time of this report; therefore, the values listed above may change as more data become available. Additionally, these volumes represent the total production from a given well and may be commingled from multiple formations, including the Marcellus Shale.

2014 Activity in Utica-Point Pleasant Play

Development of the Utica-Point Pleasant play in West Virginia is continuing . Using records currently on file with WVDEP and/or WVGES, five wells have reported 2014 production. Fourteen wells have been permitted and are in various stages of completion. Eighteen wells are in the permitting process. Other wells targeting the Utica-Point Pleasant interval may be in the permitting process but may include other geologic intervals. Several other wells that may have been completed will likely show production for 2015.

Individual Utica-Point Pleasant Well Production In 2014

1. **4705101732**, Gastar Exploration, 1688 MMcf Gas, 5 months of production in 2014
2. **4710302973**, Chesapeake, 1092 MMcf Gas, 4 months of production in 2014
3. **4709502128**, Triad Hunter, 954 MMcf Gas, 3 months of production in 2014
4. **4700900106**, Chesapeake, 508 Mmcf Gas, 12 months of production in 2014, well completed in 2013
5. **4705101599**, Chevron Appalachia, 349 MMcf Gas, 3 months of production in 2014

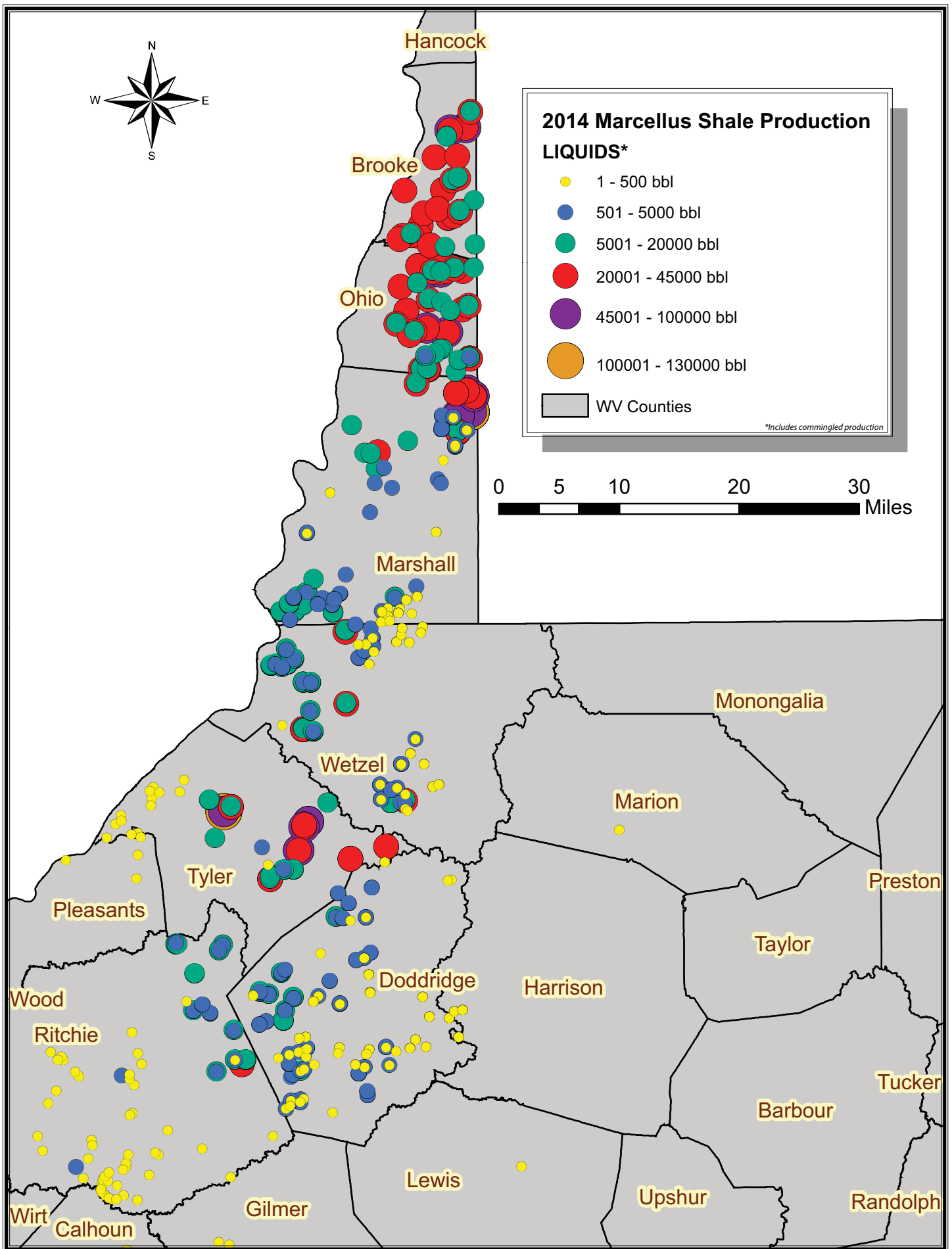
Glossary

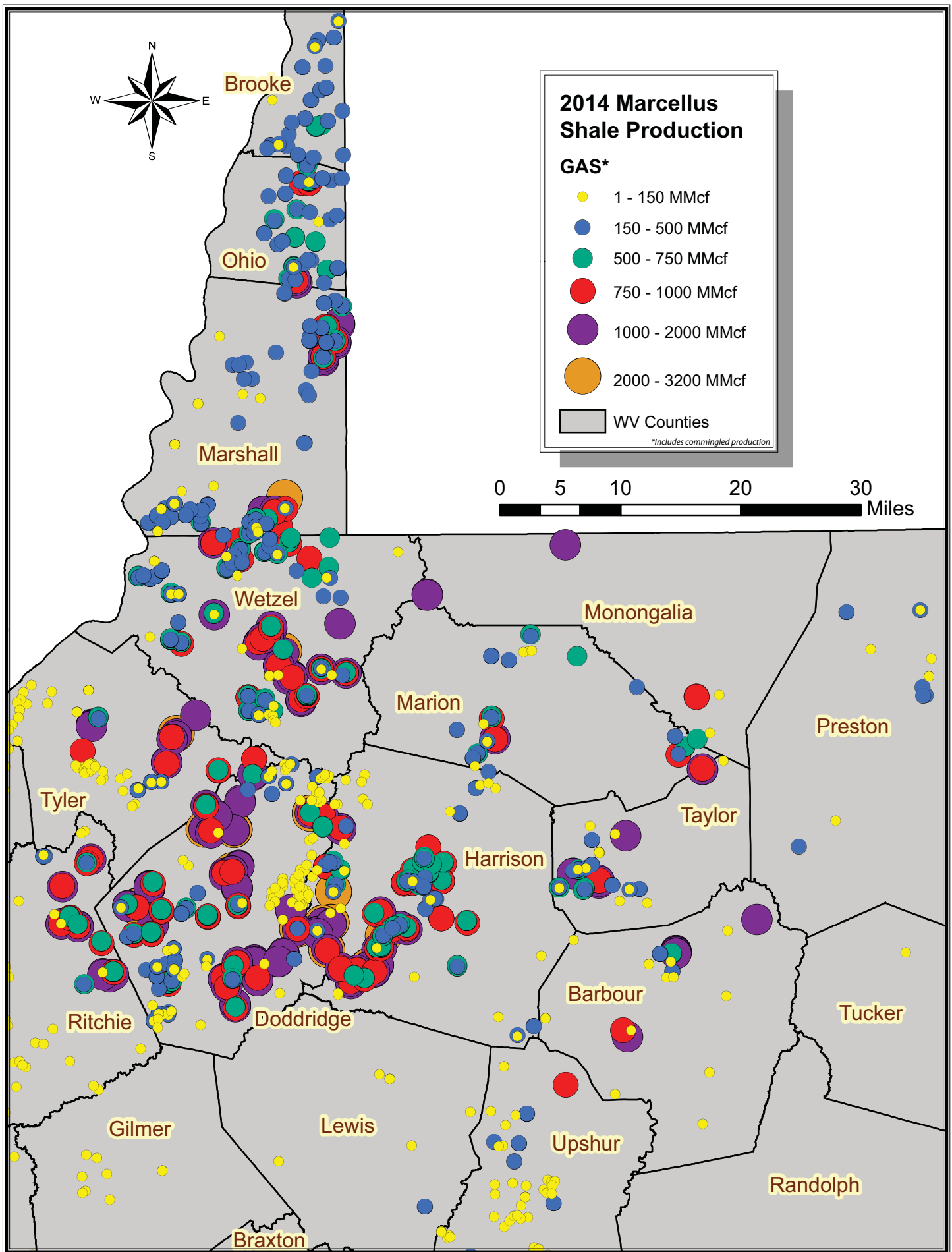
Bbl-barrel

Bcf-billion cubic feet

Mcf-thousand cubic feet

MMcf-million cubic feet





2014 Utica-Point Pleasant Wells

STATUS

- Completed
- Permitted
- Permit Pending

■ WV Counties

0 5 10 20 30 Miles

