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1201 15th St., N.W., Suite 300 Washington, DC 20005 (202) 857-4722 Fax: (202) 857-4799 www.ipaa.org

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# CONTENTS

# THE OIL & GAS PRODUCING INDUSTRY IN YOUR STATE®

# The Year in Review

2008: Upstream Trends Derailed by	
Onset of Recession	3
Chart Summary	
Drilling Trends	25
Employment Trends	26

Employment Trends	26
Royalties and Severance Taxes	27
Marginal Wells in the U.S.	28

# **Statistical Summary**

State Rankings	21
Top Producing Congressional Districts	22
Crude Oil Summary	29
Natural Gas Summary	
Drilling Summary	31

# State Statistics

State Statistics	
United States	34
Federal Offshore	36
Alabama	38
Alaska	40
Arizona	42
Arkansas	44
California	46
Colorado	48
Florida	50
Illinois	52
Indiana	54
Kansas	56
Kentucky	58
Louisiana	60
Maryland	62
Michigan	64
Mississippi	66
Missouri	68
Montana	70
Nebraska	72
Nevada	74
New Mexico	76
New York	78
North Dakota	80
Ohio	82
Oklahoma	84
Oregon	86
Pennsylvania	88
South Dakota	90
Tennessee	92
Texas	94
Utah	96
Virginia	98
West Virginia	100
Wyoming	102

Exploration and Drilling         Rotary Rigs Operating       104         New-Field Wildcat Wells Drilled       105         Exploratory Wells Drilled       106         Development Wells Drilled       107         Total Wells Drilled       108         Production       109         Producing Crude Oil Wells       110         Crude Oil Production       111         Natural Gas Production       112
Producing Crude Oil Wells109Producing Natural Gas Wells110Crude Oil Production111Natural Gas Production112
Manuslus at Malla
Marginal Wells         Producing Oil Marginal Wells         Marginal Oil Well Production         114         Producing Marginal Gas Wells         115         Marginal Gas Production         116         Abandonments         120
Financial         Cost-Drilling & Equipping Wells         Crude Oil Revenues         Natural Gas Revenues         Severance & Production Taxes
Prices       122         Crude Oil Wellhead Prices       123         Natural Gas Wellhead Prices       123         Refiner Acquisition Cost of Crude Oil       124         Retail Gasoline Prices       124         Wholesale Prices -Total U.S.       125
ConsumptionEnergy Consumption by State128Petroleum Consumption126Natural Gas Consumption127
MiscellaneousAmerican Oil & Gas Historical Society10Emerging Shale Plays
Reference Information         Abbreviations/Conversions       131         Additional Energy Education &       131         Employment Resources       17         Cooperating Oil & Gas Associations       11         Data Sources       131         Glossary       132         Oil and Gas Museums       19         State Education Programs       13         State Energy Contacts       7         Young Professionals in Energy       18         Image: Anadarko operations in the Marcellus Shale.         Photo provided by Anadarko Petroleum Corporation.

Photo provided by Anadarko Petroleum Corporation.

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# **Editor: Frederick J. Lawrence**

**The Oil & Natural Gas Producing Industry In Your State**<sup>®</sup> is published each year as the special statistical issue of America's Independent, official magazine of the Independent Petroleum Association of America, (IPAA).

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Independent Petroleum Association of America<sup>®</sup> Economics & Analysis Department (flawrence@ipaa.org) 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 Phone: 202-857-4722 Fax: 202-857-0444 www.ipaa.org 2008: Upstream Trends Derailed by Onset of Recession Pete Stark, Ph. D., IHS CERA

# Introduction:

2008 was a year of contrasts. Industry activity soared along with oil and gas prices during the first half of the year before plunging along with the global economy during the last half of the year. U.S. economic growth, which hovered around a tepid 2 percent rate throughout 2007, began to falter at mid-year 2008 and slipped into the red during the 3rd quarter. The onset of the worst recession since the 1930s was signaled when 4th quarter annualized GDP slumped to negative 2.7 percent. Energy demand slowed along with the economy. Correspondingly, oil and gas prices and industry activity came tumbling after.

Oil prices commanded headlines for most of the year while exceeding \$100 during March and ballooning to a record \$145.15 per barrel during July before im-pacts of the sagging economy broke the bubble. The plunge in oil prices did not stop until December 19 when the price hit \$30.50 per barrel – the lowest price in five years. Natural gas prices followed a similar pattern, with Henry Hub spot gas peaking at \$13.30 per Mcf during July before plunging to \$5.39 per Mcf on December 24. This was the lowest gas price since September 2006. Oil demand initially slumped in response to soaring prices and then languished as the recession worsened during the last half of the year. As a result, oil consumption suffered a significant 1,162 MMb/d decline - off 5.6% from 2007. Natural gas consumption was essentially flat with 2007 but industrial demand decreased along with the economic slump while the unconventional shale gas revolution continued to surge. Surging gas production pushed U.S. working gas in storage to a bearish 3,400 Bcf during October. These counter trends helped to sink gas prices which dropped 60 percent since July. In contrast, upstream costs eased only 4 percent during 4th quarter 2008. The cost – price differential placed an additional squeeze on producers.

Unfortunately for U.S. producers, breakthroughs in shale gas production emerged on the cusp of the recession. According to the Energy Information Administration (EIA) numbers marketed gas production increased by 1,043 Bcf during 2008 – a 5.2 percent increase over 2007 and added to the positive gas production trend that commenced during 2006. Increased domestic gas production also offset planned Liquefied Natural Gas (LNG) imports and corresponding increases in the balance of payments deficit. Moreover, lower gas and oil prices helped to reduce the pain of the recession on consumers' pocket books. This was good news for U.S. energy security, the economy and for consumers. The industry, on the other hand, was caught in several challenging crosscurrents. During the first half of the year all engines were full speed ahead. There was excitement over the shale gas revolution and the growing awareness that production breakthroughs finally had ended a decade-long period of tight gas supplies and volatile market conditions. As the magnitude of the economic slump set in, operators scrambled to curtail drilling

activity and to rebalance their portfolios while tightening credit lines and adjusting operations to offset the cost – price squeeze. It will be critical for operators to apply technologies and operating efficiencies to offset the cost – price squeeze.

Euphoria about the magnitude of the shale gas revolution was masked by concerns over the sagging economy and the collapse of oil and gas prices. A look at the track record, though, reveals that industry had achieved a game changer for natural gas. In addition to the 5.2 percent increase in 2008 gas production, average initial well productivity increased by almost 19 percent and key unconventional gas plays added 14.8 Tcf in proved developed reserves - a 20 percent increase from 2007 - with almost half of the new reserves coming from shale reservoirs. In its end-2008 report, the Potential Gas Committee (PGC) estimated that U.S. gas resources had increased by 515 Tcf – a 39 percent increase since 2006. This was the PGC's largest ever reported increase in U.S. gas resources. Driven by performance improvements with horizontal bore holes and multi-staged fracs, the so called "shale gale" was under way and the indus-try already was looking for opportunities to expand shale gas production into the international arena.

# **E&P** Activity

Even though oil and gas prices peaked during the first week of July, drilling activity did not peak until September. As a result, overall year over year industry activity was up during 2008. Drilling activity, as measured by active rigs, increased by 109 rigs or 6 percent and seismic activity, as measured by active crews, increased by 2 percent. According to Baker Hughes data, gas directed rigs peaked during the week of September 12 at 1,606 rigs and slipped to 1,347 rigs during the last week of December. The Baker Hughes oil directed rig count did not peak until the week of November 7 at 442 rigs and slipped to 364 rigs during the last week of December. A milestone was reached during 2008 when the number of directional and horizontal directed wells exceeded, for the first time, the number of vertical directed wells. The influence of the shale gale is evident in the 41 percent increase (to 553 average rigs) in horizontally directed rigs during 2008 compared to an almost 5 percent decrease in vertically directed rigs (to 954 average rigs) during the year. Drillers were shifting from lower productive vertical wells to higher productive horizontal wells well before the onset of the recession and the collapse in oil and gas prices.

Drilling momentum during the first nine months resulted in gains across the board for well completions. Total completions of 54,087 wells were the most since 1985. Gas well completions posted a 5 percent increase to a record 32,440. The response to high oil prices was evident with 16,708 oil well completions, a 29 percent increase over 2007. Wildcat drilling activity during the first half of the year was on a pace to exceed 2007 completions but operators curtailed exploratory drilling during the last half of the year. As a result, the 2,467 wildcat completions during 2008 were off almost 4 percent from the prior year.

# THE YEAR IN REVIEW: INTRODUCTION TO 2008 O&NG IN YOUR STATE

Drilling activity in most key producing states followed the overall upward trends but there were a few exceptions. Noteworthy were Montana where active drilling in the Elm Coulee Bakken pool slowed and New Mexico where gas drilling slowed in the San Juan Basin. Drilling activity in Pennsylvania, West Virginia and Wyoming were about flat with 2007. Arkansas, Colorado, Kansas, Texas and Utah were among the leaders in increased gas well completions. Colorado, Kansas, North Dakota, Oklahoma, Texas and West Virginia were among the leaders in percentage increase for oil well completions.

# **Exploration and Significant Discoveries:**

Exploration activity was channeled into three categories: Frontier exploration for conventional oil and gas fields, efforts to exploit horizontal wells with multistage fracs to establish production in new tight gas and shale gas plays and exploration to extend very promising productivity in emerging shale gas plays.

- Conventional: Offshore Gulf of Mexico deepwater and the Alaska North Slope recorded the most significant conventional discoveries. In the deepwater Gulf of Mexico nine discoveries yielded an estimated 497 MMboe in recoverable oil and gas. Noble Energy's Freestone discovery was the largest at 213 MMboe followed by BP's Kodiak discovery at 145 MMboe. Strong oil and gas prices were cited as the driver behind the record \$3.67 billion in high bids at the March 19 offshore Gulf of Mexico lease sale. On the North Slope of Alaska, AVGC LLC scored with its estimated 50.8 MMboe Tofkat discovery.
- **Tight Gas:** Numerous exploratory efforts were launched to test new tight gas play concepts. Interesting discoveries included EOG's 1-32H Buffalo Ditch discovery in the North Park Basin, Colorado that yielded 550 B/d from the Cretaceous Niobrara.
  - Shell's Pennsylvanian test in the Tucumcari Basin, eastern New Mexico that yielded 1.74 Mcfd.
  - Longfellow Energy's Atoka county, OK test that yielded 1.6 MMcfd and 5.05 MMcfd from the Ordovician Big Fork chert.
  - Barrett's Paradox Basin discoveries in SW Colorado that yielded 5.7 MMcfd and 3.1 MMcfd from the Pennsylvanian Gothic shale.

Other exploration efforts targeted diverse prospects, including:

- Pedregosa Basin, SW New Mexico, to test the Percha shale Devonian Woodford equivalent.
- Ouachita Fold Belt, SW Texas, to test and expand production in the Ellenburger limestone, Tesnus and Caballos Novaculite.
- Anadarko Basin horizontal tests to increase productivity of multiple established reservoirs like the Skinner sandstone, Marmaton limestone, Cleveland sandstone, Tonkawa formation, Atoka shale and Simpson sandstone.

- Arkoma Basin test of the deeper Chattanooga shale in the Fayetteville shale fairway.
- Uinta Basin test of Mississippian Manning Canyon shale.
- Hardeman Basin, SW Oklahoma, Atoka shale play.
- **Shale Plays:** Big news for the year, though, focused on the amazing performance of the established shale oil and gas plays:
  - Shale oil: Realization that growing Bakken shale oil production was capable of increasing onshore lower 48 states' oil production.
  - Shale gas: Realization that established shale plays were becoming a game changer for U.S. gas resources and supplies.

**Barnett shale:** Almost 1,200 horizontal wells were completed in the Barnett during 2008. These wells added 2,250 Bcf of recoverable gas and helped to boost production in the Barnett core area to 2.8 bcf per day.

**Fayetteville shale:** Increasing horizontal laterals to 4,000 ft. with more frac stages increased average Fayetteville initial potential tests by almost 40 percent to 1,850 Mcfd and helped to boost production to 1.1 Bcfd. New entrants to the play paid as much as \$5,135 per acre for leases.

**Woodford shale:** Similar to the Fayetteville, longer horizontal laterals with more frac stages helped to increase average Woodford initial potential test rates by 40 percent to 2,450 Mcfd. 2008 well completions added 2.45 Bcf in recoverable gas. Newfield announced it would test the performance of 10,000 ft. laterals with 20 or more frac stages in the Arkoma Basin. The promising emerging Woodford play in Canadian County, OK yielded higher initial potential test volumes including more liquids than the established Arkoma Basin Woodford play.

Haynesville shale: Operators reported an increasing number of Haynesville initial potential tests that exceeded 10 MMcfd and a few that exceeded 20 MMcfd. Early performance analyses indicated that Haynesville wells with 6 to 8 MMcfd on 30 day production tests might yield an EUR of 5 Bcf. Some pegged Haynesville recoverable gas as high as 250 Tcf. In spite of the Haynesville's promising producing potential, the collapse of gas prices impacted lease sales held by the Louisiana Office of Mineral Resources. After the Haynesville craze drove some lease prices to over \$15,000 per acre and the August Louisiana state land sale to a record \$93.8 million investment, the combined total for the September and October sales dropped to \$45.3 million. By November, the monthly sale took in just \$5.04 million. Drilling, nevertheless, did not slow materially and gas production topped 150 MMcfd by year end.

# THE YEAR IN REVIEW: INTRODUCTION TO 2008 O&NG IN YOUR STATE

**Marcellus shale:** Estimates that Marcellus recoverable gas ranged in excess of 500 Tcf characterized the hype for this rapidly evolving play. Operators across the prime Marcellus fairway reported promising results from both horizontal and vertical wells. Better horizontal wells averaged 5 Mcfd and better vertical wells averaged more than 2 MMcfd on initial tests. Major deals also highlighted the growing interest in the play. Chesapeake Energy Corp. and StatoilHydro closed a joint venture wherein StatoilHydro acquired a 32.5 percent interest in Chesapeake's Marcellus shale assets for \$3.375 billion of consideration. The assets included about 1.8 million net acres of leasehold in the Appalachian Basin. Moreover, the state of Pennsylvania established a minimum bid of \$1,000 per acre for its September 2008 lease sale.

**Bakken Play:** Expansion of the Middle Bakken sweetspot in Sanish and Parshall fields, Mountrail County, ND highlighted the Bakken play during 2008. Whiting Oil & Gas reported the largest initial potential oil test in North Dakota history with flows of 4,570 bbls of oil equivalent (BOE) per day at its 11-9H Richardson-Federal well on a 1,280 unit in the Sanish field. Whiting's third quarter 2008 production reached a daily average rate of 50,480 Boe, a 24 percent increase from its average during 2007. Continental Resources noted that its 2008 Bakken wells averaged 573 Boe/d on seven day flow tests and that its nine Three Forks wells on the Nessen Anticline did even better – averaging 852 boepd during their seven day production tests. The company called the Bakken, Three Forks/ Sanish (TFS) play "a game changer".

# **Production Trends – Natural Gas**

According to EIA, U.S. marketed gas production was 21,240 Bcf - a 1,043 Bcf or 5.2 percent increase from 2007. Offshore Gulf of Mexico wellhead gas production slipped by 454.8 Bcf, down in part due to hurricanes Gustav and Ike which destroyed 60 platforms. The 60 platforms which accounted for daily produc-tion of 13,657 bo/d and 98.5 MMcf/d, or about 1.05 percent of the oil and 1.3 percent of the gas produced daily in the Gulf. The surge in onshore unconventional gas drove the significant increase in U.S. gas production. Shale gas was the prime source of the increase but coalbed methane (CBM) also contributed adding 119.5 Bcf of gas – a 6.7 percent gain from 2007. The surge in onshore gas production also led to a 13.6 percent reduction in gas imports from 4,607.6 Bcf during 2007 to 3,980.6 Bcf during 2008. LNG imports took most of the hit – dropping 419.1 Bcf or 54 percent from 2007. The shale gale already was making a positive contribution to the economy while reducing the balance of payments.

# Production Trends – Oil

Aided by the impact of the hurricanes on offshore Gulf of Mexico production, U.S. oil production continued its decade long slide which resulted in a decrease of 278.4 MMb per year, or 14.4 percent, since the beginning of the millennium. During 2008, U.S. oil production dropped by 21.34 MMb or 1.3 percent to 1,628.9 MMb. Gulf of Mexico oil production dropped by 44.87 MMb or 9.3%. This was mostly due to the loss of production caused by hurricane damage. The outlook for the Gulf of Mexico oil production was positive, though, due to the planned commissioning of deepwater field developments over the next two years. Alaska oil production also continued to slide, dropping 13.6 MM or 5 percent. But U.S. lower 48 states oil production was a bright spot with a 24.6 MMb increase over 2007. The increase was driven by a 16.1 MMbo increase (+ 38 percent) in North Dakota's Bakken shale play plus gains in Oklahoma and Texas.

# **Above Ground Considerations**

The collapse of oil and gas prices and resulting impacts on wellhead revenues and tightening of credit as a result of the economic recession were the primary above ground concerns during 2008. However, with the November election U.S. politics took a sharp turn to the left with a substantial increase in environmental concerns and increased influence for anti-oil and gas interests. The new administration was a champion for renewable energy and looked to increasing oil and gas taxes as a means to pay for it. The administration also was a champion for climate change mitigation and it looked like Congress also would be receptive to increasing environmental regulations including increased controls on hydraulic fracs. Lost in the political rhetoric was the increasing plus that the emerging shale gale was delivering for U.S. energy security and as a domestic clean energy source to help meet climate change objectives.

# **Concluding Comments**

Three major issues dominated the energy scene during 2008:

- The onset of recession with the associated tightening of credit: At year-end the questions about the recession were "How deep?" and "How long?"
- The collapse in oil and gas prices which changed the economics of virtually every domestic oil and gas play. At year-end, operators focused on ways to reduce costs and to increase well productivity and operating efficiencies. They also were considering best options to rebalance portfolios to an environment with lower oil and gas demand, lower oil and gas prices and increased regulations.
- The potential impact of the shale gale on the relative competitiveness of U.S. unconventional gas plays and the long range impact on gas supplies and markets.

At year-end the industry faced significant change issues and challenges that could impact both nearterm operations and the longer-term shape of the energy future.

# New Content for Our 2009-2010 Edition

A combination of economic, geological, financial and political factors necessitates continual editorial modifications by IPAA and IHS as we endeavor to improve and expand upon the data showcased in this annual upstream publication. Throughout 2008, the ramp-up of the shale natural gas and oil plays continues even as the economy loses momentum and reverses its course. Independent producers continue to play a leading role in the 'shale gale' and their supply and reserves continue to grow with increased E&P activity in both legacy and frontier areas.

Since the 2008-2009 Edition, new additions include a map showing the transforming oil and natural gas plays in the United States followed by a data page summing up key activity indicators for the major plays in 2008. Dr. Philip 'Pete' Stark provided another astute and comprehensive Year in Review overview – highlighting key trends and activity to complement the state-by-state annual data. The map and key play analysis provide a more regional and play-specific picture of activity that may span several states or show the relative location of the plays in each state.

In addition to adding more supply analysis we have also added data from the Energy Information Administration pertaining to fuel consumption and the key role played in particular by oil and natural gas. Even

# Methodology

- IHS uses multiple sources of data such as test files (Texas and Louisiana test information is used to allocate production volumes on a well completion level), injection files and plugging reports that is integrated with basic production volume data that is submitted by individual states. As a result, production totals may differ from the Energy Information Administration data.
- IHS production data used on state pages includes peak production, total (dry) production, average production, average output per well, coalbed methane, heavy oil and marginal wells. IHS data is used for summary production data and wells drilled rankings. EIA data is used on state pages for natural gas marketed production.
- EIA production data is used for determining wellhead value of production, cumulative crude oil wellhead value, state production rankings, state consumption figures and natural gas marketed production. State reserve data is from EIA. All price data comes from EIA or states.
- All Federal Offshore statistics include only those wells in Federal waters. All state well statistics include inland/non-Federal offshore wells for each state.

though fossil fuels may not always receive relative acknowledgment for providing and enduring foundation in our energy use, this publication seeks to provide more facts regarding their use on a national and state level. IPAA recognizes that consumers globally will need fuel from all sources going forward but growing our domestic supply of oil and natural gas is paramount and one that emphasizes the efforts and activity of independent producers in developing new shales.

IPAA would like to extend a special thanks to Dr. Philip 'Pete' Stark, Janey Harwell, Ashley Bailey, Dean Williams, Randy Peterson, Read Trammel and John Wakefield for all of their efforts in improving this publication. Many hands make for lighter work and hopefully better quality with the additional data and analysis provided.

Please let us know if you have ideas pertaining to future improvements. You can send your comments to Frederick Lawrence at IPAA (flawrence@ipaa.org). Thank you for your continued support and readership of one of the industry's most informative publications.

- Deepest well statistics are based on total depth recorded from state completion reports. The only exceptions are minor occurrences where projected depth from permits has been used as a proxy for deepest well statistics. Cumulative number of total wells drilled data comes from IHS.
- Well statistics for oil, gas and dry wells are all classes that were drilled with the intent to find hydrocarbons. Historical well counts do not include any miscellaneous wells, i.e. injection, storage, service, etc.
- Drilled footage is the actual drilled footage as reported. For sidetracks it is the footage from the whipstock or kickoff point to total depth. For wells deepened it is the footage from the original total depth to the new total depth.
- Marginal wells are defined as oil wells producing 15 or less barrels of oil and 90 or less thousand cubic feet of gas per day (previous editions used stripper wells producing less than 10 bbls of oil and 60 Mcf of gas per day).

### Alabama State Oil & Gas Board

420 Hackberry Lane/P.O. Box 869999 Tuscaloosa, AL 35486-6999 (205) 349-2852 (205) 349-2861 Fax http://www.ogb.state.al.us

# Alaska Department of Natural Resources

Division of Oil & Gas 550 West 7th Ave., Suite 800 Anchorage, AK 99501-3560 (907) 269-8800 http://www.dog.dnr.state.ak.us/oil/index. htm

#### Alaska Oil & Gas Conservation Commission

3001 Porcupine Drive Anchorage, AK 99501-3192 (907) 279-1433 http://www.doa.alaska.gov/ogc/index. htm

#### Arizona Geological Survey

P.O. Box 40952 Tucson, AZ 85717 (502) 770-3500 http://arizonageologicalsoc.org

#### Arkansas Oil & Gas Commission

2215 West Hillsboro El Dorado, AR 71730 (870) 862-4965 (870) 862-8823 Fax http://www.aogc.state.ar.us/

#### California Department of Conservation

Division of Oil & Gas 801 K Street, MS 20-20 Sacramento, CA 95814 (916) 445-9686 (916) 323-0424 Fax http://www.consrv.ca.gov/index/

#### Colorado Oil & Gas Conservation Commission

1120 Lincoln St., Suite 801 Denver, CO 80203 (303) 894-2100 (303) 894-2109 Fax http://oil-gas.state.co.us/

#### Florida Bureau of Geology

Division of Resource Management 903 West Tennessee Street Tallahasee, FL 32304 (904) 488-4191

# Illinois Department of Natural Resources

Oil and Gas Division One Natural Resources Way Springfield, IL 62702-1271 (217) 782-6302 http://www.dnr.state.il.us/mines/index.htm

# Indiana Department of Natural Resources

Oil and Gas Division 402 W. Washington St., Room 293 Indianapolis, IN 46204 (317) 232-4055 (317) 232-1550 Fax http://www.in.gov/dnr/dnroil/

### Interstate Oil and Gas Compact

Commission P.O. Box 53127 Oklahoma City, OK 73152-3127 (405) 525-3596 (405) 525-3592 Fax http://www.iogcc.state.ok.us

#### Kansas Corporation Commission

Finney St. Office Building 130 South Market, Room 2078 Wichita, KS 67202-3802 (316) 337-6211 http://kcc.state.ks.us

# Kentucky Department of Mines and Minerals

Oil and Gas Division 1025 Capital Center Dr. Frankfurt, KY 40601 (502) 573-0147 http://dogc.ky.gov/

# Louisiana Department of Natural Resources

P.O. Box 94275/617 North Third Street Baton Rouge, LA 70804-9275 (225) 342-5515 http://www.dnr.state.la.us

### Maryland Geological Survey

2300 Saint Paul Street Baltimore, MD 21218-5210 (401) 554-5500 http://www.mgs.md.gov/

### Michigan Geological Survey

Department of Natural Resources P.O. Box 30028 Lansing, MI 48909 (517) 373-2352 http://www.michigan.gov/dnr

### Mississippi State Oil and Gas Board

500 Greymont, Suite E Jackson, MS 39202-3446 (601) 354-7142 (601) 354-6873 Fax http://www.ogb.state.ms.us

### Missouri Department of Natural

Resources P.O. Box 176 Jefferson City, MO 65102 (800) 361-4827 http://www.dnr.mo.gov/

# STATE ENERGY CONTACTS

#### Montana Board of Oil and Gas

Conservation 2535 St. John's Avenue Billings, MT 59102 (406) 656-0040 (406) 655-6015 Fax http://bogc.dnrc.state.mt.us

### Nebraska Oil & Gas Conservation

Commission P.O. Box 399 Sidney, NE 69162 (308) 254-6919 http://www.nogcc.ne.gov/

### Nevada Department of Minerals

400 West King Street, Suite 106 Carson City, NV 89703 (702) 684-7040 (702) 684-7052 Fax http://minerals.state.nv.us/

# New Mexico Energy, Minerals and

Natural Resources Department 1220 S. St. Francis Drive Santa Fe, NM 87505 (505) 476-3440 (505) 476-3462 Fax http://www.emnrd.state.nm.us/

# New York State Department of

Environmental Conservation 625 Broadway Albany, NY 12233-6500 (518) 402-8076 (518) 402-8060 Fax http://www.dec.ny.gov

# New York State Geological Survey

(NYSGS) 3140 Cultural Education Center Albany, NY 12230 (518) 474-5816 (518) 486-2034 Fax www.nysm.nysed.gov/research/geology

# New York State Energy Research and Development Authority (NYSERDA)

17 Columbia Circle Albany, NY 12203-6399 (518) 862-1090, ext. 3303 or 1-866-NYSERDA ext. 3303 (518) 862-1091 Fax http://www.GetEnergySmart.org

### North Dakota Industrial Commission

Oil and Gas Division 600 East Boulevard Avenue, Dept. 405 Bismark, ND 58505-0840 (701) 328-8020 (701) 328-8022 Fax http://www.dmr.nd.gov/oilgas

# STATE ENERGY CONTACTS AND FEDERAL ORGANIZATIONS

#### **Ohio Department of Natural**

Resources Division of Mineral Resources Management 1855 Fountain Square Drive, Bldg. H-2 Columbus, OH 43224-1362 (614) 265-6633 (614) 265-7999 Fax http://www.dnr.state.oh.us

#### Oklahoma Corporation Commission Oil and Gas Division

P.O. Box 52000/2101 N. Lincoln Blvd. Oklahoma City, OK 73152-2000 (405) 521-2211 http://www.occ.state.ok.us/

#### Oregon Department of Geology and Mineral Industries

800 NE Oregon St., #28, Room 965 Portland, OR 97232 (503) 731-4100 (503) 731-4066 Fax http://www.oregongeology.org/sub/ default.htm

#### Pennsylvania Dept. of Environmental Resources

Oil and Gas Division Rachel Carson St. Ofc Bldg., Box 8765 Harrisburg, PA 17105-8765 (717) 772-2199 (717) 772-2291 Fax http://www.dep.state.pa.us/dep/deputate/minres/oilgas/oilgas.htm

# South Dakota Dept. of Environment &

Natural Resources 523 E. Capitol - Joe Foss Bldg. Pierre, SD 57501 (605) 773-3151 (605) 773-6035 Fax http://www.state.sd.us/denr/denr.html

# Tennessee Dept. of Geology &

Conservation Oil and Gas Board 401 Church St., 13th Fl. Nashville, TN 37243 (615) 532-0445 http://www.state.tn.us/environment/

# **Texas Railroad Commission**

Office of Information Services P.O. Drawer 12967 Austin, TX 78711-2967 (512) 463-6887 http://www.rrc.state.tx.us/

# Utah Department of Natural Resources

1594 West North Temple/P.O. Box 145801 Salt Lake City, UT 84114-5801 (801) 538-5277 (801) 359-3940 Fax http://dogm.nr.state.ut.us/

#### Virginia Division of Energy

Dept. of Mines, Minerals & Energy P.O. Box 900 Big Stone Gap, VA 24219 (276) 523-8146 http://www.mme.state.va.us/dgo/default.htm

# West Virginia Office of Oil & Gas

1356 Hansford St. Charleston, WV 25301 (304) 558-6075 (304) 558-6047 Fax http://www.wvdep.org/

#### Wyoming Dept. of Environmental Quality

122 West 25th Street - Herscheler Bldg. Cheyenne, WY 82002 (307) 777-7937 (307) 777-7682 Fax http://deq.state.wy.us/

#### Wyoming Oil and Gas Conservation Commission

Box 2640/777 West First Street Casper, WY 82602 (307) 234-7147 (307) 234-5306 Fax http://wogcc.state.wy.us/

# Federal Organizations

### **Energy Information Administration**

Forrestal Building - Room 1F-048 1000 Independence Avenue, S.W. Washington, D.C. 20585 (202) 586-5000 http://www.eia.doe.gov

# Federal Energy Regulatory

Committee 888 First St., NE, Room 2-A Washington, D.C. 20426 (866) 208-3372 http://www.ferc.gov

# National Petroleum Technology

Office One West Third St., Suite 1400 Tulsa, OK 74103-3519 (918) 699-2000 (918) 699-2005 Fax http://www.netl.doe.gov/technologies/ oil-gas

# U.S. Department of Energy

Fossil Energy Dept. 1000 Independence Avenue, S.W. Washington, D.C. 20585 (202) 586-6503 http://www.fe.doe.gov

# U.S. Department of Energy

Office of Scientific and Technical Information P.O. Box 62 Oak Ridge,TN 37831 http://www.osti.gov/

# Bureau of Ocean Energy

Management, Regulation and Enforcement 1849 C Street, NW Washington, D.C. 20240 (202) 208-3985 http://www.boemre.gov/

### U.S. Dept. of the Interior

1849 C Street NW Washington, D.C. 20240 Phone: 202-208-3100 http://www.doi.gov

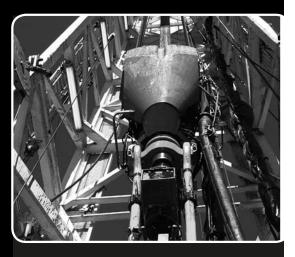
### Environmental Protection Agency

Ariel Rios Bldg. 1200 Penn. Ave., N.W., 3213A Washington, D.C. 20460 (202) 260-2090 http://www.epa.gov

### U.S. Geological Survey

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#### **American Exploration & Production Council**

1350 Eye St., NW, Suite 510 Washington, D.C. 20005 (202) 652-2359 http://www.axpc.us/

### Arkansas Independent Producers &

Royalty Owners 1401 W. Capitol Ave., Suite 440 Little Rock, AR 72201 (501) 975-0565 (501) 975-0566 Fax http://www.aipro.org

#### Association of Energy Service Companies

10200 Richmond Avenue Houston, TX 77042 (713) 781-0758 (713) 781-7542 Fax http://www.aesc.net

#### **California Independent Petroleum Association**

1112 I Street, Suite 350 Sacramento, CA 95814 (916) 447-1177 (916) 447-1144 Fax http://www.cipa.org

#### **Coalbed Methane Association of Alabama**

3829 Lorna Road, Suite 306 Birmingham, AL 35244 (205) 733-8087 (205) 985-0042 Fax http://www.coalbed.com

#### **Colorado Oil & Gas Association**

1776 Lincoln Street, Suite 1008 Denver, CO 80203 (303) 861-0362 (303) 861-0373 Fax http://www.coga.org

#### East Texas Producers & Royalty Owners Assoc.

P.O. Box 1700 Kilgore, TX 75663 (903) 984-8671 (903) 984-1499 Fax

#### Eastern Kansas Oil & Gas Association

17 South Evergreen Avenue P.O. Box 355 Chanute, KS 66720 (620) 431-1020 (620) 431-9325 Fax http://www.ekoga.org

#### FL Independent Petroleum Producers Assoc.

P.O. Box 230 Pensacola, FL 32591 (904) 434-6830 (904) 434-6842 Fax

#### Illinois Oil & Gas Association

P.O. Box 788 Mount Vernon, IL 62864 (618) 242-2857 (618) 242-3418 Fax http://www.ioga.com

#### Independent Oil & Gas Association of NY

38 Lake St. Hamburg, NY 14075 (716) 202-4688 (716) 202-4689 Fax http://iogany.org

### Independent Oil & Gas Assoc. of West Virginia

405 Capitol St., Suite 507 Charleston, WV 25301 (304) 344-9867 (304) 344-5836 Fax http://www.iogawv.com/

### Independent Oil Producers' Agency

1228 N Street, Suite 26 Sacramento, CA 95814 (916) 442-7095 (916) 442-5822 Fax

#### Independent Oil Producers Assoc. Tri-State

2104 Lincoln Avenue Evansville, IN 47714 (812) 479-9451 (812) 476-2569 Fax

### Independent Petroleum Assoc. of New Mexico

529 West San Francisco St./P.O. Box 576 Santa Fe, NM 87504 (505) 984-0128 (505) 622-8996 Fax http://www.ipanm.org

#### Indiana Oil & Gas Association

Route 1, P.O. Box 197 Bridgeport, IL 62417 (618) 943-1010 (618) 943-5301 Fax http://www.inoga.org

# International Association of Geophysical Contractors

2550 N. Loop, W., Suite 104 Houston, TX 77092 (713) 957-8080 (713) 957-0008 Fax http://www.iagc.org

#### Kansas Independent Oil & Gas Association

105 S. Broadway, Suite 500 Wichita, KS 67202-4262 (316) 263-7297 (316) 263-3021 Fax http://www.kioga.org

### Kentucky Oil & Gas Association

#1-A Physicians Park Frankfort, KY 40601 (502) 226-1955 (502) 226-3626 Fax http://kyoilgas.org

#### Liaison Committee of Cooperating Oil & Gas Associations P.O. Box 1143 Graham, TX 76450 (940) 549-5261 (940) 549-4241 Fax

#### Louisiana Landowners Association P.O. Box 44121

Baton Rouge, LA 70804-4121 (504) 927-5619 (504) 928-7339 Fax

#### Louisiana Oil & Gas Association

P.O. Box 4069 Baton Rouge, LA 70821-4069 (800) 443-1433 (225) 388-9561 Fax http://www.loga.la

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124 West Allegan St., Suite 1610 Lansing, MI 48933 (517) 487-1092 (517) 487-0961 Fax http://www.michiganoilandgasassociation.org

#### Mississippi Indep. Producers & Royalty Owners

P.O. Box 13393 Jackson, MS 39236 (601) 362-0502 (601) 362-5397 Fax http://www.mipro.ms

#### Montana Petroleum Association

601 Euclid Ave., P.O. Box 1186 Helena, MT 59624-1186 (406) 442-7582 (406) 443-7291 Fax http://montanapetroleum.org

#### National Association of Royalty Owners

P.O. Box 5779 Norman, OK 73070-5779 (405) 573-2972 http://www.naro-us.org

#### National Stripper Well Association

P.O. Box 18336 Oklahoma City, OK 73154 (405) 601-8002 http://www.nswa.us

#### New Mexico Oil & Gas Association

P. O. Box 1864, 500 Don Gaspar Santa Fe, NM 87504-1864 (505) 982-2568 (505) 982-0811 Fax http://www.nmoga.org

#### New York State Oil Producers Association

37 Elm St., P.O. Box 364 Eldred, PA 16731 (814) 225-4659

#### North Dakota Petroleum Council

P.O. Box 1395 (58502) 120 N 3rd St., Ste.. 200 Bismarck, ND 58501 (701) 223-6380 (701) 222-0006 Fax http://www.ndoil.org

# Northern Alliance of Independent Producers

P.O. Box 2422 Bismarck, ND 58502 (701) 224-5037 (701) 224-5038 Fax http://www.northernproducers.com

#### Ohio Oil & Gas Association

P.O. Box 535/1718 Columbus Rd., SW Granville, OH 43023-0535 (740) 587-0444 (740) 587-0446 Fax http://www.ooga.org

# COOPERATING OIL & GAS ASSOCIATIONS

#### **Oklahoma Independent Petroleum Association**

3555 Northwest 58th St., Suite 400 Oklahoma City, OK 73112 (405) 942-2334 (405) 942-4636 Fax http://www.oipa.com

#### Panhandle Producers & Royalty Owners Assoc.

3131 Bell #209 Amarillo, TX 79106 (806) 352-5637 (806) 359-1274 Fax http://www.pproa.org

#### Pennsylvania Independent Oil & Gas Assoc.

115 VIP Drive, Suite 210 Northridge Office Plaza II Wexford, PA 15090-7906 (724) 933-7306 (724) 933-7310 Fax http://www.pogam.org

# Permian Basin Petroleum Association

P.O. Box 132/415 W. Wall, 1st Floor Midland, TX 79701 (432) 684-6345 (432) 684-7836 Fax http://www.pbpa.info/

#### Petroleum Association of Wyoming

951 Werner Court, Suite 100 Casper, WY 82601 (307) 234-5333 http://www.pawyo.org

### Petroleum Equipment Suppliers Association

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#### Petroleum Technology Transfer Council

P.O. Box 979 Tulsa, OK 74101-0979 (888) THE-PTTC/(981) 560-2604 (918) 560-2678 Fax http://www.pttc.org

### Society of Indep. Professional Earth Scientists

4925 Greenville Avenue, Suite 1106 Dallas, TX 75206 (214) 363-1780 (214) 363-8195 Fax http://www.sipes.org

#### Southeastern Ohio Oil & Gas Association

P.O. Box 136 Reno, OH 45773 (740) 374-3203 (740) 374-2840 Fax http://www.sooga.org

#### Tennessee Oil & Gas Association

750 Old Hickory Blvd., #285 Brentwood, TN 37027 (615) 263-1291 (615) 263-1282 Fax http://www.tennoil.com

#### Texas Alliance of Energy Producers

726 Scott Ave., Ste. 500 Wichita Falls, TX 76301 (800) 299-2998 (940) 723-4132 Fax http://www.texasalliance.org

### Texas Independent Producers & Royalty

Owners Association 515 Congress Avenue, Suite 910 Austin, TX 78701 (512) 477-4452 (512) 476-8070 Fax http://www.tipro.org

### Virginia Oil & Gas Association

1007 East Watauga Ave. Johnson City, TN 37601 (423) 926-2536 (423) 378-1723 Fax www.vaoilandgas.com

#### West Virginia Oil & Natural Gas Association

P.O. Box 3231 Charleston, WV 25332-3231 (304) 343-1609 (304) 343-5610 Fax Toll free: 866-343-1609 http://www.wvonga.com

### **Networking Associations**

#### Alaska Oil & Gas Association

121 W. Fireweed, Suite 207 Anchorage, AK 99503 (907) 272-1481 (907) 279-8114 Fax http://www.aoga.org

#### American Association of Petroleum Geologists

1444 S. Boulder Ave./ P.O. Box 979 Tulsa, OK 74101 (800) 364-2274 (981) 560-2694 Fax http://www.aapg.org

#### American Petroleum Institute

1220 L St. NW Washington, DC 20005-4070 (202) 682-8000 (202) 962-4776 Fax http://www.api.org

#### **Canadian Association of Petroleum Producers**

Suite 2100, 350 7th Avenue S.W. Calgary, Alberta , Canada T2P 3N9 (403) 267-1100 (403) 261-4622 Fax http://www.capp.ca

### Illinois Petroleum Resources Board

P.O. Box 491 Mount Vernon, IL 62864 (618) 242-2861 (618) 242-3418 Fax http://www.iprb.com

#### International Assoc. of Drilling Contractors

P.O. Box 4287/10370 Richmond Ave., Ste. 760 Houston, TX 77210-4287/77042 (713) 292-1945 (713) 292-1946 Fax http://www.iadc.org

#### Louisiana Mid-Continent Oil & Gas Association 801 North Blvd. Baton Rouge, LA 70802 (225) 387-3205 (225) 344-5502 Fax http://www.lmoga.com

### Mid-Continent Oil & Gas Association of OK

6701 N. Broadway, Suite 300 Oklahoma City, OK 73116 (405) 843-5741 (405) 843-5746 Fax http://www.okmoga.com

# Nebraska Independent Oil & Gas Association

P.O. Box 427 Kimball, NE 69145 (308) 235-2906

#### North Dakota Industrial Commission

Oil and Gas Division 600 East Boulevard Avenue, Dept. 405 Bismarck, ND 58505-0840 (701) 328-8020 (701) 328-8022 http://www.oilgas.nd.gov

#### Public Lands Advocacy

1410 Grant St., Suite C-307 Denver, CO 80203 (303) 860-0212 (303) 860-0310 Fax http://www.publiclandsadvocacy.org

#### Society of Petroleum Engineers

P.O. Box 833836/222 Palisades Creek Drive Richardson, TX 75083 (800) 456-6863 (972) 952-9435 Fax http://www.spe.org

#### Southwest Kansas Royalty Owners Association

209 East 6th, Box 250 Hugoton, KS 67951 (620) 544-4333 (620) 544-2230 Fax http://www.swkroa.com

#### **Texas Oil & Gas Association**

304 W. 13th St. Austin, TX 78701 (512) 478-6631 (512) 472-3859 Fax http://www.txoga.org

#### Utah Petroleum Association

533 West 2600 South, Suite 270 Bountiful, UT 84010 (801) 295-5399 (801) 295-5477 Fax http://www.utahpetroleum.org

#### Western Energy Alliance

410 17th St., Ste. 700 Denver, CO 80202 (303) 623-0987 (303) 893-0709 Fax http://www.westernenergyalliance.org

#### Western States Petroleum Association

1415 L St., Ste. 600 Sacramento, CA 95814 (916) 444-9981 http://www.wspa.org

# STATE EDUCATION PROGRAMS

In 2006, IPAA launched its Education Center in Houston. The Education Center is dedicated to coordinating initiatives in public education and workforce expansion. The center's full-time director (Doris Richardson) is a former educator with over 15 years of public affairs experience both in the petroleum industry and private sector, and is chaired by Halliburton's Galen Cobb. IPAA continues to expand upon its commitment to education outreach through a variety of initiatives and programs including the Academy of Petroleum Exploration & Production Technology.

Since 2007, IPAA Education Center Director, Doris Richardson has established two high school engineering & geosciences academies, plus one global energy management program within the Houston Independent School District (HISD). HISD has committed to a total of five IPAA sponsored academies; with 2 more opening by fall 2010.

For more information, please visit the IPAA Education Center online at: http://www.ipaa.org/education/default.asp

CONTACT INFORMATION FOR PARTICIPATING IPAA HIGH SCHOOL ENERGY MAGNET SCHOOLS:

Global Energy Management Academy - Lamar High School – International Baccalaureate World School 3325 Westheimer Houston, TX 77098-1099 713-522-5960 713-535-3769 Fax http://hs.houstonisd.org/lamarHS

#### Academy of Petroleum E & P Technology -Milby High School

1601 Broadway Houston, TX 77012-3789 713-928-7401 713-928-7474 Fax http://hs.houstonisd.org/milbyhs/

#### Westside Engineering & Geosciences Academy

Academy 14201 Briar Forest Dr. Houston, TX 77077-1806 281-920-8000 281-920-8059 Fax http://hs.houstonisd.org/westsideHS/

#### Memorial High School

935 Echo Lane Houston, TX 77024 713-365-5110 713-365-5138 Fax http://mhs.springbranchisd.com/

# Western Hills International Baccalaureate

High School 3600 Boston Avenue Fort Worth, TX 76116 817-560-5600 817-560-5644 Fax http://schools.fortworthisd.net/education/school

#### Taft Oil Technology Academy

701 7th Street Taft, CA 93268 661.763.2300 661.763.1445 Fax http://www.taft.k12.ca.us/programs/oil University Energy and Geology Programs (non affiliated):

Alabama

#### The University of Alabama

Department of Geological Sciences-Geology Ernest Mancini, Geology Professor Office: (205) 348-4319 Fax: (205) 348-0818 Email: faculty@geo.ua.edu Website: http://www.geo.ua.edu/index.php

Alaska

University of Alaska-Fairbanks College of Engineering and Mines-Geological Engineering Professor Gang Chen, Department Chair Office: (907) 474-7388 Fax: (907) 474-6635 Email: fyminge@uaf.edu Website: http://www.alaska.edu/uaf/cem/ge/

College of Engineering and Mines-Petroleum Engineering Professor Shirish Patil, Department Chair Office: (907) 474-7734 Fax: (907) 474-5912 Email: fyipete@uaf.edu Website: http://www.alaska.edu/uaf/cem/pete/

Arkansas

#### Arkansas Tech University

Department of Physical Sciences-Geology Richard Cohoon, Dean and Professor of Geology Office: (479) 964-0816 Fax: (479) 964-0837 Email: rcohoon@atu.edu Website: http://pls.atu.edu/physci/geology

#### University of Arkansas Community College at Morrilton

Petroleum Technology Degree Program-Technical Certificate and A.A.S Jeff Lambert, Petroleum Technology Professor Office: (501) 977-2178 Fax: (501) 977-2134 Email: lambert@uaccm.edu Website: http://www.uaccm.edu/Academics/ Academics.htm California

#### University of Southern California

Viterbi School of Engineering-Petroleum Engineering Iraj Ershaghi, Ph.D., P.E., Program Director Office: (213) 740-0322 Fax: (213) 740-0324 Email: peteng@usc.edu Website: http://www.cisoft.usc.edu

#### Stanford University

Department of Energy Resources Engineering Louis Durlofsky, Chairman and Professor Office: (650) 723-4142 Fax: (650) 725-2099 Email: lou@stanford.edu Website: http://pangea.stanford.edu/ERE/about/

#### California State University, Long Beach

Department of Geological Sciences-Petroleum Geology Stan Finney, Department Chair Office: (562) 985-8637 Fax: (562) 985-8638 Email: scfinney@csulb.edu Website: http://www.cnsm.csulb.edu/ departments/geology/programs/graduate/ petroleumgeology.shtml

#### California State University, Bakersfield

Department of Geology-Petroleum Geology Dr. Dick Baron, Department Chair Office: (661) 654-3044 Fax: (661) 654-2040 Email: dbaron@csub.edu Website: http://www.csub.edu/geology/

Colorado

#### Colorado School of Mines

Department of Petroleum Engineering-Petroleum Engineering Dr. Craig W. Van Kirk, Department Head Office: (303) 273-3740 Fax: (303) 273-3189 Email: cvankirk@mines.edu Website: http://www.mines.edu/academic/ petroleum/

# STATE EDUCATION PROGRAMS

Department of Geology and Geological Engineering-Petroleum Exploration and Development John D. Humphrey, Interim Department Head Office: (303) 273-3819 Fax: (303) 273-3859 Email: juhumphre@mines.edu Website: http://www.mines.edu/academic/ geology/

#### **Colorado Mountain College**

Process Technology-Petroleum Technology (Certificate) John Prater, Associate Professor of Energy Office: (970) 625-6947 Fax: (970) 625-6927 Email: jprater@coloradomtn.edu Website: http://catalog.coloradomtn.edu/ docs/0809/AAS\_Cert\_ProcessTech.pdf

#### Mesa State College

Department of Business-Landman/Energy Management Concentration Dr. Morgan Bridge, Business Department Head Office: (970) 248-1169 Fax: (970) 248-1730 Email: mbridge@mesastate.edu Website: https://www.mesastate.edu/business/ bba.htm

#### Western State College

Department of Business Administration, Professional Land and Resource Management Ed Grauke, Director and Moncrief Chair Office: (970) 943-2538 Fax: (970) 943-7042 Email: egrauke@western.edu Website: http://www.western.edu/academics

Department of Geology-Petroleum Geology Ronald J. Hill, Moncrief Chair in Petroleum Geology Office: (970) 943-2145 Fax: (970) 943-7120 Email: rhill@western.edu Website: http://www.western.edu/academics

#### Colorado Northwestern Community College

Process Technology-Oil and Gas Associates Degree Conrad Stanley, Program Director Office: (970) 675-3375 Fax: (970) 675-5046 Email: Conrad.stanley@cncc.edu Website: http://www.cncc.edu/programs/ process\_technology/default.html

#### Kansas

#### The University of Kansas

Department of Engineering-Petroleum Engineering Laurence R. Weatherley PhD, Department Chair Office: (785) 864-3553 Fax: (785) 864-4967 Email: Iweather@ku.edu Website: http://cpe.engr.ku.edu/petro/

#### Fort Hays State University

Department of Geosciences-Petroleum Geology Dr. Ken Neuhauser, Program Director Office: (785) 628-5349 Department Fax: (785) 628-4096 Email: kneuhaus@fhsu.edu Website: http://www.fhsu.edu/geo/

Louisiana

#### Louisiana State University

Department of Petroleum Engineering-Petroleum Engineering Stephen O. Sears, Department Chair Office: (225) 578-6055 Fax: (225) 578-6039 Email: sosears@lsu.edu Website: http://www.pete.lsu.edu/

#### University of Louisiana at Lafayette

Management Department-Professional Land and Resource Management Dr. Steve Knouse, Department Head Office: (337) 482-6087 Fax: (337) 482-5898 Email: sbk4151@louisiana.edu Website: http://cobweb.louisiana.edu/New/ academics/plrm\_home.htm

College of Engineering-Petroleum Engineering Ali Ghalambor, Ph.D., Department Head Office: (337) 482-5748 Fax: (337) 482-6848 Email: axq8302@louisiana.edu Website: http://petroleum.louisiana.edu/index. shtml

#### **Nicholls State University**

Department of Applied Sciences-Petroleum Technology Michael Gautreaux, Program Director Office: (985) 448-4740 Fax: (985) 448-4475 Email: michael.gautreaux@nicholls.edu Website: http://www.nicholls.edu/doas/degreeprograms/petroleum-services/

#### **Tulane University**

Freeman School of Business-Energy Specialization (Certificate) Eric Smith, Associate Director of Energy Institute Office: (504) 865-5031 Fax: (504) 862-8327 Email: esmith11@tulane.edu Website: http://www.freeman.tulane.edu/ energy/

#### Missouri

#### University of Missouri-Rolla

Department of Geological Sciences and Engineering-Petroleum Engineering Dr. Daopu T. Numbere, Program Head Office: (573) 341-4758 Fax: (573) 341-6935 Email: numbere@mst.edu Website: http://gse.mst.edu/ academicprograms/petroleumengineering.html

#### Montana

#### Montana Tech-University of Montana

School of Mines and Engineering-Petroleum Engineering Leo Heath, Department Head Office: (406) 496-4507 Fax: (406) 496-4417 Email: Iheath@mtech.edu Website: http://www.mtech.edu/mines/pet\_eng/

#### New Mexico

#### New Mexico Institute of Mining &

Technology Department of Petroleum and Natural Gas Engineering Her-Yuan Chen, Ph.D., Department Chair Office: (575) 835-5743 Fax: (575) 835-5210 Email: her@nmt.edu Website: http://infohost.nmt.edu/~petro/index. html

#### North Dakota

#### University of North Dakota

Department of Geology and Geological Engineering-Geological Engineering William Gosnold, Department Chair Office: (701) 777-2631 Fax: (701) 777-4449 Email: willgosnold@mail.und.nodak.edu Website: http://www.geology.und.edu/geoE\_ ugdegreedirectory.php

Ohio

#### Marietta College

Department of Petroleum Engineering-Petroleum Engineering Dr. Robert Chase, Professor Office: (740) 376-4776 Fax: (740) 376-4777 Email: chaser@marietta.edu Website: http://www.marietta.edu/~petr/index. html

#### Oklahoma

### University of Oklahoma

Price College of Business Department of Management-Energy Management Steve Long, Program Director Office: (405) 325-0758 Fax: (405) 325-7499 Email: slong@ou.edu Website: http://price.ou.edu/energy\_ management/index.aspx

ConocoPhillips School of Geology and Geophysics-Petroleum Geology Doug Elmore, Director and Eberly Chair Office: (405) 325-4493 Fax: (405) 325-3140 Email: delmore@ou.edu Website: http://geology.ou.edu/index.html

#### Mewbourne School of Petroleum and Geological Engineering- Petroleum Engineering

Chandra Rai, Director and Eberly Chair Office: (405) 325-6866 Fax: (405) 325-7477 Email: crai@ou.edu Website: http://mpge.ou.edu/

#### University of Tulsa

Collins College of Business Department of Energy Management-Energy Management Ted Jacobs, Program Director Office: (918) 631-3588 Fax: (918) 631-3584 Email: ted-jacobs@utulsa.edu Website: http://www.cba.utulsa.edu/Depts/ Energy/

Department of Petroleum Engineering-Petroleum Engineering Mohan Kelkar, Department Chair Office: (918) 631-3036 Fax: (918) 631-2533 Email: mohan@utulsa.edu Website: http://www.pe.utulsa.edu/

#### Pennsylvania

#### Pennsylvania State University

Department of Energy and Mineral Engineering-Petroleum and Natural Gas Engineering Turgay Ertektin, Program Officer and Professor Office: (814) 865-6082 Fax: (814) 863-1875 Email: eur@psu.edu Website: http://www.pnge.psu.edu/index. html

#### Department of Energy and Mineral Engineering-Energy Business and Finance Andrew N. Kleit, Program Officer and Professor Office: (814) 865-0711 Fax: (814) 865-3663 Email: ank1@psu.edu Website: http://www.eme.psu.edu/ebf/ index.html

#### University of Pittsburgh

Swanson School of Engineering-Chemical and Petroleum Engineering Badie Morsi, Program Director and Professor Office: (412) 624-9650 Fax: (412) 624-9639 Email: morsi@engr.pitt.edu Website: http://www.engr.pitt.edu/chemical/ index.html

#### South Dakota

# South Dakota School of Mines & Technology

Geology and Geological Engineering Department- Geological Engineering Maribeth Price, Department Chair Office: (605) 394-1290 Fax: (605) 394-2461 Email: maribeth.price@sdsmt.edu Website: http://geology.sdsmt.edu/

#### Texas

#### Texas A&M

Harold Vance Department of Petroleum Engineering-Petroleum Engineering Betty Robins, Program Assistant Office: (979) 845-2241 Fax: (979) 862-6579 Email: betty@pe.tamu.edu Website: http://www.pe.tamu.edu/

#### Texas A&M-Kingsville

Department of Chemical and Natural Gas Engineering-Natural Gas Engineering Ali A. Pilehvari, Department Chair Office: (361) 593-2089 Fax: (361) 593-4026 Email: a-pilehvari@tamuk.edu Website: http://www.engineer.tamuk.edu/ departments/ngen/index.html

#### **Texas Tech University**

Rawls College of Business-Energy Commerce Terry McInturff, Program Director Office: (806) 742-1609 Fax: (806) 742-4535 Email: Lmcinturff@ttu.edu Website: http://plm.ba.ttu.edu/index.html

Department of Petroleum Engineering-Petroleum Engineering George Asquith, Department Chair Office: (806) 742-3573 Fax: (806) 742-3502 Email: george.asquith@ttu.edu Website: http://www.depts.ttu.edu/peWeb/ index.php

#### University of Houston

Department of Chemical and Biomolecular Engineering-Petroleum Engineering Dr. Kishore Mohanty, Program Director Office: (713) 743-4331 Fax: (713) 743-4323 Email: mohanty@uh.edu Website: http://www.chee.uh.edu/ petroleum/

# STATE EDUCATION PROGRAMS

#### University of Houston-Downtown

Department of Management, Marketing, and Business-Energy Management (Minor) Forrest Aven Jr., Department Chair Office: (713) 221-8593 Fax: (713) 221-8632 Email: avenf@uhd.edu Website: http://www.uhd.edu/academic/ colleges/business/mmba/energy\_min\_ index htm

#### University of Texas-Austin Kilgore College

Department of Petroleum and Geosystems Engineering-Petroleum Engineering Gary Pope, Department Director and Professor Office: (512) 471-3235 Fax: (512) 471-9605 Email: gpope@mail.utexas.edu Website: http://www.pge.utexas.edu/index. cfm

#### **Kilgore College**

Department of Continuing Education-Petroleum Technology Bill Brantly, Course Coordinator Office: (903) 983-8680 Fax: (903) 988-7506 Email: bbrantley@kilgore.edu Website: http://www.kilgore.edu/petro\_tech. asp

#### Panola College

Department of Applied Sciences-Petroleum Technology Gary Hughes, Division Director Office: (903) 693-1130 Fax: (903) 693-1144 Email: ghughes@panola.edu Website: http://www.panola.edu/instruction/ srtc/index.html

#### Midland College

Petroleum Professional Development Center-Various Studies/Certifications Hoxie Smith, Director Office: (432) 683-2832 Fax: (432) 686-8089 Email: hsmith@midland.edu Website: http://www.midland.edu/~ppdc/

#### Del Mar College

Technology Education Department-Process Technology Denise Rector, Assistant Professor Office: (361) 698-1713 Fax: (361) 698-1868 Email: drector@delmar.edu Website: http://www.delmar.edu/teched/ process.php

# STATE EDUCATION PROGRAMS

West Virginia

#### **Glenville State College**

Department of Land Resources-Landman Technology Charles Sypolt, Department Chair Office: (304) 462-4135 Fax: (304) 462-8709 Email: Charles.Sypolt@glenville.edu Website: http://www.glenville.edu/ landresources\_department.asp

#### West Virginia University

College of Engineering and Mineral Resources-Petroleum and Natural Gas Engineering Sam Ameri, Department Chair and Professor Office: (304) 293-7682 Fax: (304) 293-5708 Email: samuel.ameri@mail.wvu.edu Website: http://www.pnge.cemr.wvu.edu/ welcome/

Wyoming

#### Western Wyoming Community College

Division of Technology and Industry-Oil and Gas Technology Paul Johnson, Division Chair Office: (307) 382-1718 Fax: (307) 382-1872 Email: pjohnson@wwcc.wy.edu Website: http://www.wwcc.wy.edu/ academics/oilgastech/

#### University of Wyoming

Department of Chemical and Petroleum Engineering-Petroleum Engineering H. Gordon Harris, Department Head and Professor Office: (307) 766-6558 Fax: (307) 766-5769 Email: harrishg@uwyo.edu Website: http://wwweng.uwyo.edu/ chemical/

### Canada

#### . . . .

University of Calgary Haskayne School of Business-Petroleum Land Management Bob Schulz, Program Director Office: (403) 220-6591 Fax: (403) 282-0095 Email: bob.schulz@haskayne.ucalgary.ca Website: http://haskayne.ucalgary.ca/ undergrad/plma

# Additional Energy Education & Employment Resources

#### Association of Desk and Derrick Clubs

5153 E 51st St., Ste. 107 Tulsa, OK 74135 (918) 622-1749 (918) 622-1675 Fax Email: adotulsa@swbell.net http://www.addc.org

### A+ for Energy (Texas)

BP America Inc. 3401 Palmer Highway, Room 445D Texas City, TX 77590 http://www.aplusforenergy.org/Texas

#### BP - California Community Relations "A+ for Energy"

6 Centerpointe Drive La Palma, CA 90623 http://www.aplusforenergy.org/

# California Energy Commission

"Energy Quest" 1516 9th Street, MS-29 Sacramento, CA 95814 (916) 654-4989 (916) 653-5590 Fax http://www.energyquest.ca.gov/

#### Campbell Creek Science Center Bureau of Land Management (BLM), Alaska

1011 East Tudor Road Anchorage Alaska 99513-6119 (907) 267-1247 (907)271-3684 Fax http://www.blm.gov/ak/st/en/prog/ sciencecenter.html

### **Center for Energy Studies**

Louisiana State University, Energy, Coast and Environment Building, Nicholson Drive Extension, Baton Rouge, LA 70803 (225) 578-4400 http://www.enrg.lsu.edu/

### Colorado School of Mines

"Denver Earth Science Project" Office of Special Programs & Continuing Education Golden, CO 80401 (303) 273-3621 (303) 273-3314 Fax http://www.mines.edu/Outreach/Cont\_ Ed/desp/desp.html

### East Texas Historical Association

http://www.easttexashistorical.org/

#### **Energy Kids**

Energy Information Administration http://tonto.eia.doe.gov/kids/

### **Environmental Education Council of**

Ohio P.O. Box 1004 Lancaster, OH 43130 (740) 653-2649 (740) 653-6100 Fax http://www.eeco-online.org

### Federal Energy Regulatory

Commission: A Students' Corner http://www.ferc.gov/students/index.htm

### The NEED Project

8408 Kao Circle Manassas, VA 20110 (703) 257-1117 http://www.need.org

# Northern Montana Independent Oil

and Gas Association P.O. Box 488 Cut Bank, MT 59427 (406) 873-9000 (406) 873-5207Fax

### Offshore Energy Center (OEC)

200 North Dairy Ashford, Suite 6220 Houston, TX 77079 (281) 679-8040 (281) 544-2441 Fax http://www.oceanstaroec.com

### Ohio Energy Project (OEP)

670 Enterprise Drive, Suite A Lewis Center, OH 43035 (614) 785-1717 (614) 785-1731 Fax http://www.ohioenergy.org

# **Ohio Oil & Gas Energy Education**

Program (OOGEEP) 1718 Columbus Road, S.W. P.O. Box 187 Granville, OH 43023-0535 (740) 587-0444 (740) 587-0446 Fax http://www.oogeep.org

#### Oklahoma Commission on Marginally Producing Oil and Gas Wells

3535 Northwest 58th Street, Suite 870 Oklahoma City, OK 73112 (405) 604-0460 or (800) 390-0460 (405) 604-0461 Fax http://www.marginalwells.com

# Oklahoma Energy Resources Board

(OERB) 3555 N.W. 58th, Suite 430 Oklahoma City, OK 73112 (405) 942-5323 or (800) 664-1301 (405) 942-3435 Fax http://www.oerb.com

#### Sarkeys Energy Center, University of Oklahoma

100 East Boyd, Room 510 Norman, OK 73019 (405) 325-3821 http://www.sec.ou.edu/index.php

U.S. Dept of Energy - For Consumers http://www.energy.gov/forconsumers. htm

U.S. Dept of Energy - for Employees http://www.energy.gov/for\_employees. htm

U.S. Dept of Energy - for Researchers http://www.energy.gov/forresearchers. htm

U.S. Dept of Energy - for Students and Kids http://www.energy.gov/ forstudentsandkids.htm

# Western States Petroleum

Association (WSPA) 1415 L Street, Suite 600 Sacramento, CA 95814 (916) 498-7750 (916) 444-5745 Fax http://www.wspa.org

#### Wisconsin K-12 Energy Education Program (KEEP) 403 LRC, UWSP Stevens Point, WI 54481 (715) 346-4770

(715) 346-4770 (715) 346.4698 Fax http://www.uwsp.edu/cnr/wcee/keep/ index.htm

# Wyoming State Historical Society

PMB #184 1740H Dell Range Blvd. Cheyenne, WY 82009 http://wyshs.org

# YOUNG PROFESSIONALS IN ENERGY CHAPTERS

Young Professionals in Energy Chapters Founded in 2005, YPE is a global network of young professionals who seek to engage with peers in the energy industry. www.ypenergy.org

Austin Director - Code Williams (512) 328-2953 ext. 255 cwilliams1@jonesenergy.com

Director - David Watson (512) 475-9023 davewatson@austin.utexas.edu

Bay Area Director - Kelsey Lynn (650) 743-3739 kelsey@lakefirecapital.com

Director - Alicia Stevenson (818) 223-1924 alicia@recurrentenergy.com

Boston Director - Stacey DeFino (512) 217-4174 stacey.defino@sloan.mit.edu

Calgary Director - Sarah Phillips (403) 645-7816 sarah.phillips@encana.com

Chicago Director - Greg Gleason (847) 604-6121 ggleason@wynnchurch.com

Director - Joseph Elberts (312) 462-6417 jelberts@hlhz.com

#### China

Director - Scott Hou (713) 478-3123 hous@stoneenergy.com Dallas Director - Garrett Mayer (214) 442-8404 gmayer@drillinginfo.com

Denver Director - Marcus Krembs (720) 946-6373 mkrembs@sterlingplanet.com

Director - Parker Heikes (303) 864-7343 pheikes@bokf.com

Dubai Director - Will Martin (971-50) 557 0273 will.martin@nov.com

Ft. Worth Director - Gregg Frasure (817) 284-3492 gregg@welltec-us.com

Director - Rand Winfrey (817) 665-4980 rwinfrey@qrinc.com

Houston Director – Preston Carr (713) 877-8975 pcarr@mcgriff.com

Director – Alicia Dodge (713) 954-3825 adodge@mariner-energy.com

London Director - Roman Batichtchev +44 (0) 20 7930 2120 rbatichtchev@firstreserve.com

Midland Odessa Director - Leah Rudnicki (432) 570-6898 Irudnicki@treyresources.net Moscow Director - Sergei Kurilov +7-495-777-7707 svkurilov@tnk-bp.com

Director - Wiley Long +7-919-967-0574 cwlong@smith.com

New Orleans Director - J.D. Estes (504) 281-1409 john.d.estes@exxonmobil.com

New York City Director - Steve Gudovic (847) 644-9038 steve.gudovic@aig.com

Oklahoma City Director - Amanda Trood (405) 935-6808 amanda.trood@chk.com

Philadelphia Director – Jessica Maizel (215) 255-2364 jlmaizel@delinvest.com

Assistant Director – Chris Moon (215) 255-2364 chmoon@lcpim.com

Shreveport Director - William Bowdon (318) 746-1691 william@bowdonnr.com

Director - Matthew Huffty (318) 425-4789 mhuffty@petrohawk.com

Tulsa Director - Denver McPhail (918) 760-3645 dmcphail@samson.com

Washington, D.C. Director - Cortney Hazen (202) 427-2533 chazen@ipaa.org

#### Oil and Gas Museums

Arkansas Museum of Natural Resources (870) 863-6113 http://www.amnr.org/

Arkansas Museum of Science & History 500 President Cinton Ave, Ste 150 Little Rock, AR 72201 (501) 396-7050 http://www.amod.org

Brea Museum and Heritage Center - CA (714) 256-2283 http://www.breamuseum.org/

California Oil Museum (805) 933-0076 http://www.oilmuseum.net/

Kern County Museum - CA (661) 852-5000 http://www.kcmuseum.org/

Olinda Historic Museum and Park - CA (714) 990-7600 http://www.ci.brea.ca.us/

West Kern County Museum - CA (661) 765-6664 http://www.westkern-oilmuseum.org/

Denver Museum of Nature & Science 2001 Colorado Blvd Denver, CO 80205 (303) 377-6000 http://www.dmns.org

Illinois Oilfield Museum & Resource Center - IL http://www.theonlyoblong.com/oil\_field/ oblong\_oilfield.html

Museum of Science & Industry - IL Chicago -IL (773) 684-1414 http://www.msichicago.org/index.html

Kansas Oil Museum and Hall of Fame (316) 321-9333 http://www.kansasoilmuseum.org/

**Oil Patch Museum - KS** (785) 483-3637

Louisiana State Oil and Gas Museum (318) 995-6845 http://www.sos.louisiana.gov/tabid/242/default. aspx

Int'l Petroleum Museum & Exposition (985) 384-3744 http://www.rigmuseum.com/

Pioneer Oil Museum - NY (585) 373-6035 http://www.pioneer-oil-museum.com/aboutus.html

Wood County Historical Center & Museum - OH (419) 352-0967 http://www.woodcountyhistory.org Anadarko Basin Museum of Natural History - OK (580) 243-0437 http://www1.itlnet.net/web/route66/page4. html

Bartlesville Area History Museum - OK (918) 337-5336 http://www.bartlesvillehistory.com/

Conoco Museum - OK 501 W South Avenue Ponca City, OK 74610 (580) 765-8687 http://www.conocomuseum.com/EN/Pages/ index.aspx

Healdton Oil Museum-OK 315 E Main St Healdton, OK 73438-1836 (405) 229-0900 http://www.okhistory.org/outreach/affiliates/ healdtonoil.html

Oklahoma Historical Society (405) 521-2491 http://www.okhistory.org/

Greater Seminole Area Oil & Historical Museum - OK (405) 382-1500 http://www.seminoleoklahoma.com/ museum/

Drake Well Museum - PA (814) 827-2797 http://www.drakewell.org

The Oil Heritage Region - PA (800) 483-6264, Ext. 18 http://www.oilregion.org/

Penn-Brad Oil Museum - PA (814) 368-5574 http://pennbradoilmuseum.com/

Petroleum History Institute - PA http://www.petroleumhistory.org/

East Texas Oil Museum - TX (903) 983-8295 http://www.easttexasoilmuseum.com/index. html

Houston Museum of Natural Science (713) 639-4629 http://www.hmns.org/Index.asp

Panhandle-Plains Historical Museum - TX (806) 651-2244 http://www.panhandleplains.org/

Spindletop - Gladys City Boomtown Museum - TX 4400 South ML King Junior Parkway Beaumont, TX 77705-5748 (409) 835-0823 http://spindletop.org/default.htm

Texas Energy Museum - TX (409) 833-5100 http://www.texasenergymuseum.org/front2. htm

# OIL AND GAS MUSEUMS

Ocean Star Offshore Drilling Rig and Museum - TX (409) 766-STAR http://www.oceanstaroec.com/Default.htm

West Virginia Oil & Gas Museum (304) 485-5446 http://www.little-mountain.com/ oilandgasmuseum

Choctaw County Historical Museum - AL http://www.ohwy.com/al/c/choccohm.htm

Hathaway Ranch and Oil Museum - CA (562) 777-3444 http://www.hathaworld.com/hrm/index.html

Santa Barbara Maritime Museum - CA (805) 962-8404 http://www.sbmm.org/index.php

Wabash County Museum - IL (618) 262-8774 http://www.museum.wabash.il.us/

Wood River Refinery History Museum - IL (618) 255-3718 http://www.wrrhm.org/index.htm

Red Crown Mini-Museum - IN http://www.oldgas.com/info/redcrown.htm

Trump's Texaco Museum - IN (765) 345-7135 http://www.indymotorspeedway.com/ museums.htm

Butler County Historical Center & Kansas Oil Museum (316) 321-9333 http://kansasoilmuseum.org/index.cfm

Hill City Oil Museum - KS (785) 421-2854 http://www.geocities.com/RainForest/ Vines/5320/oil .html

Independence Historical Museum - KS (620) 331-3515 http://independencehistoricalmuseum.org/

Norman No. 1 Museum - KS http://www.neodygrads.com/pages/ museum/norman.html

Stevens County Gas & Historical Museum - KS http://skyways.lib.ks.us/towns/Hugoton/ museum.html

Henry Ford Museum & Benson Ford Research Center - MI (313) 982-6070 http://www.hfmgv.org/museum/default.asp

Farmington Museum - NM (505) 599-1174 http://www.farmingtonmuseum.org/

Allen County Museum - OH (419) 222-9426 http://www.allencountymuseum.org/

# OIL AND GAS MUSEUMS

Hancock Historical Museum - OH (419) 423-4433 http://www.hancockhistoricalmuseum.org/

Ken Miller Supply's Oil, Gas, Car, Truck and Agriculture Museum - OH (330) 496-4024 or (330) 567-5930 http://www.shreveohio.com/thisweek.htm

Oilfield Engine Society - OH (937) 456-9387 http://www.oilfieldengine.com

Ames Astrobleme Museum - OK http://amescrater.com/about.htm

Cherokee Strip Regional Heritage Center - OK (580) 237-1907 http://www.regionalheritagecenter.org./01. htm

Conoco Museum - OK (580) 765-8687 http://www.conocomuseum.com/index.htm

Drumright Community Historical Museum - OK (918) 352-3002 http://drumrighthistoricalsociety.org/

Frank Phillips Home - OK (918) 336-2491 http://www.frankphillipshome.org/

Greater Southwest Historical Museum - OK (580) 226-3857 http://visitors.ardmore.org/

Kerr Conference Center & Museum - OK (918) 647-9579 http://www.carlalbert.edu/kerr\_center/

Marland Oil Museum - OK http://www.marlandmansion.com/

Nowata County Historical Museum - OK (918) 273-1191 http://www.ohwy.com/ok/y/ynowhimu.htm

Oklahoma History Center (405) 522-5248 http://www.okhistorycenter.org/

Oklahoma Oil Museum (405) 382-1500 http://www.seminoleoklahoma.com/ museum/

Phillips Petroleum Company Museum - OK (918) 661-1305 http://www.phillips66museum.com/index.htm

Sam Noble Oklahoma Museum of Natural History (405) 325-4712 http://www.snomnh.ou.edu/index.shtml

Sarkeys Energy Center, University of OK (405) 325-3821 http://www.sec.ou.edu/index.php SEG Geoscience Center & Virtual Museum - OK (918) 497-5566 http://www.mssu.edu/seg-vm/

Stephens County Historical Museum - OK (580) 252-0717 http://www.shopoklahoma.com/museums. htm

Tulsa Historical Society - OK (918) 712-9484 http://www.tulsahistory.org/learn/earlytulsa/ oil.htm

Woolaroc Museum - OK http://www.woolaroc.org/

Barbara Morgan Harvey Center for the Study of Oil Heritage - PA http://www.web.clarion.edu/BMHarveyCenter/ HCWBuild/Harvey\_Center\_Web\_Site/About\_ Barbara\_Morgan\_Harvey.html

Coolspring Power Musuem - PA http://www.coolspringpowermuseum.org/

Oil Region Alliance of Business, Industry & Tourism, Inc - PA (800) 483-6264 http://www.oilregion.org/

Pumping Jack Museum - PA (724) 867-0030 http://www.pumpingjack.org/

Simpler Times Museum - PA (814) 484-3483 http://www.navr.org/museums.html

Venango Museum of Art, Science and Industry - PA http://www.venangomuseum.org/

Bob Bullock Texas State History Museum - TX (866) 369-7108 http://www.thestoryoftexas.com/

Carson Country Square House Museum - TX (805) 537-3524 http://www.squarehousemuseum.org/

Central Texas Oil Patch Museum - TX (830) 875-1922 http://www.oilmuseum.org/Welcome.html

Depot Museum - TX (903) 657-4303 http://www.depotmuseum.com/index.html

Felty Outdoor Oil Museum - TX http://www.trailsandtales.org/index.htm

Fort Worth Museum of Science and History - TX (817) 255-9300 http://www.fwmuseum.org/home/index.html

Gaston Museum - TX (903) 847-2205 http://www.gastonmuseum.org/ Heritage Museum of Montgomery County - TX (936) 539-6873 http://www.heritagemuseum.us/

Hutchinson County Historical Museum - TX http://www.hutchinsoncountymuseum.org/ index.html

London Museum - TX 690 Main St. New London, TX 75682 (903) 895-4602

Million Barrel Museum - TX http://www.monahans.org/new/chamber/ museums.html

Museum of the Plains - TX (806) 435-6400 http://www.museumoftheplains.com/

Panhandle-Plains Historical Museum - TX http://www.panhandleplains.org

Petroleum Museum - TX http://www.petroleummuseum.org/index.html

Ranger Historical Preservation Society - TX (254) 647-5353 http://www.txbusiness.com/rhps/

Van Area Oil & Historical Museum - TX (903) 963-5435 http://www.vantexas.com/history.html

W. K. Gordon Center for Industrial History of Texas - TX (254) 968-1886 http://www.tarleton.edu/~gordoncenter/ index.html

Hot Springs County Museum & Cultural Center - WY (307) 864-5183 http://hschistory.org

Pioneer Association Museum of the American West - WY (307) 332-4137 http://www.wyomingtourism.org/overview/ Salt-Creek-Oil-Museum/4155

Salt Creek Museum - WY (307) 437-6513 http://wyshs.org/mus-saltcreek.htm

Tate Geological Museum - WY (307) 268-2447 http://www.caspercollege.edu/tate

Oil and Gas museum information compiled by the American Oil and Gas Historical Society. For additional details, visit www.aoghs.org.

and Gas Museums

# STATE RANKINGS

	Crude Oil Wells Drilled	Natural Gas Wells Drilled			
1	Texas	1	Texas		
2	Oklahoma	2	Oklahoma		
3	Federal Offshore	3	Pennsylvania		
4	California	4	West Virginia		
5	Kansas	5	Louisiana		
6	Louisiana	6	Wyoming		
7	Illinois	7	Colorado		
8	Pennsylvania	8	New Mexico		
9	New Mexico	9	Kansas		
10	Ohio	10	Federal Offshore		
11	Wyoming	11	Kentucky		
12	Kentucky	12	Ohio		
13	West Virginia	13	Michigan		
14	New York	14	Montana		
15	Michigan	15	New York		
16	Montana	16	Alabama		
17	Arkansas	17	Arkansas		
18	Colorado	18	Utah		
19	Mississippi	19	Virginia		
20	North Dakota	20	California		
21	Utah	21	Mississippi		
22	Indiana	22	Tennessee		
23	Nebraska	23	Indiana		
24	Alaska	24	Illinois		
25	Tennessee	25	Nebraska		
26	Alabama	26	North Dakota		
27	Missouri	27	Alaska		
28	South Dakota	28	South Dakota		
29	Florida	29	Maryland		
30	Virginia	30	Missouri		
31	Nevada	31	Oregon		
32	Arizona	32	Arizona		
33	lowa	33	Washington		
34	Washington	34	Florida		
		35	Nevada		
		36	Idaho		

		UIAIL	
	Crude Oil Production		atural Gas roduction
1	Federal Offshore	1	Texas
2	Texas	2	Federal Offshore
3	Alaska	3	Wyoming
4	California	4	Oklahoma
5	Louisiana	5	New Mexico
6	Oklahoma	6	Louisiana
7	North Dakota	7	Colorado
8	New Mexico	8	Arkansas
9	Wyoming	9	Utah
10	Kansas	10	Alaska
11	Montana	11	Kansas
12	Colorado	12	California
13	Mississippi	13	Michigan
14	Utah	14	Alabama
15	Illinois	15	West Virginia
16	Alabama	16	Pennsylvania
17	Michigan	17	Virginia
18	Arkansas	18	Kentucky
19	Ohio	19	Montana
20	Pennsylvania	20	Mississippi
21	Kentucky	21	Ohio
22	Nebraska	22	North Dakota
23	Florida	23	New York
24	Indiana	24	Indiana
25	South Dakota	25	Tennessee
26	West Virginia	26	Nebraska
27	Nevada	27	Florida
28	New York	28	South Dakota
29	Tennessee	29	Illinois
30	Missouri	30	Oregon
31	Arizona	31	Arizona
32	Virginia	32	Maryland
		33	Nevada

STATE RANKINGS

Sources: IHS for wells drilled and EIA for production.

# TOP PRODUCING CONGRESSIONAL DISTRICTS - CRUDE OIL

Rank	State	District	% of US Prod
1	Alaska	At Large	15.2745%
2	California	20 & 22	9.9460%
3	Texas	11	6.9008%
4	New Mexico	2	3.2809%
5	Texas	19	3.0158%
6	Louisiana	3	1.6506%
7	Wyoming	At Large	1.3062%
8	Texas	23	1.1453%
9	Utah	2	0.7312%
10	Oklahoma	3	0.7054%
11	Oklahoma	4	0.6242%
12	Texas	1	0.4162%
13	Kansas	1	0.4132%
14	Montana	At Large	0.4052%
15	Colorado	3	0.3198%
16	Texas	15	0.3162%
17	Texas	13	0.3133%
18	North Dakota	At Large	0.2588%
19	Louisiana	4 14	0.2264%
20	Texas		0.2100%
21	Louisiana	7	0.1647%
22	Colorado	4	0.1219%
23 24	Texas	25 22	0.1174% 0.1017%
24 25	Texas Texas	2 & 8	0.0985%
26	Texas	17	0.0890%
20	Texas	28	0.0877%
28	Texas	29, 18, 7 & 9	0.0862%
29	Texas	27	0.0578%
30	Texas	2	0.0557%
31	New Mexico	3	0.0507%
32	Alabama	1	0.0486%
33	Texas	8	0.0473%
34	Michigan	1	0.0431%
35	Texas	6	0.0426%
36	Louisiana	5	0.0327%
37	Texas	12	0.0316%
38	Oklahoma	2	0.0231%
39	Texas	5	0.0186%
40	Texas	23 & 28	0.0076%
41	Mississippi	3	0.0058%
42	Texas	17 & 6	0.0055%
43	Texas	26	0.0049%
44	Texas	7&3	0.0043%
45	Mississippi	2&3	0.0011%
46	Texas	11 & 23	0.0008%

Source: IPAA and IHS. \*Districts have been aggregated for ranking purposes and rounded in certain cases.

# TOP PRODUCING CONGRESSIONAL DISTRICTS - NATURAL GAS

Rank	State	District	% of US Prod
1	Wyoming	At Large	11.6843%
2	Colorado	3	5.9664%
3	New Mexico	3	4.8163%
4	Texas	1	4.7229%
5	Oklahoma	3	4.5636%
6	Texas	17	4.3490%
7	Texas	15	2.8647%
8	Texas	13	2.6238%
9	Texas	12, 26, 24 & 6	2.3481%
10	Oklahoma	2	2.3430%
11	Louisiana	4	2.0294%
12	Texas	23	1.9707%
13	Texas	6	1.8493%
14	Utah	2	1.8297%
15	Texas	28	1.7800%
16	Texas	12	1.6720%
17	Louisiana	3	1.4978%
18	New Mexico	2	1.4607%
19	Texas	25	1.2387%
20	Texas	11	1.1968%
21	Kansas	1	1.1962%
22	Colorado	4	1.1744%
23	Mississippi	3	1.1265%
24	Texas	23 & 28	1.0840%
25	Texas	26	1.0800%
26	Arkansas	2	0.8852%
27	Louisiana	7	0.8279%
28	Alaska	At Large	0.8198%
27	Texas	27	0.7944%
30	Texas	14	0.7077%
31	Louisiana	5	0.6490%
32	Alabama	1	0.6157%
33	Oklahoma	4	0.5850%
34	Texas	17 & 6	0.5249%
35	Michigan	1	0.5067%
36	Virginia	9	0.4982%
37	Texas	2	0.4298%
38	Texas	11 & 23	0.4209%
39	Alabama	6 & 7	0.4088%
40	Arkansas	3	0.3500%
41	Texas	8	0.3388%
42	Arkansas	4	0.2409%
43	Texas	2 & 8	0.2301%
44	West Virginia	3	0.1265%
45	Texas	29, 18, 7 & 9	0.1181%
46	Texas	5	0.1118%
47	Texas	22	0.1100%
48	Mississippi	2&3	0.1005%
49	Montana	At Large	0.0867%
50	Texas	19	0.0804%

Source: IPAA and IHS. \*Districts have been aggregated for ranking purposes and rounded in certain cases.



# Be a part of IPAA's premiere grassroots initiative, the

# **RIG Program**

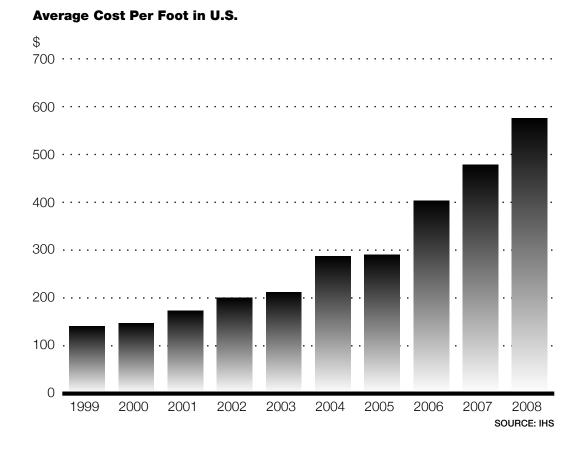
# What is the IPAA RIG Program?

- A volunteer-based campaign
- A tool for educating elected officials
- The most effective way for you to have a positive impact on your industry!

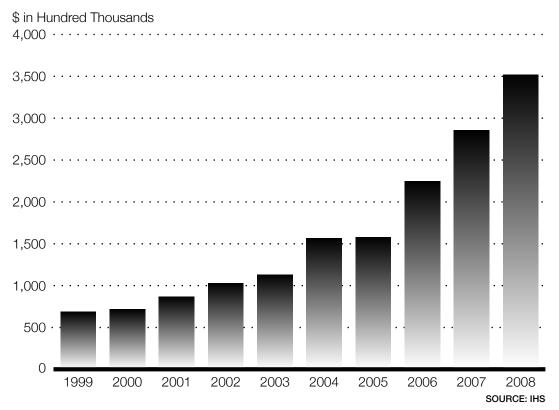
Intended to maximize the independent producer's voice and concerns regarding national energy policy, the RIG Program will establish sustained, one-to-one relationships between IPAA members and their elected officials.

Small tasks can have a large effect! Help make a difference in shaping our national energy policy, join the RIG Program today and find out what you can do to get involved.

To learn more, or to register to participate, visit www.ipaa.org/rig/ Or send an email to rigprogram@ipaa.org



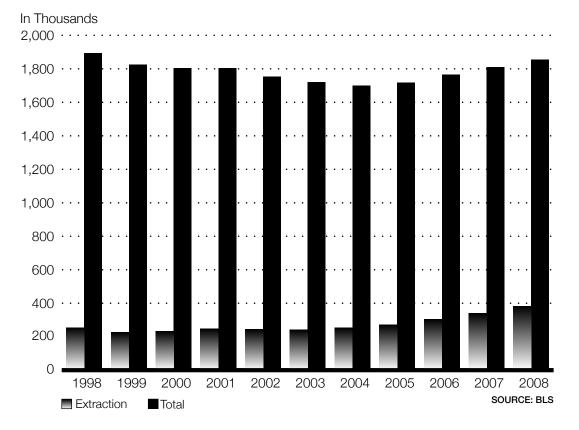
# Average Cost Per Well in U.S.

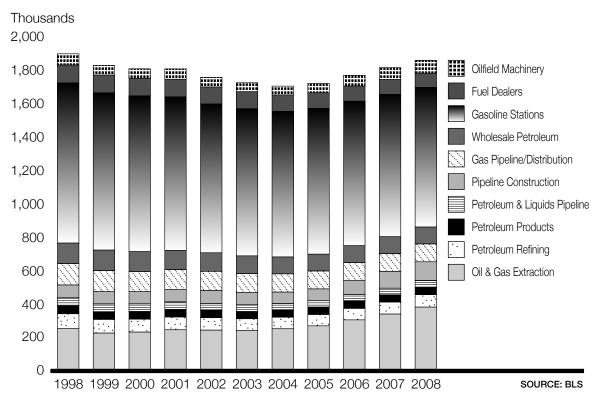


# COMPILED BY IPAA AUGUST 2010

# America's Independent 25

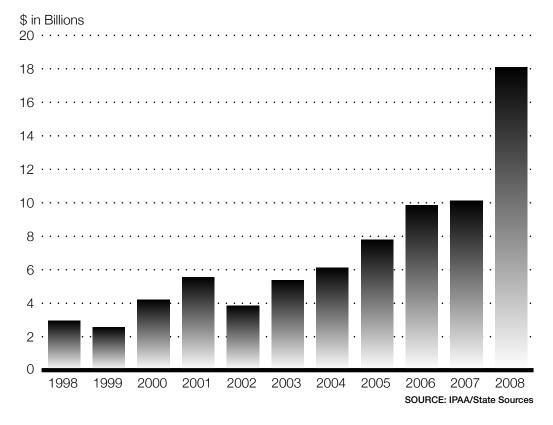
# **Industry Employment**



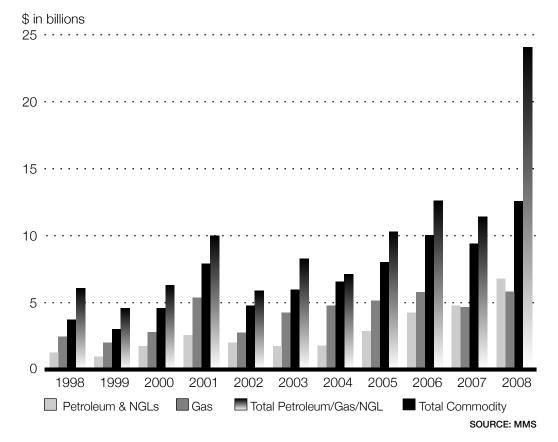


# **Total Petroleum & U.S. Energy Employment**

# **Severance Taxes**

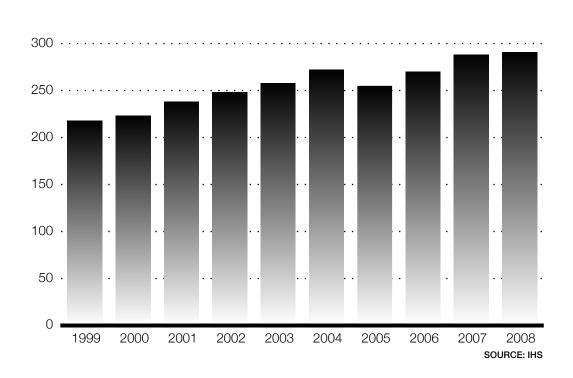


# Total Petroleum & Natural Gas Royalties, Rents & Bonuses

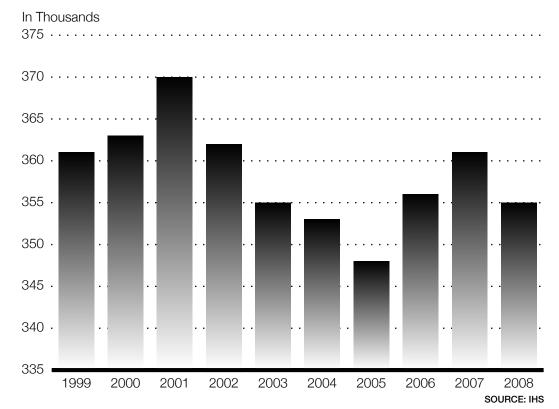


**R**OYALTIES AND SEVERANCE TAXES

# Number of Marginal Gas Wells in U.S.



# Number of Marginal Oil Wells in U.S.





# CRUDE OIL SUMMARY

Year	Pi	roductio		Imports	Sup	ply	Exports	Den	nand	Crude Re	eserves	Price
	Crude Oil	NGL	Total	Total	Other	Total		Domestic	Total	Proved Reserves	New Reserves	Oil Wellhead
1961 1962 1963 1964 1965	7,183 7,332 7,542 7,614 7,804	991 1,021 1,098 1,155 1,210	8,174 8,353 8,640 8,769 9,014	( <i>t</i> 1,917 2,082 2,123 2,258 2,468	hous. b/d) 179 175 202 217 220	10,270 10,610 10,965 11,244 11,702	174 168 208 202 187	9,976 10,400 10,743 11,023 11,513	10,150 10,568 10,951 11,225 11,700		. <i>bbls.)</i> 2,658 2,181 2,174 2,665 3,048	(\$/bbl.) 2.89 2.90 2.89 2.88 2.88 2.88
1966	8,295	1,284	9,579	2,573	246	12,398	198	12,085	12,283	31,452	2,964	2.88
1967	8,810	1,409	10,219	2,537	293	13,049	307	12,560	12,867	31,377	2,962	2.92
1968	9,096	1,504	10,600	2,840	347	13,787	231	13,393	13,624	30,707	2,455	2.94
1969	9,238	1,590	10,828	3,166	339	14,333	233	14,137	14,370	29,632	2,120	3.09
1970	9,637	1,660	11,297	3,419	355	15,071	259	14,697	14,956	39,001	2,689	3.18
1971	9,463	1,694	11,157	3,925	438	15,520	224	15,213	15,437	38,063	2,318	3.39
1972	9,441	1,744	11,185	4,741	431	16,357	222	16,367	16,589	36,339	1,558	3.39
1973	9,208	1,738	10,946	6,256	472	17,674	231	17,308	17,539	35,300	2,146	3.89
1974	8,774	1,688	10,462	6,112	478	17,052	221	16,652	16,873	34,250	1,994	6.87
1975	8,375	1,632	10,007	6,056	631	16,694	209	16,322	16,531	32,682	1,318	7.67
1976	8,132	1,604	9,736	7,313	577	17,626	223	17,461	17,684	30,942	1,085	8.19
1977	8,245	1,618	9,863	8,808	531	19,202	243	18,431	18,674	31,780	1,140	8.57
1978	8,707	1,567	10,274	8,364	315	18,953	362	18,847	19,209	31,355	2,583	9.00
1979	8,552	1,583	10,135	8,456	503	19,094	471	18,516	18,987	29,810	1,410	12.64
1980	8,597	1,573	10,170	6,909	616	17,695	544	17,056	17,600	29,805	2,970	21.59
1981	8,572	1,609	10,181	5,995	392	16,568	595	16,058	16,653	29,426	2,570	31.77
1982	8,649	1,550	10,199	5,113	478	15,790	815	15,296	16,111	27,858	1,382	28.52
1983	8,688	1,559	10,247	5,051	503	15,801	739	15,231	15,970	27,735	2,897	26.19
1984	8,879	1,630	10,509	5,437	587	16,533	722	15,726	16,448	28,446	3,748	25.88
1985	8,971	1,609	10,580	5,067	640	16,287	781	15,726	16,507	28,416	3,022	24.09
1986	8,680	1,551	10,231	6,223	764	17,218	785	16,281	17,066	26,889	1,446	12.51
1987	8,349	1,595	9,944	6,678	768	17,390	764	16,665	17,429	27,256	3,240	15.40
1988	8,151	1,625	9,776	7,402	840	18,018	815	17,283	18,098	26,825	2,380	12.58
1989	7,626	1,546	9,172	8,060	853	18,085	859	17,325	18,184	26,501	2,262	15.86
1990	7,335	1,559	8,894	8,017	1,025	17,936	857	16,988	17,845	26,254	2,258	20.03
1991	7,417	1,659	9,076	7,626	1,047	17,749	1,001	16,714	17,715	24,682	940	16.54
1992	7,171	1,697	8,868	7,888	1,114	17,870	949	17,033	17,953	23,745	1,509	15.99
1993	6,847	1,736	8,583	8,620	1,152	18,355	1,003	17,237	18,240	22,957	1,551	14.25
1994	6,662	1,727	8,389	8,996	1,291	18,676	942	17,718	18,660	22,457	1,768	13.19
1995	6,560	1,762	8,322	8,835	1,517	18,674	949	17,725	18,674	22,351	2,107	14.62
1996	6,465	1,830	8,295	9,478	1,516	19,290	981	18,309	19,215	22,017	1,839	18.46
1997	6,452	1,817	8,253	10,162	1,193	19,623	1,003	18,620	19,623	22,546	2,667	17.23
1998	6,252	1,759	8,011	10,708	1,143	19,862	945	18,917	19,862	21,034	479	10.87
1999	5,881	1,850	7,731	10,852	1,876	20,459	940	19,519	20,459	21,765	2,683	15.56
2000	5,822	1,911	7,733	11,459	1,549	20,741	1,040	19,701	20,741	22,045	2,160	26.72
2001	5,801	1,868	7,670	11,871	1,079	20,620	971	19,649	20,620	22,446	2,316	21.84
2002	5,746	1,880	7,626	11,530	1,589	20,745	984	19,761	20,745	22,677	2,106	22.51
2003	5,681	1,719	7,400	12,264	1,397	21,061	1,027	20,034	21,061	21,891	1,091	27.56
2004	5,419	1,809	7,228	13,145	1,406	21,779	1,048	20,731	21,779	21,371	1,299	36.77
2005	5,178	1,717	6,895	13,714	1,358	21,967	1,165	20,802	21,967	21,757	2,119	50.28
2006	5,102	1,739	6,841	13,707	1,456	22,004	1,317	20,687	22,004	20,972	867	59.69
2007	5,064	1,783	6,847	13,468	1,798	22,113	1,433	20,680	22,113	21,317	2,036	66.52
2008	4,950	1,784	6,734	12,915	1,651	21,300	1,802	19,498	21,300	19,121	-524	94.04

Sources: Energy Information Administration. Note: Reserves estimated as of December 31 each year. Imports to Strategic Petroleum Reserve are excluded.

# NATURAL GAS SUMMARY

Year	Production	Production Extraction I		Sup	ply	Exports	Consumption	n Gas Re	Price	
	Marketed Dr	y Loss	(Dof)	Other*	Total			Proved Reserves	New Reserves	Gas Wellhead
1961 1962 1963 1964 1965	13,254 12,6 13,877 13,2 14,747 14,0 15,547 14,8 16,040 15,2	253 624 077 670 024 723	(Bcf) 219 402 406 443 456	686 838 899 866 934	13,578 14,509 15,399 16,153 16,703	11 16 17 20 26	12,489 13,267 13,970 14,814 15,280	267,728 273,766 276,151 281,251 286,469	17,421 19,750 18,418 20,447 21,470	(\$/Mcf.) .15 .16 .16 .15 .16
1966 1967 1968 1969 1970	17,207 16,4 18,171 17,3 19,322 18,4 20,698 19,8 21,921 21,0	886 785 94 828 831 867	480 564 652 727 821	1,116 1,052 1,236 1,329 1,388	18,089 19,084 20,476 21,938 23,294	25 82 94 51 70	16,452 17,388 18,632 20,056 21,139	289,333 292,908 287,350 275,109 290,746	20,355 21,956 13,816 8,482 37,598	.16 .16 .16 .17 .17
1971 1972 1973 1974 1975	22,493 21,6 22,532 21,6 22,648 21,7 21,601 20,7 20,109 19,2	24 908 731 917 713 887	935 1,019 1,033 959 953	1,427 1,679 1,456 1,624 1,687	24,052 24,400 24,297 23,373 21,949	80 78 77 77 73	21,793 22,101 22,049 21,223 19,538	278,806 266,085 249,950 237,132 228,200	10,136 9,791 6,471 8,501 10,786	.18 .19 .22 .30 .45
1976 1977 1978 1979 1980	19,952 19,0 20,025 19,1 19,974 19,1 20,471 19,6 20,180 19,4	638632285263808	964 1,011 966 1,253 985	1,640 1,654 1,817 1,620 1,385	21,767 21,884 21,958 22,592 21,822	65 56 53 56 49	19,946 19,521 19,627 20,241 19,877	216,026 207,413 208,033 200,997 199,021	7,368 12,978 19,425 12,221 16,723	.58 .79 .91 1.18 1.59
1981 1982 1983 1984 1985	19,956 19,1 18,582 17,8 16,884 16,0 18,304 17,4 17,270 16,4	320         762           994         790           66         838	904 933 918 843 950	1,499 1,647 1,523 1,894 2,005	21,643 20,452 18,590 20,258 19,464	59 52 55 55 55	19,404 18,001 16,835 17,951 17,281	201,730 201,512 200,247 197,463 193,369	21,446 17,288 14,523 14,409 11,891	1.98 2.46 2.59 2.66 2.51
1986 1987 1988 1989 1990	16,859 16,0 17,433 16,6 17,918 17,1 18,095 17,3 18,594 17,8	32181203816311785	750 993 1,294 1,382 1,532	1,364 1,484 1,807 2,917 2,265	18,234 19,152 20,278 21,717 21,693	61 54 74 107 86	16,221 17,211 18,030 19,119 19,174	191,586 187,211 168,024 167,116 169,346	13,827 11,739 -2,517 16,075 19,463	1.94 1.67 1.69 1.69 1.71
1991 1992 1993 1994 1995	18,532 17,6 18,712 17,8 18,982 18,0 19,710 18,8 19,506 18,5	34087295886321889	1,773 2,138 2,350 2,624 2,841	2,699 2,805 3,105 2,598 3,333	22,299 22,999 23,690 24,205 24,927	129 216 140 162 154	19,562 20,228 20,790 21,247 22,207	167,062 165,015 162,415 163,837 165,146	14,918 15,376 15,189 19,744 19,275	1.64 1.74 2.04 1.85 1.55
1996 1997 1998 1999 2000	19,751 18,8 19,866 18,9 19,961 19,0 19,805 18,8 20,198 19,1	002 964 024 938 032 973	2,937 2,994 3,152 3,585 3,782	3,725 3,641 2,975 2,585 3,053	25,669 25,694 25,310 25,166 26,261	153 157 159 163 244	22,610 22,737 22,246 22,405 23,333	166,474 167,223 164,041 167,406 177,427	21,456 19,960 15,538 22,293 29,240	2.17 2.32 1.96 2.19 3.68
2001 2002 2003 2004 2005	20,570 19,6 19,885 18,9 19,974 19,0 19,517 18,5 18,927 18,0	028 957 099 876 091 927	3,977 4,015 3,944 4,259 4,341	2,110 2,734 2,526 2,689 2,621	26,076 26,193 26,249 26,393 25,742	373 516 680 854 729	22,239 23,007 22,277 22,389 22,011	183,460 186,946 189,044 192,513 204,385	25,812 22,839 21,523 22,637 30,330	4.00 2.95 4.88 5.46 7.33
2006 2007 2008	19,410 18,5 20,196 19,2 21,240 20,2	930	4,186 4,608 3,984	1,919 2,356 2,297	25,333 27,052 27,573	724 822 1,006	21,685 23,097 23,227	211,085 237,726 244,656	25,245 46,107 27,453	6.39 6.25 7.96

Sources: Energy Information Administration. Note: Reserves estimated as of December 31 each year.

# **D**RILLING **SUMMARY**

Year	Seismic Crews Rotary Rigs Exploratory Wells			Total Well Completions					Footage	
	Working	Active	New-Field Wildcats	Total Exploratory	Oil Wells	Gas Wells	Dry Wells	Service Holes	Total Wells	Total Drilled (mill. ft.)
1961	4,557	1,760	6,909	10,992	21,101	5,664	17,106	3,091	46,962	192.1
1962	3,915	1,637	6,794	10,797	21,249	5,848	16,682	2,400	46,179	198.6
1963	3,966	1,500	6,570	10,664	20,288	4,751	16,347	2,267	43,653	184.4
1964	4,102	1,502	6,623	10,747	20,620	4,855	17,488	2,273	45,236	189.9
1965	4,247	1,387	6,175	9,466	18,761	4,724	16,025	1,913	41,423	181.5
1966	3,672	1,273	6,158	10,313	16,447	4,167	15,770	2,152	38,536	165.5
1967	3,337	1,134	5,260	8,878	15,329	3,659	13,246	1,584	33,818	144.7
1968	3,268	1,169	5,205	8,879	14,331	3,456	12,812	2,315	32,914	149.3
1969	3,156	1,194	5,956	9,701	14,368	4,083	13,736	1,866	34,053	161.0
1970	2,340	1,028	4,829	7,436	13,043	4,031	11,099	1,369	29,542	142.0
1971	2,655	976	4,636	7,131	11,903	3,983	10,382	1,414	27,682	130.7
1972	3,016	1,107	5,011	7,551	11,437	5,484	11,013	1,486	29,420	142.5
1973	2,999	1,195	5,096	7,771	10,251	6,975	10,466	970	28,662	141.9
1974	3,662	1,471	5,946	8,969	13,644	7,168	12,205	1,398	34,415	153.8
1975	3,416	1,660	6,234	9,459	16,979	8,169	13,736	1,920	40,804	184.9
1976	3,140	1,656	5,856	9,317	17,697	9,438	13,805	1,674	42,614	187.3
1977	3,063	2,001	6,162	10,140	18,700	12,119	15,036	1,453	47,308	215.7
1978	4,148	2,255	6,731	11,030	19,065	14,405	16,591	1,610	51,671	238.4
1979	4,400	2,176	6,423	10,735	20,689	15,166	16,035	1,472	53,362	243.7
1980	4,962	2,910	7,332	12,870	32,120	17,132	20,234	2,076	71,562	311.4
1981	5,877	3,970	9,151	17,430	42,520	19,742	26,972	2,366	91,600	406.5
1982	5,676	3,105	7,386	15,882	39,252	18,810	25,827	2,212	86,101	375.4
1983	4,944	2,229	6,057	13,845	37,396	14,505	23,837	2,047	77,785	316.7
1984	4,655	2,428	6,528	15,138	44,472	14,962	25,549	2,251	87,234	368.8
1985	3,494	1,969	5,630	12,208	36,458	12,917	21,431	1,736	75,542	316.8
1986	2,016	964	3,484	7,156	18,598	8,055	12,362	834	39,849	177.6
1987	1,561	936	3,515	6,903	16,441	8,114	11,698	890	37,143	163.8
1988	1,512	936	3,271	6,350	13,508	8,446	10,284	953	33,191	155.2
1989	1,392	869	2,644	5,251	10,412	9,483	8,468	672	29,035	135.0
1990	1,493	1,010	2,685	5,074	12,104	10,242	8,496	802	31,417	149.5
1991	1,251	862	2,195	4,399	11,733	9,020	7,882	1,070	29,487	141.4
1992	847	721	1,762	3,525	8,821	7,854	6,284	989	24,058	121.3
1993	952	755	1,683	3,603	9,144	10,285	6,513	716	25,724	138.5
1994	1,087	775	1,613	3,787	7,704	10,044	5,515	669	23,985	130.6
1995	1,253	723	1,605	3,402	8,237	8,081	4,812	885	21,130	117.4
1996	1,307	779	1,676	3,021	8,830	9,016	4,890	791	22,736	126.6
1997	1,336	943	1,757	3,165	11,195	11,495	5,874	1,017	28,564	161.7
1998	1,566	827	1,478	2,483	7,667	11,622	4,763	838	24,052	137.6
1999	1,125	625	1,244	1,922	4,765	11,986	3,553	478	20,304	102.9
2000	61*	918	1,504	2,281	8,093	16,991	4,136	930	29,220	144.4
2001	56	1,156	1,774	3,134	8,884	22,038	4,566	786	35,486	180.0
2002	50	830	1,454	2,379	6,763	17,298	3,735	747	27,796	145.1
2003	43	1,032	1,726	2,650	8,109	20,689	3,975	815	32,773	177.4
2004	49	1,192	2,052	3,399	8,763	24,121	4,053	1,447	36,937	204.4
2005	55	1,381	2,275	4,148	10,707	28,470	4,663	1,596	43,840	240.4
2006	62	1,649	2,528	4,850	13,288	32,875	5,183	1,946	51,346	284.2
2007	71	1,768	2,525	5,288	13,454	33,093	5,100	2,062	51,647	307.2
2008	72	1,879	2,336	5,407	17,090	33,578	5,684	2,358	56,352	350.5

Sources: EIA & IHS, World Oil, Baker Hughes & American Petroleum Institute (wells drilled data pre-2005). Notes: Total well completions include exploratory and development wells. API historical data may not match IHS data used for recent decade on state and summary pages. \*Switched to maximum U.S. active seismic crew count as per http://www.eia.doe.gov/emeu/mer/pdf/pages/sec5\_5.pdf.



Top Operator (# of wells) EOG RESOURCES INC (82 oil wells)	Top Operator (# of wells) CHESAPEAKE OPERG INC (612) SEECO INCORPORATED (440) NEWFIELD EX MID-CON (90) XTO ENERGY INC (79) ATLAS RESOURCES INC (78)	n Mmcf) Top Operator (# of wells) APACHE CORP (18 Oil) APACHE CORP (20 Gas) UNIT PETROLEUM CO (16 Oil) FOREST OIL CORPORATION (86 Gas)
Oil Plays (Bbl) Production 10,275,638 Gas Plays (Mmcf)	Production 560,513,171 158,211,708 106,457,875 134,036,971 2,136,236	Gas & Liquid Plays (Oil in Bbl, Gas in Mmcf) b Drilled Production Top 12 (Gas) 146,797 (Oil) 288,109 (Gas) APA( APA( 531 (Gas) 223,535 (Oil) 48,275,970 (Gas) UNIT FORE
Wells Drilled 537	Wells Drilled 2,773 870 576 554 342	Gas & I Wells Drilled 24 (Oil) 12 (Gas) 39 (Oil) 531 (Gas)
Permits 579	Permits 3,312 894 623 554 390	Permits 42 (Oil) 597 (Oil)
Bakken	Barnett Fayetteville Woodford Haynesville/ Bossier Marcellus	Eagle Ford Granite Wash

2008 Key Trends for Shale Plays



# **Background Information**

States							
Number of states With oil and/or ga	50 33						
First year of production							
Crude oil (Pennsylvania)185Natural gas (Pennsylvania)188							
Year and amount of peak production							
Crude oil — 3,51 Natural gas — 22	1970 1973						
Deepest producing well (ft.)							
Crude oil (GOM Natural gas (Tex	33,435 30,712						
Year and depth of deepest well drilled (ft.)							
2005 (GOM) 34,189							
Cumulative number of total wells drilled as of 12/31/08 (excluding service wells)							
Oil wells Gas wells Dry holes Total	1,639,121 773,239 1,015,641 3,428,055	48% 22% 30% 100%					
Cumulative crude oil wellhead value as of 12/31/08 (thous. \$) \$2,298,570,722							
Cumulative production & new reserves as of 12/31/08							
	(mill. bbls.) Tota 35 51,811 262,9	46 1,347,516					
Deadwetten 4004	04 00045 0044	40 4 405 550					

Production 192,104 39,345 231,449 1,105,559

# Value of Oil and Gas

Average wellhead price						
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$94.02 \$7.96				
US Wellhead value of production* (2008, in thous. \$)						
Crude oil Natural gas US Total	\$	\$170,347,034 \$169,038,089 \$339,385,123				
Average natural gas price (2008, \$/Mcf)						
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$13.89 \$12.23 \$ 9.67 \$ 9.26 \$ 9.18				
Severance taxes paid \$18,105,163 (2008, in thous. \$)						
Top 10 producing counties/fields (2008 on a BOE basis)						
County	County State % US Prod					
Sublette Beechey Point Mississippi Canyon Green Canyon San Juan Garfield Johnson Tarrant La Plata Rio Arriba	WY AK FOS FOS NM CO TX TX CO NM	3.84 3.83 3.54 2.01 1.89 1.83 1.73 1.56 1.42 1.24				
* Derived from EIA data.						

|--|

Number of wells	drilled	
Exploratory           Oil         999           Gas         2,274           Dry         1,576           Total         4,849	Developmer 15,625 29,804 3,306 48,735	nt Total 16,624 32,078 4,883 53,584
Total footage drill (thous. ft.)	ed	
Exploratory           Oil         7,313.6           Gas         13,582.0           Dry         8,978.1           Total         29,873.7           (Note: Totals may not add complete the second	Developmer 73,125.5 206,766.4 15,516.4 295,408.3 due to rounding.)	nt Total 80,439.1 220,348.4 24,494.5 325,282.0
New-field wildcats Footage (thous. ft.)	s drilled	2,239 13,966.8
Average rotary rig	gs active	1,880
Permits		83,677
Worldwide rank	0 1 0"	
Wells drilled Production Reserves (2008)*	Crude Oil 1st 3rd 12th	Natural Gas 1st 2nd 6th
Number of operation	tors	17,874
Number of production (12/31/08)	cing wells	
Crude oil Natural gas Total		402,148 402,553 804,701
Average producti Crude oil (thous. b/d NGL (thous. b/d) Natural gas		3,370.5 385.5 48,385.8
Total production Crude oil (YTD bbls, Natural gas (YTD MI		1,628,855 19,776,681
Natural gas mark	eted produc	tion 21,239,516
Average output p Crude oil (bbls.) Natural gas (Mcf)	er producing	g well 4,050 52,762
Coalbed methane Oil Wells Gas Wells Daily Average (MMc		1,843,219 25 47,122 5,036
Heavy oil (YTD bbl Wells Av. bbls per day Av. bbls per well/d	ls, in thous.)	404,755 63,967 1,105.9 6,327.6

Source: For specific methodology and source details, please see pages 6 and 131. \* Canadian oil sands included

# 2008 Latest Available Data

	/ ( ) ( ) (		iu -
Petroleum reser as of 12/31/08 (mill. bbls.	)		
New reserves	Crude C -524	Dil NGL 972	Total 448
Production	1,672	840	2,512
Net annual change		132	-2,064
Proved reserves	19,121	9,275	28,396
Natural gas rese as of 12/31/08 (Bcf)			
	sociated		Dry
New reserve	issolved -1,296	Associate 29,957	ed Gas 27,453
Production	2,359	19,066	20,523
Net annual change		10,891	6,930
Proved reserves	29,023	226,012	244,656
Cost of drilling a	and equ	ipping wel	ls
-	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	471	2,276,741 3,714,993	37,848,541
Gas Dry	541 333	1,670,310	119,169,550 8,154,455
Diy	000	1,070,010	0,104,400
Marginal oil well	ls		
Producing margina			355,786
Crude oil productio			362,808
Crude oil productio	n b/a (tri	ious.)	991
Marginal natura as of 12/31/08	l gas w	ells	
Producing margina Natural gas produc		(lef)	290,811 2,784,208
		//01/)	2,104,200
Mineral lease ro	yalties	, bonuses	& rent
Oil			6,775,977,613
Gas Total Royalties			5,817,764,667 4,080,015,775
iotal i toyanica		Ψ2-	+,000,010,770
Horizontal wells	drilled		8,078
Average numbe	r of em	plovees	
-			405 305
Oil and natural gas Refining	CAUACU	UII	495,395 90,326
Transportation			157,902
Wholesale			184,589
Retail			844,991
Pipeline construction Oilfield machinery	ווכ		110,975 63,827
Total petroleum inc	lustry		1,948,005

# Federal Offshore



# **Background Information**

Planning Areas Number of areas With oil and/or gas production	25 3
First year of production	
Crude oil Natural gas	1946 1946
Year and amount of peak pro	oduction
Crude oil — 591,589 thous. bbls. Natural gas — 5,248,041 MMcf	2001 1997
Deepest producing well (ft.)	
Natural gas (water depth 10,062) Crude oil	26,480 33,435
Year and depth of deepest w	ell drilled (ft.)
Water depth (1976)	26,802
Well depth (2005)	34,189
Cumulative number of total v as of 12/31/08 (excluding service wells)	vells drilled
Oil wells 21,609	32%
Gas wells 26,856 Dry holes 18,736	40% 28%
Total 67,201	100%
Cumulative crude oil wellhea as of 12/31/08 (thous. \$) \$	id value 365,892,897
Cumulative production & new as of 12/31/08	v reserves
Crude NGL	Natural
Oil (mill. bbls.) Toi Reserves 21,970 4,816 26,7	tal Gas (Bcf) 786 150,865
Production 16,009 2,968 18,9	,

# Value of Oil and Gas

Average wellhead price	9	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$98.37 \$8.89
Wellhead value of prod (2008, in thous. \$)	uction	
Crude oil Natural gas Total	\$21	,857,674 ,222,830 ,080,504
Federal Revenues (2008, in thousands \$)		
Bonuses Rents Royalties Total	\$2 \$8,3	80,806.6 37,074.4 24,520.6 45,563.1
Top 10 producing fields (2008 on a BOE basis)	6	
Field	% Prod	uction
Mississippi Canyon Green Canyon Viosca Knoll Garden Banks Atwater Valley East Breaks West Cameron Santa Cruz Area South Timbalier Eugene Island	State 24.67 14.03 4.30 4.07 3.30 3.24 3.03 2.78 2.62 2.45	US 3.54 2.01 0.62 0.59 0.47 0.47 0.43 0.40 0.38 0.35

Number of wells	drilled	
Exploratory	Developmen	t Total
Oil 6	99	105
Gas 16	170	186
Dry 96	101	197
Total 118	370	488
Total footage dril (thous. ft.)	led	
Exploratory	Developmen	t Total
Oil 97.9	1,054.8	1,152.7
Gas 174.7	1,747.7	1,922.4
Dry 1,059.9	883.2	1,943.1
Total 1,332.5	3,685.7	5,018.2
(Note: Totals may not add	due to rounding.)	
New-field wildcat Footage (thous. ft.)	ts drilled	117 1,330.2
Average rotary ri	gs active	66
Permits		1,035
Statewide rank		
Wells drilled	Crude Oil I 3rd	Natural Gas 10th
Production	1st	2nd
Reserves (2008)	3rd	6th
1(0001/00 (2000)	ord	our
Number of produ (12/31/08)	icing wells	
Crude oil		3,574
Natural gas		3,255
Total		6,829
Average product	ion	
Average product		1 070 0
Crude oil (thous. b/c NGL (est.)	1)	1,079.9 142.7
Natural gas (MMcf/c	lav)	5,205.8
	iciy)	5,205.0
Total production Crude oil (YTD bbls		395,233
Natural gas (YTD M	Mcf)	1,905,309
Natural gas mark	keted produc	tion 2,387,270
Average output r		
Average output p Crude oil (bbls.)		110,586
Natural gas (Mcf)		585,348
Natural gas (MCI)		565,546
Producing well d	epth Oil Wells	Gas Wells
Shelf (wd <1,000 ft)		3,104
Deep (wd 1,000-4,9		112
Ultra Deep (wd >5,0		39
Total	3,574	3,255
Number of opera	itors*	120
Producing oil**		119
Producing natural g	as**	124
Source: For specific	methodology a	and source det

etails, Jgy please see pages 6 and 131. \*Number of Operators -- IHS

\*\*Producing Oil and Natural Gas --BOEMRE

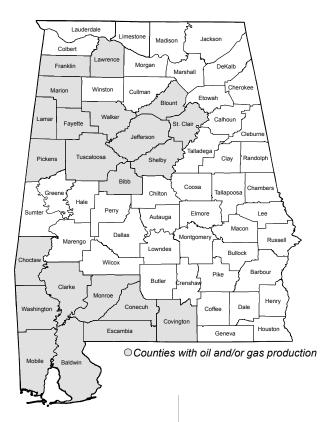
# 2008 Latest Available Data

Petroleum res		ilable	Dui	a
as of 12/31/08 (mill. bl				
New reserves Production Net annual chan Proved reserves	•		NGL 18 94 -76 548	Total 426 504 -78 4,451
Natural gas re as of 12/31/08 (Bcf)	eserves			
New reserves Production Net annual chan Proved reserves	•	red Ass 1,7 -1,2	Non- sociated 498 745 247 786	Dry Gas 1,357 2,250 -893 13,546
Cost of drilling	and e	quippin	g wells	5
-	Cost/ft. (\$) 5,526 5,400 4,324	Cost/ well (\$ 60,662, 55,816, 42,650,	7 595 6 042 10	otal Cost thous. \$) ,369,573 ,381,784 ,402,074
2008 Leas	e Stat	tistic	S	
~~~ ~				
G&G permits				112
G&G permits Platform installat Platform remova Platform in place	ls			112 72 150 3,761
· Platform installat Platform remova	ls e	3		72 150
Platform installat Platform remova Platform in place	teristics s of wate eters of v eters of v	er vater vater		72 150
Platform installat Platform remova Platform in place Lease charact Existing leases <200 meter 200-400 me 401-900 me	teristics s of wate eters of v eters of v eters of v s of wate	er vater vater er		72 150 3,761 3,320 112 98
Platform installad Platform remova Platform in place Lease charact Existing leases <200 meter 200-400 me 401-900 meter	teristics s of wate eters of v eters of v eters of v s of wate	er vater vater er		72 150 3,761 3,320 112 98
Platform installad Platform remova Platform remova Platform in place Lease charact Existing leases <200 meter 200-400 me 401-900 me >900 meter Oil & natural g Producing	teristics s of wate eters of v eters of v s of wate gas field	er vater vater er JS	uses 8	72 150 3,761 3,320 112 98 139 846 430

#### From 1996 to 2008, the gas

production in Mississippi Canyon Block 0807 field has gone from 6.5 million MCFs to just over 61 million. This field was discovered in 1989 and continues to be the top producing field in the region.

# Alabama



# **Background Information**

#### Counties

Number of counties With oil and/or gas	-	67 22
First year of pro	oduction	
Crude oil Natural gas		1944 1904
Year and amour	nt of peak proc	luction
Crude oil — 22,153 Natural gas —378,		1980 1996
Deepest produc	ing well (ft.)	
Crude oil Natural gas		19,000 23,330
Year and depth	of deepest wel	l drilled (ft.)
1995		24,275
Cumulative num as of 12/31/08 (excluding		ells drilled
Oil wells	1,409	9%
Gas wells Dry holes	8,738 4,695	59% 32%
Total	14,842	100%
Cumulative cruc as of 12/31/08 (thous. \$)		value 12,370,807
Cumulative proc	luction & new	reserves
Crude	NGL	Natural
Oil Reserves 513	(mill. bbls.) Total 469 982	Gas (Bcf) 8,422
Production 492	383 875	7,418

# Value of Oil and Gas

Average wellhead price

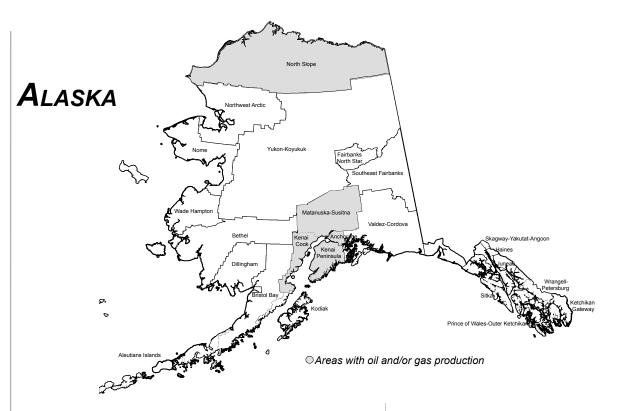
()		
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$96.71 \$ 9.65
Wellhead value of proc (2008, in thous. \$)	luction	
Crude oil Natural gas Total		\$  729,774 \$2,488,581 \$3,218,355
Average natural gas pr (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$18.30 \$15.58 \$10.57 \$10.03 \$ 9.84
Severance taxes paid (2008 in thous. \$)		\$192,752
Top 10 producing cour (2008 on a BOE basis)	nties	
County	% Pr	oduction
Tuscaloosa Mobile Baldwin	State 28.29 22.48 21.78	US 0.27 0.22 0.21

		5	
Number of wells d			
· ·	Development	Total	
Oil 11 Gas 7	9	20	
Gas 7 Dry 18	286 17	293 35	
Total 36	312	348	
	0.2	0.10	
Total footage drille	ed		
Exploratory	Development	Total	
Oil 122.4	111.5	233.9	
Gas 39.1	735.4	774.5	
Dry 172.0	69.9	241.9	
Total 333.5 (Note: Totals may not add du	916.8 le to rounding.)	1,250.3	
	-,		
New-field wildcats Footage (thous. ft.)	drilled	24 223.1	
Average rotary rig	s active	5	
Permits		444	
Statewide rank			
Statewide Talik			
		atural Gas	
Wells drilled	26th	16th	
Production	16th	14th	
Reserves (2008)	18th	14th	
Number of operate	ors	85	
Number of produc	ing wells		
Crude oil		506	
Natural gas		6,070	
Total		6,576	
• • • •			
Average productio	n	45.0	
Crude oil (thous. b/d) NGL (thous. b/d)		15.2 5.5	
Natural gas (MMcf/d)		689.8	
(initial gao (initial a)			
Total production			
Crude oil (YTD bbls, i	n thous.)	5,560	
Natural gas (YTD MM	1cf)	252,449	
Notural and marks	tod producti	~~	
Natural gas marke	etea producti	on 257,884	
(MINICI)		207,004	
Average output pe	er producing	well	
Crude oil (bbls.)		10,989	
Natural gas (Mcf)		41,590	
		,	
Coalbed methane	(YTD MMcf)	111,680	
Oil Wells		4	
Gas Wells		5,606	
Daily Average (MMcf)	/ Well	305	
Heavy oil (YTD bbls	s, in thous.)	NA	
Heavy oil (YTD bbls Wells	s, in thous.)	NA NA	
•	s, in thous.)		
Wells	s, in thous.)	NA	

Source: For specific methodology and source details, please see pages 6 and 131.

Petroleum res as of 12/31/08 (mill. bb		
New reserves Production Net annual chang Proved reserves	Crude Oil 1 5 ge -4 38	NGL         Total           62         63           9         14           53         49           106         144
Natural gas re as of 12/31/08 (Bcf)	serves	
New reserves Production Net annual chang Proved reserves	2 3	Non-         Dry           sociated         Gas           -394         -447           262         257           -656         -704           3,360         3,290
Cost of drilling	and equippin	•
Oil Gas Dry	(\$) well 654 7,645, 503 1,329, 325 2,247,0	(\$) (thous. \$) 184 152,904 429 389,523
Marginal oil we Producing margin Crude oil product Crude oil product	nal wells tion in bbls. (tho	
Marginal natur as of 12/31/08	al gas wells	
Producing margir Natural gas prod		5,023 71,335
Mineral lease	royalties, bor	uses & rent
Oil Gas Total Royalties		\$    753,387 \$ 47,684,303 \$ 60,039,444
Horizontal wel	Is drilled	12
Horizontal wel Average numb Oil and natural ge Refining Transportation Wholesale Retail Pipeline construct Oilfield machiner Total petroleum in	per of employ as extraction stion	

In 2008, 15 wells were completed in Little Cedar Creek field. The first well was completed in this field in 1994.



# **Background Information**

Areas Number of areas With oil and/or gas	15 10		
First year of pro	oduction	1905	
Natural gas		1945	
Year and amour	nt of peak prod	uction	
Crude oil — 738,14 Natural gas — 555		1988 1994	
Deepest produc	ing well (ft.)		
Crude oil Natural gas		25,040 17,864	
Year and depth of deepest well drilled (ft.)			
2007		25,040	
2007 Cumulative num as of 12/31/08 (excluding		,	
Cumulative num		,	
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells	service wells) 4,770 325	lls drilled 78% 5%	
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes	service wells) 4,770 325 1,029	11s drilled 78% 5% 17%	
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells	service wells) 4,770 325	lls drilled 78% 5%	
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes	service wells) 4,770 325 1,029 6,124 de oil wellhead	11s drilled 78% 5% 17% 100%	
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruc as of 12/31/08 (thous. \$) Cumulative proc	4,770 325 1,029 6,124 de oil wellhead \$28	lls drilled 78% 5% 17% 100% value 1,048,735	
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruct as of 12/31/08 (thous. \$)	4,770 325 1,029 6,124 de oil wellhead \$28	lls drilled 78% 5% 17% 100% value 1,048,735	
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruct as of 12/31/08 (thous. \$) Cumulative proc as of 12/31/08 Crude Oil	4,770 325 1,029 6,124 de oil wellhead \$28 duction & new r NGL (mill. bbls.) Total	lls drilled 78% 5% 17% 100% value 1,048,735 esserves Natural Gas (Bcf)	
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruct as of 12/31/08 (thous. \$) Cumulative proc as of 12/31/08	4,770 325 1,029 6,124 de oil wellhead \$28 duction & new r NGL (mill. bbls.) Total	Ils drilled 78% 5% 17% 100% value 1,048,735 eserves Natural	

# Value of Oil and Gas

Average wellhead pric	e	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$90.19 \$ 7.39
Wellhead value of pro (2008, in thous. \$)	duction	
Crude oil Natural gas Total	\$	22,536,136 2,944,486 25,480,622
Average natural gas p (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$8.72 \$8.66 \$5.49 NA \$6.74
Severance taxes paid (2008, in thous. \$)	\$	6,879,000
Top producing areas (2008 on a BOE basis)		
Areas	% Pro	duction
Beechey Point Harrison Bay Kenai Kenai Offshore Tyonek Tyonek Offshore Harrison Bay Offshore Seldovia Barrow	State 68.94 20.23 3.42 2.86 2.78 1.30 0.24 0.13 0.09	US 3.86 1.12 0.19 0.16 0.15 0.07 0.01 0.01 <0.01

2000 muusu	y Statistic	,5		
Number of wells	drilled			
Exploratory Oil 1 Gas 0 Dry 13 Total 14	Development 114 12 5 131	Total 115 12 18 145		
Total footage dril (thous. ft.)	lled			
Exploratory Oil 13.3 Gas 0.0 Dry 93.0 Total 106.3 (Note: Totals may not add	Development 561.9 84.8 41.6 688.3 due to rounding.)	Total 575.2 84.8 134.6 794.7		
New-field wildcat Footage (thous. ft.)	ts drilled	13 102.5		
Average rotary ri	gs active	8		
Permits		203		
Statewide rank				
Wells drilled Production Reserves (2008)	Crude Oil I 24th 3rd 2nd	Natural Gas 27th 10th 8th		
Number of operators 7				
Number of produ (12/31/08) Crude oil Natural gas Total	icing wells	2,479 190 2,669		
Average product Crude oil (thous. b/o NGL (thous. b/d) Natural gas (MMcf/o	1)	679.8 2.9 443.0		
Total production Crude oil (YTD bbls Natural gas (YTD M		248,800 162,126		
Natural gas marketed production (MMcf) 398,442				
Average output p Crude oil (bbls.) Natural gas (Mcf)	per producing	well 100,363 853,294		
Coalbed methan	e (YTD MMcf)	NA		
Oil Wells Gas Wells Daily Average (MMo	cf) / Well	NA NA NA		
Heavy oil (YTD bb Wells Av. bbls per day Av. bbls per well/d	ols, in thous.)	NA NA NA		

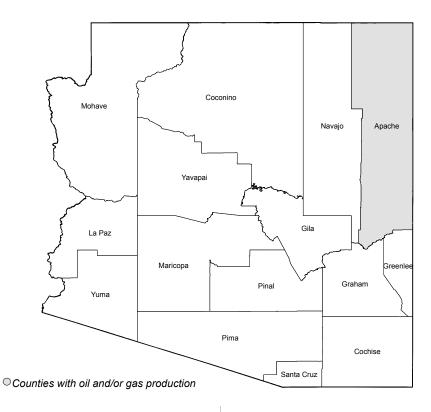
Source: For specific methodology and source details, please see pages 6 and 131.

# 2008 Latest Available Data

LUUU LUUU	L Avan		
Petroleum rese as of 12/31/08 (mill. bbl			
New reserves Production Net annual chang Proved reserves	Crude Oi -408 248 e -656 3,507	I NGL 0 13 -13 312	Total -408 261 -669 3,819
Natural gas res as of 12/31/08 (Bcf)	serves		
New reserves Production Net annual chang Proved reserves	Associate Dissolved -3,918 207 e-4,125 6,627		ted Gas -3,864 354 -4,218
Cost of drilling	and equ	ipping we	ells
-	Cost/ft. (\$) 5,449 2 3,549 2	Cost/ well (\$) 7,255,763 5,080,825 2,822,802	Total Cost (thous. \$) 3,134,413 300,970
Marginal oil we	lls		
Producing margin Crude oil producti Crude oil producti	on in bbls		177 364 1
Marginal natura	al gas we	ells	
Producing margin Natural gas produ		lcf)	0 0
Mineral lease r	oyalties,	bonuses	s & rent
Oil Gas Total Royalties	-	:	\$ 3,169,099 \$19,074,005 \$72,686,999
Horizontal wells	s drilled		59
Average numb	er of em	ployees	
Oil and natural ga Refining Transportation Wholesale Retail Pipeline construct Oilfield machinery Total petroleum in	ion	on	12,969 414 274 556 1,705 431 0 16,349

*Discovered in the late 1960s, Prudhoe* Bay field in Alaska produced just over 277,000 barrels in 1969. By 2008, over 123 million barrels were produced to put this field as the top producing field in the state.

# Arizona



# **Background Information**

Counties Number of countie With oil and/or gas	15 1			
First year of pro Crude oil Natural gas	duction	1958 1955		
Year and amou Crude oil — 3,370	thous. bbls.	production 1968		
Natural gas —3,16 Deepest produc		1966 t.)		
Crude oil Natural gas		6,382 5,771		
Year and depth	of deepest	t well drilled (ft.)		
1981		18,013		
Cumulative nun as of 12/31/08 (excluding		al wells drilled		
Oil wells	71	6%		
Gas wells Dry holes	52 996	5% 89%		
Total	100%			
Cumulative crude oil wellhead value as of 12/31/08 (thous. \$) \$70,812,773				
Cumulative production & new reserves				
Crude	NGL	Natural		
Oil Reserves NA	(mill. bbls.) T 0 I	otal Gas (Bcf) NA NA		
Reserves INA	-			

0

NA

NA

# Value of Oil and Gas

Average wellhead price	e*	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$90.24 \$ 7.09
Wellhead value of proc (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$4,692 \$3,708 \$8,400
Average natural gas pr (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$17.60 \$13.01 \$10.47 \$ 8.60 \$ 8.49
Severance taxes paid (2008, in thous. \$)		\$5,488
Top producing counties (2008 on a BOE basis)	S	
County	% Proc	duction
Apache	State 100	US <0.01

Production NA

2008 industr	y Statistic	5
Number of wells	drilled	
Exploratory	•	Total
Oil NA	NA	NA
Gas NA	NA	NA
Dry NA Total NA	NA NA	NA NA
iolai INA	NA NA	NA NA
Total footage dril (thous. ft.)	lled	
Exploratory	Development	Total
Oil NA	NA	NA
Gas NA	NA	NA
Dry NA Total NA	NA NA	NA NA
(Note: Totals may not add		INA.
New-field wildcat Footage (thous. ft.)	ts drilled	0 0
Average rotary ri	gs active	0
Permits		30
Statewide rank		
Wells drilled	Crude Oil N 32nd	atural Gas 32nd
Production	31st	31st
Reserves (2008)	NA	NA
Number of opera	ators	4
Number of produ	icing wells	
Crude oil		24
Natural gas		5
Total		29
Average product	ion	
Crude oil (thous. b/c		0.1
NGL (thous. b/d)	~)	0
Natural gas (MMcf/c	day)	1.2
Total production	· 、	
Crude oil (YTD bbls Natural gas (YTD M		50 457
		101
Natural gas mark	keted production	on
(MMcf)		523
Average entruit r		wall
Average output p	per producing	weii
Crude oil (bbls.)		2,077
Natural gas (Mcf)		91,330
Coalbed methan	e (YTD MMcf)	NA
Oil Wells		NA
Gas Wells		NA
Daily Average (MMc	ct) / Well	NA
Heavy oil (YTD bb	ols in thous )	NA
Wells	,	NA
Av. bbls per day		NA
Av. bbls per well/d		NA

Source: For specific methodology and source details, please see pages 6 and 131. \* State Data.

### 2008 Latest Available Data

Petroleum reserv		lable D	ata	
as of 12/31/08 (mill. bbls.)				
Cruc	le Oil	NGL	Total	
New reserves	NA	NA	NA	
Production	NA	NA	NA	
Net annual change	NA	NA	NA	
Proved reserves	NA	NA	NA	
Natural gas reser as of 12/31/08 (Bcf)	rves			
	sociate		Dry	
		d Associat		
New reserves	NA	NA	NA	
Production	NA	NA	NA	
Net annual change Proved reserves	NA NA	NA NA	NA NA	
Proved reserves	ΝA	NA	NA	
Cost of drilling an	nd eq	uipping w	ells	
	st/ft.	Cost/	Total Cost	
	\$)	well (\$)	(thous. \$)	
Oil	NA	NA	NA	
Gas	NA	NA	NA	
Dry	NA	NA	NA	
Marginal oil wells	;			
Producing marginal	wells		23	
Crude oil production		s. (thous.)	37	
Crude oil production	b/d (tl	hous.)	0	
Marginal natural	gas w	vells		
as of 12/31/08				
Producing marginal			2	
Natural gas producti	on (Mi	Mcf)	17	
Mineral lease roy	alties	, bonuse	s & rent	
Oil			\$ 774,080	
Gas			\$ 54,201	
Total Royalties			\$43,820,703	
Horizontal wells of	drilled	I	0	
Average number of employees				
Oil and natural gas	extract	ion	509	
Refining		• •	206	
Transportation			263	
Wholesale			1,965	
Retail			16,798	
Pipeline construction	۱		1,496	
Oilfield machinery			0	
Total petroleum indu	stry		21,237	

Dineh-Bi-Keyeh field in Arizona had 23 wells completed in 1967 with over 2 million barrels of oil produced. Still the highest producing field in AZ, less than 48,000 barrels were produced in 2008.

# **A**rkansas



 $\bigcirc$  Counties with oil and/or gas production

# **Background Information**

### Counties

Number of counties With oil and/or gas production			75 27
First year Crude oil Natural gas	1921 1889		
Year and a	amoui	nt of peak proc	duction
Crude oil — Natural gas -	,	8 thous. bbls. ,551 MMcf	1925 2008
Deepest p	roduc	ing well (ft.)	
Crude oil Natural gas			12,500 19,850
Year and d	lepth	of deepest we	ll drilled (ft.)
1992			20,661
Cumulative as of 12/31/08 (e		ber of total we	ells drilled
Oil wells		14,535	38% 23%
Gas wells Dry holes	as wells 8,695 Ty holes 14,747		
Total 37,977			100%
Cumulative crude oil wellhead value as of 12/31/08 (thous. \$) \$12,025,125			
Cumulative	e proc	luction & new	reserves
(	Crude	NGL	Natural
	Oil	(mill. bbls.) Total	Gas (Bcf)

92

89

1,924

1,857

14,389

8,483

# Value of Oil and Gas

Average wellhead pric	е	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$ 90.91 \$ 8.72
Wellhead value of prod (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$   552,642 \$3,893,925 \$4,446,567
Average natural gas p (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$14.09 \$11.32 \$10.56 \$ 9.23 \$ 8.88
Severance taxes paid (2008, in thous. \$)		\$21,427
Top 10 producing cour (2008 on a BOE basis)	nties	
County	% Pro	oduction
Van Buren Conway White Logan Sebastian Franklin Yell Faulkner Columbia Crawford	State 20.70 15.98 15.54 9.98 7.93 6.57 4.35 2.60 2.41 2.07	US 0.33 0.26 0.25 0.16 0.13 0.11 0.07 0.04 0.04 0.03

Reserves 1,832

Production 1,768

	•	63
Number of wells of		
Exploratory Oil 1	Developmen 94	t Total 95
Gas 14	94 915	929
Dry 30	39	69
Total 45	1,048	1,093
Total footage drill (thous. ft.)	ed	
Exploratory		t Total
Oil 4.6	379.7	384.3
Gas 71.0 Drv 184.6	6,531.4 242.3	6,602.4 426.9
Dry 184.6 Total 260.2	242.3 7,153.4	420.9 7,413.6
(Note: Totals may not add d		.,
New-field wildcats Footage (thous. ft.)	s drilled	27 165.51
Average rotary rig	gs active	44
Permits		1,640
Statewide rank		
		Natural Gas
Wells drilled	17th	17th
Production Reserves (2008)	18th 19th	8th 10th
		loui
Number of operat		333
Number of product (12/31/08)	cing wells	
Crude oil		1,494
Natural gas Total		5,913 7,407
Total		7,407
Average production		
Crude oil (thous. b/d) NGL (thous. b/d)	)	15.8 0
Natural gas (MMcf/da	ay)	1,209.1
Total production	.,	·
Crude oil (YTD bbls,	in thous.)	5,791
Natural gas (YTD M	Vlcf)	442,536
Natural gas mark	eted produc	tion 446,551
. ,		,
Average output p	er producing	g well
Crude oil (bbls.)		3,876
Natural gas (Mcf)		74,841
Coalbed methane	e (YTD MMcf)	1,733
Oil Wells		0
Gas Wells Daily Average (MMcf	) / Well	43 4.7
	,	r. <i>r</i>
Heavy oil (YTD bbl	s, in thous.)	NA
Wells		NA
Av. bbls per day Av. bbls per well/d		NA NA

Source: For specific methodology and source details, please see pages 6 and 131.

# 2008 Latest Available Data

	<i></i>		
Petroleum res as of 12/31/08 (mill. b	bls.)		
New reserves	Crude Oil 5	NGL -1	Total 4
Production	6	0	6
Net annual chan		-1	-2
Proved reserves	30	2	32
Natural gas re as of 12/31/08 (Bcf)	eserves		
	Associate		Dry
New reserves	Dissolved -22	Associate 2.801	d Gas 2,777
Production	-22	454	456
Net annual chan		2,347	2,321
Proved reserves	12	5,616	5,626
Cost of drilling			
	Cost/ft.	Cost/	Total Cost
Oil	(\$) 239	well (\$) 967,920	(thous. \$) 91,952
Gas	419	2,979,041	2,767,529
Dry	201	1,243,656	85,812
Marginal oil w	ells		
Producing margi			1,266
Crude oil produc Crude oil produc			1,895 5
Marginal natu as of 12/31/08	ral gas w	ells	
Producing margi	nal wells		3,346
Natural gas proc	luction (MN	∕lcf)	43,409
Mineral lease	royalties	, bonuses	& rent
Oil	-	\$	184
Gas			8,239,540
Total Royalties		\$3	34,932,660
Horizontal we	lls drilled		674
Average number of employees			
Oil and natural g	as extracti	on	6,202
Refining			1,007
Transportation Wholesale			1,728 2 157
Retail			2,157 11,892
Pipeline construe	ction		1,544
Oilfield machine	ry		0
Total petroleum	industry		24,530

*In 2008, over 60 wells were completed* in Smackover field in Arkansas, although production has decreased to 1/3 of the production of the first year a well was completed in this field.

# CALIFORNIA



# **Background Information**

Counties Number of countie With oil and/or gas		58 31
First year of pr Crude oil Natural gas	oduction	1861 1889
Year and amou Crude oil —423,87 Natural gas —714	7 thous. bbls.	uction 1985 1968
Deepest produc Crude oil Natural gas	cing well (ft.)	24,426 18,114
Year and depth	of deepest well	drilled (ft.)
		. ,
1993		24,426
1993 Cumulative nun as of 12/31/08 (excluding		, -
Cumulative nun		, -
Cumulative nun as of 12/31/08 (excluding Oil wells Gas wells Dry holes	g service wells) 155,887 6,723 34,941 198,599 de oil wellhead	11s drilled 79% 3% 18% 100%
Cumulative nun as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruc	g service wells) 155,887 6,723 34,941 198,599 de oil wellhead \$24	lls drilled 79% 3% 18% 100% value 4,286,679

# Value of Oil and Gas

Crude oil (\$/bbl.)         \$ 90.2'           Natural gas (\$Mcf)         \$ 8.38		
uction		
\$ 2	9,354,014 2,484,410 1,838,424	
се		
	\$12.75 \$11.75 \$10.80 \$ 8.23 \$ 8.11	
:	\$467,130	
ties		
% Proc	luction	
State 71.35 6.55 4.74 3.18 2.75 1.89 1.07 1.07 1.02 0.98	US 3.30 0.22 0.15 0.13 0.09 0.05 0.05 0.05 0.05	
	\$19 \$ 2 \$2 ce ce ties % Proc State 71.35 6.55 4.74 3.18 2.75 1.89 1.07 1.07 1.02	

2000 maust	y otatistic	.5
Number of wells	drilled	
Exploratory		Total
Oil 4	2,423	2,427
Gas 1	141	142
Dry 21 Total 26	76 2,640	97 2,666
10tai 20	2,040	2,000
Total footage dril (thous. ft.)	led	
Exploratory	Development	Total
Oil 26.2	5,545.8	5,572.0
Gas 5.4	949.3	954.7
Dry 151.4 Total 183.0	416.5 6.911.6	568.0 7,094.7
(Note: Totals may not add		1,004.1
New-field wildcat Footage (thous. ft.)	s drilled	12 89.7
Average rotary ri	gs active	42
Permits		4,724
Statewide rank		
	Crude Oil N	atural Gas
Wells drilled	4th	20th
Production	4th	12th
Reserves (2008)	4th	17th
Number of opera	itors	402
Number of produ	icing wells	
(12/31/08)		50.000
Crude oil		52,268 1,840
Natural gas Total		54,108
lotal		04,100
Average product	ion	
Crude oil (thous. b/c	d)	585.0
NGL (thous. b/d)		0.7
Natural gas (MMcf/c	lay)	230.4
Total production		
Crude oil (YTD bbls		214,120
Natural gas (YTD M	MCf)	84,317
Natural gas mark	eted product	ion
(MMcf)		296,469
Average output p	per producing	well
Crude oil (bbls.)		4,097
Natural gas (Mcf)		45,824
Coalbed methan	e (YTD MMcf)	NA
Oil Wells		NA
Gas Wells		NA
Daily Average (MMc	rf) / Well	NA
Heavy oil (YTD bb	ols in thous )	208,176
Wells	,	48,110
Av. bbls per day		569
Av. bbls per well/d		4,327

Source: For specific methodology and source details, please see pages 6 and 131.

# 2008 Latest Available Data

	L Avalla		lla
Petroleum rese as of 12/31/08 (mill. bbl			
New reserves Production Net annual chang Proved reserves	Crude Oil -396 221 e -617 2,705	NGL -2 11 -13 113	Total -398 232 -630 2,818
Natural gas res as of 12/31/08 (Bcf)	serves		
	ssociated Dissolved -113 163 e -276 113	Non- Associate 23 88 -65 621	Dry ed Gas -97 237 -334 2,406
Cost of drilling			
Oil Gas Dry	684 1, 270 1,	Cost/ well (\$) 569,273 816,720 780,570	Total Cost (thous. \$) 3,808,624 257,974 172,715
Marginal oil we	lls		
Producing margin Crude oil producti Crude oil producti	on in bbls.		39,453 73,049 200
Marginal natura	al gas we	lls	
Producing margin Natural gas produ		:f)	987 12,000
Mineral lease r	oyalties, l	oonuses	& rent
Oil Gas Total Royalties		\$	89,758,176 3,046,288 05,076,646
Horizontal wells	s drilled		245
Average numb	er of emp	loyees	
Oil and natural ga Refining Transportation Wholesale Retail Pipeline construct Oilfield machinery Total petroleum in	ion	1	20,953 14,432 4,128 10,902 52,411 8,489 1,862 113,267

*Oil production has remained consistent* in Midway-Sunset field. The field was first discovered in 1900 and continues to be the highest producing oil field in California with over 1 billion barrels a year.

# Colorado



○ Counties with oil and/or gas production

# **Background Information**

Counties Number of counties With oil and/or gas production	63 38
First year of production Crude oil Natural gas	1887 1893
Year and amount of peak Crude oil — 58,516 thous. bbls Natural gas — 1,389,399 MMcf	1956
Deepest producing well (ft Crude oil Natural gas	.) 12,651 18,535
Year and depth of deepest	well drilled (ft.)
1987	22,092
	22,092
1987 Cumulative number of tota	22,092
1987         Cumulative number of tota         as of 12/31/08 (excluding service wells)         Oil wells       13,674         Gas wells       41,757         Dry holes       25,723	22,092 I wells drilled 17% 51% 32% 100%
1987Cumulative number of totaas of 12/31/08 (excluding service wells)Oil wells13,674Gas wells41,757Dry holes25,723Total81,154Cumulative crude oil wellh	22,092 I wells drilled 17% 51% 32% 100% ead value \$26,521,916 ew reserves Natural

# Value of Oil and Gas

9				
(2008) Crude oil (\$/bbl.) \$90 Natural gas (\$Mcf) \$ 6				
uction				
	\$ 2,184,103 \$ 9,642,429 \$11,826,532			
ice				
	\$ 9.77 \$ 9.01 \$ 8.76 \$ 7.02 \$ 6.98			
	\$139,551			
ties				
% P	roduction			
State 35.33 27.52 12.80 8.40 4.84 3.04 2.49 1.32 0.91 0.66	0.66 0.43 0.25 0.16 0.13 0.07			
	uction ice ties % P State 35.33 27.52 12.80 8.40 4.84 3.04 2.49 1.32 0.91			

COLORADO

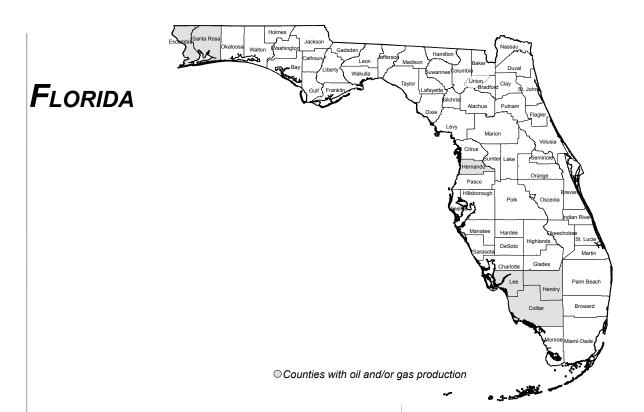
	drillod	
Number of wells Exploratory		t Total
Oil 4	101	105
Gas 70	3,618	3,688
Dry 50 Total 124	71 3,790	121 3,914
Total footage drill	,	0,011
(thous. ft.)		
Exploratory Oil 28.0	Development 695.1	t Total 723.1
Gas 395.9	25,249.0	25,644.8
Dry 212.3	318.6	530.9
Total 636.2 (Note: Totals may not add of	26,262.6 due to rounding.)	26,898.8
New-field wildcat Footage (thous. ft.)	s drilled	84 443.7
Average rotary rig	gs active	114
Permits		7,177
Statewide rank		
	Crude Oil	Natural Gas
Wells drilled	18th	8th
Production Reserves (2008)	12th 12th	7th 3rd
Number of opera		342
Number of produ (12/31/08)	cing wells	
Crude oil		
		5,038
Natural gas		36,805
Natural gas Total Average producti		36,805 41,843
Natural gas Total Average producti Crude oil (thous. b/d		36,805 41,843 29.7
Natural gas Total Average producti	))	36,805 41,843
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d	))	36,805 41,843 29.7 48.9
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls,	) ay) in thous.)	36,805 41,843 29.7 48.9 4,033.2 10,875
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production	) ay) in thous.)	36,805 41,843 29.7 48.9 4,033.2
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls,	l) lay) in thous.) Mcf)	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD M)	l) lay) in thous.) Mcf)	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD Mil Natural gas mark (MMcf)	in thous.) Mcf)	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD M) Natural gas mark (MMcf) Average output p	in thous.) Mcf)	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399 well
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD Mil Natural gas mark (MMcf)	in thous.) Mcf)	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD MI Natural gas mark (MMcf) Average output p Crude oil (bbls.)	) ay) Mcf) reted product	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399 well 2,159 40,107
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD MI) Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methane Oil Wells	) ay) Mcf) reted product	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399 well 2,159 40,107 533,892 0
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD MI) Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methane Oil Wells Gas Wells	) ay) Mcf) eeted product eer producing e (YTD MMcf)	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399 well 2,159 40,107 533,892 0 4,905
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD MI) Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methane Oil Wells	) ay) Mcf) eeted product eer producing e (YTD MMcf)	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399 well 2,159 40,107 533,892 0
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD MI) Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methane Oil Wells Gas Wells	i) in thous.) Mcf) eeted product eer producing e (YTD MMcf) f) / Well	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399 well 2,159 40,107 533,892 0 4,905
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD Mil Natural gas (YTD Mil Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methane Oil Wells Gas Wells Daily Average (MMc Heavy oil (YTD bb Wells	i) in thous.) Mcf) eeted product eer producing e (YTD MMcf) f) / Well	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 tion 1,389,399 well 2,159 40,107 533,892 0 4,905 1,459 198 104
Natural gas Total Average producti Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/d) Total production Crude oil (YTD bbls, Natural gas (YTD Mi Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methane Oil Wells Gas Wells Daily Average (MMcc Heavy oil (YTD bb	i) in thous.) Mcf) eeted product eer producing e (YTD MMcf) f) / Well	36,805 41,843 29.7 48.9 4,033.2 10,875 1,476,152 ion 1,389,399 well 2,159 40,107 533,892 0 4,905 1,459 198

Source: For specific methodology and source details, please see pages 6 and 131.

# 2008 Latest Available Data

	St Avan		ala
Petroleum re as of 12/31/08 (mill.	bbls.)		
New reserves Production Net annual cha Proved reserve		NGL 202 45 157 716	Total 209 68 141 1,004
Natural gas r as of 12/31/08 (Bcf)	eserves		
New reserves Production Net annual cha Proved reserve		Non- Associate 2,887 1,370 1,517 22,159	Dry ed Gas 2,892 1,441 1,451 23,302
Cost of drillin	-		
Oil Gas Dry	601 4	Cost/ well (\$) ,571,140 ,180,290 ,099,082	Total Cost (thous. \$) 269,970 15,416,910 132,989
Marginal oil v	vells		
Producing marg Crude oil produ Crude oil produ	ction in bbls		4,304 3,848 11
Marginal nate	ural gas w	ells	
Producing marg Natural gas pro		1cf)	25,918 292,816
Mineral lease	e royalties,	bonuses	s & rent
Oil Gas Total Royalties		\$4	66,586,572 403,587,201 571,882,570
Horizontal we	ells drilled		34
Average num	ber of em	ployees	
Oil and natural Refining Transportation Wholesale Retail Pipeline constru Oilfield machine Total petroleum	uction ery	on	23,129 637 2,024 2,230 12,675 3,657 227 44,579

Over 1,100 wells were completed in Wattenberg field in 2008. Production started here in the 1970s and has grown to over 15 million bbls per year.



# **Background Information**

Counties Number of o With oil and			n	67 6
First year	of pro	oduction		
Crude oil Natural gas				1943 1943
Year and	amour	nt of pea	k prod	uction
Crude oil — Natural gas			ols.	1978 1978
Deepest p	oroduc	ing well	(ft.)	
Crude oil Natural gas		-		18,806 17,452
Year and	depth	of deepe	st well	drilled (ft.)
2008				18,875
Cumulativ				lls drilled
Oil wells		32	1	27%
Gas wells			3	0%
Dry holes		89		73%
Total 1,214		100%		
Cumulativ		le oil we		
as of 12/31/08 (	(thous. \$)		\$	9,352,458
Cumulativ	ve proc	luction 8	k new r	eserves
	Crude	NGL		Natural
	Oil	(		Gas (Bcf)
Decemica	600	00	760	615

688

Reserves

Production 684

80

86

768

770

615

603

# Value of Oil and Gas

Average wellhead price	9	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		NA NA
Wellhead value of prod (2008, in thous. \$)	uction	
Crude oil Natural gas Total		NA NA NA
Average natural gas pr (2008, \$/Mcf)	ice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$21.19 \$14.51 \$11.72 \$10.41 \$ 9.73
Severance taxes paid (2008, in thous. \$)		\$13,386
Top producing counties (2008 on a BOE basis)	6	
County	% Pro	oduction
Santa Rosa Collier Escambia Hendry Lee Hernando	State 52.47 25.66 10.11 7.02 4.39 0.36	US 0.02 0.01 <0.01 <0.01 <0.01 <0.01

Number of wells	ما سال م	
Exploratory		Total
	Development 1	Total 1
Gas NA	NA	NA
Dry NA	NA	NA
Total NA	1	1
Total footage dril (thous. ft.)	lled	
Exploratory		
Oil NA Gas NA	3.04 NA	3.04 NA
Gas NA Dry NA	NA	NA
Total NA	3.04	3.04
(Note: Totals may not add	due to rounding.)	
New-field wildcat Footage (thous. ft.)	ts drilled	NA NA
Average rotary ri	gs active	1
Permits		5
Statewide rank		
		Natural Gas
Wells drilled Production	29th 23rd	34th 27th
Reserves (2008)	25th	27th
	2001	2.101
Number of opera	itors	6
Number of produ	icing wells	
(12/31/08) Crude oil		66
Natural gas		0
Total		66
Average product	ion	
Crude oil (thous. b/c		5.3
NGL (thous. b/d)		0
NGL (mous. b/d) Natural gas (MMcf/d		0 0
Natural gas (MMcf/c		
Natural gas (MMcf/c	day)	0
Natural gas (MMcf/c	day) , in thous.)	
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M	day) , in thous.) Mcf)	0 1,958 0
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark	day) , in thous.) Mcf)	0 1,958 0
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M	day) , in thous.) Mcf)	0 1,958 0
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark	day) , in thous.) Mcf) keted producti	0 1,958 0 Ion 2,436
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p	day) , in thous.) Mcf) keted producti	0 1,958 0 0 2,436 well
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf)	day) , in thous.) Mcf) keted producti	0 1,958 0 Ion 2,436
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p Crude oil (bbls.)	day) , in thous.) Mcf) keted production per producing	0 1,958 0 2,436 well 29,662
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methan	day) , in thous.) Mcf) keted production per producing	0 1,958 0 2,436 well 29,662 0 NA
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf)	day) , in thous.) Mcf) keted production per producing	0 1,958 0 2,436 well 29,662 0
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methan Oil Wells	day) , in thous.) Mcf) keted production per producing e (YTD MMcf)	0 1,958 0 2,436 well 29,662 0 NA NA
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methan Oil Wells Gas Wells Daily Average (MMc	day) , in thous.) Mcf) keted production per producing e (YTD MMcf) cf) / Well	0 1,958 0 2,436 well 29,662 0 NA NA NA NA
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methan Oil Wells Gas Wells Daily Average (MMc Heavy oil (YTD bb	day) , in thous.) Mcf) keted production per producing e (YTD MMcf) cf) / Well	0 1,958 0 2,436 well 29,662 0 NA NA NA NA
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methan Oil Wells Gas Wells Daily Average (MMc Heavy oil (YTD bb Wells	day) , in thous.) Mcf) keted production per producing e (YTD MMcf) cf) / Well	0 1,958 0 2,436 well 29,662 0 NA NA NA NA NA
Natural gas (MMcf/c Total production Crude oil (YTD bbls Natural gas (YTD M Natural gas mark (MMcf) Average output p Crude oil (bbls.) Natural gas (Mcf) Coalbed methan Oil Wells Gas Wells Daily Average (MMc Heavy oil (YTD bb	day) , in thous.) Mcf) keted production per producing e (YTD MMcf) cf) / Well	0 1,958 0 2,436 well 29,662 0 NA NA NA NA

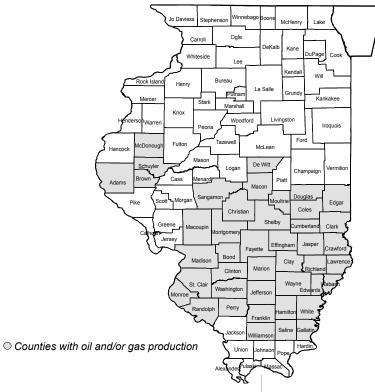
Source: For specific methodology and source details, please see pages 6 and 131.

## 2008 Latest Available Data

L Avano		la
erves Is.)		
rude Oil -26 3 ge-29 3	NGL -2 0 -2 0	Total -28 3 -31 3
serves		
		Dry d Gas -104 3 -107 1
and equi Cost/ft.		
(\$) 3,035 NA NA		
ells		
		12 28 0
al gas we	ells	0
uction (MM	cf)	0
royalties,	bonuses	& rent
		 \$12,388
s drilled		1
er of em	oloyees	
as extractic tion y ndustry	'n	1,155 473 2,075 6,371 37,779 881 31 48,765
	erves s.) rude Oil -26 3 ge-29 3 serves Associated Dissolved -106 3 ge-109 1 and equi Cost/ft. (\$) 3,035 NA NA ells al wells ion in bbls. ion b/d (the al gas we hal wells uction (MM royalties, s drilled er of emp as extraction (tion	erves s.) rude Oil NGL -26 -2 3 0 ge-29 -2 3 0 serves Associated Non- Dissolved Associate -106 0 3 0 ge-109 0 1 0 and equipping well Cost/ft. Cost/ To (\$) well (\$) (f 3,035 9,220,391 NA NA NA NA ells hal wells ion in bbls. (thous.) ion b/d (thous.) al gas wells hal wells uction (MMcf) royalties, bonuses s drilled er of employees as extraction

Jay field in Florida produced over 25 million barrels of oil in 1973. Still the highest producing field in FL, just over 1.1 million barrels were produced in 2008.

# Illinois



# **Background Information**

### Counties

Number of With oil and		s production	102 43
First yea	r of pro	oduction	
Crude oil Natural gas	3		1889 1882
Year and	amoui	nt of peak prod	uction
		47 thous. bbls.	1940
Natural gas			1940
Deepest	produc	ing well (ft.)	
Crude oil			NA
Natural gas	6		NA
Year and	depth	of deepest well	drilled (ft.)
1976			14,942
Cumulation as of 12/31/08		nber of total we	lls drilled
Oil wells		65,185	55%
Gas wells		1,288	1%
Dry holes		51,783	44%
Total		118,259	100%
		de oil wellhead	
as of 12/31/08	(thous. \$)	\$2	2,929,551
Cumulativ as of 12/31/08	ve proc	duction & new I	reserves
	Crude	NGL	Natural
	Oil	(mill. bbls.) Total	Gas (Bcf)

NA 3,574

NA 3,560

NA

NA

# Value of Oil and Gas

d price	
	\$93.48 NA
of productio	n
	\$880,862 NA \$880,862
gas price	
ers Iers S	\$12.07 \$11.70 \$10.58 \$10.10 \$ 8.48
paid	
g counties	
%	Production
State 11.68 11.41 10.30 8.49 6.93 6.40 6.06 3.94 3.87 3.72	US 0.02 0.02 0.02 0.01 0.01 0.01 0.01 0.01
	of production gas price ers hers paid paid counties % I State 11.68 11.41 10.30 8.49 6.93 6.40 6.93 6.40 6.06 3.94 3.87

Reserves 3,574

Production 3,560

#### Number of wells drilled

_			
E	xploratory	Developmen	t Total
Oil	8	303	311
Gas	2	34	36
Dry	51	97	148
Total	61	434	495
Total fo	ootage dril	led	
E	xploratory	Developmen	t Total
Oil	25.2	724.9	750.1
Gas	4.0	43.8	47.7
Dry	128.3	227.1	355.4
Total	157.5	995.8	1,153.4
(Note: Tota	ls may not add o	due to rounding.)	
	eld wildcat (thous. ft.)	s drilled	20 41.1
Averag	e rotary ri	gs active	0
Permits	3		816
Statewi	ide rank	Orrector Oil	Natural Oct
Wells dri	illod	Crude Oil 7th	Natural Gas 24th
Producti		15th	2401 29th
Reserve		15th	NA
11636176	3 (2000)	1501	INA.
Numbe	r of opera	tors	836
	r of produ	cing wells*	
(12/31/08)		-	
Crude oi			15,892
Natural g	jas		45
Total			15,937
-	e producti	ion	
Crudo oi			
	l (thous. b/d		25.8
NGL (the	ous. b/d)	))	0
NGL (the Natural g	ous. b/d) gas (MMcf/d	))	
NGL (the Natural g	ous. b/d) gas (MMcf/d roduction	l) lay)	0 NA
NGL (the Natural of Total pr Crude oi	ous. b/d) gas (MMcf/d roduction I (YTD bbls,	l) lay) , in thous.)	0 NA 9,430
NGL (the Natural of Total pr Crude oi	ous. b/d) gas (MMcf/d roduction	l) lay) , in thous.)	0 NA
NGL (the Natural of Total pi Crude oi Natural of	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M	l) lay) , in thous.)	0 NA 9,430 0
NGL (the Natural of Total pi Crude oi Natural of	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M	l) lay) , in thous.) Mcf)	0 NA 9,430 0
NGL (the Natural g Total p Crude oi Natural g Natural	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M	l) lay) , in thous.) Mcf)	0 NA 9,430 0 tion
NGL (the Natural of Total pi Crude oi Natural of Natural (MMcf)	bus. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark	l) lay) , in thous.) Mcf)	0 NA 9,430 0 tion 1,193
NGL (the Natural of Total pi Crude oi Natural of Natural (MMcf) Averag	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p	l) lay) , in thous.) Mcf) keted product	0 NA 9,430 0 tion 1,193 1 well*
NGL (the Natural of Total pi Crude oi Natural of Matural (MMcf) Averag Crude oi	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.)	l) lay) , in thous.) Mcf) keted product	0 NA 9,430 0 tion 1,193 y well* 593
NGL (the Natural of Total pi Crude oi Natural of Matural (MMcf) Averag Crude oi	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p	l) lay) , in thous.) Mcf) keted product	0 NA 9,430 0 tion 1,193 1 well*
NGL (the Natural of Crude of Natural of Natural (MMcf) Averag Crude of Natural of	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf)	l) lay) , in thous.) Mcf) keted product	0 NA 9,430 0 tion 1,193 y well* 593
NGL (the Natural of Crude of Natural of Natural (MMcf) Averag Crude of Natural of	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf) d methane	l) ay) Mcf) ated product	0 NA 9,430 0 tion 1,193 y well* 593 26,511
NGL (the Natural of Crude of Natural of Natural (MMcf) Averag Crude of Natural of Coalbe	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf) d methane	l) ay) Mcf) ated product	0 NA 9,430 0 tion 1,193 y well* 593 26,511 NA
NGL (the Natural of Total pi Crude oi Natural of Natural (MMcf) Averag Crude oi Natural of Coalbe Oil Wells Gas Wel	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf) d methane	I) lay) Mcf) ceted product per producing e (YTD MMcf)	0 NA 9,430 0 tion 1,193 y well* 593 26,511 NA NA
NGL (the Natural of Total pi Crude oi Natural of Natural of Averag Crude oi Natural of Coalbe Oil Wells Gas Wel Daily Ave	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf) d methand s Is erage (MMc	I) lay) Mcf) xeted product ber producing e (YTD MMcf) f) / Well	0 NA 9,430 0 tion 1,193 y well* 593 26,511 NA NA NA NA
NGL (the Natural of Total pi Crude oi Natural of Natural of Averag Crude oi Natural of Coalbe Oil Wells Gas Wel Daily Ave	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf) d methand s Is erage (MMc	I) lay) Mcf) ceted product per producing e (YTD MMcf)	0 NA 9,430 0 tion 1,193 y well* 593 26,511 NA NA NA
NGL (the Natural of Total pi Crude oi Natural of Natural of Averag Crude oi Natural of Coalbe Oil Wells Gas Wel Daily Ave	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf) d methand s Is erage (MMc	I) lay) Mcf) xeted product ber producing e (YTD MMcf) f) / Well	0 NA 9,430 0 tion 1,193 y well* 593 26,511 NA NA NA NA
NGL (the Natural of Total pi Crude oi Natural of Natural (MMcf) Averag Crude oi Natural of Coalbe Oil Wells Gas Wel Daily Averag Heavy	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf) d methand s Is erage (MMc oil (YTD bb	I) lay) Mcf) xeted product ber producing e (YTD MMcf) f) / Well	0 NA 9,430 0 1,193 1,193 1,193 1,193 26,511 NA NA NA NA NA
NGL (the Natural of Crude of Natural of Natural of Matural (MMcf) Averag Crude of Natural of Coalbe Oil Wells Gas Wel Daily Ave Heavy Wells Av. bbls	ous. b/d) gas (MMcf/d roduction I (YTD bbls, gas (YTD M I gas mark e output p I (bbls.) gas (Mcf) d methand s Is erage (MMc oil (YTD bb	I) lay) Mcf) xeted product ber producing e (YTD MMcf) f) / Well	0 NA 9,430 0 tion 1,193 9 well* 593 26,511 NA NA NA NA NA NA

Source: For specific methodology and source details, please see pages 6 and 131. \* World Oil for Number of producing wells.

	Crude Oil	NGL
New reserves	-41	NA
Production	6	NA
Net annual cha	ange -47	NA

2008 Latest Available Data

54

Total

-41 6

-47

54

10

NA

....

Proved reserves

Petroleum reserves as of 12/31/08 (mill. bbls.)

Natural gas reserves as of 12/31/08 (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual chang	e NA	NA	NA
Proved reserves	NA	NA	NA

#### Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	311	749,250	233,017
Gas	588	780,105	28,084
Dry	226	543,707	80,469

#### Marginal oil wells

Producing marginal wells	7,109
Crude oil production in bbls. (thous.)	5,732
Crude oil production b/d (thous.)	16
Marginal natural gas wells as of 12/31/08	

Producing marginal wells	0
Natural gas production (MMcf)	0

#### Mineral lease royalties, bonuses & rent Oil \$381,272

Gas	
Total Royalties	\$382,539

Horizontal wells drilled

#### Average number of employees

Oil and natural gas extraction	2,825
Refining	4,614
Transportation	5,953
Wholesale	5,441
Retail	26,378
Pipeline construction	2,414
Oilfield machinery	20
Total petroleum industry	47,645



# **Background Information**

Counties Number of co With oil and/o			n	92 16
First year o	of pro	duction		
Crude oil Natural gas				1889 1885
Year and a	moun	t of pea	k prod	uction
Crude oil — 1 Natural gas –	'		ols.	1953 2008
Deepest pr	oduci	ng well	(ft.)	
Crude oil Natural gas		-		NA NA
Year and de	epth c	of deepe	st well	drilled (ft.)
2008				10,064
Cumulative as of 12/31/08 (ex				lls drilled
Oil wells		6,56		36%
Gas wells Dry holes		1,33 10,53		7% 57%
Total		18,43		100%
Cumulative as of 12/31/08 (th		e oil we		value 3,833,580
Cumulative	prod	uction 8	a new r	eserves
	rude	NGL		Natural
December	Oil	(mill. bbls.)	Total	Gas (Bcf)

NA

NA

559

550

NA

NA

# Value of Oil and Gas

Average wellhead pric	e	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$91.92 \$7.58
Wellhead value of prov (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$170,787 \$35,634 \$206,421
Average natural gas p (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$12.65 \$11.14 \$10.48 \$ 9.61 \$ 8.94
Severance taxes paid (2008, in thous. \$)		\$2,082
Top 10 producing could (2008 on a BOE basis)	nties	
County		
County	/0	oduction
Posey Gibson Pike Greene Daviess Spencer Knox Vanderburgh Vigo Sullivan	% Pro State 38.03 24.34 8.04 5.03 4.96 4.62 4.14 3.37 3.12 2.38	Deduction US 0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01

Reserves 559

Production 550

2000 maust	-	5
Number of wells		
	Development	Total
Oil 13	72	85
Gas 25	39	64
Dry 41	23	64
Total 79	134	213
Total footage dri	lled	
Exploratory	Development	Total
Oil 35.0	147.1	182.0
Gas 27.9	37.9	65.7
Dry 92.0	36.0	127.9
Total 154.8	220.9	375.6
(Note: Totals may not add	due to rounding.)	
New-field wildca Footage (thous. ft.)	ts drilled	23 58.5
Average rotary r	igs active	2
Permits		385
Statewide rank		
		latural Gas
Wells drilled	22nd	23rd
Production	24th	24th
Reserves (2008)	22nd	NA
Number of opera	ators	228
Number of produ	ucing wells*	
(12/31/08)	-	
Crude oil		4,718
Natural gas		975
Total		5,693
Average product		
Crude oil (thous. b/	d)	5.1
NGL (thous. b/d)		0 NA
Natural gas (MMcf/	uay)	NA
Total production		
Crude oil (YTD bbls		1,855
Natural gas (YTD M	INICT)	NA
Natural gas mar	keted producti	on 4,701
(MMcf)		4,701
Average output	per producing	well*
• • •	1 0	393
Crude oil (bbls.) Natural gas (Mcf)		4,822
Natural gas (MCI)		4,022
Coalbed methan	e (YTD MMcf)	NA
Oil Wells		NA
Gas Wells		NA
Daily Average (MM	ct) / Well	NA
	ala in these )	NIA
Heavy oil (YTD bl	, in mous.)	NA
Wells		NA
Av. bbls per day		NA
Av. bbls per well/d		NA

Source: For specific methodology and source details, please see pages 6 and 131. \* World Oil for Number of producing wells.

# 2008 Latest Available Data

Petroleum rese as of 12/31/08 (mill. bbls			
New reserves Production Net annual change Proved reserves	Crude O 0 2 e -2 15	il NGL NA NA NA NA	Total 0 2 -2 15
Natural gas res as of 12/31/08 (Bcf)	erves		
	NA NA	d Non- d Associa NA NA NA NA	,
Cost of drilling a	and equ Cost/ft.	uipping w Cost/	ells Total Cost
Oil Gas Dry	(\$) 282 874 259	well (\$) 604,515 897,344 517,467	(thous. \$) 51,384 57,430 33,118
Marginal oil wel	ls		
Producing margina Crude oil productio Crude oil productio	on in bbl	· · ·	1,792 1,272 3
Marginal natura as of 12/31/08	ll gas w	/ells	
Producing margina Natural gas produc		Vlcf)	NA NA
Mineral lease ro	oyalties	, bonuse	s & rent
Oil Gas Total Royalties			 
Horizontal wells	drilled		32
Average number Oil and natural gas Refining Transportation			524 3,433 3,304
Wholesale Retail			3,453 22,249
Pipeline constructi			1,572

Oilfield machinery

Total petroleum industry

*Griffin Consolidated field produces over* 11% of the total oil production in Indiana. The number of barrels produced is less than 50% of the production in 1980.

138

34,673

# Kansas

Cheyenn	e Rav	wlins	Decatur	Norton	Phillips	Smith	Jewell	Republic	Washing	gton Mar	shall	aha Brov	wn Ponip	hape
Sherma	n The	omas	Sheridan	Graham	Rooks	Osborne	Mitchell	Cloud	Clay	- N	ttawatomie	Jackson	Atchison •	
Wallace	Logi	an	Gove	Trego	Ellis	Russell	Lincoln		Dickinsc	Geary	Wabaunsee			avernooth Wyandotte
Greeley	Wichita	Scott	Lane	Ness	Rush	Barton	Ellsworth	Saline		- Morris	s Lyon	Osage	Franklin	Miami
		Finney		Hodgeman	Pawne	ee Stafford	Rice	McPherson Harv		Chas	ie	Colley	Anderson	Linn
Hamilton	Kearny	1 miley	<u> </u>	Ford	Edwards		Reno			Butler	Greenwood	Woodson	Allen	Bourbon
Stanton	Grant	Haskel	Gray	- <b></b>	Kiowa	Pratt	Kingman	Sedgw	ick		Elk	Wilson	Neosho	Crawford
Morton	Stevens	Sewar	d Meade	Clark	Comanche	Barber	Harper	Sumn	er	Cowley		Montgom	ery Labette	Cherokee

○ Counties with oil and/or gas production

# **Background Information**

Counties Number of counties With oil and/or gas	-	105 90
First year of pro Crude oil Natural gas	oduction	1889 1882
Year and amour	nt of peak prod	uction
Crude oil —124,204 Natural gas — 899,		1956 1970
Deepest produc Crude oil Natural gas	ing well (ft.)	9,142 28,780
Year and depth	of deepest well	drilled (ft.)
1984		11,301
1984 Cumulative num as of 12/31/08 (excluding		,
Cumulative num as of 12/31/08 (excluding Oil wells	service wells) 130,359	Ils drilled 47%
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells	service wells) 130,359 37,064	Ils drilled 47% 13%
Cumulative num as of 12/31/08 (excluding Oil wells	service wells) 130,359	Ils drilled 47%
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes	service wells) 130,359 37,064 110,638 278,061 le oil wellhead	47% 47% 13% 40% 100%
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative crud	service wells) 130,359 37,064 110,638 278,061 le oil wellhead \$5	Ils drilled 47% 13% 40% 100% value 54,848,271
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative crud as of 12/31/08 (thous. \$) Cumulative prod as of 12/31/08	service wells) 130,359 37,064 110,638 278,061 le oil wellhead \$5 luction & new n NGL	Ils drilled 47% 13% 40% 100% value 54,848,271 reserves Natural
Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative crud as of 12/31/08 (thous. \$) Cumulative prod as of 12/31/08	service wells) 130,359 37,064 110,638 278,061 le oil wellhead \$5 luction & new r	47% 13% 40% 100% value 54,848,271

# Value of Oil and Gas

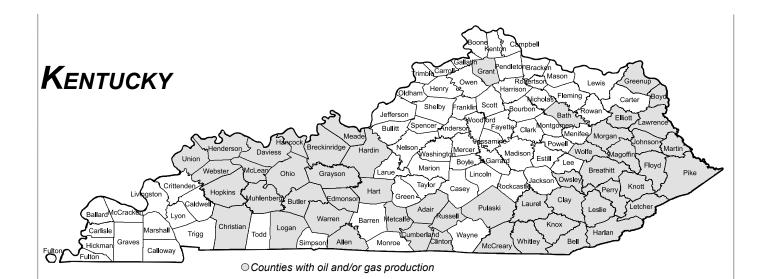
Average wellhead pric	ce	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$92.08 \$ 6.85
Wellhead value of pro (2008 in thous. \$)	oduction	
Crude oil Natural gas Total		\$3,644,711 \$2,564,024 \$6,208,735
Average natural gas p (2008, \$/Mcf)	orice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$13.00 \$12.24 \$ 9.42 \$ 8.11 \$ 8.85
Severance taxes paid (2008, in thous. \$)	ļ	\$421,100
Top 10 producing cou (2008 on a BOE basis)	Inties	
County	% P	roduction
	State	US
Stevens	11.46	0.24
Grant	6.84	0.14
Haskell	6.44	0.13
Kearny Finney	6.04 5.55	0.13 0.11
Morton	5.55 4.56	0.09
Barber	4.10	0.08
Seward	3.99	0.08
Ellis	3.23	0.07
Wilson	2.87	0.06

Number of wells	drilled	
ExploratoryOil213Gas49Dry346Total608	Developmer 1,504 1,473 657 3,634	t Total 1,717 1,522 1,003 4,242
Total footage dril	led	
Exploratory Oil 894.3 Gas 242.9 Dry 1,448.0 Total 2,585.1 (Note: Totals may not add	Developmer 4,165.1 2,552.7 2,386.4 9,104.2 due to rounding.)	t Total 5,059.4 2,795.7 3,834.3 11,689.3
New-field wildcat Footage (thous. ft.)	s drilled	313 1,342.6
Average rotary ri	gs active	11
Permits		5,893
Statewide rank		
Wells drilled Production Reserves (2008)	Crude Oil 5th 10th 13th	Natural Gas 9th 11th 13th
Number of opera	tors	2,068
Number of produ (12/31/08) Crude oil Natural gas Total	icing wells	41,661 21,908 63,569
Average product Crude oil (thous. b/c NGL (thous. b/d) Natural gas (MMcf/c	1)	108 0 1,037
Total production Crude oil (YTD bbls Natural gas (YTD M		39,575 379,647
Natural gas mark	keted produc	tion 374,310
Average output p Crude oil (bbls.) Natural gas (Mcf)	per producino	g well 950 17,329
Coalbed methan	e (YTD MMcf)	42,848
Oil Wells Gas Wells Daily Average (MMc	cf) / Well	11 3,806 117
Heavy oil (YTD bb Wells Av. bbls per day Av. bbls per well/d		NA NA NA NA

Source: For specific methodology and source details, please see pages 6 and 131.

2000 Lates	ιΑναι		αια
Petroleum rese as of 12/31/08 (mill. bbl			
C New reserves Production Net annual chang Proved reserves	rude Oil 75 38 e 37 243	NGL 2 19 -17 181	Total 77 57 20 424
Natural gas res as of 12/31/08 (Bcf)	serves		
	14 12	d Non- d Associat -87 368 -455 3,710	Dry ed Gas -68 357 -425 3,557
Cost of drilling			
Oil Gas Dry	Cost/ft. (\$) 168 216 82	Cost/ well (\$) 494,509 397,310 312,296	Total Cost (thous. \$) 849,071 604,706 313,233
Marginal oil we	lls		
Producing margin Crude oil producti Crude oil producti	on in bbl	s. (thous.) nous.)	40,575 25,673 70
Marginal natura	al gas w	vells	
Producing margin Natural gas produ		Vlcf)	20,006 264,373
Mineral lease r	oyalties	, bonuse:	s & rent
Oil Gas Total Royalties		\$	4,353,771 6,260,592 11,843,264
Horizontal well	s drilled		2
Average numb			
Oil and natural ga Refining Transportation Wholesale Retail Pipeline construct Oilfield machinery Total petroleum in	ion	ion	9,052 1,618 2,689 2,219 9,789 1,334 0 26,701

*Oil production has remained consistent* in the Bemis-Shutts field. First discovered in 1928, 33 wells were completed there in 2008.



# **Background Information**

Counties Number of counties With oil and/or gas		120 52
First year of pro		1860
Natural gas		1888
Year and amour	nt of peak prod	luction
Crude oil — 27,272 Natural gas — 114		1959 2008
Deepest produc	ing well (ft.)	
Crude oil Natural gas		NA NA
Year and depth	of deepest well	drilled (ft.)
		( - )
2000	·	24,951
•	ber of total we	24,951
2000 Cumulative num as of 12/31/08 (excluding Oil wells	iber of total we service wells) 32,152	24,951 Ils drilled
2000 Cumulative num as of 12/31/08 (excluding Oil wells Gas wells	iber of total we service wells) 32,152 24,501	24,951 Ils drilled 32% 25%
2000 Cumulative num as of 12/31/08 (excluding Oil wells	iber of total we service wells) 32,152	24,951 Ils drilled
2000 Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes	Iber of total we service wells) 32,152 24,501 42,126 98,779 le oil wellhead	24,951 ells drilled 32% 25% 43% 100%
2000 Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruce	iber of total we service wells) 32,152 24,501 42,126 98,779 le oil wellhead \$1	24,951 ells drilled 32% 25% 43% 100% value 17,965,242
2000 Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruct as of 12/31/08 (thous. \$) Cumulative proc as of 12/31/08	aber of total we service wells) 32,152 24,501 42,126 98,779 le oil wellhead \$1 duction & new f	24,951 ells drilled 32% 25% 43% 100% value 17,965,242 reserves Natural
2000 Cumulative num as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruct as of 12/31/08 (thous. \$) Cumulative proce as of 12/31/08	aber of total we service wells) 32,152 24,501 42,126 98,779 le oil wellhead \$1 duction & new f	24,951 ells drilled 32% 25% 43% 100% value 17,965,242 reserves

# Value of Oil and Gas

Average wellhead pric	e	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$90.87 \$ 8.42
Wellhead value of pro (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$ 240,351 \$ 960,857 \$1,201,208
Average natural gas p (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities		\$13.84 \$13.25 \$10.41 NA
City Gate		\$10.14
Severance taxes paid (2008, in thous. \$)		\$55,036
Top 10 producing cou (2008 on a BOE basis)	nties	
County	% Pr	oduction
	State	US
Henderson	31.1	0.01
Union	25.3	0.01
Muhlenberg	9.9	<0.01
Hopkins	7.6	< 0.01
Daviess	7.5	< 0.01
Webster Ohio	7.3 5.3	<0.01 <0.01
McLean	5.3 3.5	<0.01 <0.01
Christian	3.5 1.5	<0.01
	1.5	-0.01

<0.01

0.5

Hancock

### Number of wells drilled

Number o		annoa	
Exp	loratory	Development	t Total
Oil	38	228	266
Gas	209	395	604
Dry	106	262	368
Total	353	885	1,238
Total foot	age dril	led	
	loratory	Dovelopment	t Total
	loratory 75.4	Development 337.6	413.0
	39.3	1,790.8	2,580.2
	50.5 61.5	409.1	570.6
Total 1.02		2,537.5	3,563.8
		due to rounding.)	0,000.0
New-field Footage (th		s drilled	138 388.2
Average	rotary ri	gs active	10
Permits			2,400
Statewide	e rank		
	-l		Natural Gas
Wells drille	a	12th 21st	11th
Production Reserves (2	2000)	21st 21st	18th 16th
Reserves (	2000)	2151	1001
Number o	of opera	tors	272
Number of	of produ	cing wells	
(12/31/08)	-	-	
Crude oil*			18,343
Natural gas	6		13,727
	3		
Natural gas Total*		ion	13,727
Natural gas Total* Average	product		13,727 32,070
Natural gas Total* Average   Crude oil (t	product		13,727 32,070 3
Natural gas Total* Average   Crude oil (t NGL (thous	product hous. b/c s. b/d)	1)	13,727 32,070
Natural gas Total* Average   Crude oil (t	product hous. b/c s. b/d)	1)	13,727 32,070 3 0
Natural gas Total* Average   Crude oil (t NGL (thous	product hous. b/c s. b/d) s (MMcf/c	1)	13,727 32,070 3 0
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas	product hous. b/c s. b/d) s (MMcf/c duction	l) lay)	13,727 32,070 3 0
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas Total proc	product hous. b/d s. b/d) s (MMcf/c duction rTD bbls	l) lay) , in thous.)	13,727 32,070 3 0 260
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas Total proo Crude oil (\ Natural gas	product hous. b/c s. b/d) s (MMcf/c duction YTD bbls s (YTD M	l) lay) , in thous.)	13,727 32,070 3 0 260 1,034 95,013
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas Total proo Crude oil (\ Natural gas	product hous. b/c s. b/d) s (MMcf/c duction YTD bbls s (YTD M	l) lay) , in thous.) Mcf)	13,727 32,070 3 0 260 1,034 95,013
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas Total proc Crude oil (N Natural gas Natural gas (MMcf)	product hous. b/c s. b/d) s (MMcf/c duction (TD bbls s (YTD M as mark	l) lay) , in thous.) Mcf) keted product	13,727 32,070 3 0 260 1,034 95,013 ion 114,116
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas Total proc Crude oil (\ Natural gas Natural gas Matural gas (MMcf)	product hous. b/d) s (MMcf/c duction (TD bbls s (YTD M as mark	l) lay) , in thous.) Mcf)	13,727 32,070 3 0 260 1,034 95,013 ion 114,116
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas Total proc Crude oil (\ Natural gas Natural gas Matural gas (MMcf) Average o Crude oil (t	product hous. b/d) s (MMcf/c duction (TD bbls s (YTD M as mark output p obls.)	l) lay) , in thous.) Mcf) keted product	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas Total proc Crude oil (\ Natural gas Natural gas Matural gas (MMcf)	product hous. b/d) s (MMcf/c duction (TD bbls s (YTD M as mark output p obls.)	l) lay) , in thous.) Mcf) keted product	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well
Natural gas Total* Average I Crude oil (t NGL (thous Natural gas Total proo Crude oil (\ Natural gas Natural gas (MMcf) Average o Crude oil (k Natural gas	product hous. b/d s (MMcf/c duction (TD bbls s (YTD M as mark output p bbls.) s (Mcf)	i) lay) , in thous.) Mcf) keted product per producing	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922
Natural gas Total* Average p Crude oil (t NGL (thous Natural gas Total proc Crude oil (t Natural gas Matural gas (MMcf) Average of Crude oil (t Natural gas Coalbed p	product hous. b/d s (MMcf/c duction (TD bbls s (YTD M as mark output p bbls.) s (Mcf)	l) lay) , in thous.) Mcf) keted product	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922 148
Natural gas Total* Average p Crude oil (t NGL (thous Natural gas Total proc Crude oil (t Natural gas Matural gas (MMcf) Average of Crude oil (t Natural gas Coalbed p Oil Wells	product hous. b/d s (MMcf/c duction (TD bbls s (YTD M as mark output p bbls.) s (Mcf)	i) lay) , in thous.) Mcf) keted product per producing	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922 148 0
Natural gas Total* Average p Crude oil (t NGL (thous Natural gas Total proc Crude oil (t Natural gas Natural gas (MMcf) Average o Crude oil (t Natural gas Coalbed p Oil Wells Gas Wells	product hous. b/c s (MMcf/c duction (TD bbls s (YTD M as mark output p obls.) s (Mcf) methan	i) lay) Mcf) xeted product per producing e (YTD MMcf)	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922 148 0 17
Natural gas Total* Average p Crude oil (t NGL (thous Natural gas Total proc Crude oil (t Natural gas Matural gas (MMcf) Average of Crude oil (t Natural gas Coalbed p Oil Wells	product hous. b/c s (MMcf/c duction (TD bbls s (YTD M as mark output p obls.) s (Mcf) methan	i) lay) Mcf) xeted product per producing e (YTD MMcf)	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922 148 0
Natural gas Total* Average   Crude oil (t NGL (thous Natural gas Total proc Crude oil (\ Natural gas Natural gas (MMcf) Average of Crude oil (t Natural gas Coalbed I Oil Wells Gas Wells Daily Avera	product hous. b/d) s (MMcf/c duction (TD bbls s (YTD M as mark output p obls.) s (Mcf) methan	i) lay) Mcf) xeted product per producing e (YTD MMcf) f) / Well	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922 148 0 17 .4
Natural gas Total* Average p Crude oil (t NGL (thous Natural gas Total proc Crude oil (t Natural gas (MMcf) Average of Crude oil (t Natural gas Coalbed p Oil Wells Gas Wells Daily Avera	product hous. b/d) s (MMcf/c duction (TD bbls s (YTD M as mark output p obls.) s (Mcf) methan	i) lay) Mcf) xeted product per producing e (YTD MMcf)	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922 148 0 17 .4 NA
Natural gas Total* Average p Crude oil (t NGL (thous Natural gas Total proc Crude oil (t Natural gas (MMcf) Average of Crude oil (t Natural gas Coalbed p Oil Wells Gas Wells Daily Avera Heavy oil Wells	product hous. b/c s. b/d) s (MMcf/c duction (TD bbls s (YTD M as mark output p bbls.) s (Mcf) methan nge (MMc	i) lay) Mcf) xeted product per producing e (YTD MMcf) f) / Well	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922 148 0 17 .4 NA NA
Natural gas Total* Average p Crude oil (t NGL (thous Natural gas Total proc Crude oil (t Natural gas (MMcf) Average of Crude oil (t Natural gas Coalbed p Oil Wells Gas Wells Daily Avera	product hous. b/c s (MMcf/c duction (TD bbls s (YTD M as mark output p obls.) s (Mcf) methan uge (MMcc (YTD bb	i) lay) Mcf) xeted product per producing e (YTD MMcf) f) / Well	13,727 32,070 3 0 260 1,034 95,013 ion 114,116 well 56 6,922 148 0 17 .4 NA

Source: For specific methodology and source details, please see pages 6 and 131. \* World Oil for Number of oil producing wells.

#### COMPILED BY IPAA AUGUST 2010

# 2008 Latest Available Data

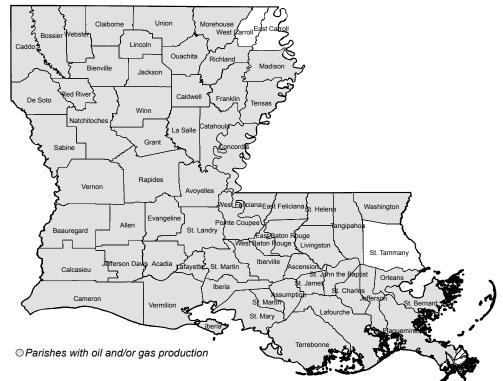
Petroleum rese as of 12/31/08 (mill. bbl			
C New reserves Production Net annual chang Proved reserves	rude Oil -6 1 je -7 17	NGL 14 3 11 100	Total 8 4 4 117
Natural gas res as of 12/31/08 (Bcf)	serves		
-	0 0	d Non- Associate 355 97 258 2,812	Dry d Gas 338 93 245 2,714
Cost of drilling	and eq Cost/ft.	Cost/ 1	Total Cost
Oil Gas Dry	(\$) 263 157 213	well (\$) ( 408,678 671,026 329,611	(thous. \$) 108,708 405,300 121,297
Marginal oil we	ells		
Producing margin Crude oil product Crude oil product	ion in bbl		13,727 740 3
Marginal nature	al gas v	vells	
Producing margin Natural gas produ		Mcf)	13,727 83,858
Mineral lease r	oyalties	, bonuses	s & rent
Oil Gas Total Royalties		\$ \$ \$ 2	272,742 233,443 2,005,207
Horizontal well	s drillec	i	184
Average numb	er of en	nployees	
Oil and natural ga Refining Transportation Wholesale Retail Pipeline construct Oilfield machinery	tion	ion	2,494 1,115 1,781 3,026 18,462 1,129 0
Total natroloum in			20.007

Total petroleum industry

*Gas production in Catron Creek field* has increased over 300% from 1997 through 2008. An additional 37 wells were completed here in 2008.

28,007

# Louisiana



#### **Background Information** Parishes Number of parishes 64 With oil and/or gas production 61 First year of production Crude oil 1902 Natural gas 1905 Year and amount of peak production Crude oil -935,243 thous. bbls. 1971 Natural gas - 8,242,423 MMcf 1973 Deepest producing well (ft.) Crude oil 22,856 23,903 Natural gas Year and depth of deepest well drilled (ft.) 1981 25,703 Cumulative number of total wells drilled as of 12/31/08 (excluding service wells) Oil wells 83,278 40% Gas wells 49,779 24% Dry holes 76,125 36% Total 100% 209,182 Cumulative crude oil wellhead value \$273,241,451 as of 12/31/08 (thous. \$) Cumulative production & new reserves as of 12/31/08 Crude NGL Natural Oil (mill. bbls.) Total Gas (Bcf) Reserves 27,806 6,422 34,228 270,976 Production 18,762 4,652 23,414 148,929

# Value of Oil and Gas

Average wellhead pri	се	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$100.74 \$8.73
Wellhead value of pro (2008, in thous. \$)	oduction	
Crude oil Natural gas Total	\$ 12	7,355,128 2,024,667 9,379,795
Average natural gas (2008, \$/Mcf)	price	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$15.49 \$13.52 \$9.32 \$10.01 \$9.58
Severance taxes paid (2008, in thous. \$)	d \$^	1,017,654
Top 10 producing par (2008 on a BOE basis)	rishes	
County	% Proc	duction
County Plaquemines	% Proo State 9.82	Juction US 0.53
Plaquemines Bossier	State	US
Plaquemines Bossier De Soto	State 9.82 9.27 7.45	US 0.53 0.50 0.40
Plaquemines Bossier De Soto Terrebonne	State 9.82 9.27 7.45 7.04	US 0.53 0.50 0.40 0.38
Plaquemines Bossier De Soto Terrebonne Bienville	State 9.82 9.27 7.45 7.04 6.19	US 0.53 0.50 0.40 0.38 0.33
Plaquemines Bossier De Soto Terrebonne Bienville Caddo	State 9.82 9.27 7.45 7.04 6.19 5.88	US 0.53 0.50 0.40 0.38 0.33 0.31
Plaquemines Bossier De Soto Terrebonne Bienville	State 9.82 9.27 7.45 7.04 6.19	US 0.53 0.50 0.40 0.38 0.33
Plaquemines Bossier De Soto Terrebonne Bienville Caddo Vermiliion	State 9.82 9.27 7.45 7.04 6.19 5.88 5.72	US 0.53 0.50 0.40 0.38 0.33 0.31 0.31 0.31 0.30 0.22
Plaquemines Bossier De Soto Terrebonne Bienville Caddo Vermiliion Cameron	State 9.82 9.27 7.45 7.04 6.19 5.88 5.72 5.56	US 0.53 0.50 0.40 0.38 0.33 0.31 0.31 0.31 0.30

#### Number of wells drilled

		drilled	
E	xploratory	Developmen	t Total
Oil	2	358	360
Gas	10	1,094	1,104
Dry	44	262	306
Total	56	1,714	1,770
Total fo (thous. ft.)	ootage dril	lled	
E	xploratory	Developmen	t Total
Oil	31.5	1,829.3	1,860.7
Gas	96.8	11,208.0	11,304.7
Dry	342.7	2,204.8	2,547.4
Total	470.9	15,242.0	15,712.9
(Note: Tota	ils may not add	due to rounding.)	
-	eld wildcat (thous. ft.)	ts drilled	30 258.1
Averag	je rotary ri	gs active	167
Permits	S		2,688
Statew	ide rank		Natural Cao
Wells dr	illed	Crude Oil 6th	Natural Gas 5th
Producti		5th	6th
	es (2008)	9th	7th
		0.11	
	er of opera		1,040
N Lu una la a	or of produ		
	er or produ	icing wells	
(12/31/08)	•	icing wells	19 156
(12/31/08) Crude of	il	icing wells	18,156
(12/31/08) Crude of Natural (	il	icing wells	11,879
(12/31/08) Crude of	il	icing wells	
(12/31/08) Crude of Natural ( Total	il gas	Ū.	11,879
(12/31/08) Crude of Natural ( Total	il	ion	11,879
(12/31/08) Crude of Natural ( Total Averag Crude of NGL (the	il gas je product il (thous. b/c ous. b/d)	ion J)	11,879 30,035
(12/31/08) Crude of Natural ( Total Averag Crude of NGL (the	il gas je product il (thous. b/c	ion J)	11,879 30,035 132.9
(12/31/08) Crude oi Natural ( Total Averag Crude oi NGL (the Natural (	il gas je product il (thous. b/d ous. b/d) gas (MMcf/d	ion J)	11,879 30,035 132.9 66.3
(12/31/08) Crude of Natural g Total Averag Crude of NGL (the Natural g	il gas je product il (thous. b/d ous. b/d) gas (MMcf/c roduction	ion 1) day)	11,879 30,035 132.9 66.3 3,557.4
(12/31/08) Crude of Natural g Total Averag Crude of NGL (the Natural g Total p Crude of	il gas il (thous. b/d) gas (MMcf/c roduction il (YTD bbls	ion t) day) , in thous.)	11,879 30,035 132.9 66.3 3,557.4 48,626
(12/31/08) Crude of Natural g Total Averag Crude of NGL (the Natural g Total p Crude of	il gas je product il (thous. b/d ous. b/d) gas (MMcf/c roduction	ion t) day) , in thous.)	11,879 30,035 132.9 66.3 3,557.4
(12/31/08) Crude of Natural g Total Averag Crude of NGL (the Natural g Total p Crude of Natural g	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M	ion t) day) , in thous.) Mcf)	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007
(12/31/08) Crude of Natural g Total Averag Crude of NGL (the Natural g Total p Crude of Natural g	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M	ion t) day) , in thous.)	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion
(12/31/08) Crude of Natural g Total Averag Crude of NGL (the Natural g Total p Crude of Natural g	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M	ion t) day) , in thous.) Mcf)	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007
(12/31/08) Crude of Natural g Total Averag Crude of NGL (the Natural g Total p Crude of Natural g Natural g	il gas il (thous. b/d) gas (MMcf/c roduction il (YTD bbls gas (YTD M l gas mark	ion day) , in thous.) Mcf) keted produc	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natural (MMcf) Averag	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M I gas mark je output p	ion t) day) , in thous.) Mcf)	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well
(12/31/08) Crude oi Natural g Total Averag Crude oi NGL (the Natural g Total p Crude oi Natural g Natural g Matural (MMcf) Averag Crude oi	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M I gas mark je output p il (bbls.)	ion day) , in thous.) Mcf) keted produc	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678
(12/31/08) Crude oi Natural g Total Averag Crude oi NGL (the Natural g Total p Crude oi Natural g Natural g Matural (MMcf) Averag Crude oi	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M I gas mark je output p	ion day) , in thous.) Mcf) keted produc	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well
(12/31/08) Crude oi Natural g Total Averag Crude oi NGL (the Natural g Total p Crude oi Natural g Natural g MMcf) Averag Crude oi Natural g	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M I gas mark je output p il (bbls.) gas (Mcf)	ion <sup>(j)</sup> , in thous.) <sup>(Mcf)</sup> keted produc	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natural of Natural of Crude of Crude of Crude of Crude of Crude of Crude of Natural of Crude of Natural of Crude of Natural of Crude of Natural of Crude of Natural of Crude of Natural of	il gas je product il (thous. b/d) gas (MMcf/c roduction il (YTD bbls gas (YTD M I gas mark je output p il (bbls.) gas (Mcf) ed methan	ion day) , in thous.) Mcf) keted produc	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606 NA
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Crude of Natural of Natural of Crude of Natural of Crude of Natural of On Natural of Crude of Natural of On Natural of Crude of Natural of On Natural of Natural of Natural of Natural of Natural of Crude of Natural of Crude of Natural of On Natural of Natural of Natural of Natural of Crude of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural	il gas je product il (thous. b/d) gas (MMcf/c roduction il (YTD bbls gas (YTD M I gas marl je output p il (bbls.) gas (Mcf) ed methan	ion <sup>(j)</sup> , in thous.) <sup>(Mcf)</sup> keted produc	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606 NA NA
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Crude of Natural of Crude of Natural of Crude of Natural of On Natural of Crude of Natural of On Natural of Crude of Natural of On Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natur	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M I gas marl je output p il (bbls.) gas (Mcf) ed methan s lls	ion J) day) , in thous.) Mcf) keted produc per producing e (YTD MMcf)	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606 NA NA NA
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Crude of Natural of Crude of Natural of Crude of Natural of On Natural of Crude of Natural of On Natural of Crude of Natural of On Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natur	il gas je product il (thous. b/d) gas (MMcf/c roduction il (YTD bbls gas (YTD M I gas marl je output p il (bbls.) gas (Mcf) ed methan	ion J) day) , in thous.) Mcf) keted produc per producing e (YTD MMcf)	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606 NA NA
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natural of Natural (MMcf) Averag Crude of Natural of Natural of Crude of Natural of Crude of Natural of On Natural of Crude of Natural of On Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natura	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M I gas mark je output p il (bbls.) gas (Mcf) ed methan s lls erage (MMd	ion J) day) , in thous.) Mcf) keted produc per producing e (YTD MMcf) cf) / Well	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606 NA NA NA
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natu	il gas je product il (thous. b/d) gas (MMcf/d roduction il (YTD bbls gas (YTD M I gas mark je output p il (bbls.) gas (Mcf) ed methan s lls erage (MMd	ion J) day) , in thous.) Mcf) keted produc per producing e (YTD MMcf)	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606 NA NA NA NA NA NA NA
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natural of Natural of Natu	il gas je product il (thous. b/d) gas (MMcf/c roduction il (YTD bbls gas (YTD M I gas mark je output p il (bbls.) gas (Mcf) ed methan s lls erage (MMc oil (YTD bb	ion J) day) , in thous.) Mcf) keted produc per producing e (YTD MMcf) cf) / Well	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606 NA NA NA NA
(12/31/08) Crude of Natural of Total Averag Crude of NGL (the Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Natural of Crude of Natural of Crude of Natural of Crude of Natural of Crude of Natural of Natural of Natural of Natural of N	il gas je product il (thous. b/d) gas (MMcf/c roduction il (YTD bbls gas (YTD M I gas mark je output p il (bbls.) gas (Mcf) ed methan s lls erage (MMc oil (YTD bb	ion J) day) , in thous.) Mcf) keted produc per producing e (YTD MMcf) cf) / Well	11,879 30,035 132.9 66.3 3,557.4 48,626 1,302,007 tion 1,377,396 g well 2,678 109,606 NA NA NA NA NA NA NA NA

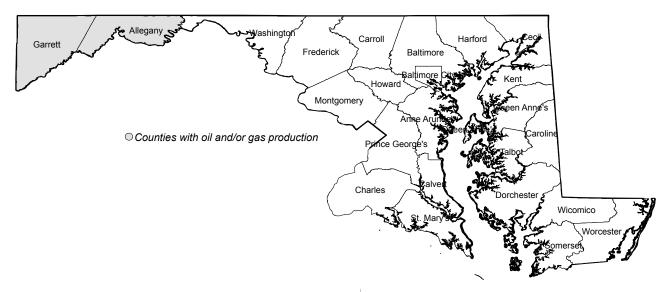
Source: For specific methodology and source details, please see pages 6 and 131.

# 2008 Latest Available Data

Petroleum rese as of 12/31/08(mill. bbls.	.)		
C New reserves	rude O -16	il NGL 44	Total 28
Production	54	47	101
Net annual change	e -70	-3	-73
Proved reserves	388	300	688
Natural gas res as of 12/31/08 (Bcf)	erves		
	ssociat		Dry
L New reserves	Dissolve 701	d Associate 2,176	ed Gas 2,847
Production	107	1,246	2,847
Net annual change		930	1,528
Proved reserves		10,581	11,573
Cost of drilling a	and ec	uipping we	ells
(	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	877	4,532,613	1,631,741
Gas	678 631	6,944,747	7,667,000 1,606,907
Dry	031	5,251,329	1,000,907
Marginal oil wel	lls		
Producing margina			16,086
Crude oil productio			9,781
Crude oil productio	) מימ חכ	thous.)	27
Marginal natura	al gas v	wells	
as of 12/31/08			E 4 E 4
Producing margina Natural gas produce		(Mcf)	5,454 54,796
Mineral lease ro	oyaltie		
Oil			7,053,781
Gas Total Royalties			42,065,703 55,154,986
Iotal Royalles		Ψ	55,154,500
Horizontal wells	s drille	d	85
Average number	er of e	mployees	
Oil and natural gas	s extrac	tion	51,336
Refining			10,874
Transportation Wholesale			4,158 3,921
Retail			17,927
Pipeline constructi	on		17,336
Oilfield machinery			8,898
Total petroleum inc	dustry		114,450

*Discovered in 1916, Elm Grove field* in Louisiana is the top producing gas field in 2008. Over 180 wells were completed in 2008 to help add to the over 140 million MCFs of gas produced.

# Maryland



# **Background Information**

Counties Number of o With oil and		-	'n	23 2
First year Crude oil Natural gas		oduction	1	 1950
Year and Crude oil – Natural gas	_	•	ik prod	uction  1959
Deepest p Crude oil Natural gas		ing well	(ft.)	NA NA
Year and	depth	of deepe	est well	drilled (ft.)
1973				11,617
Cumulativ as of 12/31/08 (				lls drilled
Oil wells Gas wells Dry holes Total			-	NA 46% 54% 100%
Cumulativ as of 12/31/08 (		le oil we	llhead	value NA
Cumulativ	e proc	duction 8	k new i	reserves
Reserves	Crude Oil 0	NGL (mill. bbls.) NA	Total NA	Natural Gas (Bcf) NA

NA

NA

NA

# Value of Oil and Gas

Average wellhead price	÷	
Crude oil (\$/bbl.)		NA
Natural gas (\$Mcf)		NA
Wellhead value of prod (2008, in thous. \$)	uction	
Crude oil		NA
Natural gas		NA
Total		NA
Average natural gas pr (2008, \$/Mcf)	ice	
Residential consumers		\$16.08
Commercial consumers		\$13.14
Industrial consumers		\$13.46
Electric utilities		\$11.16
City Gate		\$10.23
Severance taxes paid (2008, in thous. \$)		\$1
Top producing counties (2008 on a BOE basis)	3	
County	% Pro	duction
-	State	US
NA	NA	NA

Production 0

2000 muusu	Janshus	•
Number of wells of	drilled	
Exploratory	Development	Total
Oil NA	NA	NA
Gas NA	NA	NA
Dry NA Total NA	NA NA	NA NA
IUlai NA	NA	INA
Total footage drill (thous. ft.)	ed	
Exploratory	Development	Total
Oil NA	NA	NA
Gas NA	NA	NA
Dry NA Total NA	NA NA	NA NA
iolai NA	NA	IN/A
New-field wildcats Footage (thous. ft.)	s drilled	NA NA
Average rotary rig	s active	0
Permits		0
Statewide rank		
Wells drilled	Crude Oil Na NA	atural Gas 29th
Production	NA	32nd
Reserves (2008)	NA	NA
,		
Number of operat	ors	
Number of produc	cing wells*	
(12/31/08) Crude oil		NA
Natural gas		8
Total		8
Average production	on	
Crude oil (thous. b/d)		NA
NGL (thous. b/d)	)	NA
Natural gas (MMcf/da	ay)	NA
Ū (		
Total production		
Crude oil (YTD bbls,		NA
Natural gas (YTD MM	VICT)	NA
Natural gas mark	eted productic	'n
(MMcf)		28
(INIVICI)		20
Average output p	er producing v	vell
Crude oil (bbls.)		NA
Natural gas (Mcf)		NA
Coalbed methane	e (YTD MMcf)	NA
Oil Wells		NA
Gas Wells		NA
Daily Average (MMcf	) / Well	NA
	o in these )	NIA
Heavy oil (YTD bbl	s, in mous.)	NA
Wells		NA
Av. bbls per day Av. bbls per well/d		NA NA
		INA.

Source: For specific methodology and source details, please see pages 6 and 131.

\* World Oil for Number of natural gas producing wells.

# 2008 Latest Available Data

Petroleum reserv	/es		utu
as of 12/31/08 (mill. bbls.)			
Cruc New reserves	le Oil NA	NGL NA	Total NA
Production	NA	NA	NA
Net annual change		NA	NA
Proved reserves	NA	NA	NA
Natural gas rese as of 12/31/08 (Bcf)	rves		
	sociated		
		Associa NA	
New reserves Production	NA NA	NA NA	NA NA
Net annual change		NA	NA
Proved reserves	NA	NA	NA
Cost of drilling ar	nd equ	ipping w	vells
Со	st/ft.	Cost/	Total Cost
,	\$)	well (\$)	(thous. \$)
Oil	NA	NA	NA
Gas	NA NA	NA NA	NA NA
Dry	INA	NA	INA
Marginal oil wells	6		
Producing marginal			NA
Crude oil production			NA
Crude oil production	i b/a (th	ous.)	NA
Marginal natural	gas we	ells	
as of 12/31/08			
Producing marginal			NA
Natural gas product	ion (MM	lct)	NA
Mineral lease roy	alties,	bonuse	s & rent
Oil			
Gas Total Royalties			 \$10,882
Total Royalites			φ10,002
Horizontal wells	drilled		0
Average number	of em	ployees	
Oil and natural gas	extractio	on	677
Refining			765
Transportation Wholesale			665 3,292
Retail			9,709
Pipeline construction	n		1,203
Oilfield machinery			0
Total petroleum indu	istry		16,311

The first exploration well was drilled in 1888 in the Cumberland Narrows. In 1944 there was first evidence of natural gas found in a well drilled on the Accident Dome in Garrett County. Later discoveries took place in four fields in the Appalachian region: Mountain Lake Park, Accident, Negro Mountain and Pennlands (Artemas). The Marcellus Shale covers the westernmost portion of the state.





# **Background Information**

Counties				
Number of With oil and		roductio	on	83 59
First yea	r of prod	luctior	า	
Crude oil Natural gas	8			1900 1909
Year and	amount	of pea	ak prod	uction
Crude oil – Natural gas	,			1979 1997
Deepest	producin	g well	(ft.)	
Crude oil Natural gas	8			12,742 14,716
Year and	depth of	deepe	est well	drilled (ft.)
i our unu				
1975				17,466
				,
1975 Cumulatir as of 12/31/08 Oil wells		rvice well 15,37	ls) 77	lls drilled 27%
1975 Cumulatir as of 12/31/08 Oil wells Gas wells		rvice well	ls) 77 25	lls drilled
1975 Cumulatir as of 12/31/08 Oil wells		15,37 14,32	s) 77 25 90	27% 25%
1975 Cumulatir as of 12/31/08 Oil wells Gas wells Dry holes	(excluding se	15,37 14,32 26,79 56,49	s) 77 25 90 92 92 91 head	27% 25% 48% 100%
1975 Cumulati as of 12/31/08 Oil wells Gas wells Dry holes Total Cumulati as of 12/31/08	(excluding se VE Crude (thous. \$)	15,37 14,32 26,79 56,49 Oil we	s) 77 25 90 92 92 91 Head \$1	lls drilled 27% 25% 48% 100% value 5,742,628
1975 Cumulati as of 12/31/08 Oil wells Gas wells Dry holes Total Cumulati as of 12/31/08	(excluding se ve crude (thous. \$) ve produ Crude	rvice well 15,37 14,32 26,79 56,49 oil we ction & NGL	s) 77 25 30 32 \$11 \$11 \$ \$ 1 extra \$11	lls drilled 27% 25% 48% 100% value 5,742,628 eserves Natural
1975 Cumulati as of 12/31/08 Oil wells Gas wells Dry holes Total Cumulati as of 12/31/08	(excluding se ve crude (thous. \$) ve produ Crude	rvice well 15,37 14,32 26,79 56,49 oil we	s) 77 25 30 32 \$11 \$11 \$ \$ 1 extra \$11	lls drilled 27% 25% 48% 100% value 5,742,628 eserves

### Value of Oil and Gas

Average wellhead price	е	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$95.75 \$5.63
Wellhead value of prod (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$   595,852 \$1,532,255 \$2,128,107
Average natural gas pr (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$11.93 \$10.66 \$10.26 \$ 8.75 \$ 9.22
Severance taxes paid (2008, in thous. \$)		\$103,928
Top 10 producing cour (2008 on a BOE basis)	nties	
County	% Pr	oduction
	State	US
Otsego	22.14	0.14
Montmorency	21.16	0.13
Antrim	14.07	0.09
Alpena Manistee	6.97 4.71	0.04 0.03
Oscoda	3.96	0.02
Kalkaska	3.01	0.02
Alcona	2.44	0.01
Calhoun Crawford	2.37 2.13	0.01 0.01
Grawioru	2.13	0.01

MICHIGAN

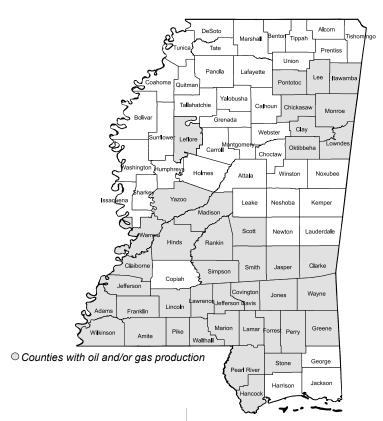
Number of wells drilled	
Number of wells drilled	nent Tatal
Exploratory Developr Oil 20 64	nent Total 84
Gas 8 353	361
Dry 24 33	57
Total 52 450	502
Total footage drilled (thous. ft.)	
Exploratory Developr	nent Total
Oil 89.4 280.2	369.6
Gas 51.3 653.3 Dry 109.1 92.7	704.6 201.8
Total 249.8 1,026.3	1,276.1
(Note: Totals may not add due to rounding	
New-field wildcats drilled Footage (thous. ft.)	34 176.1
Average rotary rigs active	1
Permits	1,093
Statewide rank	
Crude Oil	
Wells drilled 15th	13th 13th
Production 17th Reserves (2008) 16th	15th
	loui
Number of operators	175
Number of producing wells	6
(12/31/08) Crude oil	3,755
Natural gas	10,050
Total	13,805
Average production	
Crude oil (thous. b/d)	16.5
NGL (thous. b/d) Natural gas (MMcf/day)	1.9 398.6
Natural gas (Minici/day)	590.0
Total production	
Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf)	6,023 145,875
	140,070
Natural gas marketed proc	luction
(MMcf)	272,159
Average output per produc	cing well
Crude oil (bbls.)	1,604
Natural gas (Mcf)	14,515
Coalbed methane (YTD MM	lcf) NA
Oil Wells	NA
Gas Wells Daily Average (MMcf) / Well	NA NA
Daily Average (MMcf) / Well	INA
Heavy oil (YTD bbls, in thous	.) NA
Wells	NA
Av. bbls per day	NA
Av. bbls per well/d	NA

Source: For specific methodology and source details, please see pages 6 and 131.

Petroleum reserves as of 12/31/08 (mill. bbls.) Crude Oil NGL Total 9 New reserves -1 10 Production 3 9 6 Net annual change -7 7 0 Proved reserves 62 110 48 Natural gas reserves as of 12/31/08 (Bcf) Associated Non-Dry Dissolved Associated Gas New reserves -15 -262 -299 Production 145 157 16 Net annual change -31 -407 -456 Proved reserves 148 3,105 3,174 Cost of drilling and equipping wells Cost/ft. Cost/ Total Cost well (\$) (thous. \$) (\$) Oil 654 2,876,842 241,655 Gas 837 1,633,882 589,831 372 1,316,600 Dry 75,046 Marginal oil wells Producing marginal wells 3,590 Crude oil production in bbls. (thous.) 3,393 Crude oil production b/d (thous.) 9 Marginal natural gas wells as of 12/31/08 9.808 Producing marginal wells Natural gas production (MMcf) 126,805 Mineral lease royalties, bonuses & rent Oil \$ 604,586 Gas \$3,139,272 **Total Royalties** \$4,255,574 Horizontal wells drilled 99 Average number of employees Oil and natural gas extraction 2.715 Refining 1,283 Transportation 3,985 Wholesale 4,947 Retail 24,309 Pipeline construction 652 Oilfield machinery 0 Total petroleum industry 37,891

> Antrim field in Michigan was discovered in the late 1960s. By 2008, the field was producing over 90% of the state's total gas.

# Mississippi



# **Background Information**

Counties Number of counties With oil and/or gas		82 41
First year of pro Crude oil Natural gas	oduction	1889 1923
Year and amour Crude oil —65,119	thous. bbls.	uction 1970
Natural gas — 221, Deepest produc		1988
Crude oil Natural gas	<i>.</i>	22,430 23,894
Year and depth of 1986	of deepest well	drilled (ft.) 25,500
Cumulative num as of 12/31/08 (excluding		lls drilled
Oil wells Gas wells Dry holes Total	10,936 4,302 18,067 33,305	33% 13% 54% 100%
Cumulative crud as of 12/31/08 (thous. \$)		value 24,434,411
Cumulative prod as of 12/31/08		reserves
Crude Oil Reserves 2,807	NGL (mill. bbls.) Total 133 2,940	Natural Gas (Bcf) 10,138

Production 2,583 151 2,734

9,173

## Value of Oil and Gas

Average wellhead price	e	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$94.60 \$8.80
Wellhead value of proc (2008, in thous. \$)	luction	
Crude oil Natural gas Total	\$	2,090,849 850,441 2,941,290
Average natural gas pr (2008, \$/Mcf)	ice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$13.96 \$12.48 \$10.37 \$ 9.62 \$ 9.91
Severance taxes paid (2008, in thous. \$)		\$129,821
Top 10 producing cour (2008 on a BOE basis)	ities	
County	% Pro	duction
Rankin Jasper Wayne Lincoln Jefferson Davis Madison Covington Jones Lamar Pike	State 48.89 7.13 5.78 5.40 5.24 4.37 3.27 3.04 2.71 1.81	US 0.75 0.11 0.09 0.08 0.08 0.07 0.05 0.05 0.05 0.04 0.03

### Number of wells drilled

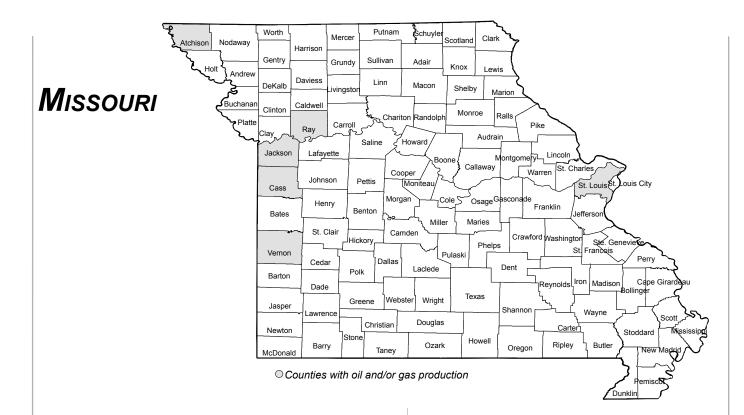
Numbe			
E	Exploratory	Developmen	t Total
Oil	1	91	92
Gas	5	113	118
Dry	26	37	63
Total	32	241	273
Total fo (thous. ft.)	ootage dril	led	
E	Exploratory	Developmen	t Total
Oil	5.5	770.6	776.1
Gas	35.3	1,056.5	1,091.7
Dry	219.8	332.8	552.6
Total	260.5	2,160.0	2,420.4
(Note: Tota	ais may not add	due to rounding.)	
	eld wildcat	s drilled	25 185.9
-			
Averag	ge rotary ri	gs active	13
Permit	s		542
Statew	vide rank		
	201		Natural Gas
Wells dr		19th 13th	21st
Product	ion es (2008)	13th 14th	20th 19th
Reserve	2000)	1401	1901
Numbe	er of opera	tors	201
Numbe	er of produ	cing wells	
(12/31/08)		•	
, ,			
Crude o	oil		2,082
Crude o Natural	oil		1,786
Crude o	oil		
Crude o Natural Total	il gas	ion	1,786
Crude o Natural Total Averaç	<sup>iil</sup> gas ge product		1,786 3,868
Crude o Natural Total Averaç Crude o	il gas ge product il (thous. b/c		1,786 3,868 57
Crude o Natural Total Averag Crude o NGL (th	ill gas ge producti ill (thous. b/c) ous. b/d)	1)	1,786 3,868
Crude o Natural Total Averag Crude o NGL (th	il gas ge product il (thous. b/c	1)	1,786 3,868 57 3.9
Crude o Natural Total Averag Crude o NGL (th Natural	ill gas ge producti ill (thous. b/c) ous. b/d)	1)	1,786 3,868 57 3.9
Crude o Natural Total Averag Crude o NGL (th Natural Total p	iil gas ge product iil (thous. b/c ous. b/d) gas (MMcf/c	l) lay)	1,786 3,868 57 3.9
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o	iil gas ge producti iil (thous. b/c ous. b/d) gas (MMcf/c production	l) lay) , in thous.)	1,786 3,868 57 3.9 906.3
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural	iil gas ge product iil (thous. b/c) ous. b/d) gas (MMcf/c production iil (YTD bbls gas (YTD M	l) lay) , in thous.)	1,786 3,868 57 3.9 906.3 20,859 331,699
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural	iil gas ge product iil (thous. b/c) ous. b/d) gas (MMcf/c production iil (YTD bbls gas (YTD M	l) lay) , in thous.) Mcf)	1,786 3,868 57 3.9 906.3 20,859 331,699
Crude o Natural Total Averaç Crude o NGL (th Natural Total p Crude o Natural Natura (MMcf)	il gas ge product il (thous. b/c) ous. b/d) gas (MMcf/c production il (YTD bbls gas (YTD M ll gas mark	l) lay) , in thous.) Mcf) keted product	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641
Crude o Natural Total Averaç Crude o NGL (th Natural Total p Crude o Natural Natura (MMcf)	il gas ge product il (thous. b/c) ous. b/d) gas (MMcf/c production il (YTD bbls gas (YTD M ll gas mark	l) lay) , in thous.) Mcf)	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural (MMcf) Averag Crude o	il gas ge producti il (thous. b/c) ous. b/d) gas (MMcf/c) production il (YTD bbls gas (YTD M Il gas mark ge output p il (bbls.)	l) lay) , in thous.) Mcf) keted product	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural (MMcf) Averag Crude o	il gas ge producti il (thous. b/d) gas (MMcf/c production il (YTD bbls gas (YTD M Il gas mark ge output p	l) lay) , in thous.) Mcf) keted product	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural Matura (MMcf) Averag Crude o Natural	ill gas ge producti vil (thous. b/c) ous. b/d) gas (MMcf/c) production vil (YTD bbls gas (YTD M il gas mark ge output p vil (bbls.) gas (Mcf)	i) lay) , in thous.) Mcf) keted producing per producing	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 y well 10,019 185,722
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural Matura (MMcf) Averag Crude o Natural	iil gas ge producti iil (thous. b/c) ous. b/d) gas (MMcf/c) production iil (YTD bbls gas (YTD M il gas mark ge output p iil (bbls.) gas (Mcf) ed methan	l) lay) , in thous.) Mcf) keted product	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 y well 10,019 185,722 NA
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural MMcf) Averag Crude o Natural (MMcf) Averag Crude o Natural	iil gas ge producti iil (thous. b/c) ous. b/d) gas (MMcf/c) production iil (YTD bbls gas (YTD M Il gas mark ge output p iil (bbls.) gas (Mcf) ed methand s	i) lay) , in thous.) Mcf) keted producing per producing	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 y well 10,019 185,722 NA NA
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural Natura (MMcf) Averag Crude o Natural On atural Crude o Natural	il gas ge producti vil (thous. b/c) ous. b/d) gas (MMcf/c) production vil (YTD bbls gas (YTD M il gas mark ge output p vil (bbls.) gas (Mcf) ed methants sells	i) lay) Mcf) keted product per producing e (YTD MMcf)	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 10,019 185,722 NA NA NA
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural Natura (MMcf) Averag Crude o Natural On atural Crude o Natural	iil gas ge producti iil (thous. b/c) ous. b/d) gas (MMcf/c production iil (YTD bbls gas (YTD M Il gas mark ge output p iil (bbls.) gas (Mcf) ed methand s	i) lay) Mcf) keted product per producing e (YTD MMcf)	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 y well 10,019 185,722 NA NA
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural MMcf) Averag Crude o Natural On atural Crude o Natural (MMcf) Crude o Natural	il gas ge producti vil (thous. b/c) ous. b/d) gas (MMcf/c) production vil (YTD bbls gas (YTD M ll gas mark ge output p vil (bbls.) gas (Mcf) ed methants sells verage (MMc	i) lay) Mcf) keted product per producing e (YTD MMcf)	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 10,019 185,722 NA NA NA
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural MMcf) Averag Crude o Natural On atural Crude o Natural (MMcf) Crude o Natural	il gas ge producti vil (thous. b/c) ous. b/d) gas (MMcf/c) production vil (YTD bbls gas (YTD M ll gas mark ge output p vil (bbls.) gas (Mcf) ed methants sells verage (MMc	i) lay) Mcf) keted product per producing e (YTD MMcf) f) / Well	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 10,019 185,722 NA NA NA NA
Crude o Natural Total Average Crude o NGL (th Natural Total p Crude o Natural Matura (MMcf) Average Crude o Natural Coalbe Oil Well Gas We Daily Av Wells	il gas ge producti vil (thous. b/c) ous. b/d) gas (MMcf/c) production vil (YTD bbls gas (YTD M ll gas mark ge output p vil (bbls.) gas (Mcf) ed methants sells verage (MMc	i) lay) Mcf) keted product per producing e (YTD MMcf) f) / Well	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 10,019 185,722 NA NA NA NA NA NA
Crude o Natural Total Averag Crude o NGL (th Natural Total p Crude o Natural Matura (MMcf) Averag Crude o Natural Coalbe Oil Well Gas We Daily Av Heavy Wells Av. bbls	ill gas ge producti vil (thous. b/c) ous. b/d) gas (MMcf/c) production vil (YTD bbls gas (YTD M ll gas mark ge output p vil (bbls.) gas (Mcf) ed methand s verage (MMc oil (YTD bb	i) lay) Mcf) keted product per producing e (YTD MMcf) f) / Well	1,786 3,868 57 3.9 906.3 20,859 331,699 tion 96,641 10,019 185,722 NA NA NA NA NA NA NA NA SA

Source: For specific methodology and source details, please see pages 6 and 131.

# 2008 Latest Available Data

Crude OilNGLTotalNew reserves70171Production21122Net annual change49049Proved reserves2499258				
Natural gas reserves as of 12/31/08 (Bcf)				
AssociatedNon-DryDissolvedAssociatedGasNew reserves21166186Production6104110Net annual change156276Proved reserves459901,030				
Cost of drilling and equipping wells				
Cost/ft.         Cost/         Total Cost           (\$)         well (\$)         (thous. \$)           Oil         730         6,160,795         566,793           Gas         734         6,789,863         801,204           Dry         554         4,857,974         306,052				
Marginal oil wells				
Producing marginal wells1,126Crude oil production in bbls. (thous.)2,522Crude oil production b/d (thous.)7				
Marginal natural gas wells as of 12/31/08				
Producing marginal wells1,286Natural gas production (MMcf)16,358				
Mineral lease royalties, bonuses & rent				
Oil         \$2,990,267           Gas         \$ 391,663           Total Royalties         \$4,011,949				
Horizontal wells drilled 47				
Average number of employees				
Oil and natural gas extraction4,297Refining2,094Transportation1,617Wholesale2,268Retail15,304Pipeline construction3,655Oilfield machinery84Total petroleum industry29,319				

*Discovered in 1946, Mallalieu West* field in Mississippi is the highest producing oil field in 2008. Four wells were completed in the field in 2008.



# **Background Information**

	114			
s production	6			
roduction				
	1889			
	1887			
unt of peak proc	luction			
nous. bbls.	1984			
68 MMcf	1938			
cing well (ft.)				
	NA			
	NA			
Year and depth of deepest well drilled (ft.)				
	10,089			
Cumulative number of total wells drilled as of 12/31/08 (excluding service wells)				
675	32%			
78	4%			
,	64%			
2,088	100%			
Cumulative crude oil wellhead value				
5)	\$118,220			
Cumulative production & new reserves				
NGL	Natural			
(mill. bbls.) Total	Gas (Bcf)			
	nous. bbls. 68 MMcf cing well (ft.) n of deepest well mber of total we ng service wells) 675 78 1,335 2,088 ide oil wellhead boduction & new NGL			

NA

NA

NA

7

NA

15

# Value of Oil and Gas

	\$83.96 NA
ction	
	\$8,312 NA \$8,312
e	
	\$13.36 \$12.02 \$11.32 NA \$ 8.03
% Production	
itate NA	US NA
	e % Produ tate

Reserves NA

7

Production

Number of wells drilled			
Exploratory Development	Total		
Oil NA NA	NA		
Gas NA NA	NA		
Dry NA NA	NA		
Total NA NA	NA		
Total footage drilled (thous. ft.)			
Exploratory Development	Total		
Oil NA NA	NA		
Gas NA NA	NA		
Dry NA NA	NA		
Total NA NA	NA		
(Note: Totals may not add due to rounding.)			
New-field wildcats drilled Footage (thous. ft.)	NA NA		
Average rotary rigs active	0		
Permits	0		
Statewide rank			
	Natural Gas		
Wells drilled 27th	30th		
Production 30th	NA		
Reserves (2008) NA	NA		
Number of operators			
Number of producing wells*			
Crude oil	425		
Natural gas	47		
Total	472		
Average production			
Crude oil (thous. b/d)	NA		
	NA		
NGL (thous. b/d)	NA NA		
NGL (thous. b/d) Natural gas (MMcf/day)			
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.)			
NGL (thous. b/d) Natural gas (MMcf/day) Total production	NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf)	NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.)	NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf)	NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product	NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product	NA NA NA ion 0		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing	NA NA NA ion 0 well		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.)	NA NA NA ion 0		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing	NA NA NA ion 0 well NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf)	NA NA NA ion 0 well NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf)	NA NA NA NA Well NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells	NA NA NA NA Well NA NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells	NA NA NA NA Well NA NA NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells	NA NA NA NA Well NA NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells Daily Average (MMcf) / Well	NA NA NA NA Well NA NA NA NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells Daily Average (MMcf) / Well Heavy oil (YTD bbls, in thous.)	NA NA NA NA NA NA NA NA NA NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells Daily Average (MMcf) / Well Heavy oil (YTD bbls, in thous.) Wells	NA NA NA NA Well NA NA NA NA NA NA NA NA NA		
NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf) Natural gas marketed product (MMcf) Average output per producing Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells Daily Average (MMcf) / Well Heavy oil (YTD bbls, in thous.)	NA NA NA NA NA NA NA NA NA NA NA NA		

Source: For specific methodology and source details, please see pages 6 and 131.

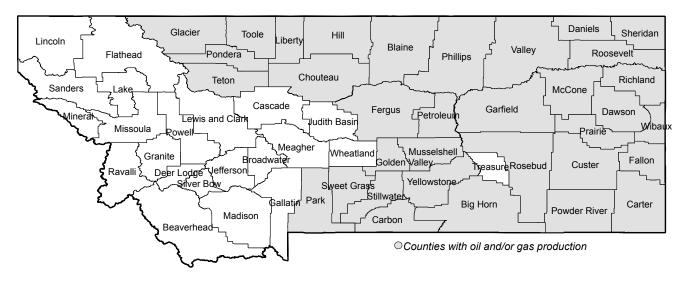
\* World Oil for Number of oil and natural gas producing wells.

### 2008 Latest Available Data

	Avanc		a	
Petroleum reserv as of 12/31/08 (mill. bbls.)				
Cru	de Oil	NGL	Total	
New reserves	NA	NA	NA	
Production	NA	NA	NA	
Net annual change	NA	NA	NA	
Proved reserves	NA	NA	NA	
Natural gas rese as of 12/31/08 (Bcf)	rves			
As	sociated	Non-	Dry	
Di	ssolved	Associated	Gas	
New reserves	NA	NA	NA	
Production	NA	NA	NA	
Net annual change	NA	NA	NA	
Proved reserves	NA	NA	NA	
Cost of drilling a	nd equi	pping wells	6	
(	Cost/ft.	Cost/ To	tal Cost	
	(\$)	well (\$) (th	nous. \$)	
Oil	NA	NA	NA	
Gas	NA	NA	NA	
Dry	NA	NA	NA	
Marginal oil wells	S			
Producing marginal	wollo		NA	
		(thous)	NA	
Crude oil production				
Crude oil productior	n b/a (tho	us.)	NA	
Marginal natural as of 12/31/08	gas we	lls		
Producing marginal	wells		NA	
Natural gas product		cf)	NA	
Mineral lease roy	yalties,	bonuses &	rent	
Oil				
Gas		· · - ·		
Total Royalties		\$17,8	06,274	
Horizontal wells	drilled		0	
Average number of employees				
Oil and natural gas	extractio	n	601	
Refining			501	
Transportation			3,440	
Wholesale			3,440 4,027	
Retail				
	~		25,182	
Pipeline constructio	11		430	
Oilfield machinery			0	
Total petroleum indu	ustry		34,181	

While there is no commercial gas production in Missouri, 47 domestic gas wells are being used in private homes and small businesses to fuel heating appliances.

# Montana



# **Background Information**

Counties Number of counties With oil and/or gas	-	56 34		
First year of pro	oduction			
Crude oil Natural gas		1916 1915		
Year and amour	nt of peak prod	uction		
Crude oil —48,460 thous. bbls. Natural gas — 116,848 MMcf		1968 2007		
Deepest produc	ing well (ft.)			
Crude oil Natural gas		22,625 19,999		
Year and depth of deepest well drilled (ft.)				
2006		22,037		
Cumulative number of total wells drilled as of 12/31/08 (excluding service wells)				
Oil wells	15,094	35%		
Gas wells	10,549 17,426	25% 40%		
Dry holes Total	43,069	100%		
Cumulative crude oil wellhead value as of 12/31/08 (thous. \$) \$24,788,840				
Cumulative production & new reserves				
Crude	NGL	Natural		
Oil	(mill. bbls.) Total	Gas (Bcf)		

57 2,046

47 1,727

4,632

3,568

# Value of Oil and Gas

Reserves 1,989

Production 1,680

2000 maast	-	
Number of wells		
Exploratory Oil 63	Development 107	t Total 170
Gas 50	297	347
Dry 32	23	55
Total 145	427	572
Total footage dril (thous. ft.)	led	
Exploratory	Development	t Total
Oil 716.6	918.1	1,634.7
Gas 146.0 Dry 186.7	477.0 96.7	623.0 283.5
Total 1,049.3	1,491.8	2,541.1
(Note: Totals may not add	due to rounding.)	
New-field wildcat Footage (thous. ft.)	s drilled	81 461.4
Average rotary ri	gs active	11
Permits		767
Statewide rank		
		Natural Gas
Wells drilled Production	16th 11th	14th 19th
Reserves (2008)	10th	20th
Number of opera	tors	246
Number of produ	cing wells	
(12/31/08) Crude oil		5,033
Natural gas		6,277
Total		11,310
Average producti		
Crude oil (thous. b/d	l)	86.0
NGL (thous. b/d) Natural gas (MMcf/d	lav)	0.3 213.7
<b>0</b> (		210.7
Total production		04.400
Crude oil (YTD bbls Natural gas (YTD M		31,480 78,197
Natural gas mark	ŗ	
(MMcf)	·	112,529
Average output p	er producing	well
Crude oil (bbls.)		6,255
Natural gas (Mcf)		12,458
Coalbed methan	e (YTD MMcf)	14,064
Oil Wells		2
Gas Wells	f) / \//ol/	928
Daily Average (MMc		38
Heavy oil (YTD bb	ls, in thous.)	266
Wells		84
Av. bbls per day		0.7
Av. bbls per well/d		3,170

Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

2000 Eulest Available	Bulu
Petroleum reserves as of 12/31/08 (mill. bbls.)	
New reserves-57Production32Net annual change-89	IGL Total 1 -56 1 33 0 -89 11 332
Natural gas reserves as of 12/31/08 (Bcf)	
DissolvedAssNew reserves55Production272Net annual change -22-3	Non-         Dry           ociated         Gas           57         62           38         114           31         -52           17         1,000
Cost of drilling and equippin Cost/ft. Cost	-
(\$) well (\$ Oil 558 5,360,70 Gas 450 808,41 Dry 543 2,799,43	<ul> <li>(thous. \$)</li> <li>911,319</li> <li>280,541</li> </ul>
Marginal oil wells	
Producing marginal wells Crude oil production in bbls. (thou Crude oil production b/d (thous.)	3,066 us.) 3,676 10
Marginal natural gas wells as of 12/31/08	
Producing marginal wells Natural gas production (MMcf)	5,625 47,551
Mineral lease royalties, bon	uses & rent
Oil Gas Total Royalties	\$ 45,808,097 \$ 25,473,634 \$125,176,757
Horizontal wells drilled	121
Average number of employe	ees
Oil and natural gas extraction Refining Transportation Wholesale Retail Pipeline construction Oilfield machinery Total petroleum industry	2,749 1,067 781 969 5,556 417 0 11,539

Over 20% of the gas production in Montana comes from the Cedar Creek field. Discovered in the early 1900s, an additional 79 wells were completed in 2008 to contribute to the top producing field in the state.

## Nebraska

	ļ					Keya F	Paha	Bo	yd	$\sim$	~~~~		_	
Sioux	Dawes	Sheridan	1	Cherry		Brown		Ho	olt	Kno	x (	Cedar Di	ixon the	2
	Box Butte					Biomi	Rock			Antelope	Pierce	Wayne	Dako Thurs	
Scotts Bluf	f		Grant	Hooker	Thomas	Blaine	Loup	Garfield	Wheeler		Madison	Stanton C	uming	Burt 2
Banner	Morrill	Garden	Arthur	McPhersor	n Logan	_		Valley	Greeley	Boone	Platte			Washington
Kimball	Cheyenne	Deuel	Keith			Cust	er	Sherman	Howard			Butler	Saunde	rs Sarpy
	1	ſ	Perkins	Lir	ncoln	Dawso	n E	Buffalo	Hall	Hamilto	ו York	Seward	Lancaste	
			Chase	Hayes	Frontier	Gospe	Phelps	Kearney	Adams	Clay	Fillmore	Saline		Otoe
			Dundy	Hitchcock	Red Willow	Furnas	Harlan	Franklin	Webster	Nuckolls	Thayer	Jeffersor		PawneeRichardson

○ Counties with oil and/or gas production

#### **Background Information**

Counties Number of With oil and			'n	93 19
First year Crude oil Natural gas		oductior	1	1939 1950
Year and	amour	nt of pea	ik prod	luction
Crude oil – Natural gas	-24,894	thous. bb	•	1962 1961
Deepest	oroduc	ing well	(ft.)	
Crude oil Natural gas	;	Ū	. ,	11,761 5,832
Year and	depth	of deepe	est well	drilled (ft.)
1997				13,128
Cumulativ as of 12/31/08				lls drilled
Oil wells		6,09		30%
Gas wells		55 13,55		3% 67%
Dry holes Total		20,20		100%
Cumulativ as of 12/31/08		le oil we		value 4,727,239
Cumulativ	/e proc	luction 8	k new	reserves
2001 12/0//00	Crude	NGL		Natural
_	Oil	(mill. bbls.)		Gas (Bcf)
Reserves	510	NA	510	NA

NA

507

NA

#### Value of Oil and Gas

Average wellhead pric	е	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$87.99 \$6.22
Wellhead value of prod (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$210,648 \$19,170 \$229,818
Average natural gas p (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities		\$11.11 \$ 9.62 \$ 9.12 NA
City Gate		\$ 8.12
Severance taxes paid (2008, in thous. \$)		\$5,855
Top 10 producing cour (2008 on a BOE basis)	nties	
County	% Pr	oduction
Kimball Hitchcock Dundy Cheyenne Red Willow Chase Banner Deuel Morrill Hayes	State 24.42 18.74 11.52 11.27 10.12 5.02 4.95 4.84 2.26 1.65	US 0.01 0.01 0.01 0.01 <0.01 <0.01 <0.01 <0.01 <0.01

Production 507

Nebraska

2000 mausti	y otatistic	3
Number of wells	drilled	
	Development	Total
Oil 9	24	33
Gas 18 Dry 44	110 29	128 73
Total 71	163	234
Total footage dril		
(thous. ft.)		
Exploratory		Total
Oil 39.6 Gas 52.7	124.9 262.7	164.5 315.5
Dry 182.8	109.3	292.1
Total 275.2	497.0	772.1
(Note: Totals may not add	due to rounding.)	
New-field wildcat Footage (thous. ft.)	s drilled	54 203.2
Average rotary ri	gs active	0
Permits		315
Statewide rank		
		latural Gas
Wells drilled	23rd	25th
Production Reserves (2008)	22nd 24th	26th NA
Reserves (2000)	2401	INA
Number of opera	tors	106
Number of produ	cing wells	
(12/31/08) Crude oil		1,234
Natural gas		328
Total		1,562
Average product	ion	
Crude oil (thous. b/c		6.5
NGL (thous. b/d)		0.0
Natural gas (MMcf/c	lay)	7.7
Total production		
Crude oil (YTD bbls Natural gas (YTD M		2,389 2,814
Natural gas (TTD M		2,014
Natural gas mark	eted producti	on
(MMcf)		3,082
Average output p	er producina	well
Crude oil (bbls.)		
Natural gas (Mcf)		1,936 8,578
Coalbed methan	e (YTD MMcf)	NA
Oil Wells		NA
Gas Wells		NA
Daily Average (MMc	f) / Well	NA
Heavy oil (YTD bb	ls, in thous.)	NA
Wells		NA
Av. bbls per day		NA
Av. bbls per well/d		NA

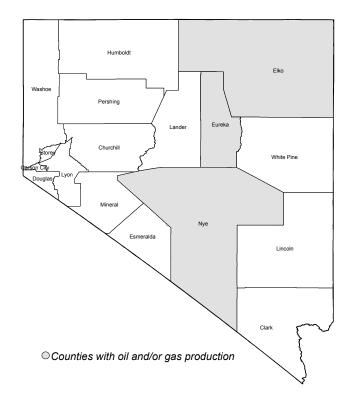
Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

Petroleum reser as of 12/31/08 (mill. bbls.)			
C New reserves Production Net annual change Proved reserves	rude ( -4 1 -4 8	Dil NGL NA NA NA NA	Total -4 1 -4 8
Natural gas rese as of 12/31/08 (Bcf)	rves		
	NA NA	ted Non- ed Associa NA NA NA NA	,
Cost of drilling a Oil Gas Dry	nd eo Cost/ft (\$) 259 408 178	t. Cost/ well (\$) 1,290,034 1,006,413	vells Total Cost (thous. \$) 42,571 128,821 52,000
Marginal oil well Producing margina Crude oil productio Crude oil productio	l wells n in bl	bls. (thous.)	1,178 1,620 4
Marginal natural as of 12/31/08	gas	wells	
Producing margina Natural gas produc			325 2,741
Mineral lease ro	yaltie	es, bonuse	es & rent
Oil Gas Total Royalties			\$746,825 \$ 8,118 \$798,953
Horizontal wells	drille	ed	0
Average numbe	r of e	mployees	
Oil and natural gas Refining Transportation Wholesale Retail Pipeline constructio Oilfield machinery Total petroleum ind	n	ction	255 22 1,882 1,236 8,815 372 0 12,582

*First drilled in 1956, just over 400* barrels of oil were produced in Kleinholz field in Nebraska. In 2008, the field produced over 255,000 barrels as the top producing field in the state.

## Nevada



#### **Background Information**

Counties		
Number of counties With oil and/or gas		17 3
First year of pro	oduction	
Crude oil Natural gas		1954 NA
Year and amour	nt of peak prod	luction
Crude oil —3,230 tl Natural gas — 53 M		1988 1991
Deepest produc	ing well (ft.)	
Crude oil Natural gas		8,050 NA
Year and depth of	of deepest well	drilled (ft.)
1980		19,562
Cumulative num as of 12/31/08 (excluding		lls drilled
Oil wells	122	13%
Gas wells	2	0%
Dry holes Total	788 912	87% 100%
Cumulative crud as of 12/31/08 (thous. \$)	le oil wellhead	value \$913,428
Cumulative prod	luction & new	reserves
Crude	NGL	Natural
Oil	(mill. bbls.) Total	Gas (Bcf)

NA

NA

NA

NA

NA

Reserves

Production NA

NÁ

NA

#### Value of Oil and Gas

Average wellhead price	е	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$91.48 NA
Wellhead value of prod (2008, in thous. \$)	duction	
Crude oil Natural gas Total		39,885 NA 39,885
Average natural gas pr (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$13.33 \$11.21 \$11.10 \$ 8.26 \$ 9.44
Severance taxes paid (2008, in thous. \$)		\$907
Top producing countie (2008 on a BOE basis)	S	
County	% Pro	duction
Nye Eureka Elko	State 89.98 10.01 0.01	US 0.01 <0.01 <0.01

2008 maustr	y Statistics	5
Number of wells	drilled	
Exploratory	Development	Total
Oil NA	1	1
Gas NA Dry 4	NA NA	NA 4
Total 4	1	5
Total footage drill	ed	
(thous. ft.)		Tatal
Exploratory Oil NA	Development 5	Total 5
Gas NA	NĂ	NĂ
Dry 18.7	NA	18.7
Total 18.7 (Note: Totals may not add c	5 due to rounding )	23.7
New-field wildcats Footage (thous. ft.)	s drilled	4 18.7
Average rotary rig	gs active	3
Permits		123
Statewide rank		
	Crude Oil Na	atural Gas
Wells drilled	31st	35th
Production	27th NA	33rd NA
Reserves (2008)	INA	NA
Number of operat	tors	8
Number of produce	cing wells	
(12/31/08) Crude oil		75
Natural gas		0
Total		75
Average producti	on	
Average production Crude oil (thous. b/d		1
NGL (thous. b/d)	/	Ö
Natural gas (MMcf/d	ay)	0
Total production		
Crude oil (YTD bbls,	in thous.)	436
Natural gas (YTD MI		0
Natural gas mark	eted productic	ND .
(MMcf)		0
		0
Average output p	er producing v	vell
Crude oil (bbls.)		5,817
Natural gas (Mcf)		0
Coalbed methane	e (YTD MMcf)	NA
Oil Wells		NA
Gas Wells		NA
Daily Average (MMc	f) / Well	NA
Heavy oil (VTD he	le in thous )	NA
Heavy oil (YTD bbl	is, iii iiious. <i>)</i>	
Wells		NA NA
Av. bbls per day Av. bbls per well/d		NA
·		

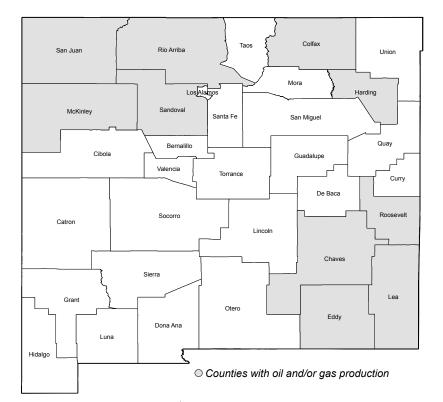
Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

	<b>Avan</b>		a
Petroleum reservas of 12/31/08 (mill. bbls.)			
Cr New reserves Production Net annual change Proved reserves	ude Oil NA NA NA NA NA	NGL NA NA NA	Total NA NA NA NA
Natural gas rese as of 12/31/08 (Bcf)	rves		
	NA NA	Non- Associated NA NA NA NA	Dry Gas NA NA NA NA
Cost of drilling a	nd equi cost/ft. (\$)		al Cost
Oil Gas Dry	299 1, NA	496,900 NA 114,418	1,497 NA 4,458
Marginal oil wells	5		
Producing marginal Crude oil production Crude oil production	n in bbls.		49 114 0
Marginal natural as of 12/31/08	gas we	ells	
Producing marginal Natural gas product		cf)	NA NA
Mineral lease rog	yalties,		
Oil Gas Total Royalties			57,855  51,937
Horizontal wells	drilled	<i><b>4</b>00,0</i>	0
Average number	of em	ployees	
Oil and natural gas Refining Transportation	extractio	on	199 200 0
Wholesale Retail Pipeline constructio	n		770 8,190 321
Oilfield machinery Total petroleum inde	ustry		0 9,680

*Almost 40% of the oil production in* Nevada is produced from the Trap Spring field. This field was discovered in the mid 1970s. One additional well was completed here in 2008.

## **New Mexico**



#### **Background Information**

Counties Number of co With oil and/o	ounties or gas production	33 10
First year Crude oil Natural gas	of production	1911 1924
Crude oil —	amount of peak pro 129,227 thous. bbls. — 1,689,125 MMcf	duction 1969 2001
Deepest pr Crude oil Natural gas	roducing well (ft.)	19,323 26,579
Year and d	epth of deepest we	ell drilled (ft.)
		. ,
1969		22,926
1969 Cumulative	e number of total w xcluding service wells)	,
1969 Cumulative		,
1969 Cumulative as of 12/31/08 (e Oil wells Gas wells Dry holes Total	xcluding service wells) 51,131 40,775 18,629 110,535 e crude oil wellhead	vells drilled 46% 37% 17% 100%
1969 Cumulative as of 12/31/08 (e Oil wells Gas wells Dry holes Total Cumulative as of 12/31/08 (th	xcluding service wells) 51,131 40,775 18,629 110,535 e crude oil wellhead	vells drilled 46% 37% 17% 100% d value 667,454,740

#### Value of Oil and Gas

•	
	\$96.23 \$ 8.40
uction	
\$ 12	5,716,351 2,148,114 7,864,465
ice	
	\$12.23 \$10.39 \$10.27 \$ 8.18 \$ 7.05
\$	1,282,483
ties	
% Pro	duction
State 35.79 23.46 18.92 17.85 2.02 1.68 0.19 0.07 0.01 0.01	US 1.89 1.24 1.00 0.94 0.11 0.09 0.01 <0.01 <0.01 <0.01
	uction \$ 1 \$ 1 \$ \$ ties \$ ties \$ ties \$ ties \$ ties \$ 2.02 1.68 0.19 0.07 0.01

Number of wells drilled
-------------------------

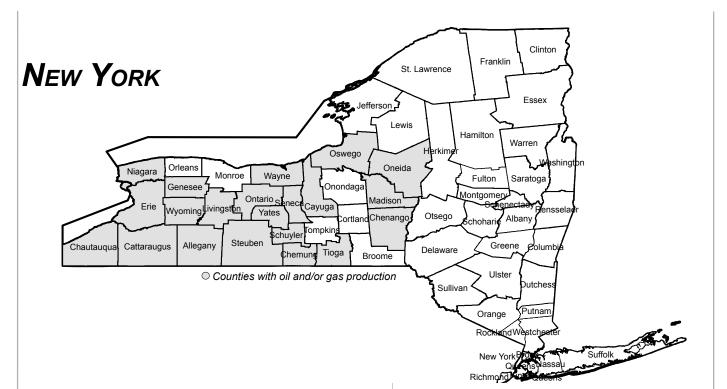
Number of wells of	drilled	
Exploratory Oil 32 Gas 20 Dry 17 Total 69	Development 666 893 60 1,619	t Total 698 913 77 1,688
Total footage drill	ed	
Exploratory Oil 122.0 Gas 161.9 Dry 108.8 Total 392.7 (Note: Totals may not add o	Development 4,333.1 5,265.2 324.6 9,922.9 Jue to rounding.)	t Total 4,455.1 5,427.1 433.4 10,315.5
New-field wildcats Footage (thous. ft.)	s drilled	44 248.3
Average rotary rig	gs active	78
Permits		2,770
Statewide rank		
Wells drilled Production Reserves (2008)	Crude Oil N 9th 8th 5th	latural Gas 8th 5th 5th
Number of operat	tors	543
Number of produc <sup>(12/31/08)</sup> Crude oil Natural gas Total	cing wells	22,134 33,625 55,759
Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/da	)	149.3 15.6 3,397.3
Total production Crude oil (YTD bbls, Natural gas (YTD M		54,648 1,243,420
Natural gas mark	eted product	tion 1,446,204
Average output p Crude oil (bbls.) Natural gas (Mcf)	er producing	well 2,469 36,979
Coalbed methane	e (YTD MMcf)	453,457
Oil Wells Gas Wells Daily Average (MMcf	f) / Well	1 5,847 1,239
Heavy oil (YTD bbl Wells Av. bbls per day Av. bbls per well/d	s, in thous.)	10 31 0.0 321

Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

Petroleum reserv	ves		
as of 12/31/08 (mill. bbls.) Cr	ude O	il NGL	Total
New reserves	-27	31	4
Production Net annual change	54 -81	71 -40	125 -121
Proved reserves	654	804	1,458
Natural gas rese as of 12/31/08 (Bcf)	rves		
	ociate solve		Dry ed Gas
New reserves	82 82	310	.eu Gas 389
Production	168	1,274	1,349
Net annual change Proved reserves 1	-86 ,755	-964 15,592	-960 16,285
Cost of drilling a	nd eo	quipping w	vells
-	ost/ft.	Cost/	Total Cost
Oil	(\$) 329	well (\$) 2,102,908	(thous. \$) 1,467,830
Gas	311	1,848,582	1,687,755
Dry	387	2,179,971	167,858
Marginal oil wells	5		
Producing marginal Crude oil production Crude oil production	n in bb		18,576 22,850 62
Marginal natural as of 12/31/08	gas	wells	
Producing marginal Natural gas product		/Mcf)	23,068 288,130
Mineral lease rog	yaltie	s, bonuse	s & rent
Oil			43,531,835
Gas Total Royalties			99,710,411 50,308,320
Horizontal wells	drille	d	188
Average number	of e	mployees	
Oil and natural gas Refining	extrac	ction	15,982 830
Transportation			1,643
Wholesale			1,664
Retail Pipeline constructio	n		7,963 2,291
Oilfield machinery			168
Total petroleum indu	ustry		30,541

Almost 500 wells were completed in 2008 in Basin field in New Mexico to help add to the almost 50% of gas production for the state. This field was discovered in the early 1940s.



#### **Background Information**

Counties Number of With oil and			n	62 21
First year Crude oil Natural gas	•	oduction	I	1865 1821
Year and	amour	nt of pea	k prod	uction
Crude oil — Natural gas	,		s.	1882 2006
Deepest p	oroduci	ing well	(ft.)	
Crude oil Natural gas		C	. ,	3,990 14,920
Year and	depth o	of deepe	st well	drilled (ft.)
2002				15,079
Cumulativ as of 12/31/08				lls drilled
Oil wells		15,67		52%
Gas wells		10,35		35% 13%
Dry holes Total		3,83 29,86		100%
Cumulative crude oil wellhead value as of 12/31/08 (thous. \$) \$1,219,220				
Cumulativ	ve prod	uction 8	a new i	reserves
	Crude	NGL		Natural
Deserve	Oil	(mill. bbls.)		Gas (Bcf)
Reserves	NA	NA	NA	1,674

NA

NA

1,299

#### Value of Oil and Gas

Average wellhead pric	ce	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$109.78 \$ 8.94
Wellhead value of pro (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$ 42,375 \$449,861 \$492,236
Average natural gas p (2008, \$/Mcf)	orice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$16.75 \$12.86 \$12.30 \$10.85 \$10.07
Severance taxes paid (2008, in thous. \$)		
Top 10 producing cou (2008 on a BOE basis)	nties	
County	% Pr	oduction
Steuben Chemung Chautauqua Cattaraugus Erie Seneca Schuyler Tioga Cayuga Genesee	State 35.75 26.35 14.16 5.73 3.82 2.57 2.24 2.16 1.71 1.60	US 0.06 0.04 0.02 0.01 <0.01 <0.01 <0.01 <0.01 <0.01 <0.01

Production NA

		3			
Number of wells of					
Exploratory Oil 0	Development 150	Total			
Gas 33	178	150 211			
Dry 16	11	27			
Total 49	339	388			
Total footage drill	ed				
Exploratory	Development	Total			
Oil 0.0	241.5	241.5			
Gas 173.8 Dry 127.1	573.5 54.2	747.3 181.3			
Total 300.9	54.2 869.2	1.170.1			
(Note: Totals may not add o		.,			
New-field wildcats Footage (thous. ft.)	s drilled	35 236.9			
Average rotary rig	gs active	6			
Permits		709			
Statewide rank					
	Crude Oil Na	atural Gas			
Wells drilled	14th	15th			
Production	28th	23rd			
Reserves (2008)	NA	23rd			
Number of operators 453					
Number of produc	cing wells				
(12/31/08) Crude oil		2,816			
Natural gas		7,391			
Total		10,207			
Average production					
Crude oil (thous. b/d	)	0.8			
NGL (thous. b/d)		0.2			
Natural gas (MMcf/d	ay)	126.3			
Total production	·	004			
Crude oil (YTD bbls, Natural gas (YTD M		294 46,221			
Natural gas mark					
(MMcf)		50,320			
Average output p	er producing	well			
Crude oil (bbls.)		104			
Natural gas (Mcf)		6,254			
Coalbed methane	e (YTD MMcf)	NA			
Oil Wells		NA			
Gas Wells	S ( ) A ( )	NA			
Daily Average (MMc	r) / Well	NA			
Heavy oil (YTD bbl	s, in thous.)	NA			
Wells		NA			
Av. bbls per day		NA			
Av. bbls per well/d		NA			

Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

	Avu		ala
Petroleum reser as of 12/31/08 (mill. bbls.			
Cr New reserves Production Net annual change Proved reserves	rude Oi NA NA NA NA NA	I NGL NA NA NA NA	Total NA NA NA NA
Natural gas rese as of 12/31/08 (Bcf)	erves		
	22 3	ed Non- ed Associat 41 46 -5 360	Dry Gas 61 48 13 389
Cost of drilling a	and eq ost/ft.	uipping w Cost/	ells Total Cost
Oil Gas Dry	(\$) 222 243	well (\$) 357,352 859,000 2,727,226	(thous. \$) 53,603 181,249 73,635
Marginal oil well	ls		
Producing margina Crude oil productio Crude oil productio	n in bb		2,513 294 1
Marginal natura as of 12/31/08	l gas v	wells	
Producing margina Natural gas produc		IMcf)	7,076 13,604
Mineral lease ro	yaltie	s, bonuses	s & rent
Oil Gas Total Royalties			 \$12,925 \$12,925
Horizontal wells	drille	d	17
Average numbe			
Oil and natural gas Refining Transportation Wholesale Retail Pipeline constructio Oilfield machinery Total petroleum ind	on	tion	1,650 459 4,306 13,301 28,262 2,579 0 50,557

*Discovered around the turn of the century,* Bradford field in New York is the highest producing oil field in 2008. Just under 50 wells were

completed in the year.

## North Dakota

Divide	Burke	Renville Bottinea	u F	Rolette	Towner	Cav	alier	Pembir	na
Williams	Mountrail	Ward Mc	Henry Pierc			Ramsey		Walsh	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		<u> </u> ]		Benso		Eddy	Nelson	Grand	Forks
McKenzie	L	McLean	Sheridan	Wells		=oster	Griggs	Steele	Traill
Golden Valley	Stark	Mercer Oliver		Kidder	Stu	tsman	Barne	es	Cass
Slope	Hettinger	Grant	Emmons	Loga	n	LaMo	ure	Ransom	Richland
Bowman	Adams	Sioux		McInte	osh	Dick	ey	Sargent	

53

16

1951 1907

#### **Background Information**

Counties
Number of counties With oil and/or gas production
First year of production
Crude oil Natural gas

#### Year and amount of peak production

Crude oil — Natural gas	2008 1985				
Deepest p	roducing well (ft.)				
	(25,828 MD horizontal) (21,070 MD horizontal)	20,540 15,300			
Year and o	lepth of deepest well	drilled (ft.)			
2007		21,727			
Cumulative number of total wells drilled as of 12/31/08 (excluding service wells)					
Oil wells	10,751	60%			
Gas wells	333	2%			
Dry holes	6,772	38%			
Total	17,856	100%			
Cumulative crude oil wellhead value					
as of 12/31/08 (thous. \$) \$35,948,107					
Cumulative	e production & new re	eserves			

as 01 12/31/06				
	Crude	NGL		Natural
	Oil	(mill. bbls.)	Total	Gas (Bcf)
Reserves	2,206	264	2,470	2,951
Production	1,644	187	1,831	2,426

○ Counties with oil and/or gas production

#### Value of Oil and Gas

Average wellhead pric	e	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$ 88.68 \$ 8.55
Wellhead value of prod (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$5,566,976 \$525,286 \$6,092,262
Average natural gas p (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$10.34 \$ 9.58 \$ 8.30 NA \$ 8.03
Severance taxes paid (2008, in thous. \$)		\$ 534,700
Top 10 producing coul (2008 on a BOE basis)	nties	
County	% Pi	roduction
Bowman Mountrail McKenzie Dunn Williams Billings Bottineau Stark Burke Divide	State 26.98 25.32 11.74 8.49 8.43 7.14 3.20 2.24 1.76 1.54	US 0.34 0.15 0.11 0.11 0.09 0.04 0.03 0.02 0.02

2008 Indust	ry Statisti	cs
Number of wells	drilled	
Exploratory Oil 204 Gas 2 Dry 11 Total 217	Developmer 478 2 20 500	nt Total 682 4 31 717
Total footage dr	illed	
Exploratory Oil 2,936.3 Gas 27.9 Dry 105.3 Total 3,069.5 (Note: Totals may not add	5,974.2 16.0 131.5 6,121.6	nt Total 8,910.5 43.8 236.8 9,191.0
New-field wildca Footage (thous. ft.)		87 1,191.1
Average rotary r	igs active	68
Permits		1,187
Statewide rank		
Wells drilled Production Reserves (2008)	Crude Oil 20th 7th 7th	Natural Gas 26th 22nd 22nd
Number of operation	ators	153
Number of produ	ucing wells	
Crude oil Natural gas Total		4,198 347 4,545
Average produc		
Crude oil (thous. b/ NGL (thous. b/d) Natural gas (MMcf/		159.5 10.9 57.6
Total production Crude oil (YTD bbls Natural gas (YTD M	s, in thous.)	58,384 21,099
Natural gas mar (MMcf)	keted produc	tion 61,437

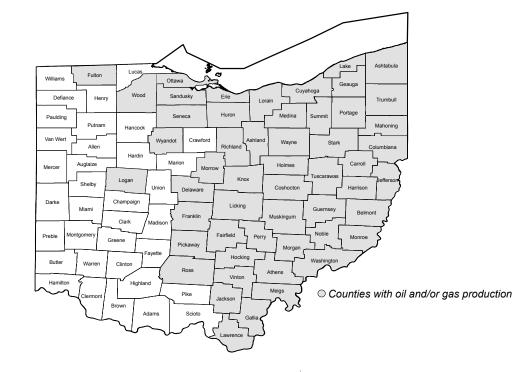
(minor)	01,101
Average output per producing w Crude oil (bbls.) Natural gas (Mcf)	vell 13,908 60,803
Coalbed methane (YTD MMcf)	NA
Oil Wells Gas Wells Daily Average (MMcf) / Well	NA NA NA
Heavy oil (YTD bbls, in thous.)	NA
Wells	NA
Av. bbls per day	NA
Av. bbls per well/d	NA

Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

*Discovered in the mid-1990s, Cedar* Hills field in North Dakota produced just over 10 Mcfs that year. In 2008, the field produced over 17 million Mcfs.

# Оню



#### **Background Information**

#### Counties

Number of counties With oil and/or gas		88 53
First year of pro	oduction	1860
Natural gas		1884
Year and amou	nt of peak proc	duction
Crude oil — 23,94 Natural gas — 186		1896 1984
Deepest produc	ing well (ft.)	
Crude oil Natural gas		9,002 11,442
Year and depth	of deepest wel	ll drilled (ft.) 11,442
Cumulative num as of 12/31/08 (excluding		ells drilled
Oil wells	47,717	57%
Gas wells Dry holes	24,090 11,312	29% 14%
Total	83,119	100%
Cumulative crude oil wellhead value		
as of 12/31/08 (thous. \$)		\$9,614,634
Cumulative production & new reserves		
Crude Oil	NGL (mill. bbls.) Total	Natural Gas (Bcf)

NA 1,125 NA 1,100 9,666

9,041

Reserves 1,125

Production 1,100

#### Value of Oil and Gas

Average wellhead price	9	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$96.43 \$ 7.88
Wellhead value of prod (2008, in thous. \$)	luction	
Crude oil Natural gas Total		\$   551,097 \$   668,681 \$1,219,778
Average natural gas pr (2008, \$/Mcf)	ice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$14.52 \$12.79 \$12.71 \$10.79 \$10.41
Severance taxes paid (2008, in thous. \$)		\$ 2,501
Top 10 producing coun (2008 on a BOE basis)	ities	
County	% Pr	oduction
,	State	US
Stark Tuscarawas Trumbull Mahoning Portage Muskingum Wayne Summit Cuyahoga Coshocton	9.6 8.9 7.9 7.7 6.2 4.3 4.3 4.0 3.9 3.4	0.03 0.03 0.02 0.02 0.01 0.01 0.01 0.01 0.01

ОНО

Number of wells	drilled		
Exploratory Oil 13 Gas 86	Development 228 618	: Total 241 704	
Dry 17	44	61	
Total 116	890	1,006	
Total footage drill (thous. ft.)	ed		
Exploratory Oil 48.7	Development 835.1	: Total 883.8	
Gas 364.5	2,419.4	2,783.9	
Dry 66.6	160.5	227.1	
Total 479.8 (Note: Totals may not add of	3,414.9 due to rounding.)	3,894.8	
New-field wildcate Footage (thous. ft.)	s drilled	34 116.1	
Average rotary rig	gs active	12	
Permits		1,398	
Statewide rank			
	Crude Oil	Natural Gas	
Wells drilled	10th	12th	
Production Reserves (2008)	19th 17th	21st 21st	
Number of operation		667	
Number of produ	cina wells		
(12/31/08)	enig nene	17 7 10	
Crude oil Natural gas		17,742 23,384	
Total		41,126	
Average producti	on		
Crude oil (thous. b/d	)	11.4	
NGL (thous. b/d) Natural gas (MMcf/d	av)	2.1 167.2	
Total production			
Crude oil (YTD bbls,		4,175	
Natural gas (YTD MI	Mcf)	61,208	
Natural gas marketed production			
Average output p	er producina	well	
Crude oil (bbls.)	ci producing	235	
Natural gas (Mcf)		2,618	
Coalbed methane	e (YTD MMcf)	NA	
Oil Wells		NA	
Gas Wells Daily Average (MMc	f) / Well	NA NA	
Heavy oil (YTD bb	ls, in thous.)	NA	
Wells Av. bbls per day		NA NA	
Av. bbls per well/d		NA	

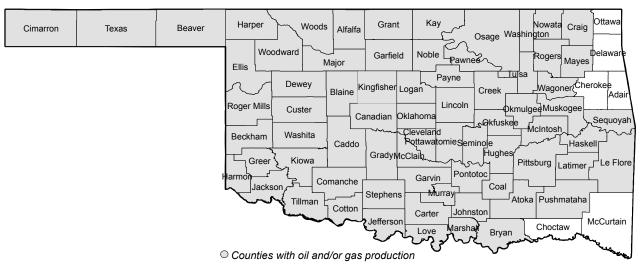
Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

			utu
Petroleum res as of 12/31/08 (mill. bl	ols.)		
New reserves Production Net annual chan Proved reserves		NGL NA NA NA	Total -6 4 -10 38
Natural gas re as of 12/31/08 (Bcf)	serves		
	•	Non- Associa 30 70 -40 886	,
Cost of drilling	and equ	ipping w	ells
Oil Gas Dry	Cost/ft. (\$) 138 140 157	Cost/ well (\$) 505,248 552,600 584,265	Total Cost (thous. \$) 121,765
Marginal oil w	ells		
Producing margi Crude oil produc Crude oil produc	tion in bbls		15,679 3,740 10
Marginal natur	ral gas we	ells	
Producing margi Natural gas prod		lcf)	22,862 52,085
Mineral lease royalties, bonuses & rent			
Oil Gas Total Royalties			\$   347,031 \$   659,689 \$1,014,331
Horizontal we	lls drilled		12
Average num	per of em	ployees	
Oil and natural g Refining Transportation Wholesale Retail Pipeline construct Oilfield machiner Total petroleum i	ction 'Y	on	5,371 2,430 4,755 5,406 34,163 1,791 209 54,125

Canton Consolidated field in Ohio was discovered in the early 1980s. Over the last 25 years, gas production has grown over 200%. An additional 73 wells were completed in the field in 2008.

## Oklahoma



#### **Background Information**

Counties		77
Number of co With oil and/o	ounties or gas production	77 71
First year o	of production	
Crude oil Natural gas		1891 1902
Year and a	mount of peak pro	duction
	77,775 thous. bbls. – 2,153,852 MMcf	1927 1991
Deepest pro	oducing well (ft.)	
Crude oil Natural gas		19,644 27,400
Year and de	epth of deepest we	ll drilled (ft.)
1974		31,441
	number of total w	ells drilled
Oil wells	243,715	52%
Gas wells Dry holes	87,168 136,477	19% 29%
Total	467,360	100%
Cumulative	crude oil wellhead	l value
as of 12/31/08 (the	ous. \$) \$1	17,816,579
Cumulative production & new reserves		
	rude NGL	Natural
D	Oil (mill. bbls.) Total	Gas (Bcf)
Reserves 15	5,009 5,689 20,698	120,194

Production 14,576 4,520 19,096

114,123

#### Value of Oil and Gas

Average wellhead pric	е	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$96.15 \$ 7.56
Wellhead value of prod (2008 in thous. \$)	duction	
Crude oil Natural gas Total	\$1	6,159,850 4,462,499 0,622,349
Average natural gas p (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$12.32 \$11.54 \$13.03 \$8.18 \$8.40
Severance taxes paid (2008, in thous. \$)	\$	1,266,655
	·	1,266,655
(2008, in thous. \$)	nties % Proc	duction
(2008, in thous. \$) <b>Top 10 producing cour</b> (2008 on a BOE basis)	nties	

Окганома

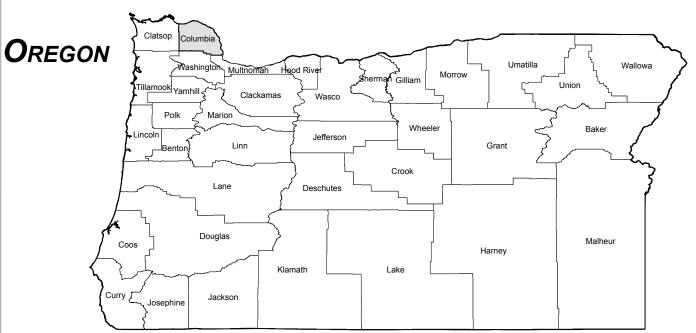
2008 Industry Statisti Number of wells drilled	cs
ExploratoryDevelopmeOil1401,190Gas4282,058Dry104259Total6723,507	nt Total 1,330 2,486 363 4,179
Total footage drilled	
Exploratory         Developme           Oil         1,111.4         5,837.7           Gas         4,122.4         15,406.6           Dry         734.3         1,350.8           Total         5,968.0         22,595.2           (Note: Totals may not add due to rounding.)	nt Total 6,949.1 19,529.1 2,085.1 28,563.2
New-field wildcats drilled Footage (thous. ft.)	273 2,420.7
Average rotary rigs active	200
Permits	5,667
Statewide rank	
Crude Oil Wells drilled 2nd Production 6th Reserves (2008) 6th	Natural Gas 2nd 4th 4th
Number of operators	3,880
Number of producing wells <sup>(12/31/08)</sup> Crude oil Natural gas Total	41,382 39,800 81,182
Average production	
Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day)	145.4 35 4,563.0
Total production Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf)	53,234 1,670,055
Natural gas marketed product (MMcf)	ction 1,913,029
Average output per producin	g well
Crude oil (bbls.) Natural gas (Mcf)	1,286 41,961
Coalbed methane (YTD MMcf	) 52,389
Oil Wells Gas Wells Daily Average (MMcf) / Well	0 3,439 143

Heavy oil (YTD bbls, in thous.) NA Wells NA Av. bbls per day NA Av. bbls per well/d NA

Source: For specific methodology and source details, please see pages 6 and 131.

2008 Latest Available Data	
Petroleum reserves as of 12/31/08 (mill. bbls.)	
Crude OilNGLNew reserves111176Production6091Net annual change5185Proved reserves5811,034	Total 287 151 136 1,615
Natural gas reserves as of 12/31/08 (Bcf)	
Production 125 1,758 1 Net annual change -1 1,930	Dry Gas 3,589 1,775 1,184 ),845
Cost of drilling and equipping wells Cost/ft. Cost/ Total C	Cost
(\$) well (\$) (thous Oil 352 1,839,081 2,444 Gas 481 3,779,261 9,395	
Marginal oil wells	
0 0	5,010 3,856 65
Marginal natural gas wells as of 12/31/08	
	3,135 1,595
Mineral lease royalties, bonuses & re	ent
Oil         \$ 16,746           Gas         \$ 37,456           Total Royalties         \$ 62,020	6,418
Horizontal wells drilled 1	,056
Average number of employees	
Refining2Transportation5Wholesale5Retail15Pipeline construction2Oilfield machinery5	0,158 2,081 5,699 3,518 3,878 2,298 3,284 5,916
	,910

Although drilling continued in 2008 in Sho-Vel-Tum field in Oklahoma with 125 completed wells, production has fallen off since the field was discovered in the early 1900s. The field is still the top producing oil field in the state with over 8 million barrels produced.



#### **Background Information**

Counties36Number of counties36With oil and/or gas production1				
First year of production Crude oil NA Natural gas 1979				
Year and amount Crude oil — Natural gas — 5,000		duction NA 1980/81		
Deepest producin Crude oil Natural gas	g well (ft.)	NA 3,720		
Year and depth of 1979	deepest we	l drilled (ft.) 13,177		
Cumulative numb as of 12/31/08 (excluding se		ells drilled		
Oil wells	NIA			
Gas wells Dry holes Total	NA 69 363 432	NA 16% 84% 100%		
Dry holes	69 363 432	16% 84% 100%		
Dry holes Total Cumulative crude	69 363 432 oil wellhead	16% 84% 100% value NA		

 $\odot$  Counties with oil and/or gas production

#### Value of Oil and Gas

Average wellhead price	3	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		NA \$5.33
Wellhead value of prod (2008, in thous. \$)	uction	
Crude oil Natural gas Total		NA \$ 4,147 \$ 4,147
Average natural gas pr (2008, \$/Mcf)	ice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$13.89 \$11.57 \$ 9.07 \$ 7.08 \$ 8.82
Severance taxes paid (2008, in thous. \$)		\$ 364
Top producing counties (2008 on a BOE basis)	3	
County	% Proc	duction
Columbia	State 100	US <0.01

Number of wells drilled	
Exploratory Developr	nent Total
Oil NA NA	NA
Gas NA 1 Dry NA NA	1 NA
Total NA 1	1
Total footage drilled	
Exploratory Developr	ment Total
Oil NA NA	NA
Gas NA 2.7 Dry NA NA	2.7 NA
Total NA 2.7	2.7
(Note: Totals may not add due to rounding	<b>]</b> .)
New-field wildcats drilled Footage (thous. ft.)	NA NA
Average rotary rigs active	1
Permits	1
Statewide rank	
Crude Oil Wells drilled NA	Natural Gas 31st
Production NA	30th
Reserves (2008) NA	NA
Number of operators	2
Number of producing wells	3
(12/31/08) Crude oil	0
Natural gas	21
Total	21
Average production	
Crude oil (thous. b/d)	0
NGL (thous. b/d)	0
Natural gas (MMcf/day)	1.8
Total production	
Crude oil (YTD bbls, in thous.) Natural gas (YTD MMcf)	0 663
	000
Natural gas marketed proc	luction 778
Average output per produc	cing well
Crude oil (bbls.)	NA
Natural gas (Mcf)	31,595
Coalbed methane (YTD MM	lcf) NA
Oil Wells	NA
Gas Wells Daily Average (MMcf) / Well	NA NA
Heavy oil (YTD bbls, in thous	.) NA
Wells	NA
Av. bbls per day Av. bbls per well/d	NA NA
•	

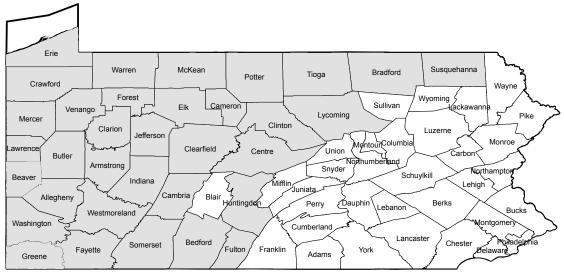
Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

Petroleum reserv as of 12/31/08 (mill. bbls.)			
. ,	de Oil NA NA	NGL NA NA NA	Total NA NA NA NA
Natural gas rese as of 12/31/08 (Bcf)	rves		
	NA NA	d Non- I Associated NA NA NA NA	Dry Gas NA NA NA NA
	Cost/ft. (\$)	Cost/ Tot well (\$) (th	al Cost ious. \$)
Oil Gas Dry	NA 472 NA	NA 1,283,894 NA	NA 1,284 NA
Marginal oil wells	5		
Producing marginal Crude oil productior Crude oil productior	n in bbls	s. (thous.) ious.)	NA NA NA
Marginal natural as of 12/31/08	gas w	ells	
Producing marginal Natural gas product		/lcf)	15 258
Mineral lease roy	alties	, bonuses 8	rent
Oil Gas Total Royalties		\$5	  559,992
Horizontal wells	drilled		0
Average number Oil and natural gas Refining Transportation Wholesale Retail Pipeline constructio Oilfield machinery Total petroleum indu	extracti n		32 404 1,259 1,663 10,325 304 0 13,987

100% of the gas production in Oregon comes from the Mist field. Since the discovery in the late 1970s with production under 2,000 MCFs, the field produced over 660,000 MCFs in 2008.

### PENNSYLVANIA



○ Counties with oil and/or gas production

#### **Background Information**

#### Counties

Number of With oil and	67 34		
First yea	r of pro	oduction	
Crude oil Natural gas			1859 1881
Year and	amou	nt of peak prod	luction
		4 thous. bbls. ,907 MMcf	1891 2000
Deepest	produc	ing well (ft.)	
Crude oil Natural gas	6		NA NA
Year and 1974	depth	of deepest well	l drilled (ft.) 21,432
		nber of total we service wells)	ells drilled
Oil wells		57,413	43%
Gas wells		70,496	52%
Dry holes		6,975	5% 100%
Total 134,885 1			
Cumulative crude oil wellhead value			
as of 12/31/08	(thous. \$)		\$5,882,821
Cumulative production & new reserves			
Cumulativ	ve proc	duction & new	reserves
	ve proo	duction & new I	reserves Natural
	•		

NA 1,366 NA 1,361 16,870

13,483

#### Value of Oil and Gas

Average wellhead price	9	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$96.76 NA
Wellhead value of prod (2008, in thous. \$)	luction	
Crude oil		\$349,400
Natural gas Total		NA \$349,400
Average natural gas pr (2008, \$/Mcf)	ice	
Residential consumers		\$16.22
Commercial consumers		\$14.30 \$12.09
Electric utilities		\$10.46
City Gate		\$10.39
Severance taxes paid (2008, in thous. \$)		
Top producing counties (2008 on a BOE basis)	6	
County	% Pro	oduction
	State	US
Indiana Westmoreland	15.25 12.24	.12 .10
Armstrong	8.76	.07
Greene	7.19	.06
Fayette McKean	6.19	.05
Crawford	5.85 5.63	.05 .05
Mercer	5.07	.04
Washington	4.88	.04
Jefferson	4.84	.04

Reserves 1,366

Production 1,361

Number of wells dril		
	led	
Exploratory D	•	
Oil 111	1,147 1,258	
Gas 653	2,276 2,929 2 3	
Dry 1 Total 765	2 3 3,425 4,190	
10101 100	3,423 4,130	
Total footage drilled (thous. ft.)		
Exploratory De	evelopment Total	
	,013.6 2,242.0	
	,971.1 11,967.1	
Dry .5	1.8 2.3	
Total 3,224.9 10 (Note: Totals may not add due t	986.5 14,211.4 o roundina.)	
,	<b>3</b> ,	
New-field wildcats d	rilled 288	
Footage (thous. ft.)	1,328.7	
Average rotary rigs	active 23	
Permits	7,187	
Statewide rank		
	Ide Oil Natural Gas	
Wells drilled Production 2	8th 3rd Oth 16th	
	3rd 12th	
1(6361)63 (2000) 2	510 12(11	
Number of operators	S	
Number of producin	g wells*	
(12/31/08)	•	
(12/31/08) Crude oil	19,093	
(12/31/08) Crude oil Natural gas	- 19,093 55,681	
(12/31/08) Crude oil	19,093	
(12/31/08) Crude oil Natural gas Total Average production	19,093 55,681 74,774	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d)	19,093 55,681 74,774 NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d)	19,093 55,681 74,774 NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d)	19,093 55,681 74,774 NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day)	19,093 55,681 74,774 NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d)	19,093 55,681 74,774 NA NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production	19,093 55,681 74,774 NA NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf	19,093 55,681 74,774 NA NA NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in the Natural gas (YTD MMcf Natural gas marketer	19,093 55,681 74,774 NA NA NA NA NA ed production	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf	19,093 55,681 74,774 NA NA NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in the Natural gas (YTD MMcf Natural gas marketer	19,093 55,681 74,774 NA NA NA NA et production 198,295	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf Natural gas markete (MMcf)	19,093 55,681 74,774 NA NA NA NA et production 198,295	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per	19,093 55,681 74,774 NA NA NA ) NA ed production 198,295 producing well	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf)	19,093 55,681 74,774 NA NA NA hous.) NA ed production 198,295 producing well NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.)	19,093 55,681 74,774 NA NA NA hous.) NA ed production 198,295 producing well NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in the Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (Ye	19,093 55,681 74,774 NA NA NA hous.) NA ed production 198,295 producing well NA NA TD MMcf) NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in the Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (Ye Oil Wells	19,093 55,681 74,774 NA NA NA NA ed production 198,295 producing well NA NA TD MMcf) NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (Y Oil Wells Gas Wells	19,093 55,681 74,774 NA NA NA hous.) NA ed production 198,295 producing well NA NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in the Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (Ye Oil Wells	19,093 55,681 74,774 NA NA NA hous.) NA ed production 198,295 producing well NA NA NA	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in the Natural gas (YTD MMcf Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (Ye Oil Wells Gas Wells Daily Average (MMcf) / The Natural gas (MCf)	thous.) NA NA NA NA NA NA NA NA NA NA NA TD MMcf) NA NA NA NA NA NA NA NA NA NA NA NA NA N	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (Y Oil Wells Gas Wells	thous.) NA NA NA NA NA NA NA NA NA NA NA TD MMcf) NA NA NA NA NA NA NA NA NA NA NA NA NA N	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in the Natural gas (YTD MMcf Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (Ye Oil Wells Gas Wells Daily Average (MMcf) / The Natural gas (MCf)	thous.) NA NA NA NA NA NA NA NA NA NA NA TD MMcf) NA NA NA NA NA NA NA NA NA NA NA NA NA N	
(12/31/08) Crude oil Natural gas Total Average production Crude oil (thous. b/d) NGL (thous. b/d) NGL (thous. b/d) Natural gas (MMcf/day) Total production Crude oil (YTD bbls, in f Natural gas (YTD MMcf Natural gas (YTD MMcf Natural gas markete (MMcf) Average output per Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (Y Oil Wells Gas Wells Daily Average (MMcf) / T Heavy oil (YTD bbls, i	thous.) NA NA NA NA NA NA NA NA NA NA MA NA TD MMcf) NA NA NA NA NA NA NA NA NA NA NA NA NA N	

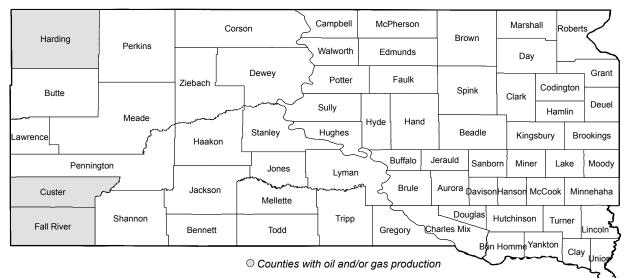
Source: For specific methodology and source details, please see pages 6 and 131. \* State data

#### 2008 Latest Available Data

Petroleum rese as of 12/31/08 (mill. bbls				
New reserves Production Net annual change Proved reserves	Crude Oil 4 2 e 2 14	NGL NA NA NA	Total 4 2 2 14	
Natural gas res as of 12/31/08 (Bcf)	erves			
	ssociated Dissolved 8 11 e -3 127	Non- Associate 421 201 220 3,467	Dry ed Gas 427 211 216 3,577	
Cost of drilling a	-	pping we	ells	
Oil Gas Dry	Cost/ft. (\$) 211 164 521	Cost/ well (\$) 376,201 670,604 401,108	Total Cost (thous. \$) 473,261 1,964,198 1,203	
Marginal oil wel	ls			
Producing margina Crude oil productio Crude oil productio	on in bbls.	` '	NA NA NA	
Marginal natura as of 12/31/08	ll gas we	ells		
Producing margina Natural gas produc		cf)	0 0	
Mineral lease ro	oyalties,	bonuses	& rent	
Oil Gas Total Royalties			\$630 \$87,743 \$90,992	
Horizontal wells	drilled		53	
Average number of employees				
Oil and natural gas Refining Transportation Wholesale Retail Pipeline constructi Oilfield machinery Total petroleum ind	on	n	7,062 4,949 5,757 10,855 35,437 2,167 383 66,610	
	-			

According to state data (DEP), Marcellus shale activity in 2008 added to an increase in permits and wells drilled. A total of 196 Marcellus shale wells were drilled accounting for almost five percent of wells drilled. According to Baker Hughes, the rig count rose 44% from 2007.

# **S**outh **D**akota



#### **Background Information**

Counties Number of o With oil and	66 3			
First year	of pro	duction	1	
Crude oil Natural gas				1954 1979
Year and	amoun	t of pea	ik prod	uction
Crude oil — Natural gas	,		S.	1988 1989
Deepest p	oroducir	ng well	(ft.)	
Crude oil Natural gas				15,750 11,000
Year and	depth o	f deepe	est well	drilled (ft.)
2006				17,025
Cumulativ as of 12/31/08 (				lls drilled
Oil wells		44	•	25%
Gas wells Dry holes		13 1,20		8% 67%
Total		1,77		100%
Cumulative crude oil wellhead value as of 12/31/08 (thous. \$) \$1,206,301				
Cumulativ	e produ	uction 8	k new i	reserves
23 01 12/01/00	Crude	NGL		Natural
Reserves	Oil NA	(mill. bbls.) NA	Total NA	Gas (Bcf) NA
Reserves	NA NA	INA	INA	INA

NA

NA

NA

#### Value of Oil and Gas

Average wellhead price	е	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$87.42 \$7.94
Wellhead value of proc (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$148,352 \$13,053 \$161,405
Average natural gas pr (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$11.32 \$9.76 \$9.00 \$7.32 \$8.06
Severance taxes paid (2008, in thous. \$)		\$5,527
Top producing countie (2008 on a BOE basis)	S	
County	% Pro	oduction
Harding Fall River Custer	State 98.48 1.38 0.13	US 0.04 <0.01 <0.01

Production NA

**SOUTH DAKOTA** 

2000 1110030	-	
Number of wells		
	Development	
Oil 6 Gas 7	15 9	21 16
Dry 6	1	7
Total 19	25	44
Total footage dril	led	
Exploratory	Development	t Total
Oil 50.3	86.7	136.9
Gas 15.7	17.6	33.3
Dry 20.2	15.7	35.9 206.1
Total 86.2 (Note: Totals may not add	120.0 due to rounding.)	200.1
New-field wildcat Footage (thous. ft.)	s drilled	16 78.4
Average rotary ri	gs active	2
Permits		64
Statewide rank		
	Crude Oil	Natural Gas
Wells drilled	28th	28th
Production Reserves (2008)	25th NA	28th NA
Number of opera		17
Number of produ	cing wells	
(12/31/08) Crude oil		151
Natural gas		84
Total		235
Average product	ion	
Crude oil (thous. b/c	1)	4.5
NGL (thous. b/d)		.1
Natural gas (MMcf/c	lay)	3.3
Total production		
Crude oil (YTD bbls	, in thous.)	1,642
Natural gas (YTD M		1,222
Notural and mark	atad praduat	ion
Natural gas mark	keled produci	
(MMcf)		1,644
Average output p	per producing	
Crude oil (bbls.) Natural gas (Mcf)		10,876 14,547
Coalbed methan	e (YTD MMcf)	NA
Oil Wells		NA
Gas Wells		NA
Daily Average (MMc	rf) / Well	NA
Heavy oil (YTD bb	ols, in thous.)	NA
Heavy oil (YTD bb Wells	ols, in thous.)	NA NA
•	ols, in thous.)	

Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

Petroleum rese as of 12/31/08 (mill. bbls			
New reserves Production Net annual chang Proved reserves	Crude ( NA NA e NA NA	Dil NGL NA NA NA NA	NA
Natural gas res as of 12/31/08 (Bcf)			
	NA NA	ted Non- ed Associa NA NA NA NA	ited Gas NA NA NA
Cost of drilling			
Oil Gas Dry	Cost/ft. (\$) 611 302 345	Cost/ well (\$) 3,982,887 627,705 1,768,799	Total Cost (thous. \$) 83,641 10,043 12,382
Marginal oil we	lls		
Producing margina Crude oil production Crude oil production	on in b	bls. (thous.)	54 138 0
Marginal natura as of 12/31/08	al gas	wells	
Producing margina Natural gas produ			72 488
Mineral lease re	oyaltie	es, bonuse	es & rent
Oil Gas Total Royalties			\$2,219,575 \$ 112,035 \$2,505,102
Horizontal wells	s drille	ed	19
Average numbe	er of e	mployees	
Oil and natural ga Refining Transportation Wholesale Retail Pipeline construct Oilfield machinery Total petroleum in	ion	ction	326 0 281 1,203 5,847 30 0 7,687

Almost 100% of all oil and gas production in South Dakota is produced from the Buffalo field. This field was discovered in 1954.

### TENNESSEE



○ Counties with oil and/or gas production

#### **Background Information**

Counties Number of o With oil and			n	95 13
First year	of pro	duction	l	
Crude oil Natural gas				1860 1889
Year and	amoun	t of pea	k prod	uction
			1982 1984	
Deepest p	oroduci	ng well	(ft.)	
Crude oil Natural gas		-		NA NA
Year and	depth c	of deepe	st well	drilled (ft.)
1982				11,540
Cumulativ as of 12/31/08				lls drilled
Oil wells		2,86		23%
Gas wells Dry holes		3,65 6,10		29% 48%
Total		12,61		100%
Cumulative crude oil wellhead value				
as of 12/31/08 (	thous. \$)			\$473,646
Cumulative production & new reserves				
us of 12/31/00)	Crude	NGL		Natural
_	Oil	(mill. bbls.)		Gas (Bcf)
Reserves	NA	NA	NA	NA

NA

NA

NA

#### Value of Oil and Gas

Average wellhead price	e*	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$92.02 \$ 8.85
Wellhead value of proc (2008, in thous. \$)	duction	
Crude oil Natural gas Total		\$31,655 \$41,595 \$73,250
Average natural gas pr (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$14.20 \$13.01 \$10.81 NA \$ 9.43
Severance taxes paid (2008, in thous. \$)		\$1,952
Top producing counties (2008 on a BOE basis)	S	
County	% Pro	duction
NA	State NA	US NA

Production NA

Tennessee

2008 Industry	y Statistics	5
Number of wells	drilled	
Exploratory	Development	Total
Oil 3	30	33
Gas 90 Dry 12	69 38	159 50
Total 105	137	242
Total footage drill		
(thous. ft.)		
Exploratory Oil 5.8	Development 53.1	Total 58.9
Gas 352.2	283.7	635.9
Dry 20.5	67.1	87.6
Total 378.5 (Note: Totals may not add of	403.8	782.3
(Note: Totals may not add t	ide to rounding.)	
New-field wildcats	s drilled	27
Footage (thous. ft.)		98.7
Average rotary rig	gs active	4
Permits		259
Statewide rank		
	Crude Oil Na	tural Gas
Wells drilled	25th	22nd
Production	29th	25th
Reserves (2008)	NA	NA
Number of operat	tors	
Number of produce	cing wells*	
(12/31/08) Crude oil		250
Natural gas		220
Total		470
Average producti	on	
Crude oil (thous. b/d		NA
NGL (thous. b/d)	)	NA
Natural gas (MMcf/d	ay)	NA
Total production		
Crude oil (YTD bbls,	in thous.)	NA
Natural gas (YTD MI	Vlcf)	NA
Natural gas mark	eted productio	n
(MMcf)		4,700
	or producing y	voll
Average output p	er producing \	
Crude oil (bbls.) Natural gas (Mcf)		NA NA
Natural gas (MCI)		INA
Coalbed methane	e (YTD MMcf)	NA
Oil Wells		NA
Gas Wells		NA
Daily Average (MMc	f) / Well	NA
Heavy oil (YTD bbl	s, in thous.)	NA
Wells		NA
Av. bbls per day		NA
Av. bbls per well/d		NA

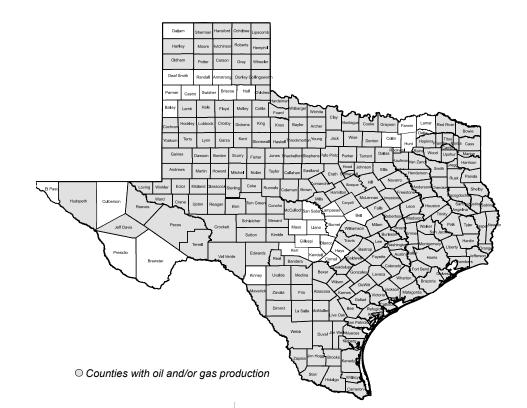
Source: For specific methodology and source details, please see pages 6 and 131. \* World Oil for Number of Producing Wells

#### 2008 Latest Available Data

Potroloum rosor			
Petroleum reser as of 12/31/08 (mill. bbls.)	)		
Ci New reserves	rude Oil NA	NGL NA	Total NA
Production	NA	NA	NA
Net annual change		NA	NA
Proved reserves	NA	NA	NA
Natural gas rese as of 12/31/08 (Bcf)	erves		
	sociate		Dry
D New reserves	ISSOIVEC	Associat NA	ed Gas NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA
Cost of drilling a	nd equ	uipping w	ells
C	ost/ft.	Cost/	Total Cost
0.11	(\$)	well (\$)	(thous. \$)
Oil Gas	265 157	472,382 626,165	15,589 99,560
Dry	195	340,780	99,500 17,039
Marginal oil well	s	,	,
Producing marginal			NA
Crude oil production		s. (thous.)	NA
Crude oil production	n b/d (tł	noùs.)	NA
Marginal natural as of 12/31/08	gas w	vells	
Producing marginal	wells		NA
Natural gas produc	tion (MI	Vlcf)	NA
Mineral lease ro	yalties	, bonuse	s & rent
Oil			
Gas Total Royalties			
Iotal Royallies			
Horizontal wells	drilled		7
Average numbe	r of en	nployees	
Oil and natural gas	extract	ion	652
Refining			1,054
Transportation Wholesale			2,204 3,428
Retail			23,753
Pipeline construction	n		579
Oilfield machinery			0
Total petroleum ind	ustry		31,670

The Chattanooga Shale field is actually an extension of the Appalachian Basin Devonian Shale, which is known to most as the Marcellus Shale. The Chattanooga Shale averages 80-200 feet in thickness.





#### **Background Information**

#### Counties

Number of counties With oil and/or gas production			254 222		
First yea	First year of production				
Crude oil Natural gas	6			1889 1889	
Year and	amoui	nt of pea	k produ	ction	
Crude oil – Natural gas				1972 1972	
Deepest	produc	ing well	(ft.)		
Crude oil Natural gas	\$			27,011 30,712	
Year and	depth	of deepe	st well o	drilled (ft.)	
1983				29,670	
1983 Cumulativ as of 12/31/08				,	
Cumulativ as of 12/31/08 Oil wells		service wells 594,26	<sup>.)</sup> 5	s drilled	
Cumulativ as of 12/31/08 Oil wells Gas wells		service wells 594,26 200,29	5 1	s drilled 53% 18%	
Cumulativ as of 12/31/08 Oil wells Gas wells Dry holes		service wells 594,26 200,29 325,81	5 1 9	53% 53% 18% 29%	
Cumulativ as of 12/31/08 Oil wells Gas wells		service wells 594,26 200,29	5 1 9	s drilled 53% 18%	
Cumulativ as of 12/31/08 Oil wells Gas wells Dry holes Total Cumulativ	(excluding	service wells 594,26 200,29 325,81 1,120,37	5 1 9 5 11	s drilled 53% 18% 29% 100% alue	
Cumulativ as of 12/31/08 Oil wells Gas wells Dry holes Total	(excluding	service wells 594,26 200,29 325,81 1,120,37	5 1 9 5 11	53% 53% 18% 29% 100%	
Cumulativ as of 12/31/08 Oil wells Gas wells Dry holes Total Cumulativ	(excluding Ve cruc (thous. \$)	service wells 594,26 200,29 325,81 1,120,37	5 5 5 5 Ilhead v \$647	s drilled 53% 18% 29% 100% alue 532,397	
Cumulativ as of 12/31/08 Oil wells Gas wells Dry holes Total Cumulativ as of 12/31/08 Cumulativ	(excluding ve cruc (thous. \$) ve proc Crude	service wells 594,26 200,29 325,81 1,120,37	5 1 9 5 1 9 5 5 1 1 9 5 5 1 8 8 8 8 8 8 8 8 8 8 8 8 8 9 8 9 8 9 8	s drilled 53% 18% 29% 100% alue 532,397	

 Reserves
 73,027
 21,500
 94,527
 460,358

 Production
 69,295
 17,437
 86,732
 433,103

#### Value of Oil and Gas

Average wellhead pric	ce	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$96.85 \$ 8.51
Wellhead value of pro (2008, in thous. \$)	oduction	
Crude oil Natural gas Total	\$58	3,547,656 3,897,676 7,445,332
Average natural gas p (2008, \$/Mcf)	orice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$13.75 \$11.25 \$ 8.96 \$ 8.91 \$ 9.20
Severance taxes paid (2008, in thous. \$)	\$4	4,121,527
Top 10 producing cou (2008 on a BOE basis)	Inties	
County	% Proc	duction
Johnson Tarrant Zapata Panola Robertson Freestone Pecos Hidalgo Webb Wise	State 5.60 5.05 3.60 3.23 3.14 3.13 2.91 2.70 2.34 2.34	US 1.73 1.56 1.11 1.00 0.97 0.90 0.83 0.72 0.72

Number of wells drilled	-
Exploratory Development	Total
Oil 50 5,723	5,781
Gas 154 9,163	9,317
Dry 490 1,147 Total 702 16,033	1,637 16,735
Total footage drilled	10,100
(thous. ft.)	
Exploratory Development Oil 371.0 34,266.1	Total 34,637.1
Gas 1,356.1 91,863.9	93,220.0
Dry 3,749.4 6,123.8	9,873.2
Total 5,416.5 132,253.9 (Note: Totals may not add due to rounding.)	137,730.3
New-field wildcats drilled	401
Footage (thous. ft.)	3,024.9
Average rotary rigs active	898
Permits	24,638
Statewide rank	
Crude Oil N	latural Gas
Wells drilled 1st	1st
Production 2nd Reserves (2008) 1st	1st 1st
Number of operators	4,781
Number of producing wells	
Crude oil	158,433
Natural gas	100,631
Total	259,064
Average production	
Crude oil (thous. b/d)	964.2
NGL (thous. b/d) Natural gas (MMcf/day)	143.9 19,331.7
Total production	
Crude oil (YTD bbls, in thous.)	352,904
Natural gas (YTD MMcf)	7,075,389
Natural gas marketed product	ion
(MMcf)	6,920,996
Average output per producing	well
Crude oil (bbls.)	2,228
Natural gas (Mcf)	70,310
Coalbed methane (YTD MMcf)	108
Oil Wells	0
Gas Wells Daily Average (MMcf) / Well	7 0
Heavy oil (YTD bbls, in thous.)	NA
Wells	NA
Av. bbls per day Av. bbls per well/d	NA NA
<del>-</del>	-

Source: For specific methodology and source details, please see pages 6 and 131.

2008 Latest Available Data	
Petroleum reserves as of 12/31/08 (mill. bbls.)	
Crude OilNGLTotalNew reserves-219244970Production348342690Net annual change -567-98-665Proved reserves4,5553,5608,115	
Natural gas reserves as of 12/31/08 (Bcf)	
AssociatedNon- DissolvedDry GasNew reserves69412,18612,464Production6656,7297,009Net annual change295,4575,455Proved reserves7,55974,28477,546	
Cost of drilling and equipping wells	
Cost/ft.         Cost/         Total Cost           (\$)         well (\$)         (thous. \$)           Oil         404         2,421,139         13,996,605           Gas         589         5,889,674         54,874,095           Dry         323         1,950,003         3,192,155	
Marginal oil wells	
Producing marginal wells145,240Crude oil production in bbls. (thous.)151,286Crude oil production b/d (thous.)413	
Marginal natural gas wells as of 12/31/08	
Producing marginal wells58,127Natural gas production (MMcf)664,340	
Mineral lease royalties, bonuses & rent	
Oil         \$ 7,111,160           Gas         \$27,226,759           Total Royalties         \$44,385,789	
Horizontal wells drilled 4,214	
Average number of employees	
Oil and natural gas extraction225,096Refining23,146Transportation20,107Wholesale16,788Retail68,819Pipeline construction31,167Oilfield machinery41,416Total petroleum industry426,539	

*In 2005–2008 horizontal drilling in the* Barnett Shale extended south into Johnson, Hill, Bosque counties, with a 100 percent success rate on completed wells. An estimated 70% of US gas shale production comes from the Barnett.

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 $\bigcirc$  Counties with oil and/or gas production

#### **Background Information**

Counties				
Number of countie With oil and/or gas	-	29 11		
First year of pr	oduction			
Crude oil Natural gas		1907 1886		
Year and amou	nt of peak prod	uction		
Crude oil — 42,30 Natural gas — 433		1975 2008		
Deepest produc	cing well (ft.)			
Crude oil Natural gas		20,600 17,500		
Year and depth of deepest well drilled (ft.)				
-				
1982		21,874		
1982 Cumulative nun as of 12/31/08 (excluding		,		
Cumulative nun as of 12/31/08 (excluding Oil wells	g service wells) 7,489	lls drilled 37%		
Cumulative nun as of 12/31/08 (excluding	g service wells)	lls drilled		
Cumulative nun as of 12/31/08 (excluding Oil wells Gas wells	g service wells) 7,489 7,605	Ils drilled 37% 38%		
Cumulative nun as of 12/31/08 (excluding Oil wells Gas wells Dry holes	g service wells) 7,489 7,605 5,020 20,114 de oil wellhead	Ils drilled 37% 38% 25% 100%		
Cumulative nun as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative cruc as of 12/31/08 (thous. \$) Cumulative proo	g service wells) 7,489 7,605 5,020 20,114 de oil wellhead \$2	Ils drilled 37% 38% 25% 100% value 1,562,345		
Cumulative nun as of 12/31/08 (excluding Oil wells Gas wells Dry holes Total Cumulative crue as of 12/31/08 (thous. \$)	g service wells) 7,489 7,605 5,020 20,114 de oil wellhead \$2	Ils drilled 37% 38% 25% 100% value 1,562,345		

#### Value of Oil and Gas

Average wellhead price	e	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$86.58 \$6.15
Wellhead value of proc (2008, in thous. \$)	luction	
Crude oil Natural gas Total	\$	1,904,587 2,666,431 4,571,018
Average natural gas pr (2008, \$/Mcf)	ice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$ 9.00 \$ 7.74 \$ 7.21 NA \$ 7.62
Severance taxes paid (2008, in thous. \$)		\$ 70,919
Top 10 producing cour (2008 on a BOE basis)	nties	
County	% Pro	duction
Uintah Carbon Duchesne San Juan Emery Sevier Summit Grand Daggett Garfield	State 55.95 18.30 10.07 5.97 3.25 2.48 2.14 1.43 0.21 0.21	US 0.97 0.32 0.17 0.10 0.06 0.04 0.04 0.02 <0.01 <0.01

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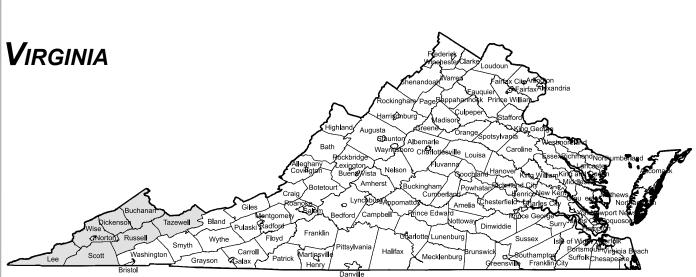
		5
Number of wells of		<b>-</b>
Exploratory Oil 28	Development 309	Total 337
Gas 36	775	811
Dry 22	32	54
Total 86	1,116	1,202
Total footage drill	ed	
Exploratory	Development	Total
Oil 197.4	1,962.7	2,160.1
Gas 333.6	6,786.0	7,119.6
Dry 138.5	76.0	214.5
Total 669.5 (Note: Totals may not add d	8,824.7 ue to rounding.)	9,494.1
New-field wildcats Footage (thous. ft.)	s drilled	46 360
rootage (trious. n.)		300
Average rotary rig	s active	42
Permits		1,486
Statewide rank		
	Crude Oil Na	atural Gas
Wells drilled	21st	18th
Production	14th	9th
Reserves (2008)	11th	9th
Number of operat	ors	115
Number of produc	cina wells	
(12/31/08)	ing none	
Crude oil		3,351
Natural gas Total		6,040 9,391
IUlai		9,391
Average production	on	
Crude oil (thous. b/d)	)	50.4
NGL (thous. b/d)		9.3
Natural gas (MMcf/da	ay)	1,101.9
Total production		
Crude oil (YTD bbls,	in thous.)	18,438
Natural gas (YTD MM	/lcf)	403,310
Natural gas mark	otod producti	00
Natural gas mark		
(MMcf)		433,566
Average output pe	er producing	well
Crude oil (bbls.)		5,502
Natural gas (Mcf)		66,773
Coalbed methane	e (YTD MMcf)	68,651
Oil Wells		2
Gas Wells		878
Daily Average (MMcf	) / Well	188
Heavy oil (VTD he	e in thous	173
Heavy oil (YTD bbl	5, 111 u IOUS.)	
Wells		19
Av. bbls per day Av. bbls per well/d		0.5 9,110
		0,110

Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

	SI AVA		ala
Petroleum re as of 12/31/08 (mill.			
New reserves Production Net annual cha Proved reserve		NGL 14 6 8 116	Total -37 24 -61 402
Natural gas r as of 12/31/08 (Bcf)	eserves		
New reserves Production Net annual cha Proved reserve	•		Dry ed Gas 669 417 252 6,643
Cost of drillin	-	uipping we	ells
Oil Gas Dry	Cost/ft. (\$) 376 751 383	Cost/ well (\$) 2,409,579 6,593,669 1,519,397	Total Cost (thous. \$) 812,028 5,347,466 82,047
Marginal oil v	vells		
Producing marg Crude oil produ Crude oil produ	ction in bb		2,367 5,332 15
Marginal nate as of 12/31/08	ural gas v	wells	
Producing marg Natural gas pro		1Mcf)	2,925 41,334
Mineral lease	e royaltie	s, bonuses	s & rent
Oil Gas Total Royalties		\$2	98,455,820 17,388,293 81,953,541
Horizontal we	ells drille	d	20
Average num	ber of e	mployees	
Oil and natural Refining Transportation Wholesale Retail Pipeline constru Oilfield machine Total petroleum	uction ery	tion	6,735 996 1,209 1,018 9,948 1,001 357 21,264
	-		

Over 570 wells were completed in the Natural Buttes field in 2008. This field was discovered in the late 1960s and continues to be the top producing gas field in Utah.



○ Counties with oil and/or gas production

#### **Background Information**

Counties Number of o With oil and		-	า	96 7
First year Crude oil Natural gas	of pro	oduction		1943 1931
Year and	amour	nt of peal	k prod	
Crude oil — Natural gas	- 65 tho	us. bbls.	•	1983 2008
Deepest p	oroduc	ing well (	(ft.)	
Crude oil Natural gas				NA 10,134
Year and	depth	of deepe	st well	drilled (ft.)
1977				17,003
Cumulativ				lls drilled
Oil wells		15		2%
Gas wells Dry holes		6,93 33		93% 5%
Total		33 7,43		5% 100%
Cumulativ		le oil wel	lhead	
as of 12/31/08 (	thous. \$)			\$11,097
Cumulativ	e proc	luction &	new r	reserves
	Crude	NGL		Natural
	Oil	(mill. bbls.)		Gas (Bcf)
Reserves	NA	NA	NA	3,495

NA

NA

1,425

#### Value of Oil and Gas

Average wellhead pric	e	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		NA NA
Wellhead value of prov (2008, in thous. \$)	duction	
Crude oil Natural gas Total		NA NA NA
Average natural gas p (2008, \$/Mcf)	rice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$16.20 \$12.98 \$11.49 \$10.87 \$10.61
Severance taxes paid (2008, in thous. \$)		
Top producing countie	s	
County	% Pro	duction
Buchanan Dickerson Russell Tazewell Wise Lee Scott	State 54.14 23.21 7.84 7.38 7.06 0.20 0.16	US 0.23 0.10 0.03 0.03 <0.01 <0.01

Production NA

VIRGINIA

Number of wells drilled	-	
Exploratory Development	Total	
Oil NA NA	NA	
Gas 14 621	635	
Dry NA NA	NA	
Total 14 621	635	
Total footage drilled (thous. ft.)		
Exploratory Development	Total	
Oil NA NA	NA	
Gas 75.0 1,565.1	1,640.1	
Dry NA NA	NA	
Total 75.0 1,565.1 (Note: Totals may not add due to rounding.)	1,640.1	
New-field wildcats drilled	8	
Footage (thous. ft.)	45.1	
Average rotary rigs active	5	
······································		
Permits	803	
Femilis	803	
Statewide rank		
	atural Gas	
Wells drilled 30th	19th	
Production 32nd	17th	
Reserves (2008) NA	18th	
Number of operators*	19	
	10	
Number of producing wells		
(12/31/08)		
Crude oil	NA	
Natural gas	6,322	
Total	6,322	
Average production		
Crude oil (thous. b/d)	NA	
NGL (thous. b/d)	NA	
Natural gas (MMcf/day)	348	
Total production		
Crude oil (YTD bbls, in thous.)	NA	
Natural gas (YTD MMcf)	127,373	
Natural and marketed product	ion	
Natural gas marketed product		
(MMcf)	128,454	
Average output per producing	well	
	WCII	
• • • • •		
Crude oil (bbls.)	NA	
• • • • •	NA 20,148	
Crude oil (bbls.) Natural gas (Mcf)	20,148	
Crude oil (bbls.)		
Crude oil (bbls.) Natural gas (Mcf)	20,148	
Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf)	20,148 NA	
Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells	20,148 NA NA	
Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells	20,148 NA NA NA	
Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells	20,148 NA NA NA	
Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells Daily Average (MMcf) / Well Heavy oil (YTD bbls, in thous.)	20,148 NA NA NA NA	
Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells Daily Average (MMcf) / Well Heavy oil (YTD bbls, in thous.) Wells	20,148 NA NA NA NA NA	
Crude oil (bbls.) Natural gas (Mcf) Coalbed methane (YTD MMcf) Oil Wells Gas Wells Daily Average (MMcf) / Well Heavy oil (YTD bbls, in thous.)	20,148 NA NA NA NA	

Source: For specific methodology and source details, please see pages 6 and 131. \* State Data COMPILED BY IPAA AUGUST 2010

#### 2008 Latest Available Data

ZUUU Lales	L Avan		ala
Petroleum rese as of 12/31/08 (mill. bbl			
O New reserves Production Net annual chang Proved reserves	Crude Oil NA NA e NA NA	NGL NA NA NA	Total NA NA NA NA
Natural gas res as of 12/31/08 (Bcf)	serves		
	ssociated		Dry
		Associate	
New reserves	0	-25	-25
Production	0	126	126
Net annual chang Proved reserves	e 0 0	-151 2,378	-151 2,378
Floved leserves	0	2,370	2,370
Cost of drilling	and equ Cost/ft.	uipping we Cost/	ells Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	NA	NA	NA
Gas	182	471,251	299,244
Dry	NA	NA	NA
Marginal oil we	lls		
Producing margin	al wells		NA
Crude oil producti Crude oil producti			NA NA
Marginal natura	al gas w	vells	
Producing margin Natural gas produ		(Acf)	5,251 70,117
Natural gas prout		vici)	70,117
Mineral lease r	oyalties	, bonuses	s & rent
Oil			 \$226.240
Gas Total Royalties			\$336,210 \$596,268
-	مطتنالمط		
Horizontal well	sunieu		7
Average numb			
Oil and natural ga	s extracti	ion	1,931
Refining			0
Transportation			1,791
Wholesale Retail			4,659 32,952
Pipeline construct	ion		1,670
Oilfield machinery			0
Total petroleum in			43,003

*Discovered in the late 1970s, Keen Mountain* field is the top producing gas field in Virginia. Almost 50% of the gas produced in the state comes from this field, with an additional 266 wells completed in 2008.



#### **Background Information**

Counties Number of counties With oil and/or gas produ	55 ction 48
First year of product Crude oil Natural gas	ion 1860 1885
Year and amount of p Crude oil — 16,196 thous Natural gas — 264,139 M	s. bbls. 1900
Deepest producing w Crude oil Natural gas	ell (ft.) 8,381 12,263
Year and depth of dee	epest well drilled (ft.)
1974	20,222
•	f total wells drilled
1974 Cumulative number of as of 12/31/08 (excluding service Oil wells 17 Gas wells 65 Dry holes 8	f total wells drilled
1974 Cumulative number of as of 12/31/08 (excluding service Oil wells 17 Gas wells 65 Dry holes 8	f total wells drilled wells) ,096 19% ,628 72% ,141 9% ,866 100%
1974         Cumulative number of as of 12/31/08 (excluding service)         Oil wells       17         Gas wells       65         Dry holes       8         Total       90         Cumulative crude oil       11	f total wells drilled wells) 7,096 19% 6,628 72% 8,141 9% 9,866 100% wellhead value \$3,061,386 n & new reserves

#### Value of Oil and Gas

Average wellhead price	9	
<sup>(2008)</sup> Crude oil (\$/bbl.) Natural gas* (\$Mcf)		\$95.07 \$7.42
Wellhead value of prod (2008, in thous. \$)	uction	
Crude oil Natural gas Total		\$ 151,477 \$1,822,189 \$1,973,666
Average natural gas pr (2008, \$/Mcf)	ice	
Residential consumers Commercial consumers Industrial consumers Electric utilities City Gate		\$14.51 \$13.54 \$10.94 \$10.08 \$10.32
Severance taxes paid (2008, in thous. \$)		\$87,606
Top 10 producing coun (2008 on a BOE basis)	ties	
County	% Pr	oduction
Wyoming McDowell Kanawha Logan Harrison Lewis Mingo Lincoln Barbour Doddridge	State 10.25 8.62 6.51 6.46 5.64 5.40 5.18 4.57 4.26 3.84	US 0.08 0.07 0.05 0.05 0.05 0.04 0.04 0.04 0.03 0.03

2000 maasa y	otutist	105
Number of wells dri	lled	
Exploratory E	•	
Oil 1 Gas 245	41 1,521	42 1,766
Dry 4	14	18
Total 250	1,576	1,826
Total footage drilled (thous. ft.)	1	
	Developme	
Oil 3.6 Gas 1,282.7	112.0 7.149.4	115.6 8,432.1
Dry 10.1	31.3	6,432.1 41.4
	7,292.6	8,589.1
New-field wildcats of Footage (thous. ft.)		48 251.8
Foolage (lindus. Il.)		201.0
Average rotary rigs	active	27
Permits		2,759
Statewide rank		
	ude Oil 13th	Natural Gas 4th
	26th	15th
Reserves (2008)	20th	11th
Number of operator	S	312
Number of producir	ng wells	
(12/31/08) Crude oil		2,485
Natural gas		44,974
Total		47,459
Average production	l	
Crude oil (thous. b/d) NGL (thous. b/d)		2.7 2.5
Natural gas (MMcf/day)	)	650.2
Total production		
Crude oil (YTD bbls, in		987
Natural gas (YTD MMc	f)	237,956
Natural gas market	ed produ	ction
(MMcf)		245,578
Average output per	producir	ng well
Crude oil (bbls.) Natural gas (Mcf)		397 5,291
Coalbed methane (	YTD MMc	
Oil Wells		, .,0
Gas Wells		96
Daily Average (MMcf) /	Well	3
Heavy oil (YTD bbls,	in thous.)	NA
Wells Av. bbls per day		NA NA
Av. bbls per uay Av. bbls per well/d		NA
Source: For specific me	ethodology	and source deta

Source: For specific methodology and source details, please see pages 6 and 131.

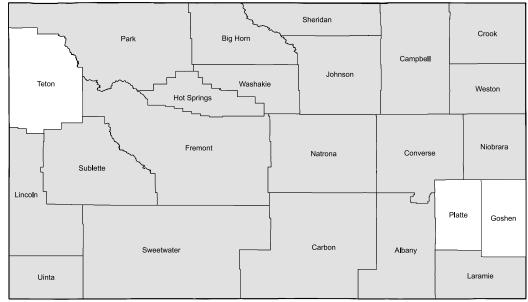
\* State data

#### 2008 Latest Available Data

	l Avali		ala
Petroleum rese as of 12/31/08 (mill. bbl			
New reserves	Crude Oil -3	-10	Total -13
Production Net annual chang Proved reserves	2 e -5 23	5 -15 100	7 -20 123
	20	100	120
Natural gas res as of 12/31/08 (Bcf)			_
		I Non- Associate	Dry ed Gas
New reserves	9	632	657
Production	2	254	250
Net annual chang		378	407
Proved reserves	23	5,243	5,136
Cost of drilling	•		
	Cost/ft. (\$)	Cost/ well (\$)	Total Cost (thous. \$)
Oil	(\$) 160	441,591	(inous: \$) 18,547
Gas	157	749,606	1,323,804
Dry	163	376,104	6,770
Marginal oil we	lls		
Producing margin Crude oil producti		(thous)	2,124 582
Crude oil producti			2
Marginal natura	al gas w	ells	
Producing margin			43,844
Natural gas produ			185,857
Mineral lease r	oyalties,	bonuses	& rent
Gas			\$1,008,267
Total Royalties			\$2,050,217
Horizontal wells	s drilled		163
Average numb	er of em	ployees	
Oil and natural ga	s extractio	on	5,713
Refining			917
Transportation Wholesale			2,525 993
Retail			8,900
Pipeline construct			1,315
Oilfield machinery Total petroleum in			0 20,363
	aaoay		20,000

Operators started producing the McGraw
field in West Virginia in the mid-1980s. An
additional 16 wells were completed in 2008 to bring
the production over 8.8 million Mcfs for 2008.

### WYOMING



 $\ensuremath{\bigcirc}$  Counties with oil and/or gas production

#### **Background Information**

Counties			
Number of With oil and			23 20
First year	r of pro	oduction	
Crude oil Natural gas	;		1894 1889
Year and	amoui	nt of peak proc	luction
		15 thous. bbls. 74,850 MMcf	1970 2008
Deepest p	oroduc	ing well (ft.)	
Crude oil Natural gas	;		17,750 25,175
Year and	depth	of deepest wel	l drilled (ft.)
2001			25,830
Cumulativ as of 12/31/08		ber of total we	ells drilled
Oil wells		33,889	31%
Gas wells		44,710	41%
Dry holes Total		30,244 108,843	28% 100%
Cumulativ as of 12/31/08		le oil wellhead \$7	value 77,799,755
Cumulativ	/e proc	luction & new	reserves
	Crude	NGL	Natural
Reserves	Oil	NGL (mill. bbls.) Total 2,436 9,667	Natural Gas (Bcf) 64,491

1,401 8,217

35,484

#### Value of Oil and Gas

Average wellhead price	•	
Crude oil (\$/bbl.) Natural gas (\$Mcf)		\$86.07 \$ 6.86
Wellhead value of prod (2008, in thous. \$)	uction	
Crude oil Natural gas Total	\$15	,556,804 ,605,471 ,162,275
Average natural gas pri (2008, \$/Mcf)	ce	
Residential consumers Commercial consumers Industrial consumers Electric utilities		\$10.16 \$ 8.87 \$ 7.55 NA
City Gate		\$ 7.02
Severance taxes paid (2008, in thous. \$)	\$	947,880
Top 10 producing count (2008 on a BOE basis)	ties	
County	% Prod	uction
Sublette Johnson Sweetwater Campbell Fremont Carbon Lincoln Uinta Sheridan Park	State 44.59 12.61 8.37 8.02 6.13 4.45 3.49 2.69 2.68 2.10	US 3.84 1.09 0.72 0.69 0.53 0.38 0.23 0.23 0.23 0.18

WYOMING

Production 6,816

Number of wells drilled	
Number of wells drilled Exploratory Development	Total
Oil 15 154	169
Gas 38 2,740	2,778
Dry 26 47 Total 79 2.941	73 3,020
10tai 79 2,941	3,020
Total footage drilled (thous. ft.)	
Exploratory Development	
Oil 131.8 810.1 Gas 362.7 14,813.8	941.9 15,176.5
Dry 194.0 195.2	389.3
Total 688.6 15,819.2 (Note: Totals may not add due to rounding.)	16,507.7
New-field wildcats drilled	50
Footage (thous. ft.)	408.2
Average rotary rigs active	74
Permits	4,466
Statewide rank	
Crude Oil N	latural gas
Wells drilled 11th	6th
Production 9th Reserves (2008) 8th	3rd 2nd
Reserves (2006) our	2110
Number of operators	452
Number of producing wells	
Crude oil	12,011
Natural gas	33,628
Total	45,639
Average production	
Crude oil (thous. b/d)	109.4
NGL (thous. b/d) Natural gas (MMcf/day)	35.3 6,353
	-,
Total production Crude oil (YTD bbls, in thous.)	40,054
Natural gas (YTD MMcf)	2,325,182
Natural gas marketed product (MMcf)	ion 2,274,850
Average output per producing	well
Crude oil (bbls.)	3,335
Natural gas (Mcf)	69,144
Coalbed methane (YTD MMcf)	563,151
Oil Wells	5
Gas Wells	21,567
Daily Average (MMcf) / Well	1,539
Heavy oil (YTD bbls, in thous.)	9,754
Wells	2,089
Av. bbls per day	26.7
Av. bbls per well/d	4,669

Source: For specific methodology and source details, please see pages 6 and 131.

#### 2008 Latest Available Data

2008 Latest	Ava	lable D	ata					
Petroleum reser as of 12/31/08 (mill. bbls.								
New reserves Production Net annual change Proved reserves	Crude ( -93 41 -234 556	Dil NGL 159 70 89 1,121	Total 66 111 -145 1,677					
Natural gas rese as of 12/31/08 (Bcf)	erves							
	-99 43	ed Non- d Associate 3,711 2,066 1,645 32,176	Dry ed Gas 3,459 2,026 1,433 31,143					
Cost of drilling a	and eq	uipping w	ells					
Oil Gas Dry	Cost/ft. (\$) 691 911 571	Cost/ well (\$) 3,853,316 4,977,894 3,046,626	Total Cost (thous. \$) 651,210 13,828,590 222,404					
Marginal oil wel	ls							
Producing marginal wells9,688Crude oil production in bbls. (thous.)13,375Crude oil production b/d (thous.)37								
Marginal natura as of 12/31/08	Marginal natural gas wells as of 12/31/08							
Producing margina Natural gas produc	20,554 191,676							
Mineral lease royalties, bonuses & rent								
Oil Gas Total Royalties		\$1,1	73,210,036 81,130,181 732,925,438					
Horizontal wells drilled 42								
Average number of employees								
Oil and natural gas Refining Transportation Wholesale Retail Pipeline constructio Oilfield machinery Total petroleum inco	on	tion	19,103 1,107 1,016 770 4,163 5,527 226 31,912					

20% of the gas production in Wyoming is produced in the Power River Basin Coal Bed field. Over 1,500 wells were completed in this field in 2008.

### **ROTARY RIGS OPERATING**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	6	4	5	3	3	3	4	5	5	5
Alaska	5	8	13	11	10	10	9	8	8	8
Arizona	0	0	0	0	0	0	0	0	0	0
Arkansas	3	4	2	1	2	6	9	24	45	51
California	19	24	36	23	22	24	27	33	35	42
Colorado	13	18	32	28	39	54	74	89	107	114
Florida	0	0	0	0	1	1	2	0	0	1
Illinois	0	0	0	0	0	0	0	0	0	0
Indiana	0	0	0	0	0	0	0	0	0	2
lowa	0	0	0	0	0	0	0	0	2	0
Kansas	7	22	23	8	9	7	7	10	14	11
Kentucky	6	5	6	5	4	5	5	7	9	10
Louisiana	141	194	214	163	157	167	182	188	177	167
Maryland	0	0	0	0	0	0	0	0	1	0
Michigan	2	3	1	1	3	3	3	2	2	1
Mississippi	7	11	14	8	8	10	10	10	14	13
Montana	4	7	10	8	14	20	24	22	17	11
Nebraska	0	1	0	0	0	1	0	0	0	0
Nevada	0	0	0	0	1	2	2	1	2	3
New Mexico	36	68	68	42	65	67	83	94	78	78
New York	3	3	5	4	3	5	4	6	6	6
North Dakota	6	13	14	10	14	15	21	32	39	68
Ohio	11	9	10	9	8	7	9	8	13	12
Oklahoma	62	99	130	91	129	159	152	179	188	200
Oregon	0	0	0	0	0	0	0	0	0	1
Pennsylvania	8	9	11	11	10	9	13	16	16	23
South Dakota	1	0	1	0	0	1	2	1	2	2
Tennessee	0	0	1	0	0	0	0	1	5	4
Texas	227	343	462	338	449	506	614	746	834	898
Utah	9	16	21	13	14	22	28	40	42	42
Virginia	5	2	2	2	1	1	2	1	3	5
Washington	0	0	1	0	0	0	0	1	0	1
West Virginia	14	14	18	13	16	15	17	27	32	27
Wyoming	32	41	55	40	54	74	78	99	74	74
TOTAL U.S.	625	918	1,156	830	1,032	1,192	1,381	1,649	1,769	1,880
ONSHORE	517	779	1,002	716	923	1,095	1,287	1,561	1,696	1,814
OFFSHORE	107	139	154	114	109	97	94	88	73	66

Source: Baker Hughes. Note: Averages may not add up to total due to rounding.

### New-FIELD WILDCAT WELLS DRILLED

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	19	17	19	16	17	22	17	26	35	24
Alaska	5	8	10	10	10	8	15	8	11	13
Arizona	0	1	1	1	0	1	4	1	1	0
Arkansas	13	13	18	10	10	16	10	32	40	27
California	32	41	39	27	27	30	30	20	14	12
Colorado	49	42	71	40	48	68	136	103	128	84
Florida	0	0	0	0	1	0	2	0	0	0
Georgia	0	0	1	0	0	0	0	0	0	0
Illinois	13	20	36	17	32	31	34	31	22	20
Indiana	7	5	19	10	17	19	19	39	34	23
lowa	0	0	1	0	0	0	0	0	0	0
Kansas	82	147	212	153	160	176	228	277	257	313
Kentucky	16	27	97	87	131	176	238	303	205	138
Louisiana	77	83	63	74	61	59	58	52	52	30
Maryland	0	0	0	0	0	0	0	0	0	0
Michigan	22	20	19	24	19	23	17	28	21	34
Mississippi	29	25	28	38	33	30	33	30	42	25
Missouri	3	1	3	2	0	0	0	0	0	0
Montana	45	56	90	95	120	151	160	139	105	81
Nebraska	9	15	12	14	15	16	19	21	22	54
Nevada	1	3	3	2	3	6	6	1	4	4
New Mexico	38	44	58	32	61	76	46	67	44	44
New York	16	24	38	36	26	54	29	26	41	35
North Carolina	0	0	0	0	0	0	0	0	0	0
North Dakota	16	19	19	9	4	26	44	103	98	87
Ohio	1	0	6	6	5	2	16	21	41	34
Oklahoma	58	66	102	69	97	104	109	181	260	273
Oregon	0	0	0	0	0	0	0	0	0	0
Pennsylvania	5	4	25	15	43	126	189	224	351	288
South Dakota	1	1	1	6	5	1	7	4	13	16
Tennessee	8	9	11	26	42	26	37	82	57	27
Texas	454	513	431	346	436	473	470	389	312	401
Utah	15	6	20	30	11	22	32	50	50	46
Virginia	1	7	4	8	8	3	2	10	28	8
Washington	1	1	3	0	0	0	0	0	2	0
West Virginia	5	10	32	30	18	28	23	37	52	48
Wyoming	90	77	80	74	82	90	81	76	61	50
Federal Offshor	<b>re</b> 67	106	105	69	83	83	74	58	61	52
TOTAL U.S.	1,198	1,411	1,676	1,376	1,625	1,946	2,085	2,439	2,464	2,291
0.0000000000000000000000000000000000000										

Source: IHS.

Note: Data include oil wells, gas wells, and dry holes and may not total due to Federal Offshore data duplication.

### EXPLORATORY WELLS DRILLED

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	20	17	22	17	23	36	27	35	49	36
Alaska	5	8	14	17	12	13	19	14	18	14
Arizona	0	1	0	1	0	1	4	1	1	0
Arkansas	13	14	23	10	12	19	18	45	47	45
California	67	79	89	62	52	69	74	44	36	26
Colorado	104	88	137	57	81	104	206	159	177	124
Florida	0	0	0	0	1	0	2	0	0	0
Georgia	0	0	1	0	0	0	0	0	0	0
Illinois	37	50	48	33	44	47	50	72	84	61
Indiana	20	10	19	12	37	24	40	58	69	79
Iowa	0	0	1	0	0	0	0	0	0	0
Kansas	148	248	398	279	289	341	418	457	479	608
Kentucky	47	59	136	132	188	302	448	598	464	353
Louisiana	87	87	64	83	72	73	70	65	67	56
Maryland	0	0	0	0	0	0	0	0	0	0
Michigan	30	23	25	30	23	27	24	34	31	52
Mississippi	31	33	33	43	41	34	44	40	53	32
Missouri	3	1	3	2	0	0	0	0	0	0
Montana	65	100	177	156	186	237	278	254	188	145
Nebraska	17	30	19	17	22	18	30	32	34	71
Nevada	1	3	4	2	3	6	6	1	4	4
New Mexico	100	94	115	75	100	103	98	118	75	69
New York	18	28	45	39	33	57	41	30	78	49
North Carolina	0	0	0	0	0	0	0	0	0	0
North Dakota	41	51	52	22	23	54	72	165	236	217
Ohio	25	27	36	31	27	28	56	66	147	116
Oklahoma	68	104	187	109	209	253	278	334	601	672
Oregon	5	0	0	0	0	0	0	0	0	0
Pennsylvania	13	11	33	30	81	307	513	657	993	765
South Dakota	2	1	2	6	5	4	9	4	13	19
Tennessee	12	21	18	29	57	58	75	120	143	105
Texas	790	841	999	714	795	774	743	696	618	702
Utah	23	18	72	41	34	47	68	123	83	86
Virginia	1	9	5	14	10	2	7	20	53	14
Washington	1	0	3	0	0	0	0	0	2	0
West Virginia	19	28	76	89	41	146	200	215	285	250
Wyoming	144	143	179	151	141	130	132	119	86	79
Federal Offshor	re 79	107	105	69	83	84	77	59	67	118
TOTAL U.S.	<b>2,036</b>	<b>2,345</b>	<b>3,140</b>	<b>2,372</b>	<b>2,726</b>	<b>3,410</b>	<b>4,127</b>	<b>4,645</b>	<b>5,281</b>	<b>4,967</b>

Source: IHS.

Note: Data include oil wells, gas wells, and dry holes and may not total due to Federal Offshore data duplication.

#### **D**EVELOPMENT WELLS **D**RILLED

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama Alaska Arizona	205 94 1	152 128 0	346 164 0	246 179 0	371 165 0	405 193 0	416 155 0	407 121 0	505 133 1	131 25 0
Arkansas	136	155	227	144	216	278	299	417	470	1,048
California Colorado	1,478 636	2,113 955	2,181 1,392	1,925 1,332	1,928 1,511	2,161 1,892	2,234 2,506	2,464 2,845	2,343 3,269	2,640 3,790
Florida Illinois	0 213	4 328	0 367	1 289	0 308	0 277	1 379	0 411	0 353	1 434
Indiana	34	53	117	81	145	125	128	72	80	134
Kansas Kentucky	497 601	911 729	1,099 865	902 891	1,339 752	1,542 573	1,867 680	2,709 805	2,770 850	3,634 885
Louisiana	757	1,031	1,217	790	1,003	1,188	1,381	1,569	1,565	1,714
Maryland Michigan	1 298	0 374	0 414	0 337	0 353	0 403	0 505	0 524	0 450	0 450
Mississippi Missouri	86 5	192 14	242 6	168 0	240 1	237 0	255 0	253 0	280 0	241 0
Montana	383	418	406	388	644	504	682	863	672	427
Nebraska Nevada	3 1	11 1	13 3	14 2	16 0	32 0	46 0	34 0	132 0	163 1
New Mexico	935	1,461	1,574	1,200	1,526	1,686	1,812	1,914	1,763	1,619
New York	69	70	77	54	46	77	133	227	288	339
North Dakota	42	121	158	154	199	168	227	322	278	500
Ohio Oklahoma	495 1,582	547 2,176	690 2,982	493 2,351	493 2,783	525 2,884	539 3,248	637 3,671	684 2,992	890 3,507
Oregon	5	0	0	0	0	0	0	0	0	1
Pennsylvania	1,362	1,591	2,232	2,183	2,505	2,290	2,908	3,611	3,210	3,425
South Dakota Tennessee	4 109	10 165	9 103	6 81	3 198	8 146	34 163	21 168	36 32	25 137
Texas	4,697	6,931	8,052	6,534	8,592	9,522	10,800	12,272	13,784	16,033
Utah	237	414	549	383	381	554	709	880	877	1,116
Virginia	278	245	304	291	358	361	318	531	654	621
Washington	0	0	0	0	0	2	0	0	0	0
West Virginia Wyoming	670 2,438	653 4,744	887 5,331	870 3,045	974 2,768	1,081 3,717	1,212 4,330	1,584 4,024	1,562 2,977	1,576 2,941
Federal Offsho	ore 794	939	952	612	630	615	551	483	415	370
TOTAL U.S.	18,506	26,843	32,184	25,454	29,923	32,945	37,967	43,805	43,010	49,105

Source: IHS. Note: Data include oil wells, gas wells, and dry holes and may not total due to Federal Offshore data duplication.

#### TOTAL WELLS DRILLED

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	225	169	368	263	394	441	443	440	554	348
Alaska	99	136	178	196	176	206	173	132	148	145
Arizona	1	1	0	1	0	1	4	1	2	0
Arkansas	149	169	250	154	228	304	334	495	830	1,093
California	1,545	2,193	2,271	1,989	1,978	2,221	2,296	2,494	2,367	2,666
Colorado	740	1,043	1,529	1,389	1,593	1,992	2,710	3,003	3,440	3,914
Florida	0	4	0	1	0	0	3	0	0	1
Georgia	0	0	1	0	0	0	0	0	0	0
Illinois	250	379	414	322	354	324	424	478	437	495
Indiana	54	63	136	93	182	149	163	117	113	213
Iowa	0	0	1	0	0	0	0	0	0	0
Kansas	645	1,162	1,499	1,183	1,631	1,887	2,283	3,161	3,249	4,242
Kentucky	647	787	986	1,016	925	842	949	1,294	1,269	1,238
Louisiana	842	1,118	1,281	873	1,075	1,261	1,451	1,633	1,630	1,770
Maryland	1	0	0	0	0	0	0	0	0	0
Michigan	328	397	439	367	376	430	528	558	482	502
Mississippi	117	225	275	211	281	270	299	293	332	273
Missouri	8	15	9	2	1	0	0	0	0	0
Montana	448	518	583	544	831	752	969	1,118	862	572
Nebraska	20	41	32	31	38	50	75	65	165	234
Nevada	2	4	7	4	3	3	5	1	2	5
New Mexico	1,039	1,556	1,689	1,275	1,624	1,789	1,906	2,028	1,838	1,688
New York	87	96	123	92	78	136	160	242	350	388
North Carolina	1 0	0	0	0	0	0	0	0	0	0
North Dakota	83	172	210	176	222	221	300	487	519	717
Ohio	520	573	725	520	515	549	577	684	806	1,006
Oklahoma	1,649	2,279	3,170	2,460	2,992	3,135	3,524	3,995	3,588	4,179
Oregon	10	0	0	0	0	0	0	0	0	1
Pennsylvania	1,375	1,601	2,263	2,212	2,575	2,496	3,344	4,260	4,169	4,190
South Dakota	6	11	11	12	8	12	41	25	48	44
Tennessee	121	186	119	107	252	202	234	285	71	242
Texas	5,486	7,779	9,052	7,240	9,378	10,284	11,532	13,409	14,392	16,735
Utah	260	433	621	424	416	601	777	1,005	961	1,202
Virginia	279	254	309	305	368	363	324	545	705	635
Washington	1	0	1	0	0	2	0	0	2	0
West Virginia	688	681	963	958	1,015	1,225	1,408	1,791	1,824	1,826
Wyoming	2,581	4,886	5,509	3,196	2,911	3,843	4,460	4,134	3,061	3,020
Federal Offsho	o <b>re</b> 971	1,135	1,158	758	807	786	716	638	555	488
TOTAL U.S.	21,277	30,066	36,182	28,374	33,227	36,777	41,696	48,173	48,216	54,072

Source: IHS.

Note: Data include oil wells, gas wells, and dry holes and may not total due to Federal Offshore data duplication.

#### **P**RODUCING **C**RUDE **W**ELLS

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	521	502	494	481	485	502	557	493	488	506
Alaska	2,256		2,304					2,465		2,479
Arizona	30		27	24	24	21	23	25	22	24
Arkansas	2,167	2,244	5,498	4,385	2,718	2,143	2,138	2,505	2,487	1,494
California	45,293	46,654	47,148	46,811	47,060	47,666	48,239	49,705	50,591	52,268
Colorado	5,305	5,400	5,322	5,272	5,133	5,140	5,088	5,049	4,999	5,038
Florida	88	79	73	72	96	67	76	65	64	66
Kansas	42,539	42,358	41,774	41,629	41,261	40,167	40,024	40,349	40,782	41,661
Louisiana	18,300	19,604	18,530	17,996	17,991	17,569	17,463	17,999	17,751	18,156
Michigan	2,631	3,688	3,845	3,672	3,790	3,761	3,887	3,847	3,875	3,755
Mississippi	1,715	1,742	1,768	1,616	1,664	1,685	1,647	1,788	1,937	2,082
Montana	3,617	3,741	4,409	3,662	3,713	3,918	4,052	4,272	4,873	5,033
Nebraska	1,269	1,270	1,250	1,224	1,222	1,224	1,211	1,229	1,211	1,234
Nevada	70	69	69	71	71	68	71	68	74	75
New Mexico	18,189	18,809	19,512	19,420	19,652	20,034	20,553	21,219	21,644	22,134
New York	3,739	3,627	2,876	3,213	3,117	3,095	3,270	2,767	3,190	2,816
North Dakota	3,391	3,418	3,481	4,224	3,519	3,779	3,506	3,512	4,841	4,198
Ohio	15,443	16,760	17,277	17,529	17,165	17,147	17,436	17,867	16,192	17,742
Oklahoma	64,254	,	60,923	58,088	,	,	51,869	,	,	41,382
South Dakota	143	144	144	143	143	145	162	153	163	151
Texas	166,711	163,487	161,943	158,410	154,932	152,693	152,045	153,455	154,569	158,433
Utah	2,112	2,142	2,201	2,163	2,217	2,433	2,685	2,953	3,107	3,351
West Virginia	1,558	1,263	1,708	2,188	1,469	2,099	2,115	2,107	2,613	2,485
Wyoming	11,599	11,910	11,921	11,716	11,688	11,743	12,147	12,813	12,094	12,011
Federal Offsho	ore 4,256	4,240	4,235	4,127	3,957	3,840	3,631	3,146	3,554	3,574
TOTAL U.S.	417,196	416,496	418,732	410,446	398,900	395,649	396,400	404,259	404,683	402,148

Source: IHS. Total includes onshore and offshore counts. \* State Data

#### **P**RODUCING **N**ATURAL **G**AS **W**ELLS

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama Alaska Arizona Arkansas	3,497 NA 7 3,073	NA	3,891 NA 7 3,454	8	4,460 NA 6 3,704	,	5,122 NA 4 4,298	5,523 NA 5 4,481	,	6,070 190 5 5,913
California Colorado Kansas Kentucky	1,309 16,040 15,781 9,859	1,359 16,824 18,069 10,225	1,484 18,137 16,684 10,541	1,416 19,280 17,827 11,038	1,467 20,821 16,998 11,510	1,497 22,693 17,740 12,298	1,579 25,570 18,417 11,754	1,715 28,407 19,891 12,771	1,806 31,920 20,978 16,140	1,840 36,805 21,908 13,727
Louisiana Michigan Mississippi Montana	13,889 7,152 665 3,862	7,234 765	8,405 7,642 913 4,419	8,250 7,957 992 4,603	8,367 8,282 1,151 4,864	8,734 8,524 1,284 5,299	9,385 9,009 1,469 5,716	10,679 9,444 1,574 6,200	9,792 1,714	11,879 10,050 1,786 6,277
Nebraska New Mexico New York North Dakota	108 22,225 5,722 82	,	102 24,506 6,120 100	104 25,454 5,544 97	108 26,687 6,517 111	112 28,160 6,707 133	115 29,723 6,661 208	117 31,246 6,764 371	195 32,535 7,138 303	328 33,625 7,391 347
Ohio Oklahoma Oregon South Dakota	20,661 25,200 21 56	22,011 26,297 18 58	22,585 27,829 18 58	22,426 29,077 16 58	22,613 30,551 16 58	32,214	22,151 34,081 14 60	23,123 36,358 13 62	38,164	23,384 39,800 21 84
Texas Utah Virginia West Virginia Wyoming	59,760 2,060 2,367 39,429 7,470	,	64,760 2,792 2,891 39,465 15,705	66,747 3,118 3,142 40,846 19,269	70,056 3,392 3,421 39,763 21,099	3,715 3,856 41,309	79,879 4,171 4,238 44,172 26,475	86,272 4,781 5,007 41,364 29,875	93,126 5,257 5,748 47,476 31,747	100,631 6,040 6,322 44,974 33,628
Federal Offsho TOTAL U.S.			4,672 <b>287,180</b>	4,374 <b>299,283</b>	4,277 <b>310,299</b>	4,137 <b>327,749</b>	3,878 <b>348,333</b>	3,367 <b>369,410</b>	3,487 <b>396,248</b>	3,255 <b>402,553</b>

Source: IHS. Data not available for certain states. \* Previous year data may be revised.

#### CRUDE OIL PRODUCTION

(thous. bbls.)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	6,406	5,983	5,415	5,163	4,970	4,662	5,197	5,276	4,951	5,560
Alaska	383,199	355,149	351,466	359,496	362,371	335,740	335,740	269,150	262,427	248,800
Arizona	62	55	58	61	45	50	48	53	41	50
Arkansas	6,187	6,454	6,873	6,470	6,586	5,845	5,388	5,292	5,249	5,791
California	273,222	271,027	260,545	255,195	247,393	239,485	228,811	222,874	217,986	214,120
Colorado	13,971	13,884	13,209	12,771	12,682	12,014	11,764	11,357	10,756	10,875
Florida	4,888	4,624	4,406	3,644	3,263	2,875	2,585	2,349	2,080	1,985
Illinois	11,274	10,906	10,198	11,127	11,707	10,699	8,899	10,324	9,609	9,430
Indiana	1,962	2,035	2,073	1,969	1,870	1,729	1,595	1,714	1,723	1,855
Kansas	34,084	34,238	33,957	33,056	33,711	33,802	33,897	35,621	36,434	39,575
Kentucky	1,459	1,545	1,490	1,381	1,347	1,210	1,215	1,181	2,618	1,034
Louisiana	80,263	75,860	71,204	60,626	58,658	56,983	50,835	49,443	52,528	48,626
Michigan	6,846	7,502	7,070	6,583	6,230	5,763	5,744	5,686	5,394	6,023
Mississippi	16,389	18,564	18,040	16,781	15,678	15,635	16,402	16,103	19,034	20,859
Montana	15,346	15,719	16,172	16,940	19,309	24,674	32,655	36,027	34,815	31,480
Nebraska	2,666	2,953	2,911	2,746	2,810	2,520	2,405	2,297	2,333	2,389
Nevada	706	621	571	553	492	463	446	426	410	436
New Mexico	59,667	61,659	60,957	58,293	57,004	56,723	54,530	53,661	53,300	54,648
New York	0	0	0	0	94	110	92	188	267	294
North Dakota	32,360	32,042	30,653	29,876	28,413	30,142	34,092	36,763	42,249	58,384
Ohio	4,563	4,935	5,532	4,917	4,521	4,264	4,250	4,372	3,958	4,175
Oklahoma	65,297	62,930	61,248	58,543	56,770	54,899	52,288	53,947	51,093	53,234
Oregon	0	0	0	0	0	0	0	0	0	0
South Dakota	1,100	1,162	1,246	1,209	1,239	1,356	1,415	1,394	1,653	1,642
Texas	408,993	400,930	380,943	365,891	359,907	351,459	347,614	346,079	341,763	352,904
Utah	14,560	14,156	13,913	12,610	12,089	13,718	15,298	15,965	16,957	18,438
West Virginia	533	538	706	571	768	586	676	788	1,030	987
Wyoming	52,901	52,987	48,963	46,020	43,174	41,689	41,452	42,287	41,992	40,054
Federal Offshore		470,192	473,252	496,663	505,364	476,795	427,167	431,321	427,571	395,233
TOTAL U.S. 1	, <b>953,524</b>	<b>1,928,649</b>	<b>1,883,071</b>	<b>1,869,155</b>	<b>1,858,465</b>	<b>1,785,890</b>	<b>1,700,805</b> <sup>2</sup> 5,178	<b>1,661,939</b>	<b>1,650,220</b>	<b>1,628,855</b>
DAILY AVG.	5,881	5,822	5,801	5,746	5,681	5,419		4,553	4,521	4,463

Source: IHS. Notes: Daily Average derived from IHS data.

#### **N**ATURAL **G**AS **P**RODUCTION

(MM	lcf) <b>199</b> 9	<b>2000</b>	2001	2002	2003	2004	2005	2006	2007	2008
Alabama Arizona Arkansas California	415,442 333 146,407 90,546	281 149,085	381,831 239 149,662 89,748	370,977 236 147,897 78,277	355,701 183 153,236 83,695	324,437 218 170,222 75,362	301,634 154 182,452 81,952	290,530 522 192,991 90,504	264,468 590 262,629 89,845	252,449 457 442,536 84,317
Colorado Kansas Kentucky Louisiana	706,407 574,048 75,096 1,310,820	528,307 76,073	803,229 490,685 77,031 1,371,071	912,289 464,540 81,344 1,261,846	997,085 431,149 83,452 1,252,126	1,062,396 405,594 85,668 1,266,290	1,120,614 386,067 79,419 1,219,382	1,217,865 378,032 85,840 1,290,156	1,273,254 371,782 95,247 1,279,855	1,476,152 379,647 95,013 1,302,007
Michigan Mississippi Montana Nebraska	227,506 120,227 55,197 1,021	110,869	203,038 132,500 74,416 871	192,482 142,950 79,235 894	178,082 157,847 78,092 1,183	170,023 170,157 87,046 1,217	161,614 183,103 91,456 939	159,295 206,269 93,199 898	151,701 268,328 88,833 1,282	145,875 331,699 78,197 2,814
New Mexico New York North Dako Ohio	17,148	18,476	30,181	1,412,648 36,252 14,485 70,426	1,375,603 35,725 12,823 68,428	1,372,580 45,785 13,329 66,562	1,358,029 53,535 13,150 60,451	1,352,226 39,741 17,216 62,021	1,294,420 54,586 18,546 55,657	1,243,420 46,221 21,099 61,208
Oklahoma Oregon South Dako Texas	1,555 ta 685	1,596	1,448,236 1,115 538 4,940,417	1,396,439 840 510 4,886,656	1,412,925 734 523 4,962,056	1,446,878 468 509 5,072,699	1,486,872 457 428 5,319,815	1,557,944 624 438 5,647,050	371 453	1,670,055 663 1,222 7,075,389
Utah Virginia West Virgin Wyoming	239,524 66,605 ia 218,565 1,118,077	71,458 161,940	265,032 71,468 190,798 1,390,353	260,714 76,828 194,328 1,539,308	257,510 80,086 183,091 1,636,903	264,789 85,752 195,084 1,735,410	281,368 89,217 215,145 1,839,625	321,626 102,798 205,051 1,948,640	348,601 112,224 234,103 2,091,822	403,310 127,373 237,956 2,325,182
Fed. Offshor TOTAL U.S.		4,177,882 <b>17,434,509</b>		3,829,757 <b>17,375,334</b>	3,715,894 <b>17,434,045</b>		2,594,879 <b>17,250,875</b>	2,376,086 <b>17,637,563</b>		1,905,309 <b>19,776,681</b>

Source: IHS. Data is not available for certain states. Data is dry natural gas production. \* Alaska data is not included as produced natural gas is re-injected in order to maintain reservoir pressure.

### **PRODUCING MARGINAL OIL WELLS**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	307	295	305	300	304	320	387	320	308	317
Alaska	95	101	136	145	151	140	144	153	163	177
Arizona	27	25	24	22	23	19	22	24	21	23
Arkansas	1,871	2,002	5,334	4,141	2,427	1,910	1,925	2,256	2,264	1,266
California	28,803	30,194	31,274	31,314	31,770	33,010	34,338	36,161	37,433	39,453
Colorado	4,437	4,504	4,454	4,455	4,344	4,384	4,334	4,331	4,302	4,304
Florida	11	9	7	13	33	11	15	8	12	12
Illinois	5,463	5,500	5,102	5,166	5,107	5,148	4,964	5,270	7,062	7,109
Indiana	1,124	1,142	1,114	1,108	1,043	1,051	995	1,061	1,790	1,792
Kansas	41,825	41,716	41,141	40,933	40,607	39,386	39,250	39,602	39,921	40,575
Kentucky	1,078	1,060	1,034	995	981	965	947	994	1,375	1,415
Louisiana	15,205	14,894	15,737	15,377	15,587	15,129	15,288	15,680	15,533	16,086
Michigan	2,240	3,306	3,520	3,386	3,502	3,508	3,665	3,640	3,689	3,590
Mississippi	919	864	867	793	822	850	883	965	1,033	1,126
Montana	2,733	2,810	3,465	2,714	2,731	2,817	2,853	2,943	2,945	3,066
Nebraska	1,199	1,190	1,172	1,154	1,140	1,177	1,157	1,182	1,152	1,178
Nevada	32	35	38	39	42	40	45	45	51	49
New Mexico	14,727	15,324	15,893	15,916	16,181	16,602	17,114	17,777	18,278	18,576
New York	NA	NA	NA	NA	2,249	2,164	1,966	2,077	2,279	2,513
North Dakota	2,019	2,035	2,085	2,819	2,163	2,412	2,164	2,183	2,249	2,321
Ohio	13,809	14,812	15,251	15,762	15,162	15,308	15,360	15,803	16,225	15,679
Oklahoma	59,045	56,384	56,346	53,846	49,700	48,542	47,937	48,269	47,029	35,010
South Dakota	57	57	54	52	61	64	75	71	70	54
Texas	145,466	146,200	145,415	142,031	139,807	138,498	138,295	140,374	142,134	145,240
Utah	1,288	1,315	1,360	1,421	1,442	1,582	1,756	1,982	2,116	2,367
West Virginia	1,456	1,143	1,544	2,016	1,201	1,722	1,480	1,689	1,975	2,124
Wyoming	8,997	9,248	9,360	9,237	9,355	9,473	9,911	10,528	9,775	9,688
Federal Offsho	ore 599	630	669	707	640	648	755	621	609	676
TOTAL U.S.	354,832	356,795	362,701	355,862	348,575	346,876	348,021	356,209	361,793	355,786

Source: IHS.

Notes: A marginal oil well is defined as a well producing 15 barrels/day or less. \* Previous year data may be revised.

#### MARGINAL OIL WELL PRODUCTION

(thous. bbls.)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	709	703	748	752	754	740	809	706	693	708
Alaska	176	185	252	288	243	264	193	322	287	364
Arizona	30	30	39	34	32	24	37	40	27	37
Arkansas	2,910	3,103	4,095	3,212	2,881	3,042	3,046	2,882	2,898	1,895
California	58,766	62,439	63,431	62,603	62,889	64,825	66,663	69,810	71,058	73,049
Colorado	3,591	3,768	3,881	4,212	4,199	4,188	4,028	3,983	3,666	3,848
Florida	20	23	20	35	46	27	25	20	37	28
Illinois	5,507	5,551	5,068	5,227	5,267	5,104	4,249	5,159	5,791	5,732
Indiana	1,149	1,186	1,178	1,102	1,063	1,020	916	1,085	1,372	1,272
Kansas	26,276	25,835	25,504	25,250	25,016	24,607	24,541	25,301	24,810	25,673
Kentucky	793	804	799	753	698	701	677	671	773	740
Louisiana	10,702	10,617	10,342	10,043	9,773	9,547	10,029	9,543	9,915	9,781
Michigan	1,769	3,304	3,460	3,367	3,374	3,427	3,443	3,425	3,289	3,395
Mississippi	1,913	1,997	1,994	1,855	1,966	2,010	2,121	2,207	2,324	2,522
Montana	3,223	3,413	3,457	3,344	3,350	3,352	3,508	3,531	3,540	3,676
Nebraska	2,010	1,981	1,857	1,826	1,777	1,842	1,711	1,676	1,575	1,620
Nevada	60	71	89	92	90	91	103	117	130	114
New Mexico	19,574	20,064	20,549	20,516	20,825	21,045	21,788	22,312	22,646	22,850
New York	NA	NA	NA	NA	94	110	92	193	270	294
North Dakota	4,318	4,572	4,658	4,648	4,815	4,531	4,601	4,811	4,955	5,224
Ohio	3,692	4,042	4,364	4,152	3,871	3,669	3,716	3,732	3723	3,740
Oklahoma	41,612	41,413	41,037	39,526	37,636	36,618	34,834	35,189	34,423	23,856
South Dakota	<b>a</b> 164	198	194	166	208	217	229	212	179	138
Texas	150,271	153,498	151,564	147,152	145,505	142,581	142,740	145,877	147,623	151,286
Utah	13,494	2,872	2,875	3,010	3,110	3,391	3,908	4,168	4,816	5,332
West Virginia		330	351	370	343	384	422	463	581	582
Wyoming		13,785	13,611	13,344	13,383	13,289	13,448	13,349	13,409	13,375
Fed Offshore	9 1,351	1,398	1,574	1,675	1,527	1,528	1,889	1,372	1,416	1,679
	<b>357,140</b>	<b>367,182</b>	<b>366,993</b>	<b>358,554</b>	<b>354,735</b>	<b>352,166</b>	<b>353,755</b>	<b>362,155</b>	<b>366,229</b>	<b>362,808</b>

Source: IHS.

Notes: A marginal oil well is defined as a well producing 15 barrels/day or less. \* Previous year data may be revised.

#### **PRODUCING MARGINAL NATURAL GAS WELLS**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	1,928	2,199	2,403	2,591	2,889	3,187	3,639	4,164	4,563	5,023
Arizona	3	3	3	5	2	2	2	2	2	2
Arkansas	1,809	2,019	2,149	2,208	2,383	2,519	2,736	2,892	2,996	3,346
California	619	685	676	693	701	720	777	836	899	987
Colorado	12,433	12,675	13,356	13,738	14,729	16,105	18,560	20,477	22,939	25,918
Kansas	8,355	10,967	10,223	12,044	11,891	13,531	15,083	17,196	18,776	20,006
Kentucky	9,684	10,074	10,405	10,868	11,329	12,129	11,616	12,617	8,444	NA
Louisiana	10,053	10,026	4,343	4,164	4,219	4,330	4,645	4,851	5,146	5,454
Michigan*	4,513	4,853	5,670	6,278	7,028	7,454	8,143	8,663	9,220	9,808
Mississippi	296	389	447	506	684	808	933	1,063	1,194	1,286
Montana	3,446	3,634	3,854	4,002	4,262	4,533	4,790	5,272	5,334	5,625
Nebraska	106	97	99	101	105	108	111	114	176	325
New Mexico	13,378	14,010	14,853	15,601	16,501	17,636	19,191	20,460	21,995	23,068
New York	5,653	5,590	6,147	6,282	6,165	6,421	6,429	6,640	6,898	7,076
North Dakota	61	64	65	60	73	79	104	156	188	210
Ohio	20,030	21,402	22,060	21,908	22,159	21,845	22,082	24,992	20,001	22,862
Oklahoma	15,069	16,135	17,605	18,924	20,321	21,716	23,393	24,955	26,707	28,135
Oregon	12	10	9	9	10	11	11	10	9	15
South Dakota		56	58	57	57	59	60	62	63	72
Texas	35,810	36,844	39,070	40,295	42,003	44,648	47,299	50,945	54,462	58,127
Utah	977	1,055	1,268	2,105	1,650	1,802	2,105	2,394	2,657	2,925
Virginia	1,695	2,003	2,260	2,440	2,702	3,085	3,438	4,117	4,802	5,251
West Virginia	38,724	29,366	38,704	40,052	38,843	40,451	43,242	40,544	46,507	43,844
Wyoming	2,804	4,664	7,162	9,591	11,127	13,443	15,526	18,060	19,592	20,554
Federal Offsh	<b>ore</b> 687	739	771	818	809	796	890	723	735	892
TOTAL U.S.*	188,200	189,559	203,660	214,694	222,642	237,418	254,805	272,205	275,861	290,811

Source: IHS.

Notes: A marginal natural gas well is defined as a well producing 90 thousand cubic feet per day or less.

\* Row may not total because it includes Pacific Coastal wells. \* Michigan data pre-2007 was derived from a calculated gas well count that increased well production and marginal well count compared to actual well counts used thereafter.

#### MARGINAL NATURAL GAS PRODUCTION

(Mmcf)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	30,121	33,921	37,297	39,224	44,565	47,877	53,491	60,237	66,314	71,335
Arizona	35	25	4	60	37	28	30	26	21	17
Arkansas	25,571	28,215	28,883	30,392	30,260	33,485	36,095	38,061	39,750	43,409
California	7,979	7,831	8,619	8,730	8,910	9,084	9,713	10,121	11,405	12,000
Colorado	126,150	129,869	141,619	153,957	172,671	195,752	219,516	244,131	259,934	292,816
Kansas	119,075	129,410	149,617	165,687	178,241	202,041	222,510	240,039	250,779	264,373
Kentucky	67,591	69,400	71,156	74,072	75,513	78,805	73,076	78,304	NA	NA
Louisiana	39,714	40,557	38,498	38,898	39,256	40,053	43,622	47,268	50,148	54,796
Michigan*	80,430	87,452	98,625	104,662	114,313	117,082	123,811	124,848	128,265	126,805
Mississippi	4,282	5,837	7,091	8,692	11,223	12,821	13,051	14,679	16,053	16,358
Montana	28,823	30,391	32,251	35,138	37,138	37,945	40,639	43,571	43,672	47,551
Nebraska	957	744	803	790	871	833	745	809	1,282	2,741
New Mexico	173,304	181,395	189,482	198,763	210,703	229,172	247,133	261,701	274,675	288,130
New York	12,512	12,181	12,152	11,770	11,015	10,892	10,885	11,582	12,755	13,604
North Dakota	430	440	446	570	679	967	1,726	2,262	22,64	2,342
Ohio	54,241	56,226	57,316	56,954	55,331	53,979	50,250	52,003	47,802	52,085
Oklahoma	195,411	211,217	225,447	240,546	257,931	270,739	288,113	304,086	320,222	331,595
Oregon	125	154	79	112	113	117	138	158	134	258
South Dakota	600	523	538	473	483	466	428	438	420	488
Texas	410,593	421,242	445,556	456,420	479,600	508,976	538,749	583,720	623,976	664,340
Utah	14,112	15,922	19,656	21,997	25,294	27,679	30,932	35,244	36,895	41,334
Virginia	23,534	28,446	31,964	35,408	36,924	40,141	43,994	53,268	61,584	70,117
West Virginia	159,474	126,932	157,127	162,879	152,036	161,214	175,204	167,499	189,735	185,857
Wyoming	36,181	56,571	88,040	110,670	136,706	157,753	174,246	187,707	195,370	191,676
Federal Offshor	r <b>e</b> 8,277	9,158	10,033	10,078	9,897	9,722	11,030	8,802	9,109	10,182
TOTAL U.S.*	1,619,483	1,655,603	1,853,471	1,967,418	2,091,600	2,247,334	2,408,367	2,570,029	2,642,563	2,784,208

Source: IHS.

Notes: A marginal natural gas well is defined as a well producing 90 thousand cubic feet per day or less.

\* Row may not total because it includes Pacific Coastal wells.

\* Totals may not add due to rounding.

\* Michigan data pre-2007 was derived from a calculated gas well count that increased well production and marginal well count compared to actual well counts used thereafter.

#### COST OF DRILLING AND EQUIPPING WELLS 2008

State	No. of Wells Drilled	Footage Drilled	Depth per Well	Total Cost	Cost per Well	Cost per Foot
		(1	ft.)			(\$)
Alabama	348	1,250,337	3,593	621,094,000	1,784,753	496.74
Alaska	145	794,722	5,481	3,846,193,000	26,525,469	4,839.67
Arizona	0	0	0	0	0	0
Arkansas	1,093	7,413,573	6,783	2,945,293,000	2,694,687	397.28
California	2,666	7,094,652	2,661	4,239,314,000	1,590,140	597.54
Colorado	3,914	26,898,799	6,872	15,819,869,000	4,041,867	588.13
Florida	1	3,038	3,038	9,220,000	9,220,000	3,034.89
Illinois	495	1,153,307	2,330	341,569,000	690,038	296.16
Indiana	213	375,665	1,764	141,932,000	666,347	377.82
Kansas	4,242	11,689,330	2,756	1,767,011,000	416,551	151.16
Kentucky	1,238	3,563,757	2,879	635,305,000	513,170	178.27
Louisiana	1,770	15,712,900	8,877	10,905,648,000	6,161,383	694.06
Michigan	502	1,276,062	2,542	906,532,000	1,805,841	710.41
Mississipp		2,420,425	8,866	1,674,049,000	6,132,048	691.63
Montana	572	4,541,099	4,442	1,345,830,000	2,352,850	529.63
Nebraska	234	772,099	3,300	223,392,000	954,667	289.33
Nevada	5	23,700	4,740	5,955,000	1,191,000	251.27
New Mexic	<b>o</b> 1,688	10,315,537	6,111	3,323,443,000	1,968,864	322.18
New York	388	1,170,071	3,016	308,487,000	795,070	263.65
North Dak	ota 717	9,191,117	12,819	5,766,131,000	8,042,024	627.36
Ohio	1,006	3,894,691	3,871	546,435,000	543,176	140.30
Oklahoma	4,179	28,563,233	6,835	12,466,680,000	2,983,173	436.46
Pennsylva		14,211,404	3,392	2,438,663,000	582,020	171.60
South Dak	ota 44	206,108	4,684	106,066,000	2,410,591	514.61
Tennessee	242	782,296	3,233	132,188,000	546,231	168.97
Texas	16,735	137,730,325	8,230	72,062,855,000	4,306,116	523.22
Utah	1,202	9,494,130	7,899	6,241,541,000	5,192,630	657.41
Virginia	635	1,640,058	2,583	299,244,000	471,250	182.46
Washingto		0	0	0	0	0
West Virgi		8,589,129	6,071	1,349,120,000	738,839	157.07
Wyoming	3,020	16,507,711	5,466	14,702,204,000	4,868,279	890.63
Federal O	ffshore 488	5,018,173	10,283	25,153,430,000	51,543,914	5,012.47
TOTAL U.S	54,072	330,300,168	6,109	190,325,976,960	3,519,862	576.22
Explorator		31,206,186	6,283	19,242,401,532	3,874,049	616.62
Developme	ental 49,105	299,093,982	6,091	171,083,575,428	3,484,036	572.01

Source: IHS.

COST OF DRILLING AND EQUIPPING WELLS 2008

#### CRUDE OIL REVENUES

(thous	. \$. <b>) 1999</b>	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	185,865	288,927	216,362	201,879	228,197	288,714	418,677	475,658	510,000	729,774
Alaska	4,828,307	8,439,528	6,448,392	7,021,406	8,509,077	11,027,864	14,890,978	15,425,817	16,819,997	22,536,136
Arizona	1,060	1,576	1,287	1,363	1,252	1,917	2,605	3,383	2,892	4,692
Arkansas	113,614	193,015	165,657	157,896	191,995	246,862	322,656	358,122	387,492	552,642
California	3,800,397	6,702,383	5,213,260	5,596,237	6,572,500	8,243,870	11,113,988		14,032,040	19,354,014
Colorado	320,807	533,177	410,026	448,493	648,257	892,277	1,263,025	1,492,282	1,557,808	2,184,103
Florida	85,663	134,339	NA							
Illinois	209,569	343,477	239,786	287,296	340,354	425,520	522,598	616,283	630,927	880,862
Indiana	33,997	58,555	47,436	45,970	52,929	67,006	88,112	102,666	113,067	170,787
Kansas	496,106	970,478	799,674	772,543	973,514	1,326,556	1,806,486	2,165,442	2,439,357	3,644,711
Kentucky	46,320	91,719	66,892	60,251	69,059	93,817	125,356	136,492	169,558	240,351
Louisiana	2,110,941	3,041,511	2,548,300	2,307,012	2,731,264	3,343,113	4,043,624	4,719,199	5,456,018	7,355,128
Michigan	130,313	222,345	167,339	170,946	190,370	250,848	297,815	310,113	347,791	595,852
Mississippi	276,804	520,508	412,627	398,312	455,644	635,176	877,318	1,030,079	1,400,185	2,090,849
Missouri	1,436	2,667	1,854	2,045	2,169	3,269	4,239	4,989	4,862	8,312
Montana	247,058	429,207	368,707	383,620	553,711	952,616	1,730,144	2,055,693	2,251,347	2,837,788
Nebraska	45,830	82,707	69,164	65,640	78,876	96,319	126,393	133,622	146,529	210,648
Nevada	9,792	14,084	9,798	9,904	12,098	14,807	19,078	24,836	26,194	39,885
New Mexico	, ,	1,935,302	1,612,984	1,616,359	1,952,158	2,521,263	3,205,274	3,693,163	4,055,809	5,716,351
New York*	3,333	6,006	3,778	4,461	4,163	6,698	10,764	20,260	26,395	42,375
North Dakot	<b>ta*</b> 549,129	922,349	746,323	748,481	860,714	1,224,352	1,867,871	2,262,555	2,942,287	5,566,976
Ohio*	97,968	180,747	136,450	135,750	159,132	221,392	302,212	340,990	371,431	551,097
Oklahoma	1,253,780	2,034,902	1,691,345	1,632,063	1,942,380	2,496,955	3,384,253	3,965,896	4,224,583	6,159,850
Oregon	6	0	0	0	0	0	0	0	0	0
Pennsylvan	i <b>a</b> 27,199	43,200	40,208	55,512	71,780	100,200	215,388	232,137	255,710	349,400
South Dako	<b>ta</b> * 18,546	32,971	29,982	29,087	35,799	52,109	74,405	72,279	104,529	148,352
Tennessee	5,496	9,093	7,708	6,020	8,260	13,162	14,765	10,956	18,565	31,655
Texas	7,767,239	12,681,154	9,932,793	9,792,883	11,820,983	15,239,311	20,395,845	24,353,558	27,107,463	38,547,656
Utah	287,516	446,095	367,421	326,446	378,212	575,651	898,821	1,069,227	1,219,610	1,904,587
Virginia	135	NA	NA	NA	131	NA	NA	NA	NA	NA
West Virgin	<b>ia</b> 24,213	37,968	27,401	31,164	37,432	51,391	84,011	110,309	105,883	151,447
Wyoming	1,006,745	1,632,922	1,237,681	1,201,585	1,395,598	1,811,827	2,355,694	2,817,138	3,157,944	4,556,804
TOTAL U.S.	25,109,181	42,032,860	33,020,634	33,510,275	40,278,009	52,224,862	70,462,396	80,243,676	89,886,271	127,163,085

Source: \* EIA price and production data used in addition to state data when EIA not available. Total does not include Federal Offshore.

#### NATURAL GAS REVENUES

(thous.	\$.) <b>1999</b>	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	885,546	1,450,233	1,509,306	1,204,585	1,874,005	2,160,750	2,751,780	2,166,685	2,011,828	2,488,581
Alaska**	634,265	807,831	938,166	986,831	1,180,314	1,613,895	2,314,590	2,574,952	2,440,521	2,944,486
Arizona	986	1,288	1,265	783	1,918	1,695	1,596	3,593	3,917	3,708
Arkansas	600,269	897,688	832,352	717,089	876,827	1,062,552	1,383,270	1,737,984	1,783,946	3,893,925
California	903,207	1,811,350	2,618,320	1,051,799	1,699,569	1,807,542	2,336,396	2,039,402	2,033,399	2,484,410
Colorado	1,575,569	2,763,455	3,138,071	2,258,760	4,591,234	5,622,814	8,418,829	7,361,265	5,678,549	9,642,429
Florida	NA	NA	NA	NA	NA	NA	NA	NA		NA
Illinois	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indiana	1,872	3,155	3,490	4,071	7,920	21,426	28,560	17,555	20,843	35,634
Kansas	960,154	1,687,590	1,757,331	1,187,292	1,813,807	1,961,778	2,455761	2,081,557	2,081,840	2,564,024
Kentucky	158,914	257,682	390,636	265,660	397,740	495,802	634,718	841,676	701,462	960,857
Louisiana	3,478,554	5,354,452	5,993,323	4,357,603	7,616,250	8,065,364	11,301,539	9,432,555	9,572,037	12,024,667
Maryland	49	128	133	132	216	213	342	366	NA	NA
Michigan	490,934	723,597	954,375	592,868	950,318	999,772	1,383,894	NA	NA	1,532,255
Mississippi	180,964	292,241	422,636	345,719	686,912	369,348	451,962	414,032	492,182	850,441
Missouri	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Montana	102,754	198,618	253,959	205,719	320,881	436,397	709,021	624,033	668,371	843,968
Nebraska	1,389	2,753	2,609	1,806	4,609	4,753	4,922	NA	7,557	19,170
New Mexico	3,189,626	5,814,862	6,570,696	4,373,974	7,314,308	8,113,719	11,368,097	9,944,998	10,628,430	12,148,114
New York*	37,040	66,589	138,935	111,552	208,872	321,429	429,300	399,137	486,237	449,861
North Dakota	<b>a</b> 122,640	210,538	193,204	155,741	196,596	315,202	441,479	360,380	365,149	525,286
Ohio*	266,107	426,808	454,486	466,274	564,282	601,665	754,213	668,941	668,641	668,681
Oklahoma	3,267,704	5,854,791	6,509,998	4,649,922	7,744,030	9,139,845	11,819,425	10,674,385	10,885,012	14,462,499
Oregon	3,253	3,266	4,063	3,323	3,275	1,817	1,930	2,745	2,155	4,147
Pennsylvani	a 539,826	346,500	446,209	538,098	NA	NA	NA	NA	NA	NA
South Dakot	<b>a</b> 1,459	5,881	3,762	3,024	5,493	6,001	7,380	6,163	7,184	13,053
Tennessee	2,804	4,704	7,200	6,991	9,412	14,490	21,010	18,055	26,135	41,595
Texas	11,675,863	20,758,669	21,764,819	16,245,797	27,161,677	29,542,446	39,836,828	36,616,945	42,520,234	58,897,676
Utah	506,845	883,255	999,374	546,731	1,101,718	1,456,558	2,156,757	1,912,277	1,452,939	2,666,431
Virginia*	179,756	284,034	329,965	453,915	397,612	NA	NA	NA	NA	NA
West Virginia	<b>a</b> 653,509	855,810	790,583	654,457	814,718	928,892	1,563,234	1,617,050	1,585,922	1,822,189
Wyoming	1,913,323	3,635,016	4,759,938	3,925,684	6,357,383	7,897,327	11,245,715	10,624,776	8,942,992	15,605,471
TOTAL U.S.	32,350,548	55,414,592	61,789,202	45,316,197	73,901,897	82,963,490	113,852,652	102,141,507	107,308,596	147,593,556

Source: EIA wellhead price and marketed production data.

\* State data used when EIA not available.

\*\* Alaska natural gas is reinjected.

NATURAL GAS REVENUES

#### **A**BANDONMENTS

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	10	60	38	19	34	29	19	78	20	2
Arizona	1	0	0	0	0	0	4	0	0	0
Arkansas	112	142	92	66	108	69	76	73	125	119
California	1,116	1,647	1,478	2,521	2,501	1,629	2,496	1,999	2,119	1,519
Colorado	157	178	193	152	215	212	206	282	104	946
Florida	0	0	0	0	0	0	0	1	2	4
Illinois	590	647	699	715	659	554	557	853	735	609
Indiana	61	80	101	127	102	80	27	159	374	275
Kansas	2,198	844	1,877	2,020	2,270	1,473	2,379	1,318	885	955
Kentucky	239	310	262	289	312	263	236	503	240	288
Louisiana	956	933	1,169	1,127	1,500	898	951	750	791	207
Michigan	172	166	196	220	177	196	136	87	108	79
Mississippi	107	128	93	144	106	90	59	34	91	8
Missouri	4	12	1	4	12	4	7	11	27	0
Montana	180	202	160	124	169	113	159	227	222	197
Nebraska	70	67	85	108	81	55	19	15	20	32
New Mexico	256	223	338	389	263	752	640	420	575	572
New York	68	94	59	106	115	83	75	19	110	122
North Dakota	70	78	89	57	40	50	28	71	18	15
Ohio	603	598	624	581	500	572	818	577	598	492
Oklahoma		1,247	975	1,139	1,056	956	1,407	1,090	1,090	3,546
Pennsylvania		420	324	358	328	306	320	100	323	342
South Dakota		0	0	1	2	0	2	0	0	0
Tennessee		138	57	53	86	50	25	34	250	0
Texas	5,355	5,486	6,305	6,579	6,902	6,718	6,160	6,417	5,030	733
Utah	54	36	42	22	17	57	73	65	125	105
Virginia	0	0	9	9	60	45	44	98	0	0
West Virginia	330	314	420	246	327	335	308	285	276	0
Wyoming	48	172	139	329	241	517	570	635	706	0
TOTAL U.S.	14,768	14,222	15,825	17,505	18,183	16,106	17,782	16,201	14,970	11,169

Source: IOGCC.

Note: 2008 data for oil and gas wells plugged and abandoned as of January 1, 2009. Some state data may be estimated.

#### Severance and Production Taxes

(thous. \$)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	37,899	68,341	107,024	53,235	92,695	101,184	132,300	177,280	139,380	192,752
Alaska	507,000	759,000	558,772	519,368	1,093,356	651,900	863,000	1,199,500	2,208,400	6,879,000
Arizona	6,398	6,060	7,026	6,510	8,377	9,899	10,022	7,979	6,761	5,488
Arkansas	4,616	9,476	9,546	6,608	8,355	9,802	15,078	15,078	14,928	21,427
California	194,606	215,696	239,921	189,306	214,473	188,753	268,796	328,876	471,185	467,130
Colorado	23,327	24,641	54,384	48,914	23,613	107,145	134,050	196,668	126,244	139,551
Florida	4,157	6,046	8,258	5,197	5,469	6,084	8,278	9,527	9,288	13,386
Indiana	502	653	572	567	590	845	1,119	1,215	1,350	2,082
Kansas	120,333	56,900	109,232	59,895	84,212	116,677	148,855	148,855	131,217	421,100
Kentucky	8,452	11,414	20,678	14,610	17,800	22,170	28,630	42,586	38,538	55,036
Louisiana	240,055	354,314	478,805	454,429	480,749	677,320	714,729	885,402	981,229	1,017,654
Maryland	1	1	2	1	1	1	4	4	3	1
Michigan	30,570	40,012	61,279	35,967	54,651	56,186	66,749	88,143	67,796	103,928
Mississippi	14,518	23,751	11,817	28,201	43,413	62,631	84,409	6,809	8,364	129,821
Montana	28,997	43,770	92,818	50,304	75,454	114,218	180,077	204,129	242,776	327,932
Nebraska	1,017	2,108	1,868	1,455	1,845	2,191	2,926	2,796	2,894	5,855
Nevada	151	341	174	182	248	356	527	577	576	907
New Mexico	227,200	345,300	355,370	479,109	571,862	737,200	926,884	1,169,271	987,921	1,282,483
North Dakota	35,402	71,275	66,800	62,300	66,846	73,914	157,500	166,147	185,970	534,700
Ohio	3,327	3,090	2,884	2,799	2,900	2,691	2,615	2,554	2,452	2,501
Oklahoma	253,039	410,412	745,236	417,103	600,980	701,156	875,653	1,168,598	1,001,328	1,266,655
Oregon	98	146	119	145	89	72	79	90	117	364
South Dakota	730	1,051	1,566	1,239	1,522	1,658	2,507	3,256	3,153	5,527
Tennessee	363	532	380	498	592	592	813	1,041	1,838	1,952
Texas	659,396	1,153,086	1,956,108	1,049,054	1,492,743	1,887,879	2,338,380	3,200,807	2,730,513	4,121,527
Utah	11,109	17,313	42,106	20,603	28,689	39,356	57,116	77,074	70,178	70,919
West Virginia	19,161	18,048	34,549	28,382	30,475	41,544	53,557	84,947	80,294	87,606
Wyoming	125,178	567,445	581,532	327,497	370,381	504,731	713,456	660,461	595,031	947,880
TOTAL U.S. 2	,557,601	4,210,222	5,548,823	3,863,479	5,372,380	6,117,250	7,787,983	9,851,714	10,109,721	18,105,163

Source: Various state and industry contacts.

Notes: Figures include all state and local tax revenues. States vary on the use of fiscal (Arizona) or calendar year data. West Virginia data switched to FY in 2001. Totals may not add due to rounding. Some taxes may include other commodities - for example Arizona's Transaction Privilege Tax includes taxes paid on coal, sand and gravel transactions in addition to oil and natural gas. Nevada's tax has been revised to include the Net Proceeds of Minerals Tax.

#### CRUDE OIL WELLHEAD PRICES

(\$/bbl.)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	16.71	27.63	23.18	23.39	28.97	38.79	53.26	63.16	71.10	96.71
Alaska	12.60	23.76	18.35	19.54	23.93	33.17	47.21	57.03	63.81	90.19
Arizona*	16.06	26.72	21.82	21.63	26.63	36.86	52.09	61.51	67.26	90.24
Arkansas	15.89	26.98	21.82	21.50	26.57	36.67	50.86	58.67	64.25	90.91
California	13.92	24.72	20.00	21.69	26.29	34.32	48.26	54.78	64.73	90.21
Colorado	17.37	28.85	24.82	25.29	30.71	40.38	55.34	63.80	67.04	90.80
Florida	17.50	29.04	NA							
Illinois	17.37	28.14	23.76	23.84	29.10	38.74	51.20	59.70	65.66	93.48
Indiana	17.31	27.91	23.46	23.43	28.38	38.18	51.02	59.31	65.47	91.92
Kansas	17.08	28.16	23.56	23.61	28.68	39.18	53.41	60.74	66.85	92.08
Kentucky	16.68	26.47	22.53	22.49	27.21	36.82	49.45	58.33	63.60	90.87
Louisiana	17.59	28.85	24.36	24.68	30.31	40.08	53.57	63.88	71.18	100.74
Maryland	NA									
Michigan	16.63	28.12	22.69	23.68	29.18	39.14	53.67	60.89	66.87	95.75
Mississippi	15.42	26.23	21.13	22.11	27.46	37.03	49.58	59.35	68.65	94.60
Missouri*	15.61	28.37	20.37	21.53	26.45	37.15	49.87	57.34	60.77	83.96
Montana	16.54	27.82	23.16	22.76	28.66	38.53	52.66	56.69	64.64	89.96
Nebraska	17.21	27.97	23.67	23.62	28.63	38.42	52.38	57.77	62.78	87.99
Nevada*	13.87	22.68	17.13	17.91	24.54	31.98	42.68	58.30	64.20	91.48
New Mexico	17.46	28.80	23.72	24.11	29.52	39.25	52.84	61.74	68.94	96.23
New York	16.18	28.60	22.76	24.92	28.91	39.40	54.64	63.51	69.46	109.78
North Dakota	16.70	28.19	23.55	24.15	29.27	39.30	52.38	56.69	65.30	88.68
Ohio	16.41	27.49	22.55	22.61	28.18	38.27	53.47	62.89	68.09	96.43
Oklahoma	17.77	29.08	24.68	24.49	29.72	39.95	54.46	63.11	69.31	96.15
Oregon	NA									
Pennsylvania	18.49	28.80	24.82	24.86	29.60	39.48	54.57	64.02	70.00	96.76
South Dakota	16.86	28.18	23.89	23.96	28.94	38.40	50.65	51.85	62.78	87.42
Tennessee*	15.93	26.28	21.96	21.89	26.56	36.46	45.57	57.06	65.37	92.02
Texas	17.29	28.60	23.41	23.77	29.13	38.79	52.61	61.31	68.30	96.85
Utah	17.69	28.53	24.09	23.87	28.88	39.35	53.98	59.70	62.48	86.58
Virginia*	16.88	NA	NA	NA	26.23	NA	NA	NA	NA	NA
West Virginia	16.46	27.12	22.35	22.55	28.06	38.38	53.75	63.07	67.27	95.07
Wyoming	16.47	26.89	21.55	21.96	26.63	35.10	45.63	53.25	58.34	86.07
TOTAL U.S.	15.56	26.72	21.84	22.51	27.56	36.77	50.28	59.69	66.52	94.02

Source: Energy Information Administration and State Sources\*

Notes: Data represent average first purchase price of crude oil at the lease or wellhead. Wellhead prices for Alaska, California, Louisiana and Texas are derived from formulas that include proportional production for onshore and offshore.

#### NATURAL GAS WELLHEAD PRICES

(\$/Mcf)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	2.32	3.99	4.23	3.48	5.93	6.66	9.28	7.57	7.44	9.65
Alaska	1.37	1.76	1.99	2.13	2.41	3.42	4.75	5.79	5.63	7.39
Arizona*	2.08	3.50	4.12	2.60	4.33	5.12	6.86	5.70	5.98	7.09
Arkansas	4.10	5.23	4.99	4.43	5.17	5.68	7.26	6.43	6.61	8.72
California	2.36	4.81	6.93	2.92	5.04	5.65	7.45	6.47	6.62	8.38
Colorado	2.18	3.67	3.84	2.41	4.54	5.21	7.43	6.12	4.57	6.94
Florida*	2.50	1.76	NA							
Illinois*	2.74	2.05	NA							
Indiana	2.19	3.51	3.28	3.11	5.41	6.30	9.11	6.01	5.78	7.58
Kansas	1.80	3.21	3.66	2.61	4.33	4.94	6.51	5.61	5.69	6.85
Kentucky	2.07	3.16	4.78	3.01	4.54	5.26	6.84	8.83	7.35	8.42
Louisiana	2.22	3.68	3.99	3.20	5.64	5.96	8.72	6.93	7.02	8.73
Maryland	2.73	3.75	4.15	5.98	4.50	6.25	7.43	7.63	NA	NA
Michigan*	1.77	2.44	3.47	2.16	4.01	3.85	5.30	NA	8.46	5.63
Mississippi	1.63	3.30	3.93	3.06	5.13	5.83	8.54	6.84	6.70	8.80
Missouri	NA									
Montana	1.68	2.84	3.12	2.39	3.73	4.51	6.57	5.53	5.72	7.50
Nebraska	1.36	2.26	2.16	1.52	3.17	3.22	4.29	NA	4.86	6.22
New Mexico	2.11	3.43	3.89	2.68	4.56	4.97	6.91	6.18	6.88	8.40
New York	2.16	3.75	5.00	3.03	5.78	6.98	7.78	7.13	8.85	8.94
North Dakota	2.32	3.94	3.53	2.73	3.53	5.73	8.40	6.52	6.67	8.55
Ohio	2.43	4.06	4.54	4.52	5.90	6.65	9.03	7.75	7.59	7.88
Oklahoma	2.05	3.63	4.03	2.94	4.97	5.52	7.21	6.32	6.24	7.56
Oregon	2.52	2.69	3.66	3.97	4.48	3.89	4.25	4.42	5.27	5.33
Pennsylvania*	3.09	2.31	3.41	3.41	NA	NA	NA	NA	NA	NA
South Dakota	2.13	3.56	3.42	2.95	4.98	5.49	7.44	6.40	7.22	7.94
Tennessee	2.28	4.09	3.60	3.41	5.22	6.90	9.55	6.78	6.63	8.85
Texas	2.31	3.93	4.12	3.16	5.18	5.83	7.55	6.60	6.98	8.51
Utah*	1.93	3.28	3.52	1.99	4.11	5.24	7.16	5.49	3.86	6.15
Virginia*	2.49	3.97	4.29	3.16	4.65	NA	NA	NA	NA	NA
West Virginia*	2.99	3.24	4.12	3.44	4.34	4.71	7.07	7.17	6.86	7.42
Wyoming	1.97	3.34	3.49	2.70	4.13	4.96	6.86	5.85	4.65	6.86
TOTAL U.S.	2.19	3.68	4.00	2.95	4.88	5.46	7.33	6.39	6.25	7.96

Source: Energy Information Administration and State Sources\*

## REFINER ACQUISITION COST OF CRUDE OIL

RETAIL	Gasoline	PRICES
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(\$/bbl.)	Domestic	Imported	Composite
1981	34.33	37.05	35.24
1982	31.22	33.55	31.87
1983	28.87	29.30	28.99
1984	28.53	28.88	28.63
1985	26.66	26.99	26.75
1986	14.82	14.00	14.55
1987	17.76	18.13	17.90
1988	14.74	14.56	14.67
1989	17.87	18.08	17.97
1990	22.59	21.76	22.22
1991	19.33	18.70	19.06
1992	18.63	18.20	18.43
1993	16.67	16.14	16.41
1994	15.67	15.51	15.59
1995	17.33	17.14	17.23
1996	20.77	20.64	20.71
1997	19.61	18.53	19.04
1998	13.18	12.04	12.52
1999	17.90	17.26	17.51
2000	29.11	27.70	28.26
2001	24.33	22.00	22.95
2002	24.65	23.71	24.10
2003	29.82	27.71	28.53
2004	38.97	35.90	36.98
2005	52.94	48.86	50.24
2006	62.62	59.02	60.24
2007	69.65	67.04	67.94
2008	98.47	92.77	94.74

Source: Energy Information Administration

(¢/gal.)	Excluding Taxes	Taxes	Pump Price
1984	90.7	30.5	121.2
1985	91.2	29.0	120.2
1986	62.4	30.3	92.7
1987	66.9	27.9	94.8
1988	67.3	27.3	94.6
1989	75.6	26.5	102.1
1990	88.3	28.1	116.4
1991	79.7	34.3	114.0
1992	78.7	34.0	112.7
1993	75.9	34.9	110.8
1994	73.8	37.4	111.2
1995	76.5	38.2	114.7
1996	84.7	38.4	123.1
1997	83.9	39.5	123.4
1998	67.3	38.6	105.9
1999	78.1	38.4	116.5
2000	110.6	40.4	151.0
2001	103.2	42.9	146.1
2002	94.7	41.1	135.8
2003	115.6	43.5	159.1
2004	143.5	44.5	188.0
2005	182.9	46.6	229.5
2006	212.8	43.1	255.9
2007	234.5	44.1	278.6
2008	277.5	49.1	326.6

Source: Energy Information Administration. Pump price quoted for unleaded regular.

#### World Crude Oil Reserves

(mill. bbls.)	United States	Canada	Latin America	Middle East	Africa	Asia Pacific	Western Europe	Eastern Europe & FSU	Total World
1991	26,254	5,588	119,765	661,571	60,488	44,073	14,503	58,774	991,011
1992	24,682	5,292	123,811	661,791	61,872	44,572	15,829	59,193	997,042
1993	23,745	5,096	124,996	662,866	61,963	44,647	16,643	59,168	999,124
1994	22,957	5,096	129,073	660,295	62,177	44,453	16,572	59,196	999,319
1995	22,457	4,898	128,695	659,555	73,154	43,953	15,573	59,188	1,007,475
1996	22,351	4,893	127,943	676,352	67,555	42,299	18,361	59,093	1,018,849
1997	22,017	4,839	126,115	676,952	70,062	42,275	18,128	59,101	1,019,545
1998	22,546	4,931	136,867	673,647	75,442	43,013	18,719	59,053	1,034,265
1999	21,034	4,931	117,931	675,636	74,890	43,985	18,611	59,024	1,016,041
2000	21,765	4,706	122,809	683,516	74,889	43,957	17,185	59,024	1,027,852
2001	22,045	4,858	122,912	685,592	76,677	43,779	17,135	58,555	1,031,553
2002	22,446	180,021	111,173	685,642	77,429	38,712	18,098	79,360	1,212,881
2003	22,677	178,893	114,522	726,842	87,043	38,258	18,233	79,343	1,265,812
2004	21,891	178,800	115,195	729,341	100,784	36,246	16,102	79,343	1,277,702
2005	21,371	178,792	116,246	743,411	102,580	35,936	14,842	79,370	1,292,550
2006	21,757	179,210	115,150	739,205	114,073	33,366	14,695	99,992	1,317,447
2007	20,972	178,592	121,507	748,286	114,838	34,350	13,157	99,997	1,331,698
2008	21,317	178,092	133,188	745,998	117,064	34,006	12,546	99,997	1,342,207

Source: Oil & Gas Journal Worldwide Reserves & Production Report. Estimated proved reserves as of 1/1 of stated year. Totals may not add due to rounding. Canadian reserves include oil sands after 2001. 124 AMERICA'S INDEPENDENT

### Wholesale Prices—Total U.S.

Year	Motor Gasoline	Kerosene		el Oil	Avera		Crude Oil
		(	Distillate t/gal.)	Residual	Of Four F		(\$/bbl.)
1952	11 20			2.04	0 60		,
1952	11.38 12.01	9.90 10.23	8.52 8.83	3.84 3.73	8.62 8.96	3.62 3.76	2.53 2.68
1954	11.66	10.40	8.94	3.97	8.88	3.73	2.78
1955	11.62	10.53	9.08	4.53	9.06	3.81	2.77
1956	11.75	10.99	9.45	5.30	9.43	3.96	2.79
1957	12.34	11.54	10.05	6.15	10.10	4.24	3.09
1958	11.74	10.96	9.39	4.82	9.27	3.89	3.01
1959	11.64	11.26	9.31	4.79	9.22	3.87	2.90
1960	11.61	11.17	8.79	4.88	9.15	3.84	2.88
1961	11.62	11.49	9.10	4.85	9.21	3.87	2.89
1962	11.52	11.42	9.11	4.78	9.13	3.84	2.90
1963	11.35	11.51	9.18	4.61	9.01	3.79	2.89
1964	11.27	10.93	8.65	4.50	8.83	3.71	2.88
1965	11.52	11.28	9.04	4.81	9.12	3.83	2.86
1966	11.59	11.49	9.09	4.73	9.15	3.84	2.88
1967	11.84	11.96	9.71	4.53	9.33	3.92	2.92
1968	11.55	12.03	9.84	4.30	9.14	3.84	2.94
1969	11.80	11.98	10.06	4.20	9.27	3.89	3.09
1970	12.33	12.43	10.45	6.14	10.20	4.28	3.18
1971	12.70	12.90	10.75	7.76	10.94	4.59	3.39
1972	12.70	12.87	10.61	7.60	10.87	4.57	3.39
1973	14.72	14.08	12.61	8.45	12.49	5.25	3.89
1974	25.53	24.02	22.57	20.43	23.48	9.86	6.87
1975 1976	30.27 33.82	27.41 31.67	26.09 30.38	22.03 21.66	27.03 29.55	11.35 12.41	7.67 8.19
1976	36.99	35.81	30.30 34.41	25.87	29.55 33.21	13.95	8.57
1978	39.22	37.23	35.66	23.00	33.72	14.16	9.00
1979	56.84	56.60	54.47	33.63	49.50	20.79	12.64
1980	87.40	80.26	78.21	44.43	72.77	30.56	21.59
1981	101.63	101.03	97.20	61.17	88.75	37.28	31.77
1982	94.56	97.18	91.95	57.80	83.27	34.97	28.52
1983	86.97	85.12	80.05	57.30	76.94	32.31	26.19
1984	81.14	84.75	79.62	59.14	74.49	31.29	25.88
1985	81.11	81.69	76.66	56.41	73.06	30.69	24.09
1986	47.74	49.92	44.91	36.23	43.97	18.47	12.51
1987	53.22	56.75	52.25	45.36	50.89	21.37	15.40
1988	50.31	50.72	46.10	38.72	46.22	19.41	12.58
1989	59.15	60.78	56.02	40.87	53.28	22.38	15.86
1990	72.13	73.37	67.82	50.99	65.20	27.38	20.03
1991	64.24	64.79	59.81	40.94	56.61	23.78	16.54
1992	60.90	62.78	58.12	41.67	54.81	23.02	15.99
1993	54.85	59.98	55.54	40.22	50.82	21.34	14.25
1994 1995	52.95 55.51	57.67 58.15	53.22 53.74	42.50 47.41	50.09 51.63	21.04 21.68	13.19 14.62
1996	68.29	74.02	69.64	53.78	64.43	27.06	18.46
1997	66.21	62.26	66.81	54.69	62.19	26.12	17.23
1998	52.60	45.00	43.90	28.00	42.38	17.80	10.87
1999	64.50	53.30	53.60	35.40	51.70	21.71	15.56
2000	96.30	88.00	89.60	56.60	82.63	34.70	26.72
2001	88.60	76.30	77.90	47.60	72.60	30.49	21.84
2002	82.80	71.60	71.80	53.00	69.80	29.32	22.51
2003	100.20	87.10	88.20	66.10	85.40	35.87	27.56
2004	128.80	120.80	117.80	68.10	108.88	45.73	36.77
2005	167.00	172.30	172.00	97.10	152.10	63.88	50.28
2006	196.90	196.10	199.10	113.60	176.95	74.10	59.69
2007	218.20	217.10	219.00	135.00	197.00	82.87	66.52
2008	259.00	302.00	297.00	186.60	261.15	109.70	94.04

Sources: Petroleum product prices derived by IPAA from Platt's Oilgram Price Report thru 1997. EIA prices used thereafter. Crude oil wellhead prices from EIA.

Notes: Data reflect price trends only, not actual sale prices. Motor gasoline prices represent leaded fuel prior to 1982, and unleaded thereafter.

#### **P**ETROLEUM **C**ONSUMPTION

(mill. bbls.)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	101.6	105.4	103.9	108.1	107.1	117.1	115.3	115.9	115.1	110.0
Alaska	48.6	48.5	50.7	48.7	50.0	58.9	58.7	60.3	57.0	49.1
Arizona	92.9	94.6	95.7	97.8	99.3	108.6	108.7	110.7	109.7	106.4
Arkansas	71.6	73.1	70.4	70.1	69.6	71.7	70.7	70.8	71.2	69.5
California	628.5	654.1	661.7	685.8	701.2	693.1	705.3	714.1	718.3	682.6
Colorado	77.8	83.5	86.9	83.3	86.7	93.7	92.6	96.1	97.8	94.1
Connecticut	83.2	81.2	76.6	70.8	79.8	86.0	82.7	75.0	73.1	67.1
Delaware	25.8	24.9	26.7	26.1	26.6	25.5	26.9	25.1	24.7	23.2
Dist.of Columbia		6.3	6.1	6.1	5.4	5.6	5.3	4.3	4.2	3.6
Florida	341.4	354.2	352.7	345.4	351.4	382.7	390.1	373.3	361.3	331.8
Georgia	192.6 39.7	193.7 40.6	193.0 41.5	192.5 44.8	196.1 46.7	206.3 49.1	213.3 51.2	207.8 51.6	202.7 52.9	190.1 42.6
Hawaii										
Idaho	30.0	30.7	28.6	29.1	25.6	28.8	29.5	30.6	30.6	29.2
Illinois	250.6	248.6	243.0	237.7	243.2	255.7	276.1	265.5	264.3	254.0
Indiana Iowa	162.5 82.8	164.9 82.4	152.1 78.8	161.7 82.4	166.8 76.4	164.6 86.5	163.2 88.3	163.5 90.0	160.7 86.3	153.6 83.6
Kansas	86.6	79.3	73.7	71.1	83.8	81.8	64.8	66.7	82.6	78.7
Kentucky	132.8	130.8	122.8	133.1	125.7	139.2 210 5	138.2	138.7	137.3	128.6
Louisiana Maine	278.9 48.1	327.7 47.1	325.8 40.7	331.5 41.3	300.9 47.3	310.5 46.6	297.9 47.6	321.4 42.9	302.2 43.0	275.2 38.6
Maryland Massachusetts	105.3 133.7	102.1 138.2	103.9 135.4	100.7 130.8	104.7 133.1	108.8 135.5	112.5 136.8	103.4 124.4	103.0 125.8	99.4 121.0
Michigan	208.0	201.5	194.0	130.8	193.4	135.5	198.4	124.4	125.8	172.9
Minnesota	122.1	125.6	125.0	126.3	129.2	133.0	134.1	134.1	131.0	136.3
Mississippi	87.5	85.0	89.1	80.4	89.1	88.5	84.2	86.9	85.5	78.7
Missouri	145.5	128.8	136.9	138.5	140.5	142.8	142.2	141.1	141.9	134.5
Montana	30.6	29.7	28.5	29.3	28.6	32.2	33.5	35.5	38.2	33.6
Nebraska	45.9	42.0	41.0	42.9	43.3	44.5	43.2	43.3	43.7	42.2
Nevada	41.9	43.4	45.9	43.8	44.4	48.3	51.2	54.0	53.6	49.8
New Hampshire	34.5	34.0	31.1	32.8	36.6	37.7	35.4	32.1	32.0	32.0
New Jersey	221.5	226.6	232.2	229.5	222.9	229.8	239.9	234.1	247.0	233.9
New Mexico	47.6	45.8	45.3	45.8	46.1	47.8	47.7	50.2	53.8	50.2
New York	294.1	308.7	297.6	287.6	319.0	337.1	331.0	292.6	295.4	283.2
North Carolina	172.5	180.8	177.0	172.8	176.4	184.0	185.8	181.0	182.1	180.3
North Dakota	22.9	22.5	26.4	23.3	22.6	25.0	25.7	25.4	26.4	26.1
Ohio	245.4	242.3	240.2	244.4	251.7	250.7	247.5	248.8	248.52	238.0
Oklahoma	93.5	95.4	106.4	101.6	99.6	98.2	105.6	111.7	104.6	103.5
Oregon	71.4	69.2	65.0	67.6	65.6	67.8	69.3	70.5	70.0	68.4
Pennsylvania	248.2	259.7	264.4	260.2	267.3	276.0	279.2	269.4	266.5	253.8
Rhode Island	17.9	17.8	18.3	18.0	18.6 97.4	18.1	17.9	17.2 109.2	16.9	17.7 103.7
South Carolina	85.6	88.5	95.1	94.9		112.3	108.1		106.2	
South Dakota	21.4	22.1	20.9	22.7	21.3	21.6	22.4	22.1	22.7	22.1
Tennessee Texas	129.2 1,152.1	130.8 1 125 0	136.8	142.7	144.6 1,160.7	148.8	153.1 1,162.5	152.6	151.4 1,208.0	139.9
Utah	46.8	1,125.0 49.2	1,113.7 48.2	1,151.0 47.6	49.9	1,200.1 50.6	53.0	1,199.2 57.0	1,208.0 55.7	1,121.8 52.9
Vermont	15.7	16.6	17.0	16.2	16.3	17.9	17.3	17.0	16.7	15.6
Virginia	156.7	164.6	168.9	164.2	177.1	189.7	189.9	185.2	186.8	173.2
Washington	153.8	152.6	142.6	136.2	133.6	136.9	141.1	145.9	152.2	145.8
West Virginia	38.8	39.4	48.3	50.2	47.7	53.0	51.9	53.0	52.4	49.4
Wisconsin	126.1	124.9	116.3	117.6	112.2	118.3	117.4	115.7	116.2	112.5
Wyoming	26.3	26.2	28.9	27.8	28.9	28.4	28.9	31.0	31.6	32.0
Total U.S.	7,124.6	7,210.6	7,171.8	7,212.9	7,312.2	7,587.6	7,592.8	7,550.9	7,548.3	7,136.3
Source: Energy Info	rmation Adm	ninistration.								1

#### NATURAL GAS CONSUMPTION

(MMcf.)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alabama	337,270	353,614	332,693	379,343	350,345	382,367	353,156	391,093	418,512	404,157
Alaska	422,816	427,288	408,960	419,131	414,234	406,319	432,972	373,850	369,967	341,895
Arizona	165,076	205,235	240,812	250,734	272,921	349,622	321,584	358,069	393,954	399,501
Arkansas	252,853	251,329	227,943	242,325	246,916	215,124	213,609	233,868	226,439	234,904
California	2,339,521	2,508,797	2,464,565	2,273,193	2,269,405	2,406,889	2,248,256	2,315,721	2,395,674	2,449,599
Colorado	333,085	367,920	463,738	459,397	436,253	440,378	470,321	450,832	504,775	504,824
Connecticut	152,237	159,712	146,278	177,587	154,075	162,642	168,067	172,682	180,181	166,821
Delaware	56,013	48,387	50,113	52,216	46,177	48,057	46,904	43,190	48,155	48,164
Dist.of Colun	nbia 32,281	33,468	29,802	32,898	32,814	32,227	32,085	29,049	32,966	31,905
Florida	559,366	541,847	543,143	689,337	689,986	734,178	778,209	891,611	917,244	942,841
Georgia	337,576	413,845	351,109	383,546	379,761	394,986	412,560	420,469	441,107	425,153
Hawaii	3,115	2,841	2,818	2,734	2,732	2,774	2,795	2,783	2,850	2,702
Idaho	70,672	72,697	80,279	71,481	69,868	75,335	74,540	75,709	81,937	88,545
Illinois	1,004,281	1,030,604	951,616	1,049,878	998,486	953,207	969,642	893,997	965,591	1,000,548
Indiana	556,932	570,558	501,711	539,034	527,037	526,701	531,111	496,303	535,796	551,447
Iowa	230,691	232,565	224,336	226,457	230,161	226,819	241,340	238,454	293,274	320,463
Kansas	302,932	312,369	272,500	304,992	281,346	256,779	255,123	264,253	286,538	282,897
Kentucky	218,399	225,168	208,974	227,920	223,226	225,470	234,080	211,049	229,799	225,299
Louisiana	1,495,478	1,536,725	1,219,013	1,341,444	1,233,505	1,281,428	1,254,370	1,217,871	1,289,421	1,238,672
Maine	6,572	44,779	95,733	101,536	70,832	72,565	57,835	49,605	56,530	61,193
Maryland	196,350	212,133	178,376	196,276	197,024	194,725	202,509	182,294	201,053	196,154
Massachusei	344,790	343,314	349,103	393,194	403,991	372,532	378,068	370,664	408,704	373,700
Michigan	951,143	963,136	906,001	966,354	924,819	916,629	913,827	803,336	798,126	779,381
Minnesota	344,591	362,025	340,911	371,583	371,261	359,898	367,825	352,570	388,335	401,247
Mississippi	306,733	300,652	332,589	343,890	265,842	282,051	301,663	307,305	364,067	355,007
Missouri	265,798	284,763	283,793	275,629	262,529	263,945	268,040	252,697	272,536	296,070
Montana	62,129	67,955	65,051	69,532	68,473	66,829	68,355	73,879	73,822	76,423
Nebraska	121,487	126,962	121,984	120,333	118,922	115,011	119,070	129,885	150,808	167,614
Nevada	154,689	189,170	176,835	176,596	185,846	214,984	227,149	249,608	254,406	264,624
New Hampsh	ire 20,313	24,950	23,398	24,901	54,147	61,172	70,484	62,549	62,132	70,537
New Jersey	715,630	605,275	564,923	598,602	612,890	620,806	602,388	547,206	618,965	614,927
New Mexico	236,264	266,469	266,283	235,098	221,021	223,575	220,717	223,636	234,236	246,715
New York		1,244,746	1,171,898	1,199,632	1,101,618	1,098,056	1,080,215	1,097,160	1,187,059	1,180,127
North Carolir		233,714	207,108	235,376	218,642	224,796	229,715	223,032	237,354	243,090
North Dakota		56,528	60,819	66,726	60,907	59,986	53,050	53,336	594,453	63,097
Ohio		890,962	804,243	830,955	848,388	825,753	825,961	742,359	806,350	792,339
Oklahoma		538,563	491,458	508,298	540,103	538,576	582,536	624,400	658,379	669,768
Oregon		224,888	229,665	202,164	212,556	234,997	232,562	222,608	251,927	268,492
Pennsylvania		702,847	634,794	675,583	689,992	696,175	691,591	659,754	752,401	749,948
Rhode Island		88,419	95,607	87,805	78,456	72,609	80,764	77,204	87,972	89,308
South Carolii		160,436	141,785	184,803	146,641	163,787	172,032	174,806	175,701	170,079
South Dakota		37,939	37,077	41,577	43,881	41,679	42,555	40,739	53,938	64,359
Tennessee		270,658	255,990	255,515	257,315	231,133	230,338	221,626	221,118	229,976
Texas		4,421,777	4,252,152	4,303,831	4,050,632	3,908,243	3,503,636	3,432,236	3,516,706	3,545,795
Utah	159,889	164,557	159,299	163,379	154,125	155,891	160,275	187,399	219,700	224,220
Vermont	8,033	10,426	7,919	8,367	8,400	8,685	8,372	8,056	8,867	8,624
Virginia	276,793	268,770	237,853	258,202	262,970	277,434	299,746	274,175	319,913	299,399
Washington	287,302	286,653	312,114	233,716	249,599	262,485	264,754	263,395	272,613	298,226
West Virginia Wisconsin Wyoming	380,560 96,726	147,854 393,601 101,314	141,090 359,784 98,569	146,455 385,310 112,872	126,986 394,711 115,358	122,267 383,316 107,060	117,136 410,250 108,314	113,084 372,462 108,481	115,974 398,370 140,912	111,482 409,259 142,710
Total U.S. Source: Energy	22,405,151 Information Ad	23,333,121 Iministration. To						<b>21,684,641</b>	23,097,140	23,226,612

Source: Energy Information Administration. Total Consumption - includes Lease & Plant Fuel and Pipeline and Distribution Use.

#### **ENERGY CONSUMPTION BY STATE**

Trillion BTU	Petroleum	Natural Gas	Coal	Nuclear	Renewable Energy	Other*	Total	% Petroleum and Natural Gas
Alabama	594	420.4	842.8	407.6	238.9	-438.7	2065	49.12
Alaska	276.9	343.9	14.7	0	15.2	0	650.7	95.40
Arizona	555.9	410.3	458.7	305.8	118.8	-296.7	1,552.8	62.22
Arkansas	373.6	238.4	278.8	148.1	121.4	-35.7	1,124.6	54.42
California	3651	2,520.6	63.1	339.5	830	977.3	8,381.5	73.63
Colorado	496.2	508.5	385.4	0	81.7	26.2	1498	67.07
Connecticut	352	169.8	45.2	161.3	39.8	41.7	809.8	64.44
Delaware	124.7	49.8	60.9	0	6.7	53.2	295.3	59.09
Dist. Of Columbia	19	32.8	0.4	0	1.6	126.6	180.4	28.71
Florida	1,759.2	970.2	693.2	335.9	257.4	431.6	4,447.5	61.37
Georgia	1,001.5	436.6	885.8	331.3	208.2	152	3,015.4	47.69
Hawaii	241.2	0.1	20.2	0	22.2	0	283.7	85.05
Idaho	156.3	90.7	8.6	0	126.7	147.1	529.4	46.66
Illinois	1,324.1	1,003.3	1,103.2	994.6	175.8	-512.2	4,088.8	56.92
Indiana	813.7	555.5	1,558.1	0	101.8	-171.7	2,857.4	47.92
Iowa	419.2	292	485.2	55.2	218.3	-55.5	1,414.4	50.28
Kansas	398.5	292.5	371.8	88.8	62	-78	1,135.6	60.85
Kentucky	682.2	233.2	1,024.8	0	67.6	-25	1,982.8	46.17
Louisiana	1,445.9	1,359.8	262.5	160.7	112.7	146	3,487.6	80.45
Maine	206.2	65	5.9	0	182.7	9.5	469.3	57.79
Maryland	519.5	203.2	309.3	153.4	65.9	195.5	1,446.8	49.95
Massachusetts	638.4	382.3	106.9	61.3	66.3	219.7	1,474.9	69.20
Michigan	880.6	797.3	800	329.1	151.2	-39.9	2,918.3	57.50
Minnesota	716.6	410.4	359.4	135.9	179.3	177.5	1,979.1	56.95
Mississippi	426.8	364.2	177.2	98.2	50.3	68.8	1,185.5	66.72
Missouri	695.4	298.1	792.9	98	75.9	-23.3	1937	51.29
Montana	181.3	77.6	203.3	0	123.1	-151	434.3	59.61
Nebraska	221.4	169.4	234.7	99.1	87.2	-29.8	782	49.97
Nevada	264.1	274.9	88.6	0	64.2	58.2	750	71.87
New Hampshire	164.5	73.3	40.2	97.7	41.7	-106.3	311.1	76.44
New Jersey	1,271.7	634.7	97.7	336.5	55.9	240.6	2,637.1	72.29
New Mexico	263.8	250.9	284.3	0	30.2	-136	693.2	74.25
New York	1,524.3	1,204.9	229	451.7	425.4	152.9	3,988.2	68.43
North Carolina	928.4	249.7	794.7	415.8	167.2	146.5	2,702.3	43.60
North Dakota	138.4	60.5	424.6	0	44.4	-227	440.9	45.11
Ohio	1,263.3	823.6	1,438.4	183.1	115.2	163.4	3987	52.34
Oklahoma	558.1	691.2	391.7	0	87.1	-124.8	1,603.3	77.92
Oregon	364	274.7	41.4	0	416.7	7.9	1,104.7	57.82
Pennsylvania	1,346.8	778.3	1,421.1	822.2	140.3	-609.1	3,899.6	54.50
Rhode Island	93.7	91.2	0	0	7.4	27.8	220.1	84.01
South Carolina	545.4	175.9	445.5	541.1	107.8	-156	1,659.7	43.46
South Dakota	113.9	64.6	43.1	0	84	44.6	350.2	50.97
Tennessee	741	238.5	643.8	282.5	145.1	210.2	2,261.1	43.32
Texas	5,433.3	3,656.2	1,605.9	425.7	349.1	81.8	11552	78.68
Utah	286.8	237.4	395.9	0	23.6	-144.4	799.3	65.58
Vermont	79.5	8.7	0	51.2	24.8	-9.7	154.5	57.09
Virginia	915.1	310.7	415.1	292	137.7	443.2	2,513.8	48.76
Washington	786	307.2	94.6	96.9	899.8	-134.2	2,050.3	53.32
West Virginia	268.6	119.7	955.6	0	25.8	-539	830.7	46.74
Wisconsin	580.9	415	480.7	127.1	147.7	111.1	1,862.5	53.47
Wyoming	177.3	147.1	500.1	0	21.6	-304.6	541.5	59.91
Total U.S.	37,280.2	23,785.1	22,384.9	8,427.3	7,351.5	112.4	99,341	61.47

Source: EIA

Note: Totals may not equal sum of components due to independent rounding. Renewable Energy includes conventional hydroelectric power, biomass (wood and biomass waste, fuel ethanol, and losses and co-products from fuel ethanol production), geothermal, solar thermal and photo voltaic, and wind energy. Other\* includes Net Interstate Flow of Electricity/Losses and Net Electricity Imports.

#### INDUSTRY EMPLOYMENT-2008

State	Mining	Refi	ning	Transportation		on V	Vholesale	Retail	Total
	Oil & Gas Extraction	Petroleum Refining	Oils & Greases	Pipelines, Except Gas	Pipeline Construction	Gas Distribution	Petroleum Products	Gasoline Stations	Industry
Alabama	2,099	ND	946	714	1,457	1,747	2,193	18,169	27,325
Alaska	12,969	ND	414	ND	431	274	556	1,705	16,349
Arizona	509	ND	206	263	1,496	ND	1,965	16,798	21,237
Arkansas	6,202	498	509	862	1,544	866	2,157	11,892	24,530
California	20,953	13,498	934	2,953	8,489	1,265	12,764	52,411	113,267
Colorado	23,129	575	62	876	3,657	1,148	2,457	12,675	44,579
Connecticut	28	ND	324	167	339	1,349	5,167	6,140	13,514
Delaware	29	ND	ND	ND	30	ND	789	2,402	3,250
Dist. of Colu	<b>mbia</b> ND	ND	ND	ND	ND	ND	ND	450	450
Florida	1,155	175	298	239	881	1,836	6,402	37,779	48,765
Georgia	287	63	208	390	1,273	1,755	4,096	27,786	35,858
Hawaii	16	ND	516	ND	85	ND	645	2,574	3,836
Idaho	101	ND	ND	ND	157	ND	820	5,667	6,745
Illinois	2,825	2,971	1,643	1,090	2,414	4,863	5,461	26,378	47,645
Indiana	524	ND	3,433	509	1,572	2,795	3,591	22,249	34,673
Iowa	17	ND	303	360	426	540	1,725	17,654	21,025
Kansas	9,052	1,364	254	795	1,334	1,894	2,219	9,789	26,701
Kentucky	2,494	754	361	993	1,129	788	3,026	18,462	28,007
Louisiana	51,336	9,543	1,331	2,525	17,336	1,633	12,819	17,927	114,450
Maine	18	ND	360	87	78	60	3,956	7,395	11,954
Maryland	677	ND	765	ND	1,203	665	3,292	9,709	16,311
Massachuse	tts 102	ND	ND	154	269	2,783	6,906	11,469	21,683
Michigan	2,715	502	781	1,055	652	2,930	4,947	24,309	37,891
Minnesota	137	ND	2,122	356	1,107	1,704	2,894	23,212	31,532
Mississippi	4,297	1,967	127	967	3,655	650	2,352	15,304	29,319
Missouri	601	141	360	308	430	3,132	4,027	25,182	34,181
Montana	2,749	1,056	11	396	417	385	969	5,556	11,539
Nebraska	255	ND	22	168	372	1,714	1,236	8,815	12,582
Nevada	199	ND	200	ND	321	ND	770	8,190	9,680
New Hampsl	hire 37	ND	172	ND	16	200	2,821	4,936	8,182
New Jersey	298	2,606	526	315	1,208	3,783	5,693	14,821	29,250
New Mexico	15,982	ND	830	882	2,291	761	1,832	7,963	30,541
New York North Caroli North Dakot Ohio		28 133 ND 1,653	431 214 ND 777	368 157 95 1,025	2,579 1,133 821 1,791	3,938 2,098 3,730	13,301 6,470 1,593 5,615	28,262 27,960 4,031 34,163	50,557 38,808 11,724 54,125
Oklahoma		1,615	466	1,875	2,298	3,824	11,802	13,878	85,916
Oregon		ND	404	ND	304	1,259	1,663	10,325	13,987
Pennsylvani		2,206	2,743	1,968	2,167	3,789	11,238	35,437	66,610
Rhode Island		ND	ND	ND	72	ND	1,097	1,834	3,003
South Caroli		20	143	ND	186	888	2,293	17,264	21,029
South Dakot		ND	ND	61	30	220	1,203	5,847	7,687
Tennessee		ND	1,054	374	579	1,830	3,428	23,753	31,670
Texas		22,320	826	12,884	31,167	7,223	58,204	68,819	426,539
Utah Vermont Virginia Washington West Virginia Wisconsin Wyoming	6,735 17 1,931 319 <b>a</b> 5,713 103 19,103	980 ND 1,921 308 ND 995	16 ND 92 609 118 112	290 ND 386 215 1,602 294 751	1,001 7 1,670 1,201 1,315 1,060 5,527	919 ND 1,405 1,306 923 775 265	1,018 1,591 4,659 3,329 993 3,330 996	9,948 3,896 32,952 13,673 8,900 23,353 4,163	21,264 5,511 43,003 22,056 20,363 29,033 31,912
Total U.S.	495,395	75,099	15,227	42,042	110,975	115,860	248,416	844,991	1,948,005

Source: State Agencies & Bureau of Labor Statistics

Note: Reported data only. N.A.I.C. codes used. ND - Non-Disclosure or not available = not included in Total.

Note: State data differ from the Bureau of Labor Statistics national averages (Total US) due to confidentiality rules. Oilfield Machinery included in Wholesale Petroleum Products. Pipeline Construction and Oilfield Machinery separated out on state pages. State page Refining includes Oil and Greases.

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#### **R**EFERENCE INFORMATION

#### **Data Sources & Notes**

The editorial staff gratefully acknowledges the following sources of data that appear on the individual state pages.

Average Production (dry).....IHS

Average output per producing well ......IHS

		В
Cumulative production (marketed) & Reserves (dry)	.Energy Information Administration	N LF N/
Cumulative wells drilled	.IHS & State Data	N
Cumulative wellhead value	.Energy Information Administration	Ε
Deepest wells drilled	.IHS & State Data	0
End-use natural gas prices	.Energy Information Administration	
Federal Leases & Royalties	. Department of Interior and Minerals Management Service	
First and peak production years	AIME Statistical Yearbook, World Oil, Oil & Gas Journal, & World Petroleum Report (Note: Marketed production)	O
Marginal wells & Abandonments	IHS & IOGCC	
Mineral lease royalties, bonuses & rent	Department of Interior and Minerals Management Service. Note: Total includes other minerals in addition to oil, ngls and natural gas	O
Natural gas marketed production	.Energy Information Administration	
Number of employees	.IPAA survey & Bureau of Labor Statistics	O
Operator	A company or individual who last. reported to the state regulatory agency as having control of the operation and management of a producing well or property	0
Petroleum reserve position	.Energy Information Administration	
Producing wells	.IHS & State Data	
Rotary drilling rigs	.Baker Hughes, Inc.	
State maps	.State data and IHS data for pro- ducing entities by county	
Severance and production taxes	.IPAA survey	
Total Production (dry)	.IHS and Energy Information Administration (marketed gas production)	
Wellhead prices and value	.Energy Information Administration and IPAA, State Data	
Wells and footage drilled	.IHS & State Data	
	& Reserves (dry) Cumulative wells drilled Cumulative wellhead value Deepest wells drilled End-use natural gas prices Federal Leases & Royalties First and peak production years Marginal wells & Abandonments Mineral lease royalties, bonuses & rent Natural gas marketed production Number of employees Operator Petroleum reserve position Producing wells Rotary drilling rigs State maps Severance and production taxes Total Production (dry)	& Reserves (dry)       Energy Information Administration         Cumulative wells drilled       IHS & State Data         Cumulative wells drilled       IHS & State Data         Cumulative wells drilled       IHS & State Data         End-use natural gas prices       Energy Information Administration         Federal Leases & Royalties       Department of Interior and Minerals Management Service         First and peak production years       AIME Statistical Yearbook, World Oil, Oil & Gas Journal, & World Petroleum Report (Note: Marketed production)         Marginal wells & Abandonments       IHS & IOGCC         Mineral lease royalties, bonuses & rent       Department of Interior and Minerals Management Service. Note: Total includes other minerals in addition to oil, ngls and natural gas         Natural gas marketed production       Energy Information Administration         Number of employees       IPAA survey & Bureau of Labor Statistics         Operator       A company or individual who last. reported to the state regulatory agency as having control of the operation and management of a producing wells         Petroleum reserve position       Energy Information Administration         Producing wells       IHS & State Data         Rotary drilling rigs       Baker Hughes, Inc.         State maps       State data and IHS data for producing entities by county         Severance and production taxes       IPAA survey

Worldwide rank from BP and World Oil for wells drilled.

#### COMPILED BY IPAA AUGUST 2010

ADDI	eviations
bbl.	= barrel
b/d	= barrels per day
Mcf	= thousand cubic feet
	= million cubic feet
Bcf	= billion cubic feet
Tcf	= trillion cubic feet
BTU	= British Thermal Unit
NGL	= Natural Gas Liguid
	•
LPG	= Liquefied Petroleum Gases
NA	= Data Not Available
ND	= Not Disclosable
Ene	rgy Conversions
One ba	arrel of crude oil:
	= 42 gallons
	= 5,800,000 BTU of energy
	= 5,614 cubic feet of natural gas
	= 0.22 ton of bituminous coal
	= 0.22 ton of bituminous coal
One ci	ubic foot of natural gas:
	= 7.48 gallons
	= 1,030 BTU of energy
	= 0.000178 barrel of crude oil
	= 0.00004 ton of bituminous coal
One sl	nort ton of bituminous coal:
	= 2,000 pounds
	= 26,200,000 BTU of energy
	= 4.52 barrels of crude oil
	= 25,314 cubic feet of natural gas
One m	etric ton of crude oil:
	= 2,204 pounds
	= 7.46 barrels of domestic crude oil
	= 6.99 barrels of foreign crude oil
One c	ubic meter of natural gas:
	= 35.314 cubic feet

#### GLOSSARY

Abandonments- The number of producing wells that have been abandoned during a given time period.

*Artificial Lifting* - Any method used to stimulate the production of crude oil and/or natural gas in excess of the flow resulting under natural reservoir pressures, e.g. pumping, secondary or tertiary recovery.

Associated Gas - The combined volume of natural gas which occurs in crude oil reservoirs either as free gas (associated) or as gas in solution with crude oil (dissolved).

*Barrel* - Standard volumetric measure for petroleum, equivalent to 42 U.S. gallons.

*Condensate* - A mixture of liquid hydrocarbons at atmospheric conditions which occur in a gaseous state underground, sometimes known as distillate or natural gasoline.

*Crude Oil* - Hydrocarbons in liquid unprocessed form that vary significantly in properties such as API gravity, viscosity, and sulfur content.

*Development Well* - A crude oil, natural gas or dry hole drilled within an area known to be productive.

*Distillate Fuel Oil* - One of the petroleum fractions produced by conventional distillate, includes fuel oil and diesel fuel.

*Dry Hole* - A completed well which is not productive of crude oil and/or natural gas in commercial quantities.

*Dry Natural Gas* - Natural gas that does not contain dissolved liquid hydrocarbons.

*Exploratory Well* - A crude oil, natural gas, or dry hole drilled to discover a petroleum formation or its limits.

*Gas Well* - An exploratory or development well completed for the production of natural gas.

*Heavy Oil* - A type of high-viscosity crude that may, or may not, naturally flow into a well bore. The limit for heavy oils has been set between 0.1 API gravity and 20.9 API gravity.

*Liquefied Petroleum Gas (LPG)* - Butane, propane, and other light products separated from natural gasoline or crude oil by fractionation or other processes. At atmospheric pressure, it reverts to the gaseous state.

*Marginal Well* - A producing well which pumps or "strips" less than 15 barrels of crude oil or 90 Mcf of natural gas per day.

*Marginal Well Reserves* - The estimated amount of additional crude oil or natural gas which can be recovered by primary means or secondary recovery methods.

*Middle Distillates* - A general classification of petroleum products that includes distillate fuel oil and kerosene.

*Natural Gas* - Hydrocarbons in gaseous form or mixed with crude oil.

*Natural Gas Liquids (NGL)* - Hydrocarbons found with natural gas that are recoverable by condensation or absorption, such as LPG or natural gasoline.

*Natural Gas Marketed Production* - Gross withdrawals of natural gas from production reservoirs, less gas used for reservoir repressuring, nonhydrocarbon gases removed in treating and processing operations, and quantities vented and flared.

*Non-associated Gas* - Natural gas not in contact with significant quantities of crude oil in a reservoir.

*Oil Well* - An exploratory or development well completed for the production of crude oil.

*Petroleum* - Includes in its broadest sense the entire spectrum of hydrocarbons - gaseous, liquid, and solid.

*Pipeline* - A line of tubes with pumping machinery that transports crude oil or natural gas from the wellhead to the storage tank or petroleum refinery.

*Proved Reserves* - The estimated quantity of crude oil, natural gas, or NGL that is shown with reasonable certainty to be recoverable from known fields under existing economic and operating conditions.

*Residual Fuel Oil* - The heavy, high-viscosity leftover from the refining process, used mainly for industrial purposes.

*Rotary Drilling Rig* - A derrick equipped with modern rotary equipment capable of drilling a bore hole with a bit attached to a rotating column of steel pipe, in contrast to a cable tool rig which drills on the percussion principle.

*Seismic Exploration Activity* -The search for geological structures which are potential petroleum-bearing formations by interpreting data from seismic shocks.

Severance Tax - A tax levied by some states on each barrel of crude oil or each thousand cubic feet of natural gas produced.

*Strategic Petroleum Reserve* - Crude oil inventories held in government underground storage for use during periods of supply interruptions.

*Stratigraphic Test* - A hole drilled to gather information about a stratigraphic formation such as the general permeability and porosity of the rocks; includes core tests.

*Well* - A hole drilled to find or produce hydrocarbons, or to provide services related to their production.

*Wet Natural Gas* - Volumes of natural gas remaining after removal of lease condensate, and after exclusion of nonhydrocarbon gases where they occur in sufficient quantity to render the gas unmarketable.

*Wildcat Well* - A type of exploratory well drilled in an unproven area where there has been no previous production.

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- Committed to becoming a future leader in the petroleum industry

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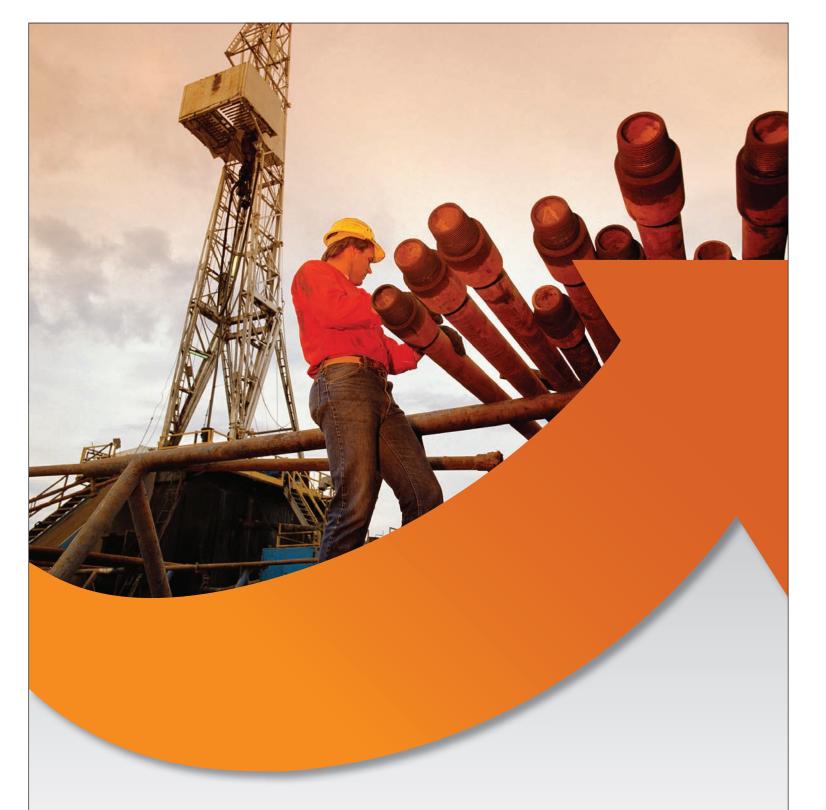
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