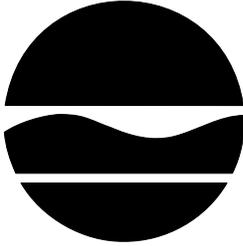


New York State



**Department of Environmental Conservation  
Division of Mineral Resources**

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# New York State Oil, Gas and Mineral Resources 2004

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**Annual Report**

New York State Department of Environmental Conservation

**George E. Pataki, Governor**

**Denise M. Sheehan, Commissioner**

## *Division Mission Statement*

*The Division of Mineral Resources is responsible for ensuring the environmentally sound, economic development of New York's non-renewable energy and mineral resources for the benefit of current and future generations.*

This report was produced by the  
NYS Department of Environmental Conservation

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New York State  
Oil, Gas  
and  
Mineral Resources  
2004

State of New York  
George E. Pataki, Governor

Department of Environmental Conservation  
Denise M. Sheehan, Commissioner

## EXECUTIVE SUMMARY

Mining occurs in every region of the State except the New York City area. Oil and gas development has historically occurred in the western half of the State, but the Finger Lakes region has been experiencing heavy activity for several years. Due to differences in legal reporting requirements, the types of statistics presented for the two programs are not identical. All information is for the year 2004.

### Oil, Gas and Solution Mining

**Inspections** - Staff traveled 114,317 miles and performed 2,491 oil and gas inspections.

#### Permits and Completions

Gas: Permits	133	Completions	70
Oil: Permits	52	Completions	56
Other: Permits	25	Completions	62
Total: Permits	210	Completions	188

**Wells Reported (All Types)** 2004 - 13,591

**Wells To Date (All Types)** - 75,000, majority pre-regulation (most plugging status unknown).

#### Production & Market Value

Gas	46.9 bcf	\$Up	58%
Oil	184,065 bbl	\$Up	41%
Total O&G Mkt Value	\$334 million		

**State Leasing** - 96 leases were in effect covering 77,500 acres and 182 productive wells.

#### Revenues from Oil and Gas

State Revenues	\$1.3 million
Local Govt. Taxes (est.)	\$10.0 million
Landowner Royalties (est.)	\$41.8 million

**Underground Natural Gas Storage** - 23 facilities were 78% full at year-end.

Total Storage Capacity	209 bcf
Working Gas Capacity	105 bcf
Max. Daily Deliverability	1.927 bcf/day

**Solution Mining** - 5 facilities produced 2.23 billion gallons of brine equal to 2.65 million metric tons of salt.

**Financial Security** - In 2004 New York held \$12.9 million to guarantee well plugging and site reclamation.

### Mined Land Reclamation

**Inspections** - Staff traveled 190,306 miles to perform 2,226 mine inspections.

#### Permits Issued

Total Permits	475	<b>Fees Annual Regulatory</b>	\$2.8 Million
New Permits	55		
Renewal & Mod.	420		

**Active Mines** 2,272

**Estimated Market Value** \$1 Billion

#### US Production Rank by Quantity

Wollastonite	1st	Salt	3rd
Garnet	1st	Talc	4th

#### NY Rank by Value

Crushed Stone	1st	Sand & Gravel	4th
Cement	2nd	Wollastonite	5th
Salt	3rd		

#### Common Mine Types

Sand & Gravel	1,948
Limestone & Dolostone	98
Bluestone	54

#### Owner Type

Industry	1,761
County	57
Town	438

**Net Affected Acreage** 47,099

**Life-of-Mine Acreage** 110,482

**Reclaimed Acreage, 2004** 1,243

**Reclaimed Since 1975** 23,300

**Financial Security** - In 2004 New York required \$99.1 million to guarantee mine site reclamation.

## **DIVISION OF MINERAL RESOURCES PROGRAM HIGHLIGHTS**

New York State gas production in 2004 was 46.9 billion cubic feet (bcf), an all-time record. The Trenton-Black River's contribution to the State's total production continued to climb and hit roughly 75% (35.9 bcf) in 2004.

Six new Trenton-Black River gas fields started production in 2004: Riverside and McNutt Run in Steuben County; Seeley Creek and Laurel Run in Chemung County; and Sexton Hollow and Meads Creek in Schuyler County.

Activity in other formations also showed promising signs. Discoveries in the Oneida-Oswego and Theresa sandstones demonstrated that New York has additional exploration targets with potentially significant reserves. Companies seeking new opportunities are taking notice that New York's "deep" formations are underexplored and deserve a closer look. More advanced exploration techniques used elsewhere in the country are no longer the exception here, but are routinely employed by many companies. For more details on the Trenton-Black River and other formations, please see pages 13 to 21.

In 2004 the price of oil reached levels not seen since the early 1980s and oil drilling picked up in the State's southern tier. Overall, New York's drilling permits hit a 12-year high in 2004. For the first time in recent memory, drilling rig availability has become a significant concern for New York's oil and gas operators.

By year-end 2004 a total of 15 deep wells had been drilled on or adjacent to New York State land. In 2004 the State collected \$525,000 in royalties on 8 Trenton-Black River wells. Steuben County has the most State acreage under lease due to the high level of drilling activity associated with the Trenton-Black River.

Issues surrounding well spacing and integration intensified significantly in 2004. In late January

DEC issued two Declaratory Rulings (#23-13, #23-14) in response to petitions filed by Western Land Services (WLS).

In 2004 there were 2,272 active DEC-regulated mines in New York State, a drop of 45 mines from 2003 and the sixth straight year of decline. The decrease is especially noticeable in the Long Island and lower Hudson Valley regions.

Nevertheless, statewide production of New York's major mined commodities remains relatively level from year-to-year. Increasingly, mine operators are choosing to replace production by expanding current mines rather than opening new ones. This trend holds true for both sand and gravel and hardrock quarries. Out of the 475 mining permits issued in 2004, only 55 were for new facilities.

A total of 47,099 acres were affected by mining in 2004 out of a total life-of-mine approved acreage of 110,482 acres. The Department continued to have success promoting concurrent reclamation with 479 acres reclaimed concurrently at 72 operating mines. Final reclamation of 764 acres occurred at 102 closed mines bringing the year's reclamation total to 1,243 acres. Approximately 23,300 acres of land affected by mining have been reclaimed since 1975.

The level of bluestone activity continued to increase in 2004. Record values for this paving and facing stone spurred new investment and increased production. In 2004 New York also rose to first place nationwide in garnet production.

In 2004 the Division held over \$99 million in financial security to guarantee reclamation of mines. However, recent experience at Department-reclaimed mines shows that many bonds are insufficient to cover costs. In 2004 the Division began an evaluation of bonding amounts statewide.

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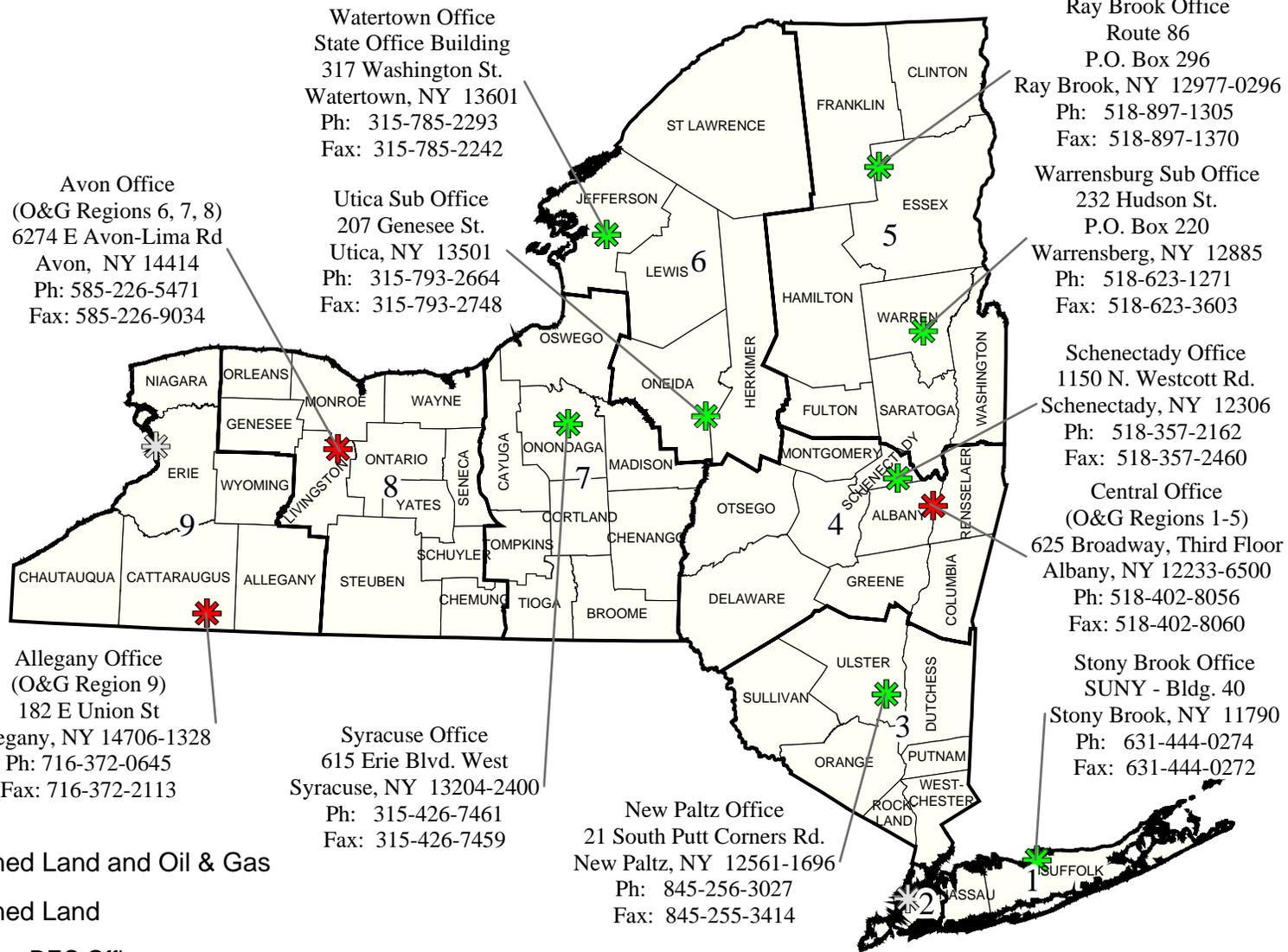
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# Map 1 - Division of Mineral Resources Regional Service Areas



## 2004 New York Oil & Gas Industry At a Glance

### Production and Market Value

Gas	46.9 bcf	\$Up 58%
Oil	184,065 bbl	\$Up 41%
Total Market Value	\$334 Million	

### Revenues In Millions

State Leasing	\$766,000
Local Govt (est.)	\$10.0 million
Landowner Royalties (est.)	\$41.8 million

### Financial Security

Plugging & Reclamation  
\$12,902,799

### State Leasing

96 leases covered 77,500 acres and 182 productive wells in 9 Counties.

**All Reported Wells** 13,591

### Active Wells

Natural Gas	6,076
Oil	3,153
Gas Storage	908
Solution Salt	113

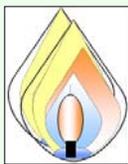
### Underground Gas Storage

23 facilities, 78% full at year-end  
Total Storage Capacity 209 bcf  
Working Gas Capacity 105 bcf  
Max. Deliverability 1.927 bcf/day

### Solution Mining

5 facilities produced 2.23 billion gallons of brine (2.65 million metric tons salt.)

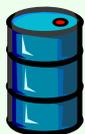
### Natural Gas & Oil Abbreviations



Abbreviations for natural gas volume measurements:

**mcf** thousand cubic feet  
**mmcf** million cubic feet  
**bcf** billion cubic feet

Crude oil is also measured by volume. One barrel equals 42 gallons.



**bbl** barrel

### What's an MCF Do ?

Roughly 4.2 million households in New York use natural gas for home heat, cooking and heating water. It takes just 69 mcf per year to heat the average New York home<sup>1</sup>. The State's 2004 production of 46.9 bcf was enough to heat 680,000 homes.



<sup>1</sup> New York State data from US DOE/EIA 2001

## MARKET VALUE AND ECONOMIC BENEFITS

### Market Value

Due to both higher production and higher prices, the total market value of New York's oil and gas production increased by roughly 58% from \$212 million in 2003 to over \$334 million in 2004. Likewise the market value of natural gas rose 58% between 2003 and 2004 to \$327.7 million. While oil is a much smaller contributor to the total, it nonetheless rose an impressive 41% from 2003 to \$6.5 million in 2004.

### Tax Revenues to Local Governments

Communities in oil and gas producing areas also benefit from the industry's activity. DEC estimates that real property taxes on 2004 natural gas and oil production were roughly \$10 million (gas \$9.83 million and oil \$194,000). Local governments assess their taxes each year based on a unit of production value determined by the NY State Division of Equalization and Assessment using a five-year average. This dampens the impact of fluctuating oil and gas prices.

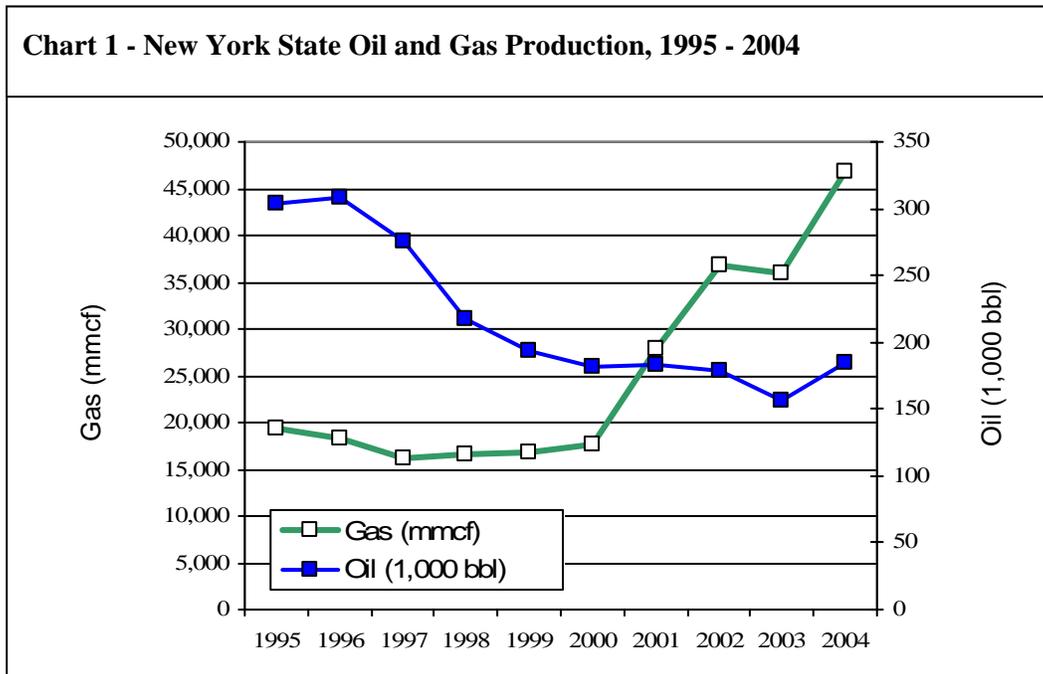
### State Lease Oil and Gas Prices

The average wellhead natural gas price of \$6.98 per mcf in 2004 was up 21% from the \$5.78 price of 2003. The average price of oil in 2004 of \$35.27 per bbl was up 20% from \$29.47 in 2003. These average prices were obtained from royalty payments made to the State for leases on State lands.

### Landowner Royalties and Landowner Wells

The majority of landowners with producing oil and gas leases receive a royalty from the well operator. Based on an average royalty of one-eighth of the production value, it is estimated that landowners in New York received roughly \$41.8 million in royalties in 2004.

In addition, roughly 450 of New York's gas well operators are landowners with just one or two wells. Typically the wells are no longer commercially productive, but produce enough gas to help reduce their home heating costs.



## PRODUCTION OF OIL & GAS

### Natural Gas Production

New York's reported natural gas production for 2004 was 46.9 bcf, an increase of 30% from 2003. Over 35.9 bcf of gas came from just 64 producing Trenton-Black River wells with one well producing over 6.5 bcf.

### Oil Production

In 2004 New York's production of oil increased roughly 17% to 184,065 bbl from 157,313 bbl in 2003.

### Top Counties and Companies

In 2004 Steuben County retook the lead when it more than doubled its natural gas production from 2003. In fact, Steuben County alone accounted for 47% of New York's 2004 production. Former leader Chemung County dropped back to second place with a slight production decrease. Chautauqua County continued in third place (see Table 1).

Fortuna Energy and Richardson Petroleum remained the top natural gas and oil producing companies respectively (see Table 2).

### For Further Details

Map 2 on page 12 and the Appendix on page 73 give production information by town. Chart 2 on page 13 shows the State's oil and gas production for the past five years. Table 7 on page 21 gives production by geologic formation.

**Table 1 - Top Ten Gas Counties, 2004**

County	Gas (mcf)	Active Gas Wells	Average mcf/Well
Steuben	21,913,148	49	447,207
Chemung	12,538,992	29	432,379
Chautauqua	5,598,788	3,124	1,792
Schuyler	1,226,457	4	306,614
Erie	1,163,548	880	1,322
Cattaraugus	983,938	521	1,888
Cayuga	812,137	303	2,680
Genesee	745,477	494	1,509
Seneca	637,455	156	4,086
Wyoming	323,378	260	1,244

**Table 2 - Top Ten Gas and Oil Producing Companies, 2004**

Company	Gas (mcf)	Company	Oil (bbl)
Fortuna Energy, Inc.	33,221,713	Richardson Petroleum Corp.	20,826
Columbia Natural Resources	3,766,696	McCracken, Carl A. III	17,291
Great Lakes Energy Partners	2,762,814	REI-NY, Inc.	12,126
Nornew, Inc.	905,210	East Resources, Inc.	11,016
Seneca Resources Corp.	624,256	Bouquin, Fred C. & Fred L.	10,669
United States Gypsum Co.	571,838	R & C Oil Co.	10,649
Kastle Resources Enterprises	549,380	Otis Eastern Services, Inc.	7,711
Stedman Energy, Inc.	492,697	Johnson, Mark & Troy	7,330
Lenape Resources, Inc.	317,028	Plants and Goodwin, Inc.	4,872
Resource Energy, Inc.	214,437	Woods Oil Company, Inc.	4,197

