

## NATURAL GAS HYDRAULIC FRACTURING: SECTOR-WIDE RISKS

### COMPANIES THAT EMPLOY HYDRAULIC FRACTURING FACE RISKS RELATED TO ENVIRONMENTAL CONCERNS

#### SHAREHOLDERS LACK THE INFORMATION NEEDED TO FULLY ASSESS RISK TO THE SECTOR AND DIFFERENTIATE AMONG INDIVIDUAL COMPANIES

- Investment value may be undermined by company decision-making and policies that may lag public and regulatory expectations for environmental protection.
- In the absence of meaningful disclosure, investors cannot differentiate risks and rewards at various companies.

#### FINANCIAL RISK DUE TO POTENTIAL NEW FEDERAL REGULATION MAY REACH THE ENTIRE INDUSTRY

- In June 2009 legislation that would reinstate the EPA's authority to regulate fracturing was introduced in the House and Senate.<sup>1</sup>
- In November 2009, a congressional committee report on the FY2009-2010 Interior-Environment Appropriations bill asked EPA to study the impacts of hydraulic fracturing. In March, the EPA announced it will embark on a \$1.9 million study to examine how hydraulic fracturing could impact drinking water.<sup>2</sup>
- In February 2010, the House Subcommittee on Energy and the Environment released a memo "Examining the Potential Impact of Hydraulic Fracturing" stressing that "as the use of these technologies expands, there needs to be oversight to ensure that their use does not threaten the public health of nearby communities."<sup>3</sup>
- In February 2010, the House Energy and Environment Subcommittee sent letters to 8 oil and gas service providers requesting more information about the chemicals used in the fracturing process and their impacts on human health and the environment.<sup>4</sup>

#### FINANCIAL RISK MAY BE ASSOCIATED WITH CONTAMINATION BY FRACTURING FLUIDS

- In 2009, Range Resources was penalized by the Pennsylvania Department of Environmental Protection because of wastewater spillage from its fracturing operations.<sup>5</sup>
- In September 2009, Pennsylvania ordered Cabot Oil & Gas to shut down all hydraulic fracturing operations in Susquehanna County. Cabot also faces a lawsuit brought by over a dozen families in Dimock PA which alleges the company's operations polluted their wells.<sup>6</sup>

#### MEDIA ATTENTION POSES REPUTATIONAL RISKS

- In November 2009 a search of the Nexis Mega-News library found 1807 articles mentioning "hydraulic fracturing" and "environment" in the last two years, a 265 percent increase over the prior three years. In the subsequent two months, an additional 482 articles appeared, demonstrating coverage is increasing.
- Between June 2009 and March 2010, the *Wall Street Journal* has run 21 stories—including one on the front page—on hydraulic fracturing, eight of which have run since December 2009.

<sup>1</sup> Senator Robert Casey, Jr, "Statement for the Record, Introduction of the Fracturing Responsibility and Awareness of Chemicals (FRAC) Act," June 9, 2009, available at: <http://casey.senate.gov/newsroom/press/release/?id=3D78271C-E412-4B63-95B8-419E75CE2BB6>

<sup>2</sup> Abraham Lustgarten and Sabrina Shankman, "Congress Tells EPA to Study Hydraulic Fracturing," ProPublica November 11, 2009; Juliet Eilperin, "EPA to Study Natural-Gas Drilling's effect on Water," Washington Post, March 19, 2010, available at: <http://www.washingtonpost.com/wp-dyn/content/article/2010/03/18/AR2010031805091.html>

<sup>3</sup> Memo From Chairman Henry A. Waxman and Subcommittee Chairman Edward J. Markey to the members of the Subcommittee on Energy and the Environment regarding the potential impact of hydraulic fracturing, February 8, 2010, available at: [http://energycommerce.house.gov/Press\\_11/20100218/hydraulic\\_fracturing\\_memo.pdf](http://energycommerce.house.gov/Press_11/20100218/hydraulic_fracturing_memo.pdf)

<sup>4</sup> "Energy & Commerce Committee Investigates Potential Impacts of Hydraulic Fracturing," U.S. House of Representatives Committee on Energy and Commerce, February 18, 2010, available at: [http://energycommerce.house.gov/index.php?option=com\\_content&view=article&id=1896:energy-a-commerce-committee-investigates-potential-impacts-of-hydraulic-fracturing&catid=122:media-advisories&Itemid=55](http://energycommerce.house.gov/index.php?option=com_content&view=article&id=1896:energy-a-commerce-committee-investigates-potential-impacts-of-hydraulic-fracturing&catid=122:media-advisories&Itemid=55)

<sup>5</sup> Sabrina Shankman, "Pennsylvania's Gas Wells Booming-But So Are Spills," Pro Publica, January 27, 2010. <http://www.propublica.org/feature/pas-gas-wells-booming-but-so-are-spills-127>

<sup>6</sup> Commonwealth of Pennsylvania, Department of Environmental Protection media release, "DEP Orders Cabot Oil and Gas to Cease all Well Fracking in Susquehanna County," September 25, 2009; Michael Rubinkam, "Pennsylvania Residents Sue Gas Driller Over Polluted Wells," The Associated Press, November 20, 2009.

## BUSINESS OPERATIONS ARE BEING AFFECTED

- *Loss of license to operate*—
  - In late October 2009, in the face of the massive public controversy about its plans to engage in drilling and hydraulic fracturing near the New York City watershed, Chesapeake Energy, reportedly the only company to hold leases within that watershed, announced it would “voluntarily” refrain from drilling within the boundary.<sup>7</sup>
- *Opt-out clause*—
  - In the merger agreement between ExxonMobil and XTO Energy, ExxonMobil protected its right to back out of the deal if state or federal regulations significantly restrict hydraulic fracturing, rendering it illegal or commercially impracticable.<sup>8</sup>
- *Increasing litigation*—
  - EnCana paid a reportedly multi-million dollar settlement to a woman who alleged her drinking water had been contaminated by the company’s operations in Colorado.<sup>9</sup>
  - Cabot Oil & Gas and Atlas Energy Inc. face lawsuits over alleged water contamination in Pennsylvania.<sup>10</sup>

## ADDITIONAL REGULATORY RISK AT THE STATE LEVEL

### **Regulatory tightening in western states**

- The Colorado Oil and Gas Conservation Commission (COGCC) passed regulations designed to protect drinking water from contamination from natural gas drilling and increase disclosure of the chemicals used.

### **Regulatory tightening moves East with expanded production**

- New York State is in the process of revising its guidelines related to hydraulic fracturing and vocal and politically well connected support for increased protections has emerged.
  - The EPA weighed in on the draft rules, expressed significant concerns about protecting New York City’s watershed, and signaled the need for further study of “issues involving water supply, water quality, wastewater treatment operations, local and regional air quality, management of naturally occurring radioactive materials disturbed during drilling, cumulative environmental impacts, and the New York City watershed.”<sup>11</sup>
  - In December 2009, New York City announced its study found hydraulic fracturing posed “an unacceptable threat to the unfiltered, freshwater supply of nine million New Yorkers, and cannot safely be permitted within the New York City watershed” and, therefore, the draft rules are insufficient.”<sup>12</sup>
  - New York City Mayor Michael Bloomberg, US Congressman Maurice Hinchey, Manhattan Borough President Scott Stringer are all vocally supporting increased protections.
  - At the same time, legislation has been introduced in New York State that prohibits natural gas drilling in the NYC watershed and also “in any recharge area of a sole source aquifer, in any area where groundwater contributes a significant base flow to surface water sources of drinking water and in any other area where the department shall find presents a significant threat of hydraulic fracturing compounds entering into a significant source of drinking water.”<sup>13</sup>
- In Pennsylvania, Governor Ed Rendell announced in January 2010 that he was proposing new comprehensive regulations on natural gas extraction to prevent environmental damage.<sup>14</sup>
- In West Virginia, bills to address the wastewater produced from drilling operations in shale and increased protections for the environment have been introduced.<sup>15</sup>

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<sup>7</sup> Jad Mouawad and Clifford Krauss, “Gas Company Won’t Drill in New York Watershed,” *The New York Times*, October 27, 2009, available at: [http://www.nytimes.com/2009/10/28/business/energy-environment/28drill.html?\\_r=1&scp=4&sq=chesapeake%20and%20watershed&st=cse](http://www.nytimes.com/2009/10/28/business/energy-environment/28drill.html?_r=1&scp=4&sq=chesapeake%20and%20watershed&st=cse)

<sup>8</sup> Russell Gold, “Exxon Can Stop Deal if Drilling Method Is Restricted,” *The Wall Street Journal*, December 16, 2009.

<sup>9</sup> Abraham Lustgarten, “Drilling Process Cause Water Supply Alarm,” *The Denver Post* (originally posted in ProPublica), November 17, 2008.

<sup>10</sup> Michael Rubinkam, “Pennsylvania Residents Sue Gas Driller Over Polluted Wells,” *The Associated Press*, November 20, 2009; Joh Hurdle, “Pennsylvania Lawsuit Says Drilling Polluted Water,” *Reuters*, November 9, 2009.

<sup>11</sup> John Filippelli, “Comments on the New York State Department of Environmental Conservation September 2009 draft SGEIS for the Well Permit Issuance for Horizontal Drilling and High-Volume Hydraulic Fracturing to Develop the Marcellus Shale and Other Low-Permeability Gas Reservoirs,” Environmental Protection Agency Region 2, available at: [http://www.epa.gov/region2/spmm/Marcellus\\_dSGEIS\\_Comment\\_Letter\\_plus\\_Enclosure.pdf](http://www.epa.gov/region2/spmm/Marcellus_dSGEIS_Comment_Letter_plus_Enclosure.pdf)

<sup>12</sup> New York City Department of Environmental Protection, December 22, 2009, available at: [http://www.nyc.gov/html/dep/pdf/natural\\_gas\\_drilling/12\\_22\\_2009\\_impact\\_statement\\_letter.pdf](http://www.nyc.gov/html/dep/pdf/natural_gas_drilling/12_22_2009_impact_statement_letter.pdf)

<sup>13</sup> New York State Assembly, “An act to amend the environmental conservation law, in relation to the regulation of the drilling of natural gas resources,” Available at: <http://assembly.state.ny.us/leg/?bn=S06244&sh=t>

<sup>14</sup> “Pennsylvania plans more gas drilling regulation,” *Reuters*, January 28, 2010.

<sup>15</sup> West Virginia Legislature, House Bill 4531, introduced February 26, 2010, available at: [http://www.legis.state.wv.us/bill\\_status/bills\\_text.cfm?billdoc=HB4513%20SUB.htm&yr=2010&sesstype=RS&i=4513](http://www.legis.state.wv.us/bill_status/bills_text.cfm?billdoc=HB4513%20SUB.htm&yr=2010&sesstype=RS&i=4513)