

Supersedure, Spacing & Economic Impact

Gregory H. Sovas - XRM, LLC

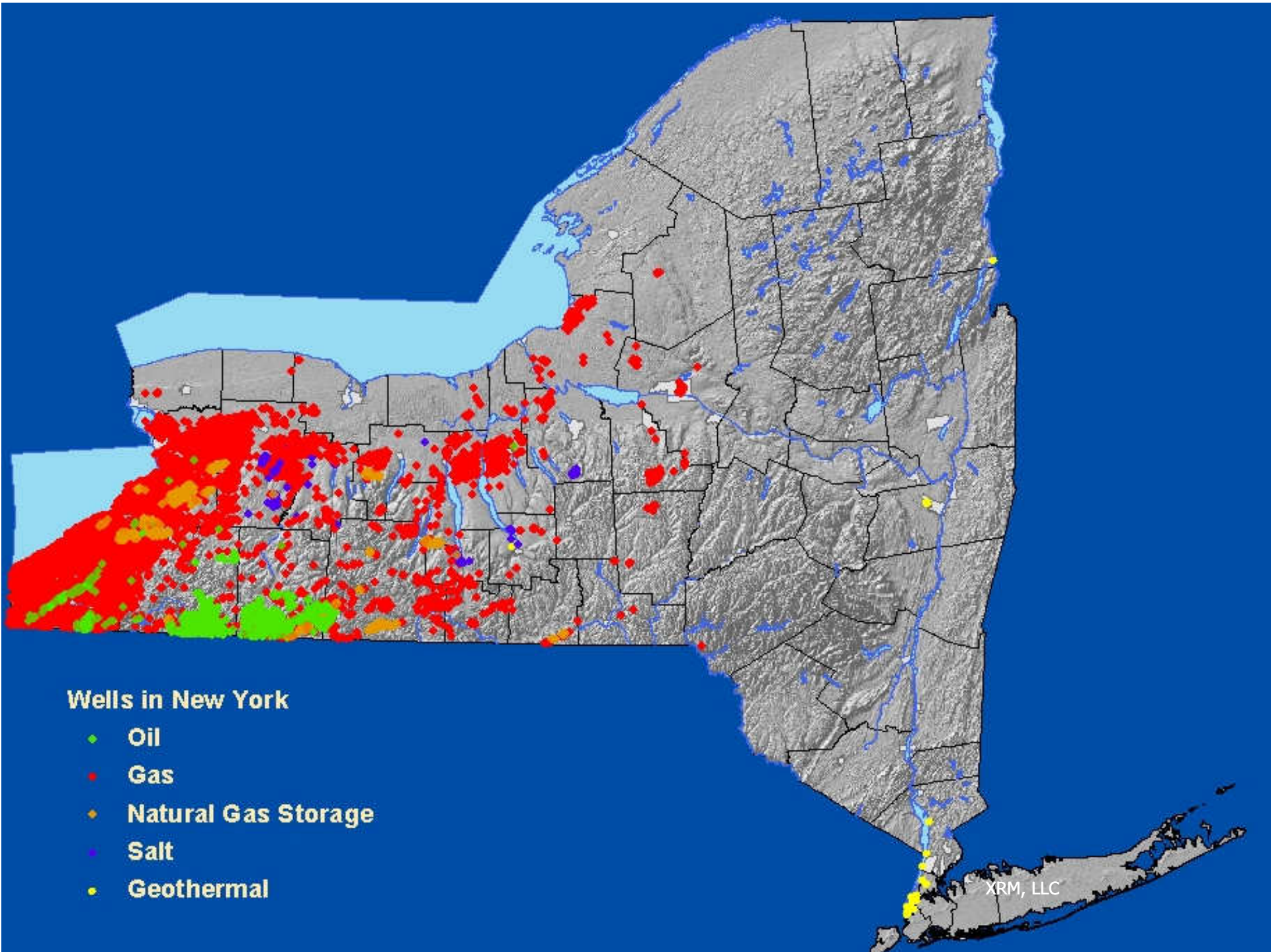
Chenango County Natural Gas Meeting
Norwich, NY
June 16, 2011

Background

- 33 years at NYSDEC, last 22 as Division Director, Mineral Resources
- Vice President, Governmental Affairs, Spectra Environmental Group
- Principal, Director – Lake Country FracWater Specialists, LLC
- Twin Tiers Landowners Coalition
- IOGA, PIOGA, IPAA member

Public Information

- Not a lawyer
- Not here to advise you
- Here to share my experiences at DEC
- Give you public information
- Here to give you info, answer questions



Natural Gas - Marcellus Shale

- 500 trillion cubic feet of natural gas
- Environmentally-preferable fuel
- Technological advances to produce gas from shales now economic
- Near population centers, markets
- In depressed areas of NY, PA
- International game changer

NYS Oil, Gas and Solution Mining Law

- 1963, IOGCC 1948
- Based on Texas, Oklahoma law
- Modified Law of Capture
- Spacing
- Correlative rights
- Compulsory integration, unitization

Spindletop, Texas 1901



NY's Oil and Gas Regulatory Program

- Modernized by 1981 Amendments
- Developed as a groundwater protection program, permits needed
- Spacing, protection of correlative rights
- Fees for new staff
- Supersedure of local regulation

Casing and Cementing Conditions – 1980's

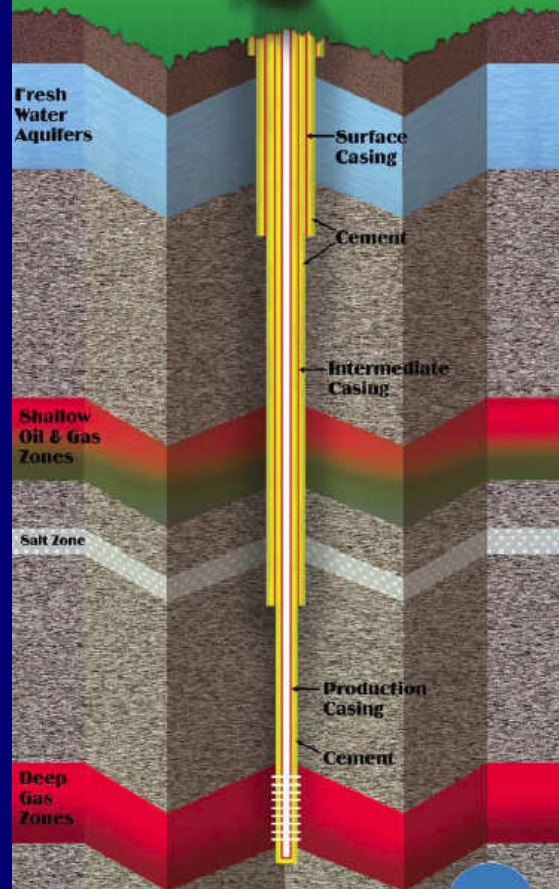
- Developed with industry input
- Redundant protection for groundwater
- two strings of pipe, cement
- Relatively unchanged for almost 30
years
- No well has impacted groundwater in
NY since at least the 1980's*

Groundwater Protection

Well Casing and Cementing Program

The Division of Mineral Resources' well casing and cementing regulations provide for the protection of the State's fresh water aquifers

Regulations require that wells be constructed and operated to prevent the movement of oil, gas or water from one zone to another



New York State Department of Environmental Conservation

XRM, LLC



Supersede Legislative Intent

- Clear intent to supersede all local regulation
- Includes zoning
- Given for democrats
- Verified after law was passed with Senate sponsor

Past Problems re Local Regulation

- Safety concerns with untrained staff
- Too expensive to hire staff at local level
- Patchwork of local laws
- Double bonding
- Taxation
- Setback issues

Supersedure

- 'shall supersede all local laws except for roads and taxes'
- Tightly drawn because of problems
- Mineral rights owners recover minerals
- Zoning included
- Legislative intent clear
- Companion tax bill

Why State in Charge?

- Uniform statewide regulatory program
- Can hire professional staff
- Set spacing
- Protect correlative rights
- Hold hearings, make decisions
- Setbacks in zoning conflict with spacing

Why state in charge (cont)

- Setbacks don't respect municipal boundaries
- Property lines only lease lines
- Well drilling conditions need to be uniform

Why Zoning Doesn't Apply (my view)

- Construction site
- Temporal use (SGEIS longer times)
- Right to recover minerals
- Right to recover water
- Minimal land use disturbance
- Farmer, farm friendly; landowner options

Why Zone Out

- Won't survive challenge
- May result in landowner 'taking' lawsuits
- Investment in leases lost - lawsuits?
- Companies may leave state
- What about the landowners?
- Keeping farms as farms, open space

Why is 1991 Mining Law (MLRL) Different

- Consumptive land use lasting decades or even centuries; impacts
- Codification of existing cases
- Limited regulation under special use
- Permissible uses in zoning districts
- Partnership between state and local
- No justification, industrial use

Spacing of Wells

- Size in acres of unit to efficiently drain the resources (conservation, no waste)
- Cannot drain neighbor's property (protection of correlative rights)
- Drilling plan must not leave out properties between wells - stranded
- PA Law of Capture - no Marcellus spacing, no fair pooling statute

NY Marcellus Spacing - Vertical and Horizontal

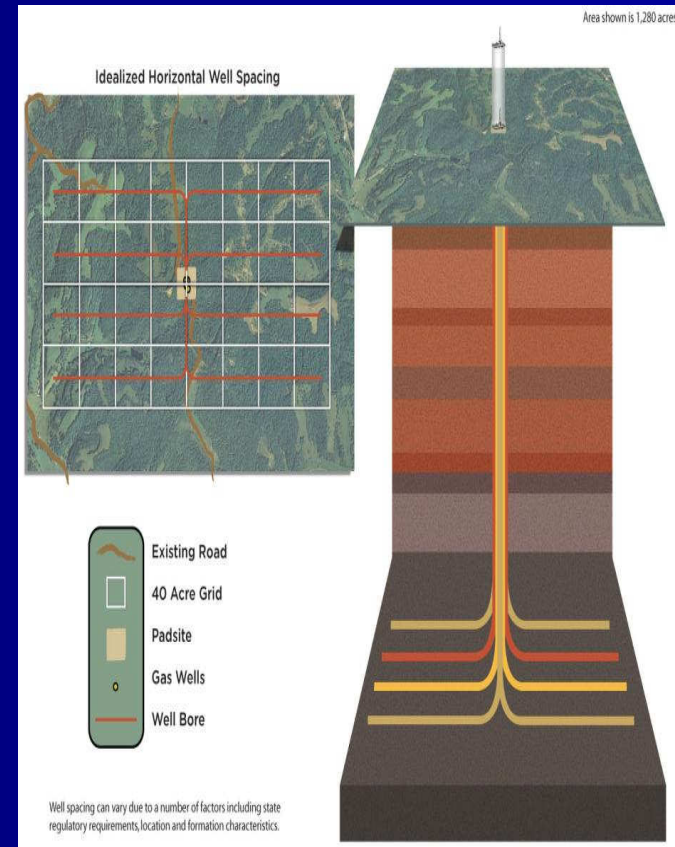
2005 & 2008 Legislation

Shale Gas (Vertical Well)	any depth	36 to 44	Wellbore within the target formation no less than 460 feet from any unit boundary
Shale Gas (Horizontal Well - written commitment to drill infill wells with all horizontal infill wells to be drilled from a common pad within three years of the first well drilled)	any depth	Up to 640	Initial horizontal wellbore or wellbores within the target formation approximately centered in the unit and no wellbore in target formation less than 330 feet from any unit boundary
Shale Gas (Horizontal Well - no written commitment to drill infill wells)	any depth	36 to 44 (plus, if applicable, the number of additional acres necessary and sufficient to ensure the horizontal wellbore within the target formation is no less than 330 feet from any unit boundary)	Wellbore within the target formation no less than 330 feet from any unit boundary

Marcellus Land Impact Positive

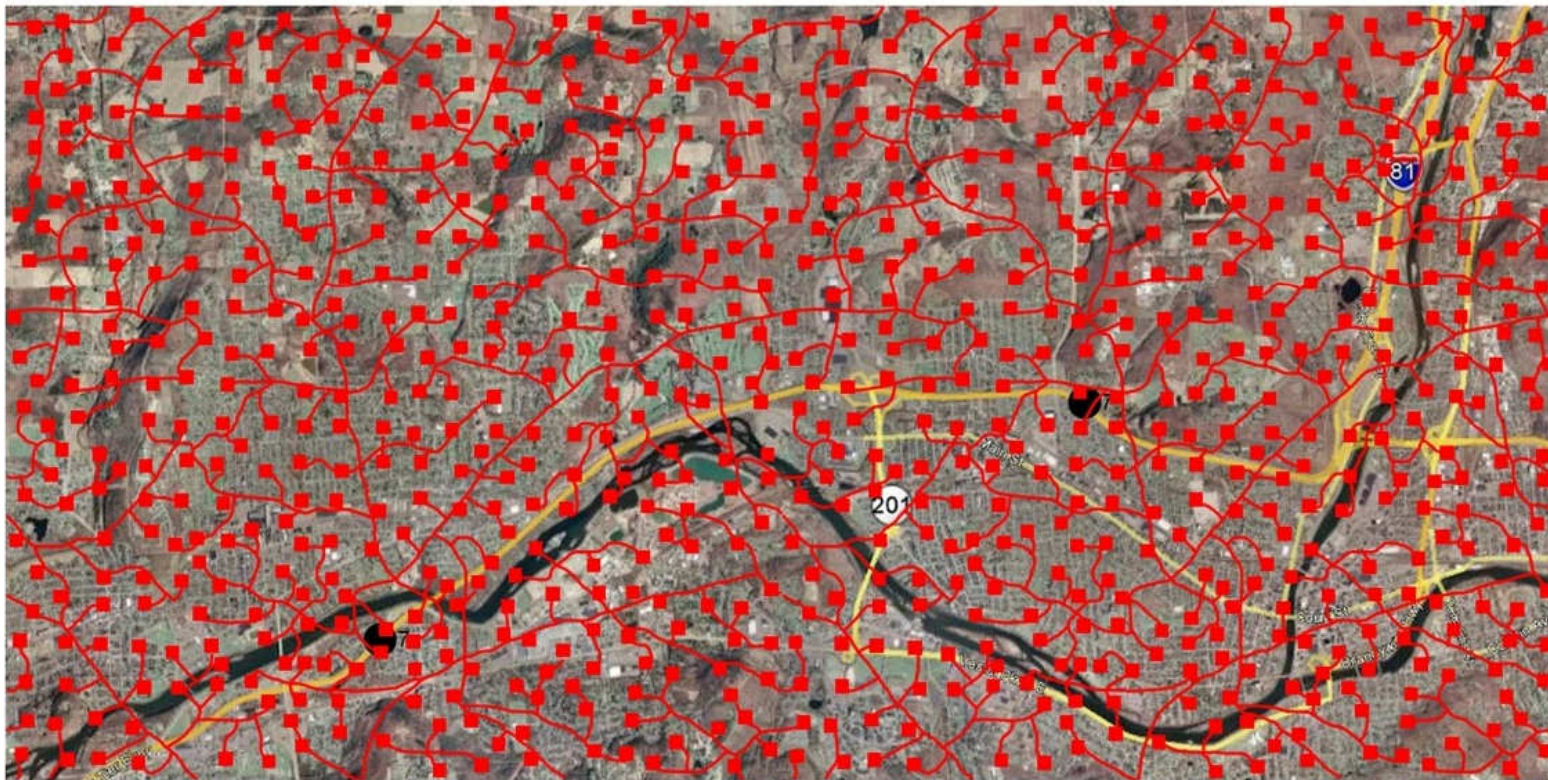
- Four to five acre drilling pad, consolidated area
- Multiple wells from one location
- Horizontal wells for greater resource recovery
- Smaller footprint, landowner options
- Environmentally, farm friendly

Horizontal Drilling – Reduced Footprint *Mandated in New York ECL § 23-0501(1)(b)(vi)*



The Spacing Myth

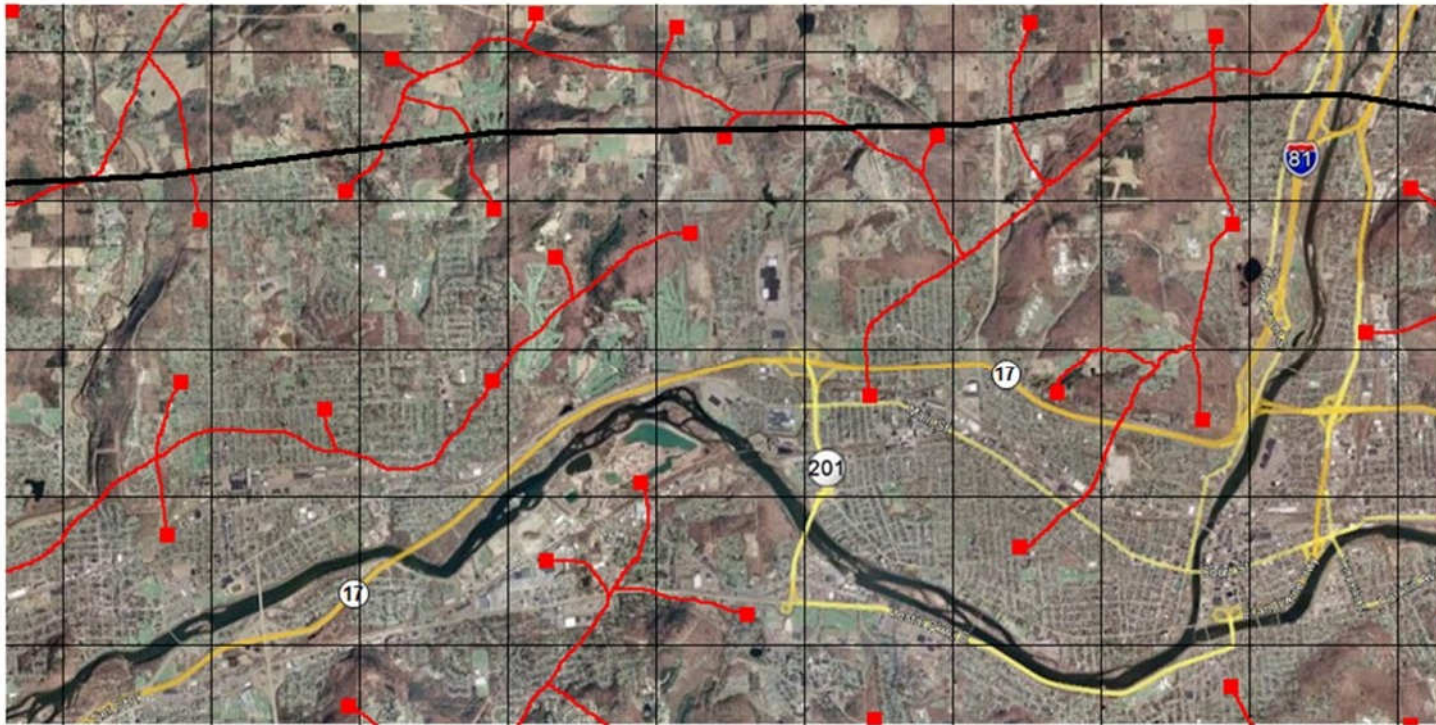
WHAT IF ONE WELL PER 40 ACRES ?



SOURCE: Binghamton Regional Sustainability Coalition, 2009
Reprinted with permission; graphic overlay assumptions on back.

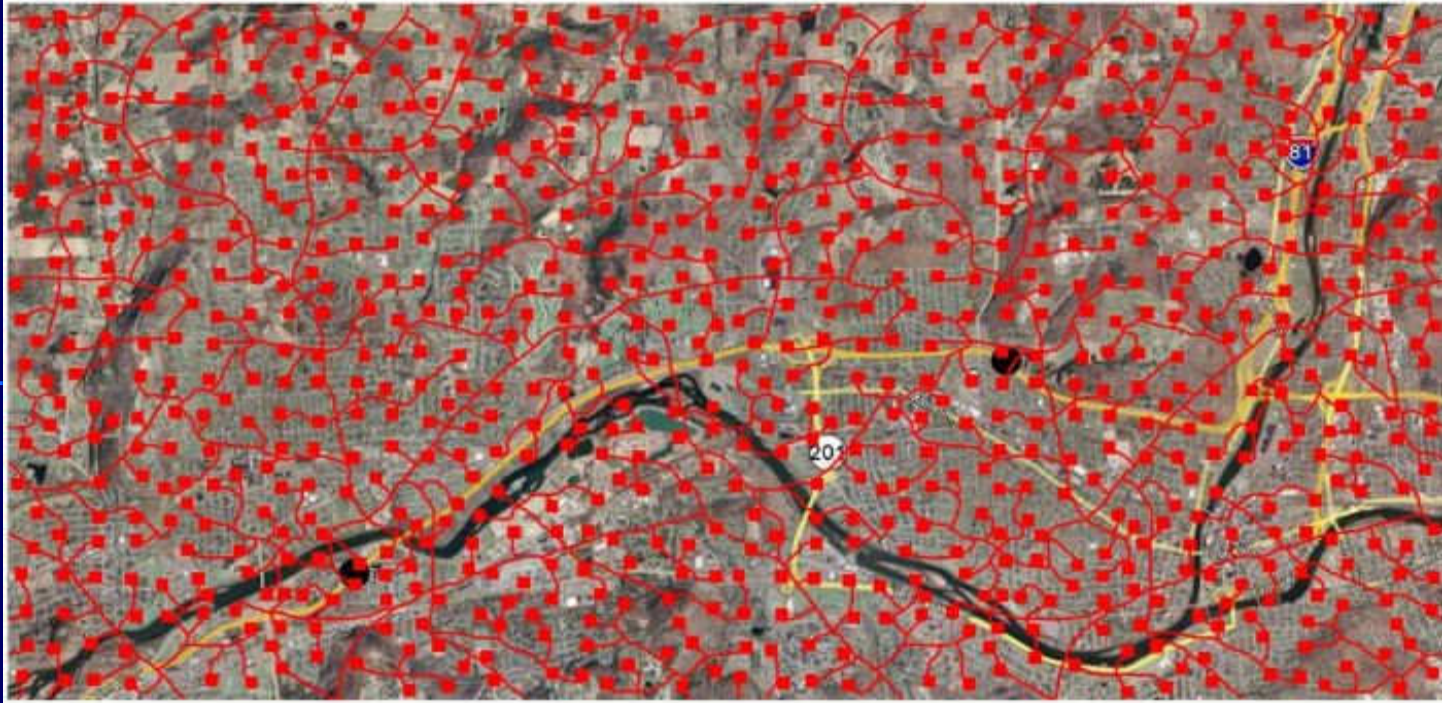
1 mile approx

WHAT IF ONE WELL PAD PER 640 ACRES ?



SOURCE: Broome Community College SOS 120W students, Spring 2010
Well pad density mapping assumptions on back.

1 mile approx.
Millennium Pipeline



2011 Manhattan Institute Study – NY Impacts

- \$11.4 billion economic output
- 15,000 to 18,000 jobs in Southern Tier and WNY Marcellus only
- 75,000 to 80,000 jobs if expanded to Utica
- State and municipalities to get \$1.4 billion in tax revenues

What About Owego, Tioga County, NY?

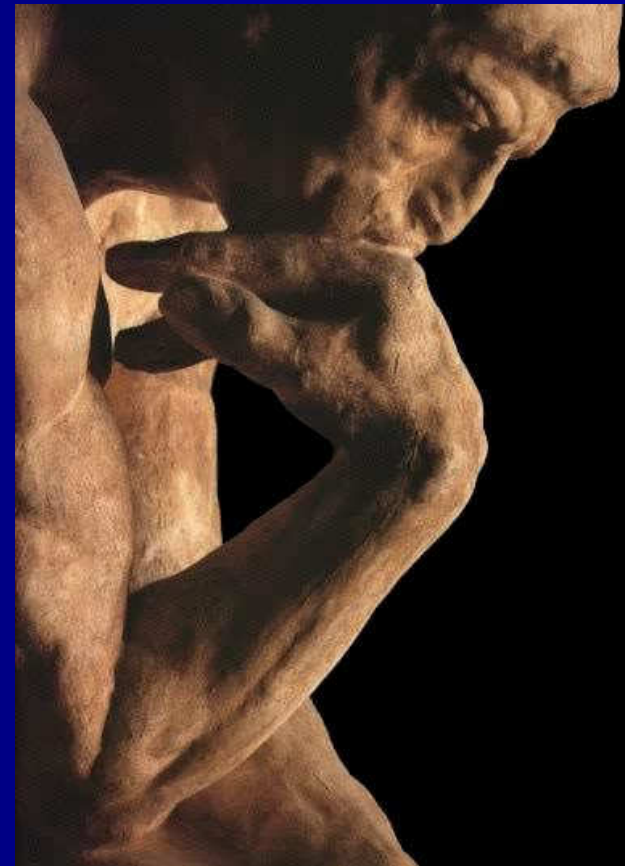
- 3 counties closest to NY in PA
- 101 horizontal wells with over 100 days
- Weighted ave. daily prod. = 3,034 mcf
- Assume one well is drilled on private, one public
- Use NY's current ad-valorem tax
- NYSORPS 2011 UOP (\$9.80/mcf)
- Current gas prices (\$4.8708/mcf) 12 month on 4/28/11
- Tax allocation from property tax bill

NY Real Property Taxes Gas Production Projection for Marcellus Drilling (One Well, Town of Owego, Tioga Co.)

Avg Well Prod.	3,034	Mcfd	
Annual Prod Total	1,107,410	Mcf	
NYS UOP Value	\$9.80	Per Mcf	2011 State Value
Uniform %	76%		
	Taxable Value	Tax Rate/m\$	Tax
County	\$8,247,990	10.788	\$88,979.31
Recycle	\$8,247,990	0.451	\$3,719.84
Townwide	\$8,247,990	0.869925	\$7,175.13
Part Town	\$8,247,990	2.200307	\$18,148.11
Apalachin Fire	\$8,247,990	2.154005	\$17,766.21
Owego/Appalachin School Tax	\$8,247,990	25.253141	\$208,287.65
Totals		41.716378	\$344,076.25

Key Points – Plus One Well on Town Property

- \$344,076 1st year local property taxes
- \$674,247 1st year royalty payments
- \$1,018,523 total annual payments to Town of Owego



Cabot Oil & Gas Production – May 2011

- 69 horizontal wells N.E. PA
- Producing 420 Mmcf per day
- At \$5 per mcf, total value is \$2.1 million per day
- Royalties at 15%, landowners receive \$315,000 per day!!!
- Direct payments to landowners

What Other Industry ---

- Can be immediate source of employment
- Not looking for handout from the state
- Pay many and all state and local taxes
- Direct 'production' taxes (real property) to locals instead of state
- Direct payments to landowners

Conclusions

- No environmental compromises
- State has extensive regulatory framework (gas drilling and pipelines)
- No need for local ordinances, regulation (see Appendix 10, dSGEIS)
- Work with industry on road use, information, and other agreements

Marcellus Natural Gas Development

----- May be the greatest economic development opportunity in depressed areas of the state that we will see in our generation ----- BCNY 2009

- No environmental compromises
- Produce clean-burning natural gas
- NY landowners deserve to share in the wealth, particularly in depressed areas

Contact Information

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