

# FEDERAL REGULATION: PREVENTING THE U.S. FROM REGAINING ENERGY INDEPENDENCE

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A Critique of BLM's 2012 Proposed Rule on Hydraulic Fracturing  
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## *Executive Summary*

It has been since the end of the Second World War that the United States was self-sufficient in terms of its energy needs. It was also during the war that the rest of the world began to understand the strategic value of hydrocarbons. As consumption dramatically increased over the second half of the century, the search for new supplies around the world intensified. The discovery of large amounts of oil in the Middle East began the pendulum swing away from the world's reliance on the U.S. for its oil production. The shift culminated with the energy crisis of the 1970s and fostered the theory that the U.S. had exhausted its oil resources and any subsequent production was on a declining trajectory. This was referred to as "peak oil," and was the prevailing theory until the technological breakthroughs that allowed the development and production of hydrocarbons from unconventional sources.

Unfortunately, just as the true measure of the current U.S. energy boom is being realized, Federal regulation may well impede its full potential. For many, the belief in peak oil set the stage for the development of renewable energy sources. At the beginning of the current Administration, the significance of the technological advancements in the oil and gas industry had not been realized. Instead it pushed forward an agenda to move away from relying on oil; regulate coal into obscurity; and push for the temporary use of natural gas as a stepping stone to the complete transformation to renewable sources of energy.

However, political agendas do not necessarily impact the entrepreneurial spirit of the U.S. What was slowly becoming known to the world was that in 2005, after years of trial and error, two proven technologies were efficaciously combined resulting in the current U.S. energy boom. What the world now knows as hydraulic fracturing, has the potential to affect the geopolitical landscape of the world. The U.S. now has an opportunity to regain its stature as a major energy producer, lead the world in technological advances in energy development, and enable North American energy independence. The benefit of the energy boom has far reaching implications that when coupled with other pro-growth strategies has the potential to spur an economic recovery to the struggling U.S. economy.

To date, the vast majority of the energy boom has been concentrated on state and privately owned land, which some argue has accounted for its success. On these lands, mineral rights owners are able to use their state's regulatory frame-work. These frame-works are based on years of expertise, and knowledge of the unique geological characteristics of the individual states. However, to fully realize the potential of a nationwide energy boom, development on federal and Indian lands must be allowed to go forward. On federal and Indian lands, the increased development will create millions of jobs, help bring down our debt, rejuvenate the economy, and provide economic stability for Tribal communities. Unfortunately, with an Administration whose agenda is the decreased development and production of natural resources on federal and Indian lands, the future of the current energy boom is uncertain.

Nowhere is this devastating policy more clear than with the Bureau of Land Management's ("BLM") proposed rule on hydraulic fracturing. The rule has been proposed to "mitigate the risks" associated with hydraulic fracturing and ground water contamination. The rule allegedly

stems not from a political agenda, but rather from public comment, recommendations from the Secretary of Energy Advisory Board (“SEAB”), and an internal review of existing federal and state regulations. BLM claims that to ensure that all the stakeholders were involved the rule was drafted with Tribal consultation; input from the state regulators; and consistency with the American Petroleum Institute’s (“API”) guidelines for well construction and integrity. Specifically, the rule purports to address three main areas involving hydraulic fracturing: 1) managing “flowback” and other water related issues; 2) the public disclose of chemicals used in the hydraulic fracturing process; and 3) the integrity of well construction.

However, instead of focusing their attention on opening up more federal and Indian lands and improving the efficiency of the permitting process, BLM’s proposed rule will be:

1. An Impediment to Energy Independence.
2. Not Based in Science or Fact.
3. Inconsistent with SEAB’s Recommendations and Premature Given EPA’s 2014 study.
4. Duplicative of Existing Federal Regulation.
5. Dismissive of the States’ Superior Position to Regulate.
6. An Expansion of Authority and Usurpation of States’ Water Rights.
7. Based on Flawed Economic Analysis.
8. Devastating to Indian Lands and Small Businesses.

Regulations dealing with environmental concerns are vitally important to protect our land, water, and air. However, when proposed regulations are duplicative; cost more than the stated benefit; are not based on the best available science; and do not address a substantiated problem, they end up doing nothing more than stifle that which they are purporting to protect. Whenever a major regulation is proposed there are safeguards to ensure that the rule is needed and the rationale is warranted. Therefore, when the need for a regulation is in doubt, there are important questions that must be answered before moving forward. This is especially true when the rationale for moving forward appears to be based more on a political agenda than scientific evidence. Frankly, given the anemic recovery of the U.S. economy, it is too important not get this right the first time.

## I. NORTH AMERICAN ENERGY INDEPENDENCE

At a time when most energy analysts had written off the commercially viable exploration and development of onshore hydrocarbons in the U.S., the oil and gas industry continued to develop innovative technology. The single biggest technological breakthrough was the development of unconventional hydrocarbons through the process known as hydraulic fracturing (“HF”). This and other technological advances have significantly increased the ability of the U.S. to develop and produce their natural resources to levels it has not seen in decades and are directly responsible for the current energy boom in the U.S. This energy boom has the potential of creating millions of jobs and significantly contributing to the U.S. economy.

Also incredibly important, is that when the U.S. energy boom is coupled with the projected increase of hydrocarbon production in Canada and Mexico, the geopolitical ramifications are far reaching. The overall significance for the U.S. is that over the next decade, with the proper energy policies, North America can become “energy independent” from the rest of the world. While energy markets are inexorably tied to the global economy, the U.S. has the potential of regaining its position as the leading energy producer and becoming a major influence in the global market place.

### A. Economy & Jobs

Given the current economic situation in the U.S., a move toward energy independence means more jobs, a reduction in the deficit, and a significant contribution to a full economic recovery. Citi GPS summarized the great potential in the energy boom as follow:

[T]he energy sector in the next few decades may drive an extraordinary and timely revitalization and reindustrialization of the US economy, creating jobs and bringing prosperity to millions of Americans just as the national economy struggles to recover from the worst economic downturn since the Great Depression.<sup>1</sup>

Citi GPS further estimated that the energy sector could create more than 3.6 million jobs and correspondingly increase U.S. GDP<sup>2</sup> by up to 3%.<sup>3</sup> There were similar findings from a recent IHS report that predicted the creation of 3.5 million jobs and over \$5 trillion in capital expenditures by 2035.<sup>4</sup> In addition, Citi GPS also indicated a corresponding appreciation of the dollar between 1.6% and 5.4% by 2020, and if the full potential of the energy boom is realized, there could be up to a 60% reduction in the current U.S. deficit.<sup>5</sup>

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<sup>1</sup> EDWARD MORE ET AL., CITI GPS: GLOBAL PERSPECTIVES & SOLUTIONS, *ENERGY 2020: NORTH AMERICA, THE NEW MIDDLE EAST?* 74 (Mar. 20, 2012) [hereinafter *Energy 2020*].

<sup>2</sup> GDP (Gross Domestic Product) is the total value of goods and services produced in a country typically measured over a one year period.

<sup>3</sup> *Energy 2020*, *supra* note 1, at 74.

<sup>4</sup> IHS Global Insight Report, *America’s New Energy Future: The Unconventional Oil and Gas Revolution and the U.S. Economy* (Oct. 2012).

<sup>5</sup> *Energy 2020*, *supra* note 1, at 74.

These estimates are incredibly encouraging to the millions of people without jobs in the U.S. However, proper education and training will be an important aspect in cultivating the skills necessary to fill the anticipated increase in employment opportunities. The skills necessary to fill these jobs are more than what one might traditionally think. In addition to the skilled trade work associated with oil and gas production, jobs requiring advanced degrees in engineering and computer analysis will continue to increase given the recent technological advances. In fact, Bill Gates, current Chairman of Microsoft, acknowledged that software has been a significant factor in energy development.<sup>6</sup> A factor so significant that according to IBM, “[t]he world is on track to generate more data traffic associated with hydrocarbon production than the total amount of global consumer Internet traffic of just a few years ago.”<sup>7</sup> What is abundantly clear, from the increased use of technology in energy development, is that the jobs of the future will require advanced technical knowledge and any energy policy should reflect an emphasis on cultivating the necessary skills for those jobs.

This encouraging economic analysis will only be fully realized if the current energy boom is allowed to develop. Unfortunately, most impediments to increased oil and gas production are not necessary for the lack of technical knowledge or skills, but rather the projected burdensome regulation and geopolitical instability throughout the world. The geopolitical impact is briefly discussed below and the burdensome regulation is the subject of the remainder of the report.

## ***B. Geopolitical impact***

The development of oil and gas in North America has the potential to change the geopolitical paradigm in place since the 1970s. In a report released on August 1, 2012, the U.S. Energy Information Administration (“EIA”) indicated that in 2010, the “[p]roved reserves of U.S. oil and natural gas ... rose by the highest amounts ever recorded....”<sup>8</sup> Furthermore, since the beginning of the U.S. energy boom in 2005, imports have been steadily declining every year.<sup>9</sup> In fact, for the first time since before 1950, the “U.S. has become a net petroleum product exporting country and has edged out Russia as the world’s largest refined petroleum exporter.”<sup>10</sup>

This miraculous change in U.S. oil and gas development and production has been the result of the confluence of multiple factors, some of which are unique to the U.S. As Leonardo Mauger argues in a June 2012 report, the U.S. is able to lead the world in unconventional development in the oil and gas industry because of the potential production capacity from over 20 large

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<sup>6</sup> Mark Mills, *Romney Chooses a Tech-Centric Energy Plan to Jumpstart Jobs and Economic Growth*, FORBES, Aug. 23, 2012, <http://www.forbes.com/sites/markpmills/2012/08/23/romney-chooses-a-tech-centric-energy-plan-to-jumpstart-jobs-and-economic-growth/>.

<sup>7</sup> *Id.*

<sup>8</sup> U.S. ENERGY INFORMATION ADMIN., [hereinafter EIA], U.S. CRUDE OIL, NATURAL GAS, AND NATURAL GAS LIQUIDS PROVED RESERVES, 1 (Aug. 2012), <http://www.eia.gov/naturalgas/crudeoilreserves/pdf/uscrudeoil.pdf>.

<sup>9</sup> EIA, *Energy in Brief: How dependent are we on foreign oil?*

[http://www.eia.gov/cfapps/energy\\_in\\_brief/foreign\\_oil\\_dependence.cfm?featureclicked=3](http://www.eia.gov/cfapps/energy_in_brief/foreign_oil_dependence.cfm?featureclicked=3) (last updated July 13, 2012).

<sup>10</sup> *Energy 2020*, *supra* note 1, at 3 (In 2011, the US net import of crude oil and petroleum products amounted to 52% from the Western Hemisphere (including 29% from Canada and 8% from Mexico), 22% from the Persian Gulf (including 14% from Saudi Arabia), 20% from Africa, and 6% from other sources).

geological formations containing huge supplies of hydrocarbons.<sup>11</sup> In addition, the unique U.S. market plays a huge role in the development of these locations because of factors such as private ownership of subsurface rights, the availability of numerous independent oil and gas companies, and the continual technological advances made in the industry.<sup>12</sup>

The significance of the natural resources that are able to be recovered in North America is nothing short of amazing. However, to realize North American energy independence, the U.S. will have to continue to foster further energy developments in both Canada and Mexico. Together, a partnership with Canada and Mexico makes energy independence not only a reality, but a worthy cause to encourage and develop.

Canada holds over 170 billion barrels of oil in their reserves, making it the third largest oil reserves in the world behind Saudi Arabia and Venezuela.<sup>13</sup> In 2011 alone, Canada produced almost 3.7 million barrels per day, making it the 6<sup>th</sup> largest oil producer in the world with almost all of it being exported to the U.S.<sup>14</sup> In addition, through the further development of the Canadian Oil Sands, production is expected to increase to over 5 million barrels per day by 2025.<sup>15</sup> This is especially important given that Canadian imports to the U.S. could reach as high as 40% by 2030.<sup>16</sup> Therefore, Canada is a vital factor in gaining North American energy independence.

In Mexico, political reforms, newly discovered resources, and the further development of existing resources through technological advances may well reverse the downward trajectory of their projected exports. The proximity of Mexico and its resources to the U.S. and the refining capabilities of the Gulf Coast, make their development important to the energy mix of the U.S. Mexico is the other geopolitical factor that will ensure energy independence. In 2011, Mexico produced an average of almost 2.9 million barrels of oil liquids per day. Almost 85% of the crude oil was exported to the U.S.<sup>17</sup> Although production has been declining in recent years, there is reason to believe that with the application of new technologies, the return of foreign investment in developing Mexico's natural resources,<sup>18</sup> and Petroleos Mexicanos' ("Pemex")<sup>19</sup>

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<sup>11</sup> Leonardo Maugeri, *Oil: The Next Revolution, The Unprecedented Upsurge of Oil Production Capacity and What It Means For the World*, Discussion Paper 2012-10, BELFER CTR. FOR SCI. AND INT'L AFFAIRS, HARVARD KENNEDY SCHOOL, 3-4 (June 2012) [hereinafter *The Next Revolution*].

<sup>12</sup> *Id.*

<sup>13</sup> EIA, *ANALYSIS OF CANADA*, 2, <http://www.eia.gov/countries/analysisbriefs/Canada/canada.pdf> (last updated Sept. 17, 2012).

<sup>14</sup> *Id.* at 2 & 4.

<sup>15</sup> CANADIAN ASS'N. OF PETROLEUM PRODUCERS, *CRUDE OIL: FORECAST, MARKETS, & PIPELINE* (June 2012), <http://www.capp.ca/getdoc.aspx?DocId=209546&DT=NTV>.

<sup>16</sup> EIA, DOE/EIA-03883(2012), *ANNUAL ENERGY OUTLOOK 2012 WITH PROJECTIONS TO 2035* (June 2012).

<sup>17</sup> EIA, *ANALYSIS OF MEXICO*, 6, <http://www.eia.gov/countries/analysisbriefs/Mexico/Mexico.pdf> (last updated Oct. 17, 2012).

<sup>18</sup> In 2008, after declining production numbers, Mexico reformed its laws in the oil sector to encourage foreign investment through incentives and granting Pemex more flexibility in its dealings. *See id.* at 3.

<sup>19</sup> Pemex is a state-owned energy company that is the 4<sup>th</sup> largest crude oil producer in the world.

recent find in the Gulf of Mexico,<sup>20</sup> the contribution of Mexico to North American energy independence will increase over time.

While the United States is tied to the global economy, including its market fluctuations, regaining its influence in energy production will produce a paradigm shift of incredible proportions. The geopolitical ramifications from this shift will have global consequences, and its affect on the U.S. economy has the potential to be the engine of economic growth. However, while the U.S. is projected to increase production at a rate significantly greater than the rest of the world, “environmental doubts” and overly burdensome regulation may derail the energy boom before it has a chance to fully develop.<sup>21</sup>

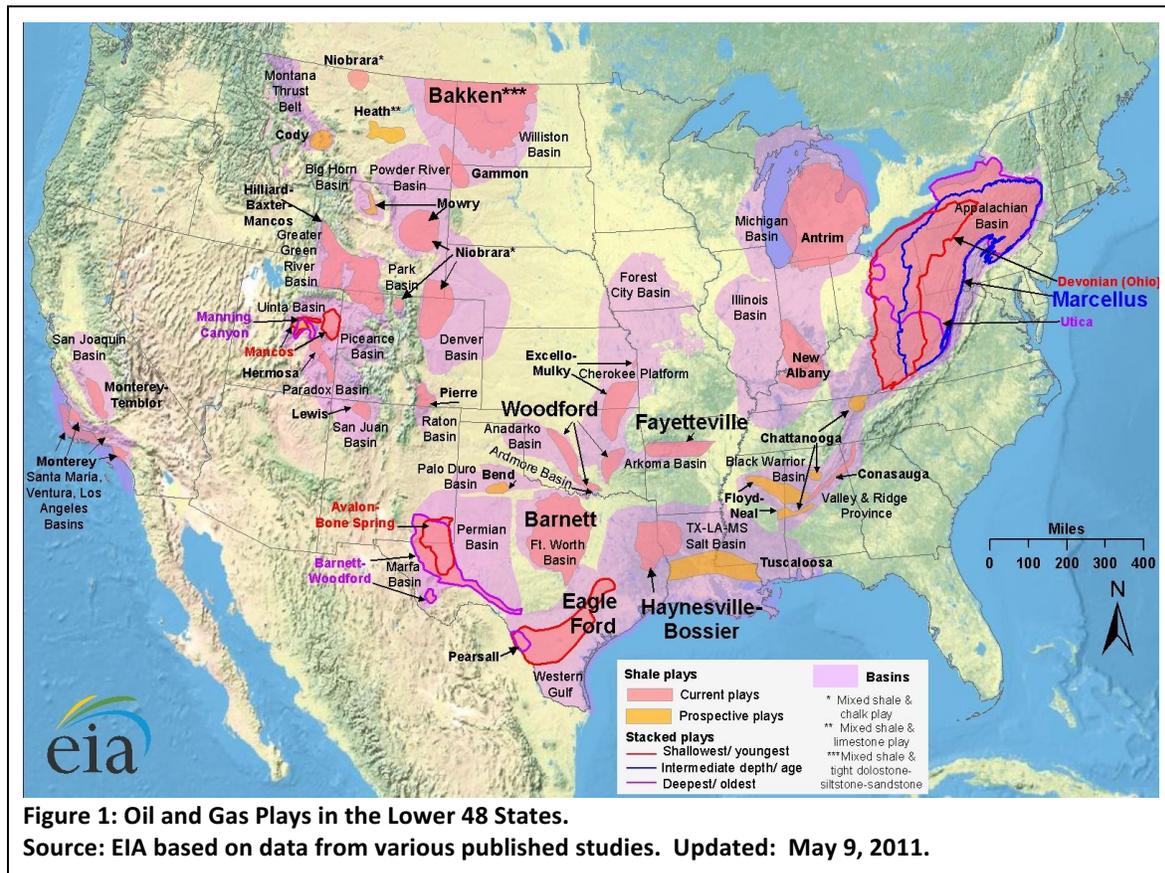
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<sup>20</sup> Carlos Manuel Rodriquez, *Pemex Said to Strike Second Perdido Find Near U.S. Border*, BLOOMBERG BUSINESSWEEK (Oct. 4, 2012), <http://www.businessweek.com/news/2012-10-03/pemex-said-to-strike-second-perdido-discovery-near-u-dot-s-dot-border> (PEMEX announced the find of a new ultra-deep-water field with about 200 million barrels of oil in the Gulf of Mexico).

<sup>21</sup> *The Next Revolution*, *supra* note 11, at 3-4.

## II. BACKGROUND ON HYDRAULIC FRACTURING & HORIZONTAL DRILLING

The EIA defines conventional oil and natural gas production as that which is “produced by a well drilled into a geologic formation in which the reservoir and fluid characteristics permit the oil and natural gas to flow to the wellbore.”<sup>22</sup> The converse of this would be considered “unconventional.” What geologists have long known, was that certain geological formations have lower porosity (the percentage of tiny spaces between the rock or loose sediment in relation to the nonporous material) and less permeability (rate or flow of a liquid or gas through a porous substance) than others. This type of formation or strata is commonly referred to as “tight.” Shale and other tight geological hydrocarbon rich formations have the porosity to make them commercially viable. However, the permeability is too low to allow the free flowing of the hydrocarbons without some enhanced recovery process i.e., unconventional means. The sheer size of both oil and natural gas plays,<sup>23</sup> the relatively recent technological advances, and the entrepreneurial spirit of the U.S. may well make the development and production of “unconventional” oil and gas the benchmark in the industry.



<sup>22</sup> EIA, *Glossary*, <http://www.eia.gov/tools/glossary/index.cfm?id=C> (last visited Nov. 1, 2012).

<sup>23</sup> A “play” is defined as “a set of known or postulated oil and gas accumulations sharing similar geologic, geographic, and temporal properties, such as source rock, migration pathway, timing, trapping mechanism, and hydrocarbon type.” See EIA, *Glossary*, <http://www.eia.gov/tools/glossary/index.cfm?id=P> (last visited Nov. 1, 2012).

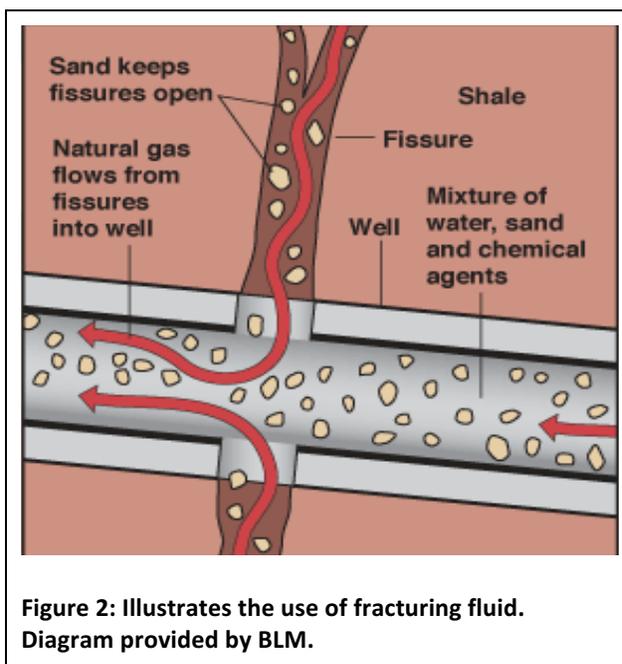
In addition, as Figure 1 demonstrates, the amount of hydrocarbons just onshore and in the lower 48 states is quite remarkable. The vastness of the plays has reinvigorated areas traditionally known to have hydrocarbon resources, but also expanded into new areas of the country and thus the overall economic impact will be spread throughout many states.

### **A. Hydraulic Fracturing**

HF involves injecting a high pressured combination of mostly water and sand and a small percentage of chemicals into a hydrocarbon rich geological formation to create fractures (fissures) in the rock allowing the release of the hydrocarbons. The HF process has been used by the oil and natural gas industry to stimulate production from tight formations since the late 1940s. It was not until the late 1990s that a breakthrough occurred by its successful use in the Barnett Shale play in East Texas that had, up until that point, not been efficiently accomplished. George P. Mitchell, based on a geological report he read in the early 1980s, began experimenting with different techniques to extract what he believed was a tremendous amount of natural gas in the shale rock.<sup>24</sup>

What the industry already knew was that shale formations have a high porosity, but very low permeability. Thus a conundrum of how to get “gas from rock,” or more specifically how to make the shale permeable enough to release its gas filled pores? It was not until the late 1990s, almost 20 years later, that the conundrum was solved. Mitchell discovered

that with the right mixture of water, proppant (e.g., sand), and chemicals, he was able to “hydraulically fracture” the shale rock. More importantly, the process was done in a way that left the proppant in the cracks, which opened a pathway for the hydrocarbon molecules to move to the wellbore, thus increasing the shale rock’s permeability to the extent necessary that gas could be extracted.<sup>25</sup> It wasn’t until increased extractions from the Barnett Shale were noticed in 2001, that Mitchell was able to sell his company to Devon Energy for \$3.5 billion.<sup>26</sup> Devon most assuredly saw the potential of Mitchell’s breakthrough and had an idea on how to make it even more effective.



**Figure 2: Illustrates the use of fracturing fluid. Diagram provided by BLM.**

<sup>24</sup> DAN YERGIN, *THE QUEST: ENERGY, SECURITY, AND THE REMAKING OF THE MODERN WORLD*, 327 (Penguin Group, 2011) [hereinafter *The Quest*].

<sup>25</sup> *Id.* at 328.

<sup>26</sup> *Id.*

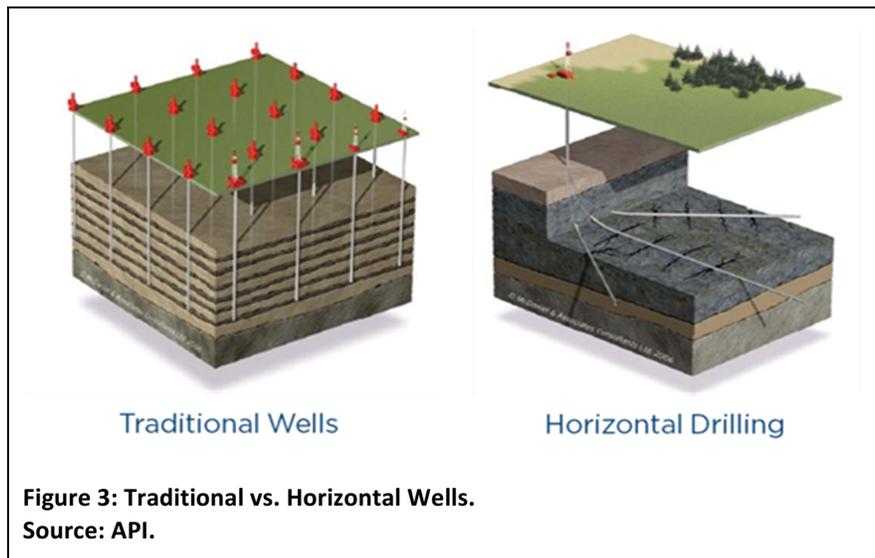
## B. Horizontal Drilling

The breakthrough, that enabled the economic development of the vast hydrocarbon-bearing shale resources of the U.S., was achieved when HF was combined with horizontal drilling. This combination transformed these geological formations into some of the largest natural gas fields in the world.

Horizontal drilling has been effectively used in oil and gas development and production since the late 1980s.<sup>27</sup> The process involves drilling a vertical well to desired location and then intentionally deviating the well from vertical (for example by use of a steerable mud motor near the drill bit at the end of the drill string).<sup>28</sup> The drill string then forms an arc until it enters the target geologic formation,

at that point it can then be steered along a horizontal plane, remaining within the bounds of the formation to be stimulated through HF. Because a horizontal well typically penetrates a greater length of the target formation, it can offer significant improvement over a vertical well by exposing more of the hydrocarbon-bearing rock to HF, and thus increasing the production of natural gas or oil from the formation.<sup>29</sup>

In addition, it also reduces the environmental impact at the surface by allowing a single well to accomplish what historically required multiple wells. (See Figure 3) In this case, Devon Energy had the needed background and expertise in horizontal drilling and by 2003 had efficaciously combined horizontal drilling with HF.<sup>30</sup> In fact, the full impact of the combination of these two techniques was not realized as a potential game changer until horizontal wells surpassed vertical wells in the Barnett shale around 2007.<sup>31</sup>



<sup>27</sup> EIA, DRILLING SIDWAYS – A REVIEW OF HORIZONTAL WELL TECHNOLOGY AND ITS DOMESTIC APPLICATION, vii (Apr. 1993), available at

[http://www.eia.gov/pub/oil\\_gas/natural\\_gas/analysis\\_publications/drilling\\_sideways\\_well\\_technology/pdf/tr0565.pdf](http://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/drilling_sideways_well_technology/pdf/tr0565.pdf).

<sup>28</sup> *Id.*

<sup>29</sup> See EIA, *Technology drives natural gas production growth from shale gas formations*, July 12, 2011, available at <http://www.eia.gov/todayinenergy/detail.cfm?id=2170> [hereinafter *Natural Gas Production Growth*].

<sup>30</sup> *The Quest*, *supra* note 24, at 328.

<sup>31</sup> *Natural Gas Production Growth*, *supra* note 29.

### ***C. The Future of Hydrocarbon Development***

Up until 2007, all signs pointed to a steady decrease in domestic oil and natural gas production in the U.S.<sup>32</sup> The prevailing view was that the U.S. had reached what has been referred to as “peak oil” and that development and production would thereafter decline.<sup>33</sup> The belief was that the world was running out of oil and correspondingly natural gas.<sup>34</sup> The fear began in the 1970s, and was premised on the rising demand of hydrocarbons and the seemingly dwindling supplies. As a solution, crude oil was prohibited from being exported, with limited exceptions, through the President’s prerogative under the Energy Policy and Conservation Act of 1975.<sup>35</sup> In 1978, natural gas was prohibited from being used as a primary fuel source for power generation.<sup>36</sup> Ironically, given the current Administration’s “war on coal,” in the 1970s, coal was seen as the best alternative fuel source for power generation.<sup>37</sup> With the belief that the U.S. was running out of oil and natural gas, the emphasis of supply shifted to the Middle East and other parts of the world to secure needed sources of energy.<sup>38</sup> Thus began the reliance of the U.S. first on imported oil and later on natural gas.<sup>39</sup> In fact, with regard to natural gas, until the late 2000s, a number of companies invested in Liquefied Natural Gas (“LNG”)<sup>40</sup> terminals, such as Dominion Cove Point LNG in Lusby, Maryland, with the anticipation that the demand for natural gas would have to be supplied by importing it from overseas.<sup>41</sup>

Since 2007, estimates on the amount of hydrocarbons in the U.S. have dramatically increased, in no small part to the technological advances related to HF.<sup>42</sup> In fact, by 2011, the increase in natural gas production had correspondingly reduced the U.S. net import of natural gas to 8%, which was a 25% reduction and the lowest amount since 1992.<sup>43</sup> Similarly, crude oil imports appear to have peaked in 2005 and have been dropping ever since.

The increased production of natural gas has also opened up the possibility that the U.S. could begin exporting natural gas. In fact, a number of energy companies have applied for and

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<sup>32</sup> EIA, *U.S. natural gas net imports at lowest levels since 1992*, available at <http://www.eia.gov/todayinenergy/detail.cfm?id=5410>.

<sup>33</sup> *The Quest*, supra note 24, at 228-9.

<sup>34</sup> *Id.* at 228-9, 335.

<sup>35</sup> 42 U.S.C. § 6212 (Permits to the prohibition are reviewed by the Sec’y of Commerce under the Export Administrative Act of 1979, see 42 U.S.C. § 92).

<sup>36</sup> 42 U.S.C. § 92 (The Powerplant and Industrial Fuel Use Act (FUA) was passed in 1978. The sections of the FUA that prohibited the use of natural gas as a primary fuel source in the production of electricity were repealed in 1987).

<sup>37</sup> EIA, *Repeal of the Powerplant and Industrial Fuel Act (1987)*, available at [http://www.eia.gov/oil\\_gas/natural\\_gas/analysis\\_publications/ngmajorleg/repeal.html](http://www.eia.gov/oil_gas/natural_gas/analysis_publications/ngmajorleg/repeal.html) (last visited Nov. 1, 2012).

<sup>38</sup> *The Quest*, supra 24, at 228-9; 325.

<sup>39</sup> See DAN YERGIN, *THE PRIZE: THE EPIC QUEST FOR OIL, MONEY & POWER*, 395 (Simon & Schuster 1991) [hereinafter *The Prize*].

<sup>40</sup> Note: Natural Gas becomes much more economical to transport when it is liquefied.

<sup>41</sup> Dominion, *History of Cove Point*, <https://www.dom.com/business/gas-transmission/cove-point/history-of-cove-point.jsp> (last visited Nov. 1, 2012).

<sup>42</sup> EIA, *U.S. Crude Oil, Natural Gas, and NG Liquids Proved Reserves*, Aug. 1, 2012, <http://www.eia.gov/naturalgas/crudeoilreserves/>.

<sup>43</sup> EIA, *U.S. NATURAL GAS IMPORTS & EXPORTS 2011*, 4 (July 2012), available at [http://www.eia.gov/naturalgas/importsexports/annual/pdf/import\\_export2012.pdf](http://www.eia.gov/naturalgas/importsexports/annual/pdf/import_export2012.pdf).

received permits from the Department of Energy (“DOE”) allowing them to enter into contracts to export LNG on a limited basis.<sup>44</sup> Given that the estimated price of natural gas for November 2012 is roughly \$10 per MMBtu in Europe and even higher in other parts of the world, exporting LNG has a huge economic potential when domestic prices hover just under \$4 per MMBtu.<sup>45</sup> However, there are some concerns with unfettered exports. Some indicate that exporting natural gas will lead to higher prices for businesses, especially those that use natural gas in the production of certain products.<sup>46</sup> At the consumer level, given the increase use of natural gas in power generation, the price of electricity may also become volatile. However, in 2011, even the Brookings Institute, a center-left think tank, released a study that indicated exporting natural gas is “likely to be competitive in global markets” and that it will only have a “modest upward impact on domestic prices, and a limited impact on the competitiveness of U.S. industry....”<sup>47</sup> The ability to export natural gas may well have the effect of reducing the trade deficit and increasing revenues for all levels of governments.<sup>48</sup> Regardless of whether DOE allows LNG to be exported in sufficient enough volumes to have an effect, most experts agree that the price of natural gas will not remain as low as it is projected to be in November of 2012.<sup>49</sup>

The increased production in unconventional oil has also been the result of a combination of HF’s application in other low permeable geological formations and the declining price of natural gas. The oil recovered from these formations is commonly referred to as “tight oil.” As the price of natural gas decreased, many of the small businesses that make up the drilling operators began focusing their efforts on oil recovery. This shift is most apparent by the fact that since May of 2011, oil rig counts have overtaken gas rig counts.<sup>50</sup> It can therefore be argued that the onshore development and production of oil has regained its prominence in the U.S. Nowhere is this resurgence more apparent than the Bakken area in North Dakota and the Eagle Ford and Permian Basin areas of Texas. Without a doubt, they have reversed the downward trajectory in U.S. crude oil production.

#### ***D. Delays and Regulatory Impediment***

Regardless of whether the technological advances are used to recover natural gas or oil, the combination of HF and horizontal drilling has changed the outlook for energy development in North America. With the advent of HF and its successful use over a million times, North America is well on its way to gaining energy independence in the next decade.<sup>51</sup> Unfortunately, the single biggest impediment to energy independence is the unnecessary, costly, and time-

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<sup>44</sup> Kevin Book et al., LNG Exports – Policy, Progress and Project Impacts, Clear View Energy Partners, LLC (Sept. 17, 2012) [hereinafter *Clear View Energy Partners, LLC Report*] (on file with Committee).

<sup>45</sup> Fed. Regulatory Energy Comm’n., [hereinafter FERC], *World LNG Estimated November 2012 Landed Prices*, <http://www.ferc.gov/market-oversight/othr-mkts/lng/othr-lng-wld-pr-est.pdf> (last updated Oct. 4, 2012) [hereinafter *Nov. 2012 LGN World Prices*].

<sup>46</sup> *Clear View Energy Partners, LLC Report, supra* note 44.

<sup>47</sup> CHARLES EBINGER ET AL., LIQUID MARKETS: ASSESSING THE CASE FOR U.S. EXPORTS OF LIQUEFIED NATURAL GAS, at vi, BROOKINGS (May 2012), available at <http://www.brookings.edu/research/reports/2012/05/02-lng-exports-ebinger>.

<sup>48</sup> *Id.*

<sup>49</sup> *Nov. 2012 LGN World Prices, supra* note 45.

<sup>50</sup> EIA, *U.S. oil rig count overtakes natural gas rig count*, May 2011, available at <http://www.eia.gov/todayinenergy/detail.cfm?id=1290#>.

<sup>51</sup> *Energy 2020, supra* note 1.

consuming delays added by regulations imposed by this Administration. While development and production has been increasing on non-Federal land, to achieve energy independence and spur an economic recovery, development must be allowed to expand on both federal and Indian lands. Although only 11% of the nation's natural gas supply and 5% of the oil supply comes from federal and Indian lands, much more could be developed with sound energy policy.<sup>52</sup> However, the average delay for obtaining a permit to drill has increased to almost 300 days.<sup>53</sup> It is therefore no wonder that development on federal and Indian lands has dropped almost 14% in 2011 alone.<sup>54</sup> In fact, in the first two years of this Administration, the number of gas leases dropped 44% and the number of new permits to drill dropped 39%, while no corresponding decrease occurred on non-Federal land.<sup>55</sup>

In what appears to be a concerted effort to reduce oil and natural gas development on federal and Indian lands through unnecessary delay, it is also being accomplished through increasingly burdensome regulation. Here the focus will be on the Department of the Interior's ("DOI") recently released proposed rule through BLM to regulate the single most important technological advancement in the oil and gas industry – HF.<sup>56</sup> **BLM identifies concerns with the HF process in both the amount and disposal of the water, the chemicals used, and the integrity of the well construction in and through drinking water sources.** While environmental concerns are incredibly important to address and periodic reviews of the existing regulatory framework is necessary, the oil and gas industry is already one of the most heavily regulated industries. In fact, the concerns identified by BLM are not new and have been effectively addressed by the oil and gas industry for years through a multitude of federal and state regulations as well as the development of industry technical standards, many of which are incorporated by reference into those regulations. Any modification of those regulations should be done only after a thorough economic and regulatory review given the projected economic significance of such a rule. As discussed in this paper, however, the BLM does **not** consider this an economically significant rule.

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<sup>52</sup> U.D. Dep't of the Interior, Bureau of Land Mgmt. [hereinafter BLM], *Oil and Gas*, available at [http://www.blm.gov/wo/st/en/prog/energy/oil\\_and\\_gas.html](http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas.html) (last updated Oct. 25, 2012).

<sup>53</sup> Dina Cappiello, *New process to expedite drilling on public lands*, ASSOCIATED PRESS (Apr. 3, 2012), [http://www.newsvine.com/\\_news/2012/04/03/11002223-new-process-to-expedite-drilling-on-public-lands](http://www.newsvine.com/_news/2012/04/03/11002223-new-process-to-expedite-drilling-on-public-lands).

<sup>54</sup> *Oversight of On/Offshore Energy Programs: Hearing Before the Subcomm. of the Interior, Environment and Related Agencies, of the S. Comm. on Appropriations*, 112th Cong. (Mar. 14, 2012), webcast available at <http://www.appropriations.senate.gov/webcasts.cfm?method=webcasts.view&id=b17d74eb-9bda-401a-af96-0058350039d5> [hereinafter *S. Appropriations Hearing*] (statement of S. Murkowski at 53:49 of broadcast).

<sup>55</sup> *EMPLOYMENT, GOVERNMENT REVENUE, AND ENERGY SECURITY IMPACTS OF CURRENT FEDERAL LANDS POLICY IN THE WESTERN U.S.*, EIS SOLUTIONS (Jan. 2012) (report prepared for American Petroleum Institute).

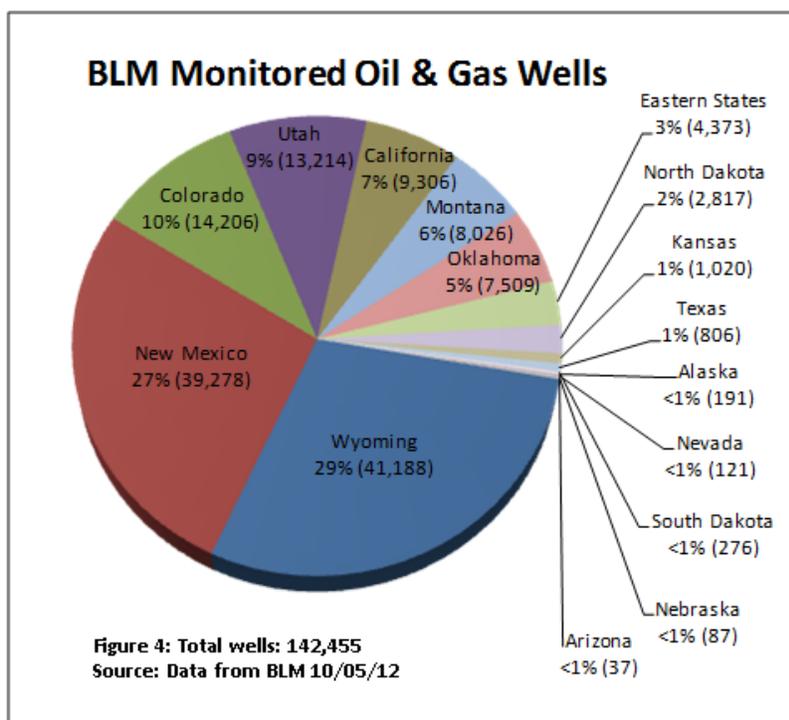
<sup>56</sup> Oil and Gas; Well Stimulation, Including Hydraulic Fracturing, on federal and Indian Lands, 77 Fed. Reg. 27691 (May 11, 2012).

### III. BLM’S PROPOSED REGULATION ON HYDRAULIC FRACTURING

#### A. Background on Proposed Rule

BLM manages over 245 million acres of land primarily located in 12 Western States including Alaska as well as 700 million acres of subsurface mineral rights.<sup>57</sup> In FY 2011, BLM collected over \$2.7 billion in oil and gas royalties alone.<sup>58</sup> In FY 2012, it is projected that \$5.7 billion will be collected from BLM managed land.<sup>59</sup>

As of October 5, 2012, BLM monitors 142,455 oil and gas wells on federal and Indian Lands.<sup>60</sup> As seen in Figure 4, almost 60% of the wells are roughly divided between Wyoming (41,188) and New Mexico (39,278). Another 20% are roughly split between Colorado (14,206) and Utah (13,214). The rest are spread



out over 11 Western States and the 3% that make up the “Eastern States” (4,373).<sup>61</sup> As of the end of FY 2011, BLM managed almost 50,000 oil and gas leases with a production value exceeding \$23 billion.<sup>62</sup> These leases cover over 90,000 producible and service drill holes and over 95,000 completions.<sup>63</sup>

As indicated earlier, both the granting of leases and the approval of drilling permits, referred to as an Application for Permit to Drill (“APD”), have dramatically decreased. In fact, since the 2008 Presidential election, BLM’s

<sup>57</sup> BLM, *New Energy for America*, <http://www.blm.gov/wo/st/en/prog/energy.html> (last updated June 6, 2012).

<sup>58</sup> 77 Fed. Reg. 27699.

<sup>59</sup> News Release, BLM, BLM Extends Public Comment Period for Proposed Hydraulic Fracturing Rule (June 25, 2012) [hereinafter *BLM Extends HF Comment Period*].

<sup>60</sup> Statistics provided by BLM on Oct. 5, 2012 (on file with Committee).

<sup>61</sup> “Eastern States” include: Alabama (121); Arkansas (761); Illinois (18); Indiana (4); Kentucky (185); Louisiana (792); Maryland (71); Michigan (861); Mississippi (349); Missouri (3); New York (9); Ohio (629); Pennsylvania (198); Tennessee (10); Virginia (36); West Virginia (326)

<sup>62</sup> 77 Fed. Reg. 27699.

<sup>63</sup> *Id.*

approval of APDs went from 6,617 in FY 2008, to 4,487 in FY 2009 and then down to 4,090 in FY 2010.<sup>64</sup> The state of Wyoming, which contains the largest proportion of oil and gas development on federal and Tribal lands, had their leases cut nearly 50% from 3,155 in FY 2008 to 1,538 FY 2010.<sup>65</sup> Coincidentally however, since 2008, the number of BLM inspections has increased by 40%.<sup>66</sup> So at a time when the country was in the largest energy boom in decades and the rest of the economy was in an economic free fall, the Administration and BLM decided to dramatically scale back both its number of leases and its approval of APDs on federal and Indian lands.

Nonetheless, in March of 2011, the Obama Administration instructed the Secretary of Energy, Steven Chu, to form a Subcommittee of the Secretary of Energy Advisory Board (“SEAB”)<sup>67</sup> to make non-binding recommendations to ensure that natural gas development in the U.S. was being conducted in a manner that was protective of the environment.<sup>68</sup> These recommendations were issued in August of 2011 in a 90-Day Report (“Interim Report”).<sup>69</sup> This was followed by a Second Ninety Day Report (“Final Report”) released in November 2011. The Final Report’s purpose was to give guidance in implementing the recommendations from both the Interim and Final Reports.<sup>70</sup> Specifically, the Final Report categorized 20 recommendations by the corresponding regulatory body they assessed most capable of taking the lead on its implementation.<sup>71</sup> SEAB looked to federal agencies, individual states, and also to some combination of all the stakeholders to form “new partnerships and mechanisms.”<sup>72</sup> SEAB did acknowledge that for their recommendations to be effectively implemented, additional resources would be necessary for the “regulatory staff at the federal and state level with the technical expertise to issue, inspect, and enforce regulations.”<sup>73</sup> However, given the challenges of effectively inspecting and enforcing current federal regulations, as posited in a recently released GAO report, prudence dictates that the individual states should take even more of a lead than was recommended by SEAB.<sup>74</sup>

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<sup>64</sup> BLM, *Number of Drilling Permits Approved by Fiscal Year on Federal Lands*, [http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS\\_\\_REALTY\\_\\_AND\\_RESOURCE\\_PROTECTION\\_/energy/oil\\_\\_gas\\_statistics/data\\_sets.Par.65795.File.dat/table08.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/energy/oil__gas_statistics/data_sets.Par.65795.File.dat/table08.pdf) (last updated Nov. 9, 2011).

<sup>65</sup> *Id.*

<sup>66</sup> BLM, *Oil and Gas Inspections and Enforcement*, available at [http://www.blm.gov/wo/st/en/prog/energy/oil\\_and\\_gas/Energy\\_Facts\\_Enforcement.html](http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/Energy_Facts_Enforcement.html) (last updated June 5, 2012) [hereinafter *Oil and Gas Inspections and Enforcement*].

<sup>67</sup> For purposes of this Committee Report, the Shale Gas Production Subcommittee of the Secretary of Energy Advisory Board (“SEAB”) will be referred to as SEAB unless otherwise noted.

<sup>68</sup> U.S. DEP’T OF ENERGY, SEAB [hereinafter SEAB], SHALE GAS PRODUCTION SUBCOMMITTEE, 90-DAY REPORT, at 5 (Aug. 18, 2011) (hereinafter *SEAB Interim Report*).

<sup>69</sup> *Id.* at 1.

<sup>70</sup> SEAB, SHALE GAS PRODUCTION SUBCOMMITTEE, SECOND NINETY DAY REPORT, at 1 (Nov. 18, 2011) (hereinafter *SEAB Final Report*).

<sup>71</sup> *See Id.*

<sup>72</sup> *Id.* at 2 & 7.

<sup>73</sup> *SEAB Interim Report*, *supra* note 68, at 11.

<sup>74</sup> U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-12-874, UNCONVENTIONAL OIL AND GAS DEVELOPMENT: KEY ENVIRONMENT AND PUBLIC HEALTH REQUIREMENTS (Sept. 2012). (As noted in the report on p. 78, EPA officials indicated that with respect to Federal regulators “the dispersed nature of the industry and the rapid pace of development make conducting inspections and enforcement activities difficult.”) [hereinafter *GAO-12-874 Report*].

On May 11, 2012, BLM proposed amending 43 CFR 3160.0-3, listing their authority under the Federal Land Policy and Management Act (“FLPMA”), the Mineral Leasing Act, (“MLA”), and the Indian Mineral Leasing Act (“IMLA”), and others.<sup>75</sup> The proposed regulation will require “(1) [t]he public disclosure of chemicals used in hydraulic fracturing operations on Federal Land; (2) confirmation that wells used in fracturing operations meet appropriate construction standards; and (3) ... that operators put in place appropriate plans for managing flowback waters from fracturing operations.”<sup>76</sup> The extended deadline for public comment on the proposed rule was September 10, 2012.<sup>77</sup>

## ***B. Promulgated Rationale for Proposed Rule***

The rationale for the proposed rule was to “mitigate the risks” associated with HF and ground water contamination. The rule allegedly stems not from a political agenda, but rather from public comment, recommendations from the Secretary of Energy Advisory Board (“SEAB”), and an internal review of existing federal and state regulations.<sup>78</sup> BLM claims that to ensure that all the stakeholders were involved; the rule was drafted with Tribal consultation, input from the state regulators, and consistency with API’s guidelines for well construction and integrity.<sup>79</sup>

### *Public Concern*

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The preamble lists the public’s concern over alleged environmental hazards involving water contamination as the first rationale for the proposed rule. However, HF is a proven technology that has been in use for over 60 years and has helped to produce over 600 trillion cubic feet of natural gas and over 7 billion barrels of crude oil with no substantiated connection to groundwater contamination.<sup>80</sup> There have been no groundwater contamination incidents attributable to HF on Federal or Indian lands administered by BLM. Instead of relying on technology that has been monitored, researched, and studied for decades to help improve its effectiveness and ensure its safety, BLM appears to be relying on *unsubstantiated* claims of harm or risk of harm to justify a change in the agency’s regulation of this activity.<sup>81</sup>

In fact, the Environmental Protection Agency (“EPA”) is currently conducting a study to “elucidate the relationship, *if any*, between hydraulic fracturing and drinking water resources.”<sup>82</sup> (emphasis added). This is especially relevant because a status report is due out at the end of 2012 and a final report due in 2014.<sup>83</sup> In addition, in April of 2012, DOI entered into a Memorandum of Understanding (“MOU”) to work collaboratively with the EPA and DOE to

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<sup>75</sup> 77 Fed. Reg. 27694.

<sup>76</sup> 77 Fed. Reg. 27692.

<sup>77</sup> *BLM Extends HF Comment Period*, *supra* note 59.

<sup>78</sup> See 77 Fed. Reg. 27693.

<sup>79</sup> See *id.*

<sup>80</sup> See Energy in Depth, *Just the Facts*, <http://www.energyindepth.org/just-the-facts/> (last visited Nov. 1, 2012).

<sup>81</sup> See *id.*

<sup>82</sup> U.S. Env’t Prot. Agency [hereinafter EPA], *EPA’s Study of Hydraulic Fracturing and Its Potential Impact on Drinking Water Resources*, <http://www.epa.gov/hfstudy/index.html> (last updated Oct. 22, 2012) [hereinafter *EPA’s HF Study Plan*].

<sup>83</sup> *Id.*

address the challenges associated with developing unconventional oil and gas.<sup>84</sup> However, by the time this MOU was signed, a draft version of the proposed rule had already been hastily written. It would seem that the prudent and responsible action for BLM to take would be to wait for EPA's final report. Any final action before that time would clearly be premature. If for instance, the EPA finds that there is no substantiated connection between HF and ground water contamination, the main rationale for the rule would be rendered moot and any decision to go forward would be arbitrary and capricious.

Another growing concern about the HF process is the correlation to seismic events i.e., earthquakes. While there is some correlation between the HF process and microseismic events, these events are not felt on the surface or cause any danger to people.<sup>85</sup> Furthermore, Bill Ellsworth, the senior geophysicist at the U.S. Geological Survey ("USGS"), indicated that the USGS does not "see any connection between fracking and earthquakes of any concern to society."<sup>86</sup>

### *SEAB Recommendations*

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As Acting Director of BLM, Mike Pool has acknowledged that BLM's proposed rule was also based on the recommendations from SEAB.<sup>87</sup> However, SEAB indicated that "geological diversity means that engineering practice and regulatory oversight will differ widely among regions of the country... and that a single best engineering practice cannot set for all locations and for all times."<sup>88</sup> Clearly SEAB recognized that in certain areas the individual states, with their unique circumstances, are in the best position to regulate industry.<sup>89</sup> Moreover, states understand the value in coordinating with the each other on best practices. In fact, this is currently done through the Interstate Oil and Gas Compact Commission ("IOGCC").<sup>90</sup>

### *States & Internal Review of Federal and State Regulations*

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Testifying before the Committee on Oversight and Government Reform, Acting Director Mike Pool stated that one of the "key goals" in revising the regulations regarding HF was to "complement" efforts by the states in "providing a consistent standard across all public and

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<sup>84</sup> Memorandum between U.S. Dep't of Energy, U.S. Dep't of the Interior, and the U.S. Env't Prot. Agency (Apr. 13, 2012), available at [http://www.epa.gov/hydraulicfracture/oil\\_and\\_gas\\_research\\_mou.pdf](http://www.epa.gov/hydraulicfracture/oil_and_gas_research_mou.pdf).

<sup>85</sup> ConocoPhillips, *An Overview: Triggered Seismicity* (June 2012), available at [http://www.powerincooperation.com/EN/Documents/COP\\_Triggered%20Seismicity%20Fact%20Sheet.pdf](http://www.powerincooperation.com/EN/Documents/COP_Triggered%20Seismicity%20Fact%20Sheet.pdf) [hereinafter *Triggered Seismicity*].

<sup>86</sup> Energy in Depth, *\*Update V\* On Shaky Grounds* (June 18, 2012), <http://www.energyindepth.org/on-shaky-ground/> (comments made by Bill Ellsworth in April of 2012).

<sup>87</sup> *Rhetoric vs. Reality, Part II: Assessing the Impact of New Federal Red Tape on Hydraulic Fracturing and American Energy Independence: Hearing Before Subcomm. on Tech., Info. Policy, Intergovernmental Relations and Procurement Reform of the H. Comm. on Oversight and Gov't Reform*, 112th Cong., (May 31, 2012) (written statement of Mike Pool, Acting Director, BLM, at 3) [hereinafter *Pool OGR Statement*].

<sup>88</sup> *SEAB Interim Report*, supra note 68, at 9-10.

<sup>89</sup> *SEAB Final Report*, supra note 70, at 7.

<sup>90</sup> Interstate Oil and Gas Compact Commission [hereinafter IOGCC], *About Us*, <http://www.iogcc.state.ok.us/about-us>.

Indian lands”<sup>91</sup> This includes changing some definitions in the existing regulations in an attempt to bring clarity to an otherwise confusing regulatory scheme. He goes on to say that there has been a “long history of working cooperatively with state regulators to coordinate State and Federal activities” and the intent is not to “duplicate various state or applicable Federal requirements.”<sup>92</sup> This includes MOUs with a number of the western oil and gas producing states. However, this decision to act was not mandated by any Congressional authorization.

As for the argument that the proposed rule brings consistency amongst BLM’s offices; consistency in their offices by default means inconsistency with each of the states that they administer federal and Indian lands. In addition, the definitional changes proposed have the unintentional consequence of expanding BLM’s authority into an area historically left to the individual states. This is possibly why the vast majority of oil and gas producing states have come out against the proposed rule as being duplicative and confusing.<sup>93</sup> Additionally, SEAB indicated that when it comes to well construction and water related issues involved in the HF process, the states, not the federal government, should take the lead in implementing their recommendations.<sup>94</sup> Even Acting Director Pool acknowledged, as recently as May 2012, that the states have already taken the lead in regulating HF.<sup>95</sup>

As for existing Federal regulation, there are a number of Onshore Oil and Gas Orders (“OOGOs”), some updated as recently as 2007, that specifically address the concerns posited by BLM for this rule. For example, under OOGO No. 1, BLM already has the authority to grant or deny an APD on a wide range of issues covered by this proposed rule.<sup>96</sup> In addition, OOGO No. 2 requires BLM’s approval for any casing and cementing programs. These programs must explain how an operator will construct the wells and what safeguards will be used to ensure “wellbore integrity” and the protection of groundwater.<sup>97</sup> In addition, OOGO No. 7 sets the

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<sup>91</sup> *Pool OGR Statement, supra* note 87, at 4.

<sup>92</sup> *Id.*

<sup>93</sup> See *Federal Regulation: Economic, Job and Energy Security Implications of Federal Hydraulic Fracturing Regulation: Hearing before the Subcomm. on Energy and Mineral Res. of the H. Comm. on Natural Res.*, 112th Cong., (May 2, 2012) (written testimony of Kathleen Clarke, Dir. of Pub. Lands Policy Coordination Office of the state of Utah); *America’s Energy Future Part I: A Review of Unnecessary and Burdensome Regulations: Hearing before the H. Comm. on Oversight and Gov’t Reform*, 112th Cong., (July 13, 2012) (written testimony of Patrice Douglas, Comm’r, Okla. Corp. Comm’n); *America’s Energy Future Part II: A Blueprint for Domestic Energy Production: Hearing before the H. Comm. on Oversight and Gov’t Reform*, 112th Cong., (July 14, 2012) (written testimony of Lynn D. Helms, Dir., N.D. Industrial Comm’n, Dep’t of Mineral Res.); *Rhetoric vs. Reality, Part II: Assessing the Impact of New Federal Red Tape on Hydraulic Fracturing and American Energy Independence: Hearing before the H. Comm. on Oversight and Gov’t Reform*, 112th Cong. (May 31, 2012) (written testimony of Michael L. Krancer, Sec’y, Commonwealth of Pa., Dep’t of Evtl. Prot.); Jim Magill, Wyoming Governor criticizes BLM over proposed fracking rule, *Platts* (Sept. 13, 2012), <http://www.platts.com/RSSFeedDetailedNews/RSSFeed/NaturalGas/6628185> (last visited Nov. 9, 2012).

<sup>94</sup> *SEAB Final Report, supra* note 70, at 7.

<sup>95</sup> See *Pool OGR Statement, supra* note 87.

<sup>96</sup> Onshore Oil and Gas Order No.1, 72 Fed. Reg. 10328, 10330 (Mar. 7, 2007) (issued under 43 C.F.R. § 3160 [hereinafter OOGO No. 1].

<sup>97</sup> See Onshore Oil and Gas Order No. 2, 53 Fed. Reg. 223 (Nov. 18, 1998) (issued under 43 C.F.R. § 31600 [hereinafter OOGO No. 2].

standards for handling waste water including the specifications on the pits used to temporarily store it.<sup>98</sup>

### *Tribal Consultation*

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In Acting Director Pool's written statement for the record, he indicated that in January of 2012 "BLM hosted formal government-to-government consultation sessions . . . with Tribal communities on the proposed rule."<sup>99</sup> The preamble to the rule indicated that BLM "asked the Tribal leaders for their views on how a hydraulic fracturing rule proposal might affect Indian activities, practices, or belief" and that these rules would apply equally to Indian lands so that they would "receive the same level of protection provided to the public lands."<sup>100</sup> However, the National Congress of American Indians indicated in a March 7, 2012 letter to Secretary Salazar that not only were the Tribal leaders not engaged in a meaningful discussion as required, but the draft rule was either not available or was only provided at the end of BLM's so-called "consultation meeting."<sup>101</sup> The letter further indicated that "Indian Lands are not 'public lands' and should not be included within the proposed regulations."<sup>102</sup>

### *API Guidelines*

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In Acting Director Pool's written statement for the record, he also indicated that the rule is consistent with API's guidelines. However, API has also come out and said that "regional differences in state geology make a single set of regulations impractical" and therefore their guidelines should be used as a "roadmap."<sup>103</sup> In fact, in comments sent to Acting Director Pool, API recommended that prior to moving forward on a final rule, BLM should conduct a "gap analysis" of all existing Federal regulations and practices in coordination with the various state regulatory agencies.<sup>104</sup>

### ***C. Goals of the Proposed Rule***

The preamble to the rule, coupled with testimony and written statements in various Congressional hearings, indicates that BLM identified a number of rationales for their intent to move forward with this rule-making effort. Through the feedback received from the public and recommendations from SEAB, BLM proposed to address three main areas involving HF:

- 1) Managing "flowback" and other water related issues;
- 2) The public disclose of chemicals used in the HF process; and
- 3) The integrity of well construction.<sup>105</sup>

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<sup>98</sup> 58 Fed. Reg. 47354; Onshore Oil and Gas Order No. 7, 58 Fed. Reg. 172 (Oct. 1993) [hereinafter OOGO No. 7].

<sup>99</sup> Pool OGR Statement, *supra* note 87, at 84.

<sup>100</sup> 77 Fed. Reg. 27692, 27693.

<sup>101</sup> Letter from Nat'l Congress of America Indians, to Ken Salazar, Sec'y of the Interior (Mar. 7, 2012).

<sup>102</sup> *Id.*

<sup>103</sup> See API Comments to RIN 1004-AE26, re BLM proposed rule to regulate hydraulic fracturing on public land and Indian lands (Sept. 10, 2012) (on file with Committee).

<sup>104</sup> *Id.*

<sup>105</sup> See 77 Fed. Reg. 27692.

Given that BLM indicated that one of its “key” goals is to “complement” states efforts and “minimize any duplication,” it is incumbent upon any analysis to review the three identified areas of concern.<sup>106</sup>

## **(1) Regulating “Flowback” Water: Federal Regulation vs. State Authority**

BLM proposed adding or amending a number of sections dealing with water use. First, it proposed §3162.3–3(c)(3) that requires the disclosure of “the source and location(s) of the water used...” including the “access route and transportation method ....”<sup>107</sup> Then it proposed §3162.3–3(c)(6) and §3162.3–3(g)(10), requiring the pre-stimulation information involving estimates and the post-stimulations information involving the actual handling of “recovered fluids” (including “flowback” water) and the volume, methods of handling, storage, and disposal of the fluids.<sup>108</sup> Lastly, §3162.3–3(f) requires that the recovered fluids be contained in either tanks or lined pits.<sup>109</sup>

“Flowback” is the water that comes to the surface during drilling operations. “Produced” water is the natural occurring water that comes with the production of oil or gas. Together they makeup what is referred to as “waste” water. Options for handling waste water depend a lot on the geological and geographical area of the country, as various regions have different water related issues. In some regions it is routinely recycled for use in future fracturing jobs; in others it can be handled at a treatment facility or injected into a geological formation under an EPA administered program.<sup>110</sup>

What is clear is that waste water has been effectively handled and regulated for many years. All of the oil and gas producing states have existing regulations to deal with waste water. In fact, BLM already regulates produced water and could easily modify the definition to include flowback water. By amending this definition, BLM would alleviate some of their concerns with flowback water and would provide a less costly alternative.

Therefore, given the existing federal and state regulations and the numerous options in handling waste water, there are a number of questions regarding the appropriateness of the proposed rule that need to be addressed. The *first* is whether this proposed rule was based on a legitimate, scientifically established need, or rather on an unfounded, possibly agenda driven, concern of the “public.” The *second* is whether BLM has prudently followed SEAB’s recommendations in this area. The *third* is whether there are existing Federal regulations that already require the information sought. *Finally*, whether the rationale given greatly expands federal authority in an area historically left to the states.

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<sup>106</sup> See 77 Fed. Reg. 27694.

<sup>107</sup> 77 Fed. Reg. 27710.

<sup>108</sup> *Id.*

<sup>109</sup> *Id.*

<sup>110</sup> API, *Hydraulic Fracturing at a Glance* (2008),

[http://www.api.org/policy/exploration/upload/hydraulic\\_fracturing\\_at\\_a\\_glance.pdf](http://www.api.org/policy/exploration/upload/hydraulic_fracturing_at_a_glance.pdf) (discussing the EPA’s Underground Injection Control program under the Safe Drinking Water Act).

One of the most publicly discussed issues about HF is its impact on local water supplies including both the risk of contamination and the amount used. As for the risk of contamination, there are a number of reasons why this has garnered so much attention. Clearly the importance of drinking water to a community cannot be overstated. However, there are sometimes more insidious reasons for the added attention. Some of the opposition to the use of HF is from those that believe that pursuing renewable energy resources, even if potentially devastating to the economy, is nevertheless a goal worth pursuing. In addition, there are always those whose opposition is based not in concern for the environment, but rather for their own economic gain.<sup>111</sup> However, allegations of HF contaminating groundwater are unsubstantiated by the facts and scientific evidence. Ironically, public concern, more than anything else, appears to have precipitated BLM promulgating this new rule. However, the repeated claim of an urgent “need” for this rule has not been posited. One can only speculate whether BLM was influenced more by an upcoming election than the scientific evidence presented. However, at a time when the Administration should have been calming public fears about the safety of HF, they chose to fan the flames of discontent by prematurely intervening in lawsuits and moving forward with a rule based on public misconception.

Given the publicity received by a documentary titled *Gasland*,<sup>112</sup> which is indicative of the lengths some will go to push an agenda meant to “inform” the public, it is worth briefly addressing it here. As for the documentary itself, the most memorable scene is when tap water from the faucet of a person’s home was lit on fire in attempt to show that oil and gas development was responsible for methane in the area’s drinking water. For the average person, that was convincing enough to oppose HF. However, methane, by far the largest component of natural gas, has been shown to have been in the water in that area<sup>113</sup> long before HF was ever used.<sup>114</sup> The connection between methane leakage and the oil and gas industry is a correlation having more to deal with geology than the causation of unsafe development and production. Nonetheless, it has unfortunately been the prevailing argument against the use of HF.

Furthermore, what is rarely discussed in public allegations of methane contamination is that methane has different forms. Methane is believed to be the result of the breakdown of organic material. Biogenic methane is naturally occurring near the surface and thermogenic is formed

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<sup>111</sup> Kevin Begos, *Next Cold War? Gas Boom Rattles Russia*, ASSOCIATED PRESS (Sept. 30, 2012), *available at*, <http://finance.yahoo.com/news/next-cold-war-gas-drilling-boom-rattles-russia-161809078.html> (Russian President Vladimir Putin’s concern about HF may have had more to do with stifling the U.S. energy boom and a response to the 25% profit loss of Gazprom, a Russian state-controlled gas exporting company, than any legitimate concern over the health and safety of the Russian people. In fact, there is some speculation that Russia itself is behind the anti-HF movement sweeping Europe.).

<sup>112</sup> *Gasland*, directed by Josh Fox, is a 2010 documentary film that Fox attempts to find the truth behind HF and its alleged environmental impacts.

<sup>113</sup> The portion of the documentary in questioned was filmed in Fort Lupton, Colo.

<sup>114</sup> Colo, Oil & Gas Ass’n [hereinafter COGA], *The Truth About “GasLand” Whitepaper* (June 17, 2011), *available at* [http://www.coga.org/pdfs\\_facts/The%20Truth%20About%20GasLand.pdf](http://www.coga.org/pdfs_facts/The%20Truth%20About%20GasLand.pdf); *See also Not Evil Just Wrong, Gasland director hides full facts*, YouTube (May 31, 2011), <http://www.youtube.com/watch?v=e9CfUm0QeOk>.

deep in the ground from high pressure and heat.<sup>115</sup> Biogenic is what is associated with agricultural, livestock, swap, and drift gas. Thermogenic is what we commonly refer to as “natural gas,” as it is associated with the production of oil and gas.<sup>116</sup> Over the years scientists have developed a number of different tests to determine the type of methane present in a given sample.<sup>117</sup> In fact, *Gasland* caused so much controversy that the Colorado Oil & Gas Conservation Commission (“COGCC”) conducted these specific scientific tests to determine the type of methane in the water supply. The results showed that the methane in question was biogenic and not thermogenic, i.e., not associated with the oil and gas industry.<sup>118</sup> In fact, this type of testing is routinely done throughout the U.S. For example, in the Northeastern U.S. there have been multiple allegations of methane contamination as a result of HF. However, a recently released USGS study found that methane samples taken in the area in question between 1999 and 2011 were also shown to be biogenic.<sup>119</sup> This confirmed what many in the area had known for years about the water. Given the misinformation in the public about methane, this type of testing is being done more and more and is how most unsubstantiated claims of water contamination, allegedly attributed to the oil and gas industry, are being scientifically disproven.

As for the amount of water consumed, it is worth noting that in many areas much of the water used in the oil and gas industry is recycled. In other areas, when compared to other industrial uses, the amount used is not statistically significant. For example, in 2009 the Ground Water Protection Council (“GWPC”) released a report indicating that:

The amount of water needed to drill and fracture a horizontal shale gas well generally ranges from about 2 million to 4 million gallons, depending on the basin and formation characteristics. While these volumes may seem very large, they are small by comparison to some other uses of water, such as agriculture, electric power generation, and municipalities, and generally represent a small percentage of the total water resource use in each shale gas area. Calculations indicate that water use for shale gas development will range from less than 0.1% to 0.8% of total water use by basin.<sup>120</sup>

Indeed, the most important aspect regarding water use is how much is used in a particular region, and reports from different regions provide some helpful information. In the Barnett Shale, water provided to oil and natural gas producers was 0.54% of 2011 total water use in Texas. Completing a well there uses as much water as a golf course uses in 20 days, or that is used on a

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<sup>115</sup> Dennis Coleman, *Advances in the Use of Geochemical Fingerprinting for Gas Identification*, ISOTECH LABORATORIES, INC., (May 1994), available at <http://cogcc.state.co.us/Announcements/GeoFingerPrinting.pdf>.

<sup>116</sup> *Id.*; See also Deneff, K., K. Paustian, S. Archibeque, S. Biggar, D. Pape, 2012. Report of Greenhouse Gas Accounting Tools for Agriculture and Forestry Sectors. Interim report to USDA under Contract No. GS23F8182H.

<sup>117</sup> *Id.*

<sup>118</sup> Colo. Oil & Gas Conservation Comm’n [hereinafter COGCC], *COGIS – Complaint Report*, [http://cogcc.state.co.us/cogis/ComplaintReport.asp?doc\\_num=200190138](http://cogcc.state.co.us/cogis/ComplaintReport.asp?doc_num=200190138) (last visited Nov. 1, 2012).

<sup>119</sup> U.S. Geological Survey [hereinafter USGS], *Dissolved Methane Found in Some New York Groundwater* (Sept. 2012), available at <http://www.usgs.gov/newsroom/article.asp?ID=3391>. [hereinafter *USGS 2012 Study*].

<sup>120</sup> GROUND WATER PROT. COUNCIL [HEREINAFTER GWPC], *MODERN SHALE GAS DEVELOPMENT IN THE UNITED STATES: A PRIMER* (Apr. 2009), available at [http://fracfocus.org/sites/default/files/publications/shale\\_gas\\_primer\\_2009.pdf](http://fracfocus.org/sites/default/files/publications/shale_gas_primer_2009.pdf).

mere six acres of corn in a growing season.<sup>121</sup> In Oklahoma, the oil and gas industry use less than 2% of the state's total water consumption.<sup>122</sup> In Colorado, 2010 estimates from the COGCC show HF annually using only 0.08% of water supplies, which is about 1/1000th the water required each year for agribusiness and only 1.5% of the water required for the recreation industry.<sup>123</sup> In Pennsylvania, gas drilling in the Marcellus uses 1.9 million gallons or about 0.2% of all the daily water withdrawn.<sup>124</sup> In fact, each golf course in the region uses up to 1 million gallons a week and the electrical generation in the Susquehanna River Basin uses nearly 150 million gallons of water per day.<sup>125</sup> Furthermore, the amount becomes less significant when compared to the 770 million gallons a day used by a broad category of other industrial users or the 524 million gallons a day that aquaculture uses.<sup>126</sup>

### *SEAB and the EPA's Actions*

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As previously indicated, BLM routinely cites SEAB's recommendations as a rationale for promulgating this rule. However, while SEAB recommends the creation of an "integrated water management" system, it acknowledges that "[t]he difference in water use and regulation in different shale plays means that there will not be a single water management integrated system applicable in all locations"<sup>127</sup> Therefore, it is no wonder that in their Final Report, **SEAB recommended that the states take the lead in this area.**<sup>128</sup> In addition, and no doubt understood by SEAB, is that states already have regulations for how to handle waste water including "flowback" water. While SEAB did not suggest that only the states should take action, they did however focus their attention on the EPA, and not BLM, as the agency to handle the

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<sup>121</sup> Barnett Shale Energy Educ. Coal., *Hydraulic Fracturing and Water Use in the Barnett Shale* (2012), available at <http://www.bseec.org/content/hydraulic-fracturing-and-water-use-barnett-shale>, See also Frank Deford, *Water-Thirsty Golf Courses need to Go Green*, NPR (June 11, 2008), <http://www.npr.org/templates/story/story.php?storyId=91363837> (indicating that Audubon International estimates that the average American golf course uses 312,000 gallons of water per day).

<sup>122</sup> STATE REVIEW OF OIL AND NATURAL GAS ENVIRONMENTAL REGULATIONS, INC. [hereinafter STRONGER], OKLAHOMA HYDRAULIC FRACTURING STATE REVIEW, at 8 (Jan. 2011), available at <http://www.occeweb.com/STRONGER%20REVIEW-OK-201-19-2011.pdf>.

<sup>123</sup> COGCC, *Water Sources and Demand for the Hydraulic Fracturing of Oil and Gas Wells in Colorado from 2010 through 2015*, available at [http://cogcc.state.co.us/Library/Oil\\_and\\_Gas\\_Water\\_Sources\\_Fact\\_Sheet.pdf](http://cogcc.state.co.us/Library/Oil_and_Gas_Water_Sources_Fact_Sheet.pdf) (last visited Nov. 1, 2012).

<sup>124</sup> J.F. Kenny, N.L. Barber, S.S. Hutson, K.S. Linsey, J.K. Lovelace and M.A. Maupin. 2009. Estimated use of water in the United States in 2005: U.S. Geologic Survey Circular 1344, 52 p JOHN A. ARWAY, STRAIGHT TALK, PA. ANGLER & BOATER (Jan./Feb. 2012), [http://fishandboat.com/anglerboater/2011ab/vol80num1\\_janfeb/01straight.pdf](http://fishandboat.com/anglerboater/2011ab/vol80num1_janfeb/01straight.pdf) ("Marcellus Shale Gas Water Use: June 1, 2008 – May 21, 2010 Susquehanna River Basin Commission basin-wide reported daily use of 0.99 MGD expanded to statewide estimate. Water sources: 29% public water supplies/71% surface water withdrawals 1 MGD daily use in Susq. Basin ÷ wells drilled in Susq. Basin/wells drilled statewide = 1 MGD ÷ (765/1428).")

<sup>125</sup> J. Daniel Arthur et al., *Water Resources and Use for Hydraulic Fracturing in the Marcellus Region*, at 3, ALL CONSULTING, LLC (2010), available at [http://fracfocus.org/sites/default/files/publications/water\\_resources\\_and\\_use\\_for\\_hydraulic\\_fracturing\\_in\\_the\\_marcellus\\_shale\\_region.pdf](http://fracfocus.org/sites/default/files/publications/water_resources_and_use_for_hydraulic_fracturing_in_the_marcellus_shale_region.pdf).

<sup>126</sup> *Id.* at footnote 107.

<sup>127</sup> *SEAB Interim Report*, *supra* note 68, at 22.

<sup>128</sup> *SEAB Final Report*, *supra* note 70, at 2 & 7.

issue.<sup>129</sup> Specifically, SEAB acknowledged a current study being conducted by the EPA regarding HF and that upon completion, the study would “likely initiate significant negotiations between *EPA and state regulators* on the scope and responsibilities for water regulations.”<sup>130</sup> (emphasis added).

The EPA study, developed at the behest of Congress, was to ascertain the alleged relationship between HF and drinking water.<sup>131</sup> Although arguably outside the scope of the Congressional mandate, EPA’s study is looking at the “water lifecycle” of the HF process including “water acquisition, chemical mixing, well injection,” and the “treatment and disposal” of wastewater.<sup>132</sup> This is the second study that EPA has conducted regarding HF and the contamination of drinking water. In 2004, after a three-year study, the **EPA produced a report over 450 pages that found no confirmed cases of drinking water contaminations as a result of HF.**<sup>133</sup> EPA plans to release a status report toward the end of 2012 and a final report for public comment and peer review in 2014.<sup>134</sup> However, the preamble and the rationale for BLM’s proposed rule make no mention of EPA’s current study. Therefore, given that the current study encompasses many of the issues considered in the proposed rule, the prudent approach, barring any scientific evidence to the contrary, would be to wait for the final report to be released. Moving forward at this time without the benefit of the study would be premature.

BLM is also silent on the EPA’s premature and unsuccessful legal challenges regarding HF. In this area, EPA has already shown that moving hastily can be costly to an agency and discredits future actions on the issue. One noted example is when the EPA had to recently withdraw from a lawsuit involving alleged contamination of water by HF for lack of scientific evidence.<sup>135</sup> Here, EPA seems to have reacted without taking the time to learn the facts. In that case, even though the Texas Railroad Commission, which is responsible for regulating oil and gas activity in Texas, had already investigated the matter, the EPA sued to get an emergency order to halt all HF operations.<sup>136</sup> The problem was that the EPA had no scientific basis to seek the order and was later reprimanded by a federal judge for acting without any supporting evidence.<sup>137</sup> This type of action seems indicative of an out-of-control agency. This is clearly evident by the fact that EPA’s former Administrator for Region 6 (including Texas), was forced to resign after it was revealed that he advocated “crucifying” energy companies as a way of making examples of them to the rest of the industry.<sup>138</sup> Maybe that is why the Chairman of the Texas Railroad

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<sup>129</sup> See *id.* at 7.

<sup>130</sup> *Id.*

<sup>131</sup> *EPA’s HF Study Plan*, *supra* note 82.

<sup>132</sup> *Id.*

<sup>133</sup> U.S. ENVTL. PROT. AGENCY [hereinafter EPA], EVALUATION OF IMPACTS TO UNDERGROUND SOURCES OF DRINKING WATER BY HYDRAULIC FRACTURING OF COALED METHANE RESERVOIRS (June 2004), *available at* [http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/wells\\_coalbedmethanestudy.cfm](http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/wells_coalbedmethanestudy.cfm).

<sup>134</sup> *EPA’s HF Study Plan*, *supra* note 82.

<sup>135</sup> Christopher Helman, *EPA Official Not Only Touted ‘Crucifying’ Oil Companies, He Tried It*, FORBES (Apr. 26, 2012), *available at* <http://www.forbes.com/sites/christopherhelman/2012/04/26/epa-official-not-only-touted-crucifying-oil-companies-he-tried-it/>.

<sup>136</sup> *Id.*

<sup>137</sup> *Id.*

<sup>138</sup> Darren Samuelsohn & Erica Martinson, *Al Armendariz exits EPA quickly after ‘crucify’ video*, POLITICO (Apr. 30, 2012), *available at* <http://www.politico.com/news/stories/0412/75760.html>.

Commission indicated that the EPA’s investigation was “a \$12 million solution in search of a problem that doesn’t exist” because “you have a better chance of hitting the moon with a roman candle than fracturing into fresh water zones by hydraulic fracturing shale rock.”<sup>139</sup>

The issue finally came to the public’s attention when a few weeks after the withdraw from the case, the Administrator of the EPA, Lisa Jackson, testified at a Congressional hearing that she was “not aware of any proven case where the fracking process itself has affected water.”<sup>140</sup> Therefore, for BLM to move forward with a rule based on unsubstantiated allegations and no scientific evidence appears to run counter to Executive Order 13563, which requires “scientific integrity” in promulgating rules and the Administrative Procedures Act.<sup>141</sup>

### *Existing Federal Regulations*

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Most of the specific information that BLM requests in their proposed rule is already required under existing regulations. Under §3162.3–3(c)(3), BLM requires the disclosure of “the source and location(s) of the water used...” including the “access route and transportation method ...”<sup>142</sup> However, BLM already regulates some aspects of water use under existing OOGOs.<sup>143</sup> OOGOs are used to “implement and supplement” the Federal oil and gas regulations for federal and Indian lands.<sup>144</sup> One example is that in order to receive an APD, operators already have to submit a detailed Surface Use Plan under OOGO No. 1.<sup>145</sup> Specifically, the Surface Use Plan requires the operator to “identify the source, access route, and transportation method for all water anticipated for use in drilling the proposed well.”<sup>146</sup>

Under §§3162.3–3(c)(6) and (10), BLM requires the pre-stimulation information involving estimates and the post-stimulations information involving the actual handling of “recovered fluids” (including “flowback” water) and the volume, methods of handling, storage, and disposal of the fluids.<sup>147</sup> In addition, BLM requires that disposal of “flowback” water “must follow the requirements set out in OOGO No. 7 Disposal of Produced Water, section III.B.”<sup>148</sup> However, under the Surface Use Plan, previously mentioned, an operator must already describe the “methods and locations proposed for safe containment and disposal of *each type of waste material* ... that results from drilling the proposed well.”<sup>149</sup> (emphasis added). This clearly

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<sup>139</sup> See News Release, Railroad Comm’n of Tex., Tex. Energy Chair, Elizabeth Jones: “No water contamination ever due to homegrown technology--Hydraulic Fracturing.” (May 12, 2011), available at <http://www.rrc.state.tx.us/pressreleases/2011/051211.php>.

<sup>140</sup> *Pain at the Pump: Policies that Suppress Domestic Production of Oil and Gas: Hearing Before the H. Comm. on Oversight and Gov’t Reform*, 112th Cong. 87 (May 24, 2011), available at <http://www.gpo.gov/fdsys/pkg/CHRG-112hhrg70675/pdf/CHRG-112hhrg70675.pdf> (statement of Lisa Jackson, Adm’r, EPA).

<sup>141</sup> Exec. Order No. 13563, 76 Fed. Reg. 3821 (Jan. 2011).

<sup>142</sup> 77 Fed. Reg. 27710.

<sup>143</sup> *OOGO (Onshore Oil and Gas Orders) No. 7*, *supra* note 101; *OOGO No. 1*, *supra* note 99.

<sup>144</sup> See 43 C.F.R. § 3164.1.

<sup>145</sup> *OOGO No. 1*, *supra* note 99.

<sup>146</sup> *Id.* at 10332.

<sup>147</sup> 77 Fed. Reg. 27710.

<sup>148</sup> 77 Fed. Reg. 27711 citing § II.B (October 8, 1993), 58 FR 4735.

<sup>149</sup> *OOGO No. 1*, *supra* note 99, at 10332.

covers all the “recovered fluids,” including “flowback” water, addressed in the language of the proposed rule and therefore makes this section unnecessary and duplicative.

Under §3162.3–3(f), BLM requires that the recovered fluids be contained in either tanks or lined pits.<sup>150</sup> However, under OOGO No. 1 an “operator must describe plans for the construction and lining, if necessary, of the reserve pit.”<sup>151</sup> In addition, OOGO No. 7 even specifies the design requirement for the pits.<sup>152</sup> Therefore, BLM already has the authority to address this issue. Therefore, as a previously indicated option, merely amending OOGO No. 7 to require a lining in all pits would be far less burdensome. Given the significance of the requirement for lining pits in BLM’s cost/benefit analysis, one wonders if it is merely being used as a pretext to add more regulation in areas where no identified problem exists.

Lastly, in May of 2012, Acting Director Pool submitted a written statement for the record before testifying in front of the House Oversight and Government Reform Committee.<sup>153</sup> The written statement suggested that BLM decided to update its rules only after a “review of its rules and existing regulations” and discovered that the regulations had not been updated for years.<sup>154</sup> However, in conducting a cursory review of the existing regulations including the OOGOs, they appear to be more than adequate to accomplish BLM’s stated goals. In addition, given that some of the regulations have been updated as recently as 2007, it is a bit disingenuous to claim that the “current BLM regulations governing hydraulic fracturing operations ... are more than 30 years old and were not written to address modern hydraulic fracturing activities.”<sup>155</sup>

### *Water Use and Federalism*

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BLM’s focus on water related issues appears to be outside their Congressionally mandated authority. In the proposed rule, BLM asserts that it “intends to be more *protective* ... of all usable water during drilling operations, not just fresh water.”<sup>156</sup> (emphasis added). It also indicated that it needed the additional data on water “to determine *the impacts* associated with operations and the *need for any mitigation* applicable to federal and Indian lands.”<sup>157</sup> (emphasis added). As previously indicated, BLM cites FLPMA, MLA, and IMLA as their authority to promulgate this rule.<sup>158</sup> However, nowhere does Congress grant BLM the unfettered authority to regulate HF or the waters within the boundaries of the individual states.<sup>159</sup> In fact, FLPMA specifically provides that it does not expand or diminish “Federal or State jurisdiction, responsibility, interest, or rights in water resources development or control ....”<sup>160</sup>

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<sup>150</sup> 77 Fed. Reg. 27710.

<sup>151</sup> OOGO No. 1, *supra* note 99, at 10332.

<sup>152</sup> OOGO No. 7, *supra* note 101.

<sup>153</sup> Pool OGR Statement, *supra* note 87.

<sup>154</sup> *Id.* at 3.

<sup>155</sup> 77 Fed. Reg. 27691, 27692.

<sup>156</sup> 77 Fed. Reg. 27695.

<sup>157</sup> 77 Fed. Reg. 27696 .

<sup>158</sup> 77 Fed. Reg. 27694.

<sup>159</sup> *Id.*; Mineral Leasing Act (MLA); Federal Land Policy and Management Act (FLPMA); Indian Mineral Leasing Act (IMLA).

<sup>160</sup> Act of Oct. 21, 1976, Public Law 94-579 § 701(g)(2).

In fact, as far back as the Desert Land Act of 1877, Congress granted its citizens the authority to use the water on Federal land.<sup>161</sup> Specifically it provided that:

...all lakes, rivers, and other sources of water supply upon the public lands and not navigable, shall remain and be held free for the appropriation and use of the public for irrigation, mining, and manufacturing purposes subject to existing rights.<sup>162</sup>

The U.S. Supreme Court, in analyzing the effect of the Act, held that not only were water rights considered separately from those on the land, but that “all nonnavigable waters then a part of the public domain became *publici juris* [of public right], subject to the plenary control of the designated states...”<sup>163</sup> (emphasis added). This Act of Congress, and subsequent U.S. Supreme Courts cases, have held that states, and not the Federal government, have primacy over water rights in their respective jurisdictional boundaries.<sup>164</sup> The states’ primacy are subject to “federally reserved water rights,” however, with limited exception these rights do not apply to BLM lands.<sup>165</sup>

What is most revealing about the long standing legal precedent in this area is not necessarily that the states were granted this authority, but rather the rationale behind it. As Supreme Court Chief Justice Rehnquist indicated, when quoting a Congressman from 70 years earlier, the problem with having two sets of laws in the same state is that “[d]ifferent water rights in the same state would be governed by different laws and would frequently conflict.”<sup>166</sup> Justice Rehnquist continued by writing that, “[a] principal motivating factor behind Congress’ decision to defer to state law was thus the legal confusion that would arise if federal water law and state water law reigned side by side in the same locality.”<sup>167</sup>

In this case, one of the stated rationale’s behind the proposed rule was to have consistency throughout BLM in an attempt to “complement State efforts.”<sup>168</sup> However, by proposing these rules just the opposite effect will occur. In each state there will be two sets of laws dealing with HF. This will be especially confusing when jurisdictional issues come into play such as when BLM administers the subsurface rights and the corresponding surface rights are either privately or state-owned. The same rationale for granting the states authority over water rights over a hundred years ago should by analogy apply equally to the current issue. Therefore, BLM should continue to defer to the states on all water use issues. However, if BLM does in fact plan to have a more active role in water use issues, then a “Federal Assessment” is clearly warranted.

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<sup>161</sup> See 43 U.S.C. § 321.

<sup>162</sup> *Id.*

<sup>163</sup> *Cal. Or. Power Co. v. Beaver Portland Cement Co. et al.*, 295 U.S. 142, 163 (1935).

<sup>164</sup> *Cal. v. U.S.*, 438 U.S. 645, 662 (1978) (Justice Rehnquist quoted Congress Sutherland. Congressman Sutherland eventually became a U.S. Supreme Court Justice.)

<sup>165</sup> *Id.* at 662.

<sup>166</sup> *Id.* at 667-8.

<sup>167</sup> *Id.* at 668-9.

<sup>168</sup> *Pool OGR Statement*, *supra* note 87; see also GPO Official Transcript Serial No. 122-148, p. 79.

Executive Order (“EO”) 13132 requires a Federalism Assessment when a regulation will have “substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among various levels of government.”<sup>169</sup> In this case, BLM asserts without support, that the following regulation does not have federalism implications.<sup>170</sup> However, the vast majority of states that will be affected by these regulations have already indicated that they do not support it.<sup>171</sup> This should be a sufficient indicator that further review is warranted. In fact, EO 13132 indicates that “[t]o the extent practicable, state and local officials *shall* be consulted before any such action is implemented.”<sup>172</sup> (emphasis added). Therefore, given the long historical record of the states administering Federal regulations dealing with water issues, and that the “national government shall grant the states the maximum administrative discretion possible” and “[i]ntrusive Federal oversight of State Administration is neither necessary nor desirable,” BLM should consult with those states affected by this proposed regulation and complete a Federalism Assessment.<sup>173</sup>

In addition, the proposed rule also expands the definition of water in the HF operations. Under proposed §3160.0–5, the current definition of “fresh water” is to be deleted and replaced by the much broader definition of “usable water.”<sup>174</sup> The distinction is that the former dealt with what is commonly referred to as drinking water and defined as “containing not more than 1,000 ppm of total dissolved solids.” The new definition expands the current definition to include any water “containing up to 10,000 ppm of total dissolved solids.”<sup>175</sup> This distinction dramatically increases the amount and type of water regulated under the proposed rule. BLM offers no scientific reason for a broader definition, rather only that there has been some confusion between the current regulation and its OOGS.<sup>176</sup> However, this broader definition of water may have unintended consequences as it could include water normally associated with the production of oil and gas that is otherwise not suitable for human consumption. Protecting this type of water has limited use and would unnecessarily increase the cost of operations. In addition, the rule would also add significant cost to well construction as a deeper area of water would need to be isolated in well construction as discussed later in the report. Therefore, these definitional changes have the unintentional, or possibly intentional, consequences of expanding BLM’s authority by adding costly and unnecessary burdens on industry without identifying any corresponding benefit.

## **(2) Chemical Disclosure: Public Information vs. Trade Secret Protection**

Proposed §§3162.3–3(g)(4) and (5) requires a listing of “all additives” and their intended purpose and the “complete chemical make-up of all materials used in the actual stimulation fluid” including the “percentage by mass” of each chemical.<sup>177</sup> BLM claims that they need this

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<sup>169</sup> Exec. Order No. 13132 § 3(a), 64 Fed. Reg. 43255 (Aug. 1999).

<sup>170</sup> 77 Fed. Reg. 27704.

<sup>171</sup> *Supra*, note 94.

<sup>172</sup> *Supra*, note 173.

<sup>173</sup> *See id.* at § 3(c).

<sup>174</sup> 77 Fed. Reg. 27709.

<sup>175</sup> *Id.*

<sup>176</sup> 77 Fed. Reg. 27695.

<sup>177</sup> 77 Fed. Reg. 27710.

information merely to maintain a record, however they do not go on to explain why the “maximum concentration” standard used by the states is not sufficient for this purposes.<sup>178</sup>

Proposed §§3162.3–3(h) and (i) cover the “protections” afforded to trade secrets. Specifically, the rule provides that after an identified trade secret is provided, BLM reviews the submission and makes the ultimate decision about whether it is in fact granted trade secret protection.<sup>179</sup> If the decision is made not to grant trade secret protection, a company is notified and has only 10 days to respond before the information is made public.<sup>180</sup> There is some question as to whether 10 days is sufficient notice to adequately respond, given the potentially devastating impact that such a public disclosure would have on a company’s research and development. BLM has not sufficiently explained how the proposed trade secret evaluation process will be developed. Consequently, leading to the type of uncertainty that may well force industry to withhold their most innovative products and procedures on BLM controlled lands.

Nonetheless, BLM argues that this section of the proposed rule is based on public input and the recommendations of SEAB. The public’s overwhelming concern, which is incorporated in SEAB’s recommendations, is based on allegations that the chemicals found in HF fluid are contaminating drinking water. There appears to be a growing public misconception that the industry does not want to disclose the chemicals it uses in the HF process and that by claiming a “trade secret” protection, they are trying to prevent the public from learning about the hazardous nature of the chemicals that are used in the process. SEAB specifically indicated that “the barrier to shield chemicals based on trade secret[s] should be set *very high*.”<sup>181</sup> (emphasis added). It also indicated that “the benefit of immediate and complete disclosure of all chemical components and compositions of fracturing fluid completely *outweighs* the restriction on company action, the cost of reporting, and *any property value of propriety chemicals*.”<sup>182</sup> (emphasis added).

However, such a statement by SEAB can have quite a chilling effect on decades of legal jurisprudence regarding trade secrets, not to mention the millions of dollars and hundreds of hours of work that go into developing intellectual property. What seems to be overlooked is that industry has a long history of working with the individual states when it comes to chemical disclosure. In fact, the vast majority of oil and gas producing states already require chemical disclosure.<sup>183</sup>

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<sup>178</sup> *Id.*

<sup>179</sup> 77 Fed. Reg. 27711.

<sup>180</sup> *Id.*

<sup>181</sup> *SEAB Interim Report, supra* note 68, at 24.

<sup>182</sup> *Id.*

<sup>183</sup> See Disclosure requirements for various States: Wyoming Chapter 3 Section 45(h) requires disclosure of additives and other options including the maximum concentration of chemicals used; 2 COLO. CODE REG § 404-1A 205A (b)(2)(A)(ix)-(xii) requires disclosure of additives and the maximum concentration of chemicals used; N.M. ADMIN. CODE § 19.15.16.19(B) limits information to that found on an MSDS, but includes additives and maximum concentration of chemicals used; MONT. ADMIN. CODE § 36.22.1015(2) requires disclosure of additive type and the chemical ingredient name, may also post on FracFocus; N.D. ADMIN. CODE § 43-02-03-27.1.1(g) requires the use of FracFocus; UTAH ADMIN. CODE R649-3-22(2) requires disclosure of the “type of material” used and encourages voluntary use of FracFocus.

To properly analyze the rationale put forth by BLM for this section of the proposed rule, one must first look at the concern over public disclosure. At the root, the rationale for public disclosure is to assure the public that the chemicals used in the HF process are not contaminating local water supplies. Therefore, any inquiry should include the types of chemicals being used and whether existing regulations and industry practice make further disclosure warranted.

### *Purpose of Chemicals Used*

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There has been much discussion about the chemical make-up of HF fluid. To begin with 98 to 99.5% of the fluid consists of only water and sand.<sup>184</sup> Therefore, understanding the chemical make-up of the remaining .05% to 2% of the fluid is important in properly evaluating the concerns about its environmental impact. Typically “between 3 and 12 additive chemicals” are used depending on the type of well, geology, water, and equipment used.<sup>185</sup> Chemicals are often added to help the process run more efficiently. Certain chemicals thicken the water into a gel thereby effectively opening fractures and carrying proppants deep into the rock unit where they remain to keep (or “prop”) the fractures open. Other chemicals may be added to reduce friction, keep rock debris suspended in the liquid, prevent corrosion of down-hole equipment, remove bacteria, and to control the pH<sup>186</sup> of the HF fluid.<sup>187</sup> In addition, some make the pump run more efficiently in addition to reducing emissions.<sup>188</sup> Therefore, the chemicals are actually used to help the overall process run more efficiently and in many cases *reduce* its environmental impact.

The technological advances in the oil and gas industry have continually responded to both market forces and environmental concerns. In fact, there are some promising new developments in “green” versions of the fluids used such as Halliburton’s CleanStim,<sup>189</sup> and others that are developing techniques that use natural gas to fracture the rock instead of water.<sup>190</sup> Therefore, there is no reason to believe that these improvements will not continue as more and more unconventional recovery procedures are perfected. Ironically, BLM’s proposed disclosure requirements would stifle the use of these “green” alternatives because companies are not likely to risk the disclosure of their most innovative products when the protection of their proprietary information is uncertain.

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<sup>184</sup> *Hydraulic Fracturing: The Process*, FRACFOCUS.ORG, <http://fracfocus.org/hydraulic-fracturing-how-it-works/hydraulic-fracturing-process> (last visited Nov. 2, 2012).

<sup>185</sup> *Chemical Use in Hydraulic Fracturing*, FRACFOCUS.ORG, <http://fracfocus.org/water-protection/drilling-usage> (last visited Nov. 2, 2012).

<sup>186</sup> The Ph level is the measurement of acidity and alkalinity.

<sup>187</sup> *Why Chemicals Are Used*, FRACFOCUS.ORG, <http://fracfocus.org/chemical-use/why-chemicals-are-used> (last visited Nov. 2, 2012).

<sup>188</sup> *Id.*

<sup>189</sup> *CleanStim® Hydraulic Fracturing Fluid System*, Halliburton.com, <http://www.halliburton.com/ps/default.aspx?pageid=4184&navid=93&AdType=JPTCSTC> (last visited Nov. 2, 2012).

<sup>190</sup> Ray Franklin, *Green Natural Gas Fracking*, HELIOZA.COM, <http://www.helioza.com/Directory/Business/Energy-and-Environment/Green-Natural-Gas-Fracking-1.php> (last visited Nov. 2, 2012).

Under the Occupational Safety and Health Act (“OSHA”), companies are already required to submit Material Safety Data Sheets (“MSDS”) for all hazardous chemical used.<sup>191</sup> A hazardous chemical is defined by whether its effects are a health hazard to humans.<sup>192</sup> Those effects include everything from skin irritation to possible carcinogenicity.<sup>193</sup> In this case, SEAB expressed concern about relying on a MSDS because it may not include chemicals that “*might* be hazardous if human exposure occurs through *environmental* pathways.”<sup>194</sup> (emphasis added). However, it cites no study or other supporting documentation for this claimed discrepancy with the existing requirement. In fact, under the definition of hazardous chemical, any adverse health effect “not otherwise classified” but identified “through the evaluation of scientific evidence” should be included on the list.<sup>195</sup> Therefore a substance should be added to the list if there is some scientific basis for believing it is a health hazard. If the purported purpose of requiring chemical disclosure is to prevent harm to the public, clearly whether the chemicals are a health hazard for those that work with it should be sufficient notice to the public about its hazardous nature.

Furthermore, under the Emergency Planning and Community Right-to-Know Act of 1986 (“EPCRA”), companies are required to report hazardous chemicals, above a certain amount, to their respective State Emergency Response Commission (“SERC”), Local Emergency Planning Committee (“LEPC”), and local fire department.<sup>196</sup> EPCRA’s stated purpose is to “help local communities protect public health, safety, and the environment from chemical hazards.”<sup>197</sup> This reporting requirement can be fulfilled by submitting the MSDS required under OSHA.<sup>198</sup> It is thus a bit disingenuous to claim, as SEAB did, that MSDS “only report chemicals that have been deemed hazardous in an *occupational* setting” (emphasis added), given that they are also used for the reporting requirements under EPCRA.<sup>199</sup> It is important to note that the use of hazardous chemicals and their effect on the environment and public health have been regulated for many years at both the federal and state level. For example, at the Federal level, OOGO No. 1 already addresses the health and welfare of the public. Specifically, under the “General Operating Requirements,” an operator must “take appropriate measures as specified in Orders and Notices . . . to protect the public from any hazardous conditions resulting from operations.”<sup>200</sup> Therefore, with the MSDS disclosure requirements regarding hazardous chemicals and the industry’s

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<sup>191</sup> 29 C.F.R. § 1910.1200 (g)(1) (Chemical manufacturers and importers shall obtain or develop a safety data sheet for each hazardous chemical they produce or import. Employers shall have a safety data sheet in the workplace for each hazardous chemical that they use).

<sup>192</sup> See 29 C.F.R. § 1910.1200 (c) definition of Hazardous Chemical.

<sup>193</sup> 29 C.F.R. § 1910.1200 (c) definition of Health Hazard.

<sup>194</sup> SEAB Interim Report, *supra* note 68, at 24.

<sup>195</sup> See 29 C.F.R. § 1910.1200 (c) definition of HNOC (Hazard not otherwise classified).

<sup>196</sup> 42 U.S.C. § 11001 et seq. (1986); EPA, *Summary of the Emergency Planning & Community Right-to-Know Act*, <http://www.epa.gov/lawsregs/laws/epcra.html> (last updated Aug. 23, 2012).

<sup>197</sup> SEAB Interim Report, *supra* note 68, at 24.

<sup>198</sup> EPA, *The Emergency Planning and Community Right-to-Know Act*, EPA 550-F-12-002 (Sept. 2012), *available at* <http://www.epa.gov/oem/docs/chem/epcra.pdf>.

<sup>199</sup> *Supra* note 197.

<sup>200</sup> OOGO No. 1, *supra* note 99, at § (IV)(d) Safety Measures.

willingness to voluntarily disclose through a nationwide database called FracFocus, BLM's rationale for additional requirements in chemical disclosure seems duplicative and unnecessary.

### *Trade Secrets*

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The next issue to address is whether there are sufficient safe-guards in place to provide the public with information about the types of chemicals used in the process; and to make sure that a company's investments in research and development are properly protected. SEAB recommended full public disclosure, including the ability to search by "chemical, well, company, and geology."<sup>201</sup> states have been incorporating public disclosure requirements in various forms in many of their recent regulatory revisions. Industry also appears willing to disclose certain information, provided certain protections are granted for trade secrets. Therefore, whether public disclosure happens is not the issue, but rather only how it is accomplished.

As previously indicated, BLM would require the disclosure of "all chemicals" in the fluid and not just those that were intentionally added.<sup>202</sup> In addition, BLM would require the disclosure of chemicals by "percentage mass."<sup>203</sup> BLM gives no explanation of why such specificity is needed in their disclosure requirements or why operators are to be held liable for "all" chemicals added and not just those "intentionally added." Moreover, noticeably absent from SEAB's recommendations are any requirements to disclose chemicals by "percentage by mass" or that an operator should be held liable for the chemical mixture of the fluids received in the HF process by third parties.<sup>204</sup> The relevance of the phraseology of "percentage by mass" and "all chemicals," while seemingly innocuous, actually have some serious implications worth addressing.

The inclusion of "all chemicals added" creates an unduly and unnecessary reporting burden on the operator. Without showing a specific need for the added requirement, an operator should be allowed to rely on the composition of the HF fluid provided. It is one thing for an operator to use the wrong chemicals or to change the requested chemicals to be used, however it is quite another thing to tell an operator that they cannot rely on the manufacturer's assertion that the chemicals provided are what they purport to be when delivered. Just as someone with a peanut allergy has to be able to rely on product labeling, so to should an operator be able to rely on labeling. The alternative is that an operator would have to test each container of fluid before each use. This time consuming process would undoubtedly be costly and overly burdensome as many of the operators are small business. In addition, BLM claims the proposed rule is similar to the regulations recently enacted in Colorado.<sup>205</sup> However, even Colorado's rule applies only to "intentionally added" chemicals and not trace amounts of other chemicals or contaminants.<sup>206</sup>

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<sup>201</sup> SEAB Interim Report, *supra* note 68, at 24.

<sup>202</sup> 77 Fed. Reg. 27698.

<sup>203</sup> 77 Fed. Reg. 27710.

<sup>204</sup> See SEAB Interim Report, *supra* note 68, at 29; SEAB Final Report, *supra* note 70, at 5.

<sup>205</sup> 77 Fed. Reg. 27698.

<sup>206</sup> COGCC Rule 205A(b)(2)(A)(xi), available at <http://cogcc.state.co.us/> (Rules/200 Series General Rules); 2 COLO. CODE REG § 404-1A 205A (b)(2)(A)(ix)-(xii).

The distinction between “percentage by mass” and the more “maximum concentration” goes to the very heart of a trade secret. As previously indicated in this report, it took years before the right formula of water, sand, and chemicals were discovered allowing the effective recovery of oil and gas from tight geological formations. BLM’s requirement of percentage by mass is somewhat analogous to requiring Coca-Cola to disclose its secret formula before being granted permission to sell its products on federal and Indian lands. In fact, more precisely it would be like telling Coca-Cola they can sell their products on federal and Indian lands but after the sale they would be required to disclose their secret formula to BLM. Then BLM would make a decision about whether to disclose it to the public with a mere 10 day notice. This analogy shows the chilling effect this rule may well have on companies investing in the development of oil and gas on federal and Indian lands.

Requiring the disclosure of the “maximum concentration” of each chemical provides the needed protection of the public’s health and access to information, while maintaining the value of the research and development that went into creating the proprietary information. Here BLM should follow the states lead and require only the disclosure of maximum concentrations of a given chemical in attempt to follow years of legal jurisprudence in protecting trade secrets.

BLM’s proposed regulation goes too far in its attempt to disclose information to the public. What seems to be lost on BLM is that if their rule goes forward as written, the specificity of the required information and the uncertainty of the evaluation process, will most assuredly affect a company’s decision to develop on federal and Indian lands. Therefore, the level of detail in requiring chemical disclosure by percentage mass and increasing the liability of operators for the chemical make-up of the fluid used, will have little benefit to the public and risks the disclosure of propriety information.

Another issue not addressed by BLM’s proposed rule is the anticipated costs associated with maintaining a database of proprietary information. In addition, there is no mention of the requisite expertise needed to determine trade secret protection and the corresponding standard of review to be used. BLM’s failure to address these issues are especially troubling given that both SEAB<sup>207</sup> and the Administration<sup>208</sup> have indicated that creating a duplicative database is unnecessary. The costs of maintaining a government run nationwide database system would be significant. As for the expertise needed to evaluate the request for trade secret status, BLM seems to assume their current staff has the capacity to handle the flood of requests that would be submitted to comply with the rule. However, given the current backlog in the permitting process, this assumption seems dubious.

In addition, there is confusion about the standard of review to be applied. Former BLM Director Bob Abbey testified in March of 2012 that the process used to determine whether a request would be granted trade secret protection, was going to be based on the showing of some “rational

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<sup>207</sup> *SEAB Interim Report, supra* note 68, at 14. (This position is consistent with SEAB’s recommendation of having a national database focused on “creating linkages among information and data that is currently collected” but not “establishing new reporting requirements.”).

<sup>208</sup> Mike Soraghan, *White House Official backs FracFocus as preferred disclosure method*, E&E NEWS PM (June 21, 2012) (Heather Zichal, Deputy Assistant to the President for Energy and Climate Issues, stated that “the administration sees no need to create a new means of disclosure at the federal level.”) [hereinafter *Soraghan*].

basis,” however nothing in the rule references this, even though he indicated the process was “already in place.”<sup>209</sup> If Director Abbey was referring to the existing Federal framework used in the previously discussed section on MSDS, the preamble and the proposed rule were silent on that point. However, under the statutory authority for disclosing chemicals on a MSDS, there are exceptions for trade secrets and therefore this might be the best option.<sup>210</sup> Here, a business may withhold the chemical name or exact percentage provided there is a valid claim of trade secret, an inclusion of the hazardous effects, and that the withheld information be made available to health professionals on a showing of good cause.<sup>211</sup> In this case, this may well be the correct standard to apply in that it would significantly reduce the reporting requirements and simultaneously protect trade secrets. Unfortunately, without indicating any guidelines in the rule or clarification of what process was “already in place,” moving forward with the rule as written would increase uncertainty not only in whether a company will choose to develop on federal or Indian lands, but also, as previously discussed, whether companies would risk using their most innovative products for fear of public disclosure.

Lastly, the public’s (and competitors’) desire to know detailed information about intellectual property, without any identified health risk, should not outweigh the long history of protecting trade secrets.<sup>212</sup> Maybe it was best articulated by renowned, jurist, legal theorist, and economist Judge Richard Posner who in 1991 wrote “[t]he future of the nation depends in no small part on the efficiency of industry, and the efficiency of industry depends in no small part on the protection of intellectual property.”<sup>213</sup> Here, BLM’s proposed regulations have limited protection for trade secrets and fail to state a rational basis for the need of such specificity in its disclosure requirement.

### *The Compromise: FracFocus*

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Before BLM decided on gathering public input on HF, and without being mandated by any new Federal regulations, there had already been a workable “compromise” on chemical disclosure created by the Ground Water Protection Council (“GWPC”) and the (“Interstate Oil and Gas Compact Commission”) IOGCC. GWPC is a nonprofit organization of state regulators whose purpose is to promote “best practices” regarding ground water protection.<sup>214</sup> The IOGCC is a multi-state government agency that “advocates for environmentally-sound ways to increase the supply of American energy.”<sup>215</sup> As a result, GWPC and IOGCC worked together to create FracFocus as a way to cooperatively compile and disseminate information on the HF process while protecting the industry’s propriety information.<sup>216</sup> Started in 2011, it currently has over 200 companies registered including full disclosure of chemicals used in their HF fluid.<sup>217</sup>

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<sup>209</sup> *S. Appropriation Hearing*, *supra* note 54, 01:34:00 of Webcast.

<sup>210</sup> 29 C.F.R. § 1910.1200 (i) Trade secrets.

<sup>211</sup> *Id.*

<sup>212</sup> *See Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 481 (1974).

<sup>213</sup> *Rockwell Graphics Sys., Inc. v. DEV Indus., Inc.*, 925 F.2d 174, 180 (7th Cir. 1991).

<sup>214</sup> *About Us*, GWPC, <http://www.gwpc.org/about-us> (last visited Nov. 2, 2012).

<sup>215</sup> *About Us*, INTERSTATE OIL AND GAS COMPACT COMMISSION [hereinafter IOGCC], <http://www.iogcc.state.ok.us/about-us> (last visited Nov. 2, 2012).

<sup>216</sup> FracFocus.org, <http://fracfocus.org/> (last visited Nov. 2, 2012).

<sup>217</sup> *Id.*

FracFocus was thus created to provide “objective information on hydraulic fracturing, the chemicals used, the purposes they serve, and the means by which groundwater is protected.”<sup>218</sup> This “compromise” should be the model that BLM uses and any proposed regulation should fit within the preexisting framework already established by it. In June of 2012, even Heather Zichal, Deputy Assistant to the President for Energy and Climate Issues, stated that “the administration sees no need to create a new means of disclosure at the federal level.”<sup>219</sup> This position is consistent with SEAB’s recommendation of “creating linkages among information and data that is currently collected” but not “establishing new reporting requirements.”<sup>220</sup>

Recognizing that FracFocus was “off to a good start,”<sup>221</sup> SEAB also focused on both the GWPC and the State Review of Oil and Natural Gas Environmental Regulations (“STRONGER”) organization.<sup>222</sup> STRONGER is a nonprofit organization focused on facilitating the cooperation of individual states in reviewing and improving environmental regulations associated with the oil and gas industry.<sup>223</sup> SEAB cites both organizations as being “exceptionally meritorious” for their efforts in improving the availability of information associated with the oil and gas industry.<sup>224</sup> In addition, SEAB recommended the “expansion of the STRONGER process” among the individual states.<sup>225</sup> **SEAB advocated that instead of creating more Federal bureaucracy, it should be understood that there are sufficient mechanisms currently in place to handle the reporting requirements and that incentives should be used to encourage more state participation.** In fact, in their Final Report, SEAB recommended appropriating \$5 million a year as a way to encourage STRONGER and GWPC to expand their current abilities and recommended that grants be used to incentivize states to voluntarily have their regulations and practices evaluated by STRONGER.<sup>226</sup>

Having the states take the lead, with financial support and incentives from the Federal government, would help prevent duplicative regulation, while at the same time acknowledging that each state has its own unique circumstances. After seeing the benefits of FracFocus, states such as Colorado, Montana, and North Dakota, have mandated the use of FracFocus as a way to compile data and give the public access to information. Unfortunately, even though BLM suggests in the preamble that they want to work with FracFocus and the Administration has indicated that it does not want duplication, BLM’s proposed rule regarding proprietary information is incompatible with FracFocus.<sup>227</sup> Specifically, FracFocus is **not** setup to handle proprietary information. However, this type of proprietary information has been effectively handled at the state level for years. As a result, BLM should use the existing disclosure

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<sup>218</sup> *About Us*, FRACFOCUS.ORG, <http://fracfocus.org/welcome> (last visited Nov. 2, 2012).

<sup>219</sup> *Soraghan*, *supra* note 213.

<sup>220</sup> *SEAB Interim Report*, *supra* note 68, at 14.

<sup>221</sup> *Id.* at 24.

<sup>222</sup> *Id.* at 14.

<sup>223</sup> *Who We Are*, STATE REVIEW OF OIL AND NATURAL GAS ENVTL. REGULATIONS [hereinafter STRONGER]

<http://www.strongerinc.org/who-we-are> (STRONGER was created in 1999 to continue the cooperation originally started in 1988 by the EPA and IOGCC. It receives grant money from both the EPA and DOE).

<sup>224</sup> *SEAB Interim Report*, *supra* note 68, at 14.

<sup>225</sup> *Id.*

<sup>226</sup> *SEAB Final Report*, *supra* note 70, at 3.

<sup>227</sup> 77 Fed. Reg. 27692; *Supra*, note 231.

requirements in FracFocus and defer to existing federal and state regulations regarding trade secret and proprietary information.

### (3) Wellbore Integrity: Unnecessary Burden vs. Industry Best Practices

The last major area of the proposed rule deals with the integrity of the wells being used for the HF process. The concern is that if a wellbore is improperly constructed, especially through water bearing geological formations, there is a possibility that either during drilling, HF, or production, it could leak and contaminate the groundwater. There are a number of sections in the proposed rule dedicated to wellbore integrity, but the two most prevalent are the required use of a Cement Bond Log (“CBL”) and a Mechanical Integrity Test (“MIT”) before each use of HF. The required use of CBLs and MITs before each HF corresponds with BLM’s removal of the distinction between routine and non-routine uses of HF. In addition, another public concern that is indirectly related to wellbore integrity is the allegation that HF causes increased seismic events.

When drilling an initial well through areas with groundwater, safe-guards are used to protect against contamination. These include using fresh water in the drilling fluid and ceasing drilling

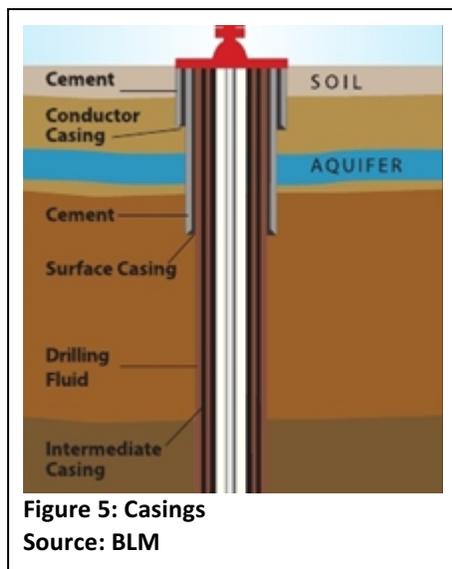


Figure 5: Casings  
Source: BLM

operations well before entering any geological formations containing hydrocarbons.<sup>228</sup> One of the keys to proper well construction and corresponding wellbore integrity is the proper cementing of each of the successive casings used to protect the surrounding geological areas. The “casings” are the steel piping used for the different cycles of drilling as illustrated in Figure 5. Cement is used to “provide zonal isolation between different formations, including the full isolation of groundwater and to provide structural support for the well.”<sup>229</sup> The “cementing” process is where an operator pumps cement down the inside of the casing and, to insure proper isolation, watches for it to return to the surface on the outside of the casing.<sup>230</sup> This procedure has been used for years to ensure that hydrocarbons do not leak into the surrounding geological formations including those aquifers that contain drinking water.

One of the first steps in proper well construction is cementing a metal “conductor” casing in place. This casing is used to “hold back the unconsolidated surface sediments and isolate shallow groundwater.”<sup>231</sup> Once a “conductor” casing is securely in place, the operator drills through the aquifer to typically a depth of a 100 ft. below the lowest point of the water source.<sup>232</sup>

<sup>228</sup> *Ground Water: Protecting Groundwater Aquifers*, ASKCHESAPEAKE.COM, <http://www.askchesapeake.com/Barnett-Shale/Water-Use/Pages/Protecting-Groundwater-Aquifers.aspx> (last visited Nov. 2, 2012).

<sup>229</sup> API, HYDRAULIC FRACTURING OPERATIONS – WELL CONSTRUCTION AND INTEGRITY GUIDELINES, API Guidance Document HF 1, at 5 (1st ed., 2009) [hereinafter *HF Operations*].

<sup>230</sup> *Id.*

<sup>231</sup> *Id.* at 10.

<sup>232</sup> *Id.* at 11.

Then a metal “surface” casing is inserted in the hole and cemented in place.<sup>233</sup> A surface casing is “designed to achieve all regulatory requirements for isolating groundwater and also to contain pressures that might occur in the subsequent drilling process.”<sup>234</sup> This process is repeated with the “intermediate” and “production” casing, each adding a layer of protection from leaking into the surrounding geological formation. Evaluating the integrity of the well and corresponding cement job can be accomplished through a number of evaluation tools.

Even though BLM has not cited any case where the failure of wellbore integrity caused groundwater contamination, it nonetheless decided to increase the regulatory scheme in this area. The stated rationale for the requirement was to “make sure water resources are protected.”<sup>235</sup> In fact, SEAB only cited one study from 2011, through Duke University (“Duke Study”), dealing with water contamination. However, even the Duke Study found no evidence that HF fluid had contaminated the groundwater, rather only that methane was found in some of the wells tested.<sup>236</sup> Specifically, the Duke Study claimed to have found higher concentrations of thermogenic methane in the samples taken from areas closer to producing wells, although acknowledging that this type of methane was also found in the water in other areas as well.<sup>237</sup> The Duke Study presumed that there were a number of reasons why this may have occurred, but seemed to focus on “older, *uncased* wells drilled and abandoned over the last century and half . . .”<sup>238</sup> (emphasis added). It is worth noting that today, all states require casings to be used and that there are existing regulations to ensure their integrity.

Moreover in late 2011, a subsequent study, published in the Oil & Gas Journal, questioned the validity of the Duke Study because of its small sampling size and lack of historical data regarding methane in the water supply as far back as the 1800s.<sup>239</sup> In addition, it found that the Duke Study had misinterpreted the data in that the origins of the thermogenic methane found were not from the Marcellus shale i.e., where the HF was occurring.<sup>240</sup> In fact, the subsequent study found that after testing over 1,700 water wells, compared to just 18 in the Duke Study, “the assertion by the Duke Study that hydraulic fracturing of the Marcellus shale is contributing thermogenic methane to local water wells and shallow regions groundwater is unsubstantiated.”<sup>241</sup> Also, as previously mentioned, the USGS recently released a study on groundwater contamination in the Northeastern U.S. and it found biogenic and not thermogenic methane in their samplings.<sup>242</sup> The questionable Duke Study may have influenced SEAB’s decision to recommend that “*several* studies be commissioned to confirm the validity of the [Duke] study . . .”<sup>243</sup> (emphasis added).

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<sup>233</sup> *Id.*

<sup>234</sup> *Id.*

<sup>235</sup> 77 Fed Reg. 27696.

<sup>236</sup> Stephen G. Osborn et al., *Methane contamination for drinking water accompanying gas-well drilling and hydraulic fracturing*, 108 PNAS 8172, (Duke Univ. 2011).

<sup>237</sup> *Id.*

<sup>238</sup> *Id.* at 8175.

<sup>239</sup> Lisa J. Molofsky et al., *Methane in Pennsylvania wells unrelated to Marcellus shale fracturing*, OIL & GAS JOURNAL 54-67 (Dec. 5, 2011).

<sup>240</sup> *Id.*

<sup>241</sup> *Id.* at the sections covering the Review of the Duke University 2011 Study and Significance of Findings.

<sup>242</sup> USGS 2012 Study, *supra* note 124.

<sup>243</sup> SEAB Interim Report, *supra* note 68, at 20.

## *Cement Bond Logs (CBLs)*

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Under proposed §3162.3-3(c)(2), a CBL (“Cement Bond Log”) is required on the surface casing of *every* well and must then be *analyzed* and *approved* by BLM.<sup>244</sup> (emphasis added). A CBL is an “acoustic device” that is lowered into a well, and through sonic technology can help determine if the cement job was properly constructed.<sup>245</sup> Analyzing a CBL requires expertise as the results can be somewhat subjective. However, SEAB recommended using “best practices,” including the use of CBLs and pressure testing, to confirm proper well construction, but stopped short of recommending that it be required on every well and before each well stimulation activity.<sup>246</sup> The most common way to determine a successful cement job is to ensure that the cement, that was pumped down the wellbore, returns to the surface on the outside of the casing. This is the standard indicator that proper isolation has occurred from the surrounding geological formation.<sup>247</sup> This is perhaps why states only require pressure testing (see MITs below)<sup>248</sup> and an operator’s observation that the cementing process was successful. Since 1988, under the OOGO No. 2, BLM has used and relied on a uniform national standard requiring pressure testing and confirmation that cement has circulated to the surface as proof of wellbore integrity.<sup>249</sup> Here, BLM provides no scientific evidence that requiring a CBL on every well is needed, especially given the subjectivity of analyzing CBLs and current industry practice.

BLM also cites API’s (American Petroleum Institute) guidance documents as a model for their requirements.<sup>250</sup> However, API’s guidance documents indicate that although the CBL is a commonly used tool in certain circumstances, “other types of cement evaluation tools are available and, depending on the situation, should be considered as a part of a comprehensive cement evaluation program.”<sup>251</sup> Furthermore, API’s submitted comments on this proposed rule indicated that “CBLs are but one of several potential tools that can be utilized to gauge various components of proper well construction and should *not* be mandated in all circumstances.”<sup>252</sup> (emphasis added).

Therefore, to ensure wellbore integrity, such a restrictive rule is unnecessary given the existing federal and state regulations and, contrary to BLM’s assertions, the requirement is not supported by industry standards.

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<sup>244</sup> 77 Fed. Reg. §3162.3-3(c).

<sup>245</sup> *HF Operations*, *supra* note 235, at 9.

<sup>246</sup> *SEAB Interim report*, *supra* note 68, at 20.

<sup>247</sup> See API, *Addendum to letter dated September 10, 2012, API comments to RIN 1004-AE26, re BLM proposed rule to regulate hydraulic fracturing on public land and Indian lands* 9 (Sept. 10, 2012) (on file with Committee).

<sup>248</sup> Pressure testing is otherwise referred to as Mechanical Integrity Tests (MITs).

<sup>249</sup> See OOGO No. 2, *supra* note 100.

<sup>250</sup> 77 Fed. Reg. 27693.

<sup>251</sup> *HF Operations*, *supra* note 235, at 10.

<sup>252</sup> *Supra*, note 253.

### *Mechanical Integrity Tests (MITs)*

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A Mechanical Integrity Test (“MIT”) or “pressure test” is a well-established industry practice that is widely used in well construction and is already required by existing federal and state regulations. A MIT, is used to ensure that there are no leaks in the casings of the well and that all other mechanical aspects of the well function in a way that is protective of both the environment and the equipment used by an operator.<sup>253</sup> For these reasons, operators determine the pressure levels before construction, so as to use the proper techniques established by industry standards.

However, under §3162.3–3(d), BLM requires a MIT at the *end* of construction and before *every* HF procedure.<sup>254</sup> (emphasis added). The major issues with these requirements are the lack of flexibility in the timing of its completion and the increased frequency of its use. While MITs are typically done at the completion of the well, some operators use them during construction for a variety of different reasons. In addition, while BLM requires a MIT be completed before *every* use of HF, state regulations typically require it only once during or at the completion of well construction and then every five years thereafter. Here, BLM has provided no evidence to suggest that MITs are needed before each use of HF, but nonetheless require this costly and burdensome procedure.

In addition, some of the specific requirements listed in the proposed rule are already required under existing Federal regulation. For example, under §3162.3–3(d)(3), BLM requires that when a pressure test is done, the selected pressure needs to be maintained for “30 minutes with no more than [a] 10 percent pressure loss.”<sup>255</sup> However, under OOSG No. 2, there already is a requirement that if during testing, the “pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.”<sup>256</sup> Furthermore, under §3162.3–3(d)(2), there is a requirement that if a “fracturing string” (fracture casing) is used in well stimulation, the casing will be placed “100 feet below the cement top,” presumably of the next sized casing, ensuring proper protection.<sup>257</sup> However, again under OOSG No. 2, there is already a requirement for “a minimum of 100 feet of overlap between a string of casing and the next larger casing....”<sup>258</sup>

The requirements under this section of the proposed rule are yet another example of a duplicative, costly, and burdensome regulation that addresses an unidentified problem with the status quo.

### *Routine use of HF*

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As previously referenced, under §§ 3162.3–2(a) and (b), BLM proposes to remove the distinction between the “routine” and “non-routine” use of HF because the terms are not defined and

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<sup>253</sup> *HF Operations, supra* note 235, at 22.

<sup>254</sup> 77 Fed. Reg. 27710.

<sup>255</sup> 77 Fed. Reg. 27697.

<sup>256</sup> *OOGO No. 2, supra* note 100, at § III(B)(1)(b).

<sup>257</sup> 77 Fed. Reg. 27697.

<sup>258</sup> *OOGO No. 2, supra* note 100 at § III(B)(1)(b).

therefore confusing and difficult to apply.<sup>259</sup> However, removing the distinction is not without consequence as the “non-routine” use of the HF process requires an operator to submit a new proposal before each use of the process while the “routine” use does not.<sup>260</sup> Instead of simply defining what each term means and acknowledging the routine use of HF, BLM chose the more burdensome and costly option. For BLM, the cost is the additional time it would take to review the increased number of proposals. For industry, the cost is the added time it would take to complete, submit, and wait for BLM’s approval. The costs of this definitional change may well be substantial, yet BLM failed to quantitatively identify the benefits, and explain why removing the distinction and requiring a more burdensome outcome is the best solution to the identified problem.

### *Increased Seismicity*

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Another concern cited is the allegation that HF causes increased seismic events. A seismic event is measured by seismographs and is categorized by its magnitude on what has come to be known as the Richter scale.<sup>261</sup> According to the USGS, seismic events with a magnitude of less than two are not felt on the surface and cause no danger to people.<sup>262</sup> It also estimates that annually several *million* seismic events occur naturally throughout the world.<sup>263</sup> However, USGS does indicate that fluid injection,<sup>264</sup> including: waste water associated with oil and gas development and production<sup>265</sup>; liquefied carbon dioxide through the CCS (Carbon Capture and Sequestration) process; and geothermal energy production, can in fact cause seismic events that could be dangerous to humans.<sup>266</sup> These risks can be mitigated by proper planning and a thorough understanding of the geological formation that the fluid is injected.<sup>267</sup>

While some correlation is asserted between injecting large volumes of fluids into poorly planned deep disposal wells near existing fault structures, there is no evidence to establish a link between HF and seismic events that present a risk to the public.<sup>268</sup> Here, the correlation between HF and seismic events is well understood because of the extensive monitoring done “to understand and

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<sup>259</sup> 77 Fed. Reg. 27694.

<sup>260</sup> 43 C.F.R. § 3162.3–2(a) and (b).

<sup>261</sup> USGS, *The Richter Magnitude Scale*, <http://earthquake.usgs.gov/learn/topics/richter.php> (last modified July 24, 2012).

<sup>262</sup> *See id.*

<sup>263</sup> USGS, *Earthquake Facts and Statistics*, <http://earthquake.usgs.gov/earthquakes/eqarchives/year/eqstats.php> (last visited Nov. 2, 2012).

<sup>264</sup> Under the Safe Drinking Water Act (“SDWA”), EPA and some select States regulate the re-injection of fluids underground through the Underground Injection Control (“UIC”) program, *available at* <http://water.epa.gov/type/groundwater/uic/index.cfm> (last updated Sept. 12, 2012).

<sup>265</sup> “Of more than 150,000 Class II injection wells in the United States, roughly 40,000 are waste fluid disposal wells for oil and gas operations. Only a small fraction of these disposal wells have induced earthquakes that are large enough to be of concern to the public.” USGS, *Do all wastewater disposal wells induce earthquakes?*, <http://www.usgs.gov/faq/index.php?action=artikel&cat=125&id=1830&artlang=en> (last updated Sept. 28, 2012).

<sup>266</sup> USGS, *Hydraulic Fracturing-The State of the Science*, [http://www.usgs.gov/solutions/2012\\_june8.htm](http://www.usgs.gov/solutions/2012_june8.htm) (Power Point by Bill Leath, Senior Sci. Advisor for Earthquake and Geological Hazards, USGS (June 8, 2012)) (last visited Nov. 2, 2012).

<sup>267</sup> *Id.*

<sup>268</sup> Triggered Seismicity, *supra* note 85.

optimize field development of the resource, well completions, and stage treatments.”<sup>269</sup> Furthermore, the National Research Council, which is part of the National Academies, looked into whether, among other things, HF caused significant seismic events. In June of 2012, they released their report *Induced Seismicity Potential in Energy Technologies*.<sup>270</sup> The report found that HF in the oil and gas industry **“does not pose a high risk for inducing felt seismic events.”**<sup>271</sup> In addition, they were only able to identify one incident where HF caused a small seismic event felt on the surface; however it was considered an anomaly.<sup>272</sup> As previously indicated, HF has been used worldwide on over 2 million wells and not one instance has been shown to cause a seismic event harmful to people.<sup>273</sup>

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<sup>269</sup> API factsheet, “The Facts About Hydraulic Fracturing and Seismic Activity”, *available at* [http://www.api.org/~media/Files/Policy/Hydraulic\\_Fracturing/Facts-HF-and-Seismic-Activity.pdf](http://www.api.org/~media/Files/Policy/Hydraulic_Fracturing/Facts-HF-and-Seismic-Activity.pdf)

<sup>270</sup> NAT’L ACADEMIES: NAT’L RES. COUNCIL STUDY, *INDUCED SEISMICITY POTENTIAL IN ENERGY TECHNOLOGIES* (June 15, 2012), *available at* <http://dels.nas.edu/Report/Induced-Seismicity-Potential-Energy-Technologies/13355> [hereinafter *Induced Seismicity*].

<sup>271</sup> *Id.*

<sup>272</sup> *Id.*

<sup>273</sup> *Id.*

## IV. BLM UNDERESTIMATES COSTS AND OVERESTIMATES BENEFITS

BLM has put forth an economic analysis that addresses the costs and benefits of their proposed rule. In conducting the analysis, BLM compared the aspects of their preferred alternative, i.e., the proposed rule, against the status quo and one other option. The focus of the analysis was on two aspects of the rule: 1) the effects of wellbore integrity and 2) the liners for the pits used to temporarily store fluids associated with the oil and gas industry. The disclosure of chemicals was listed as a benefit, but not included in the economic analysis because BLM considered it too difficult to quantify in monetary terms.<sup>274</sup>

BLM claims the proposed rule would “remove much of the risk associated with potential wellbore integrity issues and unlined pits.”<sup>275</sup> However, BLM does not put forth any reasonable alternative in their analysis. Unfortunately, the lack of any reasonable alternative does not leave any middle ground such as deferring to the regulatory scheme already in place in the states or modifying existing OOGOs.

Furthermore, BLM makes certain questionable assumptions in calculating both the costs and benefits. For the costs, it assumes that any administrative or operational delay would not add to the cost of the rule. Given the current length of delay with the status quo, BLM is not being realistic with this assumption. Another assumption is that the number of wells will increase on federal and Indian lands.<sup>276</sup> However, it appears that BLM’s assumption is relying on data from the increased development on state-owned and private lands and not on federal and Indian lands. In fact, development on federal and Indian lands has decreased by 14%.<sup>277</sup> The decrease is based in no small part on the increased costs associated with more burdensome regulation and delays. As former BLM Director Abbey indicated at a Senate hearing in March of 2012, “it is a lot cheaper to drill on private land than on public land.”<sup>278</sup> He went on to say that the rationale for where to drill was an economic decision based on factors such as increased regulation.<sup>279</sup>

As for the benefits, BLM assumes that a certain number of HF stimulations may result in groundwater contamination. BLM argues that their proposed rule would prevent the contamination and therefore the costs associated with remediating the risk of contamination should be considered a benefit. Aside from this questionable calculation, the fact that there is no scientific evidence to support this assumption makes any calculated benefits for it suspect and arguably overstated.

However, as discussed throughout the report, the vast majority of the proposed regulation dealing with wellbore integrity and storage of fluids are already covered by existing Federal and state regulations. Therefore, the benefits associated with the proposed rule are overestimated

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<sup>274</sup> 77 Fed. Reg. 27700, (The disclosure of chemicals was listed as a benefit, but not included in the economic analysis because it was difficult to quantify in monetary terms.).

<sup>275</sup> BLM, WELL STIMULATION PROPOSED RULE: ECONOMIC ANALYSIS AND INITIAL REGULATORY FLEXIBILITY ANALYSIS, at 2 [hereinafter *BLM’s Economic Analysis*].

<sup>276</sup> *Id.* at 51-52; 77 Fed. Reg. 27699.

<sup>277</sup> *S. Appropriations Hearing*, *supra* note 54, 53:49 of Webcast.

<sup>278</sup> *Id.* at 01:10:43 of Webcast.

<sup>279</sup> *Id.* at 01:11:20 of Webcast.

when compared to the status quo. As for the costs associated with the proposed rule, BLM vastly underestimated the costs associated with both the administrative and operational delays. One of the consequences of underestimating the costs associated with the proposed rule is that BLM will be able to avoid a more thorough analysis required under various statutes and Executive Orders.

### **A. BLM's Cost Analysis**

In assessing the costs associated with the proposed rule, it is helpful to divide them generally into operational and administrative costs.

In analyzing administrative costs, we first look to BLM's projected increase in employment as a result of the rule. The projected increase in employment was identified in BLM's "employment impacts analysis."<sup>280</sup> In their analysis, BLM anticipates that the industry will have to add 15-18 jobs to comply with the proposed regulation in each of the next three years.<sup>281</sup> BLM appears to infer that the rule will promote economic growth and job creation. BLM claims that this is a "standalone analysis" that should not be "included in the estimation of benefits and costs."<sup>282</sup> However, it seems a bit disingenuous to claim the added jobs as a "net gain" when conducting their analysis, but then not include it as a cost for the industry.

If the projected need for 15-18 jobs was *not* taken into consideration in the cost/benefit analysis, then it should be assumed that BLM did not include these additional employees in their estimates of the administrative costs. An analysis of the proposed rule by John Dunham & Associates ("JDA") indicated that BLM calculated the administrative costs as only \$750 per well.<sup>283</sup> When calculated per year, that amounts to an administrative burden of nearly \$3.8 million.<sup>284</sup> However, JDA completed a subsequent and more thorough evaluation of the administrative costs in September of 2012.<sup>285</sup> In this analysis, JDA identified 30 additional tasks that would be required by the proposed rule and determined that the industry would have to hire 160 people to comply with the rule.<sup>286</sup> Under the revised analysis, the administrative costs increased to \$3,550 per well.<sup>287</sup> Calculated as an overall administrative burden, the number increased to nearly \$18 million in total cost.<sup>288</sup> Furthermore, JDA's analysis only included the thirteen states represented

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<sup>280</sup> 77 Fed. Reg. 27703.

<sup>281</sup> *Id.*; see also *BLM's Economic Analysis*, *supra* note 276, at 51.

<sup>282</sup> *Id.* at note 281.

<sup>283</sup> See Memorandum from John Dunham, Managing Partner, John Dunham & Associates, to Western Energy Alliance, *re: Business Impact of Proposed Changes to Well Completion Regulation*, at 10 Table 5 (June 11, 2012) (\$751 was the sum of the estimated cost for both BLM and the industry) [hereinafter *JDA Impact of Proposed Changes Report*]; John Dunham & Associates (JDA) is a leading New York City-based economic consulting firm specializing in the economics of fast moving issues. In this capacity, JDA reviewed and analyzed BLM's proposed rule and submitted multiple reports.

<sup>284</sup> *Id.* at 9 Table 4.

<sup>285</sup> In this analysis JDA did not take for grant the numbers put forth by BLM as they had in their June 11, 2012 report.

<sup>286</sup> Memorandum from John Dunham, Managing Partner, John Dunham & Associates, to Kathleen Sgamma, Western Energy Alliance, *re: Administrative Impact of Proposed Changes to Well Completion Regulation*, at 1 (Sept. 7, 2012) [hereinafter *JDA Administrative Impact Report*].

<sup>287</sup> *Id.*

<sup>288</sup> *Id.*

by the Western Energy Alliance and therefore the actual costs would be much higher as some of the major oil and gas producing states were not included.<sup>289</sup>

Another administrative cost dismissed by BLM is the increased delay the proposed rule will cause. BLM acknowledges there will be an increased burden in meeting the additional reporting requirements, but claims the burden will not cause any further delay.<sup>290</sup> The Energy Policy Act of 2005 amended the MLA to require BLM to respond to an APD in 30 days.<sup>291</sup> However, given that an average APD takes 298 days to complete, it is impractical to assume that this added burden would not further delay the process at various stages.<sup>292</sup> In fact, the costs of those estimated delays have been calculated at almost \$19,000 per well or a total cost of almost \$95 million.<sup>293</sup> Therefore, the total cost of administrative delays and the additional employees needed to handle the added burden amounts to over \$110 million.<sup>294</sup>

In addition to the administrative costs, there are operational costs that BLM has failed to include in their analysis. There is agreement that the cost of running a CBL and a MIT is about \$10,000 a piece per well.<sup>295</sup> This results in a total cost of just over \$44 million.<sup>296</sup> However, in their analysis BLM does not take into account the time delays associated with mandating these procedures or the delay in waiting for BLM to review and approve the submitted information. To accurately calculate the total cost, the analysis should include the time that it takes to actually run the test, evaluate the data, and wait for the approval from BLM. When these factors are taken into consideration, the anticipate cost increases to \$145,665 per well or a total cost of over \$700 million.<sup>297</sup>

Another operational cost that is not factored into BLM's analysis is the effect of changing the definition of water in the proposed rule. Under the current definition of "fresh" water, surface casing is needed to isolate groundwater to an average depth of about 2,000 feet.<sup>298</sup> By expanding the definition to all "usable" water, the amount of water to be isolated would consequently increase. In fact, estimates are that the amount of surface casing need to isolate the newly defined water would almost double.<sup>299</sup> According to JDA, this will cost an average of just over \$85,000 a well, with a total cost of almost \$440 million.

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<sup>289</sup> The West Energy Alliance covers the following thirteen States: Arizona, Colorado, Idaho, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming; The analysis did not cover the States of Texas, Oklahoma, Alaska, California, and others.

<sup>290</sup> 77 Fed. Reg. 2770.

<sup>291</sup> Public Law 109-58, 119 Stat.726, (Aug. 8, 2005).

<sup>292</sup> *Cappiello, supra* note 53.

<sup>293</sup> *JDA Impact of Proposed Changes Report, supra* note 290, at 9 Table 4 (Combination of the "initial Delay Cost" (\$56,404,007) and "Pre Completion Delay Costs" (\$38,326,948) for a total cost of (\$94,730,935)).

<sup>294</sup> *Id.* at 9 Table 4; *JDA Administrative Impact Report, supra* note 293 (Combination of the "initial Delay Cost" (\$56,404,007); "Pre Completion Delay Costs" (\$38,326,948); and from JDA's September 7 Report, Administrative Impact, an "Administrative Cost" of (\$17, 971,074) for a total cost of \$112,702,029).

<sup>295</sup> *BLM's Economic Analysis, supra* note 282, at 36 fn. 16, 37 Table 3.

<sup>296</sup> *JDA Impact of Proposed Changes Report, supra* note 290, at 9.

<sup>297</sup> *Id.*

<sup>298</sup> *Id.* at 7.

<sup>299</sup> *Id.*

In their final cost analysis, BLM claims that the combined costs will be just over \$11,000 per well with a total cost of under \$60 million.<sup>300</sup> However, a combination of the administrative and operational costs shown above are calculated to just over \$250,000 per well with a total cost of over \$1.2 billion.<sup>301</sup> The disparity between these two estimates is stark and clearly requires a more thorough evaluation.

### ***B. BLM's Benefits Analysis***

In calculating the benefits, BLM first assessed the costs associated with the remediation of water contamination in a low and high risk scenario. BLM then assumed that without the proposed rule, water contamination may in fact happen.<sup>302</sup> BLM then found that the proposed rule has a benefit that is equal to the cost of remediation.<sup>303</sup> BLM indicated that to remediate an aquifer it would cost \$42,500 under their low risk scenario and a \$1 million under their high risk scenario.<sup>304</sup>

However, BLM's calculated benefits appear to disregard the fact that the vast majority of the proposed changes are already required under existing federal and state law. Furthermore, BLM does not identify any supporting evidence to the proposition that HF leads to groundwater contamination. In fact, a recently released GAO report, along with a number of other studies, indicates that there is no causal link between HF and groundwater contamination.<sup>305</sup> Specifically, the GAO report indicated that in meeting with representatives from a number of oil and gas producing states, they all indicated that "based on state investigations, the hydraulic fracturing process has not been identified as a cause of groundwater contamination...."<sup>306</sup>

Moreover, although BLM does not quantify them, it lists a number of additional benefits including increased public, government, and organizational knowledge that will assist in future decisions about HF.<sup>307</sup> While disseminating data collected to the public and the scientific community may have some minor benefits, BLM's assertion that the public disclosure of chemicals will encourage the use of safer chemicals is dubious at best and fails to properly calculate the costs associated with the risk of revealing trade secrets under BLM's new disclosure requirements.<sup>308</sup>

In sum, BLM fails to properly calculate the administrative and operational costs, and its calculated benefits rely on the false premise that HF will cause water contamination. **This**

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<sup>300</sup> *BLM's Economic Analysis*, *supra* note 282, at 59; in comparison to *JDA Impact of Proposed Changes Report*, *supra* note 296, at 9.

<sup>301</sup> *JDA Impact of Proposed Changes Report*, *supra* note 290, at 1.

<sup>302</sup> 77 Fed. Reg. 27700.

<sup>303</sup> *Id.*

<sup>304</sup> *BLM's Economic Analysis*, *supra* note 282, at 37 Table 3.

<sup>305</sup> U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-12-732, INFORMATION ON SHALE RESOURCES, DEVELOPMENT, AND ENVIRONMENTAL AND PUBLIC HEALTH RISKS (Sept. 2012).

<sup>306</sup> *Id.* at 49 (States contacted include: Arkansas, Colorado, Louisiana, North Dakota, Ohio, Pennsylvania, and Texas).

<sup>307</sup> *See* 77 Fed. Reg. 27700.

<sup>308</sup> *See id.*; Also see earlier discussion regarding "Chemical Disclosure: Public Information vs. Trader Secret Protection"

**consequently leads to a rule with an underestimated cost and an overestimated benefit for the proposed rule.** While there may be questions regarding the assumptions made for projecting costs and benefits in the future, what is abundantly clear is that given the incredible differences in attributable costs, and correspondingly questionable benefits, a more in-depth economic analysis is warranted. In addition, possibly the most significant aspect of the total cost projected by BLM is that by keeping that number under \$100 million or claiming that it does not materially and adversely affect the economy, competition, jobs, the environment, public health, or state, local or Tribal governments, BLM is preventing a more thorough review of their proposed rule.<sup>309</sup> In fact, one of those more thorough analyses would be that required under NEPA.

### ***C. NEPA Analysis***

The National Environmental Policy Act (“NEPA”) requires federal agencies to assess the environmental impact of any proposed Federal action.<sup>310</sup> Environmental effects “include, among others, impacts on social, cultural, and economic resources, as well as natural resources.”<sup>311</sup> In most instances an Environmental Assessment (“EA”) is completed to determine whether a more thorough analysis is warranted. In completing an EA, the Federal agency either issues a Finding of No Significant Impact (“FONSI”) or begins the process of completing a more thorough Environmental Impact Statement (“EIS”). If it is determined that the action would be significant, a draft EIS, including a statement about the purpose, is created and put forth for public comment. In the final EIS, the agency must address the public comments received and must objectively assess all reasonable alternatives to the proposed action.

Here BLM issued a FONSI claiming that their proposed rule would not have a significant effect on the “human environment.”<sup>312</sup> However, given the gross disparity in the costs attributable to this rule by BLM’s analysis compared to that by JDA, and that a NEPA analysis might be required in conjunction with the approval process in the proposed rule, BLM should reassess its findings and begin the process of drafting an EIS.

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<sup>309</sup> 58 Fed. Reg. 51735, Exec. Order 12866, § 6(a)(3)(B)(i) & (ii). (E.O. 12866 requires a much more thorough analysis if the proposed action exceeds \$100 million or materially and adversely affect the economy, competition, jobs, the environment, public health, or state, local or Tribal governments.).

<sup>310</sup> National Environmental Policy Act (NEPA) of 1969, *as amended*, 42 U.S.C. §§ 4321-4347.

<sup>311</sup> COUNCIL OF ENVTL. QUALITY [HEREINAFTER CEQ], A CITIZEN’S GUIDE TO THE NEPA (Dec. 2007), *available at* <http://www.whitehouse.gov/administration/eop/ceq/foia/readingroom>.

<sup>312</sup> 77 Fed. Reg. at 27708.

## V. ECONOMIC EFFECTS ON INDIAN LANDS AND SMALL BUSINESSES

Although BLM has repeatedly cited their ongoing “consultation” with the Tribes, there is no mention of the economic effect that this rule will have on Indian lands. BLM claims that consolidating the leasing of federal and Indian lands under one set of rules is one of the rationales for its proposed rule. However, even though it may arguably be convenient for BLM to consolidate all their leases in this manner, this rationale does not take into account the different regions of the country and their geological diversity. Moreover, it does not take into account that individual Tribes feel that they are best able to regulate their own land.

In assessing the economics of the proposed rule, BLM cites the royalties associated with oil and gas development on federal and Indian lands. This revenue is essential to the survival and economic vitality of many of the Tribes that receive it. Any action, intentional or otherwise, that decreases this revenue will have a devastating effect on jobs and the economy of thousands of people. In addition to the Tribal impact, this proposed rule will have a disproportional effect on small businesses. As acknowledged by BLM, the vast majority of operators in the oil and gas industry are small businesses.<sup>313</sup> Small businesses are vitally important to the U.S. economy. Ensuring their stability in a volatile economy should be the focal point of any energy policy. Correspondingly, any increased economic burden on small businesses will have disastrous consequences on the economy as a whole.

### A. Indian Lands

The Federal Government holds in trust title to more than 56 million acres of Indian land for the benefit of Tribes and individual Indians.<sup>314</sup> Certain statutes provide a basis for the Secretary of the Interior to review and approve leases of Indian trust land subject to the consent of the beneficial owner. Under the IMLA,<sup>315</sup> the Secretary has regulatory authority over mineral leasing on Indian lands.<sup>316</sup> Indian lands hold a significant amount hydrocarbons that help Tribes create jobs, spur economic development, and help improve education, health, and infrastructure. Fortunately, several Tribes with high levels of unemployment and poverty also have reservations holding large, commercial quantities of oil and gas resources whose development would create jobs for Tribal members and supply long-term revenue streams to Tribal governments.

The revenue generated from Indian lands can be a significant portion of Tribes’ individual budgets. BLM indicated that in FY 2011, the production of natural resources under Tribal leases generated \$433 million in royalties.<sup>317</sup> All of the royalties from these leases went to the Tribes or individual lease holders.<sup>318</sup> However, as with Federal lands, there is an added regulatory burden

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<sup>313</sup> 77 Fed. Reg. 27703.

<sup>314</sup> For consistency purposes with the applicable Federal statutes, the term “Indians” is used to refer to all Native Americans.

<sup>315</sup> Indian Mineral Leasing Act of 1938, 25 U.S.C. § 396 et seq. (There are statutorily created exceptions to the Secretary’s authority).

<sup>316</sup> Indian lands, as used in this report, include lands owned by various tribes and individual land owners.

<sup>317</sup> 77 Fed. Reg. 27699 (The Indian onshore leases produced: “... almost 20 million barrels of oil, 255 million Mcf of natural gas, [and] 142 million gallons of natural gas liquids.”).

<sup>318</sup> *Id.*

for developing and producing mineral resources on Indian lands. The fear is that the increased costs associated with the proposed rule will make development cost-prohibitive for the operators leasing Indian trust land. Thus, BLM's proposed rule will have the perverse effect of denying Indian people the financial rewards from the production of oil resources under their own reservations. This is why many of the Tribes are concerned that they were left out of BLM's rulemaking process and that the proposed rule could greatly impede the Tribes' ability to improve lives for their members.

In promulgating any new rule affecting Indian lands, BLM is required to engage in consultation with the Tribes about any proposed regulation.<sup>319</sup> In January of 2012, BLM claims that it held "formal government-to-government consultation sessions" with Tribal communities. However, such sessions were perfunctory and for show; merely informing the Tribes what BLM planned on doing is not sufficient "consultation."<sup>320</sup> Multiple Tribes, with significant interests in the development of oil and gas resources, have expressed their frustration in the lack of consultation received.<sup>321</sup> In a letter sent to Secretary Salazar in March of 2012, the National Congress of American Indians<sup>322</sup> indicated that:

Tribal Leaders were not engaged in a meaningful discussion, instead they were informed of what the BLM plans to do. A draft of the proposed regulations was not available at all of the meetings, and when the draft regulations were available, they were handed out at the end of the meeting with no time to review or ask questions.<sup>323</sup>

In addition, one Tribal leader testified:

Unfortunately, the BLM choose to develop a rule without Tribal participation, in apparent response to issues outside Indian Country, and chose to forward the proposed rule toward final adoption without regard to [Secretarial] Order No. 3317.<sup>324</sup>

Given the timing, it appears that BLM had already decided on their proposed rule and the "meetings" with the Tribes were merely pro forma.

There is also a more fundamental issue that is crucially important to the Tribes. While the Secretary has certain responsibilities for managing trust lands, Tribes believe that they should be

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<sup>319</sup> Dep't of the Interior, SECRETARIAL ORDER 3317 (Dec., 2011), *available at* <http://www.doi.gov/tribes/upload/SO-3317-Tribal-Consultation-Policy.pdf>.

<sup>320</sup> *Id.*

<sup>321</sup> *Bureau of Land Management's Hydraulic Fracturing Rule's Impacts on Indian Tribal Energy Development: Hearing Before the Subcomm. on Indian and Alaskan Native Affairs of the H. Comm. on Natural Res.*, 112th Cong. (Apr. 19, 2012) (Resolution #ECWS-12-005 submitted by NCAI Board Member Scott Russell) [hereinafter *Natural Res. BLM's HF Hearing*].

<sup>322</sup> National Congress of American Indians is the "largest and most representative American Indian and Alaska Native" organization. More information is available at <http://www.ncai.org/>.

<sup>323</sup> Letter from the Nat'l Congress of American Indians to Ken Salazar, Sec'y of the Interior, & Wilma Lewis, Asst. Sec'y for Land & Minerals (Mar. 7, 2012) (on file with Committee).

<sup>324</sup> *Natural Res. BLM'S HF Hearing*, *supra* note 328 (Testimony of T.J. Show, Chairman, Blackfeet Nation).

able to decide how best to develop their land. The argument is that irrespective of what BLM does on Federal lands, Indian lands should be treated separately. This view is a good example of why consultation should not be pro forma, but rather a meaningful discussion between the Department and recognized Tribes.

The Tribes are also concerned that the proposed rule will hinder development on Indian lands because of the costs associated with the increased regulatory burden. Federal regulation already puts the Tribes at a disadvantage compared to the state-owned and private lands. The practical effect of increased regulation will make the Tribes unable to compete with states and private landowners. As previously indicated, the vast majority of operators are small businesses. The fear is that the added costs will force these small businesses to move their operations to state-owned and private lands. Given the intermixing of Indian lands and state-owned and private lands in a checker board pattern on a number of western Indian reservations, BLM's rule creates a financial incentive for an operator to move just a few feet from a trust land parcel to drill on non-Indian land where the rule has no force or effect. This would result in production from the same pool of oil lying under the Tribe's reservation without any benefit going to the Tribes. This would have a crippling effect on future development on Indian lands.

As with the individual states, continued development on Indian lands is vital to creating jobs. Unfortunately, the indirect result of the proposed rule will mean fewer jobs on Indian lands. Given that unemployment estimates within Tribes far exceed those of their adjacent states, the rule will disproportionately affect Tribal communities throughout the country. Just recently this was discussed at a Congressional hearing where the Chairman of the Subcommittee on Indian and Alaskan Native Affairs stated the following:

A number of Indian reservations suffer jobless rates ranging from 50 to 80% ... New jobs – especially year-round, high wage jobs available in the oil and gas industry – can and will have a dramatic effect on reducing unemployment and poverty on Indian reservations.<sup>325</sup>

While estimating the true economic impact on the effected Indian lands may be difficult, it would be illustrative to look at the estimated loss of revenues and economic impact to various states that have large tracts of federal and Indian lands. In FY 2011, the combined royalties from the production of BLM's Federal onshore leases was approximately \$2.7 billion.<sup>326</sup> Half of those royalties went to the individual states where the natural resources were produced. In addition, a recently released IHS report estimates that annual government revenues from the development and production of unconventional hydrocarbon resources will reach almost \$62 billion in 2012 and will double to \$124 billion by 2035.<sup>327</sup>

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<sup>325</sup> *Natural Res. BLM's HF Hearing, supra* note 328 (statement of Chairman Don Young, Subcomm. on Indian and Alaskan Native Affairs).

<sup>326</sup> 77 Fed. Reg. 27699 (The Federal onshore leases produced: "... 98 million barrels of oil, 2.97 billion Mcf of natural gas, [and] 2.55 billion gallons of natural gas liquids.").

<sup>327</sup> IHS, AMERICA'S NEW ENERGY FUTURE: THE UNCONVENTIONAL OIL AND GAS REVOLUTION AND THE U.S. ECONOMY 33 (Oct. 2012).

In Wyoming, where federal and Indian lands make up more than 50% of the state, the proposed regulation will have a devastating impact including costs of over \$770 million.<sup>328</sup> It is projected that of the 25,000 jobs associated with the oil and gas industry, nearly 1,000 jobs would be eliminated.<sup>329</sup> The economic activities associated with the industry would be reduced by over \$630 million and the state would forgo over \$980 million in future revenue.<sup>330</sup> In New Mexico, federal and Indian lands make up over 45% of the land and estimates for the costs of this rule are over \$168 million, including hundreds of jobs, \$90 million in loss economic activity, and a loss of future tax revenues of more than \$125 million.<sup>331</sup> In Utah, federal and Indian lands make up over 70% of the land and estimates for costs are over \$155 million, again including hundreds of jobs, over \$150 million in loss economic activity, and a loss of future tax revenues of more than \$17 million.<sup>332</sup>

Overall, in the 11 Western States that comprise most of BLM's jurisdiction, excluding Alaska, the cost of this rule will exceed \$1 billion.<sup>333</sup> What is therefore clear is that these regulations will disproportionately harm Tribes and states with large tracts of Federal land. The added costs associated with this proposed regulation will drive investment onto state-owned and private lands. Finally, by promulgating rules that have such a devastating economic impact on Tribes, the Federal government will be neglecting their trust responsibility to the Tribes.

## ***B. Small Businesses***

Small businesses are without question the backbone of the U.S. economy. Advocating their growth and stability is paramount to the economic recovery of the current recession in the U.S. However, the prevailing public perception of the oil and gas industry is that it is dominated by "big oil," a pejorative term used to describe some of the large international oil and gas companies from the U.S. What is often left out of that discussion is that in a global economy large energy companies are necessary to compete against government-owned oil and gas entities.<sup>334</sup> However, in the development and production of oil and gas in the U.S., the vast majority of oil and gas producers are smaller "independent" companies. In fact, the average independent oil and gas producer are considered small businesses with an average of just over 10 employees.<sup>335</sup> More importantly, independent producers drill 95% of the wells and produce 68% of domestic oil and 82% of domestic natural gas in the U.S.<sup>336</sup> Therefore, the increased economic burden in the proposed rule will have a disproportionate effect on small businesses and may have disastrous consequences to the economy as a whole.

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<sup>328</sup> JOHN DUNHAM & ASSOCS., ANALYSIS OF BUREAU OF LAND MANAGEMENT PROPOSED RULE IMPACTS ON STATE AND FEDERAL REVENUES 18 (Sept. 4, 2012) [hereinafter *JDA Impacts on Revenues Report*].

<sup>329</sup> *Id.*

<sup>330</sup> *Id.*

<sup>331</sup> *Id.*

<sup>332</sup> *Id.*

<sup>333</sup> *Id.*

<sup>334</sup> A list of the top 50 oil and gas companies showing that the dominance of state-owned companies can be found at [http://www.petrostrategies.org/Links/Worlds\\_Largest\\_Oil\\_and\\_Gas\\_Companies\\_Sites.htm](http://www.petrostrategies.org/Links/Worlds_Largest_Oil_and_Gas_Companies_Sites.htm).

<sup>335</sup> See INDEP. PETROLEUM ASS'N OF AMERICA (IPAA), PROFILE OF INDEPENDENT PRODUCERS 2009, *available at* <http://ipaa.org/reports/faq/docs/2008ProfileOfIndependentProducers.pdf> (IPAA is a trade association that represents thousands of independent oil and gas producers).

<sup>336</sup> IPAA Access Direct, <http://www.ipaa.org/ipaa-access-direct/> (last visited Nov. 8, 2012).

Realizing the importance of small businesses, Congress and the Executive branch have enacted statutes and orders that attempt to protect them from overly burdensome and costly regulations.<sup>337</sup> Just as with a NEPA analysis previously discussed, the concern by many, including the Office of Advocacy of the Small Business Administration, is that BLM's flawed economic analysis has the practical effect of avoiding these protective statutes and EOs.<sup>338</sup> The key to their applicability is whether the proposed rule would be considered a "significant" government action.

Based on their flawed economic analysis, BLM indicated that the regulation was *not* "economically significant." However, after submitting their assessment to the Office of Management and Budget ("OMB"), it was determined that the proposed action was in fact a significant regulatory action.<sup>339</sup> Therefore, under EO 12866, BLM was required to provide a detailed description of the need for the regulatory action and how it will be met as well as an assessment of the costs and benefits of the regulatory action.<sup>340</sup> After completing an initial cost benefit analysis, BLM reasserted that the proposed rule was not economically significant thereby forgoing any in-depth analysis including that required under the Regulatory Flexibility Act ("RFA") and EO 12866 §6(a)(3)(C).<sup>341</sup>

The RFA, amended by the Small Business Regulatory Enforcement Fairness Act ("SBREFA"), was enacted to protect small businesses in the rule making process.<sup>342</sup> Under the RFA, BLM would be required to conduct a "regulatory flexibility analysis."<sup>343</sup> This analysis would require that BLM posit less burdensome alternatives to their proposed rule. However, BLM has failed to complete the analysis because it determined that, although small businesses represent the vast majority of those operating in the development of the oil and gas industry, the impact of the rule would not have a significant economic impact.<sup>344</sup> In opposition to BLM's findings, the Office of Advocacy advised BLM to reevaluate its conclusions and conduct a more thorough analysis.<sup>345</sup> Specifically, it requested BLM to draft an initial regulatory flexibility analysis because BLM's current analysis underestimated the costs to small businesses.<sup>346</sup>

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<sup>337</sup> See, e.g., Regulatory Flexibility Act, Paperwork Reduction Act and the Unfunded Mandates Reform Act., Exec. Order No. 12866, Exec. Order No. 13563, and others.

<sup>338</sup> The Office of Advocacy is an independent office within SBA.

<sup>339</sup> See *BLM's Economic Analysis*, *supra* note 282, at 2 (OMB determined that the rule was "significant.").

<sup>340</sup> See 58 Fed. Reg. 51735; Exec. Order No. 12866 § 6(a)((3)(B)(i) & (ii).

<sup>341</sup> 5 U.S.C. § 601 et seq.; Exec. Order No. 12866, § 6(a)(3)(C).

<sup>342</sup> 5 U.S.C. § 601 et seq. (IRA) and amended in various sections by Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996) (SBREFA).

<sup>343</sup> 5 U.S.C. §§ 603 – 605 (Under the RFA, BLM must also submit a copy of the initial regulatory flexibility analysis to the Chief Counsel for the Advocacy of the Small Business Administration. In addition, BLM must provide a final regulatory flexibility analysis *unless* BLM asserts that the rule would not have "a significant economic impact on a substantial number of small entities.").

<sup>344</sup> *BLM's Economic Analysis*, *supra* note 282, at 5 & 52.

<sup>345</sup> See September 10, 2012 letter from the Office of Advocacy to BLM regarding the proposed rule, *available at* <http://www.sba.gov/advocacy/816/296051>.

<sup>346</sup> *Id.*

Under EO 12866, if it is determined that the proposed Federal action would have an effect on the economy in excess of \$100 million or “materially and adversely affect the economy, competition, jobs, the environment, public health, or state, local or Tribal governments,” further analysis would be required.<sup>347</sup> The significance of this finding is that it would require BLM to quantify the costs and benefits and include an assessment of “potentially effective and reasonably feasible alternatives to the planned regulations.”<sup>348</sup> Therefore, instead of comparing the proposed rule to the status quo as is the current case, BLM would have to put forth reasonable alternatives and explain why a less burdensome and costly alternative wouldn’t address the specified rationale for the preferred alternative i.e., the proposed rule.

Whether through the NEPA analysis, the RFA requirements, or the standards in EO 12866, it is clear that this Federal action is “significant.” When compared to the economic analysis previously discussed, it appears that the proposed rule will have costs well in excess of \$100 million and will undoubtedly materially and adversely affect multiple aspects of the economy. Therefore, BLM must suspend their current rulemaking effort and conduct a much more thorough analysis of this rule.

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<sup>347</sup> Exec. Order No. 12866, 58 Fed. Reg. 51735 (Sept. 30, 1003).

<sup>348</sup> *Id.* at § 6(a)(3)(C).

## VI. RATIONALE FOR A MORE THOROUGH ANALYSIS

BLM should be focusing their attention on facilitating the leasing of the nation's federal and Indian lands. This would allow the Tribes to benefit from the energy boom the rest of the country is experiencing and increase revenues and economic prosperity in the individual states. Instead, by focusing on unnecessary and overly burdensome regulation, BLM's actions will slow the projected growth in the energy sector and further hinder a recovery to the U.S. economy. Therefore, given the significant impact this rule will have on the U.S. economy, a more thorough economic analysis is required. A rationale for this conclusion is summarized as follows:

### **1. An Impediment to Energy Independence**

The technological advancement that coupled HF with horizontal drilling has the potential to fundamentally change the geopolitical landscape of the world. The combined use of these two technologies has led to the current energy boom in the U.S. The potential ramifications for the U.S. are a continued decrease in reliance on the Middle East to support its energy needs, and a trajectory toward energy self-sufficiency. In addition, policies that foster self-sufficiency and North American energy independence can rejuvenate the struggling U.S. economy. Therefore, regulation in this area is too important to push forward without a thorough analysis of both its intended and unintended consequences on energy production.

### **2. Not Based in Science or Fact**

Although "public concern" is an important factor in determining Federal action, what is equally important is to identify and substantiate the concern through fact and scientific evidence. The two prevailing concerns are groundwater contamination and increased seismic activity. However, HF has been safely done for over 60 years, completed over a million times, and was found not to cause groundwater contamination by the EPA, or increased seismicity by USGS. Nonetheless, BLM continues to maintain that the public concern warrants this rule. Given that BLM has indicated that public concern is one of their main rationales for promulgating this rule and that disseminating information to the public was listed as a major challenge for them in a recently released GAO report, it would behoove BLM, DOI, and this Administration to focus their attention on disseminating the correct information on the safety record of HF. This is especially important given documentaries like *Gasland* and other anticipated Hollywood movies that contribute to the misinformation regarding HF. However, by not disseminating the correct information, BLM encourages the same unsubstantiated public concern that it uses as a rationale for the rule. This circular rationale creates the backdrop for a poorly drafted rule and bad public policy. One just hopes that when proposing a regulation as significant as this one, politics are set aside and Federal action is not duplicative, arbitrary or capricious. Instead, it should be based on substantiated fact and scientific evidence.

### **3. Inconsistent with SEAB's Recommendations and Premature Given EPA's 2014 Study**

At the request of the current Administration, SEAB created a Subcommittee to review alleged concerns with HF and reported their findings and recommendations. Those findings lists "four major areas of concern: 1) Possible pollution of drinking water from methane and chemicals used in [hydraulic] fracturing; 2) Air pollution; 3) Community disruption during shale gas production; and 4) Cumulative adverse impacts that intensive shale production can have on communities and

ecosystems.”<sup>349</sup> The first major area of concern, involving the risk of HF causing water contamination, is currently being reviewed by the EPA through their “Hydraulic Fracturing Study Plan.”<sup>350</sup> The EPA is due to release a status report on their “Hydraulic Fracturing Study Plan” by the end of 2012 and a final report by 2014. Unless BLM can substantiate the need to push through a regulation without a thorough review, it would be more than premature to finalize this action before the release of this report, it would be careless.<sup>351</sup>

The last two areas of concern deal with “community disruption” and “cumulative adverse impacts ... on communities and ecosystems.”<sup>352</sup> As for these last two major areas of concern, SEAB specifically identified DOI as being “unique in having tools at its disposal that could be used to address cumulative and community impacts.”<sup>353</sup> However, instead of working on these two areas of concern, DOI and BLM decided to focus on flowback water; chemical disclosure; and wellbore integrity. By doing this, DOI and BLM seemingly ignored areas that they were “uniquely qualified to handle.”

Furthermore, SEAB identified wellbore integrity and flowback as areas of concern, but indicated that their recommendations in these areas should be implemented primarily by the states.<sup>354</sup> SEAB also indicated that their recommendations be implemented only “to the extent that such actions have not already been undertaken by particular companies and regulatory agencies ...”<sup>355</sup> BLM seems to have completely disregarded this recommendation and pushed forward with their proposed rule anyway.

As for the proposed regulations dealing with the chemical disclosure, SEAB recommended not creating a nationwide database system for chemical disclosure as it was duplicative and too costly. However, by requiring information that no other states require, BLM is in effect mandating a new database system that offers less protection to proprietary information. By doing so, BLM is showing that it does not fundamentally understand how imperative proprietary information is to the development of natural resources. Instead this requirement appears to be a dilatory tactic in the development of oil and gas on federal and Indian lands.

#### **4. Duplicative of Existing Federal Regulation**

After analyzing BLM’s proposed rule in comparison to existing Federal regulations, it is clear that moving forward with the rule as written would be duplicative and arguably contrary to Executive Order 12866.<sup>356</sup> This point was recently emphasized by Deputy Assistant to the President for Energy and Climate Issues Heather Zichal when discussing duplicative regulations in the HF process. Specifically, she stated that the administration is “not looking to duplicate or

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<sup>349</sup> SEAB Interim Report, *supra* note 68, at 8.

<sup>350</sup> EPA’s HF Study Plan, *supra* note 82.

<sup>351</sup> *Id.*

<sup>352</sup> SEAB Interim Report, *supra* note 68, at 8.

<sup>353</sup> SEAB Final Report, *supra* note 70, at 8.

<sup>354</sup> *Id.* at 7.

<sup>355</sup> SEAB Interim Report, *supra* note 68, at 2.

<sup>356</sup> Exec. Order No. 12866, 58 Fed. Reg. 51735 (Sept. 1993), which states: “Each agency shall avoid regulations that are inconsistent, incompatible, or duplicative with its other regulations or those of other Federal agencies.” (Reaffirmed by Exec. Order No. 13563 (Jan 2011), 76 Fed. Reg. 3821).

create another platform that provides a bunch of uncertainty....<sup>357</sup> This seems especially relevant given that the development of oil and gas on federal and Indian lands must already comply with Onshore Oil and Gas Orders (“OOGS”), NEPA, other statutes, and Executive Orders.<sup>358</sup>

An analysis of the existing regulatory scheme should have begun with a complete review of the OOGOs. BLM has historically used these OOGOs to implement and supplement regulations. Currently there are seven OOGOs that BLM uses to regulate the oil and gas industry on federal and Indian lands. As previously discussed, many aspects of BLM’s proposed rule are already covered under existing OOGOs with some having been updated in 2007. For those items not specifically mentioned in an OOGO, the framework is clearly there to make amendments to the OOGSs as has been done for years. Given the need to refrain from duplicative regulations, BLM needs to conduct a more thorough analysis of the existing Federal regulatory framework, before moving forward on this proposed rule. If a review had adequately been done, it would have discovered that, under OOGO No. 1, BLM already has the authority to grant or deny an APD on a wide range of issues covered by this proposed rule.<sup>359</sup> In addition, OOGO No. 2 requires BLM’s approval for any casing and cementing programs. The submitted “programs” in an APD must explain how an operator would construct the well and what safeguards would be used to ensure “wellbore integrity” and the protection of groundwater.<sup>360</sup> Also, OOGO No. 7 sets the standards for handling waste water and the requirements for the pits to be used.<sup>361</sup> Instead of using the existing regulations, BLM has embarked on a multi-million dollar rulemaking effort with little to no benefit to the public.

### ***5. Dismissive of the States’ Superior Position to Regulate***

The individual states have been regulating the oil and gas industry for decades and as technology has changed over the years, so have the state regulations. Their ability to assess and respond to developments in the oil and gas industry has placed them in a far better position than the Federal government to devise and implement regulation. In addition to thoroughly knowing their geology, hydrology, and topography, states also develop best practices having for years collectively worked with the IOGCC<sup>362</sup> and STRONGER.<sup>363</sup>

States constantly examine the costs and benefits to activities occurring within their geographical area and are therefore best able to understand their surface and subsurface make-up. Unlike having a one-size fits all approach to the entire country, states are able to quickly respond to

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<sup>357</sup> Mike Soraghan’s article *White House Official backs FracFocus as preferred disclosure method* E&E News PM (June 21, 2012).

<sup>358</sup> *OOGO No. 1, supra* note 99, at 10334. “The BLM cannot approve an APD or Master Development Plan until the requirements of certain other laws and regulations including NEPA, the National Historic Preservation Act, and the Endangered Species Act have been met.”

<sup>359</sup> *OOGO No. 1, supra* note 99.

<sup>360</sup> *See OOGO No. 2, supra* note 100, at (III)(B).

<sup>361</sup> 58 Fed. Reg. 47354, OOGO No. 7 (I)(B) Purpose, 58 Fed. Reg. 172 (Oct. 1993).

<sup>362</sup> The IOGCC is a multi-state government agency that “advocates for environmentally-sound ways to increase the supply of American energy.”, *see* ABOUT US, <http://www.iogcc.state.ok.us/about-us> (last visited Nov. 8, 2012).

<sup>363</sup> STRONGER was formed with funding in part from EPA, the DOE, and API. It continually reviews state regulations and in 2010 published Guidelines for HF, *available at* <http://www.strongerinc.org/who-we-are>.

local issues as they arise. This has allowed states to take the lead in regulation and make changes when necessary, and at a pace that coincides with the technological advances in the industry. In fact, according to the Congressional Research Service, States revise their rules so frequently that trends, instead of the current status, are used to categorize them.<sup>364</sup> Even Acting Director Mike Pool, with almost 35 years of experience, acknowledged as recently as May of 2012, that the states have taken the lead in regulating HF.<sup>365</sup> Moreover, even the Administration seems to be arguing that the rationale for the proposed regulation is not that the states haven't been doing a good job.<sup>366</sup>

Instead of adding more regulatory confusion, BLM should consider revising and increasing the number of MOUs it has with the various states. In fact, BLM seeks to include FLPMA in the "authorities section" of their management of oil and gas regulations.<sup>367</sup> FLPMA includes authorizing language to permit cooperation between the Federal government and the states to enforce state law as well as manage public lands.<sup>368</sup> Therefore, through these MOUs, BLM can defer to the states on most regulatory matters and seek their assistance in inspecting and enforcing a joint regulatory scheme that protects the environment and allows our nations resources to be developed.

The need for cooperation with the states was made abundantly clear in a recent GAO report. In the report, Congress requested a review of the federal and state environmental and public health requirements for the development of unconventional oil and gas.<sup>369</sup> In addition, GAO was asked to identify challenges in regulating the development at both the federal and state level.<sup>370</sup> The biggest challenge for the state and federal agencies was not an environmental concern, but rather the retention of qualified employees and educating the public.<sup>371</sup> EPA, on the other hand, indicated the biggest challenge was their lack of authority and difficulty in conducting inspections and implementing enforcement because of the "dispersed nature of the industry and the rapid pace of development."<sup>372</sup> Addressing the EPA's concern first, instead of granting more authority to the EPA, maybe we should consider deferring these responsibilities to the individual states for reasons previously mentioned. In fact, this idea of the states controlling this aspect of the oil and gas industry is not new, rather it was a widely held belief in the Clinton Administration. In September of 1995, under Al Gore's Reinvesting in Government II proposal,

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<sup>364</sup> BRANDON J. MURRILL & ADAM VAN, CONG. RESEARCH SERV., R42461, HYDRAULIC FRACTURING: CHEMICAL DISCLOSURE REQUIREMENTS 4 (2012).

<sup>365</sup> See Pool OGR Statement, *supra* note 87.

<sup>366</sup> 09.16.12 Energy Policy Debate Part 3, PLATTS ENERGY WEEK TV, <http://plattsenergyweektv.com/news/article/221581/293/091612-Energy-Policy-Debate-Part-3-> (last visited Nov. 8, 2012).

<sup>367</sup> 77 Fed. Reg. 27695.

<sup>368</sup> See 43 U.S.C. §§ 1733(d), (b).

<sup>369</sup> GAO-12-874, *supra* note 74.

<sup>370</sup> *Id.*

<sup>371</sup> *Id.* at 77-81. (Note: As for the retention of qualified employees, maybe instead of focusing on a rule that will inevitably decrease development on Federal and Indian lands and its corresponding tax revenues and seek the necessary authority to pay bonuses for increased development and efficiencies through the agency. As for better educating the public, maybe the federal agencies should spend more time getting the correct information to the public as opposed to using their unfounded fears as an excuse to implement more burdensome regulation.).

<sup>372</sup> *Id.*

a draft report was made available for review and comment that proposed that BLM “transfer oil and gas Inspection and Enforcement (I&E) and Environmental Compliance responsibilities that are currently administered by the BLM to individual States and Indian Tribes.”<sup>373</sup> It is worth noting that Acting Director Pool was the contact person for this proposal.<sup>374</sup>

### ***6. An Expansion of Authority and Usurpation of States’ Water Rights***

The removal of the distinction between the definition of a “routine” and “non-routine” HF stimulation will require a proposal be submitted to BLM every time HF is to be used. This added burden will increase the time and costs to both BLM and the Industry. Having to submit a proposal each time the HF process is to be used is unnecessary and costly. In removing the distinction, BLM has disregarded the added costs and has not identified any quantitative benefit for the change.

BLM also expanded the definition of water to include “usable” water as opposed to the more limited definition of “drinking” water. In expanding this authority, BLM has not identified any corresponding benefit, especially given that “usable” water is not suitable for human consumption. However, the unintentional, or possibly intentional, consequence of this expanded definition will add costs and unnecessary burdens to industry. This becomes abundantly clear when calculating the increased costs for the extra casings that will be necessary to properly isolate “useable” water under this expanded definition.

Furthermore, BLM’s focus on water related issues is outside their Congressionally mandated authority. In proposing to be more “protective” of water use issues, BLM appears to be usurping what has traditionally been the role of the individual states. Congress did not grant BLM the unfettered authority to regulate the waters within the boundaries of the individual states. In fact, it specially prohibited interference with established state jurisdiction of water rights. By taking a more active role in water use issues, BLM’s proposed rule has the potential to have “substantial direct effects on the States” and thus requires a Federalism Assessment and consultation with the individual states. In addition, BLM has not been given the express authority through authorizing legislation to regulate HF. In fact, the Energy Policy Act of 2005 expressly removed the authority to regulate HF from the EPA in response to a federal judge’s ruling to the contrary. Instead, as had been occurring for years before the judge’s ruling, the states were tasked with regulating HF. Therefore, it is highly unlikely that Congress intended to confer that authority to BLM.

### ***7. Based on Flawed Economic Analysis***

BLM has put forth an economic analysis that addresses the costs and benefits of their proposed rule. In conducting the analysis, BLM compared the aspects of their proposed rule against the status quo. The focus of the analysis was on the effects of wellbore integrity and liners for the pits used to temporarily store flowback water. Chemical disclosure was listed as a benefit, but not included in the economic analysis.

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<sup>373</sup> Notice of Draft Report and Comment Period, 60 Fed. Reg. 47587 (Sept. 1995).

<sup>374</sup> *Id.*

In calculating the benefits, BLM assessed the costs associated with the remediation of water contamination. BLM then assumed that without the proposed rule, water contamination may in fact occur. BLM then presumed that the proposed rule has a benefit equal to the cost of remediation. The assumptions relied on for their economic analysis are misplaced. First, it assumes that groundwater contamination from HF will at some point occur. As has been discussed throughout this report, this assumption is not substantiated by the evidence. Second, it presumes that the existing federal and state regulations do not protect the environment from groundwater contamination. However, after a thorough review of existing federal and state regulations as discussed in this report, this presumption is also erroneous. Therefore, the benefits associated with the proposed rule are overestimated.

As for calculating the costs associated with the proposed rule, BLM vastly underestimated the costs associated with both the operational and administrative delays. It is clear from the culmination of multiple reports from JDA that the costs associated with this rule have been vastly understated. On a per well basis, BLM claims the cost will be just over \$11,000 with a total cost of almost \$60 million.<sup>375</sup> However, JDA indicated the actual costs show a per well average cost of just over \$250,000 with a total cost of over \$1.2 billion.<sup>376</sup> In addition, possibly the most significant aspect of the total cost projected by BLM is that by keeping that number under \$100 million or claiming that it does not materially and adversely affect the economy, competition, jobs, the environment, public health, or state, local or Tribal governments, BLM is preventing a more thorough review of their proposed rule.<sup>377</sup>

What is abundantly clear is that given the incredible differences in attributable costs, and questionable benefits, a more in-depth economic analysis is warranted before moving forward with this rule.

## **8. Devastating to Indian Lands and Small Businesses**

Overall, in the 11 Western States that comprise most of BLM's jurisdiction, excluding Alaska, the cost of this rule will exceed \$1 billion.<sup>378</sup> Although BLM has repeatedly cited their ongoing "consultation" with the Tribes, there is no mention of the economic effect that this rule will have on Indian lands. However, the revenue generated from Indian lands can be a significant portion of Tribes' individual budgets. In FY 2011, Tribes received \$433 million in royalties from oil and gas development on Indian lands. In addition, as with Federal lands, there is an added regulatory burden for developing and producing mineral resources on Indian lands. As previously indicated, former BLM Director Bob Abbey acknowledge that it was more expensive to develop on federal and Indian lands. The fear is that the increased the cost associated with the BLM's proposed rule will make development cost-prohibitive for the operators leasing Indian trust land and drive investment onto state-owned and private lands. Therefore, any regulation that infringes on the development of these natural resources will have a devastating economic impact

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<sup>375</sup> *BLM's Economic Analysis*, *supra* note 282, at 59; Compared to *JDA Impact of Proposed Changes Report*, *supra* note 290, at Table 4, p. 9.

<sup>376</sup> *JDA Impact of Proposed Changes Report*, *supra* note 290, at 1. (In JDA's analysis, which includes additional factors, their estimate is that the rule to cost between \$1.499 and \$1.615 billion).

<sup>377</sup> 58 Fed. Reg. 51735; Exec. Order No. 12866, §6(a)(3)(B)(i) & (ii).

<sup>378</sup> See *JDA Impacts on Revenue Report*, *supra* 336, at 18.

on the Tribal communities. BLM's proposed rule will have the perverse effect of denying Indian people the financial rewards from the production of oil and gas resources under their own reservations and will cause the Federal government to neglect their trust responsibility to the Tribes.

In addition to the Tribal impact, this proposed rule will have a disproportionate effect on small businesses. As previously indicated, the vast majority of operators in the oil and gas industry are small businesses. Small businesses are vitally important to the U.S. economy. Ensuring their stability in a volatile economy should be the focal point of any energy policy. Correspondingly, any increased economic burden may have disastrous consequences to the economy as a whole. However, BLM's flawed economic analysis has prevented many of the Executive Orders and statutes, designed to safe-guard small businesses, from taking effect. Without a more thorough analysis of this proposed rule, thousands of small businesses will be devastated by this proposed rule.

What is therefore clear is that these regulations will disproportionately harm Tribes, states with large tracts of federal land, and small businesses.

## VII. CONCLUSION

BLM's Congressional mandate is to manage, not stifle, the development and production of natural resources on federal and Indian lands. BLM's decision to regulate hydraulic fracturing is not expressly authorized by any statute and has historically been effectively handled at the state level.

Given the potential impacts on the economic and geopolitical future of the U.S., the rationale for moving forward with this rule is troubling. When an Administration claims to champion scientific integrity, but proposes a rule to address a problem not substantiated by scientific evidence, the contradiction is puzzling. When the Administration requests DOE to create a Subcommittee to look into an alleged problem, one would expect the recommendations to be followed. When statutes and Executive Orders are written to prevent duplicative, costly, and overburdensome regulations, it seems counter-intuitive to propose one with these attributes. When expanding an agency's authority without Congressional approval while simultaneously infringing on states' rights, Congressional review is clearly warranted. When a proposed regulation is based on a false premise and faulty economic numbers, reevaluation is required. When a proposed rule has devastating effects on Tribal communities and small businesses throughout the country, action must be taken.

Maybe the most telling aspect of the lack of thoroughness in BLM's rule-making was that less than a year ago, in November of 2011, former EPA Administrator Lisa Jackson made the following statement:

[I]f we see something along the way, I've said, we're not going to keep that hidden, especially if it has a potential impact on the environment or health, but we have no data right now that lead us to believe one way or the other that there needs to be specific Federal regulation of the fracking process.<sup>379</sup>

In sum, based on the following reasons put forth in this report, BLM should immediately suspend preparations to finalize this rule and begin a more thorough analysis of the alleged problem and possible alternatives to the proposed rule. To the extent that BLM decides to push forward this proposed rule, Congress will undoubtedly need to respond under their constitutionally mandated oversight authority.

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<sup>379</sup> energyNOW!, *The Mix: EPA Administrator Jackson* (Nov. 20, 2011)

<http://www.energynow.com/video/2011/11/18/mix-epa-administrator-lisa-jackson#> (Lisa Jackson statement at 00:58 of broadcast).