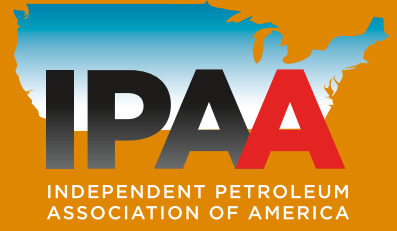
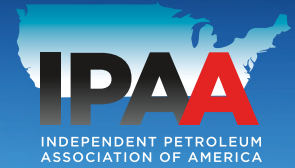


# 2012-2013 IPAA Oil & Gas Producing Industry in Your State®





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*Image provided by EOG Resources, Inc.  
operations in the Eagle Ford.*



# ***THE OIL & GAS PRODUCING INDUSTRY IN YOUR STATE***

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**Editor: Frederick J. Lawrence**

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# *THE YEAR IN REVIEW: INTRODUCTION TO 2011 O&NG IN YOUR STATE*

## **2011: The Shift to Liquids Solidifies in the Post-Recession, Post-Macondo Era**

**Pete Stark, Ph.D., Senior Research Director and Advisor, IHS**

### **Introduction:**

The year 2011 marked the end of a 17 year period where natural gas drilling and production dominated the U.S. petroleum industry and introduced a new era with a significant shift toward oil and liquids. In the aftermath of dual shocks from the “Great Recession” of 2009 and the April 2010 blowout and fire at the Macondo Prospect in the Gulf of Mexico the U.S. petroleum industry gradually recovered along with the economy. The growth of Real U.S. Gross Domestic Product (GDP) slowed during 2011 but recorded a 1.8 percent gain for the year. U.S. natural gas demand recorded a modest 0.7 billion cubic feet per day (Bcf/d) increase during 2011 thanks to a one Bcf/d increase in industrial demand and a surge in demand for gas to replace coal-fired power. These increases offset declines in residential and commercial gas demand that resulted from mild winter heating seasons. U.S. oil demand, on the other hand, followed a slowly declining trend line from a peak in 2005 and dropped by 386,000 barrels per day (bop/d) – a two percent decrease from 2010.

The “Great Revival” in U.S. oil supplies from “shale” or tight reservoirs was a headline story for 2011. From 2008 through 2011 the U.S. was the leading country in the world in terms of oil supply growth. According to the Energy Information Administration (EIA), U.S. crude oil production increased by 552 thousand barrels per day during this period, with 2011 contributing an increase of 181 thousand barrels per day or 28 percent of the total. This milestone was greeted as a huge positive for the U.S. energy sector but following more than 20 years of declining oil production the surge in new tight oil production impacted North American crude oil flows and pricing dynamics. Growth in sweet crude production from the Bakken – Three Forks play in the Williston Basin overloaded takeaway capacity and created an oversupply of crude in the Mid-Continent region (Cushing, OK) that had been retooled to handle increasing supplies of heavy oil from Canada. By the end of the year it was apparent that thousands of miles of new pipelines and substantial increases in crude shipping by rail would be required to balance the new wave of liquids supplies. Excess supplies of natural gas liquids (NGLs) led to production curtailments in the Marcellus and Eagle Ford and also triggered a slump in liquids processing.

The Great Revival also led to “The Great Oil Price Disconnect” during 2011. West Texas Intermediate (WTI) oil prices entered the year almost on par with Brent crude but the negative differential between WTI and Brent crude reached almost \$30 per barrel during September before new transportation options relieved the bottleneck. The negative price differential eased to about \$10 per barrel before the end of the year. Monthly WTI crude prices ranged from a high of \$106.60 per barrel during April to a low of \$82.15 per barrel during September and averaged \$91.70 per barrel for the year - an increase of \$15.52 per barrel or 20 percent from 2010.

The size of the prize for tight oil became evident during 2011. IHS studies estimated that the U.S. had almost 40 billion barrels of recoverable tight oil resources and that tight oil production could grow to about four million barrels per day by 2020. Studies also indicated that tight oil also could support 1.3 million jobs, deliver \$988 billion to the U.S. economy and generate \$97 billion in state and federal tax revenues over a ten year period.

The incredible “Shale Gale” continued to boost U.S. natural gas supplies. According to the EIA, from 2008 through 2011 U.S. marketed gas supplies increased by a little over 8 Bcf/d or 14 percent, with 2011 contributing an increase of 4.5 Bcf/d or 56 percent of the total. Shale gas performance continued to shine and increased by 15.4 Bcf/d over the three year period. Almost half of the shale gas increase – about 7.4 Bcf/d was recorded during 2011. Shale gas clearly offset declines in conventional gas production as well as a significant drop of 1.17 Bcf/d in offshore Gulf of Mexico gas production that was compounded by the post-Macondo drilling moratorium. But, unlike oil, which had few demand constraints, the North American gas market already was oversupplied and something had to give.

Many gas producers hoped for signs that the surge in shale gas supplies would diminish in response to reduced levels of gas drilling. But mild weather prevailed and reduced demand for commercial and residential gas led to a steady build-up of excess gas in storage and gas prices slumped during the last half of the year. From a high of \$4.68 per thousand cubic feet (Mcf) during June 2011, Henry Hub gas price slipped to \$3.21 per Mcf in December. This was the lowest average December gas price since 1999. Implications of the “shale gale” were clear and gas producers championed new prospective avenues such as LNG exports to market their gas. This idea would have been viewed as a



# THE YEAR IN REVIEW: INTRODUCTION TO 2011 O&NG IN YOUR STATE

sure sign of dementia only four years earlier when substantial LNG imports – as much as ten Bcf/d - were viewed as the only way to meet U.S. gas demand during 2011. Another milestone was reached when the Baker Hughes oil rig count surpassed the gas rig count for the first time (since August 1993) on April 21st, 2011, marking the end of a remarkable era for U.S. natural gas and ushering in what appeared to be an exciting new era for tight oil.

## E&P Trends

**Oil:** The combination of a huge spread in Btu values between oil and gas and the successful application of horizontal drilling / hydraulic fracturing technology to produce commercial volumes of oil and liquids from tight reservoirs drove a substantial shift in focus from gas to oil. The shift toward oil already was apparent in IHS 2010 drilling statistics, when 16,601 oil completions almost matched 16,739 gas completions. The shift was confirmed during 2011 when 22,649 oil completions and 14,525 gas completions were reported. And according to Baker Hughes, during April 2011 the number of active oil rigs exceeded the number of active gas rigs for the first time since August 1993. Different dynamics were behind these numbers. In the case of oil, healthy oil prices and management desires to rebalance portfolios drove investments and drilling activity toward expanding tight oil plays such as the Bakken-Three Forks in the Williston Basin, the Niobrara in the Denver and Powder River Basins, the Eagle Ford in the western part of the Upper Gulf Coast Basin, the Utica shale in Ohio and the Permian Basin where the Spraberry, Bone Spring and Wolfcamp were prime targets. IHS identified 21 U.S. tight oil plays that were being evaluated by drilling during 2011. Ten of these plays demonstrated material commercial production.

**Natural Gas:** Decreasing natural gas prices undermined economic returns from many dry gas plays. During 2011 operators actively shifted rigs from dry gas plays like the Haynesville, Barnett and the Rocky Mountain region Cretaceous tight sands to the hot tight oil plays listed above and into liquid rich parts of gas plays such as the Marcellus, Woodford shale and the Barnett Combo fairway on the north flank of the Barnett shale play. In this respect, the mighty Marcellus and the Woodford were the only major U.S. gas plays that increased rig activity during 2011 but even they began to lose rigs by end of the year. The increase in shale gas well performance over time posed a challenge. Even though the gas rig count, which stood at 1,347 at the end of 2008, decreased by 40 percent to 809 rigs at the end

of 2011, U.S. gas production increased by eight Bcf/d. Far too many gas wells were being drilled to balance the gas market.

**Technology:** The importance of technology in the evolution of U.S. unconventional oil and gas plays cannot be overstated. As a baseline to compare with the growth of oil and gas supplies, Baker Hughes data showed 587 U.S. active horizontal rigs, 34 percent of total rigs, at the end of 2008. By the end of 2010 the number of horizontal rigs had increased to 947, or 56 percent of the total, and by the end of 2011 the number of horizontal rigs had increased to 1,167 or 59 percent of the total. Moreover, operators were tuning their horizontal boreholes and completions. Longer horizontal laterals, increasing the number of frac stages and boosting the amount of proppant resulted in steady improvements in well performance. Average peak 30 day initial production rates, for example, from Bakken wells in North Dakota outside of the Sanish-Parshall field increased from about 175 bop/d during 2008 to 375 bop/d during 2011. Similarly, the peak 30 day initial potential rate for U.S. gas wells almost doubled from about 800 Mcf/d during 2008 to about 1,580 Mcf/d during 2011. Many fewer vintage 2011 gas wells were needed to grow gas supplies than the much lower volume 2008 vintage wells.

**Exploration:** Exploratory drilling eased a bit during 2011 with 2,327 total exploratory wells representing a 14 percent decrease from 2010. There is no clear reason for this decrease other than that it was due at least in part to the process of balancing portfolios to the new focus on oil. It takes time to rebuild a portfolio of exploration prospects. Nevertheless, a number of interesting exploration prospects were tested during the year.

Frontier wildcats tested prospects on the Diablo Platform and Marathon Uplift in west Texas, along the Ouachita trough in central Texas, on the Pedernal Uplift in New Mexico and in the Pedregosa Basin of New Mexico to test the Percha shale – an equivalent to the Woodford shale. Unfortunately, these tests did not yield discoveries before the end of the year.

On the other hand, several important tight oil successes were confirmed during 2011. The most newsworthy was Chesapeake's mid-year announcement that the Utica shale in Ohio could be a potential giant play. Other successes included Apache's expansion of Granite Wash production into the Dalhart Basin, promising Uteland Butte horizontal tests in the Uintah Basin, the emergence of the so-called "Eagle-



# *THE YEAR IN REVIEW: INTRODUCTION TO 2011 O&NG IN YOUR STATE*

bine” play in the eastern extension of the Eagle Ford fairway and promising oil tests in the Pearsall shale along and under the western part of the Eagle Ford play.

Promising wildcat tests of the Collingwood shale in the Michigan Basin, the Smackover Brown Dense Limestone in Arkansas and Louisiana and the Tuscaloosa Marine shale along the Mississippi – Louisiana boundary triggered announcements of additional tests to evaluate these emerging plays.

By mid-year, deepwater Gulf of Mexico exploration was ramping up following the Macondo drilling moratorium. The Wilcox oil trend in Walker Ridge and Keathley Canyon drew the most attention.

Natural gas was also not forgotten. Encana announced a promising Niobrara horizontal completion in western Colorado’s Piceance Basin that might have the potential to revitalize drilling in this dry gas province.

## **Production Trends – Natural Gas**

Based on numbers tabulated for this report, U.S. gas well gas production reached 22,301 Bcf, an increase of 1,246 Bcf – a six percent gain from 2010. Coalbed methane delivered 1,613 Bcf during 2011 – about seven percent of the total even though coalbed drilling slowed markedly in several areas due to low gas prices. The U.S. Federal Offshore contributed 1,374 Bcf, or six percent of the total even though drilling was curtailed for more than a year following the Macondo accident. Marginal gas production clearly has taken a back seat to the shale plays, but these smaller volume marginal wells produced almost 2,990 Bcf, or more than 13 percent of the 2011 total. More than 358,000 marginal gas wells were on-stream during 2011 and comprised almost 74 percent of the tabulated U.S. producing gas wells.

Louisiana, driven by Haynesville shale gas production, led all states by increasing its annual gas well gas production by 807 Bcf. Pennsylvania followed and added 678 Bcf, mostly from the Marcellus shale.

Associated gas production added an additional 2,694 Bcf in the lower 48 states. Associated gas was beginning to increase during the year from liquids-rich fairways in plays such as the Eagle Ford and Granite Wash.

## **Production Trends – Oil**

Based on numbers tabulated for this report, U.S. crude oil production reached 1,838 million barrels (MMb), an increase of 40.5 MMb – a two percent gain from 2010. Marginal oil

wells have provided a foundation for U.S. oil production for many decades and continued to do so. During 2011 marginal oil wells produced 368 MMb or 20 percent of the total crude volume. Almost 377,000 marginal oil wells were on-stream during 2011 and comprised almost 88 percent of the total tabulated U.S. producing oil wells. Heavy oil contributed 382.3 MMbo or almost 21 percent of 2011 crude production. California was the leading heavy oil producer, contributing more than 187 MMbo, or almost half of the heavy oil.

Texas, driven by Eagle Ford shale and Permian Basin oil production, led all states by increasing its annual crude oil production by 79.2 MMb. North Dakota followed and added 41.2 MMb, mostly from the Bakken and Three Forks formations.

Condensate production added an additional 209.5 MMb and boosted U.S. 2011 wellhead liquids production by 11 percent to 2,047 MMb

## **Concluding Comments**

The “Great Revival” of oil production from U.S. tight reservoirs was the big story for 2011. Thanks to tight oil production the U.S. led the world in oil production growth from 2008 through 2011 – a remarkable turn-around for U.S. oil supplies. Tight oil was recognized as a game changer and for the first time in 17 years U.S. oil well completions and active oil rigs exceeded the number of gas well completions and gas rigs.

Several additional changes also commanded attention:

- Operators were rebalancing their portfolios to increase their oil stream revenues.
- Gas producers pursued new markets for their gas including LNG exports and increased use of compressed natural gas (CNG) as a transportation fuel.
- The industry scrambled to eliminate transportation bottlenecks by planning an unprecedented expansion of pipelines and crude rail shipping terminals.
- Expanding unconventional drilling activity triggered additional conflicts with community and environmental interests. The industry was challenged to demonstrate appropriate corporate responsibility.

At year-end 2011, it was clear that the U.S. industry had embarked on a new era for unconventional oil and gas that had the potential to deliver huge benefits to the economy and to energy security.

## ***THE 2012-2013 EDITION –EDITOR’S DESK***

The strength and progress of the U.S. energy industry emanate from the activities of independent producers in the various plays that have created the incredible turn-around in American oil and natural gas production and reserve growth. The Eagle Ford play began as a natural gas play and did not have notable oil exploration until early 2009. As featured on the cover of this edition, the Eagle Ford play in Texas played a key role in the transition of the unconventional revolution from natural gas to liquids. Oil production in the Eagle Ford, went from averaging less than 21 thousand barrels per day in 2007 to over one million barrels in the fall of 2013 (according to data from the EIA). Besides spurring jobs growth, the jump in Eagle Ford production helped drive Texas crude oil production past the two million barrel per day mark in 2012 – a level not seen since 1988.

The combination of technology, entrepreneurship and risk capital heralded new activity (and a better understanding of its geological zones) to a field that has been explored since the 1920s. The Eagle Ford formation was named for a town in eastern Texas near Dallas – though the formation itself extends to the southwestern end of the state, where the play’s activity is concentrated, and on into Mexico. A shale formation roughly 4,000 to 12,000 feet below the surface, it has served as the source rock for the East Texas Field (among the top 100 fields in the U.S.) and for conventional fields in the overlying Austin Chalk. With the fine-tuning of horizontal drilling and the refinement of hydraulic fracturing technology, the hydrocarbon-rich Eagle Ford has become a major target of independents. Although the southeastern band of the play has more natural gas, it becomes more “oily” on the northwestern side, with a condensate “window” in between.

Since the first horizontal drilling began in 2008, activity has risen sharply from approximately 185 rigs in 2011 to more than 230 rigs in 2013. The transition to pad drilling and horizontal wells will lend further efficiencies of scale to the drilling and completion process as companies continue to adapt to the shale and tight oil plays. According to the first-ever assessment by the U.S. Geological Survey (USGS), published in 2011, the shale held estimated technically recoverable reserves of 853 million barrels of oil, two billion barrels of natural gas liquids, and 1.8 trillion cubic feet of natural gas, though some experts suggest that the figures could ultimately turn out to be significantly higher.

The editorial team continues to mark geographical and company-specific highlights of the unconventional revolution taking place with its “Emerging Play” map (page 32) and the “Key Trends for Shale Plays” (page 33). Additionally the team has added data for shale gas production for select states, natural gas vehicle demand and fueling station capacity in addition to breakdowns for federal production of oil and natural gas by state. An essay regarding the critical importance of tax policy has been added on page 26 in addition to new information on the IPAA-PESA expansion of their energy magnet schools in Texas. Education, public policy and politics remain critical to the nation’s oil and natural gas industry as it continues to grow production and provides numerous benefits to our country’s economy.

IPAA and IHS seek to provide a detailed look at the upstream sector of an industry that plays such a vital role in powering America’s economy, providing critical job and revenue growth and improving our trade balance and national security. According to a recent IHS study, total unconventional upstream employment has risen to more than 1.7 million jobs and is forecast to reach three million jobs by the end of the decade. Since 2005, net petroleum imports have dropped from over 60 percent of U.S. consumption to less than 35 percent today. Both energy producing and consuming states have a stake in the energy transformation taking place across the country, just as America’s newfound production potential has ramifications on developments in the international energy marketplace. For this reason, more people know about the Eagle Ford in Washington, D.C., New York City, Moscow, Seoul and Beijing.

IPAA would like to thank the IHS team which includes Dr. Pete Stark, Dean Williams, William Brandorff, Randy Peterson and John Wakefield for their continued efforts in making this publication both comprehensive and unique. IPAA would also like to thank Ron Planting for all of his contributions to the publication.

If you have ideas or feedback for future publications, please send your comments to Frederick Lawrence at IPAA ([flawrence@ipaa.org](mailto:flawrence@ipaa.org)). Thank you for your continued support and readership of one of the industry’s longest running sources of upstream state data.



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 the value of production, cumulative crude oil wellhead value, state production rankings, state consumption figures, natural gas marketed production and shale gas production. For this issue, the CityGate natural gas price is used to determine value of production instead of wellhead price which is no longer available. State reserve data is from EIA. All price data comes from EIA or individual states.

The mineral lease royalties, bonuses and rent data comes from the Office of Natural Resources Revenue. Additional lines items have been added for the rents, bonuses and other revenues that pertain to oil and natural gas in addition to a new Total that includes all oil and gas revenues in addition to rents and bonuses related to oil and gas. We also include a percentage that relates to oil and gas total to the entire mineral total. Federal production shares figured using data from the Office of Natural Resources Revenue (ONRR - Federal Volumes) and production data from the EIA or ONRR.

All Federal Offshore statistics include only those wells in Federal waters. All state well statistics include inland/non-Federal offshore wells for each state.

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).

The Cost of Drilling and Equipping Wells data are no longer available (post-2010).

# STATE ENERGY CONTACTS AND FEDERAL ORGANIZATIONS

## Alabama

### Alabama State Oil & Gas Board

420 HACKBERRY LN  
PO BOX 869999  
TUSCALOOSA, AL 35486-6999  
(205) 349-2852  
[ogb.state.al.us](http://ogb.state.al.us)

## Alaska

### AK Dept. of Natural Resources

Division of Oil & Gas  
550 WEST 7th AVE STE 1100  
ANCHORAGE, AK 99501-3563  
(907) 269-8800  
[www.dog.dnr.alaska.gov](http://www.dog.dnr.alaska.gov)

### Alaska Oil & Gas Conservation Commission

333 W 7TH AVE STE 100  
ANCHORAGE, AK 99501-3192  
(907) 279-1433  
[www.doa.alaska.gov/ogc/](http://www.doa.alaska.gov/ogc/)

## Arkansas

### Arkansas Oil & Gas Commission

301 NATURAL RESOURCES DR STE 102  
LITTLE ROCK, AR 72205  
(501) 683-5814  
[www.aogc.state.ar.us](http://www.aogc.state.ar.us)

## Arizona

### Ariz O & G Conservation Comm.

416 W CONGRESS ST STE 100  
TUCSON, AZ 85701  
(520) 770-3500  
[www.azogcc.az.gov](http://www.azogcc.az.gov)

### Arizona Geological Society

PO BOX 40952  
TUCSON, AZ 85717  
(520) 663-5295  
[www.arizonageologicalsoc.org](http://www.arizonageologicalsoc.org)

## California

### California Dept. of Conservation

801 K ST MS 24-01  
SACRAMENTO, CA 95814  
(916) 322-1080  
[www.consrv.ca.gov/index](http://www.consrv.ca.gov/index)

## Colorado

### Colorado Oil & Gas Conservation Commission

1120 LINCOLN ST STE 801  
DENVER, CO 80203  
(303) 894-2100  
[www.cogcc.state.co.us](http://www.cogcc.state.co.us)

## Florida

### FL Dept. of Env. Protection

Oil & Gas Section  
2600 BLAIR STONE ROAD M.S. 3500  
TALAHASSEE, FL 32399  
(850) 245-8336  
[www.dep.state.fl.us/water/mines/oil\\_gas/](http://www.dep.state.fl.us/water/mines/oil_gas/)

## Florida Geological Survey

903 W TENNESSEE ST  
TALLAHASSEE, FL 32304  
(850) 617-0300  
[www.dep.state.fl.us/geology](http://www.dep.state.fl.us/geology)

## Illinois

### Illinois Department of Natural Resources

Oil and Gas Division  
1 NATURAL RESOURCES WAY  
SPRINGFIELD, IL 62702-1271  
(217) 782-7756  
[www.dnr.state.il.us/mines/dog](http://www.dnr.state.il.us/mines/dog)

## Indiana

### Indiana Department of Natural Resources

Oil and Gas Division  
402 W WASHINGTON ST  
ROOM 293  
INDIANAPOLIS, IN 46204  
(317) 232-4055  
[www.in.gov/dnr/dnroil](http://www.in.gov/dnr/dnroil)

## Kansas

### Kansas Corporation Commission

1500 SW ARROWHEAD ROAD  
TOPEKA, KS 66604-4027  
(785) 271-3100  
[www.kcc.state.ks.us](http://www.kcc.state.ks.us)

## Kentucky

Energy and Environment Cabinet  
Division of Fossil Energy Development  
500 MERO ST 5TH FL  
FRANKFORT, KY 40601  
(502) 564-5525  
[www.eec.ky.gov](http://www.eec.ky.gov)

## Louisiana

### Louisiana Department of Natural Resources

617 N THIRD ST - LA SALLE BLDG  
BATON ROUGE, LA 70802  
(225) 342-4500  
[dnr.louisiana.gov](http://dnr.louisiana.gov)

## Maryland

### Maryland Geological Survey

2300 ST PAUL ST  
BALTIMORE, MD 21218  
(410) 554-5500  
[www.mgs.md.gov](http://www.mgs.md.gov)

## Michigan

### Michigan Geological Survey

Department of Natural Resources  
PO BOX 30028  
LANSING, MI 48909  
(517) 373-2352  
[www.michigan.gov/dnr](http://www.michigan.gov/dnr)

## Missouri

### MO Dept. of Natural Resources Geological Survey Program

111 FAIRGROUNDS RD  
PO BOX 250  
ROLLA, MO 65402-0250  
(800) 361-4827  
<http://dnr.mo.gov/geology>

## Mississippi

### MS State Oil and Gas Board

500 GREYMONT AVE STE E  
JACKSON, MS 39202-3446  
(601) 576-4900  
[www.ogb.state.ms.us](http://www.ogb.state.ms.us)

## Montana

### MT Board of O & G Conservation

2535 ST JOHNS AVE  
BILLINGS, MT 59102  
(406) 656-0040  
[bogc.dnrc.mt.gov](http://bogc.dnrc.mt.gov)

## North Dakota

### ND Industrial Commission

Oil and Gas Division  
600 E BOULEVARD AVE DEPT 405  
BISMARCK, ND 58505-0840  
(701) 328-8020  
[www.dmr.nd.gov/oilgas](http://www.dmr.nd.gov/oilgas)

## Nebraska

### NE O & G Cons. Commission

922 ILLINOIS  
PO BOX 399  
SIDNEY, NE 69162  
(308) 254-6919  
[www.nogcc.ne.gov](http://www.nogcc.ne.gov)

## New Mexico

### New Mexico Energy, Minerals and Natural Resources Department

1220 S ST FRANCIS DR  
SANTA FE, NM 87505  
(505) 476-3200  
[www.emnrd.state.nm.us](http://www.emnrd.state.nm.us)

## Nevada

### Nevada Division of Minerals

400 WEST KING ST STE 106  
CARSON CITY, NV 89703  
(775) 684-7040  
[www.minerals.state.nv.us](http://www.minerals.state.nv.us)

## New York

### NY State Dept. of Env.Cons.

625 BROADWAY  
ALBANY, NY 12233-0001  
(518) 402-8013  
[www.dec.ny.gov](http://www.dec.ny.gov)

# STATE ENERGY CONTACTS AND FEDERAL ORGANIZATIONS

## **NY State Geological Survey**

3000 CULTURAL EDUCATION CENTER  
ALBANY, NY 12230  
(518) 473-6262  
[www.nysm.nysed.gov/nysgs](http://www.nysm.nysed.gov/nysgs)

## **NYS Energy Res. and Dev. Auth.**

17 COLUMBIA CIR  
ALBANY, NY 12203-6399  
(518) 862-1090 (866) NYSERDA  
[www.nyserda.ny.gov](http://www.nyserda.ny.gov)

## **Ohio**

### **OH Dept. of Natural Resources**

Division of Oil and Gas  
2045 MORSE RD  
BLDG F  
COLUMBUS, OH 43229-6693  
(614) 265-6922  
[www.ohiodnr.com/mineral](http://www.ohiodnr.com/mineral)

## **Oklahoma**

### **Interstate O & G Compact Comm.**

PO BOX 53127  
OKLAHOMA CITY, OK 73105  
(405) 525-3556  
[www.iogcc.state.ok.us](http://www.iogcc.state.ok.us)

### **OK Corporation Commission**

Oil and Gas Division  
2101 N LINCOLN BLVD.  
OKLAHOMA CITY, OK 73105  
(405) 521-2211  
[www.occ.state.ok.us](http://www.occ.state.ok.us)

## **Oregon**

### **Oregon Department of Geology and Mineral Industries**

800 NE OREGON ST #28  
STE 965  
PORTLAND, OR 97232-2162  
(971) 673-1555  
[www.oregongeology.org](http://www.oregongeology.org)

## **Pennsylvania**

### **PA Dept. of Env. Protection**

Oil and Gas Division  
Bureau of Oil & Gas Management  
PO BOX 8765  
HARRISBURG, PA 17105-8765  
(717) 772-2199  
[www.depweb.state.pa.us](http://www.depweb.state.pa.us)

## **South Dakota**

### **SD Dept. of Environment and Natural Resources**

PMB 2020  
SD DENR  
JOE FOSS BLDG  
523 E CAPITOL  
PIERRE, SD 57501  
(605) 773-3151  
[www.denr.sd.gov](http://www.denr.sd.gov)

## **Tennessee**

### **TN Dept. of Env. and Cons. Board of Water Quality, Oil and Gas**

312 ROSA L. PARKS AV.  
3RD FLOOR NASHVILLE ROOM, TN TOWER  
NASHVILLE, TN 37243  
[www.tn.gov/environment/board\\_tn-water-quality-oil-gas.shtml](http://www.tn.gov/environment/board_tn-water-quality-oil-gas.shtml)

## **Texas**

### **Texas Railroad Commission**

#### **Oil & Gas Division**

PO BOX 12967  
AUSTIN, TX 78711-2967  
(512) 463-6838  
[www.rrc.state.tx.us](http://www.rrc.state.tx.us)

## **Utah**

### **UT Dept. of Natural Resources**

Division of Oil, Gas and Mining  
1594 WEST NORTH TEMPLE  
SALT LAKE CITY, UT 84116  
(801) 538-5340  
[www.oilgas.ogm.utah.gov](http://www.oilgas.ogm.utah.gov)

## **Virginia**

### **Virginia Department of Mines, Minerals and Energy**

Division of Geology and Mineral Resources  
900 NATURAL RESOURCES DR. STE 500  
CHARLOTTESVILLE, VA 22903  
(434) 951-6310  
[www.dmme.virginia.gov/dgmr/divisiongeologymineralresources.shtml](http://www.dmme.virginia.gov/dgmr/divisiongeologymineralresources.shtml)

## **West Virginia**

### **WV Dept. of Env. Protection**

Office of Oil & Gas  
601 57TH ST. SE  
CHARLESTON, WV 25304  
(304) 926-0440  
[www.dep.wv.gov/oil-and-gas](http://www.dep.wv.gov/oil-and-gas)

## **Wyoming**

### **WY Dept. of Env. Quality**

122 WEST 25TH ST  
HERSCHLER BLDG  
CHEYENNE, WY 82002  
(307) 777-7937  
<http://deq.state.wy.us>

### **WY O & G Cons. Commission**

2211 KING BLVD  
PO BOX 2640  
CASPER, WY 82602  
(307) 234-7147  
<http://wogcc.state.wy.us>

## **Federal Organizations**

### **Bureau of Ocean Energy Management**

1849 C STREET, NW  
WASHINGTON, D.C. 20240  
(202) 208-6474  
[www.boemre.gov](http://www.boemre.gov)

### **Bureau of Safety and Environmental Enforcement**

1849 C STREET, NW  
WASHINGTON, D.C. 20240  
(202) 208-7468  
[www.bsee.gov](http://www.bsee.gov)

### **Environmental Protection Agency**

ARIEL RIOS BLDG.  
1200 PENNSYLVANIA AVE NW  
WASHINGTON, DC 20004  
(202) 272-0167  
[www.epa.gov](http://www.epa.gov)

### **Federal Energy Regulatory Commission**

888 FIRST ST NE  
WASHINGTON, DC 20426  
(866) 208-3372  
[www.ferc.gov](http://www.ferc.gov)

### **Nat'l Energy Tech. Laboratory**

626 COCHRANS MILL RD  
PO BOX 10940  
PITTSBURGH, PA 15236-0940  
800-553-7681  
[www.netl.doe.gov/technologies/oil-gas](http://www.netl.doe.gov/technologies/oil-gas)

### **U.S. Department of Energy**

Fossil Energy  
1000 INDEPENDENCE AVE SW  
WASHINGTON, DC 20585  
(800) DIAL DOE (342-5363)  
(202) 586-6503  
[www.energy.gov/fe/](http://www.energy.gov/fe/)

### **U.S. Department of Energy**

Office of Scientific and Technical Information  
PO BOX 62  
OAX RIDGE, TN 37831  
(865) 576-1188  
[www.osti.gov](http://www.osti.gov)

### **U.S. Department of the Interior**

1849 C ST NW  
WASHINGTON, DC 20240  
(202) 208-3100  
[www.doi.gov](http://www.doi.gov)

### **U.S. Energy Information Administration**

1000 INDEPENDENCE AVE SW  
WASHINGTON, DC 20585  
(202) 586-8800  
[www.eia.gov](http://www.eia.gov)

### **U.S. Geological Survey**

USGS National Center  
12201 SUNRISE VALLEY DR  
RESTON, VA 20192  
(703) 648-5953  
[www.usgs.gov](http://www.usgs.gov)



# COOPERATING OIL & GAS ASSOCIATIONS

## Alabama

### Coalbed Methane Assoc. of Alabama

3829 LORNA RD STE 306  
BIRMINGHAM AL, 35244  
(205) 733-8087  
www.coalbed.com

## Arkansas

### Arkansas Ind Producers & Royalty Owners

1401 W CAPITOL AVE STE 440  
LITTLE ROCK, AR 72201  
(501) 975-0565  
www.aipro.org

## California

### CA Independent Petroleum Assoc.

1001 K ST 6TH FL  
SACRAMENTO, CA 95814  
(916) 447-1177  
www.cipa.org

### Independent Oil Producers' Agency

4520 CALIFORNIA AVE #230  
BAKERSFIELD, CA 93309  
(661) 377-0411

### Western States Petroleum Assoc.

1415 L ST STE 600  
SACRAMENTO, CA 95814  
(916) 498-7750  
www.wspa.org

## Colorado

### Colorado Oil & Gas Assoc.

1800 GLENAM PL., SUITE 1100  
DENVER, COLORADO 80202  
(303) 861-0362  
www.coga.org

### Western Energy Alliance

410 17TH ST STE 700  
DENVER, CO 80202  
(303) 623-0987  
www.westernenergyalliance.org

## Florida

### Florida Independent Petroleum Producers

5860 B SPANISH TRAIL  
PENSACOLA, FL 32504  
(850) 969-1034  
www.flippaoil.org

## Illinois

### Illinois O&G Assoc.

P.O. BOX 788  
MOUNT VERNON, IL 62864  
(618) 242-2857  
www.ioga.com

## Indiana

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

2104 LINCOLN AVE  
EVANSVILLE, IN 47714  
(812) 479-9451

### Indiana O&G Assoc.

1200 REFINERY RD  
MT VERNON, IN 47620  
(812) 838-8515  
www.inoga.org

## Kansas

### Kansas Independent O & G Assoc.

229 E. WILLIAM, SUITE 211  
WICHITA, KS 67202-4027  
(316) 263-7297  
www.kioga.org

### Eastern Kansas O & G Assoc.

17 S EVERGREEN AVE  
CHANUTE, KS 66720  
(620) 431-1020  
www.ekoga.org

### SW Kansas Royalty Owners Assoc.

209 EAST 6TH ST  
HUGOTON, KS 67951  
(620) 544-4333  
www.swkroa.com

### Liaison Committee of Cooperating Oil & Gas Associations

800 SW JACKSON ST STE 1400  
TOPEKA, KS 66612  
(785) 232-7772

## Kentucky

### Kentucky O & G Assoc.

306 W. MAIN ST., SUITE 404  
FRANKFORT, KY 40601  
(502) 226-1955  
www.kyoilgas.org

## Louisiana

### Louisiana Landowners Assoc.

8982 DARBY AVE  
BATON ROUGE, LA 70806  
(225) 927-5619  
lalaandowners.org

### Louisiana O & G Assoc.

P.O. BOX 4069  
BATON ROUGE, LA 70821-4069  
(800) 443-1433  
www.loga.la

## Michigan

### Michigan Oil & Gas Assoc.

124 W ALLEGAN ST STE 1610  
LANSING, MI 48933  
(517) 487-1092  
www.michiganoilandgas.org

## Mississippi

### MS Ind. Producers & Royalty Owners

P.O. BOX 187  
JACKSON, MS 39205-0187  
(601) 353-8349 x23  
www.mipro.ms

## Montana

### Montana Petroleum Association

25 NEILL AVE STE 202  
HELENA, MT 59601  
(406) 442-7582  
www.montanapetroleum.org

### Northern Montana O & G Assoc.

P.O. BOX 488  
CUT BANK, MT 59427  
(406) 873-9000

## New Mexico

### Ind. Petroleum Assoc. of NM

P.O. BOX 6101  
ROSWELL, NM 88202  
(575) 622-2566  
www.ipanm.org

### New Mexico Oil & Gas Assoc.

123 W. BOOTH ST.  
SANTA FE, NM 87505  
(505) 982-2568  
www.nmoga.org

## New York

### Independent O & G Assoc. of New York

38 LAKE ST  
HAMBURG, NY 14075  
(716) 202-4688  
www.iogany.org

## North Dakota

### North Dakota Petroleum Council

120 N 3RD ST STE 200  
PO BOX 1395  
BISMARCK, ND 58501  
(701) 223-6380  
www.ndoil.org

## Ohio

### Ohio O & G Assoc.

88 E. BROAD ST., SUITE 1400  
COLUMBUS, OH 43215  
(614) 824-3901  
www.ooga.org

### Southeastern Ohio O & G Assoc.

P.O. BOX 136  
RENO, OH 45773  
(740) 374-3203  
www.sooga.org

  
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# COOPERATING OIL & GAS ASSOCIATIONS

## Oklahoma

### OK Independent Petroleum Assoc.

500 N.E. 4TH ST., SUITE 200  
OKLAHOMA CITY, OK 73104  
(405) 601-2437  
www.oipa.com

### Petroleum Technology Transfer Council

P.O. BOX 710942  
OAK HILL, VA 20171  
(703) 928-5020  
www.pttc.org

### National Stripper Well Assoc.

P.O. BOX 18336  
OKLAHOMA CITY, OK 73154  
(405) 228-4112  
www.nswa.us

### National Assoc. of Royalty Owners

15 W 6TH ST STE 2626  
TULSA, OK 74119  
(800) 558-0557  
www.naro-us.org

## Pennsylvania

### Pennsylvania Independent O&G Assoc.

115 VIP DR STE 210  
NORTHRIDGE OFFICE PLAZA II  
WEXFORD, PA 15090-7906  
(724) 933-7306  
www.pioga.org

## Tennessee

### Tennessee Oil & Gas Assoc.

750 OLD HICKORY BLVD STE 150-2  
BRENTWOOD, TN 37027  
(615) 371-6137  
www.tennoil.com

## Texas

### American Assoc. of Prof. Landmen

4100 FOSSIL CREEK BLVD  
FORT WORTH, TX 76137-2791  
(817) 847-7700  
www.landman.org

### Assoc. of Energy Service Companies

14531 FM 529 STE 250  
HOUSTON, TX 77095  
(713) 781-0758  
www.aesc.net

### East Texas Producers and Royalty Owners Assoc.

P.O. BOX 1700  
KILGORE, TX 75663  
(903) 984-8676

## Int'l Assoc. of Geophysical Contractors

1225 NORTH LOOP WEST STE 220  
HOUSTON, TX 77008  
(866) 558-1756  
www.iagc.org

### Panhandle Producers and Royalty Owners Assoc.

3131 BELL STE 209  
AMARILLO, TX 79106  
(806) 352-5637  
www.pproa.org

### Permian Basin Petroleum Assoc.

415 W WALL STE 103  
MIDLAND, TX 79701  
(432) 684-6345  
www.pbpa.info

### Petroleum Equipment Suppliers Assoc.

1240 BLALOCK RD STE 110  
HOUSTON, TX 77055  
(713) 932-0168  
www.pesa.org

### Society of Independent Professional Earth Scientists

4925 GREENVILLE AVE STE 1106  
DALLAS, TX 75206  
(214) 363-1780  
www.sipes.org

### Texas Alliance of Energy Producers

900 8TH ST., SUITE 400  
WICHITA FALLS, TX 76301  
(800) 299-2998  
(940) 723-4131  
www.texasalliance.org

### Texas Independent Producers and Royalty Owners Assoc.

919 CONGRESS AVE STE 1000  
AUSTIN, TX 78701  
(512) 477-4452  
www.tipro.org

## Utah

### Utah Petroleum Association

10714 S JORDAN GATEWAY STE 260  
SOUTH JORDAN, UT 84095  
(801) 619-6680  
www.utahpetroleum.org

## Virginia

### Virginia O & G Assoc.

P.O. BOX 2285  
ABINGDON, VA 24212  
www.vaoilandgas.com

## West Virginia

### Independent Oil & Gas Assoc. of WV

300 SUMMERS ST STE 820  
CHARLESTON, WV 25301  
(304) 344-9867  
www.iogawv.com

### West Virginia Oil and Natural Gas Assoc.

P.O. BOX 3231  
CHARLESTON, WV 25332-3231  
(866) 343-1609  
www.wvonga.com

## Wyoming

### Petroleum Assoc. of Wyoming

951 WERNER CT STE 100  
CASPER, WY 82601  
(307) 234-5333  
www.pawyo.org

### Networking Associations

#### AK Oil and Gas Assoc.

121 W FIREWEED LN STE 207  
ANCHORAGE, AK 99503-2035  
(907) 272-1481  
www.aoga.org

#### Am. Assoc. of Petroleum Geologists

1444 S BOULDER AVE  
TULSA, OK 74119  
(800) 364-2274  
www.aapg.org

#### American Exploration and Production Council

1350 EYE ST NW STE 510  
WASHINGTON, DC 20005  
(202) 652-2359  
www.axpc.us

#### American Petroleum Institute

1220 L ST NW  
WASHINGTON, DC 20005-4070  
(202) 682-8000  
www.api.org

#### Canadian Assoc. of Petroleum Producers

350 7TH AVE SW STE 2100  
CALGARY ALBERTA T2P 3N9  
CANADA  
(403) 267-1100  
www.capp.ca

#### IL Petroleum Resources Board

P.O. BOX 941  
MOUNT VERNON, IL 62864  
(618) 242-2861  
www.iprb.org



# COOPERATING OIL & GAS ASSOCIATIONS

**Int'l Assoc. of Drilling Contractors**

10370 RICHMOND AVE STE 760  
PO BOX 4287  
HOUSTON, TX 77210  
(713) 292-1945  
[www.iadc.org](http://www.iadc.org)

**LA Mid-Continent O & G Assoc.**

730 NORTH BLVD  
BATON ROUGE, LA 70802  
(225) 387-3205  
[www.lmoga.com](http://www.lmoga.com)

**Mid-Continent O & G Assoc. of Oklahoma**

6701 N BROADWAY STE 300  
OKLAHOMA CITY, OK 73116  
(405) 843-5741  
[www.okmoga.com](http://www.okmoga.com)

**NE Independent O & G Assoc.**

414 S WALNUT ST  
PO BOX 427  
KIMBALL, NE 69145-1434  
(308) 235-2906

**North Dakota Industrial Commission  
Mineral Resources, Oil and Gas**

600 EAST BOULEVARD AVE DEPT 405  
BISMARCK, ND 58505-0840  
(701) 328-8020  
[www.oilgas.nd.gov](http://www.oilgas.nd.gov)

**Public Lands Advocacy**

1155 S HAVANA ST #11-327  
DENVER, CO 80012  
(303) 506-1153  
[www.publiclandsadvocacy.org](http://www.publiclandsadvocacy.org)

**Society of Petroleum Engineers**

222 PALISADES CREEK DR.  
RICHARDSON, TX 75080  
(800) 456-6863  
[www.spe.org](http://www.spe.org)

**Stripper Well Consortium**

The Pennsylvania State University  
C-211 CUL  
UNIVERSITY PARK, PA 16802  
(814) 865-4802  
[www.energy.psu.edu/swc/](http://www.energy.psu.edu/swc/)

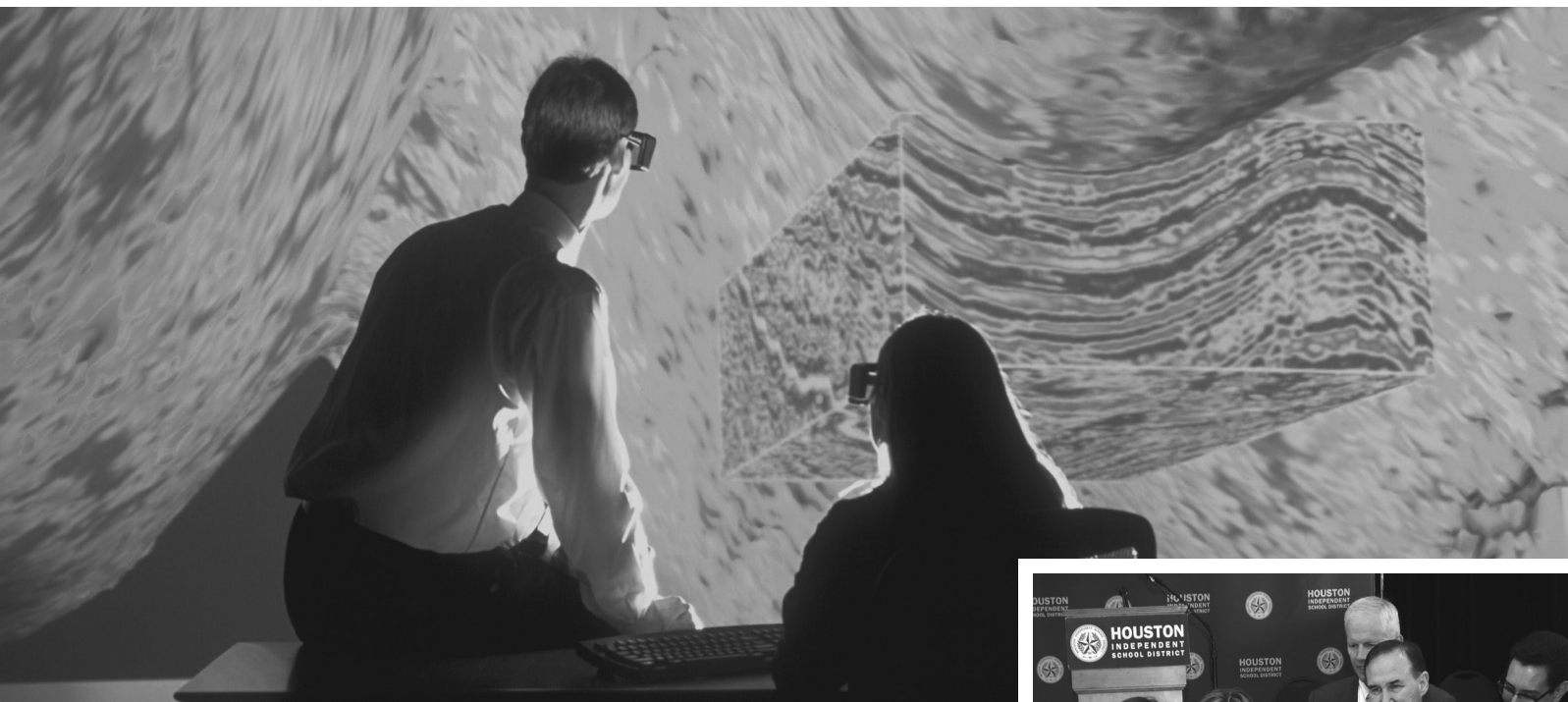
**Texas Oil and Gas Assoc.**

304 W 13TH ST  
AUSTIN, TX 78701  
(512) 478-6631  
[www.txoga.org](http://www.txoga.org)



**HISD ENERGY INSTITUTE HIGH SCHOOL**

# **The First Energy Magnet School in America**



This year, the Houston Independent School District and the **IPAA/PESA Energy Education Center** officially opened the district's new Energy Institute High School. The school is the first of its kind in the nation and represents a collaborative effort between a public school district and industry leaders. The high school provides students with a rigorous science, technology, engineering, and math curriculum, hands-on learning, and externships in the fields of geoscience, alternative energy, and offshore technology.

# ***IPAA/PESA ENERGY EDUCATION CENTER***

IPAA and PESA continue to expand upon their commitment to education outreach through their Houston-based Energy Education Center. During the past seven years, the Energy Education Center has established five high school engineering, geoscience and leadership Petroleum Academies within the Houston Independent School District and the Fort Worth Independent School District. The IPAA / PESA Petroleum Academies are established at:

- Milby High School, Houston
- Westside High School, Houston
- Young Women's College Preparatory Academy, Houston
- Southwest High School, Fort Worth
- Energy Institute High School, Houston

The Young Women's College Preparatory Academy in Houston is the nation's first all girls engineering and geoscience program of its type at the high school level in the nation. The latest school, the Energy Institute High School, is the first energy high school in the nation and it opened its doors in fall 2013 with a full enrollment of 207 freshmen. The school will add 200 students for each of the next three years until it reaches an enrollment of 800 students.

To date 1,000 students have participated in IPAA / PESA's Petroleum Academies and 1,000 students are currently enrolled. In August 2012, the Petroleum Equipment Suppliers Association announced its partnership with IPAA. PESA has been a vigorous supporter of the both the Houston and Fort Worth programs since their inception.

The key components of the IPAA / PESA Petroleum Academy program include:

- Partnerships with oil and gas businesses and associations
- Scholarships for college; \$150,000 awarded in 2013
- Real-world career experiences through participation in a paid Externship Program; 70 externs participated in 2013 in 14 oil and gas companies with 260 externs participating to date
- Science, Technology, Engineering and Mathematics (STEM) academic focus
- Exploration of various careers in the industry through a Guest Speaker Program
- Industry related and university field trips
- Industry software, including multi-million dollar donations from Halliburton and Schlumberger for cutting edge engi-

neering and geoscience software

- Community service including environmental projects
- Social and career networking opportunities
- Professional development training
- Public speaking and academic competitions
- Engineering and geoscience summer camp programs
- Mentoring by young and tenured industry professionals
- Positive impact on first generation high school and college graduates
- Membership of the IPAA Emerging Leaders group

The 2012-2013 school year closed with many achievements and successes which would not have been possible without the tremendous support of the many companies, organizations and individuals who have helped sustain the work of the IPAA / PESA Energy Education Center. From an academic viewpoint, our students have excelled. Seven of the top 10 students at Southwest High School in Fort Worth, including the Valedictorian and Salutatorian were members of the IPAA / PESA program. At Milby High School, the Salutatorian was a member of the program and at Westside three of the top 10 students were students in the program throughout their high school years.

From an overall Academy perspective, the IPAA / PESA program was awarded the Houston ISD Community Partner of the Year at the high school level and was inducted into the Houston ISD Partnership Hall of Fame. In Fort Worth, the program was one of two finalists in the Fort Worth Gold Seal awards ceremony. Westside entered three student-built cars in the Shell EcoMarathon, with one car winning best Eco design.

The year concluded with the summer 2013 IPAA / PESA Externship Program at 14 Houston and Fort Worth companies. Seventy externs in 14 companies in two cities, in 17 different locations, gained valuable firsthand experience in oil and gas organizations. We are very thankful to the following companies: Apache, Core Labs, EOG Resources, Halliburton, Harbison-Fischer, Marathon, Newfield Exploration, National Oilwell Varco, PEC Safety, Schlumberger, Shell, Weir Oil & Gas, W&T Offshore and XTO.

We are also grateful to all the many and various organizations and individuals who contributed to this past year's success and helping to create the next generation of talented energy professionals.



# STATE EDUCATION PROGRAMS

## Participating IPAA/PESA High School Energy Magnet Schools:

### Texas

#### Energy Institute High School

812 W 28TH ST  
HOUSTON, TX 77008  
(713) 802-4620  
[http://www.houston.org/icon\\_contact\\_energy](http://www.houston.org/icon_contact_energy)

#### Milby High School

1601 BROADWAY  
HOUSTON, TX 77012-3789  
(713) 928-2765  
[www.milby.org](http://www.milby.org)

#### Southwest Academy of Petroleum Engineering & Technology (SAPET)

100 N UNIVERSITY DR  
FORT WORTH, TX 76107  
(817) 871-2000  
<http://sapet.webs.com>

#### Westside High School

14201 BRIAR FOREST DR  
HOUSTON, TX 77077-1806  
(281) 920-8000  
<http://hs.houstonisd.org/westsidehs>

#### Young Women's College Preparatory Academy

Engineering & Geosciences Academy  
1906 CLEBURNE  
HOUSTON, TX 77004-4131  
(713) 942-1441  
<http://schools.houstonisd.org/YWCPA>

#### University Energy and Geology Programs (Non-affiliated):

### Alabama

#### The University of Alabama

Department of Geological Sciences  
(205) 348-5095  
[geology@geo.ua.edu](mailto:geology@geo.ua.edu)  
[www.geo.ua.edu](http://www.geo.ua.edu)

### Alaska

#### University of Alaska - Fairbanks

Mining & Geological Engineering  
(907) 474-7388  
[uaf-cemmingeo-dept@alaska.edu](mailto:uaf-cemmingeo-dept@alaska.edu)  
[cem.uaf.edu/mingeo](http://cem.uaf.edu/mingeo)

#### University of Alaska - Fairbanks

Petroleum Engineering  
Associate Professor Catherine Hanks  
(907) 474-7734  
[uaf-pete-dept@alaska.edu](mailto:uaf-pete-dept@alaska.edu)  
[cem.uaf.edu/pete](http://cem.uaf.edu/pete)

### Arkansas

#### Arkansas Tech University

Department of Physical Sciences  
Dr. Cathy Baker  
(479) 968-0661  
[cbaker@atu.edu](mailto:cbaker@atu.edu)  
[www.atu.edu/geology](http://www.atu.edu/geology)

#### University of Arkansas Community College at Morrilton

Petroleum Technology A.A.S. and Technical Certificate  
(800) 364-1094  
[adm@uaccm.edu](mailto:adm@uaccm.edu)  
[www.uaccm.edu/academics/academics.html](http://www.uaccm.edu/academics/academics.html)

### California

#### CA State University, Bakersfield

Department of Geology  
Dr. Robert Horton, Department Chair  
(661) 654-3059  
[rhorton@csu.edu](mailto:rhorton@csu.edu)  
[www.csu.edu/geology/](http://www.csu.edu/geology/)

#### CA State University, Long Beach

Dept. of Geological Sciences  
(562) 985-4809  
[www.csulb.edu/depts/geology](http://www.csulb.edu/depts/geology)

### Stanford University

Department of Energy Resources Engineering  
(650) 723-4744  
[ere@sesmail.stanford.edu](mailto:ere@sesmail.stanford.edu)  
[pangea.stanford.edu/departments/ere/](http://pangea.stanford.edu/departments/ere/)

### University of Southern California

Viterbi School of Engineering  
(213) 740-4488  
[viterbi.admission@usc.edu](mailto:viterbi.admission@usc.edu)  
[viterbi.usc.edu/academics/programs](http://viterbi.usc.edu/academics/programs)

### Colorado

#### Colorado Mountain College

Process Technology  
(866) 271-2381  
[joinus@coloradomtn.edu](mailto:joinus@coloradomtn.edu)  
[www.coloradomtn.edu/cms/one.aspx?pageId=3639044](http://www.coloradomtn.edu/cms/one.aspx?pageId=3639044)

#### Colorado School of Mines

Department of Petroleum Engineering  
(303) 273-3740  
[dwinbow@mines.edu](mailto:dwinbow@mines.edu)  
[petroleum.mines.edu](http://petroleum.mines.edu)

#### Colorado School of Mines

Geoscience and Resource Engineering  
(303) 273-3247  
[jsimbai@mines.edu](mailto:jsimbai@mines.edu)  
[mines.edu/GeoscienceandResourceEngineering\\_GS](http://mines.edu/GeoscienceandResourceEngineering_GS)

### Mesa State College

Department of Business  
(970) 248-1778  
[admissions@coloradomesa.edu](mailto:admissions@coloradomesa.edu)  
[www.coloradomesa.edu/business/certificates.html](http://www.coloradomesa.edu/business/certificates.html)

### Western State College of Colorado

Department of Geology  
Dale Orth, Department Chair  
(970) 943-3437  
[dorth@western.edu](mailto:dorth@western.edu)  
[www.western.edu/academics/geology](http://www.western.edu/academics/geology)

### Kansas

#### Fort Hays State University

Department of Geosciences  
Dr. John Heinrichs, Chair  
(785) 628-4536  
[jheinric@fhsu.edu](mailto:jheinric@fhsu.edu)  
[www.fhsu.edu/geo](http://www.fhsu.edu/geo)

#### The University of Kansas School of Engineering

Petroleum Engineering  
(785) 864-4965  
[cpe@ku.edu](mailto:cpe@ku.edu)  
[www.cpe.engr.ku.edu/petro.html](http://www.cpe.engr.ku.edu/petro.html)

### Louisiana

#### Louisiana State University

Craft and Hawkins Department of Petroleum Engineering  
Karsten Thompson, Chair  
(225) 578-6055  
[karsten@lsu.edu](mailto:karsten@lsu.edu)  
[www.pete.lsu.edu](http://www.pete.lsu.edu)

#### Nicholls State University

Petroleum Engineering Technology and Safety Management  
(985) 448-4739  
[petsm@nicholls.edu](mailto:petsm@nicholls.edu)  
[www.nicholls.edu/doas/petsm/](http://www.nicholls.edu/doas/petsm/)

### Tulane University

Freeman School of Business  
(800) 223-5402  
[abfadmit@tulane.edu](mailto:abfadmit@tulane.edu)  
[www.freeman.tulane.edu/energy](http://www.freeman.tulane.edu/energy)

### University of Louisiana at Lafayette

Professional Land and Resource Management Department  
Dr. Fathi Boukadi, Department Head  
(337) 482-5085  
[fxb1275@louisiana.edu](mailto:fxb1275@louisiana.edu)  
[petroleum.louisiana.edu](http://petroleum.louisiana.edu)

# STATE EDUCATION PROGRAMS

## Missouri

### Missouri University of Science and Technology

Petroleum Engineering  
(573) 341-4616  
rocks@mst.edu  
petroleum.mst.edu

## Montana

### Montana Tech - University of Montana

School of Mines and Engineering  
(800) 445-8324  
enrollment@mtech.edu  
www.mtech.edu/mines/pet\_eng

## New Mexico

### NM Institute of Mining & Technology

Department of Petroleum and Natural Gas Engineering  
(575) 835-5412  
petro@nmt.edu  
infohost.nmt.edu/~petro

## North Dakota

### University of North Dakota

Department of Geology and Geological Engineering  
(800) 225-5863  
und.info@email.und.edu  
www.geology.und.edu/geoE\_ugdegreedirectory.php

## Ohio

### Marietta College

Department of Petroleum Engineering  
(740) 376-4775  
petr@marietta.edu  
www.marietta.edu/~petr/index.html

## Oklahoma

### University of Oklahoma

ConocoPhillips School of Geology and Geophysics  
(405) 325-3253  
geology@ou.edu  
www.ou.edu/mcee/geology.html

### University of Oklahoma

Mewbourne School of Petroleum and Geological Engineering  
(405) 325-2252  
mpge.ou.edu

### University of Oklahoma

Price College of Business Department of Management  
(405) 325-3611  
pricecollege@ou.edu  
www.ou.edu/content/price/left/divisions.html

## University of Tulsa

Collins College of Business Department of Energy Management  
Ted Jacobs, Program Director  
(918) 631-3588  
ted-jacobs@utulsa.edu  
www.utulsa.edu/Academics/Colleges/Collins-College-of-Business

## Pennsylvania

### Pennsylvania State University

Dept of Energy & Mineral Engineering  
(814) 865-3437  
eme@psu.edu  
www.eme.psu.edu/ebf/

### University of Pittsburgh

Swanson School of Engineering  
(412) 624-9630  
che@engr.pitt.edu  
www.engr2.pitt.edu/chemical

## South Dakota

### SD School of Mines and Technology

Geology and Geological Engineering Department  
Laurie C Anderson, Chair  
(605) 394-1290  
lauri.anderson@sdsmt.edu  
geology.sdsmt.edu

## Texas

### Del Mar College

Technology Education Department  
(361) 698-1200  
www.delmar.edu

### Kilgore College

Department of Continuing Education  
Bill Brantley, Jr, Director  
(903) 983-8680  
bbrantley@kilgore.edu  
www.kilgore.edu/petro\_tech.asp

### Midland College

Petroleum Professional Development Center  
Joan Brooks, Program Coordinator  
(432) 683-2832  
jbrooks@midland.edu  
www.midland.edu/ppdc

### Panola College

Department of Applied Sciences  
1109 WEST PANOLA ST  
CARTHAGE, TX 75633  
(903) 693-2000  
www.panola.edu/industrial/programs/petroleum-technology/

### Texas A&M - Kingsville

Department of Chemical and Natural Gas Engineering  
Ali A. Pilehvari, Chair  
(361) 593-2089  
ali.pilehvari@tamuk.edu  
www.engineer.tamuk.edu/departments/ngen

### Texas A&M University

Harold Vance Department of Petroleum Engineering  
(979) 845-2241  
info@pe.tamu.edu  
www.pe.tamu.edu

### Texas Tech University

Department of Petroleum Engineering  
M. Y. Soliman, Chair  
(806) 742-1801 x232  
Mohamed.Soliman@ttu.edu  
www.depts.ttu.edu/pe

## Texas Tech University

Rawls College of Business - Center for Energy Commerce  
Kellie Estes, Director of Operations  
(806) 834-2046  
kellie.estes@ttu.edu  
ec.ba.ttu.edu

### University of Houston

Department of Chemical and Biomolecular Engineering  
Dr. Tom Holley, Petroleum Engr. Pgm.  
(713) 743-4300  
tkholley@uh.edu  
www.che.uh.edu

### University of Houston - Downtown

Department of Management, Marketing, and Business  
Dr. Lucille Pointer, Chair  
(713) 222-5382  
pointerl@uhd.edu  
www.uhd.edu/academic/colleges/business/mmba/mmba\_index.htm

### University of Texas - Austin

Department of Petroleum and Geosystems Engineering  
Jessica Jimenez, Student Recruitment  
(512) 471-3161  
jessica.jimenez@mail.utexas.edu  
www.pge.utexas.edu/

## West Virginia

### Glenville State College

Department of Land Resources  
Dr. Milan C. Vavrek  
(304) 462-6375  
Milan.Vavrek@glenville.edu  
www.glenville.edu/landresources\_department.asp

### West Virginia University

College of Engineering and Mineral Resources  
(304) 293-4821  
statler-info@mail.wvu.edu  
www.pnge.cemr.wvu.edu/welcome

## Wyoming

### Western Wyoming Community College

Oil and Gas Technology  
Paul Johnson, Division Chair  
(307) 382-1784  
pjohnson@wwcc.wy.edu  
www.wwcc.wy.edu/academics/oilgastech

### University of Wyoming - College of Engineering & Applied Science

Department of Chemical and Petroleum Engineering  
(307) 766-2500  
chpe.info@uwyo.edu  
www.eng.uwyo.edu/chemical

## CANADA

### University of Calgary

Haskayne School of Business  
(403) 220-5685  
undergrad@haskayne.ucalgary.ca  
www.haskayne.ucalgary.ca/undergrad/plma

# YOUNG PROFESSIONALS IN ENERGY

## 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](http://www.ypenergy.org)

Founder - Stephen Cravens  
(214) 608-2858  
[Stephen.cravens@ypenergy.org](mailto:Stephen.cravens@ypenergy.org)

Founder - Michael Teplitsky  
(847) 604-6120  
[mteplitsky@wynnchurch.com](mailto:mteplitsky@wynnchurch.com)

### California

#### Bay Area

Peter O'Brien  
(415) 355-4151  
[pobrien@coolearthsolar.com](mailto:pobrien@coolearthsolar.com)

### Colorado

#### Denver

Director - John Heinle  
(303) 296-1624  
[heinlejohn@hotmail.com](mailto:heinlejohn@hotmail.com)

#### Denver

Director - Parker Heikes  
(303) 864-7343  
[pheikes@bokf.com](mailto:pheikes@bokf.com)

### District of Columbia

#### Washington, DC

Director - Alla Lipsky  
(443) 858-0077  
[Alla.Lipsky@gmail.com](mailto:Alla.Lipsky@gmail.com)

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#### Chicago

Director - Josh Zwickl  
[joshzwickl@gmail.com](mailto:joshzwickl@gmail.com)

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#### Wichita

Director - Jennifer "JL" White  
(316) 771-7167  
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### Louisiana

#### Shreveport

Director - Kevin Lorenzen  
(318) 703-9263  
[kevinlorenzen@basinminerals.com](mailto:kevinlorenzen@basinminerals.com)

#### Shreveport

Director - Greg Reinkenmeyer  
(318) 579-3061  
[Greg.reinkenmeyer@exterran.com](mailto:Greg.reinkenmeyer@exterran.com)

### Massachusetts

#### Boston

President - Meghan Shaw  
[Meghan.shaw@gmail.com](mailto:Meghan.shaw@gmail.com)

### North Dakota

#### Bismarck

Executive Director - Adam Landstrom  
[bismarckype@gmail.com](mailto:bismarckype@gmail.com)

### New York

#### New York City

Director - Michael Conti  
(973) 809-6328  
[imichaelconti@gmail.com](mailto:imichaelconti@gmail.com)

### Oklahoma

#### Oklahoma City

Director - Lindsey Fixley  
[lfixley@vernonlsmith.com](mailto:lfixley@vernonlsmith.com)

### Tulsa

Director - J. Nick Cooper  
(918) 588-6375  
[jncooper@bokf.com](mailto:jncooper@bokf.com)

### Pennsylvania

#### Philadelphia

Director - Jessica Maizel  
(215) 255-2364  
[jlmaizel@delinvest.com](mailto:jlmaizel@delinvest.com)

#### Philadelphia

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

### Pittsburgh

Director - Josh Hickman  
(304) 952-9397  
[Josh.hickman@ypenergy.org](mailto:Josh.hickman@ypenergy.org)

### Texas

#### Austin

Director - Jayne Langerock  
(512) 306-0301, ext. 4  
[jlangerock@peissel.com](mailto:jlangerock@peissel.com)

### Dallas

Director - Chuck Maretzky  
(214) 368-6100, ext. 2142  
[cmaretzky@sundownenergy.com](mailto:cmaretzky@sundownenergy.com)

### Fort Worth

Director - Matt Thompson  
(214) 369-5554  
[matt.thompson@exterran.com](mailto:matt.thompson@exterran.com)

### Houston

Director - Matt Gelotti  
(832) 476-6609  
[matt.gelotti@aon.com](mailto:matt.gelotti@aon.com)

### Midland Odessa

Director - Doug Schmidt  
(432) 686-3084  
[dschmidt@conchoresources.com](mailto:dschmidt@conchoresources.com)

### International

#### Calgary, Canada

President - Sean A. Delsnider  
(403) 681-9910  
[Calgary@ypenergy.org](mailto:Calgary@ypenergy.org)

#### Toronto, Canada

Director - Dan Pinault  
(647) 986-7415  
[dan.pinault@navigantconsulting.com](mailto:dan.pinault@navigantconsulting.com)

### China

#### Hong Kong

Director - Chris Richardson  
+(852) 3658-6412  
[crichardson@velaw.com](mailto:crichardson@velaw.com)

#### Dubai & Abu Dhabi

Director - John Van Zuylen  
[jvanzuylen@gmail.com](mailto:jvanzuylen@gmail.com)

### London, England

Director - Amy Bowe  
+44 (0) 20 3060-0532  
[Amy.bowe@woodmac.com](mailto:Amy.bowe@woodmac.com)

### Moscow, Russia

Director - Sergei Kurilov  
+7-495-777-7707  
[svkurilov@tnk-bp.com](mailto:svkurilov@tnk-bp.com)

# ADDITIONAL ENERGY EDUCATION & EMPLOYMENT RESOURCES

## Alaska

### Alaska BLM - Campbell Creek Science Center

5600 SCIENCE CENTER DR  
ANCHORAGE, AK 99507-2599  
(907) 267-1247  
(907) 267-1258 Fax  
[www.blm.gov/ak/st/en/prog/sciencecenter.html](http://www.blm.gov/ak/st/en/prog/sciencecenter.html)

## California

### Energy Quest - California Energy Commission

1516 9TH ST MS-29  
SACRAMENTO, CA 95814  
(916) 654-4989  
[www.energyquest.ca.gov](http://www.energyquest.ca.gov)

### Western States Petroleum Assoc. (WSPA)

1415 L ST STE 600  
SACRAMENTO, CA 95814  
(916) 498-7750  
[www.wspsa.org](http://www.wspsa.org)

## Colorado

### Colorado School of Mines

Division of Economics and Business  
816 15th ST  
Golden, CO 80401  
(303) 273-3480 (303) 273-3416  
[econbus.mines.edu](http://econbus.mines.edu)

## District of Columbia

### Energy Kids

US Department of Energy  
1000 INDEPENDENCE AVE  
WASHINGTON, DC 20585  
(202) 586-8800  
[www.eia.gov/kids](http://www.eia.gov/kids)

### Federal Energy Regulatory Commission Student Relations

(202) 502-8476  
[amanda.perry@ferc.gov](mailto:amanda.perry@ferc.gov)  
[www.ferc.gov/careers/student-rel.asp](http://www.ferc.gov/careers/student-rel.asp)

## Louisiana

### LSU Center for Energy Studies

ENERGY, COAST AND ENVIRONMENT BUILD-  
ING  
NICHOLSON DRIVE EXTENSION  
BATON ROUGE, LA 70803  
(225) 578-4400  
[www.enrg.lsu.edu](http://www.enrg.lsu.edu)

## Montana

### Northern Montana Independent O & G Assoc.

PO BOX 488  
CUT BANK, MT 59427  
(406) 873-9000

## Ohio

### Environmental Education Council of Ohio

PO BOX 1004  
LANCASTER, OH 43130  
(740) 653-2649 Office  
(740) 215-3376 Cell  
[eeco.wildapricot.org](http://eeco.wildapricot.org)

### Ohio Energy Project (OEP)

200 E WILSON BRIDGE RD STE 320  
WORTHINGTON, OH 43085  
(614) 785-1717  
[www.ohioenergy.org](http://www.ohioenergy.org)

### Ohio O & G Energy Education Program (OOGEEP)

1718 COLUMBUS RD SW  
PO BOX 187  
GRANVILLE, OH 43023-0535  
(740) 587-0410  
[www.oogEEP.org](http://www.oogEEP.org)

## Oklahoma

### Assoc. of Desk and Derrick Clubs

5153 E 51ST ST STE 107  
TULSA, OK 74135  
(918) 622-1749  
[ado.addc.org](http://ado.addc.org)

### Domestic Energy Producers Alliance

PO BOX 18359  
OKLAHOMA CITY, OK 73154  
(405) 424-1699  
[www.depausa.org](http://www.depausa.org)

### Committee for Sustaining Oklahoma's Energy Resources

500 NE 4th ST., SUITE 100  
OKLAHOMA CITY, OK 73104  
(800) 664-1301  
[serok.com](http://serok.com)

### Oklahoma Energy Resources Board (OERB)

500 NE 4th ST, SUITE 100  
OKLAHOMA CITY, OK 73104  
(800) 664-1301  
[info@oerb.com](mailto:info@oerb.com)  
[www.oerb.com](http://www.oerb.com)

## University of Oklahoma

### Mewbourne College of Earth & Energy

100 EAST BOYD ROOM 1510  
NORMAN, OK 73019  
(405) 325-3821  
[www.ou.edu/mcee.html](http://www.ou.edu/mcee.html)

## Pennsylvania

### Marcellus Shale Coalition

24 SUMMIT PARK DR.  
PITTSBURGH, PA 15275  
(412) 706-5160  
[marcelluscoalition.org](http://marcelluscoalition.org)

## Texas

### East Texas Historical Assoc.

PO BOX 6223 SFA STATION  
NACOGDOCHES, TX 75962  
(936) 468-2407  
[www.easttexashistorical.org](http://www.easttexashistorical.org)

### Offshore Energy Center (OEC) - Ocean Star Museum

200 N DAIRY ASHFORD STE 4119  
HOUSTON, TX 77079  
(281) 679-8040  
[oec@oceanstaroec.com](mailto:oec@oceanstaroec.com)  
[www.oceanstaroec.com](http://www.oceanstaroec.com)

## Virginia

### National Energy Education Development Project (NEED)

8408 KAO CIRCLE  
MANASSAS, VA 20110  
(703) 257-1117  
[www.need.org](http://www.need.org)

## Wisconsin

### Wisconsin K-12 Energy Education Program (KEEP)

403 LRC, UWSP  
STEVENS POINT, WI 54481  
(715) 346-4770  
[energy@uwsp.edu](mailto:energy@uwsp.edu)  
[www.uwsp.edu/cnr/wcee/keep](http://www.uwsp.edu/cnr/wcee/keep)

## Wyoming

### Wyoming State Historical Society

PO BOX 247  
WHEATLAND, WY 82201  
(307) 322-3014  
[www.wyshs.org](http://www.wyshs.org)

## CANADA

### BP - A+ for Energy

240 4TH AVE SW  
CALGARY AB T2P 2H8 CANADA  
(403) 233-1359  
[aplusforenergycanada@bp.com](mailto:aplusforenergycanada@bp.com)  
[www.aplusforenergy.org](http://www.aplusforenergy.org)

## ENERGY IN DEPTH

1201 15TH STREET NW STE 300  
WASHINGTON, DC 20005  
(202) 857-4722  
[www.energyindepth.org](http://www.energyindepth.org)



# OIL AND GAS MUSEUMS

## Alabama

### Choctaw Cnty Historical Museum

40 MELVIN RD  
GILBERTOWN, AL 26908  
(205) 459-3383  
[www.ohwy.com/al/c/choccohm.htm](http://www.ohwy.com/al/c/choccohm.htm)

## Arkansas

### AK Museum of Natural Resources

3583 SMACKOVER HWY  
SMACKOVER, AR 71762  
(870) 725-2877  
[www.amnr.org](http://www.amnr.org)

### Arkansas Museum of Science and History

500 PRESIDENT CLINTON AVE STE 150  
LITTLE ROCK, AR 72201  
(501) 396-7050  
[www.amod.org](http://www.amod.org)

## California

### Brea Museum and Heritage Center

125 WEST ELM STREET  
BREA, CA 92821  
(714) 256-2283  
[www.breamuseum.org](http://www.breamuseum.org)

### California Oil Museum

1001 E MAIN ST  
SANTA PAULA, CA 93061  
(805) 933-0076  
[www.oilmuseum.net](http://www.oilmuseum.net)

### Hathaway Ranch and Oil Museum

11901 FLORENCE AVE  
SANTA FE SPRINGS, CA 90670  
(562) 777-3444  
[www.santafesprings.org/about/history/hathaway\\_ranch\\_museum.asp](http://www.santafesprings.org/about/history/hathaway_ranch_museum.asp)

### Kern County Museum

3801 CHESTER AVE  
BAKERSFIELD, CA 93301  
(661) 868-8400  
[www.kcmuseum.org](http://www.kcmuseum.org)

### Olinda Historic Museum & Park

4025 SANTA FE ROAD  
BREA, CA 92821  
(714) 671-4447  
[www.ci.brea.ca.us/index.asp?NID=438](http://www.ci.brea.ca.us/index.asp?NID=438)

### Santa Barbara Maritime Museum

113 HARBOR WAY STE 190  
SANTA BARBARA, CA 93109  
(805) 962-8404  
[www.sbmm.org](http://www.sbmm.org)

### West Kern County Museum

PO BOX 491  
TAFT, CA 93268  
(661) 765-6664  
[www.westkern-oilmuseum.org](http://www.westkern-oilmuseum.org)

## Colorado

### Museum of Nature and Science

2001 COLORADO BLVD  
DENVER, CO 80205  
(303) 370-6000  
[www.dmns.org](http://www.dmns.org)

## Illinois

### Illinois Oilfield Museum

10570 N 150TH ST  
OBLONG, IL 62449  
(618) 592-4664  
[www.theonlyoblong.com/oil\\_field/](http://www.theonlyoblong.com/oil_field/)

### Museum of Science and Industry

57TH ST AND LAKE SHORE DR  
CHICAGO, IL 60637  
(773) 684-1414  
[www.msichicago.org](http://www.msichicago.org)

### Wabash County Museum

320 N MARKET ST  
MT CARMEL, IL 62863  
(618) 262-8774  
[www.museum.wabash.il.us](http://www.museum.wabash.il.us)

### Wood River Refinery Museum

PO BOX 76  
ROXANNA, IL 62084-0076  
(618) 255-3718  
[www.wrrhm.org](http://www.wrrhm.org)

## Indiana

### Red Crown Mini-Museum

6TH AND SOUTH ST  
LAFAYETTE, IN 47901  
[www.oldgas.com/info/redcrown.htm](http://www.oldgas.com/info/redcrown.htm)

### Trump's Texaco Museum

BREWER AND WASHINGTON ST  
KNIGHTSTOWN, IN 46148  
(765) 345-7135

## Kansas

### Hill City Oil Museum

801 W MAIN STREET  
HILL CITY, KS 67642  
(785) 421-2448  
[www.grahamhistorical.ruraltel.net/oil/oil.html](http://www.grahamhistorical.ruraltel.net/oil/oil.html)

### Independence Historical Museum and Art Center

123 N 8TH ST  
PO BOX 294  
INDEPENDENCE, KS 67301  
(620) 331-3515  
[independencehistoricalmuseum.org](http://independencehistoricalmuseum.org)

### Kansas Oil Museum and Hall of Fame

383 E CENTRAL AVE  
EL DORADO, KS 67042  
(316) 321-9333  
[www.kansasoilmuseum.org](http://www.kansasoilmuseum.org)

## Norman #1 Museum & RV Park

106 S 1ST  
NEODESHA, KS 66757  
(620) 325-5316  
[www.neodesha.com/DocumentView.aspx?DID=46](http://www.neodesha.com/DocumentView.aspx?DID=46)

## Oil Patch Museum

I-70 AND US 281  
RUSSELL, KS  
(785) 483-3637  
[www.russellks.org/attractions.html#oil](http://www.russellks.org/attractions.html#oil)

## Stevens Cnty Gas & Hist. Museum

905 S ADAMS  
HUGOTON, KS 67951  
(620) 544-8751  
[skyways.lib.ks.us/towns/Hugoton/museum.html](http://skyways.lib.ks.us/towns/Hugoton/museum.html)

## Louisiana

### Int'l Petroleum Museum and Expo

PO BOX 1988  
MORGAN CITY, LA 70381  
(985) 384-3744  
[www.rigmuseum.com](http://www.rigmuseum.com)

## LA State Oil and Gas Museum

200 S LAND AVE  
OIL CITY, LA 71061  
(318) 995-6845  
[www.sos.la.gov/HistoricalResources/VisitMuseums/LouisianaStateOilAndGasMuseum/Pages/default.aspx](http://www.sos.la.gov/HistoricalResources/VisitMuseums/LouisianaStateOilAndGasMuseum/Pages/default.aspx)

## Michigan

### Henry Ford Museum

20900 OAKWOOD BLVD  
DEARBORN, MI 48124-4088  
(313) 982-6001  
[www.hfmgv.org/museum](http://www.hfmgv.org/museum)

## New Mexico

### Farmington Museum

3041 E MAIN  
FARMINGTON, NM 87401  
(505) 599-1174  
[www.farmingtonmuseum.org](http://www.farmingtonmuseum.org)

## New York

### Pioneer Oil Museum

PO BOX 332  
BOLIVAR, NY 14715  
(585) 928-2377  
[www.pioneeroilmuseum.com](http://www.pioneeroilmuseum.com)

## Ohio

### Allen County Museum and Historical Society

620 W MARKET ST  
LIMA, OH 45801  
(419) 222-9426  
[www.allencountymuseum.org](http://www.allencountymuseum.org)

# OIL AND GAS MUSEUMS

## County Line Historical Society

281 N MARKET ST  
BOX 614  
SHREVE, OH 44616  
(330) 567-2501  
[www.shreveohio.com/resources/county-line-historical-society](http://www.shreveohio.com/resources/county-line-historical-society)

## Hancock Historical Museum

422 W SANDUSKY ST  
FINDLAY, OH 45840  
(419) 423-4433  
[www.hancockhistoricalmuseum.org](http://www.hancockhistoricalmuseum.org)

## Wood County Historical Center and Museum

13660 COUNTY HOME RD  
BOWLING GREEN, OH 43402  
(419) 352-0967  
[www.woodcountyhistory.org](http://www.woodcountyhistory.org)

## Oklahoma

### Ames Astrobleme Museum

109 E MAIN  
AMES, OK 73718  
(580) 753-4624

### Anadarko Basin Museum of Natural History

204 N MAIN ST  
ELK CITY, OK 73644  
(580) 243-0437

### Bartlesville Area History Museum

401 SOUTH JOHNSTONE AVE  
BARTLESVILLE OK 74003  
(918) 338-4290  
[www.bartlesvillehistory.com](http://www.bartlesvillehistory.com)

### Cherokee Strip Regional Heritage Center

507 S 4TH ST  
ENID, OK 73701  
(508) 237-1907  
[www.csrhc.org](http://www.csrhc.org)

### Conoco Museum

501 W SOUTH AVE  
PONCA CITY, OK 74601  
(580) 765-8687  
[www.conocomuseum.com](http://www.conocomuseum.com)

### Drumright Community Historical Museum

301 E BROADWAY  
DRUMRIGHT, OK 74030  
(918) 352-3002  
[www.drumrighthistoricalsociety.org](http://www.drumrighthistoricalsociety.org)

### Frank Phillips Home

1107 CHEROKE AVE  
BARTLESVILLE, OK 74003  
(918) 336-2491  
[www.frankphillipshome.org](http://www.frankphillipshome.org)

## Greater Southwest Historical Museum

35 SUNSET DR  
ARDMORE, OK 73401  
(580) 226-3857  
[www.gshhm.org](http://www.gshhm.org)

## Healdton Oil Museum

315 E MAIN ST  
HEALDTON, OK 73438-1836  
(580) 229-0900  
[www.okhistory.org/sites/healdtonoil.php](http://www.okhistory.org/sites/healdtonoil.php)

## Nowata County Hist. Museum

121 S PINE  
NOWATA, OK 74048  
(918) 273-1191  
[www.ohwy.com/ok/ynowhimu.htm](http://www.ohwy.com/ok/ynowhimu.htm)

## Oklahoma Historical Society

800 NAZIH ZUHDI DR  
OKLAHOMA CITY, OK 73105  
(405) 521-2491  
[www.okhistory.org](http://www.okhistory.org)

## Oklahoma Oil Museum

1800 HWY 9 W  
SEMINOLE, OK 74868  
(405) 382-1500  
[www.seminoleoklahoma.com/museum](http://www.seminoleoklahoma.com/museum)

## Phillips Petroleum Company Museum

410 KEELER  
BARTLESVILLE, OK 74004  
(918) 661-8687  
[www.phillips66museum.com](http://www.phillips66museum.com)

## Sam Noble Museum of Natural History

2401 CHAUTAUQUA AVE  
NORMAN, OK 73072-7029  
(405) 325-4712  
[www.snomnh.ou.edu](http://www.snomnh.ou.edu)

## Tulsa Historical Society

2445 S PEORIA  
TULSA, OK 74114  
(918) 712-9484  
[www.tulsaohistory.org/learn/earlytulsa/oil](http://www.tulsaohistory.org/learn/earlytulsa/oil)

## Woolaroc Museum

1925 WOOLAROC RANCH RD  
BARTLESVILLE, OK 74003  
336-0307 x10  
[www.woolaroc.org](http://www.woolaroc.org)

## Pennsylvania

### Barbara Morgan Harvey Center for the Study of Oil Heritage

1801 West First St  
Oil City, PA 16301  
[web.clarion.edu/BMHarveyCenter/HCWBuild/Harvey\\_Center\\_Web\\_Site/Home.html](http://web.clarion.edu/BMHarveyCenter/HCWBuild/Harvey_Center_Web_Site/Home.html)

## Coolspring Power Musuem

179 COOLSPRING RD  
COOLSPRING, PA 15730  
(814) 849-6883  
[www.coolspringpowermuseum.org](http://www.coolspringpowermuseum.org)

## Drake Well Museum

202 MUSEUM LN  
TITUSVILLE, PA 16354  
(814) 827-2797  
[www.drakewell.org](http://www.drakewell.org)

## Oil Region National Heritage Area

217 ELM ST  
OIL CITY, PA 16301-1412  
(800) 483-6264  
[www.oilregion.org](http://www.oilregion.org)

## Penn-Brad Oil Museum

901 SOUTH AVENUE  
CUSTER CITY, PA 16725  
(814) 362-1955  
[www.pennbradoilmuseum.com](http://www.pennbradoilmuseum.com)

## Petroleum History Institute

PO BOX 165  
OIL CITY, PA 16301-0165  
[www.petroleumhistory.org](http://www.petroleumhistory.org)

## Pumping Jack Museum

PO BOX 25  
EMLENTON, PA 16373  
(724) 867-0030  
[www.pumpingjack.org](http://www.pumpingjack.org)

## Simpler Times Museum

111 SIMPLER TIMES LN  
TIDIOUTE, PA 16351  
(814) 484-3483

## Venango Museum of Art, Science and Industry

270 SENECA ST  
OIL CITY, PA 16301  
(814) 676-2007  
[www.venangomuseum.org](http://www.venangomuseum.org)

## Texas

### Bob Bullock Texas State History Museum

1800N. CONGRESS AVE.  
AUSTIN, TX 78701  
(512) 936-8746  
[www.thestoryoftexas.com](http://www.thestoryoftexas.com)

## Central Texas Oil Patch Museum

421 E DAVIS ST  
LULING, TX 78648  
(830) 875-1922  
[www.oilmuseum.org](http://www.oilmuseum.org)

## Depot Museum

514 N HIGH ST  
HENDERSON, TX 75652  
(903) 657-4303  
[www.depotmuseum.com](http://www.depotmuseum.com)

## East Texas Oil Museum

HWY 259 AND ROSS ST  
KILGORE, TX 75662  
(903) 983-8295  
[www.easttexasoilmuseum.com](http://www.easttexasoilmuseum.com)

# OIL AND GAS MUSEUMS

## **Fort Worth Museum of Science and History**

1600 GENDY ST  
FORT WORTH, TX 76107  
(817) 255-9300  
[www.fwmuseum.org](http://www.fwmuseum.org)

## **Gaston Museum**

6558 HWY 64 W  
PO BOX 301  
JOINERVILLE, TX 75658  
(903) 847-2205  
[www.gastonmuseum.org](http://www.gastonmuseum.org)

## **Heritage Museum of Montgomery County**

1506 I-45 NORTH FEEDER  
CONROE, TX 77305-2262  
(936) 539-6873  
[www.heritagemuseum.us](http://www.heritagemuseum.us)

## **Houston Museum of Natural Science**

5555 HERMANN PARK DR  
HOUSTON, TX 77030  
(713) 639-4629  
[www.hmns.org](http://www.hmns.org)

## **Hutchinson County Historical Museum**

618 N MAIN  
BORGER, TX 79007  
(806) 273-0130  
[www.hutchinsoncountymuseum.org](http://www.hutchinsoncountymuseum.org)

## **London Museum and Tea Room**

690 S MAIN  
NEW LONDON, TX 75682  
(903) 895-4602

## **Million Barrel Museum**

400 MUSEUM BLVD  
MONAHANS, TX 79756  
(432) 943-8401  
[www.monahans.org/chamber/node/207](http://www.monahans.org/chamber/node/207)

## **Museum of the Plains**

1200 N MAIN  
PERRYTON, TX 79070  
(806) 435-6400  
[www.museumofthepains.com](http://www.museumofthepains.com)

## **Panhandle-Plains Historical Museum**

2503 4TH AVE  
CANYON, TX 79015  
(806) 651-2244  
[www.panhandleplains.org](http://www.panhandleplains.org)

## **Permian Basin Petroleum Museum**

1500 W INTERSTATE 20  
MIDLAND, TX 79701  
(432) 683-4403  
[www.petroleummuseum.org](http://www.petroleummuseum.org)

## **Ranger Historical Preservation Society**

1505 W. LOOP 254  
RANGER, TX 76470-0313  
(254) 647-5353  
[www.txbusiness.com/rhps](http://www.txbusiness.com/rhps)

## **Spindletop-Gladys City Boomtown Museum**

PO BOX 10070  
HWY 69 AND UNIVERSITY DR  
BEAUMONT, TX 77710  
(409) 880-1750  
[www.spindletop.org](http://www.spindletop.org)

## **Square House Museum**

PO BOX 276  
PANHANDLE, TX 79068  
(806) 537-3524  
[www.squarehousemuseum.org](http://www.squarehousemuseum.org)

## **Texas Energy Museum**

600 MAIN ST  
BEAUMONT, TX 77701  
(409) 833-5100  
[www.texasenergymuseum.org](http://www.texasenergymuseum.org)

## **Van Area Oil and Historical Museum**

170 W. MAIN ST.  
VAN, TX 75790  
(903) 963-5051  
[www.vantexas.com/history.html](http://www.vantexas.com/history.html)

## **W. K. Gordon Center for Industrial History**

PO BOX 218  
MINGUS, TX 76463  
(254) 968-1886  
[www.tarleton.edu/gordoncenter](http://www.tarleton.edu/gordoncenter)

## **West Virginia**

## **West Virginia Oil and Gas Museum**

PO BOX 1685  
119 THIRD ST  
PARKERSBURG, WV 26101  
(304) 485-5446  
[www.oilandgasmuseum.com](http://www.oilandgasmuseum.com)

## **Wyoming**

## **Hot Springs County Museum and Cultural Center**

700 BROADWAY  
THERMOPOLIS, WY 82443  
(307) 864-5183  
[www.hschohistory.org](http://www.hschohistory.org)

## **Salt Creek Oil Museum**

531 PEAKE ST  
MIDWEST, WY 82643  
(307) 437-6633  
[www.wyomingtourism.org/overview/saltcreekoil-museum/4155](http://www.wyomingtourism.org/overview/saltcreekoil-museum/4155)

## **Tate Geological Museum**

125 COLLEGE DR  
CASPER, WY 82601-4699  
(307) 268-2447  
[www.caspercollege.edu/tate](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](http://www.aoghs.org).*

# STATE RANKINGS

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

Sources: IHS for wells drilled and EIA for production.

# TOP PRODUCING CONGRESSIONAL DISTRICTS - CRUDE OIL

Rank	State	District	% of US Prod
1	FOS Gulf & Pacific	7, 3	39.2157
2	Texas	11	13.8226
3	California	20, 22	13.6903
4	New Mexico	2	6.4783
5	Texas	19	4.5086
6	Louisiana	3	2.6980
7	Wyoming	At Large	2.2465
8	North Dakota	At Large	1.9657
9	Texas	23	1.8295
10	Utah	2	1.5925
11	Fos Gulf & Pacific	California	1.5525
12	Oklahoma	3	1.5266
13	Texas	13	1.0652
14	Texas	15	1.0110
15	Oklahoma	4	0.8323
16	Colorado	4	0.7593
17	Texas	1	0.5962
18	Kansas	1	0.5431
19	Texas	25	0.4822
20	Montana	At Large	0.4727
21	Colorado	3	0.4279
22	Louisiana	4	0.3924
23	Texas	28	0.3685
24	Louisiana	7	0.3377
25	Texas	14	0.2774
26	Texas	22	0.1624
27	Texas	2, 8	0.1263
28	Texas	27	0.1219
29	Texas	17	0.1207
30	Texas	29, 18, 7, 9	0.1138
31	Texas	8	0.0959
32	Texas	6	0.0925
33	New Mexico	3	0.0820
34	Texas	2	0.0810
35	Alabama	1	0.0661
36	Michigan	1	0.0567
37	Louisiana	5	0.0530
38	Oklahoma	2	0.0341
39	Texas	12	0.0290
40	Texas	5	0.0239
41	Texas	7, 3	0.0177
42	Texas	23, 28	0.0106
43	Texas	17, 6	0.0081
44	Texas	26	0.0041
45	Texas	11, 23	0.0041
46	Mississippi	3	0.0026
47	Mississippi	2, 3	0.0006
48	Texas	12, 26, 24, 6	0.0000
49	Arkansas	2	0.0000
50	Virginia	9	0.0000

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	12.4598
2	Louisiana	4	9.6927
3	Colorado	3	7.6002
4	FOS Gulf & Pacific	7, 3	6.1317
5	Texas	1	5.2932
6	New Mexico	3	4.7320
7	Texas	17	4.3891
8	Texas	12, 26, 24, 6	4.2791
9	Oklahoma	3	4.1362
10	Texas	13	3.3538
11	Oklahoma	2	2.8634
12	Arkansas	2	2.7432
13	Louisiana	5	2.3210
14	Utah	2	2.1631
15	Texas	15	2.0328
16	Texas	6	2.0204
17	Texas	23, 28	1.9883
18	Texas	12	1.9531
19	Texas	23	1.6240
20	Mississippi	3	1.5429
21	Texas	26	1.4734
22	Colorado	4	1.4137
23	Louisiana	3	1.3157
24	Texas	28	1.3088
25	Kansas	1	1.0446
26	New Mexico	2	0.9640
27	Texas	25	0.8993
28	Texas	11	0.8489
29	Mississippi	2, 3	0.7014
30	Virginia	9	0.6464
31	Texas	27	0.6210
32	Texas	17, 6	0.5133
33	Texas	14	0.4996
34	Louisiana	7	0.4920
35	Michigan	1	0.4860
36	Alabama	1	0.4688
37	Oklahoma	4	0.4215
38	Texas	2	0.3869
39	Alabama	6, 7	0.3803
40	Arkansas	3	0.3234
41	Texas	11, 23	0.2925
42	Texas	8	0.2502
43	Arkansas	4	0.2231
44	Texas	2, 8	0.1714
45	Texas	29, 18, 7, 9	0.1099
46	West Virginia	3	0.0902
47	Texas	5	0.0880
48	Montana	At Large	0.0792
49	Texas	22	0.0628
50	Texas	19	0.0564
51	North Dakota	At Large	0.0203
52	California	20, 22	0.0170
53	FOS Gulf & Pacific	California	0.0077

Source: IPAA and IHS.

\*Districts have been aggregated for ranking purposes and rounded in certain cases.

# ***REVISING HISTORIC TAX POLICIES FOR AMERICAN OIL AND NATURAL GAS PRODUCTION WILL COST THE COUNTRY***

There's a lot of talk about "subsidies" and "tax incentives" these days, including with respect to energy, so we thought we'd gather a few pertinent facts to clear up some misunderstandings.

First, we need to sort out some definitional issues. The word "subsidy" may conjure up images of the government handing out checks or waiving taxes for industries deemed to be of special value or that create jobs. Many definitions of "subsidy" contain the phrase, "a tax reduction that a government gives a business for a particular purpose, usually to create jobs." This last part is the crux of the issue. Market-created jobs, rather than those directly created and supported by the government, are the key benefit of increased activity by independent producers (IHS STUDY "The Economic Contribution of the Onshore Independent Oil, Gas Producers to the U.S. Economy"). These jobs are stable, high paying, and often in rural areas of the country that are struggling for opportunity. Efforts to resolve the debt ceiling must also consider the effects those decisions will have on our other impending national crisis, the economy. The independent oil and gas sector is a natural and substantial job creator. To view the industry only as a target for revenue, by way of capital destruction, would be to ignore the critical mass that independents represent in U.S. energy productivity, the national job market, and in the wallet of every American citizen.

Independent producers drill 94 percent of the wells in the U.S., so how Congress treats the tax provisions that impact them, such as intangible drilling costs and percentage depletion, is of paramount importance. These are neither "loopholes" nor "subsidies," but rather methods very similar to real estate depreciation in accounting for those capital expenditures.

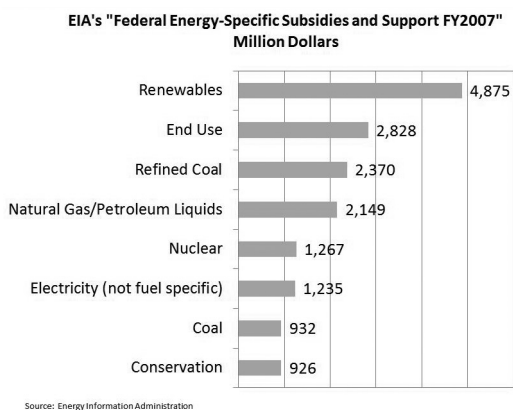
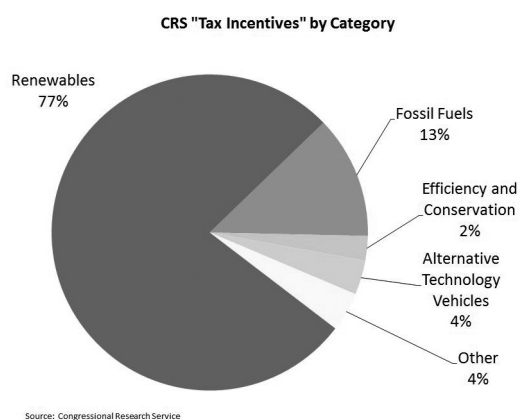
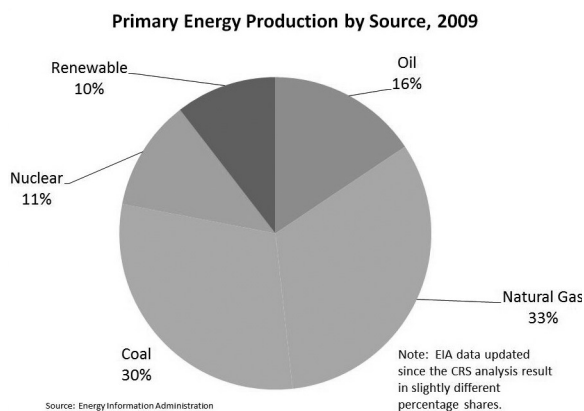
Intangible Drilling and Development Costs (IDC) – IDC tax treatment is a normal business deduction – a form of capital recovery. Expensing IDC has been part of the tax code since 1913. IDCs generally include any cost incurred that has no salvage value but is necessary for the drilling of wells or the preparation of wells. Only independent producers can fully expense IDCs, and only on American production. Eliminating IDC expensing would have the direct result of removing capital that would have been invested in new American production and the jobs that support it – such as the emerging shale gas and shale oil resources throughout the country.

Percentage Depletion – All natural resource minerals, from coal to gold to sand and gravel, are eligible for a percentage depletion income tax deduction. Percentage depletion for natural gas and oil has been in the tax code since 1926. Unlike percentage depletion for other mineral resources, natural gas and oil percentage depletion is highly limited. It is available only for American production, only for independent producers and royalty owners, limited to the first 1,000 barrels per day of production, limited to the net income of a property, and limited to 65 percent of the producer's net income. Percentage depletion provides capital primarily for smaller independents and thus is particularly important for marginal well operators. Eliminating percentage depletion would remove capital that would have been invested in maintaining and developing American production. Many royalty owners are farmers, ranchers and retirees who rely on their royalties for essential supplement income.

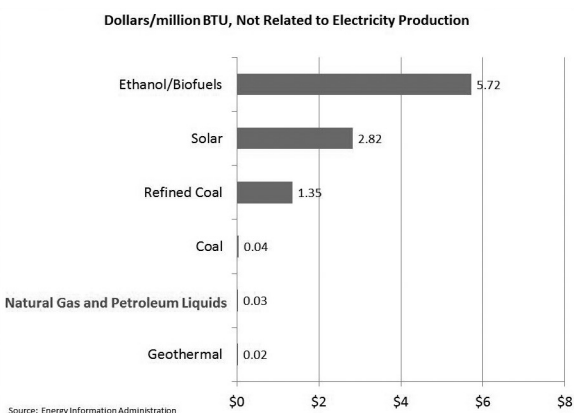
In IPAA's assessment, the proposed tax increases from the administration would result in a 25-35 percent reduction in capital expenditures for independent producers who reinvest more than 150 percent of their American cash flow back into new American projects. (See IPAA's letter to Congressional leaders regarding taxes).

We've reviewed federal assessments of energy tax issues by the Congressional Research Service (CRS) and the Energy Information Administration (EIA). These include intangible drilling costs and percentage depletion – unfortunately characterizing them as "tax incentives" or "subsidies". Nevertheless, the results are still revealing,

considering the dominant role played by fossil fuels in our energy sources. For example, a CRS memo dated May 16, 2011 on “Energy Production by Source and Energy Tax Incentives” concludes that while fossil fuels (including oil, natural gas, and coal) accounted for 78 percent of domestic energy production, they received just 13 percent of energy related “tax incentives” in 2009. Meanwhile, renewables accounted for more than 77 percent of the roughly \$20 billion in “tax incentives” that went to energy, but generated less than 11 percent of domestic energy production. Renewables have received additional boosts as part of Federal spending packages enacted under the banner of economic recovery. The following charts illustrate these points.

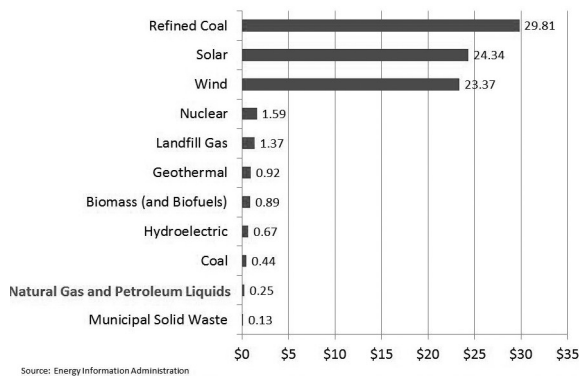


In an extensive study released by EIA in 2008 (Federal Financial Interventions and Subsidies in Energy Markets 2007), the agency's analysis shows that oil and gas accounted for less than 13 percent of the “subsidies” for 2007 with the majority going to renewables, coal, nuclear, end-use programs, and other initiatives. The following chart shows EIA's breakout.



Even more interesting is EIA's analysis translating these figures into dollars per BTU of energy delivered (see following charts). On this basis, the highest figure by far is for ethanol and biofuels, at \$5.72 per million BTU for 2007, with oil and gas coming in at just 3 cents per million BTU. (A gallon of gasoline contains roughly 0.125 million BTU.)

Dollars/Megawatt-Hour Supporting Electricity Production



For electricity generation, support was by far the highest for “refined coal” (coal that is upgraded to improve combustion and emissions), solar, and wind, all within the \$20 to \$30 per megawatt range. (For comparison, this would be a little less than a third of the entire per-megawatt-hour average retail price paid by all users in 2007 of \$91.) While oil provides only a small share of U.S. electricity generation, natural gas accounts for 24 percent of generation.

## Conclusion

We find that, even with the varied approaches and definitions taken in these studies, tax policies affecting the oil and natural gas industry are rather limited compared to renewables and other sources that currently comprise a much smaller share of the energy mix – both today and projected for many years to come (For example, illustrated out to 2035 in EIA’s Annual Energy Outlook 2011).

IPAA believes that while we need all forms of energy to compete in the global marketplace, we must keep in mind the job and BTU-destroying impact that a removal of these tax provisions would have, in particular, to the U.S. oil and natural gas industry as well as to the U.S. energy consumer. American oil and natural gas provides for real, meaningful job creation going forward as well as decreased dependence on more expensive imports. Changing tax policies affecting this industry would diminish U.S. investment and U.S. jobs.

# CRUDE OIL SUMMARY

Year	Production			Imports	Supply		Exports	Demand		Crude Reserves		Price
	Crude Oil	NGL	Total	Total	Other	Total		Domestic	Total	Proved Reserves	New Reserves	Oil Wellhead (\$/bbl.)
1962	7,332	1,021	8,353	2,082	133	10,568	168	10,400	10,568	31,389	2,181	2.90
1963	7,542	1,098	8,640	2,123	188	10,951	208	10,743	10,951	30,970	2,174	2.89
1964	7,614	1,155	8,769	2,258	198	11,225	202	11,023	11,225	30,991	2,665	2.88
1965	7,804	1,210	9,014	2,468	217	11,699	187	11,513	11,700	31,352	3,048	2.88
1966	8,295	1,284	9,579	2,573	130	12,282	198	12,085	12,283	31,452	2,964	2.88
1967	8,810	1,409	10,219	2,537	111	12,867	307	12,560	12,867	31,377	2,962	2.92
1968	9,096	1,504	10,600	2,840	184	13,624	231	13,393	13,624	30,707	2,455	2.94
1969	9,238	1,590	10,828	3,166	376	14,370	233	14,137	14,370	29,632	2,120	3.09
1970	9,637	1,660	11,297	3,419	240	14,956	259	14,697	14,956	39,001	2,689	3.18
1971	9,463	1,694	11,157	3,925	354	15,436	224	15,213	15,437	38,063	2,318	3.39
1972	9,441	1,744	11,185	4,741	663	16,589	222	16,367	16,589	36,339	1,558	3.39
1973	9,208	1,738	10,946	6,256	337	17,539	231	17,308	17,539	35,300	2,146	3.89
1974	8,774	1,688	10,462	6,112	300	16,874	221	16,652	16,873	34,250	1,994	6.87
1975	8,375	1,632	10,007	6,056	467	16,531	209	16,322	16,531	32,682	1,318	7.67
1976	8,132	1,604	9,736	7,313	635	17,684	223	17,461	17,684	30,942	1,085	8.19
1977	8,245	1,618	9,863	8,808	4	18,674	243	18,431	18,674	31,780	1,140	8.57
1978	8,707	1,567	10,274	8,364	572	19,209	362	18,847	19,209	31,355	2,583	9.00
1979	8,552	1,583	10,135	8,456	392	18,984	471	18,513	18,984	29,810	1,410	12.64
1980	8,597	1,573	10,170	6,909	521	17,600	544	17,056	17,600	29,805	2,970	21.59
1981	8,572	1,590	10,162	5,995	495	16,653	595	16,058	16,653	29,426	2,570	31.77
1982	8,649	1,539	10,188	5,113	810	16,111	815	15,296	16,111	27,858	1,382	28.52
1983	8,688	1,547	10,235	5,051	684	15,970	739	15,231	15,970	27,735	2,897	26.19
1984	8,879	1,626	10,505	5,437	506	16,448	722	15,726	16,448	28,446	3,748	25.88
1985	8,971	1,595	10,566	5,067	874	16,507	781	15,726	16,507	28,416	3,022	24.09
1986	8,680	1,546	10,226	6,223	616	17,066	785	16,281	17,066	26,889	1,446	12.51
1987	8,349	1,591	9,940	6,678	811	17,429	764	16,665	17,429	27,256	3,240	15.40
1988	8,140	1,621	9,761	7,402	935	18,098	815	17,283	18,098	26,825	2,380	12.58
1989	7,613	1,546	9,159	8,060	964	18,184	859	17,325	18,184	26,501	2,262	15.86
1990	7,355	1,559	8,914	8,017	913	17,845	857	16,988	17,845	26,254	2,258	20.03
1991	7,417	1,659	9,076	7,626	1,012	17,715	1,001	16,714	17,715	24,682	940	16.54
1992	7,171	1,697	8,868	7,888	1,227	17,983	949	17,033	17,983	23,745	1,509	15.99
1993	6,847	1,736	8,583	8,620	1,037	18,240	1,003	17,237	18,240	22,957	1,551	14.25
1994	6,662	1,727	8,389	8,996	1,275	18,660	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	19,290	22,017	1,839	18.46
1997	6,452	1,817	8,269	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	7,669	11,871	1,079	20,620	971	19,649	20,620	22,446	2,316	21.84
2002	5,746	1,880	7,624	11,530	1,591	20,745	984	19,761	20,745	22,677	2,106	22.51
2003	5,644	1,719	7,363	12,264	1,434	21,061	1,027	20,034	21,061	21,891	1,091	27.56
2004	5,435	1,809	7,244	13,145	1,390	21,779	1,048	20,731	21,779	21,371	1,299	36.77
2005	5,186	1,717	6,903	13,714	1,350	21,967	1,165	20,802	21,967	21,757	2,119	50.28
2006	5,089	1,739	6,828	13,707	1,469	22,004	1,317	20,687	22,004	20,972	867	59.69
2007	5,077	1,783	6,860	13,468	1,785	22,113	1,433	20,680	22,113	21,317	2,036	66.52
2008	5,000	1,784	6,784	12,915	1,601	21,300	1,802	19,498	21,300	19,121	-524	94.04
2009	5,353	1,910	7,263	11,691	1,841	20,795	2,024	18,771	20,795	20,682	3,312	56.35
2010	5,471	2,074	7,545	11,793	2,195	21,533	2,353	19,180	21,533	23,267	4,352	74.71
2011	5,652	2,216	7,868	11,436	2,564	21,868	2,986	18,882	21,868	26,544	5,111	95.73

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		Extraction Imports		Supply		Exports	Consumption	Gas Reserves		Price
	Marketed	Dry	Loss		Other*	Total			Proved Reserves	New Reserves	
				(Bcf)							Gas Wellhead (\$/Mcf.)
1962	13,877	13,253	624	402	838	14,509	16	13,267	272,279	19,750	.16
1963	14,747	14,077	670	406	899	15,399	17	13,970	276,151	18,418	.16
1964	15,547	14,824	723	443	866	16,153	20	14,814	281,251	20,447	.15
1965	16,040	15,287	753	456	934	16,703	26	15,280	286,469	21,470	.16
1966	17,207	16,468	739	480	1,116	18,089	25	16,452	289,333	20,355	.16
1967	18,171	17,386	785	564	1,052	19,084	82	17,388	292,908	21,956	.16
1968	19,322	18,494	828	652	1,236	20,476	94	18,632	287,350	13,816	.16
1969	20,698	19,831	867	727	1,329	21,938	51	20,056	275,109	8,482	.17
1970	21,921	21,015	906	821	1,388	23,294	70	21,139	290,746	37,598	.17
1971	22,493	21,610	883	935	1,427	24,052	80	21,793	278,806	10,136	.18
1972	22,532	21,624	908	1,019	1,679	24,400	78	22,101	266,085	9,791	.19
1973	22,648	21,731	917	1,033	1,456	24,297	77	22,049	249,950	6,471	.22
1974	21,601	20,713	887	959	1,624	23,373	77	21,223	237,132	8,501	.30
1975	20,109	19,236	872	953	1,687	21,949	73	19,538	228,200	10,786	.45
1976	19,952	19,098	854	964	1,640	21,767	65	19,946	216,026	7,368	.58
1977	20,025	19,163	863	1,011	1,654	21,884	56	19,521	207,413	12,978	.79
1978	19,974	19,122	852	966	1,817	21,958	53	19,627	208,033	19,425	.91
1979	20,471	19,663	808	1,253	1,620	22,592	56	20,241	200,997	12,221	1.18
1980	20,180	19,403	777	985	1,385	21,822	49	19,877	199,021	16,723	1.59
1981	19,956	19,181	775	904	1,499	21,643	59	19,404	201,730	21,446	1.98
1982	18,582	17,820	762	933	1,647	20,452	52	18,001	201,512	17,288	2.46
1983	16,884	16,094	790	918	1,523	18,590	55	16,835	200,247	14,523	2.59
1984	18,304	17,466	838	843	1,894	20,258	55	17,951	197,463	14,409	2.66
1985	17,270	16,454	816	950	2,005	19,464	55	17,281	193,369	11,891	2.51
1986	16,859	16,059	800	750	1,364	18,234	61	16,221	191,586	13,827	1.94
1987	17,433	16,621	812	993	1,484	19,152	54	17,211	187,211	11,739	1.67
1988	17,918	17,103	816	1,294	1,807	20,278	74	18,030	168,024	-2,517	1.69
1989	18,095	17,311	785	1,382	2,917	21,717	107	19,119	167,116	16,075	1.69
1990	18,594	17,810	784	1,532	2,265	21,693	86	19,174	169,346	19,463	1.71
1991	18,532	17,698	835	1,773	2,699	22,299	129	19,562	167,062	14,918	1.64
1992	18,712	17,840	872	2,138	2,805	22,999	216	20,228	165,015	15,376	1.74
1993	18,982	18,095	886	2,350	3,105	23,690	140	20,790	162,415	15,189	2.04
1994	19,710	18,821	889	2,624	2,598	24,205	162	21,247	163,837	19,744	1.85
1995	19,506	18,599	908	2,841	3,333	24,927	154	22,207	165,146	19,275	1.55
1996	19,812	18,854	958	2,937	3,725	25,669	153	22,610	166,474	21,456	2.17
1997	19,866	18,902	964	2,994	3,641	25,694	157	22,737	167,223	19,960	2.32
1998	19,961	19,024	938	3,152	2,975	25,310	159	22,246	164,041	15,538	1.96
1999	19,805	18,832	973	3,585	2,585	25,166	163	22,405	167,406	22,293	2.19
2000	20,198	19,182	1,016	3,782	3,053	26,261	244	23,333	177,427	29,240	3.68
2001	20,570	19,616	954	3,977	2,110	26,076	373	22,239	183,460	25,812	4.00
2002	19,885	18,928	957	4,015	2,734	26,193	516	23,027	186,946	22,839	2.95
2003	19,974	19,099	876	3,944	2,526	26,249	680	22,277	189,044	21,523	4.88
2004	19,517	18,591	927	4,259	2,689	26,393	854	22,403	192,513	22,637	5.46
2005	18,927	18,051	876	4,341	2,621	25,742	729	22,014	204,385	30,330	7.33
2006	19,410	18,504	906	4,186	1,919	25,333	724	21,699	211,085	25,245	6.39
2007	20,196	19,266	930	4,608	2,356	27,052	822	23,104	237,726	46,107	6.25
2008	21,112	20,159	953	3,984	2,465	27,571	963	23,277	244,656	27,453	7.97
2009	21,648	20,624	1,024	3,751	1,850	27,227	1,072	22,910	272,509	27,853	3.67
2010	22,382	21,316	1,066	3,741	2,321	28,515	1,137	24,087	304,625	54,355	4.48
2011	24,036	22,902	1,134	3,469	1,436	29,314	1,507	24,385	334,067	52,997	3.95

Sources: Energy Information Administration.

Note: Reserves estimated as of December 31 each year.

\*Other natural gas supply includes supplemental gaseous fuels, net storage withdrawals, and a statistical balancing item.

# DRILLING SUMMARY

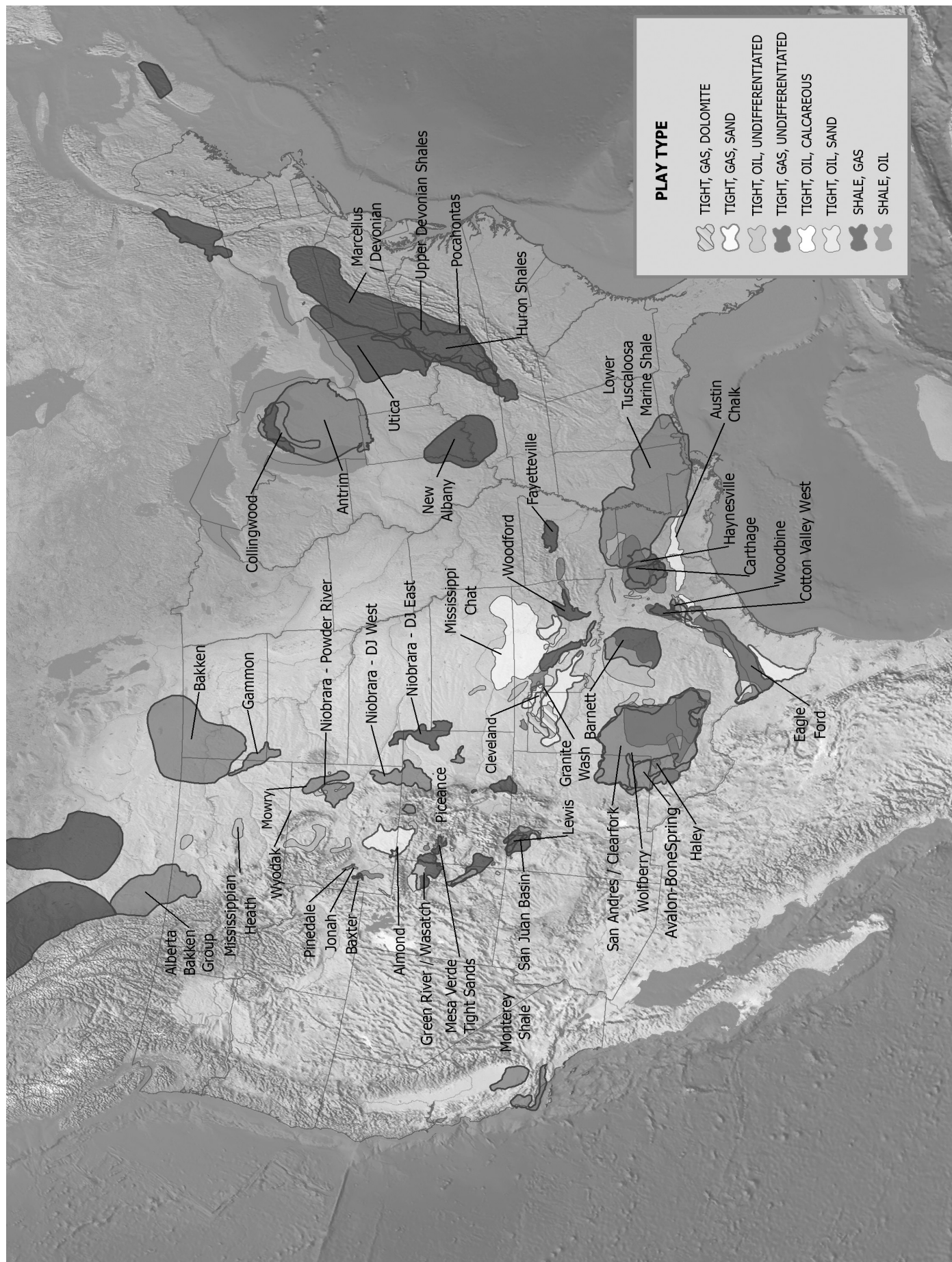
Year	Seismic Crews		Rotary Rigs		Exploratory Wells		Total Well Completions				Footage	
	Working	Active	New-Field Wildcats	Total Exploratory	Oil Wells	Gas Wells	Dry Wells	Service Holes	Total Wells	Total Drilled (mill. ft.)		
1962	3,915	1,637	6,794	10,797	21,249	5,848	16,682	2,400	46,179	198.6		
1963	3,966	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	1,658	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	2,259	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	1,980	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	5,247	10,230	9,522	8,468	672	27,988	134.5		
1990	1,493	1,010	2,685	5,150	12,445	11,126	8,496	802	32,067	156.2		
1991	1,251	860	2,195	4,511	12,542	9,768	7,476	1,070	29,786	145.1		
1992	847	721	1,762	3,467	9,379	8,149	5,857	989	23,385	120.2		
1993	952	755	1,683	3,482	8,828	9,829	6,093	716	24,750	133.8		
1994	1,087	775	1,613	3,622	7,334	9,358	5,092	669	21,784	125.0		
1995	1,253	723	1,605	3,152	8,248	8,082	4,814	885	21,144	117.4		
1996	1,307	779	1,676	3,021	8,836	9,027	4,890	791	22,753	126.6		
1997	1,336	943	1,757	3,166	11,206	11,498	5,874	1,017	28,578	161.7		
1998	1,566	827	1,478	2,483	7,682	11,639	4,761	838	24,082	137.6		
1999	1,125	625	1,244	1,924	4,805	12,027	3,550	478	20,382	103.1		
2000	62*	918	1,506	2,286	8,090	17,051	4,146	930	29,287	144.6		
2001	60	1,156	1,684	3,160	9,549	22,216	4,827	-	36,592	181.0		
2002	52	830	1,378	2,376	7,355	17,429	3,995	-	28,779	146.1		
2003	40	1,032	1,626	2,727	8,910	20,776	4,250	-	33,936	178.0		
2004	47	1,192	1,935	3,412	9,658	24,408	4,366	-	38,432	206.1		
2005	55	1,381	2,189	4,164	11,700	28,528	4,875	-	45,103	240.4		
2006	61	1,649	2,469	4,713	14,302	32,731	5,415	-	52,448	283.2		
2007	71	1,769	2,495	5,386	14,358	33,359	5,223	-	52,940	305.1		
2008	74	1,880	2,346	5,121	17,647	33,285	5,582	-	56,514	337.3		
2009	66	1,089	1,397	2,876	11,772	18,650	3,529	-	33,951	214.8		
2010	65	1,546	1,581	2,718	16,470	16,734	3,971	-	37,175	256.1		
2011	65	1,879	1,373	2,359	23,079	14,554	4,148	-	41,781	321.3		

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 [www.eia.doe.gov/emeu/mer/pdf/pages/sec5\\_5.pdf](http://www.eia.doe.gov/emeu/mer/pdf/pages/sec5_5.pdf).

# EMERGING SHALE PLAYS (2011)



## 2011 KEY TRENDS FOR SHALE PLAYS

### Oil Plays

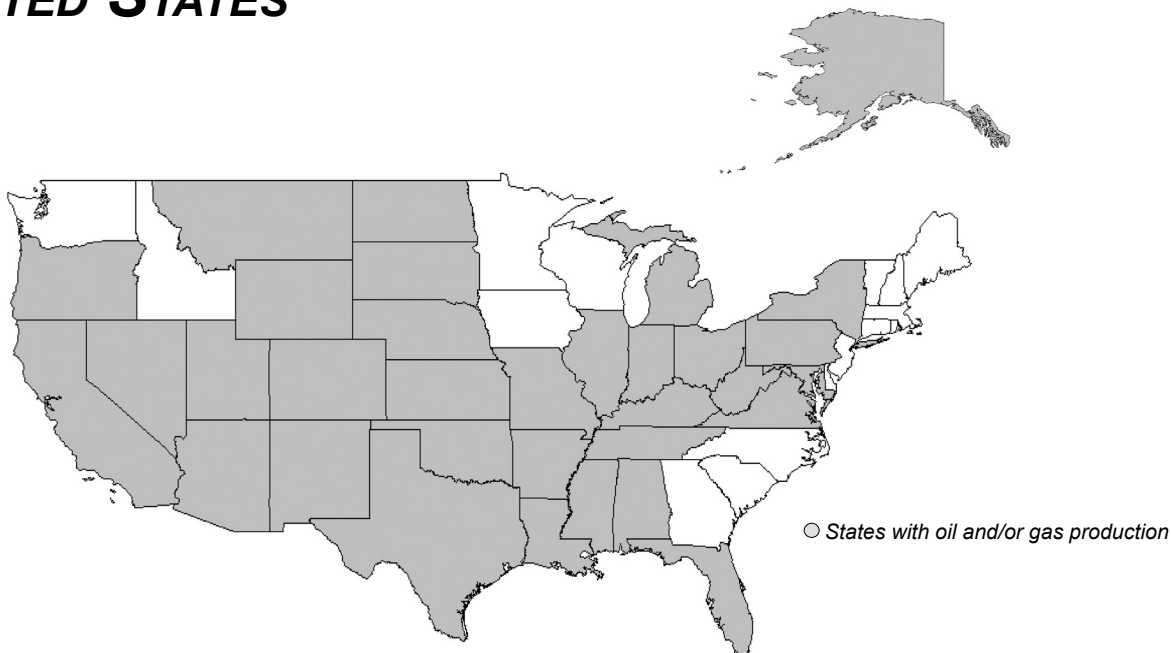
Formation	Number of Wells	Production (YTD Bbls)	Top Operator
Bakken	392	16,463,532	EOG Resources Inc.
Bone Spring	139	2,707,586	Cog Operating Llc
Eagle Ford	320	13,875,009	EOG Resources Inc.
Granite Wash	44	844,943	Sanguine Gas Exploration Llc
Mississippian	71	1,114,374	Sandridge Exploration & Production Llc
Mississippian Lime	47	379,811	Chesapeake Operating Inc.
Niobrara	644	2,202,377	Noble Energy Inc.

### Gas Plays

Formation	Number of Wells	Production (YTD Mcfs)	Top Operator
Barnett	4,410	513,468,103	Devon Energy Production Company LP
Eagle Ford	93	56,664,551	Petrohawk Operating Co.
Fayetteville	2,278	639,820,660	Seeco Incorporated
Granite Wash	339	75,881,005	Chesapeake Operating Inc.
Haynesville/Bossier	595	586,191,749	Chesapeake Operating Inc.
Marcellus	363	234,366,199	Chesapeake Appalachia Llc
Woodford	445	98,146,628	Newfield Exploration Mid-Continent Inc.

Source: IHS

# UNITED STATES



## Background Information

States	
Number of states	50
With oil and/or gas production	33

First year of production	
Crude oil (Pennsylvania)	1859
Natural gas (Pennsylvania)	1881

Year and amount of peak production	
Crude oil — 3,517,450 thous. bbls.	1970
Natural gas — 22,647,549 MMcf	1973

Deepest producing well (ft.)	
Crude oil (Texas)	27,011
Natural gas (Texas)	30,712

Year and depth of deepest well drilled (ft.)	
2011 (Federal Offshore)	37,165

Cumulative number of total wells drilled (2011 - excluding service wells)		
Oil wells	1,829,514	47.6%
Gas wells	908,971	23.6%
Dry holes	1,107,261	28.8%
Total	3,845,746	100%

Cumulative crude oil wellhead value (as of 12/31/11 - thous. \$)	\$2,755,682,930
---	-----------------

Cumulative production & new reserves				
(as of 12/31/11)				
	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	224,633	56,422	281,055	1,504,315
Production	197,687	41,990	239,677	1,172,947

## Value of Oil and Gas

Average wellhead/City Gate price (2011)	
Crude oil (\$/bbl.)	\$95.73
Natural gas (\$/Mcf)*	\$5.63

Wellhead/City Gate value of production (2011 in thous. \$)	
Crude oil	\$197,504,201
Natural gas*	\$135,324,662
Total	\$332,828,863

Average natural gas price (2011 \$/Mcf)	
Residential consumers	\$11.03
Commercial consumers	\$8.92
Industrial consumers	\$5.11
Electric utilities	\$4.89
City Gate	\$5.63

Severance taxes paid (2011 in thous. \$)	\$13,519,180
---	--------------

Top 10 producing counties/fields		
(2011 on a BOE basis)		
County	State	% US Prod
De Soto	LA	3.59
Sublette	WY	3.41
Mississippi Canyon	FOS	3.22
Beechey Point	AK	3.36
Green Canyon	FOS	2.57
Tarrant	TX	2.28
Garfield	CO	2.03
Kern	CA	1.82
Johnson	TX	1.60
San Juan	NM	1.45

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	920	22,159	23,079
Gas	541	14,013	14,554
Dry	898	3,250	4,148
Total	2,359	39,422	41,781

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	7,932	150,044	158,375
Gas	4,913	135,750	140,663
Dry	5,113	17,177	22,290
Total	17,958	303,370	321,328

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 1,373

Footage (thous. ft.) 10,411.35

Average rotary rigs active 1,879

Permits 69,865

### Worldwide rank

	Crude Oil	Natural Gas
Wells drilled	1st	1st
Production	3rd	1st
Reserves (2011)	11th	5th

Number of operators 17,708

### Number of producing wells

(12/31/11)

Crude oil	427,635
Natural gas	484,383
Total	912,018

### Average production

Crude oil (thous. b/d)	5,035
NGL (thous. b/d)	574
Natural gas (MMcf/d)	61,098

### Total production

Crude oil (YTD bbls, in thous.)	1,837,808
Natural gas (YTD MMcf)	22,300,922

### Natural gas marketed production

(MMcf)	24,036,352
--------	------------

Shale gas production 7,994 Bcf

### Average output per producing well

Crude oil (bbls.)	4,298
Natural gas (Mcf)	46,039

Coalbed methane (YTD MMcf) 1,613,150

Oil Wells	24
Gas Wells	42,582
Daily Average (MMcf) / Well	4,419.6

Heavy oil (av. bbls/day, in thous.) 382,340

Wells	64,357
Av. bbls per day (in thous.)	1,047.51
Av. bbls per well	5,941

## 2011 Latest Available Data

### Petroleum reserves\*

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	5,834	1,016	6,850
Production	2,065	784	2,849
Net annual change	3,769	1,016	4,785
Proved reserves	28,950	10,825	39,775

### Natural gas reserves\*

(as of 12/31/11 Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserve	9,799	45,984	52,997
Production	2,722	21,899	23,555
Net annual change	7,077	24,085	29,442
Proved reserves	42,823	305,986	334,067

### Marginal oil wells

Producing marginal wells	376,864
Crude oil production in bbls. (thous.)	368,271
Crude oil production b/d (thous.)	1,009

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	358,084
Natural gas production (MMcf)	2,989,935

### Mineral lease royalties, bonuses & rent

Oil	\$7,032,751,157
Natural Gas	\$2,381,690,354
Rent, Bonuses & Other	\$590,356,184
Total Oil and Gas Revenues	\$10,004,797,695
Total Federal Reported Revenues	\$11,216,781,059
Oil and Gas Percent of Total	89%

### Federal lands production shares\*\*

Oil	30%
Natural Gas	20%
Combined on BOE basis	24%

Horizontal wells drilled 13,376

Directional wells drilled 6,019

Vertical wells drilled 22,170

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	32,247 Mmcft
CNG stations	1093
LNG stations	118
LPG stations	2984

### Average number of employees

Oil and natural gas extraction	516,425
Refining	110,852
Transportation	157,691
Wholesale	171,538
Retail	825,244
Pipeline construction	107,245
Oilfield machinery	68,180
Total petroleum industry	1,957,176

Source: For specific methodology and source details, please see pages 7 and 132

\* Canadian oil sands included

\*\* NGLs are not included



# FEDERAL OFFSHORE



Federal Offshore planning areas

## Background Information

### Planning Areas

Number of areas	25
With oil and/or gas production	3

### First year of production

Crude oil	1946
Natural gas	1946

### Year and amount of peak production

Crude oil — 591,589 thous. bbls.	2001
Natural gas — 5,248,041 MMcf	1997

### Deepest producing well (ft.)

Natural gas (water depth 9,356)	25,400
Crude oil	37,165

### Year and depth of deepest well drilled (ft.)

Water depth (2004)	10,011
Well depth (2011)	37,165

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	22,339	32.2%
Gas wells	27,895	40.2%
Dry holes	19,132	27.6%
Total	69,366	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$498,005,401

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	24,621	4,999	29,620	153,930
Production	17,606	3,248	20,854	74,294

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$105.27
Natural gas (\$/Mcf)*	\$5.63

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$52,638,263
Natural gas*	\$10,354,172
Total	\$62,992,435

### Federal Revenues

(2011, in thousands \$)

Bonuses and other revenues	\$ 1,184,001.1
Rents	\$ 233,146.7
Royalties	\$ 4,402,530.3
Total	\$ 5,819,678.1

### Top 10 producing fields

(2011 on a BOE basis)

Field	State	% Production US
Mississippi Canyon	25.99	3.22
Green Canyon	20.80	2.57
Garden Banks	4.20	0.52
Viosca Knoll	4.03	0.50
Eugene Island	2.69	0.33
Alaminos Canyon	2.51	0.31
Atwater Valley	2.43	0.30
Ship Shoal	2.38	0.29
Santa Cruz Area	2.35	0.29
South Timbalier	2.22	0.27

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	4	83	87
Gas	6	47	53
Dry	22	47	69
Total	32	177	209

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	2.36	654.02	656.38
Gas	70.24	499.71	569.95
Dry	237.32	386.28	623.60
Total	309.91	1,540.01	1,849.92

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 28

Footage (thous. ft.) 282.59

Average rotary rigs active 32

Permits 622

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	20th	17th
Production	2nd	6th
Reserves (2011)	2nd	9th

### Number of producing wells

(12/31/11)

Crude oil	3,417
Natural gas	2,350
Total	5,767

### Average production

Crude oil (thous. b/d)	1,250
NGL (est.)	124
Natural gas (MMcf/day)	3,764

### Total production

Crude oil (YTD bbls, in thous.)	456,297
Natural gas (YTD MMcf)	1,373,902

### Natural gas gross withdrawals

(MMcf)	1,867,492
--------	-----------

### Average output per producing well

Crude oil (bbls.)	133,537
Natural gas (Mcf)	584,639

### Producing well depth

	Oil Wells	Gas Wells
Shelf (wd <1,000 ft)	2,818	2,504
Deep (wd 1,000-4,999 ft)	466	99
Ultra Deep (wd >5,000 ft)	74	32
Total	3,358	2,635

Number of operators\* 105

Producing oil\*\* 111

Producing natural gas\*\* 111

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	965	14	979
Production	504	57	561
Net annual change	461	14	475
Proved reserves	5,171	355	5,526

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	756	-332	315
Production	514	1,210	1,660
Net annual change	242	-1,542	-1,345
Proved reserves	5,446	5,374	10,420

## 2011 Lease Statistics

G&G permits	59
Platform installations	18
Platform removals	288
Platform in place	3,162

### Lease characteristics

Number of Active Leases	6,560
Gulf of Mexico	5,841
Pacific	49
Alaska	670

Number of producing leases 1,280

Gulf of Mexico	1,234
Pacific	43
Alaska	3

Number of non-producing leases 4,607

Total blocks	69,780
Total acres	381,641,990

### Mineral lease royalties, bonuses & rent

Oil	\$5,379,489,422
Natural Gas	\$875,239,840
Rent, Bonuses & Other	\$284,527,364
Total Oil and Gas Revenues	\$6,538,288,577
Total Federal Reported Revenues	\$6,538,354,963
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	100%
Natural Gas	100%
Combined on BOE basis	100%

Source: For specific methodology and source details, please see pages 7 and 132

\* IHS

\*\* BOEM

# ALABAMA



○ Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	67
With oil and/or gas production	22

### First year of production

Crude oil	1944
Natural gas	1904

### Year and amount of peak production

Crude oil — 22,153 thous. bbls.	1980
Natural gas — 378,877 MMcf	1996

### Deepest producing well (ft.)

Crude oil	18,750
Natural gas	23,330

### Year and depth of deepest well drilled (ft.)

1995	24,275
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	1,501	9.6%
Gas wells	9,381	59.7%
Dry holes	4,825	30.7%
Total	15,707	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$14,192,044

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	541	459	1,000	8,302
Production	510	404	914	8,113

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$105.99
Natural gas (\$/Mcf)*	\$5.80

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$887,560
Natural gas*	\$1,134,370
Total	\$2,021,930

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$15.09
Commercial consumers	\$12.37
Industrial consumers	\$5.56
Electric utilities	\$4.36
City Gate	\$5.80

### Severance taxes paid

(2011 in thous. \$) \$106,501

### Top 10 producing counties

(2011 on a BOE basis)

County	% Production
Tuscaloosa	0.20
Mobile	0.14
Baldwin	0.12
Escambia	0.08
Jefferson	0.06
Conecuh	0.06
Walker	0.02
Shelby	0.01
Choctaw	0.01
Monroe	0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	19	16	35
Gas	3	142	145
Dry	29	7	36
Total	51	165	216

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	244.97	170.47	415.44
Gas	7.96	335.27	343.23
Dry	304.18	56.24	360.41
Total	557.11	561.97	1,119.08

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 43

Footage (thous. ft.) 480.62

Average rotary rigs active 7

Permits 270

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	24th	15th
Production	16th	15th
Reserves (2011)	15th	15th

Number of operators 80

### Number of producing wells

(12/31/11)

Crude oil	554
Natural gas	6,289
Total	6,833

### Average production

Crude oil (thous. b/d)	18
NGL (thous. b/d)	5
Natural gas (MMcf/d)	553

### Total production

Crude oil (YTD bbls, in thous.)	6,552
Natural gas (YTD MMcf)	201,860

### Natural gas marketed production

(MMcf)	195,581
--------	---------

### Average output per producing well

Crude oil (bbls.)	11,827
Natural gas (Mcf)	32,097

### Coalbed methane (YTD MMcf)

Oil Wells	3
Gas Wells	5,883
Daily Average (MMcf) / Well	266.37

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

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	13	0	13
Production	8	6	14
Net annual change	5	0	5
Proved reserves	65	68	133

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	18	54	64
Production	8	218	218
Net annual change	10	-164	-154
Proved reserves	48	2,522	2,475

### Marginal oil wells

Producing marginal wells	350
Crude oil production in Bbls. (thous.)	763
Crude oil production Bbls./d (thous.)	2

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	5,563
Natural gas production (MMcf)	72,294

### Mineral lease royalties, bonuses & rent

Oil	\$4,985,572
Natural Gas	\$17,484,840
Rent, Bonuses & Other	\$206,608
Total Oil and Gas Revenues	\$22,677,020
Total Federal Reported Revenues	\$31,581,984
Oil and Gas Percent of Total	72%

### Federal lands production shares

Oil	<1%
Natural Gas	15%
Combined on BOE basis	12%

Horizontal wells drilled 19

Directional wells drilled 22

Vertical wells drilled 175

### Natural gas vehicle fuel demand & fueling stations

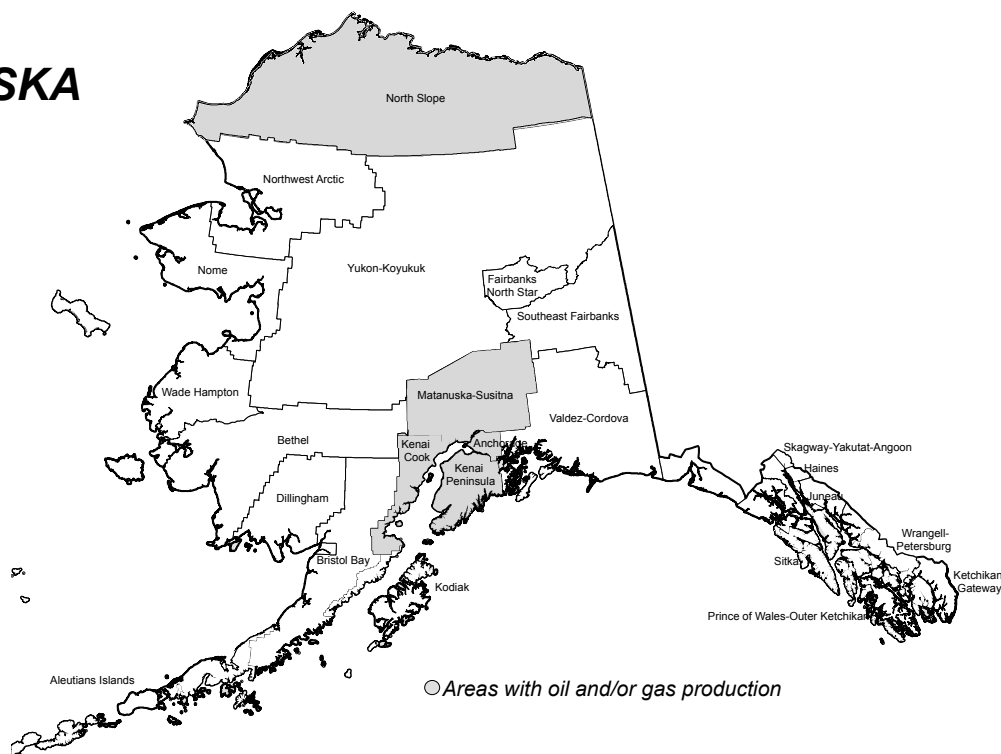
Natural gas vehicle demand	118 Mmcft
CNG stations	11
LNG stations	3
LPG stations	116

### Average number of employees

Oil and natural gas extraction	1,841
Refining	1,334
Transportation	2,976
Wholesale	3,059
Retail	17,237
Pipeline construction	1,289
Oilfield machinery	0
Total petroleum industry	27,736

Source: For specific methodology and source details, please see pages 7 and 132.

# ALASKA



## Background Information

### Areas

Number of areas	25
With oil and/or gas production	10

### First year of production

Crude oil	1905
Natural gas	1945

### Year and amount of peak production

Crude oil — 738,143 thous. bbls.	1988
Natural gas — 555,402 MMcf	1994

### Deepest producing well (ft.)

Crude oil	26,350
Natural gas	17,864

### Year and depth of deepest well drilled (ft.)

2009	26,090
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	5,123	78.5%
Gas wells	360	5.5%
Dry holes	1,047	16%
Total	6,530	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$329,976,386

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	21,035	497	21,532	23,753
Production	16,774	429	17,203	13,477

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$98.79
Natural gas (\$/Mcf)*	\$6.53

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$20,235,057
Natural gas*	\$2,326,149
Total	\$22,561,206

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$8.77
Commercial consumers	\$8.77
Industrial consumers	\$3.84
Electric utilities	\$5.04
City Gate	\$6.53

### Severance taxes paid

(2011 in thous. \$) \$4,552,901

### Top producing areas

(2011 on a BOE basis)

County	Areas	% Production
	State	US
Beechey Point	69.65	2.83
Harrison Bay	18.93	0.77
Kenai Offshore	3.11	0.13
Kenai	3.00	0.12
Tyonek	2.73	0.11
Harrison Bay Offshore	1.15	0.05
Tyonek Offshore	1.06	0.04
Seldovia	0.23	0.01
Barrow	0.12	<0.01
Beechey Point Offshore	0.02	<0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	NA	101	101
Gas	1	7	8
Dry	2	1	3
Total	3	109	112

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	NA	575.75	575.75
Gas	10.68	48.74	59.39
Dry	12.55	9.44	21.99
Total	23.23	633.90	657.12

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 3

Footage (thous. ft.) 23.23

Average rotary rigs active 7

Permits 159

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	18th	24th
Production	3rd	12th
Reserves (2011)	3rd	11th

Number of operators 9

### Number of producing wells

(12/31/11)

Crude oil	2,477
Natural gas	191
Total	2,668

### Average production

Crude oil (thous. b/d)	559
NGL (thous. b/d)	2
Natural gas (MMcf/day)	347

### Total production

Crude oil (YTD bbls, in thous.)	203,981
Natural gas (YTD MMcf)	126,570

### Natural gas marketed production

(MMcf)	356,225
--------	---------

### Average output per producing well

Crude oil (bbls.)	82,350
Natural gas (Mcf)	662,670

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	336	0	336
Production	206	11	217
Net annual change	130	0	130
Proved reserves	3,852	288	4,140

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	815	107	913
Production	176	152	327
Net annual change	639	-45	586
Proved reserves	8,535	976	9,424

### Marginal oil wells

Producing marginal wells	198
Crude oil production in Bbls. (thous.)	398
Crude oil production Bbls./d (thous.)	1

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	0
Natural gas production (MMcf)	0

### Mineral lease royalties, bonuses & rent

Oil	\$21,730,740
Natural Gas	\$11,979,776
Rent, Bonuses & Other	\$7,254,092
Total Oil and Gas Revenues	\$40,964,608
Total Federal Reported Revenues	\$40,964,608
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	95%
Natural Gas	96%
Combined on BOE basis	95%

Horizontal wells drilled 89

Directional wells drilled 22

Vertical wells drilled 1

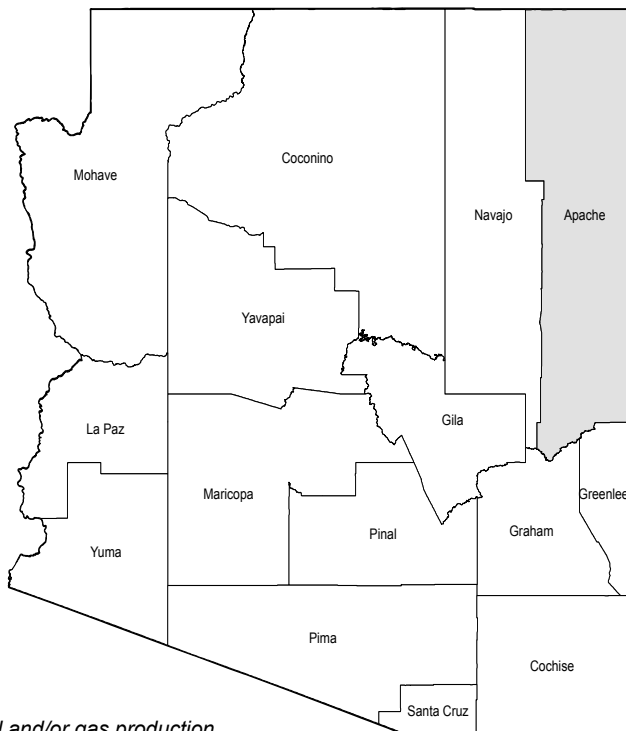
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	23 Mmcft
CNG stations	1
LNG stations	--
LPG stations	7

### Average number of employees

Oil and natural gas extraction	13,149
Refining	0
Transportation	0
Wholesale	534
Retail	1,744
Pipeline construction	512
Oilfield machinery	0
Total petroleum industry	15,939

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	15
With oil and/or gas production	1

First year of production	
Crude oil	1958
Natural gas	1955

Year and amount of peak production	
Crude oil — 3,370 thous. bbls.	1968
Natural gas — 3,161 MMcf	1966

Deepest producing well (ft.)	
Crude oil	6,382
Natural gas	5,753

Year and depth of deepest well drilled (ft.)	
1981	18,013

Cumulative number of total wells drilled		
(as of 12/31/11 - excluding service wells)		
Oil wells	71	6.4%
Gas wells	54	4.8%
Dry holes	987	88.8%
Total	1,112	100%

Cumulative crude oil wellhead value	
(as of 12/31/11 - thous. \$)	\$70,821,714

Cumulative production & new reserves				
(as of 12/31/11)				
	Crude Oil	NGL	Total	Natural Gas
	(mill. bbls.)			(Bcf)
Reserves	NA	0	NA	NA
Production	NA	0	NA	NA

## Value of Oil and Gas

Average wellhead/City Gate price*	
(2011)	
Crude oil (\$/bbl.)	\$90.06
Natural gas (\$/Mcf)*	\$5.91

Wellhead/City Gate value of production	
(2011 in thous. \$)	
Crude oil	\$3,332
Natural gas*	\$993
Total	\$4,325

Average natural gas price	
(2011 \$/Mcf)	
Residential consumers	\$15.04
Commercial consumers	\$9.99
Industrial consumers	\$6.86
Electric utilities	\$5.02
City Gate	\$5.91

Severance taxes paid - FY	\$3,300
(2011 in thous. \$)	

Top producing counties	
(2011 on a BOE basis)	
County	% Production
Apache	State US
	100 <0.01

\*City Gate price used for natural gas.



## 2011 Industry Statistics

### 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

NA

### Footage (thous. ft.)

NA

### Average rotary rigs active

0

### Permits

74

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	32nd	31st
Production	31st	31st
Reserves (2011)	NA	NA

### Number of operators

3

### Number of producing wells

(12/31/11)

Crude oil	21
Natural gas	3
Total	24

### Average production

Crude oil (thous. b/d)	0
NGL (thous. b/d)	0
Natural gas (MMcf/day)	0

### Total production

Crude oil (YTD bbls, in thous.)	36
Natural gas (YTD MMcf)	105

### Natural gas marketed production

(MMcf)	168
--------	-----

### Average output per producing well

Crude oil (bbls.)	1,691
Natural gas (Mcf)	35,138

### Coalbed methane (YTD MMcf)

NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	20
Crude oil production in Bbls. (thous.)	27
Crude oil production Bbls./d (thous.)	<1

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	1
Natural gas production (MMcf)	21

### Mineral lease royalties, bonuses & rent

Oil	\$486,380
Natural Gas	\$131,636
Rent, Bonuses & Other	\$22,029
Total Oil and Gas Revenues	\$640,046
Total Federal Reported Revenues	\$54,033,638
Oil and Gas Percent of Total	1%

### Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

### Horizontal wells drilled

NA

### Directional wells drilled

NA

### Vertical wells drilled

NA

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	2,267 Mmcft
CNG stations	32
LNG stations	7
LPG stations	65

### Average number of employees

Oil and natural gas extraction	406
Refining	272
Transportation	274
Wholesale	1,820
Retail	14,724
Pipeline construction	355
Oilfield machinery	0
Total petroleum industry	17,851

Source: For specific methodology and source details, please see pages 7 and 132

# ARKANSAS



○ Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	75
With oil and/or gas production	27

### First year of production

Crude oil	1921
Natural gas	1889

### Year and amount of peak production

Crude oil — 77,398 thous. bbls.	1925
Natural gas — 1,072,212 MMcf	2011

### Deepest producing well (ft.)

Crude oil	12,500
Natural gas	19,850

### Year and depth of deepest well drilled (ft.)

1992	20,661
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	15,249	36.2%
Gas wells	11,715	27.8%
Dry holes	15,152	36.0%
Total	42,116	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$13,253,907

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,857	95	1,952	27,861
Production	1,785	89	1,874	11,211

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$ 87.61
Natural gas (\$/Mcf)*	\$6.27

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$514,884
Natural gas*	\$6,722,769
Total	\$7,237,653

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$11.46
Commercial consumers	\$8.90
Industrial consumers	\$7.44
Electric utilities	\$4.73
City Gate	\$6.27

### Severance taxes paid

(2011 in thous. \$)

\$79,968

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Van Buren	26.41	0.87
White	21.00	0.69
Conway	18.18	0.60
Cleburne	12.79	0.42
Faulkner	6.51	0.21
Logan	3.63	0.12
Sebastian	3.30	0.11
Franklin	1.96	0.06
Independence	1.14	0.04
Columbia	0.84	0.03

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	NA	108	108
Gas	NA	859	859
Dry	1	62	63
Total	1	1,029	1,030

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	NA	575.22	575.22
Gas	NA	7,596.28	7,596.28
Dry	3.90	296.94	300.84
Total	3.90	8,468.44	8,472.34

(Note: Totals may not add due to rounding.)

### New-field wildcats drilled

NA

### Footage (thous. ft.)

NA

### Average rotary rigs active

34

### Permits

1,227

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	17th	6th
Production	18th	9th
Reserves (2011)	21st	7th

### Number of operators

301

### Number of producing wells

(12/31/11)

Crude oil	1,195
Natural gas	8,124
Total	9,319

### Average production

Crude oil (thous. b/d)	11
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	2,925

### Total production

Crude oil (YTD bbls, in thous.)	3,926
Natural gas (YTD MMcf)	1,067,730

### Natural gas marketed production

(MMcf)	1,072,212
--------	-----------

### Shale gas production

940 Bcf

### Average output per producing well

Crude oil (bbls.)	3,285
Natural gas (Mcf)	131,429

### Coalbed methane (YTD MMcf)

1,202

Oil Wells	0
Gas Wells	42
Daily Average (MMcf) / Well	3.29

### Heavy oil (YTD Bbls, in thous.)

NA

Wells NA

Av. bbls per day (in thous.) NA

Av. bbls per well NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	4	1	5
Production	6	0	6
Net annual change	-2	1	-1
Proved reserves	40	3	43

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	23	3,250	3,271
Production	6	1,074	1,079
Net annual change	17	2,176	2,192
Proved reserves	46	16,328	16,370

### Marginal oil wells

Producing marginal wells	1,035
Crude oil production in Bbls. (thous.)	1,406
Crude oil production Bbls./d (thous.)	4

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	3,502
Natural gas production (MMcf)	44,899

### Mineral lease royalties, bonuses & rent

Oil	\$76
Natural Gas	\$7,084,929
Rent, Bonuses & Other	\$2,966,542
Total Oil and Gas Revenues	\$10,051,547
Total Federal Reported Revenues	\$10,052,610
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	<1%
Natural Gas	1%
Combined on BOE basis	1%

### Horizontal wells drilled

826

### Directional wells drilled

20

### Vertical wells drilled

184

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	18 Mmcf
CNG stations	8
LNG stations	3
LPG stations	39

### Average number of employees

Oil and natural gas extraction	6,983
Refining	635
Transportation	1,727
Wholesale	2,119
Retail	11,376
Pipeline construction	851
Oilfield machinery	0
Total petroleum industry	23,691

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	58
With oil and/or gas production	35*

### First year of production

Crude oil	1861
Natural gas	1889

### Year and amount of peak production

Crude oil —423,877 thous. bbls.	1985
Natural gas —714,893 MMcf	1968

### Deepest producing well (ft.)

Crude oil	24,426
Natural gas	18,114

### Year and depth of deepest well drilled (ft.)

1993	24,426
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	173,556	80.3%
Gas wells	7,164	3.3%
Dry holes	35,506	16.4%
Total	216,226	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$290,765,247

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	31,691	1,548	33,239	47,644
Production	25,651	1,444	27,095	37,776

\*Includes offshore areas

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$102.50
Natural gas (\$/Mcf)*	\$4.47

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$19,853,328
Natural gas*	\$1,118,291
Total	\$20,971,619

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$9.93
Commercial consumers	\$8.28
Industrial consumers	\$7.04
Electric utilities	\$4.71
City Gate	\$4.47

### Severance taxes paid - Est.

(2011 in thous. \$) \$400,000

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Kern	49.47	1.82
Kern	19.49	0.72
Los Angeles	6.76	0.25
Los Angeles Offshore	4.92	0.18
Ventura	4.01	0.15
Monterey	3.49	0.13
Fresno	2.97	0.11
Santa Barbara	1.36	0.05
Orange	1.22	0.04
Sutter	1.08	0.04

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	NA	2,388	2,388
Gas	NA	18	18
Dry	6	41	47
Total	6	2,447	2,453

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	NA	5,847.95	5,847.95
Gas	NA	132.84	132.84
Dry	35.73	181.98	217.71
Total	35.73	6,162.76	6,198.49

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 2

Footage (thous. ft.) 11.35

Average rotary rigs active 45

Permits 4,751

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	3rd	23rd
Production	4th	14th
Reserves (2011)	4th	17th

Number of operators 379

### Number of producing wells

(12/31/11)

Crude oil	52,082
Natural gas	1,745
Total	53,827

### Average production

Crude oil (thous. b/d)	529
NGL (thous. b/d)	1
Natural gas (MMcf/day)	171

### Total production

Crude oil (YTD bbls, in thous.)	193,113
Natural gas (YTD MMcf)	62,339

### Natural gas marketed production

(MMcf)	250,177
--------	---------

Shale gas production 101 Bcf

### Average output per producing well

Crude oil (bbls.)	3,708
Natural gas (Mcf)	35,724

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.) 187,013

Wells 47,475

Av. bbls per day (in thous.) 512.37

Av. bbls per well 3,939

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	266	-20	246
Production	196	10	206
Net annual change	70	-20	50
Proved reserves	3,009	94	3,103

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	901	71	598
Production	260	64	311
Net annual change	250	7	287
Proved reserves	2,532	510	2,934

### Marginal oil wells

Producing marginal wells	40,769
Crude oil production in Bbls. (thous.)	70,854
Crude oil production Bbls./d (thous.)	194

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	986
Natural gas production (MMcf)	11,666

### Mineral lease royalties, bonuses & rent

Oil	\$209,424,495
Natural Gas	\$2,863,349
Rent, Bonuses & Other	\$6,135,146
Total Oil and Gas Revenues	\$218,422,991
Total Federal Reported Revenues	\$230,359,569
Oil and Gas Percent of Total	95%

### Federal lands production shares

Oil	10%
Natural Gas	4%
Combined on BOE basis	9%

Horizontal wells drilled 309

Directional wells drilled 1,149

Vertical wells drilled 995

### Natural gas vehicle fuel demand & fueling stations

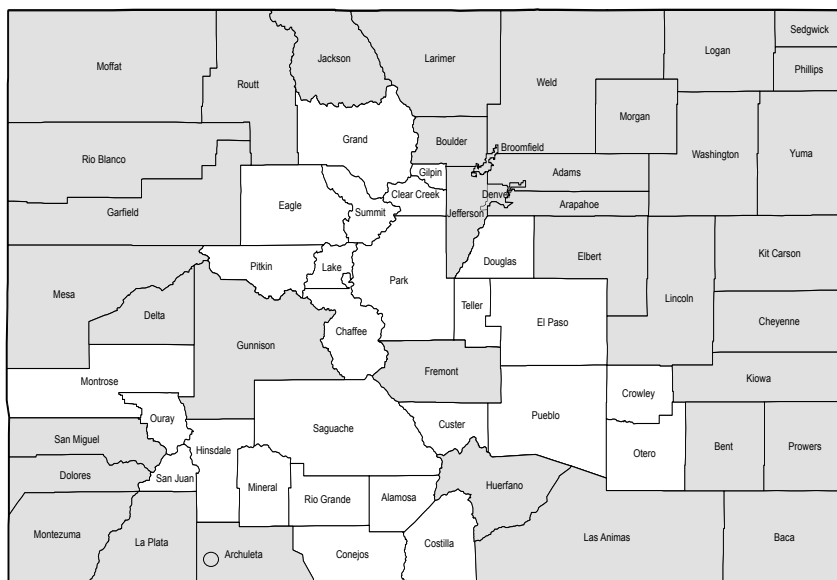
Natural gas vehicle demand	15,269 Mmcft
CNG stations	256
LNG stations	38
LPG stations	234

### Average number of employees

Oil and natural gas extraction	21,539
Refining	14,984
Transportation	2,753
Wholesale	10,039
Retail	50,451
Pipeline construction	9,429
Oilfield machinery	1,566
Total petroleum industry	110,761

Source: For specific methodology and source details, please see pages 7 and 132

# COLORADO



Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	63
With oil and/or gas production	37

### First year of production

Crude oil	1887
Natural gas	1893

### Year and amount of peak production

Crude oil — 58,516 thous. bbls.	1956
Natural gas — 1,637,713 MMcf	2011

### Deepest producing well (ft.)

Crude oil	16,020
Natural gas	19,710

### Year and depth of deepest well drilled (ft.)

1987	22,092
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	15,114	16.1%
Gas wells	52,466	55.8%
Dry holes	26,471	28.1%
Total	94,051	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$33,827,042

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	2,498	1,726	4,224	49,651
Production	2,082	777	2,859	22,545

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$88.26
Natural gas (\$/Mcf)*	\$4.94

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$3,453,173
Natural gas*	\$8,089,625
Total	\$11,542,798

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$8.25
Commercial consumers	\$7.84
Industrial consumers	\$6.42
Electric utilities	\$4.97
City Gate	\$4.94

### Severance taxes paid

(2011 in thous. \$) \$137,589

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Garfield	38.49	2.03
La Plata	23.79	1.26
Weld	14.71	0.78
Rio Blanco	7.37	0.39
Las Animas	6.35	0.34
Mesa	2.37	0.13
Yuma	2.24	0.12
Moffat	1.10	0.06
Archuleta	0.57	0.03
Cheyenne	0.52	0.03

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	27	753	780
Gas	30	2,112	2,142
Dry	40	113	153
Total	97	2,978	3,075

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	242.96	6,108.04	6,351.00
Gas	184.88	15,908.59	16,093.47
Dry	194.43	588.88	783.30
Total	622.27	22,605.50	23,227.77

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 59

Footage (thous. ft.) 379.68

Average rotary rigs active 72

Permits 5,048

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	8th	2nd
Production	11th	5th
Reserves (2011)	10th	6th

Number of operators 342

### Number of producing wells

(12/31/11)

Crude oil	5,727
Natural gas	45,690
Total	51,417

### Average production

Crude oil (thous. b/d)	44
NGL (thous. b/d)	63
Natural gas (MMcf/day)	4,539

### Total production

Crude oil (YTD bbls, in thous.)	16,203
Natural gas (YTD MMcf)	1,656,713

### Natural gas marketed production

(MMcf)	1,637,576
--------	-----------

Shale gas production 3 Bcf

### Average output per producing well

Crude oil (bbls.)	2,829
Natural gas (Mcf)	36,260

Coalbed methane (YTD MMcf) 515,697

Oil Wells	0
Gas Wells	5,171
Daily Average (MMcf) / Well	1,412.87

Heavy oil (YTD Bbls, in thous.) 14,495

Wells	858
Av. bbls per day (in thous.)	39.71
Av. bbls per well	16,894

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	95	46	141
Production	41	63	104
Net annual change	54	46	100
Proved reserves	555	925	1,480

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	307	2,257	2,396
Production	160	1,625	1,694
Net annual change	147	632	702
Proved reserves	2,518	23,633	24,821

### Marginal oil wells

Producing marginal wells	4,757
Crude oil production in Bbls. (thous.)	4,351
Crude oil production Bbls./d (thous.)	12

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	32,977
Natural gas production (MMcf)	351,968

### Mineral lease royalties, bonuses & rent

Oil	\$64,611,480
Natural Gas	\$210,988,764
Rent, Bonuses & Other	\$4,069,558
Total Oil and Gas Revenues	\$279,669,803
Total Federal Reported Revenues	\$393,864,851
Oil and Gas Percent of Total	71%

### Federal lands production shares

Oil	10%
Natural Gas	20%
Combined on BOE basis	19%

Horizontal wells drilled 281

Directional wells drilled 2,169

Vertical wells drilled 625

### Natural gas vehicle fuel demand & fueling stations

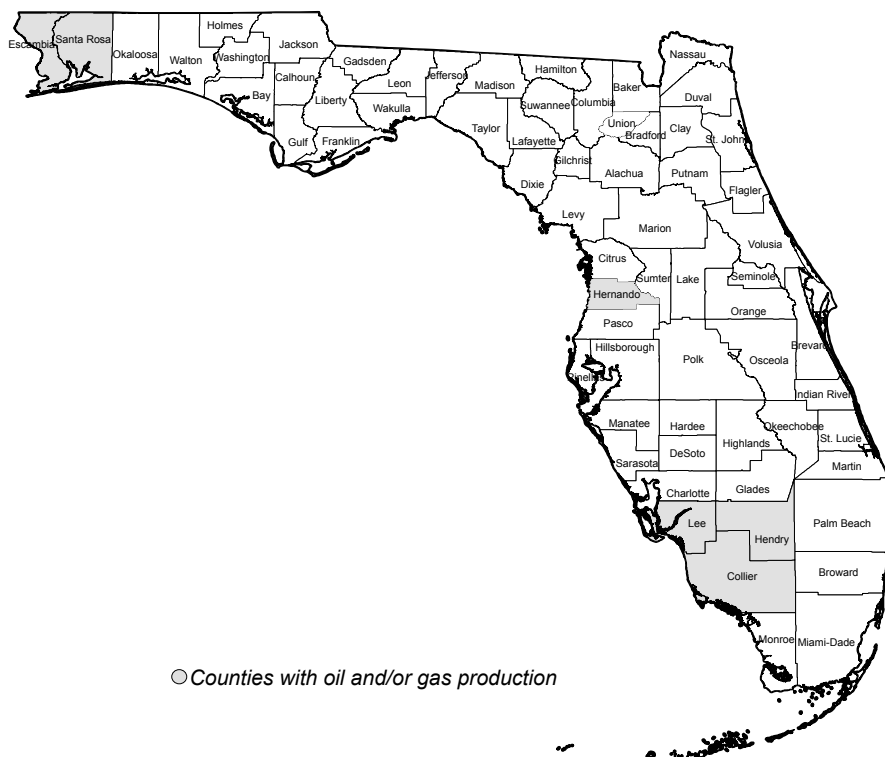
Natural gas vehicle demand	280 Mmcf
CNG stations	29
LNG stations	2
LPG stations	54

### Average number of employees

Oil and natural gas extraction	23,177
Refining	644
Transportation	1,862
Wholesale	2,084
Retail	12,227
Pipeline construction	3,056
Oilfield machinery	248
Total petroleum industry	43,298

Source: For specific methodology and source details, please see pages 7 and 132





○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	67
With oil and/or gas production	6

First year of production	
Crude oil	1943
Natural gas	1943

Year and amount of peak production	
Crude oil — 47,536 thous. bbls.	1978
Natural gas — 51,595 MMcf	1978

Deepest producing well (ft.)	
Crude oil	16,250
Natural gas	NA

Year and depth of deepest well drilled (ft.)	
2008	18,875

Cumulative number of total wells drilled (as of 12/31/11 - excluding service wells)		
Oil wells	334	26.2%
Gas wells	3	0.1%
Dry holes	940	73.7%
Total	1,277	100%

Cumulative crude oil wellhead value (as of 12/31/11 - thous. \$)	\$9,352,458
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Cumulative production & new reserves (as of 12/31/11)				
	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	711	81	792	635
Production	689	86	775	618

## Value of Oil and Gas

Average wellhead/City Gate price (2011)	
Crude oil (\$/bbl.)	NA
Natural gas (\$/Mcf)*	\$5.07

Wellhead/City Gate value of production (2011 in thous. \$)	
Crude oil	NA
Natural gas*	\$76,684
Total	\$76,684

Average natural gas price (2011 \$/Mcf)	
Residential consumers	\$18.16
Commercial consumers	\$11.11
Industrial consumers	\$8.07
Electric utilities	\$5.86
City Gate	\$5.07

Severance taxes paid - FY (2011 in thous. \$)	\$10,055
--	----------

Top producing counties (2011 on a BOE basis)		
County	% Production	
	State	US
Santa Rosa	49.10	0.02
Collier	30.21	0.01
Escambia	10.16	<0.01
Hendry	9.05	<0.01
Lee	1.38	<0.01
Hernando	0.10	<0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	NA	4	4
Gas	NA	NA	NA
Dry	NA	2	2
Total	NA	6	6

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	NA	30.52	30.52
Gas	NA	NA	NA
Dry	NA	12.38	12.38
Total	NA	42.90	42.90

(Note: Totals may not add due to rounding.)

### New-field wildcats drilled

NA

### Footage (thous. ft.)

NA

### Average rotary rigs active

1

### Permits

5

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	28th	33rd
Production	24th	24th
Reserves (2011)	23rd	24th

### Number of operators

7

### Number of producing wells

(12/31/11)

Crude oil	79
Natural gas	0
Total	79

### Average production

Crude oil (thous. b/d)	6
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

### Total production

Crude oil (YTD bbls, in thous.)	2,026
Natural gas (YTD MMcf)	NA

### Natural gas marketed production

(MMcf)	15,125
--------	--------

### Average output per producing well

Crude oil (bbls.)	25,646
Natural gas (Mcf)	NA

### Coalbed methane (YTD MMcf)

NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	5	0	5
Production	2	0	2
Net annual change	3	0	3
Proved reserves	22	0	22

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	-28	0	-50
Production	0	0	0
Net annual change	-28	0	-50
Proved reserves	2	0	6

### Marginal oil wells

Producing marginal wells	16
Crude oil production in Bbls. (thous.)	34
Crude oil production Bbls./d (thous.)	<1

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	0
Natural gas production (MMcf)	0

### Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	1
Rent, Bonuses & Other	\$19,012
Total Oil and Gas Revenues	\$19,013
Total Federal Reported Revenues	\$524,296
Oil and Gas Percent of Total	4%

### Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

### Horizontal wells drilled

5

### Directional wells drilled

1

### Vertical wells drilled

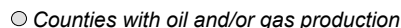
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	67 Mmcf
CNG stations	25
LNG stations	2
LPG stations	66

### Average number of employees

Oil and natural gas extraction	880
Refining	2,710
Transportation	1,970
Wholesale	5,632
Retail	37,565
Pipeline construction	870
Oilfield machinery	29
Total petroleum industry	49,656

Source: For specific methodology and source details, please see pages 7 and 132



## Value of Oil and Gas

## Average wellhead/City Gate price

Crude oil (\$/bbl.)	\$88.73
Natural gas (\$/Mcf)*	\$5.09

## Wellhead/City Gate value of production

(2011 in thous. \$)	
Crude oil	\$819,333
Natural gas*	\$10,796
Total	\$830,129

## Average natural gas price

(2011 \$/Mcf)	
Residential consumers	\$8.78
Commercial consumers	\$8.27
Industrial consumers	\$6.84
Electric utilities	\$4.91
City Gate	\$5.09

## Severance taxes paid

(2011 in thous. \$)

### Top 10 producing counties

(2011 on a BOE basis)

County	% Production
--------	--------------

	State	US
White	11.38	0.02
Marion	10.96	0.02
Crawford	10.40	0.02
Lawrence	7.92	0.01
Fayette	7.39	0.01
Clay	5.80	0.01
Wayne	5.42	0.01
Wabash	4.05	0.01
Richland	3.65	0.01
Franklin	3.45	0.01

\*City Gate price used for natural gas.

\*City Gate price used for natural gas.

\*City Gate price used for natural gas.

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	11	332	343
Gas	NA	3	3
Dry	37	86	123
Total	48	421	469

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	34.94	756.73	791.67
Gas	NA	4.98	4.98
Dry	97.67	195.48	293.14
Total	132.60	957.19	1,089.79

(Note: Totals may not add due to rounding.)

### New-field wildcats drilled

17

### Footage (thous. ft.)

36.54

### Average rotary rigs active

1

### Permits

879

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	11th	25th
Production	15th	27th
Reserves (2011)	18th	NA

### Number of operators

808

### Number of producing wells

(12/31/11)

Crude oil	NA
Natural gas	NA
Total	NA

### Average production

Crude oil (thous. b/d)	25
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

### Total production

Crude oil (YTD bbls, in thous.)	9,158
Natural gas (YTD MMcf)	NA

### Natural gas marketed production

(MMcf)	2,121
--------	-------

### Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	NA

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	-6	NA	-6
Production	4	NA	4
Net annual change	-10	NA	-10
Proved reserves	54	NA	54

### Natural gas reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	7,106
Crude oil production in Bbls. (thous.)	5,653
Crude oil production Bbls./d (thous.)	15

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

### Mineral lease royalties, bonuses & rent

Oil	\$283,630
Natural Gas	--
Rent, Bonuses & Other	--
Total Oil and Gas Revenues	\$283,630
Total Federal Reported Revenues	\$283,570
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	<1%
Natural Gas	0%
Combined on BOE basis	<1%

### Horizontal wells drilled

6

### Directional wells drilled

1

### Vertical wells drilled

462

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	331 Mmcft
CNG stations	33
LNG stations	2
LPG stations	102

### Average number of employees

Oil and natural gas extraction	2,575
Refining	5,379
Transportation	5,177
Wholesale	4,484
Retail	26,722
Pipeline construction	1,481
Oilfield machinery	14
Total petroleum industry	45,832

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	92
With oil and/or gas production	16

First year of production	
Crude oil	1889
Natural gas	1885

Year and amount of peak production	
Crude oil — 12,833 thous. bbls.	1953
Natural gas — 9,075 MMcf	2011

Deepest producing well (ft.)	
Crude oil	0
Natural gas	NA

Year and depth of deepest well drilled (ft.)	
2008	10,064

Cumulative number of total wells drilled		
(as of 12/31/11 - excluding service wells)		
Oil wells	21,453	35.1%
Gas wells	10,245	16.8%
Dry holes	29,429	48.1%
Total	61,127	100%

Cumulative crude oil wellhead value	
(as of 12/31/11 - thous. \$)	\$4,242,752

Cumulative production & new reserves				
(as of 12/31/11)				
	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	554	NA	554	NA
Production	553	NA	553	NA

## Value of Oil and Gas

Average wellhead/City Gate price	
(2011)	
Crude oil (\$/bbl.)	\$88.15
Natural gas (\$/Mcf)*	\$4.97

Wellhead/City Gate value of production	
(2011 in thous. \$)	
Crude oil	\$175,154
Natural gas*	\$45,103
Total	\$220,257

Average natural gas price	
(2011 \$/Mcf)	
Residential consumers	\$9.46
Commercial consumers	\$8.04
Industrial consumers	\$6.53
Electric utilities	\$4.53
City Gate	\$4.97

Severance taxes paid	\$2,102
(2011 in thous. \$)	

Top 10 producing counties		
(2011 on a BOE basis)		
County	% Production	
	State	US
Posey	29.41	0.01
Gibson	22.47	0.01
Vigo	13.50	<0.01
Pike	8.46	<0.01
Vanderburgh	4.43	<0.01
Daviess	4.39	<0.01
Greene	4.19	<0.01
Knox	4.12	<0.01
Spencer	3.93	<0.01
Sullivan	2.01	<0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	3	63	66
Gas	3	17	20
Dry	12	24	36
Total	18	104	122

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	7.55	127.10	134.66
Gas	0.73	17.09	17.81
Dry	23.91	29.16	53.06
Total	32.19	173.35	205.53

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 10

Footage (thous. ft.) 12.77

Average rotary rigs active 1

Permits 262

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	22nd	22nd
Production	25th	25th
Reserves (2011)	25th	NA

Number of operators 222

### Number of producing wells

(12/31/11)

Crude oil	NA
Natural gas	NA
Total	NA

### Average production

Crude oil (thous. b/d)	5
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

### Total production

Crude oil (YTD bbls, in thous.)	1,972
Natural gas (YTD MMcf)	NA

### Natural gas marketed production

(MMcf)	9,075
--------	-------

### Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	NA

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	0	NA	0
Production	1	NA	1
Net annual change	-1	NA	-1
Proved reserves	7	NA	7

### Natural gas reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	1,806
Crude oil production in Bbls. (thous.)	1,304
Crude oil production Bbls./d (thous.)	4

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

### Mineral lease royalties, bonuses & rent

Oil	\$23,622
Natural Gas	--
Rent, Bonuses & Other	\$17,667
Total Oil and Gas Revenues	\$41,289
Total Federal Reported Revenues	\$41,289
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	<1%
Natural Gas	0%
Combined on BOE basis	<1%

Horizontal wells drilled 8

Directional wells drilled 4

Vertical wells drilled 110

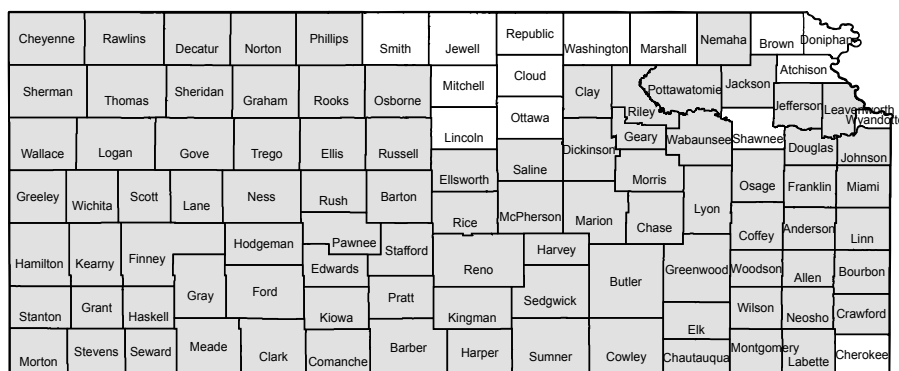
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	56 Mmcft
CNG stations	17
LNG stations	3
LPG stations	176

### Average number of employees

Oil and natural gas extraction	399
Refining	902
Transportation	2,432
Wholesale	3,466
Retail	21,235
Pipeline construction	1,808
Oilfield machinery	110
Total petroleum industry	30,352

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	105
With oil and/or gas production	90

### First year of production

Crude oil	1889
Natural gas	1882

### Year and amount of peak production

Crude oil — 124,204 thous. bbls.	1956
Natural gas — 899,955 MMcf	1970

### Deepest producing well (ft.)

Crude oil	12,129
Natural gas	11,652

### Year and depth of deepest well drilled (ft.)

2011	12,129
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	136,171	47.5%
Gas wells	38,380	13.4%
Dry holes	112,295	39.1%
Total	286,846	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$63,600,377

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	6,623	1,499	8,122	45,746
Production	6,344	1,391	7,735	42,031

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$88.52
Natural gas (\$/Mcf)*	\$5.53

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$3,673,846
Natural gas*	\$1,709,456
Total	\$5,383,302

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$9.93
Commercial consumers	\$8.89
Industrial consumers	\$5.28
Electric utilities	\$4.79
City Gate	\$5.53

### Severance taxes paid - FY

(2011 in thous. \$) \$385,900

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Stevens	8.70	0.15
Grant	6.25	0.11
Haskell	6.06	0.10
Barber	5.93	0.10
Kearny	5.44	0.09
Finney	5.33	0.09
Morton	5.19	0.07
Ellis	4.09	0.06
Seward	3.76	0.05
Stanton	3.13	0.04

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	269	2,193	2,462
Gas	16	250	266
Dry	302	628	930
Total	587	3,071	3,658

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	1,196.02	5,138.04	6,334.06
Gas	57.94	535.77	593.71
Dry	1,322.11	2,124.48	3,446.58
Total	2,576.06	7,798.29	10,374.35

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 317

Footage (thous. ft.) 1,408.13

Average rotary rigs active 29

Permits 5,467

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	2nd	13th
Production	10th	13th
Reserves (2011)	13th	13th

Number of operators 1,882

### Number of producing wells

(12/31/11)

Crude oil	42,743
Natural gas	21,910
Total	64,653

### Average production

Crude oil (thous. b/d)	113
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	862

### Total production

Crude oil (YTD bbls, in thous.)	41,355
Natural gas (YTD MMcf)	314,526

### Natural gas marketed production

(MMcf)	309,124
--------	---------

### Average output per producing well

Crude oil (bbls.)	968
Natural gas (Mcf)	14,355

Coalbed methane (YTD MMcf) 36,338

Oil Wells	13
Gas Wells	4,000
Daily Average (MMcf) / Well	99.56

Heavy oil (YTD Bbls, in thous.) NA

Wells NA

Av. bbls per day (in thous.) NA

Av. bbls per well NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	89	-3	86
Production	41	16	57
Net annual change	48	-3	45
Proved reserves	350	192	542

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	60	56	98
Production	12	294	285
Net annual change	48	-238	-187
Proved reserves	127	3,620	3,486

### Marginal oil wells

Producing marginal wells	41,523
Crude oil production in Bbls. (thous.)	26,481
Crude oil production Bbls./d (thous.)	73

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	20,881
Natural gas production (MMcf)	249,155

### Mineral lease royalties, bonuses & rent

Oil	\$4,766,385
Natural Gas	\$2,720,925
Rent, Bonuses & Other	\$303,648
Total Oil and Gas Revenues	\$7,790,958
Total Federal Reported Revenues	\$7,750,981
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	1%
Natural Gas	0%
Combined on BOE basis	<1%

Horizontal wells drilled 20

Directional wells drilled 2

Vertical wells drilled 3,636

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	11 Mmcf
CNG stations	6
LNG stations	2
LPG stations	37

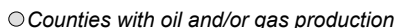
### Average number of employees

Oil and natural gas extraction	8,146
Refining	2,045
Transportation	2,710
Wholesale	1,779
Retail	9,476
Pipeline construction	1,137
Oilfield machinery	0
Total petroleum industry	25,293

Source: For specific methodology and source details, please see pages 7 and 132



# KENTUCKY



## Counties

First year of production

Year and amount of peak productionDeepest producing well (ft.)Year and depth of deepest well drilled (ft.)Cumulative number of total wells drilled

Cumulative crude oil wellhead value

## Cumulative production & new reserves

Average wellhead/City Gate price

Natural gas (\$Mcf)*	\$5.18
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## Wellhead/City Gate value of production

Total	\$843,615
-------	-----------

## Average natural gas price

City Gate	\$5.18
-----------	--------

## Severance taxes paid

### Top 10 producing counties

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	NA	200	200
Gas	8	260	268
Dry	18	214	232
Total	26	674	700

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	NA	320.6	320.6
Gas	33.39	1,423.02	1,456.41
Dry	33.89	367.38	401.27
Total	67.28	2,110.46	2,177.74

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 15

Footage (thous. ft.) 33.83

Average rotary rigs active 5

Permits 1,099

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	13th	12th
Production	22nd	18th
Reserves (2011)	22nd	16th

Number of operators 850

### Number of producing wells

(12/31/11)

Crude oil	NA
Natural gas	NA
Total	NA

### Average production

Crude oil (thous. b/d)	2.6
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	286.9

### Total production

Crude oil (YTD bbls, in thous.)	920
Natural gas (YTD MMcf)	104,733

### Natural gas marketed production

(MMcf)	124,243
--------	---------

Shale gas production 4 Bcf

### Average output per producing well

Crude oil (bbls.)	51
Natural gas (Mcf)	8,093

### Coalbed methane (YTD MMcf)

	136
Oil Wells	0
Gas Wells	17
Daily Average (MMcf) / Well	0.4

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	7	-36	-29
Production	1	4	5
Net annual change	6	-36	-30
Proved reserves	22	88	110

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	-12	-537	-506
Production	1	107	101
Net annual change	-13	-644	-607
Proved reserves	98	2,030	2,006

### Marginal oil wells

Producing marginal wells	1,328
Crude oil production in Bbls. (thous.)	668
Crude oil production Bbls./d (thous.)	2

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells
Natural gas production (MMcf)

### Mineral lease royalties, bonuses & rent

Oil	\$145,909
Natural Gas	\$91,215
Rent, Bonuses & Other	\$25,165
Total Oil and Gas Revenues	\$262,289
Total Federal Reported Revenues	\$1,468,912
Oil and Gas Percent of Total	18%

### Federal lands production shares

Oil	1%
Natural Gas	<1%
Combined on BOE basis	<1%

Horizontal wells drilled 142

### Directional wells drilled

Vertical wells drilled 588

### Natural gas vehicle fuel demand & fueling stations

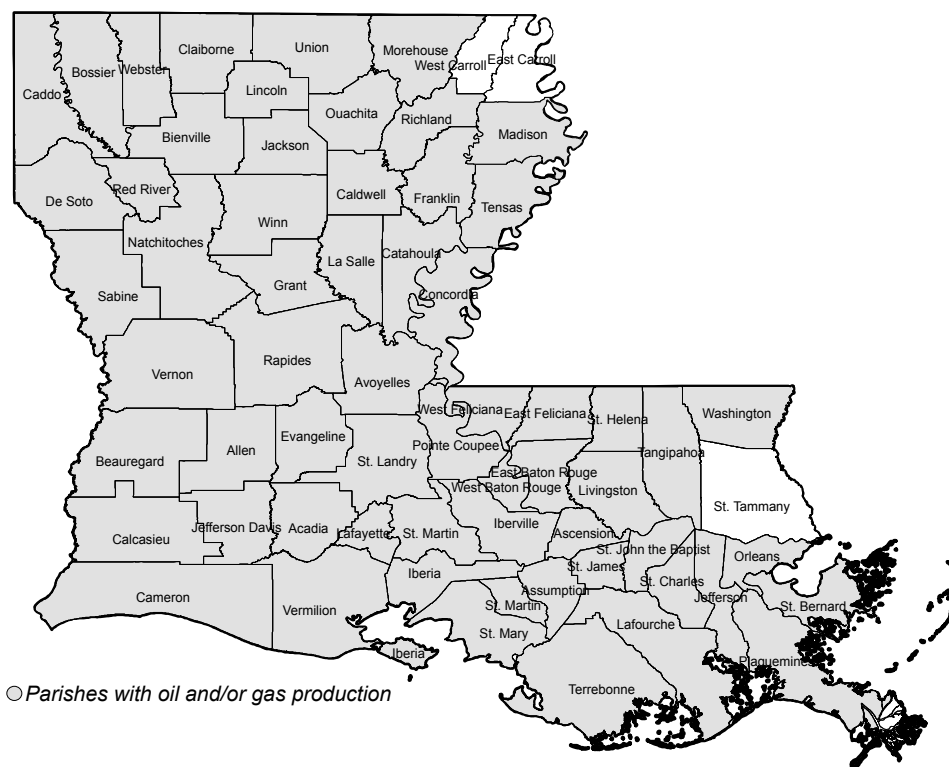
Natural gas vehicle demand	3 Mmcf
CNG stations	1
LNG stations	--
LPG stations	47

### Average number of employees

Oil and natural gas extraction	1,851
Refining	409
Transportation	1,699
Wholesale	2,838
Retail	16,458
Pipeline construction	789
Oilfield machinery	0
Total petroleum industry	24,044

Source: For specific methodology and source details, please see pages 7 and 132

# LOUISIANA



○ Parishes with oil and/or gas production

## 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
Natural gas	36,120

Year and depth of deepest well drilled (ft.)	
1981	25,703

Cumulative number of total wells drilled		
(as of 12/31/11 - excluding service wells)		
Oil wells	88,475	40%
Gas wells	54,043	24.4%
Dry holes	78,752	35.6%
Total	221,270	100%

Cumulative crude oil wellhead value (as of 12/31/11 - thous. \$)	\$289,917,429
---	---------------

Cumulative production & new reserves				
(as of 12/31/11)				
	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	28,007	6,477	34,484	296,479
Production	18,932	4,758	23,690	155,647

## Value of Oil and Gas

Average wellhead/City Gate price (2011)	
Crude oil (\$/bbl.)	\$106.20
Natural gas (\$/Mcf)*	\$5.67

Wellhead/City Gate value of production (2011 in thous. \$)	
Crude oil	\$7,326,101
Natural gas*	\$17,175,598
Total	\$24,537,699

Average natural gas price (2011 \$/Mcf)	
Residential consumers	\$11.37
Commercial consumers	\$9.36
Industrial consumers	\$4.25
Electric utilities	\$4.40
City Gate	\$5.67

Severance taxes paid - FY (2011 in thous. \$)	\$722,828
--	-----------

Top 10 producing parishes		
(2011 on a BOE basis)		
Parish	State	% Production US
De Soto	36.92	3.59
Red River	10.99	1.07
Caddo	9.49	0.92
Bossier	5.81	0.57
Bienville	5.61	0.55
Sabine	4.63	0.45
Plaquemines	4.20	0.41
Terrebonne	2.35	0.23
St Mary	2.10	0.20
Lafourche	2.05	0.20

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	7	431	438
Gas	4	998	1,002
Dry	24	226	250
Total	35	1,655	1,690

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	48.41	2,300.66	2,349.07
Gas	33.40	15,730.26	15,763.66
Dry	182.72	1,749.86	1,932.58
Total	264.53	19,780.78	20,045.31

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 26

Footage (thous. ft.) 208.07

Average rotary rigs active 165

Permits 2,385

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	10th	5th
Production	8th	2nd
Reserves (2011)	11th	3rd

Number of operators 989

### Number of producing wells

(12/31/11)

Crude oil	17,393
Natural gas	13,701
Total	31,094

### Average production

Crude oil (thous. b/d)	143
NGL (thous. b/d)	48
Natural gas (MMcf/day)	7,997

### Total production

Crude oil (YTD bbls, in thous.)	52,127
Natural gas (YTD MMcf)	2,918,796

### Natural gas marketed production

(MMcf)	3,029,206
--------	-----------

Shale gas production 2,084 Bcf

### Average output per producing well

Crude oil (bbls.)	2,997
Natural gas (Mcf)	213,035

### Coalbed methane (YTD MMcf)

	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.) 25,328

Wells	11,914
Av. bbls per day (in thous.)	69.39
Av. bbls per well	2,126

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11)(mill. bbls.)

	Crude Oil	NGL	Total
New reserves	63	-24	39
Production	68	23	91
Net annual change	-5	-24	-29
Proved reserves	525	192	717

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	59	3,977	4,066
Production	99	2,909	2,985
Net annual change	-40	1,068	1,081
Proved reserves	639	29,906	30,358

### Marginal oil wells

Producing marginal wells	15,283
Crude oil production in Bbls. (thous.)	9,867
Crude oil production Bbls./d (thous.)	27

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	6,170
Natural gas production (MMcf)	66,373

### Mineral lease royalties, bonuses & rent

Oil	\$118,693,719
Natural Gas	\$41,644,822
Rent, Bonuses & Other	\$6,345,647
Total Oil and Gas Revenues	\$166,684,187
Total Federal Reported Revenues	\$166,684,187
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	9%
Natural Gas	2%
Combined on BOE basis	3%

Horizontal wells drilled 901

Directional wells drilled 289

Vertical wells drilled 500

### Natural gas vehicle fuel demand & fueling stations

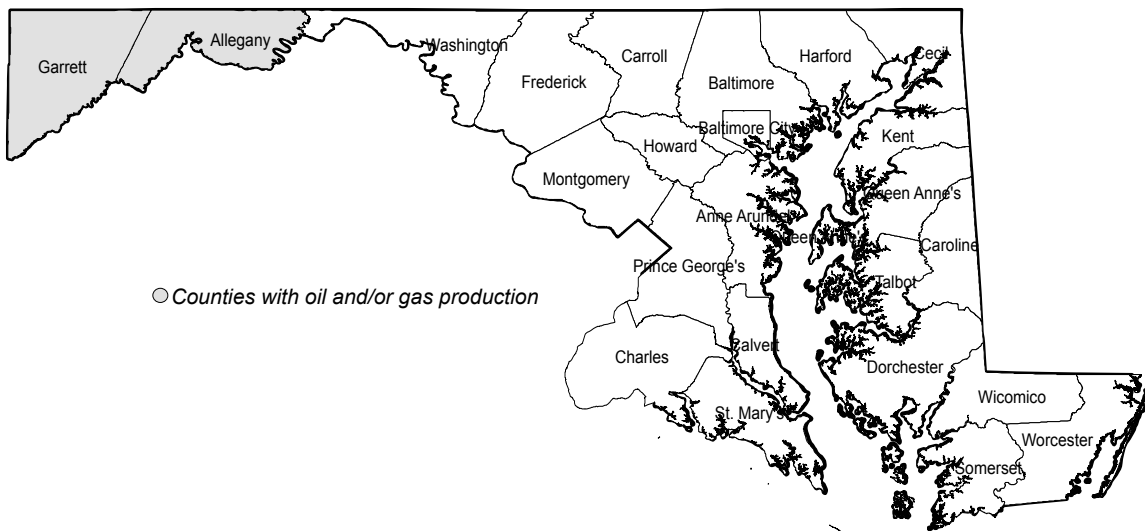
Natural gas vehicle demand	12 Mmcf
CNG stations	9
LNG stations	2
LPG stations	34

### Average number of employees

Oil and natural gas extraction	49,553
Refining	11,120
Transportation	4,717
Wholesale	3,363
Retail	18,340
Pipeline construction	13,898
Oilfield machinery	9,117
Total petroleum industry	110,108

Source: For specific methodology and source details, please see pages 7 and 132

# MARYLAND



## Background Information

Counties	
Number of counties	23
With oil and/or gas production	2

First year of production	
Crude oil	—
Natural gas	1950

Year and amount of peak production	
Crude oil —	—
Natural gas —4,543 MMcf	1959

Deepest producing well (ft.)	
Crude oil	NA
Natural gas	NA

Year and depth of deepest well drilled (ft.)	
1973	11,617

Cumulative number of total wells drilled (as of 12/31/11 - excluding service wells)		
Oil wells	NA	NA
Gas wells	88	46%
Dry holes	102	54%
Total	190	100%

Cumulative crude oil wellhead value (as of 12/31/11 - thous. \$)	NA
---	----

Cumulative production & new reserves (as of 12/31/11)				
	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	0	NA	NA	NA
Production	0	NA	NA	NA

## Value of Oil and Gas

Average wellhead/City Gate price (2011)	
Crude oil (\$/bbl.)	NA
Natural gas (\$/Mcf)*	\$6.26

Wellhead/City Gate value of production (2011 in thous. \$)	
Crude oil	NA
Natural gas*	\$213
Total	\$213

Average natural gas price (2011 \$/Mcf)	
Residential consumers	\$12.10
Commercial consumers	\$10.29
Industrial consumers	\$8.61
Electric utilities	NA
City Gate	\$6.26

Severance taxes paid (2011 in thous. \$)	\$2
---	-----

Top producing counties (2011 on a BOE basis)		
County	% Production	
NA	State	US
	NA	NA

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### 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

NA

### Footage (thous. ft.)

NA

### Average rotary rigs active

0

### Permits

0

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	33rd	30th
Production	NA	32nd
Reserves (2011)	NA	NA

### Number of operators

--

### Number of producing wells

(12/31/11)

Crude oil	NA
Natural gas	NA
Total	NA

### Average production

Crude oil (thous. b/d)	NA
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

### Total production

Crude oil (YTD bbls, in thous.)	NA
Natural gas (YTD MMcf)	NA

### Natural gas marketed production

(MMcf)	34
--------	----

### Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	NA

### Coalbed methane (YTD MMcf)

NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

### Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	\$10,045
Total Oil and Gas Revenues	\$10,045
Total Federal Reported Revenues	\$10,045
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	--
Natural Gas	--
Combined on BOE basis	--

### Horizontal wells drilled

0

### Directional wells drilled

0

### Vertical wells drilled

0

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	229 Mmcft
CNG stations	7
LNG stations	1
LPG stations	18

### Average number of employees

Oil and natural gas extraction	475
Refining	698
Transportation	495
Wholesale	3,096
Retail	9,091
Pipeline construction	706
Oilfield machinery	0
Total petroleum industry	14,561

Source: For specific methodology and source details, please see pages 7 and 132



## Background Information

Counties	
Number of counties	83
With oil and/or gas production	59

### First year of production

Crude oil	1900
Natural gas	1909

### Year and amount of peak production

Crude oil — 34,862 thous. bbls.	1979
Natural gas — 311,616 MMcf	1997

### Deepest producing well (ft.)

Crude oil	12,742
Natural gas	14,716

### Year and depth of deepest well drilled (ft.)

1975	17,466
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	15,899	27.5%
Gas wells	14,903	25.8%
Dry holes	27,035	46.7%
Total	57,837	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$17,228,643

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,297	314	1,611	9,639
Production	1,264	250	1,514	6,347

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$92.40
Natural gas (\$/Mcf)*	\$6.18

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$644,675
Natural gas*	\$853,841
Total	\$1,498,516

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$10.47
Commercial consumers	\$9.14
Industrial consumers	\$8.27
Electric utilities	\$4.76
City Gate	\$6.18

### Severance taxes paid

(2011 in thous. \$)

\$68,843

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Otsego	21.13	0.11
Montmorency	18.88	0.09
Antrim	13.86	0.07
Alpena	6.24	0.03
Manistee	4.40	0.02
Jackson	4.22	0.02
Oscoda	3.36	0.02
Alcona	3.02	0.02
Kalkaska	2.79	0.01
Crawford	2.06	0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	12	46	58
Gas	3	80	83
Dry	30	24	54
Total	45	150	195

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	49.01	160.82	209.83
Gas	26.49	137.98	164.46
Dry	142.76	90.55	233.31
Total	218.26	389.34	607.60

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 34

Footage (thous. ft.) 174.01

Average rotary rigs active 2

Permits 255

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	23rd	16th
Production	17th	17th
Reserves (2011)	16th	18th

Number of operators 169

### Number of producing wells

(12/31/11)

Crude oil	4,092
Natural gas	10,310
Total	14,402

### Average production

Crude oil (thous. b/d)	18
NGL (thous. b/d)	2
Natural gas (MMcf/day)	346

### Total production

Crude oil (YTD bbls, in thous.)	6,720
Natural gas (YTD MMcf)	126,172

### Natural gas marketed production

(MMcf)	138,162
--------	---------

Shale gas production 106 Bcf

### Average output per producing well

Crude oil (bbls.)	1,642
Natural gas (Mcf)	12,238

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	10	-10	0
Production	6	2	8
Net annual change	4	-10	-6
Proved reserves	59	38	97

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	10	-294	-275
Production	5	137	139
Net annual change	5	-431	-414
Proved reserves	77	2,472	2,505

### Marginal oil wells

Producing marginal wells	3,879
Crude oil production in Bbls. (thous.)	3,289
Crude oil production Bbls./d (thous.)	9

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	10,049
Natural gas production (MMcf)	109,645

### Mineral lease royalties, bonuses & rent

Oil	\$401,268
Natural Gas	\$898,723
Rent, Bonuses & Other	\$234,366
Total Oil and Gas Revenues	\$1,534,357
Total Federal Reported Revenues	\$1,535,280
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	1%
Natural Gas	2%
Combined on BOE basis	2%

Horizontal wells drilled 56

Directional wells drilled 40

Vertical wells drilled 99

### Natural gas vehicle fuel demand & fueling stations

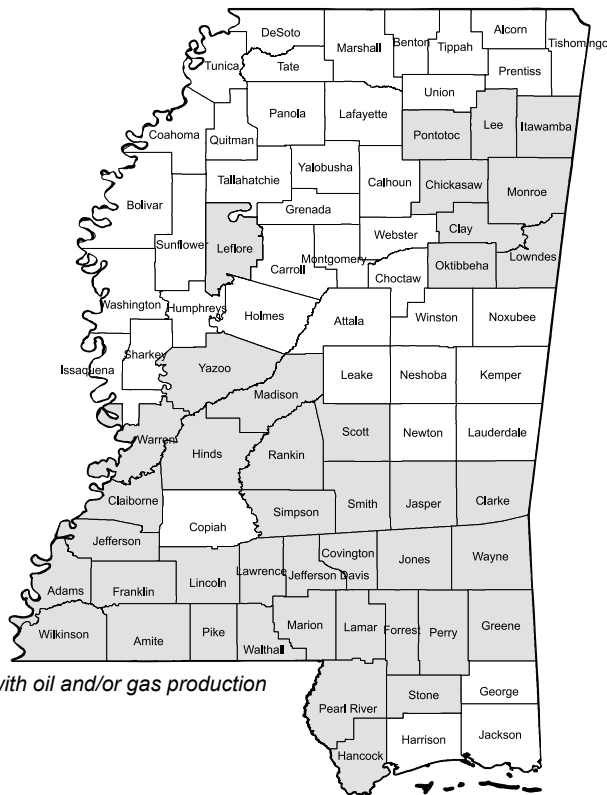
Natural gas vehicle demand	292 Mmcft
CNG stations	18
LNG stations	--
LPG stations	73

### Average number of employees

Oil and natural gas extraction	2,482
Refining	739
Transportation	3,246
Wholesale	4,676
Retail	24,314
Pipeline construction	1,219
Oilfield machinery	0
Total petroleum industry	36,676

Source: For specific methodology and source details, please see pages 7 and 132





○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	82
With oil and/or gas production	41

### First year of production

Crude oil	1889
Natural gas	1923

### Year and amount of peak production

Crude oil —65,119 thous. bbls.	1970
Natural gas — 221,331 MMcf	1988

### Deepest producing well (ft.)

Crude oil	21,533
Natural gas	23,894

### Year and depth of deepest well drilled (ft.)

1986	25,500
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	11,666	33.8%
Gas wells	4,522	13.1%
Dry holes	18,345	53.1%
Total	34,533	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$30,060,569

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	2,866	139	3,005	10,230
Production	2,653	154	2,807	9,435

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$100.43
Natural gas (\$/Mcf)*	\$5.29

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$2,432,013
Natural gas*	\$431,066
Total	\$2,863,079

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$9.47
Commercial consumers	\$7.99
Industrial consumers	\$5.83
Electric utilities	\$4.32
City Gate	\$5.29

### Severance taxes paid

(2011 in thous. \$)

\$113,491

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Rankin	45.81	0.82
Madison	20.82	0.37
Jasper	4.86	0.09
Wayne	4.36	0.08
Yazoo	3.94	0.07
Lincoln	2.81	0.05
Jones	2.67	0.05
Jefferson Davis	2.40	0.04
Lamar	1.94	0.03
Pike	1.40	0.03

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	4	93	97
Gas	2	24	26
Dry	17	31	48
Total	23	148	171

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	44.14	609.30	653.44
Gas	21.50	208.17	229.67
Dry	149.58	260.29	409.87
Total	215.22	1,077.76	1,292.98

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 18

Footage (thous. ft.) 179.29

Average rotary rigs active 9

Permits 494

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	19th	20th
Production	13th	20th
Reserves (2011)	14th	21st

Number of operators 168

### Number of producing wells

(12/31/11)

Crude oil	2,442
Natural gas	1,742
Total	4,184

### Average production

Crude oil (thous. b/d)	64
NGL (thous. b/d)	3
Natural gas (MMcf/day)	1,257

### Total production

Crude oil (YTD bbls, in thous.)	23,184
Natural gas (YTD MMcf)	458,783

### Natural gas marketed production

(MMcf)	81,487
--------	--------

### Average output per producing well

Crude oil (bbls.)	9,494
Natural gas (Mcf)	263,366

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

Heavy oil (YTD Bbls, in thous.) 1,938

Wells 230

Av. bbls per day (in thous.) 5.31

Av. bbls per well 8,426

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	15	2	17
Production	24	1	25
Net annual change	-9	2	-7
Proved reserves	245	6	251

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	34	51	82
Production	8	67	75
Net annual change	26	-16	7
Proved reserves	62	806	860

### Marginal oil wells

Producing marginal wells	1,397
Crude oil production in Bbls. (thous.)	2,882
Crude oil production Bbls./d (thous.)	8

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	1,353
Natural gas production (MMcf)	13,478

### Mineral lease royalties, bonuses & rent

Oil	\$3,459,059
Natural Gas	\$7,004,831
Rent, Bonuses & Other	\$825,965
Total Oil and Gas Revenues	\$11,289,855
Total Federal Reported Revenues	\$11,289,855
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	1%
Natural Gas	15%
Combined on BOE basis	6%

Horizontal wells drilled 7

Directional wells drilled 50

Vertical wells drilled 114

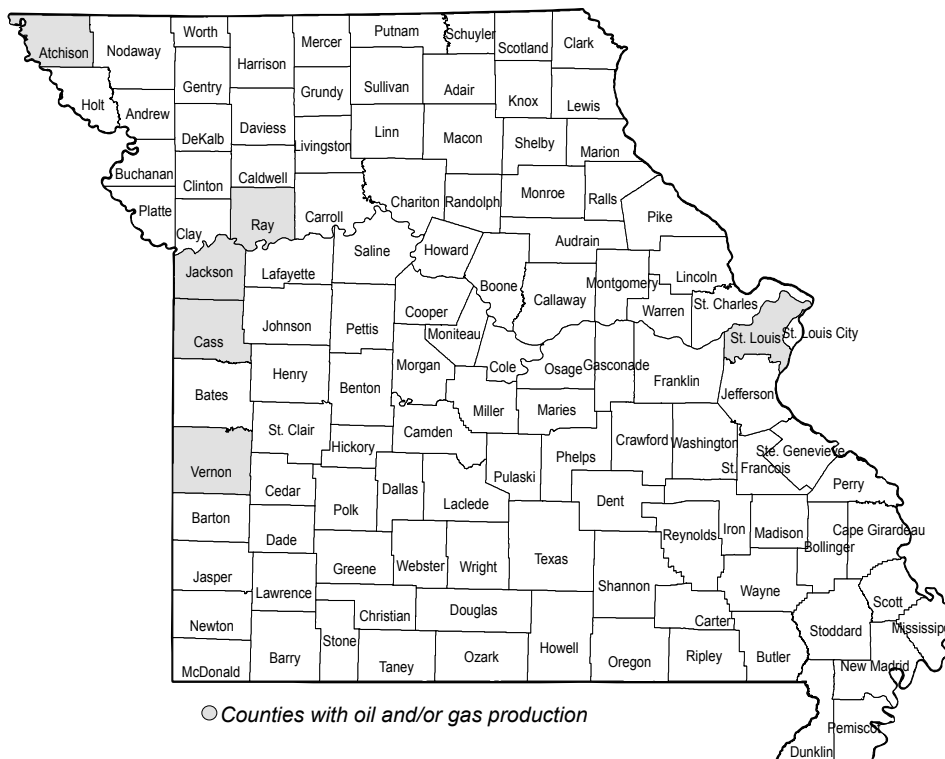
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	4 Mmcf
CNG stations	2
LNG stations	1
LPG stations	126

### Average number of employees

Oil and natural gas extraction	4,324
Refining	2,373
Transportation	1,677
Wholesale	2,038
Retail	13,882
Pipeline construction	1,553
Oilfield machinery	101
Total petroleum industry	25,948

Source: For specific methodology and source details, please see pages 7 and 132



## Background Information

### Counties

Number of counties	114
With oil and/or gas production	7

### First year of production

Crude oil	1889
Natural gas	1887

### Year and amount of peak production

Crude oil —285 thous. bbls.	1984
Natural gas —1,368 MMcf	1938

### Deepest producing well (ft.)

Crude oil	NA
Natural gas	NA

### Year and depth of deepest well drilled (ft.)

1988	10,089
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	2,434	28.4%
Gas wells	1,671	19.5%
Dry holes	4,457	52.1%
Total	8,562	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$)	\$143,473
------------------------------	-----------

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil (mill. bbls.)	NGL	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	NA
Production	7	NA	7	15

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$84.43
Natural gas (\$/Mcf)*	\$5.85

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$9,963
Natural gas*	\$0
Total	\$9,963

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$12.02
Commercial consumers	\$9.99
Industrial consumers	\$8.54
Electric utilities	NA
City Gate	\$5.85

### Severance taxes paid

(2011 in thous. \$)

	--
--	----

### Top producing counties

(2011 on a BOE basis)

County	% Production
NA	NA

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### 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

NA

### Footage (thous. ft.)

NA

### Average rotary rigs active

0

### Permits

99

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	29th	29th
Production	30th	NA
Reserves (2011)	NA	NA

### Number of operators

12

### Number of producing wells\*

(12/31/11)

Crude oil	439
Natural gas	53
Total	492

### Average production

Crude oil (thous. b/d)	NA
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

### Total production\*

Crude oil (YTD bbls, in thous.)	147
Natural gas (YTD MMcf)	60

### Natural gas marketed production

(MMcf)	0
--------	---

### Average output per producing well

Crude oil (bbls.)	305
Natural gas (Mcf)	4,286

### Coalbed methane (YTD MMcf)

NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

### Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	--
Total Oil and Gas Revenues	--
Total Federal Reported Revenues	\$15,394,000
Oil and Gas Percent of Total	0%

### Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	<1%

### Horizontal wells drilled

0

### Directional wells drilled

0

### Vertical wells drilled

0

### Natural gas vehicle fuel demand & fueling stations

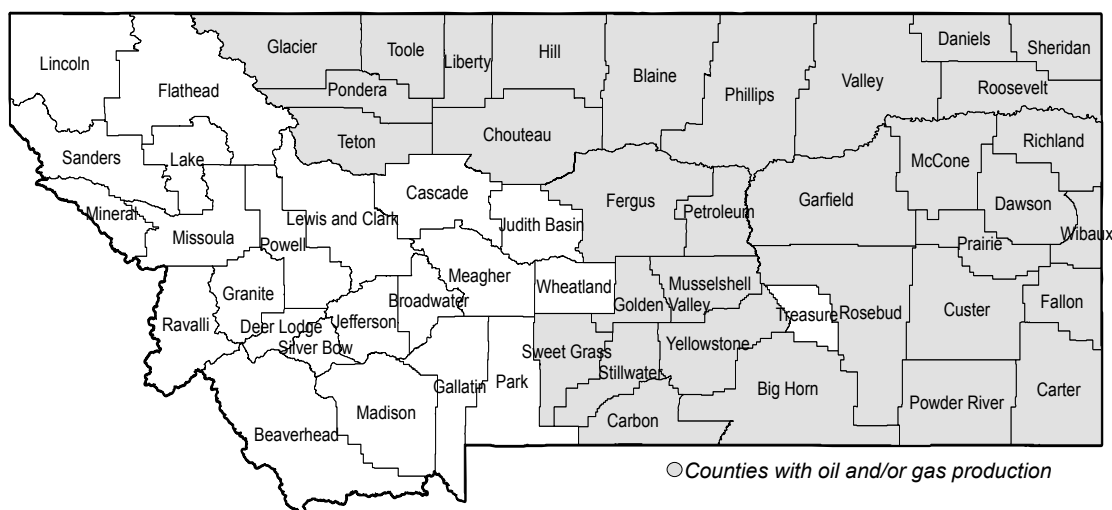
Natural gas vehicle demand	8 Mmcf
CNG stations	10
LNG stations	1
LPG stations	64

### Average number of employees

Oil and natural gas extraction	190
Refining	1,204
Transportation	3,066
Wholesale	3,065
Retail	24,498
Pipeline construction	413
Oilfield machinery	0
Total petroleum industry	32,436

Source: For specific methodology and source details, please see pages 7 and 132

\* State data



## Background Information

Counties	
Number of counties	56
With oil and/or gas production	33

First year of production	
Crude oil	1916
Natural gas	1915

Year and amount of peak production	
Crude oil —48,460 thous. bbls.	1968
Natural gas — 116,848 MMcf	2007

Deepest producing well (ft.)	
Crude oil	22,625
Natural gas	19,999

Year and depth of deepest well drilled (ft.)	
2006	22,037

Cumulative number of total wells drilled		
(as of 12/31/11 - excluding service wells)		
Oil wells	15,603	35%
Gas wells	11,199	25.1%
Dry holes	17,769	39.9%
Total	44,571	100%

Cumulative crude oil wellhead value	
(as of 12/31/11 - thous. \$)	\$30,174,818

Cumulative production & new reserves				
(as of 12/31/11)				
	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	2,130	59	2,189	4,691
Production	1,758	50	1,808	3,849

## Value of Oil and Gas

Average wellhead/City Gate price	
(2011)	
Crude oil (\$/bbl.)	\$88.61
Natural gas (\$/Mcf)*	\$5.11

Wellhead/City Gate value of production	
(2011 in thous. \$)	
Crude oil	\$2,140,020
Natural gas*	\$381,329
Total	\$2,521,349

Average natural gas price	
(2011 \$/Mcf)	
Residential consumers	\$8.80
Commercial consumers	\$8.66
Industrial consumers	\$8.13
Electric utilities	NA
City Gate	\$5.11

Severance taxes paid	\$213,770
(2011 in thous. \$)	

Top 10 producing counties		
(2011 on a BOE basis)		
County	% Production	
	State	US
Richland	35.27	0.22
Fallon	21.14	0.13
Phillips	6.67	0.04
Roosevelt	5.24	0.03
Blaine	4.85	0.03
Sheridan	3.76	0.02
Big Horn	3.40	0.02
Hill	3.39	0.02
Toole	2.46	0.02
Wibaux	2.30	0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	32	102	134
Gas	15	27	42
Dry	29	19	48
Total	76	148	224

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	356.56	1,110.25	1,466.81
Gas	28	41.41	69.41
Dry	164.30	140.29	304.59
Total	548.86	1,291.95	1,840.81

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 59

Footage (thous. ft.) 328.57

Average rotary rigs active 9

Permits 379

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	15th	19th
Production	14th	22nd
Reserves (2011)	12th	20th

Number of operators 228

### Number of producing wells

(12/31/11)

Crude oil	4,624
Natural gas	6,542
Total	11,166

### Average production

Crude oil (thous. b/d)	66
NGL (thous. b/d)	0
Natural gas (MMcf/day)	162

### Total production

Crude oil (YTD bbls, in thous.)	24,070
Natural gas (YTD MMcf)	59,104

### Natural gas marketed production

(MMcf)	74,624
--------	--------

Shale gas production 13 Bcf

### Average output per producing well

Crude oil (bbls.)	5,205
Natural gas (Mcf)	9,035

Coalbed methane (YTD MMcf) 6,394

Oil Wells	1
Gas Wells	712
Daily Average (MMcf) / Well	17.52

Heavy oil (YTD Bbls, in thous.) 281

Wells	84
Av. bbls per day (in thous.)	0.77
Av. bbls per well	3,348

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	39	1	40
Production	24	1	25
Net annual change	15	1	16
Proved reserves	384	10	394

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	-13	-78	-91
Production	19	57	75
Net annual change	-32	-135	-166
Proved reserves	270	522	778

### Marginal oil wells

Producing marginal wells	3,215
Crude oil production in Bbls. (thous.)	3,961
Crude oil production Bbls./d (thous.)	11

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	6,277
Natural gas production (MMcf)	47,652

### Mineral lease royalties, bonuses & rent

Oil	\$32,573,561
Natural Gas	\$8,677,729
Rent, Bonuses & Other	\$8,882,376
Total Oil and Gas Revenues	\$50,133,665
Total Federal Reported Revenues	\$108,739,392
Oil and Gas Percent of Total	46%

### Federal lands production shares

Oil	12%
Natural Gas	30%
Combined on BOE basis	18%

Horizontal wells drilled 129

Directional wells drilled 4

Vertical wells drilled 91

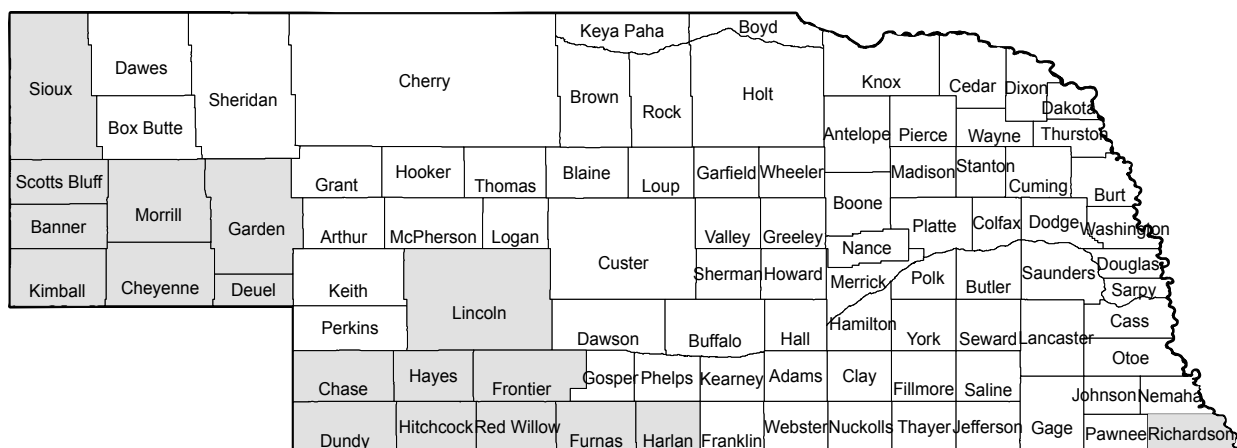
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	1 Mmcf
CNG stations	2
LNG stations	--
LPG stations	46

### Average number of employees

Oil and natural gas extraction	2,825
Refining	1,057
Transportation	838
Wholesale	1,018
Retail	4,971
Pipeline construction	685
Oilfield machinery	0
Total petroleum industry	11,394

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	93
With oil and/or gas production	18

### First year of production

Crude oil	1939
Natural gas	1950

### Year and amount of peak production

Crude oil —24,894 thous. bbls.	1962
Natural gas —15,743 MMcf	1961

### Deepest producing well (ft.)

Crude oil	11,761
Natural gas	5,832

### Year and depth of deepest well drilled (ft.)

1997	13,128
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	6,276	30.5%
Gas wells	576	2.8%
Dry holes	13,710	66.7%
Total	20,562	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$5,220,636

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil (mill. bbls.)	NGL	Total	Natural Gas (Bcf)
Reserves	525	NA	525	NA
Production	513	NA	513	NA

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$85.48
Natural gas (\$/Mcf)*	\$5.11

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$217,290
Natural gas*	\$10,010
Total	\$227,300

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$8.84
Commercial consumers	\$6.69
Industrial consumers	\$5.61
Electric utilities	\$5.76
City Gate	\$5.11

### Severance taxes paid

(2011 in thous. \$) \$5,149

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Hitchcock	26.45	0.01
Kimball	20.73	0.01
Cheyenne	10.39	0.01
Red Willow	9.69	<0.01
Banner	9.19	<0.01
Dundy	7.73	<0.01
Chase	3.73	<0.01
Deuel	3.29	<0.01
Richardson	2.22	<0.01
Morrill	1.87	<0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	13	68	81
Gas	NA	NA	NA
Dry	27	27	54
Total	40	95	135

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	52.98	274.02	327.01
Gas	NA	NA	NA
Dry	142.64	148.81	291.44
Total	195.62	422.83	618.45

(Note: Totals may not add due to rounding.)

### New-field wildcats drilled

23

### Footage (thous. ft.)

103.73

### Average rotary rigs active

1

### Permits

194

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	21st	26th
Production	21st	28th
Reserves (2011)	24th	NA

### Number of operators

107

### Number of producing wells

(12/31/11)

Crude oil	1,289
Natural gas	299
Total	1,588

### Average production

Crude oil (thous. b/d)	7
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	5

### Total production

Crude oil (YTD bbls, in thous.)	2,415
Natural gas (YTD MMcf)	1,819

### Natural gas marketed production

(MMcf)	1,959
--------	-------

### Average output per producing well

Crude oil (bbls.)	1,874
Natural gas (Mcf)	6,084

### Coalbed methane (YTD MMcf)

NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	10	NA	10
Production	3	NA	3
Net annual change	7	NA	7
Proved reserves	21	NA	21

### Natural gas reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	1,210
Crude oil production in Bbls. (thous.)	1,592
Crude oil production Bbls./d (thous.)	4

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	297
Natural gas production (MMcf)	1,819

### Mineral lease royalties, bonuses & rent

Oil	\$355,182
Natural Gas	--
Rent, Bonuses & Other	\$39,160
Total Oil and Gas Revenues	\$394,342
Total Federal Reported Revenues	\$394,342
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	1%
Natural Gas	<1%
Combined on BOE basis	1%

### Horizontal wells drilled

0

### Directional wells drilled

0

### Vertical wells drilled

135

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	33 Mmcft
CNG stations	7
LNG stations	2
LPG stations	22

### Average number of employees

Oil and natural gas extraction	244
Refining	0
Transportation	1,524
Wholesale	1,029
Retail	8,673
Pipeline construction	134
Oilfield machinery	0
Total petroleum industry	11,604

Source: For specific methodology and source details, please see pages 7 and 132





○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	17
With oil and/or gas production	2

### First year of production

Crude oil	1954
Natural gas	NA

### Year and amount of peak production

Crude oil — 3,230 thous. bbls.	1988
Natural gas — 53 MMcf	1991

### Deepest producing well (ft.)

Crude oil	8,050
Natural gas	NA

### Year and depth of deepest well drilled (ft.)

1980	19,562
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	123	13.8%
Gas wells	2	0.2%
Dry holes	763	86%
Total	888	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$937,780

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL	Total	Natural Gas
	(mill. bbls.)			(Bcf)
Reserves	NA	NA	NA	NA
Production	NA	NA	NA	NA

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	NA
Natural gas (\$/Mcf)*	NA

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	NA
Natural gas*	NA
Total	NA

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$10.66
Commercial consumers	\$8.07
Industrial consumers	\$8.99
Electric utilities	\$4.99
City Gate	\$6.77

### Severance taxes paid

(2011 in thous. \$)

\$797

### Top producing counties

(2011 on a BOE basis)

County	State	% Production
	US	
Nye	89.41	0.01
Eureka	10.59	<0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### 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

NA

### Footage (thous. ft.)

NA

### Average rotary rigs active

3

### Permits

89

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	31st	34th
Production	27th	33rd
Reserves (2011)	NA	NA

### Number of operators

6

### Number of producing wells

(12/31/11)

Crude oil	72
Natural gas	0
Total	72

### Average production

Crude oil (thous. b/d)	1
NGL (thous. b/d)	0
Natural gas (MMcf/day)	0

### Total production

Crude oil (YTD bbls, in thous.)	408
Natural gas (YTD MMcf)	0

### Natural gas marketed production

(MMcf)	3
--------	---

### Average output per producing well

Crude oil (bbls.)	5,667
Natural gas (Mcf)	NA

### Coalbed methane (YTD MMcf)

NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	47
Crude oil production in Bbls. (thous.)	111
Crude oil production Bbls./d (thous.)	<1

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

### Mineral lease royalties, bonuses & rent

Oil	\$4,076,107
Natural Gas	--
Rent, Bonuses & Other	\$7,032,614
Total Oil and Gas Revenues	\$11,108,721
Total Federal Reported Revenues	\$17,430,116
Oil and Gas Percent of Total	64%

### Federal lands production shares

Oil	100%
Natural Gas	0%
Combined on BOE basis	100%

### Horizontal wells drilled

0

### Directional wells drilled

0

### Vertical wells drilled

0

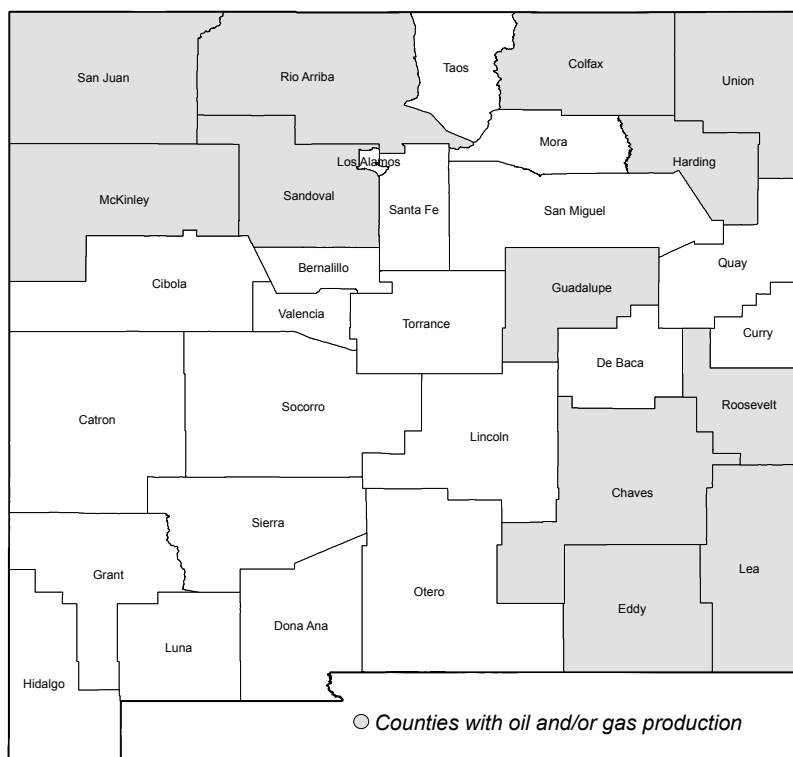
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	942 Mmcft
CNG stations	7
LNG stations	3
LPG stations	39

### Average number of employees

Oil and natural gas extraction	269
Refining	108
Transportation	0
Wholesale	675
Retail	7,421
Pipeline construction	1,186
Oilfield machinery	0
Total petroleum industry	9,659

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	33
With oil and/or gas production	10

### First year of production

Crude oil	1911
Natural gas	1924

### Year and amount of peak production

Crude oil — 129,227 thous. bbls.	1969
Natural gas — 1,689,125 MMcf	2001

### Deepest producing well (ft.)

Crude oil	19,323
Natural gas	26,579

### Year and depth of deepest well drilled (ft.)

1969	22,926
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	54,256	47.1%
Gas wells	42,117	36.6%
Dry holes	18,846	16.3%
Total	115,219	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$82,371,696

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	7,570	3,506	11,076	85,333
Production	6,777	2,653	9,430	70,325

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$90.93
Natural gas (\$/Mcf)*	\$4.52

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$6,480,945
Natural gas*	\$5,592,610
Total	\$12,073,555

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$9.14
Commercial consumers	\$6.98
Industrial consumers	\$6.23
Electric utilities	NA
City Gate	\$4.52

### Severance taxes paid

(2011 in thous. \$) \$922,600

### Top producing counties

(2011 on a BOE basis)

County	State	% Production
San Juan	33.89	1.45
Rio Arriba	23.83	1.02
Eddy	20.81	0.89
Lea	17.31	0.74
Chaves	1.96	0.08
Colfax	1.87	0.08
Roosevelt	0.17	0.01
Sandoval	0.13	0.01
McKinley	0.03	<0.01
Guadalupe	0.01	<0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	54	1,005	1,059
Gas	7	284	291
Dry	13	39	52
Total	74	1,328	1,402

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	389.36	7,046.65	7,436.00
Gas	41.96	1,641.23	1,683.19
Dry	51.63	183.39	235.02
Total	482.94	8,871.27	9,354.22

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 68

Footage (thous. ft.) 458.18

Average rotary rigs active 79

Permits 2,498

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	6th	11th
Production	7th	8th
Reserves (2011)	7th	8th

Number of operators 497

### Number of producing wells

(12/31/11)

Crude oil	23,863
Natural gas	34,402
Total	58,265

### Average production

Crude oil (thous. b/d)	184
NGL (thous. b/d)	12
Natural gas (MMcf/day)	2,776

### Total production

Crude oil (YTD bbls, in thous.)	67,308
Natural gas (YTD MMcf)	1,013,359

### Natural gas marketed production

(MMcf)	1,237,303
--------	-----------

Shale gas production 9 Bcf

### Average output per producing well

Crude oil (bbls.)	2,821
Natural gas (Mcf)	29,456

Coalbed methane (YTD MMcf) 371,052

Oil Wells	1
Gas Wells	6,007
Daily Average (MMcf) / Well	1,016.58

Heavy oil (YTD Bbls, in thous.) 15

Wells 25

Av. bbls per day (in thous.) 0.04

Av. bbls per well 603

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	110	12	122
Production	72	62	134
Net annual change	38	12	50
Proved reserves	960	776	1,736

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	543	326	763
Production	204	1,056	1,170
Net annual change	339	-73	-407
Proved reserves	2,552	13,586	15,005

### Marginal oil wells

Producing marginal wells	19,560
Crude oil production in Bbls. (thous.)	23,482
Crude oil production Bbls./d (thous.)	64

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	24,848
Natural gas production (MMcf)	306,932

### Mineral lease royalties, bonuses & rent

Oil	\$500,634,846
Natural Gas	\$373,920,642
Rent, Bonuses & Other	\$40,907,908
Total Oil and Gas Revenues	\$915,463,395
Total Federal Reported Revenues	\$979,255,359
Oil and Gas Percent of Total	93%

### Federal lands production shares

Oil	48%
Natural Gas	62%
Combined on BOE basis	58%

Horizontal wells drilled 417

Directional wells drilled 186

Vertical wells drilled 799

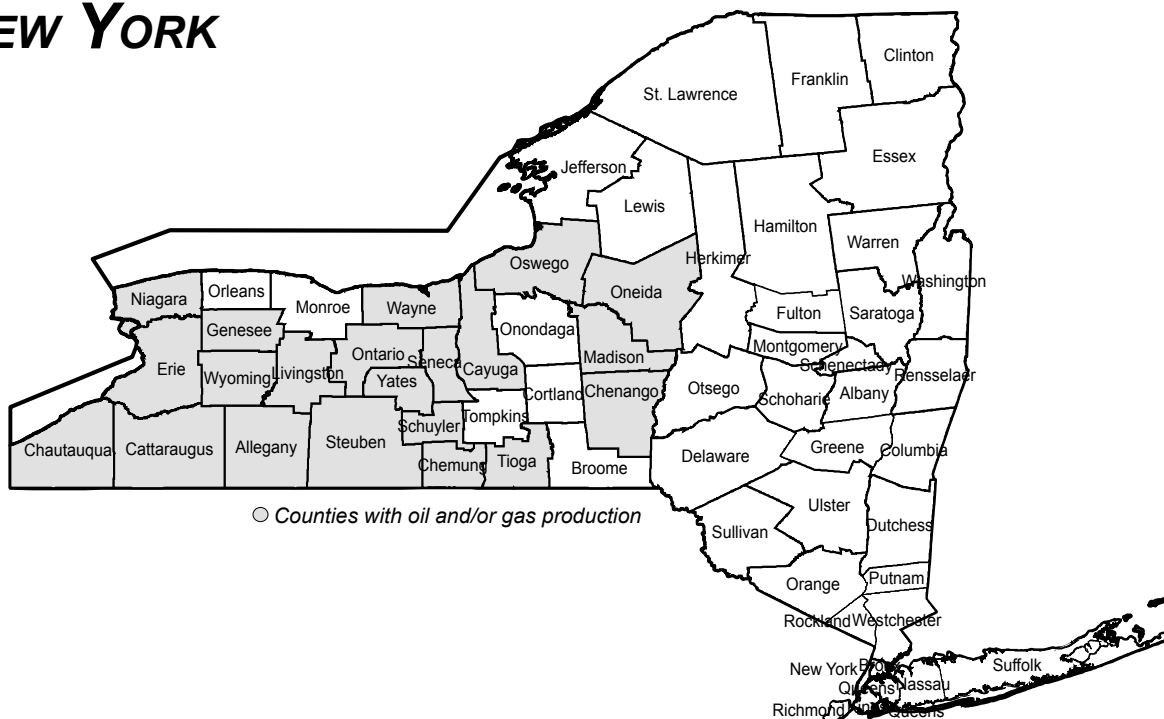
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	337 Mmcft
CNG stations	8
LNG stations	2
LPG stations	46

### Average number of employees

Oil and natural gas extraction	16,412
Refining	0
Transportation	1,327
Wholesale	1,450
Retail	7,386
Pipeline construction	1,820
Oilfield machinery	NA
Total petroleum industry	28,395

Source: For specific methodology and source details, please see pages 7 and 132



## Background Information

Counties	
Number of counties	62
With oil and/or gas production	21

First year of production	
Crude oil	1865
Natural gas	1821

Year and amount of peak production	
Crude oil — 6,685 thous. bbls.	1882
Natural gas — 55,980 MMcf	2006

Deepest producing well (ft.)	
Crude oil	3,990
Natural gas	14,920

Year and depth of deepest well drilled (ft.)	
2002	15,079

Cumulative number of total wells drilled (as of 12/31/11 - excluding service wells)		
Oil wells	16,329	52.5%
Gas wells	10,832	34.8%
Dry holes	3,957	12.7%
Total	31,118	100%

Cumulative crude oil wellhead value (as of 12/31/11 - thous. \$)	\$1,299,041
---	-------------

Cumulative production & new reserves (as of 12/31/11)				
	Crude Oil (mill. bbls.)	NGL	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	1,640
Production	NA	NA	NA	1,401

## Value of Oil and Gas

Average wellhead/City Gate price (2011)	
Crude oil (\$/bbl.)	\$89.10
Natural gas (\$/Mcf)*	\$6.04

Wellhead/City Gate value of production (2011 in thous. \$)	
Crude oil	\$32,967
Natural gas*	\$187,989
Total	\$220,956

Average natural gas price (2011 \$/Mcf)	
Residential consumers	\$13.71
Commercial consumers	\$9.32
Industrial consumers	\$8.09
Electric utilities	\$5.56
City Gate	\$6.04

Severance taxes paid (2011 in thous. \$)	--
---	----

Top 10 producing counties (2011 on a BOE basis)		
County	State	% Production US
Chemung	24.76	0.02
Steuben	20.96	0.02
Chautauqua	18.95	0.02
Cattaraugus	8.67	0.01
Erie	8.32	0.01
Cayuga	3.32	<0.01
Chenango	3.13	<0.01
Seneca	2.85	<0.01
Genesee	2.24	<0.01
Madison	2.04	<0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	1	168	169
Gas	3	41	44
Dry	8	7	15
Total	12	216	228

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	1.98	238.47	240.45
Gas	15.16	123.63	138.80
Dry	32.11	14.97	47.08
Total	49.25	377.07	426.32

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 6

Footage (thous. ft.) 17.97

Average rotary rigs active 0

Permits 210

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	14th	18th
Production	28th	23rd
Reserves (2011)	NA	23rd

Number of operators 453

### Number of producing wells

(12/31/11)

Crude oil	3,011
Natural gas	7,544
Total	10,555

### Average production

Crude oil (thous. b/d)	1
NGL (thous. b/d)	0
Natural gas (MMcf/day)	77

### Total production

Crude oil (YTD bbls, in thous.)	306
Natural gas (YTD MMcf)	28,267

### Natural gas marketed production

(MMcf)	31,124
--------	--------

### Average output per producing well

Crude oil (bbls.)	102
Natural gas (Mcf)	3,747

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	-1	4	3
Production	1	30	31
Net annual change	-2	-26	-28
Proved reserves	8	245	253

### Marginal oil wells

Producing marginal wells	2,714
Crude oil production in Bbls. (thous.)	306
Crude oil production Bbls./d (thous.)	1

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	7,227
Natural gas production (MMcf)	12,724

### Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	\$11,747
Rent, Bonuses & Other	--
Total Oil and Gas Revenues	\$11,747
Total Federal Reported Revenues	\$11,747
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	0%
Natural Gas	<1%
Combined on BOE basis	<1%

Horizontal wells drilled 14

Directional wells drilled 0

Vertical wells drilled 214

### Natural gas vehicle fuel demand & fueling stations

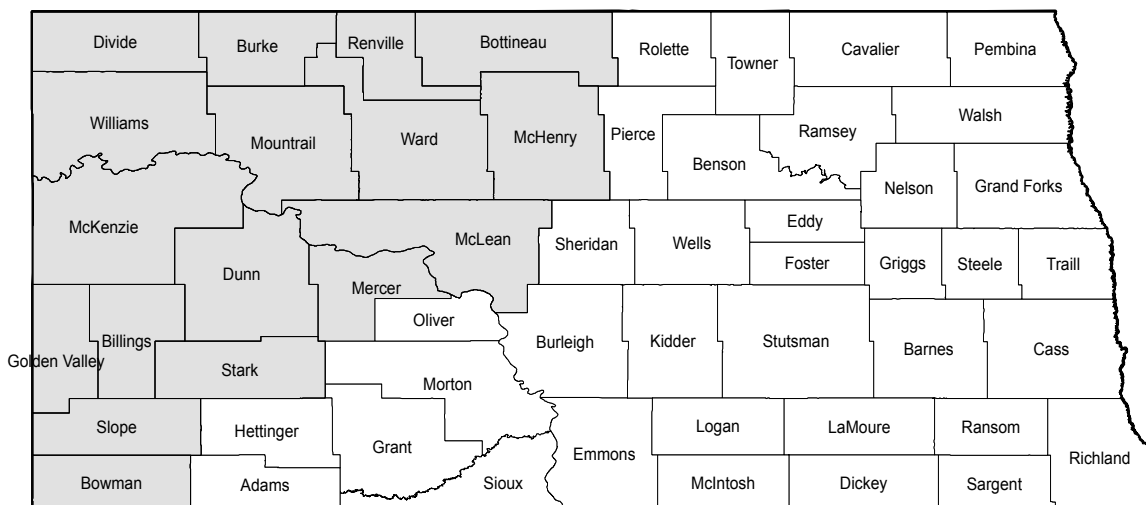
Natural gas vehicle demand	4,038 Mmcft
CNG stations	109
LNG stations	--
LPG stations	66

### Average number of employees

Oil and natural gas extraction	1,560
Refining	1,902
Transportation	6,856
Wholesale	12,090
Retail	28,331
Pipeline construction	1,505
Oilfield machinery	0
Total petroleum industry	52,244

Source: For specific methodology and source details, please see pages 7 and 132

# NORTH DAKOTA



○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	53
With oil and/or gas production	17

### First year of production

Crude oil	1951
Natural gas	1907

### Year and amount of peak production

Crude oil — 148,383 thous. bbls.	2011
Natural gas — 97,102 MMcf	2011

### Deepest producing well (ft.)

Crude oil—(25,828 MD horizontal)	25,828
Natural gas—(21,070 MD horizontal)	21,070

### Year and depth of deepest well drilled (ft.)

2011	24,390
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	14,204	65.7%
Gas wells	338	1.6%
Dry holes	7,086	32.7%
Total	21,628	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$61,753,683

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	4,567	485	5,052	5,100
Production	1,993	216	2,209	2,735

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$88.74
Natural gas (\$/Mcf)*	\$5.06

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$13,575,889
Natural gas*	\$491,336
Total	\$14,067,225

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$8.10
Commercial consumers	\$7.00
Industrial consumers	\$5.10
Electric utilities	\$8.66
City Gate	\$5.06

### Severance taxes paid

(2011 in thous. \$)

\$1,296,100

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Mountrail	33.95	0.92
McKenzie	19.63	0.53
Dunn	14.84	0.40
Williams	13.76	0.37
Bowman	5.84	0.16
Divide	3.46	0.09
Billings	2.56	0.07
Stark	1.57	0.04
Burke	1.49	0.04
Bottineau	1.16	0.03

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	146	1,464	1,610
Gas	NA	NA	NA
Dry	17	108	125
Total	163	1,572	1,735

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	2,277.06	22,739.81	25,016.87
Gas	NA	NA	NA
Dry	131.49	964.82	1,096.30
Total	2,408.55	23,704.63	26,113.18

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 86

Footage (thous. ft.) 1,309.62

Average rotary rigs active 168

Permits 2,463

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	4th	28th
Production	5th	19th
Reserves (2011)	5th	19th

Number of operators 158

### Number of producing wells

(12/31/11)

Crude oil	6,522
Natural gas	343
Total	6,865

### Average production

Crude oil (thous. b/d)	407
NGL (thous. b/d)	11
Natural gas (MMcf/day)	31

### Total production

Crude oil (YTD bbls, in thous.)	148,383
Natural gas (YTD MMcf)	11,474

### Natural gas marketed production

(MMcf)	97,102
--------	--------

Shale gas production 95 Bcf

### Average output per producing well

Crude oil (bbls.)	22,751
Natural gas (Mcf)	33,452

### Coalbed methane (YTD MMcf)

	NA
Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	923	36	959
Production	152	11	163
Net annual change	771	36	807
Proved reserves	2,658	193	2,851

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	934	-2	847
Production	140	9	133
Net annual change	794	-11	714
Proved reserves	2,511	141	2,381

### Marginal oil wells

Producing marginal wells	2,591
Crude oil production in Bbls. (thous.)	5,475
Crude oil production Bbls./d (thous.)	15

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	258
Natural gas production (MMcf)	2,577

### Mineral lease royalties, bonuses & rent

Oil	\$203,820,584
Natural Gas	\$5,080,517
Rent, Bonuses & Other	\$108,835,950
Total Oil and Gas Revenues	\$317,737,050
Total Federal Reported Revenues	\$318,510,903
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	7%
Natural Gas	11%
Combined on BOE basis	7%

Horizontal wells drilled 1,661

Directional wells drilled 38

Vertical wells drilled 36

### Natural gas vehicle fuel demand & fueling stations

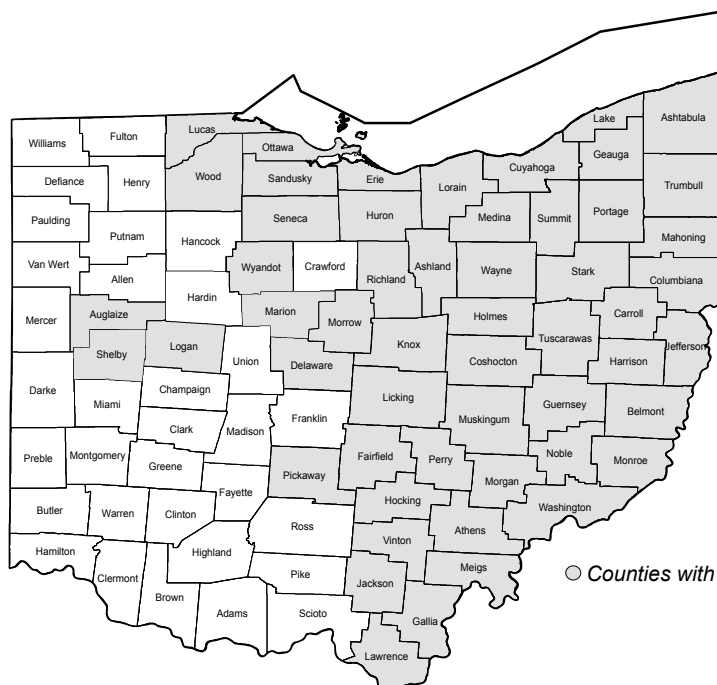
Natural gas vehicle demand	1 Mmcf
CNG stations	2
LNG stations	--
LPG stations	18

### Average number of employees

Oil and natural gas extraction	9,768
Refining	0
Transportation	396
Wholesale	1,972
Retail	4,534
Pipeline construction	1,710
Oilfield machinery	0
Total petroleum industry	18,380

Source: For specific methodology and source details, please see pages 7 and 132





○ Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	88
With oil and/or gas production	53

### First year of production

Crude oil	1860
Natural gas	1884

### Year and amount of peak production

Crude oil — 23,941 thous. bbls.	1896
Natural gas — 186,480 MMcf	1984

### Deepest producing well (ft.)

Crude oil	14,262
Natural gas	15,226

### Year and depth of deepest well drilled (ft.)

2011	15,231
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	104,797	53.2%
Gas wells	56,131	28.5%
Dry holes	35,991	18.3%
Total	196,919	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$10,734,185

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,141	NA	1,141	9,667
Production	1,111	NA	1,111	9,269

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$90.79
Natural gas (\$/Mcf)*	\$5.51

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$440,604
Natural gas*	\$434,508
Total	\$875,112

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$10.78
Commercial consumers	\$8.55
Industrial consumers	\$6.77
Electric utilities	\$4.57
City Gate	\$5.51

### Severance taxes paid

(2011 in thous. \$)

\$2,590

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Trumbull	8.21	0.02
Stark	8.01	0.02
Mahoning	7.76	0.02
Tuscarawas	7.27	0.02
Cuyahoga	6.24	0.02
Muskingum	6.03	0.02
Summit	5.43	0.01
Portage	4.71	0.01
Wayne	4.02	0.01
Geauga	3.05	0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	17	107	124
Gas	42	216	258
Dry	17	18	35
Total	76	341	417

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	78.28	394.34	472.62
Gas	237.44	920.84	1,158.28
Dry	80.36	60.38	140.74
Total	396.07	1,375.56	1,771.63

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 7

Footage (thous. ft.) 30.14

Average rotary rigs active 11

Permits 709

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	16th	14th
Production	19th	21st
Reserves (2011)	17th	22nd

Number of operators 628

### Number of producing wells

(12/31/11)

Crude oil	19,682
Natural gas	25,243
Total	44,925

### Average production

Crude oil (thous. b/d)	11
NGL (thous. b/d)	2
Natural gas (MMcf/day)	175

### Total production

Crude oil (YTD bbls, in thous.)	3,894
Natural gas (YTD MMcf)	64,020

### Natural gas marketed production

(MMcf)	78,858
--------	--------

### Average output per producing well

Crude oil (bbls.)	198
Natural gas (Mcf)	2,536

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	5	NA	5
Production	4	NA	4
Net annual change	1	NA	1
Proved reserves	55	NA	55

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	-8	10	2
Production	8	68	76
Net annual change	-16	-58	-74
Proved reserves	74	684	758

### Marginal oil wells

Producing marginal wells	16,931
Crude oil production in Bbls. (thous.)	3,530
Crude oil production Bbls./d (thous.)	10

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	24,446
Natural gas production (MMcf)	50,442

### Mineral lease royalties, bonuses & rent

Oil	\$233,898
Natural Gas	\$314,211
Rent, Bonuses & Other	\$21,623
Total Oil and Gas Revenues	\$569,732
Total Federal Reported Revenues	\$569,732
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	<1%
Natural Gas	1%
Combined on BOE basis	1%

Horizontal wells drilled 21

Directional wells drilled 25

Vertical wells drilled 371

### Natural gas vehicle fuel demand & fueling stations

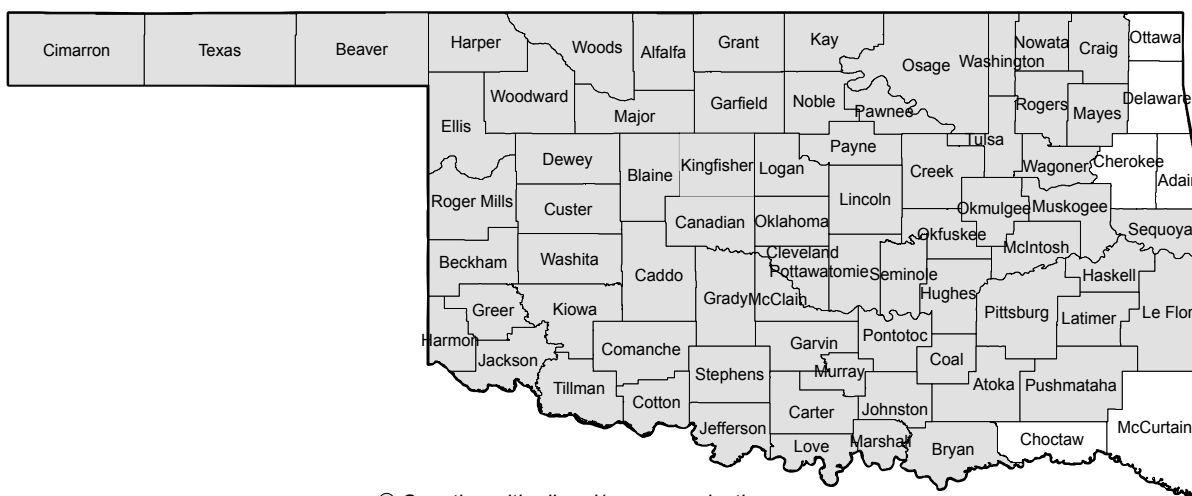
Natural gas vehicle demand	165 Mmcft
CNG stations	25
LNG stations	2
LPG stations	66

### Average number of employees

Oil and natural gas extraction	5,002
Refining	4,427
Transportation	4,748
Wholesale	4,875
Retail	33,131
Pipeline construction	1,925
Oilfield machinery	142
Total petroleum industry	54,250

Source: For specific methodology and source details, please see pages 7 and 132

# OKLAHOMA



○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	77
With oil and/or gas production	71

### First year of production

Crude oil	1891
Natural gas	1902

### Year and amount of peak production

Crude oil — 277,775 thous. bbls.	1927
Natural gas — 2,153,852 MMcf	1991

### Deepest producing well (ft.)

Crude oil	19,817
Natural gas	27,400

### Year and depth of deepest well drilled (ft.)

1974	31,441
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	248,756	52.1%
Gas wells	90,862	19.1%
Dry holes	137,600	28.8%
Total	477,218	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$133,672,428

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	15,531	6,434	21,965	132,369
Production	14,745	4,803	19,548	119,313

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$90.94
Natural gas (\$/Mcf)*	\$5.67

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$6,973,370
Natural gas*	\$10,709,893
Total	\$17,683,263

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$10.32
Commercial consumers	\$8.94
Industrial consumers	\$7.37
Electric utilities	\$4.59
City Gate	\$5.67

### Severance taxes paid

(2011 in thous. \$)

\$ 978,167

### Top 10 producing counties

(2011 on a BOE basis)

County	State	% Production US
Pittsburg	11.15	0.61
Washita	5.81	0.32
Coal	5.60	0.31
Roger Mills	5.24	0.29
Canadian	4.89	0.27
Caddo	4.67	0.26
Latimer	4.62	0.25
Hughes	4.13	0.23
Beckham	3.50	0.19
Grady	3.17	0.17

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	116	1,374	1,490
Gas	74	769	843
Dry	36	217	253
Total	226	2,360	2,586

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	1,313.60	9,334.29	10,647.89
Gas	1,115.78	9,017.15	10,132.93
Dry	293.86	1,341.16	1,635.03
Total	2,723.24	19,692.60	22,415.84

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 74

Footage (thous. ft.) 833.87

Average rotary rigs active 180

Permits 4,308

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	5th	7th
Production	6th	4th
Reserves (2011)	6th	4th

Number of operators 3,102

### Number of producing wells

(12/31/11)

Crude oil	40,134
Natural gas	39,339
Total	79,473

### Average production

Crude oil (thous. b/d)	160
NGL (thous. b/d)	38
Natural gas (MMcf/day)	4,025

### Total production

Crude oil (YTD bbls, in thous.)	58,284
Natural gas (YTD MMcf)	1,469,052

### Natural gas marketed production

(MMcf)	1,888,870
--------	-----------

Shale gas production 476 Bcf

### Average output per producing well

Crude oil (bbls.)	1,452
Natural gas (Mcf)	37,343

Coalbed methane (YTD MMcf) 31,546

Oil Wells	0
Gas Wells	3,184
Daily Average (MMcf) / Well	86.43

Heavy oil (YTD Bbls, in thous.) NA

Wells NA

Av. bbls per day (in thous.) NA

Av. bbls per well NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	303	175	478
Production	79	88	167
Net annual change	224	175	399
Proved reserves	1,150	1,445	2,595

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	1,074	2,506	3,182
Production	129	1,696	1,697
Net annual change	945	810	1,485
Proved reserves	2,254	27,683	27,830

### Marginal oil wells

Producing marginal wells 33,859

Crude oil production in Bbls. (thous.) 21,648

Crude oil production Bbls./d (thous.) 59

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells 29,482

Natural gas production (MMcf) 324,210

### Mineral lease royalties, bonuses & rent

Oil	\$17,897,853
Natural Gas	\$28,220,468
Rent, Bonuses & Other	\$4,530,767
Total Oil and Gas Revenues	\$50,649,088
Total Federal Reported Revenues	\$51,754,746
Oil and Gas Percent of Total	98%

### Federal lands production shares

Oil	<1%
Natural Gas	1%
Combined on BOE basis	1%

Horizontal wells drilled 1,369

Directional wells drilled 108

Vertical wells drilled 1,109

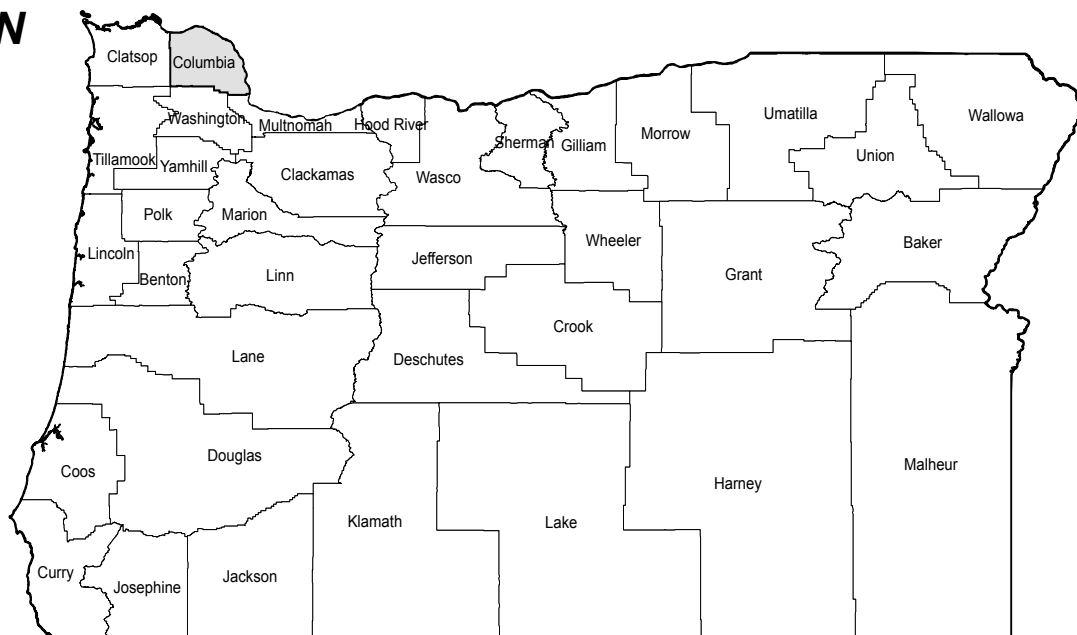
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	273 Mmcft
CNG stations	68
LNG stations	1
LPG stations	149

### Average number of employees

Oil and natural gas extraction	49,862
Refining	2,278
Transportation	6,355
Wholesale	2,918
Retail	14,673
Pipeline construction	2,981
Oilfield machinery	8,168
Total petroleum industry	87,235

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	36
With oil and/or gas production	1

First year of production	
Crude oil	NA
Natural gas	1979

Year and amount of peak production	
Crude oil —	NA
Natural gas — 5,000 MMcf	1980/81

Deepest producing well (ft.)	
Crude oil	NA
Natural gas	3,747

Year and depth of deepest well drilled (ft.)	
1979	13,177

Cumulative number of total wells drilled		
(as of 12/31/11 - excluding service wells)		
Oil wells	NA	NA
Gas wells	80	19.8%
Dry holes	324	80.2%
Total	404	100%

Cumulative crude oil wellhead value	
(as of 12/31/11 - thous. \$)	NA

Cumulative production & new reserves				
(as of 12/31/11)				
	Crude Oil	NGL	Total	Natural Gas
	(mill. bbls.)			(Bcf)
Reserves	NA	NA	NA	NA
Production	NA	NA	NA	72

## Value of Oil and Gas

Average wellhead/City Gate price	
(2011)	
Crude oil (\$/bbl.)	NA
Natural gas (\$/Mcf)*	\$5.84

Wellhead/City Gate value of production	
(2011 in thous. \$)	
Crude oil	NA
Natural gas*	\$7,849
Total	\$7,849

Average natural gas price	
(2011 \$/Mcf)	
Residential consumers	\$11.76
Commercial consumers	\$9.60
Industrial consumers	\$6.84
Electric utilities	NA
City Gate	\$5.84

Severance taxes paid	\$370
(2011 in thous. \$)	

Top producing counties	
(2011 on a BOE basis)	
County	% Production
	State US
Columbia	100 <0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### 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

NA

### Footage (thous. ft.)

NA

### Average rotary rigs active

1

### Permits

4

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	NA	27th
Production	NA	30th
Reserves (2011)	NA	NA

### Number of operators

2

### Number of producing wells

(12/31/11)

Crude oil	0
Natural gas	27
Total	27

### Average production

Crude oil (thous. b/d)	0
NGL (thous. b/d)	0
Natural gas (MMcf/day)	4.0

### Total production

Crude oil (YTD bbls, in thous.)	0
Natural gas (YTD MMcf)	1,343

### Natural gas marketed production

(MMcf)	1,344
--------	-------

### Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	49,741

### Coalbed methane (YTD MMcf)

NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	18
Natural gas production (MMcf)	214

### Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	\$501,367
Total Oil and Gas Revenues	\$501,367
Total Federal Reported Revenues	\$768,735
Oil and Gas Percent of Total	65%

### Federal lands production shares

Oil	--
Natural Gas	--
Combined on BOE basis	--

### Horizontal wells drilled

0

### Directional wells drilled

0

### Vertical wells drilled

0

### Natural gas vehicle fuel demand & fueling stations

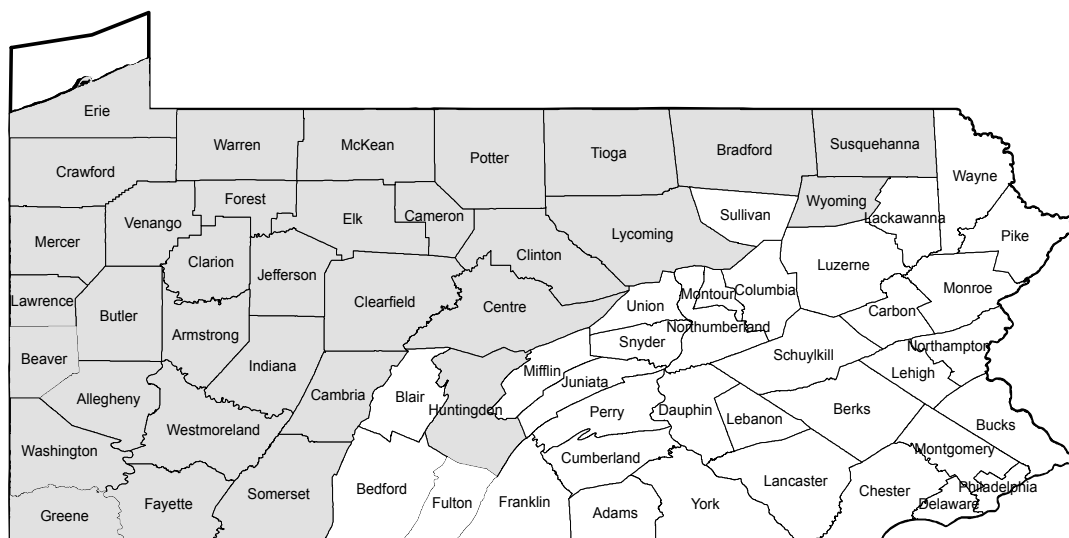
Natural gas vehicle demand	206 Mmcft
CNG stations	12
LNG stations	3
LPG stations	32

### Average number of employees

Oil and natural gas extraction	83
Refining	429
Transportation	0
Wholesale	1,442
Retail	9,684
Pipeline construction	797
Oilfield machinery	0
Total petroleum industry	12,435

Source: For specific methodology and source details, please see pages 7 and 132

# PENNSYLVANIA



○ Counties with oil and/or gas production

## Background Information

### Counties

Number of counties	67
With oil and/or gas production	33

### First year of production

Crude oil	1859
Natural gas	1881

### Year and amount of peak production

Crude oil — 31,424 thous. bbls.	1891
Natural gas — 1,310,592 MMcf	2011

### Deepest producing well (ft.)

Crude oil	10,030
Natural gas	27,696

### Year and depth of deepest well drilled (ft.)

1901	22,568
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	61,721	42.0%
Gas wells	78,240	53.2%
Dry holes	7,096	4.8%
Total	147,057	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$6,614,196

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL	Total	Natural Gas
	(mill. bbls.)	(mill. bbls.)		(Bcf)
Reserves	1,390	143	1,533	41,934
Production	1,367	8	1,375	15,595

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$87.16
Natural gas (\$/Mcf)*	\$6.28

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$295,298
Natural gas*	\$8,230,518
Total	\$8,525,816

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$12.46
Commercial consumers	\$10.42
Industrial consumers	\$9.86
Electric utilities	\$4.85
City Gate	\$6.28

### Severance taxes paid

(2011 in thous. \$)

--

### Top producing counties

(2011 on a BOE basis)

County	State	US
Bradford	22.89	0.84
Susquehanna	15.90	0.58
Greene	10.99	0.40
Tioga	10.36	0.38
Washington	9.88	0.36
Lycoming	6.67	0.24
Westmoreland	3.12	0.11
Fayette	2.88	0.11
Indiana	2.64	0.10
Clearfield	1.85	0.07

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	10	884	894
Gas	237	1,418	1,655
Dry	7	44	51
Total	254	2,346	2,600

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	16.19	1,488.47	1,504.66
Gas	2,256.17	13,103.59	15,359.76
Dry	24.62	102.11	126.73
Total	2,296.98	14,694.16	16,991.15

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 145

Footage (thous. ft.) 1,354.81

Average rotary rigs active 110

Permits 5,315

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	7th	3rd
Production	20th	7th
Reserves (2011)	20th	5th

Number of operators 336

### Number of producing wells

(12/31/11)

Crude oil	8,590
Natural gas	45,646
Total	54,236

### Average production

Crude oil (thous. b/d)	3
NGL (thous. b/d)	5
Natural gas (MMcf/day)	3,325

### Total production

Crude oil (YTD bbls, in thous.)	979
Natural gas (YTD MMcf)	1,213,565

### Natural gas marketed production

(MMcf)	1,310,592
--------	-----------

Shale gas production 1,068 Bcf

### Average output per producing well

Crude oil (bbls.)	114
Natural gas (Mcf)	26,586

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	13	62	75
Production	3	7	10
Net annual change	10	62	72
Proved reserves	44	143	187

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	4	13,904	13,817
Production	14	1,696	1,248
Net annual change	-10	810	12,839
Proved reserves	134	27,683	26,529

### Marginal oil wells

Producing marginal wells	7,859
Crude oil production in Bbls. (thous.)	943
Crude oil production Bbls./d (thous.)	3

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	43,129
Natural gas production (MMcf)	129,602

### Mineral lease royalties, bonuses & rent

Oil	\$33,577
Natural Gas	\$60,633
Rent, Bonuses & Other	\$9,421
Total Oil and Gas Revenues	\$103,631
Total Federal Reported Revenues	\$103,631
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	<1%
Natural Gas	<1%
Combined on BOE basis	<1%

Horizontal wells drilled 1,240

Directional wells drilled 9

Vertical wells drilled 1,346

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	330 Mmcft
CNG stations	37
LNG stations	3
LPG stations	74

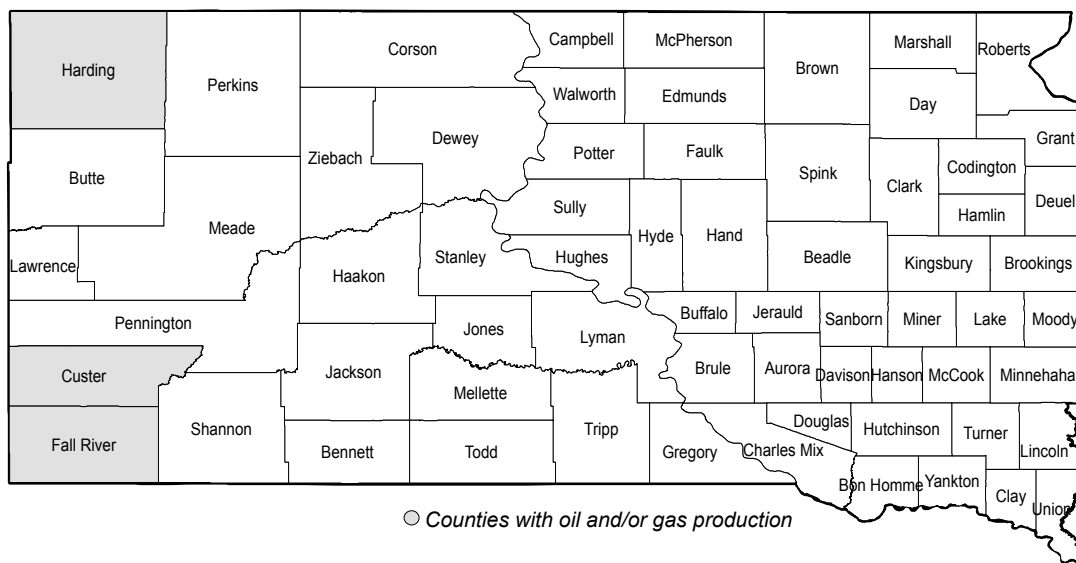
### Average number of employees

Oil and natural gas extraction	17,993
Refining	6,306
Transportation	5,890
Wholesale	10,059
Retail	37,836
Pipeline construction	5,943
Oilfield machinery	362
Total petroleum industry	84,389

Source: For specific methodology and source details, please see pages 7 and 132



# SOUTH DAKOTA



## Background Information

Counties	
Number of counties	66
With oil and/or gas production	3

### First year of production

Crude oil	1954
Natural gas	1979

### Year and amount of peak production

Crude oil — 1,697 thous. bbls. **	2008
Natural gas — 4,369 MMcf	1989

### Deepest producing well (ft.)

Crude oil	17,719
Natural gas	11,352

### Year and depth of deepest well drilled (ft.)

2011	17,719
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	488	25.3%
Gas wells	164	8.5%
Dry holes	1,280	66.2%
Total	1,932	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$1,541,958

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL	Total	Natural Gas
	(mill. bbls.)			(Bcf)
Reserves	NA	NA	NA	NA
Production	NA	NA	NA	NA

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$87.08
Natural gas (\$/Mcf)*	\$5.21

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$140,634
Natural gas*	\$9,628
Total	\$150,262

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$8.59
Commercial consumers	\$6.98
Industrial consumers	\$6.25
Electric utilities	\$5.03
City Gate	\$5.21

### Severance taxes paid

(2011 in thous. \$)

\$5,558

### Top producing counties

(2011 on a BOE basis)

County	State	% Production
	US	
Harding	98.57	0.03
Fall River	1.32	<0.01
Custer	0.10	<0.01

\*City Gate price used for natural gas.

\*\* State data

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	1	14	15
Gas	NA	NA	NA
Dry	4	1	5
Total	5	15	20

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	3.30	111.63	114.93
Gas	NA	NA	NA
Dry	6.49	2.15	8.64
Total	9.79	113.78	123.56

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 5

Footage (thous. ft.) 9.79

Average rotary rigs active 1

Permits 28

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	27th	NA
Production	26th	29th
Reserves (2011)	NA	NA

Number of operators 18

### Number of producing wells

(12/31/11)

Crude oil	156
Natural gas	98
Total	254

### Average production

Crude oil (thous. b/d)	4
NGL (thous. b/d)	0
Natural gas (MMcf/day)	3

### Total production

Crude oil (YTD bbls, in thous.)	1,617
Natural gas (YTD MMcf)	1,035

### Natural gas marketed production

(MMcf)	1,848
--------	-------

### Average output per producing well

Crude oil (bbls.)	10,365
Natural gas (Mcf)	10,561

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	60
Crude oil production in Bbls. (thous.)	162
Crude oil production Bbls./d (thous.)	<1

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	89
Natural gas production (MMcf)	535

### Mineral lease royalties, bonuses & rent

Oil	\$1,687,289
Natural Gas	\$98,818
Rent, Bonuses & Other	\$201,696
Total Oil and Gas Revenues	\$1,987,803
Total Federal Reported Revenues	\$1,987,803
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	10%
Natural Gas	12%
Combined on BOE basis	11%

Horizontal wells drilled 14

Directional wells drilled 0

Vertical wells drilled 6

### Natural gas vehicle fuel demand & fueling stations

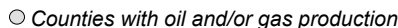
Natural gas vehicle demand	1 Mmcf
CNG stations	--
LNG stations	--
LPG stations	18

### Average number of employees

Oil and natural gas extraction	146
Refining	12
Transportation	248
Wholesale	1,155
Retail	5,778
Pipeline construction	31
Oilfield machinery	0
Total petroleum industry	7,370

Source: For specific methodology and source details, please see pages 7 and 132

# TENNESSEE



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## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	2	31	33
Gas	8	15	23
Dry	1	39	40
Total	11	85	96

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	4.37	47.59	51.97
Gas	53.36	103.40	156.76
Dry	1.85	61.22	63.07
Total	59.58	212.12	271.80

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 2

Footage (thous. ft.) 12.35

Average rotary rigs active 0

Permits 162

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	25th	21st
Production	29th	26th
Reserves (2011)	NA	NA

Number of operators --

### Number of producing wells

(12/31/11)

Crude oil	265
Natural gas	230
Total	495

### Average production

Crude oil (thous. b/d)	NA
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	NA

### Total production

Crude oil (YTD bbls, in thous.)**	245
Natural gas (YTD MMcf)***	4,903

### Natural gas marketed production

(MMcf)	4,851
--------	-------

### Average output per producing well

Crude oil (bbls.)	1,031
Natural gas (Mcf)	NA

### Coalbed methane (YTD MMcf)

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

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

### Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	NA
Natural gas production (MMcf)	NA

### Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	--
Rent, Bonuses & Other	--
Total Oil and Gas Revenues	--
Total Federal Reported Revenues	--
Oil and Gas Percent of Total	--

### Federal lands production shares

Oil	0%
Natural Gas	0%
Combined on BOE basis	0%

Horizontal wells drilled 22

Directional wells drilled 0

Vertical wells drilled 74

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	15 Mmcft
CNG stations	10
LNG stations	2
LPG stations	89

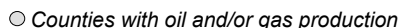
### Average number of employees

Oil and natural gas extraction	328
Refining	534
Transportation	2,075
Wholesale	3,305
Retail	20,835
Pipeline construction	714
Oilfield machinery	0
Total petroleum industry	27,791

Source: For specific methodology and source details, please see pages 7 and 132

\*\* EIA data

\*\*\* State data



## Value of Oil and Gas

## Average wellhead/City Gate price

Crude oil (\$/bbl.)	\$91.99
Natural gas (\$/Mcf)*	\$5.39

## Wellhead/City Gate value of production

(2011 in thous. \$)	
Crude oil	\$46,008,717
Natural gas*	\$38,338,332
Total	\$84,347,049

## Average natural gas price

(2011 \$/Mcf)	
Residential consumers	\$10.21
Commercial consumers	\$7.07
Industrial consumers	\$4.20
Electric utilities	\$4.36
City Gate	\$5.39

Severance taxes paid - FY	\$2,677,552
(2011 in thous. \$)	

### Top 10 producing counties

(2011 on a BOE basis)

County	% Production	
	State	US
Tarrant	7.96	2.28
Johnson	5.58	1.60
Webb	3.71	1.06
Panola	2.95	0.85
Denton	2.74	0.79
Wise	2.64	0.76
Wheeler	2.60	0.75
Freestone	2.52	0.72
Pecos	2.15	0.62
Robertson	2.04	0.59

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	65	9,497	9,562
Gas	41	4,011	4,052
Dry	155	1,118	1,273
Total	261	14,626	14,887

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	494.89	79,731.49	80,226.38
Gas	343.40	49,314.72	49,658.12
Dry	1,180.87	7,450.05	8,630.92
Total	2,019.16	136,496.26	138,515.42

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 189

Footage (thous. ft.) 1,447.88

Average rotary rigs active 838

Permits 24,616

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	1st	1st
Production	1st	1st
Reserves (2011)	1st	1st

Number of operators 4,707

### Number of producing wells

(12/31/11)

Crude oil	169,174
Natural gas	104,986
Total	274,160

### Average production

Crude oil (thous. b/d)	1,223
NGL (thous. b/d)	212
Natural gas (MMcf/day)	18,785

### Total production

Crude oil (YTD bbls, in thous.)	446,532
Natural gas (YTD MMcf)	6,856,592

### Natural gas marketed production

(MMcf)	7,112,863
--------	-----------

Shale gas production 2,900 Bcf

### Average output per producing well

Crude oil (bbls.)	2,639
Natural gas (Mcf)	65,310

### Coalbed methane (YTD MMcf)

	72
Oil Wells	0
Gas Wells	6
Daily Average (MMcf) / Well	0.2

### Heavy oil (YTD Bbls, in thous.)

	NA
Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	2,286	558	970
Production	534	340	874
Net annual change	1,752	558	2,310
Proved reserves	8,108	4,541	12,649

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	4,240	13,538	16,307
Production	863	6,748	7,139
Net annual change	3,377	6,790	9,168
Proved reserves	13,507	90,947	98,165

### Marginal oil wells

Producing marginal wells	154,489
Crude oil production in Bbls. (thous.)	158,156
Crude oil production Bbls./d (thous.)	433

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	64,788
Natural gas production (MMcf)	715,654

### Mineral lease royalties, bonuses & rent

Oil	\$10,201,664
Natural Gas	\$22,229,254
Rent, Bonuses & Other	\$19,514,442
Total Oil and Gas Revenues	\$51,945,361
Total Federal Reported Revenues	\$51,945,361
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	<1%
Natural Gas	1%
Combined on BOE basis	1%

Horizontal wells drilled 5,376

Directional wells drilled 611

Vertical wells drilled 8,900

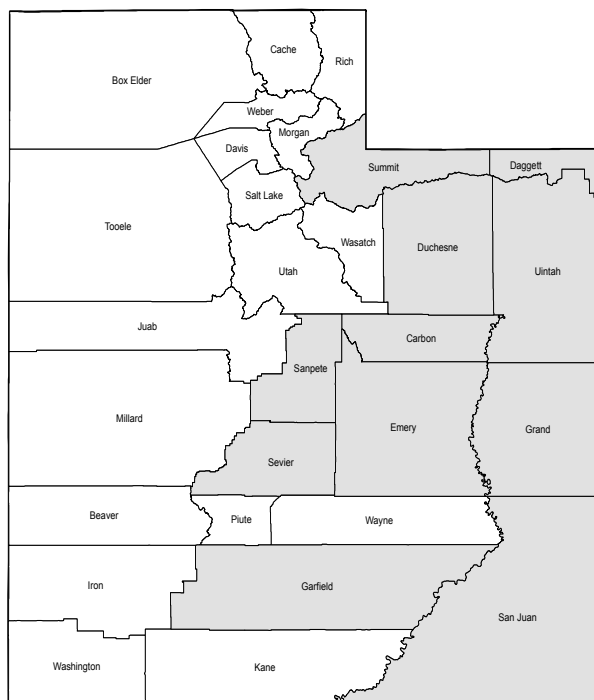
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	2,626 Mmcft
CNG stations	54
LNG stations	16
LPG stations	460

### Average number of employees

Oil and natural gas extraction	233,494
Refining	24,508
Transportation	23,972
Wholesale	16,633
Retail	71,069
Pipeline construction	33,372
Oilfield machinery	46,059
Total petroleum industry	449,107

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	29
With oil and/or gas production	11

### First year of production

Crude oil	1907
Natural gas	1886

### Year and amount of peak production

Crude oil — 42,301 thous. bbls.	1975
Natural gas — 457,525 MMcf	2011

### Deepest producing well (ft.)

Crude oil	20,600
Natural gas	18,510

### Year and depth of deepest well drilled (ft.)

1982	21,874
------	--------

### Cumulative number of total wells drilled

(as of 12/31/11 - excluding service wells)

Oil wells	9,152	39.2%
Gas wells	9,055	38.8%
Dry holes	5,129	22%
Total	23,336	100%

### Cumulative crude oil wellhead value

(as of 12/31/11 - thous. \$) \$26,585,918

### Cumulative production & new reserves

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	1,763	1,981	3,744	16,303
Production	1,297	491	1,788	8,386

## Value of Oil and Gas

### Average wellhead/City Gate price

(2011)

Crude oil (\$/bbl.)	\$82.53
Natural gas (\$/Mcf)*	\$5.68

### Wellhead/City Gate value of production

(2011 in thous. \$)

Crude oil	\$2,192,398
Natural gas*	\$2,598,742
Total	\$4,791,140

### Average natural gas price

(2011 \$/Mcf)

Residential consumers	\$8.44
Commercial consumers	\$7.05
Industrial consumers	\$5.50
Electric utilities	NA
City Gate	\$5.68

### Severance taxes paid

(2011 in thous. \$) \$65,640

### Top 10 producing counties

(2011 on a BOE basis)

County	% Production
State	US
Uintah	57.94 0.96
Carbon	16.33 0.27
Duchesne	12.98 0.22
San Juan	5.32 0.09
Sevier	2.74 0.05
Emery	2.25 0.04
Summit	1.26 0.02
Grand	0.81 0.01
Garfield	0.18 <0.01
Daggett	0.16 <0.01

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	54	389	443
Gas	5	422	427
Dry	12	11	23
Total	71	822	893

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	421.07	2,858.26	3,279.32
Gas	39.57	3,898.97	3,938.54
Dry	61.33	5.20	66.53
Total	521.97	6,762.42	7,284.39

(Note: Totals may not add due to rounding.)

### New-field wildcats drilled

39

### Footage (thous. ft.)

294.95

### Average rotary rigs active

28

### Permits

1,670

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	9th	9th
Production	12th	10th
Reserves (2011)	9th	12th

### Number of operators

118

### Number of producing wells

(12/31/11)

Crude oil	4,146
Natural gas	6,893
Total	11,039

### Average production

Crude oil (thous. b/d)	64
NGL (thous. b/d)	8.0
Natural gas (MMcf/day)	1,127

### Total production

Crude oil (YTD bbls, in thous.)	23,359
Natural gas (YTD MMcf)	411,516

### Natural gas marketed production

(MMcf)	457,525
--------	---------

### Average output per producing well

Crude oil (bbls.)	5,634
Natural gas (Mcf)	59,701

### Coalbed methane (YTD MMcf)

52,546

Oil Wells	2
Gas Wells	877
Daily Average (MMcf) / Well	143.72

### Heavy oil (YTD Bbls, in thous.)

163

Wells	19
Av. bbls per day (in thous.)	0.45
Av. bbls per well	8,601

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	91	64	155
Production	27	11	38
Net annual change	64	64	128
Proved reserves	582	196	778

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	328	1,097	1,325
Production	50	413	449
Net annual change	278	684	876
Proved reserves	909	7,199	7,857

### Marginal oil wells

Producing marginal wells	2,952
Crude oil production in Bbls. (thous.)	6,244
Crude oil production Bbls./d (thous.)	17

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	3,487
Natural gas production (MMcf)	51,297

### Mineral lease royalties, bonuses & rent

Oil	\$248,455,678
Natural Gas	\$130,822,897
Rent, Bonuses & Other	\$7,961,970
Total Oil and Gas Revenues	\$387,240,545
Total Federal Reported Revenues	\$431,670,341
Oil and Gas Percent of Total	90%

### Federal lands production shares

Oil	42%
Natural Gas	61%
Combined on BOE basis	56%

### Horizontal wells drilled

27

### Directional wells drilled

566

### Vertical wells drilled

300

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	228 Mmcft
CNG stations	82
LNG stations	2
LPG stations	26

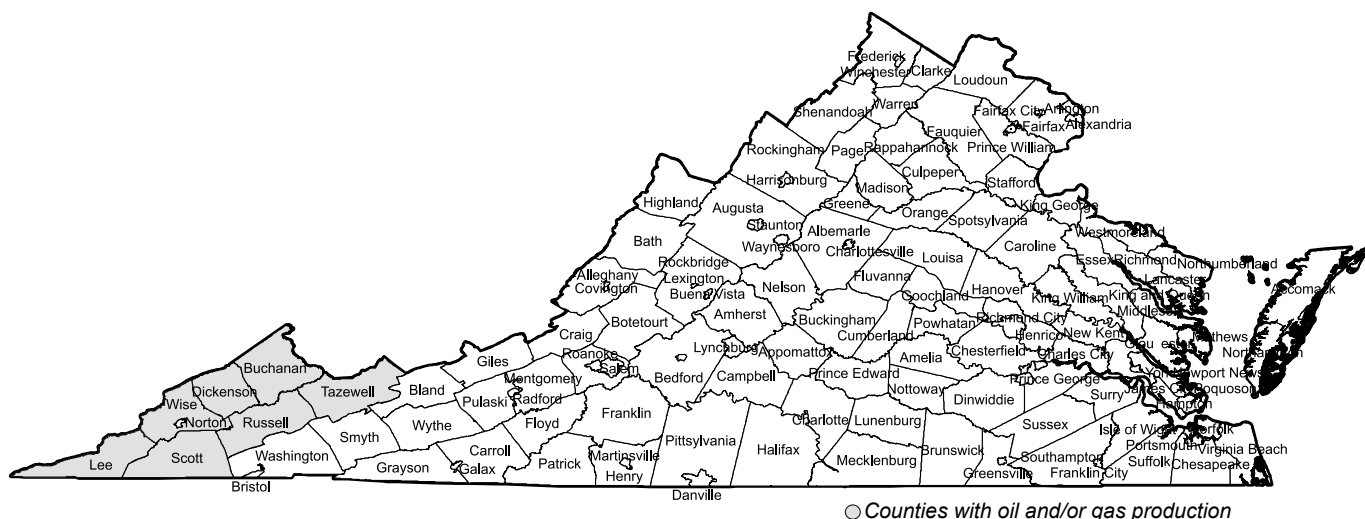
### Average number of employees

Oil and natural gas extraction	5,834
Refining	992
Transportation	1,142
Wholesale	947
Retail	8,742
Pipeline construction	1,590
Oilfield machinery	381
Total petroleum industry	19,628

Source: For specific methodology and source details, please see pages 7 and 132

UTAH





## Background Information

Counties	
Number of counties	95
With oil and/or gas production	7

First year of production	
Crude oil	1943
Natural gas	1931

Year and amount of peak production	
Crude oil — 65 thous. bbls.	1983
Natural gas — 151,094 MMcf	2011

Deepest producing well (ft.)	
Crude oil	NA
Natural gas	10,134

Year and depth of deepest well drilled (ft.)	
1977	17,003

Cumulative number of total wells drilled		
(as of 12/31/11 - excluding service wells)		
Oil wells	156	1.7%
Gas wells	8,694	94.6%
Dry holes	338	3.7%
Total	9,188	100%

Cumulative crude oil wellhead value (as of 12/31/11 - thous. \$)	\$11,097
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Cumulative production & new reserves				
(as of 12/31/11)				
	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	NA	NA	NA	4,155
Production	NA	NA	NA	1,931

## Value of Oil and Gas

Average wellhead/City Gate price (2011)	
Crude oil (\$/bbl.)	NA
Natural gas (\$/Mcf)*	\$6.64

Wellhead/City Gate value of production (2011 in thous. \$)	
Crude oil	NA
Natural gas*	\$1,003,264
Total	\$1,003,264

Average natural gas price (2011 \$/Mcf)	
Residential consumers	\$12.72
Commercial consumers	\$9.69
Industrial consumers	\$6.44
Electric utilities	\$5.08
City Gate	\$6.64

Severance taxes paid (2011 in thous. \$)	--
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Top producing counties (2011 on a BOE basis)	
County	% Production
Buchanan	53.45
Dickenson	22.79
Tazewell	9.81
Russell	7.83
Wise	5.91
Lee	0.12
Scott	0.09

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	389	389
Dry	NA	NA	NA
Total	NA	389	389

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	NA	NA	NA
Gas	NA	1,178.63	1,178.63
Dry	NA	NA	NA
Total	NA	1,178.63	1,178.63

(Note: Totals may not add due to rounding.)

### New-field wildcats drilled

NA

### Footage (thous. ft.)

NA

### Average rotary rigs active

1

### Permits

367

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	30th	10th
Production	32nd	16th
Reserves (2011)	NA	14th

### Number of operators\*

20

### Number of producing wells

(12/31/11)

Crude oil	0
Natural gas	7,747
Total	7,747

### Average production

Crude oil (thous. b/d)	NA
NGL (thous. b/d)	NA
Natural gas (MMcf/day)	412

### Total production

Crude oil (YTD bbls, in thous.)	NA
Natural gas (YTD MMcf)	150,404

### Natural gas marketed production

(MMcf)	151,094
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### Average output per producing well

Crude oil (bbls.)	NA
Natural gas (Mcf)	19,415

### Coalbed methane (YTD MMcf)

NA

Oil Wells	NA
Gas Wells	NA
Daily Average (MMcf) / Well	NA

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude 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 reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	0	-227	-227
Production	0	156	156
Net annual change	0	-383	-383
Proved reserves	0	2,832	2,832

### Marginal oil wells

Producing marginal wells	NA
Crude oil production in Bbls. (thous.)	NA
Crude oil production Bbls./d (thous.)	NA

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	6,542
Natural gas production (MMcf)	86,220

### Mineral lease royalties, bonuses & rent

Oil	--
Natural Gas	\$77,643
Rent, Bonuses & Other	\$25,222
Total Oil and Gas Revenues	\$102,865
Total Federal Reported Revenues	\$209,786
Oil and Gas Percent of Total	49%

### Federal lands production shares

Oil	0%
Natural Gas	<1%
Combined on BOE basis	<1%

### Horizontal wells drilled

25

### Directional wells drilled

0

### Vertical wells drilled

363

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	160 Mmcft
CNG stations	12
LNG stations	1
LPG stations	58

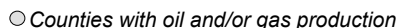
### Average number of employees

Oil and natural gas extraction	1,669
Refining	547
Transportation	1,732
Wholesale	4,385
Retail	29,511
Pipeline construction	1,934
Oilfield machinery	0
Total petroleum industry	39,778

Source: For specific methodology and source details, please see pages 7 and 132

\* State data

# West Virginia



## Value of Oil and Gas

## Average wellhead/City Gate price

Crude oil (\$/bbl.)	\$86.56
Natural gas* (\$/Mcf)	\$5.91

## Wellhead/City Gate value of production

(2011 in thous. \$)	
Crude oil	\$185,758
Natural gas*	\$2,329,279
Total	\$2,515,037

## Average natural gas price

(2011 \$/Mcf)	
Residential consumers	\$10.91
Commercial consumers	\$9.65
Industrial consumers	\$4.89
Electric utilities	\$4.87
City Gate	\$5.91

Severance taxes paid	\$72,947
----------------------	----------

(2011 in thous. \$)

### Top 10 producing counties

(2011 on a BOE basis)

County	% Production
--------	--------------

	State	US
Harrison	19.27	0.23
Wetzel	9.87	0.12
Doddridge	9.65	0.11
Marshall	7.78	0.09
Upshur	4.91	0.06
Logan	4.22	0.05
Wyoming	4.07	0.05
Mingo	3.68	0.04
Kanawha	3.49	0.04
McDowell	3.41	0.04

\*City Gate price used for natural gas.

(as of 12/31/11 - thous. \$) \$3,481,402

(as of 12/31/11)

	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	639	541	1,180	31,690
Production	622	437	1,059	21,499

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	NA	19	19
Gas	25	435	460
Dry	4	14	18
Total	29	468	497

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	NA	66.38	66.38
Gas	249.89	3,460.45	3,710.34
Dry	25.80	43.17	68.96
Total	275.68	3,570.00	3,845.68

(Note: Totals may not add due to rounding.)

### New-field wildcats drilled

20

### Footage (thous. ft.)

189.43

### Average rotary rigs active

21

### Permits

945

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	26th	8th
Production	23rd	11th
Reserves (2011)	19th	10th

### Number of operators

601

### Number of producing wells

(12/31/11)

Crude oil	2,671
Natural gas	49,682
Total	52,353

### Average production

Crude oil (thous. b/d)	3
NGL (thous. b/d)	3
Natural gas (MMcf/day)	1,062

### Total production

Crude oil (YTD bbls, in thous.)	916
Natural gas (YTD MMcf)	387,479

### Natural gas marketed production

(MMcf)	394,125
--------	---------

### Shale gas production

192 Bcf

### Average output per producing well

Crude oil (bbls.)	343
Natural gas (Mcf)	7,799

### Coalbed methane (YTD MMcf)

1,835

Oil Wells	0
Gas Wells	104
Daily Average (MMcf) / Well	5.03

### Heavy oil (YTD Bbls, in thous.)

NA

Wells	NA
Av. bbls per day (in thous.)	NA
Av. bbls per well	NA

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	32	18	50
Production	2	5	7
Net annual change	30	18	48
Proved reserves	919	140	1,059

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	26	3,745	3,740
Production	3	399	395
Net annual change	23	3,346	3,345
Proved reserves	52	10,480	10,345

### Marginal oil wells

Producing marginal wells	2,243
Crude oil production in Bbls. (thous.)	624
Crude oil production Bbls./d (thous.)	2

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	48,403
Natural gas production (MMcf)	176,331

### Mineral lease royalties, bonuses & rent

Oil	\$174
Natural Gas	\$384,502
Rent, Bonuses & Other	\$422,051
Total Oil and Gas Revenues	\$806,727
Total Federal Reported Revenues	\$806,727
Oil and Gas Percent of Total	100%

### Federal lands production shares

Oil	<1%
Natural Gas	<1%
Combined on BOE basis	<1%

### Horizontal wells drilled

247

### Directional wells drilled

0

### Vertical wells drilled

249

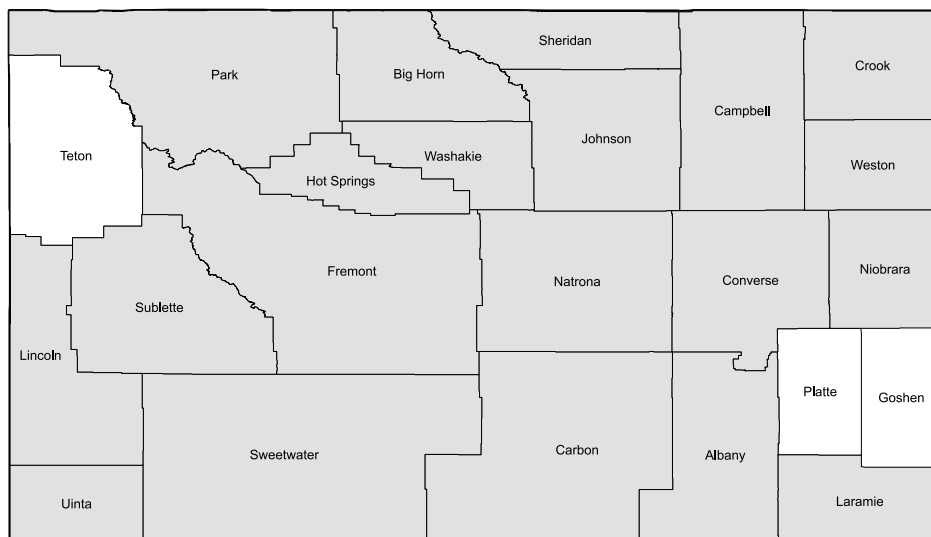
### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	--
CNG stations	--
LNG stations	--
LPG stations	12

### Average number of employees

Oil and natural gas extraction	6,051
Refining	919
Transportation	2,245
Wholesale	973
Retail	9,409
Pipeline construction	1,924
Oilfield machinery	0
Total petroleum industry	21,521

Source: For specific methodology and source details, please see pages 7 and 132



○ Counties with oil and/or gas production

## Background Information

Counties	
Number of counties	23
With oil and/or gas production	20

First year of production	
Crude oil	1894
Natural gas	1889

Year and amount of peak production	
Crude oil — 160,345 thous. bbls.	1970
Natural gas — 2,335,328 MMcf	2009

Deepest producing well (ft.)	
Crude oil	22,265
Natural gas	25,175

Year and depth of deepest well drilled (ft.)	
2001	25,830

Cumulative number of total wells drilled		
(as of 12/31/11 - excluding service wells)		
Oil wells	34,887	30.2%
Gas wells	49,973	43.3%
Dry holes	30,588	26.5%
Total	115,448	100%

Cumulative crude oil wellhead value	
(as of 12/31/11 - thous. \$)	\$88,675,801

Cumulative production & new reserves				
(as of 12/31/11)				
	Crude Oil	NGL (mill. bbls.)	Total	Natural Gas (Bcf)
Reserves	7,471	2,782	10,253	75,177
Production	6,949	1,620	8,569	42,023

## Value of Oil and Gas

Average wellhead/City Gate price	
(2011)	
Crude oil (\$/bbl.)	\$83.45
Natural gas (\$/Mcf)*	\$4.65

Wellhead/City Gate value of production	
(2011 in thous. \$)	
Crude oil	\$4,565,550
Natural gas*	\$10,041,312
Total	\$14,606,862

Average natural gas price	
(2011 \$/Mcf)	
Residential consumers	\$8.72
Commercial consumers	\$7.29
Industrial consumers	\$5.57
Electric utilities	NA
City Gate	\$4.65

Severance taxes paid	\$657,802
(2011 in thous. \$)	

Top 10 producing counties		
(2011 on a BOE basis)		
County	% Production	
	State	US
Sublette	45.84	3.41
Johnson	12.92	0.96
Sweetwater	8.88	0.66
Fremont	7.32	0.54
Campbell	7.01	0.52
Carbon	4.14	0.31
Lincoln	2.72	0.20
Uinta	2.46	0.18
Natrona	1.94	0.14
Sheridan	1.84	0.14

\*City Gate price used for natural gas.

## 2011 Industry Statistics

### Number of wells drilled

	Exploratory	Development	Total
Oil	53	226	279
Gas	8	1,169	1,177
Dry	28	82	110
Total	89	1,477	1,566

### Total footage drilled

(thous. ft.)

	Exploratory	Development	Total
Oil	652.49	1,625.90	2,278.39
Gas	85.15	10,367.61	10,452.76
Dry	174.66	309.98	484.64
Total	912.30	12,303.49	13,215.79

(Note: Totals may not add due to rounding.)

New-field wildcats drilled 78

Footage (thous. ft.) 789.96

Average rotary rigs active 48

Permits 2,812

### Statewide rank

	Crude Oil	Natural Gas
Wells drilled	12th	4th
Production	9th	3rd
Reserves (2011)	8th	2nd

Number of operators 413

### Number of producing wells

(12/31/11)

Crude oil	11,479
Natural gas	30,596
Total	42,075

### Average production

Crude oil (thous. b/d)	114
NGL (thous. b/d)	34
Natural gas (MMcf/day)	6,081

### Total production

Crude oil (YTD bbls, in thous.)	41,767
Natural gas (YTD MMcf)	2,219,664

### Natural gas marketed production

(MMcf)	2,159,422
--------	-----------

### Average output per producing well

Crude oil (bbls.)	3,639
Natural gas (Mcf)	72,548

Coalbed methane (YTD MMcf) 499,195

Oil Wells	4
Gas Wells	16,579
Daily Average (MMcf) / Well	1,367.66

Heavy oil (YTD Bbls, in thous.) 8,519

Wells	1,967
Av. bbls per day (in thous.)	23.34
Av. bbls per well	4,331

## 2011 Latest Available Data

### Petroleum reserves

(as of 12/31/11) (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	151	121	272
Production	55	66	121
Net annual change	96	121	217
Proved reserves	919	1,122	2,041

### Natural gas reserves

(as of 12/31/11) (Bcf)

	Associated Dissolved	Non- Associated	Dry Gas
New reserves	18	2,571	2,304
Production	34	2,151	2,088
Net annual change	-16	420	216
Proved reserves	318	36,612	35,290

### Marginal oil wells

Producing marginal wells	9,087
Crude oil production in Bbls. (thous.)	12,693
Crude oil production Bbls./d (thous.)	35

### Marginal natural gas wells

(as of 12/31/11)

Producing marginal wells	16,662
Natural gas production (MMcf)	156,722

### Mineral lease royalties, bonuses & rent

Oil	\$396,661,824
Natural Gas	\$693,215,380
Rent, Bonuses & Other	\$81,933,001
Total Oil and Gas Revenues	\$1,171,810,205
Total Federal Reported Revenues	\$1,994,293,170
Oil and Gas Percent of Total	59%

### Federal lands production shares

Oil	60%
Natural Gas	72%
Combined on BOE basis	70%

Horizontal wells drilled 145

Directional wells drilled 703

Vertical wells drilled 718

### Natural gas vehicle fuel demand & fueling stations

Natural gas vehicle demand	418 Mmcft
CNG stations	8
LNG stations	2
LPG stations	19

### Average number of employees

Oil and natural gas extraction	17,043
Refining	1,001
Transportation	993
Wholesale	777
Retail	3,688
Pipeline construction	2,904
Oilfield machinery	0
Total petroleum industry	26,406

Source: For specific methodology and source details, please see pages 7 and 132

# ROTARY RIGS OPERATING

ROTARY RIGS OPERATING

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	3	3	3	4	5	5	4	4	5	7
Alaska	11	10	10	9	8	8	8	8	8	7
Arizona	0	0	0	0	0	0	0	0	0	0
Arkansas	1	2	6	9	24	45	50	44	39	34
California	23	22	24	27	33	35	41	23	32	45
Colorado	28	39	54	74	89	107	114	50	58	72
Florida	0	1	1	2	0	0	1	1	1	1
Hawaii	NA	NA	NA	1	0	0	0	1	0	0
Illinois	0	0	0	0	0	0	0	1	2	1
Indiana	0	0	0	0	0	2	2	2	3	1
Iowa	1	1	0	0	0	0	0	0	0	0
Kansas	8	9	7	7	10	14	11	20	20	29
Kentucky	5	4	5	5	7	9	10	10	6	5
Louisiana	163	157	167	182	189	177	167	151	192	165
Maryland	0	0	0	0	0	1	0	0	0	0
Michigan	1	3	3	3	2	1	1	0	0	2
Mississippi	8	8	10	10	10	14	13	10	11	9
Montana	8	14	20	24	21	17	11	3	7	9
Nebraska	0	0	1	0	0	0	0	0	2	1
Nevada	0	1	2	2	1	2	3	3	6	3
New Mexico	42	65	67	83	94	78	79	44	62	79
New York	4	3	5	4	6	6	6	2	1	0
North Dakota	10	14	15	20	32	39	68	50	114	168
Ohio	9	8	7	9	8	13	12	8	7	11
Oklahoma	91	129	159	152	179	188	200	94	128	180
Oregon	0	0	0	0	0	0	1	0	0	1
Pennsylvania	11	10	9	13	16	16	23	42	85	110
South Dakota	0	0	1	2	1	1	2	0	1	1
Tennessee	0	0	0	0	1	5	4	2	0	0
Texas	338	449	506	615	746	834	898	433	662	841
Utah	13	14	22	28	40	41	42	18	27	28
Virginia	2	1	1	2	1	3	5	4	2	1
Washington	0	0	0	0	1	0	1	1	0	0
West Virginia	13	16	15	17	26	32	27	22	23	21
Wyoming	40	54	74	78	99	74	74	40	40	48
<b>TOTAL U.S.</b>	<b>830</b>	<b>1,032</b>	<b>1,192</b>	<b>1,383</b>	<b>1,649</b>	<b>1,768</b>	<b>1,879</b>	<b>1,089</b>	<b>1,546</b>	<b>1,879</b>
<b>ONSHORE</b>	<b>716</b>	<b>923</b>	<b>1,095</b>	<b>1,290</b>	<b>1,559</b>	<b>1,695</b>	<b>1,814</b>	<b>1,045</b>	<b>1,515</b>	<b>1,847</b>
<b>OFFSHORE</b>	<b>114</b>	<b>109</b>	<b>97</b>	<b>93</b>	<b>90</b>	<b>73</b>	<b>65</b>	<b>44</b>	<b>31</b>	<b>32</b>

Source: Baker Hughes.

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

# NEW-FIELD WILDCAT WELLS DRILLED

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	16	17	22	17	26	35	24	32	50	43
Alaska	10	10	8	15	8	10	13	9	2	3
Arizona	1	0	1	4	1	1	0	0	0	0
Arkansas	10	10	14	10	34	39	30	11	11	0
California	27	27	30	29	18	17	18	8	7	2
Colorado	40	48	68	136	102	132	86	43	46	59
Florida	0	1	0	2	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	1	0	2	0
Illinois	17	32	31	34	31	22	20	12	12	17
Indiana	9	17	19	19	39	33	30	34	26	10
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	153	158	169	225	275	249	305	208	306	317
Kentucky	87	133	176	242	313	227	168	95	39	15
Louisiana	75	62	60	58	52	52	30	19	25	26
Michigan	24	19	23	18	28	21	34	15	33	34
Mississippi	38	33	30	33	30	42	25	17	12	18
Missouri	2	0	0	0	0	0	0	0	0	0
Montana	95	120	148	160	140	107	81	30	28	59
Nebraska	14	15	16	19	21	22	55	17	23	23
Nevada	2	3	6	6	1	5	5	2	3	0
New Mexico	32	60	76	46	67	46	44	38	52	68
New York	36	26	54	30	30	45	50	32	29	6
North Dakota	9	4	26	44	101	98	87	83	58	86
Ohio	6	5	2	16	21	41	34	12	7	7
Oklahoma	70	96	104	108	181	256	273	102	62	74
Oregon	0	0	1	0	0	0	0	0	0	0
Pennsylvania	14	43	126	188	224	349	293	185	374	145
South Dakota	6	5	1	7	4	13	16	6	1	5
Tennessee	27	42	27	37	82	62	28	12	8	2
Texas	347	436	473	468	392	315	383	233	244	189
Utah	30	11	22	32	50	49	49	27	33	39
Virginia	8	8	3	2	10	28	8	0	0	0
Washington	0	0	0	0	0	2	0	0	0	0
West Virginia	30	18	29	27	43	56	53	25	21	20
Wyoming	74	82	90	80	77	62	52	36	34	78
Federal Offshore	68	83	82	72	62	58	52	70	33	28
<b>TOTAL U.S.</b>	<b>1,377</b>	<b>1,624</b>	<b>1,937</b>	<b>2,184</b>	<b>2,463</b>	<b>2,494</b>	<b>2,346</b>	<b>1,383</b>	<b>1,581</b>	<b>1,373</b>

NEW-FIELD WILDCAT WELLS DRILLED

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

EXPLORATORY WELLS DRILLED

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	17	23	36	27	35	49	36	40	52	51
Alaska	17	12	13	19	14	18	14	10	3	3
Arizona	1	0	1	4	1	1	0	0	0	0
Arkansas	10	12	19	18	45	47	45	19	11	1
California	62	52	69	74	44	36	26	20	12	6
Colorado	57	81	104	206	159	177	124	56	62	97
Florida	0	1	0	2	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	NA	NA	NA	NA	NA	NA	1	NA	2	0
Illinois	33	44	47	50	72	84	61	51	54	48
Indiana	12	37	24	40	58	69	79	80	57	18
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	279	289	341	418	457	479	608	423	557	587
Kentucky	132	188	302	448	598	464	353	286	101	26
Louisiana	83	72	73	70	65	67	56	33	30	35
Michigan	30	23	27	24	34	31	52	24	55	45
Mississippi	43	41	34	44	40	53	32	19	15	23
Missouri	2	0	0	0	0	0	0	0	0	0
Montana	156	186	237	278	254	188	145	48	43	76
Nebraska	17	22	18	30	32	34	71	25	39	40
Nevada	2	3	6	6	1	4	4	2	3	0
New Mexico	75	100	103	98	118	75	69	48	58	74
New York	39	33	57	41	30	78	49	40	45	12
North Dakota	22	23	54	72	165	236	217	135	182	163
Ohio	31	27	28	56	66	147	116	80	42	76
Oklahoma	109	209	253	278	334	601	672	302	217	226
Pennsylvania	30	81	307	513	657	993	765	402	513	254
South Dakota	6	5	4	9	4	13	19	7	1	5
Tennessee	29	57	58	75	120	143	105	45	21	11
Texas	714	795	774	743	696	618	702	385	333	261
Utah	41	34	47	68	123	83	86	44	56	71
Virginia	14	10	2	7	20	53	14	0	0	0
Washington	0	0	0	0	0	2	0	0	0	0
West Virginia	89	41	146	200	215	285	250	134	69	29
Wyoming	151	141	130	132	119	86	79	45	49	89
Federal Offshore	69	83	84	77	59	67	118	87	36	32
<b>TOTAL U.S.</b>	<b>2,384</b>	<b>2,644</b>	<b>3,404</b>	<b>4,136</b>	<b>4,623</b>	<b>5,187</b>	<b>4,974</b>	<b>3,065</b>	<b>2,718</b>	<b>2,359</b>

Source: IHS.

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

# DEVELOPMENT WELLS DRILLED

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	246	371	405	416	407	505	131	250	201	165
Alaska	179	165	193	155	121	133	25	135	129	109
Arizona	0	0	0	0	0	1	0	0	0	0
Arkansas	144	216	278	299	417	470	1,048	1,107	1,120	1,029
California	1,925	1,928	2,161	2,234	2,464	2,343	2,640	1,603	1,965	2,447
Colorado	1,332	1,511	1,892	2,506	2,845	3,269	3,790	2,431	2,624	2,978
Florida	1	0	0	1	0	0	1	1	1	6
Illinois	289	308	277	379	411	353	434	232	334	421
Indiana	81	145	125	128	72	80	134	93	111	104
Kansas	902	1,339	1,542	1,867	2,709	2,770	3,634	2,011	2,382	3,071
Kentucky	891	752	573	680	805	850	885	712	694	674
Louisiana	790	1,003	1,188	1,381	1,569	1,565	1,714	1,138	1,342	1,655
Michigan	337	353	403	505	524	450	450	194	116	45
Mississippi	168	240	237	255	253	280	241	144	168	148
Missouri	0	1	0	0	0	0	0	0	35	0
Montana	388	644	504	682	863	672	427	209	230	148
Nebraska	14	16	32	46	34	132	163	49	60	95
Nevada	2	0	0	0	0	0	1	1	0	0
New Mexico	1,200	1,526	1,686	1,812	1,914	1,763	1,619	1,014	1,022	1,328
New York	54	46	77	133	227	288	339	203	281	216
North Dakota	154	199	168	227	322	278	500	473	997	1,572
Ohio	493	493	525	539	637	684	890	521	408	341
Oklahoma	2,351	2,783	2,884	3,248	3,671	2,992	3,507	1,813	2,068	2,360
Oregon	0	0	0	0	0	0	1	4	4	0
Pennsylvania	2,183	2,505	2,290	2,908	3,611	3,210	3,425	2,327	2,448	2,346
South Dakota	6	3	8	34	21	36	25	17	24	0
Tennessee	81	198	146	163	168	32	137	73	71	85
Texas	6,534	8,592	9,522	10,800	12,272	13,784	16,033	9,351	11,694	14,626
Utah	383	381	554	709	880	877	1,116	597	883	822
Virginia	291	358	361	318	531	654	621	522	414	389
Washington	0	0	2	0	0	0	0	0	0	0
West Virginia	870	974	1,081	1,212	1,584	1,562	1,576	860	582	468
Wyoming	3,045	2,768	3,717	4,330	4,024	2,977	2,941	1,841	1,837	1,477
Federal Offshore	612	630	615	551	483	415	370	253	46	177
<b>TOTAL U.S.</b>	<b>25,487</b>	<b>30,189</b>	<b>33,653</b>	<b>39,880</b>	<b>46,499</b>	<b>45,946</b>	<b>50,376</b>	<b>31,347</b>	<b>34,291</b>	<b>39,422</b>

DEVELOPMENT WELLS DRILLED

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

TOTAL WELLS DRILLED

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	263	394	441	443	440	554	348	290	253	216
Alaska	196	176	206	173	132	148	145	145	132	112
Arizona	1	0	1	4	1	2	0	0	0	0
Arkansas	154	228	304	334	495	830	1,093	1,126	1,131	1,030
California	1,989	1,978	2,221	2,296	2,494	2,367	2,666	1,623	1,977	2,453
Colorado	1,389	1,593	1,992	2,710	3,003	3,440	3,914	2,487	2,686	3,075
Florida	1	0	0	3	0	0	1	1	1	6
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	2	0	1	0
Illinois	322	354	324	424	478	437	495	283	388	469
Indiana	93	182	149	163	117	113	213	173	168	122
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	1,183	1,631	1,887	2,283	3,161	3,249	4,242	2,434	2,939	3,658
Kentucky	1,016	925	842	949	1,294	1,269	1,238	998	795	700
Louisiana	873	1,075	1,261	1,451	1,633	1,630	1,770	1,171	1,372	1,690
Michigan	367	376	430	528	558	482	502	218	171	195
Mississippi	211	281	270	299	293	332	273	163	183	171
Missouri	2	1	0	0	0	0	0	0	35	0
Montana	544	831	752	969	1,118	862	572	257	273	224
Nebraska	31	38	50	75	65	165	234	74	99	135
Nevada	4	3	3	5	1	2	5	3	3	0
New Mexico	1,275	1,624	1,789	1,906	2,028	1,838	1,688	1,062	1,080	1,402
New York	92	78	136	160	242	350	388	243	326	228
North Dakota	176	222	221	300	487	519	717	608	1,179	1,735
Ohio	520	515	549	577	684	806	1,006	601	450	417
Oklahoma	2,460	2,992	3,135	3,524	3,995	3,588	4,179	2,115	2,285	2,586
Oregon	0	0	0	0	0	0	1	4	4	0
Pennsylvania	2,212	2,575	2,496	3,344	4,260	4,169	4,190	2,729	2,961	2,600
South Dakota	12	8	12	41	25	48	44	24	25	20
Tennessee	107	252	202	234	285	71	242	118	92	96
Texas	7,240	9,378	10,284	11,532	13,409	14,392	16,735	9,736	12,027	14,887
Utah	424	416	601	777	1,005	961	1,202	641	939	893
Virginia	305	368	363	324	545	705	635	522	414	389
Washington	0	0	2	0	0	2	0	0	0	0
West Virginia	958	1,015	1,225	1,408	1,791	1,824	1,826	994	651	497
Wyoming	3,196	2,911	3,843	4,460	4,134	3,061	3,020	1,886	1,886	1,566
Federal Offshore	758	807	786	716	638	555	488	340	248	209
<b>TOTAL U.S.</b>	<b>27,871</b>	<b>32,833</b>	<b>37,057</b>	<b>44,016</b>	<b>51,122</b>	<b>51,133</b>	<b>55,350</b>	<b>34,412</b>	<b>37,175</b>	<b>41,781</b>

Source: IHS.

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

# PRODUCING CRUDE WELLS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	481	485	502	557	493	488	506	507	528	554
Alaska	2,310	2,283	2,384	2,505	2,465	2,402	2,479	2,518	2,498	2,477
Arizona	24	24	21	23	25	22	24	23	22	21
Arkansas	4,385	2,718	2,143	2,138	2,505	2,487	1,494	1,488	1,415	1,195
California	46,811	47,060	47,666	48,239	49,705	50,591	52,268	51,866	51,327	52,082
Colorado	5,272	5,133	5,140	5,088	5,049	4,999	5,038	4,942	5,029	5,727
Florida	72	96	67	76	65	64	66	59	73	79
Kansas	41,629	41,261	40,167	40,024	40,349	40,782	41,661	41,792	42,272	42,743
Louisiana	17,996	17,991	17,569	17,463	17,999	17,751	18,156	17,315	17,388	17,393
Michigan	3,672	3,790	3,761	3,887	3,847	3,875	3,755	3,774	3,885	4,092
Mississippi	1,616	1,664	1,685	1,647	1,788	1,937	2,082	3,872	2,418	2,442
Montana	3,662	3,713	3,918	4,052	4,272	4,873	5,033	4,535	4,563	4,624
Nebraska	1,224	1,222	1,224	1,211	1,229	1,211	1,234	1,199	1,202	1,289
Nevada	71	71	68	71	68	74	75	71	71	72
New Mexico	19,420	19,652	20,034	20,553	21,219	21,644	22,134	22,563	23,017	23,863
New York	3,213	3,117	3,095	3,270	2,767	3,190	2,816	2,632	2,890	3,011
North Dakota	4,224	3,519	3,779	3,506	3,512	4,841	4,198	4,565	5,315	6,522
Ohio	17,529	17,165	17,147	17,436	17,867	16,192	17,742	17,015	19,181	19,682
Oklahoma	58,088	53,530	52,326	51,869	54,408	51,160	41,382	38,502	38,325	40,134
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	5,390	11,018	8,590
South Dakota	143	143	145	162	153	163	151	145	147	156
Texas	158,410	154,932	152,693	152,045	153,455	154,569	158,433	160,173	162,417	169,174
Utah	2,163	2,217	2,433	2,685	2,953	3,107	3,351	3,548	3,885	4,146
West Virginia	2,188	1,469	2,099	2,115	2,107	2,613	2,485	2,284	2,633	2,671
Wyoming	11,716	11,688	11,743	12,147	12,813	12,094	12,011	11,798	11,533	11,479
Federal Offshore	4,127	3,957	3,840	3,631	3,146	3,554	3,574	3,289	3,358	3,417
<b>TOTAL U.S.</b>	<b>410,446</b>	<b>398,900</b>	<b>395,649</b>	<b>396,400</b>	<b>404,259</b>	<b>404,683</b>	<b>402,148</b>	<b>405,865</b>	<b>416,427</b>	<b>427,635</b>

Source: IHS. Total includes onshore and offshore counts.

# PRODUCING NATURAL GAS WELLS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	4,130	4,460	4,784	5,122	5,523	5,728	6,070	6,214	6,297	6,289
Alaska	NA	NA	NA	NA	NA	NA	190	203	196	191
Arizona	8	6	7	4	5	5	5	4	4	3
Arkansas	3,510	3,704	3,959	4,298	4,481	4,955	5,913	6,652	7,412	8,124
California	1,416	1,467	1,497	1,579	1,715	1,806	1,840	1,841	1,748	1,745
Colorado	19,280	20,821	22,693	25,570	28,407	31,920	36,805	39,296	42,927	45,690
Kansas	17,827	16,998	17,740	18,417	19,891	20,978	21,908	22,140	21,849	21,910
Kentucky	11,038	11,510	12,298	11,754	12,771	16,140	13,727	13,622	12,941	12,941
Louisiana	8,250	8,367	8,734	9,385	10,679	11,245	11,879	12,859	13,288	13,701
Michigan	7,957	8,282	8,524	9,009	9,444	9,792	10,050	10,349	10,253	10,310
Mississippi	992	1,151	1,284	1,469	1,574	1,714	1,786	2,112	1,762	1,742
Montana	4,603	4,864	5,299	5,716	6,200	6,206	6,277	6,705	6,722	6,542
Nebraska	104	108	112	115	117	195	328	356	295	299
New Mexico	25,454	26,687	28,160	29,723	31,246	32,535	33,625	34,163	34,306	34,402
New York	5,544	6,517	6,707	6,661	6,764	7,138	7,391	7,401	7,509	7,544
North Dakota	97	111	133	208	371	303	347	350	350	343
Ohio	22,426	22,613	22,212	22,151	23,123	20,507	23,384	22,631	24,701	25,243
Oklahoma	29,077	30,551	32,214	34,081	36,358	38,164	39,800	39,817	39,443	39,339
Oregon	16	16	16	14	13	12	21	23	26	27
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	32,076	55,215	45,646
South Dakota	58	58	60	60	62	64	84	87	100	98
Texas	66,747	70,056	74,550	79,879	86,272	93,126	100,631	102,471	103,697	104,986
Utah	3,118	3,392	3,715	4,171	4,781	5,257	6,040	6,323	7,037	6,893
Virginia	3,142	3,421	3,856	4,238	5,007	5,748	6,322	7,068	7,454	7,747
West Virginia	40,846	39,763	41,309	44,172	41,364	47,476	44,974	47,569	50,765	49,682
Wyoming	19,269	21,099	23,749	26,475	29,875	31,747	33,628	33,294	31,253	30,595
Federal Offshore	4,374	4,277	4,137	3,878	3,367	3,487	3,255	2,756	2,635	2,350
<b>TOTAL U.S.</b>	<b>299,283</b>	<b>310,299</b>	<b>327,749</b>	<b>348,333</b>	<b>369,410</b>	<b>396,248</b>	<b>402,553</b>	<b>444,760</b>	<b>490,185</b>	<b>484,383</b>

Source: IHS. Data not available for certain states.

# CRUDE OIL PRODUCTION

(thous. Bbls.)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	5,163	4,970	4,662	5,197	5,276	4,951	5,560	5,054	5,275	6,552
Alaska	359,496	362,371	335,740	335,740	269,150	262,427	248,800	236,522	217,932	203,981
Arizona	61	45	50	48	53	41	50	45	38	36
Arkansas	6,470	6,586	5,845	5,388	5,292	5,249	5,791	5,202	4,246	3,926
California	255,195	247,393	239,485	228,811	222,874	217,986	214,120	206,195	198,675	193,113
Colorado	12,771	12,682	12,014	11,764	11,357	10,756	10,875	10,192	11,174	16,203
Florida	3,644	3,263	2,875	2,585	2,349	2,080	1,985	696	1,750	2,026
Illinois	11,127	11,707	10,699	8,899	10,324	9,609	9,430	9,099	9,067	9,158
Indiana	1,969	1,870	1,729	1,595	1,714	1,723	1,855	1,803	1,837	1,972
Kansas	33,056	33,711	33,802	33,897	35,621	36,434	39,575	39,448	40,320	41,355
Kentucky	1,381	1,347	1,210	1,215	1,181	2,618	1,034	1,004	936	920
Louisiana	60,626	58,658	56,983	50,835	49,443	52,528	48,626	47,487	49,388	52,127
Michigan	6,583	6,230	5,763	5,744	5,686	5,394	6,023	5,846	6,420	6,720
Mississippi	16,781	15,678	15,635	16,402	16,103	19,034	20,859	21,915	22,958	23,184
Montana	16,940	19,309	24,674	32,655	36,027	34,815	31,480	27,771	25,226	24,070
Nebraska	2,746	2,810	2,520	2,405	2,297	2,333	2,389	2,234	2,197	2,415
Nevada	553	492	463	446	426	410	436	455	425	408
New Mexico	58,293	57,004	56,723	54,530	53,661	53,300	54,648	56,133	60,917	67,308
New York	0	94	110	92	188	267	294	228	227	306
North Dakota	29,876	28,413	30,142	34,092	36,763	42,249	58,384	75,200	107,205	148,383
Ohio	4,917	4,521	4,264	4,250	4,372	3,958	4,175	3,572	4,078	3,894
Oklahoma	58,543	56,770	54,899	52,288	53,947	51,093	53,234	48,999	54,071	58,284
Oregon	0	0	0	0	0	0	0	0	0	0
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	783	1,575	979
South Dakota	1,209	1,239	1,356	1,415	1,394	1,653	1,642	1,646	1,575	1,617
Texas	365,891	359,907	351,459	347,614	346,079	341,763	352,904	349,087	367,312	446,532
Utah	12,610	12,089	13,718	15,298	15,965	16,957	18,438	19,646	21,743	23,359
West Virginia	571	768	586	676	788	1,030	987	446	881	916
Wyoming	46,020	43,174	41,689	41,452	42,287	41,992	40,054	38,489	42,057	41,767
Federal Offshore	496,663	505,364	476,795	427,167	431,321	427,571	395,233	543,395	537,735	456,297
<b>TOTAL U.S.</b>	1,869,155	1,858,465	1,785,890	1,722,500	1,661,939	1,650,220	1,628,881	1,758,592	1,797,329	1,837,808
<b>DAILY AVG.</b>	5,121	5,092	4,879	4,719	4,553	4,521	4,450	4,818	4,924	5,035

Source: IHS.

Notes: Daily Average derived from IHS data.

CRUDE OIL PRODUCTION

# NATURAL GAS PRODUCTION

(MMcf)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	370,977	355,701	324,437	301,634	290,530	264,468	252,449	230,405	223,853	201,860
Alaska	NA	NA	NA	NA	NA	NA	NA	149,289	139,299	126,570
Arizona	236	183	218	154	522	590	457	626	122	105
Arkansas	147,897	153,236	170,222	182,452	192,991	262,629	442,536	674,387	920,787	1,067,730
California	78,277	83,695	75,362	81,952	90,504	89,845	84,317	80,584	70,406	62,339
Colorado	912,289	997,085	1,062,396	1,120,614	1,217,865	1,273,254	1,476,152	1,536,385	1,620,565	1,656,713
Kansas	464,540	431,149	405,594	386,067	378,032	371,782	379,647	362,162	335,570	314,526
Kentucky	81,344	83,452	85,668	79,419	85,840	95,247	95,013	107,449	104,733	104,733
Louisiana	1,261,846	1,252,126	1,266,290	1,219,382	1,290,156	1,279,855	1,302,007	1,471,968	2,111,650	2,918,796
Michigan	192,482	178,082	170,023	161,614	159,295	151,701	145,875	137,571	132,173	126,172
Mississippi	142,950	157,847	170,157	183,103	206,269	268,328	331,699	336,382	389,751	458,783
Montana	79,235	78,092	87,046	91,456	93,199	88,833	78,197	78,366	69,893	59,104
Nebraska	894	1,183	1,217	939	898	1,282	2,814	2,713	2,093	1,819
New Mexico	1,412,648	1,375,603	1,372,580	1,358,029	1,352,226	1,294,420	1,243,420	1,176,047	1,081,223	1,013,359
New York	36,252	35,725	45,785	53,535	39,741	54,586	46,221	40,309	31,895	28,267
North Dakota	14,485	12,823	13,329	13,150	17,216	18,546	21,099	18,338	16,519	11,474
Ohio	70,426	68,428	66,562	60,451	62,021	55,657	61,208	57,949	61,602	64,020
Oklahoma	1,396,439	1,412,925	1,446,878	1,486,872	1,557,944	1,595,177	1,670,055	1,671,430	1,563,328	1,469,052
Oregon	840	734	468	457	624	371	663	818	1,459	1,343
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	226,017	535,986	1,213,565
South Dakota	510	523	509	428	438	453	1,222	1,752	1,536	1,035
Texas	4,886,656	4,962,056	5,072,699	5,319,815	5,647,050	6,214,058	7,075,389	6,913,702	6,715,482	6,856,592
Utah	260,714	257,510	264,789	281,368	321,626	348,601	403,310	408,665	393,587	411,516
Virginia	76,828	80,086	85,752	89,217	102,798	112,224	127,373	140,700	147,156	150,404
West Virginia	194,328	183,091	195,084	215,145	205,051	234,103	237,956	252,895	282,126	387,479
Wyoming	1,539,308	1,636,903	1,735,410	1,839,625	1,948,640	2,091,822	2,325,182	2,399,101	2,370,892	2,219,664
Fed. Offshore	3,829,757	3,715,894	3,355,752	2,594,879	2,376,086	2,292,279	1,905,309	1,914,239	1,731,131	1,373,902
<b>TOTAL U.S.</b>	<b>17,452,158</b>	<b>17,514,132</b>	<b>17,474,227</b>	<b>17,121,757</b>	<b>17,637,562</b>	<b>18,460,111</b>	<b>19,709,570</b>	<b>20,282,800</b>	<b>21,054,798</b>	<b>22,300,922</b>

Source: IHS. Data not available for certain states. Data is dry natural gas production.

## PRODUCING MARGINAL OIL WELLS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	300	304	320	387	320	308	317	323	341	350
Alaska	145	151	140	144	153	163	177	161	182	198
Arizona	22	23	19	22	24	21	23	22	21	20
Arkansas	4,141	2,427	1,910	1,925	2,256	2,264	1,266	1,277	1,247	1,035
California	31,314	31,770	33,010	34,338	36,161	37,433	39,453	39,521	39,618	40,769
Colorado	4,455	4,344	4,384	4,334	4,331	4,302	4,304	4,252	4,266	4,757
Florida	13	33	11	15	8	12	12	38	17	16
Illinois	5,166	5,107	5,148	4,964	5,270	7,062	7,109	7,092	7,129	7,106
Indiana	1,108	1,043	1,051	995	1,061	1,790	1,792	1,796	1,825	1,806
Kansas	40,933	40,607	39,386	39,250	39,602	39,921	40,575	40,657	41,203	41,523
Kentucky	995	981	965	947	994	1,375	1,415	1,424	1,329	1,328
Louisiana	15,377	15,587	15,129	15,288	15,680	15,533	16,086	15,301	15,388	15,283
Michigan	3,386	3,502	3,508	3,665	3,640	3,689	3,590	3,588	3,696	3,879
Mississippi	793	822	850	883	965	1,033	1,126	1,141	1,337	1,397
Montana	2,714	2,731	2,817	2,853	2,943	2,945	3,066	3,085	3,125	3,215
Nebraska	1,154	1,140	1,177	1,157	1,182	1,152	1,178	1,131	1,142	1,210
Nevada	39	42	40	45	45	51	49	45	42	47
New Mexico	15,916	16,181	16,602	17,114	17,777	18,278	18,576	18,792	19,024	19,560
New York	NA	2,249	2,164	1,966	2,077	2,279	2,513	2,340	2,563	2,714
North Dakota	2,819	2,163	2,412	2,164	2,183	2,249	2,321	2,359	2,475	2,591
Ohio	15,762	15,162	15,308	15,360	15,803	16,225	15,679	14,839	16,734	16,931
Oklahoma	53,846	49,700	48,542	47,937	48,269	47,029	35,010	34,118	33,962	33,859
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	4,827	9,959	7,859
South Dakota	52	61	64	75	71	70	54	48	53	60
Texas	142,031	139,807	138,498	138,295	140,374	142,134	145,240	146,530	148,828	154,489
Utah	1,421	1,442	1,582	1,756	1,982	2,116	2,367	2,553	2,777	2,952
West Virginia	2,016	1,201	1,722	1,480	1,689	1,975	2,124	1,946	2,193	2,243
Wyoming	9,237	9,355	9,473	9,911	10,528	9,775	9,688	9,404	9,266	9,087
Federal Offshore	707	640	648	755	621	609	676	583	573	580
<b>TOTAL U.S.</b>	<b>355,862</b>	<b>348,575</b>	<b>346,876</b>	<b>348,021</b>	<b>356,209</b>	<b>361,793</b>	<b>355,786</b>	<b>359,193</b>	<b>370,315</b>	<b>376,864</b>

PRODUCING MARGINAL OIL WELLS

Source: IHS.

Notes: A marginal oil well is defined as a well producing 15 barrels/day or less.



# MARGINAL OIL WELL PRODUCTION

(thous. Bbls.)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	752	754	740	809	706	693	708	698	752	763
Alaska	288	243	264	193	322	287	364	350	348	398
Arizona	34	32	24	37	40	27	37	32	25	27
Arkansas	3,212	2,881	3,042	3,046	2,882	2,898	1,895	1,875	1,713	1,406
California	62,603	62,889	64,825	66,663	69,810	71,058	73,049	71,214	69,787	70,854
Colorado	4,212	4,199	4,188	4,028	3,983	3,666	3,848	3,713	3,657	4,351
Florida	35	46	27	25	20	37	28	26	34	34
Illinois	5,227	5,267	5,104	4,249	5,159	5,791	5,732	5,702	5,564	5,653
Indiana	1,102	1,063	1,020	916	1,085	1,372	1,272	1,308	1,355	1,304
Kansas	25,250	25,016	24,607	24,541	25,301	24,810	25,673	25,709	26,018	26,481
Kentucky	753	698	701	677	671	773	740	761	679	668
Louisiana	10,043	9,773	9,547	10,029	9,543	9,915	9,781	9,398	9,713	9,867
Michigan	3,367	3,374	3,427	3,443	3,425	3,289	3,395	3,289	3,250	3,289
Mississippi	1,855	1,966	2,010	2,121	2,207	2,324	2,522	2,514	2,835	2,882
Montana	3,344	3,350	3,352	3,508	3,531	3,540	3,676	3,685	3,872	3,961
Nebraska	1,826	1,777	1,842	1,711	1,676	1,575	1,620	1,568	1,564	1,591
Nevada	92	90	91	103	117	130	114	110	95	111
New Mexico	20,516	20,825	21,045	21,788	22,312	22,646	22,850	22,752	22,887	23,482
New York	NA	94	110	92	193	270	294	228	277	306
North Dakota	4,648	4,815	4,531	4,601	4,811	4,955	5,224	5,144	5,374	5,475
Ohio	4,152	3,871	3,669	3,716	3,732	3,723	3,740	3,147	3,578	3,530
Oklahoma	39,526	37,636	36,618	34,834	35,189	34,423	23,856	22,138	22,879	21,648
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	783	1,439	943
South Dakota	166	208	217	229	212	179	138	139	148	162
Texas	147,152	145,505	142,581	142,740	145,877	147,623	151,286	151,249	154,301	158,156
Utah	3,010	3,110	3,391	3,908	4,168	4,816	5,332	5,535	5,874	6,244
West Virginia	370	343	384	422	463	581	582	421	633	624
Wyoming	13,344	13,383	13,289	13,448	13,349	13,409	13,375	12,696	12,732	12,693
Fed. Offshore	1,675	1,527	1,528	1,889	1,372	1,416	1,679	1,313	1,351	1,367
<b>TOTAL U.S.</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>	<b>357,497</b>	<b>362,734</b>	<b>368,271</b>

Source: IHS.

Notes: A marginal oil well is defined as a well producing 15 barrels/day or less.

# PRODUCING MARGINAL NATURAL GAS WELLS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	2,591	2,889	3,187	3,639	4,164	4,563	5,023	5,280	5,465	5,563
Arizona	5	2	2	2	2	2	2	1	2	1
Arkansas	2,208	2,383	2,519	2,736	2,892	2,996	3,346	3,406	3,441	3,502
California	693	701	720	777	836	899	987	1,014	959	986
Colorado	13,738	14,729	16,105	18,560	20,477	22,939	25,918	27,794	30,711	32,977
Kansas	12,044	11,891	13,531	15,083	17,196	18,776	20,006	20,501	20,549	20,881
Kentucky	10,868	11,329	12,129	11,616	12,617	8,444	NA	NA	12,470	NA
Louisiana	4,164	4,219	4,330	4,645	4,851	5,146	5,454	5,684	6,028	6,170
Michigan	6,278	7,028	7,454	8,143	8,663	9,220	9,808	10,066	9,985	10,049
Mississippi	506	684	808	933	1,063	1,194	1,286	1,299	1,345	1,353
Montana	4,002	4,262	4,533	4,790	5,272	5,334	5,625	6,187	6,365	6,277
Nebraska	101	105	108	111	114	176	325	353	292	297
New Mexico	15,601	16,501	17,636	19,191	20,460	21,995	23,068	23,602	24,376	24,848
New York	6,282	6,165	6,421	6,429	6,640	6,898	7,076	7,085	7,178	7,227
North Dakota	60	73	79	104	156	188	210	222	241	258
Ohio	21,908	22,159	21,845	22,082	24,992	20,001	22,862	22,083	24,187	24,446
Oklahoma	18,924	20,321	21,716	23,393	24,955	26,707	28,135	28,692	29,326	29,482
Oregon	9	10	11	11	10	9	15	16	20	18
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	31,095	53,686	43,129
South Dakota	57	57	59	60	62	63	72	70	87	89
Texas	40,295	42,003	44,648	47,299	50,945	54,462	58,127	60,479	62,475	64,788
Utah	2,105	1,650	1,802	2,105	2,394	2,657	2,925	3,028	3,198	3,487
Virginia	2,440	2,702	3,085	3,438	4,117	4,802	5,251	5,906	6,268	6,542
West Virginia	40,052	38,843	40,451	43,242	40,544	46,507	43,844	46,225	49,527	48,403
Wyoming	9,591	11,127	13,443	15,526	18,060	19,592	20,554	19,788	17,257	16,662
Federal Offshore	818	809	796	890	723	735	892	713	658	649
<b>TOTAL U.S.*</b>	<b>214,694</b>	<b>222,642</b>	<b>237,418</b>	<b>254,805</b>	<b>272,205</b>	<b>275,861</b>	<b>290,811</b>	<b>330,589</b>	<b>376,087</b>	<b>358,084</b>

PRODUCING MARGINAL NATURAL GAS WELLS

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.

# MARGINAL NATURAL GAS PRODUCTION

(Mmcf)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	39,224	44,565	47,877	53,491	60,237	66,314	71,335	73,061	72,987	72,294
Arizona	60	37	28	30	26	21	17	17	23	21
Arkansas	30,392	30,260	33,485	36,095	38,061	39,750	43,409	42,460	43,771	44,899
California	8,730	8,910	9,084	9,713	10,121	11,405	12,000	12,090	12,013	11,666
Colorado	153,957	172,671	195,752	219,516	244,131	259,934	292,816	308,372	332,373	351,968
Kansas	165,687	178,241	202,041	222,510	240,039	250,779	264,373	262,210	255,529	249,155
Kentucky	74,072	75,513	78,805	73,076	78,304	NA	NA	87,570	77,934	NA
Louisiana	38,898	39,256	40,053	43,622	47,268	50,148	54,796	58,113	63,246	66,373
Michigan	104,662	114,313	117,082	123,811	124,848	128,265	126,805	120,181	114,548	109,645
Mississippi	8,692	11,223	12,821	13,051	14,679	16,053	16,358	15,122	14,651	13,478
Montana	35,138	37,138	37,945	40,639	43,571	43,672	47,551	53,071	52,183	47,652
Nebraska	790	871	833	745	809	1,282	2,741	2,713	2,093	1,819
New Mexico	198,763	210,703	229,172	247,133	261,701	274,675	288,130	293,344	301,286	306,932
New York	11,770	11,015	10,892	10,885	11,582	12,755	13,604	13,949	13,676	12,724
North Dakota	570	679	967	1,726	2,262	22,64	2,342	2,509	2,718	2,577
Ohio	56,954	55,331	53,979	50,250	52,003	47,802	52,085	48,039	52,241	50,442
Oklahoma	240,546	257,931	270,739	288,113	304,086	320,222	331,595	333,142	328,652	324,210
Oregon	112	113	117	138	158	134	258	234	305	213
Pennsylvania	NA	NA	NA	NA	NA	NA	NA	101,553	159,049	129,602
South Dakota	473	483	466	428	438	420	488	416	607	535
Texas	456,420	479,600	508,976	538,749	583,720	623,976	664,340	681,630	697,279	715,654
Utah	21,997	25,294	27,679	30,932	35,244	36,895	41,334	44,089	47,301	51,297
Virginia	35,408	36,924	40,141	43,994	53,268	61,584	70,117	78,627	84,462	86,220
West Virginia	162,879	152,036	161,214	175,204	167,499	189,735	185,857	188,459	190,133	176,331
Wyoming	110,670	136,706	157,753	174,246	187,707	195,370	191,676	167,793	158,461	156,722
Federal Offshore	10,078	9,897	9,722	11,030	8,802	9,109	10,182	7,556	7,621	7,503
<b>TOTAL U.S.*</b>	<b>1,967,418</b>	<b>2,091,600</b>	<b>2,247,334</b>	<b>2,408,367</b>	<b>2,570,029</b>	<b>2,642,563</b>	<b>2,784,208</b>	<b>2,908,750</b>	<b>3,085,140</b>	<b>2,989,935</b>

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.

# CRUDE OIL REVENUES

(thous. \$.)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	201,879	228,197	288,714	418,677	475,658	510,000	729,774	397,192	536,485	887,560
Alaska	7,021,406	8,509,077	11,027,864	14,890,978	15,425,817	16,819,997	22,536,136	12,813,555	15,879,039	20,235,057
Arizona	1,363	1,252	1,917	2,605	3,383	2,892	4,692	2,620	2,989	3,332
Arkansas	157,896	191,995	246,862	322,656	358,122	387,492	552,642	306,798	407,100	514,884
California	5,596,237	6,572,500	8,243,870	11,113,988	12,240,536	14,032,040	19,354,014	11,620,044	15,005,196	19,853,328
Colorado	519,001	660,511	909,842	1,285,105	1,561,888	1,737,878	2,659,532	1,577,593	2,369,759	3,453,173
Florida	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Illinois	287,296	340,354	425,520	522,598	616,283	630,927	880,862	504,444	663,523	819,333
Indiana	45,970	52,929	67,006	88,112	102,666	113,067	170,787	100,393	133,625	175,154
Kansas	772,543	973,514	1,326,556	1,806,486	2,165,442	2,439,357	3,644,711	2,147,236	2,931,025	3,673,846
Kentucky	60,251	69,059	93,817	125,356	136,492	169,558	240,351	144,121	177,917	200,036
Louisiana	2,307,012	2,731,264	3,343,113	4,043,624	4,719,199	5,456,018	7,355,128	4,078,018	5,271,859	7,326,101
Michigan	170,922	188,765	232,922	307,636	354,684	376,879	599,682	345,163	508,639	644,675
Mississippi	428,293	489,035	660,171	920,601	1,081,120	1,434,785	2,165,489	1,378,967	1,839,953	2,432,013
Missouri	2,045	2,169	3,269	4,239	4,989	4,862	8,312	5,001	10,290	9,963
Montana	383,620	553,711	952,616	1,730,144	2,055,693	2,251,347	2,837,788	1,466,568	1,779,390	2,140,020
Nebraska	65,711	78,818	96,242	126,550	133,564	146,591	210,648	113,879	162,076	217,290
Nevada	9,904	12,098	14,807	19,078	24,836	26,194	39,885	23,442	NA	NA
New Mexico	1,628,920	1,965,707	2,532,292	3,222,025	3,670,813	4,080,972	5,788,812	3,490,899	4,945,797	6,480,945
New York*	4,112	4,163	6,698	10,764	20,260	26,395	42,375	18,126	28,728	32,967
North Dakota*	748,481	860,714	1,224,352	1,867,871	2,262,555	2,942,287	5,566,976	4,285,810	7,943,877	13,575,889
Ohio*	135,750	159,132	221,392	302,212	340,990	371,431	551,097	328,746	350,201	440,604
Oklahoma	1,632,063	1,942,380	2,496,955	3,384,253	3,965,896	4,224,583	6,159,850	3,790,538	5,091,941	6,973,370
Pennsylvania	57,775	72,994	94,634	134,242	165,748	195,160	289,796	175,106	225,175	295,298
South Dakota*	29,087	35,799	52,109	74,405	72,279	104,529	148,352	84,144	110,878	140,634
Tennessee	6,020	8,260	13,162	14,765	10,956	18,565	31,655	14,207	18,514	21,271
Texas	9,645,296	11,671,255	15,233,492	20,653,108	24,059,332	26,713,037	39,300,858	22,903,576	32,579,635	46,008,717
Utah	328,714	378,241	580,176	900,170	1,070,242	1,220,547	1,908,310	1,152,147	1,679,780	2,192,398
Virginia	NA	131	NA	NA	NA	NA	NA	NA	NA	NA
West Virginia	32,833	41,557	66,589	91,160	108,859	134,002	202,119	83,711	130,303	185,758
Wyoming	1,203,430	1,41,591	1,827,236	2,362,448	2,820,972	3,157,769	4,567,132	2,696,745	3,625,780	4,565,550
<b>TOTAL U.S.</b>	<b>47,194,196</b>	<b>56,775,943</b>	<b>73,145,201</b>	<b>95,169,783</b>	<b>110,863,550</b>	<b>123,267,281</b>	<b>172,069,387</b>	<b>110,096,630</b>	<b>149,399,903</b>	<b>197,484,672</b>
Federal										
Offshore	13,938,003	16,837,886	20,726,267	24,393,152	30,083,818	33,001,587	44,002,377	34,395,206	44,933,438	52,638,263

Source: \* EIA price and production data used in addition to state data when EIA not available. Total does not include Federal Offshore.  
Note: Totals differ from those on U.S. page. U.S. data is based on national production and cost data.

# NATURAL GAS REVENUES

(thous. \$.)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011*
Alabama	1,204,585	1,874,005	2,160,750	2,751,780	2,166,685	2,011,828	2,488,581	1,019,645	994,277	1,134,370
Alaska***	986,831	1,180,314	1,613,895	2,314,590	2,574,952	2,440,521	2,944,486	1,163,436	1,186,296	2,326,149
Arizona	783	1,918	1,695	1,596	3,593	3,917	3,708	2,271	752	993
Arkansas	717,089	876,827	1,062,552	1,383,270	1,737,984	1,867,611	3,893,925	2,332,235	3,558,290	6,722,769
California	1,051,799	1,699,569	1,807,542	2,366,396	2,039,402	2,033,399	2,484,410	1,095,237	1,396,916	1,118,291
Colorado	2,258,760	4,591,234	5,622,814	8,418,829	7,361,265	5,678,549	2,702,429	4,812,015	6,250,381	8,089,625
Florida	NA	NA	NA	NA	NA	NA	NA	NA	NA	76,684
Illinois	NA	NA	NA	NA	NA	NA	NA	NA	NA	10,796
Indiana	4,071	7,920	21,426	28,560	17,555	20,843	35,634	19,954	28,092	45,103
Kansas	1,187,292	1,813,807	1,961,778	2,455,761	2,081,557	2,081,840	2,564,024	1,120,030	1,373,566	1,709,456
Kentucky	265,660	397,740	495,802	634,718	841,676	701,462	960,857	NA	604,925	643,579
Louisiana	4,357,603	7,616,250	8,065,364	11,301,539	9,432,555	9,572,037	12,024,667	5,915,679	9,348,719	17,175,598
Maryland	132	216	213	342	366	NA	NA	NA	199	213
Michigan	592,868	950,318	999,772	1,383,894	NA	2,241,113	1,532,255	602,645	496,937	853,841
Mississippi	345,719	686,912	369,348	451,962	414,032	492,182	850,441	328,826	307,417	431,066
Missouri	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Montana	205,719	320,881	436,397	709,021	624,033	668,371	843,968	310,454	318,642	381,329
Nebraska	1,806	4,609	4,753	4,922	NA	7,557	19,170	8,637	8,879	10,010
New Mexico	4,373,974	7,314,308	8,113,719	11,368,097	9,944,998	10,628,430	12,148,114	5,767,127	6,874,424	5,592,610
New York**	111,552	208,872	321,429	429,300	399,137	486,237	449,861	188,814	166,530	187,989
North Dakota	155,741	196,596	315,202	441,479	360,380	365,149	525,286	222,040	320,801	491,336
Ohio**	466,274	564,282	601,665	754,213	668,941	668,641	668,681	387,273	361,705	434,508
Oklahoma	4,649,922	7,744,030	9,139,845	11,819,425	10,674,385	10,885,012	14,462,499	6,557,953	8,606,715	10,709,893
Oregon	3,323	3,275	1,817	1,930	2,745	2,155	4,147	3,284	6,922	7,849
Pennsylvania	538,098	NA	NA	NA	NA	NA	NA	NA	NA	8,230,518
South Dakota	3,024	5,493	6,001	7,380	6,163	7,184	13,053	NA	NA	9,628
Tennessee	6,991	9,412	14,490	21,010	18,055	26,135	41,595	20,981	22,376	25,371
Texas	16,245,797	27,161,677	29,542,446	39,836,828	36,616,945	42,520,234	58,897,676	25,980,287	31,561,882	38,338,332
Utah	546,731	1,101,718	1,456,558	2,156,757	1,912,277	1,452,939	2,666,431	1,501,268	1,827,550	2,598,742
Virginia**	453,915	397,612	NA	NA	NA	NA	NA	NA	NA	1,003,264
West Virginia	654,457	814,718	928,892	1,563,234	1,617,050	1,585,922	1,822,189	1,163,518	1,034,179	2,329,279
Wyoming	3,925,684	6,357,383	7,897,327	11,245,715	10,624,776	8,942,992	15,605,471	7,940,115	9,913,758	10,041,312
<b>TOTAL U.S.</b>	<b>45,316,197</b>	<b>73,901,897</b>	<b>106,565,501</b>	<b>138,735,606</b>	<b>124,027,817</b>	<b>125,120,756</b>	<b>169,278,943</b>	<b>79,287,260</b>	<b>100,270,791</b>	<b>135,324,662</b>
Federal										
Offshore	13,439,722	21,703,151	21,890,964	23,223,588	18,732,879	17,711,494	18,680,469	9,030,483	10,193,004	10,354,172

Source: EIA wellhead price and marketed production data. Total does not include Federal Offshore.

\*2011 Citygate prices used due to the unavailability of wellhead prices

\*\*State data used when EIA not available.

\*\*\* Alaska natural gas is reinjected.

Note: Totals differ from those on U.S. page. U.S. data is based on national production and cost data.

# HORIZONTAL WELLS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	8	13	9	16	15	2	12	19	22	19
Alaska	109	107	140	133	114	106	101	100	101	89
Arkansas	2	3	6	17	123	465	691	963	910	826
California	155	125	140	139	165	220	263	151	207	309
Colorado	1	7	3	21	29	44	49	64	83	281
Georgia	0	0	0	0	0	0	0	0	0	0
Florida	2	0	0	1	0	0	1	1	1	5
Illinois	4	4	2	2	1	0	9	2	10	6
Indiana	7	5	4	16	23	48	40	46	70	8
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	2	0	4	2	25	29	5	7	7	20
Kentucky	1	1	5	11	9	44	229	268	225	142
Louisiana	40	26	60	34	37	36	96	390	738	901
Michigan	19	16	39	79	121	90	136	42	47	56
Mississippi	1	0	1	2	8	23	48	14	25	7
Missouri	0	0	0	0	0	0	0	0	0	0
Montana	130	204	290	348	358	312	130	31	76	129
Nebraska	0	0	0	0	0	1	0	0	0	0
Nevada	0	0	0	0	0	0	0	0	0	0
New Mexico	30	36	49	95	163	218	230	145	275	417
New York	1	1	4	7	5	16	27	19	9	14
North Dakota	144	180	152	248	397	469	724	609	1,121	1,661
Ohio	1	2	3	1	6	5	12	4	4	21
Oklahoma	127	242	383	526	673	761	1,073	671	833	1,369
Oregon	0	0	0	0	0	0	0	0	0	0
Pennsylvania	3	3	0	0	6	9	55	310	978	1,240
South Dakota	5	3	10	35	23	50	24	11	9	14
Tennessee	0	0	0	1	0	0	9	32	27	22
Texas	513	866	1,243	1,641	2,254	3,392	4,237	2,771	3,703	5,376
Utah	2	4	5	11	6	18	28	13	22	27
Virginia	0	0	2	2	0	1	8	31	21	25
Washington	0	0	0	0	0	0	0	0	0	0
West Virginia	12	5	1	4	5	26	184	185	228	247
Wyoming	9	18	15	59	64	47	52	22	38	145
<b>TOTAL U.S.</b>	<b>1,328</b>	<b>1,871</b>	<b>2,570</b>	<b>3,451</b>	<b>4,630</b>	<b>5,432</b>	<b>8,473</b>	<b>6,921</b>	<b>9,752</b>	<b>13,376</b>

HORIZONTAL WELLS

Source: IHS

# DIRECTIONAL WELLS

DIRECTIONAL WELLS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	11	4	8	11	12	17	23	5	18	22
Alaska	83	60	58	26	20	30	36	33	29	22
Arizona	0	0	0	0	0	0	0	0	0	0
Arkansas	7	16	22	25	29	27	18	9	20	20
California	759	925	1,073	1,022	979	1,112	1,090	495	1,036	1,149
Colorado	259	411	609	833	1,205	1,649	2,395	1,729	1,800	2,169
Florida	1	1	0	2	0	0	0	1	0	1
Georgia	0	0	0	0	0	0	0	0	0	0
Illinois	1	5	6	1	2	1	3	0	1	1
Indiana	0	0	1	4	1	1	0	0	0	4
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	0	0	0	1	3	0	3	0	0	2
Kentucky	0	0	1	0	2	4	4	0	0	0
Louisiana	269	380	420	483	510	499	403	209	242	289
Michigan	35	45	52	64	71	59	60	28	46	40
Mississippi	16	26	47	53	37	44	48	24	59	50
Missouri	0	0	0	0	0	0	0	0	0	0
Montana	6	12	19	24	23	40	27	2	22	4
Nebraska	0	0	0	1	0	0	0	0	0	0
Nevada	0	0	0	0	0	0	0	0	1	0
New Mexico	72	109	108	130	163	128	166	167	175	186
New York	19	11	31	19	12	29	23	1	0	0
North Dakota	3	3	7	4	10	13	2	4	21	38
Ohio	23	23	18	29	22	35	30	21	31	25
Oklahoma	127	158	187	248	272	217	217	111	77	108
Oregon	0	0	0	0	0	1	1	2	2	0
Pennsylvania	7	1	2	6	5	26	37	3	7	9
South Dakota	0	0	0	0	1	0	0	0	0	0
Tennessee	0	0	0	0	0	0	0	0	0	0
Texas	497	729	893	899	877	946	1,031	612	683	611
Utah	11	17	24	34	105	150	250	214	404	566
Virginia	0	0	0	1	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0
West Virginia	8	2	6	3	5	10	10	1	1	0
Wyoming	97	139	252	368	444	500	642	588	689	703
<b>TOTAL U.S.</b>	<b>2,311</b>	<b>3,077</b>	<b>3,844</b>	<b>4,291</b>	<b>4,810</b>	<b>5,538</b>	<b>6,519</b>	<b>4,259</b>	<b>5,364</b>	<b>6,019</b>

Source: IHS

# VERTICAL WELLS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	254	405	452	436	437	541	312	271	218	175
Alaska	4	10	8	9	8	12	8	12	2	1
Arizona	1	0	1	5	1	2	1	0	0	0
Arkansas	145	207	283	308	399	382	423	191	202	184
California	1,077	938	1,052	1,219	1,524	1,317	1,471	1,021	756	995
Colorado	1,132	1,172	1,389	1,897	1,858	2,032	1,674	792	843	625
Florida	0	0	0	2	0	0	0	0	0	0
Georgia	0	0	0	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	1	0	2	0
Illinois	320	343	329	443	514	468	504	301	378	462
Indiana	90	187	155	168	190	150	192	142	97	110
Iowa	0	0	0	0	0	0	0	0	0	0
Kansas	1,196	1,704	2,119	2,730	3,960	3,875	4,343	2,427	2,930	3,636
Kentucky	1,045	983	938	1,330	1,561	1,454	1,352	757	586	558
Louisiana	582	679	790	947	1,116	1,247	1,279	582	395	500
Michigan	325	329	376	413	435	375	387	165	104	99
Mississippi	196	261	227	251	258	272	182	125	100	114
Missouri	11	21	31	17	28	22	208	56	35	0
Montana	408	616	449	600	755	525	425	226	175	91
Nebraska	31	39	50	75	68	165	235	74	99	135
Nevada	4	3	6	8	1	5	8	4	2	0
New Mexico	1,177	1,487	1,634	1,708	1,742	1,521	1,330	766	639	799
New York	81	71	125	199	403	464	417	236	328	214
North Dakota	30	43	65	53	104	65	39	19	39	36
Ohio	511	505	564	721	949	1,025	1,002	590	421	371
Oklahoma	2,214	2,604	2,642	2,822	3,173	2,703	3,025	1,371	1,374	1,109
Oregon	2		1				1	2	2	0
Pennsylvania	2,321	2,768	3,103	3,952	4,689	4,847	4,696	2,729	2,033	1,346
South Dakota	4	6	4	7	7	12	23	16	16	6
Tennessee	135	273	216	254	332	324	243	93	66	74
Texas	6,268	7,913	8,318	9,361	10,620	10,472	11,632	6,453	7,683	8,900
Utah	410	392	574	730	900	793	936	421	514	300
Virginia	323	398	411	439	626	764	631	572	393	363
Washington	0	0	2	0	0	2	0	0	0	0
West Virginia	979	1,067	1,320	1,496	1,978	2,033	1,749	853	465	249
Wyoming	3,100	2,749	3,554	4,009	3,693	2,516	2,339	1,269	1,165	718
<b>TOTAL U.S.</b>	<b>24,376</b>	<b>28,173</b>	<b>31,188</b>	<b>36,609</b>	<b>42,329</b>	<b>40,385</b>	<b>41,068</b>	<b>22,536</b>	<b>22,062</b>	<b>22,170</b>

## WELL SUMMARY\*

Source: IHS

Year	Horizontal Wells	Directional Wells	Vertical Wells
2001	1,556	3,921	30,900
2002	1,346	2,993	24,343
2003	1,884	3,868	27,996
2004	2,599	4,767	30,829
2005	3,529	4,958	36,311
2006	4,640	4,916	42,350
2007	6,353	5,428	40,590
2008	8,293	6,366	40,753
2009	6,729	4,442	21,856
2010	9,755	5,228	22,183
<b>2011</b>	<b>13,376</b>	<b>6,019</b>	<b>22,170</b>

\*Data in state and national tables may differ due to date tabulated.  
Source: IHS



# SEVERANCE AND PRODUCTION TAXES

(thous. \$)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	53,235	92,695	101,184	132,300	177,280	139,380	192,752	111,004	90,613	106,500
Alaska	519,368	1,093,356	651,900	863,000	1,199,500	2,208,400	6,879,000	3,112,000	2,871,000	4,552,901
Arkansas	6,608	8,355	9,802	15,078	15,078	14,928	21,427	28,209	70,455	79,968
Arizona FY	6,510	8,377	8,993	9,899	10,022	6,761	5,488	3,214	3,016	3,300
California	189,306	214,473	188,753	268,796	328,876	471,185	467,130	400,000	400,000	400,000
Colorado	48,914	23,613	107,145	134,050	196,668	126,244	139,551	273,028	63,702	137,589
Florida	5,197	5,469	6,084	8,278	9,527	9,288	13,386	7,995	3,928	10,055
Indiana	567	590	845	1,119	1,215	1,350	2,082	1,213	1,629	2,102
Kansas	59,895	84,212	116,677	148,855	148,855	131,217	421,100	388,600	330,700	385,900
Kentucky	14,610	17,800	22,170	28,630	42,586	38,538	55,036	30,878	35,001	35,162
Louisiana	454,429	480,749	677,320	714,729	885,402	981,229	1,017,654	895,855	744,867	722,828
Maryland	1	1	1	4	4	3	1	5	4	2
Michigan	35,967	54,651	56,186	66,749	88,143	67,796	103,928	44,434	57,195	68,843
Mississippi	28,201	43,413	62,631	84,409	6,809	8,364	129,821	109,514	93,463	113,491
Montana	50,304	75,454	114,218	180,077	204,129	242,776	327,932	172,189	206,024	213,770
Nebraska	1,455	1,845	2,191	2,926	2,796	2,894	5,855	2,874	3,660	5,149
Nevada	182	248	356	527	577	576	907	538	418	797
New Mexico	479,109	571,862	737,200	926,884	1,169,271	987,921	1,282,483	1,361,237	1,431,086	922,600
North Dakota	62,300	66,846	73,914	157,500	166,147	185,970	534,700	403,100	749,100	1,296,100
Ohio	2,799	2,900	2,691	2,615	2,554	2,452	2,501	2,569	2,555	2,590
Oklahoma	417,103	600,980	701,156	875,653	1,168,598	1,001,328	1,266,655	1,174,211	869,129	978,167
Oregon	145	89	72	79	90	117	364	305	390	370
South Dakota	1,239	1,522	1,658	2,507	3,256	3,153	5,527	5,894	4,746	5,558
Tennessee	498	592	592	813	1,041	1,838	1,952	1,342	1,532	1,495
Texas	1,049,054	1,492,743	1,887,879	2,338,380	3,200,807	2,730,513	4,121,527	2,292,249	1,775,739	2,677,552
Utah	20,603	28,689	39,356	57,116	77,074	70,178	70,919	77,831	60,392	65,640
West Virginia	28,382	30,475	41,544	53,557	84,947	80,294	87,606	91,505	70,507	72,947
Wyoming	327,497	370,381	504,731	713,456	660,461	595,031	947,880	488,568	635,511	657,802
<b>TOTAL U.S.</b>	<b>3,863,479</b>	<b>5,372,380</b>	<b>6,117,250</b>	<b>7,787,983</b>	<b>9,851,714</b>	<b>10,109,721</b>	<b>18,105,163</b>	<b>11,480,372</b>	<b>10,576,364</b>	<b>13,519,180</b>

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. Texas oil tax includes oil production tax, oil regulation tax and oil well service tax; gas tax includes natural gas production tax and gas utility pipeline tax.

# CRUDE OIL WELLHEAD PRICES

(\$/bbl.)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	23.39	28.97	38.79	53.26	63.16	71.10	96.71	55.25	75.54	105.99
Alaska	19.54	23.93	33.17	47.21	57.03	63.81	90.19	54.41	72.33	98.79
Arizona	21.63	26.63	36.86	52.09	61.51	67.26	90.24	56.96	74.72	NA
Arkansas	21.50	26.57	36.67	50.86	58.67	64.25	90.91	53.07	71.01	87.51
California	21.69	26.29	34.32	48.26	54.78	64.73	90.21	56.11	74.51	102.50
Colorado	25.29	30.71	40.38	55.34	63.80	67.04	90.80	52.33	72.75	88.26
Florida	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Illinois	23.84	29.10	38.74	51.20	59.70	65.66	93.48	55.47	73.18	88.73
Indiana	23.43	28.38	38.18	51.02	59.31	65.47	91.92	55.65	72.82	88.15
Kansas	23.61	28.68	39.18	53.41	60.74	66.85	92.08	54.41	72.43	88.52
Kentucky	22.49	27.21	36.82	49.45	58.33	63.60	90.87	55.24	70.63	86.00
Louisiana	24.68	30.31	40.08	53.57	63.88	71.18	100.74	59.10	78.25	106.20
Michigan	23.68	29.18	39.14	53.67	60.89	66.87	95.75	56.39	74.91	92.40
Mississippi	22.11	27.46	37.03	49.58	59.35	68.65	94.60	58.29	76.41	100.43
Missouri	21.53	26.45	37.15	49.87	57.34	60.77	83.96	53.20	70.48	84.43
Montana	22.76	28.66	38.53	52.66	56.69	64.64	89.96	52.96	70.24	88.61
Nebraska	23.62	28.63	38.42	52.38	57.77	62.78	87.99	50.93	69.65	85.48
Nevada	17.91	24.54	31.98	42.68	58.30	64.20	91.48	53.52	NA	NA
New Mexico	24.11	29.52	39.25	52.84	61.74	68.94	96.23	57.08	75.64	90.93
New York	24.92	28.91	39.40	54.64	63.51	69.46	109.78	53.47	76.00	89.10
North Dakota	24.15	29.27	39.30	52.38	56.69	65.30	88.68	53.75	70.24	88.74
Ohio	22.61	28.18	38.27	53.47	62.89	68.09	96.43	56.35	73.68	90.79
Oklahoma	24.49	29.72	39.95	54.46	63.11	69.31	96.15	56.56	75.18	90.94
Pennsylvania	24.86	29.60	39.48	54.57	64.02	70.00	96.76	56.96	69.80	87.16
South Dakota	23.96	28.94	38.40	50.65	51.85	62.78	87.42	50.75	69.04	87.08
Tennessee	21.89	26.56	36.46	45.57	57.06	65.37	92.02	53.01	72.04	86.82
Texas	23.77	29.13	38.79	52.61	61.31	68.30	96.85	57.40	76.23	86.56
Utah	23.87	28.88	39.35	53.98	59.70	62.48	86.58	50.22	68.09	83.45
Virginia	NA	26.23	NA	NA	NA	NA	NA	NA	NA	NA
West Virginia	22.55	28.06	38.38	53.75	63.07	67.27	95.07	55.77	70.74	86.56
Wyoming	21.96	26.63	35.10	45.63	53.25	58.34	86.07	52.30	68.10	83.45
<b>TOTAL U.S.</b>	<b>22.51</b>	<b>27.56</b>	<b>36.77</b>	<b>50.28</b>	<b>59.69</b>	<b>66.52</b>	<b>94.04</b>	<b>56.35</b>	<b>74.71</b>	<b>95.73</b>

CRUDE OIL WELLHEAD PRICES

Source: Energy Information Administration and State Sources

# NATURAL GAS WELLHEAD/CITY GATE PRICES

NATURAL GAS WELLHEAD/CITY GATE PRICES

(\$/Mcf)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011**
Alabama	3.48	5.93	6.66	9.28	7.57	7.44	9.65	4.32	4.46	5.80
Alaska	2.13	2.41	3.42	4.75	5.79	5.63	7.39	2.93	3.17	6.53
Arizona*	2.60	4.33	5.12	6.86	5.70	5.98	7.09	3.19	4.11	5.91
Arkansas	4.43	5.17	5.68	7.26	6.43	6.61	8.72	3.43	3.84	6.27
California	2.92	5.04	5.65	7.45	6.47	6.62	8.38	3.96	4.87	4.47
Colorado	2.41	4.54	5.21	7.43	6.12	4.57	6.94	3.21	3.96	4.94
Florida*	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.07
Illinois*	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.09
Indiana	3.11	5.41	6.30	9.11	6.01	5.78	7.58	4.05	4.13	4.97
Kansas	2.61	4.33	4.94	6.51	5.61	5.69	6.85	3.16	4.23	5.53
Kentucky	3.01	4.54	5.26	6.84	8.83	7.35	8.42	NA	4.47	5.18
Louisiana	3.20	5.64	5.96	8.72	6.93	7.02	8.73	3.82	4.23	5.67
Maryland	5.98	4.50	6.25	7.43	7.63	6.97	7.46	7.45	4.63	6.26
Michigan*	2.16	4.01	3.85	5.30	NA	8.46	5.63	3.92	3.79	6.18
Mississippi	3.06	5.13	5.83	8.54	6.84	6.70	8.80	3.73	4.17	5.29
Montana	2.39	3.73	4.51	6.57	5.53	5.72	7.50	3.16	3.64	5.11
Nebraska	1.52	3.17	3.22	4.29	NA	4.86	6.22	2.97	3.98	5.11
New Mexico	2.68	4.56	4.97	6.91	6.18	6.88	8.40	4.17	5.32	4.52
New York	3.03	5.78	6.98	7.78	7.13	8.85	8.94	4.21	4.65	6.04
North Dakota	2.73	3.53	5.73	8.40	6.52	6.67	8.55	3.74	3.92	5.06
Ohio	4.52	5.90	6.65	9.03	7.75	7.59	7.88	4.36	4.63	5.51
Oklahoma	2.94	4.97	5.52	7.21	6.32	6.24	7.56	3.53	4.71	5.67
Oregon	3.97	4.48	3.89	4.25	4.42	5.27	5.33	4.00	4.92	5.84
Pennsylvania*	3.41	NA	NA	NA	NA	NA	NA	NA	NA	6.28
South Dakota	2.95	4.98	5.49	7.44	6.40	7.22	7.94	NA	NA	5.21
Tennessee	3.41	5.22	6.90	9.55	6.78	6.63	8.85	3.83	4.35	5.23
Texas	3.16	5.18	5.83	7.55	6.60	6.98	8.51	3.81	4.70	5.39
Utah*	1.99	4.11	5.24	7.16	5.49	3.86	6.15	3.38	4.23	5.68
Virginia*	3.16	4.65	NA	NA	NA	NA	NA	NA	NA	6.64
West Virginia*	3.44	4.34	4.71	7.07	7.17	6.86	7.42	4.40	3.90	5.91
Wyoming	2.70	4.13	4.96	6.86	5.85	4.65	6.86	3.40	4.30	4.65
<b>TOTAL U.S.</b>	<b>2.95</b>	<b>4.88</b>	<b>5.46</b>	<b>7.33</b>	<b>6.39</b>	<b>6.25</b>	<b>7.96</b>	<b>3.67</b>	<b>4.48</b>	<b>5.63</b>

Source: Energy Information Administration and State Sources\*

\*\*City Gate price used for natural gas.

## REFINER ACQUISITION COST OF CRUDE OIL

### REFINER ACQUISITION COST OF CRUDE OIL

(\$/bbl.)	Domestic	Imported	Composite
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
2009	59.49	59.17	59.29
2010	77.96	75.88	76.69
<b>2011</b>	<b>100.71</b>	<b>102.63</b>	<b>101.87</b>

Source: Energy Information Administration

## RETAIL GASOLINE PRICES

(¢/gal.)	Excluding Taxes	Taxes	Pump Price
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	46.1	258.9
2007	234.5	45.6	280.1
2008	277.5	49.1	326.6
2009	188.8	46.2	235.0
2010	230.1	48.7	278.8
<b>2011</b>	<b>305.0</b>	<b>47.10</b>	<b>352.1</b>

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

## WORLD CRUDE OIL RESERVES

### WORLD CRUDE OIL RESERVES

(mill. bbls.)	United States	Canada	Latin America	Middle East	Africa	Asia Pacific	Western Europe	Eastern Europe & FSU	Total World
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
2009	19,121	175,214	135,044	753,358	119,114	40,137	12,198	99,998	1,354,182
2010	19,121	175,214	247,532	752,918	123,609	40,251	10,974	99,996	1,469,615
<b>2011</b>	<b>20,682</b>	<b>173,625</b>	<b>248,978</b>	<b>799,607</b>	<b>124,209</b>	<b>45,360</b>	<b>10,704</b>	<b>100,059</b>	<b>1,523,225</b>

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.

# WHOLESALE PRICES—TOTAL U.S.

WHOLESALE PRICES —TOTAL U.S.

	Motor Gasoline	Kerosene	Jet Fuel Distillate (¢/gal.)	Fuel Oil Residual	Average Of Four Products (¢/gal.) (\$/bbl.)	Crude Oil (\$/bbl.)
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	30.27	27.41	26.09	22.03	27.03 11.35	7.67
1976	33.82	31.67	30.38	21.66	29.55 12.41	8.19
1977	36.99	35.81	34.41	25.87	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	52.95	57.67	53.22	42.50	50.09 21.04	13.19
1995	55.51	58.15	53.74	47.41	51.63 21.68	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 63.93	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	261.15 109.68	94.04
2009	176.70	171.90	170.70	134.20	163.38 68.62	56.35
2010	216.50	218.50	220.80	169.70	206.38 86.68	74.71
<b>2011</b>	<b>286.70</b>	<b>301.40</b>	<b>302.5</b>	<b>233.60</b>	<b>281.05 118.04</b>	<b>95.73</b>

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.

# PETROLEUM CONSUMPTION

(mill. bbls.)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	104.3	103.0	112.4	111.1	112.2	111.6	107.4	101.7	104.8	103.9
Alaska	48.7	50.0	58.9	58.7	60.3	57.0	49.2	45.4	48.8	47.5
Arizona	97.4	98.9	103.2	108.3	110.4	109.5	106.4	99.5	98.6	97.5
Arkansas	65.9	65.3	66.8	66.2	66.3	66.9	66.0	63.5	64.6	63.7
California	679.4	694.5	685.6	698.3	706.7	711.1	677.0	654.6	653.3	642.9
Colorado	83.0	86.4	93.3	92.3	95.8	97.4	94.0	90.1	92.4	90.7
Connecticut	70.1	79.0	85.0	81.8	74.2	72.4	66.7	65.1	63.8	61.3
Delaware	24.0	24.4	23.0	24.5	22.8	22.5	21.3	17.4	17.6	19.3
Dist. of Columbia	6.1	5.4	5.6	5.3	4.3	4.2	3.6	3.7	4.0	3.7
Florida	342.6	348.5	379.3	387.1	370.3	358.4	329.7	309.7	330.1	309.9
Georgia	187.1	190.3	199.6	207.3	201.8	197.0	185.5	193.9	200.7	190.2
Hawaii	44.8	46.7	49.1	51.3	51.6	52.9	42.6	40.9	41.5	43.8
Idaho	29.1	25.7	28.8	29.5	30.6	30.6	29.3	28.5	30.8	30.4
Illinois	229.3	234.2	245.4	266.7	256.3	255.4	246.8	235.4	236.7	231.5
Indiana	158.3	163.1	160.7	159.6	160.1	157.4	150.9	145.5	144.7	144.5
Iowa	80.5	74.3	84.1	86.1	87.8	84.3	82.1	82.7	83.7	84.1
Kansas	69.1	81.6	79.3	62.5	64.5	80.5	77.0	76.6	77.2	80.1
Kentucky	126.6	119.0	131.3	131.0	131.5	130.8	123.1	121.4	119.3	117.0
Louisiana	383.1	362.3	384.7	374.0	413.6	399.7	369.7	336.4	361.7	359.1
Maine	41.3	47.3	46.6	47.6	42.9	43.0	38.7	37.9	37.0	36.3
Maryland	100.4	104.3	108.5	111.9	102.8	102.5	99.0	100.9	97.5	92.9
Massachusetts	129.1	131.4	133.5	135.0	122.6	124.1	119.7	109.5	111.9	109.7
Michigan	191.8	186.7	189.8	191.4	180.0	180.8	167.3	161.1	160.7	157.5
Minnesota	125.7	128.6	132.4	133.4	129.7	130.7	125.1	117.4	117.4	115.8
Mississippi	79.3	88.0	87.1	83.0	85.7	84.4	77.8	76.0	79.0	76.8
Missouri	137.2	139.5	141.4	141.0	139.6	140.8	133.6	127.2	127.0	123.8
Montana	29.3	28.6	32.2	33.5	35.4	38.1	33.7	32.0	31.2	32.0
Nebraska	42.7	43.1	44.2	43.0	43.1	43.5	42.2	40.1	41.3	44.2
Nevada	43.8	44.4	48.3	51.2	54.0	53.6	49.9	46.1	45.3	40.4
New Hampshire	32.8	36.6	37.7	35.4	32.1	32.0	32.1	31.0	29.8	29.2
New Jersey	213.4	205.9	210.5	222.2	216.6	230.2	219.7	195.5	201.7	205.3
New Mexico	45.2	45.5	47.2	47.1	49.6	53.2	49.8	47.7	48.3	49.2
New York	282.5	313.5	330.8	325.3	286.9	289.9	279.0	264.5	251.1	238.7
North Carolina	166.0	169.2	175.8	178.3	173.9	175.4	174.7	161.0	162.8	155.0
North Dakota	23.3	22.6	25.0	25.7	25.4	26.5	26.3	24.0	28.0	33.8
Ohio	238.0	245.0	242.6	240.3	242.1	242.2	233.0	219.5	221.9	219.3
Oklahoma	100.9	98.9	97.4	104.8	111.0	103.9	103.2	90.7	91.9	98.4
Oregon	67.4	65.3	67.5	69.0	70.3	69.8	68.4	67.9	65.8	64.8
Pennsylvania	255.2	261.9	269.7	273.6	264.0	261.4	250.0	241.8	242.6	233.1
Rhode Island	18.0	18.6	18.1	17.9	17.2	16.9	17.3	18.0	17.5	15.5
South Carolina	88.8	91.0	104.9	101.3	102.5	100.0	98.4	100.3	97.9	93.3
South Dakota	22.7	21.3	21.6	22.4	22.1	22.7	22.1	22.7	22.0	22.2
Tennessee	135.9	137.6	140.6	145.5	146.7	145.9	135.7	127.0	130.7	131.9
Texas	1,231.3	1,239.3	1,285.0	1,232.0	1,248.1	1,245.8	1,145.5	1,143.5	1,232.2	1,256.9
Utah	47.5	49.7	50.4	52.8	56.9	55.6	53.0	49.7	49.3	53.1
Vermont	16.2	16.3	17.9	17.3	17.0	16.7	15.7	16.3	15.7	15.3
Virginia	158.8	171.4	183.3	184.0	179.4	181.2	168.7	158.6	158.1	147.7
Washington	135.2	131.5	136.1	140.3	145.4	150.5	145.0	140.2	138.7	136.2
West Virginia	41.6	38.5	42.5	42.3	43.4	43.3	41.5	38.0	38.0	35.8
Wisconsin	115.3	109.7	115.4	114.8	113.2	113.7	110.6	103.6	104.5	101.3
Wyoming	26.9	28.0	27.3	27.9	30.0	30.7	31.4	29.6	30.0	29.9
<b>Total U.S.</b>	<b>7,212.9</b>	<b>7,312.2</b>	<b>7,587.6</b>	<b>7,592.8</b>	<b>7,550.9</b>	<b>7,548.3</b>	<b>7,136.3</b>	<b>6,851.6</b>	<b>7,000.7</b>	<b>6,916.6</b>

Source: Energy Information Administration.

PETROLEUM CONSUMPTION

# NATURAL GAS CONSUMPTION

(MMcf.)	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Alabama	379,456	350,983	382,663	353,193	391,103	420,399	410,273	462,118	540,755	603,945
Alaska	419,131	414,234	406,319	432,972	373,849	369,966	341,887	342,259	333,312	332,723
Arizona	250,734	272,921	349,622	321,584	358,068	392,954	399,188	369,739	330,913	289,357
Arkansas	242,325	246,916	215,124	213,609	233,869	226,440	234,900	244,192	271,515	283,797
California	2,273,192	2,269,405	2,406,889	2,248,256	2,315,720	2,395,674	2,405,264	2,328,504	2,273,129	2,153,499
Colorado	459,397	436,253	440,378	470,321	450,832	504,775	504,784	523,726	501,351	465,985
Connecticut	177,587	154,075	162,642	168,067	172,682	180,181	166,800	185,055	199,426	229,710
Delaware	52,216	46,177	48,057	46,904	43,190	48,155	48,162	50,148	54,826	79,717
Dist. of Columbia	32,898	32,814	32,227	32,085	29,049	32,966	31,881	33,178	33,251	32,977
Florida	689,337	689,986	734,178	778,209	891,611	917,245	942,700	1,055,341	1,158,451	1,218,340
Georgia	383,546	379,761	394,986	412,560	420,469	441,107	425,042	462,798	530,031	522,875
Hawaii	2,734	2,732	2,774	2,795	2,783	2,850	2,701	2,608	2,627	2,618
Idaho	71,481	69,868	75,335	74,540	75,709	81,937	88,515	85,198	83,326	82,491
Illinois	1,049,879	998,486	953,207	969,642	893,998	965,591	1,000,501	956,066	966,679	986,911
Indiana	539,034	527,037	526,701	531,111	496,303	535,795	551,423	506,943	573,866	630,705
Iowa	226,457	230,161	226,819	241,340	238,454	293,274	325,772	315,186	311,075	306,909
Kansas	304,992	281,346	256,779	255,123	264,253	286,538	282,904	286,972	275,184	278,973
Kentucky	227,920	223,226	225,470	234,080	211,048	229,798	225,295	206,833	232,099	222,577
Louisiana	1,426,433	1,307,548	1,346,429	1,309,728	1,292,761	1,376,700	1,313,695	1,266,139	1,437,083	1,474,911
Maine	121,540	70,832	86,136	61,673	64,035	63,183	70,145	70,333	77,575	70,698
Maryland	196,276	197,024	194,725	202,509	182,294	201,053	196,069	196,510	212,019	193,934
Massachusetts	393,194	403,991	372,532	378,068	370,664	408,704	406,719	395,852	432,298	446,477
Michigan	966,354	924,819	916,629	913,827	803,336	798,126	779,603	735,341	746,749	776,426
Minnesota	371,583	371,261	359,898	367,825	352,570	388,335	425,351	394,134	422,968	420,778
Mississippi	343,890	265,842	282,051	301,663	307,305	364,068	355,007	364,323	438,733	434,701
Missouri	275,628	262,529	263,945	268,040	252,697	272,536	296,059	264,867	280,180	272,166
Montana	69,532	68,473	66,829	68,355	73,879	73,822	76,422	75,801	72,024	78,219
Nebraska	120,333	118,922	115,011	119,070	129,885	150,809	171,005	163,474	168,944	171,773
Nevada	176,596	185,846	214,984	227,149	249,608	254,406	264,596	275,468	259,252	250,322
New Hampshire	24,901	54,147	61,172	70,484	62,549	62,132	71,178	59,951	60,378	69,223
New Jersey	598,602	612,890	620,806	602,388	547,206	618,965	614,908	620,789	654,458	660,596
New Mexico	235,098	221,021	223,575	220,717	223,635	234,236	246,665	241,194	241,137	246,504
New York	1,199,632	1,101,618	1,098,056	1,080,215	1,097,160	1,187,060	1,180,357	1,142,625	1,198,127	1,216,532
North Carolina	235,376	218,642	224,796	229,715	223,032	237,354	243,091	247,047	304,148	307,809
North Dakota	66,726	60,907	59,986	53,050	53,336	59,453	63,096	54,564	66,394	72,462
Ohio	830,958	848,388	825,753	825,961	742,360	806,350	792,246	740,925	784,293	820,485
Oklahoma	508,298	540,103	538,576	582,536	624,400	658,379	687,988	659,305	675,727	655,936
Oregon	202,164	212,556	234,997	232,562	222,608	251,927	268,484	248,864	239,324	199,471
Pennsylvania	675,583	689,992	696,175	691,591	659,754	752,401	749,883	809,706	879,365	962,962
Rhode Island	87,805	78,456	72,609	80,764	77,204	87,972	89,256	92,744	94,110	100,468
South Carolina	184,803	146,641	163,787	172,032	174,806	175,701	170,076	190,927	220,235	229,497
South Dakota	41,577	43,881	41,679	42,555	40,739	53,938	65,257	66,185	72,563	73,606
Tennessee	255,515	257,315	231,133	230,338	221,626	221,118	229,934	216,944	257,443	255,026
Texas	4,328,007	4,074,323	3,932,971	3,526,380	3,459,579	3,543,067	3,568,042	3,407,263	3,594,468	3,665,303
Utah	163,379	154,125	155,891	160,275	187,400	219,701	224,187	214,220	219,214	222,165
Vermont	8,367	8,400	8,685	8,372	8,056	8,867	8,624	8,638	8,443	8,608
Virginia	258,202	262,970	277,434	299,746	274,175	319,913	299,364	319,136	375,420	373,261
Washington	233,716	249,599	262,485	264,754	263,395	272,613	298,140	310,426	285,727	264,568
West Virginia	146,455	126,986	122,267	117,136	113,085	115,973	111,479	109,652	113,179	115,361
Wisconsin	385,310	394,711	383,316	410,250	372,462	398,370	409,378	387,066	372,898	393,737
Wyoming	112,872	115,358	107,060	108,314	108,481	140,912	142,705	142,794	150,106	156,456
<b>Total U.S.</b>	<b>23,027,022</b>	<b>22,276,502</b>	<b>22,402,546</b>	<b>22,014,435</b>	<b>21,699,071</b>	<b>23,103,793</b>	<b>23,277,001</b>	<b>22,910,072</b>	<b>24,086,798</b>	<b>24,384,560</b>

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

# ENERGY CONSUMPTION BY STATE

<i>Trillion BTU</i>	<b>Petroleum</b>	<b>Natural Gas</b>	<b>Coal</b>	<b>Nuclear</b>	<b>Renewable Energy</b>	<b>Other*</b>	<b>Total</b>	<b>% Petroleum and Natural Gas</b>
Alabama	549.5	614.8	651.0	411.8	260.6	-556.4	1,931.3	60.29
Alaska	267.1	337.0	15.5	NA	18.4	-0.1	637.9	94.70
Arizona	500.9	293.7	459.9	327.3	136.6	-286.9	1,431.5	55.51
Arkansas	335.7	288.6	306.1	148.5	126.7	-85.5	1,117.1	55.89
California	3,405.8	2,196.6	55.3	383.6	928.5	888.6	7,858.4	71.29
Colorado	472.9	476.5	368.9	NA	102.9	59.6	1,480.8	64.11
Connecticut	315.6	235.7	61	166.7	43.8	-26.3	741.6	74.34
Delaware	101.5	81.7	17.9	NA	7.1	63.4	271.6	67.45
Dist. of Columbia	19.4	33.5	NA	NA	0.7	126.7	180.3	29.34
Florida	1,611.9	1,236.6	552.7	230.4	335.1	250.4	4,217.1	67.55
Georgia	996.6	531.6	634.8	338.1	236.7	264.3	3,002.1	50.90
Hawaii	246.2	0.2	16.1	NA	23.5	NA	286.0	86.15
Idaho	161.3	83.9	7.8	NA	179.7	92.9	525.6	46.65
Illinois	1,201.3	986.4	1,052.2	1,002.7	212.1	-476.9	3,977.8	55.00
Indiana	763.6	635.2	1,334.4	NA	148.2	-11.2	2,869.2	48.75
Iowa	422.6	277.6	463.1	54.6	351.9	-57.5	1,512.6	46.29
Kansas	398.1	284.6	346.5	76.6	77.6	-20.9	1,162.5	58.73
Kentucky	615.5	228.6	1,010.6	NA	82.7	-26	1,911.4	44.6
Louisiana	1,908.3	1,502.5	270.0	173.9	127.1	73.5	4,055.3	84.11
Maine	190.5	74.0	1.5	NA	160.4	-13.9	412.5	64.12
Maryland	478.5	199.1	241.2	150.7	76.7	280.2	1,426.4	47.50
Massachusetts	570.0	461.2	43.0	53.2	70.5	197.2	1,391.1	73.92
Michigan	797.2	787.3	691.1	344.2	159.5	23.4	2,802.7	56.53
Minnesota	605.8	425.0	315.6	125.1	228.1	167.0	1,866.6	55.22
Mississippi	409.0	439.0	107.5	108.2	69.6	30.1	1,163.4	72.89
Missouri	642.0	274.9	825.6	98.1	88.7	-51.2	1,878.1	48.82
Montana	168.1	72.9	203.3	NA	120.3	-163.2	401.4	60.04
Nebraska	234.8	173.7	285.4	72.5	149.2	-44.2	871.4	46.88
Nevada	207.6	256.3	62.7	NA	61.5	44.4	632.5	73.34
New Hampshire	148.5	72.0	24.5	87.5	47.1	-87.5	292.1	75.49
New Jersey	1,095.0	677.4	49.6	351.7	73.2	191.6	2,438.5	72.68
New Mexico	252.1	251.9	284.7	NA	40.3	-141.0	688.0	73.26
New York	1,255.2	1,246.9	125.2	446.8	427.1	113.6	3,614.8	69.22
North Carolina	782.8	311.2	624.8	424.1	180.8	249.0	2,572.7	42.52
North Dakota	183.6	72.2	394.8	NA	103.8	-228.2	526.2	48.61
Ohio	1,156.5	845.6	1,222.6	115.8	123.9	323.2	3,827.6	52.31
Oklahoma	530.6	676.9	378.3	NA	108.6	-99.8	1,594.6	75.72
Oregon	339.0	203.7	35.1	NA	525.4	-89	1,014.2	53.51
Pennsylvania	1,221.3	998.6	1,213.0	796.8	179.8	-684.2	3,725.3	59.59
Rhode Island	79.3	102.5	NA	NA	8.3	-6.2	183.9	98.86
South Carolina	483.2	235.5	366.2	553.6	129.1	-157.1	1,610.3	44.62
South Dakota	116.4	74.0	32.1	NA	155.0	4.9	382.4	49.79
Tennessee	691.0	258.6	481.1	281.7	186.9	301.8	2,201.1	43.14
Texas	5,841.7	3,756.9	1,695.2	414.9	498.0	-0.1	12,206.6	78.63
Utah	285.4	230.6	346.2	NA	30.5	-95.5	797.2	64.73
Vermont	77.3	8.7	NA	51.4	33.4	-21.5	149.3	57.60
Virginia	759.5	383.2	288.3	267.3	138.2	552.0	2,388.5	47.84
Washington	724.1	272.2	57.0	50.3	1,078.8	-102.2	2,080.2	47.89
West Virginia	188.3	124.9	822.6	NA	51.3	-462.8	724.3	43.24
Wisconsin	520.4	399.2	447.4	121.0	173.9	127.3	1,789.2	51.40
Wyoming	165.1	161.8	467.7	NA	61.0	-302.6	553.0	59.11
<b>Total U.S.</b>	<b>35,497.40</b>	<b>24,859.70</b>	<b>19,663.90</b>	<b>8,268.70</b>	<b>8,959.50</b>	<b>138.1</b>	<b>97,387.30</b>	<b>61.98</b>

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—2011

	Mining	Refining		Transportation			Wholesale	Retail	Total
	Oil & Gas Extraction	Petroleum Refining	Oils & Greases	Pipelines, Except Gas	Pipeline Construction	Gas Distribution	Petroleum Products	Gasoline Stations	Industry
Alabama	1,841	0	1,334	555	1,289	2,421	3,059	17,237	27,736
Alaska	13,149	0	0	0	512	0	534	1,744	15,939
Arizona	406	0	272	274	355	0	1,820	14,724	17,851
Arkansas	6,983	458	177	449	851	1,278	2,119	11,376	23,691
California	21,539	12,761	2,223	2,753	9,429	0	11,605	50,451	110,761
Colorado	23,177	542	102	785	3,056	1,077	2,332	12,227	43,298
Connecticut	23	0	264	202	236	1,065	4,939	5,783	12,512
Delaware	0	0	101	0	0	0	882	2,145	3,128
Dist. of Columbia	0	0	0	0	0	0	0	435	435
Florida	880	190	2,520	222	870	1,748	5,661	37,565	49,656
Georgia	162	17	922	401	956	1,726	3,860	27,344	35,388
Hawaii	9	0	0	0	64	0	586	2,345	3,004
Idaho	147	0	0	0	133	304	725	5,753	7,062
Illinois	2,575	2,952	2,427	1,096	1,481	4,081	4,498	26,722	45,832
Indiana	399	0	902	520	1,808	1,912	3,576	21,235	30,352
Iowa	33	74	343	373	181	597	1,652	18,280	21,533
Kansas	8,146	1,383	662	793	1,137	1,917	1,779	9,476	25,293
Kentucky	1,851	0	409	909	789	790	2,838	16,458	24,044
Louisiana	49,553	9,015	2,105	2,827	13,898	1,890	12,480	18,340	110,108
Maine	0	11	417	93	37	70	3,460	7,300	11,388
Maryland	475	141	557	0	706	495	3,096	9,091	14,561
Massachusetts	111	0	583	151	291	3,316	6,675	11,832	22,959
Michigan	2,482	0	739	980	1,219	2,266	4,676	24,314	36,676
Minnesota	68	1,372	664	378	933	1,658	3,007	22,799	30,879
Mississippi	4,324	1,891	482	1,008	1,553	669	2,139	13,882	25,948
Missouri	190	38	1,166	296	413	2,770	3,065	24,498	32,436
Montana	2,825	1,057	0	522	685	316	1,018	4,971	11,394
Nebraska	244	0	0	131	134	1,393	1,029	8,673	11,604
Nevada	269	0	108	0	1,186	0	675	7,421	9,659
New Hampshire	28	0	84	0	0	184	2,612	4,604	7,512
New Jersey	335	1,588	1,089	350	937	3,948	5,334	16,268	29,849
New Mexico	16,412	0	0	197	1,820	1,130	1,450	7,386	28,395
New York	1,560	30	1,872	346	1,505	6,510	12,090	28,331	52,244
North Carolina	492	157	782	260	980	2,049	6,024	27,115	37,859
North Dakota	9,768	0	0	396	1,710	0	1,972	4,534	18,380
Ohio	5,002	1,679	2,749	969	1,925	3,779	5,017	33,131	54,250
Oklahoma	49,862	1,351	927	1,919	2,981	4,436	11,086	14,673	87,235
Oregon	83	34	395	0	797	0	1,442	9,684	12,435
Pennsylvania	17,993	2,286	4,020	1,960	5,943	3,930	10,421	37,836	84,389
Rhode Island	0	0	0	0	88	0	1,017	1,806	2,911
South Carolina	189	45	320	76	143	852	2,179	16,581	20,385
South Dakota	146	12	0	67	31	181	1,155	5,778	7,370
Tennessee	328	0	534	351	714	1,724	3,305	20,835	27,791
Texas	233,494	21,277	3,231	16,348	33,372	7,624	62,692	71,069	449,107
Utah	5,834	998	0	282	1,590	860	1,328	8,742	19,628
Vermont	29	0	0	0	0	0	1,563	3,688	5,280
Virginia	1,669	77	470	373	1,934	1,359	4,385	29,511	39,778
Washington	354	1,771	582	0	823	1,076	3,036	13,051	20,693
West Virginia	6,051	919	0	1,924	1,924	751	973	9,409	21,951
Wisconsin	75	178	278	333	520	667	3,038	22,748	27,837
Wyoming	17,043	1,001	0	770	2,904	223	777	3,688	26,406
<b>Total U.S.</b>	<b>516,425</b>	<b>71,248</b>	<b>39,606</b>	<b>43,900</b>	<b>107,245</b>	<b>113,791</b>	<b>239,718</b>	<b>825,244</b>	<b>1,957,177</b>

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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## Data Sources & Notes

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

Average Production (dry)	IHS	Statewide rankings	Energy Information Administration (EIA) for production and reserves. IHS data for wells drilled.
Average output per producing well	IHS		
Cumulative production (marketed) & Reserves (dry)	Energy Information Administration (EIA)	Total Production (dry)	IHS
Cumulative wells drilled	IHS & State Data	Wellhead and City Gate prices and value	Energy Information Administration (EIA) and IPAA, State Data
Cumulative wellhead value	Energy Information Administration (EIA)	Wells and footage drilled	IHS & State Data
Coalbed methane and Heavy oil	IHS	Well summary and wells by type	IHS
Deepest wells drilled	IHS & State Data	Worldwide rank	BP Statistical Energy review and Oil and Gas Journal
End-use natural gas prices	Energy Information Administration (EIA)		
Federal (Offshore) lease data	Bureau of Ocean Energy Management		
Federal leases & royalties	Department of Interior and Minerals Management Service		
Federal production shares	Office of Natural Resources Revenue, Department of Interior		
First and peak production years	IHS		
Marginal wells	IHS		
Mineral lease revenues, bonuses & rent	Office of Natural Resources Revenue, Department of Interior		
Natural gas marketed production	Energy Information Administration (EIA)		
Natural gas vehicle production and station data	Energy Information Administration (EIA) and National Renewable Energy Laboratory		
Number of employees	IPAA survey & Bureau of Labor Statistics		
Operator	IHS. Defined as a company or individual who last reported.		
Petroleum reserve position	Energy Information Administration (EIA)		
Permits and Horizontal wells	IHS		
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		
Shale Gas	Energy Information Administration (EIA)		

## Abbreviations

bbl. = barrel  
 b/d = barrels per day  
 Mcf = thousand cubic feet  
 MMcf = million cubic feet  
 Bcf = billion cubic feet  
 Tcf = trillion cubic feet  
 BTU = British Thermal Unit  
 NGL = Natural Gas Liquid  
 LPG = Liquefied Petroleum Gases  
 NA = Data Not Available  
 ND = Not Disclosable

## Energy Conversions

One barrel of crude oil:  
 = 42 gallons  
 = 5,800,000 BTU of energy  
 = 5,631 cubic feet of natural gas  
 = 0.22 ton of bituminous coal

One cubic foot of natural gas:  
 = 1,030 BTU of energy  
 = 0.000178 barrel of crude oil  
 = 0.00004 ton of bituminous coal

One short ton of bituminous coal:  
 = 2,000 pounds  
 = 26,200,000 BTU of energy  
 = 4.52 barrels of crude oil  
 = 25,437 cubic feet of natural gas

One metric ton of crude oil:  
 = 2,205 pounds  
 = 7.46 barrels of domestic crude oil  
 = 6.99 barrels of foreign crude oil

One cubic meter of natural gas:  
 = 35.314 cubic feet

**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** - A range of petroleum products heavier than gasoline or jet fuel that includes heating 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) or Natural Gas Plant Liquids** - Hydrocarbons, such as LPG or natural gasoline, found with natural gas that are recoverable by absorption, cryogenic expansion or other means.

**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 ship fuel and 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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