

Oil & Gas Producers

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Cover photograph by Bruce Wells, executive director, the American Oil & Gas Historical Society (www.aoghs.org) in Washington, DC. Image is of a Lufkin pumping unit located in Van, Texas, about 60 miles east of Dallas. The Van Oilfield was discovered on October 6, 1929 (the same year IPAA was founded). Its heritage is exhibited at the Van Area Oil & Historical Museum located off I-20 on Highway 16 West.

Editor's Desk



2003: Economic Recovery and Asian Demand Drive Energy Markets

By Frederick Lawrence - Vice President of Economics & International Affairs, IPAA

The year 2003 was marked by international events that brought little respite to an industry endeavoring to find equilibrium since the events of the previous two years. Prices reached 20-year highs for oil and natural gas. Record nominal prices would follow geopolitical instability in Venezuela and Nigeria and conflict in Iraq. These international events influenced global markets and flowed to the U.S. where demand was continuing to build with a robust economy, especially after the fallout in 2001.

A cold winter in the U.S. and low inventories exacerbated the already tight market. In February, commercial crude stocks fell to the lowest level since 1975 and just slightly below the lower operational inventory level of 270 million barrels. OPEC raised the aggregate production guota of its members (excluding Iraq) to 24.5 million barrels per day (MMB/d), up from 23 MMB/d and Russia would boost its production to average 8.1 MMB/d - up almost 26 percent from 2000 level. Saudi Arabia's output increased by over 1 Mmb/d to reach a 22-year high of over 9.8 Mmb/d according to BP Statistics. Russia's growth of 840,000 b/d represented the primary non-OPEC growth with slight builds by Mexico and Canada. Meanwhile, crude production in the U.S. continued to fall - the 10th year of such declines. Imports rose to constitute over 61 percent of demand.

One macro event was followed by another just as petroleum demand and imports would hit new highs. Recovery from the strike in Venezuela was countered by civil unrest in Nigeria and military action commenced in Iraq on March 19th. As the year ended, Russia stole the show with the arrest of the head of Yukos on charges of fraud and tax evasion. Access to the resource base and energy security gathered heightened attention, whether looking at Iraq, U.S. import dependence, Russian and Venezuelan political risk or China's growing search for international resources necessary to sustain the country's robust economic growth.

In mid-year, Federal Reserve Chairman Alan Greenspan warned about rising natural gas prices and potential economic impacts. In late September, the National Petroleum Council released a report that called for increased domestic gas exploration and growth in the imports of liquefied natural gas (LNG). Greenspan warned, "I have no doubt that ... if we stay at these elevated prices we're going to see some erosion in a number of macroeconomic variables which are not evident at this stage. A very significant amount of natural gas using infrastructure in the American economy was based on 2\$ gas. That means a lot of noncompetitive structures are sitting out there."

Regarding industry employment, the Bureau of Labor Statistics (NAICS) disaggregated 'oil and gas extraction' from associated industries (services, contractors, support activities, etc.) resulting in E&P extraction employment numbers being presented more precisely. The 2003 average oil and gas extraction workforce stood at 120,328 with a monthly low of 119,058 in January and a monthly high of 121,696 in July before falling to 121,089 in December (compares to 119,994 in December 2002). The 2003 and 2002 yearly averages fell from 123,599 average employees in 2001. The 2003 average for employees involved in drilling oil and gas wells was 51,526, up from 48,596 in 2002 but down considerably from the 62,012 drillers in 2001. The 2003 average for support activities for oil and gas operations stood at 120,992, comparing to 120,536 for 2002 and 123,420 for 2001.

For 2003, imports of crude oil and petroleum products averaged 12.26 MMB/d, an estimated increase of 734,000 b/d or six percent from 2002. Imports constituted over 58 percent of domestic petroleum demand in 2002 and the figure for 2003 topped 61 percent. Fifteen years ago, by comparison, imports comprised just over 40 percent of U.S. needs and constituted a \$39 billion trade value price tag (imports only) compared to the \$132.4 billion burden in 2003. Imports of refined products in 2003 averaged 2.60 MMb/d, up almost nine percent from 2.39 MMb/d in 2002. Finished gasoline imports were up almost four percent in 2003 while distillate and residual imports were up almost 25 and 31 percent, respectively.

Crude oil imports increased to 9.67 MMb/d, up almost six percent from 9.14 MMb/d in 2002. Our top importers for crude and petroleum products in 2003 were Canada, Saudi Arabia, Mexico, Venezuela, Nigeria, and Iraq. New importers helped replace decreased Iraqi imports. OPEC imports made up 42 percent of U.S. imports in 2003, up two percent from 2002 but down almost eight percent (in percentage terms) from 1993 levels. In 2003, Russia exported an average of 254,000 b/d to the U.S. - a 21 percent increase from 2002 and a 182 percent increase from 2001 levels. The Strategic Petroleum Reserve (SPR) added 39 million barrels in 2003 reaching an historic high of 638 million barrels. Petroleum product supplied increased 1.4 percent in 2003 (up 17.9 percent since 1990) and refinery inputs were up 1.2 percent (up 13.2 percent since 1990). In 2003, petroleum comprised 39.7 percent of total U.S. energy consumption (compared to 23.5 percent for natural gas and 22.7 percent for coal).

Annual natural gas imports for 2003 amounted to 4.0 Trillion cubic feet (Tcf), almost three times the natural gas imports in 1990 (1.5 Tcf). Imports of natural gas have been rising fairly steadily since 1986 - up almost 424 percent (25 percent per year annualized) - while our dry production is up only 19 percent (or 1.1 percent per year annualized) over the same time period. More recently, imports are down slightly in 2003 compared with 2002, primarily due to expanding exports (with increases to Canada and Mexico) and reduced pipeline imports from Canada. Exports in 2003 increased by almost 32 percent to 680 Billion cubic feet (Bcf) and Canadian imports fell by over eight percent to 3.5 Tcf.

Despite difficulties in expanding production, Canada easily maintained its role as the major supplier of gas imports, doubling its level of imports to the U.S. in 1991. LNG imports to the U.S. grew by over 121 percent in 2003 with supply growth from Trinidad, Nigeria, Algeria and Oman. Strong gas prices brought in spot cargoes from traditional sources and new growth regions such as Trinidad & Tobago. It is important to note that in 2003, LNG imports collectively supplied just over two percent (up from one percent in 2002) of our total natural gas demand.

Natural gas demand in the U.S. fell by almost five percent but world consumption outside the U.S. averaged over four percent according to *BP Statistics*. Global LNG sales rose by over 12 percent, indicating a trend on both the Atlantic and Pacific energy markets.

Estimated crude oil production (ex-NGLs) in



2003 averaged 5.68 MMb/d, compared to 5.75 MMb/d in 2002, representing a 1.67 MMB/d (almost 35 percent) decrease since 1990. U.S. crude production has fallen for 12 straight years. Compared to 2002, crude oil production in the lower-48 states (including offshore) dropped slightly to 4.71 MMb/d in 2003, while Alaskan production dropped to 0.97 MMb/d. The Federal Offshore share of lower-48 production grew by over four percent from 2002 to 1.71 MMb/d, representing almost 30 percent of U.S. production. Natural gas liquid (NGL) production for 2003 averaged 1.72 MMb/d compared to 1.88 MMb/d in 2002. Production from stripper wells (producing ten barrels per day or less) rose to an average rate of 887,059 b/d in 2002 compared to 866,000 b/d in 2001 according to the Interstate Oil and Gas Compact Commission (IOGCC).

Notable year-to-date increases in crude production occurred in the Federal Offshore, Kansas, Montana, and Kentucky but generally the decliners led the gainers. Seismic activity in 2003 fell 30 percent behind year-ago levels, reflecting ongoing challenges in the exploration and newfield market. The average number of monthly seismic crews in 2003 dropped to 40 from a monthly average of 52 in 2002. According to the *American Oil and Gas Reporter*, the average number of drilling permits (received and applied for) in 2003 was 3,644, up from an average of 2,971 in 2002.

Preliminary data showed that dry natural gas production in 2003 was estimated at 19.04 Tcf. up 0.57 percent from 18.93 Tcf for 2002. In 2003, gross withdrawals (including lease condensate) of natural gas amounted to 24.06 Tcf, up from 23.94 Tcf in 2002. Increased gas-directed rig activity and higher gas field revenues resulted in marginal growth. Notable year-to-date marketed production increases occurred in Texas, Oklahoma, Colorado, Wyoming, Mississippi, Alaska and Louisiana. Data from state agencies and World Oil estimates indicated only seven states showing declines in producing wells - of these, only Arkansas, Utah and California have significant numbers. The top ten gas-well states, representing 85 percent of total U.S. gas wells, increased 4.9 percent, or by 15,716 wells, to 333,722 gas wells.

Regarding state natural gas production, Alabama replaced California for the 9th slot and Pennsylvania replaced Oklahoma as the third ranked state in natural gas wells drilled. Preliminary data from the EIA showed a 110 Bcf drop (2.4 percent) in 2003 Federal Offshore gross withdrawals compared to 2002. According to BP, "North America was the only region to see a decline in gas production, as lower Canadian output was only partially offset by small gains in the USA and Mexico."

According to the IOGCC, the number of stripper gas wells (producing 60 Million cubic feet - Mcf - per day or less) totaled 245,961 in 2002, up almost five percent from 2001. These wells collectively produced 1.4 Tcf (3.9 Bcf/d) with an average daily production per well of 15.8 Mcf.

In 2003, the U.S. rotary rig count averaged 1,032 rigs, an increase of 202 from the annual average in 2002. Approximately 15 percent of rigs were oriented toward oil and 85 percent toward natural gas. The natural gas average of 872 rigs for 2003 was almost 26 percent higher than the annual average in 2002 and the oil average of 157 rigs was 15 percent higher than the 2002 average. The 2003 natural gas rig count reached a yearly high of 952 for the week of November 7th, a level last reached during the week of September 28, 2001. The oil-directed rig count ranged between a low of 127 for the week of January 3, 2003 to a high of 187 reached during the week of April 4, 2003. The average workover rig count in 2003 was 1,129 compared to 1,095 in 2002. Workover activity exhibited the largest yearly increases in West Texas, the Texas Gulf Coast, the Southeast, and the Rocky Mountains. The average well-servicing rig count for 2003 was 1,967, up from 1,830 in 2002.

In 2003 according to the American Petroleum Institute, total estimated well completions increased almost 19 percent, rising to 33,436 from 27,794 in 2002. The year yielded an estimated 20,715 gas well completions, 8,710 oil well completions and 4,011 dry holes; up 23 percent, 21 percent, and six percent, respectively, from 2002 figures. Preliminary completion numbers in 2003 showed a 62 percent gas orientation, a 26 percent oil focus and 12 percent constituting dry holes. Total exploratory completions rose by almost 13 percent in 2003 to 2,580 wells (53.6 percent dry) and total development wells rose almost 21 percent to 30,856 completions. Total well footage rose by over 23 percent between 2002 and 2003 to 178.5 million feet. World Oil showed a total of 520,318 producing crude wells (57.1 percent) in 2003 compared to 391,336 (42.9 percent) producing natural gas wells. Compared to 2002, the number of producing oil wells dropped by 8,475 (almost two percent) and natural gas wells rose by 19,474 (over five percent).

In 2002, crude oil reserves increased one percent to 22,677 million barrels, due primarily to reserve extensions, particularly in Texas, California, and the Gulf of Mexico Federal Offshore. Alaska reported a decline in crude oil proved reserves. Crude reserve additions replaced 112 percent of 2002 U.S. crude oil production. Natural gas liquids grew by one million barrels in 2002 to 7,994 million barrels. Reserve additions replaced 100 percent of 2002 NGL production. Dry natural gas reserves increased 1.8 percent to 186.95 Tcf. Producers replaced 118 percent of 2002 dry natural gas production but gas production declined by two percent in 2002 with sharp declines in the Gulf of Mexico partially offset by large production increases in the Rocky Mountain States.

Texas and the Rocky Mountain States dominated gas reserve additions, signifying the ongoing shift from conventional fields to unconventional gas fields. Coal bed natural gas accounted for ten percent of proved dry natural gas reserves and eight percent of dry gas production. Wyoming, New Mexico, Colorado, Utah and Montana collectively represented over 30 percent of U.S. proven gas reserves. Measured by reserves, 11 of the top 20 natural gas fields of 2002 were located in the Rocky Mountain region. Texas comprised a 24 percent share and the Federal Offshore held almost 14 percent of gas reserves.

China's appetite for commodities commands attention. When looking at the world's overall energy supply and demand, the increase of electrification and fuel demand in China (industrial growth and automobile proliferation) have rising implications. Global demand pressures (starring China, India, and developing Asia) are challenging the limits of global spare capacity. China's growth plays an inordinate role in driving global crude markets and this looks to continue despite attempts by the country's government to slow the pace of growth. One International Energy Agency Report noted "Preliminary data indicate that Chinese apparent demand surged by more than 900,000 b/d in the first guarter of 2004, a gain of nearly 18 percent year-on-year." According to the Financial Times, between 2000 and 2003 China "accounted for 40 percent of the growth in world oil demand."

This growth is not just limited to petroleum but affects the gamut of other natural resources. According to the Deputy Director of China's State Environmental Protection Administration, "In the past 20 years the consumption of oil had risen 100 percent, natural gas 92 percent, steel 143 percent, copper 189 percent and aluminum 380 percent. But while China has 21 percent of the world's population, it has only a fraction of its reserves of oil, natural gas, iron ore, alumina and other resources." Energy security and resource diversification have important domestic and international ramifications especially in countries where political stability and economic growth rely so heavily on

resource development.

As spare capacity continues to shrink, production in emerging areas such as Russia, Kazakhstan, and West Africa will be critical. Russia led non-OPEC supply growth with an increase of 2.13 Mmb/d between 1994 and 2003, according to the BP Statistical Review of World Energy. It will be important to monitor the capability of Russia and the Caspian region to sustain production increases. Kazakhstan has raised its production by 681,000 b/d between 1994 and 2003 and looks to factor largely in regard to new growth potential. The Former Soviet Union comprised 13.63 percent of the world's total production in 2003, compared to 13.27 percent for Saudi Arabia, 39.82 percent for OPEC (including Saudi Arabia) and 46.55 percent for non-OPEC (excluding Former Soviet Union).

Regarding natural gas, the 2003 National Petroleum Council report, Balancing Natural Gas Policy - Fueling the Demands of a Growing Economy, provided detailed analysis regarding the supply and demand of this critical fuel going forward. It noted that "the largest component of North American supply remains traditional supply sources in the United States and Canada. These sources supply almost 100 percent of U.S. and Canadian demand today, and are expected to still represent over 75 percent of demand in 2025." It also noted key growth and decline areas: "In the U.S. lower-48, growth in the Rockies and deepwater Gulf of Mexico is offsetting declines in virtually all other U.S. mature basins. In Canada, production from the Western Canada Sedimentary Basin is also expected to decline throughout the study period, with some increases from offshore Eastern Canada."

"While North American production grew 11 Bcf/d (1.8 per year) between 1990 and 2002, growth slowed dramatically after 1996. Growth in the lower-48 Rocky Mountains, deepwater Gulf of Mexico, and more recently, East Texas/North Louisiana has been offset by production losses in other regions, particularly the Gulf of Mexico shelf and Midcontinent. Canadian production growth, which comprised 65 percent of the total growth since 1990, slowed dramatically and began to decline, even as the number of Canadian gas well completions more than tripled."

Unconventional natural gas continued to grow its market share as more conventional sources were depleting in areas open to resource development. "Conventional gas production in the U.S. lower-48 has been declining since 1990 and nonconventional production (tight gas, coal bed methane, and shale gas) has doubled from 12 percent to 25 percent of production. Aside from deepwater Gulf of Mexico, the only U.S. basins maintaining sustainable production increases (Rockies, East Texas/North Louisiana) have been driven by increased nonconventional production."

The Report detailed specific natural gas production trends that depict maturing prospects and steepening decline rates. "Average estimated ultimate recovery (EUR) per gas connection in the U.S. lower-48, excluding nonconventional and the deepwater Gulf of Mexico, fell 15 percent between 1990 and 1999 as the resource base matured and technology gains and higher prices made smaller prospects economic. As drilling ramped up in response to the 2000-2001 price spike, average EUR fell a further 18 percent, as more marginal wells were drilled. Western Canadian average EUR has fallen dramatically as the basin has matured and the industry concentrated on lower-risk, shallow-depth drilling."

"Initial production rates (IPs) increased markedly through the early to mid-1990s, helping the industry to maintain production rates, as the industry employed technology to accelerate production and improve drilling economics. Increases in IPs flattened in the latter part of the 1990s as per-well reserves fell and fracture technology implementation neared saturation level in most basins. Declining EURs and increasing IPs have resulted in steepening initial well decline rates."

"As more and more high decline wells have been added to base production, base decline rates have steadily risen. The decline rate of lower-48 base production has increased to over 25 percent, from just over 15 percent in the early 1990s. Just to maintain production levels requires first year production from new wells of 12-13 Bcf/d, up from 8 Bcf/d in 1992. Western Canada has shown a similar increase in base decline."

"Industry responded aggressively to the 2000-2001 price spike, with the gas rig count climbing to an all-time high over 1,050. The incremental activity yielded a limited production response as: (1) the resource base continued to mature, (2) additional drilling yielded very low marginal results, (3) much of the incremental activity occurred in low rate regions, (4) gains from completion/stimulation technology slowed, (5) base declline rates continued to increase, (6) higher gas prices made it possible to drill lower quality prospects, and (7) rig efficiency declined."

The issue of workforce attrition continues to rise in prominence as more wells are drilled

and demand increases. The U.S. consumed almost 26 percent (over 20 Mmb/d) of the world total petroleum consumption in 2003 according to the BP Statistical Review. Access to skilled labor and rigs joins access to the resource base as a critical industry priority as we endeavor to supply our nation with domestic oil and natural gas. According to experts, over half of the industry will retire in the next 7-10 years. New entrants to the industry will need experience and increasing levels of technical expertise as producers focus on unconventional production, more complex geology and enhanced recovery. Much of this burden will fall on the U.S. independents that drill 90 percent of the nation's wells and produce 68 percent of oil and 82 percent of natural gas.

The Information Services Department has continued to expand the resources available in *The Oil and Gas Industry in Your State*. The department is also building upon the information provided through the IPAA website -http://www.ipaa.org. In addition to adding an electronic version of the *U.S. Oil and Gas Producing Industry in Your State* http://www.ipaa.org/info/InYourState and the *U.S. Petroleum Statistics* -

http://www.ipaa.org/info/econreports/usps.asp you can also access key resources on our international webpage -

http://www.ipaa.org/int. IPAA would like to thank all of the participating state, association, and industry contacts for their continued assistance in the review and collection of data. Please contact Fred Lawrence (flawrence@ipaa.org) with any ideas and comments.

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Alaska Oil & Gas Conservation Commission

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Interstate Oil and Gas Compact Commission

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Michigan Geological Survey

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Oklahoma Corporation Commission

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Tennessee Dept. of Geology & Conservation Oil and Gas Board

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Texas Railroad Commission

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West Virginia Office of Oil & Gas

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

U.S. Dept. of the Interior - MMS

Mail Stop 3000, P.O. Box 25165 Denver, CO 80225 (303) 231-3230 http://doi.gov & http://mms.gov

U.S. Environmental Protection Agency

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

U.S. Geological Survey

12201 Sunrise Valley Dr. Reston, VA 20192 (703) 648-4000 http://www.usgs.gov/

Oil and Gas Museums

Arkansas Museum of Natural Resources (870) 863-6113 http://www.boomtown.org/recreation/museum.html

Arkansas Museum of Natural Science (870) 725-2877 http://www.msstate.edu/dept/geosciences

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

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

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

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

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

Denver Museum of Nature & Science - CO (303) 322-7009 http://www.dmns.org/main/en/

Illinois Oilfield Museum & Resource Center http://www.theonlyoblong.com/oil_field/oblong_oilfield.html

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

Kansas Oil Museum and Hall of Fame (316) 321-9333 http://skyways.lib.ks.us/museums/kom/

Oil Patch Museum - KS (785) 483-3637 http://www.rchs.rwisp.com/index.html

The Kansas Oil & Gas Hall of Fame Museum (620) 793-5742 http://greatbend.com/gbconven/oilgas.htm

Louisiana State Oil and Gas Museum (318) 995-6845 http://members.aol.com/CaddoPine/index.htm

International Petroleum Museum & Exposition - LA (985) 384-3744 http://www.rigmuseum.com/

Pioneer Oil Museum - NY (585) 373-6035 http://rin.buffalo.edu/c_alle/comm/cult/muse/agen/pio -neer.html

> Wood County Historical Center & Museum - OH (419) 352-0967 http://www.woodcountyhistory.org

Anadarko Basin Museum of Natural History - OK (580) 243-0437 http://www.itlnet.net/web/route66/page4.html

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

Healdton Oil Museum-OK (405) 229-0317 http://www.brightok.net/chickasaw/ardmore/county/ healdoil.html

Oklahoma Historical Society (405) 521-2491 http://www.ok-history.mus.ok.us/

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

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

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

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

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

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

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

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

Spindletop - Gladys City Boomtown Museum - TX (409) 835-0823 http://spindletop.org/default.htm

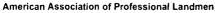
Texas Energy Museum (409) 833-5100 http://www.texasenergymuseum.org/front2.htm

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

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



Cooperating Oil & Gas Associations



4100 Fossil Creek Blvd. Fort Worth, TX 76137-2791 (817) 847-7700 (817) 847-7704 Fax http://www.landman.org

Association of Energy Service Companies

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

California Independent Petroleum Association

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

Colorado Oil & Gas Association

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

Domestic Petroleum Council

101 Constitution Ave., NW, Suite 800 Washington, DC 20001-2133 (202) 742-4300 http://www.dpcusa.org

East Texas Producers & Royalty Owners Assoc.

Kilgore, TX 75663 (903) 984-8671 (903) 984-1499 Fax

Eastern Kansas Oil & Gas Association P.O. Box 355

Chanute, KS 66720 (620) 431-1020 (620) 431-9325 Fax

Florida Independent Petroleum Producers

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

Illinois Oil & Gas Association

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

Independent Oil & Gas Association of New York

5743 Walden Drive Lakeview, NY 14085 (716) 627-4250 (716) 627-4375 Fax http://iogany.org

Independent Oil & Gas Assoc. of Pennsylvania Northridge Office Plaza II

Wexford, PA 15090-7906 (724) 933-7306 (717) 933-7310 Fax

Independent Oil & Gas Assoc. of West Virginia

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

Independent Oil Producers' Agency

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

Independent Oil Producers Assoc. Tri-State

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

Independent Petroleum Assoc. of Mountain States

518 17th Street, Suite 620 Denver, CO 80202 (303) 623-0987 (303) 893-0709 Fax http://www.ipams.org

Independent Petroleum Assoc. of New Mexico

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

Indiana Oil & Gas Association

Route 1, P.O. Box 197 Bridgeport, IL 62417 (618) 943-1010 (618) 943-5301 Fax

International Association of Geophysical

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

Kansas Independent Oil & Gas Association

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

Kentucky Oil & Gas Association

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

Liaison Committee of Cooperating Oil & Gas Associations P.O. Box 1143

Graham, TX 76450 (940) 549-5261 (940) 549-4241 Fax

Louisiana Independent Oil & Gas Association

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

Louisiana Landowners Association

P.O. Box 44121 Baton Rouge, LA 70804-4121 (504) 927-5619 (504) 928-7339 Fax http://www.louisiana2000/LLA/index.com

Michigan Oil & Gas Association

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

Mississippi Indep. Producers & Royalty Owners

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

Montana Petroleum Association

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

National Association of Royalty Owners

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

National Stripper Well Association

P.O. Box 18336 Oklahoma City, OK 73154 (405) 601-8002

New Mexico Oil & Gas Association

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

New York State Oil Producers Association 37 Elm St., P.O. Box 364 Eldred, PA 16731 (814) 225-4659

Northern Alliance of Independent Producers P.O. Box 2422 Bismarck, ND 58502 (701) 224-5037 (701) 224-5038

Ohio Oil & Gas Association

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

Oklahoma Independent Petroleum Association

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

Panhandle Producers & Royalty Owners Assoc.

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

Pennsylvania Oil & Gas Association

106 Locust Grove Rd./P.O. Box 349 Bainbridge, PA 17405 (717) 426-0067 (717) 426-3010 Fax

Permian Basin Petroleum Association

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

Petroleum Association of Wyoming

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



Petroleum Equipment Suppliers Association

9225 Katy Freeway, Suite 310 Houston, TX 77024 (713) 932-0168 (713) 932-0497 Fax http://www.pesa.org

Petroleum Technology Transfer Council

16010 Barkers Point Lane, Suite 220 Houston, Texas 77079 (888) THE-PTTC/(281) 921-1720 (281) 921-1723 Fax http://www.pttc.org

Society of Indep. Professional Earth Scientists

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

Tennessee Oil & Gas Association

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

Texas Alliance of Energy Producers

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

Texas Independent Producers & Royalty Owners Association

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

Virginia Oil & Gas Association

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

Wyoming Independent Producers Association

P.O. Box 2325 Gillette, WY 82717-2325 (307) 686-1081 (307) 686-0560 Fax http://www.energyconnect.com/wipa

Contributing Associations

Alaska Oil & Gas Association

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

American Association of Petroleum Geologists

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

American Petroleum Institute

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

Canadian Association of Petroleum Producers

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

Illinois Petroleum Resources Board

P.O. Box 491 Mount Vernon, IL 62864 (618) 242-2861 (618) 242-3418 Fax

International Association of Drilling Contractors

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

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

Mid-Continent Oil & Gas Association

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

Nebraska Independent Oil & Gas Association

P.O. Box 427 Kimball, NE 69145 (308) 235-2906 (308) 235-2108 Fax

North Dakota Petroleum Council

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

Public Lands Advocacy

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

Society of Petroleum Engineers

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

Southeastern Ohio Oil & Gas Association

Rt. 1, Box 55-P Marietta, OH 45750 (740) 374-3203 (740) 374-2840 Fax http://www.sooga.org

Southwest Kansas Royalty Owners Association

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

Texas Oil & Gas Association

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

Utah Petroleum Association

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

Western States Petroleum Association

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

West Virginia Oil & Natural Gas Association P.O. Box 3231 Charleston, WV 25332-3231 (304) 343-1609

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State Rankings

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

29 New York

30 Missouri

31 Arizona

32 Virginia

29 Oregon

30 Arizona

31 Illinois

32 Maryland 33 Nevada

Year		Productio	n 🐴 😤	Imports	્યુર્જ દ્વાડા	pply	Exports	s 🌾 🏷 De	mand 34	Crude	Reserves	Pric
	Crude Oil	NGL	Totai	Total	Other	Total		Domestic	: Total	Proved Reserves	New Reserves	Oil Wellhe
					(thous. b/d)				•	•	ll. bbls.)	(\$/bbl
1958	6,710	807	7,517	1,700	65	9,282	276	9,118	9,394	30,536	2,608	3.01
1959	7,054	879	7,933	1,780	86	9,799	211	9,526	9,737	31,719	3,667	2.90
1960	7,035	929	7,964	1,815	147	9,926	202	9,798	10,000	31,613	2,365	2.88
1961	7,183	991	8,174	1,917	179	10,270	174	9,976	10,150	31,759	2,658	2.89
1962	7,332	1,021	8,353	2,082	175	10,610	168	10,400	10,568	31,389	2,181	2.90
1963	7,542	1,09 8	8,640	2,123	202	10,965	208	10,743	10,951	30,970	2,174	2.89
1964	7,614	1,155	8,769	2,258	217	11,244	202	11,023	11,225	30,991	2,665	2.8
1965	7,804	1,210	9,014	2,468	220	11,702	187	11,513	11,700	31,352	3,048	2.8
1966	8,295	1,284	9,579	2,573	246	12,398	198	12,085	12,283	31,452	2,964	2.88
1967	8,810	1,409	10,219	2,537	293	13,049	307	12,560	12,867	31,377	2,962	2.92
1968	9,096	1,504	10,600	2,840	347	13,787	231	13,393	13,624	30,707	2,455	2.94
1969	9,238	1,590	10,828	3,166	339	14,333	233	14,137	14,370	29,632	2,120	3.09
1970	9,637	1,660	11,297	3,419	355	15,071	259	14,697	14,956	39,001	2,689	3.18
1971	9,463	1,694	11,157	3,925	438	15,520	233	15,213	15,437	38,063	2,009	3.39
1972	9,441	1,744	11,185	4,741	431	16,357	222	16,367	16,589	36,339	1,558	3.39
1973	9,208	1,738	10,946	6,256	472	17,674	231	17,308	17,539	35,300	2,146	3.89
1974	9,200 8,774	1,688	10,462	6,112	472	17,052		16,652	16,873			6.87
1975	8,375	1,632	10,402	6,056			221			34,250	1,994	÷
					631 577	16,694	209	16,322	16,531	32,682	1,318	7.6
1976	8,132	1,604	9,736	7,313	577	17,626	223	17,461	17,684	30,942	1,085	8.19
1977	8,245	1,618	9,863	8,808	531	19,202	243	18,431	18,674	31,780	1,140	8.5
1978	8,707	1,567	10,274	8,364	315	18,953	362	18,847	19,209	31,355	2,583	9.00
1979	8,552	1,583	10,135	8,456	503	19,094	471	18,516	18,987	29,810	1,410	12.64
1980 1981	8,597 8,572	1,573 1,609	10,170 10,181	6,909 5,995	616 392	17,695 16,568	544 595	17,056 16,058	17,600 16,653	29,805 29,426	2,970 2,570	21.59
		4 550	· · · · · · · · · · · · · · · · · · ·						<u> </u>		·····	
982		-1,550	10,199	5,113	478	15,790	815	15,296	16,111	27,858	1,382	28.52
983	8,688	1,559	10,247	5,051	503	15,801	739	15,231	15,970	27,735	2,897	26.19
984	8,879	1,630	10,509	5,437	587	16,533	722	15,726	16,448	28,446	3,748	25.88
985	8,971	1,609	10,580	5,067	640	16,287	781	15,726	16,507	28,416	3,022	24.09
986	8,680	1,551	10,231	6,223	764	17,218	785	16,281	17,066	26,889	1,446	12.51
987	8,349	1,595	9,944	6,678	768	17,390	764	16,665	17,429	27,256	3,240	15.40
988	8,151	1,625	9,776	7,402	840	18,018	815	17,283	18,098	26,825	2,380	12.58
989	7,626	1,546	9,172	8,060	853	18,085	859	17,325	18,184	26,501	2,262	15.86
990	7,335	1,559	8,894	8,017	1,025	17,936	857	16,988	17,845	26,254	2,258	20.03
991	7,417	1,659	9,076	7,626	1,047	17,749	1,001	16,714	17,715	24,682	940	16.54
992	7,171	1,697	8,868	7,888	1,114	17,870	949	17,033	17,953	23,745	1,509	15.99
993	6,847	1,736	8,583	8,620	1,152	18,355	1,003	17,237	18,240	22,957	1,551	14.25
994	6,662	1,727	8,389	8,996	1,291	18,676	942	17,718	18,660	22,457	1,768	13.19
995	6,560	1,762	8,322	8,835	1,517	18,674	949	17,725	18,674	22,351	2,107	14.62
996	6,465	1,830	8,295	9,478	1,516	19,290	981	18,309	19,215	22,017	1,839	18.46
997	6,452	1,817	8,253	10,162	1,193	19,623	1,003	18,620	19,623	22,546	2,667	17.23
998	6,252	1,759	8,011	10,708	1,143	19,862	945	18,917	19,862	21,034	479	10.87
999	5,881	1,850	7,731	10,852	1,876	20,459	940	19,519	20,459	21,765	2,683	15.56
000	5,822	1,911	7,733	11,459	1,549	20,741	1,040	19,701	20,435	22,045	2,005	26.72
000	5,801	1,868	7,669	11,871	1,080	20,620	971	19,649	20,620	22,045	2,316	20.72
002	5,746	1,880	7,626	11,530	1,589	20,745	984	19,761	20,745	22,677	2 106	22.51
002	0,740	1,000	1,020	11,000	1,009	20,140	304	10,101	20,740	: 22,011	2,106	:22.01

Sources: Energy Information Administration and American Petroleum Institute

Notes: Reserves estimated as of December 31 each year. Imports to Strategic Petroleum Reserve are excluded.

Crude Oil Summary

Natural Gas Summary

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	Marketed	Dry	Loss	(Bcf)	Other	Total			Proved Reserves	New Reserves	Gas Wellhead (\$/Mcf)
1957	10,680	10,246	434	38	478	10,766	42	9,846	246,569	20,297	.11
1958	11,030	10,572	458	136	582	11,329	39	10,303	254,142	19,058	.12
1959	12,046	11,548	498	134	650	12,350	18	11,321	262,597	20,895	.13
1960	12,771	12,228	543	156	7Ó1	13,096	11	11,967	263,759	14,253	.14
1961	13,254	12,662	592	219	686	13,578	11	12,489	267,728	17,421	.15
1962	13,877	13,253	624	402	838	14,509	16	13,267	273,766	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	19,751	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	2,586	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		25,812	4.00
2002	19,885	18,928	957	4,015	2,734	26,193	516	23,007		22,839	2.95
2003	19,912	19,036	876	3,996	2,635	26,359	692	22,375	189,044	21,523	4.88

Sources: Reserves from American Gas Association and Energy Information Administration. All other data from Energy Information Administration.

Drilling Summary

	Monteline									
	Working	Active	New-Field Wildcats	Total Exploratory	Oil Wells	Gas Wells	Dry Holes	Service Wells	Total Wells	Total Drille (mill. ft.)
1957	6,283	2,429	8,014	14,714	28,012	4,620	20,976	230	53,838	223.1
1958	5,064	1,923	6,950	13,199	24,578	4,803	19,043	1,615	50,039	198.2
1959	5,097	2,074	7,031	13,191	25,800	5,029	19,265	1,670	51,764	209.2
1960	4,625	1,750	7,320	11,704	21,186	5,258	17,574	2,733	46,751	190.7
1961	4,557	1,760	6,909	10,992	21,101	5,664	17,106	3,091	46,962	192.1
1962	3,915	1,637	6,794	10,797	21,249	5,848	16,682	2,400	46,179	198.6
1963	3,966	1,500	6,570	10,664	20,288	4,751	16,347	2,267	43,653	184.4
1964	4,102	1,502	6,623	10,747	20,620	4,855	17,488	2,273	45,236	189.9
1965	4,247	1,387	6,175	9,466	18,761	4,724	16,025	1,913	41,423	181.5
1966	3,672	1,273	6,158	10,313	16,447	4,167	15,770	2,152	38,536	165.5
1967	3,337	1,134	5,260	8,878	15,329	3,659	13,246	1,584	33,818	144.7
1968	3,268	1,169	5,205	8,879	14,331	3,456	12,812	2,315	32,914	149.3
1969	3,156	1,194	5,956	9,701	14,368	4,083	13,736	1,866	34,053	161.0
1970	2,340	1,028	4,829	7,436	13,043	4,031	11,099	1,369	29,542	142.0
1971	2,655	976	4,636	7,131	11,903	3,983	10,382	1,414	27,682	130.7
1972	3,016	1,107	5,011	7,551	11,437	5,484	11,013	1,486	29,420	142.5
1973	2,999	1,195	5,096	7,771	10,251	6,975	10,466	970	28,662	141.9
1974	3,662	1,471	5,946	8,969	13,644	7,168	12,205	1,398	34,415	153.8
1975	3,416	1,660	6,234	9,459	16,979	8,169	13,736	1,920	40,804	184.9
1976	3,140	1,656	5,856	9,317	17,697	9,438	13,805	1,674	42,614	187.3
1977	3,063	2,001	6,162	10,140	18,700	12,119	15,036	1,453	47,308	215.7
1978	4,148	2,255	6,731	11,030	19,065	14,405	16,591	1,610	51,671	238.4
1979	4,400	2,176	6,423	10,735	20,689	15,166	16,035	1,472	53,362	243.7
1980	4,962	2,910	7,332	12,870	32,120	17,132	20,234	2,076	71,562	311.4
1981	5,877	3,970	9,151	17,430	42,520	19,742	26,972	2,366	91,600	406.5
1982	5,676	3,105	7,386	15,882	39,252	18,810	25,827	2,212	86,101	375.4
1983	4,944	2,229	6,057	13,845	37,396	14,505	23,837	2,047	77,785	316.7
1984	4,655	2,428	6,528	15,138	44,472	14,962	25,549	2,251	87,234	368.8
1985	3,494	1,969	5,630	12,208	36,458	12,917	21,431	1,736	75,542	316.8
1986	2,016	964	3,484	7,156	18,598	8,055	12,362	834	39,849	177.6
987	1,561	936	3,515	6,903	16,441	8,114	11,698	890	37,143	163.8
988	1,512	936	3,271	6,350	13,508	8,446	10,284	953	33,191	155.2
989	1,392	869	2,644	5,251	10,412	9,483	8,468	672	29,035	135.0
990	1,493	1,010	2,685	5,074	12,104	10,242	8,359	802	31,417	149.5
991	1,251	862	2,195	4,399	11,733	9,020	7,664	1,070	29,487	141.4
992	847	721	1,762	3,525	8,821	7,854	6,394	989	24,058	121.3
993	952	755	1,683	3,603	9,144	10,285	6,594	716	25,724	138.5
994	1,087	775	1,613	3,787	7,704	10,044	5,568	669	23,985	130.6
995	1,253	723	1,605	3,402	8,736	8,923	5,425	885	23,969	124.5
996	1,307	779	1,676	3,342	9,937	10,118	5,698	791	26,544	138.7
997	1,336	943	1,757	3,269	12,028	11,838	6,354	1,017	31,237	165.4
998	1,566	827	1,478	2,694	8,389	12,233	5,202	838	26,662	143.6
999	1,125	625	1,244	2,068	5,419	12,663	3,930	478	22,490	110.0
2000	727	918	1,435	2,487	8,860	17,283	4,721	930	31,794	148.9
2001	717	1,156	1,576	3,109	9,581	21,601	4,667	786	36,635	184.0
2002	674	830	1,324	2,288	7,222	16,801	3,771	747	28,541	145.0
'UUZ										

Sources: Seismic crews from EIA & IHS Energy Group & World Oil. Rotary rigs from Baker-Hughes. All other data from American Petroleum Institute. Notes: Total well completions include exploratory and development wells.



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~ 33	States with oil and/or gas production
1859 1881	

Background Information

States		•0	030	
Number of s	states		20	50
With oil and	/or gas pro	duction		33
First year of Crude oil Natural gas	- (Pennsylva	inia)		1859 1881
Year and am	ount of nea	k production		
	-	thous. bbls.		1970
Natural gas				1973
Deepest pro	-			
Crude oil (Natural gas	. ,			23,257
Natural gas	(16,43)			26,536
Voor ond do-				
tear and dep	ith of deepe	st well drille	d (ft.)	
2003 (GOI	-	ist well drille	d (ft.)	31,824
2003 (GOI Cumulative n	M) Number of to	otal wells dril		31,824
2003 (GOI	M) Number of to	otal wells dril		31,824 54%
2003 (GOI Cumulative n as of 12/31/03 (e Oil wells Gas wells	M) Number of to	Dtal wells dril ^{ze wells)} 1,888,338 560,960		
2003 (GOI Cumulative n as of 12/31/03 (e Oil wells Gas wells Dry holes	M) Number of to	Dtal wells dril e wells) 1,888,338 560,960 1,031,228		54% 16% 30%
2003 (GOI Cumulative n as of 12/31/03 (e Oil wells Gas wells	M) Number of to	Dtal wells dril ^{ze wells)} 1,888,338 560,960		54% 16%
2003 (GOI Cumulative n as of 12/31/03 (e Oil wells Gas wells Dry holes	M) wimber of to xcluding servic	Dtal wells dril e wells) 1,888,338 560,960 1,031,228 3,480,526	led	54% 16% 30%
2003 (GOI Cumulative m as of 12/31/03 (e Oil wells Gas wells Dry holes Total	M) Number of to xcluding servic rude oil we roduction a	Dtal wells dril re wells) 1,888,338 560,960 1,031,228 3,480,526 lihead value A new reserve	led \$1, ⁻ \$	54% 16% 30% 100%
2003 (GOI Cumulative m as of 12/31/03 (e Oil wells Gas wells Dry holes Total Cumulative c Cumulative p	M) Number of to xcluding servic rude oil we roduction a	Dtal wells dril re wells) 1,888,338 560,960 1,031,228 3,480,526 lihead value A new reserve	led \$1, ⁻ \$	54% 16% 30% 100%
2003 (GOI Cumulative n as of 12/31/03 (e Oil wells Gas wells Dry holes Total Cumulative c Cumulative p production as of 1	M) Excluding servic Fude oil we Foduction a 12/31/03, reser Crude Oil	Dtal wells dril te wells) 1,888,338 560,960 1,031,228 3,480,526 lihead value the reserve ves as of 12/31/02	led \$1, ⁻ \$	54% 16% 30% 100% 733,378,297
2003 (GOI Cumulative m as of 12/31/03 (e Oil wells Gas wells Dry holes Total Cumulative c Cumulative p	M) Aumber of to xcluding servic rude oil we roduction a 12/31/03, reser Crude	Dtal wells dril te wells) 1,888,338 560,960 1,031,228 3,480,526 lihead value the reserve ves as of 12/31/02 NGL	led \$1, ⁻ \$	54% 16% 30% 100% 733,378,297 Natural

Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$27.56
Natural gas (\$Mcf)	\$4.88
Wellhead value of production (2003, in thous. \$)	
Crude oil	\$56,848,040
Natural gas	\$97,169,594
Total	\$154,017,634
Average natural gas prico (2003, \$/Mcf)	
Residential consumers	\$9.52
Commercial consumers	\$8.29
Industrial consumers	\$5.81
Electric utilities	\$5.54
City Gate	\$5.85
Severance taxes paid (2003, in thous. \$)	\$5,372,380



Number of wells drilled

	Exploratory	Development	<u>Total</u>
Oil	338	7,703	8,041
Gas	761	18,169	18,930
Dry	1,230	2,259	3,489
Service		815	815
Total	2,329	28,946	31,275

Total footage drilled

(thous. ft.)	Exploratory	Development	Total
Oil	2,463.7	34,906.2	37,369.9
Gas	5,773.7	104,438.8	110,212.5
Dry	8,579.2	12,526.5	21,105.7
Service		2,572.1	2,572.1
Total	16,816.6	154,443.6	171,260.2
(Note: Total:	s may not add due to ro	unding.)	

New-field wildcats drilled 1,415 Footage (thous. ft.) 10,353.5

U ()	-
Average rotary rigs active	1,032

Average rotary rigs active

World-wide rank

		Crude Oil	Natural Gas
	Wells drilled	1st	1st
	Production (inc. NGLs)	3rd	2nd
,	Reserves (2002)	11th	6th
	Number of producing well	S	
	(12/31/03) Crude oil		520,318
	Flowing		19,628
	Artificial lift		500,690
	Natural gas		391,336
	Total		886,316
	Average production*		
		hous. bbls.	thous. b/d
		,062,701	5,651
	NGL (est.)	671,322	1,839
	Total 2	,734,023	7,490
	Natural gas marketed pro (MMcf)	duction	19,911,802
	Average output per produ	cing well	
	Crude oil (bbls.)	-	3,964
	Natural gas (Mcf)		50,882
	Average number of employ	vees	
	Oil and natural gas extrac		306,000
	Refining		71,400
	Transportation		151,500
	Wholesale		152,300
	Retail		880,100
	Total petroleum industry		1,561,400

2002 Latest Available Data

Petroleum reserves

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	4,516	885	5,401
Production	1,875	884	2,759
Net annual change	231	1	232
Proved reserves	22,677	7,994	30,671

Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	2,705	21,359	22,839
Production	2,988	17,260	19,353
Net annual change	-283	4,099	3,486
Proved reserves	29,541	166,020	186,946

Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	152.94	700,001	4,065,606
Gas	159.67	895,222	13,761,350
Dry	250.60	1,455,327	4,670,145
Total	171.20	922,428	22,497,101
Stripper we	lis		
	stripper wells		402,072
•	ell abandonme	nts	13,635
• •	roduction in bb		323,776,606
Crude oil p	roduction b/d		887,059
Percentage	e of oil product	ion	16%
Stripper oil as of 1/1/03(the			
Primary			1,085,800
Secondary			1,079,875
Total			2,165,675
Natural gas as of 1/1/03	stripper wells		
	stripper wells		245.961
	ell abandonmer	nts	3,870
Natural gas	1,418,273,778		
Federal Anc	hore Mineral L	ace Rovalties	
: Oil	aivi o milloi ai Li	aav no ta ines	\$1,373,087,660
Gas			\$768,599,243
Total Royal	tion		\$5,353,954,610
rotarittoyar	100		40,000,904,010

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005

202-857-4722, FAX: 202-857-4799



Souther Caloria		Vester Guid Wextor
Planning Areas		
Planning Areas Number of areas	25	☐ States and Federal Offshore with oil and/or gas
With oil and/or gas production	3	production
First year of production	1946	

2001 1997

7,570 24,709

10,011 30,505

N	/a	ue o	f O	il ar	າd G	as	and the second	Sec. 1	1. 1	2 J

Average wellhead price (2003)	
Crude oil (\$/bbl.)	\$28.48
Natural gas (\$Mcf)	NA
Wellhead value of production (2003, in thous. \$)	
Crude oil	\$16,755,752
Natural gas	NA
Total	NA
Federal Revenues (2003, in thous. \$)	
Bonuses	\$1,147,014
Rents	\$245,964
Royalties	\$4,540,922
Total	\$5,933,900

First year of product	łon
Year and amount of p	eak production
Crude oil - 591,58	9 thous. bbls.
Natural gas — 5,248	8,041 MMcf
Deepest producing w	vell (ft.)
Water depth	
Well depth	
Year and depth of dec	epest well drilled (ft.)
Water depth (2001)	
Well depth (2005)	
Cumulative number o	of total wells drilled
as of 12/31/03 (excluding se	ervice wells)
Oil wells	9 526

Cumulative crude o	\$213,377,552	
Total	35,727	100%
Dry holes	14,546	40%
Gas wells	8,655	24%
Oil wells	9,526	26%

compliance clube on menuesa Asiae	\$213,377,55
as of 12/31/03 (thous. \$)	,,.

Cumulative production & new reserves

production as of 12/31/03, reserves as of 12/31/02

	Crude	NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	20,350	4,469	24,819	100,430
Production	13,798	2,344	16,142	56,397

16 America's Independent

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ł	Number of	wells drilled		
		Explorator	/ Development	Total
	Oil	1	129	130
	Gas	38	319	357
	Dry	125	73	198
	Service		3	- 3
	Total	164	521	688
	Total foota (thous, ft.)	ge drilled		
	(Exploratory	Development	Total
	Oil	23.4	1,417.9	1,441.3
	Gas	402.9	3,370.0	3,772.9
	Dry	1,805.5	913.9	2,719.4
	Service		61.0	61.0
	Totai	2,231.8	5,762.8	7,994.6
	(Note: Totals	may not add due	to rounding.)	
	New-field v Footage (t	vildcats drill	ed	164 2,231.8
			10	
	AAGLARG LO	tary rigs acti	AG	109
	State-wide	rank	Crude Oil	Natural Gas
	Wells drille	ed	12th	11th
	Production		1st	2nd
)	Reserves		2nd	2nd
	Number of	producing w	elle	
	(12/31/03)	hinning ur		
	Crude oil			4,078
	Flowing			1,704
	Artificial	lift		2,374
	Natural ga	s		5,457
	Total	· · ·		9,535
	Average pr	oduction		
			thous. bbls.	thous. b/d
	Crude oil		588,334	1,612
	NGL (est.)		148,000	405
	Total		736,334	2,017
	-	marketed p	roduction	4,505,443
	(MMcf)			
		tput per prod	ucing well	
	Crude oil (I	•		144,270
	Natural gas	s (Mcf)		825,626
	Number of a			100
	Producing			120
	Producing	natural gas		126

2002 Latest Available Data

Petroleum reserves

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	657	181	838
Production	483	184	667
Net annual change	174	-3	171
Proved reserves	5,009	973	4,036

Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	468	2,345	2,637
Production	1,027	3,563	4,469
Net annual change	-559	-1,218	-1,832
Proved reserves	8,090	17,772	25,204

Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	984.04	11,882,158	903,055
Gas	973.80	11,647,575	2,329,515
Dry	1,121.63	14,148,101	2,235,400
Total	1,031.13	12,598,984	5,467,959

2003 Lease Statistics

Prelease activities

G&G permits approved	119
Postiease activities	
Platform installations	122
Platform removals	166
Platforms in place	4,024
Lease characteristics	
Existing leases	6,822
<200 meters of water	2,894
200-400 meters of water	198
400-900 meters of water	489
>900 meters of water	3,241
Acres under lease (mil.)	36.2
Producing leases	1,656
Oil & natural gas fields	
Producing	741
Non-producing	232
Total	973

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799



La Franklin Morga M: Marion w Cla Shelh Coose EIn Lee Dalla Rus Bulloci Вя Cla n. Esca Counties with oil and/or gas production

Background Information

Counties			
Number of co	unties		67
With oil and/o	r gas produ	uction	23
	0.		
First year of p	roduction		
Crude oil			··· 1944
Natural gas		a.	1904
Year and amo	unt of peak	production	
Crude oil — 2	2,153 thou	s. bbls.	1980
Natural gas –	- 378,877	MMcf	1996
0	·		
Deepest produ	licing well (it.)	
Crude oil			18,750
Natural gas			21,805
Year and dept	h of deepes	t well drilled (ft.	J
1995			24,256
		al wells drilled	
as of 12/31/03 (exc	cluding service		4.4.07
Oil wells		1,202	11%
Gas wells		5,370	49%
Dry holes		4,332	40%
Total		10,904	100%
Cumulative cr	ude oil weil	head value	\$10,055,859
as of 12/31/03 (tho	ius. \$)		
Cumulative pr			
production as of 12			N
7	Crude	NGL	Natural

	Crude	NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	487	388	875	7,221
Production	467	356	823	5,973

Value of Oil and Gas	New York Street Street
Average wellhead price	
(2003) Crude oil (\$/bbl.)	\$28.97
Natural gas (\$Mcf)	\$5.93
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$228,689
Natural gas	\$2,052,640
Total	\$2,281,329
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$11.81
Commercial consumers	\$10.07
Industrial consumers	\$6.64
Electric utilities	\$5.80
City Gate	\$6.06
Severance taxes paid (2003, in thous. \$)	\$92,695



Number of wells drilled

	Exploratory	Development	Total
Oil	2	5	7
Gas	8	286	294
Dry	14	18	32
Service			
Total	24	309	333

Total footage drilled

(thous. ft.)	•				
	Exploratory	Development	Total		
Oil	17.2	58.4	75.6		
Gas	24.1	657.1	681.2		
Dry	93.6	78.8	172.4		
Service		 *			
Total	135.0	794.3	929.2		
(Note: Totals	may not add due to	rounding.)			
New-field	wildcats drilled		19		
Footage (Footage (thous. ft.) 117.5				
Average rotary rigs active 3					
State-wid	e rank				
		Crude Oil	Natural Gas		
Wells drill	ed	19th	13th		
Productio	n	16th	10th		
Reserves	(2002)	19th	11th		

Number of producing wells

(12/31/03)	
Crude oil	810
Flowing	51
Artificial lift	759
Natural gas	4,101
Total	4,911

Average production

thous. bbls.	thous, b/d
7,894	22
5,117	14
13,011	36
d production	346,145
roducing well	
	9,746
	84,405
mployees	
extraction	1,546
	1,031
	2,450
	2,973
	19,432
ustry	27,432
	7,894 5,117 13,011 d production producing well mployees extraction

2002 Latest Available Data

Petroleum reserves

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	14	0	14
Production •	5	7	12
Net annual change	9	-7	2
Proved reserves	51	57	108

Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	9	325	334
Production	4	365	365
Net annual change	5	-40	-31
Proved reserves	31	3,891	3,884

Cost of drilling and equipping wells

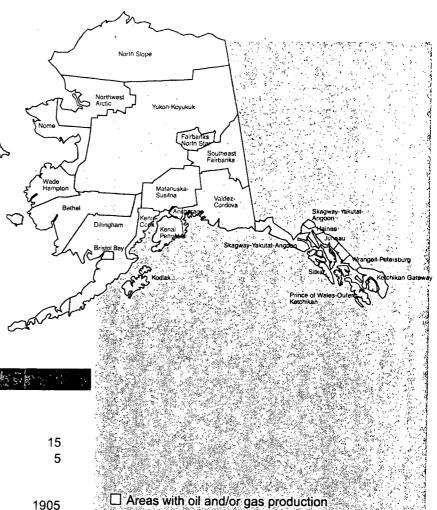
	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	182.19	1,799,600	8,998
Gas	319.59	746,928	154,614
Dry	445.32	2,525,625	60,615
Total	335.02	950,114	224,227

Stripper wells

Producing stripper wells Stripper well abandonments	639 3 1,141,083
Crude oil production in bbls.	
Crude oil production b/d	3,126
Percentage of oil production	13%
Stripper oil reserves as of 1/1/03 (thous. bbls.)	
Primary	1,021
Secondary	1,107
Total	2,128
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	1,696
Stripper well abandonments	16
Natural gas production in Mcf	18,139,406
Federal Onshore Mineral Lease Royalties	
Oil	\$649,209
Gas	\$34,198,476
Total Royalties	\$34,512,763
- Clair Royanico	ψ 04 ,012,100

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

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Background Information

9 St

	Areas				
	Number of a				15
	With oil and	/or gas pro	oduction		5
1	First year of	production	1		
,	Crude oil				1905
	Natural gas				1945
	Year and am	ount of pea	k production		
	Crude oil —	738,143 tl	nous. bbls.		1988
	Natural gas	— 555,402	2 MMcf		1994
	Deepest proc	lucing wei	l (ft.)		
	Crude oil	•			21,980
	Natural gas				17,318
	Year and dep	th of deepe	est weil drilled	(ft.)	
	1998				23,855
			otal wells drill	ed	
	as of 12/31/03 (e:	xcluding servic			
	Oil wells		3,590		79%
	Gas wells		210		5%
	Dry holes		724		16%
	Total		4,524		100%
	Cumulative c as of 12/31/03 (th		lihead value	\$2	00,315,754
	•		R new reserves	6	
	production as of 1	-	rves as of 12/31/02		
)		Crude	NGL		Natural
		Oil	(mill. bbls)	Total	Gas (Bcf)
	Reserves	19,496	510 _,	20,006	19,220

319

15,085

10,378

Value of Oil and Gas

22

Average wellhead price	
Crude oil (\$/bbl.)	\$23.93
Natural gas (\$Mcf)	\$2.41
Wellhead value of production (2003, in thous. \$)	
Crude oil	\$8,508,599
Natural gas	\$1,180,314
Total	\$9,688,913
Average natural gas price	
Residential consumers	\$4,39
Commercial consumers	\$3.58
Industrial consumers	\$1.75
Electric utilities	\$2.33
City Gate	\$2.33
Severance taxes paid (2003, in thous. \$)	\$1,093,356

14,766

Production



Number of wells drilled

	Exploratory	Development	Total
Oil	1	163	164
Gas	5	16	21
Dry	8	8	16
Service		30	30
Total	14	217	231

Total footage drilled

(thous. ft.)					
	Exploratory	Development	Total		
Oil	2.2	1,131.9	1,134.1		
Gas	55.0	86.3	141.3		
Dry	87.9	84.5	172.4		
Service		318.2	318.2		
Total	145.1	1,620.9	1,766.0		
(Note: Totals	may not add due to	rounding.)			
New-field	wildcats drilled		10		
Footage (thous. ft.) 101.5					
Average r	Average rotary rigs active				
State-wid	e rank				
		Crude Oil	Natural Gas		
Wells dril	led	9th	21st		
Productio	n	3rd	8th		
Reserves	(2002)	3rd	8th		

Number of producing wells

(12/31/02)	
Crude oil	1,634
Flowing	541
Artificial lift	1,093
Natural gas	124
Total	1,758

Average production

waaraaaa huuunennu		
	thous, bbls,	thous. b/d
Crude oil	355,562	974
NGL (est.)	1,479	4
Total	357,041	978
Natural gas markete (MMcf)	d production	489,757
Average output per j	producing well	
Crude oil (bbls.)		217,602
Natural gas (Mcf)		3,949,653
Average number of e	mployees	
Oil and natural gas	extraction	8,329
Refining		377
Transportation		212
Wholesale		1,178
Retail		1,783
Total petroleum ind	ustry	11,879

2002 Latest Available Data

Petroleum reserves

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	188	20	208
Production	361	20	381
Net annual change	-173	0	-173
Proved reserves	4,678	405	5,083

Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	46	48	128
Production	262	200	460
Net annual change	-216	-152	-332
Proved reserves	6,376	2,157	8,468

Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$).
Oil	710.05	7,489,429	419,408
Gas	1,173.10	9,447,375	75,579
Dry	1,044.51	10,377,133	155,657
Total	809.13	8,236,000	650,644

Stripper wells

Broducing strippor wells	0
Producing stripper wells Stripper well abandonments	0
Crude oil production in bbls.	0
Crude oil production b/d	0
Percentage of oil production	0
Percentage of on production	0
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	0
Secondary .	0
Total	0
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	0
Stripper well abandonments	0
	0
Natural gas production in Mcf	0
Federal Onshore Mineral Lease Royalties	
Oil	\$6,001,893
Gas	\$8,102,847
Total Royalties	\$15,162,727
r	

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

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<figure>

Background Information

Oil	(mili. bbls)	Total	Gas (Bcf)
Crude	NGL		Natural
Cumulative production a production as of 12/31/03, reset			
Cumulative crude oil we as of 12/31/03 (thous. \$)	llhead value		\$70,797,357
Total	501		100%
Dry holes	412		82%
Gas wells	40		8%
as of 12/31/03 (excluding service Oil wells	ce wells) 49		10%
Cumulative number of to		d	
Year and depth of deep 1980	est well drilled (ft.)	18,013
Natural gas			5,992
Deepest producing well Crude oil	i (ft.)		6,793
Natural gas — 3,161 M			1966
Year and amount of pea Crude oil —3,370 thou	-		1968
Crude oil Natural gas			1958 1955
First year of production	1		1050
Counties Number of counties With oil and/or gas pro	oduction		15 1

0

0

NA

NA

NA

NA

Value of Oil and Gas

Average wellhead price	
(2003)	
Crude oil (\$/bbl.)	\$26.63
Natural gas (\$Mcf)	\$4.33
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$1,252
Natural gas	\$1,918
Total	\$3,170
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$11.31
Commercial consumers	\$7.84
Industrial consumers	\$6.54
Electric utilities	\$5.14
City Gate	\$4.87
Severance taxes paid (2002/2003FY, in thous. \$)	\$8,377

NA

NA

Reserves

Production



Number of wells drilled

	Exploratory	Development	Total
Oil			
Gas			
Dry			
Service			
Total			

Total footage drilled

(thous.	ft.)	
---------	------	--

	Exploratory	Development	Total
Oil			
Gas			
Dry			
Service			
Total			
Nictor Totala	mov pet edd due te mu	oding)	

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

New-field wildcats drilled	0
Footage (thous. ft.)	0

Average rotary rigs active

State-wide rank

	Crude Oil	Natural Gas
Wells drilled		
Production	31st	30th
Reserves (2002)	NA	NA

Number of producing wells

(12/31/03)	
Crude oil	17
Flowing	0
Artificial lift	17
Natural gas	6
Total	23

Average production

violaão hioranorom		
	thous. bbls.	thous. b/d
Crude oil	47	
NGL (est.)		
Total	47	
Natural gas markete (MMcf)	d production	443
Average output per (producing well	0.705
Crude oil (bbls.)		2,765
Natural gas (Mcf)		73,833
Average number of e	employees	
Oil and natural gas	extraction	200
Refining		ND
Transportation		ND
Wholesale		1,182
Retail		16,474
Total petroleum indu	ustry	17,856

2002 Latest Available Data

Petroleum reserves

as of 12/31/02 (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 12/31/02 (Bcf)

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

Cost of drilling and equipping wells

	Cost/ft. (\$)	Cost/ well (\$)	Total Cost (thous. \$)
Oil			
Gas			
Dry			
Total			

Stripper wells

0

arithat néus	
Producing stripper wells	17
Stripper well abandonments	0
Crude oil production in bbls.	23,951
Crude oil production b/d	66
Percentage of oil production	38%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	230
Secondary	0
Total	230
Natural gas stripper weils as of 1/1/03	
Producing stripper wells	4
Stripper well abandonments	0
Natural gas production in Mcf	3,387
Federal Onshore Mineral Lease Royalties	
Oil	\$172,091
Gas	\$29,658
Total Royalties	\$39,323,331

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

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Background Information

Counties Number of co With oil and/		oduction		75 24
First year of p	roduction	1		
Crude oil Natural gas				1921 1889
Year and amo				
Crude oil —				1925
Natural gas -	- 224,446	6 MMcf		1996
Deepest prod	ucing wel	l (ft.)		
Crude oil				11,804
Natural gas				11,804
Year and dept	h of deep	est well drilled ((ft.)	
1992				20,661
Cumulative ni as of 12/31/03 (ex		otal wells drille ce wells)	đ	
Oil wells		18,160		48%
Gas wells		5,646		15%
Dry holes		14,120		. 37%
Total		37,926		100%
Cumulative cr as of 12/31/03 (the		eilhead value		\$10,189,877
-		R NEW IESEIVES		
	Crude	NGL		Natural
······································	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	1,802	94	1,896	8,990
Production	1,738	89	1,827	7,226

24 America's Independent

Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$26.57
Natural gas (\$Mcf)	\$5.17
Wellhead value of production (2003, in thous, \$)	
Crude oil	\$191,995
Natural gas	\$876,827
Total	\$1,068,822
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$10.33
Commercial consumers	\$7.67
Industrial consumers	\$6.94
Electric utilities	\$4.37
City Gate	\$6.07
Severance taxes paid (2003, in thous. \$)	\$8,355

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2003 Indus	try Statistics	

Number of v	wells drilled		Contract of the state of the second
	Exploratory	Development	Total
Oil	0	13	13
Gas	4	173	. 177
Dry	8	27	35
Service			
Total	12	213	225
Total footo	no duillo d		
Total footag (thous. ft.)		Development	Total
Oil		81.0	81.0
Gas	28.9	953.8	982.7
		141.8	210.4
Dry	68.6	141.0	210.4
Service			
Total	97.5	1,176.6	1,274.1
	hay not add due to		
New-field w Footage (th	rildcats drille nous. ft.)	d	10 80.4
Average ro	tary rigs activ		2
State-wide	rank		
		Crude Oil	Natural Gas
Wells drille	d	18th	18th
Production		17th	15th
Reserves (20th	18th
	producing we		
NULLIDOF UL (12/31/03)	producing we	ill 2	
Crude oil			6,727
Flowing			53
Artificial	ift		6,674
Natural gas			5,134
Total	5		11,861
lotal			11,001
Average pro	oduction		
Crude oil		_thous.bbls. 7,226	thous. b/d 20
		236	
NGL (est.)			1
Total		7,462	21
Natural gas	marketed pr	oduction	169,599
(MMcf)			
	tput per prod	ucing well	4 074
Crude oil (t	•		1,074
Natural gas	s (Mcf)		33,034
	mber of empl		4.000
	ural gas extra	action	1,838
Refining			458
Transporta	tion		1,645
Wholesale			1,590
Retail			13,109
	eum industry	1	18,640
· · ·			

2002 Latest Available Data

Petroleum reserves as of 12/31/02 (mill, bbls,)

, , , , , , , , , , , , , , , , , , ,	Crude Oil	NGL	Total
New reserves	13	-1	12
Production	7	0	7
Net annual change	6	-1	5
Proved reserves	49	4	53

Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	13	180	191
Production	5	153	157
Net annual change	8	27	34
Proved reserves	38	1,616	1,650

Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	130.93	972,167	5,833
Gas	88.82	481,027	53,394
Dry	56.41	319,579	12,144
Total	82.90	460,458	71,371

Stripper wells

Producing stripper wells	3,362
Stripper well abandonments	42
Crude oil production in bbls.	3,087,798
Crude oil production b/d	8,460
Percentage of oil production	42%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	35,056
Secondary	29,983
Total	65,039
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	1,719
Stripper well abandonments	24

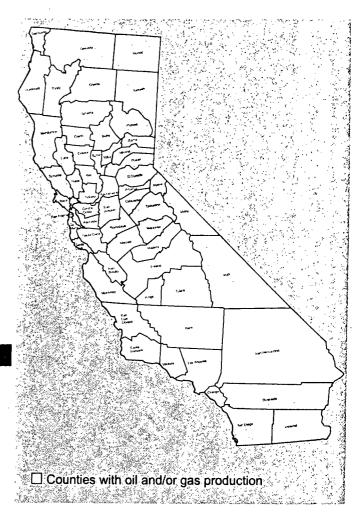
· · · · · · · · · · · · · · · · · · ·	,, e
Stripper well abandonments	24
Natural gas production in Mcf	15,574,407

Federal Onshore Mineral Lease Royalties

Oil	\$8,680
Gas	\$2,392,613
Total Royalties	\$2,432,786

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799





Background Information

	Counties Number of counties With oil and/or gas prod	duction	58 29
)	First year of production Crude oil Natural gas		1861 1889
	Year and amount of peal Crude oil — 423,877 th Natural gas — 714,893	ous. bbls.	1985 1968
	Deepest producing well Crude oil Natural gas	(fL)	14,570 12,576
	Year and depth of deepe 1987	st well drilled (ft.	24,426
	Cumulative number of to as of 12/31/03 (excluding service Oil wells Gas wells Dry holes		80% 3% 17%
	Total	163,198	100%
	Cumulative crude oil well as of 12/31/03 (thous. \$) Cumulative production a production as of 12/31/03, reserved	New reserves	\$179,324,581
ļ	Crude	NGL	Natural

	Crude	NGL		Natural	
~~~~	Oil	(mill. bbls)	Total	Gas (Bcf)	
Reserves	30,336	1,474	31,810	44,983	
Production	23,917	1,359	25,276	35,723	

# Value of Oil and Gas

# Average wellhead price

¢06.00
\$26.29
\$5.04
\$6,535,168
\$337,216
\$6,872,384
\$9.13
\$8.15
\$7.19
\$5.49
\$5.16
\$214,473

# Number of wells drilled

-	Exploratory	Development	Total
Oil	3	1,748	1,751
Gas	6	47	53
Dry	19	68	87
Service		387	387
Total	28	2,250	2,278

# **Total footage drilled**

(thous. ft.)	pao ni mon		
(inous: n.y	Exploratory	Development	Total
Oil	4.8	3,892.3	3,897.1
Gas	. 31.8	240.6	272.4
Dry	143.9	223.1	367.0
Service		688.2	688.2
Total	180.5	5,044.2	5,224.7
(Note: Totals	may not add due to	rounding.)	
New-field	wildcats drilled		15
Footage (thous. ft.)			113.6
Average r	otary rigs active		22
State-wid	e rank		
		Crude Oil	Natural Gas
Wells drill	ed	2nd	20th
Productio	n	4th	11th
Reserves	(2002)	4th	14th
	producing well	S	
(12/31/03) Crudo oil			46 350

Crude oil	46,350
Flowing	2,120
Artificial lift	44,230
Natural gas	1,190
Total	47,540

# Sucrose production

Average production		
	thous. bbls.	thous. b/d
Crude oil	248,580	681
NGL (est.)	9,614	26
Total	258,194	707
Natural gas markete (MMcf)	d production	337,216
Average output per p	roducing well	
Crude oil (bbls.)		5,363
Natural gas (Mcf)		283,375
Average number of e	mployees	•
Oil and natural gas	extraction	14,526
Refining		14,054
Transportation		32,681
Wholesale		10,800
Retail		55,555
Total petroleum indu	ustry	127,616

# 2002 Latest Available Data

# **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	263	29	292
Production	257	10	267
Net annual change	.6	19	25
Proved reserves	3,633	95	3,728

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
2	Dissolved	Associated	Gas
New reserves	194	42	201
Production	216	88	291
Net annual change	-22	-46	-90
Proved reserves	1,900	796	2,591

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	203.58	438,704	666,830
Gas	99.11	508,400	5,084
Dry	297.23	1,243,786	52,239
Total	206.75	460.657	724,153

# **Stripper wells**

Percentage of oil production	14%
Crude oil production b/d	95,973
Crude oil production in bbls.	35,030,269
Stripper well abandonments	2,452
Producing stripper wells	24,420

# Stripper oil reserves

as of 1/1/03 (thous. bbls.)	
Primary	66,253
Secondary	58,753
Total	125,006

# Natural gas stripper wells

as of 1/1/03	
Producing stripper wells	446
Stripper well abandonments	69
Natural gas production in Mcf	3,506,947

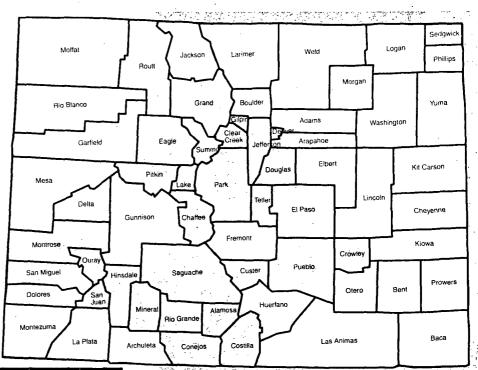
# **Federal Onshore Mineral Lease Royalties**

Oil	\$34,470,878
Gas	\$2,465,424
Total Royalties	\$53,912,462

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799



Colorado



# Background Information

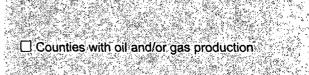
# Counties

Number of co With oil and/o		duction		63 36
First year of p	roduction			
Crude oil				1887
Natural gas				1893
Year and amo	unt of nea	k production		
Crude oil —	-	-		1956
Natural gas -				2003
Deenest mod		1 féa 3		
Deepest prod Crude oil	acing Mai			10 704
Natural gas				12,704 17,654
Natural yas				17,004
Year and dept	th of deepe	st well drilled	(ft.)	
1986	-			22,092
<b>Cumulative n</b> as of 12/31/03 (ex		<b>Dtal wells drille</b> ce wells)	d	
Oil wells		12,011		22%
Gas wells		18,529		35%
Dry holes		22,959		43%
Total				4000/
		53,499		100%
<b>Cumulative c</b> as of 12/31/03 (th		·	\$	<b>100%</b> 19,539,572
as of 12/31/03 (the <b>Cumulative p</b>	ous. \$) roduction (	·	·	
as of 12/31/03 (the <b>Cumulative p</b>	ous. \$) roduction (	ilhead value & new reserves	·	
as of 12/31/03 (the <b>Cumulative p</b>	ous. \$) <b>roduction</b> ( 2/31/03, rese	ilhead value R new reserves rves as of 12/31/02	·	19,539,572

428

2,323

13,166



The street of the second

# Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$30.71
Natural gas (\$Mcf)	\$4.54
Wellhead value of production (2003, in thous, \$)	
Crude oil	\$658,207
Natural gas	\$4,591,234
Total	\$5,249,441
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$5.62
Commercial consumers	\$4.82
Industrial consumers	\$4.79
Electric utilities	\$2.62
City Gate	\$2.72
Severance taxes paid (2003, in thous. \$)	\$23,613

28 America's Independent

Production

1,895



# Number of wells drilled

	Exploratory	Development	Total
Oil	8	28	36
Gas	28	1,431	1,459
Dry	45	45	90
Service		4	4
Total	81	1,508	1,589

# **Total footage drilled**

(thous. ft.)	•••		
	Exploratory	Development	Total
Oil	50.3	142.7	193.0
Gas	160.1	8,045.4	8,205.5
Dry	258.6	176.0	434.6
Service		12.4	12.4
Total	469.0 may not add due to	8,376.5	8,845.5
·	wildcats drilled		47 257.2
Average ro	otary rigs active	1	39
State-wide	ə rank		
		Crude Oil	Natural Gas
Wells drill	ed	16th	5th
Production	n	11th	7th
Reserves	(2002)	13th	6th
Number of (12/31/03)	producing well	S	
Crude oil			5,941
Flowing			0
Artificial			5,941
Natural ga	IS		18,774
Total			24,715
Average pi			
		thous. bbls.	thous. b/d
Crude oil		21,433	59
NGL (est.)		21,050	58
Total		42,483	116
Natural ga: (MMcf)	s marketed prod	duction	1,011,285
Average of	itput per produ	cing well	
Crude oil (	bbls.)		3,608
Natural ga	is (Mcf)		53,866
Average ni	umber of employ	yees	
Oil and na	tural gas extrac	tion	8,361
Refining			390
Transporta	ation		2,036
Wholesale	•		2,162
Retail			13,954
Total petro	leum industry		26,903

# 2002 Latest Available Data

# **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	35	78	113
Production	17	27	44
Net annual change	18	51	69
Proved reserves	214	396	610

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	155	2,241	2,325
Production	83	914	964
Net annual change	72	1,327	1,361
Proved reserves	1,097	13,251	13,888

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	165.00	835,381	17,543
Gas	119.60	685,014	767,901
Dry	87.64	424,238	26,727
Total	118.88	674,000	812,171

# **Stripper wells**

5,384
119
4,643,717
12,723
26%
13,830
10,510
24,340
•
6,701
33

# **Federal Onshore Mineral Lease Royalties**

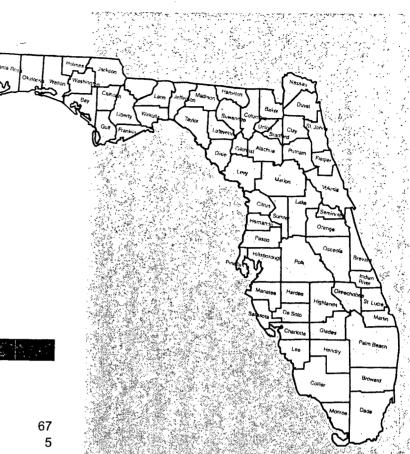
Natural gas production in Mcf

Oil	\$15,435,561
Gas	\$74,678,625
Total Royalties	\$149,082,470

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

60,945,434





# Background Information

# **Counties**

ounties for gas pro	oduction		67 5
production	1		1943 1943
47,536 th	ous. bbls.		1978 1978
lucing wel	l (ft.)		16,656 17,452
th of deep	est well drilled	(ft.)	18,670
		bd	
-	290		28%
	4		0%
	739		72%
	1,032		100%
r <b>ude oil we</b> ous. \$)	ellhead valu <del>o</del>		\$9,352,458
Crude	NGL		Natural
Oil	(mill. bbls)	Total	Gas (Bcf)
739	93	832	691
	for gas pro production point of per 47,536 th — 51,595 lucing wel th of deep th of deepth of deepth of deepth	for gas production production point of peak production 47,536 thous. bbls. — 51,595 MMcf lucing well (ft.) th of deepest well drilled umber of total wells drilled cluding service wells) 290 4 739 1,032 rude oil wellhead value ous. \$) roduction & new reserves 2/31/03, reserves as of 12/31/02 Crude NGL Oil (mill. bbls)	for gas production production punt of peak production 47,536 thous. bbls. — 51,595 MMcf lucing well (ft.) th of deepest well drilled (ft.) umber of total wells drilled cluding service wells) 290 4 739 1,032 rude oil wellhead value bus. \$) roduction & new reserves 2/31/03, reserves as of 12/31/02 Crude NGL Oil (mill. bbls) Total

86

756

589

### Value of Oil and Gas . . C.

S. C. S. S.

Counties with oil and/or gas production CH.

Average wellhead price (2003)	
Crude oil (\$/bbl.)	NA
Natural gas (\$Mcf)	NA
Wellhead value of production (2003, in thous. \$)	
Crude oil	NA
Natural gas	NA
Total	NA
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$16.17
Commercial consumers	\$10.39
Industrial consumers	\$6.82
Electric utilities	\$5.87
City Gate	\$5.87
Severance taxes paid (2003, in thous. \$)	\$5,469

Production

30

670



# Number of wells drilled

	Exploratory	Development	Total
Oil			
Gas			
Dry			
Service		, 	
Total			

# Total footage drilled

	Exploratory	Development	Total
0:1	CAPIOLOGY	Development	10101
Oil			
Gas			
Dry			
Service			
Total			
New-field	wildcats drilled		0
Footage	(thous. ft.)		0
Averane i	otary rigs active		0

# State-wide rank

	Crude Oil	Natural Gas
Wells drilled		
Production	20th	24th
Reserves (2002)	16th	24th
Number of producing w	relis	

# producing wells

(12/31/03)	
Crude oil	70
Flowing	20
Artificial lift	50
Natural gas	
Total	70

# **Average production**

	thous. bbls.	thous. b/d
Crude oil	3,262	9
NGL (est.)	800	2
Total	4,062	11
Natural gas marketer (MMcf)	a production	3,087
Average output per p Crude oil (bbls.)	roducing well	46,600
· ·		40,000 NA
Natural gas (Mcf)		INA
Average number of e	mployees	
Oil and natural gas e	extraction	1,579
Refining		394
Transportation		1,923
Wholesale		5,532
Retail		38,948
Total petroleum indu	stry	48,376

# 2002 Latest Available Data

# **Petroleum reserves**

# as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	2	3	5
Production	4	1	5
Net annual change	-2	2	0
Proved reserves	73	14	87

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	11		11
Production	5		4
Net annual change	6		7
Proved reserves	102		91

# Cost of drilling and equipping wells

	Cost/ft. (\$)	Cost/ well (\$)	Total Cost (thous. \$)
Oil			
Gas			'
Dry			
Dry <b>Total</b>			

# **Stripper wells**

Producing stripper wells Stripper well abandonments Crude oil production in bbls. Crude oil production b/d Percentage of oil production	0 0 0 0
Stripper oil reserves as of 1/1/03 (thous. bbls.)	
Primary	0
Secondary	0
Total	0
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	0
Stripper well abandonments	0
Natural gas production in Mcf	0
Federal Onshore Mineral Lease Royalties	
Oil	\$20,622
Gas	-
Total Royalties	\$20,622

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799



# Background Information

)	Cumulative production production as of 12/31/03, res Crude Oil		Total	Natural Gas (Bcf)
	<b>Cumulative crude oil w</b> as of 12/31/03(thous. \$)			\$19,864,402
	Total	138,566		100%
	Dry holes	53,330		39%
	Gas wells	1,869		1%
	Cumulative number of as of 12/31/03 (excluding ser Oil wells		d	60%
	<b>Year and depth of dee</b> 1976	pest well drilled (	(ft.)	14,942
	Crude oil Natural gas			5,405 4,832
	Deepest producing we	all (ft )		
	Year and amount of pe Crude oil — 147,647 Natural gas — 18,133	thous. bbis.		1940 1944
)	<b>First year of productio</b> Crude oil Natural gas	) <b>n</b>		1889 1882
	<b>Counties</b> Number of counties With oil and/or gas p	roduction		102 45



# Value of Oil and Gas

Average wellhead price	
(2003)	
Crude oil (\$/bbl.)	\$29.10
Natural gas (\$Mcf)	NA
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$340,470
Natural gas	NA
Total	\$340,470
Average natural gas price	
(2003, \$/Mcf)	
Residential consumers	\$8.65
Commercial consumers	\$8.26
Industrial consumers	\$7.23
Electric utilities	\$6.06
City Gate	\$5.97
Severance taxes paid (2003, in thous. \$	

# Number of wells drilled

_	Exploratory	Development	Total
Oil	4	113	117
Gas		14	14
Dry	37	53	90
Service		23	23
Total	41	203	244

# **Total footage drilled**

	Deliverent	<b>T</b> -1-1
Exploratory	Development	<u> </u>
9.8	277.3	287.1
	9.4	9.4
84.2	114.8	199.0
·	28.2	28.2
94.0	429.7	523.7
may not add due to rou	nding.)	
	84.2  94.0	9.8     277.3        9.4       84.2     114.8        28.2

# New-field wildcats drilled

Footage (thous. ft.)	74.1
----------------------	------

# Average rotary rigs active

# State-wide rank

	Crude Oil	Natural Gas
Wells drilled	14th	22nd
Production	15th	. 31st
Reserves (2002)	15th	NA

# Number of producing wells

(12/31/03)	
Crude oil	16,737
Flowing	7
Artificial lift	16,730
Natural gas	240
Total	16,977

# **Average production**

weige hinnerin		
	thous. bbls.	thous. b/d
Crude oil	11,700	32
NGL (est.)	46,894	128
Total	58,594	161
Natural gas market (MMcf)	ed production	174
Average output per	producing well	
Crude oil (bbls.)		699
Natural gas (Mcf)		725
Average number of	employees	
Oil and natural gas	extraction	1,962
Refining		6,516
Transportation		6,291
Wholesale		2,475
Retail		27,212
Total petroleum inc	lustry	44,456

# 2002 Latest Available Data

# **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	24	NA	24
Production	9	NA	9
Net annual change	15	NA	15
Proved reserves	107	NA	107

# Natural gas reserves

as of 12/31/02 (Bcf)

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

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
<u> </u>	(\$)	well (\$)	(thous. \$)
Oil	62.06	151,953	16,259
Gas	130.30	125,250	501
Dry	42.66	116,900	8,183
Total	54.50	137,807	24,943

# Stripper wells

30

0

Producing stripper wells Stripper well abandonments Crude oil production in bbls. Crude oil production b/d Percentage of oil production	17,466 710 10,720,000 29,370 89%
Stripper oil reserves as of 1/1/03 (thous. bbls.)	
Primary	14,662
Secondary	14,681
Total	29,343
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	172
Stripper well abandonments	5
Natural gas production in Mcf	184,860
Federal Onshore Mineral Lease Royalties	
Oil	\$109,569
Gas	-
Total Royalties	\$109,569

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

Compiled by IPAA July 2005



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# Background Information

# Counties

	Number of c With oil and/		uction	92 48
Natural gas1885Year and amount of peak productionCrude oil — 12,833 thous. bbls.Natural gas — 2,241 MMcfDeepest producing well (ft.)Crude oilCrude oilR429Natural gas3,355Year and depth of deepest well drilled (ft.)19988,429Cumulative number of total wells drilledas of 12/31/03 (excluding service wells)Oil wells0il wells25,80438%Total67,465100%Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02	First year of (	production		
Year and amount of peak productionCrude oil — 12,833 thous. bbls.1953Natural gas — 2,241 MMcf1936Deepest producing well (ft.)Crude oil8,429Natural gas3,355Year and depth of deepest well drilled (ft.)19988,429Cumulative number of total wells drilledas of 12/31/03 (excluding service wells)Oil wells39,106Gas wells2,5554%Dry holes25,804Total67,465Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)Cumulative production a new reserves production as of 12/31/03, reserves as of 12/31/02	Crude oil			1889
Crude oil — 12,833 thous. bbls.1953Natural gas — 2,241 MMcf1936Deepest producing well (ft.)1936Crude oil8,429Natural gas3,355Year and depth of deepest well drilled (ft.)199819988,429Cumulative number of total wells drilled8,429Oil wells39,106Gas wells2,5554%100%Dry holes25,8047 total67,465Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)Cumulative production a new reserves production as of 12/31/03, reserves as of 12/31/02	Natural gas			1885
Natural gas — 2,241 MMcf1936Deepest producing well (ft.)8,429Crude oil8,429Natural gas3,355Year and depth of deepest well drilled (ft.)8,42919988,429Cumulative number of total wells drilled8,429Cumulative number of total wells drilled8,429Oil wells39,106Gas wells2,5554%4%Dry holes25,8047 total67,465Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)Cumulative production a new reserves production as of 12/31/03, reserves as of 12/31/02	Year and amo	ount of peak	production	
Deepest producing well (ft.)Crude oil8,429Natural gas3,355Year and depth of deepest well drilled (ft.)8,42919988,429Cumulative number of total wells drilled8,429as of 12/31/03 (excluding service wells)0il wellsOil wells39,106Gas wells2,5554%Dry holes25,8047 otal67,465Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02	Crude oil —	12,833 thou	ıs. bbls.	1953
Crude oil8,429Natural gas3,355Year and depth of deepest well drilled (ft.)199819988,429Cumulative number of total wells drilled as of 12/31/03 (excluding service wells)8,429Oil wells39,106Oil wells2,5554%2,555Dry holes25,804Total67,465Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02	Natural gas -	— 2,241 MM	Acf	1936
Natural gas0,125Natural gas3,355Year and depth of deepest well drilled (ft.)19988,429Cumulative number of total wells drilled as of 12/31/03 (excluding service wells)Oil wells39,106Gas wells2,5554%Dry holes25,804Total67,465Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02	<b>Deepest prod</b>	lucing well (	ft.)	
Year and depth of deepest well drilled (ft.)8,42919988,429Cumulative number of total wells drilled as of 12/31/03 (excluding service wells)58%Oil wells39,10658%Gas wells2,5554%Dry holes25,80438%Total67,465100%Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)\$3,292,935Cumulative production a new reserves production as of 12/31/03, reserves as of 12/31/02\$3	Crude oil	•		8,429
1998       8,429         Cumulative number of total wells drilled       as of 12/31/03 (excluding service wells)         Oil wells       39,106       58%         Gas wells       2,555       4%         Dry holes       25,804       38%         Total       67,465       100%         Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)       \$3,292,935         Cumulative production a new reserves production as of 12/31/03, reserves as of 12/31/02       \$3,292,935	Natural gas			3,355
Cumulative number of total wells drilledas of 12/31/03 (excluding service wells)Oil wells39,106Gas wells2,555Dry holes25,804Total67,465Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02	Year and dep	th of deepes	t well drilled (ft.)	
as of 12/31/03 (excluding service wells)         Oil wells       39,106       58%         Gas wells       2,555       4%         Dry holes       25,804       38%         Total       67,465       100%         Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)         Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02	1998			8,429
Oil wells         39,106         58%           Gas wells         2,555         4%           Dry holes         25,804         38%           Total         67,465         100%           Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)         \$3,292,935           Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02         \$3,292,935	Cumulative n	umber of tot	al wells drilled	
Gas wells2,5554%Dry holes25,80438%Total67,465100%Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)\$3,292,935Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02\$3,292,935		cluding service	,	
Dry holes25,80438%Total67,465100%Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)\$3,292,935Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02\$3,292,935				
Total67,465100%Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)\$3,292,935Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02\$3,292,935	_		,	.,•
Cumulative crude oil wellhead value as of 12/31/03 (thous. \$)       \$3,292,935         Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02       \$3,292,935	,			
as of 12/31/03 (thous. \$) Cumulative production & new reserves production as of 12/31/03, reserves as of 12/31/02	lotal		67,465	100%
production as of 12/31/03, reserves as of 12/31/02			head value	\$3,292,935
	production as 011			Natural

	Crude NGL			Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	548	NA	548	NA
Production	541	NA	541	NA

34 America's Independent



# Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$28.38
Natural gas (\$Mcf)	• • •
Natural gas (pivici)	\$5.41
Wellhead value of production (2003, in thous, \$)	
Crude oil	\$52,929
Natural gas	\$7,920
Total	\$60,849
	<i>4</i> 00,049
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$7.68
Commercial consumers	\$6.83
Industrial consumers	\$5.48
Electric utilities	\$3.85
City Gate	\$3.58
	·
Severance taxes paid (2003, in thous. \$)	\$590



# Number of wells drilled

	Exploratory	Development	Total
Oil		42	42
Gas	20	50	70
Dry	9	29	38
Service		2	2
Total	29	123	152

# **Total footage drilled**

(thous. ft.)			
	Exploratory	Development	Total
Oil		50.0	50.0
Gas	23.3	9.3	32.6
Dry	14.4	24.7	39.1
Service		1.5	1.5
Total	37.7	85.5	123.2
(Note: Totals	may not add due to	rounding.)	
Now_field	wildcats drille	4	18
	thous. ft.)		23.6
i oolage (	(11003. 11.)		20.0
Average r	otary rigs activ	Ð	0
State-wide	e rank		
		Crude Oil	Natural Gas
Wells drill	ed	15th	19th
Productio	n	24th	26th
Reserves	(2002)	23rd	NA
Number of producing wells (12/31/03)			
Crude oil			5,001
Flowing			250
Artificial	lift		4,751
Natural ga	as		1,860
Total			6,861
Average p	roduction		
	-	thous, bbls.	thous. b/d

	thous, bbls.	thous. b/d
Crude oil	1,865	5
NGL (est.)		
Total	1,865	5
Natural gas market (MMcf)	ed production	1,464
Average output per	producing well	
Crude oil (bbls.)		373
Natural gas (Mcf)		787
Average number of	employees	
Oil and natural gas	extraction	324
Refining		419
Transportation		3,386
Wholesale		3,664
Retail		25,555
Total petroleum inc	lustry	33,348

# 2002 Latest Available Data

# **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	5	NA	5
Production	2	NA	2
Net annual change	3	NA	3
Proved reserves	15	NA	15

# Natural gas reserves

as of 12/31/02 (Bcf)

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

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	58.52	111,536	3,123
Gas	196.65	152,667	1,832
Dry	44.42	86,476	1,816
Total	65.37	110,983	6,770

# **Stripper wells**

ourphot Mous	
Producing stripper wells	4,956
Stripper well abandonments	125
Crude oil production in bbls.	1,962,078
Crude oil production b/d	5,576
Percentage of oil production	100%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	7,690
Secondary	7,615
Total	15,305
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	1,545
Stripper well abandonments	2
Natural gas production in Mcf	1,309,120
Federal Onshore Mineral Lease Royalties	
Oil	
Gas	
Total Royalties	-

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

Compiled by IPAA July 2005



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Cheyen	ne l	Rawlins	Decatur	Norten	Phillips	Smith	jeweil		Washir	ngto	Marsh	all Nemat	1	$\perp$	<u>Ś</u>
Sherma	an 1	homas	Sheridar	Graham	Rocks	Osborne	. Mitcheli	Cloud	Clay	Rill	ey Pona	watomie	ickson	tchison Lea	avery worth
Wailace		ogan	Gove	Trego	Ellis	Russell	Lincoln	Ottawa	Dickin		Geary	Wabaunse	Shawne		Johnson
		<u> </u>		1	Rush		Elisworth	Saline			Morris	- 1	Osage	Franklin	Miami
Greeley	Wichita	Scott	Lane	Ness	Pawnee	Barton	Rice	McPherso		rion	Chas	Lyon	Coffey	Andersd	n Linn
Hamilton	Kearn	Fir	iney	Hodgeman	Edwards	Stafford	Reno	Har	vey		tler	Greenwoo	Woodso	n Allen	Bourbon
Stanton	Grant	Hask	Gray	Ford	Kiowa	Pratt	Kingma	n Sedgw	ick	80	uer	Elk	Wilson	Neosho	Crawford .
Morton	I Steven	s Sewa	rd Mead	e Clark	Comanch	Barbe	r Harpe	r Sumi	ner	Cow		Chautauqu	Montgo	Labette mery	Cherokee
						The Astron	<del>, , , , , , , , , , , , , , , , , , , </del>	- Testing	1 . 1 × 1	2. *	<u>,                                    </u>	- 1. A. A.			

77.4%

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# Background Information

Counties				
Number of countie	s			105
With oil and/or gas	pro	duction		89
First year of produc	tion			
Crude oil				1889
Natural gas				1882
Year and amount of	neal	aroduction		
Crude oil — 124,20		-		1956
Natural gas - 899	,955	MMcf		1970
Deepest producing	ارمس	(# )		
Crude oil	WGII	u		7,400
Natural gas				6,774
Jack Sac				0,774
Year and depth of d	eepe:	st <mark>well</mark> drilled (	ft)	
1984				11,300
Cumulative number	nf to	tal wells driffe	d	
as of 12/31/03 (excluding				
Oil wells		129,859		49%
Gas wells		30,575		12%
Dry holes		103,139		39%
Total		263,573		100%
Cumulative crude o	il wel	lhead value		\$43,467,914
as of 12/31/03 (thous. \$)				,
Cumulative product				
production as of 12/31/03,				
Cru		NGL		Natural
Oi	<u> </u>	(mill. bbls)	Total	Gas (Bcf)

1,422

1,242

7,679

7,322

44,069

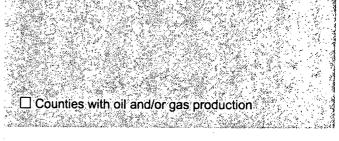
39,283

6,257

6,080

Reserves

Production



# Value of Oil and Gas

# Average wellhead price

(2003)	
Crude oil (\$/bbl.)	\$28.68
Natural gas (\$Mcf)	\$4.33
Wellhead value of production (2003, in thous. \$)	
Crude oil	\$973,973
Natural gas	\$1,813,807
Total	\$2,787,780
Average natural gas price (2003, S/Mcf)	
Residential consumers	\$7.24
Commercial consumers	\$6.51
Industrial consumers	\$3.61
Electric utilities	\$3.11
City Gate	\$4.12
Severance taxes paid (2003, in thous. \$)	\$59,895

### Number of wells drilled Exploratory Development Total Oil 70 378 Gas 51 657 153 245 Dry Service 40 ---Total 1,594 274 1,320 **Total footage drilled** (thous. ft.) Exploratory Development Total

Oil	317.8	1,150.9	1,468.7
Gas	194.7	1,370.9	/ 1,565.6
Dry	675.1	797.7	1,472.8
Service		79.7	79.7
Total	1,187.6	3,399.2	4,586.8
	s may not add due		.,
	wildcats dril	ed	151
Footage	(thous. ft.)		656.8
Average r	otary rigs act	iv <del>o</del>	9
State-wid	e rank		
<u></u>		Crude Oil	Natural Gas
Wells dril		4th	9th
Productic		9th	9th
Reserves	s (2002)	12th	9th
<b>Number o</b> (12/31/03)	f producing w	ells	
Crude oil			40,500
Flowing	<b>1</b> .		550
Artificia	•		39,950
Natural g	as		18,639
Total			59,139
Average p	roduction		
		thous. bbls.	thous. b/d
Crude oil		33,960	93
NGL (est.	.)	29,336	80
Total		63,296	173
Natural ga (MMcf)	as marketed p	roduction	418,893
	utput per pro	fucing well	
Crude oil	· /		839
Natural g	as (Mcf)		22,474
_	umber of emp		
	atural gas ext	raction	5,505
Refining			1,521
Transport			2,960
Wholesal	e		2,073
Retail			11,058
Total petr	oleum industi	У	23,117

# 2002 Latest Available Data

### **Petroleum reserves**

### as of 12/31/02 (mill. bbls.)

448 708

398

40

	Crude Oil	NGL	<u>Total</u>
New reserves	53	-14	39
Production	32	25	57
Net annual change	21	-39	-18
Proved reserves	237	263	500

### Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	<u>Gas</u>
New reserves	-31	403	353
Production	8	495	471
Net annual change	-39	-92	-118
Proved reserves	66	5,263	4,983

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	50.70	176,904	58,909
Gas	68.12	174,141	71,746
Dry	34.98	132,790	46,875
Total	49.94	161,685	177,530

# Stripper wells

Producing stripper wells Stripper well abandonments Crude oil production in bbls. Crude oil production b/d	33,317 1,722 25,002,372 68,500
Percentage of oil production	77%
Stripper oil reserves as of 1/1/03 (thous. bbls.)	
Primary	57,870
Secondary	52,076
Total	109,946
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	10,437
Stripper well abandonments	298
Natural gas production in Mcf	124,877,543
Federal Onshore Mineral Lease Royalties	
Oil	\$840,712
Gas	\$3,663,650
Total Royalties	\$4,4,357,516

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

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	und inf	ormation		
<b>Counties</b> Number of c With oil and,		oduction		120 60
First year of	production	1		
Crude oil* Natural gas*				1860
•		st year of oil product	tion of a brin	1888 e well in
		363 for gas productio		
Year and am	ount of pea	k production		
Crude oil —	27,272 the	ous. bbls.		1959
Natural gas	96,459	MMcf		1947
<b>Deepest prod</b>	lucing wei	l (ft.)		•
Crude oil	-			8,546
Natural gas				10,934
Year and dep	th of deep	est well drilled (	(ft.)	
<b>Year and dep</b> 1977	th of deepo	est well drilled (	( <b>ft.)</b>	15,200
1977	-			15,200
1977	umber of t	otal wells drille		15,200
1977 <b>Cumulative n</b> as of 12/31/03 (e: Oil wells	umber of t	<b>otal wells drille</b> ^{ce wells)} 54,973		49%
1977 <b>Cumulative n</b> as of 12/31/03 (e: Oil wells Gas wells	umber of t	<b>otal wells drille</b> ce wells) 54,973 15,085		49% 13%
1977 <b>Cumulative n</b> as of 12/31/03 (e: Oil wells	umber of t	<b>otal wells drille</b> ^{ce wells)} 54,973		49% 13% 38%
1977 Cumulative n as of 12/31/03 (e: Oil wells Gas wells Dry holes Total	umber of t xcluding servic	0tal wells drille ce wells) 54,973 15,085 42,777 112,835	d	49% 13% 38% <b>100%</b>
1977 <b>Cumulative n</b> as of 12/31/03 (e: Oil wells Gas wells Dry holes	umber of t xcluding servic	0tal wells drille ce wells) 54,973 15,085 42,777 112,835	d	49% 13% 38%
1977 Cumulative n as of 12/31/03 (e: Oil wells Gas wells Dry holes Total Cumulative c Cumulative p	umber of t xcluding servi rude oil we roduction a	0tal wells drille ce wells) 54,973 15,085 42,777 112,835	d	49% 13% 38% <b>100%</b>
1977 Cumulative n as of 12/31/03 (e: Oil wells Gas wells Dry holes Total Cumulative c Cumulative p	rude oil we roduction a Crude	otal wells drille ce wells) 54,973 15,085 42,777 112,835 Sillhead value & new reserves rves as of 12/31/02 NGL	d	49% 13% 38% <b>100%</b>
1977 Cumulative n as of 12/31/03 (e: Oil wells Gas wells Dry holes Total Cumulative c Cumulative p production as of 1	rude oil we roduction a 2/31/03, rese Oil	otal wells drille ce wells) 54,973 15,085 42,777 112,835 Allhead value R new reserves rves as of 12/31/02 NGL (mill. bbls)	<b>d</b> ₹ Total	49% 13% 38% <b>100%</b> 517,248,933 Natural Gas (Bcf)
1977 Cumulative n as of 12/31/03 (e: Oil wells Gas wells Dry holes Total Cumulative c Cumulative p	rude oil we roduction a Crude	otal wells drille ce wells) 54,973 15,085 42,777 112,835 Sillhead value & new reserves rves as of 12/31/02 NGL	<b>d</b> \$	49% 13% 38% <b>100%</b> 517,248,933 Natural

Counties with oil and/or gas production

:

# Value of Oil and Gas

Average wellhead price (2003)	
Crude oil (\$/bbl.)	\$27.21
Natural gas (\$Mcf)	\$4.54
Wellhead value of production (2003, in thous, \$)	
Crude oil	\$69,059
Natural gas	\$397,740
Total	\$466,799
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$9.18
Commercial consumers	\$8.62
Industrial consumers	\$6.54
Electric utilities	NA
City Gate	\$6.11
Severance taxes paid (2003, in thous. \$)	\$17,800

# Number of wells drilled

	Exploratory	Development	Total
Oil			
Gas		3	3
Dry .		1	· 1
Service			
Total		4	4

# Total footage drilled

(thous. ft.)			
	Exploratory	Development	Total
Oil			
Gas		1.6	1.6
Dry		0.9	0.9
Service			
Total		1.7	1.7
New-field wildcats drilled0Footage (thous. ft.)0			
Average rotary rigs active			4

### State-wide rank

	Crude Oil	Natural Gas
Wells drilled		24th
Production	22nd	19th
Reserves (2002)	21st	16th
Number of producing v	olie	

# Number of producing wells

(12/31/03)	
Crude oil	18,166
Flowing	4
Artificial lift	18,162
Natural gas	12,551
Total	30,717

### **Average production**

thous. bbis	thous. b/d
2,538	7
1,334	4
3,872	11
I production	87,608
roducing well	
	140
	6,980
nployees	
extraction	1,688
	1,190
	3,132
	1,949
	20,670
stry	28,629
	1,334 3,872 I production roducing well mployees extraction

# 2002 Latest Available Data

# **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	10	-3	7
Production	2	3	5
Net annual change	10	-6	4
Proved reserves	27	66	93

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	0	132	126
Production	0	. 83	. 79
Net annual change	0	49	47
Proved reserves	25	1,974	1,907

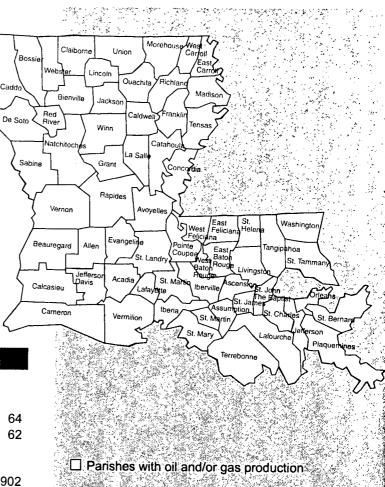
# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	76.84	127,833	8,437
Gas	62.25	225,316	118,516
Dry	81.16	115,010	23,462
Totai	65.32	188,964	150,415

# **Stripper wells**

Producing stripper wells Stripper well abandonments Crude oil production in bbls. Crude oil production b/d Percentage of oil production	19,462 237 2,049,971 5,616 75%
Stripper oil reserves, as of 1/1/03 (thous, bbls.)	
Primary	3,892
Secondary	7,415
Total	11,307
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	16,010
Stripper well abandonments	52
Natural gas production in Mcf	78,444,980
Federal Onshore Mineral Lease Royattles	
Oil	\$1,415
Gas	\$71,913
Total Royalties	\$73,328

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799 Louisiana



# Background Information

<b>Parishes</b>				
Number of p				64
With oil and	/or gas pro	oduction		62
First year of	production	]		
Crude oil				1902
Natural gas				1905
Year and am	ount of pea	k production		
Crude oil —				1971
Natural gas	8,242,4	23 MMcf		1973
Deepest pro	ducing wel	l (ft_)		
Crude oil	-			22,856
Natural gas				21,862
Year and dep	th of deepo	est well drilled	(fL)	
1981				25,703
Cumulative n as of 12/31/03 (e		otal wells drill ce wells)	ed	
Oil wells	0	90,102		43%
Gas wells		41,174		20%
Dry holes		78,075		37%
Total		209,351		100%
Cumulative c as of 12/31/03 (th	-	ilhead value	\$2	49,287,022
		L NEW reserves	5	
production as OF	Crude	NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	27,595	4,830	32,425	260,670
Dupduction	40,400	0,400	04.007	

3,138 -

21,627

142,516

# Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$30.31
Natural gas (\$Mcf)	\$5.64
Wellhead value of production (2003, in thous. \$)	
Crude oil	\$2,740,721
Natural gas	\$7,616,250
Total	\$10,356,971
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$8.13
Commercial consumers	\$6.79
Industrial consumers	\$3.70
Electric utilities	\$3.66
City Gate	\$4.07
Severance taxes paid (2003, in thous. \$)	\$454,429

40 America's Independent

18,489

Production



Number o	f wells drilled		
	Exploratory	Development	Total
Oil	6	252	258
Gas	49	780	829
Dry	93	321	414
Service	·		
Total	148	1,353	1,501
Total foot (thous. ft.)	age drilled		
	Exploratory	Development	Total
Oil	49.8	1,812.2	1,862.0
Gas	512.6	7,941.9	8,454.5
Dry	879.5	2,792.5	3,672.0
Service		<b></b> '	
Total	1,441.9	112,546.7	13,988.5
(Note: Totals	may not add due to r	rounding.)	
	wildcats drilled (thous. ft.)		138 1,343.7
Average r	otary rigs active		157
State-wid	e rank		
		Crude Oil	Natural Gas
Wells drill	ed	6th	8th

<b>t</b> 1	Wells drilled	6th	8th
	Production	5th	6th
,	Reserves (2002)	8th	7th
	Number of producing	wells	
	(12/31/03)		
	Crude oil		20,184
	Flowing		1,657
•	Artificial lift		18,527
	Natural gas		15,694
	Total		35,878
	Average production		
		thous. bbls.	thous. b/d
	Crude oil	90,423	248
	NGL (est.)	116,104	318
	Total	206,527	566
	Natural gas marketed	production	1,350,399
	(MMcf)	-	1,350,399
	(MMcf) Average output per pl	-	1,350,399 4,480
	(MMcf)	-	
	(MMcf) Average output per pi Crude oil (bbls.) Natural gas (Mcf)	roducing well	4,480
	(MMcf) Average output per pl Crude oil (bbls.) Natural gas (Mcf) Average number of er	roducing well nployees	4,480 86,046
	(MMcf) Average output per pl Crude oil (bbls.) Natural gas (Mcf) Average number of er Oil and natural gas e	roducing well nployees	4,480 86,046 42,909
	(MMcf) Average output per pl Crude oil (bbls.) Natural gas (Mcf) Average number of er Oil and natural gas e Refining	roducing well nployees	4,480 86,046 42,909 10,084
	(MMcf) Average output per pl Crude oil (bbls.) Natural gas (Mcf) Average number of er Oil and natural gas e Refining Transportation	roducing well nployees	4,480 86,046 42,909 10,084 3,969
	(MMcf) Average output per pl Crude oil (bbls.) Natural gas (Mcf) Average number of er Oil and natural gas e Refining Transportation Wholesale	roducing well nployees	4,480 86,046 42,909 10,084 3,969 4,282
	(MMcf) Average output per pl Crude oil (bbls.) Natural gas (Mcf) Average number of er Oil and natural gas e Refining Transportation	roducing well nployees extraction	4,480 86,046 42,909 10,084 3,969

# 2002 Latest Available Data

### Petroleum reserves

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	-3	0	-3
Production	60	68	128
Net annual change	-63	-68	-131
Proved reserves	501	323	824

# Natural gas reserves

as of 12/31/02(Bcf)

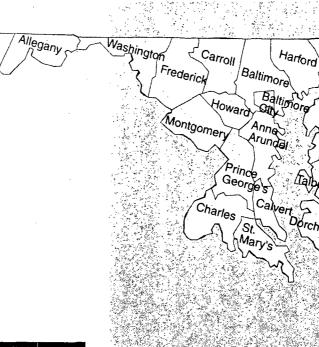
	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	-29	558	487
Production	97	1,283	1,338
Net annual change	-126	-725	-851
Proved reserves	670	8,520	8,960

# Cost of drilling and equipping wells

COSLOI ALIN	nny anu cyup	hillà Mali2	
	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	553.81	3,955,149	609,093
Gas	448.09	4,590,176	2,483,285
Dry	562.95	5,408,609	1,660,443
Total	495.54	4,743,334	4,752,821
Stripper we	lis		
Producing	stripper wells		20,891
Stripper we	ell abandonme	nts	731
Crude oil p	roduction in bl	ols.	14,999,393
Crude oil p	roduction b/d		41,094
Percentage	e of oil product	ion	16%
<b>Stripper oil</b> as of 1/1/03 (th Primary Secondary Total			64,710 62,172 126,882
Natural gas as of 1/1/03	stripper wells		
	stripper wells		9,595
	ll abandonme	nts	396
	production in		40,835,950
Federal Ons	hore Mineral L	ease Royalties	
Oil			\$26,995,243
Gas			\$52,012,665
Total Royal	ties		\$79,404,734

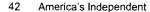
For more information please contact: Information Services Department, Independent Petroleum Association of America, 11201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799





Garrett

<b>Counties</b> Number of c With oil and/		oduction		23
<b>First year of p</b> Crude oil Natural gas	roduction			 1950
<b>Year and amo</b> Crude oil — Natural gas -		-		 1959
<b>Deepest prod</b> Crude oil Natural gas	lucing wel	l (ft.)	·	10,376 8,658
<b>Year and dep</b> 1973	th of deepo	est well drilled (	(ft.)	11,617
Cumulative n as of 12/31/03 (ex		otal wells drille	d	
Oil wells Gas wells Dry holes Total		0 72 51 <b>123</b>		0% 59% 41% <b>100%</b>
<b>Cumulative c</b> i as of 12/31/03 (the		ilhead value		NA
Cumulative production & new reserves				
production as of 1	2/31/03, rese Crude	rves as of 12/31/02 NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	0	NA	NA	NA
Production	0	NA	NA	NA



# Calvert Dorchester Wicomico Worce Some Counties with oil and/or gas production

Cecil

Kent

Quee

Caroline

Ann/e

# Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	NA
Natural gas (\$Mcf)	\$4.50
Wellhead value of production (2003, in thous. \$)	
Crude oil	NA
Natural gas	\$216
Total	\$216
Average natural gas price (2003, \$/Mcf)	,
Residential consumers	\$11.01
Commercial consumers	\$8.12
Industrial consumers	\$9.57
Electric utilities	\$6.71
City Gate	\$6.87
Severance taxes paid (2003, in thous. \$)	\$1

# Number of wells drilled

	Exploratory	Development	Total
Oil			
Gas		. <b></b>	
Dry			
Service			
Total			

# Total footage drilled

(thous.	ft.)
---------	------

	Exploratory	Development	Total
Oil			
Gas			
Dry			
Service			
Total		'	
(Note: Totals	may not add due to rou	inding.)	

New-field wildcats drilled	
Footage (thous. ft.)	

### Average rotary rigs active

### State-wide rank

	Crude Oil	Natural Gas
Wells drilled		÷-
Production		32nd
Reserves (2002)		NA

### Number of producing wells

(12/31/03)	
Crude oil	0
Flowing	0
Artificial lift	0
Natural gas	11
Total	11

### Average production

	thous. bbls.	thous. b/d
Crude oil	NA	NA
NGL (est.)	NA	NA
Total	NA	NA
Natural gas marketer (MMcf)	i production	48
Average output per p	roducing well	
Crude oil (bbls.)		0
Natural gas (Mcf)		4,364
Average number of e	mployees	
Oil and natural gas e	extraction	203
Refining		38
Transportation		959
Wholesale		2,793
Retail		11,682
Total petroleum indu	stry	15,675

# 2002 Latest Available Data

### **Petroleum reserves**

as of 12/31/02 (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 12/31/02 (Bcf)

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

# Cost of drilling and equipping wells

	Cost/ft. (\$)	Cost/ well (\$)	Total Cost (thous. \$)
Oil			
Gas			
Dry			
Total			•

### **Stripper wells**

---

0

Producing stripper wells	
Stripper well abandonments	
Crude oil production in bbls.	
Crude oil production b/d	
Percentage of oil production	
Stripper oll reserves	
as of 1/1/03 thous. bbls.)	
Primary	
Secondary	
Total	
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	6
Stripper well abandonments	0
Natural gas production in Mcf	13,446
Federal Onshore Mineral Lease Royalties	
Oil	
Gas	
Total Royalties	\$0

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799



# Alagan Alagan Alagan Alagan Alagan Alagan Alagan Alagan Alagan

# Background Information

Counties			
Number of	counties		83
With oil and	l/or gas prod	luction	63
First year of	production		
Crude oil			1900
Natural gas			1909
Year and am	ount of peak	production	
	- 34,862 thou		1979
	— 311,614		1997
-			
	ducing well (		
Crude oil			10,515
Natural gas			13,513
Year and dep	oth of deepes	st well drilled (ft.)	
1975	-		17,466
Aumulathua -			
as of 12/31/03 (e		tal wells drilled	
Oil wells		14,761	32%
Gas wells		10,584	23%
Dry holes		20,855	45%
Total		46,200	100%
<b>Cumulative c</b> as of 12/31/03 (th		lhead value	\$13,965,493
as or 12/0 1/03 (ti	10 <b>03</b> . Øj		
		new reserves	
production as of	12/31/03, reserve Crude		N. 4
	Crude	NGL	Natural

	Crude	NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	1,265	284	1,549	8,766
Production	1,222	225	1,447	4,945

44 America's Independent

# Counties with oil and/or gas production

Barry Eato

c

Alger

# Value of Oil and Gas

Average wellhead price (2003)	
Crude oil (\$/bbl.)	\$29.18
Natural gas (\$Mcf)	\$4.01
Wellhead value of production	
(2003, in thous. \$) Crude oil	<b>A</b> ( <b>A A A A</b>
	\$190,370
Natural gas	\$950,318
Total	\$1,140,688
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$7.31
Commercial consumers	\$6.93
Industrial consumers	\$5.52
Electric utilities	\$3.91
City Gate	\$5.32
Severance taxes paid	\$54,651
(2003, in thous. \$)	



### 2003 Industry Statistics S ......

# Number of wells drilled Exploratory

	Exploratory	Development	Total
Oil	2	3	5
Gas	1	311	. 312
Dry	21	18	39
Service			
Total	24	332	356

# **Total footage drilled**

(thous. ft.)			
	Exploratory	Development	Total
Oil	7.1	14.9	22.0
Gas	0.4	463.5	463.9
Dry	80.7	50.7	131.4
Service			
Total	88.2	529.1	617.3
(Note: Totals	may not add due to rou	inding.)	
New-field	wildcats drilled		21
Footage	Footage (thous. ft.)		

# Footage (thous. ft.)

# Average rotary rigs active

# State-wide rank

Natural Gas
12th
13th
13th
3,800
368
3,432
8,500
12.300
thous. b/d
18
17
35
236,987
1,717
27,881
2,164
ND
4,268
3,289
27,230
36,951

# 2002 Latest Available Data

# **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	21	8	29
Production	6	4	10
Net annual change	15	4	19
Proved reserves	61	47	. 108

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas_
New reserves	83	442	520
Production	28	218	242
Net annual change	55	224	278
Proved reserves	214	3,097	3,254

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	70.21	299,433	8,983
Gas	138.89	207,064	55,079
Dry	82.50	320,455	10,575
Total	114.35	226,863	74,638

# Stripper wells

3

Producing stripper wells Stripper well abandonments	3,428 155
Crude oil production in bbls.	3,397,608
Crude oil production b/d	9,309
Percentage of oil production	47%
Stripper oil reserves as of 1/1/03 (thous. bbls.)	
Primary	18,273
Secondary	17,557
Total	35,830
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	4,100
Stripper well abandonments	65
Natural gas production in Mcf	55,623,429
Federal Onshore Mineral Lease Royalties	
Oil	\$143,802
Gas	\$957,876
Total Royalties	\$1,092,028

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	Crude	NGL	Natural
	umulative production & roduction as of 12/31/03, reserve		
	<b>Sumulative Crude oil well</b> s of 12/31/03 (thous. \$)	ihead value	\$18,457,015
1	fotal	26,870	100%
	Dry holes	16,163	60%
(	Gas wells	2,412	9%
	as of 12/31/03 (excluding service D <b>il wells</b>	e wells) 8,295	31%
	Cumulative number of to		
	<b>Year and depth of deepe</b> 1986	st well drilled (ft.)	25,500
	Natural gas		21,727
	<b>Deepest producing well</b> Crude oil	(ft.)	21,533
	Natural gas — 181,238	MMcf	1981
	Year and amount of peak Crude oil — 65,119 tho		1970
	Natural gas		1923
	First year of production Crude oil		1889
	<b>Counties</b> Number of counties With oil and/or gas proc	duction	82

			natura	
Oil	(mill. bbls)	Total	Gas (Bcf)	
2,628	126	2,754	9,286	
2,490	146	2,626	8,701	
	2,628	2,628 126	2,628 126 2,754	

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# Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$27.46
Natural gas (\$Mcf)	\$5.13
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$455,644
Natural gas	\$686,912
Total	\$1,142,556
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$9.74
Commercial consumers	\$7.74
Industrial consumers	\$6.35
Electric utilities	\$5.81
City Gate	\$6.19
Severance taxes paid (2003, in thous, \$)	\$43,413



# Number of wells drilled

	Exploratory	Development	Total
Oil	1	29	30
Gas	7	173	180
Dry	33	36 ,	. 69
Service	,		
Total	41	238	279

# Total footage drilled

(thous. ft.)			
	Exploratory	Development	Total
Oil	16.1	220.4	236.5
Gas	41.2	1,199.9	1,241.1
Dry	217.9	275.3	493.2
Service			
Total	275.1	1,695.6	1,970.7
(Note: Totals	may not add due to	rounding.)	
New-field	wildcats drilled		33
Footage	(thous. ft.)		215.0
Average r	otary rigs active	)	8
State-wid	e rank		
		Crude Oil	Natural Gas
Wells drill	led	17th	16th
Productio	n	13th	17th
Reserves	(2002)	14th	21st

# Number of producing wells

(12/31/03)	
Crude oil	2,890
Flowing	460
Artificial lift	2,430
Natural gas	1,355
Total	4,245

# **Average production**

Average productio		
	thous. bbls.	thous. b/d
Crude oil	16,593	45
NGL (est.)	8,562	23
Total	25,155	69
Natural gas marke (MMcf)	ted production	133,901
Average output pe	r producing well	
Crude oil (bbls.)		5,742
Natural gas (Mcf)		98,820
Average number of	i employees	
Oil and natural ga	s extraction	3,760
Refining		145
Transportation		1,640
Wholesale		2,583
Retail		16,341
Total petroleum in	dustry	25,469

# 2002 Latest Available Data

### **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	29	0	29
Production	18	2	20
Net annual change	12	-2	10
Proved reserves	179	8	187

### Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	12	170	181
Production	5	94	98
Net annual change	7	76	83
Proved reserves	33	713	744

### Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	167.11	1,582,333	33,229
Gas	84.82	605,570	64,796
Dry	126.20	805,793	46,736
Total	108.59	778,285	144,761

# Stripper wells

Producing stripper wells	442
Stripper well abandonments	109
Crude oil production in bbls.	562,190
Crude oil production b/d	1,540
Percentage of oil production	3%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	7,278
Secondary	6,454
Total	13,732
Natural gas stripper wells	
as of 1/1/03	000
Producing stripper wells	260
Stripper well abandonments	35
Natural gas production in Mcf	2,718,961
Federal Onshore Mineral Lease Royalties	
Oil	\$1,204,575
Gas	\$9,062,717
Total Royalties	\$10,271,177

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Hα

<b>Counties</b> Number of co With oil and/o		duction		114 5
<b>First year of p</b> Crude oil Natural gas	roduction			1889 1887
<b>Year and amo</b> Crude oil 2 Natural gas	85 thous	. bbls.		1984 1938
<b>Deepest prod</b> i Crude oil Natural gas	icing wel	i (ft.)		3,680 765
<b>Year and dept</b> 1988	h of deep	est well drilled (	( <b>ft.)</b> ·	10,089
<b>Cumulative nu</b> as of 12/31/03 (exc		<b>Dtal wells drille</b> ce wells)	đ	
Oil wells	Ĵ,	727		36%
Gas wells		192		10%
Dry holes		1,093	•	54%
Total		2,012		100%
Cumulative cr as of 12/31/03 (tho		lihead value		\$92,549
		R NEW RESERVES		
,	Crude	NGL		Natural
. <u></u>	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	NA	NA	NA	NA

NA

7

15.1

Value of Oil and Gas

Average wellhead price	
(2003)	
Crude oil (\$/bbl.)	\$26.45
Natural gas (\$Mcf)	NA
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$2,169
Natural gas	
Total	\$2,169
Average natural gas price	
(2003, \$/Mcf)	,
Residential consumers	\$9.49
Commercial consumers	\$8.59
Industrial consumers	\$7.93
Electric utilities	NA
City Gate	\$6.12
Severance taxes paid	
(2003, in thous. \$)	

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Production

7



# Number of wells drilled

	Exploratory	Development	Total
Oil		· 1	1
Gas			
Dry			
Service			
Total		1	1

# **Total footage drilled**

(thous. ft.)			
	Exploratory	Development	Total
Oil		0.7	0.7
Gas			'
Dry			
Service			
Total		0.7	0.7
(Note: Totals	may not add due to rou	unding.)	

### New-field wildcats drilled

Footage (	(thous.	ft.)
-----------	---------	------

### Average rotary rigs active

### State-wide rank

	Crude Oil	Natural Gas
Wells drilled	23rd	
Production	30th	
Reserves (2002)	NA	NA
Number of producing v	wells	
(12/31/03)		
Crude oil		- 352
Èles test		•

Crude oil	- 352
Flowing	0
Artificial lift	352
Natural gas	54
Total	406

### Average production

WARIGGE highnrich		
	thous. bbls.	thous. b/d
Crude oil	82	
NGL (est.)		
Total	82	
Natural gas market( (MMcf)	ed production	
Average output per	producing well	
Crude oil (bbls.)		233
Natural gas (Mcf)		
Average number of	employees	
Oil and natural gas	extraction	113
Refining		481
Transportation		3,510
Wholesale		2,571
Retail		25,733

# 2002 Latest Available Data

### Petroleum reserves

### as of 12/31/02 (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 12/31/02 (Bcf)

0

0

0

32,408

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

# Cost of drilling and equipping wells

(Other)	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	180.66	213,000	3,143
Gas	89.05	219,943	17,572
Dry	161.48	309,500	7,906
Total	93.19	225,585	28,621

### Stripper wells 364 Producing stripper wells Stripper well abandonments 4 Crude oil production in bbls. 95,071 Crude oil production b/d 260 Percentage of oil production 100% **Stripper oil reserves** as of 1/1/03 (thous. bbls.) Primary 1,305 Secondary 1,280 Total 2,585 Natural gas stripper wells as of 1/1/03 Producing stripper wells Stripper well abandonments Natural gas production in Mcf Federal Onshore Mineral Lease Royatties

Oil	
Gas	
Total Royalties	\$2,995,999

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Total petroleum industry





7	Crude.	NGL (mill_bbls)	Total	Natural Gas (Bof)
-	2/31/03, resei	R NEW TESETVES ves as of 12/31/02		
Cumulative cl as of 12/31/03 (the		lihead value		\$14,963,179
Total		34,306		100%
Dry holes		15,058		44%
Gas wells		7,344		21%
<b>Cumulative n</b> as of 12/31/03 (ex Oil wells		<b>otal wells drille</b> ce wells) 11,904	đ	35%
<b>Year and dep</b> 1999	th of deepa	est well drilled (	(fL)	18,016
Natural gas				5,800
Deepest prod	ucing well	(ft.)		18,016
Natural gas -	•			1968 2002
<b>Year and amo</b> Crude oil —	-	-	^{بو} م	4000
First year of p Crude oil Natural gas	roduction			1916 1915
With oil and/	or gas pro	duction		33
<b>Counties</b> Number of co				56

	10,010	· · · · ·
1,904 7,344 5,058 <b>4,306</b>	35% 21% 44% <b>100%</b>	Weilhead value of produc (2003, in thous. \$) Crude oil Natural gas Total
	10070	Average natural gas price
		(2003, \$/Mcf)

	Crude	NGL		Natural	
	Oil	(mill. bbls)	Total	Gas (Bcf)	
Reserves	1,782	46	1,828	3,914	
Production	1,530	42	1,572	3,030	

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### Value of Oil and Gas S. due -

Counties with oil and/or gas production 

Average wellhead price	
Crude oil (\$/bbl.)	\$28.66
Natural gas (\$Mcf)	\$3.73
Wellhead value of production	
(2003, in thous. \$)	·: ···
Crude oil	\$556,491
Natural gas	\$320,881
Total	\$877,372
Average natural gas price	
Residential consumers	\$7.08
Commercial consumers	\$7.08
Industrial consumers	\$4,41
Electric utilities	\$5.89
City Gate	\$5.04
Severance taxes paid (2003, in thous. \$)	\$50,304



# Number of wells drilled

	Exploratory	Development	<u> </u>
Oil	64	161	225
Gas	57	436	493
Dry	59	41	100
Service		21	21
Total	180	659	839

# **Total footage drilled**

Exploratory	Development	Total
750.0	989.7	1,739.7
117.9	560.0	677.9
200.5	132.3	332.8
	61.5	61.5
1,068.4	1,743.5	2,811.9
may not add due to rou	inding.)	
	750.0 117.9 200.5  <b>1,068.4</b>	750.0         989.7           117.9         560.0           200.5         132.3            61.5

# New-field wildcats drilled

Footage (thous. ft.)	662.1
----------------------	-------

# Average rotary rigs active

### State-wide rank

·····		Crude Oil	Natural Gas
	Wells drilled	8th	10th
	Production	12th	20th
	Reserves (2002)	10th	20th
	Number of producing v (12/31/03)	vells	
	Crude oil		2,868
	Flowing		125
	Artificial lift		2,743
	Natural gas		3,932
	Total		6,800
	Average production		•
		thous. bbls.	thous. b/d
	Crude oil	19,417	53
	NGL (est.)	474	1
	Total	19,891	55

# Natural gas marketed production (MMcf)

# Average output per producing well

Crude oil (bbls.)	6,770
Natural gas (Mcf)	21,879

# Average number of employees

Oil and natural gas extraction	1,291
Refining	914
Transportation	505
Wholesale	721
Retail	4,824
Total petroleum industry	8,255

# 2002 Latest Available Data

# **Petroleum reserves**

# as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	46	2	48
Production	18	1	19
Net annual change	28	1	29
Proved reserves	288	6	294

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	17	68	85
Production	8	70	77
Net annual change	9	-2	· 8
Proved reserves	94	820	908

# Cost of drilling and equipping wells

	Cost/ft. Cost/		Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	175.90	2,033,596	115,915
Gas	92.94	177,929	49,820
Dry	146.45	413,607	34,743
Total	139.97	476,197	200,479

# **Stripper wells**

116

14

86,027

Producing stripper wells	2,274
Stripper well abandonments	65
Crude oil production in bbls.	1,842,960
Crude oil production b/d	5,049
Percentage of oil production	11%
Stripper oll reserves	
as of 1/1/03 (thous. bbls.)	
Primary	28,525
Secondary	34,865
Total	63,390
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	3,533
Stripper well abandonments	59
Natural gas production in Mcf	25,286,348
Federal Onshore Mineral Lease Royalties	
Oil	\$9,149,232
Gas	\$6,121,055
Total Royalties	\$50,035,367

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[															
Sioux	Dawes	Sheridan	· ·	Cherry		Кеуа		Boyc	$\sim$	Клох		edar Dí	xon		
Joux	Box Butte	7	]			Brown	Rock			Antelope	Pierce	Wayne	Thursto	<b>}</b>	
Scotts Biuff	Morrill	<u> </u>	Grant	Hooker	Thomas	Blaine	Loup	Garfield	1		Madison	Stanton		Burt	
Banner		Garden	Arthur	McPherson	n Logan			Valley	Greeley	Boone	Platte	Colfax	Dodge	Washing	gton
Kimball	Cheyenne	Deuel	Keith			Cu	ster	Sherm	Howard	Merrick	Polk	Butler	Saunder	Douglas	A,
			Perkins	- Lini	coln	Dawso	an I	Buffalo	Hafi	Hamiltor	York	Seward	Lancas	Cass er Otoe	
			Chase	Hayes	Frontie	Gospe	Pheips	Kearney	Adams	⁽ Clay	Fillmore	Saline		Johnson	Nernaha
		ſ	Dundy	Hitchcock	Red Willow	1		Franklin	Webste	r Nuckolis	Thayer		1 .	Pawnee	Richardso
		·			Sec. 28	AN COM	Stat.		1.5		an da an Tanàna ao		an a		

# Background Information

# Countles

Number of co	ounties			93
With oil and/o	or gas pro	duction		18
First year of p	roduction			
Crude oil				1939
Natural gas				1950
Year and amo	unt of peai	k production		
Crude oil — 2	4,894 the	us. bbls.		1962
Natural gas –	- 15,743	MMcf		1961
Deepest produ	ucina well	(ft.)		
Crude oil				8,630
Natural gas				5,832
•				
-	h of deepe	est well drilled l	(fL)	
1997				13,128
Cumulative nu	imber of t	otal wells drille	d	
as of 12/31/03 (exc	cluding servic	e wells)		
Oil wells		5,569		30%
Gas wells		311		2%
Dry holes		12,403		68%
Total		18,283		100%
Cumulative cr		lihead valuo		\$4,013,229
as of 12/31/03 (tho	ous. \$)			
•		R New reserves		
F. 5444	Crude	NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	508	NA	508	NA
Production	497	NA	497	NA

Counties with oil and/or gas production

ing a straight Constant

# Value of Oil and Gas

Average wellhead price	
(2003) Crude cil (#/bbl )	¢00.60
Crude oil (\$/bbl.)	\$28.63
Natural gas (\$Mcf)	\$3.17
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$78,876
Natural gas	\$4,609
Total	\$83,485
	• • •
Average natural gas price	
(2003, \$/Mcf)	
Residential consumers	\$7.83
Commercial consumers	\$6.90
Industrial consumers	\$5.86
Electric utilities	\$5.13
City Gate	\$5.70
-	
Severance taxes paid	\$1,845
(2003, in thous. \$)	

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Number of	wells drilled		
	Exploratory	Development	Total
Oil	2	4	6
Gas		4	. 4
Dry	20	8	28
Service			
Total	22	16	38
Total foota (thous. ft.)	ge drilled	-	,
	Exploratory	Development	Total
Oil	8.5	17.0	25.5
Gas		16.3	16.3
Dry	79.4	39.1	118.5
Service			
Total	87.9 may not add due to re	72.4	160.3
•	-		
Footage (1	wildcats drilled thous. ft.)		15 57.0
Ű,	tary rigs active		0
State-wide			-
		Crude Oil	Natural Gas
Wells drill	ed	20th	23rd
Production		21st	27th
Reserves		22nd	NA
(12/31/03) Crude oil Flowing Artificial		5	1,097 0 1,097
Natural ga <b>Total</b>	IS		110 <b>1,207</b>
Average p			
	t	hous. bbls.	thous. b/d
Crude oil		2,755 17	8
NGL (est.) Total		2,772	8
Natural ga (MMcf)	s marketed prod	uction	1,454
	ntput per produc	ina well	
Crude oil (			2,511
Natural ga			13,218
Average nu	umber of employ	ees	
	tural gas extrac		241
Refining	-		ND
Transporta	ation		1,608
Wholesale			424
Retail			9,281
	leum industry		11,554
Total perio	neuminuusuy		11,004

# 2002 Latest Available Data

# **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	6	NA	6
Production	3	NA	3
Net annual change	3	NA	3
Proved reserves	18	NA	18

# Natural gas reserves

as of 12/31/02 (Bcf)

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

# Cost of drilling and equipping wells

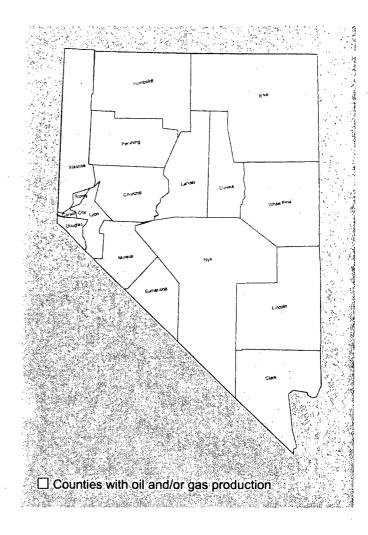
	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	121.88	585,444	5,269
Gas	74.12	282,500	1,130
Dry	61.32	297,063	4,753
Total	82.01	384,552	11,152

# Stripper wells

Producing stripper wells	1,451
Stripper well abandonments	100
Crude oil production in bbls.	1,717,983
Crude oil production b/d	4,707
Percentage of oil production	62%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	2,495
Secondary	4,490
Total	, 6,985
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	99
Stripper well abandonments	8
Natural gas production in Mcf	750,809
Federal Onshore Mineral Lease Royalties	
Oil	\$100,216
Gas	-
Total Royalties	\$100,655

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	Counties				
	Number of c	ounties			17
	With oil and/		duction		2
	First year of p	production			
	Crude oil				1954
	Natural gas				NA
	Year and amo	nunt of nea	k production		
	Crude oil —	-	-		1988
	Natural gas -	-	13. 0013.		NA
	Hatara gao				
	Deepest prod	lucing well	(ft.)		
	Crude oil				8,694
	Natural gas			,	NA
	Veer and dem	th of doon <i>e</i>		( <b>6</b> 4 3	
	<b>Tear anu uep</b> 1980	ai oi acche	est well drilled (	lilj	10 560
	1900				19,562
	Cumulative n	umber of t	otal wells drille	d	
	as of 12/31/03 (e:	xcluding servio			
	Oil wells		107		19%
	Gas wells		1		0%
	Dry holes		473		81%
	Total		581		100%
	Cumulative c	rude oil we	anley head		\$788,628
	as of 12/31/03 (th				Ψ/ 00,020
			B. New reserves		
	production as of 1	12/31/03, reser Crude	rves as of 12/31/02 NGL		Natural
1		Oil	(mill. bbls)	Total	
	Reserves	NA	NA	NA	Gas (Bcf) NA
				11/1	

ŇA

NA

NA

# Value of Oil and Gas

Average wellhead price (2003) Crude oil (\$/bbl.) Natural gas (\$Mcf)	\$24.54 
Wellhead value of production (2003, in thous. \$)	
Crude oil Natural gas	\$12,098
Total	\$12,098
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$8.96
Commercial consumers	\$7.29
Industrial consumers	\$8.68
Electric utilities	\$5.31
City Gate	\$5.67
Severance taxes paid (2003, in thous. \$)	\$248

NA

Production



# Number of wells drilled

	Exploratory	Development	Total
Oil			
Gas			·
Dry	2		2
Service		·	
Total	2		2

### **Total footage drilled**

(thous.	ft.)
---------	------

(,	Exploratory	Development	Total
Oil		. <b></b>	
Gas			
Dry	5.2		5.2
Service			
Total	5.2		5.2
(Note: Totals	may not add due to rou	unding.)	
New-field	wildcats drilled		2
Footage (	(thous. ft.)		5.2

### Average rotary rigs active

# State-wide rank

	Crude Oil	Natural Gas
Wells drilled		
Production	27th	33rd
Reserves (2002)	NA	NA

### Number of producing wells

Flowing Artificial lift	22 41
Natural gas	4
Total	69

# Average production

	thous, bbls.	thous. b/d
Crude oil	493	1
NGL (est.)		
Total	493	_ 1
Natural gas marke (MMcf)	ted production	NA
Average output pe	r producing well	
Crude oil (bbls.)		7,825
Natural gas (Mcf)		NA
Average number o	f employees	
Oil and natural ga	s extraction	139
Refining		141
Transportation		ND
Wholesale		476
Retail		8,475

# 2002 Latest Available Data

### **Petroleum reserves**

as of 12/31/02 (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 12/31/02 (Bcf)

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

# Cost of drilling and equipping wells

(Other)	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	180.66	213,000	3,143
Gas	89.05	219,943	17,572
Dry	161.48	309,500	7,906
Total	93.19	225,585	28,621

### **Stripper wells**

1

9,231

Producing stripper wells Stripper well abandonments Crude oil production in bbls. Crude oil production b/d Percentage of oil production	0 0 0 0
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	0
Primary	0
Secondary	0
Total	0
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	0
Stripper well abandonments	0
Natural gas production in Mcf	0
Federal Onshore Mineral Lease Royalties	
Oil	\$964,996
Gas	-
Total Royalties	\$5,186,475

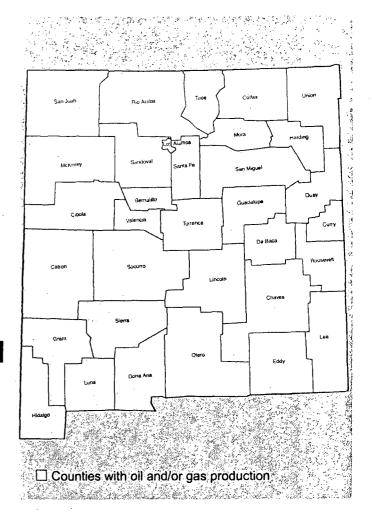
For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300 Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

Total petroleum industry



Natural	
48,557,765	5
100%	>
18%	
34%	
48%	
22,926	3
17,515	5
17,652	
2001	1
1969	9
1924	4
1911	1
	9
33	3

	Crude	NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	6,895	2,929	9,824	75,349
Production	6,312	2,145	8,457	59,441



Value of Oil and Gas	
Average wellhead price	
Crude oil (\$/bbl.)	\$29.52
Natural gas (\$Mcf)	\$4.56
Wellhead value of production	
(2003, in thous. \$)	A4 005 004
Crude oil	\$1,965,264
Natural gas	\$7,314,308
Total	\$9,279,572
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$8.41
Commercial consumers	\$6.89
Industrial consumers	\$5.48
Electric utilities	NA
City Gate	\$4.78
Severance taxes paid (2003, in thous. \$)	\$571,862



1,525

# Number of wells drilledExploratoryDevelopmentOil6425Gas341,028Dry3567Service--5

# Total footage drilled

75

Total

(thous. ft.)			
ι <i>γ</i>	Exploratory	Development	Total
Oil	30.5	2,628.2	2,658.7
Gas	272.8	5,898.4	6,171.2
Dry	246.0	407.7	653.7
Service		38.5	38.5
Totai	549.3	8,972.8	9,522.1
(Note: Totals	may not add due to	rounding.)	
<b>New-field</b> Footage (	wildcats drilled thous. ft.)		43 326.7
Average r	otary rigs active		65
State-wide	e rank		
olalo-miu	y i alik	Crude Oil	Natural Gas
Wells drill	ed.		6th
Productio		6th	3rd
Reserves		5th	4th
	i producing well	S	
(12/31/03)			07 507
Crude oil			27,527
Flowing Artificial			3,217 24,310
			36,437
Natural ga	15		<b>63,964</b>
TUTAT			03,304
Average p	roduction		,
<u> </u>		thous. bbls.	thous. b/d
Crude oil		66,574	182
NGL (est.)	)	57,693	158
Total		124,267	340
Natural ga (MMcf)	s marketed pro	duction	1,604,015
Average of	utput per produ	cing well	
Crude oil			2,419
Natural ga	as (Mcf)		44,022
Average n	umber of employ	Vees	
	atural gas extrac		10,571
Refining			ND
Transport	ation		1405
Wholesale			1,959
Retail			7,634
	oleum industry		21,569
			,

# 2002 Latest Available Data

### **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

Total

1,062

1,600

431

102

5

	Crude Oil	NGL	Total
New reserves	59	47	106
Production	64	82	146
Net annual change	-5	-35	-40
Proved reserves	710	838	1,548

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	272	1,256	1,430
Production	237	1,397	1,524
Net annual change	35	-141	-94
Proved reserves	1,482	16,971	17,320

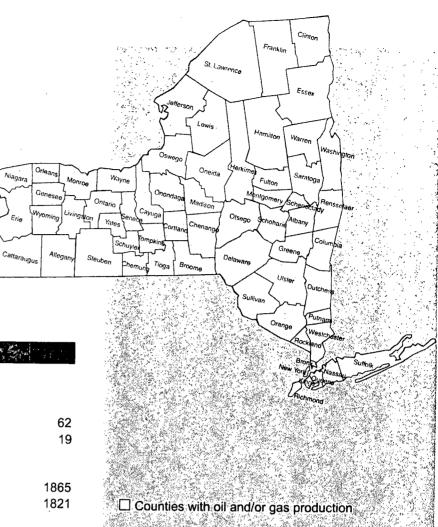
### Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	100.81	668,013	211,760
Gas	117.58	717,634	557,602
Dry	183.37	1,280,110	93,448
Total	117.35	739,340	862,810

### Stripper wells

	10 070
Producing stripper wells	13,379
Stripper well abandonments	217
Crude oil production in bbls.	13,386,587
Crude oil production b/d	36,676
Percentage of oil production	20%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	22,016
Secondary	16,609
Total	38,625
Natural gas stripper wells	
as of 1/1/03	
Producing stripper wells	9,232
	 172
Producing stripper wells	,
Producing stripper wells Stripper well abandonments	 172
Producing stripper wells Stripper well abandonments Natural gas production in Mcf	172 81,059,390
Producing stripper wells Stripper well abandonments Natural gas production in Mcf Federal Onshore Mineral Lease Royalties Oil	172 81,059,390 \$115,335,572
Producing stripper wells Stripper well abandonments Natural gas production in Mcf Federal Onshore Mineral Lease Royalties	172 81,059,390

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300, Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799



Chauta

<b>Counties</b> Number of counties With oil and/or gas pr	oduction	62 19
<b>First year of production</b> Crude oil Natural gas	n	1865 1821
<b>Year and amount of pe</b> Crude oil 6,685 tho Natural gas 39,402	us. bbls.	1882 1938
<b>Deepest producing we</b> Crude oil Natural gas	ll (ft.)*	4,906 10,458
<b>Year and depth of deep</b> 1958	est well drilled	<b>(fl.)</b> 13,500
<b>Cumulative number of t</b> as of 12/31/03 (excluding servi		d*
Oil wells	9.557	58%
Gas wells	5,638	34%
Dry holes	1,222	8%
Total*	16,417	100%
* The Division of Mineral Resonantive and plugged wells. NY		
<b>Cumulative crude oil we</b> as of 12/31/03 (thous. \$)	elihead value*	\$1,115,092
Cumulative production production as of 12/31/03, rese		
Crude	NGL	Natural

Oil(mill. bbls)TotalGas (Bcf)ReservesNANANA1,327ProductionNANANA1,061

58 America's Independent

# Value of Oil and Gas

Average wellhead price* (2003)	
Crude oil (\$/bbl.)	\$29.47
Natural gas (\$Mcf)	\$5.78
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$4,576
Natural gas	\$202,554
Total	\$207,130
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$11.58
Commercial consumers	\$8.59
Industrial consumers	\$7.35
Electric utilities	\$6.21
City Gate	\$5.73
Severance taxes paid (2003, in thous. \$)	



# Number of wells drilled*

	Exploratory	Development	Total
Oil	0	32	32
Gas	14	30	44
Dry	19	2	21
Service		2	2
Total	33	64	99

# **Total footage drilled***

(thous. ft.)			
	Exploratory	Development	Total
Oil	0.5	45.4	45.9
Gas	47.0	70.5	117.5
Dry	137.3	12.2	149.5
Service		5.4	5.4
Total	184.8	133.5	318.3

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

New-field wildcats drilled*	9
Footage (thous. ft.)	47

### Average rotary rigs active

### State-wide rank

	Crude Oil	Natural Gas
Wells drilled		
Production	29th	23rd
Reserves (2002)	NA	23rd

# Number of producing wells

Total	8,486
Natural gas	5,723
Artificial lift	2,763
Flowing	0
Crude oil	2,763
(12/31/03)	

### **Average production**

waelage hiennenen		
	thous. bbls.	thous. b/d
Crude oil	157.5	0.43
NGL (est.)		**
Total	157.5	0.43
Natural gas market( (MMcf)	ed production	35,044
Average output per	producing well	
Crude oil (bbls.)		57
Natural gas (Mcf)		6,314
Average number of	employees	
Oil and natural gas	extraction	812
Refining		769
Transportation		4,188
Wholesale		16,167
Retail		29,747
Total petroleum ind	ustry	51,683

# 2002 Latest Available Data

### **Petroleum reserves**

as of 12/31/02 (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 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	-7	39	32
Production	0	35	35
Net annual change	-7	4	-3
Proved reserves	0	315	315

# Cost of drilling and equipping wells

(Appalachian) Cost/ft.		Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	51.61	157,180	105,939
Gas	51.31	208,774	484,148
Dry	50.77	203,109	24,170
Total	51.34	197,383	614,257

# **Stripper wells**

3

Producing stripper wells	2,758
Stripper well abandonments	65
Crude oil production in bbls.	174,766
Crude oil production b/d	479
Percentage of oil production	100%
Stripper oil reserves	
as of 1/1/03 (thous: bbis.)	
Primary	808
Secondary	261
Total	1,069
Natural gas stripper wells	
as of 1/1/03	
Producing stripper wells	5,442
Stripper well abandonments	41
Natural gas production in Mcf	10,637,283
Federal Onshore Mineral Lease Royalties	
Oil	
Gas	\$11,402
Total Royalties	\$11,745
* State data	

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300, Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799



Divide	Burke	Renville Bottineau	Role		Cavalier	Pembina	
Williams	Mountrail	Ward McHer		Benson	Ramsey Nelson	Walsh Grand For	
Billings Golden Valley	Dunn M	Aercer Oliver Burk	heridan	Weils	Eddy Foster Griggs Itsman Barr		Traill
Slope	Hettinger	Grant Sioux	Emmons	Logan McIntosh	La Moure Dickey	Ransom	Richland

	<b>Counties</b> Number of counties With oil and/or gas pro	oduction		- 53 17
)	<b>First year of production</b> Crude oil Natural gas	l ·		1951 1907
	<b>Year and amount of pea</b> Crude oil — 52,654 the Natural gas — 72,633	ous. bbls.		1984 1985
	Deepest protucing well Crude oil (18,262 M Natural gas (16,510 M	ID horizontal)		14,352 14,792
	Year and depth of deep 1978 (18,262 MD hori	zontal-2000)		15,380
	Cumulative number of t as of 12/31/03 (excluding servi-			
	Oil wells Gas wells Dry holes <b>Total</b>	7,497 209 6,191 <b>13,897</b>		54% 2% 44% <b>100%</b>
	<b>Cumulative crude oil wo</b> as of 12/31/03 (thous. \$)	ellhead value		\$22,123,837
	Cumulative production production as of 12/31/03, rese			
)	Crude	NGL (mill_bbls)	Total	Natural Gas (Bcf)

	Grude	NGL		Naturai
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	1,732	223	1,955	2,557
Production	1,431	158	1,589	2,152

# Counties with oil and/or gas production

# Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$29.27
Natural gas (\$Mcf)	\$3.53
Wellhead value of production (2003, in thous. \$)	
Crude oil	\$841,893
Natural gas	\$204,338
Total	\$1,046,231
Average natural gas price	
Residential consumers	\$7.25
Commercial consumers	\$6.89
Industrial consumers	\$6.22
Electric utilities	\$6.84
City Gate	\$5.79
Severance taxes paid (2003, in thous. \$)	\$66,846

# Number of wells drilled'

	Exploratory	Development	Total
Oil	2	88	90
Gas		11	11 -
Dry	3	8	11
Service		7	· 7
Total	5	114	119

# **Total footage drilled***

(thous, ft.)	ayo umrcu		
· · · ·	Exploratory	Development	Total
Oil	19.9	1,387.1	1,407.0
Gas		18.4	18.4
Dry	25.2	72.0	97.2
Service		108.6	108.6
Total	45.1	1,586.1	1,631.2
(Note: Totals	i may not add due to	rounding.)	
New-field	wildcats drille	1	6
Footage	(thous. ft.)		19.9
Average r	otary rigs activ	8	14
State-wid	e rank		
		Crude Oil	Natural Gas
Wells drill		10th	
Productio		10th	22nd
Reserves	(2002)	9th	22nd
Number of (12/31/03)	f producing wel	ls*	
Crude oil			3,118
Flowing			153
Artificial	lift		2,965
Natural ga	as		94
Total			3,212
Average p	roduction [*]		
		thous. bbis.	thous. b/d
Crude oil		28,763	79

### 

647

29,410

2

1

1,763

81

	5,40
Natural gas (Mcf)	154,51

# Average number of employees Oil and natural gas extraction Refining

Refining	ND
Transportation	1,193
Wholesale	92
Retail	3,966
Total petroleum industry	7,014

# 2002 Latest Available Data

# **Petroleum reserves**

	Crude Oil	NGL	Total
New reserves	47	-5	42
Production	33	. 5	38
Net annual change	14	-10	4
Proved reserves	342	47	389

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	89	-1	81
Production	44	15	53
Net annual change	45	-16	28
Proved reserves	315	209	471

### Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	203.51	2,563,651	220,474
Gas	137.05	783,000	2,349
Dry	130.78	950,353	16,156
Total	195.23	2,254,519	238,979

# Stripper wells*

Producing stripper wells	1,394
Stripper well abandonments	38
Crude oil production in bbls.	2,288,191
Crude oil production b/d	6,269
Percentage of oil production	8%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	25,540
Secondary	25,035
Total	50,575
Natural gas stripper wells* as of 1/1/03	
Producing stripper wells	67
Stripper well abandonments	2
Natural gas production in Mcf	762,017
Federal Onshore Mineral Lease Royalties	
Oil	\$14,983,400
Gas	\$1,713,680
Total Royalties	\$19,130,877
* State data	•••••••••••••
For more information please contact: Information Sector Department, Independent Petroleum Association of 1201 15th St., N.W., Suite 300, Washington, D.C. 2	America,

202-857-4722, FAX: 202-857-4799

Compiled by IPAA July 2005

NGL (est.)

Total





	<b>Counties</b> Number of co With oil and/o		duction		88 71
)	<b>First year of p</b> Crude oil Natural gas	roduction			1860 1884
	<b>Year and amo</b> Crude oil — 2 Natural gas -	23,941 tho	ous. bbls.		1896 1984
	<b>Deepest prod</b> Crude oil Natural gas	ucing well	(ft.)		7,805 8,953
	<b>Year and dept</b> 1967	h of deepe	est well drilled (	(ft.)	11,442
	<b>Cumulative nu</b> as of 12/31/03 (ex		otal wells drille	d*	
	Oil wells	cidding scrive	139,968		52%
	Gas wells		88,139		33%
	Dry holes		42,201		15%
	Total		270,308		100%
	Cumulative cr as of 12/31/03 (the	ous. \$)			\$7,885,721
			R New reserves		
	production as of 1.	Crude	NGL		Natural
)		Oil	(mill. bbls)	Total	Gas (Bcf)
	Reserves	1,128	NA	1,128	9,453
				,	-,

NA

1,079

8,655

# Value of Oil and Gas

# Average wellhead price

(2003)	
Crude oil (\$/bbl.)	\$27.64
Natural gas (\$Mcf)	\$5.90
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$159,091
Natural gas	\$552,387
Total	\$711,478
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$9.16
Commercial consumers	\$8.12
Industrial consumers	\$8.06
Electric utilities	\$6.19
City Gate	\$6.54
Severance taxes paid (2003, in thous. \$)	\$2,900

1,079

Production



# Number of wells drilled*

	Exploratory	Development	Total
Oil	7	150	157
Gas	12	271	283
Dry	29	45	74
Service		2	2
Total	48	466	516

# Total footage drilled*

(thous. ft.)			
	Exploratory	Development	Total
Oil	1.4	355.8	357.2
Gas	80.5	1,799.1	1879.3
Dry	161.7	336.3	528
Service		7.3	7.3
Total	243.2	2,528.5	2771.8
(Note: Totals	may not add due to rou	indina.)	

hay not add due to

### New-field wildcats drilled*

Footage (thous. ft.)	23.2

# Average rotary rigs active*

### State-wide rank

	Crude Oil	Natural Gas
Wells drilled	7th	17th
Production	19th	18th
Reserves (2002)	17th	19th

# Number of producing wells

Natural gas Total	28,911 33,828 <b>62,867</b>
Flowing Artificial lift	128
Crude oil	29,039
(12/31/03)	

# Average production

waalayo pi uuusiinii		
	thous. bbls.	thous. b/d
Crude oil	5,647	16
NGL (est.)	140	
Total	5,787	16
Natural gas marketer (MMcf)	d production	93,641
Average output per p	roducing well*	
Crude oil (bbls.)		194
Natural gas (Mcf)		2,768
Average number of e	mployees	
Oil and natural gas e	extraction	4,580
Refining		2,097
Transportation		4,690
Wholesale		4,196
Retail		36,569
Total petroleum indu	stry	52,132

# 2002 Latest Available Data

### Petroleum reserves

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	<u>Total</u>
New reserves	26	NA	26
Production	5	NA	5
Net annual change	21	NA	21
Proved reserves	67	NA	67

# Natural gas reserves

as of 12/31/02 (Bcf)

2

8

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	33	201	234
Production	27	60	87
Net annual change	6	141	147
Proved reserves	346	772	1,117

# Cost of drilling and equipping wells

(Appalachi	an) Cost/ft.	Cost/	Total Cost		
	(\$)	well (\$)	(thous. \$)		
Oil	51.61	157,180	105,939		
Gas	51.31	208,774	484,148		
Dry	50.77	203,109	24,170		
Total	51.34	197,383	614,257		
Stripper wo	elis				
	stripper wells		28,850		
-	ell abandonmer	nts	183		
Crude oil p	production in bb	ls.	4,398,074		
Crude oil p	roduction b/d		12,050		
Percentage	e of oil producti	on	73%		
Stripper oil					
as of 1/1/03 (th	nous. bbls.)				
Primary			32,200		
Secondary			106		
Total			32,306		
Natural gas as of 1/1/03	stripper wells				
	stripper wells		33,345		
-	abandonmen	ts	398		
•••	s production in l		75,993,000		
Federal Onshore Mineral Lease Royalties					
Oil			\$32,285		
Gas			\$366,330		
Total Roya	lties		\$399,241		
* State data			<i><b>4000</b></i>		
	······				

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Cir	1										
Cir	narron	Texas	Beaver	Harper	Voods Alfalfa	Grant	Кау	Osage	Nowata C Washington	Craig Ottawa	
			L	Woodward Ellis	Major	Garfield	Noble Pawr	nee 7		Aayes Delawa	
An Frank An				Roger Mills Cust	Blaine		ogan Lincol	Creek	Julsa Wagone Wagone		dair yah
in the second seco				Beckham Wash	Caddo	Grady	Cleveland Pottawa Clain Garvin Po	Semirole	Pittsburg Li	Haskell atimer Le F	Flore
Backgröur	ıd Info	ormation		Jackson		Stephens Jefferson	Carter	Coal phnston Ato arshall Bryan	oka Pushma Choctav		tain
<b>Counties</b> Number of cou With oil and/or		duction	·	77 71			443 - 1 4				7
<b>First year of pro</b> Crude oil Natural gas	duction			1891 1902		unties wi	th oil and/	or gas pri	Dauclion		
<b>Year and amou</b> Crude oil — 277 Natural gas — 2	7,775 th	ous. bbls.		1927 1991	Value	of Oil	and Ga	S - (5,54)			
<b>Deepest produc</b> Crude oil Natural gas	ing well:	l (ft.)	·	22,850 25,152	(2003) Crude oi		-				0.02
<b>Year and depth</b> 1974	of deepo	est well drilled	l (ft.)	31,441	Natural g Wellheau (2003, in the	l value of	^{f)} productio	n*		\$4	4.83
Cumulative nun	iber of t	otal wells drill	ed*		Crude oil					\$1,941,	597

Natural gas

(2003, \$/Mcf)

City Gate

Average natural gas price

**Residential consumers** 

Commercial consumers

Industrial consumers

Severance taxes paid

**Electric utilities** 

(2003, in thous. \$)

Total

とうぶつ かもつ

1. 1. 1. 1. A.

22

### Cumulative number of total wells drilled as of 12/31/03 (excluding service wells)

Cumulative crude (	\$97,882,567	
Total	429,291	100%
Dry holes	121,938	28%
Gas wells	64,227	15%
Oil wells	243,126	57%
as or 12/31/03 (excluding	g service wells)	

### as of 12/31/03 (thous. \$)

# Cumulative production & new reserves

production as of 12/31/03, reserves as of 12/31/02

	Crude	NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	14,707	4,871	19,578	106,316
Production	14,312	4,111	18,423	105,938

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### Compiled by IPAA July 2005

\$7,566,985

\$9,508,582

\$8.89

\$8.38

\$7.46

\$5.55

\$5.87

\$600,980

Numbere	f wells drilled		
Mumber u	Exploratory	Development	Total
Oil	23	566	589
Gas	90	1,793	1,883
Dry	85	322	407
Service		22	22
Total	198	2,703	2,901
Total foot	age drilled		
(thous. ft.)	and attend		
·	Exploratory	Development	Total
Oil	177.3	2,626.7	2,804.0
Gas	818.9	11,705.0	12,523.9
Dry	485.7	1,740.6	2,226.3
Service		62.0	62.0
Total	1,481.9	16,134.3	17,616.2
(Note: Lotals	may not add due to	rounaing.)	
	wildcats drille	d (	89
Footage	(thous. ft.)		586.0
Average r	otary rigs activ	0	129
-	_		
State-wid	e rank	Crude Oil	Notural Can
Malla dril		Crude Oil 3rd	Natural Gas 4th
Wells dril			
Productio		7th	4th 5th
Reserves	(2002)	6th	้อเก
Number o	f producing wel	is	
(12/31/03)			
Crude oil			83,389
Flowing			. 0
Artificia			83,389
Natural g	as		34,283
Total			117,672
Average p	roduction		
		thous. bbls.	thous, b/d
Crude oil		64,664	177
NGL (est.	)	55,619	152
Total		120,283	330
Natural ga	is marketed pro	duction	1,558,155
	utaut sos arodu	oing wolf	
	utput per produ (hele )	uniy well	775
Crude oil			
Natural ga	as (MCI)		45,450
Average n	umber of emplo	yees	
Oil and na	atural gas extra	ction	26,993
Refining			2,005
Transport	ation		5,949
Wholesale			3,719
Retail			13,419
	oleum industry		52,085
	,		,

# 2002 Latest Available Data

### **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	100	73	173
Production	58	72	130
Net annual change	42	1	43
Proved reserves	598	695	1,293

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	232	2,762	2,846
Production	164	1,442	1,518
Net annual change	68	1,320	1,328
Proved reserves	1,177	14,576	14,886

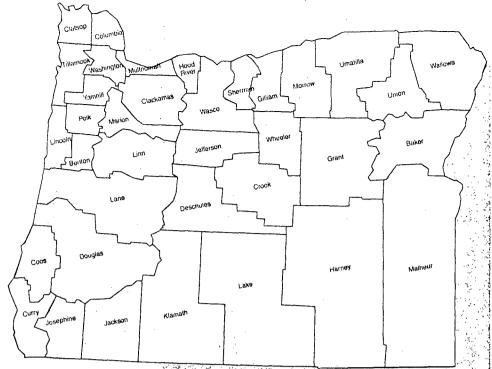
# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	92.25	461,776	229,041
Gas	112.59	717,443	1,040,293
Dry	86.23	497,683	172,696
Total	105.07	628,884	1,442,030

Stripper wells	
Producing stripper wells	56,673
Stripper well abandonments	774
Crude oil production in bbls.	56,299,808
Crude oil production b/d	154,246
Percentage of oil production	85%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	97,459
Secondary	104,737
Total	202,196
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	17,676
Stripper well abandonments	365
Natural gas production in Mcf	153,207,218
Federal Onshore Mineral Lease Royalties	
Oil	\$4,517,711
Gas	\$12,930,057
Total Royalties	\$19,177,281
* State data	

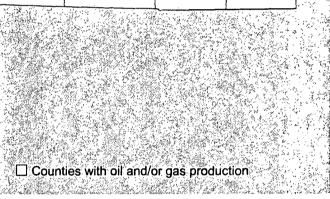
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<b>Counties</b> Number of c With oil and/		duction		36 · 1
<b>First year of (</b> Crude oil Natural gas	production			NA 1979
<b>Year and am</b> Crude oil — Natural gas -	-	-		NA 1980/81
<b>Deepest prot</b> Crude oil Natural gas	lucing well	(ft.)		NA 3,027
<b>Year and dep</b> 1979	th of deepe	est well drilled (	ift.)	13,177
		otai wells drille	d	
as of 12/31/03 (e Oil wells	xcluding servic	ce wells) O		0%
Gas wells		50		13%
Dry holes		332		87%
Total		382		100%
Cumulative c as of 12/31/03 (th		ilhead valu <del>o</del>		NA
		B. new reserves		
production as of		rves as of 12/31/02		National I
	Crude	NGL	Total	Natural
Reserves	Oil NA	(mill. bbls) NA	<u>Total</u> NA	Gas (Bcf) NA
I LESEIVES	1974	19/25		11/1

NA



# Value of Oil and Gas

# Average wellhead price

70

NA

(2003) Crude oil (\$/bbl.)	
Natural gas (\$Mcf)	NA
Wellhead value of production (2003, in thous. \$) Crude oil	
Natural gas	 NA
Total	NA
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$9.84
Commercial consumers	\$7.91
Industrial consumers	\$5.84
Electric utilities	\$4.53
City Gate	\$5.19
Severance taxes paid (2003, in thous. \$)	\$89

NA

Production



### Number of wells drilled Exploratory Development Total Oil --_-----Gas --------Dry ___ --__ Service -------Total ---------

# **Total footage drilled**

(thous. ft.)

·	Exploratory	Development	Total
Oil			
Gas			
Dry			
Service			
Total			
(Note: Totals	s may not add due to rou	unding.)	

New-field wildcats drilled	0
Footage (thous. ft.)	0

### Average rotary rigs active

### State-wide rank

	Crude Oil	Natural Gas
Wells drilled		
Production		29th
Reserves (2002)	—	NA

# Number of producing wells

(12/31/03)	
Crude oil	0
Flowing	0
Artificial lift	0
Natural gas	16
Total	16

# **Average production**

mondae production		
	thous. bbls.	thous b/d
Crude oil	NA	NA
NGL (est.)	NA	NA
Total	NA	NA
Natural gas market (MMcf)	ed production	731
Average output per Crude oil (bbls.)	producing well	0
• • •		0
Natural gas (Mcf)		45,688
Average number of	employees	· ·
Oil and natural gas	extraction	41
Refining		ND
Transportation		1,420
Wholesale		1,637
Retail		11,168
Total petroleum inc	dustry	14,266

# 2002 Latest Available Data

### Petroleum reserves

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	<u>Tota</u> l
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 12/31/02 (Bcf)

0

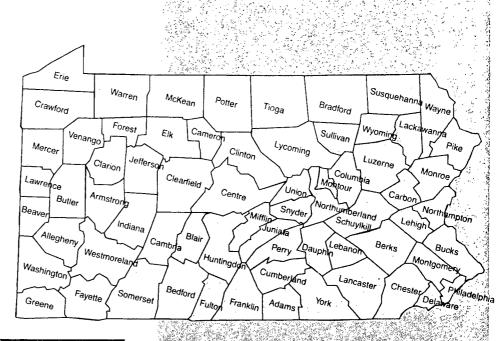
	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	NA	NA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	(#) NA	NA	(iiious: \$) NA
Gas	NA	NA	NA
Dry	NA	NA	NA
Total	NA	NA	NA
TOTAL	NA	NA	INA
-	<b>ils</b> stripper wells Il abandonmen [.]	ts	0 0
Crude oil pr	roduction in bbl	S.	• 0
Crude oil pr	roduction b/d	4 - 4 	0
Percentage	of oil production	n	0
Stripper oil as of 1/1/03 (the Primary Secondary Total			0 0 0
Natural gas as of 1/1/03	stripper wells		
Producing s	tripper wells		0
Stripper we	ll abandonment	S	0
Natural gas	production in N	/lcf	0
<b>Federal Onsi</b> Oil	hore Mineral Lea	ase Royalties	
Gas			
Total Royalt	lies		\$0

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production as of 1	Crude	ves as of 12/31/02 NGL	Total	Natural
		R new reserves		
Cumulative cl as of 12/31/03 (the		llhead valu <del>e</del>		\$4,729,986
Total		336,439		100%
Dry holes		38,941		12%
Gas wells		44,914		13%
as of 12/31/03 (ex Oil wells			u	75%
Cumulativa n	umbor of t	otal wells drille	ei.	
<b>Year and dep</b> 1974	th of deepe	est well drilled (	ift.)	21,640
Natural gas				13,186
Deepest prod Crude oil	ucing well	(ft.)		8,484
Natural gas -				2000
<b>Year and amo</b> Crude oil —3	-	-		1891
Natural gas				1881
First year of p Crude oil	roduction		•	1859
<b>Counties</b> Number of co With oil and/o		duction		67 31
Gounties				

Counties with oil and/or gas production

# Value of Oil and Gas

Average wellhead price	
	<b>^</b>
Crude oil (\$/bbl.)	\$29.60
Natural gas (\$Mcf)	NA
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$68,672
Natural gas	NA
Total	\$68,672
Average natural gas price	
Residential consumers	\$10.87
Commercial consumers	\$9.32
Industrial consumers	\$8.12
Electric utilities	\$7.10
City Gate	\$6.48
Severance taxes paid (2003, in thous. \$)	



# Number of wells drilled

	Exploratory	Development	Total
Oil	10	390	400
Gas	57	1,838	1,895
Dry	1	8	9
Service			
Total	68	2,236	2,304

# **Total footage drilled**

(thous. ft.)			
	Exploratory	Development	Total
Oil	23.0	723.8	746.8
Gas	251.1	7,013.5	7,264.6
Dry	12.3	25.1	37.4
Service			
Total	286.3	7,762.4	8,048.7
(Note: Totals	may not add due to rou	unding.)	

# **New-field wildcats drilled**

Footage (thous. ft.)	138.5

### Average rotary rigs active

# State-wide rank

	Crude Oil	Natural Gas
Wells drilled		3rd
Production	23rd	16th
Reserves (2002)	24th	15th
Number of producing w	ells	

# (40)24(00)

(12/31/03)	
Crude oil	22,334
Flowing	200
Artificial lift	22,134
Natural gas	46,397
Total	68,731

# **Average production**

	thous. bbls.	thous. b/d.
Crude oil	2,320	6
NGL (est.)	499	1.
Total	2,819	8
Natural gas market (MMcf)	ed production	159,827
Average output per	producing well	
Crude oil (bbls.)		104
Natural gas (Mcf)		3,445
Average number of	employees	
Oil and natural gas	extraction	3,798
Defining		1 960

Oil and natural gas extraction	3,798
Refining	4,869
Transportation	5,304
Wholesale	13,127
Retail	35,024
Total petroleum industry	62,122

# 2002 Latest Available Data

### **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	4	NA	4
Production	2 ·	NA	2
Net annual change	2	NA	2
Proved reserves	12	NA	12

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	-25	601	574
Production	6	127	133
Net annual change	-31	474	441
Proved reserves	137	2,088	2,216

# Cost of drilling and equipping wells

(Appalachi	an) Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	51.61	157,180	105,939
Gas	51.31	208,774	484,148
Dry	50.77	203,109	24,170
Total	51.34	197,383	614,257

# **Stripper wells**

36

10

Producing stripper wells	15,470
Stripper well abandonments	210
Crude oil production in bbls.	2,324,000
Crude oil production b/d	6,367
Percentage of oil production	100%

# **Stripper oil reserves**

as of 1/1/03 (thous. bbls.)	
Primary	8,210
Secondary	11,814
Total	20,024

# Natural gas stripper wells

as of 1/1/03	
Producing stripper wells	40,830
Stripper well abandonments	148
Natural gas production in Mcf	131,800,000

# **Federal Onshore Mineral Lease Royalties**

Oil	\$170
Gas	\$21,021
Total Royalties	\$39,345

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South Dakota

			Corson	Campbell	McPherson		Marshall	$\Box$
Harding	Perkins			Waiworth	Edmunds	Brown	Day	Roberts
Butte		Zlebach	Dewey	Potter	Faulk	Spink	Ciark Cox	dington
wrence	Meade	Haakon	Stanley	Suily Hughes	Hyde Hand	Beadle	Kingsbu	<u> </u>
Penni Custer	ngton:	Jackson	Jones Meilette	Lyman.	Bruie	Aurora	Hanspn	
Fall River	Shannon	Bennett	Todg	Tripp	Gregory	Douglas Charles Mix	Hutchinson Bon Yankt Homme	Turner Lincolu ton Clay Unic

	Backgro Counties Number of c With oil and/	ounties	ormation		66 3
)	<b>First year of</b> Crude oil Natural gas	production	l		1954 1979
	<b>Year and am</b> Crude oil — Natural gas	1,668 thou			1988 1989
	<b>Deepest prot</b> Crude oil Natural gas	lucing wel	l (ft.)*		14,877 3,550
	<b>Year and dep</b> 2003	th of deep	est well drilled	(ft.)*	14,877
	Cumulative n as of 12/31/03 (e.		otal wells drille	d	
	Oil wells Gas wells Dry holes Total	xcluung servi	267 71 905 <b>1,243</b>		21% 6% 73% <b>100%</b>
	Cumulative c as of 12/31/03 (th		ilhead value		\$754,667
		12/31/03, rese	<b>B. New reserves</b> rves as of 12/31/02		
)		Crude Oil	NGL	Tatal	Natural
	Reserves	NA	(mill. bbls) NA	Total NA	Gas (Bcf) NA
	Deadersteen			11/3	

NA

NA

NA

Value of Oil and Gas

Counties with oil and/or gas production

Average wellhead price	
Crude oil (\$/bbl.)	\$28.94
Natural gas (\$Mcf)	\$4.98
Weilhead value of production (2003, in thous, \$)	
Crude oil	\$35,799
Natural gas	\$5,493
Total	\$41,292
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$8.49
Commercial consumers	\$7.12
Industrial consumers	\$5.78
Electric utilities	NA
City Gate	\$6.07
Severance taxes paid (2003, in thous. \$)	\$1,239

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NA

Production



# Number of wells drilled*

	Exploratory	Development	Total
Oil	·		3
Gas			2
Dry			. 4
Service			. 0
Total			9

# **Total footage drilled***

(thous. ft.)					
	Exploratory	Development	Total		
Oil			53.8		
Gas			2.4		
Dry			8.6		
Service			0		
Total			64.8		
(Note: Totals may not add due to rounding.)					
New-field wildcats drilled*5Footage (thous. ft.)8.6					
Average rotary rigs active 0					

# State-wide rank

	Crude Oil	Natural Gas
Wells drilled		
Production	25th	28th
Reserves (2002)	NA	NA

# Number of producing wells*

(12/31/03)	
Crude oil	147
Flowing	0
Artificial lift	147
Natural gas	67
Total	214

# **Average production**

	thous, bbls,	thous, b/d
Crude oil	1,237	3
NGL (est.)		
Total	1,237	3
Natural gas markete (MMcf)	ed production	1,103
Average output per	producing well*	
Crude oil (bbls.)		8,415
Natural gas (Mcf)		16,463
Average number of (	employees	
Oil and natural gas	extraction	37
Refining		ND
Transportation		230
Wholesale		1,358
Retail		5,824
Total petroleum ind	ustry	7,449

# 2002 Latest Available Data

# **Petroleum reserves**

as (	of 1	2/31	/02	(mi)}.	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 12/31/02 (Bcf)

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

# Cost of drilling and equipping wells

(Other)	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	180.66	213,000	3,143
Gas	89.05	219,943	17,572
Dry	161.48	309,500	7,906
Total	93.19	225,585	28,621

# Stripper wells*

Producing stripper wells	24
Stripper well abandonments	2
Crude oil production in bbls.	51,461
Crude oil production b/d	140
Percentage of oil production	4%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	142
Secondary	136
Total	278
Natural gas stripper wells"	
as of 1/1/03	
Producing stripper wells	56
Stripper well abandonments	• 0
Natural gas production in Mcf	415,523
Federal Onshore Mineral Lease Royalties	
Oil	\$460,390
Gas	\$44,482
Total Povaltion	0710.000
Total Royalties	\$713,266

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Backgrö	und Info	ormation 🗐		
Counties				
Number of co				95
With oil and/o	or gas pro	duction		12
First year of p	roduction			
Crude oil				1860
Natural gas				1889
Year and amo	unt of pea	k production		
Crude oil —	-	-		1982
Natural gas -	– 5,022 M	IMcf		1984
-				
Deepest prod	ucing well	(III)		0.007
Crude oil				3,297
Natural gas				4,624
-	h of deepe	est well drilled	(ft.)	
1982				11,540
•••••••••		otal wells drille	d	
as of 12/31/03 (ex Oil wells	cluding servic			28%
Gas wells		1,939 1,782		28% 25%
Dry holes		3,297		23 <i>%</i> 47%
Total		7,018		100%
<b>Cumulative cl</b> as of 12/31/03 (the		lihead value		\$384,543
Cumulative production a new reserves production as of 12/31/03, reserves as of 12/31/02				
production as of h	Crude	NGL		Natural
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	NA	NA	NA	NA
Production	19.9	NA	19.9	105

# Value of Oil and Gas

Counties with oil and/or gas production

Average wellhead price (2003)	
Crude oil (\$/bbl.)	\$26.56
Natural gas (\$Mcf)	\$5.22
Wellhead value of production (2003, in thous, \$)	
Crude oil	\$9,562
Natural gas	\$9,412
Total	\$18,974
Average natural gas price	
Residential consumers	\$9.64
Commercial consumers	, \$8.88
Industrial consumers	\$6.32
Electric utilities	NA
City Gate	\$5.96
Severance taxes paid (2003, in thous. \$)	\$592



# 2003 Industry Statistics

# Number of wells drilled

	Exploratory	Development	Total
Oil		1	1
Gas		1	1
Dry		4	4
Service			
Total		6	6

# **Total footage drilled**

(thous.	ft.)

	Exploratory	Development	Total
Oil		1.5	1.5
Gas		2.7	2.7
Dry		7.1	7.1
Service			·
Total		11.3	11.3

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

New-field wildcats drilled	0
Footage (thous. ft.)	0

#### Average rotary rigs active

## State-wide rank

	Crude Oil	Natural Gas
Wells drilled	24th	25th
Production	28th	25th
Reserves (2002)	NA	NA

#### Number of producing wells

(12/31/03)	
Crude oil	420
Flowing	0
Artificial lift	420
Natural gas	300
Total	720

#### **Average production**

	thous, bbis,	thous. b/d
Crude oil	360	1
NGL (est.)	0	
Total	360	1
Natural gas marketed	production	1,803
Average output per pr	oducing well	
Crude oil (bbls.)		857
Natural gas (Mcf)		6,010
Average number of en	nployees	
Oil and natural gas e	xtraction	547
Refining		628
Transportation		2,379
Wholesale		4,250
Retail		23,726
Total petroleum indus	stry	31,531

# 2002 Latest Available Data

#### **Petroleum reserves**

as of 12/31/02 (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 12/31/02 (Bcf)

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

## Cost of drilling and equipping wells

(Other)	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	180.66	213,000	3,143
Gas	89.05	219,943	17,572
Dry	161.48	309,500	7,906
Total	93.19	225,585	28,621

# **Stripper wells**

0

Producing stripper wells	424
Stripper well abandonments	38
Crude oil production in bbls.	246,026
Crude oil production b/d	674
Percentage of oil production	78%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	214
Secondary	144
Total	358
Natural gas stripper wells as of 1/1/03	
Producing stripper wells	401
Stripper well abandonments	15
Natural gas production in Mcf	1,586,127
Federal Onshore Mineral Lease Royalties	x
Oil	
Gas	
Total Royalties	\$0
For more information please contact: Information Se	

Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300, Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799





# Background Information

#### **Counties** Number of counties 254 With oil and/or gas production 244 **First year of production** Crude oil 1889 1889 Natural gas Year and amount of peak production Crude oil — 1,301,685 thous. bbls. 1972 Natural gas - 8,657,840 MMcf 1972 **Deepest producing well (ft.)** Crude oil 18,008 Natural gas 26,536 Year and depth of deepest well drilled (ft.) 1982 29,670 Cumulative number of total wells drilled as of 12/31/03 (excluding service wells) Oil wells 549,206 56% Gas wells 121,671 12% Dry holes 309,113 32% Total 979,990 100% Cumulative crude oil wellhead value \$523,494,780 as of 12/31/03 (thous. \$) **Cumulative production & new reserves** production as of 12/31/03, reserves as of 12/31/02 NGL Crude Natural

				i tatai ai
·	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	71,355	18,805	90,160	392,321
Production	67,527	15,867	83,394	403,481

74 America's Independent

# Image: set of the set of

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Counties with oil and/or gas production

# Value of Oil and Gas

Average wellhead price (2003)	
Crude oil (\$/bbl.)	\$29.13
Natural gas (\$Mcf)	\$5.18
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$11,851,279
Natural gas	\$27,161,677
Total	\$39,012,956
Average natural gas price	
(2003, \$/Mcf)	
Residential consumers	\$9.22
Commercial consumers	\$7.59
Industrial consumers	\$5.36
Electric utilities	[′] \$5.47
City Gate	\$5.53
Severance taxes paid (2003, in thous. \$)	\$1,492,743



# 2003 Indústry Statistics

# Number of wells drilled

	Exploratory	Development	Total
Oil	92	2,650	2,742
Gas	199	5,034	5,233
Dry	446	808	1,254
Service		207	207
Total	737	8,699	9,436

# Total footage drilled

(thous. ft.)			
	Exploratory	Development	Total
Oil	631.2	14,901.5	15,532.7
Gas	1,994.5	43,930.9	45,925.4
Dry	3,361.6	4,653.5	8,015.1
Service	·	865.6	865.6
Total	5,987.2	64,351.5	70,338.8
(Note: Totals	a may not add due to rou	inding.)	

# New-field wildcats drilled424Footage (thous. ft.)3,382.4

# Average rotary rigs active

# State-wide rank

·	Crude Oil	Natural Gas
Wells drilled	1st	1st
Production	2nd*	1st
Reserves (2002)	1st	1st

*First for state ranking but behind Federal Offshore.

# Number of producing wells

Total	220,743
Natural gas	66,315
Artificial lift	146,929
Flowing	7,499
Crude oil	154,428
(12/31/03)	

#### Average production

Average production		
	thous, bbls,	thous. b/d
Crude oil	406,855	1,115
NGL (est.)	267,431	733
Total	674,286	1,847
Naturai gas markete (MMcf)	d production	5,243,567
Average output per p	roducing well	
Crude oil (bbls.)		2,635
Natural gas (Mcf)		79,071
Average number of e	mployees	
Oil and natural gas	extraction	177,577
Refining		21,485
Transportation		21,400
Wholesale & produc	sts	7,665
Retail		67,860
Total petroleum indu	ustry	295,987

# 2002 Latest Available Data

#### **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	439	359	798
Production	368	301	669
Net annual change	71	58	129
Proved reserves	5,015	2,711	7,726

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas_
New reserves	956	5,455	5,808
Production	658	4,727	5,038
Net annual change	298	728	770
Proved reserves	6,387	41,104	44,297

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	106.25	628,968	1,028,362
Gas	170.66	1,562,770	5,916,647
Dry	171.17	1,108,658	1,237,262
Total	158.64	3,300,396	8,182,270

## **Stripper wells**

449

Producing stripper wells	124,551
Stripper well abandonments	5,228
Crude oil production in bbls.	127,252,695
Crude oil production b/d	348,638
Percentage of oil production	31%
Strinnar all recorve	

#### Stripper oil reserves

523,686
561,675
1,085,361

# Natural gas stripper wells

as of 1/1/03	
Producing stripper wells	32,200
Stripper well abandonments	1,351
Natural gas production in Mcf	258,983,600

# **Federal Onshore Mineral Lease Royalties**

Oil	\$6,248,322
Gas	\$54,984,334
Total Royalties	\$60,658,250

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300, Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

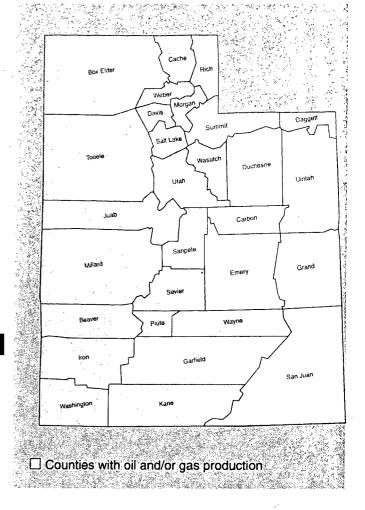




# Background Information

Cumulative	,	<b>New reserves</b> es as of 12/31/02	
<b>Cumulative</b> ( as of 12/31/03 (1	crude oil well	head value	\$15,930,298
Total		12,879	100%
Dry holes		4,113	32%
Gas wells		3,997	31%
Oil wells		4,769	37%
	number of tot excluding service	al wells drilled	
<b>Year and de</b> 1982	pth of deepes	t well drilled (ft	<b>)</b> 21,874
Natural gas			20,600
Crude oil	ducing well (	fL)	17,910
Natural gas	— 348,140	MMcf	1994
	<b>iount of peak</b> - 42,301 thou	-	1975
Natural gas	;		1886
First year of Crude oil	production		1907
Number of With oil and	counties I/or gas prodi	uction	29 9
Counties			

	Crude	NGL		Natural	
	Oil	(mill. bbls)	Total	Gas (Bcf)	
Reserves	1,330	1,286	2,616	9,254	
Production	1,148	199	1,347	5,337	



# Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$28.88
Natural gas (\$Mcf)	\$4.11
Weilhead value of production	
(2003, in thous. \$) Crude oil	\$378,270
Natural gas	\$1,101,718
Total	\$1,479,988
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$7.33
Commercial consumers	\$5.95
Industrial consumers	\$5.04
Electric utilities	\$3.89
City Gate	\$4.74
Severance taxes paid (2003, in thous. \$)	\$28,689



#### 2003 Industry Statistics

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385

#### Number of wells drilled Exploratory Development 10 108 Oil 15 254 Gas Dry 8 23 Service

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33

# **Total footage drilled**

Total

(thous. ft.)			
	Exploratory	Development	<u>Total</u>
Oil	50.7	631.6	682.3
Gas	141.8	1,866.9	2,008.7
Dry	40.0	130.1	170.1
Service			
Total	232.5	2,628.6	2,861.1
(Note: Totals	may not add due to rou	inding.)	

# New-field wildcats drilled

Footage (thous. ft.) 60	60.4
-------------------------	------

## Average rotary rigs active

# State-wide rank

Crude Oil	Natural Gas
13th	14th
14th	12th
11th	10th
	13th 14th

## Number of producing wells

Total	5,098
Natural gas	3,143
Artificial lift	1,896
Flowing	59
Crude oil	1,955
(12/31/03)	

#### **Average production**

	thous. bbls.	thous. b/d
Crude oil	13,098	36
NGL (est.)	2,785	8
Total	15,883	44
Natural gas markete (MMcf)	ed production	268,058
Average output per l	producing well	
Crude oil (bbls.)		6,700
Natural gas (Mcf)		85,287
Average number of e	employees	
Oil and natural gas	extraction	2,656
Refining		749
Transportation		1,246
Wholesale		495
Retail		9,642
Total petroleum ind	ustry	14,788

# 2002 Latest Available Data

#### **Petroleum reserves**

Total 118

269

31

----

418

10

14

as of 12/31/02 (mill. bbls.) * Combined with Wyoming

	Crude Oil	NGL*	<u>Total</u>
New reserves	-28	107	79
Production	12	66	78
Net annual change	-30	41	11
Proved reserves	241	938	1,179

## Natural gas reserves

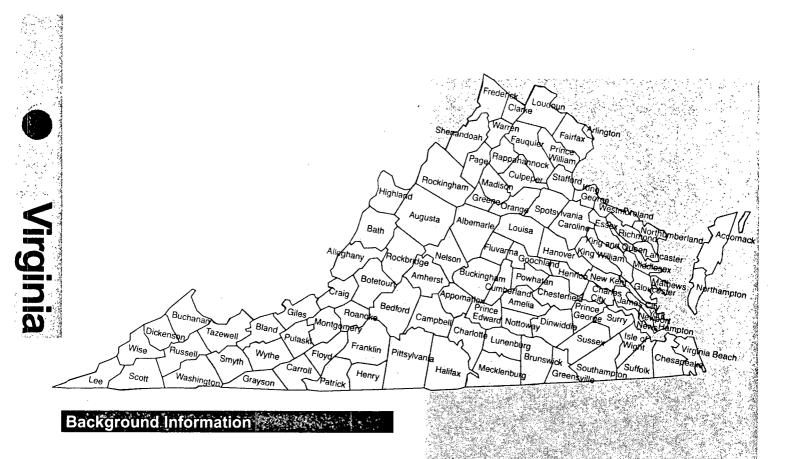
as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	77	-260	-158
Production	21	275	286
Net annual change	56	-535	-444
Proved reserves	359	3,915	4,135

## Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	117.37	765,000	81,090
Gas	153.63	983,136	469,939
Dry	96.95	522,103	15,141
Total	144.95	923,604	566,169
Stripper w	ells		
Producing	stripper wells	,	1,049
Stripper w	ell abandonmen	ts	16
Crude oil p	production in bbl	S.	1,445,945
Crude oil p	production b/d		3,961
Percentag	e of oil production	on	11%
Stripper of as of 1/1/03 (th			
Primary			9,995
Secondary	1		9,795
Total			19,790
Natural gas	s stripper weils		
	stripper wells		929
-	ell abandonmen	te	6
	s production in I		9,359,853
, latarar ga	o production in r	10.	0,000,000
Federal Ons	shore Mineral Le	ase Royalties	
Oil			\$26,737,705
Gas			\$36,944,256
Total Roya	Ities		\$88,162,215

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300, Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799



# **Counties**

)	Crude	NGL	T	Natural
	<b>Cumulative production</b> roduction as of 12/31/03, rese			
	<b>Cumulative crude oil we</b> s of 12/31/03 (thous. \$)	eilhead value		\$11,097
٦	otal	5,217		100%
C	Dry holes	203		4%
(	Gas wells	4,759		91%
a	s of 12/31/03 (excluding servi Dil wells		u	5%
(	umulative number of t	ntal wells drille	d	
	<b>(ear and depth of deep</b> 1977	est well drilled (	(ft.)	17,003
I	Natural gas			7,238
	<b>Jeepest producing wel</b> Crude oil	I (N)		7,238
				2003
	Crude oil — 65 thous. Natural gas — 81,086			1983 2003
۱	/ear and amount of pea	k production		
	Crude oil Natural gas			1943 1931
<b>7</b>	irst year of production			
	Number of counties With oil and/or gas pro	duction		96 7

•	oruue	NGL		naturai
	Oil	(mill. bbls)	Total	Gas (Bcf)
Reserves	NA	NA	NA	2,229
Production	0.5	NA	0.5	946

Value of Oil and Gas

Counties with oil and/or gas production

Average wellhead price	
(2003)	<b>\$</b> \$\$\$
Crude oil (\$/bbl.)	\$26.23
Natural gas (\$Mcf)	\$4.65
Weilhead value of production (2003, in thous, \$)	
Crude oil	\$472
Natural gas	\$377,050
Total	\$377,522
Average natural gas price (2003, \$/Mcf) Residential consumers	\$11.84
Commercial consumers	\$9.47
Industrial consumers	\$5.97
Electric utilities	\$6.23
City Gate	\$6.57
Severance taxes paid (2003, in thous. \$)	

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# 2003 Industry Statistics

# Number of wells drilled

	Exploratory	Development	Total
Oil			
Gas	6	192	198
Dry			
Service			
Total	6	192	198

# **Total footage drilled**

(thous. ft.)			
	Exploratory	Development	Total
Oil			
Gasí	33.7	534.6	568.3
Dry		<b></b> .	
Service			·
Total	33.7	534.6	568.3
(Note: Totals	may not add due to rou	unding.)	
New-field	wildcats drilled		5
Footage (thous. ft.)			28.2

## Average rotary rigs active

## State-wide rank

	Crude Oil	Natural Gas
Wells drilled		
Production	32nd	21st
Reserves (2002)	NA	17th

#### Number of producing wells

(12/31/03)	
Crude oil	8
Flowing	0
Artificial lift	8
Natural gas	3,529
Total	3,529

#### **Average production**

	thous. bbls.	thous. b/d
Crude oil	18	
NGL (est.)		
Total	18	
Natural gas markete	d production	81,086
Average output per j	producing well	
Crude oil (bbls.)		2,250
Natural gas (Mcf)		22,977
Average number of e	employees	
Oit and natural gas	extraction	926
Refining		321
Transportation		2,608
Wholesale		3,722
Retail		34,247

# 2002 Latest-Available Data

#### **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	Total
New reserves	NA	ŅA	NA
Production	NA	NA	NA
Net annual change	NA	NA	NA
Proved reserves	NA	NA	NA

## Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
· · · · · · · · · · · · · · · · · · ·	Dissolved	Associated	Gas
New reserves	0	-4	-4
Production	0	75	75
Net annual change	0	-79	-79
Proved reserves	0	1,673	1,673

# Cost of drilling and equipping wells

(Other)	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	180.66	213,000	3,143
Gas	89.05	219,943	17,572
Dry	161.48	309,500	7,906
Total	93.19	225,585	28,621

#### Stripper well

1

41,317

Producing stripper wells		13
Stripper well abandonments		0
Crude oil production in bbls.	11 A.	3,428
Crude oil production b/d		· 9
Percentage of oil production		16%

# **Stripper oil reserves**

51
50
101

## Natural gas stripper wells

as of 1/1/03 ·	
Producing stripper wells	127
Stripper well abandonments	9
Natural gas production in Mcf	1,807,834

## **Federal Onshore Mineral Lease Royalties**

Oil	\$0
Gas	\$(192,885)
Total Royalties	\$(159,566)

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300, Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

Compiled by IPAA July 2005

Total petroleum industry



	Hancock
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:	Wetzei Marion Preston Mineral Hampshire Jofferson
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Mingo	
1.1 ° 1.3 E	McDowell Mercer
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55 50	
1860	
1885	□ Counties with oil and/or gas production
2	

	Backgro	und Inf	ormation 🐐		
	Counties				
	Number of c With oil and/		oduction		55 50
	First year of (	production	1		
	Crude oil				1860
)	Natural gas				1885
	Year and amo	ount of pea	k production		
	Crude oil —			-	1900
	Natural gas -	— 264,139	9 MMcf		2000
	Deepest prod	lucina wel	l (ft )		
	Crude oil	aving not			6,785
	Natural gas				14,300
	Veer and den	th of door	est well drilled (	744 1	
	1974	ιη οι ποςθι	gəl men utnicu i		20,222
	<b>Cumulative n</b> as of 12/31/03 (e)		otal wells drille	đ	
	Oil wells	clubing service	48,077		39%
	Gas wells		56,115		45%
	Dry holes	•	19,847		16%
	Total		124,039		100%
	<b>Cumulative cl</b> as of 12/31/03 (the		ellhead value		\$2,587,356
			R new reserves		
	production as of 1		rves as of 12/31/02		
		Crude Oil	NGL (mill_bbla)	Tatal	Natural
	Pacanyas		(mill. bbls)	Total	Gas (Bcf)

464

399

1,056

1,009

22,521

19,504

# Value of Oil and Gas

Average wellhead price	
Crude oil (\$/bbl.)	\$28.06
Natural gas (\$Mcf)	\$4.34
Wellhead value of production	
(2003, in thous. \$) Crude oil	<b>#04.000</b>
Natural gas	\$34,233
Total	\$814,718
Total	\$848,951
Average natural gas price (2003, \$/Mcf)	
Residential consumers	\$8.92
Commercial consumers	\$8.05
Industrial consumers	\$6.76
Electric utilities	\$6.84
City Gate	\$5.69
Severance taxes paid (2003, in thous. \$)	\$30,475 (FY)

592

610

Reserves

Production

# 2003 Industry Statistics

# Number of wells drilled

	Exploratory	Development	Total
Oil		5	5
Gas	28	832	. 860
Dry	2	20	22
Service		16	16
Total	30	873	903

# **Total footage drilled**

(thous. ft.)			
	Exploratory	Development	Total
Oil		13.9	13.9
Gas	123.5	3,354.5	3,478.0
Dry	8.6	77.0	85.6
Service		51.8	51.8
Total	132.1	3,497.2	3,629.3

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

New-field wildcats drilled	12
Footage (thous. ft.)	54.4

#### Average rotary rigs active 16

## State-wide rank

	Crude Oil	Natural Gas
Wells drilled	22nd	7th
Production	26th	14th
Reserves (2002)	25th	12th

#### Number of producing wells

Total	47,853
Natural gas	40,186
Artificial lift	7,488
Flowing	179
Crude oil	7,667
(12/31/03)	

#### **Average production**

	thous, bbls.	thous, b/d
Crude oil	1,220	3
NGL (est.)	8,577	24
Total	9,797	27
Natural gas marketo (MMcf)	ed production	187,723
Average output per	producing well	
Crude oil (bbls.)		159
Natural gas (Mcf)		4,671
Average number of	employees	
Oil and natural gas	extraction	2,662
Refining		921
Transportation		2,608
Wholesale		604
Retail		9,115
Total petroleum ind	ustry	15,910

# 2002 Latest Available Data

#### **Petroleum reserves**

as of 12/31/02 (mill. bbls.)

	Crude Oil	NGL	<u>Total</u>
New reserves	6	-1	5
Production	1	6	7
Net annual change	5	-7	-2
Proved reserves	13	99	112

## Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	Associated	Gas
New reserves	-26	901	876
Production	1	201	194
Net annual change	-27	700	682
Proved reserves	21	3,477	3,360

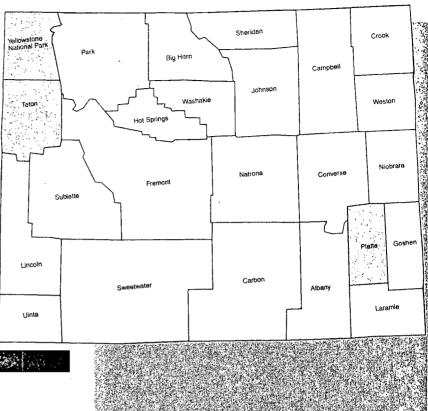
## Cost of drifling and equipping wells

Unar di di i	nnig ann adaibh	IIIB MOIIS	
(Appalach	ian) Cost/ft.	Cost/	Total Cost
·	(\$)	well (\$)	(thous. \$)
Oil	51.61	157,180	105,939
Gas	51.31	208,774	484,148
Dry	50.77	203,109	24,170
Total	51.34	. 197,383	614,257
Stripper w	ells		
Producing	stripper wells		8,210
Stripper w	ell abandonmer	nts	46
Crude oil p	production in bb	ls.	1,248,000
Crude oil p	production b/d	,	3,419
Percentag	e of oil production	on	90%
Stripper of as of 1/1/03 (t			
Primary			4,139
Secondary	/		3,785
Total			7,924
Natural gas as of 1/1/03	s stripper wells		
Producing	stripper wells		37,528
Stripper w	ell abandonmen	ts	200
Natural ga	s production in I	Vlcf	208,775,000
Federal On	shore Mineral Le	ase Royalties	
Oil			
Gas			\$286,144
Total Roya	alties		\$572,661

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300, Washington, D.C. 20005 202-857-4722; FAX: 202-857-4799

Compiled by IPAA July 2005





# Background Information

	<b>Counties</b> Number of counties With oil and/or gas	-	duction		23 20
	First year of product	tion			
	Crude oil Natural gas				1894 1889
	Year and amount of	-	-		
	Crude oil — 160,34 Natural gas — 1,53				1970 2003
	Deepest producing	well	(ft.)		
	Crude oil Natural gas				19,612 24,938
	<b>Year and depth of de</b>	eepe	st well drilled (f	t.)	25,764
	Cumulative number	of to	tal wells drilled	1	20,704
	as of 12/31/03 (excluding				
	Oil wells		28,937		37%
	Gas wells		24,686		32%
	Dry holes		24,004		31%
	Total		77,627		100%
	Cumulative crude of as of 12/31/03 (thous. \$)	il we	lihead value		\$63,448,891
	<b>Cumulative product</b> production as of 12/31/03,				
,	Crue	de	NGL		Natural
	Oi	1	(mill. bbls)	Total	Gas (Bcf)

1,759

1,077

8,701 7,652 43,707

26,772

Counties with oil and/or gas production

# Value of Oil and Gas

Average wellhead price	
(2003)	
Crude oil (\$/bbl.)	\$26.63
Natural gas (\$Mcf)	\$4.13
Wellhead value of production	
(2003, in thous. \$)	
Crude oil	\$1,396,877
Natural gas	\$6,357,383
Total	\$7,754,260
Average natural gas price	
(2003, \$/Mcf)	
Residential consumers	\$7.14
Commercial consumers	\$5.69
Industrial consumers	\$6.12
Electric utilities	\$3.57
City Gate	\$2.52
Severance taxes paid	\$370,381
(2003, in thous. \$)	

6,942

6,575

Reserves

Production

# 2003 Industry Statistics

# Number of wells drilled

	Exploratory	Development	Total
Oil	9	144	153
Gas	87	2,573	2,660
Dry	43	45	88
Service		42	42
Total	139	2,804	2,943

## **Total footage drilled**

(thous, ft.)		•	
	Exploratory	Development	Total
Oil	76.4	636.1	712.5
Gas	905.8	8,191.7	9,097.5
Dry	256.7	426.8	683.5
Service		212.0	212.0
<b>Total</b> (Note: Totals	1,238.9 may not add due to	9,466.6 rounding.)	10,705.5
<b>New-field</b> Footage (	wildcats drille thous. ft.)	1	81 694.0
Average ro	otary rigs activ	Ð	54
State-wide	e rank		
		Crude Oil	Natural Gas
Wells drill		11th	2nd
Production		8th	5th
Reserves	(2002)	7th	3rd
Number of (12/31/03)	i producing wel	is	
Crude oil			9,932
Flowing			322
Artificial	lift		9,610
Natural ga	is		23,217
Total			33,149
Average p	roduction		
		thous, bbls,	<u>thous. b/d</u>
Crude oil		52,455	144
NGL (est.)		40,352	111
Total		92,807	254
Natural ga (MMcf)	s marketed pro	duction	1,539,318
	itput per produ	cing well	
Crude oil (	. ,		5,281
Natural ga	is (Mcf)		66,301
Average ni	umber of emplo	yees	
	tural gas extra	ction	10,614
Refining			842
Transporta			741
Wholesale	)		431
Retail			4,207
Total petro	pleum industry		16,835

# 2002 Latest Available Data

#### **Petroleum reserves**

as of 12/31/02 (mill. bbls.)	*Combined with Uta	h	
<u>.</u>	Crude Oil	NGL*	Total
New reserves	81	107	188
Production	46	66	112
Net annual change	35	41	76
Proved reserves	524	938	1,462

# Natural gas reserves

as of 12/31/02 (Bcf)

	Associated	Non-	Dry
	Dissolved	<u>Associated</u>	Gas
New reserves	154	3,434	3,517
Production	81	1,375	1,388
Net annual change	73	2,059	2,129
Proved reserves	561	20,970	20,527

# Cost of drilling and equipping wells

	Cost/ft.	Cost/	Total Cost
	(\$)	well (\$)	(thous. \$)
Oil	156.60	709,425	56,754
Gas	167.49	412,050	1,206,069
Dry	190.56	1,225,533	128,681
Total	168.90	447,142	1,391,505

# Stripper wells

Producing stripper wells	11,416
Stripper well abandonments	228
Crude oil production in bbls.	8,430,429
Crude oil production b/d	23,097
Percentage of oil production	15%
Stripper oil reserves	
as of 1/1/03 (thous. bbls.)	
Primary	38,250
Secondary	36,750
Total	75,000
Natural gas stripper wells	
as of 1/1/03	
Producing stripper wells	11,817
Stripper well abandonments	• 101
Natural gas production in Mcf	56,002,994
Federal Onshore Mineral Lease Royatties	
Oil	\$78,687,666
Gas	\$189,085,514
Total Royalties	\$1,696,298,826

For more information please contact: Information Services Department, Independent Petroleum Association of America, 1201 15th St., N.W., Suite 300, Washington, D.C. 20005 202-857-4722, FAX: 202-857-4799

Compiled by IPAA July 2005

# Rotary Rigs Operating

	1994	1995	1996	1997	1998	1999	2000	2001	.2002	200
Alabama	9	8	5	4	6	6	4	5	3	3
Alaska	10	11	10	11	12	5	8	13	11	10
Arizona	0	0	0	0	0	0	0	0	0	0
Arkansas	9	11	9	10	6	3	4	2	1	2
California	31	28	27	32	28	19	24	36	23	22
Colorado	30	15	14	16	13	13	18	32	28	39
Florida	1	1	1	0	0	0	0	0	0	1
Illinois	0	0	0	0	0	0	0	0	0	0
Indiana	0	0	0	0	0	0	0	0	1	C
Kansas	33	29	24	19	13	7	22	23	8	9
Kentucky	3	2	3	5	3	6	5	6	5	4
Louisiana	132	141	156	194	187	141	194	214	163	157
Michigan	7	7	4	0	5	0	3	1	1	3
Mississippi	8	7	9	6	14	2	11	14	8	8
Montana	6	7	8	13	9	7	7	10	8	14
Nebraska	1	0	0	1	1	4	1	0	0	
Nevada	2	1	1	0	0	0	0	0	0	1
New Mexico	36	37	35	53	45	36	68	68	42	65
New York	0	1	2	1	2	3	3	5	4	З
North Dakota*	7	12	19	18	11	6	13	14	11	14
Ohio	9	10	8	9	10	11	9	10	9	e
Oklahoma	106	96	106	104	85	62	99	130	91	129
Oregon	0	1	0	0	0	0	0	0 ·	0	0
Pennsylvania	10	8	11	10	11	88	9	11	11	10
South Dakota	0	1	1	1	Ö	1	0	1	0	0
Texas	274	251	283	358	303	227	343	462	338	449
Jtah	7	8	9	14	12	9	16	21	13	14
Virginia	2	1	1	2	2	5	. 2	2	2	1
Vest Virginia	11	10	12	15	14	14	14	18	13	16
Nyoming	33	24	24	39	38	32	41	55	40	54
Other	1	0	0	1	1	0	0	2	0	1
TOTAL U.S.	775	723	779	943	827	625	918	1,156	830	1,032
ONSHORE	672	622	669	820	703	517	779	1,002	716	923
OFFSHORE	103	101	110	123	124	107	139	154	114	109

Source: Baker-Hughes and state data*

Note: Data represent annual averages and include offshore rigs. Totals may not add due to rounding.

	1994	1995	1996	1997	1998	1999	2000	2001	2002-	200
Alabama	37	37	33	27	18	19	17	17	15	19
Alaska	7	. 6	8	10	11	5	9	10	10	10
Arizona	0	4	0	4	7	0	0	0	1	C
Arkansas	10	28	19	22	15	13	12	18	10	10
California	10	14	38	30	22	33	37	34	31	15
Colorado	94	130	91	78	58	51	42	65	39	47
Florida	0	0	1	0	0	0	0	0	0	٠C
Illinois	44	33	38	57	25	17	22	37	18	30
Indiana	6	15	35	19	21	8	5	19	10	18
Kansas	166	152	179	180	118	85	140	210	166	151
Kentucky	22	47	30	31	13	3	2	1	່1	0
Louisiana	95	128	156	175	104	117	176	148	143	138
Michigan	62	40	52	55	44	25	20	19	25	21
Mississippi	66	35	34	30	27	29	26	21	37	33
Missouri	0	0	1	0	1	2	0	1	2	· 0
Montana	31	53	57	65	62	45	56	87	96	116
Nebraska	29	22	15	23	15	9	13	12	14	15
Nevada	13	17	18	8	6	1	2	1	2	2
New Mexico	24	25	35	35	27	30	32	47	23	43
New York*	1	1	3	1	5	6	9	25	32	9
North Dakota*	21	45	73	42	25	18	18	17	9	6
Ohio*	29	28	26	8	21	1	0	5	6	2
Oklahoma	73	74	91	97	59	57	65	91	67	89
Oregon	0	0	0	0	1	0	0	0	0	0
Pennsylvania	4	3	0	1	2	4	4	23	15	36
South Dakota*	3	1	8	8	5	1.	2	0	6	5
Tennessee	4	4	8	4	1	7	6	6	NA	0
Texas	520	534	479	534	557	452	523	427	351	424
Utah	9	21	29	14	22	14	5	18	30	10
∕irginia	0	0	0	0	0	1	6	4	5	5
Nest Virginia	3	2	0	0	2	5	10	29	25	12
Nyoming	44	87	79	155	106	93	81	75	75	81
- ederal Offshore	176	120	151	156	50	111	205	216	139	164
Other	0	0	0	1	1	. 1	0	2	0	0
	,613	1,605	1,676							

Source: American Petroleum Institute and state data*

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

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	1994	1995	1996	1997	1998	1999	2000	2001	2002	200
Alabama	38	48	44	29	18	20	17	19	16	24
Alaska	8	8	9	11	12	5	10	16	14	14
Arizona	0	6	0	4	8	0	0	0	1	0
Arkansas	14	33	23	24	15	13	13	22	10	. 12
California	9	49	65	65	63	67	70	68	65	28
Colorado	160	214	150	116	124	119	80	127	57	81
Florida	0	0	1	0	0	0	0	0	0	0
Illinois	93	78	98	119	75	40	61	45	37	41
Indiana	26	35	80	52	46	21	10	19	12	29
Kansas	482	430	395	280	167	139	234	395	282	274
Kentucky	71	114	77	76	52	9	4	1	1	0
Louisiana	192	131	163	195	173	162	181	150	152	148
Michigan	86	53	60	57	48	32	23	25	31	24
Mississippi	79	50	56	41	28	31	32	29	42	41
Missouri	0	0	1	0	0	2	0	1	2	0
Montana	51	68	69	98	105	58	98	170	157	180
Nebraska	39	38	27	37	18	17	28	18	17	22
Nevada	16	19	19	9	7	1	2	2	2	2
New Mexico	64	70	85	100	100	70	61	86	59	75
New York*	1	1	4	2	7	18	22	31	35	· 33
North Dakota*	43	88	134	114	61	36	48	48	22	5
Ohio*	154	123	106	73	52	23	25	29	27	48
Oklahoma	268	283	183	148	81	67	101	171	107	198
Oregon	0	0	1	0	1	2	0	0	0	0
Pennsylvania	7	8	3	1	4	11	10	32	29	68
South Dakota*	5	5	13	11	6	2	3	0 1	6	2
Tennessee	6	10	10	13	5	11	15	7	NA	0
Texas	1,437	1,219	1,176	1,179	963	755	808	910	683	737
Utah	15	37	50	33	44	22	18	69	41	33
Virginia	0	0	0	0	0	1	8	4	8	6
West Virginia	6	2	· 1	΄7	8	18	26	70	81	30
Wyoming	63	103	107	196	179	148	146	177	149	139
ederal Offshor	e 174	120	152	174	146	171	206	212	139	164
Other	0	0	0	1	1	1	0	2	0	0
TOTAL U.S.	3,471	3,342	3,250	3,137	2,510	1,997	2,250	2,851	2,205	2,367

Source: American Petroleum Institute and state data*

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



# Development Wells Drilled

# 1994 1995 1996 1997 1998 1999 2000 2001 2002 2002 2003

TOTAL U.S.	16,884	18,353	20,399	25,287	20,890	17,491	26,241	31,576	24,595	28,110
Other	0	0	0	0	0	0	0	0	0	0
Federal Offsho	re 502	472	450	741	728	900	873	902	532	521
Wyoming	455	530	527	995	1,043	2,091	4,782	5,311	3,061	2,762
West Virginia	600	383	547	668	715	614	597	836	811	857
Virginia	96	53	119	127	88	126	215	294	216	192
Utah	82	193	235	365	455	220	428	548	387	385
Texas	6,454	6,738	7,313	8,971	6,769	4,812	6,944	8,154	6,551	8,492
Tennessee	66	42	50	52	74	108	129	55	NA	(
South Dakota*	0	2	12	4	1	4	5	9	4	(
Pennsylvania	534	562	766	985	850	770	1,447	2,134	2,158	2,236
Oregon	0	0	0	0	2	6	0	0	0	
Okiahoma	1,548	1,514	1,885	2,100	1,768	1,522	2,112	2,920	2,310	2,68
Ohio*	585	548	621	658	503	459	510	685	487	466
North Dakota*	32	62	107	160	109	40	119	158	152	114
New York*	39	32	82	32	48	62	59	143	81	64
New Mexico	734	935	996	1,143	1,073	955	1,440	1,551	1,200	1,520
Nevada	2	7	3	3	2	1	0	2	2	(
Nebraska	16	9	19	44	14	3	11	14	14	16
Montana	111	149	146	341	238	367	415	405	385	638
Missouri	1 .	÷	9	0	1	2	2	0	0	
Mississippi	101	105	124	152	157	89	187	240	169	23
Michigan	422	820	698	606	520	300	364	388	324	332
				· · · · · · · · · · · · · · · · · · ·	1,000	1,474	1,000	1,017	1,195	
Louisiana	661	1,176	1,383	1,802	404 1,668	1,474	1,686	22 1,817	1,193	1,35
Kansas Kentucky	1,051 516	1,065 649	1,077 555	1,379 652	695 464	484 109	853 16	1,060 22	881 17	1,280
Indiana	39	71	82	78	53	32	42	108	70	121
Illinois	255	287	290	313	159	121	295	274	209	180
Florida	000	1	2	3	0	0	4	1,500	1,000	1,00-
California Colorado	793 886	1,244 654	1,631 500	2,386 658	2,091 701	1,479 591	2,064 940	2,134 1,380	1,918 1,336	1,863 1,504
Arkansas	213	182	192	208	174	137	153	227	143	
Arizona	0	1	0	0	0	1	0	0	0	( 21:
Alaska	7	157	181	217	221	148	138	169	170	18
Alabama	95	128	184	92	145	202	145	346	233	309

Source: American Petroleum Institute and state data*

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



# Total Wells Drilled

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	1994	1995	1996	<u>. 19</u> 97.	1998	. 1999 🗠	2000	2001	2002	2003
Alabama	133	176	228	121	163	222	162	365	249	333
Alaska	10	174	207	267	286	153	148	185	224	231
Arizona	0	7	0	. 4	8	1	0	0	1	C
Arkansas	227	215	215	235	189	150	166	249	153	225
California	797	1,656	1,969	2,891	2,548	1,546	2,134	2,202	2,396	2,278
Colorado	1,007	873	651	785	828	710	1,020	1,507	1,397	1,590
Florida	0	1	3	3	0	0	4	0	1	0
Illinois	345	368	395	444	259	161	356	319	259	244
Indiana	63	115	168	139	105	53	52	127	93	157
Kansas	1,524	1,552	1,523	1,728	890	623	1,087	1,455	1,205	1,599
Kentucky	578	765	634	730	516	118	20	23	18	. 4
Louisiana	754	1,307	1,547	2,000	1,841	1,636	1,867	1,967	1,351	1,501
Michigan	488	873	758	663	568	332	387	413	355	356
Mississippi	180	155	181	193	187	120	219	269	211	279
Missouri	1	0	11	7	2	4	2	1	2	1
Montana	154	222	215	440	344	425	513	575	561	839
Nebraska	49	48	46	82	33	20	39	32	32	38
Nevada	13	26	22	12	9	. 2	2	4	4	2
New Mexico	793	1,041	1,103	1,273	1,188	1,025	1,501	1,637	1,275	1,601
New York*	39	45	86	34	55	80	81	174	148	99
North Dakota*	71	151	245	275	174	76	167	206	179	119
Ohio*	732	673	727	731	555	482	535	714	515	516
Oklahoma	1,815	1,807	2,111	2,275	1,869	1,589	2,213	3,091	2,438	2,901
Oregon	0	0	1	0	3	8	0	0	0	0
Pennsylvania	541	573	769	992	855	781	1,457	2,166	2,187	2,304
South Dakota*	3	7	25	15	8	6	8	9	10	9
Tennessee*	72	52	60	65	80	119	144	62	110	6
Texas	7,881	8,195	8,787	10,475	7,930	5,567	7,752	9,064	7,397	9,436
Utah	95	236	316	438	537	242	446	617	431	418
Virginia	96	54	119	127	88	127	223	298	224	198
West Virginia	606	401	582	697	724	632	623	906	892	903
Wyoming	502	749	745	1,233	1,280	2,239	4,928	5,488	3,223	2,945
Federal Offshore	674	592	602	916	874	1,071	1,079	1,118	677	688
Other	0	0	0	1	1	1	0	3	0	0
TOTAL U.S.	20.190	22.590	24,552	29,514	24,250	19,488	28,491	34,427	27,711	31,311

Source: American Petroleum Institute and state data*

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



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# Producing Crude Oil Wells

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Total U.S.	581,676	573,483	574,416	573,070	561,473	545,681	532,72 <b>5</b>	529,648	519,382	512,671
Other	23	23	21	17	21	14		8	8	8
Federal Waters	4,856	4,975	5,060	5,164	5,190	3,620	3,700	3,792	3,629	4,078
Wyoming	9,980	10,368	10,782	10,283	10,167	9,900	9,650	10,160	9,855	9,610
West Virginia	15,750	17,436	16,869	18,000	15,550	16,300	15,900	8,450	8,028	6,278
Utah	1,802	1,851	1,976	1,990	1,992	1,865	1,910	1,960	1,927	1,995
Texas	179,643	174,527	175,532	174,670	168,237	163,600	154,104	159,240	157,565	154,428
Tennessee	850	701	714	790	700	700	625	550	510	420
South Dakota*	143	150	145	147	147	129	160	155	155	147
Pennsylvania	19,077	18,157	18,305	18,621	16,500	16,000	15,050	16,750	16,331	16,404
Oklahoma	92,377	91,289	90,557	88,144	86,765	84,908	84,515	84,252	81,724	83,389
Ohio*	29,792	29,622	29,622	29,276	29,183	29,149	29,095	29,095	28,309	29,039
 North Dakota*	3,495	3,171	3.201	3,380	3,322	3,285	3,185	3,395	3,207	3,118
New York*	3,757	3,670	3,041	3,360	3,739	3,463	2,802	2,876	3,106	2,763
New Mexico	18,141	17,976	18,397	19,022	19,878	20,572	17,157	18,158	18,076	27,527
Nevada	62	72	63	67	74	81	67	67	65	63
Nebraska	2.050	1,489	1,445	1,481	1,251	1,160	1,170	1,176	1,155	1,595
Montana	4,220	3,100	3,040	3,738	3,706	3,250	3,088	3,110	2,979	3,645
Missouri	370	518	394	449	301	304	317	332	364	297
Mississippi	1,523	1,516	1,567	1,532	1,450	1,500	1,490	1,484	1,474	1.482
 Michigan	4,035	4.079	3,746	3,685	3,620	3,380	3,329	3,700	3,730	3,800
Louisiana	26,850	24,430	24,402	24,074	27,486	27,678	27,950	27,250	26,814	20,184
Kentucky	23,578	23,538	23,538	23,628	23,548	23,140	29,300	29,557	28,522	18,166
Kansas	42,298	44,235	44,776	44,832	43,000	44,000	43,472	42,350	41,207	40,500
Indiana*	7,238	7,135	5,190	5,273	5,200	5,042	5,026	4,874	4,956	5,001
Illinois	31,380	31,128	30,799	30,681	30,265	25,000	20,010	17,912	17,410	16,737
Florida	85	85	92	95	85	77	70	72	73	70
Colorado	7,868	8,022	9,762	9,068	9,000	7,500	7,000	5,788	5,643	6,150
California	39,330	39,365	40,531	41,495	41,102	40,110	42,604	43,078	42,713	46,350
Arkansas	8,523	7,834	7,871	7,467	7,345	7,297	7,267	7,150	6,935	6,727
Arizona	21	22	23	25	27	25	25	25	20	17
Alabama Alaska	886 1,673	913 2,086	827 2,128	827 1,789	794 1,828	808 1,824	820 1,852	823 2,059	812 2,080	810 1,943

Source: World Oil and state data*

Note: Data include wells on artificial lift and flowing. Figures quoted as of December 31 each year. Post-1999 numbers reflect lower levels than previous years due to change in MMS (OCS) counting methods, which now exclude shut-ins.

Other: Virginia



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1994 1995 1996 1997 1998 1999 2000 2001 2002 2003

Total U.S.	287,845	294,165	303,701	303,604	309,165	314,624	324,109	356,797	357,833	375,624
Other	33	57	82	88	62	71	81	79	80	98
Federal Waters	-1-1-	4,136	4,523	4,743	4,993	3,052	3,300	3,290	3,145	3,145
Wyoming	3,194	3,649	4,384	4,869	4,850	4,950	6,200	23,280	23,862	15,250
West Virginia	35,250	36,144	35,148	31,000	39,072	45,266	46,171	38,816	39,592	40,186
Virginia	1,571	1,610	1,671	2,030	2,235	2,695	2,850	3,280	3,460	3,529
Utah	1,227	1,142	1,269	1,399	1,643	1,885	2,130	3,177	3,377	3,14:
Texas	48,782	49,639	53,719	56,747	55,883	53,758	55,614	60,798	63,390	66,315
Tennessee	570	485	470	510	500	490	450	400	350	300
South Dakota*	49	49	59	58	59	60	60	65	70	67
Pennsylvania	31,150	31,025	31,792	32,692	29,000	32,649	33,465	34,864	35,701	43,563
Oklahoma	29,118	29,337	29,733	29,734	30,101	30,981	31,556	32,949	33,608	34,283
Ohio*	34,660	34,501	34,380	34,238	34,136	34,058	33,917	33,945	35,303	33,828
North Dakota*	104	94	89	89	92	95	82	130	82	. 94
New York*	5,768	6,016	6,208	5,769	5,903	5,756	5,747	5,708	5,773	5,723
New Mexico	28,461	28,231	28,838	29,169	28,660	25,000	23,850	27,175	22,362	36,43
Nebraska	78	78	78	75	95	97	96	96	100	11(
Montana	3,075	3,000	2,990	3,241	3,250	3,300	3,538	3,725	3,844	5,37
Mississippi	542	518	548	532	540	560	690	811	856	1,178
Michigan	4,082	4,621	5,826	5,775	6,300	6,000	6,500	7,600	7,680	8,500
Louisiana	12,958	14,169	14,995	14,958	14,680	15,500	15,700	16,350	16,988	15,694
Kentucky	13,052	13,311	13,501	13,501	13,825	14,381	15,000	19,387	14,367	12,55
Kansas	14,456	14,878	15,523	14,966	15,000	15,000	15,500	16,250	15,925	18,639
Indiana*	1,341	1,330	877	654	900	1,250	1,502	1,439	1,545	1,720
Colorado . Illinois	6,440 390	7,259 372	8,251 370	7,637 372	8,200 300	8,500 300	10,815 280	13,283 250	16,209 225	16,250 24(
<u> </u>	·····			·····						<u> </u>
California	1,054	962	966	920	933	942	885	1,050	1,065	1,190
Arkansas	3,092	3,988	4,020	4,378	4.453	4.561	4,612	4,825	4,922	3,995
Alabama Alaska	3,422 108	3,455 109	3,284 107	3,359 101	3,389 111	3,365 102	3,418 100	3,649 126	3,814 130	4,10 ⁻ 124

Source: World Oil and state data*

Note: Figures quoted as of December 31 each year. Post-1999 numbers reflect lower levels than previous years due to change in MMS (OCS) counting methods, which now exclude shut-ins.

Other: Arizona, Maryland, Missouri, Nevada & Oregon.

# Crude Oil Production

ويكموه فليستم منطقة ليوسم مستمام المحقي المتعارية	
	1999 2000 2001 2002 2003

TOTAL U.S. DAILY AVG.	2,440,187 6,685	2,394,269 6,560	2,366,016 6,465	2,354,831 6,452	2,281,919 6,252	2,146,718 5,881	2,130,679 5,822	2,123,148 5,801	2,094,718 5,739	2,062,701 5,651
Fed. Offshore	371,329	416,028	438,063	466,303	494,620	533,769	558,242	591,216	590,774	588,334
Wyoming	79,528	78,884	73.362	70,176	64,782	61,127	60,726	57,436	54,777	52,455
Virginia West Virginia	7 1,918	12	13 1,680	1,508	6 1,470	8 1,470	7 1,401	11 1,499	25 1,435	18 1,220
Virginia	7	12	13	10	6	8	7		25	
Utah	20,661	19,988	19,401	19,317	19,198	16,253	15,636	15,088	13,648	13,098
Texas	590,734	559,647	543,342	536,584	504,661	449,233	443,396	424,793	414,536	406,855
Tennessee	417	382	381	367	287	345	346	386	316	360
South Dakota	1,453	1,344	1.257	1.334	1,206	1.100	1,170	1,255	1,214	1.237
Pennsylvania	2,520	1,939	1,692	1,320	1,978	1,470	1,500	2,233	2,233	2,320
Oklahoma	90,974	87,491	85,379	83,365	77,577	70,557	69,976	68,725	66,345	64,664
Ohio	8,758	8,258	8,305	8,593	6,541	5,968	6,574	6,050	6,004	5,647
North Dakota*	27,575	29,335	32,317	35,833	35,562	32,883	32,718	31,693	30,800	28,763
New York*	299	304	309	276	217	191	181	183	179	157
New Mexico	65,846	64,508	64,477	69,835	72,328	64,377	67,198	68,998	67,594	66,574
Nevada	1,698	1,342	1,058	980	799	706	621	571	553	493
Nebraska	4,217	3,794	3,541	3,337	3,176	2.661	2.955	2,922	2.778	2,755
Montana	16,527	16,529	15,920	15,527	16,483	14,939	15,427	16,287	16,986	19,417
Missouri	122	120	115	114	93	92	95	90	95	82
Mississippi	20,124	19,911	19,509	21,037	22,031	17,949	19,843	19,530	18,015	16,593
Michigan	12,207	11,383	10,835	10,052	8,995	7,835	7,907	7,374	7,219	6,524
Louisiana	135,932	122,883	132,151	134,134	134,219	120,008	105,424	104,918	93,763	90,423
Kentucky	4,013	3,492	3,602	2,988	2,919	2,777	3,467	2,970	2,721	2,538
Kansas	46,733	43,767	41,789	39,836	35,541	29,046	34,463	32,736	32,739	33,960
Indiana	2,492	2,778	2,523	2,430	2,210	1,964	2,098	2,023	1,962	1,865
Illinois	17,148	16,190	15,575	16,115	13,732	12,065	12,206	11,115	11,115	11,700
Florida	6,093	5,693	6,292	6,381	5,971	4,895	4,625	4,426	3,656	3,262
Colorado	28,613	27,976	24,954	25,616	22,365	18,468	18,479	19,554	20,412	21,433
California	285,323	278,977	282,409	285,172	283,628	273,019	271,132	260,667	257,404	248,580
Arkansas	9,569	8,910	8,814	8,429	7,998	7,154	7,153	7,584	7,344	7,226
Arizona	65	71	84	82	78	66	57	60	63	47
Alabama Alaska	18,344 568,948	18,731 541,654	16,868 509,999	14,831 472,949	12,397 428,851	11,125 383,198	10,458 355,198	9,346 351,409	8,631 359,382	7,894 355,562

Source: Energy Information Administration & state data*. Does not include NGLS.

(MMct) 1994 1995 1996 1997 1998 1999	9 2000 2001 2002 2003
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			19,812,242					20,570,295		
4,99	96,197	4,942,089	5,246,422	5,315,514	5,185,312	5,130,746	4,951,592	5,113,526	4,615,443	4,505,443
	96,018	673,775	666,036	738,368	903,836	971,230	1,088,328	1,363,879	1,453,957	1,539,318
18	83,773	186,231	169,839	172,268	180,000	176,015	264,139	191,889	190,249	187,723
	50,259	49,818	54,290	58,249	57,263	72,189	71,545	71,543	76,915	81,086
2	70,858	241,290	250,767	257,139	277,340	262,614	269,285	283,913	274,739	268,058
5,0	45,690	5,046,555	5,132,207	5,167,334	5,227,477	5,054,485	5,285,397	5,282,723	5,141,075	5,243,567
	1,990	1,820	1,690	1,510	1,420	1,230	1,150	2,000	2,050	1,803
	1,437	1,252	1,329	1,598	1,620	1,566	1,652	1,100	1,025	1,103
1:	20,506	111,000	135,000	80,000	130,317	174,701	200,907	157,000	157,800	159,827
	3,221	1,923	1,439	1,173	1,067	1,291	1,214	1,110	837	731
	34,864	1,811,734	1,734,887	1,703,888	1,669,367	1,594,002	1,612,890	1,615,384	1,581,606	1,558,155
	32,151	126,336	119,251	116,246	115,083	109,509	105,125	100,107	103,158	93,641
,	57.805	49,468	49.674	52.401	53,185	52,862	52.426	54,732	57,048	57,886
	20,465	18,400	18,131	16,188	16,699	16,122	17,757	27,787	36,816	35,044
1.5	57,689	1,625,837	1,554,087	1,558,633	1,501,098	1,511,671	, 1,695,295	, 1,689,125	1,632,080	1.604.015
	2,000	13	11	1,070	1,000	1,555	7	1,200	6	6
;	50,416 2,898	50,264 2,240	50,996 1,876	52,437 1,670	57,645 1,695	61,163 1,395	69,936 1,218	81,397 1,208	86,075 1,188	86,027 1,454
	<u></u>									06.007
	8	16	25	5	0	0	00,000	0	0	0
	63,448	95,533	103,263	107,300	108,068	111,021	88,558	107,541	112,980	133,901
ว	26 22,657	22 238,203	135 245,740	118 305,950	63 278,076	18 277,364	34 296,556	32 275,036	22 274,476	48 236,987
.,				· · · · · · · · · · · · · · · · · · ·						
	55,724	1,648,263	1,600,572	1,468,868	1,518,148	1,543,684	1,479,282	1,502,086	1,361,751	1,350,399
	73,081	721,438	81,435	79,547	81,869	. 76,770	81,545	480,145	454,901 88,259	418,893 87,608
7	107 12,730	249 721,436	360 712,796	526 687,215	615 603,586	855 553,419	899 525,729	1,064 480,145	1,309 454,901	1,464 418,893
						·				
	333	335	298	231	209	195	189	185	180	174
4	7,486	6,463	6,006	6,114	5,796	5,933	6,491	5,710	3,353	3,087
	255,866	224,765 523,084	219,710 572,071	212,345 637,375	240,292 696,321	304,906 722,738	319,740 752,985	335,601 817,206	360,205 937,245	337,216 1,011,285
	87,673	187,242	221,822	208,514	188,372	170,006	171,642	166,804	161,871	169,599
	752	558	463	452	457	474	368	307	301	443
5	55,402	469,550	480,828	468,311	466,648	462,967	458,995	471,440	463,301	489,757
3	94,770	375,958	378,786	388,595	392,394	381,701	364,532	356,810	356,061	346,145

Source: Energy Information Administration & state data*

Note: Data represent marketed production and bulk of data including total comes from ElA's Natural Gas Annual. Federal Offshore production from Alabama, California, Louisiana, & Texas comprises 'Federal Offshore.' Pre-2002 data may be revised.

# Producing Stripper Oil Wells

	1993	1994	1995	1996	1997	1998	1999	<b>2000</b> °	2001	. 2002
			207	0.F.0						
Alabama	629	601	597	650	622	643	623	627	641	639
Arizona	14	14	16	15	19	22	20	20	20	17
Arkansas	7,406	7,516 22,063	7,305	3,512	3,766	3,515	3,803	3,286	3,404	3,362
California	22,803	22,003	21,600	21,783	21,889	23,058	21,541	22,244	24,303	24,420
Colorado	4,465	4,156	5,149	5,679	5,725	6,229	7,739	7,618	7,003	5,384
Illinois	32,527	31,838	31,446	30,907	30,572	19,532	19,016	18,491	17,876	17,466
Indiana	5,763	5,653	5,500	5,394	5,298	5,126	5,101	5,049	5,034	4,956
Kansas	43,982	44,011	42,485	41,913	42,657	40,159	39,172	35,359	33,886	33,317
Kentucky	19,470	20,019	19,994	20,007	20,007	19,883	23,140	24,585	19,615	19,462
Louisiana	18,719	20,732	17,983	17,781	17,924	17,900	21,269	21,091	21,024	20,891
Michigan	3,160	3,360	3,280	3,116	3,009	2,760	1,993	2,550	2,210	3,428
Mississippi	869	841	437	430	454	413	426	376	385	442
Missouri	684	431	347	355	362	293	299	327	308	364
Montana	2,986	2,853	2,871	2,594	2,388	2,478	2,325	2,476	2,267	2,274
Nebraska	1,209	1,274	1,185	1,114	1,004	1,646	1,498	1,483	1,475	1,451
New Mexico	15,263	15,407	13,251	13,371	16,354	12,379	12,057	12,642	13,243	13,379
New York*	3,344	3,629	3,076	3,013	3,288	3,041	3,170	2,876	2,876	2,758
North Dakota*	1,305	1,294	1,297	1,345	1,365	1,338	1,286	1,357	1,340	1,394
Ohio	29,521	29,507	29,422	29,332	29,134	28,955	28,960	28,918	28,887	28,850
Oklahoma	72,018	70,616	70,679	68,961	68,408	66,444	65,730	60,120	55,295	56,673
Pennsylvania	19,800	19,062	19,550	19,316	27,113	26,500	26,500	15,170	15,270	15,470
South Dakota*	24	22	18	24	24	17	18	17	20	24
Tennessee	857	704	676	809	363	387	392	301	288	424
Texas	126,434	126,730	124,592	123,609	113,751	120,090	120,074	126,028	125,823	124,551
Utah	1,028	1,011	1,067	1,181	876	838	898	943	1,043	1,049
Virginia	21	23	25	20	17	´ 17	13	15	16	13
West Virginia	15,850	11,221	11,250	11,272	11,212	8,464	8,434	8,450	8,384	8,210
Wyoming	3,126	7,660	7,402	6,919	5,570	7,153	7,233	9,612	11,523	11,416
TOTAL U.S.	453,277	452,248	442,500	434,422	433,171	419,280	422,730	412,031	403,459	402,084

Sources: Interstate Oil and Gas Compact Commission, National Stripper Well Association and state data

Notes: Figures quoted as of January 1 each year.

Data cannot be compared to "Producing Oil Wells" table due to different sources and methodology.

# Stripper Oil Well Production

Alabama Arizona Arkansas California Colorado	1,593 20 4,762 32,928	1,452 23 3,932	1,607 20	1,302	1,185	4 405	4 400			
Arkansas California Colorado	4,762		-		1,100	1.425	1,199	1,144	1,054	1,143
California Colorado		2 0 2 2	20	31	39	28	20	21	26	24
Colorado	32,928	3,932	3,143	3,115	3,286	3,026	1,581	3,211	3,316	3,088
		32,374	31,910	32,535	33,834	33,980	29,204	31,500	. 35,133	35,030
	3,398	5,212	5,875	5,373	5,262	5,450	4,133	3,913	4,646	4,644
Illinois	16,750	16,120	14,910	13,540	14,808	12,934	11,675	10,450	10,220	10,720
Indiana	2,761	2,492	2,777	2,522	2,563	2,210	1,998	2,052	2,022	1,962
Kansas	34,942	32,668	31,796	31,281	30,675	26,225	27,655	25,063	25,178	25,002
Kentucky	3,796	3,400	2,907	2,813	2,413	2,430	2,287	2,372	2,077	2,050
Louisiana	7,240	3,827	5,655	10,583	10,597	10,500	15,821	15,286	16,127	14,999
Michigan	3,800	2,933	3,173	3,699	3,495	3,204	1,399	3,214	1,850	3,398
Mississippi	1,901	578	609	620	593	501	460	576	491	562
Missouri	135	124	120	115	114	93	92	106	91	95
Montana	2,093	2,199	2,021	1,745	1,957	2,063	1,834	2,036	1,830	1,843
Nebraska	2,215	2,148	1,899	1,948	2,366	2,113	1,828	1,831	1,765	1,718
Nevada	0	0	0	0	0	0	0	0	0	0
New Mexico	13,853	12,353	13,275	41,366	42,725	12,034	12,005	12,823	13,176	13,387
New York	325	291	294	296	276	217	191	183	184	175
North Dakota*	2,155	1,977	2,160	2,121	2,197	1,980	1,842	2,113	2,111	2,288
Ohio	6,017	5,888	5,999	6,033	6,713	5,078	4,269	5,378	4,905	4,398
Oklahoma	65,767	64,942	60,265	59,453	55,621	49,665	50,040	50,068	47,071	56,300
Pennsylvania	2,148	2,076	2,115	2,679	1,473	1,330	1,440	2,224	2,233	2,324
South Dakota*	43	31	50	49	29	14	17	16	35	51
Tennessee	319	310	280	164	143	238	246	189	241	246
Texas	133,195	129,437	128,941	116,749	118,709	128,822	131,129	135,151	129,017	127,253
Utah	2,470	2,572	1,344	1,258	1,167	1,113	1,303	1,418	1,449	1,446
Virginia	6	7	6	6	4	4	4	5	6	3
West Virginia	2,048	2,009	1,954	1,850	1,700	1,450	1,390	1,300	1,250	1,248
Wyoming	9,281	8,556	8,010	9,181	8,972	8,046	8,311	12,566	8,597	8,430
TOTAL U.S.	355,961	339,931	333,115	352,427	352,916	316,173	313,373	326,210	316,099	323,826

Sources: Interstate Oil and Gas Compact Commission, National Stripper Well Association, and state data Notes: Totals may not add due to rounding.

# Stripper Natural Gas Production

(Mmcf)	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Alabama	1,580	1,543	1,586	1,721	1,825	1,801	1,860	14,390	16,427	18,139
Arizona	34	1,545	5	12	4	4	13	40	10,427	10,100
Arkansas	9.261	10.528	11,821	11,711	12.858	13,018	13,147	14,927	14,385	15,574
California	3,048	3,312	3,301	3,523	3,414	3,253	3,158	2,833	3,662	3,507
Colorado	87,322	20,652	21,617	31,205	35,094	55,797	55,584	57,974	117,017	60,945
Illinois	90	90	90	90	88	88	88	88	84	185
Indiana	192	107	249	360	526	615	855	829	1,064	1,309
Kansas	18,646	45,213	33,967	44,386	41,002	40,394	46,090	94,149	74,416	124,878
Kentucky	77,296	64,955	66,441	72,379	70,698	72,765	68,233	72,477	72,635	78,445
Louisiana	22,564	22,232	20,542	25,847	23,500	23,300	28,650	26,899	37,344	40,836
Maryland	28	26	22	22	19	67	75	34	49	13
Michigan	14,803	17,151	22,453	22,727	26,338	29,468	36,803	41,587	44,411	55,623
Mississippi	1,181	1,328	1,189	1,170	1,370	1,389	1,511	1,652	2,040	2,719
Missouri	14	8	16	17	5	0	0	0	0	C
Montana	20,425	20,989	20,561	19,694	20,647	23,112	23,195	23,044	24,195	25,286
Nebraska	162	132	616	132	1,133	922	846	746	779	751
New Mexico	121,987	86,084	72,024	73,061	75,938	73,746	74,183	77,672	78,022	81,059
New York	15,807	14,839	13,970	13,253	12,998	12,501	11,278	11,092	11,050	10,637
North Dakota*	408	409	381	395	362	343	473	347	342	762
Ohio	110,953	94,019	90,772	86,539	84,182	79,333	67,612	74,484	72,905	75,993
Oklahoma	88,885	91,190	98,786	100,344	108,287	114,668	114,749	120,014	126,632	153,207
Pennsylvania	37,149	42,313	39,874	74,105	75,000	115,860	115,390	125,191	130,853	131,800
South Dakota*	215	430	383	387	414	488	505	461	475	416
Tennessee	1,417	1,848	1,664	1,571	1,212	1,316	1,184	1,066	1,059	1,586
Texas	185,644	189,618	195,953	202,851	195,063	221,514	226,318	238,351	249,667	258,984
Utah	1,930	1,860	1,837	3,235	3,965	4,374	5,848	6,017	7,445	9,360
Virginia	1,549	1,240	1,957	1,346	2,399	2,502	2,079	2,054	2,238	1,808
West Virginia	198,564	198,595	199,394	190,145	198,000	198,500	218,350	220,000	221,662	208,775
Wyoming	5,084	9,697	4,090	4,449	5,021	13,547	20,904	30,310	42,644	56,003
TOTAL U.S. 1	.026.239	940.421	925,563	986,676	1.001.363	1,104,684	1,138,980	1,258,727	1,353,516	1.418.606

Sources: Interstate Oil and Gas Compact Commission, National Stripper Well Association, and state data. Notes: Totals may not add due to rounding.

# Cost of Drilling and Equipping Wells '02

# State No. of Wells Drilled Footage Drilled Depth per Well State Cost Per Well Cost Per Well Cost per Foot

		(	ft.)		(\$)	
Alabama	263	669,289	2,545	224,227,000	950,114	335.02
Alaska	79	804,129	10,179	650,644,000	8,236,000	809.13
Arizona	-	-	-	-	-	-
Arkansas	155	860,971	5,555	71,371,000	460,458	82.90
California	1,694	4,452,834	2,629	665,263,000	392,717	149.40
Colorado	1,205	6,831,984	5,670	812,171,000	674,001	118.88
Florida	•	-	. –	-	-	-
Illinois	181	457,639	2,528	24,943,000	137,807	54.50
Indiana	61	103,565	1,698	6,770,000	110,984	65.37
Kansas	1,098	3,555,032	3,238	177,530,000	161,685	49.94
Kentucky	796	2,302,681	2,893	150,415,000	188,964	65.32
Louisiana	1,002	9,591,267	9,572	4,752,821,000	4,743,334	495.54
Michigan	329	652,705	1,984	74,638,000	226,863	114.35
Mississippi	186	1,333,141	7,167	144,761,000	778,285	108.59
Montana	421	1,432,258	3,402	200,479,000	476,197	139.97
Nebraska	29	135,987	4,689	11,152,000	384,552	82.01
New Mexico	1,167	7,352,607	6,300	862,810,000	739,340	117.35
North Dakota	106	1,224,082	11,548	238,979,000	2,254,519	195.23
Oklahoma	2,293	13,725,013	5,986	1,442,030,000	628,884	105.07
Texas	6,537	51,576,417	7,890	8,182,270,000	1,251,686	158.64
Utah	415	2,660,099	6,410	326,527,000	786,812	122.75
Wyoming	3,112	8,238,603	2,647	1,391,505,000	447,142	168.90
Appalachian	3,112	11,964,209	3,845	614,257,000	197,383	51.34
Federal Offshore	343	4,252,990	12,399	4,394,940,000	12,813,236	1,033.38
Other	94	227,555	2,421	21,205,000	225,585	93.19
Total Offshore	434	5,302,859	12,219	5,467,959,000	12,598,984	1,031.13
Total Onshore	23,955	126,103,944	5,264	17,029,142,000	710,881	135.04
Total U\$	24,389	131,406,803	5,388	22,497,101,000	922,428	171.20
Exploratory	1,908	13,478,095	7,064	4,170,609,000	2,185,854	309.44
Developmental	22,481	117,928,708	5,246	18,326,492,000	815,199	155.40

Sources: Joint Association Survey on Drilling Costs--American Petroleum Institute Notes: Appalachian includes New York, Ohio, Pennsylvania and West Virginia.



# Crude Oil Revenues



(thous is) 1994 1995 1996 1997 1998 1999 1999 2000 2001 2002 2003

TOTALUS	32 235 042	28 946 640	35 461 087	32 075 404	19 408 701	25 114 280	12 020 665	22 165 054	22 142 642	57 020 264
Wyoming	1,084,762	1,222,702	1,443,031	1,221,764	693,167	1,006,762	1,632,922	1,237,746	1,201,585	1,396,877
West Virginia	a 29,921	32,200	32,911	26,480	17,567	24,196	37,995	33,503	31,164	34,233
Virginia*	101	201	255	164	70	133	NA	NA	NA	472
Utah	337,807	353,987	409,361	358,523	240,551	287,516	446,095	363,470	326,446	378,270
Texas	9,142,981	-		10,001,925	6,197,237	7,771,731		9,944,404	9,792,471	
Tennessee*	6,268	6,303	7,449	6,334	3,226	5,496	9,093	8,477	6,020	9,562
South Dakot		20,872	24,587	22,011	14,822	18,546	32,971	29,982	29,087	35,79
Pennsylvania	a 40,622	32,827	35,515	24,802	27,039	27,180	43,200	55,423	55,512	68,67
Oklahoma	1,391,902	1,459,350	1,758,807	1,588,103	987,555	1,253,798	2,034,902	1,696,133	1,632,063	1,921,81
Ohio	139,865	137,661	165,768	151,924	79,800	97,935	180,719	136,428	135,750	159,09
North Dakota	a* 386,877	457,039	628,889	631,735	404,696	549,146	922,320	746,370	729,958	841,89
New York*	4,766	5,089	6,474	5,103	2,600	3,089	5,160	4,200	4,500	4,57
New Mexico		1,079,864	1,340,477	1,327,563	893,974	1,124,022	1,935,302	1,636,633	1,615,688	1,965,264
Nevada*	19,103	16,440	15,881	14,700	9,005	9,792	14,084	9,781	9,904	12,09
Nebraska	57,351	57,593	69,297	60,399	36,524	45,796	82,651	69,164	65,640	78,87
Montana	221,627	246,778	300,729	263,959	186,093	247,091	429,179	377,207	383,620	556,49
Missouri*	1,708	1,920	2,076	2,123	1,068	1,436	2,695		2,045	2,16
Mississippi	270,064	293,886	369,305	356,366	227,580	276,774	520,482	412,669	398,312	455,64
 Michigan	188,110	189,299	220,167	188,475	110,459	130,296	222,345	167,316	170,944	190,37
Louisiana	6,285,900	2,096,384	2,759,313	2,578,055	1,677,335	2,110,941	3,041,693	2,555,907	2,306,638	2,740,72
Kentucky	61,519	57,374	72,904	53,694	34,065	46,320	91,771	66,914	57,111	69,05
Kansas	686,508	708,588	855,421	742,144	433,245	496,106	970,478	771,260	772,543	973,97
Indiana*	39,025	46,893	52,150	45,513	27,603	33,997	58,555	47,460	44,734	52,92
Illinois	269,910	274,421	324,895	305,701	175,495	209,569	343,477	264,092	287,296	340,47
Florida	81,951	82,549	104,133	125,322	61,083	85,663	134,310	NA	NA	N
California Colorado	441,212	466,360	510,808	4,500,014	2,071,770	3,800,424	533,119	5,213,340 485,330	408,059	658,20
	3,992,225	3,905,678				3.800,424		-		
Arkansas	131,287	132,224	164,557	148,181	88,778	113,677	192,988	165,483	157,896	191,99
Arizona*	900	1,157	1,680	1,494	912	1,060	1,523	1,309	1,678	1,25
Alaska	5,615,517	6,087,731	7,685,685	6,559,802	3,675,253	185,899 4,829,100	288,955 8,438,616	216,640 6,447,477	201,793 7,020,292	8,507,81

TOTAL U.S.32,235,043 28,946,640 35,461,087 32,075,404 19,408,791 25,114,280 42,030,665 33,165,951 33,443,642 57,020,264

Source: Energy Information Administration, IPAA and state data. Total does not include Federal OCS.



# Natural Gas Revenues

(thous 5) 1994 1995 1996 1997 1998 1999 2000 2001 2002 2002 2003

Alabama	953,259	684,244	992,419	1,031,631	1,016,262	881,729	1,450,233	1,498,602	1,239,092	2,052,640
Alaska	666,294	770,062	774,133	745,141	657,181	587,968	807,831	938,166	986,831	1,180,314
Arizona	976	670	764	1,078	864	980	1,288	1,265	783	1,918
Arkansas	454,469	565,471	847,360	557,710	402,768	350,212	897,688	832,352	717,089	876,827
California	766,811	763,574	432,459	570,552	622,195	798,384	1,590,903	2,325,715	923,622	1,699,569
Colorado	694,556	496,930	783,737	1,364,032	1,342,708	1,241,663	2,763,455	2,819,760	2,028,066	4,591,234
Florida	18,886	8,014	12,673	6,452	8,230	14,833	11,392	NA	NA	NA
Illínois	783	637	849	888	589	534	388	NA	NA	NA
Indiana*	381	473	828	572	856	1,872	3,155	3,490	4,071	7,920
Kansas	1,133,156	981,153	1,368,568	1,479,466	1,124,099	996,154	1,687,590	1,757,331	1,187,292	1,813,807
Kentucky	182,474	122,597	207,659	217,808	191,599	158, <b>914</b>	257,682	390,636	265,660	397,740
Louisiana	9,951,470	2,659,238	3,793,541	3,997,005	3,352,820	3,619,578	5,354,452	5,996,272	4,357,603	7,616,250
Maryland	53	31	340	90	218	45	128	133	. 91	216
Michigan	599,755	397,799	543,085	680,194	641,904	490,934	723,597	954,375	592,868	950,318
Mississippi	150,009	118,461	171,417	187,194	181,556	174,303	292,241	422,636	345,719	686,912
Missouri	21	27	39	32	28	0	0	0	0	C
— Montana	82,497	68,359	71,904	85,412	80,937	102,754	198,618	253,959	205,719	320,881
Nebraska	3,994	2,666	2,683	3,126	2,002	1,897	2,753	2,609	2,800	4,609
New Mexico	2,496,049	2,048,555	2,595,325	3,308,522	2,822,217	3,189,626	5,787,837	6,570,696	4,373,974	7,314,308
New York*	48,365	42,320	50,767	49,408	43,700	34,811	66,380	135,500	111,700	208,872
North Dakota	94,725	41,058	105,806	53,615	113,593	122,640	206,558	193,204	170,003	196,596
Ohio*	334,360	294,363	313,630	349,350	250,622	263,917	426,808	454,486	466,274	552,387
Oklahoma	3,412,118	2,608,897	2,595,325	3,923,061	3,516,765	3,220,236	5,854,791	6,509,998	4,560,740	7,744,030
Oregon	6,008	1,788	3,252	2,170	2,177	2,659	3,266	4,063	3,323	NA
Pennsylvania	304,100	315,240	415,125	436,487	220,915	539,826	465,074	535,370	538,098	NA
South Dakota	1,637	1,991	2,631	3,214	1,164	3,336	5,881	3,762	4,459	5,493
Tennessee	3,467	2,803	4,293	5,556	5,565	2,804	4,704	7,200	6,991	9,412
Texas	11,670,340	8,124,952	11,752,756	11,373,730	10,376,470	11,452,056	19,934,846	22,191,013	16,245,797	27,161,677
 Utah	468,301	277,484	348,566	478,279	496,439	504,219	883,255	999,374	546,731	1,101,718
Virginia*	102,325	85,687	151,469	138,360	117,692	179,751	284,034	306,919	243,051	377,050
West Virginia	524,613	413,433	542,322	491,810	396,264	526,285	855,810	1,033,840	654,457	814,718
Wyoming	1,125,576	1,199,320	1,711,713	1,411,067	1,327,403	1,621,570	3,635,016	4,759,938	3,925,684	6,357,383
	20 525 0 40	20.005.000	10 054 050	40 424 222	20.005.240	42.204.000	74 000 050	00 000 005	50 500 000	

TOTAL U.S. 36,535,940 30,285,862 42,951,353 46,131,323 39,085,318 43,324,690 74,338,958 82,202,805 58,596,868 97,249,837

Source: Energy Information Administration, state data*

Total from EIA - imputed wellhead value of marketed production.

1,356

16,914

6,642

Ohio

Oklahoma

Pennsylvania

South Dakota*

Tennessee

Texas

Utah

Virginia

Wyoming

U.S. Total

West Virginia

1,489

17,896

8,268

Alabama	8	11	2	10	8	2	6	6	3	
Arizona	0	0	0	0	0	. 0	0	0	. 0	
Arkansas	163	254	151	186	138	97	77	116	43	4
California	1,727	1,675	1,734	1,849	1,919	1,392	1,046	1,615	1,469	2,45
Colorado	115	144	190	334	321	153	120	124	168	11
Illinois	994	810	542	514	518	802	590	647	689	71
Indiana	198	181	169	135	129	133	58	72	93	12
Kansas	1,262	1,281	1,754	1,716	1,765	1,480	2,025	614	1,614	1,72
Kentucky	255	289	206	231	166	233	179	232	202	23
Louisiana	1,043	718	812	614	785	750	620	605	760	73
Michigan	215	126	103	121	153	146	139	139	141	15
Mississippi	102	110	88	86	74	58	83	91	62	10
Missouri	0	14	137	235	251	2	4	12	1	
Montana	126	80	97	74	45	124	136	178	135	6
Nebraska	65	50	36	112	66	90	66	67	83	10
New Mexico	963	976	1,082	619	397	206	105	121	203	21
New York	90	45	68	59	79	58	57	36	36	6
North Dakota	54	53	45	33	51	37	26	35	48	3

Source: Interstate Oil and Gas Compact Commission, National Stripper Well Association and state data Note: Figures quoted as of January 1 each successive year.

17,120

7,305

1,164

17,023

7,063

1,740

15,173

5,246

1,871

13,912

5,110

1,442

11,227

4,078

10,688

4,255

Drilling Summary 2002

	S Oil.	Wells	Gas	Wells	Drý H	oles 🚧	is a Tótal	Wells
	2002	%	2002	%	2002	%	2002	%
Number of Wells Drilled	6,401	(25.6)	15,744	(24.1)	3,358	(19.0)	25,503	(23.8)
Footage Drilled (thous. ft.)	29,047	(28.8)	88,840	(17.8)	19,744	(20.1)	137,661	(20.7)
Total Cost (mill. \$)	\$5,651	(9.9)	\$15,616	(16.0)	\$5,619	(16.4)	\$26,886	(14.9)
Average Depth (ft.)	4,538	(4.3)	5,643	8.3	5,889	(1.3)	5,398	4.1
Average Cost per Well (\$)	\$882,837	21.1	\$991,860	10.6	\$1,673,388	3.3	\$1,054,234	25.0
Average Cost per Foot (\$)	\$194.55	26.6	\$175.78	2.2	\$284.17	4.6	\$195.31	7.4
Source: APL Joint Association Survey								

Source: API Joint Association Survey

Notes: Data include all costs incurred through Christmas tree. Total may not add due to rounding. Percent change versus 2001 JAS data.

12,234

5,126

13,619

5,228

# Severance and Production Taxes

# (thous. s) 1994 1995 1996 1997 1998 1999 2000 2001 2002 2002 2003

TOTAL U.S.	3,382,521	3,431,937	3,392,439	3,781,727	2,949,029	2,557,163	4,210,909	5,548,198	3,863,352	5,372,380
Wyoming	112,000	91,972	123,541	152,448	73,754	125,178	567,445	581,532	327,497	370,381
West Virginia	17,101	19,086	19,199	17,431	16,118	19,161	18,048	34,549	28,382	30,475
Utah	14,049	13,766	13,145	17,217	13,988	11,109	17,313	42,106	20.603	28,689
Texas**	916,500	886,620	897,671	1,091,284	926,561	659,396	1,153,086	1,956,108	1,049,054	1,492,743
Tennessee	300	247	243	282	213	363	532	380	498	592
South Dakota	943	1,041	945	1,178	1,018	730	1,051	1,566	1,239	1,522
Oregon	384	154	204	156	93	. 98	146	119	145	89
Oklahoma	372,464	309,553	324,377	413,576	360,285	253,039	410,412	745,236	417,103	600,980
Ohio	4,060	3,920	3,738	3,655	3,383	3,327	3,090	2,884	2,799	2,900
North Dakota	38,300	45,106	52,000	53,500	39,200	35,402	71,275	66,800	62,300	66,846
New Mexico	238,839	258,100	271,600	372,600	375,800	227,200	345,300	355,370	479,109	571,862
Nevada	85	525	486	283	74	50	62	62	56	248
Nebraska	1,193	1,736	2,149	1,915	1,334	1,017	2,108	1,868	1,455	1,845
Montana	45,760	38,652	42,507	42,482	35,065	28,997	43,770	92,818	50,304	75,454
Mississippi	29,711	23,557	28,225	28,343	25,346	14,518	23,751	11,817	28,201	43,413
Michigan	40,345	36,822	36,414	40,961	30,982	30,570	40,012	61,279	35,967	54,651
Maryland	2	1	1	2	1	1	1	2	1	1
Louisiana	350,369	364,390	344,302	380,699	336,293	240,055	354,314	478,805	454,429	480,749
Kentucky	11,291	8,757	10,673	12,653	11,212	8,452	11,414	20,678	14,610	17,800
Kansas	93,572	183,864	68,535	78,531	51,686	120,333	56,900	109,232	59,895	84,212
Indiana	597	674	616	599	550	502	653	572	567	590
Florida	6,515	7,657	6,908	10,441	7.318	4,157	6.046	8,258	5,197	5,469
Colorado	6,480	1.632	7.555	18,688	19,756	23.327	24,641	54,384	48.914	23.613
California*	302,700	325,000	147,100	174,044	157,652	194,606	215,696	239,921	189,306	214,473
Arizona	5,141	2,402	5,286	5,952	6,398	6,060	7,026	6,510	8,377	8,377
Arkansas	5,984	5,872	6,027	6,872	4,371	4,616	9,476	9,546	6,608	8,355
Alaska	708,998	750,828	914,890	788,409	395,500	507,000	759,000	558,772	519,368	1,093,356
Alabama	58,838	50.003	64,102	67,526	55.078	37,899	68,341	107.024	53,235	92,695

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.

*California data recalibrated to methodology that includes property taxes associated with an ad valorem tax base and a nominal assessment based on projected production expenditures.

**Texas includes oilfield clean up tax beginning in 1991.

# Crude Oil Wellhead Prices

(\$/Bbi.)	1994	1995	1996	1997	1998	1999	.2000	2001	2002	200
									A Address Presses	
Alabama	15.00	16.35	20.24	18.58	12.08	16.71	27.63	23.18	23.38	28.97
Alaska	9.77	11.12	15.32	14.84	8.47	12.60	23.76	18.35	19.54	23.93
Arizona*	13.85	16.29	20.00	18.23	11.69	16.06	26.72	21.82	26.63	26.63
Arkansas	13.74	14.84	18.67	17.58	11.10	15.89	26.98	21.82	21.50	26.57
California	11.62	14.00	16.72	15.78	9.55	13.92	24.72	20.00	21.68	26.29
Colorado	15.44	16.67	20.47	19.03	12.56	17.37	28.85	24.82	23.01	30.71
Florida*	13.45	14.50	16.55	19.64	10.23	17.50	29.04	NA	NA	NA
Illinois	15.76	16.95	20.86	19.11	12.78	17.37	28.14	23.76	23.84	29.10
Indiana	15.66	16.88	20.67	18.73	12.49	17.31	27.91	23.46	23.43	28.38
Kansas	14.71	16.19	20.47	18.63	12.19	17.08	28.16	23.56	23.61	28.68
Kentucky	15.33	16.43	20.24	17.97	11.67	16.68	26.47	22.53	22.49	27.21
Louisiana	15.00	17.06	20.88	19.22	12.59	17.59	28.85	24.36	24.68	30.31
Michigan	15.43	16.63	20.32	18.75	12.39	16.63	28.12	22.69	23.68	29.18
Mississippi	13.45	14.76	18.93	16.94	10.33	15.42	26.23	21.13	22.11	27.46
Missouri*	14.00	16.00	18.05	18.63	11.48	15.61	28.37	20.37	21.53	26.45
Montana	13.43	14.93	18.89	17.00	11.28	16.54	27.82	23.16	22.76	28.66
Nebraska	13.60	15.18	19.57	18.10	11.50	17.21	27.97	23.67	23.62	28.63
Nevada*	11.25	12.25	15.01	15.00	11.27	13.87	22.68	17.13	17.91	24.54
New Mexico	15.32	16.74	20.79	19.02	12.36	17.46	28.80	23.72	24.10	29.52
New York*	15.94	16.74	20.95	18.49	11.46	16.18	28.60	22.76	24.92	28.91
North Dakota	14.08	15.58	19.46	17.63	11.39	16.70	28.19	23.55	24.15	29.27
Ohio*	15.98	16.67	19.96	17.77	12.20	16.41	27.49	22.55	22.61	27.64
Oklahoma	15.33	16.68	20.60	19.05	12.73	17.77	29.08	24.68	24.49	29.72
Pennsylvania*	16.12	16.93	20.99	18.79	13.67	18.49	28.80	24.82	24.86	29.60
South Dakota*	14.24	15.53	19.56	17.80	12.29	16.86	28.18	23.89	23.96	28.94
Tennessee*	15.03	16.50	19.55	17.26	11.24	15.93	26.28	21.96	21.89	26.56
Texas	14.94	16.38	20.31	18.66	12.28	17.30	28.60	23.41	23.77	29.13
Jtah	16.38	17.71	21.10	18.57	12.52	17.69	28.53	24.09	23.87	28.88
Virginia*	14.45	16.71	19.63	16.40	11.64	16.88	NA	NA	NA	26.23
West Virginia	15.68	16.53	19.59	17.56	11.95	16.46	27.12	22.35	22.55	28.06
Wyoming	13.67	15.50	19.67	17.41	10.70	16.47	26.89	21.55	21.96	26.63
TOTAL U.S.		14.62	18.46							

Source: Energy Information Administration *Estimated by IPAA or state data. Notes: Data represent average first purchase prices of crude oil at the lease or wellhead.

# Natural Gas Wellhead Prices

Alabama Alaska Arizona Arkansas* California Colorado Florida* Illinois* Indiana Kansas	2.17 1.27 1.40 2.65 1.50 1.39 1.28 2.40 1.97 1.60 2.24	1.82 1.64 1.20 3.02 1.73 0.95 1.24 1.90 1.90 1.36	2.62 1.61 1.65 3.82 1.82 1.37 2.11 2.85 2.30	2.67 1.82 2.40 4.03 2.41 2.23 1.06 2.81	2.19 1.32 1.88 3.92 1.97 1.90 1.42 2.74	2.31 1.27 2.05 2.06 2.37 1.68 2.50	3.99 1.76 3.50 4.04 4.81 2.06 1.76	4.20 1.99 4.12 4.99 6.93 4.05	3.48 2.13 2.60 4.43 2.92 2.41	5.93 2.41 4.33 5.17 5.04 4.54
Alaska Arizona Arkansas* California Colorado Florida* Illinois* Indiana	1.27 1.40 2.65 1.50 1.39 1.28 2.40 1.97 1.60	1.64 1.20 3.02 1.73 0.95 1.24 1.90 1.90	1.61 1.65 3.82 1.82 1.37 2.11 2.85	1.82 2.40 4.03 2.41 2.23 1.06 2.81	1.32 1.88 3.92 1.97 1.90 1.42	1.27 2.05 2.06 2.37 1.68 2.50	1.76 3.50 4.04 4.81 2.06	1.99 4.12 4.99 6.93 4.05	2.13 2.60 4.43 2.92	2.41 4.33 5.17 5.04
Arizona Arkansas* California Colorado Florida* Illinois* Indiana	1.40 2.65 1.50 1.39 1.28 2.40 1.97 1.60	1.20 3.02 1.73 0.95 1.24 1.90 1.90	1.65 3.82 1.82 1.37 2.11 2.85	2.40 4.03 2.41 2.23 1.06 2.81	1.88 3.92 1.97 1.90 1.42	2.05 2.06 2.37 1.68 2.50	3.50 4.04 4.81 2.06	4.12 4.99 6.93 4.05	2.60 4.43 2.92	4.33 5.17 5.04
Arkansas* California Colorado Florida* Illinois* Indiana	2.65 1.50 1.39 1.28 2.40 1.97 1.60	3.02 1.73 0.95 1.24 1.90 1.90	3.82 1.82 1.37 2.11 2.85	4.03 2.41 2.23 1.06 2.81	3.92 1.97 1.90 1.42	2.06 2.37 1.68 2.50	4.04 4.81 2.06	4.99 6.93 4.05	4.43 2.92	5.17 5.04
Colorado Florida* Illinois* Indiana	1.39 1.28 2.40 1.97 1.60	0.95 1.24 1.90 1.90	1.37 2.11 2.85	2.23 1.06 2.81	1 <i>.</i> 90 1.42	1.68 2.50	2.06	4.05		
Florida* Illinois* Indiana	1.28 2.40 1.97 1.60	1.24 1.90 1.90	2.11 2.85	1.06 2.81	1.42	2.50			2.41	4.54
Illinois* Indiana	2.40 1.97 1.60	1.90 1.90	2.85	2.81			1 76			
Indiana	1.97 1.60	1.90			2.74		1.70	NA	NA	NA
	1.60		2.30			2.74	2.05	NA	NA	NA
Kansas		1 36		2.18	2.09	2.19	3.51	3.28	3.11	5.41
Ranous	2.24		1.92	2.05	1.70	1.80	3.21	3.66	2.61	4.33
Kentucky		1.64	2.55	2.66	2.39	2.07	3.16	4.78	3.01	4.54
Louisiana	2.08	1.58	2.33	2.36	2.00	2.31	3.68	3.99	3.20	5.64
Maryland	1.37	1.42	2.52	2.23	2.60	2.50	3.75	4.15	4.15	4.50
Michigan	1.96	1.67	2.21	2.19	1.77	1.77	2.44	3.47	2.16	4.01
Mississippi	1.49	1.24	1.66	1.73	1.42	1.57	3.30	3.93	3.06	5.13
Missouri	1.49	1.70	1.56	1.70	1.62	NA	NA	NA	NA	NA
Montana	1.46	1.36	1.41	1.59	1.53	1.68	2.84	3.12	2.39	3.73
Nebraska	1.60	1.19	1.43	1.53	1.30	1.36	2.26	2.16	1.52	3.17
New Mexico	1.58	1.26	1.67	1.76	1.76	2.11	3.43	3.89	2.68	4.56
New York*	2.35	2.30	2.21	2.56	2.56	2.19	3.75	4.85	3.03	5.78
North Dakota	1.86	0.83	2.13	2.16	2.14	2.32	3.94	3.53	2.98	3.53
Ohio	2.43	2.33	2.63	2.70	2.95	2.41	4.06	4.54	4.52	5.90
Oklahoma	1.70	1.44	2.21	2.32	1.77	2.05	3.63	4.03	2.94	4.97
Oregon	2.06	0.93	2.26	2.19	2.38	2.06	2.69	3.66	3.97	NA
Pennsylvania*	2.76	2.84	3.08	3.17	2.97	3.09	2.31	3.41	3.41	NA
South Dakota	1.73	1.59	1.98	2.09	2.47	2.13	3.56	3.42	4.35	4.98
Tennessee	2.16	1.54	2.54	2.55	2.15	2.28	4.09	3.60	3.41	5.2 <b>2</b>
Texas	1.89	1.61	2.29	2.48	2.06	2.31	3.93	4.14	3.16	5.18
Utah	1.54	1.15	1.39	1.86	1.73	1.92	3.28	3.52	1.99	4.11
Virginia*	2.15	1.72	2.79	2.55	2.16	2.49	3.97	4.29	3.16	4.65
West Virginia*	2.62	2.22	3.05	2.63	2.37	2.99	3.24	4.12	3.44	4.34
Wyoming	2.05	1.78	2.57	2.42	1.78	1.97	3.34	3.49	2.70	4.13
TOTAL U.S.	1.85	1.55	2.17	2.32	1.96	2.19	3.68	4.00	2.95	4.88

Source: Energy Information Administration and State sources

# Refiner Acquisition Cost of Crude Oil

(\$/bbl.)	∴ <b>D</b> omestic	<b>Mimported</b>	Composite
1977	9.55	14.53	11.96
1978	10.61	14.57	12.46
1979	14.27	21.67	17.72
1980	24.23	33.89	28.07
1981	34.33	37.05	35,24
1982	31.22	33.55	31.87
1983	28.87	29.30	28.99
1984	28.53	28.88	28.63
1985	26.66	26.99	26.75
1986	14.82	14.00	14.55
1987	17.76	18.13	17.90
1988	14.74	14.56	14.67
1989	17.87	18.08	17.97
1990	22.59	21.76	22.22
1991	19.33	18.70	19.06
1992	18.63	18.20	18.43
1993	16.67	16.14	16.41
1994	15.67	15.51	15.59
1995	17.33	17.14	17.23
1996	20.77	20.64	20.71
1997	19.61	18.53	19.04
1998	13.18	12.04	12.52
1999	17.90	17.26	17.51
2000	29.11	27.70	28.26
2001	24.33	22.00	22.95
2002	24.65	23.71	24.10
2003	29.82	27.71	28.53

# Retail Gasoline Prices

(¢/gal.)	Excluding Taxes	: Taxes	Pump Price
1981	114.7	23.1	137.8
1982	106.0	23.6	129.6
1983	95.4	28.7	124.1
1984	90.7	30.5	121.2
1985	91.2	29.0	120.2
1986	62.4	30.3	92.7
1987	66.9	27.9	94.8
1988	67.3	27.3	94.6
1989	75.6	26.5	102.1
1990	88.3	28.1	116.4
1991	79.7	34.3	114.0
1992	78.7	34.0	112.7
1993	75.9	34.9	110.8
1994	73.8	37.4	111.2
1995	76.5	38.2	11 <u>4.7</u>
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

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

Source: Energy Information Administration

# World Crude Oil Reserves

(mill, bbls		Canada	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Middle East	Africa	Asia Pacific	Western Europe	Eastern Ei & FSU	urope Total World
						, aonio	Luropo		
1987	26,889	6,825	114,321	564,680	55,250	19,354	22,448	79,200	889,334
1988	27,256	6,786	121,951	571,519	56,964	21,367	18,557	83,800	907,768
1989	26,825	6,133	125,027	660,247	58,387	22,545	18,822	84,100	1,002,213
1990	26,501	5,783	121,091	662,598	59,892	50,242	14,476	58,855	999,113
1991	26,254	5,588	119,765	661,571	60,488	44,073	14,503	58,774	991,011
1992	24,682	5,292	123,811	661,791	61,872	44,572	15,829	59,193	997,042
1993	23,745	5,096	124,996	662,866	61,963	44,647	16,643	59,168	999,124
1994	22,457	5,096	129,073	660,295	62,177	44,453	16,572	59,196	999,319
1995	22,957	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	22,071	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

Source: Oil & Gas Journal & EIA. Totals may not add due to rounding. Canadian growth due to inclusion of oil sands reserves.

# Wholesale Prices — Total U.S.

Year I	Motor Gasoli	ne. Kerosen	ester Sesserer Fu	el Oil > 🖏 🐨	Ave	erage	Grude Oil
			Distillate	Residual	Of Fo	ur Products	
			(¢/gal.)				(\$/bbl.)
1948	10.53	9.92	8.94	5.72	8.81	3.70	2.60
1949	10.71	9.11	7.72	3,31	7.96	3.34	2.54
1950	10.86	9.39	7.97	3.98	8.29	3.48	2.51
1951	11.40	9.85	8.50	4.42	8.79	3.69	2.53
1952	11.38	9.90	8.52	3.84	8.62	3.62	2.53
1953	12.01	10.23	8.83	3.73	8.96	3.76	2.68
1954	11.66	10.40	8.94	3.97	8.88	3.73	2.78
1955	11.62	10.53	9.08	4.53	9.06	3.81	2.77
1956	11.75	10.99	9.45	5.30	9.43	3.96	2.79
1957	12.34	11.54	10.05	6.15	10.10	4.24	3.09
1958	11.74	10.96	9.39	4.82	9.27	3.89	3.01
1959	11.64	11.26	9.31	4.79	9.22	3.87	2.90
1960	11.61	11.17	8.79	4.88	9.15	3.84	2.88
1961	11.62	11.49	9.10	4.85	9.21	3.87	2.89
1962	11.52	11.42	9.11	4.78	9.13	3.84	2.90
1963	11.35	11.51	9.18	4.61	9.01	3.79	2.89
1964	11.27	10.93	8.65	4.50	8.83	3.73	2.88
1965	11.52	11.28	9.04	4.81	9.12	3.83	2.86
1966	11.52	11.49	9.09	4.73	9.12	3.84	2.88
1967	11.84	11.49	9.71	4.73	9.33	3.92	2.00
1968		12.03	9.84	4.30	9.14	3.82	2.92
	11.55				9.14 9.27		3.09
1969	11.80	11.98	10.06	4.20		3.89	
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
990	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
992	60.90	62.78	58.12	41.67	54.81	23.02	15.99
993	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	43.00 53.30	53.60	35.40	51.70	21.71	15.56
2000	96.30	<u> </u>	89.60	56.60	82.63	34.70	
2000		76.30	77.90	47.60			26.72
	88.60 82.80	76.30	71.80	53.00	72.60 69.80	30.49 29.32	21.84 22.51
		/ 1 01/	/ / 00	0.0 UU	NY NU	/u </td <td>7761</td>	7761
2002 2003	82.80	87.10	88.20	66.10	81.05	34.04	27.56

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

(Thous. bbls)	1992	1993	1994	1995	1996	1997	1998	. 1999	2000	2001
Alabama	97,074	98,167	103,212	102,873	100,172	96,652	96,207	102,676	107,598	100,835
Alaska	36,376	34,584	35,366	39,253	39,508	43,221	44,988	44,671	45,779	51,099
Arizona	67,342	69,673	71,238	75,359	80,223	80,656	88,246	91,654	93,448	96,789
Arkansas	52,768	54,945	57,198	57,213	62,485	64,186	63,999	72,190	74,057	71,038
California	592,992	573,050	595,417	599,599	605,810	594,582	604,043	617,760	647,484	656,863
Colorado	64,339	68,895	70,528	72,136	76,174	72,013	76,177	79,029		86,814
Connecticut	73,862	71,957	68,592	66,486	76,201	80,996	79,328	79,478	69,318	79,501
Delaware	25,481	25,608	24,603	22,420	25,451	23,666	24,171	25,160	24,757	26,155
Dist.of Columbi		6,671	6,804	6,730	6,435	6,314	,	6,162	6,213	6,135
Florida	282,506	292,446	301,899	292,904	301,746	311,064	341,932	345,014		358,559
Georgia	151,983	167,620	169,308	177,723	185,282	179,166	183,366	193,170	193,503	191,681
Hawaii	44,439	38,814	41,396	40,947	38,811	37,134	38,159	37,031	38,501	41,480
Idaho	22,456	24,108	24,940	26,490	29,473	28,053	28,286	30,804	31,967	28,576
Illinois Indiana	213,786 147,909	225,810 153,432	230,288 159,628	232,270 157,002	231,870 156,348	234,519 160,372	228,809 158,945	250,369 163,950	247,728 166,875	242,769 153,632
lowa	60,908	69,139	72,650	74,540	73,558	73,197	79,122	82,698	82,759	78,716
Kansas	75,565	67,354	66,810	67,162	73,329	76,336	76,133	86,511	79,612	73,906
Kentucky Louisiana	109,035	109,381 275,569	111,446 296,101	113,600 282,424	118,817 273,409	129,077 246,790	129,309 237,839	134,515 280,507	132,476 333,434	130,889 288,776
Maine	39,800	41,794	43,805	42,946	45,894	46,897	46,544	44,610	44,740	41,740
Maryland	90,150	94,629	95,222	90,553	94,769	96,466	101,763	106,067	101,273	103,914
Massachusetts		132,046	127,278	122,831	126,936	135,822	131,946	117,551	124.235	137,854
Michigan	175,766	180,867	183,067	186,493	192,297	197,319		207,214	201,214	198,642
Minnesota	100,630	104,881	109,988	113,802	118,574	118,293	116,931	122,077	126,005	124,687
Mississippi	76,723	79,779	76,460	74,000	78,970	78,062	83,050	88,304	86,170	89,146
Missouri	115,507	120,350	126,619	130,732	134,876	134,678	141,228	145,967	130,373	135,381
Montana	26,503	28,712	28,255	28,344	31,284	29,969	28,603	30,735	30,163	30,276
Nebraska	38,042	37,791	39,834	40,435	43,778	43,794	45,596	45,542	42,323	40,811
Nevada	32,329	33,237	35,019	36,780	39,319	38,487	40,675	40,840	42,459	45,867
New Hampshire	e 25,931	26,836	27,386	27,832	31,207	32,160	33,792	34,807	33,948	33,296
New Jersey	217,158	212,090	227,086	224,082	213,219	217,228	213,981	223,915	228,233	225,683
New Mexico	47,223	46,580	44,220	40,603	40,605	42,736	45,001	48,035	46,353	47,126
New York	280,679	284,037	271,166	268,605	293,887	288,719	294,830	298,522	307,081	308,659
North Carolina	139,592	146,317	148,712	157,325	171,431	174,706	176,050	175,638	183,102	178,544
North Dakota Ohio	21,574 210,093	21,199 215,491	21,861 220,314	21,597 220,038	22,194 230,280	22,664 235,996	20,939 233,324	22,658 246,488	22,605 244,772	26,445 239,604
			87,896		86,546					
Oklahoma Oregon	86,669 66,346	85,383 64,765	65,346	81,462 65,344	65,697	86,747 65,437	87,169 71,768	93,600 70,827	95,912 68,660	106,892 67,081
Pennsylvania	231,364	238,926	242,713	240,721	240,207	243,415	249,910	250,940	256,755	263,233
Rhode Island	• 17,999	17,730	18,233	17,789	17,706	18,791	17,803	18,073	17,800	18,275
South Carolina	76,988	79,292	79,368	80,641	77,358	83,514	85,935	86,705	89,469	87,150
South Dakota	19,412	20,562	21,386	21,490	22,166	21,552	21,014	21,341	22,193	20,935
Tennessee	112,097	114,802	119,815	124,042	120,653	122,117	127,230	130,951	132,503	129,979
Texas	953,817	937,518	986,013	978,535	1,069,057	1,135,414	1,150,682	1,157,769	1,133,581	1,129,174
Utah	37,303	38,004	39,028	42,417	45,806	45,813	46,245	47,601	50,266	47,939
Vermont	14,823	15,082	14,827	15,116	16,013	16,256	15,814	15,905	16,549	16,984
Virginia	133,999	138,942	140,990	141,798	146,453	151,353	155,079	158,419	165,741	167,126
Washington	153,895	139,909	145,459	150,760	149,454	152,833	155,164	157,367	156,472	152,846
West Virginia	47,676	48,367	50,037	50,308	36,673	39,793	41,817	40,040	40,009	39,425
Wisconsin	90,760	95,502	99,361	100,240	114,503	116,045	117,946	125,170	124,951	124,784
Wyoming	21,403	22,765	22,940	24,681	26,145	25,343	24,000	27,528	.28,107	28,064
Total U.S.	5,234,031	6,291,408	6,467,128	6,469,473	6,699,059	6,796,413	6,904,850	7,124,555	7,210,597	7,171,778

Source: Energy Information Administration. 2002 data not yet available.



# Natural Gas Consumption

1994	1995	<b>1996</b>	<b>. 1997</b>	1998	1999	2000	- <b>2001</b> -
Alabama 260,830	287,239	293,084	292,094	298,102	295,393	315,202	299,555
Alaska 126,045	134,996	150,877	149,164	147,426	150,079	150,745	132,428
Arizona 108,515	101,731	103,037	112,590	134,871	142,217	184,542	217,684
Arkansas 227,835	240,071	252,585	244,644	254,142	249,342	240,672	217,640
California 2,041,539	1,839,721	1,721,217	1,850,248	1,933,371	2,070,679	2,434,770	2,398,279
Colorado 241,416	247,180	269,006	263,988	271,849	270,999	321,784	412,187
Connecticut 119,334	131,130	126,488	134,557	120,955	131,134	156,692	143,183
Delaware 48,632	60,658	54,020	46,480	40,769	55,930	48,325	50,044
Dist. of Columbia 30,607	32,735	33,644	33,824	30,115	31,993	33,225	29,493
Florida 361,428	507,329	478,471	477,601	460,082	510,239	532,297	533,855
Georgia 334,418	362,734	374,882	353,700	349,701	322,727	408,209	343,179
Hawaii 2,778	2,773	2,672	2,611	2,654	2,735	2,841	2,818
Idaho 52,164	57,407	61,058	61,707	62,018	64,414	66,758	73,655
Illinois 1,010,989	1,065,238	1,104,972	1,062,463	944,563	980,594	1,017,283	940,398
Indiana 512,482	,	561,056	546,337	513,375	522,758	564,919	494,360
lowa 237,614	251,262	260,140	243,476	223,826	223,510	224,299	215,309
Kansas 341,677	286,430	275,508	253,242	260,044	240,427	253,037	224,360
Kentucky 182,710		207,529	202,583	186,990	199,356	208,848	191,531
Louisiana 1,353,337	1,443,515	1,382,966	1,360,160	1,312,174	1,265,917	1,286,353	1,069,711
Maine 5,045	5,333	5,722	6,290	5,716	6,572	43,971	94,569
Maryland 181,259	191,272	189,901	204,319	176,323	191,579	208,8946	175,425
Massachusetts 335,544	360,429	355,609	377,911	335,874	336,560	340,923	345,791
Michigan 893,735	936,466	980,555	943,881	813,457	882,580	926,633	874,325
Minnesota 306,505	333,900	348,671	334,572	305,174	317,793	340,988	321,798
Mississippi 225,730	242,887	216,524	206,749	201,209	266,585	266,008	298,278
Missouri 264,715	271,956	286,814	276,124	253,682	259,404	277,206	281,763
Montana 46,274		55,584	54,114	54,071	55,095	57,725	54,476
Nebraska 123,373	132,923	128,297	128,031	127,779	118,471	123,791	118,890
Nevada 101,105	110,273	122,449	127,969	142,970	150,725	188,288	175,505
New Hampshire 18,732	19,877	19,031	20,822	1 <b>9</b> ,103	20,310	24,918	23,373
New Jersey 582,356	588,315	599,810	617,638	579,099	612,672	602,377	560,887
New Mexico 106,849	105,796	113,059	123,435	127,354	124,843	139,812	144,018
New York 1,005,676	1,131,325	1,121,742	1,220,113	1,135,250	1,209,650	1,236,734	1,165,250
North Carolina 182,107	196,626	205,783	206,940	206,129	210,269	226,543	200,489
North Dakota 27,301	29,371	32,670	42,826	40,782	38,160	36,499	38,787
Ohio 824,119	877,112	915,035	878,124	794,255	828,215	871,444	787,190
Oklahoma 454,889		460,373	452,553	483,117	448,987	450,596	399,969
Oregon 140,526	138,545	160,626	159,105	192,094	198,4192	213,063	218,563
Pennsylvania 656,021	680,495	684,022	652,219	587,218	635,749	659,042	595,625
Rhode Island 70,901	69,520	82,041	82,100	85,811	83,933	88,124	95,288
South Carolina 141,863	148,980	146,434	150,962	153,476	154,025	156,975	138,846
South Dakota 28,002	31,164	33,594	32,289	29,383	28,901	30,667	30,753
Tennessee 228,007	239,100	256,053	259,773	263,778	261,234	256,821	242,108
Texas 3,272,393	3,387,065	3,585,201	3,566,640	3,634,920	3,507,316	4,073,007	3,916,218
Utah 120,993	126,981	129,651	137,605	139,380	133,304	137,213	134,650
V/	7 000	7 005	0.050	7 7 7 0 0	0.004	40.444	7 000



(Mmc0) 2001 2002 2003







Vermont

Virginia

Washington

Wisconsin

Wyoming

West Virginia

TOTAL U.S. 18,909,587 19,660,165 20,005,507 20,004,011 19,469,048 21,651,078 21,539,964 20,495,108 21,227,015 20,587,447

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254,067

104,879

355,650

77,656

8,024

255,574

256,049

103,952

369,830

60,600

10,411

258,975

280,617

106,057

389,543

63,384

Source: Energy Information Administration. Volumes delivered to consumers.

7,268

239,616

211,791

113,908

376,291

70,986

7,325

230,140

231,767

115,622

398,581

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232,674

222,391

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205,515

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143,833

37,011

245,904 3,748,549

125,502

254,009

243,074

103,712

391,186

67,627

8,386

37,059

1,079,714

2,167,037 377,797

# Industry Employment — 2003

State

# Mining Refining Total

	Oil & Gas Extraction	Petroleum Refining	Oils & Greases	Pipelines, Except Gas	Gas Distribution	Petroleum Products	Gasoline Stations	Industry
Alabama	1,546	350	681	66	2,384	2,973	19,432	27,432
Alaska	8,329	ND	377	ND	212	1,178	1,783	11,879
Arizona	200	ND	ND	ND	ND	1,182	16,474	17,856
Arkansas	1,838	458	ND	ND	1,645	1,590	13,109	18,640
California	14,526	13,145	909	786	31,895	10,800	55,555	127,616
Colorado	8,361	390	ND	ND	2,036	2,162	13,954	26,903
Connecticut	28	ND	ND	ND	1,430	5,175	6,404	13,037
Delaware	37	ND	ND	ND	ND	1,077	2,662	3,776
Dist. of Columbia	42	22	ND	21	ND	ND	551	635
Florida	1,579	76	318	138	1,785	5,532	38,948	48,376
Georgia	344	125	172	155	1,994	4,692	28,409	35,891
Hawaii	ND	ND	430	ND	ND	389	2,864	3,683
Idaho	25	ND	ND	ND	ND	1,082	5,153	6,260
Illinois	1,962	4,858	1,658	414	5,877	2,475	27,212	44,456
Indiana	324	ND	419	232	3,154	3,664	25,555	33,348
lowa	16	ND	122	144	839	885	18,421	20,427
Kansas	5,505	1,303	218	696	2,264	2,073	11,058	23,117
Kentucky	1,688	731	459	1,251	1,881	1,949	20,670	28,629
Louisiana	42,909	9,235	849	727	3,242	4,282	19,440	80,684
Maine	ND	ND	386	ND	59	4,389	7,718	12,552
Maryland	203	38	ND	251	708	2,793	11,682	15,675
Massachusetts	157	ND	1,221	ND	2,884	6,972	12,396	23,630
Michigan	2,164	ND	ND	ND	4,268	3,289	27,230	36,951
Minnesota	100	1,097	ND	299	3,882	3,806	25,778	34,962
Mississippi	3,760	ND	145	260	1,380	2,583	16,341	24,469
Missouri	113	ND	481	115	3,395	2,571	25,733	32,408
Montana	1,291	914	ND	95	410	721	4,824	8,255
Nebraska	241	ND	ND	45	1,563	424	9,281	11,554
Nevada	139	ND	141	ND	ND	476	8,475	9,231
New Hampshire	49	ND	ND	ND	157	2,618	5,516	8,340
New Jersey	419	2,004	1,310	152	4,308	7,332	14,096	29,621
New Mexico	10,571	ND	ND	67	1,338	1,959	7,634	21,569
New York	812	51	718	ND	4,188	16,167	29,747	51,683
North Carolina	667	ND	231	101	2,212	7,575	28,263	39,049
North Dakota	1,763	ND	ND	74	1,119	92	3,966	7,014
Ohio	4,580	1,389	708	571	4,119	4,196	36,569	52,132
Oklahoma	26,993	1,556	449	662	5,287	3,719	13,419	52,085
Oregon	41	ND	ND	ND	1,420	1,637	11,168	14,266
Pennsylvania	3,798	2,418	2,451	ND	5,304	13,127	35,024	62,122
Rhode Island	ND	ND	ND	ND	381	1,252	2,226	3,859
South Carolina	214	ND	128	ND	948	2,738	17,590	21,618
South Dakota	37	ND	ND	ND	230	1,358	5,824	7,449
Tennessee	547	531	98	6	2,373	4,250	23,726	31,531
Texas	177,577	20,890	595	3,293	18,107	7,665	67,860	295,987
Utah	2,656	731	18	37	1,209	495	9,642	14,788
Vermont	ND	ND	ND	ND	ND	1,554	3,769	5,323
Virginia	926	230	91	64	2,037	3,722	34,247	41,317
Vashington	151	2,116	88	ND	1,524	1,803	14,820	20,502
West Virginia	2,662	310	611	ND	2,608	604	9,115	15,910
Visconsin	80	ND	ND	ND	992	2,501	23,685	27,258
Wyoming	10,614	842	ND	214	527	431	4,207	16,835
							·	

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

# **Reference Information**

# Data Sources & Notes

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

State maps	Cartesia Software, IPAA Surveys
First and peak production years	
Deepest wells drilled	World Oil& State Data
Cumulative wells drilled	Oil & Gas Journal, World Petroleum Statistical Yearbook, American Petroleum Institute (API), & State Data
Cumulative wellhead value	IPAA
Cumulative production (marketed) and reserves (dry)	API, American Gas Association, IPAA, and Energy Information Administration (EIA)
Wellhead prices and value	EIA, IPAA, State Data
End-use natural gas prices	EIA
Severance and production taxes	IPAA survey
Wells and footage drilled	API, IPAA, State Data
Rotary drilling rigs	Baker Hughes, Inc.
Producing wells	World Oil and State Data
Oil and gas production	.EIA and Minerals Management Service
Number of employees	.IPAA survey & BLS
Petroleum reserve position	.EIA
Lease and Royalties	.Minerals Management Service
Stripper wells	Interstate Oil & Gas Compact Commission
Federal Leases and Royalties	. Department of Interior and Minerals Management Service

# Abbreviations

bbl. = barrel b/d = barrels per day Mcf = thousand cubic feet MMcf = million cubic feet Bcf = billion cubic feet Tcf = trillion cubic feet BT= 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
- = 5,614 cubic feet of natural gas
- gas = 0.22 ton of bituminous coal

#### One cubic foot of natural gas:

- = 7.48 gallons
- = 1,030 BTU of energy
- = 0.000178 barrel of crude oil
- = 0.00004 ton of bituminous coal

#### One short ton of bituminous coal:

- = 2,000 pounds
- = 26,200,000 BTU of energy
- = 4.52 barrels of crude oil
- = 25,314 cubic feet of natural gas

# One metric ton of crude oil:

- = 2,204 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** - One of the petroleum fractions produced by conventional distillate, includes fuel oil and diesel fuel.

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

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

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

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

**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.

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

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

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

Non-associated Gas - Natural gas not in contact with signifi-

cant quantities of crude oil in a reservoir.

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

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

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

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

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

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

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

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

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

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

**Stripper Well** - A producing well which pumps or "strips" less than 10 barrels of crude oil or 60 Mcf of natural gas per day.

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

**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.



PTTC benefits the nation by assisting U. S. independent oil and natural gas producers make timely, informed technology decisions

Petroleum Technology Transfer Council, 16010 Barkers Point Lane, Suite 220, Houston, TX 77079 Phone 281.921.1720, Fax 281.921.1723, Toll-Free 1.888.THE.PTTC, Email: hq@pttc.org, Website: www.pttc.org Executive Director: Don Duttlinger • Director of Business Affairs: Kathy Chapman • Project Manager: Lance Cole

# What is PTTC?

Petroleum Technology Transfer Council (PTTC) is a national not-for-profit organization directed by industry representatives, primarily independent producers. PTTC was established in 1994 to disseminate technology ideas that were proven yet not widely accepted across the country to enhance domestic production of oil and natural gas.

# What Does PTTC Do?

For U.S. independent oil and natural gas producers, obtaining access to cost-effective exploration and production (E&P) technologies is an act of survival. With limited technical staffs, independents need field-tested and proven, cost-effective solutions to their E&P problems. PTTC enables independents to make timely, informed technology decisions-through targeted connections to potential solutions-in its five program lines:

- ☞ Drilling and Completion
- * Environmental Protection
- ✗ Exploration
- s Operations and Production
- 🖉 Reservoir Management

PTTC functions as the "Bridge to Solutions" for independents by helping them identify and clarify problems, by educating them about options for solutions and opportunities, and by connecting them with technology providers. In each of these areas, PTTC disseminates information and makes connections via a network of regional resource centers at universities and state geological surveys with strong oil and gas expertise. (See organizations listed on other side.)

# How Does PTTC Assist Independent Oil And Gas Producers?

Smaller companies and independents play an expanding role, drilling 85% of the wells in the U.S. and producing 65% of the nation's natural gas and 40% of the domestic crude oil. PTTC serves the role of supporting and linking independent producers, technology providers and federally-funded research, development and demonstration efforts. To address the shifting production environment, PTTC's most important products and services include:

- « Workshops that provide real-world solutions targeted to specific constraints
- Resource Centers with technical referral assistance to service companies/consultants and demonstrations of exploration and production software
- « Website Network linking national and regional websites and other technical resources
- r Publications and Information Products including newsletters, technical reports, databases, and case studies
  - » National Quarterly Newsletter distributed electronically and in hard-copy form
- Petroleum Technology Digest "Case Studies" published in World Oil-published monthly
- * Tech Connections published in American Oil and Gas Reporter-published monthly
- Frequent Email Tech Alerts with Industry, DOE and PTTC Highlights

# How is PTTC Funded?

The PTTC program is a cost-sharing arrangement with Federal funding through the U.S. Department of Energy, Office of Fossil Energy's National Energy Technology Laboratory. Matching 50:50 cost share is provided by several state governments, universities, state geological surveys and industry. As a tax-exempt corporation under IRS Section 501(c)(3), contributions to PTTC are tax deductible.

# **PTTC Regional Resource Centers**

# **Appalachian Region**

vertext vertex

# **Central Gulf Region**

Director: Bob Baumann, Louisiana State University, 225-578-4400 Coordinator: Don Goddard, 225-578-4538 www.cgrpttc.lsu.edu

# **Eastern Gulf Region**

Director: Ernest Mancini University of Alabama, 205-348-4319 Coordinator: Bennett Bearden, 205-348-1880 http://egrpttc.geo.ua.edu

# **Midwest Region**

Director: David Morse Illinois State Geological Survey, 217-244-5527 Coordinator: Steve Gustison, 217-244-9337 http://www.isgs.uiuc.edu/pttc

# **North Midcontinent Region**

Director: Rodney Reynolds Kansas University Energy Research Center, 785-864-7398 Coordinator: Dwayne McCune, 785-864-7398 ww.nmcpttc.org

# **Rocky Mountain Region**

Director: Sandra Mark Colorado School of Mines, 303-273-3107 Coordinator: Michael Ewing, 303-514-4098 www.pttcrockies.org

# **South Midcontinent Region**

Director: Charles Mankin Oklahoma Geological Survey, 405-325-3031 Coordinator: Michelle Summers, 405-325-3031 www.ogs.ou.edu/pttc

# **Southwest Region**

Director: Robert Lee Petroleum Recovery Research Center, 505-835-5408 Coordinator: Martha Cather, 505-835-5685 http://octane.nmt.edu/sw-pttc

# **Texas Region**

Director: Scott Tinker, Bureau of Economic Geology, University of Texas at Austin 512-471-0209 Coordinator: Sigrid Clift, 512-471-0320 www.energyconnect.com/pttc

# West Coast Region

Director: Iraj Ershaghi University of Southern California, 213-740-0321 www.westcoastpttc.org

# **PTTC Michigan Satellite Office**

Director: Dr. William B. Harrison Western Michigan University, 269-387-8633 http://wst023.west.wmich.edu/pttc.htm

#### PTTC-Texas Permian Basin Director: Bob Kiker Midland, TX, 432-552-3432 http://www.energyconnect.com/pttc/pb/

**PTTC's Regional Workshops** 

	Year	No of Workshops	Cumulative No of Workshops	Attendance	Cumulative Attendance	Contacts (no/yr)	Cumulative Contacts (no/yr)
	FY-95	. 18	18	1,117	1,117		
	FY-96	46	64	3,801	4,918		
	FY-97	62	126	3,176	8,094	5,482	5,482
	FY-98	100	226	4,429	12,523	10,241	15,723
	FY-99	128	354	5,948	18,471	10,555	26,278
	FY-00	148	502	6,020	24,491	12,980	39,258
S	FY-01	147	649	6,338	30,829	16,051	55,309
ł.	FY-02	147	796	6,243	37,072	18,377	76,686
ĺ	FY-03	169	965	8,616	45,688	24,714	98,400
	FY-04	141	1,106	6,451	52,139	25,205	123,605
ĺ	FY-05	153	1,259	8,524	60,663	29,550	153,155

# **Regional Resource Centers**



Compiled by IPAA July 2005