

**New York State  
Oil and Gas  
Leasing Report  
2005**

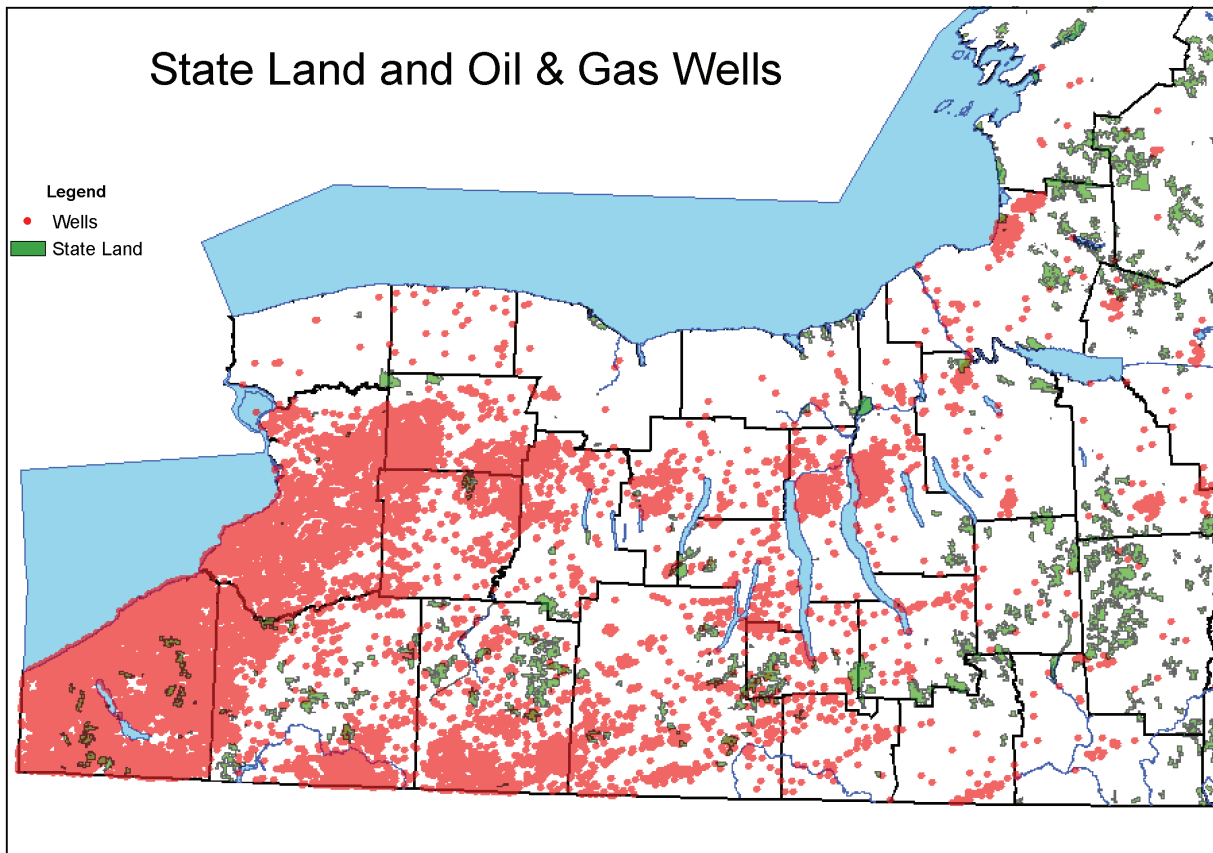
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**George E. Pataki, Governor**

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## Introduction

The year 2005 was an unsettled one for energy markets. Increasing oil usage by foreign countries, especially India and China, led to extraordinary increases in the world prices of crude oil and refined petroleum products such as gasoline. Hurricanes Katrina and Rita caused severe damage to petroleum refineries and oil and gas fields in the Gulf Coast region of the United States. Storm damage led to refinery outages that caused further increases in the price of gasoline and also disrupted so much natural gas production that domestic U.S. natural gas prices also rose to record highs.

The record prices for oil and natural gas were responsible for a remarkable surge of activity in drilling and production in New York. The number of new oil and gas wells drilled in the state rose to numbers not seen since 1985. The long, slow decline of production from New York's aging old fields was arrested as new oil wells were drilled and production increases were seen in old fields. Natural gas production from new and existing Trenton-Black River wells were responsible for record production in the state for the second consecutive year. Some 2005 highlights from statewide industry activity are:

- Natural gas production in New York rose to 55 billion cubic feet (BCF), an increase of 17% from 2004's record production of 47 BCF.
- Yearly oil production was 211,292 barrels, up over 27,000 barrels from 2004's total of 184,065 and up 34% from 2003's total.
- Drilling permits issued by the Division of Mineral Resources rose to 429, more than double 2004's total of 210 as industry activity increased in response to sharply higher oil and gas prices.
- Article 23, New York's Oil, Gas and Solution Mining Law, was amended by the Legislature to revise the well permitting process, establish statewide spacing for oil and gas reservoirs, and revise the compulsory integration process.

Some 2005 highlights pertaining to state land leasing include:

- Royalty revenue from oil and gas production on state lands rose from \$525,000 in 2004 to over \$3.2 million in 2005 and total revenues for the year exceeded \$3.4 million, the second-highest total ever.
- In spite of the extraordinary increase in activity and revenue, less than 30 acres of state land have been disturbed by well drilling and road and pipeline construction since 1999.
- State acreage currently under lease declined from 77,500 acres in 2004 to 64,521 acres due to the expirations of unproductive leases.

This report describes oil and gas activity in New York State and on state lands through year-end 2005. It contains detailed information on revenues generated from oil and gas production on state lands, the number and location of active state leases, the leasing process and the measures taken to ensure that development is compatible with surface management and is protective of the environment. If you have any questions or need additional information concerning this state land leasing report, please contact the Division of Mineral Resources.

## State Acreage Under Lease

Under the authority contained in Article 23, the New York State Oil, Gas and Solution Mining Law, the DEC acts as leasing agent for State Reforestation Areas, Multiple Use Areas, Wildlife Management Areas and Department of Transportation rights-of-way.

As of year-end 2005, state acreage leased for oil and gas development totaled 64,521 acres, a decrease of 13,000 acres from the 2004 year-end total. Approximately half of the state acreage under lease is in five-year primary terms and the state is due delay rentals. Delay rentals are yearly payments, typically five dollars per acre per lease. If the five year primary term of a lease ends without a well establishing production, the lease expires and oil and gas development rights return to the State.

The decrease in state acreage under lease was mainly

due to the expirations of 13 leases in Allegany County in 2005.

If the lessee drills a well before the expiration of the lease and discovers and produces hydrocarbons, the lease enters its secondary term. The secondary term lasts as long as commercial amounts of hydrocarbons are produced from the leased tracts. Delay rentals are no longer due but the State receives a percentage share of the proceeds from the sale of production, free of the costs of production. The percentage share, or royalty, is one-eighth or 12.5% of gross production revenue.

At year-end 2005, there were 20,856 state acres in secondary term and the State's royalty revenue is derived from these leases.

### Leased Acreage, 2005: 64,521 Acres

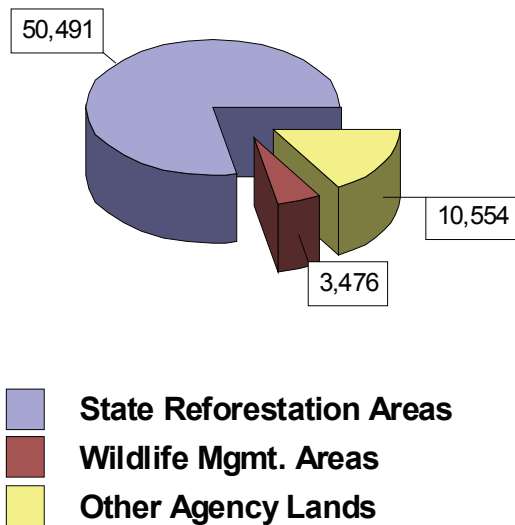


Figure 1. State leases broken down by type and lease status.

Acres Under Lease and Lease Status,	
<b>State Reforestation Areas</b>	
Delay Rental	29,297
Royalty	19,003
Storage	2,191
<b>Wildlife Management Areas</b>	
Delay Rental	2,418
Royalty	1,004
Storage	55
<b>Other Agency Lands</b>	
Delay Rental	39
Royalty	849
Storage	9,666
<b>Total</b>	<b>64,521</b>

2005 Leasing Summary by County								
	Number of Acres				Number of Leases			
County	Rental	Royalty	Storage	Total	Rental	Royalty	Storage	Total
Allegany		126		126		1		1
Cattaraugus		62	9,981	10,043		2	8	10
Cayuga		62		62		4		4
Chautauqua		15,913		15,913		29		29
Chemung		492		492		3		3
Erie		10	255	265		2	2	4
Madison	53			53	1			1
Ontario			55	55			1	1
Schuyler	9,773	2,129	1	11,903	6	2	1	9
Seneca		17		17		1		1
Steuben	21,928	2,044	1,620	25,592	19	3	2	24
<b>Total</b>	<b>31,754</b>	<b>20,856</b>	<b>11,911</b>	<b>64,521</b>	<b>26</b>	<b>47</b>	<b>14</b>	<b>87</b>

Figure 2. Tabulation of leases by location, acres leased and status.

Several companies inject natural gas into depleted gas fields caverns dissolved in salt beds to balance seasonal fluctuations in natural gas demand.

The year-end 2005 total of acreage under storage leases was 11,912, the same as the previous year.

State lands may be leased for such storage projects and the State receives fees from storage fields under state lands based on the volumes of natural gas injected and withdrawn during a given year.

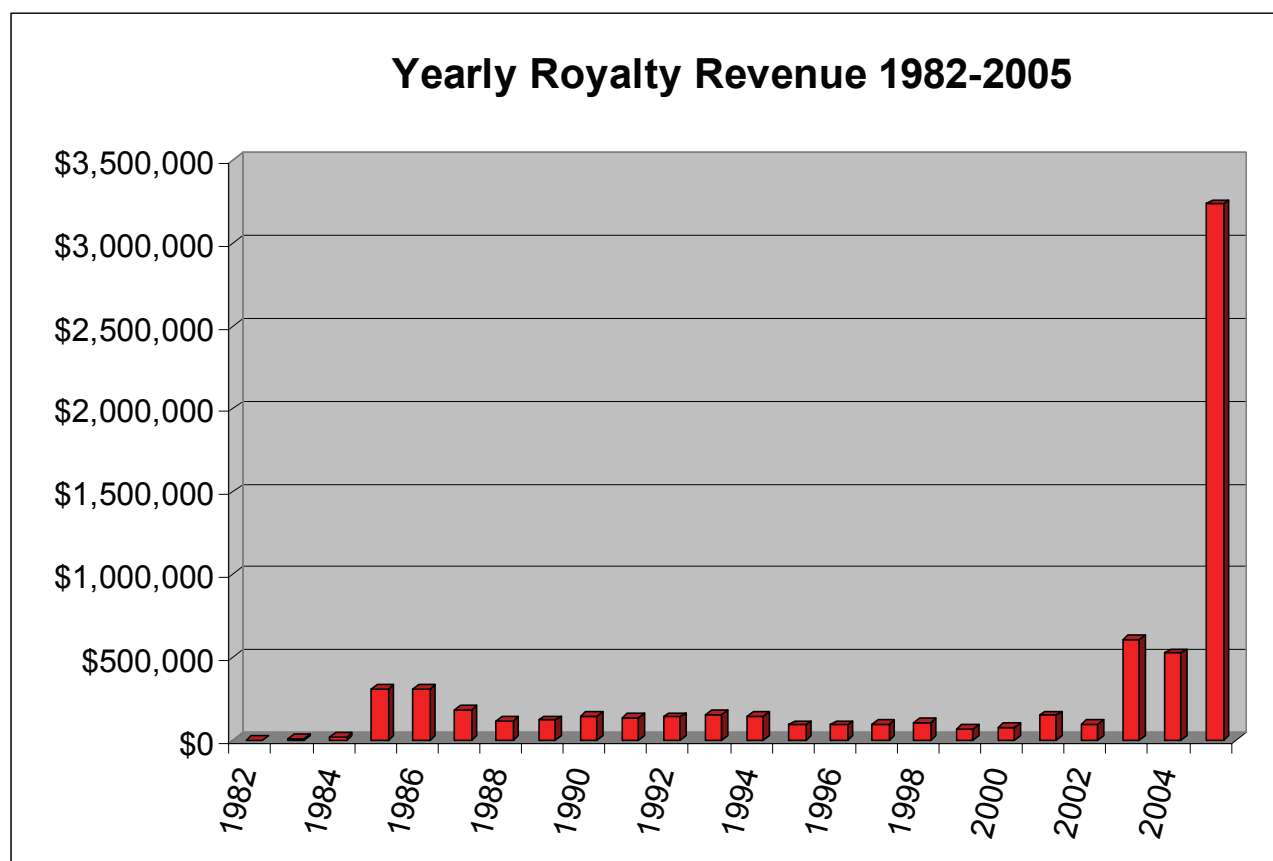
## 2005 Leasing and Revenue Results

The discovery of large volumes of gas in the Trenton-Black River in 1998 led interested companies to nominate selected State Reforestation and Wildlife Management Areas for oil and gas leasing. The sale held in 1999 leased approximately 13,000 state acres and the 2003 sale leased approximately 26,500 acres. Since 1996, the State has received \$14 million from oil and gas leases and nearly \$8 million of that total has come from lease bonuses from those two sales (Figures 4 and 5).

As of year-end 2005, the State received royalties from nine Trenton-Black River wells that include state acreage in their producing units. The initial increase in royalties in 2003, shown on Figure 5, reflects royalty payments received from Trenton-Black River production from state lands leased in the 1999 and 2003 sales.

Gas production increased as more Trenton-Black River wells were completed and natural gas prices rose to record highs and, consequently, royalty revenues received by the State increased six-fold in 2005. The royalty received by the State in 2005 was nearly equal to the royalty revenue of the previous 20 years combined.

Leasing revenues received during the ten-year period 1996 to 2005 are broken down in detail in Figure 5. The largest yearly sum for any revenue type was \$4.5 million received in bonus bids in 2003, followed by \$3.2 million in royalties in 2005 and \$3 million in bonus bids in 1999. These three payments comprise over 75% of the revenue received during the ten year period.



**Figure 4. Royalty revenue received by the State from oil and gas production on state lands.** The State receives one-eighth of the revenue generated by wells on state lands, in the proportion that state acreage comprises the producing unit.

State Land Leasing Revenues: 1996 - 2005

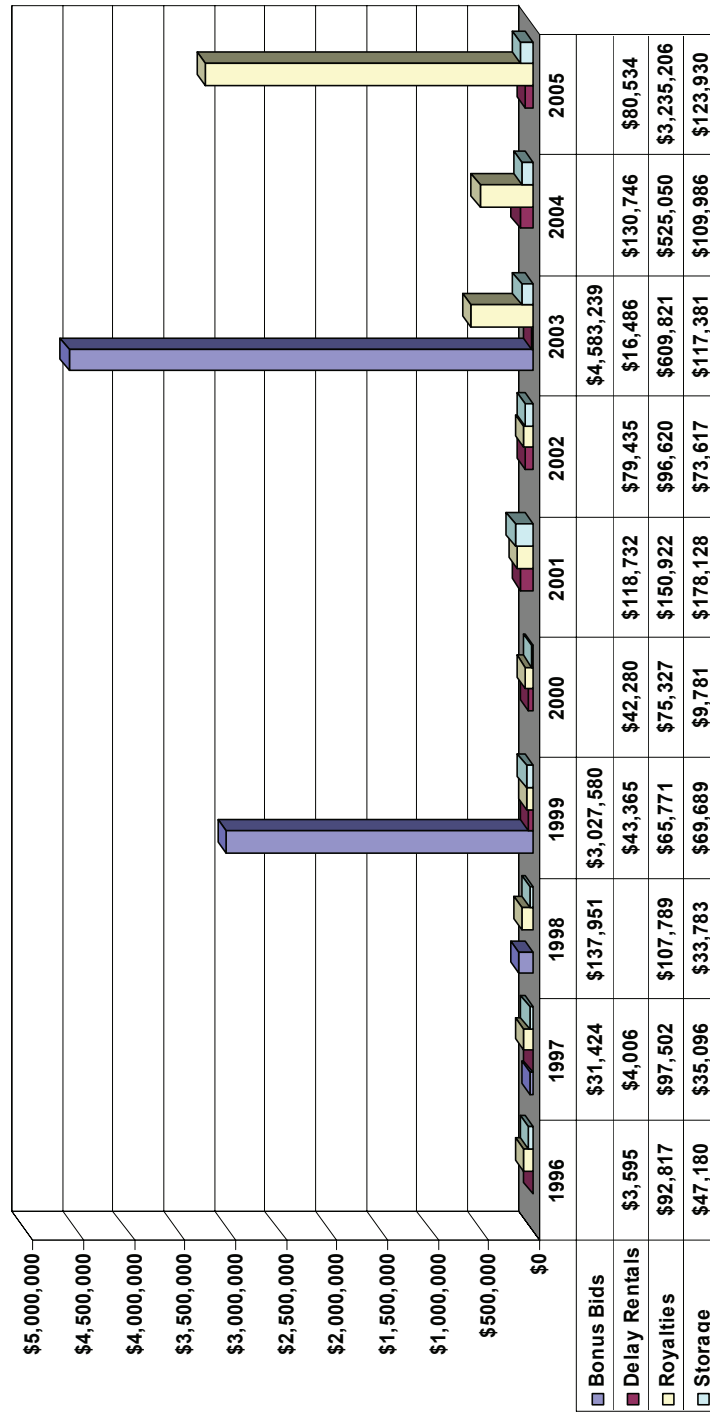
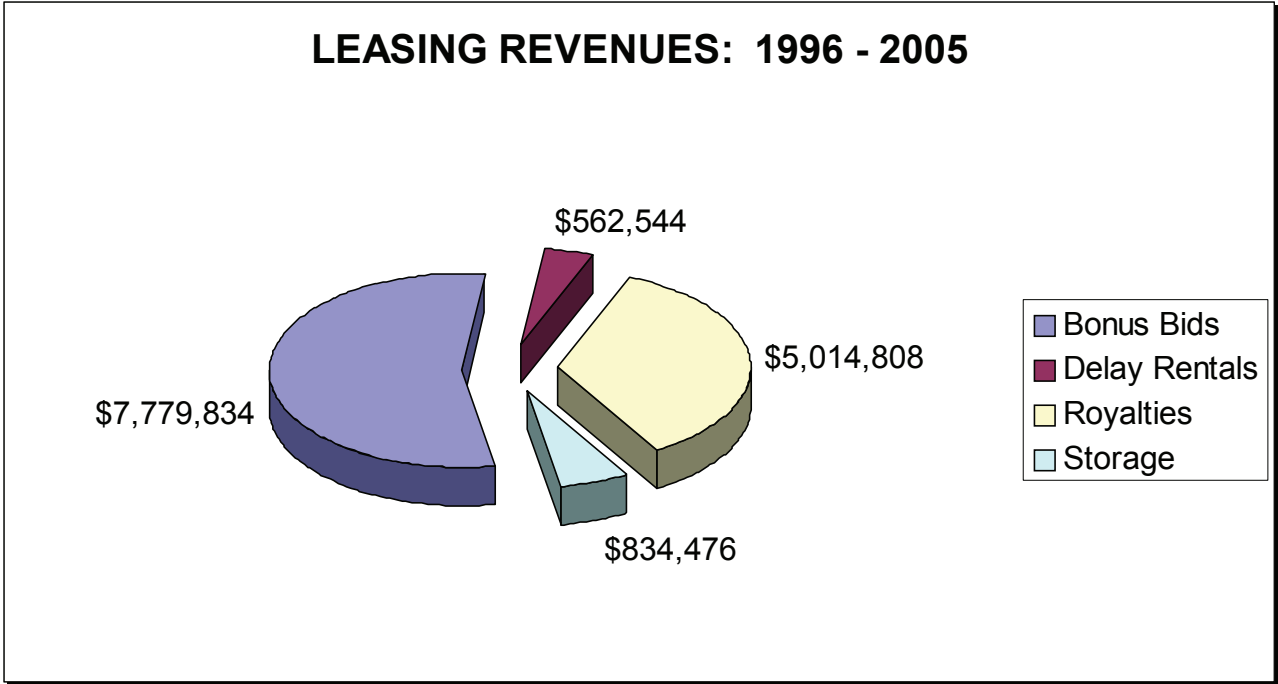


Figure 5. Detailed breakdown of leasing revenue for the period 1996-2005.

## LEASING REVENUES: 1996 - 2005



**Figure 6. A ten-year summary of leasing revenue by type of payment.** Bonus bid payments comprise 55% of the revenue and royalties 35% of the total during the period.

With continued high gas prices and production from Trenton-Black River wells, royalty revenue will likely overtake bonus bids as the largest contributor of oil and gas revenue in the near future. Increased bonus bid and delay rental revenue will depend on the availability of state lands for future oil and gas lease sales.

To date, 18 Trenton-Black River wells have been drilled on state lands or have had state lands included in a spacing unit. A listing of these wells, the amount of state acreage disturbed and the revenue received by the State for each well are detailed in Figure 7 on Page 10.

Eight Trenton-Black River wells have been drilled on state lands, including six producing wells, one plugged well and one shut-in well. A total of approximately 30 acres of state land have been disturbed by the drilling of Trenton-Black River wells and their pipelines.

Two acres of land disturbed by the drilling on the Erwin WMA have already been reclaimed to De-

partment standards as the well was a dry hole. The remaining disturbed acres will be reclaimed when the wells are plugged.

Of the acres of state land leased in 1999, leases expired in 2005 on 2,862 acres and the oil and gas development rights on those lands have returned to the State. The remaining approximately 10,000 acres are held by production as long as royalties are received from the well or wells holding each lease.

As of year-end 2005, only 2,350 acres of the lands leased in the 2003 sale are currently held by production. Oil and gas development rights on the remaining approximately 24,000 acres from this sale that are not held by production from a well will return to the State when the five-year leases expire in 2008.

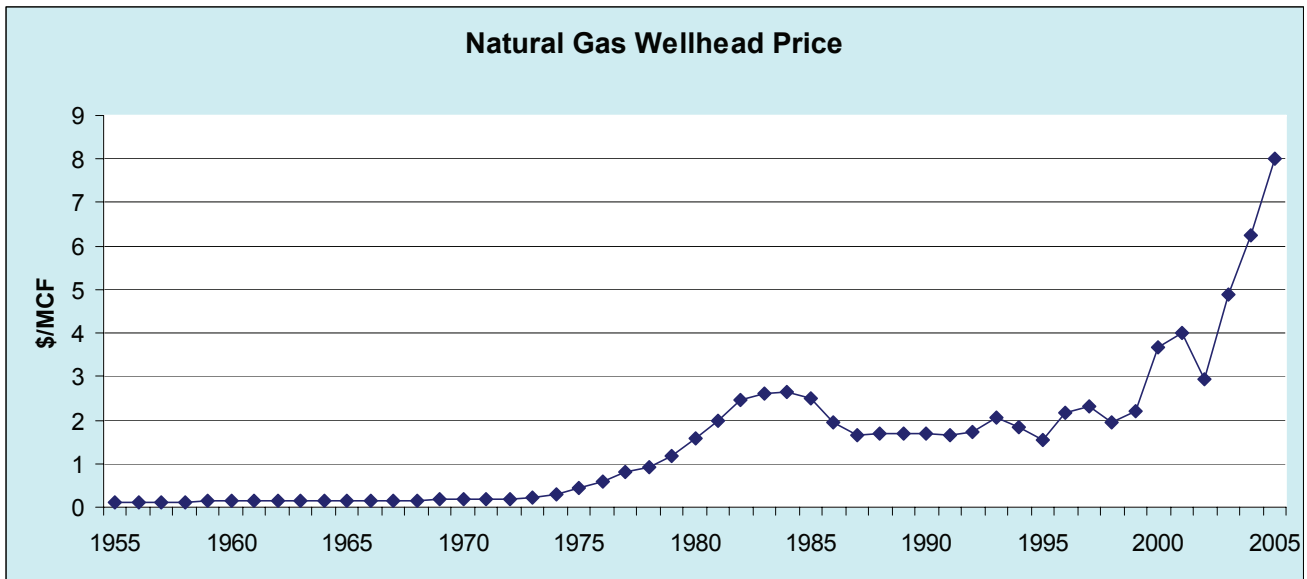
With nearly 40,000 acres of land leased in the 1999 and 2003 sales, only 30 acres, or .07%, of those lands have been disturbed by oil and gas activities while returning revenues of nearly \$14 million through year-end 2005.

### State Lands in Trenton-Black River Units

Well Name	State Lease	State Acres Dis- turbed	State Net Royalty %	Well Status	Gross Produc- tion (BCF)	State Net Royalty to Date
Howe #1300-A	Steuben SRA 5B	0.0	0.16	Producing	6.96	\$57,046
Van Vleet #1355	Steuben SRA 5B	0.0	1.00	Producing	2.69	\$141,659
Chemung SRA #1-A	Chemung SRA 1	1.5	2.90	Producing	3.30	\$542,643
Root #1514	Chemung SRA 1	0.0	0.36	Producing	3.01	\$67,697
Hardy #1447A	Chemung SRA 1	0.0	2.80	Producing	1.60	\$215,074
SRA 2 - #1	Schuyler SRA 2	2.5	11.55	Producing	1.10	Escrow
Parker #1401	Ste. Rt. 414	0.0	0.10	Producing	7.32	\$41,475
Grand Prix #2	Schuyler SRA 1	7.7	9.04	Producing	1.30	\$887,034
SRA 3-#1	Steuben SRA 3	5.0	7.70	Producing	2.06	\$1,257,001
SRA 3-#2	Steuben SRA 3	3.0	10.40	Producing	0.97	\$829,741
Grand Prix #1	Schuyler SRA 1	2.9	TBD	Shut-in		
Drumm #1	Steuben SRA 3	1.8	0.13	Producing		Escrow
Andrews #1	Ste. Rt. 17	0.0	TBD	Producing		Escrow
Behm Unit #1	Steuben SRA 14	0.0	TBD	Producing		Escrow
Erwin WMA #1	Steuben WMA	3.5	TBD	T/A		
Erwin GMA #2	Steuben WMA	2.0*	NA	Plugged		
Youmans #1511	Steuben SRA 9	0.0	NA	Plugged		
Bonham #1	Schuyler SRA 4	0.0	NA	Plugged		
<b>Totals</b>		<b>29.9 acres</b>			<b>30.31 BCF</b>	<b>\$3,708,370</b>

**Figure 7. Numbers as of 12/31/05**      BCF = Billion Cubic Feet of gas      TBD = To Be Determined  
T/A = Temporarily Abandoned      NA=Not Applicable      \* Acres Already Reclaimed to Dept. Standards

## 2005 Oil and Gas Production in New York



**Figure 8. Average U.S. natural gas prices paid at the well head.** Domestic natural gas prices remained stable for several decades when gas supply exceeded demand. The supply “bubble” burst in the late 1990s when increasing demand removed the surplus gas from the market and prices rose sharply. New York gas producers commonly receive a slightly higher price than the U.S. average due to lower transportation costs necessary to reach Northeastern markets. The higher price is commonly referred to as the “Appalachian premium.” Data from US Energy Information Agency.

Increased worldwide demand for oil and gas, and the damage caused by hurricanes Katrina and Rita to Gulf Coast oil and gas fields, caused prices to rise to record levels in 2005. Decreasing gas well deliverability and increasing demand for natural gas, primarily as a fuel for electrical generation, caused U.S. wellhead prices to rise to \$8 per thousand cubic feet (mcf), a nearly four-fold increase from 1999’s price (Figure 8). New York oil and gas operators responded to the record oil and gas prices by increasing their drilling activities to levels not seen in over 20 years. Drilling permit applications for 429 wells were received by the Division in 2005, including 199 oil well permits and 181 gas well permits (Figure 10).

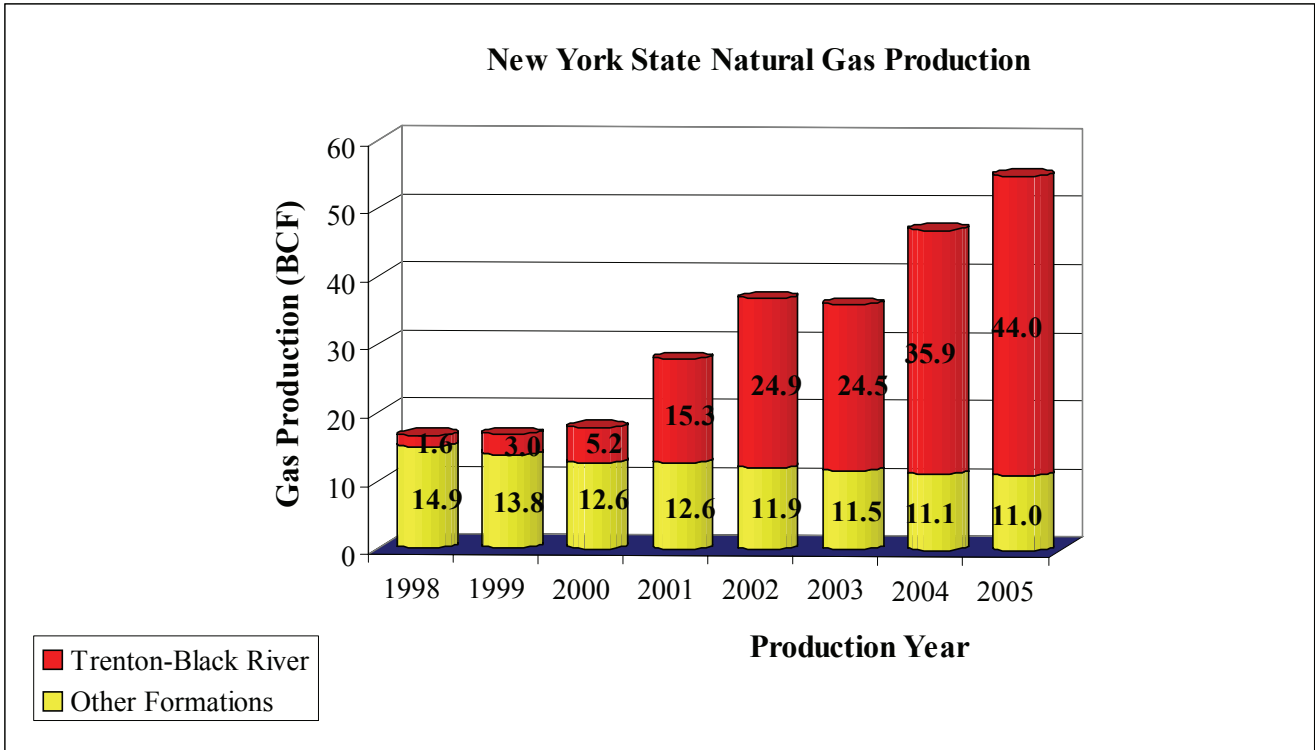
Twenty-six Trenton-Black River well drilling permit applications were received, down substantially from the previous year’s total of 51 permit applications. Due to changes in Environmental Conservation Law enacted in 2005, a moratorium on deep drilling permits was declared, and this was a major contributor to the decline in deep gas well drilling in the State. For the second consecutive year, gas production in

New York rose to a record level (Figure 9). Trenton-Black River production accounted for 80% of the 55 billion cubic feet (BCF) produced. Gas produced from other formations also rose from the previous year, as increased gas well completions arrested the slow decline in production.

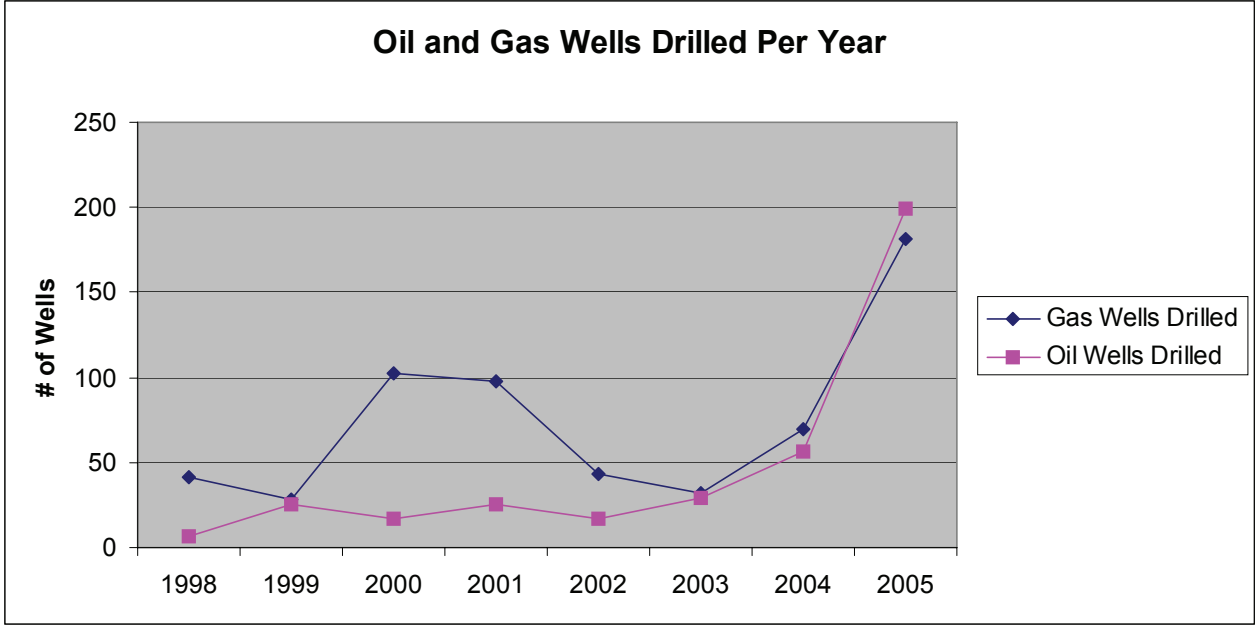
Oil prices also rose to unprecedented levels in 2005, reaching nearly \$60 per barrel (Figure 11), and New York operators responded by drilling 199 oil wells during the year. For comparison, as recently as 2002 only 17 oil wells were drilled in New York.

Along with the increased drilling activity, oil production increased in established oilfields as operators either returned shut-in wells to productive status or expended funds to rehabilitate the aging fields. Oil production rose to a total of 211,292 barrels for the year, up 34% from the historic low of 157,313 barrels in 2003.

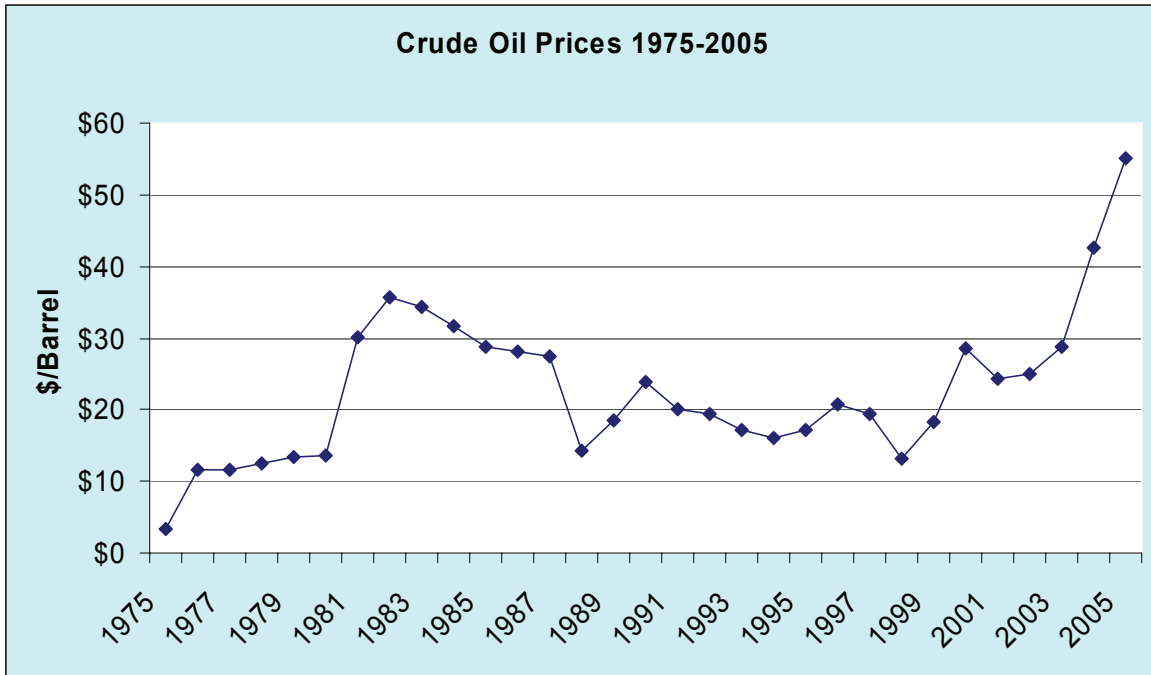
Continued high oil and gas prices will likely result in another record year for drilling and production in New York in 2006.



**Figure 9. Natural gas production in New York 1998-2005.** Gas production from the Trenton-Black River Formation drove production to a record high of 55 BCF in 2005 and accounts for 80% of the gas produced in the State.



**Figure 10. Number of oil and gas wells completed in New York per year from 1998-2005.** The four-fold increase in wells drilled in the last two years tracks the rise in oil and gas prices seen in Figures 8 and 11. The numbers may increase slightly as more completion reports for the year are received.



**Figure 11. Domestic U.S well head oil prices (West Texas Intermediate crude oil) 1975-2005.** Oil prices have undergone a more than four-fold price increase since 1999 due to a sharp increase in world demand and a lack of new supplies. Data from the Energy Information Agency.

## Summary

The year 2005 saw high oil and gas prices and, consequently, robust industry activity in New York. Strong increases in the number of oil and gas wells drilled were recorded and, for the second consecutive year, natural gas production in the State reached a new record high. Oil production in the State also increased for the second year in a row after decades of slow decline.

Gas production from recently completed Trenton-Black River wells was primarily responsible for an increase in state royalty revenue to \$3.2 million in 2005, up forty-three fold from that received as recently as the year 2000. Total revenue in 2005 generated from the leasing of state lands was \$3.4 million, the second highest ever recorded, exceeded only by 2003's total during which \$4.5 million in lease bonuses was received from an auction of state

leases.

In spite of the large increases in revenue generated from leasing efforts, only 30 acres of the lands leased in the 1999 and 2003 sales have been disturbed by drilling and production activities. Department regulations and oversight ensure that temporary disturbances of even such small amounts of state land are carried out in an environmentally-responsible manner.

The Department's leasing and regulatory programs ensure that development of a badly-needed resource meets the highest environmental standards while delivering significant income to the State.