

# Hydraulic Fracking: The MGA's Guide

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**Impact of Hydraulic Fracking on Insurance Exposures  
Emerging Risks and How Wholesalers can Best Address Them**

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## **Introduction**

Hydraulic Fracturing has become a popular topic in the news over the past few years. In fact, it has contributed to the surplus in available energy all across the world which has lowered gasoline prices domestically. However hydraulic fracturing, or fracking, has been met with criticism by environmental advocates and communities negatively affected by this form of energy extraction. The insurance industry has also been hesitant to embrace this surging enterprise. This paper conveys what exposures, risk management tactics, available coverages, and potential risks are faced by MGA's regarding this form of energy production.

While fracking is in the news and proceeding to gain popularity in society today, fracking is actually a lot older than one might expect. Energy companies began fracking in 1949 for commercial use. By 1952 "the first reported hydraulic fracturing in Michigan occurs on a well in Elk Township. Since then, approximately 12,000 wells have used hydraulic fracturing in the state" ("closup fracking timeline," 2013). Columbia University reported that approximately 45,000 fracking wells were being utilized as of 2014 in the United States. Internationally, however, fracking wells are increasing in popularity because they provide a resource that many countries did not believe would be profitable. That being said, fracking is an international enterprise that countries are relying on to become energy independent. This presents a unique opportunity for the wholesale insurance market to provide coverage for such a booming industry.

### **Where in the world is the fracking insurance market?**

As previously stated, Fracking is an international venture. The Council of Foreign Relations (CFR) is an independent, nonpartisan membership organization and publisher that focuses on helping individuals understand foreign and domestic policy. The CFR cited the 2013 Advanced Resources International (ARI) analysis of global shale formations when conveying the likely opportunities fracking presents across the globe. The council stated that other than the United States "revealed that more than half of the world's shale oil resources are located in Russia, China, Argentina, and Libya. Some countries see their shale resources as potential geopolitical game changers: Poland, Turkey, and Ukraine in particular harbor hopes of reducing their dependence on conventional gas from Russia and Iran" (McBride & Aly Sergio, 2015). While fracking exploration may be slowing presently, large energy corporations recognize the opportunity shale offers and it is only a matter of time before extraction of shale oil begins again.

## **Exposures and Remedies**

### **Seismic Activity**

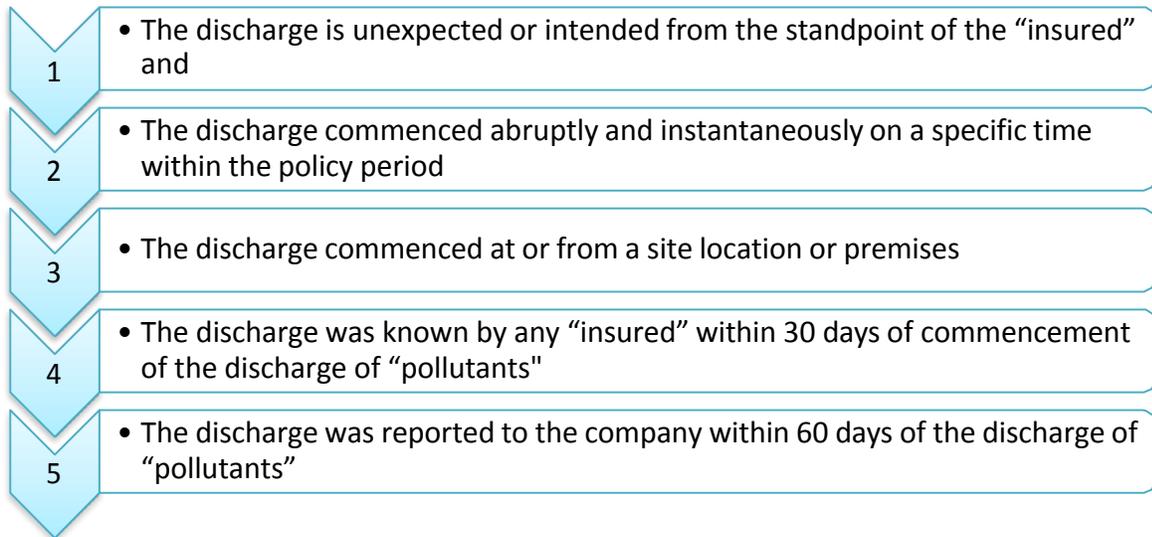
In recent years it has appeared that fracking has led to seismic activities in the areas near fracking wells. A correlation between seismic activity and fracking definitely exists, but causation between the two events has been much more difficult to prove. Alan M. Parizo, former owner FGW Insurance Services, is now an E&O auditor as well as a faculty member for the Accredited Customer Service Representative and Agribusiness and Farm Insurance Specialist professional designation. Parizo presented a webinar for IRMI members regarding the exposures associated with fracking and how they can be insured. Parizo conveyed that "a team of scientists with the US Geological Survey has found evidence 'directly linking' the uptick in Colorado and New Mexico earthquakes since 2001 to wastewater injection, a process widely used in controversial technique of hydraulic fracturing..." (Parizo, 2015). Parizo did continue to state, however, that "the study does note that despite the strong and direct link, the findings are not definitive" (Parizo, 2015). While direct causation has not been proven, the peril still exists.

Parizo enlightened International Risk Management Institute (IRMI) members on just how brokers should approach clients when exposed to this risk. “For eligible prospects” he begins, “the peril of earthquake is currently available, either by endorsement to a commercial property policy, within a difference-in-conditions policy, or available as a stand-alone policy such as the California Earth Authority” (Parizo, 2015). If the insured were to purchase the commercial property policy then it would be important to attach an endorsement similar to a CP 15 06, Off-Premises Interruption of Business—Vehicles and Mobile Equipment. This would broaden coverage for the insured that relies so heavily on its mobility of equipment. Fracking involves a lot of transportation of both equipment and materials. These coverages will help protect clients against the earthquake exposure, but what about the other inhabitants of the land and could a claim be brought against a client for fracking on leased land?

The Pennsylvania Insurance Department has taken steps to ensure their citizens are covered by this peril. As published by the Insurance Journal “The Pennsylvania Insurance Department issued a notice telling insurance companies that earthquake endorsements to homeowners insurance policies in Pennsylvania cannot exclude coverage for earthquakes that may be caused by ‘human activity’ such as fracking” (Insurance Journal). If the insured is drilling in a state other than Pennsylvania then the insured may be vulnerable to liability claims. It is common practice for fracking companies to request a lease for another’s land to mine for oil. However, many banks will not tolerate this use of the property if it is still under mortgage. Furthermore some major insurance companies will not cover losses associated with fracking. In 2012, Nationwide Mutual Insurance Group announced it would not cover events that may have been caused by fracking. The Huffington Post reported the memo released by Nationwide which states “‘prohibited risks’ apply to landowners who lease land for shale gas drilling and contractors involved in fracking operations, including those who haul water to and from drill sites; pipe and lumber haulers; and operators of bulldozers, dump trucks and other vehicles used in drill site preparation” (Esch, 2012). This is a substantial gap in coverage for homeowners. If in the event the homeowner’s land were to become contaminated then they would likely turn to legal counsel to pursue legal action against the fracking leaser.

### **Liability and Pollution**

The CGL policy would be the ideal coverage for this scenario. However, pollution is specifically excluded from the CGL policy. As Parizo cited in his webinar, an Energy Pollution Liability Extension Endorsement may provide some additional coverage for the insured as long as five conditions can be met. They are as follows:



Unfortunately, this policy does not cover what is most likely to happen such as leaks that could occur over a long period of time. As was the case in Pennsylvania, residents experienced high levels of methane in their home water supply. Families could light their sink water on fire which could lead to house fires (Villanova). This was due to a leak that allowed methane to leak over a longer period of time without any warning to the drillers or families in the community. Fortunately, Parizo provides some solutions as to how MGAs can ensure that their clients are covered for these perils. Parizo explains that “partnering with a good environmental underwriter with risk management as a prerequisite for risk transfer” and that the underwriter “should be able to offer loss control, risk mitigation, and claims management service as well as a remediation and liability policy.” A necessary risk management technique would be having a third party investigate the integrity of the well before the MGA binds the possible client. This could greatly decrease the risk of methane and other chemicals escaping the well which is what contaminates the surrounding ground water. With current oil prices so low, fracking companies are turning to wells that were previously drilled to save costs by attempting to extract oil that may have been left over. Parizo does go on to suggest that MGAs should recommend Operators extra expense (OEE) policies. OEE policies provide coverage for:

1. Expenses incurred for controlling the out-of-control well
2. Redrilling and restoring the well
3. Liability from above ground pollution

Parizo recognizes that the third condition does not apply perfectly to the fracking process. He states that “Because the OEE policies provide coverage only on a named peril basis and then only for aboveground pollution, the scope of insurance protection for fracking cases...is somewhat narrow” (Parizo, 2015). Through research, a carrier was located that does offer coverage for gradual pollution by gas or oil. Last revised in October 2014, a description of Chubb’s Gradual Pollution Policy states that “while most other pollution policies only provide protection for sudden and accidental events, Chubb’s pollution and umbrella policies offer options that include events that are gradual in nature as well as those that are sudden and accidental” (Understanding pollution insurance differences, 2014). This may be the ideal

coverage for an MGA to offer to a potential fracking client. Some key qualities of the policy include gradual coverage back to the original policy inception/retroactive date; defend gradual-type allegations like air emissions or water-well pollution, and offers low minimum premiums of \$10,000 for gradual pollution. This minimum premium can vary by state however.

### Transportation and Business Interruption

A huge exposure fracking company's face is the consistent transportation of materials used in the fracking process. Large 18 wheelers are always transporting chemicals, sand, water, and large equipment to and from the drilling site. John Murawskia, a reporter for the *News & Observer*, a local newspaper in North Carolina, reported that "More than 1,600 trucks could haul sand, water and equipment for a single fracking operation in North Carolina... according to the state Department of Transportation" (Murawski, 2015). He conveys that the Department of Transportation estimated that this heavy traffic could lead to more than \$11 million in necessary road work and repairs. This instance demonstrates the impact of one fracking location on a community. This is not an isolated incident however.

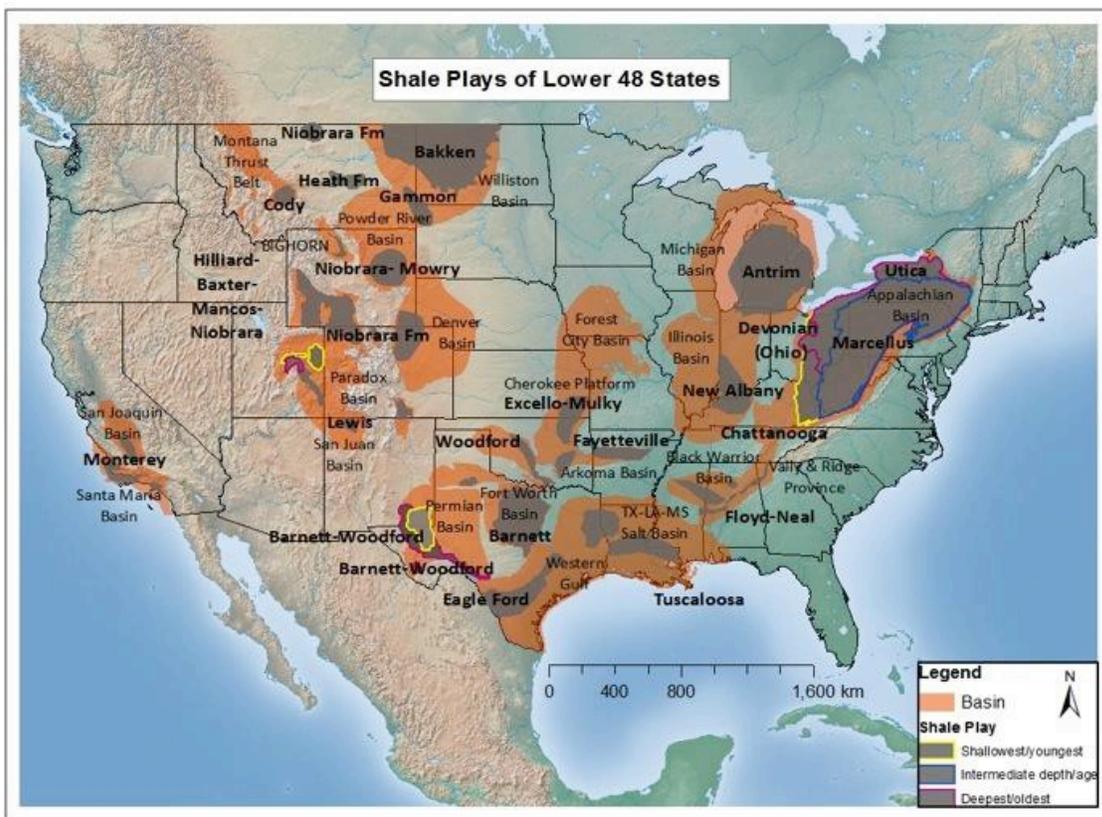


Figure A.

As one could see on the map above shale plays exist all across the country. Texas, especially, has become a hub for fracking in the United States. This has reflected in the uptick of automobile accidents as more trucks are moving back and forth to fracking sites. Andrew Schneider, a reporter for National Public Radio elaborated on this further in his 2014 article title *In Texas, Traffic Deaths Climb Amid Fracking Boom*. Schneider conveys that "the Texas Department of Transportation says that between 2009 and 2013, the state's traffic fatalities rose by eight percent, even as those in most other states continued to fall. And deaths linked to

commercial vehicle crashes, like trucks, soared by more than 50 percent over the same period” (Schneider, 2014). Further, states that have granted fracking licenses have seen an increased rate in death in accordance with these accidents. In May of 2014, CBS News cited an analysis conducted by the Associated Press based on U.S. census data of six states that allow fracking. The analysis concluded that “fatalities have more than quadrupled since 2004” (“Fracking boom producing deadly side effect,” 2014). Increased traffic on the roads is not the only cause of accidents. Jim Bolz, the chief underwriting officer at specialty insurer, of Energi further elaborated on the exposure in an article published by Insurance Journal. “It’s where these guys travel, it’s how they travel, it’s the loads that they’re hauling. Most of them or a lot of them are running on private property, unimproved roads. They’re riding at night. It’s a whole litany of different things,” Bolz said (Jones, 2015). Also, due to the high demand for domestic energy in recent years, fracking companies had to push their workforce to meet said high demand. Schneider goes on to report that “experts cite fatigue as another factor pushing up traffic fatalities tied to the oil and gas industry. Oilfield workers often work 12-hour shifts, then pile into a company van to drive half an hour or more from their work site to a hotel” (Jones, 2015). With a fleet of large trucks, an overworked labor force, and important cargo in tow it is critical that an MGA approach a fracking auto peril with risk management techniques in mind.

First, the MGA can decrease the risk associated with a fracking operation if it requires said operation to outsource its trucking business. These could also relieve the fracking company of the need for inland marine coverage by transferring the risk for lost product. This may be a common practice in the oil industry already thanks to companies like the Kenan Advantage Group. Second, if the fracking company refused to outsource their trucking business then the MGA should consider a minimum amount of hours a fleet of truck drivers must acquire before the MGA attempts to place the auto coverage. The amount of hours should depend on the fracking company’s loss history and other factors that may affect driver attentiveness such as the distance from the well site to where the drivers will be housed by the company. Insurance policies do exist as well that can help transfer the risk. A Commercial Auto policy will help transfer the risk away from the insured. It is important to be cautious as to what symbol is assigned for liability under a commercial auto policy. The MGA would take on the least amount of risk by assigning restrictions similar to symbol 7 which is autos specifically scheduled on the policy. This is commonly found on an ISO policy. Likewise, the insured would likely request symbol 19 also known as mobile equipment coverage subject to compulsory or financial responsibility. This concession should be carefully considered due to the large amount of transportation required in the fracking process.

### **Workers’ Compensation**

The overwhelming amount of traffic on the drilling site has also been known to lead to injury of employees. For example, OSHA determined that heavy exposure to silica sand on a fracking site can cause injury to employees over a long period of time. Workers can be exposed to silica multiple ways throughout the fracking process including “Transporting, moving, and refilling silica sand into and through sand movers, along transfer belts, and into blender hoppers (which) can release dusts containing silica into the air. Workers can be exposed if they breathe the dust into their lungs.” The report goes on to say that “dust ejected and pulsed through open side fill ports on the sand movers during refilling operations and dust generated by on-site vehicle traffic” can also lead to inhalation by employers (“Worker exposure to silica during hydraulic fracturing,” n.d.)). The Center for Disease Control echoed these findings. The CDC

found that long-term exposure to silica sand can lead to a disease called silicosis. Silicosis “typically develops after long periods of exposure and progresses gradually” the CDC published in a 2012 report. The report further elaborates by explaining that “there is evidence that inhaling respirable silica dust causes chronic obstructive pulmonary disease (COPD), chronic renal (kidney) disease and various autoimmune diseases. Individuals with silicosis are known to be at higher risk of tuberculosis and several other respiratory infections” (“CDC - Worker exposure to crystalline silica during hydraulic fracturing,” 2012). The CDC’s report concluded by recommending eleven steps a fracking company could take to decrease the probability of worker disease or injury. One suggestion was doing away with the silica sand and replacing it with ceramic throughout the fracking process where possible. Fracking companies seem to have quickly adopted this measure. CNBC reported in 2015 that companies are now using a mixture of sand and ceramic (DiChristopher, 2015). This has the potential to decrease the amount of silica dust in the air. A few other recommendations provided by the CDC were “Minimize distances between the dragon tail and T-belts and blender hoppers, mandate use of cam-lock caps for fill ports on sand movers, and use amended water (e.g., containing chloride and magnesium salts) to reduce dust generation on roads into and at the well site” (“CDC - Worker exposure to crystalline silica during hydraulic fracturing,” 2012). An umbrella policy would also assist insureds to transfer their risk and this could be coupled with the commercial auto, liability, and property policies. An excess policy would also be required in the event of a severe worker’s compensation claim.

### **Threats to MGAs**

Currently, the greatest threat MGAs face regarding Hydraulic Fracturing is the volatility of the energy industry. An executive with Weatherford International Plc told Bloomberg Business in April of 2015 that “Half of the 41 fracking companies operating in the U.S. will be dead or sold by year-end because of slashed spending by oil companies” (Weath, 2015). This means MGAs will need to carefully monitor the changing of risks associated with this fast rate of mergers and acquisitions.

Another threat is how fracking companies conduct operations as demand fluctuates and many companies struggle to survive. Said struggling companies may begin to ignore safety precautions and decrease their workforce to cut costs. This could also present the opportunity for the insured to commit insurance fraud. This puts more pressure on workers that these companies retain and, mixed with fatigue, can lead to more accidents. It is important for the MGA to recognize those companies that have a sustainably long-term plan and also have enough cash available to survive if they drill non-lucrative wells.

### **Conclusion**

At the end of Alan M. Parzio’s webinar he states the following for MGAs: “Without insurance companies’ active participation, the burden falls on the market and state regulators to separate the good and bad actors-at the expense of the public and the environment. Insurance providers are critical to ensuring that the industry is implementing best practice standards set forth by state regulations and industry associations.” Parizo recognized that fracking is a high risk business. Writing specific lines of business that the carrier and the MGA is comfortable with will prepare underwriters to more readily recognize threats in the future. This could be a critical advantage for MGAs as fracking begins to grow over the next 100 years both domestically and internationally.

