

**A New Lease on Life: Documenting the Relationship Between Low-Income
Landowners and Their Fracking Lease Agreements**

By
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April, 2013



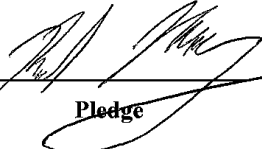
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**Submitted in fulfillment of the senior thesis requirements of the
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and approved by the senior thesis committee.**

	
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Hydrofracking has exploded onto the political scene in recent years due to the invention of fracking methods that allow drills to mine for natural gas in places that were, before, inaccessible. This fracking surge has particularly impacted Pennsylvania residents due to the presence of the Marcellus Shale underneath much of the state. Landowners possessing the mineral rights to their land have been approached by hydrofracking companies that seek to lease their land in order to search for and/or drill for natural gas.

This project seeks to understand the leasing agreements between landowners and companies and critically assess the benefits and drawbacks to the formation and implementation of these agreements. It will do so by examining the process of forging a lease agreement, examining common aspects that reappear within leases and by speaking with the leaseholders themselves. Interviews were conducted with the landowners who were leasing or thinking about leasing their land; these personal testimonies were then incorporated into my final project. A website was then created to host my findings. This website serves to provide potential leaseholders with basic information regarding the process and more general information about fracking.

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Chapter 1: Introduction

Preamble

There is a method of mining that is used to extract natural gas from the ground which is generating controversy across the state of Pennsylvania (Caruso, 2011). It is known as hydraulic fracturing, or fracking, and the process begins by drilling a well into the earth where a mixture of water and assisting chemicals are injected into that the well at a high pressure (Burnham et al., 2012). This pressure creates cracks in the rock and shale surrounding the well and these cracks release natural gas (Burnham et al., 2012). A large part of Pennsylvania's land sits on the Marcellus Shale, a virtual goldmine of natural gas. The Marcellus Shale could be producing over 7 billion cubic feet per day by 2015, by far exceeding all gas produced by offshore wells (Considine, 2010). Pennsylvania, as seen in

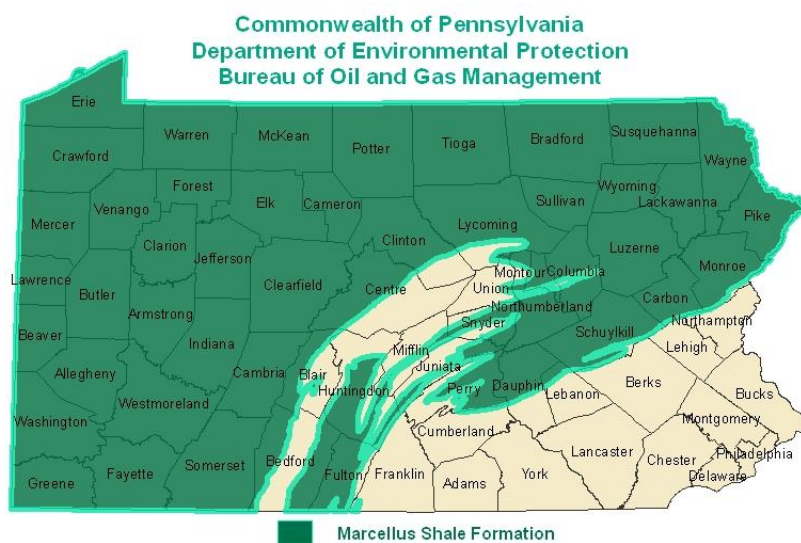


Figure 1: Pennsylvania DEP. Marcellus Shale Formation. [Diagram]. Retrieved from <http://www.dep.state.pa.us/dep/deputate/minres/oilgas/BOGM%20Website%20Pictures/2010/Marcellus%20Shale%20Formation.jpg>

Figure 1, is largely covered by the shale formation.

However, there have been a number of concerns raised about the potential negative consequences that may come as a result of the fracking process.

These concerns range from the generation of micro earthquakes to environmental health and deterioration of water

quality to economic ruin for those individuals whose property has been used as a drilling site (Pennell et al., 2000; Caruso, 2011; Schmidt, 2011). These potential hazards that are linked to fracking have been demonstrated to have a substantial negative effect on

communities, especially on the members of communities that have limited to no financial safety nets (Jacquet, 2009). However, in spite of the aforementioned number of potential risks there are still many people who agree to have wells placed on their land. The potential financial gain may be worth the gamble to the leaseholders, and this might be especially true in those who own their land and mineral rights but are in danger of losing that land or their way of life due to a lack of funds. Many small farm owners are in this position because their farms are not proving to be profitable in a recovering economy (USDA, 2012). Other sources of income must be pulled into the household in order to turn a profit (USDA, 2012).

The goal of my project will be to find out if, and, if so, how, low-income landowners are being taken advantage of through the lease agreements they forge with fracking companies. The United States Census states that, in 2012, \$45,000 or less annually per household is the threshold for declaring that household "low-income." Nearly half of the people living in the United States are low-income or below the poverty line (CBS, 2011; USCB, 2012a). These households operate with a dearth of resources so fracking companies have the potential to take advantage of them due to potential need for money. I want to know if these landowners are being paid fair, upfront lump sum agreements for land use and if they are have been given an adequate percentage of the royalties from the wells they allow on their land. I want to know if these companies are staying on the land longer than the landowners believed they would be staying and how much the landowner's property will be worth after the fracking process has been completed and how the potential change in value is relevant to the amount the landowners receive. I want to know how equipped the landowners are to navigate the leasing process and how transparent that very leasing process actually is for those who cannot afford legal experts to look the agreement over. I want to know how much agency the landowners feel like that they have in the lease agreements, something which can only really be discovered by personally speaking with the leaseholders. These specifics will help guide me to see whether or not these households are being taken advantage of by their own lease agreements.

I believe, to that end, that I must meet with and record individuals who have been economically affected by fracking in order to understand how the leasing process may or may not be harmful to landowners and under what circumstances does the leasing process end as it does. I want to use these testimonies within my project to better understand the situation faced by leaseholders and potential leaseholders. I will use this information to understand what future leaseholders need to know and create a website to share this information with those who might face the same situations in the future. I want to use these interviews to better help my readers and myself understand not just the monetary cost but also the personal. It was Joseph Stalin who said, “when one man dies it is a tragedy, when thousands die it's statistics.” Putting a human face on an issue allows for people to have a face to empathize with and consider when decisions are made.

I will first identify problems and concerns that landowners within the western half of Pennsylvania have expressed about their leases. I chose to narrow my focus primarily on western Pennsylvania due to how easy it would be for me to meet people in the area. Using that knowledge as a launching point I will read about leasing information and fracking laws, along with those laws that pertain to fracking. However, because much of the language will be technical I will meet with several lawyers that are willing to explain the portions of legal jargon I do not understand to me. I can then begin contacting subjects who are willing to be interviewed, presenting them with a brief questionnaire to see if they qualify before interviewing them using the knowledge I have already gathered to ask questions. I will then edit these interviews with other footage I have taken from around their house, of the fracking process, etc., before hosting them on a website that I am building. This website will act as a resource for other landowners going through the same experience, sharing the experiences of my subjects in a context that makes sense.

Defining Fracking

Hydraulic fracturing is the process of fracturing layers of rock and shale, a process that involves pumping between two to eight million gallons of water (Ehrenberg, 2012) laced with chemicals deep underground (Finkel and Law, 2011). The pressure from the water fractures the shale and this releases the natural gas deposits locked inside (EPA,

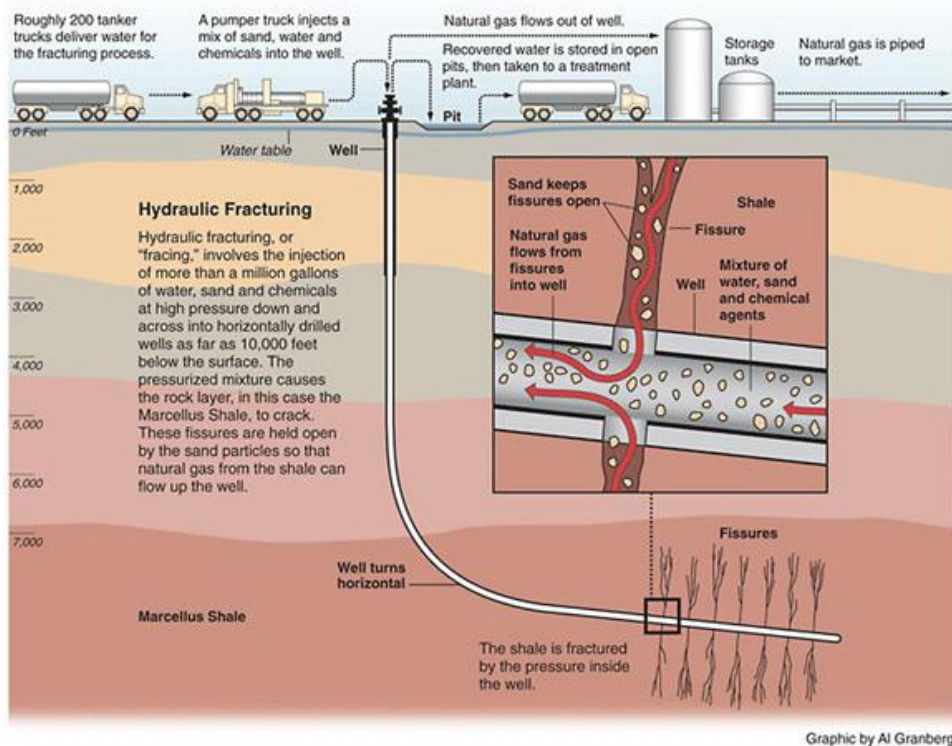


Figure 2: Hydraulic Fracturing [Diagram] Retrieved from: http://www.eia.gov/energy_in_brief/images/charts/hydraulic_fracturing_large.jpg

encountered, after which chemically infused sand and water are blasted down through the hole and through the shale, creating cracks, as seen in Figure 2 (Mooney et al., 2011). The methane from the ensuing cracks diffuses and travels through the water and up the well (Ehrenberg, 2012).

As of the 1990s, however, a new technique known as directional drilling, or horizontal drilling, has come into prominence (Mooney, 2011). This method allows for a drill that has created a vertical well to change direction as much as ninety degrees, allowing for further, more efficient drilling and thus contributing to the sudden prominence of

2012b). Many of the wells that have been drilled in the United States have used a method known as “vertical shaft drilling” (Mooney, 2011). The Halliburton Corporation pioneered this technique in the 1940s and it starts by drilling a vertical well down until a patch of shale is

natural gas drilling across the United States (Mooney, 2011). The chemical mixture composing approximately 1% (Ehrenberg, 2012) of the fracking solution has been shown to contain at least 750 chemicals, 29 of which are known or possible carcinogens (Kusnetz, 2011). Natural gas accounted for approximately 28% of produced energy in the United States in 2011 (USEIA, 2011) and approximately 23% of the natural gas consumed in the United States came from shale beds in 2010 (Ehrenberg, 2012). This is a significant proportion of not only the energy market but the United States economy at large.

Potential Benefits and Consequences of Fracking

Hydraulic fracturing would not be as common as it is today without potential benefits to reap. All of these benefits seem to be economic at first glance but some environmental arguments have been made in fracking's favor, as well. Natural gas is the cleanest burning fossil fuel (Weiss, 2009; Weinhold, 2012). Though not a permanent solution, fracking could be used as a changeover technology, something to try and stave off further global climate change until renewable energy sources take its place. Ernest Moniz, director of the MIT Energy Initiative and a former undersecretary of energy, was quoted as saying that "natural gas truly is a bridge to a low-carbon future and could enable very substantial reductions in carbon emissions—as much as 50 percent by 2050" (Marsa, 2011). A deeper look into exactly how natural gas is mined, however, begins to deconstruct the argument that natural gas might act as an environmental boon. Fracking sites have been found to contain severely elevated levels of toxic emissions within the air, such as volatile organic compounds or VOCs (Weinhold, 2012). In fact, fracking and oil industries are the leading producers of VOCs within the United States (Weinhold, 2012).

The economic benefits, however, are what have landowners signing leases. Stories of landowners leasing their land for a nearly million dollar initial signing fee and a 20% share of the royalties from the wells are enticing for people struggling to get by (Hargreaves, 2010). Due to the United States' large supply and access to natural gas, however, prices have fallen, however, and are expected to fall a little more (Rowley, 2012).

This is actually expected to help the United States' economy overall. "...An abundance of natural gas and inexpensive energy will support jobs, particularly in the chemicals and fertiliser industry which is sensitive to low gas prices.... It will also reduce the threat of inflation, as energy costs will be less likely to drive prices higher" (Rowley, 2012, para. 5). In fact, 30% of the world's natural gas supply, in 2011, came from the United States, making us the second largest producer in the world (USEIA, 2013).

However, just as fracking would not be so common without potential benefits there would be no debate if there were no controversy. A major concern that has been raised about fracking is the number of, type of and effect of the chemicals in the fracking solution. Out of a total of just over seven hundred and fifty chemicals used in fracking by at least fourteen major oil and gas companies, twenty-five of the chemicals used, from 2005 to 2009, are listed as hazardous pollutants under the Clean Air Act (Kusnetz, 2011 ; Ehrenberg, 2012). Nine of the total chemicals are regulated under the Safe Drinking Water Act and twenty-nine are known or possible human carcinogens or health hazards (Kusnetz, 2011; Ehrenberg, 2012). However, hydraulic fracturing was made exempt from the Clean Water act by Congress in 2005 (Kusnetz, 2011).

It is important to keep in mind that when the Clean Water Act exemption was passed, lawmakers and researchers alike believed that only 30% of fracking fluid would remain underground; it is now known that the amount could be up to 80% (Kusnetz, 2011). Water around drill sites was labeled safe for consumption in an early EPA study but, recently, they have determined that this study may be flawed and have decided to launch another investigation (Manuel, 2010). There have been many reports of poor water quality in fracking sites, ranging from grimy water to flammable water (Holzman, 2011). A separate study of sixty-eight wells in the states of New York and Pennsylvania reported that "methane contamination rose sharply with proximity to natural gas drilling and hydraulic fracturing sites" (Holzman, 2011, para. 1). Methane was even found at hazardous levels in shallow groundwater sites (Holzman, 2011). This has raised concerns about how fit this water is for human and environmental use. While the amount of the fracking fluid

that remains in the ground varies by location, it is likely in the regions residing on the Marcellus Shale that up to three quarters of the fluid will be left in the ground (Kusnetz, 2011).

There have also been critiques levied at the “pro-environment” stance some people have taken about natural gas in general. Critics acknowledge that it is the cleanest burning fossil fuel (Weiss, 2009) but they still do not believe it is an answer to climate change. Potential methane leaks from natural gas capturing and processing plants would actually result in natural gas no longer emitting less carbon dioxide than coal (Howarth et al., 2010; Weinhold, 2012). The fracking industry alone emits 40% of methane gas released by the United States (Weinhold, 2012).

Thousands of wells that might exhibit these same environmental impacts have already been drilled in Pennsylvania. In 2010 the state issued more than 3,300 natural gas permits in the Marcellus Shale (Marsa, 2012). In 2012 there were already over 8,000 wells across the state (NPR, 2012). There are many people who are leasing their land across Pennsylvania who are not so lucky as the person who received nearly a million dollars for use of their land (Hargreaves, 2010). Just a half hour away from the man who nearly made a million off his land it's a very different story. This northwestern Pennsylvania man's “retirement home is ruined: His pond is contaminated by a drilling accident on land owned by a neighbor and his well water is undrinkable” (Hargreaves, 2010, para. 3). There have been some counties and municipalities in southwestern Pennsylvania, 35 and 1,485 respectively, that are scheduled to receive \$108.7 million collectively due to a new “impact fee” that energy companies are now being charged to compensate for the effects of gas drilling on local communities (Hurdle, 2012). However, some affected communities have been left out of this agreement (Hurdle, 2012).

A majority of the population that has fracking leases set up with companies are farmers (Worthington, 2012; MacIssac, 2012). “...Gas companies are leasing up large tracts of farmer's fields along the Marcellus and Utica shales [in] upstate [New York]” (MacIssac, 2012, para. 5). “Rising costs and the encroachment of suburbs has led many farmers to

seek out non-traditional sources of income. Leasing land to gas companies for hydro-fracking has become a potential lifeline for some” (Worthington, 2012, para. 1). Farming is not something that is economically beneficial enough to many families and they cannot afford to solely farm anymore (Esch, 2012); dairy farmers as a whole and especially in western Pennsylvania have been hit especially hard by the economy (Napsha, 2010; Department of Agriculture Economic Research Service).

There are significant economic incentives presented to financially struggling landowners in order to convince them to allow hydrofracking companies to drill wells on their land; these landowners have the potential to gain financially by leasing their land to fracking companies. It has been discovered, however that some, if not many, of these landowners are often uninformed about the risks (Navarro, 2011; Urbina, 2011). In the state of New York, hundreds of people have already filed lawsuits against fracking companies because they have discovered things about the fracking process or the terms of their leases that they claim, had they known, they would have never signed the lease agreement (Navarro, 2011). In another New York case, a man was uninformed that the lease he signed with a fracking company “allows the company to remain on the leaser’s land longer than allotted if ample resources still exist” (Gifford, 2012, para. 16). People who want to challenge fracking that are from the outside are sometimes ignored by people who have lived in the area, along with their families before them, for a very long time. “...They don’t own their mineral rights because they’re newcomers (the earlier owners retained the rights), and newcomers, in a lot of cases, is code for city folk, who’ve moved in and who have more money than the farmers who’ve lived there forever. In other words, the people without leases are either just bitter because they can’t cash in or they’ve already got money, so they’ve got the luxury of questioning this whole endeavor” (Game Changer, 2011).

The Fracking Leasing Process

Overview

The leasing process for fracking tends to differ heavily depending on location and who is involved in the process (Fort, 2013). Typically, the fracking company contacts the owner of the land they want to drill (Fort, 2013; PAR, 2012). This could be household by household but it is typically done across large stretches of land owned by many different people (Fort, 2012). These companies typically then send out representatives to meet with the landowners one-on-one, presenting them with a leasing agreement that the company has already drawn up (Fort, 2012). Because the company has taken the “drafting initiative” the agreement will almost always be drawn in favor of the company, meaning that that the agreement means they will, essentially, “get more for less” (Fort, 2013). If the landowner wants to get a deal that works out in their favor, then they must often hire a lawyer to look over the lease and create a version that works their favor. If they cannot afford a lawyer then they must take it upon themselves to learn as much about this process as they can. Mr. Jeffery E. Fort, an oil and gas attorney who was consulted during this project, said that “Any landowner who signs a land lease without consulting an expert gets exactly what they deserve.”

In 2010, Interior Secretary Ken Salazar changed the procedures that the Bureau of Land Management must follow before leasing federal land for oil and gas drilling (Shankman, 2010). A requirement was instated that called for more detailed reviews before leases were to be issued (Shankman, 2010). This, said Salazar, would allow for more public involvement in development plans and would shift the focus of new drilling away from new parcels of land to areas already being developed (Shankman, 2010). Drilling before this point relied on preexisting environmental information that the Bureau of Land Management possessed but now it must reevaluate a parcel of land before giving the go-ahead (Shankman, 2010). This process, however, was only enacted for the land that the Bureau of Land Management was in charge of overseeing, meaning that this policy only affected federal land and those members of the communities that lived by it (Shankman, 2010).

There are a great number of specific terms and clauses within leasing, however, that many landowners are initially unfamiliar with upon being presented with a lease. Unfortunately, this technical language can be severely different from how the lease is initially presented and any promises made during verbal negotiations are only subject to being honored if they are present in the physical contract. Low-income landowners may not know who to go to for help in understanding language that is typically only used by legal experts if they cannot afford a lawyer.

Leasing Terms

The following terms are commonly used within the leasing process.

- **Lease:** A contract stating that the lessee will pay the lessor for the use of an asset or multiple assets (Matthews, 2010).
- **Lessee:** The company or individual who has the right to use the assets of the owner in exchange for payment (Matthews, 2010).
- **Lessor:** The original owner of the asset being used by the lessee (Matthews, 2010).
- **Leaseholder:** The agreement that transfers the mineral rights of the lessor to the lessee (Matthews, 2010).
- **Royalty interest:** A fraction of the proceeding made by production that is paid to the lessor, often on a monthly basis (Matthews, 2010).
- **Rule of capture:** If a resource is below a community but a well is build on a specific property then whatever comes out of that well belongs to the person capturing the resource (Fort, 2013).
- **Non-participation royalty:** Mineral ownership and land ownership are separated for a specific period of time (Matthews, 2010).
- **Fee interest:** All of the surface mineral rights (Matthews, 2010).
- **Mineral fee/estate interest:** Recognized by law as the most complete ownership of minerals, the right to use the land for the exploration,

development, and production. The owner of these rights may be different than the holder of the surface rights (Matthews, 2010).

- **Pooling:** In terms of fracking, it is the joining together of tracts of land, typically small or a portion, in order to have enough acreage to obtain a well drilling permit and to share production and benefits (Fort, 2012).
 - **Voluntary pooling:** When the lessors agree to pool their tracts of land (Fort, 2012).
 - **Mandatory/forced pooling:** When a lessor is forced to pool due to having an insufficient amount of acreage and the terms of their lease allow the lessee to combine their property with others (Fort, 2012).
- **Utilization:** The consolidation of mineral interests covering all or part of a common source of supply, typically there are multiple wells as opposed to pooling, which has many tracts of land producing for a single well (Fort, 2012).
- **Executive right:** The right to grant a lease (Matthews, 2010).
- **Non-executive mineral interest:** An individual holding this interest May 7, 2013 not develop or execute leases and are, instead, bound by the interests of individual or group providing the land (Matthews, 2010).
- **Primary term:** The period of time a lease must be honored, even if there is no production or payments made during this time unless specified otherwise in the initial contract (Matthews, 2010; Fort, 2013).

Leasing Tips

It is important for a landowner to learn what the company they are leasing to plans to produce from their property (Tice, 2012; PAR, 2012). Knowing whether or not their property will be producing oil, shallow or deep gas and where they will be drilling for these substances can change a lease significantly (Fort, 2013). If only these formations that the

company expects to produce are leased then this allows the landowner to later negotiate if other deposits are found in other owned formations. There are usually bonuses for signing, though that depends on the time of year and local taxes so it could benefit the landowner to have their signing bonuses paid in installments as opposed to one upfront lump sum.

The lease should specify whether or not gas will be stored on the landowner's property and if this extends the term of the lease (Fort, 2013). Gas storage rights are able to be negotiated and it is often wise to do so in order to receive additional payments even if there is not active drilling on the property (Tice, 2011). Not all land requires a well to be located on the property and if the landowner does not desire one they may include a "surface non-disturbance" clause which will deny the drilling company the right to use any part of the property's surface (Fort, 2013). Additionally, many leases give the company the right to build transmission lines over/across the property, which may be long or large and bulky, along with related facilities (PAR, 2012). A "transmission line easement" can be negotiated in order to keep the landowner's property mostly or completely free of these facilities (PAR, 2012; Fort, 2013).

A landowner may find it beneficial to enter into a pool (Fort, 2013). It is expensive for a company to drill several different wells on smaller properties and they typically provide more compensation if they only have to drill a single well that taps into several properties (Fort, 2012; Fort, 2013). Pools are often established out of fear that one of their neighbors may drill a well and collect the royalties for mineral rights they all share, siphoning off the resources; if one is established then the group may profit from their collective minerals (Baca, 2011; Fort, 2013). Problems may arise, however, if a landowner wishes to pool but in order to reach their property the well must be drilled underneath a separate property with a landowner who does not wish to pool. This will be discussed in further detail in the following chapter. A pool is typically established to be, in most states, of a minimum acreage of 640 (Baca, 2011).

Leasing Pitfalls

There are several common issues that typically arise during the leasing process. On occasion, a landowner will be presented with papers that agree to market the landowner's oil and gas rights to third parties though they might appear to be leases (Fort, 2013). If these agreements are signed before negotiating the terms of the lease that these third party companies purchase these terms will no longer be negotiable (PAR, 2012). The landowner should include a provision in the lease to that they be notified when their property has been assigned to one of these third parties or if a company terminates operations (Fort, 2013). Often initial presented leases will include a clause, known colloquially as the "Mother Hubbard" clause, that the landowners are agreeing to lease all their land, not just the property outlined specifically in the lease (Fort, 2013). If a landowner can negotiate a "Pugh Clause" into their lease than they will be able to lease the land that is not being produced from or held for production to other companies (Tice, 2010; Fort, 2013). A "vertical Pugh clause" allows other companies to lease formations of gas discovered deeper than the formation that the first company is leasing (Tice, 2010; Fort, 2013).

Many companies lease more properties than they are able to drill in for the next two years, the time period considered the standard "primary" term (Tice, 2012; PAR, 2012; Fort, 2013). Leases, for this reason, may exceed two years in order to give the company time to drill (Fort, 2013). However, the more time it takes for the company to actually drill on the property the longer it will take them to begin paying the landowner their royalties on the land, which is where most landowners make the substantial amount of their money from the lease (Fort, 2013). Some leases may specify that the landowner receive "delay rental payments" for each year there is no drilling on their property (Fort, 2013). Pennsylvania's statutory minimum royalty interest is 12.5% of the gross (Jacobson, 2011). This amount is not standard, only the minimum expected amount, and it can be negotiated (PAR, 2012; Fort, 2013). Also, leases should specify when the royalty payments will begin, typically beginning within ninety days after drilling and continuing monthly thereafter (Fort, 2013). However, some landowners need to check their leases carefully to make sure

it is not a “paid-up” lease where no payment will be made to them beyond the initial signing bonus during the first primary term of the lease (Fort, 2013).

Pieces of the landowner's property may be damaged or completely destroyed during drilling, including aspects of the property that may be vital to their livelihood such as roads and crops (PAR, 2012; Fort, 2013). However, the company may not inform the landowner of this during the lease negotiation process (Fort, 2013). The landowner should take care to ensure that they will be compensated for this destruction by including language in the lease that holds the company accountable for any damages the property sustains (PAR, 2012).

Discussion

Fracking is full of a great deal of technical terminology, most of which is difficult for laypeople to parse without guidance of some sort. The above pitfalls listed are common ways for landowners to end up in leases they do not significantly benefit from or even leases where they lose more money in property damages than they gain. In another chapter I will write on aspects of the leasing process that do not directly deal with the contracting process, such as factors that influence decision making and knowledge levels laypeople typically have about fracking and the concerns surrounding it.

Environmental Justice

This project was concerned with justice for people, distinguishing it as an environmental justice project, from its initial conception. However, in order to fully explore the environment justice themes of the project and why I chose to pursue them, I must first establish what, exactly, the concept is.

Justice itself needs to be defined before the components behind a more specific form of justice may be explored. Justice can be broken into three concepts: distributive, procedural and justice as recognition (Walker, 2009). Distributive justice is concerned with the equal sharing of resources and risks while procedural justice is concerned with who has influence in the way decisions are made (Walker, 2009). Justice as recognition,

however, is concerned with who is and is not valued by society (Walker, 2009). These three ideas contribute to the larger definition of justice itself and with these concepts in mind that environmental justice may be examined.

The definition of environmental justice varies from group to group with the EPA defining it as “...the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (Walker, 2012, pg. 8). They even provide their own guidelines for when they feel it will be achieved, citing equal protection from hazards and equal access in making decisions about the environment in which they live (Walker, 2012). Pennsylvania, like many other states, has made a move to define environmental justice for itself. In a 2001 report to the Pennsylvania DEP by the Environmental Justice Work Group the foundation for the state's definition is laid. Environmental justice is defined as “the fair treatment and meaningful involvement of all people with respect to the identification of environmental issues, and the development, implementation and enforcement of environmental policies, regulations and laws” (EJWG, 2001, pg. 11).

Examining these given definitions closely a theme emerges. It seems to be that environmental justice is concerned with equality for all people, regardless of any dividing factors, involving them and insuring fair and safe environmental development alongside related policy making and regulations. People deserve to live in environmentally safe areas and should have the agency to make sure this is so. Proponents of environmental justice are focused on justice for people within the environment, not justice for nature itself. (Walker, 2012). It is a solely anthropocentric movement. Of course, organizations would not have the need to have formal definitions of environmental justice if it was not in response to a need found within local and national communities.

Traditionally, the environmental justice movement has been concerned with the disproportionate number of environmental burdens placed on communities composed of primarily of minorities (Rechtschaffen et. al, 2009). Within the United States, the social

movement that has developed the goals of environmental justice has particularly concerned itself with environmental racism due to the skewed burden placed upon people of color (Rechtschaffen et. al, 2009). This was a response to the injustice faced by these communities. Members were often not consulted on development projects within their areas of residence, meaning that they, unknowingly and/or unwillingly, could have potentially hazardous industries or landfills placed within a short distance of their homes, as was often the case throughout history (Rechtschaffen et. al, 2009). African-Americans, for example, are 79% more likely than whites to live in areas with poor air quality (Little, 2007) and make up a substantial amount of the whole of people living below the poverty line (Little, 2007). While the number of minorities in Pennsylvania is low (USCB, 2012b), there is still a sizable amount of the population living below the poverty line (USCB, 2012b).

This project directly concerns itself, specifically, with people's relationship with potential or present fracking leases. It is my goal to discover if they are able to make fully informed decisions on whether or not to lease their land, and, if so, how easily. These people are members of low-income households, if not below the poverty line, and this indicates they have a lack of financial safety net (Jacquet, 2009). However, to say that these people are facing an environmental justice problem, if it is found that they are not being compensated fairly or not being educated about their decision to lease their land, would go against tradition. They are not having toxic waste dumps or air-polluting factories placed into their community without permission; they are, inversely, agreeing to have this potentially hazardous procedure done on their own property for their own financial benefit.

However, an argument can be made that due the struggling economy low-income households do not truly have much of a choice about agreeing to lease. This will be explained in further depth later on, but many of these households risk losing farms or other properties that have been within their family for generations and fear waiting for a better offer, unsure of whether or not it will come along. This would indicate that these people

are being robbed of agency, unable to really have a choice when they stand to lose their homes. One of the requirements of environmental justice demands that people have the real ability to hold influence over their community and that clearly is not true for these households. Another requirement of environmental justice is the fair treatment of people and the fact that low-income households are far more likely to be in positions where they must lease their land hazards that may be related to fracking are disproportionately shouldered by this population. This indicates that fracking may, in fact, be an environmental justice issue.

Reflections

The subject of hydrofracking is both large and dense. News articles covering the related science and controversy are released literally on a day to day basis nationally, alongside hundreds of articles written for newspapers in areas directly affected by fracking. Documentary, has helped to further spread awareness about hydraulic fracturing and the buzz surrounding it, allowing the news to penetrate into areas where fracking is not a part of daily news or life. Much of the material in the news seems to either try and prove that fracking is safe or to warn against its dangers. In fact, when fracking is discussed most of the conversation seems to be centered around the related environmental issues. Environmental justice issues, however, should be just as large a part of the conversation. Many people are agreeing to leases without understanding the terminology and cannot afford to hire someone to look over their contracts. Lawyers, like Jeffery. E Fort, are typically unsympathetic to this view, viewing themselves as an invaluable investment as opposed to the costly expense many households tend to view them as.

However, the above assessments need to be further evaluated. Personal interviews must be conducted in order to view the fracking leasing process “from the inside.” After conducting all of this preliminary investigation I decided it was time to move on to finding people who were willing to speak with me.

Chapter Two: The Down and Dirty, Behind the Scenes

Grievances

I have already touched on some of the issues people have with the hydraulic fracturing leasing process, and these problems have been cited across the United States. Many of the lessors livelihoods are supported by small farms, though they have realized that this way of life is earning them less and less (Worthington, 2012; MacIssac, 2012; Esch, 2012). It seems, to many, the most logical way to combat the stagnant economy and try and save their farms (Worthington, 2012; MacIssac, 2012). However, this desperate need puts them in a poor position for negotiation. Some people have, essentially, “lost” their property due to accidents that occurred during drilling that contaminated their water supply (Lustgarten, 2011; Hargreaves, 2010). If there had been a provision set up in their lease agreement, however, that would pay for this form of damage, then they would have at least been compensated (Fort, 2013).

Some, or perhaps quite a few, of these potentially desperate landowners are uninformed about the risks, having little to no outside knowledge about fracking or leases prior to signing (Navarro, 2011; Urbina, 2011). It is rare that the company, hoping to a secure a lease for as little as possible, would give landowners full information (Fort, 2013). Hundreds of lessors in New York state have filed lawsuits against fracking companies due to feeling misled by the initial lease signing (Navarro, 2011; Gifford, 2012). A common theme has emerged; people are discovering things about their lease on which they were previously uninformed (Navarro, 2011). Specifics on what the lessors felt they had been misled on often included the company's length of stay on their property, compensation for the use of their land or damages, the ability for their property to be damaged at all, when payments would begin and how much they were being paid (Navarro, 2011; Gifford, 2012).

Of course, there are some cases where people literally have no choice but to sign a lease to drill. Pennsylvania has the right, as many states do, to force landowners into a pool (Pifer, 2012). Forced pooling was created as a measure to compensate landowners whose resources are being used by other members of a pool (Fort, 2013). This is because

Pennsylvania law, alongside many other states, does not prohibit a well being drilled into one property so as to capture resources from a separate property (Pifer, 2012). In response to this, in 1961 Pennsylvania ruled that, in wells dug at least 3,800 feet below the surface, all of the owners of the tapped resources were subject to pooling (PA Code, 2013). It is illegal to waste gas (PA Code, 2013). A landowner that desires a well on their property but does not have a large parcel of land, or only has a small strip of land that may produce oil or gas, may file for an “integration order,” which means that they are filing to pool their neighbors' properties along with their own (PA Code, 2013; Fort, 2013). There is no requirement for any type of majority to be counted in order to for the integration order to be granted, nor does their interest have to be assessed (PA Code, 2013; Fort, 2013).

This takes care of the “problem” of landowners who want to drill but are separated from others that wish to because of a landowner who is either against or unaware of the situation. This is also true in the situation where a landowner's property sits at the edge of other properties that have decided to pool and drill. Pennsylvania law wants to be “fair” and not allow their minerals to which they have rights to be “stolen” by all other participants, thereby forcing them to drill as a compromise. These landowners are not just people who are against fracking for environmental concerns; in some cases, the forced participants may have been awaiting for a better deal from other companies. Landowners who are mandated to pool have three choices: contribute to the cost of the well and profit, not to pay and be forced to share in the gas profits after a 'risk aversion' penalty is subtracted from them, or simply receive the state-mandated minimum royalty payment, the low 12.5% of the gross (Baca, 2011; Jacobson, 2011). There is no getting out of it: landowners who choose none of these options are automatically enrolled in third plan (Baca, 2011). As of 2011, Pennsylvania law currently excluded forced pooling from occurring if it involved the Marcellus Shale (Detrow, 2011). However, I was unable to uncover if that is the current law on the books.

A man in New York, Joseph Todd, discovered in 2009 that he had become part of a drilling unit (Baca, 2011). However, he soon discovered that he had a large amount of methane contaminating his water (Baca, 2011). This has been the case for uncompensated

households as well (Baca, 2011). Other landowners have had to deal with the same issues, and also report late or absent royalty payments (Baca, 2011). Many oil and gas companies claim that forced pooling is an environmental positive (Baca, 2011). They disturb the environment less if they drill fewer wells, after all, and it allows them to be efficient with the few wells they do drill.

Environmental risks, as established in the previous chapter, seem to go hand in hand with fracking. The issue of contaminated water seems to be widespread. However, many of these lessors were uninformed of the potential risks that come with the fracking process (Navarro, 2011).

Interviews

Doris Harvey agreed to meet with me the day after a blustering winter storm, the likes of which are only known to those who live in the land of lake-effect snow. After I'd made my way to the rural edge of Meadville, in Union Township (scene in Figs. 3 and 4), and traveled down the winding driveway across her one hundred and three acre farm, Doris greeted me in her home with scones and bottles of Perrier's fizzy water in hand. She told me if we were going to talk about fracking it didn't seem right to her to offer me her own drinking water. What was surprising about that was that Doris had not yet signed a lease. However, through her own detective work, she had discovered that even properties that were simply nearby wells could have bad water. She told me that made her sad to think about; her family had operated the farm for five generations and she planned to pass it down to her own children and up until then it had always been "nearly pristine."

Ever since companies began approaching her to try and get her to lease her land Doris has been doing research. She cannot afford a lawyer and does not use the internet, instead cutting out and saving every article pertaining to fracking that she sees in the newspaper. She even had a stack of clippings kept separately, articles that others had cut out and mailed to her. She has been to every meeting that happens within the area related to fracking, and she's tuned in to every program on television that she hears is related to fracking. "People have signed up for \$35 an acre," Doris told me. Her cousin had gone for

that deal but Doris was nervous about the amount. She was not prepared to lease her property until she had found out everything she could about fracking. Unfortunately, the people who met with her often did not attempt to explain much beyond the fact that she was being presented with an “amazing opportunity.” Now that she's had more time for research she's discovered that, locally, people had been receiving initial signing payments of \$3,000 to \$4,000 an acre. “They tried to get me to take a cheap deal.”

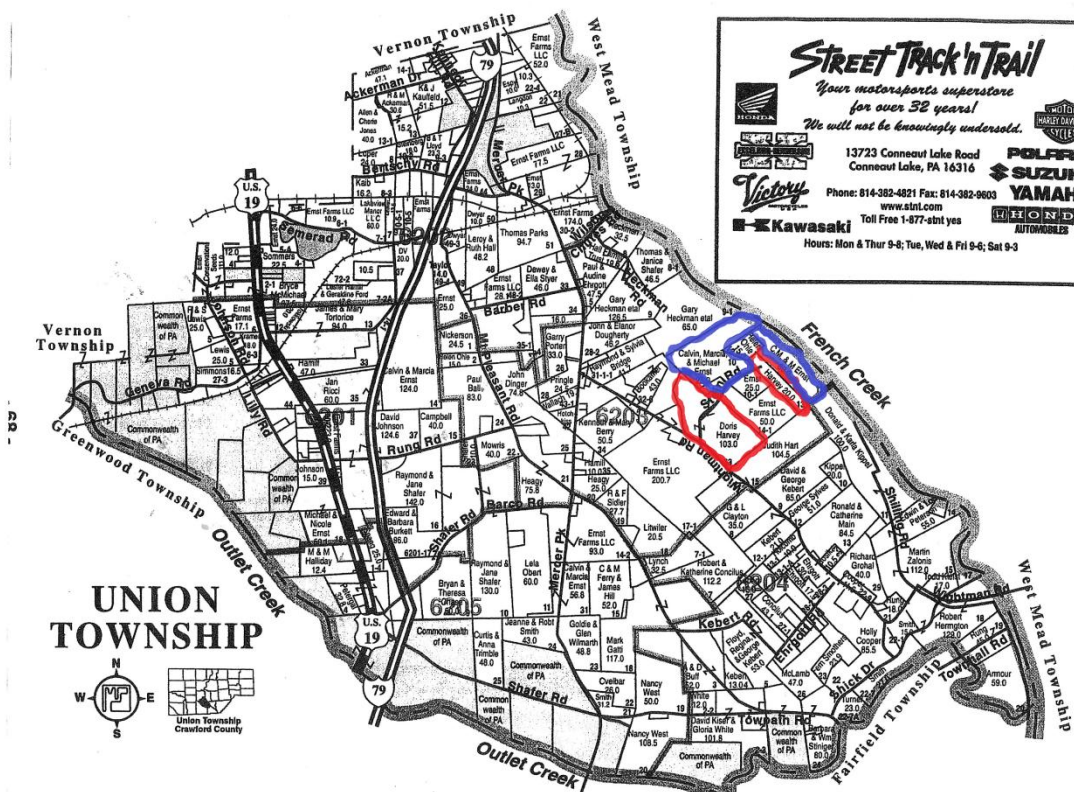


Figure 3: Union Township. The areas outlined in red are Doris Harvey's property and the areas outlined in blue are Michael Ernst's personal property.

She received notice in the mail from a company that conducted seismic testing that wanted to “throw dynamite down a hole in [her] land” in order to assess how much natural gas is below her property. Doris, however, had heard that even testing her land might damage or contaminate her water supply and she chose not to go through with it. This particular company wanted to pay her \$28 an acre.

Doris has seen people try and get her to sign a lease using a variety of methods. A salesman that represented a Christian company, Guardian Energy Exploration, had made a

point, said Doris, of hosting events on his property, letting children play with his horses while he talked to people about how he, a good Christian, thought that it would be best for everyone to sign the leases he was offering. “When someone brings their beliefs, their Christianity, the fact that they're Christians into the conversation that we're having-- he's a salesman. He's selling me... on leasing my property at \$35 an acre. I'm not going to go for this. This turns me off immediately.”



Figure 4: A close-up of Doris Harvey and Michael Ernst's properties

Doris and several of her neighbors and friends have formed a small coalition where they try and discover as much about fracking as they can together. Opinions differ all around the group but they try and support everyone's decisions; Doris herself is pretty cool on the whole fracking idea after the amount of investigation she's done. She says that she could really use the money but doesn't want to risk her water. She's very fond of the pond directly beside her farmhouse, and the geese that make their home there as long as they don't come up on the grass. Doris was kind enough to try and find me someone else to

interview picking out a friend, who was actually able to come over for a visit that day, from her fracking investigation group; this was someone who was heavily involved with trying to understand fracking and who was looking to sign a lease that was beneficial to him and the both of them lived above the Utica shale. His name was Michael Ernst and he has been looking for the past few years for this ideal lease.

Michael Ernst and his family own quite a bit of Union Township, if the property he owns, his entire family owns, and the property they have picked up from buying former landowners' acreage, are combined. He isn't too fond of the leases that came along with some of the formerly owned land because he thinks the former lessors didn't get the deal they could have. Still, it has helped to educate him on what to look for when a lease is presented to him. Michael is actively trying to lease his property, though he is not in the hard financial position that Doris is in; he simply hasn't seen a lease that was up to his standards.

The same salesman that approached Doris Harvey, touting his Christian ideals, came to Michael's home to visit him and his family to ask them to sign their lease agreement. The representative told him that signing the lease was what "God wanted him to do" and invited Michael and his family to pray with him in Michael's own kitchen so that they could better understand God's plan. Michael didn't go for it.

However, this or other techniques used by representatives seem to succeed. Michael talked about how some people are convinced that they are going to be making real money off of their land because of the way the representative talked it up. He even saw someone go out and buy a brand new luxury vehicle after signing their lease, which is actually a scene straight out of Matt Damon's *Promised Land*. These people might not even even see a first payment as, often, the local oil and gas companies purchase leases to sell to third parties; some leases may never be purchases at all.

"You don't want to believe that anybody ever lies to you, or doesn't tell you the truth," said Michael. However, he's heard stories about lease salesmen making up things to get their sale. He heard a story where a salesman approached a local farmer and told him: "You should this lease, all your neighbors have signed these leases." The farmer said, in

response, “Gosh... you think my sisters would have picked up the phone....” Michael says he hears stories like this all the time. He hears, from every salesman out there, that they are giving him the best deal and that it won't get any better and yet “usually, tomorrow they show up with more money.”

Michael had a neighbor call him after he had met with a representative of Guardian Energy Exploration and he told Michael about how badly this salesman wanted him to sign and how he had made all these big claims and was coming to Michael's house next to try and get him to sign. Michael greeted the representative at the door and the man began his pitch telling Michael that he wouldn't have to lease all of his property, just a small amount, in order to make the well possible. He was showing Michael a map and outlined in yellow were all the properties that had agreed to lease. However, Michael spotted that the neighbor he had just been speaking with on the phone, who had not signed, was outlined in yellow. “I actually put my finger on the neighbor's land,” said Michael. ‘Everybody here is leased with you? Everyone outlined in yellow right here is leased with you?’ and the guy said, ‘Yeah.’” Michael said that didn't let on that he knew the salesman was lying and went through the motions until the man left. “Another lie that you often hear is that ‘the government has regulated the percentage an oil and gas company must pay the landowner... the representatives will claim that 12.5% is what they must pay.’” Michael called 12.5% the “minimum wage” of royalties and that a landowner should really be receiving somewhere between 17-18% royalties.

Michael and Doris bid me farewell at the end of our afternoon together and I made my way back down the now slushy driveway and onward to Allegheny College to compile what I had learned.

Conclusions

While many official sources were able to give me a laundry list of complaints that were often raised about the leasing process what I learned from my interviews was another kettle of fish. They told me, flat out, that they had been lied to and the lengths that representatives of oil and gas companies would go to manipulate them. These sorts of

claims are not typically found in traditionally credited sources, most often showing up on anti-fracking environmental or liberal websites that never seem to cite anything. However, I was able to hear these charges levied against these company practices in person, from the very people who had experienced them.

Many potential lessors seem to have to take the time to educate themselves about fracking and lease laws, as many oil and gas companies see little to no incentive in assisting with the process. Explaining the potential risks to property and person stands the risk of driving away potential lessors. They seem to be relying on poor communication amongst the landowners in order to use them as leverage against one another to secure a signing; forced pooling might occur in that case and the landowners left out would not have the ability to negotiate. The oil and gas companies know that they eventually would have to agree to the lease. More than that, these companies seemed to have strategized on what beliefs they believe are held most dear by the community that they are trying to move into. While Doris and Michael were unimpressed by the Christian salesman's attempts to bring religion into why they should lease with his company, others may have been moved.

Michael and Doris spoke did not spend much time addressing the technical terms of the leases they were offered. Much of what they knew about leasing and fracking was self-taught, after all, and while they seemed to know what signs to beware of when agreeing to a lease they did not name specific clauses that they would like included. Michael was not a low-income landowner and so could afford to have a lawyer look over the lease once he found one that paid him enough. Doris, on the other hand, was far more cautious. She was very concerned about her property and potential damage to the environment and her water. As a member of a low-income household, she stood the most to lose or gain depending on how her lease was handled. She was protective of her land and, while tempted by sorely needed money, she distrusted all of representatives who had approached her with leases.

On the other hand, Michael did not risk as much by signing a lease as Doris and was far more concerned with the amount of money he would receive and if the agreement was fair. When asked about environmental concerns he said that the DEP signing off on

fracking was as much assurance as he needed about whether or not it was safe. Due to his assets he could afford to wait longer than Doris and risk more than she, having a safety net to fall back on should anything in the fracking process go awry.

Doris's vulnerable economic position made her more cautious but she and Michael both assured me that they see plenty of people in bad financial situations agree to bad deals because they desperately need the money, walking away with \$20-\$40 an acre, no compensation for any damages that may occur and a meager 12.5% of the production royalties. Low-income households truly are being taken advantage of by some oil and gas companies, and in the worst case scenario they may be played against one another, tricked or waited out until they take whatever is offered to them.

Chapter Three: Methods

Process

I began my process by doing a little detective work. I sifted through dozens upon dozens of online news articles about fracking and how people felt about the subject. I came across several articles that talked about how farmers in New York were dissatisfied with their lease agreements, their complaints ranging from poor compensation to a lack of transparency from the companies. Some did not even really understand what fracking was before signing the agreements. If these things were happening in other parts of the country I knew that there was a distinct possibility that they could be happening in Pennsylvania. I now knew what sort of things I was looking for when I began to track down subjects that I wanted to interview.

My focus on the leasing aspect of fracking made things very difficult at first. I have no background in legal knowledge and almost all of the language used in drafts of leases I had examined through online sources seemed almost alien in nature. Up the creek without even a boat, this quickly led me to decide I needed to try and find a legal counselor with whom I could speak. I began to contact local offices that dealt with fracking and oil and gas law. Unfortunately, many of the offices that I spoke with did not return my calls. One particular office in Meadville and I were in contact weekly in my attempts to arrange a meeting, though it eventually became clear to me that I was no real priority and I would do well to look elsewhere. I put out the call to my friends that I was looking for someone to speak with who had expertise in the law behind oil and gas, preferably one who understood Pennsylvania law. A friend put me in contact with a lawyer who was a friend of his family. However, when I called to conduct a phone interview my contact asked for me to explain my project's premise. She decided it was unsafe for her professional life to be connected a project that she viewed as “anti-fracking” and quickly ended the interview.

However, one of my old friends, Sam Kessler, was able to help me find someone. He connected me with a close friend of his, practicing attorney, Jeffery E. Fort. Jeff Fort's responsibilities as a lawyer include advising clients, either lessees or lessors, on oil and gas

leases and related laws, environmental regulations, and contract obligations. Before specializing in oil and gas he had practiced environmental law so he had a great deal of interest in my project. However, he was an expert in Ohio law, so while he could educate me about federal law and what terms meant, he could not tell me anything specific about Pennsylvania. Before we spoke, he directed me to the blog he ran in order to teach me the basics about fracking law and this website proved an invaluable source. After that, his lack of specific knowledge pertaining to Pennsylvania turned out to not be an issue. He made himself available any day during the week so I could contact him whenever I had questions. I wanted to know upfront what signs a person should look for in order to know if the lease they are being offered was beneficial to the lessor or not, but he informed me that it was more complicated than that. I used his blog and other sources he gave me to look up specific terms that commonly were seen in leases, asking him to clarify whenever I didn't understand (which was often). Eventually, he helped me assemble a very list of terms and clauses that people should understand if they intend to look over their own lease.

Jeff eventually found and directed me to another fracking blog headed by lawyers who knew the specifics of Pennsylvania law, and that was the last of the legal information I needed before I could move forward. I could understand what should and should not be included in a lease agreements under most circumstances, and what I might expect to find in both solid and crooked agreements. I wanted to make sure that I firmly understood at least the basics before I began searching for subjects to interview. This deeper understanding of leasing would help show respect for my subjects and allow me to better listen to my their interviews.

After conducting all of this research I needed to locate subjects. I wanted to choose people that lived in the relatively local area and I knew, from the articles I had gathered, that quite a bit of fracking had been conducted in the Pittsburgh area. I have contacts with alumni in the area so I asked for their help in locating my subjects, though none of those efforts proved fruitful. While I searched I decided to develop a set of criteria in order to assess if they would fit the requirements of my project and also to give me some informal background about them so I did not walk into a blind interview.

My initial criteria included:

- They must own land
- This land is in western Pennsylvania
- Their households could be classified as low-income
- A willingness to share their story with me
- A willingness to allow their story to be included in this paper
- They must have had their lease for at least six months

From this list I could see that the most difficult criteria for me to ascertain would be the government designation of “low-income household.” The first issue had a quick-fix. I consulted with Dr. Kate Darby and she informed me that finding a household that fell below the poverty threshold by the standards of the federal government would be quite difficult as the government's standards are exceedingly low. Instead, she said many researchers develop a formula that raises the income levels of households based on how many people live there. She offered a formula that she often saw used in research projects and I adapted it, raising the maximum level of income per household. Using that information, and the criteria above, I developed a questionnaire that would allow me to tactfully find out the answers I needed to know from questions that otherwise may have been sensitive, such as household income. I intended to give this to any candidate that was interested in my project. This questionnaire is located in Appendix A.

Locating my subjects was the most difficult aspect of this project. I was having a lot of trouble finding someone who was both low-income and willing to speak with me about their experiences. It was only with the help of Dr. Richard Schindler that I was able to find someone who was willing to speak with me. Her name was Ms. Doris Harvey and she was initially reluctant to meet with me due to fear of being recorded but she met all of my requirements, except that she was not currently in a lease. In fact, she was unsure about whether or not she wanted to enter a lease at all. She had been educating herself on every aspect of fracking for the past few years and had been offered leases by multiple companies which she wanted to share with me. I decided that this was better than nothing and,

eventually, after a short conference over the phone, she and I agreed to meet. I went to her home that week and she gave me a tour of her farm as we became comfortable with one another. Doris listened to my worries that I had only found one subject to interview and arranged for me to meet with Mr. Michael Ernst. Michael did not meet my all of my requirements but was able to talk about his close friends' experiences instead and was willing to use specific names and companies in his interview, something Doris feared.

I spent one long afternoon with both of them, filming their interviews as they worked off of one another to tell the stories of their experiences. However, I still needed to figure out how frame my pieces and I needed to figure out how to develop a website to host them on.

Design

In order to understand how I would undertake the website portion of my project I needed to first understand how would be distributed and what audience I would be targeting through that distribution. This would inform how I what content I would include in my website. I decided that the people who needed to see this information would be people who might find themselves in the same situation.

I consulted several online sources, along with having several consulting sessions with technology consultants who work for the Allegheny College Learning Commons, in order to understand the best way to build and structure my website. The content of the website needed to neatly focus on taking the complex legal information on leasing and break it down so that it could be easily understood and digested by an audience primarily composed of curious laypeople.

Before attempting any of that, however, I needed to explain the basics of what fracking was and explain some of the concerns surrounding the process, linking to credible sources as I went. Some of this information would be put on the front page of the website in order to catch attention; an additional, more detailed explanation of the process would be posted to another page. This links to another page where the main grievances about the fracking process are listed and explained, linking to stories about these occurrences. A

separate page explains the basic legal ins and outs of the leasing process for fracking land and bullet points of what a landowner should expect to see in their lease agreement. This has some contact information for visitors to get in contact with relevant legal sources, though more contact information is held on a separate page. This contact page links visitors to groups that are act as advocates for lease-holding landowners that feel as though their lease agreements are unfair. Additional information on how to contact groups that are concerned about fracking was included and, of course, contact information on how to get in touch with the fracking companies themselves if website visitors feel this is the best path for them. Finally, I decided to make an FAQ page, as I have found, from personal experience, that those tend to be the most helpful to me, and I added a short section explaining who exactly I was and why I wanted to host this website. The website that I created is hosted at the following address: <http://behindthefrack.weebly.com/index.html>.

Limitations and Challenges

Going into this project, I had absolutely no knowledge on what, exactly, a lease was and how someone went about entering into one. Finding this information was extremely difficult as well, only becoming manageable once I had an out-of-state legal consultant willing to work with me over the phone. I was lucky that he had so much free time to spare for me and expected no fee for all the consultation he gave me. I had no legal background whatsoever, and so I was unable to parse the legal documents surrounding lease agreements. There was no simple explanation on the process that was easily found. I would then have to take this information and create an easy to read page on a website, something that is rarely, if ever, done, judging by my scouring of the internet; otherwise I would have used this information as a resource.

Of course, I had no idea, going into the project, how to physically build a website. This presented a lesser challenge than finding a willing legal expert, however. My brother taught me how to use a few free web page development services and I ended up choosing Weebly's services. I had never designed a website before, however, and this offered a new challenge of a different nature. I needed to look at some of the most trafficked websites

that offered information and services on par with what I wanted to offer so that way I could take my cues from them about what makes for an effective layout.

The second largest challenge was locating subjects and the ethical considerations I needed to make surrounding the editing process of their stories. I only found my first subject because Dr. Schindler overheard my dilemma and was sympathetic to my cause, arranging for me to meet with one of his friends, Doris Harvey who was involved. I only found my second subject, Michael Ernst to interview because Doris was a close friend of his. During the editing process I was highly conscious about wanting to faithfully represent them, especially considering how nervous they initially were about being filmed.

Discussion

I set a project before myself, not grasped just how large a task I had set. I think that, ultimately, I should have focused on understanding fracking leases and their effects on people and not added in the video component. I also did not properly estimate just how much time it would take to find a lawyer willing to speak with me, and how it took an even longer time to find willing subjects. However, I am still proud of the project that I have assembled. The time I invested in interviewing Doris Harvey and Michael Ernst was wisely spent as they told me things about the leasing process that are difficult to find in many, if any, peer-reviewed sources. Creating a website on top of doing my research and making my videos made this task all the more challenging but I still stand by my final product.

If I had to do it all over again I would limit my scope further but I feel that setting these tasks before myself stretched my abilities, gaining new skill sets and growing as a person from it. I really enjoyed working and meeting with people and I do feel that the work I did was important.

Chapter Four: Conclusion

Low-income landowners seem to be at a serious disadvantage when negotiating with oil and gas companies. In order to obtain a lease a company executive might lie to a varying degree of severity about how many people have signed leases in their community, how long the primary term of the lease is and what may go on during that term, the level of compensation the lessor may be entitled to, whether in upfront or royalty fees, and how competitive that rate might be. They may even choose to coerce landowners into leases by claiming that their faith calls them to do it.

This is not to say that all low-income landowners are “helpless” in the face of these circumstances. Doris Harvey was tough, taking it upon herself to learn all she could about fracking and leasing. She, at no point, felt that she had no control over her own future. She has almost completely decided not to lease her land even though she, and her farm, could use the funds. Not all companies actively seek to deceive potential lessors either. Doris told me many of the information sessions she attended were hosted by oil and gas companies and that they seemed to answer all of the questions the crowds who gathered posed with a level of sincere care.

However, this project did find that information and stories gained from personal testimony are of a different quality than sources obtained via articles. I continue to be genuinely invested in the story of how Doris Harvey and Michael Ernst will continue to coexist with representatives that want nothing more than to finally lease their large tracts of land. They were good people with important experiences to relate and, I believe that the information they helped me gain that I posted on my website will help many others that may find themselves in the same situation.

I believe that low-income landowners would be better equipped to deal with the leasing process if more information sessions were held across fracking-heavy areas. While it is difficult to make up for the lack of a professional lawyer when overlooking a lease agreement, if one cannot be afforded than these leasing sessions, along with resources

assembled online, may be a low-income landowner's best guide to negotiating their way through the process, whether or not they ultimately choose to sign.

Hearing the stories of the people who not often paid attention on the national scale is important. It brings new perspectives to those members of the audience who are probably only hearing a filtered perspective from a removed location. We are all responsible for what happens to one another and it is important to try and listen to the voices that are not often able to speak above the national, day-to-day chatter.

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Appendices

Appendix A: Screening Questions

- Where do you live?
 - Must be within a three hour drive
- Do you own land?*
- Have you been approached by a company that wished to frack on your land?*
- Have you agreed to lease your land?*
- How many members live in your household, including yourself?
- Is your income above or below...?*

2012 Poverty Guidelines for the 48 Contiguous States and the District of Columbia

Persons in family/household	Poverty guideline
1	\$19,547
2	\$26,477
3	\$29,090
4	\$33,407
5	\$47,267
6	\$54,197
7	\$61,127
8	\$68,057

For families/households with more than 8 persons,
add \$3,960 for each additional person.

- Would you be willing to have the footage I take during the interview posted online?*
- Would you be willing to let me use statements you make during the interview in my paper?
- Would you be willing to sign a release? *Critical

Background Question

- What do the wage earning members of your household do for a living?
- What times do you think you would be available for interview?
- How long will the fracking company be leasing your land?
- What, roughly, was the reason you agreed to lease?
- How long has your family owned this land?

Interview Questions:

Intention: Get them relaxed, establish a rapport. Possibly with camera off.

1. Tell me about yourself.

Intention: I want to have the base facts about the land stated to the camera.

2. What motivated you to agree to allow a company to frack on your land?

- How long has your family owned this land?
- Were you contacted by the company you agreed to a lease with?
- How long is the lease for?

Intention: I want to establish this information for the camera as well, along with finding out how they're living with the process.

3. Has drilling begun?

- Has anything in your daily life changed because of drilling?

Intention: I don't want to lead my subject but I really want to know if the company minimized current controversy and I want to see what they now know about the process. I want to know, really, how much money they expected to receive.

4. How was the information regarding the lease process presented to you? Were you told about the current controversy surrounding fracking?

Intention: I want to know how much they understood about the leasing process and the lease agreement. In The End of Country, along with many news articles that I have read, a common story seems to be that people are handed a contract without context and told they could make hundreds of thousands, if not millions, of dollars. I want to know what their thought process was and why they handled the situation like they did.

5. How did you approach the process of signing your lease agreement?

- ...How long did you look it over?
- ...Why did you/did you take this action?
- Who was involved in the process?

Intention: I could possibly gain the answers to this from other questions but I want to understand the influence of the community on their decision. I will know the climate of the town towards fracking before I go in to meet my subjects.

6. Do you know any other people in the area that have fracking leases?

- Do you know why they got leases?

Intention: In case my other questions didn't get at this info.

7. Is there anything you have found out, about your lease or about fracking, that is different from what you believed?

- How did you find out?
- How did discovering these things make you feel?
- What options did you consider to alter or end your lease, if any?
- Do you believe you have been fairly compensated?

i. Why?

Intention: I want to establish, if I could not before, their opinion on these groups.

8. What is your opinion on the concerns about fracking voiced by environmental groups?
 - What sort of things do you think these groups are saying?
9. Do you believe that you are being fairly compensated for the fracking process taking in the environmental concerns into account?
10. Why is it important that others hear your story?

Concerns Raises

- Fracking companies do not communicate how the leasing process works clearly
- Fracking companies overestimate the amount of money that the land owners will be compensated with, incorrectly, sometimes, portraying the value of royalties vs. the initial lump sum
- Fracking companies may “low ball” the true amount that the natural gas may be worth
- Fracking companies overstay the amount of time the land owners believed they would stay
- Fracking companies do not talk about the potential environmental hazards that have been raised in opposition
- Landowners are quickly pushed to sign leases or the fracking companies threaten to leave and that they'll be the only ones in their community that were left broke because of it because “everyone” is signing it

Landowners are not made aware of the potential decrease in value of their land due to the simple fact that fracking ever occurred there and are not compensated to minimize this damage