

SUBMITTED via ELECTRONIC MAIL

September 10, 2012

Mike Pool
Acting Director
Bureau of Land Management
Washington, DC

Re: Comments on Proposed Rule on Oil and Gas; Well Stimulation, Including Hydraulic Fracturing, on Federal and State Lands

Dear Acting Director Pool:

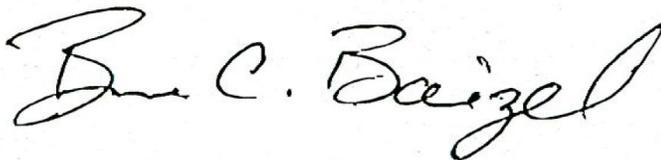
Please accept these comments on the Bureau of Land Management's proposed rule to regulate hydraulic fracturing on public land, Indian land, and private land overlying federal minerals, published in the Federal Register on May 11, 2012 at 77 Fed. Reg. 27691, on behalf of Earthworks.

Earthworks is a nonprofit organization dedicated to protecting communities and the environment from the impacts of irresponsible mineral and energy development while seeking sustainable solutions. The organization fulfills its mission by working with communities and grassroots groups to reform government policies, improve corporate practices and influence investment decisions. Earthworks has been working specifically on hydraulic fracturing issues for more than a decade.

Attached, please find two documents. First, comments prepared for Earthworks by Mary Ellen Denomy, CPA, certified petroleum accountant, that address the issue of the potential compliance costs associated with the proposed rule. Second, a copy of Ms. Denomy's CV is also attached.

Thank you, and we look forward to seeing a revised final rule that fully addresses the comments submitted.

Sincerely,

A handwritten signature in black ink that reads "Bruce C. Baizel". The signature is written in a cursive, flowing style.

Staff Attorney
Earthworks
P.O. Box 1102
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970-903-5326

Mary Ellen Denomy, CPA
Accredited Petroleum Accountant
Certified Mineral Manager
Certified Fraud Deterrent Analyst
Certified Forensic Financial Analyst

July 31, 2012

Re: Economic Impacts of Proposed Bureau of Land Management Hydraulic Fracturing Proposed Rule.

Introduction

I am a Certified Public Accountant licensed in the State of Colorado, with a specialty in oil and gas accounting. For the last fifteen (15) years most of my time has been spent on oil and gas accounting, leases, surface use agreements, site reviews, technological tours, negotiations, royalty taxation and credits and working interest audits for numerous clients encompassing various oil and gas companies and governmental agencies across the United States. I have been an expert witness in numerous cases involving oil and gas issues. I have performed numerous joint interest revenue and expenditure audits across the country. I have also completed numerous mineral evaluations for various legal purposes for numerous clients, attorneys, court testimony and government officials. The type of oil and gas accounting and auditing work that I have done includes working for tribes, Federal government agencies, state government agencies; including legislative, regulatory and executive branch officials, county government agencies, private mineral owners, private oil and gas companies and overriding mineral owners. This work has required me to apply various statutes, rules, regulations, industry standards, protocols, and court interpretations.

My qualifications may be found in my Curriculum Vitae, included as an exhibit.

Background

As John Dunham states in his Memorandum, the following items are included in the BLM rule RIN 1004-AE26: Oil and Gas; Well Stimulation, Including Hydraulic Fracturing, on Federal and Indian Lands:

- “* Provide additional information and meet new requirements for all well stimulation (completion) activity when applying for a permit to drill (APD). A similar application would need to be filed prior to performing additional stimulation on an existing well. The BLM would have to review and verify the additional completions requirements when approving these permits.

- * Submit additional cement bond logs for review and approval prior to completing the well.
- * Report the specific source of water used in well completion operations.
- * Submit a detailed engineering design and other information related to well stimulation operations to the BLM for approval.
- * Submit detailed information related to how they will handle or treat all recovered fluids.
- * Perform a successful mechanical integrity test prior to commencing any well completion activities.
- * Store detail to the agency how recovered fluids are disposed of.”¹

While Mr. Dunham is an established economist, he lacks the day-to-day knowledge of oil and gas operations and the practical application of the rules in existence and their actual costs. While there may be some additional costs for paperwork compliance at the commencement of any rule changes, the similarity of the process for each well in a location, may allow companies an opportunity to reduce compliance costs over time.

There are very few operating completion companies, such as Schlumberger, Halliburton and BJ Services, as well as a few others. A company will establish a practice for an area, such as what additives to include in their fracturing liquids that are most effective, and then will continue to use the same methods for a period of time. Therefore, once a required disclosure is made, for example, relatively similar paperwork compliance can be submitted other wells in the same formation and location. This reduces costs for the companies.

A number of states, including Colorado and Wyoming, already require Bradenhead testing. This practice has been in existence for a number of years and is certainly not a new requirement for wells in many states. This practice helps detect any leaks that may be occurring. This is something that a prudent company would do, regardless if it is required. Lost product through leaks, means lost revenue. So, for the most part, this would not represent an additional cost for the prudent operator.

Proper cementing has been required, but often without agency supervision, in many states, including one of the largest producing states, Texas. While the act of cementing does come with a cost for the rig to be idled during the curing time, proper drilling mandates that it is done properly. According to sources at Devon, “it’s about \$2,000 an hour for equipment and personnel.”² Again, if proper cementing is not done and required by the drilling team, product is lost and the company suffers economic losses, in addition to the costs of clean-up. The article

¹ Dunham, John, (June 11, 2012), *Business Impact of Proposed Changes to Well Completion Regulations*, John Dunham & Associates, New York City, New York

² Francesco, Beth, (March 30, 2011), *Cement Plays Vital Role in Drilling*, Denton Record-Chronicle, www.dentonrc.com/local-news/special-projects/gas-well-drilling-headlines/20110330-cement-plays-vital-role-in-drilling.ece

also goes on to disclose that the Texas Railroad Commission picks up the cost of plugging of some of the wells that have leaked because they were not cemented properly. This has become a cost to the public that should be a private entity's responsibility.

There have been instances when improper cementing has caused a loss of the entire well. On August 13, 1998, a well being drilled by Barrett Resources Corp in Natrona County, Wyoming blew out from a failure in the downhole casing. It took the company months to "kill" the well. The money spent on drilling the well was totally lost because the well had to be abandoned. Better techniques for cementing the casing and proper testing of the cement would have saved the costs paid to drill the well. In addition, the minerals that would have been produced were also lost. Proper cementing and testing for the integrity of the cement are well worth the costs sustained for wells that have to be plugged and abandoned. The state, the royalty owners and the company all lost potential earnings from this well and others that have had to be plugged for lack of proper cementing.

Schlumberger has disclosed that it costs about \$128,000 to perform cement bond logging.³ However, there are potential ways of gaining cement integrity in other manners. It may behoove the final regulation to allow for more efficient and comprehensive testing, if and when it becomes available. For example, according to Eddie H. Shook and Gary Frisch at Halliburton and Tony Lewis at Centurion Exploration, there are potential alternatives that are even better than cement mud logging that may not be as costly.⁴ Technology and innovation have played a key role in better, faster, more efficient drilling and citing a specific method for integrity evaluation in a regulation may preclude the ability use a more economic and equally effective practice.

For instance, for years, the drilling of a well at the depth of about 7,500 feet took about 28 days. This meant the costs of a supervisor, staff and the drilling rig were incurred for 28 days. With technological advances, there are now rigs capable of drilling that distance within 5-7 days. This creates a cost-savings for the oil and gas company. If a requirement for cement integrity testing is implemented, it should be the impetus for innovative thinking that will reduce this \$128,000 cost and the time and cost for down rig time it takes to do a cement mud log.

Mr. Dunham did not distinguish in his report the difference between the various types of casing. This is important in the evaluation of the cost of the casing. While he mentions in his paper that "Currently, this casing is brought down to an average depth of about 2,000 feet, but may now have to be brought down to a depth of 4,000 or 7,500 feet or deeper depending on conditions."⁵ We just need to look to Natural Gas.org for an explanation of casing. Their article refers to surface casing being used to a depth of 2,000

³ democrats.energy/commerce.house.gov/documents/20100614/Schlumberger-Cost.of.Completing.Cement.Bond.Log.V.Cancelled.Contingency, (June 14, 2010)

⁴ Shook, Eddie H, Frisch, Gary J, Lewis, Tony, (2008), *Cement Bond Evaluation*, Society of Petroleum Engineers, ISBN: 978-1-55563-198-7

⁵ Ibid

feet long, and being smaller in diameter.⁶ At a recent New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Commission hearing, West Largo Corp presented financial information concerning costs of drilling a well.⁷ The surface casing listed an expense of \$18 per foot for the smaller surface casing.

The Authorization For Expenditure (AFE) from West Largo Corp shows actual costs (dated 1/1/2012) of \$5,207.12 for 2,300 feet of cementing. This amounts to about \$2.26 per foot ($\$5,207.12/2,300$). Mr. Sauck, the Vice-President of West Largo Corp, also disclosed that even when the time to drill was doubled because of some delays, the additional cost of the rig was only increased by 27%.

Most of the requirements that are being suggested by the BLM are already practices followed by many of the responsible oil and gas operators. For those operators that only now will begin implementing these industry standard practices, the cost incurred to lengthen the drilling time can be expected to be at most 27% of the current cost of drilling. The total cost of drilling the well to 2,300 by West Largo Corp was \$224,735.18 per the documents submitted by the company representative. Twenty seven percent of that cost totals around \$60,000, as opposed to the hundreds of thousands suggested by Mr. Dunham.

Current agency staffing levels are not sufficient to ensure that best management practices are being used to protect the rest of the multiple uses for properties and the waterways. As a consequence, many wells producing today have never had their integrity tested. The cost of cleanup after a leak is far more astronomical than the cost of preventative measures. While many in the oil and gas industry may point to a small number of “incidents”, the economic cost of these ‘incidents’ is massive. In addition to the \$5 billion to clean up costs, there were about 9 million barrels of oil lost in the spill in the Gulf of New Mexico. At today’s prices of \$88.02⁸, that is \$792,180,000 of oil lost that can never be recouped.

The 20,000 barrels spilled near Marshall, Michigan has cost more than \$800 million⁹ for cleanup so far and the value of the product lost is \$1,760,000. Just yesterday, (7/30/2012), 1,200 more barrels of oil were spilled in Wisconsin, with a lost product value of \$105,624, not counting clean-up. While the incidents at Marshall, Michigan and in Wisconsin were created by pipelines, rather than well leaks, they are included here for illustrative purposes to show the potential costs of clean-up and lost product losses. In addition, with the amount of losses from just these three spills, we have taken away 173,207,040¹⁰ gallons of gasoline away from the US public. This amounts to more than

⁶ NaturalGas.org, (no date), *Well Completion*, www.naturalgas.org/naturalgas/well_completion.asp

⁷ Sauck, Mike, (May 17, 2012), Vice-President, West Largo Corp, *Authorization for Expenditure*, Tulsa, Oklahoma

⁸ naro-us.org (July 31, 2012), *Commodities* – 3:15 pm.

⁹ Hersman, Deborah A.P., Chairman, NTSB, (July 10, 2012), www.nts.gov/news/speeches/hersman/daph120710o.html

¹⁰ There are 19.2 gallons of gasoline per barrel (Gibson, Dick, (2000), Gibson Consulting, Butte, MT), therefore, $9,021,200 \times 19.2$ gallons = 173,207,040. This does not take into consideration, the jet fuel, fuel oil and other products that are processed from a barrel of oil.

half a billion dollars in lost income from gasoline sales at the pump. This creates a cascading effect to reduce gasoline taxes for the states and federal government. None of these revenues and lost product were taken into account by Mr. Dunham.

Conclusions

Projections are based on the best possible guess. While Mr. Dunham would like to look at the worst case possible, his lack of integral knowledge concerning the complex nature of oil and gas production has made his predictions far less reliable than those of the BLM. The BLM staff has been a vital stakeholder in oil and gas production since 1920; for almost 100 years. The BLM audits production, reviews permits, does site inspections and accumulates all pertinent information concerning oil and gas wells. In addition, the BLM has access to other government agencies that can provide information concerning costs and revenue. These include, but are not limited to, the Federal Energy Regulatory Commission, Office of Natural Resources Revenue and Energy Information Administration. The BLM also works closely with state oil and gas commissions and agencies and is able to access information from them through memorandums of understanding. It is because of these reasons that I believe that a more realistic economic framework for the benefits and costs associated with the BLM rule change is reflected in the Economic Analysis for BLM Hydraulic Fracturing Rule presented as an exhibit to the Rule.

However, I would like to go on to say that I am not sure if the agency took into account the lost revenue and lower tax collections from oil and gas wasted from a spill. It would be unconscionable for nonrenewable resources to be lost forever by a spill or blowout due simply to a lack of industry standard preventative measures. Our country needs to become energy self-sufficient and this includes taking measures to protect our resources from being wasted through lackadaisical industry practices.

It is important to remember, that even though there may be a relatively small number of reported incidents concerning water contamination, the cost of each incident is far greater than the initial cost of any preventative measures. The costs to the companies involved, over and above the fines paid for lack of care taken in drilling, certainly far exceed the cost that they would have incurred for preventative measures at the onset of drilling. This can be likened to each of us having a fire extinguisher in our home. There may be few times when it is needed, but if it prevents the entire home from burning down, the cost was well worth it.

Respectfully submitted,
Mary Ellen Denomy, CPA

Economic Impacts of Proposed Bureau of Land Management Hydraulic Fracturing
Proposed Rule.

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