

# ***GAS DRILLING/FRACKING CASES***

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John F. Romano is a senior partner in the West Palm Beach, Florida, law firm of Romano Law Group, an "a/v." rated law firm. He is a former President of both the Academy of Florida Trial Lawyers and the Southern Trial Lawyers Association. Mr. Romano is a Fellow of the International Academy of Trial Lawyers. He was chosen to *Florida Trend Magazine's* 2006 and 2007 "Legal Elite" naming Florida's top one percent of lawyers in various specialty areas; named one of Florida's 2006, 2007, 2008, 2009, 2010, 2011, and 2012 "Super Lawyers." He has served as former Chairman of the National College of Advocacy and former Chairman of the AAJ Criminal Law Section. He is board certified by both the Florida Bar and the National Board of Trial Advocacy as a civil trial advocate. He has lectured and authored extensively on trial advocacy, litigation techniques, demonstrative evidence, and more. He has authored several books, including the textbook *Strategic Use of Circumstantial Evidence*; *The Deposition Field Manual*, published in 2002 by PESI Law Publications; and *Opening Statement: Winning the Jury*, published in 2004 by PESI Law Publications. Recently handled or currently pending cases include the following: orthopedic medical malpractice, plastic surgery medical malpractice, vehicular rollover product liability, trucking collision wrongful death, automobile neck injury-back injury, white collar criminal fraud, security negligent premises liability, business litigation fraud and breach of contract, business litigation attacking medical peer review system, toxic tort and pollution litigation. Additionally, Mr. Romano has received numerous awards, including recently the Al J. Cone Lifetime Achievement Award presented by the Florida Justice Association, the Tommy Malone Golden Eagle Award presented by the Southern Trial Lawyers Association, and the Annual Clarence Darrow Award presented by Mass Torts Made Perfect. He received the prestigious Perry Nichols Award presented by the Academy of Florida Trial Lawyers (FJA) (as its highest honor) in 1997. John Romano previously served as a Captain in the United States Marine Corps. John Romano lives in West Palm Beach, Florida, with his wife, Nancy. Nancy and John have four children and ten grandchildren. John and Nancy are the co-founders of Vive Verde, Inc., the entity which owns and developed the "world's first living office building" – an environmental wonderland office building in South Florida which is "green" and "LEED-certified" and "living" (water purification systems).

Dustin B. Herman is an attorney with Romano Law Group. He attended Florida International University College of Law where he focused his studies on trial advocacy and the First Amendment. He was on the FIU Trial Team (Finalist 2009 Zehmer Mock Trial Competition; 2010 AAJ Mock Trial Competition, Phoenix, Regionals); Moot Court Team; received the Book Award in Evidence and multiple Dean's List awards. He also interned with the Miami-Dade County Public Defender's Office where he assisted with numerous criminal trials. Currently, he concentrates his practice on mass torts, multidistrict litigation, and catastrophic injury cases. Recently handled or currently pending cases include the following: pharmaceutical and medical device mass torts (Actos, DePuy, Propecia, Yaz), gas drilling/fracking, gulf oil, product liability-wrongful death, scuba diving-wrongful death, medical malpractice, shark attack-amputation, traumatic brain injury, business litigation fraud and breach of contract, and foreclosure defense. He is also heavily involved in doing neuroscience and *Daubert* law research for the Propecia Plaintiffs' Steering Committee in MDL 2331. Dustin lives with his wife, Dana, in Delray Beach, Florida.

# GAS DRILLING/FRACKING CASES

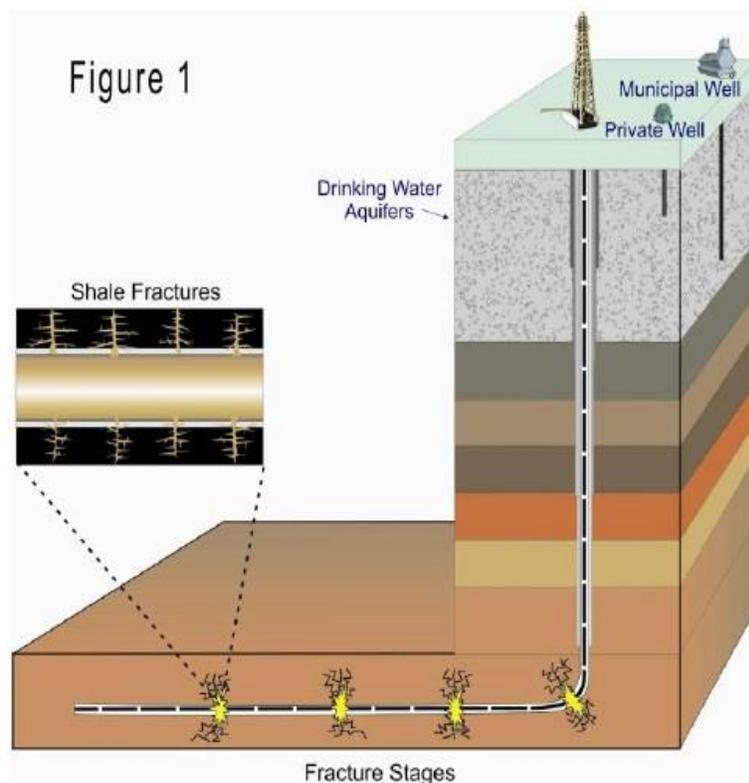
## I. INTRODUCTION: WHAT THE FRACK?

“Fracking” is the popular term for a method of drilling known as hydraulic fracturing. Hydraulic fracturing literally refers to fracturing rock formations (known as shale rock) located thousands of feet below the ground by blasting the shale with highly pressurized fracking fluid (i.e. water, sand, and chemicals). Once the shale rock is fractured, natural gas trapped within the rock is released and flows up the wellbore to the surface where it is captured.

Gas companies begin this process by drilling a vertical well. They drill through the groundwater aquifers and continue until they reach the shale rock – usually between 6,000 and 12,000 feet below the surface of the earth. Shale rock formations can have very large surface areas, but are usually no more than a few hundred feet thick. Once the drill reaches the shale rock, it takes a 90-degree turn and continues horizontally through the formation. These lateral lines can extend for another 1-2 miles underground.

At certain intervals during the drilling process, the well is “cased.” This simply means that a steel pipe - or “casing” - is dropped into the wellbore and cement is poured around the casing. The idea is that fracking fluid and natural gas will travel inside the casing, and the cement is supposed to insulate and protect the surrounding environment – and most importantly the groundwater aquifer - from contamination.

The steel casing continues all way down the wellbore – through the turn – and into the horizontal portions of the wellbore. Using explosives, gas companies then blow holes through the steel casing. Fracking fluid is pumped down the wellbore, through the holes, and into the shale rock at a pressure high enough to shatter the rock (around 6,000 - 9,000 psi). The sand grains act like tiny wedges that keep the cracks in the shale rock open so the trapped gas can escape. The released gas travels up the wellbore and is collected at the surface and harvested by the gas companies.



## II. BENEFITS v. HAZARDS

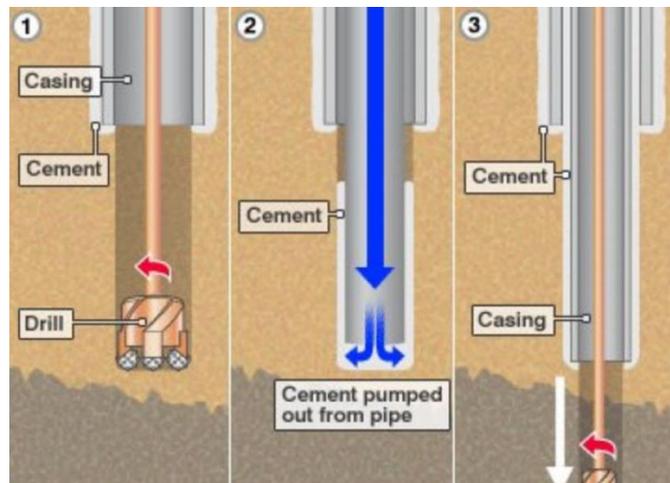
The Benefits: Shale gas offers the United States a variety of advantages *if* it can be extracted *safely*.

- Shale gas produces 25% of America’s natural gas;
- It allowed the U.S. to surpass Russia as the world’s largest producer of natural gas;
- The shale gas industry provides jobs for American workers and increases our GDP;
- Shale gas could lessen our dependence on foreign oil; and
- Natural gas releases less carbon dioxide than both coal and gasoline so it could serve as a transition fuel until renewable energy sources become more widely available.

The Hazards: Fracking chemicals and/or natural gas can contaminate groundwater aquifers and harm people, animals, and the environment.

- **Flowback.** Millions of gallons of fracking fluid are pumped into the wellbores and then much of it is brought back to the surface and removed. Not only does fracking fluid itself contain dangerous chemicals, but this “flowback” of the fracking fluid carries with it naturally occurring – but still extremely hazardous – substances, such as radioactive matter, barium, and other heavy metals. The gas companies can be extremely careless, or downright criminal, in the way they handle and dispose of this toxic cocktail.
  - Flowback is often stored in impoundment ponds, which are little more than holes dug in the ground with a tarp laid at the bottom. These ponds pose extreme risks for contamination of the surrounding environment. Companies have even been caught dumping flowback directly into ponds, rivers, and in the middle of streets.
  - Wellheads can fail causing flowback to erupt uncontrollably into the surrounding areas (think miniature BP oil spill on land).
  - Flowback poses serious health risks to humans, animals, and the environment. If ingested, even in small amounts, it can cause liver failure, cancer, reproductive problems, and death. If flowback gets into the ground water, residents are forced to move or find alternative sources of water to use and drink.

- **Cement Failures.** To cement the casing, a cementing head is lowered inside the casing and cement is injected out the bottom of the casing so that it fills the space between the casing and the rock – called the “annular” space. The cement is supposed to act as a stop plug and prevent any natural gas or flowback from migrating up the annular space and into the aquifer. The problem is that there are so many



ways the cement can fail. We know that about 6% of the concrete casing will fail *ab initio* and about 50% will fail over 10 years.

- One reason for failure is simply a poor cementing job. If the cement does not create an impervious seal, gas will escape into the groundwater. Pouring the cement is extremely expensive and, sadly, gas companies will cut corners to save time and money.
- Another problem is called “channeling.” This occurs when gas is flowing while the cement is still wet and the gas creates channels through the cement so that even after the cement is dry, gas can still flow through the channels.
- The cement can also crack. Think about what happens to a sidewalk over time. Now think about the kind of forces that are involved when holes are blasted through steel pipe using explosives - and when fracking fluid is blasted into shale rock at 6,000 – 9,000 psi.
- BOND LOG. The quality of the cement job can be tested - and you can find the results of the tests in the cement bond log. The cement is tested by vibrating the casing and measuring the vibrations of the cement and casing throughout the wellbore. With a good cement job there will be very little or no vibrating. A bad cement bond log means you have a good case. You must get the bond log!
- **Methane Exposure.** A big risk of gas drilling is contaminating the groundwater aquifer with natural gas, namely methane. This poses several threats to residents that use groundwater in their homes:
  - Explosive Hazard. Methane is an extremely flammable gas. Methane dissolves into water while underground, but when people turn on their faucets and/or showerheads, the dissolved methane will be released into the air inside the home. Leaky pipes can also be sources for methane build up – especially in basements. Once the concentration of methane reaches the lower explosive limit, a light of a match, a cigarette, or even a single spark will cause an explosion. YouTube is filled with videos of residents that live near gas drilling operations that can literally light their water on fire – I urge you to watch. Many residents have had to install methane alarms in their homes and are advised to keep their windows open while showering.
  - Simple Asphyxiant. Methane is a simple asphyxiant, which means it displaces oxygen in the air. At high concentrations, methane can cause dizziness, nausea, vomiting, loss of consciousness, and even death due to hypoxia.
  - Methane Ingestion/Exposure. To date, we do not know of any specific harm caused by drinking water with methane in it. However, there have been no studies done concerning the long-term effects of methane ingestion/exposure. Hopefully, methane is truly not harmful, but often it is only after years of people being

exposed to a substance that we learn of its dangerous effects. In a recent arbitration suit, an expert hired by a gas company claimed that methane is harmless and that she knew this because: “After a comprehensive search, I could not find any studies evaluating the health effects of consuming water that contains methane . . . The absence of such studies is not an oversight, but is because, other than the potential for explosion, the only adverse health effects caused by methane result from its action as a simple asphyxiant.” This “scientist” used the absence of scientific studies as proof to support her conclusions. To say that her methodology is flawed would be quite the understatement.

- **Disruption of Geological Formations.** Shattering rock formations thousands of feet below the surface of the earth may allow natural gas to migrate upward – through the rock – and into the groundwater. If this happens, the quality of the cement job is irrelevant. Moreover, while flowback is collected and disposed of, millions of gallons of fracking fluid are still just left in the ground. Fracking fluid contains chemicals that act as a lubricant so the fluid can more easily pierce the rock. Some scientists believe that breaking apart these rock formations and injecting a lubricant into them (i.e. decreasing friction) will cause an increase in earthquakes – especially if fracking is done near fault lines.

### III. CAUSES OF ACTION

There are basically three categories of claims that can be brought against the gas companies:

1. Negligent Drilling Cases. These cases involve groundwater contamination due to negligent practices of the gas companies (described above) which led to a diminution in value of property or even forced residents to move from their homes. Personal injury cases are more difficult unless there has been actual physical harm. Damages for emotional distress will vary by state and by jury/arbitration panel.
2. Nuisance Cases. A nuisance is the non-trespassory invasion of another’s interest in the private use and enjoyment of his or her land. When gas companies arrive, they bring with them loud trucks, generators, compressors, foul odors, bright lights, 24-hour-a-day activities, high traffic, destruction of scenery, and many other disturbances that interfere with residents’ use and enjoyment of their lands.
3. Breach of Lease Cases. The first contact a resident has with the gas industry is most likely a land man. These are the gas companies’ salesmen that go out and try to purchase leases from residents. They use extremely sneaky tactics and will tell the residents anything. After the lease is signed, the gas companies come in and basically take over. They do not request permission to drill in certain places when they are supposed to. They do not pay out money due under the lease when they are supposed to. And they certainly do not respect the complaints of the property owners.

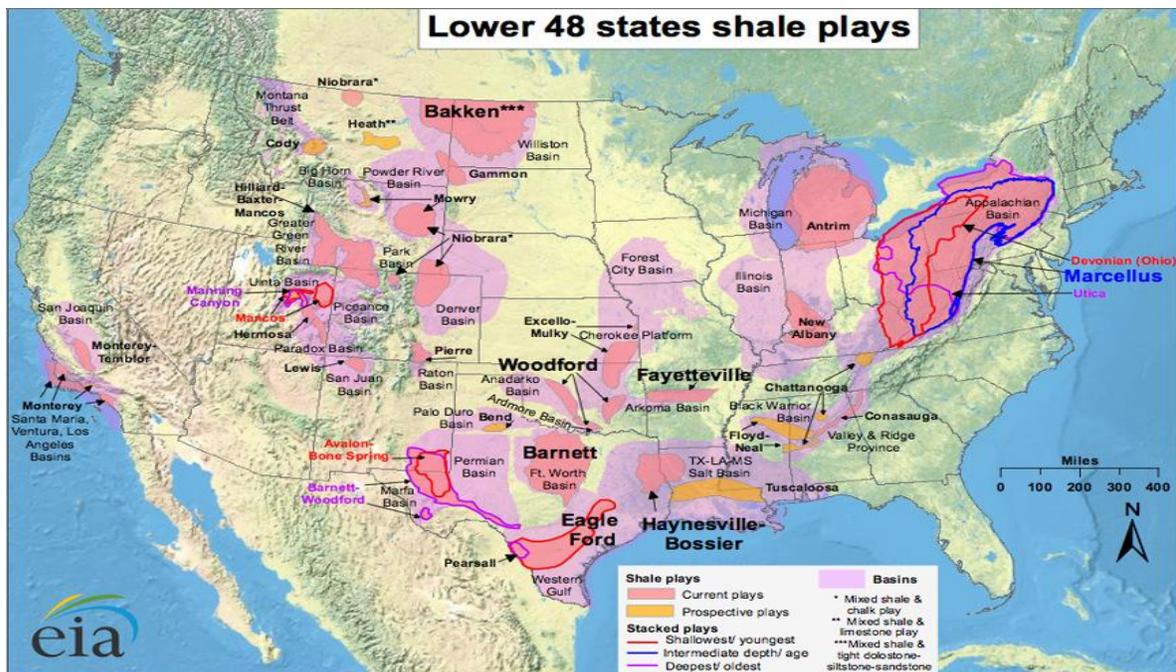
#### IV. PROSECUTING A GAS DRILLING/FRACTURING CASE

- Jury Trial v. Arbitration. Many of these cases will involve arbitration agreements under the lease. Obviously a jury trial has its advantages, but at an arbitration hearing you do not have to worry about the rules of evidence and there are no *Daubert* hearings.
- Experts. Prosecuting a gas drilling case is not cheap. You will need to hire many experts to be able to prove both liability and damages, and many experts may not be willing to help because their research funding comes from the oil & gas industry. Experts needed include: geologist, hydrogeologist, geochemist, geophysicist, geotechnical engineer, drilling engineer, forensic engineer, and toxicologist. You will also need experts to prove economic damages and diminution of property values. Further, you may need various medical doctors to testify to physical damages and a psychiatrist or clinical psychologist and possibly a neuropsychologist to testify to psychiatric damages and emotional distress (do not conflate the two!).

#### V. AVAILABLE RESOURCES

- a. AAJ Gas Drilling/Fracturing Litigation Group
- b. <http://www.gaslandthemovie.com/>
- c. <http://topdocumentaryfilms.com/sky-pink/>
- d. <http://www.marcellus-shale.us/>
- e. <http://shaleshock.org/>
- f. <http://www.hydraulicfracturing.com> (Chesapeake Energy website)
- g. Book, "*Dirty Fracking Buisness*" by Peter Ralph

#### VI. MAP OF SHALE PLAYS IN THE UNITED STATES



[http://8020vision.com/wp-content/uploads/2011/04/shale\\_map.png](http://8020vision.com/wp-content/uploads/2011/04/shale_map.png)