

Water on Fire:

An Analysis of ExxonMobil's Communicative Defense of Hydraulic Fracturing

Though residents in some drilling areas can allegedly light running water on fire with a lighter, ExxonMobil has launched a campaign to persuade the public it can perform the controversial energy extraction process known as *hydraulic fracturing* safely and get much needed energy with no unintended side effects.

With differing scientific reports on hydraulic fracturing's impacts, ExxonMobil is caught between publics demanding an alternative to oil and a controversial approach some say is the country's best chance at energy independence. This case study explores ExxonMobil's reputation management communication strategies and its overall handling of a technology steeped in debate.

Table of Contents

I.	Case Study	
	1. Overview	4
	2. A Brief History of ExxonMobil	
	2.1 ExxonMobil Company Background	5
	2.2 Notable Past Controversies	5,6
	2.3 Continued Financial Success	6
	2.4 Corporate Philosophy	6
	2.5 Corporate Social Responsibility	7
	3. Hydraulic Fracturing In-Depth	
	3.1 Key Terms	7
	3.2 The Science Behind Hydraulic Fracturing	7,8
	3.3 General History	8
	3.4 Hydraulic Fracturing Timeline	8,9
	3.5 Associated Controversies	9,10
	3.6 ExxonMobil and Hydraulic Fracturing	10,11
	4. Chronology of ExxonMobil's Communication Regarding Hydraulic Fracturing	11, 12
	5. Public Perception	
	5.1 Media Response--- Cause and Aftermath	12, 13
	5.2 Stakeholder Response	13
	5.3 Economic Impact	13, 14
	5.4 EPA Investigation Overview	14
	6. Summary: ExxonMobil's Challenge	14,15
II.	APPENDICES	16
III.	REFERENCES	21

I. CASE STUDY

1. Overview

Momentum to end the United States' costly dependence on foreign oil has recently sparked a focus on natural gas extraction processes. ExxonMobil, the United States' largest energy company and one of the most profitable companies globally, considers itself "the world's largest public natural gas producer".¹ And with their purchase of the leading shale gas energy company, XTO, in 2009 for \$31 billion, the historic energy company did indeed become the first major oil company to invest serious financial assets in shale gas— gas collected through the process of hydraulic fracturing.² By embracing this potentially profitable type of natural gas, however, ExxonMobil officially launched itself into an energy and environmental debate over hydraulic fracturing, or more simply, 'fracking.'

Hydraulic Fracturing (Fracking)

An energy extraction process that involves drilling deep into the Earth's surface using a mixture of chemicals and water to capture natural gas

Despite the fact that the Environmental Protection Agency (EPA) has declared the drilling practice safe enough to continue for now, EPA investigations persist.³ Yet, an avalanche of public concern from individuals and environmental groups such as Greenpeace USA and the Environmental Health Fund serves as a reminder that many remain up in arms about the practice. These groups cite thousands of reports of water contamination near drilling sites.⁴ This water contamination is allegedly so severe in some cases that nearby residents have reported being able to light their running water on fire by holding a lighter to it.⁵ Investigative groups like Propublica.org point to the fact that ExxonMobil and other oil companies are exempt from federal laws protecting water supplies such as the Safe Water Drinking Act.⁶ This exemption allows oil companies to conceal specific information regarding the types of chemicals used as "trade secrets"—making it difficult to determine the cause of contamination.⁷ Meanwhile, those living near drilling sites have reported sudden cases of respiratory infections, headaches, neurological impairments, nausea and skin rashes.⁸ More rare are reports of miscarriages, benzene poisoning (a chemical allegedly used in extraction processes), cancer and tumors.⁹ Moreover, hydraulic fracturing's potential harm to the environment has recently gained attention with reports that, if done incorrectly, the process can lead to shifts in seismic faults that can shift the very foundation of Earth---causing earthquakes in areas without a history of seismic activity.¹⁰

Still, ExxonMobil is convinced they can perform the extraction process safely with no unintended side effects on neighboring communities.¹¹ In 2011, they officially began a communication campaign aimed at informing and persuading the public that hydraulic fracturing can be done safely and is the key to our energy independence.¹² ExxonMobil finds itself caught between publics demanding an alternative to expensive oil and a controversial approach that some say is our best chance at true energy independence. With differing and non-conclusive scientific reports on hydraulic fracturing's impacts, ExxonMobil's communicative balancing act walks a fine line between appeasing key stakeholders and protecting the safety of the American public.

2. A Brief History of ExxonMobil

2.1 ExxonMobil Company Background

ExxonMobil was created on November 30, 1999 when the companies Exxon and Mobil merged.¹³ However, both companies were descendants of oil giant and philanthropist John D. Rockefeller's Standard Oil Company, which was forced to dissolve in 1911 by the U.S. government due to public backlash from the exposé *The History of the Standard Oil Company* by Ida M. Tarbell.¹⁴ Tarbell's book portrayed Rockefeller's business practices and personality as shallow and ruthless --- creating growing concern about the Standard Oil Company's power in the industry. Exxon and Mobil were both born out of the forced dissolution of this historical oil company.

ExxonMobil is a publicly traded company in the New York Stock Exchange (NYSE) under the symbol XOM. U.S. energy competitors to ExxonMobil include: BP, The Chevron Corporation, Shell and ConocoPhillips.¹⁵ With operations in every continent except Antarctica, ExxonMobil is considered the largest of these publicly traded oil companies.¹⁶

With ExxonMobil's purchase of XTO, the leading shale gas producer, in 2009, ExxonMobil produces nearly 50 percent more natural gas than its closest competitor.¹⁷ Consequently, about two-thirds of the company's energy reserves are natural gas--- reflecting ExxonMobil's focus on energy alternatives and the extraction process of hydraulic fracturing. ExxonMobil's tagline on its official website illustrates the debate surrounding hydraulic fracturing and natural gas--- reading: "Taking on the world's toughest energy challenges."¹⁸ In 2006, Rex Tillerson became Chair of the Board and CEO of ExxonMobil.¹⁹

2.2 Notable Past Controversies

Exxon-Valdez Oil Spill

Despite the fact that the Exxon-Valdez oil spill happened nearly nine years before the companies Exxon and Mobil merged, the event still mars ExxonMobil's image today.²⁰ On March 24, 1989, an Exxon oil tanker headed toward Long Beach, California struck a reef off the coast of Prince William Sound, Alaska--- spilling nearly 11 million gallons of crude oil and causing severe damage to local marine life in the area.²¹ The Exxon-Valdez oil spill was considered the worst in U.S. history until the BP oil spill of 2010.²² In fact, ExxonMobil was still dealing with litigation involving the 1989 oil spill as recently as 2008.²³ The Exxon-Valdez Oil spill and its aftermath segwayed into not only years of legal battles but also years of a damaged reputation---giving the company an unwanted perception as it became to be known in some circles as green energy's "public enemy number one."²⁴

The Greenpoint Oil Spill

On July 17, 2007, New York Attorney General Andrew Cuomo sued ExxonMobil and BP to force them to clean up an oil spill Cuomo claimed spanned several decades and affected the Greenpoint, Brooklyn community.²⁵ The state of New York claimed as much as 17 million gallons of oil had been seeping into the soil for decades.²⁶ The Greenpoint community had long been home to oil refineries dating back to the Standard Oil Company's days.²⁷ Mobil and other oil companies used the oil refineries as recently as 1966.²⁸ However, ExxonMobil claims that Paragon Oil, an American oil company now known as Chevron, caused the spill.²⁹ Regardless of which company was rightfully to blame, ExxonMobil's reputation for trustworthiness and quality of product was on the decline between 2002 and 2008, potentially making instances of controversy like this one even more dangerous to the company.³⁰

Yellowstone River Oil Spill

On July 2, 2011, a ruptured ExxonMobil pipeline spilled as much as 42,000 gallons of oil into Montana's historic Yellowstone River.³¹ The Yellowstone River was flooded when the oil spill occurred---giving local

residents concern over whether or not the spill would affect not only the river but also farmers who would be left with oil on their farmland once waters receded.³² Media reports revealed some residents were upset with ExxonMobil's response—claiming the company downplayed the nature and impact of the oil spill.³³

2.3 Continued Financial Success

As of August 2011, despite brief speculation of being surpassed by Apple Inc., ExxonMobil remains "America's most valuable company" with a market capitalization of \$350.1 billion.³⁴ Despite ExxonMobil's growth being inextricably connected to the price of oil as well as the ability to find and produce new energy alternatives, the company has remained the world's number one publicly traded oil and gas company, staying in great shape financially despite economic uncertainty in the market.³⁵ In 2010, ExxonMobil's earnings reached \$30.4 billion, a significant increase from 2009 earnings of \$19.2 billion.³⁶

Since a company's earnings are considered the main determinants of its share price, this increase for ExxonMobil from 2009 to 2010 bodes well for its overall economic wellbeing.³⁷ Moreover, when comparing ExxonMobil's revenue from 2010 (\$383.2 billion) to its 2009 revenue (\$310.6 billion), a clear picture of increasing strength is painted.³⁸ However, these numbers come on the heels of a two-year decline starting in 2008 due in large part to an unstable economy. Previous to this downturn, ExxonMobil's 2007 earnings were \$40.6 billion.³⁹ It's apparent that ExxonMobil is steadily recovering from losses felt in 2008 and 2009. The company's continued financial success despite adversity can be linked to insatiable global demands for energy.⁴⁰ With global energy demands projected to increase by 35 percent between the years 2005 and 2030 and energy demands expected to increase by 70 percent in developing countries, ExxonMobil shows no signs of a significant slow down in the short-term or long-term future.⁴¹

2.4 Corporate Philosophy

ExxonMobil's business model commits to valuing safety, operational excellence and risk management.⁴² Acknowledging growing global demand for energy, the company has shifted resources into the natural gas industry. This is reflected in their corporate style and philosophy—promising to develop and apply advanced technology and innovation.⁴³ A company-wide focus on integrity dominates ExxonMobil communication.

A significant motivation for ExxonMobil lies in what they deem "ExxonMobil Upstream" in which a major goal is to "identify, evaluate, selectively pursue and capture the highest quality resource opportunities ahead of competition."⁴⁴ This goal explains ExxonMobil's early communicative focus on hydraulic fracturing ahead of key competitors.

The Operations Integrity Management System (OIMS) guides all ExxonMobil employees in efforts to provide safety and environmentally conscious performance.⁴⁵ The system was designed to recognize that many of the company's operations present potential risks to people and the environment.⁴⁶ It includes eleven categories with accompanying policies or instructions reviewed by each ExxonMobil employee when conducting business. These address instances such as risk management, personnel and training, incident investigation, etc.⁴⁷ Efficiency is emphasized through this system. Exxon Mobil reports that OIMS has led to a 9 percent reduction in lost-time incident rate since 2006.⁴⁸

ExxonMobil has invested nearly \$1.6 billion since 2005 to improve energy efficiency and reduce green house gas emissions and continues to invest in algae biofuels and technology that could help increase energy efficiency.⁴⁹ The growing demand for energy and the risk of climate change is something ExxonMobil claims, "shapes our activities and investments."⁵⁰

2.5 Corporate Social Responsibility

Despite the fact some environmental groups are concerned about ExxonMobil's use of hydraulic fracturing causing harm to people and the environment, the company has taken steps to show its dedication to environmental causes--- spending approximately \$6.9 million on environmental initiatives in 2010 alone and touting its nearly \$1.6 billion in investments since 2005 in activities aimed to improve energy efficiency.⁵¹ ExxonMobil also reports a nearly \$5 billion investment in projects to reduce the harmful process of natural gas flaring and maintains a company-wide policy that each new project started throughout the world must include plans for community specific investments--- referred to as National Content Plans within the ExxonMobil Capital Projects Management System (EMCAPS).⁵²

The ExxonMobil Foundation is the organizational arm of all ExxonMobil's philanthropic giving. The foundation coordinates giving in four general areas: ExxonMobil Women's Economic Opportunity Initiative, ExxonMobil Math and Science Initiative and the ExxonMobil Malaria Initiative.⁵³ In 2010, ExxonMobil contributed \$237 million in worldwide giving.⁵⁴ In 2005, ExxonMobil partnered with professional golfer, Phil Mickelson, to create the Mickelson ExxonMobil Teacher's Academy to encourage children to pursue fields in medicine, computing and energy.⁵⁵ This program offers a five-day initiative in New Jersey, Louisiana and Texas targeted to third through fifth grade teachers with the goal of better preparing educators to motivate students to pursue careers in science and math.⁵⁶ Clearly, this support coordinates with ExxonMobil's business goals and serves as a match with the company's needs for skilled workers in the math and science areas. In 2009, ExxonMobil received the *Opening Minds Corporate Leadership Award* for its work with education initiatives and women's rights worldwide.⁵⁷ The Institute of International Education, a provider of global scholarships and education initiatives, created the award.

3. Hydraulic Fracturing In-Depth

3.1 Key Terms⁵⁸

<p>Oil Well: a drill made through the Earth's surface to obtain oil. Usually, some natural gas can be acquired through this process. Many old oil wells can be used to produce shale gas through the process of hydraulic fracturing.</p>	<p>Gas Well: a drilling through of the Earth's surface primarily to extract natural gas.</p>	<p>Wellbore: the actual hole drilled into a rock to extract natural gas.</p>
<p>Shale Gas: The type of natural gas obtained through drilling into shale rock (made of mud, clay and other minerals) via gas or oil wells. Shale gas is the term for what is acquired when hydraulic fracturing is used to extract gas from shale rock. Projections estimate that shale gas will make up half of North American natural gas production by 2020.</p>		

3.2 The Science behind Hydraulic Fracturing

First, a temporary drilling rig (also known as a derrick) drills several thousand feet into the Earth's surface---slowly turning horizontally while descending.⁵⁹ Eventually, the drill will reach the water table thousands of feet below the Earth's surface. The drill is meant to go below the water table in order to reach natural gas. Cement is used to seal (or case) the drilled well in order to prevent contamination of the water table once the energy extracting process begins.⁶⁰ The accuracy and reliability of this cement

case has caused one of the biggest controversies as some argue the casing isn't strong enough to prevent harmful natural gas from seeping into the water table.⁶¹

The drill continues to travel deeper into the Earth until it reaches shale rock at around 3,000 to 8,000 feet underground and then travels horizontally into the shale formation.⁶² A perforating gun then tears into the shale rock, where the natural gas is stored, in order to extract it.⁶³

Next, water and toxic additives like sand, lubricants and anti-bacterial chemicals are shot into the drill to widen the fractures made in the shale rock.⁶⁴ Experts report that herein may lie another problem with hydraulic fracturing---as toxic drilling fluids could seep through to the surface from these man-made fractures.⁶⁵ Natural pressures force the liquids obtained through the drill back up to the surface.⁶⁶ What returns to the Earth's surface is harmful wastewater that can contain radioactive materials at levels thousands of times greater than drinking water standards permit.⁶⁷ To solve this, waste can be stored in a pit or in tanks; however, these storage spaces pose potential problems as well with some opponents saying they are prime for pipe breaks and dangers from heavy rain that could cause ponds containing wastewater to overflow.⁶⁸

The natural gas extraction happens next. Once the wastewater is removed, natural gas flows from the fractures and into the drill pipe.⁶⁹ However, once the natural gas hits the surface, early portions have the potential to escape into the atmosphere as a greenhouse gas. Lastly, any sand grains or ceramic pellets accidentally remaining in the fractures from earlier in the process can potentially widen the man-made fissures deep within the ground--- causing natural gas to seep up to the surface through the well.⁷⁰

3.3 General History

Hydraulic Fracturing is not a new practice. In use since 1903, this energy extraction process wasn't performed commercially until 1943.⁷¹ However, it has never been used at the frequency that it is being used today and the frequency in which projections propose.⁷² It has only been in the last three decades that major independent energy companies like Chesapeake Energy, Andarko, Deven Energy and Encana have made the process an integral part of their business practice.⁷³ More recently, major energy companies like ExxonMobil, BP, ConocoPhillips and Chevron have incorporated the practice.⁷⁴ Increasing tension over global oil prices and resulting foreign policy security issues served as a major incentive for top energy companies to diversify energy production.⁷⁵ Moreover, though the validity of the viewpoint is debated, there remains a perception held by most publics that oil is an increasingly scarce commodity--- which may have also contributed to this foray into natural gas production.⁷⁶ While ExxonMobil is not the only company engaged with this issue (Ex. Chevron), it is the first major company to conduct a public communication campaign to market its efforts.

Additionally, ExxonMobil remains the biggest natural gas producer and user of hydraulic fracturing---producing more than 50 percent more gas than its closest competitor.⁷⁷ For years, hydraulic fracturing was viewed by many as an effective use of old and abandoned oil wells.⁷⁸ Currently, hydraulic fracturing is used to prompt energy extraction in newly created wells, old wells and hard-to-navigate wells in unfavorable locations.⁷⁹

3.4 Hydraulic Fracturing Timeline

1948: Commercial entities begin to use hydraulic fracturing.⁸⁰

1997: Legal Environmental Assistance Foundation (LEAF) versus EPA is argued. EPA first becomes aware of possible harms of hydraulic fracturing during this case about potential methane production (drilling into coal beds instead of shale rock) from hydraulic fracturing in the state of Alabama. The case was brought about to determine if the EPA had the authority to regulate Alabama's use of hydraulic fracturing. The EPA initially determined that hydraulic fracturing does not fall within its statutes of regulation.⁸¹

2000: EPA begins first in-depth study of the fracturing process.⁸²

2002: EPA concludes initial study of hydraulic fracturing---claiming the process does not harm drinking water, but could potentially pose a risk when including diesel fuel in the process.

2003: Major users of hydraulic fracturing sign EPA agreement to exclude diesel fuel from hydraulic fracturing operations.⁸³

2007: Gas well in Bainbridge, OH explodes which causes some to blame hydraulic fracturing process. The use of hydraulic fracturing is later dismissed as a cause.⁸⁴

2008: Momentum to ban hydraulic fracturing builds as the state of Colorado initiates policy of providing full disclosure to citizens and regulators detailing companies in the area that use hydraulic fracturing. Environmental groups in both New Mexico and Colorado push for a complete ban on hydraulic fracturing.⁸⁵

2008: The state of New York enacts a moratorium on hydraulic fracturing. In essence, the process is banned because of safety, health and environmental concerns.⁸⁶

August 2011: Report commissioned by President Obama suggests more oversight is needed for gas drilling, but could not confirm how much of a danger hydraulic fracturing poses for both the environment and surrounding communities.⁸⁷ Some criticized the panel saying six out of seven members have financial ties to prominent oil and gas companies.⁸⁸

October 2011: Plans to increase federal oversight of hydraulic fracturing are announced by the EPA after reports indicate nearly 22 billion gallons of wastewater from gas drilling goes into surface waters across the country each year. The EPA cited "other information" as a reason to draft new national rules for treating wastewater discharged by gas drilling, but no details were given on what that "other information" was.⁸⁹

December 2011: An initial report from the EPA's investigation (due in full by 2014) suggests there is a link between hydraulic fracturing and groundwater contamination in the state of Wyoming. This represents the first time in the debate surrounding hydraulic fracturing that the EPA has drawn such a strong connection.⁹⁰

January 2012: Increased seismic activity in Ohio, not typically a hotspot for earthquakes, results in eleven minor-to-light earthquake occurrences all with epicenters surrounding a wastewater injection well for a hydraulic fracturing operation. Critics blame these hydraulic fracturing operations for the increase in earthquakes in the area.⁹¹

3.5 Associated Controversies

Health Repercussions

If potential drilling areas fall on personal property, oil and gas companies have the prerogative to approach homeowners to negotiate payment options in order to begin drilling. Drilling operations commenced in August of 2008 on Craig and Julie Sautner's Pennsylvania farmland.⁹² The Saunters received \$2,500 per acre.⁹³ One month later, their water began to turn brown.⁹⁴ The water, later revealed to contain dangerously high levels of methane, iron and aluminum allegedly resulting from fracking, was so contaminated it was scarring dishes in their dishwasher and staining their laundry.⁹⁵ But the real issue was what it was doing to their family's health. Craig Sautner explains what he says his family experienced.

"It was so bad sometimes that my daughter would be in the shower in the morning, and she'd have to get out of the shower and lay on the floor because of dizzying effects the water had on her."⁹⁶

Sautner went on to explain the contaminated water wasn't just having mental effects but physical manifestations as well---causing sores to erupt all over his son's legs.⁹⁷ The Saunters are only one of thousands of U.S. residents claiming to have experienced what they call the harmful effects of hydraulic fracturing.⁹⁸

Meanwhile, another Pennsylvania resident, Bill Ely, signed a gas lease similar to the Saunters because he believed natural gas drilling was a safe practice that could earn him much needed money.⁹⁹ Yet Ely's investment turned sour after he was able to hold a lighter up to his running tap water and light it on fire.¹⁰⁰ One scientific study recently confirmed Ely's suspicions and linked such water contamination directly to hydraulic fracturing.¹⁰¹ Today, Ely has to have water hand delivered to his home.¹⁰²

"I knew it [the water] went bad because we could light it," Ely said.¹⁰³

Thousands of hydraulic fracturing complaints have been submitted to state and federal agencies across the U.S.¹⁰⁴ The most common health complaints of residents near drilling areas are respiratory infections, headaches, neurological impairments, nausea and skin rashes.¹⁰⁵ In rare cases, miscarriages, tumors and cancer have been reported.¹⁰⁶

But such health complaints are not just coming from homeowners who have leased their land. Reports have also originated from drilling sites on public property, as was the case with Susan Wallace-Babb of Winnsboro, Texas. Babb reports walking to a neighbor's ranch, taking a deep breath and collapsing, unconscious.¹⁰⁷ Less than a half-mile away resided a natural gas well and storage tanks.¹⁰⁸ A sheriff's deputy later explained that one of those storage tanks had overflowed---sending harmful fumes drifting through the air.¹⁰⁹ Following Wallace-Babb's apparent exposure to the fumes, she experienced rashes, lesions and extreme nausea.¹¹⁰ Her symptoms reflect those of dozens of residents in her neighborhood and across the country.¹¹¹

In current drilling hotspots like Colorado, Texas, Wyoming and Pennsylvania, reports of health problems near drilling areas can be traced back to the earliest instances of well drilling.¹¹² The exact extent and cause of these health problems have not been concretely confirmed, as companies involved in natural gas drilling are exempt from federal environmental rules.¹¹³ This exemption allows companies to withhold reporting toxic emissions and the release of hazardous waste.¹¹⁴ Thus, many of the chemicals involved in hydraulic fracturing remain a secret—making efforts to understand the true cause of the health complaints nearly futile. In October 2011, a group of doctors, medical associations, and environmental groups called for the state of New York to conduct research on the harmful effects of hydraulic fracturing near New York drilling sites.¹¹⁵

Although the companies involved in these examples are not associated with ExxonMobil, the examples illustrate the controversial environment and dialogue ExxonMobil has positioned itself to become an essential part of. All of ExxonMobil's communication regarding hydraulic fracturing comes in light of these health allegations and differing and non-conclusive scientific reports.

3.6 ExxonMobil and Hydraulic Fracturing

ExxonMobil launched a national advertising and information-based campaign in May of 2011 with the goal of presenting its side of the natural gas debate.¹¹⁶ A series of print ads ran in the New York Times and Washington Post in May 2011 from ExxonMobil claiming the company had a "responsible way to produce" natural gas.¹¹⁷ The ads showed wells surrounded by layers of steel and cement aimed at protecting the environment and surrounding communities from escaping gas and fluids. Yet, a ProPublica investigation questioned the fairness of ExxonMobil's representation of these wells, and the Natural Resources Defense Council, a national environmental action group, also disputed the ad's claims.¹¹⁸ ExxonMobil's advertising campaign includes television ads featuring ExxonMobil Geologist Erik Oswald. In one version of the ad, Oswald acknowledges the debate surrounding fracking and natural gas and whether or not it can be done safely, "But at ExxonMobil we know the answer is 'Yes.'"¹¹⁹ The ads claim there exists a great amount of rock between the extraction process and groundwater. Oswald ends the television ad by saying, "Natural gas is critical to our future, and at ExxonMobil, we recognize the challenges and how important it is to do this right."¹²⁰ In a second version, Oswald focuses on the energy independence and economic security he says natural gas drilling can bring to the U.S. In this ad, there is no mention of the controversy surrounding

hydraulic fracturing. ExxonMobil also launched a website specifically dedicated to offering information and answering questions about natural gas (www.aboutnaturalgas.com).¹²¹

4. **Chronology of ExxonMobil's Communication regarding Hydraulic Fracturing**

January 20, 2010. At a congressional hearing regarding the merger of ExxonMobil with XTO Energy, ExxonMobil CEO Rex Tillerson told members of the House Energy and Commerce subcommittee, "There have been over a million wells hydraulically fractured in the history of the industry, and there is not one, not one, reported case of a freshwater aquifer having ever been contaminated from hydraulic fracturing. Not one".¹²² Tillerson's statement comes in light of an Environmental Protection Agency (EPA) report documenting a connection between hydraulic fracturing and contaminated water and suggestions that there may be more. Yet, researchers remain unable to investigate many cases due to sealed lawsuits between energy companies and landowners.¹²³

January 27, 2011. In ExxonMobil's annual "Energy Outlook" report, hydraulic fracturing is described as involving, "injecting a solution that is primarily water and sand—mixed with a small amount of chemicals often found in swimming pools, dish detergents, and other common uses—to open up cracks in water formations that allows natural gas to migrate to the well."¹²⁴

May 2011. ExxonMobil begins testing the advertising waters—running full page spreads in both the New York Times and the Washington Post claiming hydraulic fracturing is both safe and essential to American energy security and job growth. The advertisement text takes the debate head on stating, "But many Americans want to know more about shale gas. Can it be produced safely while protecting water supplies and the environment? The answer is yes."¹²⁵ Yet, a ProPublica investigation questioned the fairness of ExxonMobil's representation of these wells saying, "The ad, which depicts a gas well in the Marcellus Shale, implies that these layers of protection extend all the way down the well. But in the vast majority of horizontal wells, they do not. An ExxonMobil spokeswoman acknowledged that fact in an email."¹²⁶ The Natural Resources Defense Council, a national environmental action group, also disputed the ad's claims.

May 19, 2011. ExxonMobil uploads the first of its soon-to-be national television advertisements titled, "ExxonMobil: Unlocking a Century's Supply of Natural Gas" to its official YouTube account. The ad features ExxonMobil Geologist Erik Oswald who claims that ExxonMobil now has the technology to safely "unlock this clean burning natural gas that will provide us with fuel for 100 years--- providing energy security and economic growth all across this country."¹²⁷ This first advertisement does not mention hydraulic fracturing by name or the controversies some associate with it.

May 25, 2011. At the 2011 ExxonMobil Annual Shareholder's meeting, "a resolution calling for the company's board of directors to prepare a report on known and potential impacts of ExxonMobil's fracking operations" is defeated after receiving 28.2 percent of votes from shareholders and lacking support from top officials.¹²⁸

May 25, 2011. Tillerson tells reporters "overzealous regulation of hydraulic fracturing is impeding development of gas fields vital to America's economic success." Tillerson announces ExxonMobil is planning an advertising campaign to defend natural gas drilling techniques. The campaign, he says, is needed in part because, "We have some problems in getting out the message with some of you folks [media]. So we have to go out and buy some of the space in which to present the industry's viewpoint."¹²⁹ Tillerson said the campaign would include traditional advertising combined with town hall meetings.¹³⁰

June 30, 2011. ExxonMobil announces the launch of its natural gas information website: www.aboutnaturalgas.com. The announcement is made on ExxonMobil's 'Perspectives' blog and explains,

“The new website houses facts, figures and graphics that give context to the growth of natural gas resources in the United States, as well as the hydraulic fracturing technology that helped unlock these supplies”.¹³¹ One of the frequently asked questions developed and listed by ExxonMobil in promoting this website is, “What is the real story behind the negative claims about hydraulic fracturing [in the documentary] GasLand?”¹³²

August 10, 2011. The second national television spot entitled, “Natural Gas: An Amazing Resource, a Responsible Way to Produce it” is uploaded to YouTube. In this advertisement, Oswald returns to narrate. This time, ExxonMobil makes an acknowledgement that there is much discussion and debate surrounding natural gas drilling. But no specifics are included in the ad about the possible dangers of hydraulic fracturing. Oswald goes on to say, “There’s a lot of discussion going on about the production of natural gas—whether it can be done safely and responsibly. At ExxonMobil, we know the answer is ‘Yes.’” Oswald gives details about ExxonMobil’s safety precautions when designing a well which include, “multiple layers of steel and cement” to protect groundwater. Ending, Oswald explains that, “Most wells are over a mile and a half deep so there’s a tremendous amount of protective rock between the fracking operation and groundwater. Natural gas is critical to our future. At ExxonMobil, we recognize the challenges and how important it is to do this right.”¹³³

August 25, 2011. Following a report by the Department of Energy calling for improvements in shale gas production by the gas and oil industry, ExxonMobil reminded stakeholders on its ‘Perspectives’ blog that ExxonMobil had already been complying with one of the report’s recommendations: voluntarily disclosing the contents of fracking fluids on the website FracFocus.org.¹³⁴

5. Public Perception

5.1 Media Response—Cause and Aftermath

“The bottom line is that it [hydraulic fracturing] is also important to the industry, which is investing heavily in shale acreage, with plans to extract gas, and now oil, from the hard source rock through the fracking process not only in the U.S. but around the world. *If the backlash cannot be contained, at least some of the billions of dollars the industry has invested in production could well be under threat.*”

-Sheila McNulty,
The Financial Times

A consistent storm of negative media coverage has forced ExxonMobil into a position where it feels the need to explain its use of hydraulic fracturing and how the company thinks it can perform the process safely. In short, media coverage is the primary reason ExxonMobil is running a campaign to ease the public’s concerns about hydraulic fracturing. When looking at the volume and scope of media coverage concerning hydraulic fracturing pre-campaign, it’s clear why ExxonMobil felt pressured to talk. Media coverage of the process has been decidedly negative and few news reports mention scientific research of the practice.¹³⁵ Not only has the coverage trended negative, but the amount of coverage is extensive. As of November 2009, 2,289 articles had been written about hydraulic fracturing which represented a 265 percent increase in coverage compared to the previous three years.¹³⁶ In particular, the investigative organization, ProPublica, has been critical of hydraulic fracturing from the start and includes the subject on its ‘Investigation’ webpage where over 100 original news articles can be found on the issue.¹³⁷ ExxonMobil’s planned campaign drew severe criticism from ProPublica after ads claimed there was no possibility of harmful chemicals contaminating drinking water because of strong well casing and miles between water tables and drilling.^{138 139}

Media coverage was so much of an issue, in fact, that members of the environmental group As You Sow

introduced a resolution at ExxonMobil's annual meeting asking the company to, "come clean on the serious environmental, public health and financial risks of hydraulic fracturing."¹⁴⁰ Media pressure caused 28 percent of ExxonMobil's shareholders to buck leadership and call for more transparency. Although the measure failed due to its non-binding nature, it clearly demonstrated the amount of media pressure surrounding hydraulic fracturing that threatens to envelop ExxonMobil with their increasing use and promotion of the practice.

Although the measure failed, it did succeed in causing further media uproar. Stories about ExxonMobil refusing to produce an unbiased report detailing the dangers of hydraulic fracturing were rampant. AP, Reuters, Wall Street Journal, Democracy Now, Bloomberg, New York Times, Forbes, ABC News, MSN Money, Washington Post, San Francisco Chronicle, Smart Money, CNBC, Miami Herald, Politico, Fuel Fix, The Hill, New York Post and Business Week were just a few of the prominent news outlets that covered ExxonMobil's rejection of the resolution.¹⁴¹ Media coverage has even gone so far as to claim ExxonMobil and the entire energy industry is "losing the shale PR battle" because of unwillingness to be completely transparent in practices and communication.¹⁴²

Extensive negative media coverage also led to frustration as the CEO of ExxonMobil, Rex Tillerson "othered" the media at the same annual meeting where the failed resolution was introduced. Denying hydraulic fracturing had any harmful consequences, Tillerson said the extraction process had gotten a bad rap because of "you guys" [the media]. He went on to say, "We have some problems in getting the message out with some of you folks, so we have to go out and buy some of the space in which to present the industry's viewpoint."¹⁴³

Because of the tone and depth of media coverage concerning not only the issue of hydraulic fracturing but ExxonMobil's use of the controversial approach, the company will most likely have all eyes pointed in its direction as it continues to campaign for the public's trust.

5.2 Stakeholder Response

While environmental groups and concerned citizens continue to respond negatively to the industry's use of hydraulic fracturing, the average consumer appears to be mostly unaffected by ExxonMobil's incorporation and promotion of the process. Prior to the announcement of ExxonMobil's advertising campaign on May 25, 2011, stock prices closed at \$81.96.¹⁴⁴ The day following the announcement of the campaign, stock prices rallied, closing at \$82.39.¹⁴⁵ Throughout the summer and prior to television advertising running nationally, stocks remained around the \$80 mark.¹⁴⁶ However, once the national advertising campaign started in the fall of 2011, stocks did see a drop to \$73.49.¹⁴⁷ But it is important to note there is no data concretely linking this drop in stock price to the advertising campaign.

Yet, those stakeholders that pay particular attention to environmental concerns such as the As You Sow foundation, a San Francisco based advocacy investor group that owns ExxonMobil stock, expressed considerable concerns regarding hydraulic fracturing at the annual stockholder's conference last May. Senior strategist Michael Passoff said the announcement of the campaign did not put the group's concerns at ease, "It's going to take more than an ad campaign. Everyone would be better off if they spent that money in the fields, doing things like reducing toxics in fracking fluids and safeguarding water quality."¹⁴⁸ Some say the call for a resolution examining potential harms of hydraulic fracturing at the 2011 annual shareholder meeting in May represents a mainstream concern from investors about hydraulic fracturing that ExxonMobil needs to further address.¹⁴⁹

5.3 Economic Impact

When ExxonMobil shares were trailing rivals ConocoPhillips (COP) and Chevron Corp (CVX) because of depressed gas prices, ExxonMobil saw an opportunity to turn it around by capitalizing on the natural gas

boom in the U.S.¹⁵⁰ It was because of this potential economic gain that ExxonMobil decided to incorporate natural gas into its business plan and along with it the process of hydraulic fracturing. As Robert Bryce, a senior fellow at the Manhattan Institute explains, "When it comes to hydraulic fracturing, ExxonMobil doesn't have a choice. As the biggest U.S. energy company, it has to join with other companies in the oil and gas business in educating the public about what hydraulic fracturing is, why it's essential to U.S. energy production, and why it's not a threat to the environment."¹⁵¹ Thus, because ExxonMobil has made natural gas such a vital part of their business model, and because hydraulic fracturing is currently the only way to effectively extract natural gas, ExxonMobil chose to conduct the campaign to secure economic prosperity. According to Tillerson, it's imperative the public is on board with hydraulic fracturing because without their support, "We can not gain access [to drilling in certain areas]. And if we don't address some of these concerns, we're going to find it even more difficult to gain access."¹⁵²

5.4 EPA Investigation Overview

The Environmental Protection Agency's reports on hydraulic fracturing can be considered mixed at best. An initial 2002 report by the EPA determined hydraulic fracturing could only potentially be harmful when certain fluids like diesel were used in the process.¹⁵³ Yet, in 2011 in the aftermath of reports that nearly 22 billion gallons of wastewater are reaching surface waters each year due to hydraulic fracturing, the EPA announced forthcoming stricter federal regulations on dealing with wastewater discharge.¹⁵⁴ The actual process of hydraulic fracturing, however, is still being studied scientifically to determine the exact amount of potential harm caused to humans and the environment.¹⁵⁵ It is important to note that ExxonMobil is not directly under investigation for its use of hydraulic fracturing; however, the practice in general has undergone a considerable amount of investigation by the EPA. Any negative findings reported by the EPA significantly affect not only ExxonMobil's use of the process but also its continued assurance to the American public that it "can be done safely." This places ExxonMobil in a precarious position---risking harm to its reputation if it is revealed that the process is dangerous. The EPA acknowledges hydraulic fracturing is the dominant means of accessing the vital resource of natural gas and that they are conducting the investigation because the public is concerned about whether it can be done without adverse affects on key water resources and public health.¹⁵⁶

The EPA is currently undergoing what it terms its "Final Hydraulic Fracturing Study Plan" with the goal of understanding the relationship between hydraulic fracturing and water resources.¹⁵⁷ The scope of the research includes, "the full lifespan of water in hydraulic fracturing, from acquisition of the water, through the mixing of chemicals and actual fracturing, to the post-fracturing stage, including the management of flowback and produced water and its ultimate treatment and disposal."¹⁵⁸ Initial research results are not expected until the end of 2012 with a final report due to be released in 2014.¹⁵⁹ In September of 2010, the EPA sent requests to nine oil and gas companies currently using hydraulic fracturing.¹⁶⁰ The requests asked for voluntary participation in the EPA's study of hydraulic fracturing---providing information on well construction, design and operation practices.¹⁶¹ As the nation's largest natural gas producer, ExxonMobil was not invited to participate as companies were chosen randomly. Unfortunately for ExxonMobil, this represents a missed opportunity to show transparency in practices and goodwill toward public concern.

If the EPA finds hydraulic fracturing to be dangerous, ExxonMobil might find itself in a sticky position---caught defending a practice they promised they performed safely.

6. Summary: ExxonMobil's Challenge

ExxonMobil finds itself trying to stay atop a natural energy market it betted big on with the acquisition of XTO Energy. To best the competition in this market, hydraulic fracturing seems to be the most efficient way to get to the energy the company needs. Yet, the EPA is still out on the official verdict

of whether or not hydraulic fracturing is safe for the public's lifeblood---breathable air and drinkable water. This leaves ExxonMobil with a challenge--- assuring the public of the practice's safety without having a scientific consensus that it is, in fact, safe. Right now, hydraulic fracturing is the best-known practice to extract the valuable natural gas that ExxonMobil has promised stakeholders. This places ExxonMobil in a difficult position: provide the energy it promised and risk harming people in the process or backtrack on the promise to provide customers clean, natural energy in order to confirm with far greater certainty that no one will be harmed.

Transparency and genuineness in communication will be the key to handling this dilemma in an ethically responsible manner. Not downplaying concerns of the public or media via official communication materials or communication from top officials will be essential in fulfilling ExxonMobil's responsibility to its consumers and those it could affect through its policies. If careful attention is not paid to this issue, ExxonMobil could find itself cast as the classic villains in the big energy versus everyman saga. And if ExxonMobil ever appears to be "calling the victim crazy" in its defense of hydraulic fracturing, reputation points will most likely not be the only thing lost by the largest energy company in the world.

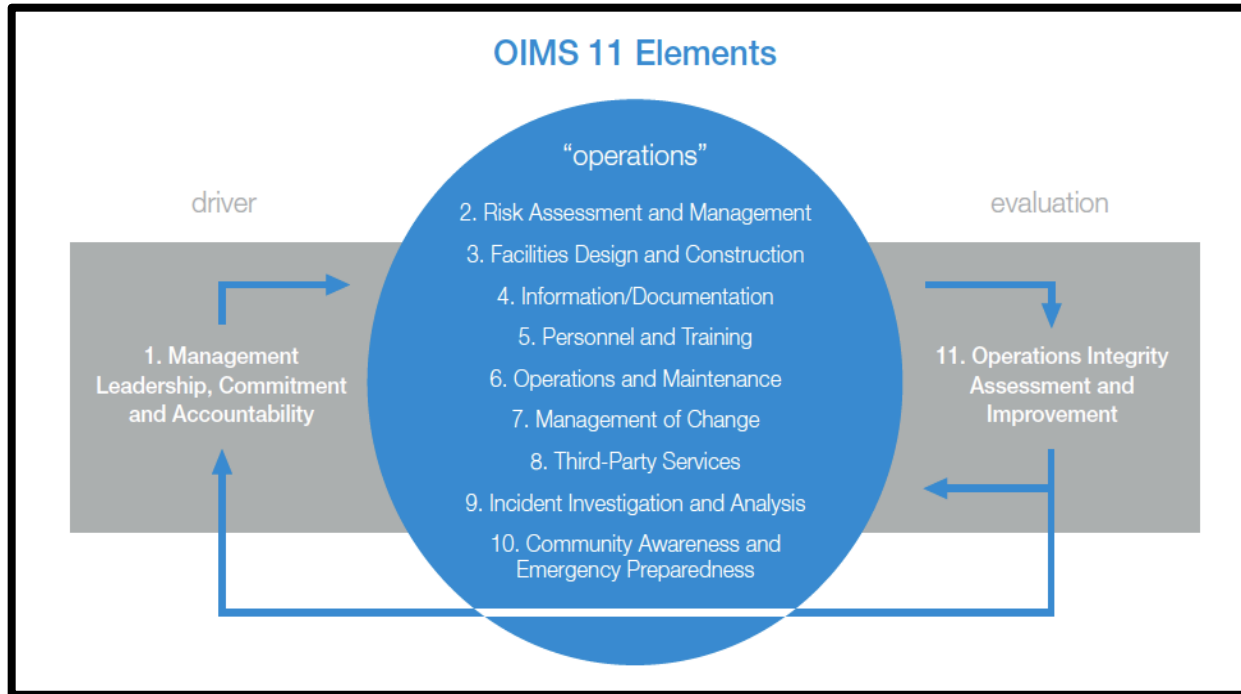
Yet, ExxonMobil could find itself on the right side of the debate---the first major energy company to take a leap and support a process that benefits the U.S. and world for hundreds of years. As David Brooks, a contributor for the New York Times wrote in a recent editorial, "if done right, this [hydraulic fracturing] should not contaminate freshwater supplies, but rogue companies have screwed up and there have been instances of contamination."¹⁶² If Brooks is correct and the blame really ends up coming down on "rogue companies," then ExxonMobil could continue the narrative it has recently created as the company the American public should trust to get much needed energy in a way that is safe for everyone.

Regardless of how the debate ends, the consumer's search for understanding of the process of hydraulic fracturing should never be belittled by ExxonMobil. If dangers do exist, the challenge for ExxonMobil is to fully and openly acknowledge them with no communicative sugarcoating. After all, it's not only a company's reputation and stock options at stake---it could be the wellbeing of consumers as well.

II. Appendices

Appendix 1

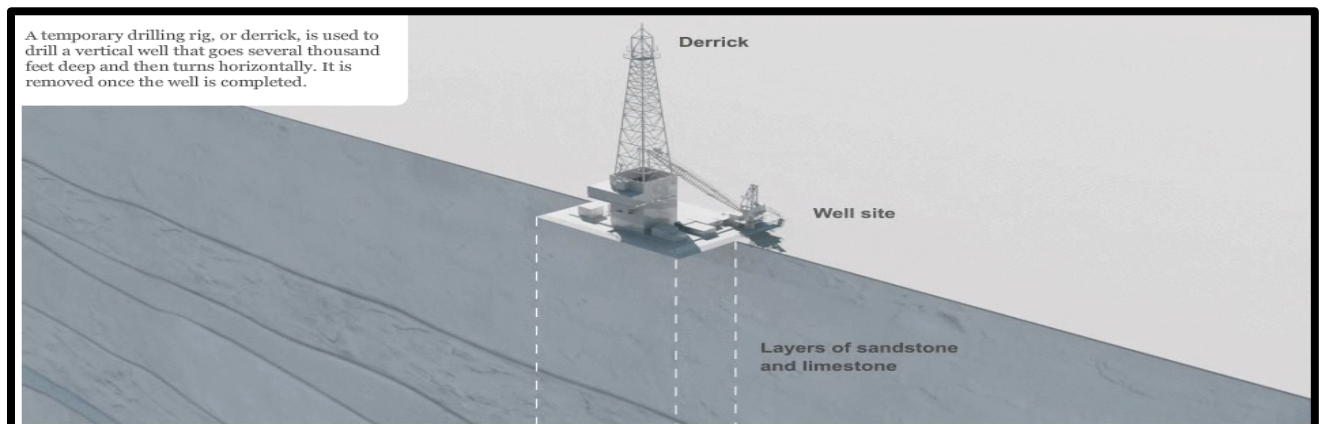
Explanation of ExxonMobil's Operation Integrity Management System



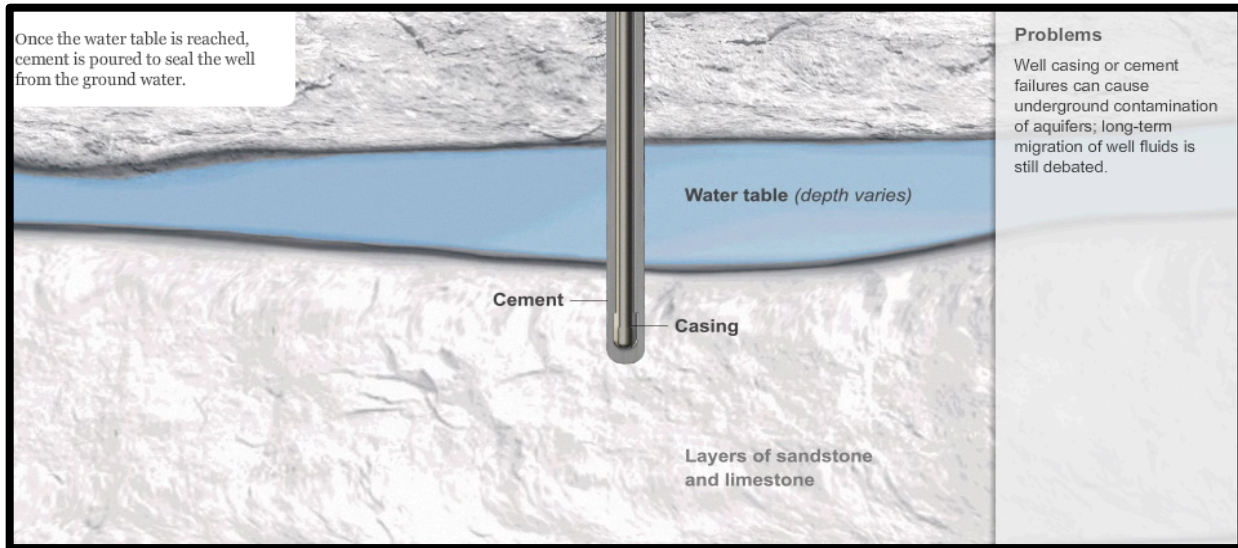
Source: "Operation Integrity Management System," www.exxonmobil.com. (July 2009). Accessed October 25, 2011 from http://www.exxonmobil.com/Corporate/Files/OIMS_Framework_Brochure.pdf

Appendix 2

How Hydraulic Fracturing Works



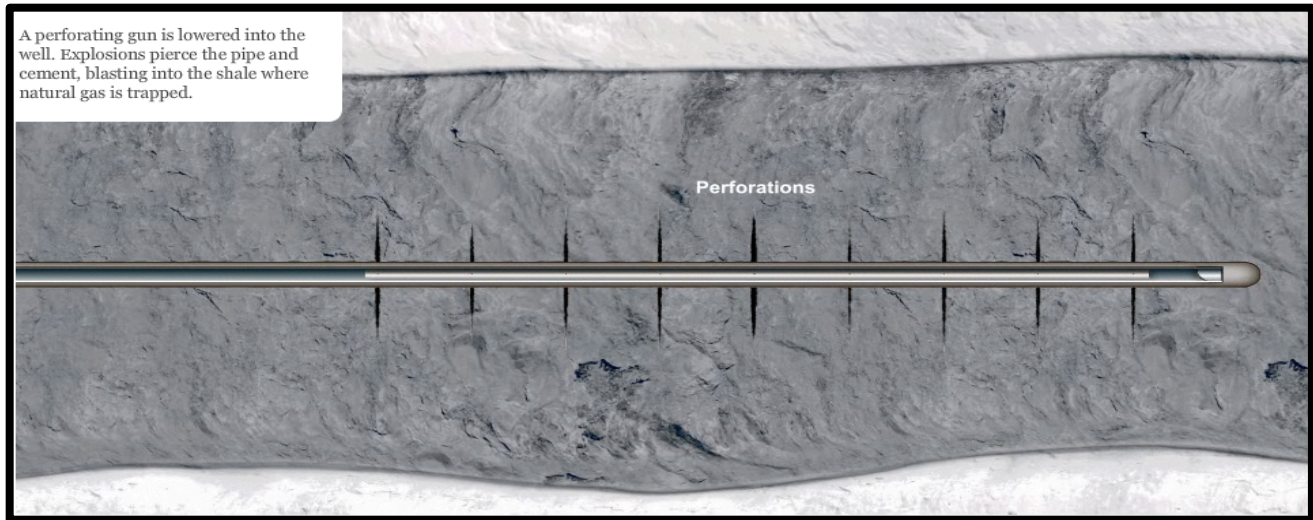
Source: "Extracting Natural Gas From Rock," *The New York Times*, February 26, 2011. Accessed on October 31, 2011 from <http://www.nytimes.com/interactive/2011/02/27/us/fracking.html>



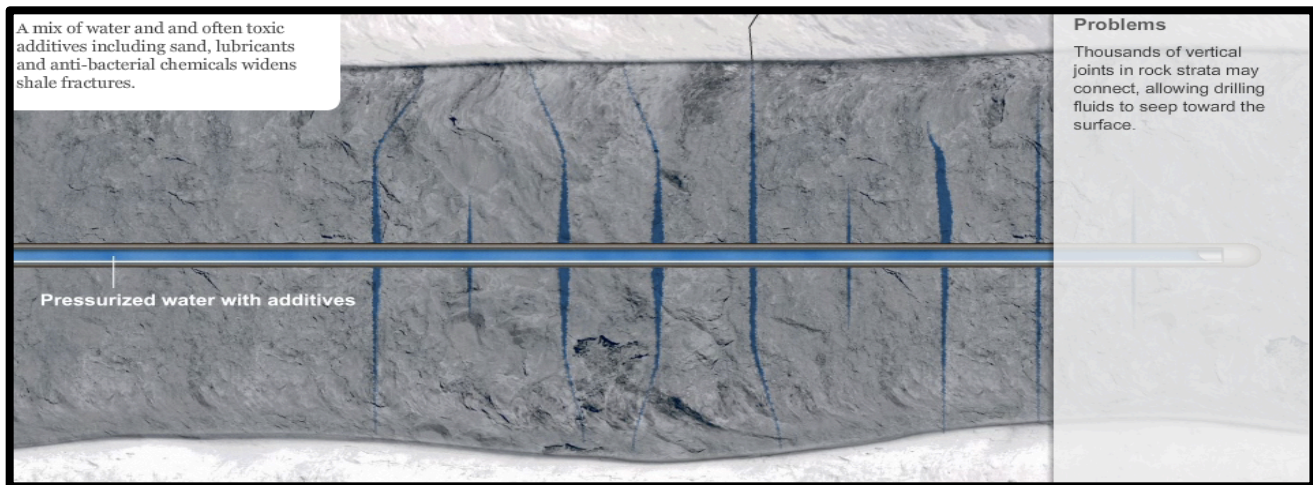
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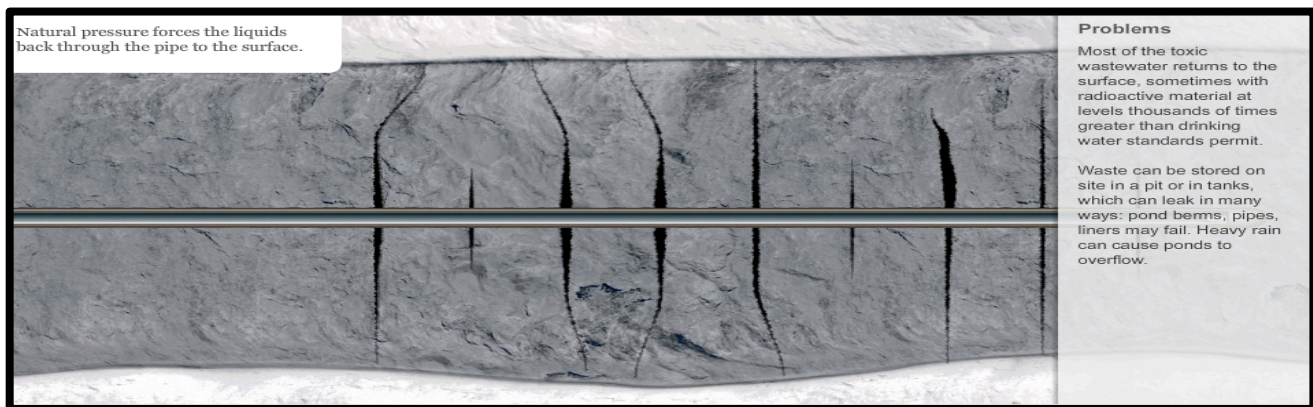
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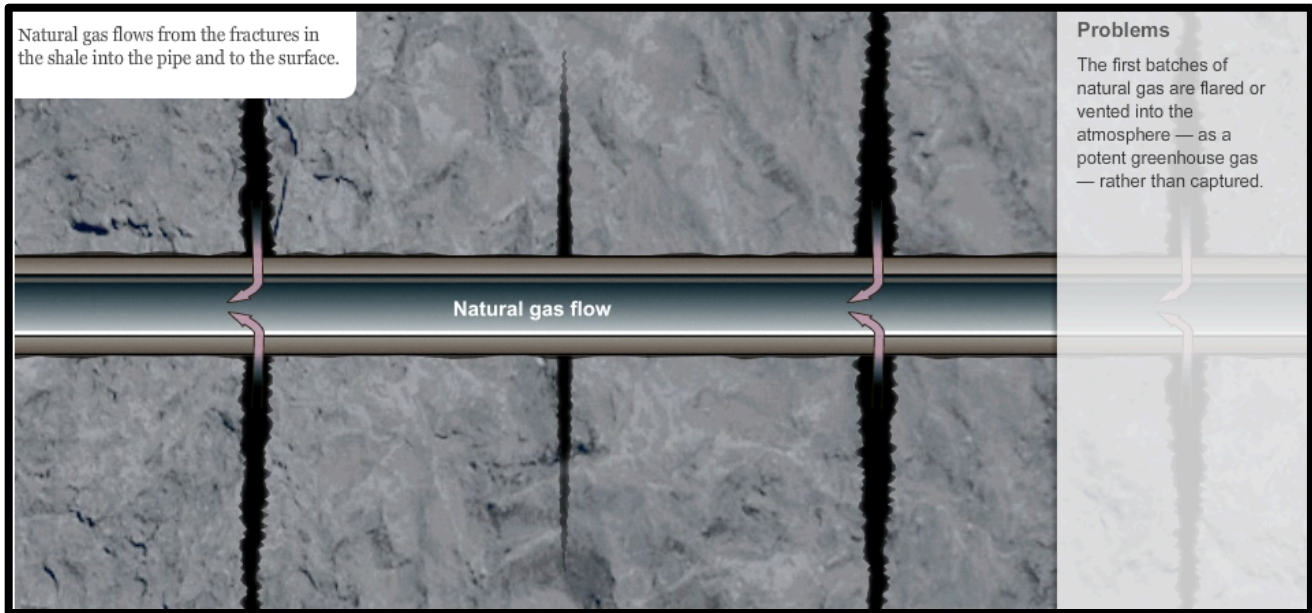
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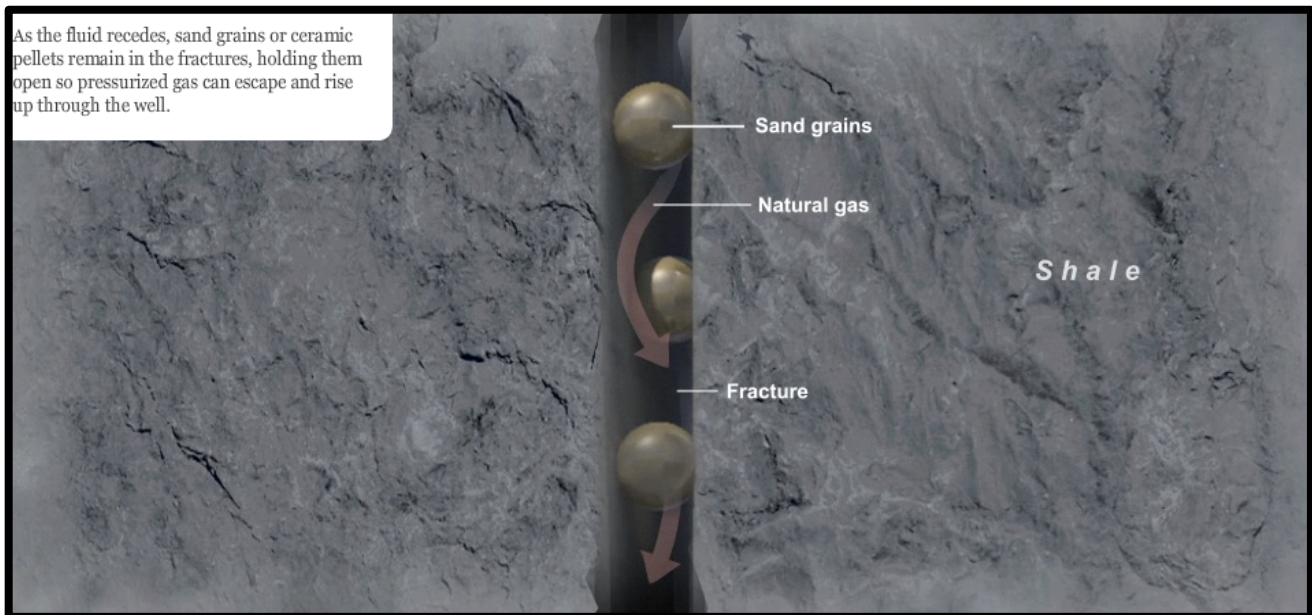
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Appendix 3

ExxonMobil Print Ad

NATURAL GAS WELL

Cement Sheath

Multiple Layers of Steel and Cement

1.5 miles deep

Natural Gas Reservoir

ExxonMobil
Taming the world's toughest energy challenges

An amazing resource for Americans. A responsible way to produce it.

Here, billions of tiny fractures created with a low initial pressure called hydraulic fracturing gas, releasing and increasing the amount of shale-bearing natural gas from deep rock, and providing economic benefits to communities across the country.

Thanks to these innovations, the United States now has an estimated 26.2 trillion cubic feet in reserve of gas resources. That's enough to meet our needs for over 100 years.

But many Americans want to know more about shale gas. Can it be produced safely while protecting water supplies and the environment?

The answer is yes. Here's how:

- The average depth of a shale gas well is more than 10 miles, with thousands of feet of protective rock between the natural gas deposit and any groundwater.
- In addition, multiple layers of steel and cement are installed to shale gas wells to keep the natural gas and fluids contained in the production process safely within the well.
- Carefully produced are used to create high-quality and to ensure responsible disposal of water. We are continuing to work with the industry to develop best practices for the safe handling of produced water.

Exxon's natural gas resources are supplying about 2 million jobs, more investment and permanent energy security, and we're confident that they'll produce safely and responsibly.

This is ExxonMobil's commitment.

Learn more at www.exxonmobil.com

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¹⁶² David Brooks, "The Shale Gas Revolution," *The New York Times*, November 3, 2011. Accessed on November 7, 2011 from http://www.nytimes.com/2011/11/04/opinion/brooks-the-shale-gas-revolution.html?_r=2