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1. Top Issues and Considerations

Top Issues	Considerations		
Major drillers and environmental groups seek to set standards through collaboration Drillers and environmental groups have created the Center for Sustainable Shale Development (CSSD) which will offer a sustainability certification incorporating 15 performance and environment-protection standards for gas and oil drilling in Ohio, Pennsylvania, and West Virginia. Another group, the Shale Gas Roundtable, announced it's been working on recommendations for Marcellus Shale exploration as well.	Collaborations have emerged as the industry faces claims that shale gas extraction is harmful to the environment, and likely represent an attempt to counter these arguments with buy-in from selected environmental leaders. In getting out front of the sustainability standards debate, the industry is also seeking to reduce the risk of having multiple, potentially conflicting layers of new regulations imposed upon it. These efforts will not be welcome by all drillers or environmental activists, however, and some groups have already voiced their opposition. Further, smaller drillers may face greater challenges in meeting standards set by major industry players.		
Out-of-state hiring has labor groups up in arms Ohio counties with strong shale activity have seen higher sales growth, but not higher employment growth, due to out-of-state companies using an out- of-state workforce and leaving local applicants jobless. The issue has workers and trade unions pushing out-of-state companies to hire more locals.	As Utica development progresses, local jobs are likely to be in higher need for <u>post-production work</u> . An IHS <u>report</u> projects that the number of jobs supported by unconventional drilling will quadruple in Ohio between 2012 and 2020, and that its value-added economic activity will grow more than eightfold from 2012 to 2035.		
Shale opportunities spread to other industries Buckeye Water Services tripled its size to become a primary hauling and servicing company. Skycasters grew its business thanks to the O&G industry's high bandwidth needs for video conferencing and remote data analysis. HomeWaters Retreats formed a new division to manufacture entrance signs for unconventional wells. Buckeye Transfer Realty grew from a family business to having 22 employees by turning railroad track into a propane transloading center.	As shale production continues to transform Ohio's economy, businesses in real estate, insurance, construction, information technology, food services, and healthcare, among other industries, should keep an eye on the evolving needs of oil and gas and consider appropriate marketing strategies to seize opportunities that branch out into their industry.		



1. Top Issues and Considerations

Top Issues	Considerations
State and municipalities vie for authority ODNR's authority to regulate drilling in the City of Munroe Falls has been upheld, effectively barring the City from enforcing its ordinances on land use and licenses, and allowing Beck Energy to drill without City permits. The City said it planned to appeal to the Ohio Supreme Court. Not far away, in Stow, officials said the system takes all control away from local governments, and proposed legislation that some control on drilling be given back.	The industry will benefit from more uniform regulations and greater certainty. While local governments may continue to fight for greater control, drillers have taken note of the court's decision in allowing Beck to drill without city permits, and they will now have a precedent on their side if they find themselves in similar conflicts with municipalities.
Gov. Kasich's budget bill to impact shale players Gov. Kasich's budget plan proposed several changes directly affecting the oil and gas industry, most notably a \$25,000 impact fee on each well drilled, and a severance tax increase of roughly 20% for the largest oil and gas producers. The proposal spurred criticism and debate, with some politicians and residents opposing the idea in fear it would discourage oil and gas investment.	While the Governor's budget included a severance tax increase, the proposed tax increase has not been supported by either party in the Ohio General Assembly.
Pipeline and infrastructure projects A lack of wet gas infrastructure has been the biggest problem holding back production in the Utica. The latest major project aiming to address that is the Bluegrass Pipeline by Williams and Boardwalk, a gasto-NGL pipeline conversion that would take away up to 200,000 bbl/d from the Utica and Marcellus plays to the Gulf Coast, nearly doubling the combined capacity of the ATEX and Mariner projects.	The extra processing capacity will be important for NGLs, and especially ethane. NGLs make up a more lucrative revenue stream than plain natural gas, and ethane has had practically no end market in the region up to now. As natural gas prices have been down, some of the wells will only become profitable once wet gas infrastructure is on line.



2. Shale Industry Moves

Production and extraction

- ODNR issued 127 permits in the first quarter of 2013, bringing the total as
 of early may to 662 permits. It also <u>updated its maps showing TOC value</u>,
 upgrading the production potential for several counties, such as Marion,
 Wyandot, Hancock, Hardin, and Seneca. Latest data show 87 shale wells in
 production.
- Most major Utica players announced positive news and more investment in the play:
 - Chesapeake Energy expects to accelerate production growth with two additional natural gas processing complexes. The company projected an EUR of 5 to 10 Bcfe from each well over its lifetime in Carroll and surrounding counties. It also expects current production of 75 Mmcfe per day to jump to more than 330 Mmcfe of natural gas per day by year-end.
 - Antero Resources will spend \$149.5 million in E&P and operate two rigs in the Utica shale.
 - **Gulfport Energy** said it expects to spend between \$382 million and \$426 million in Ohio in 2013, and drill up to 50 wells.
 - **PDC Energy** <u>increased its budget for the Utica Shale</u> from \$53 million to \$96 million to maintain a one-rig drilling program throughout 2013 and to drill a total of 11 horizontal wells.
- A year after first leasing land in Ohio, <u>BP finally applied for its first drilling</u> <u>permit</u> in the Utica - a horizontal well in Trumbull County.



2. Shale Industry Moves

Production and extraction

- New players enter the Utica play:
 - **Halcón Resources** plans to invest \$200M in the play, and will start by drilling wells to delineate acreage.
 - **CONSOL** will invest about \$122 million in gas operations in the Utica through its JV with Hess Corporation.
 - Magnum Hunter intends to drill a minimum of four test wells in the play.
- An exception to the growth trend is **Devon Energy**, who cited disappointing results in the play and <u>plugged three wells</u>. The company put its <u>Utica</u> <u>assets on sale</u>, including about 244,000 gross acres in eastern Ohio. A former state geologist speculated the <u>company might exit the Utica shale</u>.
- Knox Energy and Canadian company Marksmen Energy executed an agreement to explore Knox's 6,100-acre Owl Creek Prospect in central Ohio.

Private equity

Rice Energy said it was looking for investors to expand its presence in the
Utica Shale. The company could reportedly raise as much as \$400 million to
develop its holdings in the formation.



3. Ohio Shale Infrastructure

Transportation and logistics

The Ohio Department of Transportation concluded that a 35-mile extension to US
Route 30 to accommodate an expected traffic hike due to shale development <u>is not</u>
<u>feasible were it to be funded on tolls</u>. It will look at other construction and funding
scenarios.

Construction / Real Estate

- Natural gas from shale <u>is attracting more than \$1 billion in private investment</u>, with companies building offices, pipelines, processing facilities, regional field offices, processing plants, and other infrastructure.
- Louisiana-based **Six C Fabrication** bought the former Delphi plant in Rootstown for \$1.25 million to manufacture piping and structural steel equipment for the oil and gas industry. The company hopes to have up to 100 workers by year-end.

Midstream

- **Crosstex Energy** and the former management of Enerven Compression Services formed E2, a company that will build, own and operate two gas-gathering compressor stations and condensate stabilization facilities in Noble and Monroe counties. Commercial operations are expected to start in the third quarter of 2013.
- **Kinder Morgan** is said to be looking at Tuscarawas County to build a processing plant to handle up to 300 MMcf/d of natural gas, plus a fractionation plant for NGLs.
- Woolster Tool & Dye, which manufactures gas and oil separation tanks and gas
 production units, said it would add 120 full-time workers and \$5.4 million in payroll
 over the next three years in Wooster, Wayne County, thanks to a seven-year tax
 credit offered by the Ohio Tax Credit Authority.
- The Tennessee Gas Pipeline Co. made a filing with the FERC to convert its lean gas pipeline located in the Ohio Utica Shale into a wet gas gathering pipeline to transport the gas from the Utica shale to yet-to-be built processing facilities.



3. Ohio Shale Infrastructure

Downstream

 NiSource won FERC approval for its plan to spend \$300 million a year through 2017 to upgrade its Appalachian pipeline system in West Virginia, Virginia, Pennsylvania, Ohio, Maryland, and Kentucky.

Supply chain

- Dearing Compressor & Pump in Youngstown, a compressor and pump system manufacturer, said it plans to expand again and add 25,000 square feet to its facility.
- **Santrol**, a subsidiary of **Fairmount Minerals**, opened a 500,000-ton-annual-capacity proppant terminal for Marcellus and Utica Shale drillers just south of Youngstown. Unimin also opened a proppant distribution terminal in Navarre, its seventh terminal serving the Utica and Marcellus shale plays.
- **Exterran Energy Solution's** manufacturing plant in Youngstown was set to be ready to go online in April. The company expects to see \$15 million in revenue this year, and up to \$40 million to \$60 million once it is fully operational.



4. Government

Regulatory

- An Ohio trial court <u>granted a motion for class certification</u> in an action filed against **Beck Energy** to invalidate hundreds of oil and gas leases in Monroe and Belmont counties. The Court also denied XTO Energy's request to intervene in the litigation, ruling that XTO knew about the litigation and its potential consequences before finalizing the lease acquisition deal from Beck. Both Beck and XTO indicated they are going to the Ohio Court of Appeals in an attempt to reverse the decisions.
- The ODNR issued a unitization order for only the second time, granting **Chesapeake Energy** the right to operate a 549-acre tract of land as a unit and compelling the inclusion of 61.5 non-consenting acres in the unit. **D&L** owner Ben Lupo and a Hardrock employee were indicted by a federal grand jury for violating the Clean Water Act after illegal dumping of brine and wastewater. The ODNR revoked six of D&L Energy's permits, denied three applications, and ordered a halt to all temporary storage operations near Youngstown.
- Congressmen Tim Ryan (OH-13) and Bill Johnson (OH-6) <u>founded the Liquefied</u>
 <u>Natural Gas Export Working Group</u> with the mission to advocate for expanded
 exports of domestic LNG, as well as to conduct meetings and briefings on the issue
 of LNG exports.
- Gov. John Kasich <u>delayed the appointments</u> of Ohio's five-member Oil and Gas Leasing Commission, causing the leasing of mineral rights for parks and forests to be delayed as well.

Economic Development

• The <u>Columbiana County Port Authority approved</u> a \$2.4-million land purchase agreement with Marathon Petroleum for 3.6 acres at its Wellsville Intermodal Facility, where Marathon intends to build a trucking terminal to bring in liquids from local fields to take to their tanks, and then they'll go by barge to refineries.



4. Government

Environment

- The Ohio Department of Health <u>said pumping elements</u> such as uranium and radium into reinforced Class II disposal wells is the best way for Ohio to keep the potentially hazardous materials out of drinking water supplies. It also, along with the EPA and the Department of Natural Resources, proposed stricter regulations around low-level radioactive waste from shale drilling.
- In Cleveland, fracking was suspected to have <u>caused methane migration and contamination of a family's water well</u> when Mountaineer Keystone began drilling. A water test after drilling revealed a methane measurement of 22 PPM in the water, while a water test before showed no pollution. In Harrison County, crushed limestone, used to build the drilling pad at Chesapeake's Dodson well site, was also thought to have contaminated and caused discoloration of a local stream.
- OEPA officials, firefighters and the Trumbull County hazardous material team were called to a natural gas well twice in two days after neighbors reported <u>a well's</u> <u>containment tank was leaking crude oil</u>. The tank was shut down and a vacuum truck called in to remove the oil leaked into a nearby stream.
- Ohio officials <u>said limited information is available on water recycling in Ohio</u>. They said they didn't know how many businesses recycle water for the fracking process, how much of this waste is produced, what is in it or where it goes.



5. Schools/Training

Several universities in and around Ohio hosted events on shale gas development and its impacts and opportunities.

- Franciscan University of Steubenville <u>hosted the Principals' Leadership Academy</u>, where Charlie Dixon of OOGEEP presented to principals and superintendents on OOGEEP workshops and scholarships.
- OSU and Mahoning County hosted "Shale and You: A Workshop for Landowners," an event that focused on leasing issues, taxation, wealth management, water testing, and pipelines.
- The University of Pittsburgh and JURIST Staff and Supporters Association (JSSA)
 held a <u>Marcellus Shale discussion panel and networking lunch</u>, where professors,
 litigators, and industry professionals discussed the advantages and disadvantages
 of fracking.
- ONU's T.J. Smull College of Engineering and Kokosing Construction co-sponsored the <u>Ohio Shale Oil & Gas Seminar</u>, which covered impacts and opportunities, technology, exploration and drilling, changing regulations, jobs, and market entry challenges.

Additionally:

- Ohio State University and West Virginia University <u>formed a partnership</u> to research the economic, environmental, community, and public health impacts of natural gas and shale development
- Pierpont Community & Technical College <u>offered a free three-week, 120-hour course</u> for oil and gas jobs, covering safety, rig components, well control, and more.
- The <u>ShaleNet on-the-job training program</u> is benefiting organizations in Mahoning and Columbiana counties, with 50 workers participating in the program.