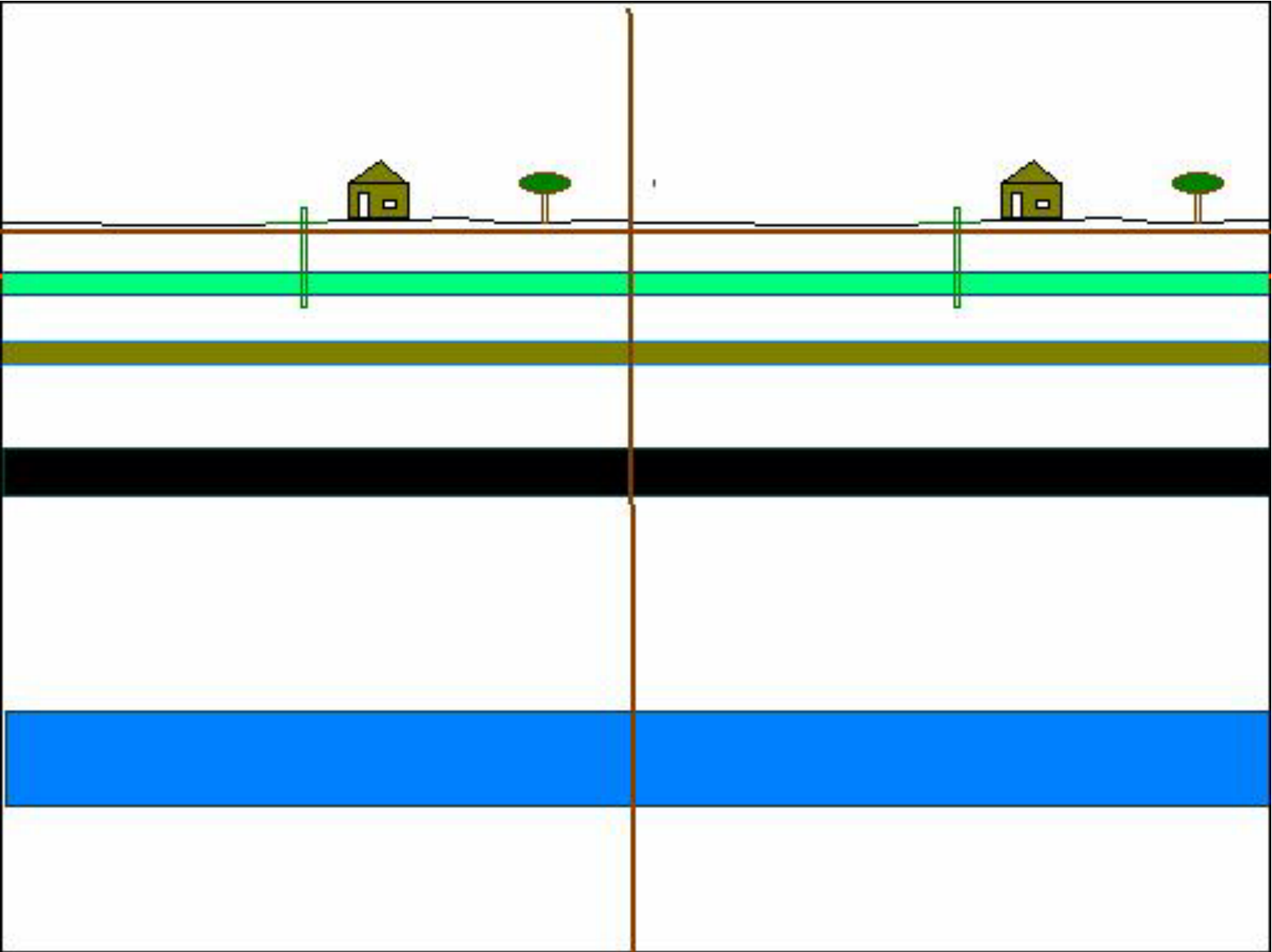
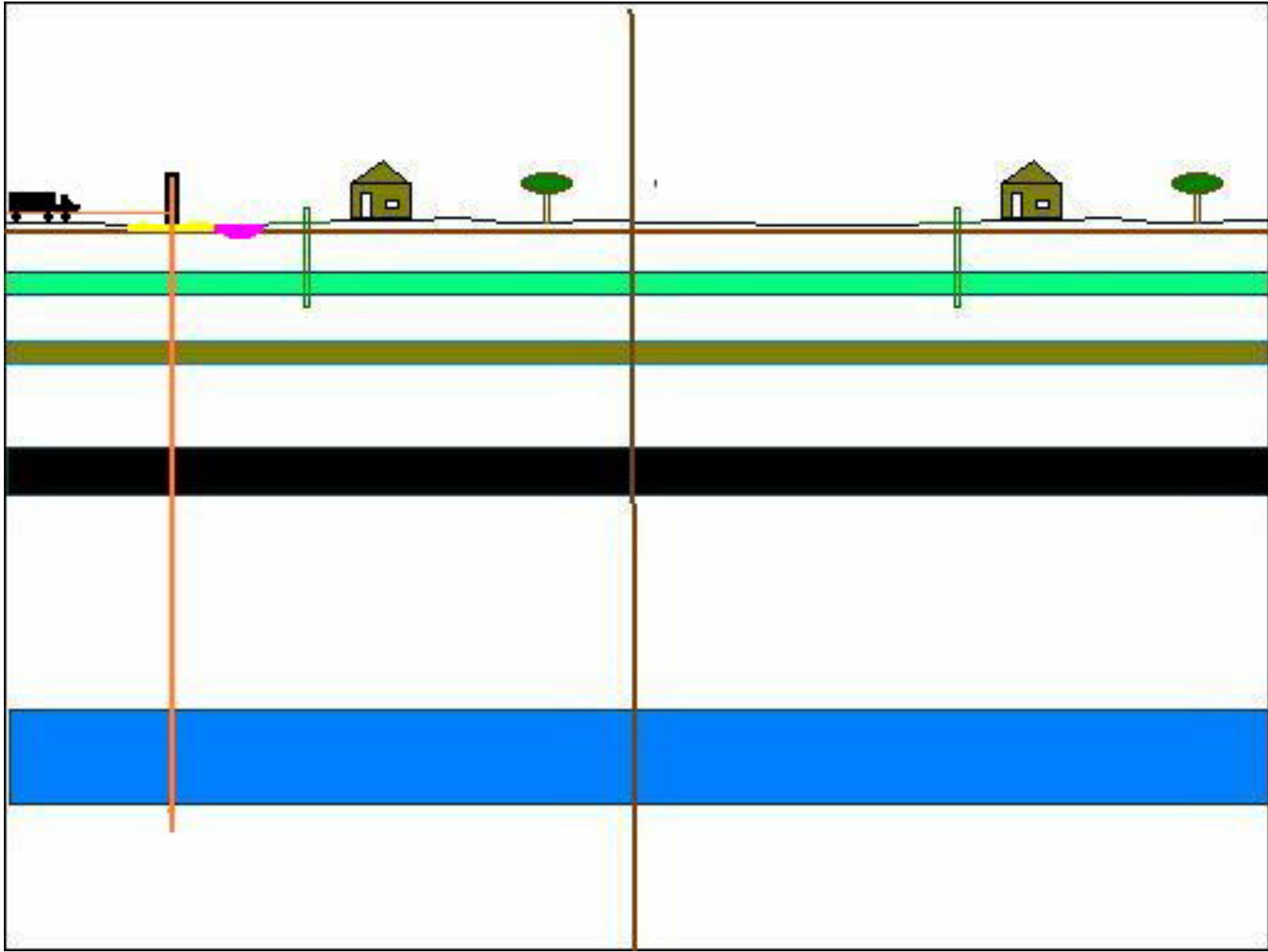
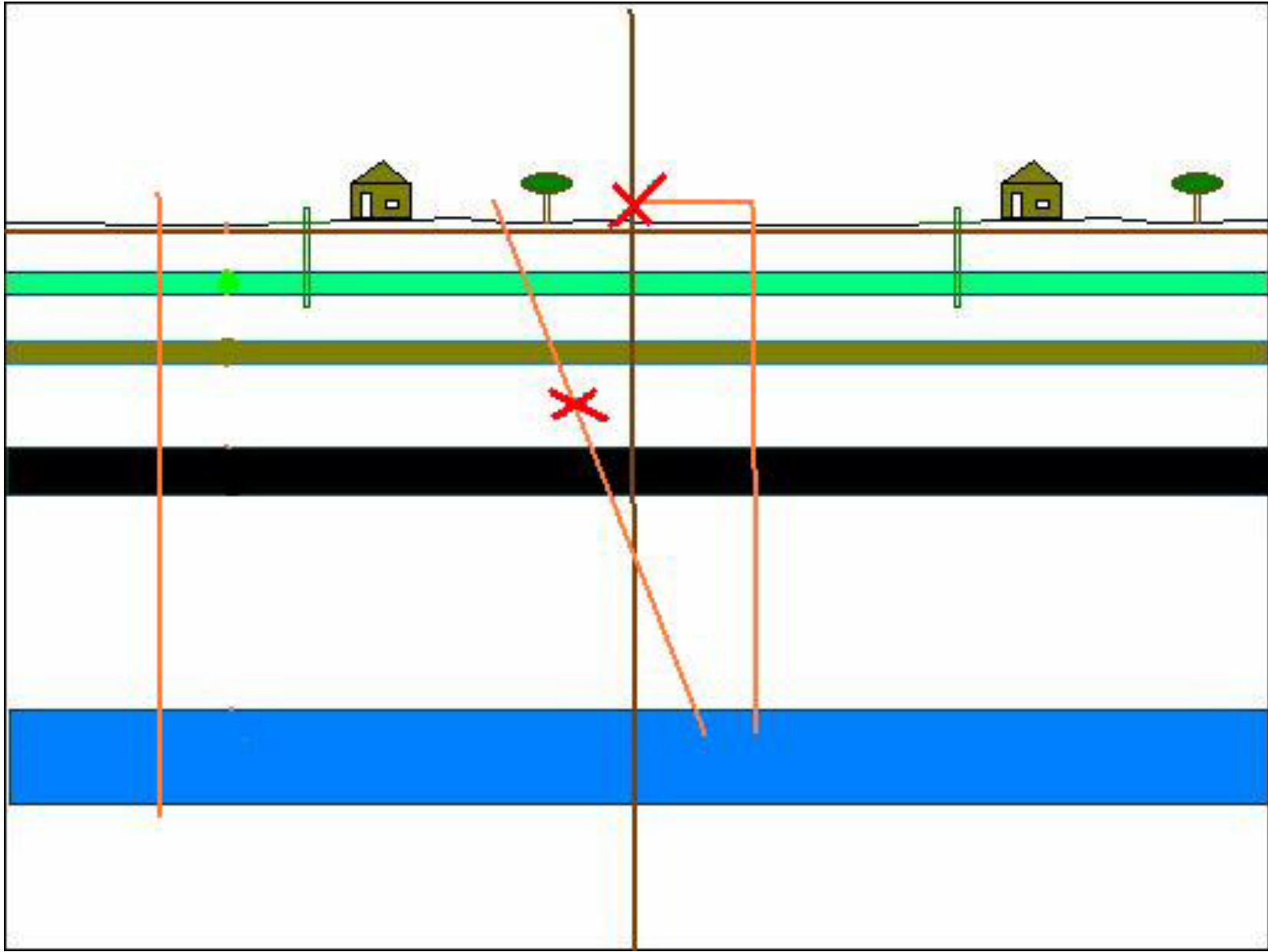


A surface owner may be able to stop  
a horizontal well pad  
on their surface!

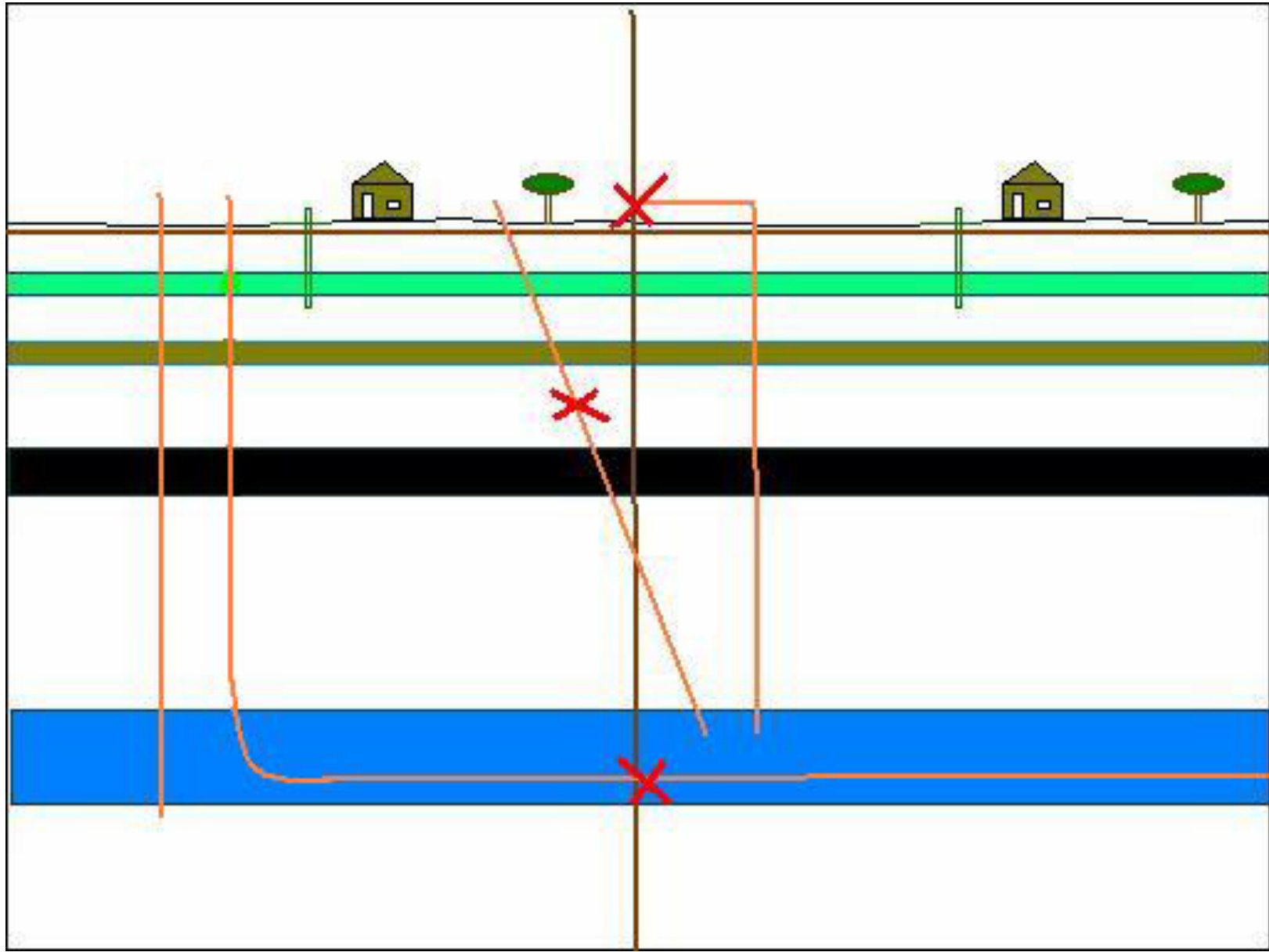












## NO HORIZONTAL WELL PAD UNLESS:

- For **surface only owners**, no surface disturbance may be imposed on the surface tract unless:

(1)The right to explore for and produce the **gas was leased** to the driller **before the severance** of the ownership of the surface from the minerals, and the lease provided that the **surface could be used** (pooling and unitization clause ?) to explore for and produce gas from a neighboring tract [and the surface disturbance **was in the contemplation of the parties** at the time of the lease], or

(2)The **deed or other instrument severing** the ownership of the surface from the gas **granted or reserved to the mineral owner** the right to use the surface to explore for and produce gas **from neighboring tracts** [and the surface disturbance required for the unit well and other wells on the same pad **was in the contemplation of the parties** at the time of the deed or other instrument].

- For **surface/mineral owners**, no surface disturbance may be imposed on the surface tract unless:

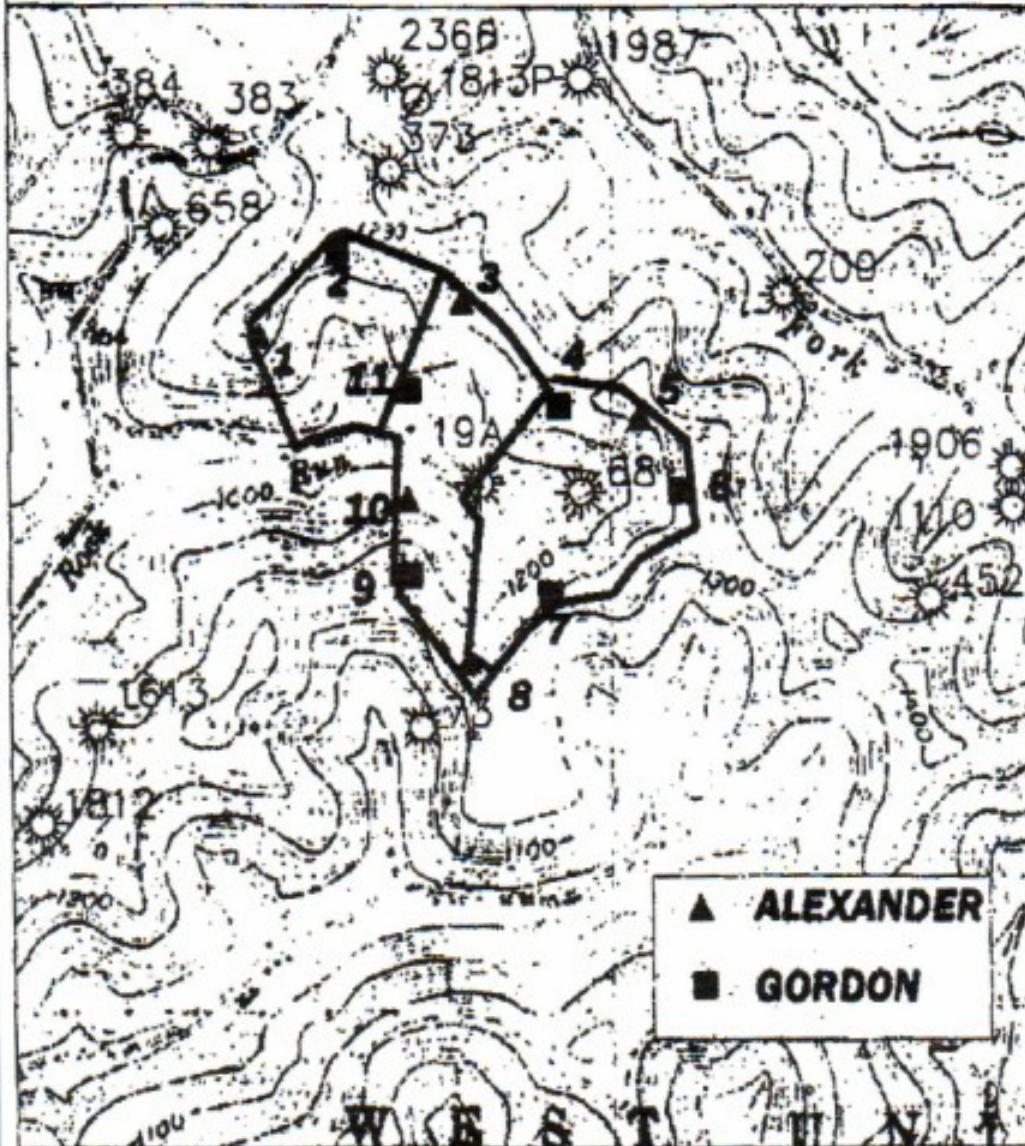
(1)The owner or the owner's predecessor **signed a lease** that granted the driller the right to use the surface to explore for or produce gas **from neighboring tracts** (pooling and unitization clause ?) [and the surface disturbance **was in the contemplation of the parties** at the time of the lease].



A Statute Authorizing Forced Unitization  
For Drilling Horizontal Wells  
Is Good Public Policy,  
  
But **IF** and **ONLY IF** . . .



# [REDACTED] SPACING



▲ ALEXANDER  
■ GORDON

<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>050154</p>	<p>OPERATOR</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	<p>TOPO SECTION</p> <p>SMITHBURG 25'</p> <p>SCALE</p> <p>1"=100'</p>	<p>WELL NAME</p> <p>[REDACTED] LEASE</p> <p>DATE</p> <p>05/16/85</p>
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## Requirements for a Fair Bill for Forced Unitization for Horizontal Drilling.

- **No well should be drilled on the surface** of land forced into a unit, whether or not the surface owner owns the minerals.
- The person with the right to drill for the gas on the tract being forced into the unit (whether a surface and mineral owner, a mineral only owner, or a lessee/driller) should get paid **royalty etc in the amount that the deal is worth to the driller**, not some "standard" rate. (They should get at least the best deal any other drilling rights owner.)
- A mineral owner who has not signed a lease (whether or not they also own the surface) should **not get just the royalty**, they should always get a fair share of the working interest.
- **Neighbors** to the proposed unit should get some kind of notice and be able to petition to say that they think they are being drained and want some of the money.
- It would be nice if a **surface owner where a vertical well is being planned** could force the property to be drilled horizontally from an existing pad.
- **If some of the mineral owners cannot be found**, after 7 years, their share of the money should go to the surface owner.
- Requirements, based on science and engineering, need to be set for the **minimum inside** distances of well bores from unit boundaries, and **minimum and maximum outside** distances of well bores from unit boundaries.
- See the **position paper** of the West Virginia Surface Owner's Rights Organization for details.













J Henry Fair  
PHOTOGRAPHY

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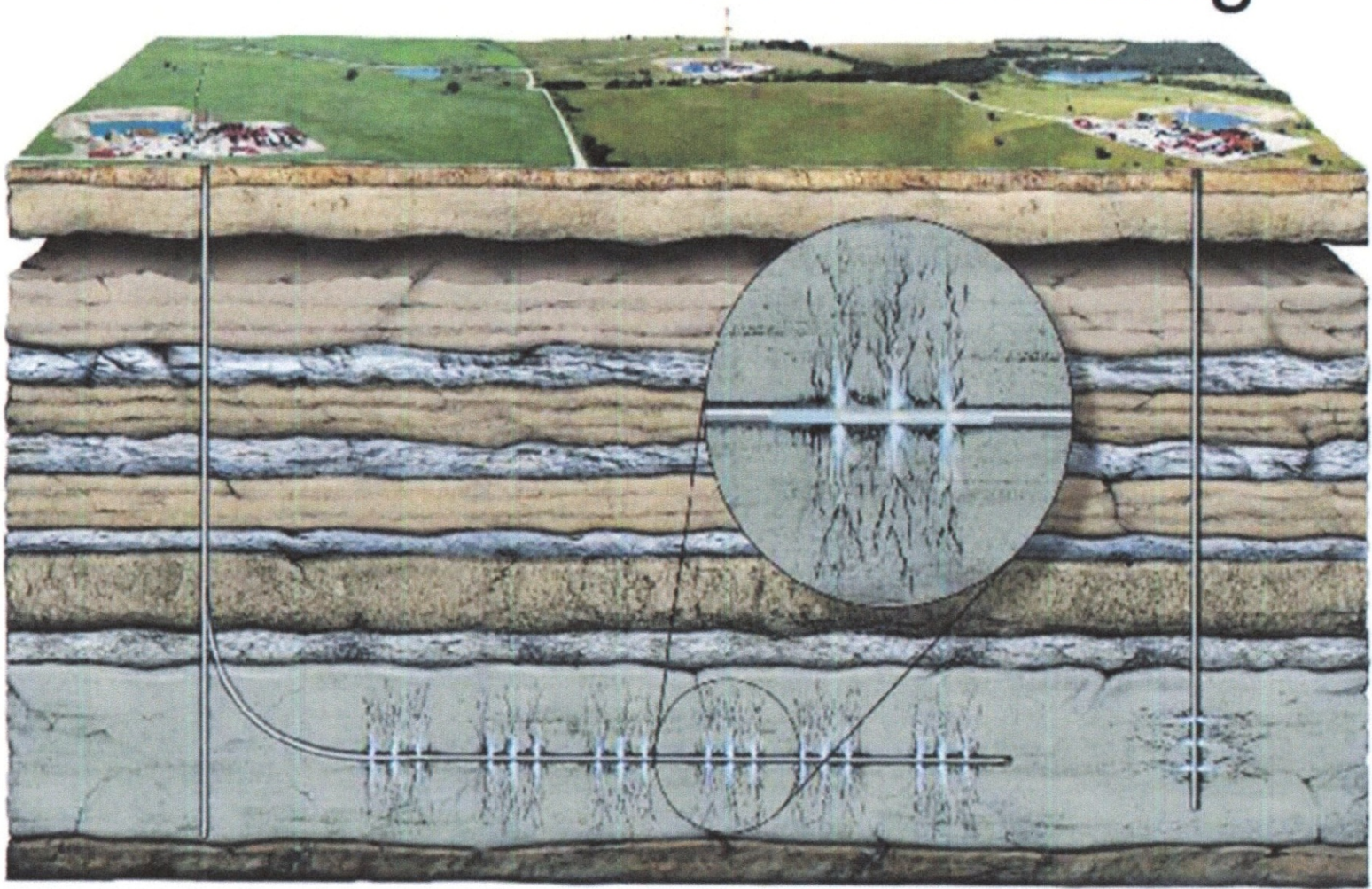
LIGHT HAWK







# Vertical vs. Horizontal Drilling





# Multiple Wells per Pad

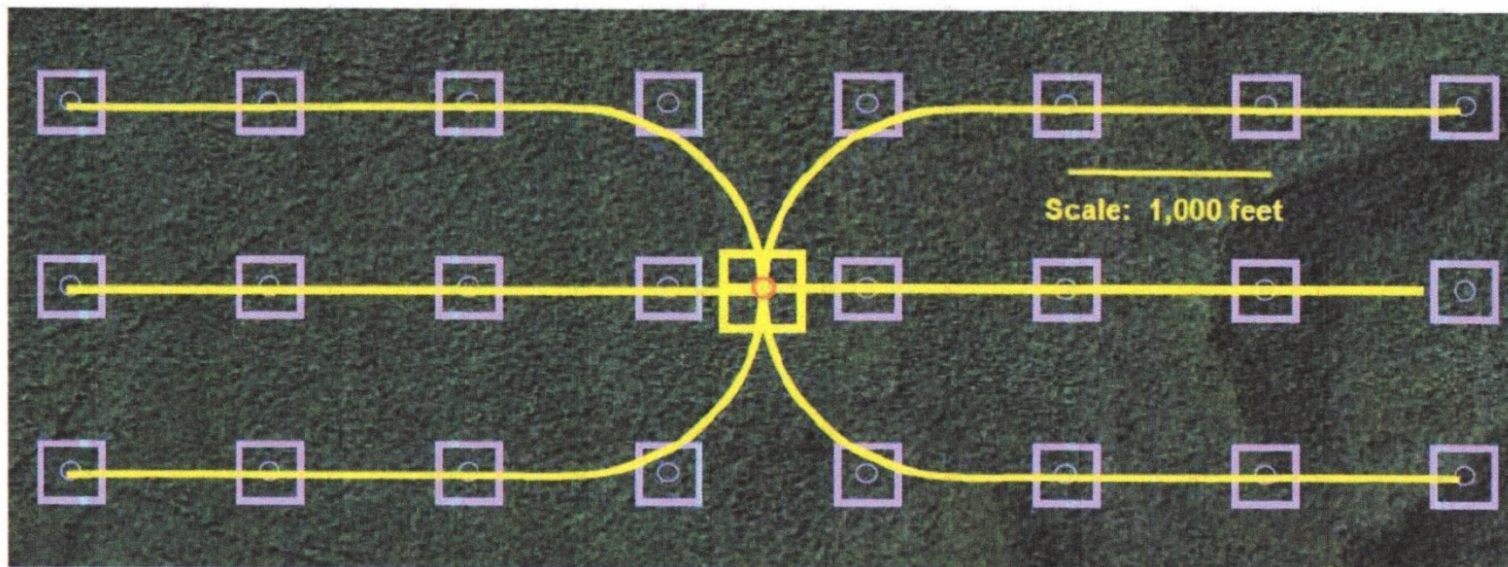
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## Drilling

Horizontal drilling provides greater access with a smaller footprint



Total surface disturbance during drilling, including access road, drilling pad and required pipeline infrastructure:

- Horizontal (yellow) develop 500 acres per pad with 2% surface disturbance
- Vertical (purple) on 1,000-foot spacing develop 23 acres per well with 19% total surface disturbance

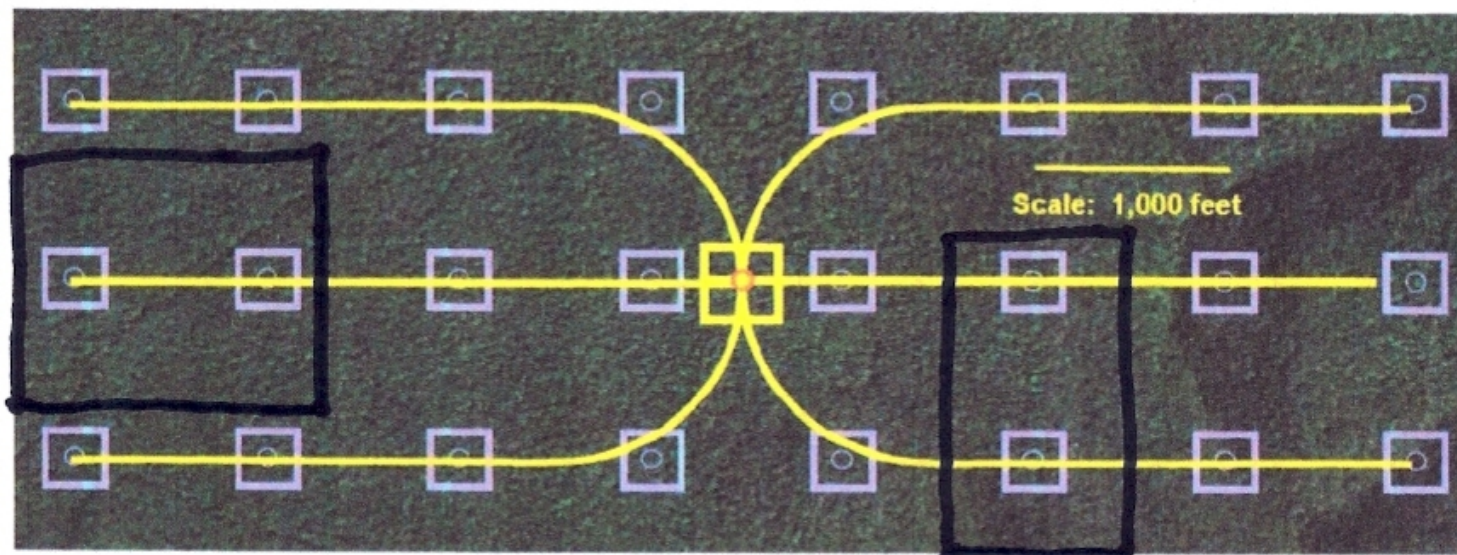






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**Who Benefits from Forced Pooling  
For Horizontal Wells  
And Other Wells?**

- Surface owners
- Ground water
- Environment
- Mineral owners generally
- Forced mineral owner
- Investor
- Consumer
- Operators

## Responses to Those Who Are Opposed

- Surface owners (whether they also own the minerals or not) who do not want drilling on them.

No legislation should allow the driller to force a horizontal well site on a surface owner *whether or not* they also own the minerals. (The driller may already have the right in some instances, but the statute should not give it.)

- Surface owners who do not want drilling near them.

You cannot really stop it. And without forced unitization, if you stopped it here you would make it happen somewhere else, and with more well unnecessary well pads.

- Environmentalists who do not like drilling at all.

Can't stop it and its better than coal mining and burning.

- Environmentalists who do not like all the frac water source and flow back disposal issues.

-Drillers are going to use large frac's anyway, so there will be problems with water source and flowback disposal issues.

-In terms of the groundwater, the frac process is not the most dangerous to the environment, Its when they first start drilling through the groundwater. And this reduces that.

-It reduces forest fragmentation by multiple well sites and access roads.

- Mineral owners who think that it would be better to wait for a better market.

The statute should provide that the driller needs 75% voluntary leases so that at least that many people think it is a good idea to drill now.

- Mineral owners who are un-leased and want to hold their minerals as a long term savings account.

-The driller will be able to drill along the side of your tract and drain at least some of you. So this is probably better.

-You will not just get the royalty (often 1/8th), you will get a net share of the other (7/8ths of the) gas sold!



- Mineral owners who do not like the terms being offered.

Mineral owners who are forced into units should definitely get the best terms anybody else in the unit is getting, or what it is worth to the driller. A statute should provide that the mineral owner should get at least this much. The industry may oppose this.

- Anyone who says it is a “taking”.

The driller can already take your gas by drilling on the other side of your property line as long as the “rule of capture” continues to be the law. Forced unitization (also sometimes called forced “pooling and unitization”) in part prevents taking, though it does expand the driller’s right to put the drill bit under your land.



## **Marcellus Shale Gas Well Play Issues of Concern to Citizens.**

- Landscape and land use, including:
  - Conflicts with existing private surface uses.
  - Conflicts with existing public lands uses.
- Impact on ecosystems and habitat, including:
  - Erosion and stream sedimentation.
  - Forest fragmentation.
  - Invasive species.
- Disposal of waste, including:
  - Drilling fluids and cuttings from pits.
  - Frac flow back water.
- Impacts on infrastructure, including:
  - Road use conflicts.
  - Damages to roads and bridges.
- Sources of water.
- On all of these issues – proper oversight, including:
  - Funding for enforcement.
  - Getting ahead of or staying even with issues caused by new technologies etc.
- Impacts on community:
  - Jobs or motels?
  - Keeping community between those hurt and those benefitted.

End