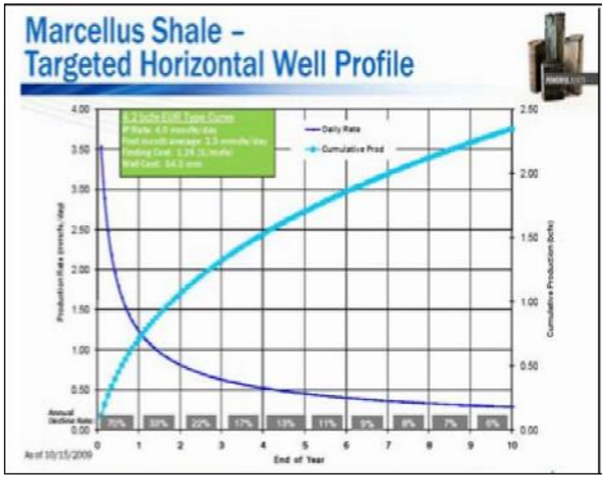
BOOM & BUST ROYALTIES

Gas production declines 80% after two years of production, as this chart from Chesapeake shows.



The dark blue line indicates daily production, million cu ft/ day
the light blue line indicates total production, billion cu ft to date

For farming: no control over well-pad locations, access roads, pipelines.

For landowner: a rapid fall-off of royalties, while *liabilities & risks remain.*

For agri-tourism (including hunting & fishing): the prospect of no-go zones, round-the-clock drilling noise, fumes and traffic from 80,000 wells in rural New York.

For hired help: higher-paying but temporary jobs with drillers may attract workers away from local jobs, threatening the viability of farms and other local businesses.

Not your grandfather's well

Generations of farmers have experience with conventional gas wells. Some may have had free gas for their farms. Even in the last few years, wells drilled in sandstone and limestone formations have had small surface footprints. But horizontally drilled, high-volume hydrofracturing in shales

- require pads of five to fifteen acres, hosting six to twelve wells each
- involve 900+ truck trips *per well*
- have production decline rates that requires frequent drilling of new wells on your property, and refracking, possibly continuing for decades

Concerned?
Find an action group near you

www.DamascusCitizens.org

YOUR FARM AT RISK

Pipeline easements are forever. Many leases do not specify the location of the easements.

What your lease may <u>not</u> tell you about about

FARM IMPACTS
ROYALTIES
LIABILITIES
HIDDEN COSTS

Shale Gas Drilling Can Have
Unexpected Impacts on Farm Operations

Pennsylvania drillers have cornered the market on sawdust/shavings, which they mix with soupy, *radioactive* drill cuttings so they can be classed as non-hazardous solid waste and tipped into the local landfill.

Road-to-drill-pad access can be at the "curb cut" most convenient to the drillers. If your lease doesn't specify otherwise, that may be at your barn door.

Drillers don't necessarily "work with" lessors. Chesapeake contracted one PA farm owner to use 20 acres for a water impoundment that would remain for twenty years. The farmer had leased some land to another farmer for growing corn. That's where Chesapeake chose to put the impoundment, and they put it in three weeks before the corn was ready.

Speculation on land can make it difficult to rent cropland locally.

Does your lease specifically *exclude* water impoundments? Water impoundments filled from rivers during high water and drawn down in dry weather to supply fracking operations — through over-the-ground piping networks — may bring 200 water trucks per day onto your farm.

"For milk haulers in the area, the expansion of the natural gas industry has resulted in increased competition of the hiring of drivers." — Land O' Lakes, explaining higher haulage rates charged to co-op dairy farmers.

Default in the surface rights agreement is *not* a default in the lease. No matter how badly the driller treats you and your land under the surface agreement, the lease itself is *never* in default, and the operator can *never* be evicted from the lease because of a surface rights abuse.

Shale Gas Drilling Can Yield
Disappointing Royalties

Gas that's drawn off and stored will *not* yield royalties to lessors. Payment is calculated when the gas enters a transmission pipeline, *not* at the wellhead. Facilities like the 30-mile-long "Stagecoach" gas storage caverns allow drillers to store gas while waiting for better prices: since drillers don't have to pay royalties on the extracted gas until it's *sold*, landowners may not be paid for any gas production in the foreseeable future. Yet their leases will be "held open by production.

"**The only gas components that are *currently* profitable do *not* yield royalties to lessors.** To the extent that raw gas is "wet," people with producing wells will not be paid for other gases and fluids separated from the raw gas, such as propane, butane, xylene, etc., even though the company is able to sell those gas components for more than the methane, which is at near-record low price levels. However, the cost of the separation infrastructure is deducted from royalty payments.

"Post-production costs" *deducted* from royalty payments include the cost of pipelines, compressor stations and removal of "returned" fluids that may need to be trucked out of state. It's not known if the companies will try to take road costs out of lease owners' royalties: companies are *not* required to list the costs deducted from royalties.

Wells that are drilled and capped — but not yet connected to a pipeline — do *not* yield royalties. But the interests of the drillers are served because the leases are "held open by production" beyond the specified term of the lease.

Many leased properties have only a tiny bit of their total acreage in a production unit. The lessor — who may be disadvantaged by the location of the well, access roads and other problems — gets only a small royalty, *if at all*, yet the whole of the leased property is "held by production."

Shale Gas Drilling Can Involve
Hidden Costs and Liabilities

Major banks *deny* mortgages on leased properties and even nearby *unleased* properties, limiting the market to buyers able to pay in cash.

Major insurance companies, concluding that potential risk and liability are too high, are increasing premiums, excluding pollution coverage or refusing applications for policies on leased properties and even *neighboring* properties.

Potable water replacement, filters or venting are all costs property owners may face, perhaps forever. Gas companies deny any responsibility, forcing individuals to buy their own water treatment and methane exhaust systems.

A property owner leasing mineral rights will find that the lessee's subsurface rights *trump* the owner's surface rights. Any building erected on the surface after a gas lease has been signed may be demolished by the gas company *without* compensation.

Drillers are often underinsured, so property owners are advised to buy their own insurance against accidents over which they've no control.

Towns resist reducing assessments on properties negatively impacted by gas activities. Property owners who've had extreme downward appraisals of their homes — after drilling mishaps poisoned their water — find that towns don't want to reduce their tax assessments accordingly.

Pipeline easements are forever. Many leases do *not* specify the location of easements. Many leases do *not* prevent drillers from selling or subletting pipeline easements.