MY BENESCH MY TEAM

Benesch Shale Industry Report

Quarterly Summary Q2 2014

Benesch
Attorneys at Law

Cleveland • Columbus • Indianapolis • Philadelphia • Shanghai • White Plains • Wilmington • www.beneschlaw.com/shale

Benesch
Attorneys at Law

Contents

Benesch
Attorneys at Law

1. Top Issues and Considerations

Top Issues	Considerations
The **Ohio House of Representatives** approved an increase to the state's severance tax on horizontal drilling to 2.5%, up from less than 1%. It also proposed $21 million for **ODNR** to use for industry regulation and reclamation, and 17.5% of revenue will go towards local governments. The bill still requires Senate approval later in 2014.	The bill doesn't set the tax rate as high as Ohio democrats or Republican **Gov. John Kasich** wanted, but did receive industry support. The bill still faces hurdles in the Senate, which adjourned for the summer without acting on it. In its current form, the compromise bill should permit the state to increase revenue, without dampening energy industry investment.
Private equity firms such as **Natural Gas Partners** and **Trilantic Capital Partners** are investing in O&G-related water-management companies across the U.S. ODNR also reported a 15% increase in drilling wastewater and brine from 2012 to 2013.	As investment and production in the Utica and nearby Marcellus ramp up, demand will increase for companies that supply, treat and dispose of the water required, representing a niche opportunity for investment and development.
Some companies, including **BP** and **EQT**, halted their operations in the Utica play during the quarter. However, **Magnum Hunter** and others have doubled down on the region and publicly touted the opportunity it presents for oil and gas exploration.	The wide variation between companies' experiences shows the relatively young Utica play remains in the development stage. Until exploration companies identify a sweet spot and related infrastructure can be developed accordingly, exploration will continue to yield mixed results.
Test results made **Rice Energy**'s Bigfoot 9H the Utica play's largest producing well. Located in Belmont County, it surpassed **Antero Resources**' Yontz well, located immediately to the south in Monroe County.	These results, along with **Magnum Hunter**'s focus in adjacent Tyler Co., W.Va., provide further evidence of the strong opportunities in southeastern Ohio and should spur further investment and supply chain growth. Results have also shown the Utica could be drier than expected, with fewer NGLs than other plays, and could rival the Marcellus' Susquehanna core.

2. Shale Industry Moves

E&P – Overview for Ohio

- As of the end of Q2, Ohio had 1,386 Utica wells permitted, 926 wells drilled and 41 rigs, in addition to 44 permits and 27 drilled wells in the Marcellus.

- ODNR reported that natural gas production nearly doubled at the state's 352 horizontal shale wells from 2012 to 2013, pointing to increasing activity in the Utica play and continued development of midstream infrastructure.

- Ohio’s Utica and Marcellus wells produced 3.6 million barrels of oil and 100 billion cubic feet of gas, with average production increasing approximately 65% from Q1 2013 to Q1 2014. Infrastructure upgrades in the past two years have included 11 processing facilities and several miles of pipeline construction, with spent or committed midstream investments totaling more than $6 billion.

- Highlights from ODNR's *2013 State of the Play* report include:
  - Total 2013 production hit 8,088,599 Bbls of oil and 171,658,608 MCF of gas;
  - Ohio’s oil production increased by 62% and natural gas increased 97%;
  - Horizontal well production increased 470% and 680% for oil and gas, respectively;
  - Ohio is on pace to supply all residential natural gas customers in the state with domestically produced fuel by 2015;
  - ODNR estimates it will issue 700 Utica permits in 2014 and 800 in 2015.

Benesch
Attorneys at Law

2. Shale Industry Moves (cont.)

E&P – Company news

- A joint venture of **EV Energy Partners**, **Chesapeake Energy** and **Total** plans to drill 190 Utica shale wells in 2014 in addition to the 370 it has already drilled. The wells will be drilled in the wet-gas region of the Utica play, as well as some in the volatile oil area. The partnership has leased 158,000 acres in the Utica Ohio play and 15,000 acres in Pennsylvania.
- **BP** halted its development plans in the Utica shale play, citing its decision to create a separate BP business around its U.S. lower 48 onshore oil and gas activities and appraisal results as reasons for the decision.
- **Rice Energy**’s Bigfoot 9H, its first operated Utica Shale well, stabilized at a rate of 41.69 MMcf/d of gas on a 33/64" choke, with flowing casing pressures of 5850 psi. The results make Bigfoot the Utica's largest producing well so far, surpassing **Antero Resources**' Yontz well.
- **Magnum Hunter Resources** is selling its remaining Canadian assets for approximately $67.5 million in order to focus on the Marcellus and Utica shale plays in West Virginia and Ohio.
- **EQT** stopped all Utica drilling activities after disappointing results from wells at the edge of the Ohio play prompted it to evaluate its prospects. The company, which will now shift its attention towards the Marcellus play, was active in the western Utica region.
- Aubrey McClendon's **American Energy Partners** rented seven rigs from **Chesapeake Energy** at a cost of between $23,500 and $26,000 a day. The companies signed six-month agreements in October to drill for American Energy in Ohio's Utica shale play.

Benesch
Attorneys at Law

2. Shale Industry Moves (cont.)

Financial Results

- **Chesapeake Energy**'s Q1 profit was $425M, compared to $102M in the first quarter of 2013. Revenues grew by 47% YOY to $5.05B. Utica Shale average peak production was 1,180 Boe/d at the company's 47 wells that commenced first production.
- **Antero Resources** reported net income of $88M, a 225% increase over the prior year quarter and 21% higher than the previous quarter. Net production averaged 786 MMcfe/d, a YOY increase of 105% driven by 24 new Marcellus wells and 12 new Utica wells brought online.
- **Cabot Oil & Gas**' Q1 net income reached $109.7M, a 102% increase over Q1 2013. Total production was 119.9 Bcfe, up 34% over the same quarter last year.
- **Hess Energy**'s Q1 profit was $386M, down from $1.276B in the first quarter of 2013, due to the divestiture of its E&P and downstream businesses. The company's total production dropped to 318,000 Boe/d from 389,000 the year before.
- **PDC Energy** reported a net loss for the quarter of $2.1M, compared to a net loss of $39.4M in Q1 2013. Production increased 44% to 26,700 Boe/d compared to 18,500 Boe/d in the first quarter of 2013, and increased 2% compared to Q4 of 2013. The increase was due to horizontal drilling in the Wattenberg Field, Utica Shale and Marcellus Shale.
- **Magnum Hunter** reported oil and gas revenues of $70.2M, an increase of 103% over Q1 2013 that partially resulted from its expanded drilling efforts in the company's core Marcellus and Utica operations. Production increased 102% to an average of 14,796 Boe/d, compared to 7,322 Boe/d the year before.

Benesch
Attorneys at Law

3. Ohio Shale Infrastructure

Midstream

- **Energy Transfer Partners** hopes to build 600 miles of 2.2-billion cf/d capacity pipeline from the Marcellus and Utica plays. The pipeline would flow gas from Pennsylvania, West Virginia and Ohio to Energy Transfer's existing Panhandle Eastern Pipe Line and another Midwest pipeline near Defiance, Ohio, then to the Union Gas Dawn Hub near Sarnia, Canada.
- **Access Midstream Partners'** Utica East Ohio midstream service complex will undergo an expansion that will increase its capacity to 1 billion cubic feet per day and allow for a processing capacity of more than 1.1 bcf/d.
- **Dominion Resources** announced the Lebanon West II project, a pipeline that will transport 130,000 dekatherms per day of Marcellus shale production from Butler County, Penn. to Lebanon, Ohio. The pipeline is scheduled to be operational in late 2016 and last for 20 years.
- **Magnum Hunter Resources** subsidiary GreenHunter Resources plans to build three short pipelines, a total of 34 miles in length, in Pennsylvania and West Virginia. The three pipelines will each be dedicated to either brine/wastewater, fresh water or condensate.
- **Kinder Morgan** announced that **Antero Resources** subscribed to 100% of the capacity for the proposed $782-million Tennessee Gas Pipeline Broad Run expansion in the West Virginia Marcellus play for a 15-year period.
- **Williams** announced it was suspending the Bluegrass Pipeline, citing slow customer uptake. The proposed natural-gas-liquids project would have transported NGLs from the Utica and Marcellus regions to Gulf Coast for processing and sale. **Boardwalk Pipeline Partners**, which is partnering with Williams on the project, said the plan may be revisited in the future.

Benesch
Attorneys at Law

3. Ohio Shale Infrastructure (cont.)

Downstream

- **Carroll County Energy**, an Advance Power subsidiary, received approval from the Ohio Power Siting Board to construct an $800-million, 742-MW natural gas-fired, combined-cycle power plant in Carroll County.
- **Tallgrass Energy** will begin moving the first 0.25 Bcf/d of capacity on its 0.60 Bcf/d Seneca Lateral pipeline in southeast Ohio. The 14.3-mile lateral will flow gas from the MarkWest Seneca natural gas processing plant in Noble County to the main Rockies Express Pipeline for delivery in Ohio, Indiana and Illinois.
- **Clean Energy Future Lordstown** of Boston applied to rezone 57 acres in Lordstown for the construction of an $800-million natural gas-powered generation facility.

Real Estate

- **Antero Resources** agreed to pay $15,000 per acre to drill on more than 6,300 acres of **Muskingum Watershed Conservancy District** land in Guernsey, Harrison and Belmont counties. The deal includes a one-time $94-million payment, plus royalties of 20% on natural gas and liquids produced by those wells, making it the most lucrative O&G lease in Ohio's history.

Supply chain

- A **Goldman Sachs** report stated that time is running out for North America to take advantage of the shale oil and gas boom. It said funding is needed for infrastructure and manufacturing plants, without which it is only a matter of time before other nations catch up with North America.

Benesch
Attorneys at Law

4. Government

Regulatory - Ohio

- The **Ohio House of Representatives** approved an increase to the state's severance tax on horizontal drilling to 2.5%, up from less than 1%. The industry-supported “compromise” bill doesn't set the tax rate as high as Ohio democrats or Republican **Gov. John Kasich** wanted. It also proposes $21 million for the ODNR to use for industry regulation and reclamation, and 17.5% of revenue will go towards local governments. The bill still requires Senate approval later in 2014.

- **ODNR** issued a statement making a “probable connection” between **seismic events** in Mahoning County and hydraulic fracturing near a previously unknown microfault. As a result, the department unveiled strong permit requirements near known faultlines or areas of past seismic activity. They require new permit holders to install seismic monitors during horizontal drilling within 3 miles of a known fault or area of seismic activity greater than a 2.0 magnitude. If a seismic event in excess of 1.0 is detected, activities must stop while the cause is investigated. Should a probable connection be identified, all well completion operations must be suspended.

- The **Ohio Environmental Protection Agency** tightened restrictions on **fugitive emissions**, becoming just the third state to target the release of methane gas from drilling equipment used in shale gas development. The state now requires regular equipment inspections to find and correct gas leaks. Horizontal shale wells can emit up to twice as much methane as vertical-only wells, with leaks emitting anywhere from 1% to 8% of methane contained in a well.

4. Government (cont.)

Regulatory - Federal

- The **EPA** is considering regulations requiring oilfield service companies to detail the health and safety of the **chemicals used in fracking**. The agency said it may decide to stop before drafting regulations and use incentives or voluntary steps instead. The oil and natural gas industries have argued states can best oversee the industry and that their formulas are trade secrets. The EPA is seeking public and industry feedback before determining its next step.

- The **EPA** released a draft rule that would require U.S. power plants **cut carbon-dioxide emissions** 30% by 2030 from 2005 levels. The rule targets coal-burning plants and encourages states to convert generation capacity to oil and natural gas, which emit less carbon than does coal. The rule would significantly affect Ohio, the *Cincinnati Enquirer* reports, which generates nearly 70% of its power from coal plants.

- Ohio is leading a **group of states** that have drilling activity to examine the best approach to detect and regulate **earthquakes caused by human activity**. About a dozen states, plus non-governmental organizations, met in May for an initial meeting. The group, which includes seismology experts from energy companies, government agencies and universities across the U.S., is now being expanded to include further interested parties. The initiative comes after Ohio identified a probable link between drilling and five small tremors in the Youngstown area in April, which prompted the state to introduce new regulatory and monitoring requirements.