

Chapter 7 Mineral Extraction

VISION: *Resource extraction has always been an important societal goal in New York State. The Town of Veteran welcomes this expanding industry, but does so expecting the industry and its regulators to consult municipal planning documents and properly mitigate any negative impacts that might result from industry activities.*

Natural Gas

Natural gas has been commercially drilled in New York State since 1821. It has been piped to towns for light, heat, and energy since the 1870s. The first storage facilities were developed in 1916. The first well completion in the Town of Veteran was in 1931.

Hydraulic fracturing was first used in New York to develop low permeability reservoirs in the Medina Group around the 1970s-80s. Six new Trenton-Black River fields were discovered in 2005; however Veteran saw its first Trenton-Black River well in 2000. Since then several wells targeting the Trenton-black River formation were drilled in the Town.¹ As of July 2012, the New York State Department of Environmental Conservation (NYSDEC) Well Search Database records 28 well permits and 10 wells listed in the NYSDEC 2011 Well Production Database for Veteran. The producing wells all have Trenton-Black River objectives. However, soon New York State may witness its first Marcellus shale drilling.

Table 8: Town of Veteran’s 2011 Annual Well Production

API Well Number	Well Name	Operator Name	Year	OIL (Dbls)	GAS (Mcf)	WATER (Gals)	Months in Production	Well Type
31015228260000	Broz Unit 1	Talisman Energy JSA nc.	2011		669.00	189.00	8	Gas Wellcat
31015220090100	Clauss Jr 1-A	Talisman Energy JSA nc.	2011		9022.00	41.00	9	Gas Extension
31015229130000	CIFasi 1	Talisman Energy JSA nc.	2011		0.00	0.00	0	Gas Wellcat
31015220270000	Hulet 1	Talisman Energy JSA nc.	2011		100740.00	13065.00	5	Gas Wellcat
31015228800100	Kienzle 1-A	Talisman Energy JSA nc.	2011		87934.00	138.00	12	Gas Extension
31015220570000	Kimball 1	Talisman Energy JSA nc.	2011		71601.00	260.00	12	Gas Extension
31015228620000	Lant 1	Talisman Energy JSA nc.	2011		0.00	92.00	1	Gas Extension
31015222200000	Little 1	Talisman Energy JSA nc.	2011		121425.00	3146.00	11	Gas Wellcat
310152260920000	Victor 1	Talisman Energy JSA nc.	2011		0.00	0.00	0	Gas Extension
31015229500000	Winky 1	Talisman Energy JSA nc.	2011		0.00	0.00	0	Not Listed

Recent advances in horizontal drilling and hydraulic fracturing have allowed deep gas reserves, such as Marcellus Shale, to finally be economically feasible to develop. The Utica Shale is a deeper and more expansive formation that may also have economic viability for the state. Both formations are found throughout the municipal boundary; refer to Appendix A for maps on depth and thickness of these formations.



Figure 16: Example Hydraulic Fracturing Well

¹ According to the NYDEC well permit database, viewed 23 December 2011; <http://www.dec.ny.gov/cfm/extentapps/GasOil/search/wells/index.cfm>

² NYSDEC Annual Well Production Search, <http://www.dec.ny.gov/cfm/extentapps/GasOil/search/production/index.cfm>

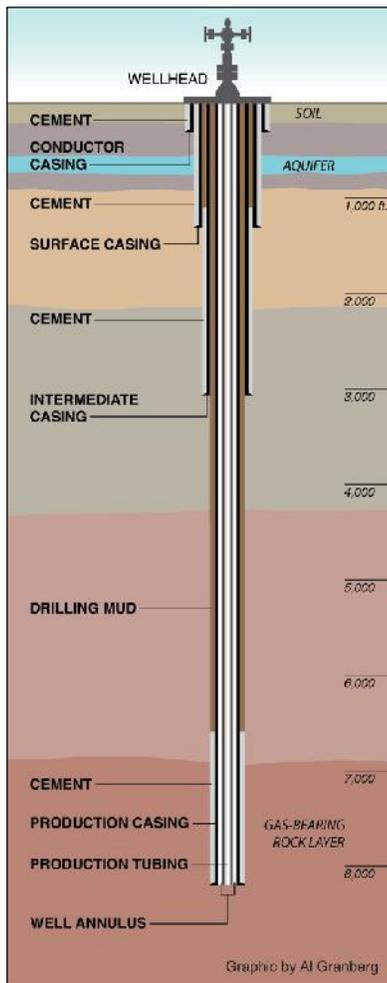


Figure 17: Anatomy of a Well

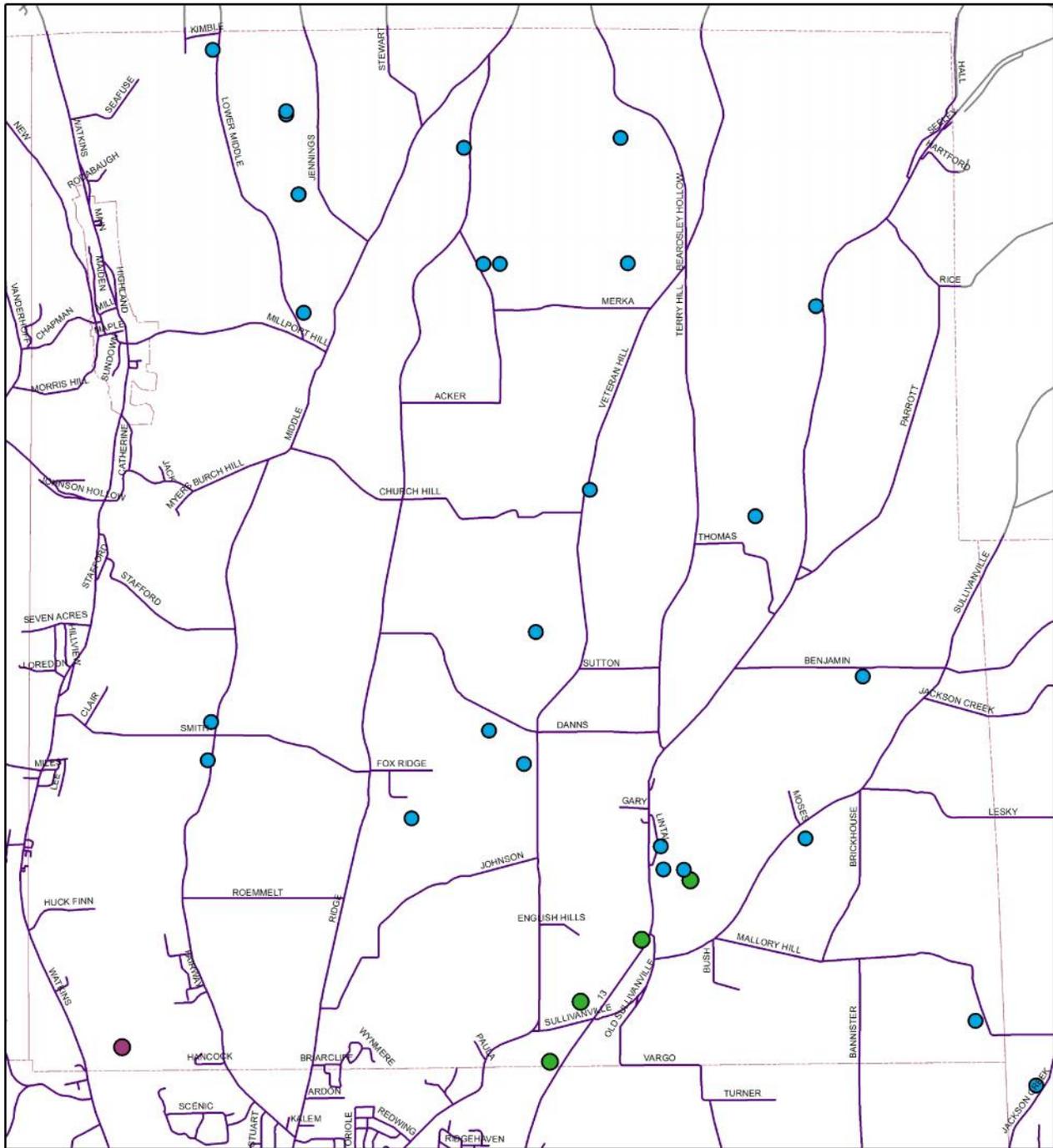
An energy advisory commission, the *Chemung County Executive's Advisory Commission on Natural Energy Solutions*, was formed in April of 2010 to explore the impacts and opportunities associated with natural energy issues. The group's main focus at this time is to identify key issues, research facts, and review and propose public policy regarding natural gas exploration and provide credible information to the County Executive, the County Legislature and the public at large.

The Commission's nine sub-committees are focusing on business opportunities and workforce development, environmental impacts and water quality, law enforcement, public safety and roads, planning and zoning, and outreach and education. The full commission meets regularly with committee chairs providing updates to the group. The sub-committees meet more often, as needed, based upon their individual tasks. A website was developed in September of 2010.³

The increased demand for cleaner energy and the proximity reserves sits to the northeast's population hubs makes natural gas development significant. There are certain financial benefits landowners may receive for leasing their land and certain economic gains a community could reap, but there will be challenges and costs that are associated to these benefits. Map 25 depicts well permits, as of June 2012, in the Town of Veteran.

³ <http://www.chemungcounty.com/index.asp?pageld=468>

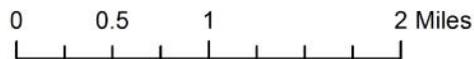
Map 25: Town of Veteran Mines and Wells



Legend

- Gas Wells
- Mines**
- COMMODITY**
- Glacial Till
- Sand and Gravel
- Roads
- - - Town Boundaries

Town of Veteran Mines and Wells Map



Map Created 5/18/13

Surface Mining

Surface mining provides the raw materials for consumer goods. It is the basis for many construction projects. The availability of hydraulic cement was as important in the success of the Erie Canal as it is to the maintenance of the New York State Thruway. Mines provided materials to improve the standard of living and the quality of life.

However, during the last five to ten years, there has been a steady decrease in the number of mines and mining applications in New York. This is because most mines produce materials used for construction aggregates, that is, crushed stone and sand and gravel. These are products that are high in volume but low in value. They must be produced close to market lest the value of transporting the material to the site of use exceeds the value of the product itself. Depending on variables such as the cost of fuel and traffic congestion, the cost of hauling distances of thirty miles or less can be greater than the value of the material being delivered.⁴ That said, the recent shale gas development in the region, and its demand for gravel, may have an impact on mining activity in the area.

A total of 55 acres of land in the Town of Veteran has been affected by surface mining since 1991.^{5, 6} Since 1991, five mining permits were issued in the Town. One permit remains active, totaling 27 acres, 3.6 acres of which are actively being mined. To date 28 acres of the 55 acres has been through a reclamation process. Expected land uses after mining reclamation are agricultural cropland.

Mineral Extraction Issues

- The Town of Veteran has significant mineral resources that have a considerable benefit and impact to the economic health of the Town.
- The natural gas industry is very comprehensive and far-reaching with a complex network of subcontractors, support companies, and specialists.
- The natural gas industry follows a boom and bust cycle with hard to measure variables that make planning and mitigating this industry challenging for local officials.
- Mineral extraction and mining operations affect many sectors of government and community; e.g. emergency medical services, roads, fire, health care, social services, police, water, sewer, courts. It also has broader socioeconomic impacts; e.g. workforce, economy, unemployment, wages, housing prices, housing availability, and temporary housing and lodging.
- Primary regulatory control of mineral extractions resides with the *New York State Department of Environmental Conservation* and its *Division of Mineral Resources*. The *Bureau of Oil and Gas Permitting and Management* regulates oil and gas resources and the *Bureau of Resource Development and Reclamation* oversees the mined land program.

⁴ http://www.nysm.nysed.gov/publications/record/vol_03/pdfs/vol_03-CH01.pdf

⁵ Total acreage was calculated using the 'Searchable on-line Mining Database.' This system to allows users to generate dynamic queries and save the output either as an Excel based file or in a comma separated value format; <http://www.dec.ny.gov/cfm/xtapps/MinedLand/>

⁶ The Mined Land Reclamation Law was enacted in 1975. The Division of Mineral Resources maintains a data management system on mines regulated under the MLRL. Mines operated and closed prior to that date were not regulated or tracked by the Division. Roughly 5,400 mines statewide are in that system with approximately 2,100 active mines and the rest reclaimed since 1975.

- The Town of Veteran has jurisdiction over land use planning and control by various means such as zoning, land use ordinances, and code enforcement, but this authority is limited when dealing with mineral extraction and may only apply to secondary activities; e.g. light/noise, storage facilities, driveway permits, temporary housing facilities, and road-use agreements.

POLICY: *The Town of Veteran recognizes that surface and mineral owners have certain legal rights and privileges, including the right to extract and develop these interests. Private property owners also have certain legal rights and privileges, including the right to have the mineral estate developed in a reasonable manner and to have adverse impacts mitigated. The property rights of mineral lessees must be balanced with the rights of private property owners and the general public.*

POLICY: *Strengthen the Town of Veteran's jurisdiction through updating the Town's zoning, land use ordinances, and code enforcement laws.*

RECOMMENDATION:

- 7a. Review and update site plan review law.
- 7b. Adopt camping regulations.
- 7c. Review mobile home court and RV ordinances.
- 7d. Adopt regulations on short-term temporary employee housing regulations.
- 7e. Adopt and identify agricultural zoning district and agricultural resources.
- 7f. Review and update regulatory definitions to include industry terminology, man-camp, temporary employee housing, group home, agricultural resources, storage yards, compressor station, drilling rig, etc.

POLICY: *The Town seeks to conserve ridgetops and steep slopes for environmental, aesthetic, and economic value. Development on ridgetops and steep slopes will be carefully evaluated so as to attempt to retain their natural character and prevent negative impacts on the Town's creeks and streams. Preservation of forested ridgetops and steep slopes will be encouraged.*

RECOMMENDATION:

- 7g. Encourage preservation of ridgetops and steep slopes.

POLICY: *Ensure that mineral extraction is responsive to local planning documents.*

RECOMMENDATION:

- 7h. Review and update ordinances at the Town levels to make sure documents meet the Comprehensive Plan's goals and objectives.

POLICY: *Strengthen regional alliances and coordinate efforts with the Chemung County Executive's Advisory Commission on Natural Energy Solutions, industry representatives, and surrounding municipalities.*

RECOMMENDATION:

- 7i. Appoint a municipal official to attend local and regional energy meetings; e.g. the energy commission meetings, to stay informed and to provide local insight in the coordination and planning efforts.

POLICY: *Ensure mineral extraction activity is being properly tracked at the town or county level to benefit local decision-making and planning processes; e.g. rig count, permit locations, active well site locations, truck routes, storage facilities, etc.*

RECOMMENDATION:

- 7j. Assign municipal officers and staff additional roles and responsibilities; e.g. meetings, data collection, analysis, and regulator.

7k. Review and adopt a road use agreement.

7l. Maintain an inventory of viable sand and gravel resources in the Town using information available from the NYSDEC searchable on-line mining database. Compare this online inventory to the local knowledge and municipal employee knowledge.

7m. Maintain an inventory of viable well permit resources in the Town using information available from the NYSDEC searchable on-line wells data search. Compare this online inventory to the local knowledge and municipal employee knowledge.

POLICY: *Protecting the quality and quantity of water in the Town is of utmost importance; especially drinking water sources. High volumes of fresh water are required for drilling activities and the potential threat to water contamination from underground pollution and surface spills, chemical or diesel, is serious and should be controlled and managed accordingly. Mining and drilling activity is regulated through NYSDEC, but it is important to ensure our water resources. Therefore more local planning documents and oversight should be considered. All mining activities occurring in the aquifer or floodzone and well permit process involves consulting local planning documents before permit is granted.*

RECOMMENDATION:

- 7n. Advise local residents to get their private drinking wells tested for baseline compound levels prior to drilling activities.

7o. Adopt wellhead protection regulations.

7p. Adopt brine and waste disposal regulations.

POLICY: *Natural drainage patterns will be preserved so the cumulative impact of mineral extraction activities will not cause storm drainage or floodwater patterns to exceed the capacity of natural or constructed drainage ways, or to subject other areas to increased flooding, erosion or sedimentation or result in pollution to streams, rivers or other natural bodies of water.*

RECOMMENDATION:

7q. Review and update erosion, sedimentation, and local stormwater regulations.

7r. Review and update floodplain regulations.

POLICY: Maintain and enhance cooperation with natural gas operators, mining operators, property owners, state and federal agencies, in regulating activities and mitigating impacts.

RECOMMENDATION:

7s. Invite stakeholders and industry representatives to participate in select community and municipal meetings.

7t. Consider meetings with gas industry representatives to maintain communications and monitor market conditions with the objective to forewarn the Town of impending changes in employment or well drilling activity and mitigate other major facts, e.g. change truck routes, upcoming construction projects, pipeline expansion, etc.

POLICY: Ensure that developers of energy or mineral extraction projects contribute proportionally to the construction and operation of any public improvements where they are, or will be, required by their projects.

POLICY: Facilities that are appurtenances to oil and gas development activities (e.g. compressors, storage yards, etc.) are considered appropriate in all land uses so long as they maintain compatibility with surrounding land uses.

Figure 18: Disguised vs. Traditional Compressor Site



Source: Patrick O'Dell, National Park Service, disguised compressor site



New compressor station in Columbia Township, Bradford County. (G. Frantz 3-15-12)

RECOMMENDATION:

- 7u. Through the Town's site plan review law, require accessory oil and gas facilities to maintain community character. Possibilities compressor site disguises to include: barn structure, school facility, picnic area enclosures, club house or recreational facility, retail or office building.

POLICY: *Reduce risks and improve the safety of affected communities and transmission pipelines through implementation of recommended practices related to risk-informed land use near transmission pipelines.*

RECOMMENDATION:

- 7v. Bring together key stakeholders: property developers and owners, transmission pipeline operators, and state real estate commissions to enhance pipeline safety and ensure the protection of people, environment, and the pipeline infrastructure.
- 7w. Consult Pipeline and Informed Planning Alliance (PIPA) as new pipelines are built within the Town. See PIPA's website at:
<https://primis.phmsa.dot.gov/comm/pipa/landuseplanning.htm>.
- 7x. Obtain transmission pipeline mapping data.
- 7y. Adopt transmission pipeline consultation zone ordinance.

Figure 19: Consultation Zone



7z. Implement new development planning areas around transmission pipelines.

7aa. Consider site emergency response plan in land use development.

⁷ www.pipa-info.com