NYS DEC’s Regulation of Oil and Gas Drilling in New York

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- New York State Environmental Conservation Law Article 23
  - Oil, Gas & Solution Mining Law – Titles 1, 3, 5, 7, 9, 11, 13, 17, 19, 21, 23, and 24
- Regulations 6NYCRR Parts 550-559
- State Environmental Quality Review Act
- Site-specific permits: environmental and technical reviews
  - Site considerations
  - Well drilling and construction methods
  - Fluid handling and disposal
  - Well spacing and correlative rights
  - Plugging permits and reclamation
- Guidance and special permit conditions
- Other DEC jurisdictions
  - Water
  - Solid and Hazardous Materials
Environmental Conservation Law
Article 23

- Issue permits to drill and plug wells
- Collect and disseminate oil and gas well geological, technical and production data
- Require financial security to ensure well plugging and reclamation
- Set well spacing and order compulsory integration
- Lease state lands for oil and gas
- Issue permits for underground gas storage fields
The provisions of this article shall supersede all local laws or ordinances relating to the regulation of the oil, gas and solution mining industries; but shall not supersede local government jurisdiction over local roads or the rights of local governments under the real property tax law.
Oil & Gas Regulatory Program

- Oil, Gas & Solution Mining Law passed in 1963; major amendments 1981, 2005
- Regulate oil and gas activity to:
  - Prevent waste
  - Protect public health, safety and the environment
  - Provide for greater ultimate recovery of oil and gas
  - Protect correlative rights of all persons
- 1992 FGEIS - site review under SEQR
Use of a GEIS to Fulfill SEQRA

- Evaluates separate actions having common impacts
- Individual EIS not needed if GEIS adequately addresses all potential impacts
- Gas well drilling in NYS was reviewed in a 1992 GEIS

http://www.dec.ny.gov/energy/45912.html
1992 Findings on Gas Well Drilling

- No significant impacts if:
  - Consistent with Final GEIS
  - No other DEC permits needed
  - Not in a State Parkland
  - Less than 2.5 acres in Agricultural District disturbed
  - Greater than 2,000 feet from a municipal water supply well
  - Includes wells drilled in primary and principal aquifers
Draft SGEIS

- Addresses separate actions with common impacts not covered in the existing GEIS
  - The action of well permit issuance for horizontal drilling and high-volume hydraulic fracturing to develop the Marcellus Shale and other low permeability gas reservoirs
- Builds upon existing GEIS
- Proposes SEQRA determinations for the new activity
- [http://www.dec.ny.gov/energy/58440.html](http://www.dec.ny.gov/energy/58440.html)
Well Spacing and Compulsory Integration

- Wells are drilled within “spacing units” of 40 - 640 acres, established by law.
- Spacing unit acreage is “assigned to the well” for the purpose of sharing costs and production revenue.
- Lessors and royalty owners have no costs.
- Unleased owners may choose to participate (share) in well costs and a greater share of production if a well is successful.
The Well Operator must have 60% of the unit acreage under lease to submit an application for permit to drill (APD).
Establish the Unit

- The spacing unit is the area assigned to the well, usually more than one property.

- “Pooling” or “integration” refers to the grouping of more than one property into a single spacing unit.

- Unit set when permit is issued.

- Usually established by permit without a hearing.

- May sometimes require review and a hearing if exception from law is requested.
Compulsory Integration

- If the Well Operator has control of 100% of unit acreage, compulsory integration is NOT necessary.
- If the Well Operator has less than 100%, then compulsory integration IS required.
- Compulsory integration requires a DEC hearing and order.
- Compulsory integration does not affect owners leased to the well operator.
Compulsory Integration - Elections

1. “Integrated non-participating owner”
   - If unleased: no royalty paid during penalty phase (accelerates payout)
   - If leased: sliding scale royalty paid during penalty phase (1/16, 3/32, 1/8)

2. “Integrated participating owner”
   - Pay your share of costs and receive WI share of production

3. “Integrated royalty owner”
   - Lowest royalty in unit but not less than 1/8th (paid on gross)

**Consider not only the rewards, but also the costs, risks and responsibilities associated with each option.

**See DEC’s brochure, consult an expert.
In Albany, approximately once a month

Attendance not mandatory *unless*:

- Integrated participating owner has not yet made the required payment; OR
- Uncontrolled owner has an objection to the notice or proposed order
Compulsory Integration - Hearing Notice

- 30 days before the hearing
- In the newspaper
- On the DEC website
- Direct mailing to “uncontrolled owners”
  - Unleased owners
  - Other lessees not in a joint operating agreement with the well operator
The Integration Order

- Issued after the hearing.
- NOT a lease or a contract.
- Will be filed in the county courthouse against all properties in the unit.
- Owners affected by all future drilling and well-related operations in unit.
  - May have to make elections for subsequent operations.
  - DEC will NOT be involved in most disputes between owners and operators, only violations.
State Land Leasing Program

- Leasing of state lands for oil & gas authorized by law since 1930s
- DMN oil & gas leasing agent for all state lands except Forest Preserves, State Parks, lands under Lake Ontario
- 83,021 acres under lease at year-end 2007
- 104 wells on or adjacent to state land
State Lease Components

- Primary Term – 5 years
- Secondary Term – as long as well produces
- Bonus Bid – dollars per acre by high bidder
- Delay Rental Payment – during primary term should no production occur
- 12.5% Royalty – if drilled well is productive
- Excluded Areas – based on tract assessments
  - (>50% of total acreage excluded in 2006 sale)
- Special Conditions – site specific restrictions
- Lease Termination – reclamation of all sites
Private Oil & Gas Leasing

- Leases are negotiable contracts
- Many leased properties are never drilled or placed into spacing units
- DEC has no jurisdiction over lease offers or lease terms, but does provide educational information
- DEC does have jurisdiction over well site, drilling and environmental issues
NY Oil and Gas Statistics

- Oil seeps - Cuba, NY - 1627
- First natural gas - Fredonia, NY - 1821
- First oil well - Allegany County - 1863
- Est. 75,000 wells drilled since the 1820s
- Approx. 12,000 active wells
- 453 new well permit applications received in 2010
- 2008 oil and gas production
  - 50.3 bcf produced
  - 397,000 bbl oil produced
FIGURE 4.9
MARCELLUS SHALE THICKNESS IN NEW YORK STATE

Notes:
- Source: New York State Museum - Reservoir Characterization Group (Leone, 2009)
- Organic-rich Marcellus includes Union Springs and Otka Creek Members and lateral equivalents.
THICKNESS OF HIGH-ORGANIC UTICA SHALE IN NEW YORK STATE

Note:
- Contours show the combined thickness of the high organic carbon interval (>1% TOC) lower Indian Castle, Dolgaveille, Flat Creek members (New York State Museum - Reservoir Characterization Group, 2009).
Chenango County Drilling History

- **Gas Field Development**
- **Genegantslet Field**
  - Towns of Smithville and Greene
  - Drilled 11 wells 1964 through 1967
  - Several producing gas for residential use from the Hamilton Shale at approx. depths of 2000 to 2400 ft.
  - Operator – Genegantslet Gas & Oil Co., Inc.

- **Beaver Meadow and Hawley Brook Fields**
  - Towns of Smyrna and Plymouth
  - Drilled to approx. 3500 to 4500 ft. from 2004 to present targeting the Oneida and Herkimer Sandstones
  - Operator - Norse Energy Corp USA

- **Recent Drilling/Permitting Activity**
  - Towns of Smyrna, Afton, Coventry, Plymouth, and Preston
  - 7 permits issued recently targeting Herkimer, Utica and Marcellus Formations
  - 10 pending permit applications for new wells
  - Operator – Norse Energy Corp USA