Information about Oil and Gas Leasing For Surface Owners Who Also Own Their Minerals.

May 16, 2008, Edition

Presented for educational and informational purposes only. Consult with your own attorney if you want specific advice about a lease you may sign!

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Introduction to the May 16, 2008, draft.

This is the author's first edition of this article. It was prepared in some haste because of the rapidly increasing leasing activity and several impending meetings of citizens who wanted information on the subject. A person or two on the landowner side and a person or two from industry has looked at it and seen no glaring errors, but it has not been thoroughly vetted. If you are viewing this after May of 2008, you may want to check the web site of Legal Aid of West Virginia or the West Virginia Surface Owners' Rights Organization, or any other web site where you found or were referred to this article, in order to make sure there is not a later, revised edition. Anyone who sees what they believe to be errors of any kind in this article is encouraged to contact the author so that a correction can be made in a later edition.

INTRODUCTION

This article is written by an attorney who has written a book to educate low income surface owners regarding their conflicts with oil and gas drillers. This book, the *West Virginia Surface Owners' Guide to Oil and Gas*^{*}, is for people who own only the surface while someone else owns the minerals or for people who own the surface and the minerals together, but they or a previous owner have already signed a lease giving producers too much leeway in deciding where and how the drilling and surface disturbance is to be done.^{**}

In the course of this activity for surface owners, the author of this article regularly gets questions about leasing from the lucky few surface owners who also own their minerals. Probably no greater than 30% of surface owners in West Virginia own their minerals. These lucky folks are sometimes (frequently, at the time his is being written) being approached by

^{*}To get a copy of the 's *West Virginia Surface Owners' Guide to Oil and Gas*, just do an Internet search for the title.

^{**}If there are non-producing wells on the property under an existing lease, it may be possible to get the old lease cancelled and the wells plugged, but that is not the subject of this article.

a "landman" for an oil and gas company who wants them to sign a lease of the oil and gas.

The author has no particular experience or specialized expertise in actually drafting or negotiating leases or riders or addendums etc. However, a great deal of his general knowledge regarding oil and gas exploration and production would be helpful when a surface owner is considering signing a lease to the oil and gas minerals under his surface. In particular, where the mineral owner is also the surface owner, the author is familiar with the issues that a surface owner will have with oil and gas well drilling that can be addressed in the lease. The author gathered further information from other sources and individuals, and he organized and presents it here in order for surface owners who own their minerals to have a starting place when they are approached by a landman and need to decide whether to sign a lease and if so, how and what to negotiate in a lease.

Large land owners – 1000 acres or more – have more bargaining leverage, and their potential income, particularly if there is also coal present, often justifies hiring a land managing company to help plan the development of their land, if not manage their land. And these large landowners do not live on all of those acres so they have different and probably fewer surface disturbance concerns. So this article is generally not addressed to them.

In other states there are sometimes people who have become leasing agents for smaller landowners. These agents work for surface owners in negotiations with the producers' landmen. Maybe some will crop up here in West Virginia and can be more help than just having this article to read. There is also a host of additional material on the web site of the West Virginia Surface Rights Organization (Google "WVSORO"), on which there is a specific page of "Mineral Owner Info" / "Leasing".

There may be real estate tax, personal property tax and income tax issues raised by oil and gas leases. The author generally represents low income people and has no knowledge of tax consequences relating to the leasing of oil and gas. Please consult a tax professional if that is a concern for you, or to determine whether it should be.

Finally, a short note on some terms used in this article. This is written for low income and other citizens who own the surface and the minerals together. Since that is a long phrase, these people may be called just the "mineral owner" or "surface owner" or "you". In legal jargon this person is the "lessor", the person who is signing and executing the lease, even though the lease is usually drawn up by the lawyer for the other side of the deal. The other side of the equation will generally be called the "producer". This is a person or entity wanting to come onto the surface and drill into the subsurface in order to explore for, drill for, produce and take away and sell oil or gas. Most people would call them the "driller". That term is used for them frequently in this article when talking about the actual process of

drilling a well. But sometimes the actual driller is a company that was hired by the producer to drill the well. That contract drilling company itself may hire subcontractors for parts of that work. The lease will call the party on that side of the equation the "lessee". The state statutes generally refer to them as the "operator". This article generally uses the term "producer" for the person or entity on that side of the equation when they are not called the "driller".

GENERAL INFORMATION

Think long term!

What do you want to do with your surface land? Money is a good thing, but money is here and gone, especially the up-front lease money. The land will be there forever. What else might you want to do with your surface in the future? What will the next generations want to do with the surface? What you are about to sign could very well make a huge difference in what uses can be made of the land in the future.

Time and understanding.

Understand what you are signing. A survey in New York State showed 80% of people who were approached by a land man with a "standard lease" drafted by the lawyer for the company or landman signed the lease exactly as presented to them! Many of them are sick at heart now.

If the landman is in a hurry and pressing you to sign quickly, be extra cautious before signing with them. Ask him to explain all the provisions of the lease. Does he take his time to explain everything, or does he gloss over things in a hurry?

Ask the landman, or find out on your own, where the company he is working for has drilled wells recently, and go look at them. Ask the surface owner of those wells how they got treated by the company. (That is not a sure fire protection. As explained below, these leases are often "assigned" to other producers to drill wells. Or independent contractors are hired to drill wells.)

Find out what provisions others in your area have negotiated into leases, and the dollar amounts and royalty percentages. The web site of WVSORO^{*} has links to a web site bulletin board of offers made in leases by oil and gas producers to landowners in West Virginia. Do research on production success from wells in your area and the geology. The Internet is a great place to start. For deeper research into the wells in our area the West Virginia Office of Oil and Gas has some information on well production on line, but some other information like the formation being produced only in paper files in the Charleston office.

Get a lawyer to explain the lease to you. It should not cost more than a couple hundred dollars. You pay car insurance in case of a car wreck or a house fire. Think of paying a lawyer as insurance that your land or finances will not get wrecked.

Remember. You do not have to sign a lease. You certainly do not have to sign a lease giving the producer more rights than are necessary to drill and produce on your land. Lease language is not required by any laws. Bargain for what you want. If you do sign, understand first.

As this is being written, the most common strong arm "Hurry up!" tactic being employed by landmen is to say, "If you don't sign a lease now, we or someone else will get leases from your neighbors, drill wells on them and legally drain the gas out from under your land!" This is a half truth at best. It is true, as explained in more detail later, that an oil or gas well drilled on a neighboring tract, but near your boundary, can legally drain or gas out from under your land. However, if that exploratory well is a good well, then you can have an "off set" well drilled on your side of the boundary and compete with them for the oil or gas. They know this. So it is important to them to lease up all the surrounding land to protect their interests when they drill. If they are in such a hurry to get your well drilled, then why do they want a 5 year primary term? (The "primary term" is explained later). Also, most of the leasing activity now is driven by the desire to lease the "Marcellus" formation. Although the issue is on appeal to the West Virginia Supreme Court, Marcellus formation wells are currently subject to forced well spacing and royalty sharing laws. So you could force a well on a neighboring land to share their royalty with you in exchange for agreeing not to drill an offset well. You are much better off to contact those neighbors, bargain as a group, have several landmen make you offers, and take the best one.

Who you are dealing with and why it matters.

The person who comes and tries to get you to sign a lease is called a "landman".

^{*}The West Virginia Surface Owners' Rights Organization. Google "WVSORO".

There is no governmental licensing of landmen, so no one can keep a bad landman from continuing to be a landman. There are no requirements for becoming a landman so they may be educated and trained or they may not. Some are straightforward. Some are sharp bargainers who may tell you the truth – but not the whole truth. Some others will make promises that they know will not be kept.

Landmen work generally in three employment contexts. You should ask them how they are working. If they are not straightfoward about that, do not deal with them.

An independent landman or company tries to lease your land, often linked to other lands around you, and then sells the bundle to producers. It is extra important to get all agreements in writing in detail with these landmen. The ultimate driller will take the position that they are not bound by oral agreements or assurances of the landman, indeed they may honestly say that they never have heard of them until you bring them up.

A company that intends to produce the wells themselves will sometimes contact you using a landman on their staff. There are no guarantees, but this is probably the preferred arrangement, because you know who you are dealing with, or are not going to deal with, top to bottom.

A company that intends to drill and produce wells on your land will often hire a different company or an independent landman to do the leasing for them. The leasing company or independent landman may not tell you who they are working for. This could be because the producer has a bad reputation. More likely, the producer does not want other producers to know that they are doing leasing in your area in order to avoid competition, or because they have done geologic research in the area that leads them to believe it could be good and they do not want other producers to suspect that.

So who should you deal with?

Competition is good.

The important thing is to try to talk to several different landmen. If one producer/landman wants to lease your land, another one probably will too. Find the competitors and shop around. Get them bidding against each other in what they will agree to and how much they will pay. One possible way to find other landmen looking to lease is to go down to the county courthouse and ask the people in the record room where deeds and leases are recorded for the names of the landmen working the record room looking for land to lease. Then contact those landmen. Contact the known production companies, particularly if you know others in your community who have had good experiences with them.

Should I talk to my neighbors?

That is one of the best things you can do! Talk to your neighbors to find out what they have been offered, and by whom.

The more acreage that can be leased at once the better the bargaining power. Get your neighbors together. Bargain as a group for good terms. More acreage means more leverage. The same terms you got by negotiating in a group should then be included in separate leases, one for each separate tract/owner in on the deal.

Who will they come to first?

Sometimes the landmen are strategic and go to the largest mineral owner first. Sometimes it is just the first person they can find home. Sometimes it is just who they get the title work at the courthouse done on first – maybe the easiest title history.

Conveyance or lease?

You almost certainly just want to lease the right to drill – mostly so you can lease out just what you want and put the limitations and requirements in that you want.

If you are only thinking in terms of money, a lease gives you some money up front and then royalties over time. Deeding away your minerals will give you a lot more money up front, but none after that. So if you sign a lease you risk that the wells will not be good and will get paid little royalty later, and you will end up with less total money. On the other hand if you sign a deed, you risk losing out on a lot more money later if the wells turn out to be very good. If they are certain enough of success to pay a lot of money up front to buy your land, you probably going to get more money in the long run by waiting for a royalty check. Unless they want to buy the minerals and surface and you can buy a place you like better.

And again, the brief general language of a deed of conveyance will not protect your surface interests as much as terms you can negotiate in a lease!

Oil and gas drilling vs. coal mining?

If you have coal under your land, be aware that coal companies prefer to avoid mining coal that has a number of gas wells drilled through the coal seam. The mining company has to figure out where they are and not get too close to them during mining leaving coal in place, or else buy the wells and plug them and mine through the plugged casing.

Oil well or gas well?

Most producers now are looking for natural gas. Sometimes they are drilling for oil. Sometimes they find oil when they are looking for gas.

The amount of surface disturbance etc. is essentially the same for both kinds of wells is the same during the drilling of the well.

Post drilling activity on your land for oil wells is much greater than for gas wells!

The gas flows naturally out of a gas well. A gas well will have to have a pipeline to carry the gas to market. Once the pipeline is laid, and buried sometimes, the land is reclaimed relatively quickly. There will only then be occasional visits to the gas well for maintenance, and infrequently another smaller rig in to "swab" or otherwise maintain the well.

The oil in an oil well has to be pumped out on a regular basis. It is done with a "pump jack" on the surface over the well that runs on electricity or gasoline. It comes on at intervals and rocks back and forth to pump the oil out. This can involve some noise. The oil is then stored in a large tank near the well or wells. Then a truck has to come in on the road and carry the oil away on a regular basis. This is all a relative frequent intrusion onto your land.

If they are drilling for oil, you may not want to sign a lease at all because of this extra surface presence, or you may not mind.

Coal Bed Methane.

Coal bed methane is the gas that is produced from the coal seams under your land. If the coal has been separated from the surface and/or the gas years ago, and if the coal bed methane was not mentioned, then you may find yourself in the middle of a huge two or three-way battle about who owns the coal bed methane. But if you own all the surface and all the minerals, you have the power to lease it out and get paid royalties on wells drilled to produce

it. If you plan on having the coal mined, it will not happen until after the coal bed methane wells are no longer producing, 18 years more or less. You should know that if you lease the coal bed methane to a gas producer, a coal mining company that comes along later may have qualms about mining through a system of wells the drilling of which it did not oversee.

These coal beds where the coal bed methane is found are shallower than most conventional natural gas producing formations – hundreds of feet deep instead of thousands. So traditional wells drilled vertically to produce coal bed methane are closer together than wells drilled to deeper formations for conventional natural gas. This means more well sites on the surface, plus some more vertical holes through the water table etc. with at least some risk of ground water contamination or depletion associated with each penetration. Importantly, the "fracing" etc. that is usually done to these vertical wells is more likely to cause water pollution problems than the fracing deeper conventional natural gas wells – particularly if you have old orphaned wells nearby, or old wells nearby for which there are no plugging records on file with the West Virginia Office of Oil and Gas. On the other hand, if the coal is going to be mined some day, it is better to capture and use the coal bed methane, which is a greenhouse gas, before the mining activity releases it to the atmosphere.

Horizontal drilling to produce coal bed methane is better if they are not fracing the coal bed. It requires fewer well sites and fewer vertical penetrations of the water table etc. that always pose some environmental risk. However the site where the horizontal well or a cluster of wells are drilled is a much larger well site. If you get them to sign a "no surface disturbance lease" to only drill underneath you horizontally from a well drilled nearby, you may get the best of both worlds. However, horizontal drilling too can have problems if there are orphaned wells nearby, or old wells nearby for which there are no plugging records.

A large problem with coal bed methane can also be the produced water. Coal bed methane is produced by pumping the water out of the coal seam and up and out of the well. What is to be done with that water? Does it have contaminants and how will they be treated?

Do not sign a lease that has drilling for coal bed methane included in it as an afterthought – something that the producers put in the lease just in case the producer finds or ever decides in the future to drill for coal bed methane. In dealing with coal bed methane it is probably best, when the producer really wants to do it, to do a separate lease then for coal bed methane after learning more about it. Do not agree to sticking the words "coal bed methane" in a lease for conventional natural gas just because it is easy to type in the words. Cross out those words.

If they come to you to sign a lease and you thought you did not own the minerals in the first place, it is time to see a lawyer to figure out why they are doing that, and what you may be giving up.

Other undiscovered gases and resources.

Natural gas as it comes out of a well has methane, butane, and lots of other "thanes" mixed in it in various quantities. The lease needs to give the producer the right to all of those "constituents" of the natural gas. It should not give them the right to drill wells or otherwise produce gases or other substances that are not in your current contemplation. Who knows what it might take to produce those? Who knows what they are worth? Who knows what different burdens on the surface, or dangers of production to other resources next technologies could cause. If they are discovered, then the producer can come to you then and do a fair lease for them. If the producer insists on some rights to those gases, tell them they can have a first option to lease them later.

Storage.

Similarly, it is best to cross out any language in a lease that will allow your land to be used for storage. Almost all of landmen's "standard leases" include a provision allowing storage. And almost all have you paying only a pittance if your land is used for storage. Almost never is the storage provision actually used for the development of a storage field. But if it is it will not pay you much and make further drilling for wells that will pay you a royalty practically impossible.

You will get paid royalty at 1/8 or more of the value of the gas originally produced from wells drilled on your land. When the original gas from a formation is gone, if they decide to exercise a provision in your lease to create a storage field, they pump someone else's gas down into your depleted formation in order to store it, and you get nothing for the gas when it comes back up to go to market except a certain amount per acre.

Also, having one formation under your land being used for storage means that drilling new wells to other formations is usually so much more expensive that drillers will prefer to drill their new wells on some other surface owner's land. So if there is storage on your land, no future wells that will pay you royalty are likely to be drilled. You will only get the much lesser storage fees.

If they want to use your land for storage later on, they can come back later on and you can learn whether you want to and if so how to negotiate such a lease.

They will say they can condemn your land for storage, and that is a remote possibility. And when that happens you can figure out the compensation you ought to get, and it will in all likelihood be greater than what is set out in their standard lease.

Secondary Recovery

After the gas wells in a pool of gas have been there for many years, the amount of gas produced goes way down because all of the gas that will naturally flow out of the formation and into the gas well will be gone; but there is still some amount of gas left in the rocks. Similarly, after the wells in an oil field have been there for many years, all the oil that will naturally flow into the well bore to be pumped out will be gone; but there will still be some amount of oil left in the rocks. Think of a sponge that is sopping wet with dirty water. Drop it on a flat surface and much of the dirty water will flow out, but there will be more left that did not drain out on its own.

Occasionally, in order to get that remaining gas out of a pool of gas, or to get that remaining oil out of an oil field, producers will pump water or other substances down some of the wells under high pressure and into rocks holding the pool or field, and then pump it back up out of other wells. It is like running clean water though that sponge to get the rest of the dirty water out.

Never agree to this in a lease – especially if you are in a part of the State that has a lot of old oil or gas wells for which the state has no records of their plugging. Letting natural pressure flow out of a well is one thing. That natural pressure was not currently causing oil or gas to flow into water tables etc. by way of fracture zones or existing plugged, poorly plugged, or even unplugged well annuluses. Adding new additional pressure can force the remaining oil or gas into water tables by way of fracture zones or existing plugged, or even unplugged wells as the producer planned. But it might also force the oil or gas into water tables by way of fracture zones or existing plugged, or even unplugged well annuluses.

If at some point after the original wells they intend to drill are depleted, maybe then let them come back to you to try to convince you that the formation is deep enough, and with new technology that they know enough about the geology that it is safe. Not until.

Carbon Sequestration.

This sounds like a good idea. We all worry about global warming. It might be a good idea to pump CO_2 produced by coal fueled power plants into depleted gas well formations. But is it in a deep enough formation that it has not been penetrated by orphaned gas wells or old gas wells with no plugging records? Is it going to be inserted at the pressure the original formation was holding, or a much higher pressure that might cause it to leak out? Will it prevent new drilling to deeper formations for new gas so that your chance of getting royalties is lessened? We still do not know enough about it. There are some who argue that it is an impractical pipe dream that is being promoted to avoid more meaningful environmental action. If it is such a good idea, when they decide to actually do it, they can come back to you then, and you can learn more, and get a lease that protects your interests.

Injection Generally.

It is necessary to inject fluids or sometimes gasses into a natural gas well into the producing formation right after (usually) the well has been drilled in order to "frac" the formation. This is done so that the gas will flow faster and from farther away from the well bore into the well bore and up and out to be sold. There is a slide show on the web site of WVSORO^{*} about how a well is drilled and what can to wrong that illustrates this.

So you will have to agree to allow this kind of injection if you want to lease your oil and gas. You should absolutely not agree to language that allow any more general injection of fluids. You could end up having "disposal" wells on your property. Some disposal wells for salt water in safe areas at safe depths may be OK. On the other hand the injection of something more problematic could have all of the problems mentioned for secondary recovery, storage, carbon sequestration etc. It is a bad idea to sign a lease that mentions this unless you scratch it out first.

Horizontal drilling.

In horizontal drilling the driller drills straight down into the ground to the target formation, and then turns horizontally and drills for thousands of feet horizontally through the oil or gas bearing formation. Sometimes the driller drills in one direction. Sometimes, particularly in producing coal bed methane, the horizontal bores are drilled in several directions from one well or one central cluster of wells. And in some cases the horizontal well bores branch out

^{*}The West Virginia Surface Owners' Rights Organization. Google "WVSORO".

like the veins in a leaf. The driller does this in order to drain more area more quickly than if the driller had just one vertical well or several vertical well bores going straight up and down through the formation. (This is not "slant"drilling where the well bore from starts down at an angle from the very top. Slant drilling is used on ocean drilling platforms in order to get wells drilled down deep over a wide spread area without constructing more platforms. It is rarely used in West Virginia, though there are those who say it could be. And here, if the bottom of the well bore ended up under a different mineral tract than the well was drilled on, there could be serious legal complications.)

Generally, horizontal drilling is a good idea. One horizontal well (or one cluster of horizontal wells) is drilled down through the water table instead of the much larger number of vertical wells that would be required to drain the gas out of the same area. There is less total surface disturbance. This is generally good. It is particularly good if your land is the land being drained by a horizontal well bore that just runs underneath you, and not the land where the horizontal well or cluster of wells is drilled.

It is not so good if your land is where the horizontal well (or cluster of horizontal wells) is drilled! The well site will be much larger than normal. For a deep Marcellus well, they may need 1.5 Million gallons of water for the frac job, that they have to get or haul in from somewhere, and dispose of somehow. The well site will be up to 5 acres. There will be lots more traffic on the access road and the county road. If it is a coal bed methane well, there will probably be a compressor and water pump, and the flow of produced water that all coal bed methane wells require will be much greater in the early stages than a vertical coal bed methane well.

So agreeing in a lease to horizontal drilling of your oil and gas is probably good. But be sure that you are willing to have that larger, 5 acre maybe, well site on your land, and that you will receive extra compensation for the use of your surface for an extra large site. Or only agree to a lease that allows them to drill horizontally through your minerals under your surface, but will not allow the placement of horizontal well sites on your surface land – a "no surface use" lease.

Compressor stations etc.

You do not have to agree to anything that is not necessary for producing the gas from your land, though it is possible they would insist on it. (Of course you do not have to agree to lease at all if they want to do something you do not want, and you could even try to get them to put some of the facilities necessary for producing your case, like compressor stations, placed on neighboring lands. Hopefully, on the neighbors who do not care.) If they want

a compressor or other facility on your land that is handling gas from other property be especially careful. It will be especially big. You can say no. Or you should bargain separately for that. And be careful that language that allows for continued use of the compressor station after the wells that they drill on your land play out does not extend the secondary term of the whole lease. More on that below.

Pipelines.

You will have to agree to a pipeline if you are going to sign a lease for the drilling of a gas well. You may want to negotiate for it to be buried in areas that you want to use now or in the future. You will certainly want to find out where they plan to put their pipeline. Even if they are buried, the existence of the gas line can prevent the placement of future buildings, roads etc. where the pipeline runs. So you may want to negotiate a different location than they planned for their pipeline, or you may not want to sign if the pipeline will interfere with other future uses you have for your land.

And if they are laying a line to a well on your land they may want to pipe gas from neighboring leases to the pipeline from your well in order to get that gas to market -- a sixinch or eight-inch pipeline. You may have to agree to that if you don't have much acreage. There have to be enough wells to produce enough gas through the line to justify building a pipeline to your tract. You may want to negotiate for extra payment for that line – usually it a certain dollar amount per foot up front. And be aware that there may be language associated with this pipeline language that lets them continue to use, and even replace, the pipeline across your land after the royalty producing wells on your land play out. And as in compressor stations, if you do agree to a line across your land to gather gas from other property, and if they can use it after the royalty producing wells on your land play out, be careful. Be careful that you are not agreeing that such a line keeps the lease you are about to sign in effect without them having to keep a well on your land that pays you royalty. You may want to get money for a pipeline across your land that can still be there after the wells drilled under the lease are played out; but if that happens, you should be able to find someone else to drill a new well on your land that will pay you royalties. They do not have the power to condemn your property for such a line. But be very careful about any more general pipeline language that lets them build pipelines that are not related to your well.

Be sure you do not allow an interstate pipeline. They are HUGE and require much more surface presence. Yes they may have the power to condemn for that. But again, deal with that when they actually have a plan and you can learn more about what such a lease should say, and how much you should get.

How many years should I agree to for the primary term?

All leases have a primary term of several years. The primary term lasts for a set number of years until the driller has drilled at least one well on your land. Once a well is drilled and starts producing/paying you royalties, then the secondary term kicks in. The secondary term goes for an indefinite period of years as long as there are productive wells on your land, and beyond that if you are not careful.

So how long should the primary term be?

The producer needs time to plan wells, arrange financing, hire a drilling rig etc., so a few years is a reasonable period of time. But they may also want to lock you into the terms of the lease for as long as they can without having to drill a well. If they do not have to drill a well for "X" number of years, there is a chance you will get no royalty payments for that number of years. (The lease usually provides that they have the power to end the lease at any time during the primary term – which means they can stop paying you "delay rental" payments, unless it is a "paid up" lease.) And they keep other competing producers from getting a lease from you and drilling on you for "X" number of years. And if they have lots of undrilled acres being held by leases, their "assets" look good to their shareholders and to banks where they get their credit. So they want a long primary term usually. And you do not want the primary term to be too long. On the other hand, with a shorter primary term the up front money sometimes called a "bonus" or "paid up" or "delay rental" may not be as great. So some of your decision may be based on how much you want money up front vs. the amount of gas you can research or guess they may find and pay you royalty on some time later.

In the past, three years was a standard amount of time for a primary term. In an area that has a pipeline to it and currently has some producing wells, where they just want to put more wells to that formation, three years should still be enough. If they have not gotten a well drilled by then, and if it was a fair lease, and if it is still a good idea for you, then the two of you agree to extend it for more years. If things have gotten better, you can do better on the up front money and other terms. If things have gotten worse, you will not do as well on the up-front money etc.

On the other hand, if the drilling is in an area, or to a formation, that is new to development, and they are still drilling wells to find out where the gas is, and there is not a pipeline yet built to serve the wells, a five-year term may be acceptable.

Think hard about making a five-year lease renewable or extendable by the company with or without pay new up-front money at the end of the primary term – that is the same as a tenyear primary term. That means the producer wins if prices go up, but can bail out if prices go down. If you think you got a good deal on a paid up lease and that prices will only go down, that might be a good idea. But what if the producer is producing all around you on people with whom they have shorter leases, and so will not drill a well on you for you to get the more significant royalty payments for nine years? There is a possible law suit to make him develop or abandon the lease, but that is expensive. Rather than an extension, it might be better to give the producer a five-year primary term with the right of first refusal in competition with other producers after the primary term.

If a producer drills a well within the primary term, then the secondary term begins. Generally their lease will provide that the lease now continues for a secondary term that continuous so long as that well, and any subsequent well drilled during the life of the first or succeeding wells, are producing gas in paying quantities! Decades at least. We know some that have lasted for a century!

What kinds of payments will I get?

There are three kinds of payments you will get as the lessor/mineral owner. Since you are also the surface owner, you should also make sure the lease provides you a fourth kind of payments.

The first kind of payment the mineral owner gets is the payment that compensates you for/during the primary term. It is often phrased as a certain dollar amount per acre per year paid quarterly until the producer drills a well or until the primary term ends without a well and the lease ends. This form of payment is called "delay rental" - the rent they pay on the lease during the delay before they drill a well. During hot leasing periods, producers will sometimes give you a "paid up" lease. The means the producer will pay you the entire three or five years of delay rental payments up front – usually calculated by a dollar amount per acre per year and multiplied by the number of years in the primary term. The advantage to a paid up lease is that you get the money for all the years even if they decide to opt out of the lease early. The disadvantage is that they will are less likely to opt out. They will hold the lease for the entire period since they have already paid for it rather than back out and give vou a chance to lease to someone else who will drill and give you a royalty. Again, during hot leasing times, sometimes you can also get an up front signing "bonus" in addition to delay rental and even paid up delay rental. There are no laws about this. Again usually the bonus is calculated as a certain number of dollars per acre. The most important thing with the upfront money is that you should not get so interested in the upfront money that you do not negotiate the other payments and the other things that are important to you!

The second form of payment is the royalty. This is usually where the biggest money is expected – once a well is drilled successfully and put into production. The royalty starts being paid as soon as the gas is produced and sold. It is a payment to the mineral owner by the producer that is a percentage of the value of the gas as it comes out of the well. Until recently, the royalty paid by the producer to the mineral owner was 1/8th $(12\frac{1}{2}\%)$ of market value of the gas or oil in almost every case. (More later on how the "market value" is determined.) However, this is not set in law. It has been rumored that some large sophisticated landholders/producers negotiate for as high as 25% royalty. As this is written, in some parts of Pennsylvania where there is fierce competition and very high expectations for production, royalties of 15% and 18% have occurred. It is something you can try to negotiate, perhaps in coordination with bargaining about market value as explained below. And again, you will probably do better if you join with your neighbors and negotiate together.

The third form of payment is generally called a "shut in" payment, sometimes also called a "delay in marketing" payment. There may be times after the well is drilled when the well has to be turned off, called "shut in", in industry parlance. This may occur at the very beginning until a pipeline is laid into the area -- causing a "delay in marketing". It may occur after the royalties start to be paid because demand is down and the well is shut off (or "shut in"), which is justifiable. In that case, rather than receive a royalty payment, in order for the lease to keep the secondary term of the lease in effect, the producer pays you a monthly/quarterly/yearly payment. The shut in payment will always be much less money than a royalty payment. This used to be generally in an amount similar to the delay rental payment amount. However, low delay rental payments are not a good idea for you. There are lots of reasons that producers want to avoid plugging wells on your land. First, as oil or gas wells get older they produce less and less, so they do not generate the cash flow to plug themselves. So the producer has to take income from other wells to plug them, which the producer does not want to do. So producers often drag their feet about plugging wells because of cash flow issues. Second, as long as there is a well on your land that is paying you royalty or shut in payments, the secondary term of the lease with the producer continues in effect and they hold on to your lease as an asset on their books, plus no competitor can drill on the lease. You on the other hand want a well that is played out to be plugged. First, the well needs plugged at some point or it can cause pollution of water tables etc. And if it stays unplugged, the producer could go out of business and there will be no way to get it plugged. Second, you cannot sign a new lease with someone else to drill a new well on your land that will start you receiving real royalties again. There are laws that you can invoke to terminate the lease or have the state declare that the well must be plugged, but you may need a lawyer. There are common law arguments that the producer has a duty to develop your land, but that takes an expensive law suit to enforce. It is better for you to make sure that the shut in payment amount is high enough to discourage the producer from paying the shut it payments rather

than plugging the well. And since this may occur 80 years from now, the amount should be adjusted for inflation every so many years, or be tied to some other flexible figure.

The fourth form of payment is the payment that the surface owner can get when a well site and access road is placed on his surface land. It compensates the surface owner for the value of the land used by the well site and access road because the surface owner no longer has the use of that land. It also compensates for timber cut, crops lost etc., during the drilling phase. Surface owners are entitled to some compensation pursuant to the Oil and Gas Production Compensation Act passed by the West Virginia Legislature in 1983; and they are entitled especially if they do not also own the minerals. Strictly speaking this Act may not apply to you since you own the surface and the minerals and are leasing it out now. However, oil and gas companies are accustomed to paying these damages and there will probably be little objection if you insist that they be put into the lease. You can even try to improve on the damages allowed by the Act by providing that you get the market value of the land they take when the drill a well. The Act only gives you the value for it as it is used at the time of the drilling, which could be less than the market value of land that has a potentially more valuable use than it is current use.

How much should the payments to me be?

The payment amounts that mineral owners talks about most are the first kind described above. These are the upfront delay rental or bonus payments. This article will talk about that under this heading.

The most lucrative payment amounts are the second kind described above, the royalty payments that begin once a well is drilled and placed into production. (This assumes of course that the well finds gas or oil, or find enough gas or oil to be an economically successful well. Probably 90% or more of the gas wells drilled in West Virginia are successful because most of our wells are in "stratigraphic" rather than "structural" traps. But there can be dry holes when exploring new formations, or even in existing formations.) All that the author currently knows about the royalty percentage etc. was set out under the previous heading. The web site of WVSORO^{*} has links to Internet forums where mineral owners are posting the amounts of up-front money, and the royalty percentages that are offered to them.

The third kind of payments are the "shut in" payments. Similarly, all that is known to the author regarding the amount of shut in payments was set out under the previous heading.

^{*}The West Virginia Surface Owners' Rights Organization. Google "WVSORO".

The fourth kind of payments are the surface damage payments. A little more about that will be talked about under this heading. More information on them can be found on the web site for WVSORO* and in the *West Virginia Surface owners Guide to Oil and Gas* which can be ordered from Legal Aid of West Virginia or by typing the title into your Internet search engine.

The amount of up-front payments is rapidly changing as this article is being written. It depends heavily on what formation the producer is considering drilling to, and how high the expectations are for that formation, and how much competition there is to lease your land. As this is being written in April of 2008, the Marcellus formation is hot and many people think it has high potential. Some companies are paying top dollar up front to corral all the acreage in an area that they can so there will be no competition. So the up-front payments are going higher and higher. It also depends on where you are. The formations have different thicknesses and gas content, and therefore different values, in different places.

In Pennsylvania in areas with no track record of productive wells, or new areas that are speculative, bonuses could be \$25 an acre or less. In Northern Wayne County Pennsylvania a good bonus in 2006 was \$25 an acre. The Marcellus is thick there. When drilling and leasing started heating up, a group of landowners with 3800 acres got \$35 an acre. Bonuses in November 2007 were \$500 an acre. Blocks of landowners negotiation together got \$750 an acre. Now according to news reports, Chesapeake is offering \$1,500 an acre and 15% royalties!

The Marcellus here in West Virginia is generally not as thick so that may be unrealistic here, but it may be more saturated with gas, so maybe it is not unrealistic. But the competition for leases is very hot here. The author has heard that Chesapeake started at \$75 an acre in Preston County and then moved up to\$125 an acre. A month or two later another is at \$350 an acre in the same County. As West Virginian's get educated, they will probably go higher and higher. How high is not known.

For more up to date information on current offers, the web site of WVSORO^{*} has links to the web site forums for West Virginia, and the Pennsylvania forum may also be helpful.

You also may be able to find out the amounts that others are getting by going to the Courthouse and looking at recently recorded leases – although sometimes just a "memorandum of lease" is recorded and you may have to track down the mineral owners and ask them personally.

^{*}The West Virginia Surface Owners' Rights Organization. Google "WVSORO".

You can research generally the formations under your land by using the Internet and the West Virginia Geologic and Economic Survey. Some formations pinch out and vary greatly in thickness over only thousand s of linear feet. To find out exactly for your area takes a lot of research at the Office of Oil and Gas in Charleston, or a geologist consultant might help. You can go to the West Site of the West Virginia Office of Oil and Gas and see production records of neighboring wells. You will have to have the well number for the well. Unfortunately the on line records do not show the formation being produced.

What about free gas?

Free gas is not entirely free. You will have to provide the appliances and gas line for connecting from the well head or gas line to your house.

Free gas is not as reliable as utility gas. It is untreated gas. It sometimes has water etc. in it that can gather in the low spots in your supply line and freeze during the coldest nights of the year, when you need heat the most. You have to deal with these and other problems that are on your lines. The producer will not be as good on fixing problems on their line as a regulated utility is. Be sure and have an adequate alternate heat source.

Producers are less and less willing to give free gas because of increased sensitivity to liability issues and the hassle of dealing with free gas recipients regarding the problems identified above. Some producers will give you instead, in addition to other payments, a monthly payment in the amount of the market value of the gas for your home. If you agree to that, do not make it a fixed amount. Make it the market value at the time of production. Inflation will raise it over the years.

Free gas is a very good thing to have when you can get it, and you probably can. You will have to agree to some liability waivers and assume responsibility for installation etc.

Determining the value of the gas upon which the royalty percentage is calculated.

The royalty is stated in the lease as a fraction, or percent, of the value of the gas at some point after it leaves the ground. As this article is drafted, the most richly contested oil and gas leasing issue is how to determine the "market value" of the gas to which the royalty percentage is to be applied.

A common lease royalty provision used to be "one-eighth of the market value of the gas at the wellhead". The producers take the position that in the past the market value was easy to

determine when wellhead gas prices were regulated, or before that when the producer who drilled the well actually sold the gas at the well head to the next person or entity in the production process. In those days, and still sometimes today, the producer sold the gas at the well head to someone else who owned the gathering line, who sold it to someone else who owned the processing plant, who sold it to the interstate pipeline company etc. At each exchange/sale of the gas, the producers argue, the market price of the gas went up because of the value added at each step by collecting, processing etc. the gas. The market value at the well site was what was stated in the lease, so that lower value was used to calculate the royalty.

Now, the producers' argument continues, the same entity that owns the well and the gas at the wellhead also owns the gathering line, and the processing station. So the only arms length, bona fide sale to an unaffiliated third party, at which a "market value" is established is way farther along the production process than at the well head. So, the argument goes, that is not the market value at the wellhead, the sale further along the production trail is a higher market value. The producers say they should be able to subtract some costs from the royalty owner's 1/8 of the market value established at the eventual sale, to take it back to the wellhead market value. This should be done in order to help pay for the costs of transporting the gas from the well head to the point of sale, the cost of treating it etc. for its eventual sale. So that is what they did. They subtracted out the expenses, sometimes telling the royalty owner and sometimes not.

The other side of the argument is that the cost of transporting the gas is not really that high; that treating the gas actually takes out some liquid hydrocarbons that the processor sells for which the royalty owner should get compensated. And in any event, some or many of the subtractions taken have been taken out by some producers would never be justifiable. Some inappropriate examples would be "line loss" from the producer's leaky lines, metering charges, taxes, brokering fees, etc. Also some outright fraud has been charged in using a sale that was below market value because it was a sale to an entity that was a sweetheart deal with an affiliate of the producer that was used to calculate the market value from which mineral owners royalty was calculated.

The royalty owners filed a class action, won a preliminary round in the West Virginia Supreme Court, and won a \$200 Million jury award. That award is on appeal again to the West Virginia Supreme Court.

The language should be clear that the royalty will a percent of the gross market value. The market value needs to be determined based on a sale to a bona fide third party with no affiliation to the seller and for no other consideration. If there is deduction language, look at it carefully. You might also want to provide that you have access to the metering records

etc. to make sure that the royalty is based on accurate measurements. If you cannot get the producer to agree to a royalty higher than 1/8, you can argue that their stubbornness on the percentage gives you justification for being stubborn on the market value determination – that there should be no deductions for expenses.

The practicalities of getting what you want into a lease.

Sometimes the landman working for a company does not have authority from his superiors to agree to any changes in a lease made in any way. Or he may just tell you he cannot when he can. Doesn't matter. If you want to make changes and the landman will not agree, find someone else. Never ever sign a lease based on oral promises.

Changes to the lease do not have to be made by having the printed form retyped and reprinted. Any lengthy changes or additions can be set out on a written "addendum" or "rider" attached to the printed lease. If you do that, sign the addendum first, attach it to the printed lease. Make sure that the addendum or rider states clearly that its provisions are the ones that count if they are different from something that is said in the printed lease. Then refer to the addendum or rider in writing on the printed lease before you sign the printed lease. You can do that in your own handwriting. On the other hand, if you have the bargaining power or expense sharing (usually, lots of acres individually or with other owners) you may be able to get the entire lease itself rewritten. You may want to hire, or may already have hired, an attorney at this point.

For the shorter changes that you have been promised or told by the landman that you are going to get, put them in writing on the lease itself. Your handwriting is fine! When they hand you the lease to sign, if there are things in there you do not want, scratch out things like "secondary recovery" and "storage" and initial the scratch outs before you sign. If there are shorter changes that are supposed to be there that are not, like the royalty percentage, or "ten hours of bulldozer work", then write the things that you have agreed to on there yourself before you sign.

If the landman says he is an honest man just like you and can be trusted, tell them that if he is honest he will not object to things being in writing so there will be no misunderstandings. And remember, he is likely to sell or "assign" the lease to someone else or is working for someone else, so if it is not in writing, proving later what you were promised when you signed will be nearly impossible, or at least very expensive.

Usually the lease only has a place for you to sign, and not the company or landman. That makes the author as a lawyer very uncomfortable, but if the company takes the lease you

wrote on or added to and signed, and then the company records it and/or begins acting on it, it is highly unlikely that the courts would not enforce what was written on it when you signed. The same is true with the addendum or rider. Try to get the landman to sign at least the addendum, or to at least initial where you have struck out or added things on the printed lease. But he may not have the authority to do so. Be sure to get his name and permanent address. (He may be in West Virginia only temporarily working for an out of state company.)

Nowadays there is often some form of payment document attached to the front – a "draft" or some such thing. It is kind of a check to you. It is part of the selling job that the payment document is right there when you sign. It is an OK thing to sign. Sign the other stuff first.

Try to get a copy of everything right at the time you sign it. Your signature on the lease has to be notarized before it can be recorded in the courthouse, so the landman will insist on this. This is good. Hopefully the notary will have a photocopier or maybe just a scanner hooked to their computer. Sometimes the landman is a notary and may want you to sign at your house. Insist on going somewhere that a notary has copying ability. And signing at your house does not give you much time to think, which also may be part of the landman's salesmanship.

Sometimes the company has you sign or agree to a separate "memorandum of lease" that is all that will be recorded at the Courthouse. You might prefer everything to be on record in the courthouse, but there is nothing inherently wrong with it as long as you and your heirs permanently keep and then hang onto your copy of the lease. Maybe make several copies of your copy and spread them around so one fire will not destroy them all.

SPECIFIC PROVISIONS TO CONSIDER NEGOTIATING IN A LEASE

Cross out arbitration clauses in leases -- They limit your ability to get a judge or jury on your case. It also does away with your ability to be part of a class action and share lawyer and litigation fees. If a dispute arises and you decide then that arbitration is the best way to go, you can agree to arbitration then. Non-binding mediation is recommended instead, but do not put it in a lease – wait for the dispute to arise to decide how best to resolve the dispute. Do not sign a lease that has an arbitration clause in it unless you cross it out first.

Save some areas of your land – Designate any areas where wells, roads and pipelines cannot be located. Save future home sites. Say the producer cannot use the area around your current home. Keep them out of your most productive meadowland. It is up to you, and the landman. Say they cannot use your driveway (because it will be impassible if they drill while

it is wet) or that they have to use your driveway and then gravel it (so there will be fewer roads on your land).

Road Construction types – Some land owners are happy to have a nicely bulldozed wide graveled road to the back of their property. Others want as little disturbance as possible and an impregnable gate to keep four-wheelers off the land. Some people believe in "daylighting" the road by cutting back extra trees on either side. Others say that a properly constructed, re-vegetated, maintained roads is what works, and no amount of daylighting will help if that is not done. Some say they want to avoid eroded roads and stream siltation by doing longer roads with less slope. Others say that takes out more trees, so they want a shorter, steeper road. You own the surface! These should be your choices and you should write them into the lease or addendum.

"New Technologies" – The author has seen a number of leases that allow producers to use new technologies – technologies that have not been invented yet. There is nothing wrong with that per se, and it is probably the current law. But what if new technologies impose more burden on the surface. What if they need 10 acre well sites? A New technology is OK, but insert in the lease or addendum that the technology is permitted only "if it imposes no greater burden or diminution in value on the surface or other interests in the property than current technologies."

Limit the number of wells – You may want to limit the total number of wells that can be drilled on your land. Some unscrupulous producers are "promoters" who get paid "on the push". They get paid more according to the number of wells they drill, than how much money the wells eventually make. So they will put wells too close together. This means extra, unnecessary wells on your land. (For more explanation, see the WVSORO^{*} web site slide show on "Well Spacing and Royalty Sharing".)

Additionally, there are probably several producing formations under your land. A producer may drill wells close together on the surface but to different formations. The number of wells drilled on your surface can be nearly limitless in some areas. Decide what is the largest number of wells you would want on our land and put that in the lease. Tell the landman you might agree to more later, but not now. Or find out the geologically justified well spacing for the formation they are planning to drill to – usually 1500 feet for shallow wells – and agree to no more wells than that. Or try to lease out just one formation.

Insist on a number of wells – If you own hundreds of acres, and want a lot of royalty now or in the near future, insist on a certain number of wells over a certain period of time. If not,

^{*}The West Virginia Surface Owners' Rights Organization. Google "WVSORO".

the producer may just drill one well to keep your lease in its secondary term indefinitely while he drills other wells on other people. There is a common law duty for producers to develop your well, but it is vague and usually takes expensive litigation to enforce. Maybe require one well to be drilled in the primary term and another in another year or three or five, and if no additional wells are drilled, then the secondary term of the lease expires for the portion of your land that is not being drained by the wells or wells that they have drilled.

Well spacing and royalty sharing -- a.k.a. "Pooling and Unitization". – Generally well spacing and royalty sharing is a good thing. The web site of WVSORO^{*} has a slide show that more fully explains well spacing and royalty sharing. The industry, and your lease, will call it "pooling" or "unitizing" or both.

Here is a quick summary of how it works. All of the mineral acreage that a gas or oil well drains is declared a "unit". If the well drains acreage in the unit that belongs to more than one mineral owner, then the mineral owners split the royalty according to how much of the acreage in the unit each of them owns. The next well is spaced far enough from the first well that its unit does not drain gas out of first well's unit. The same for further wells draining the same pool of gas.

Without unitizing, all the gas that comes out of a well belongs to the producer and royalty owner upon whose mineral tract the well was drilled – even if it is known for a scientific certainty that the well is draining gas out from under a neighboring mineral owner.

If the producer you are leasing to is going to drill a well close to the boundary line of your mineral tract, you want that well unitized with the land on the neighboring tract. If not, if it is a good well, the neighbor will drill a well on his side of the boundary line and get much of the gas out before your well does.

If the producer on a neighboring tract wants to drill on the border, you want a unit declared around that well that will include your acreage so you get a royalty for your share of the gas that comes up out of their well. If not, you and/or your producer will have to pay to drill a well on your side to get the gas first. And if the same producer owns your and the neighboring tract too, you will not be able to persuade him to do so, since he is already getting the gas from the neighboring well.

Even worse, if the first well on your neighbor's side is a good well, but not a great well, the cost of drilling your well will exceed the value of the gas left to produce. So it will not be profitable to drill the well, and you just lose the gas.

So you want language in your lease that requires unitization if the lessor has an interest in the neighboring lands. It should allow your producer to voluntarily unitize your acreage in wells on your land or neighbors' land. It should require the producer to ask

^{*}The West Virginia Surface Owners' Rights Organization. Google "WVSORO".

neighbors for voluntary unitization. (Unfortunately, with some exceptions, this cannot be forced on a neighbor who does not want to declare a unit. One formation where unitization can be forced on a neighbor may be the Marcellus, depending on the outcome of a case before the West Virginia Supreme Court.)

However, it is important to remember that the primary term of your lease, during which the producer is supposed to have drilled a well and start paying you royalties, turns into the secondary term and ties up your land under the secondary term of the lease for as long as a well produces and you get royalties or shut in payments (unless you insist on more wells as noted above). But what if the lease allows a well on a neighboring tract that includes a small number of your acres in its unit. You will only be getting royalties for a fraction of the production from one well. But you will be getting some royalties, so that small royalty payment can count to tie up your land under the secondary term of the lease – depending on the language in the lease. That means you would only get a 1/8 royalty on a part of the royalties from one well. The producer would not have to drill any more wells on your land. He could drill somewhere else. So you would not get any more royalty.

So your lease should allow, even encourage or require efforts to use pooling and unitization. But it should not allow a unitized well to tie up more acreage in a secondary term than is in the unit. Maybe give the producer another year or so after inclusion of some of your acreage in a unit to drill another well, but not forever. Then end the secondary term for the acreage that is not included in the unit.

Protect structures and special areas – Require drillers to stay certain distances from current or future residences and water wells. The State requires they be 200 feet from residences and water wells. Go measure that distance from your house and see if that is enough for you. The drilling phase will only last days or weeks, and fracing or work overs may be the same, but when it is going on it will be 24 hours a day 7 days a week with lights and noise and traffic. And you may not want the sight of the well there.

Surface owner agreement – You might want to require that "The (surface) owner's agreement must be obtained to locations of well sites, access roads, pipelines and other facilities, which agreement cannot be unreasonably withheld." This could be a less desirable alternative to saving certain areas as suggested above. But this gives you some leverage as a surface owner. In a real dispute, you probably cannot afford the law suit to enforce it, so more specific provisions are recommended if you can get them. (Even if you only own the minerals, consider putting this in to give consideration to the surface owner's interests – or even contact the surface owner and ask him or her what is important to them to protect.)

Gate the roads? – If you want to keep people from using the producer's access road to come onto your land, require a durably constructed gate at a point that a trespasser cannot get

around. And require the driller to keep it locked. They may be reluctant to agree to this during the drilling phase, but should not object strongly after that.

Fences – If you have livestock that may graze near the well require fencing around it. If it is an oil well with a pump jack or other "attractive nuisance" equipment and there are children nearby, require fencing around it.

Bulldozing – Probably the most common extra thrown in by a driller is some bulldozing or other heavy equipment work that you want. The bulldozer and operator is sitting there anyway. It might cost the driller \$150 an hour. But sometimes it costs that if the bulldozer is sitting there doing nothing, so it may as well be doing something. But do not give up too much to get this. It is cheap for the driller to give it to you.

Water use by driller! – They will need water to drill their well. They will want to use streams etc. near the well because it is cheaper than hauling it in. There may be certain ponds or streams that are important to your use of the land that you do not want them to use. If so name them in the lease. You may want them to haul in all of the water. For a shallow well it is not that much water. However, a horizontally drilled Marcellus well can require 1.5 Million gallons of water – 40 or 50 tanker truck loads – for the "frac" job. If there is a water source on your land large for them to want to use for that, do you want to allow it? Or would you prefer that use that and save all the truck traffic.

Bank the top soil uphill – Particularly at the well site, but at the roads too if having them return to nature is important to you, insist that the driller scrape the top soil uphill, save it, and then put it back during reclamation. Burying it, even mixing it with other soil, will give poor re-vegetation.

Temporary seeding – Require temporary grass planting if final planting/reclamation cannot be done immediately due to season/weather or well completion issues. This will prevent soil erosion and/or soil compaction. The State requires it, so they should agree, and putting it here will help.

Re-seeding – The State requires re-vegetation of the site when they are done drilling. This is part of "reclamation" though that is a bit of a misnomer since the well site and access road are not going to be returned to the original contour for several decades after they are "reclaimed" for the secondary term of the lease. The state manual suggests seed mixtures that use a lot of fescue which is not good for some domestic animals. The State D.E.P.'s Office of Oil and Gas has an additional manual for maintaining well sites for wildlife. There is also a study of native vegetation on logging roads that should also work on well roads.

Look for both on the WVSORO^{*} web site and insist on something from those, or something your local soil conservation service recommends.

Noise – Limit noise from oil well pump jacks, from local compressors or pumps for coal bed methane wells, or from other facilities allowed by the lease. The author is not sure of the technology available for these various uses, but he has heard of enclosure of some compressor type facilities, and soil bank baffles or other baffles or noise suppressing features to keep noise from you and neighbors.

Pit liner – The drilling pit is generally lined, but this is not required in all cases. Require the pit to be lined. They should be used to doing this. Otherwise you are trusting the local clay to keep the contaminations in the drilling pit from leaching into your groundwater.

Disposal of water used in drilling – After the drilling is done, the water the driller used will be in the drilling pit. Under a state issued "general permit" it is legal for the water to be treated and sprayed onto the land. (A copy of the driller's application to have that general permit apply to your particular well will be served on the surface owner with the permit notice.) After the water is removed from the pit, the stuff that settled to the bottom of the pit is folded up in the pit liner and buried in place. The author has not heard of problems coming from the spraying of this water or the burying of the solid material in the pit liners. That does not mean they are not out there, or are latent. (If you have a problem, please let him know.) But you may have a situation where the area they want to bury the pit liner is near and uphill from your spring or water well, or where you want to use the land for a house with a basement. Some drillers have been persuaded to truck the water off of the site and inject it in special regulated injection wells. Pennsylvania requires all the water to be carted off. They brought it in, they can take it out. The author has heard of one instance where the driller agreed to cart off the pit liner and its contents.

Limitation on assignment – Once you sign the lease, it can be sold ("assigned") to someone else who could be the one doing the drilling. You may want to have some control over who is in charge of the drilling on your land. Language you add into a lease addendum might say, "No assignment without the consent of the lessor, which assignment shall not be unreasonably withheld." Coal leases have these. It is unknown if oil and gas producers will agree to this. There are certainly some drillers and producers you may not want on your land. Larger producers are more likely to agree. A smaller landman may be unwilling to agree to this if you acreage is small, and you could effectively block transfer of a large grouping of leases. And that probably would not prohibit your leases from changing hands if the lessor

^{*}The West Virginia Surface Owners' Rights Organization. Google "WVSORO".

merges or goes out of business and a creditor takes the leases – etc. so a lease that otherwise limited assignment will have to say something about that.

Title Warranties – Make sure there is nothing in the lease that says you grant a "warranty" of the title. If someone else comes along and says they are entitled to some of your royalty (and the producer's profits) what happens? The producer did the title search before getting you to sign the lease, not you. Do not agree to defend the title search that they did. If the lease says anything, it should say that the producer will pay the cost of your lawyer to defend your title to the property. The producer may want the right to put the royalty payments "in escrow" until a court decides or it is settled, which would not be bad.

Access to drilling operation – Make sure the lease or the addendum at least does not deny you access to the drilling job. (OSHA says you need to wear a hard hat.) You might want to add that you have access to the drilling site. Access to the drilling job is important for the surface owner in order to be sure that the driller is following the rules for properly casing and cementing the bore hole through your water table. (See the slide show on the WVSORO^{*} web site on "How a Gas Well Is Drilled down into the Ground and What Can Go Wrong".) The author has never heard of access being denied in West Virginia, but probably not a lot of people ask first or at all. And as mentioned above, since you are the mineral owner, you want access to the meter to make sure there is no fraud there.

CONCLUSION

Signing a mineral lease is a serious step. Do not let them rush you. Decide what is important to you and future generations. What are you willing, and not willing, to give up in terms rights on your land in order to get or have a chance of getting how much money. Remember too that if what the producer wants is more valuable to him than it is to you, then you should try to make him pay what it is worth to him and not what it is worth to you. Do your best to understand as much as you possibly can before signing. Try to find a lawyer to explain the lease language to you even if you cannot afford to hire a lawyer to negotiate or re-draft the whole lease. Maybe try to find a geologist or information on the Internet about leasing and drilling in your area. Decide if what you have to give up is worth the money you may get. Get together with neighbors. Get landmen competing for your lease. Do not expect to get everything this article talks about. Do get what you can. Get everything in writing.

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