



*Independent Statistics & Analysis*  
U.S. Energy Information  
Administration

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# U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Proved Reserves, 2010

August 2012



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## Summary

Proved reserves of U.S. oil and natural gas in 2010 rose by the highest amounts ever recorded since the U.S. Energy Information Administration (EIA) began publishing proved reserves estimates in 1977.

- Net additions to proved reserves of crude oil plus lease condensate in 2010 totaled 2.9 billion barrels, surpassing the previous high of 1.8 billion barrels added in 2009 by 63 percent (Table 1).
- Net additions of wet natural gas in 2010 totaled 33.8 trillion cubic feet (Tcf), nearly 5 Tcf (17 percent) higher than the previous record of 28.8 Tcf, also added in 2009.

**Table 1. Changes to proved reserves, 2010**

	<b>Crude oil plus lease condensate billion barrels</b>	<b>Wet natural gas trillion cubic feet</b>
<b>Reserves at December 31, 2009</b>	<b>22.3</b>	<b>283.9</b>
Total discoveries	2.1	48.9
Net revisions	1.9	4.1
Net adjustments, sales, acquisitions	0.9	4.1
Production	-2.0	-23.2
<b>Net change in proved reserves</b>	<b>2.9</b>	<b>33.8</b>
<b>Reserves at December 31, 2010</b>	<b>25.2</b>	<b>317.6</b>
<b>Percentage change in proved reserves</b>	<b>12.8%</b>	<b>11.9%</b>

Notes: Wet natural gas includes natural gas plant liquids.

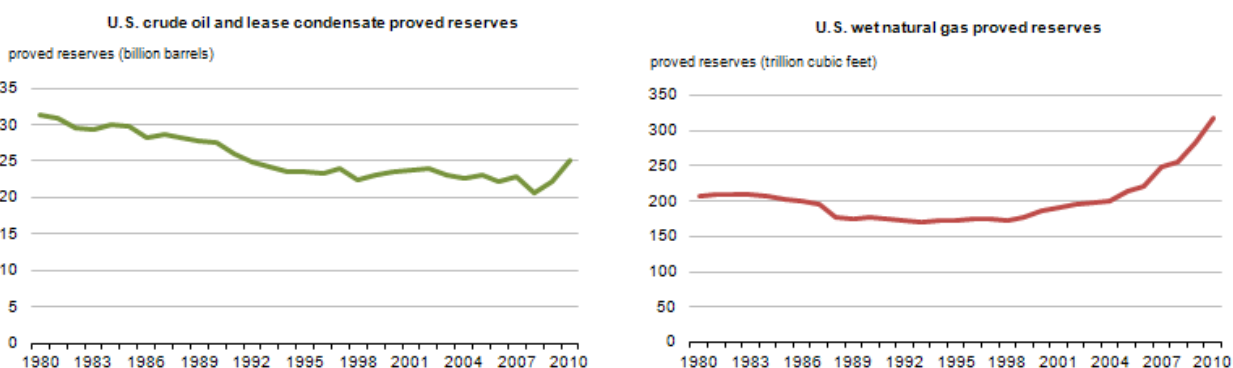
Percent change calculated from unrounded numbers.

Source: U.S. Energy Information Administration, Form EIA-23

An important factor for each fuel was the expanding application of horizontal drilling and hydraulic fracturing in shale and other “tight” (very low permeability) formations, the same technologies that spurred substantial gains in natural gas proved reserves in recent years. Helping to drive proved reserves increases in 2010 were also higher prices used to assess economic viability relative to the prices used for the 2009 reporting year, particularly for oil.

While proved reserves of natural gas began increasing moderately in the late 1990s, it was not until the mid-2000s that volumes grew dramatically, in step with intensifying horizontal drilling programs (Figure 1). More recently, tight oil developments have contributed to the reversal of more than two decades of generally declining U.S. proved oil reserves. For both oil and natural gas, these increases in proved reserves represent a growing role for domestically-produced hydrocarbons in meeting current and projected U.S. energy demands.

Figure 1. U.S. oil and natural gas proved reserves



Source: U.S. Energy Information Administration, U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1980 through 2010 annual reports.

Proved reserves of crude oil and lease condensate rose 13 percent to 25.2 billion barrels in 2010, marking the largest annual increase since 1977 and the highest total level since 1991. Proved reserves increased in each of the five largest crude oil and lease condensate areas (Texas, the Gulf of Mexico Federal Offshore, Alaska, California, and North Dakota) between 2009 and 2010. Of these, Texas had the largest increase, 860 million barrels (16 percent), resulting mostly from ongoing development in the Permian and Western Gulf Basins in the western and south-central portions of the state. North Dakota reported the second largest increase, 829 million barrels (78 percent), driven by development activity in the Williston Basin. Collectively, North Dakota and Texas accounted for nearly 60 percent of the net increase in total U.S. proved reserves in 2010.

Natural gas proved reserves<sup>1</sup> (estimated as “wet” natural gas, including natural gas plant liquids) increased by 12 percent in 2010 to 317.6 Tcf, the twelfth consecutive annual increase and the first year U.S. volumes surpassed 300 Tcf. Four of the five largest natural gas states (Texas, Louisiana, Oklahoma, and Colorado) registered net gains, with Louisiana and Texas adding a combined 17.8 Tcf, over one-half of the overall national increase. Pennsylvania’s proved natural gas reserves more than doubled in 2010, contributing about one-fifth of the overall U.S. increase. Expanding shale gas developments in these and other areas, perhaps most notably in Pennsylvania’s portion of the Appalachian Basin in the Marcellus play, drove overall increases in 2009 and 2010.

This report summarizes changes to U.S. oil and natural gas proved reserves during 2010. As of this release date (August 2, 2012), EIA is currently collecting data for the 2011 reporting year, and anticipates releasing a summary of 2011 developments in the first quarter of 2013.

<sup>1</sup> Natural gas, wet after lease separation, is the volume of natural gas remaining after removal of lease condensate in lease and/or field separation facilities, if any, and after exclusion of nonhydrocarbon gases where they occur in sufficient quantity to render the gas unmarketable. Natural gas plant liquids may be recovered from volumes of natural gas, wet after lease separation, at natural gas processing plants.

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## Background

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EIA provides annual estimates of U.S. proved reserves of crude oil, natural gas, and natural gas liquids (NGLs) based on filed responses to Form EIA-23, Annual Survey of Domestic Oil and Gas Reserves, an annual survey of about 1,200 domestic operators.

Proved reserves are those volumes of oil and natural gas that geologic and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions. Reserves estimates change from year to year as new discoveries are made, existing fields are more thoroughly appraised, existing reserves are produced, and as prices and technologies change. Discoveries include new fields, identification of new reservoirs in previously discovered fields, and extensions, which are reserve additions that result from additional drilling and exploration in previously discovered reservoirs. Within a given year, extensions typically account for a large percentage of total discoveries. While discoveries of new fields and reservoirs are important indicators of new resources, they generally comprise a small percentage of overall reserve additions on an annual basis. Revisions occur primarily when operators change their estimates of what they will be able to produce from the properties they operate using existing technology and prices.

Several factors influence reserves estimates, but crude oil and natural gas prices are particularly important. Higher prices typically increase estimates (positive revisions) as operators consider a broader portion of the resource base economically producible, or proved. Lower prices generally reduce estimates (negative revisions) as the economically producible base contracts.

Both EIA and the Securities and Exchange Commission (SEC) require oil and gas companies to provide information on their oil and gas reserves. The 2010 reporting period represents the second year companies reporting to the SEC followed updated rules for determining the prices underpinning their proved reserves estimates. The revised rules, which were designed to make estimates less sensitive to price fluctuations during the year, require companies to use an average of the 12 first-day-of-the-month prices. Prior to the 2009 reporting year, companies' estimates were based on the market price on the last trading day of the year. The 12 first-day-of-the-month average crude oil and natural gas spot prices<sup>2</sup> for 2010 were \$79.79 per barrel and \$4.39 per million Btu (MMbtu), representing increases of 31 percent and 15 percent, respectively, from the previous year. Spot market prices are not necessarily the prices used by operators in their reserves estimates, because actual prices received by operators depend on their contractual arrangements, location, quality, etc. They do provide a benchmark or trend indicator.

There are also important differences between these two reporting systems. First, EIA collects information from both publicly traded and privately held companies, while SEC reporting requirements apply only to companies with more than \$10 million in assets and whose securities are held by more than 500 owners. Second, companies reporting to EIA (both public and private) include gross operated

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<sup>2</sup> Spot prices used were the Cushing, OK West Texas Intermediate for crude oil and the Henry Hub Gulf Coast for natural gas.



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reserves (irrespective of their ownership share), while the companies reporting to the SEC include only their “owned” reserves (irrespective of operator).<sup>3</sup>

It is important to note that the average natural gas price used in estimating proved reserves for 2010 does not reflect the more recent and prolonged downward trend in natural gas prices. For the 2011 reporting period, the average natural gas price fell more than 5 percent to \$4.15 per MMBtu, reflecting the dual impact of continued increases in domestic production (due largely to shale gas development) and significantly rising inventories. This held particularly true during the second half of 2011, when the daily Henry Hub spot price dipped below \$4.00 per MMBtu, averaging \$3.17 per MMBtu in December and finishing the year at \$2.98 per MMBtu. It can be expected, therefore, that price-driven negative revisions will affect overall natural gas proved reserves additions in 2011.

Conversely, the 12 first-day-of-the-month average spot price of Cushing, Oklahoma WTI crude oil rose from \$79.79 per barrel in 2010 to \$95.84 per barrel in 2011. EIA therefore anticipates price-driven positive revisions will add to proved reserves of crude oil in 2011.

The aggregated production data for crude oil, natural gas, and NGLs includes volumes that have been reported to EIA by operators on Form EIA-23, and, for non-reported production, volumes that are based on EIA estimates. These production numbers are offered only as an indicator of production trends and may differ from EIA’s official production series based on State-reported data and provided elsewhere on the EIA website for [oil](#) and [natural gas](#)

## Oil proved reserves (crude oil plus lease condensate)

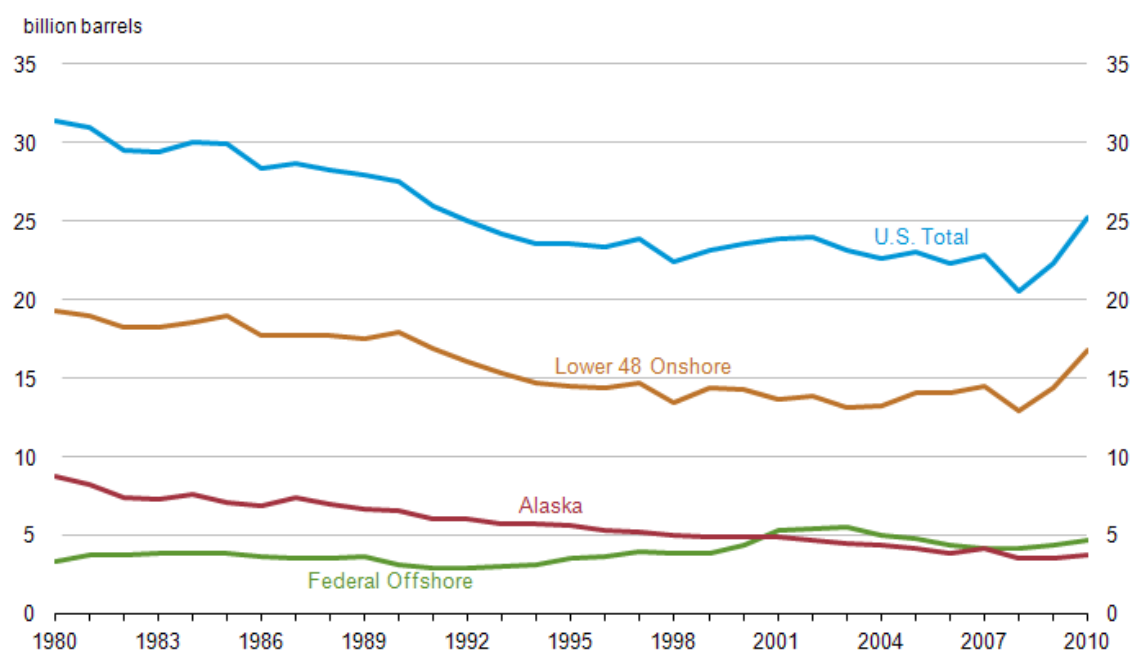
### *Overview*

The 2009 Reserves Report detailed the major increases in the country’s natural gas proved reserves attributable to expanding exploration and development programs in shale formations such as the Barnett in Texas and the Haynesville in Louisiana. Central to the increases was the combination of horizontal drilling and hydraulic fracturing technologies. While that Report acknowledged the increase in 2009 oil proved reserves were also facilitated by the dual application of these technologies in shale and other tight formations, gains were especially pronounced in 2010, taking place primarily onshore in the lower 48 states (Figure 2).

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<sup>3</sup> Additional information concerning EIA and SEC reserves can be found in a [supplemental report](#) to the 2009 reserves summary.

Figure 2. U.S. crude oil plus lease condensate proved reserves, 1980-2010

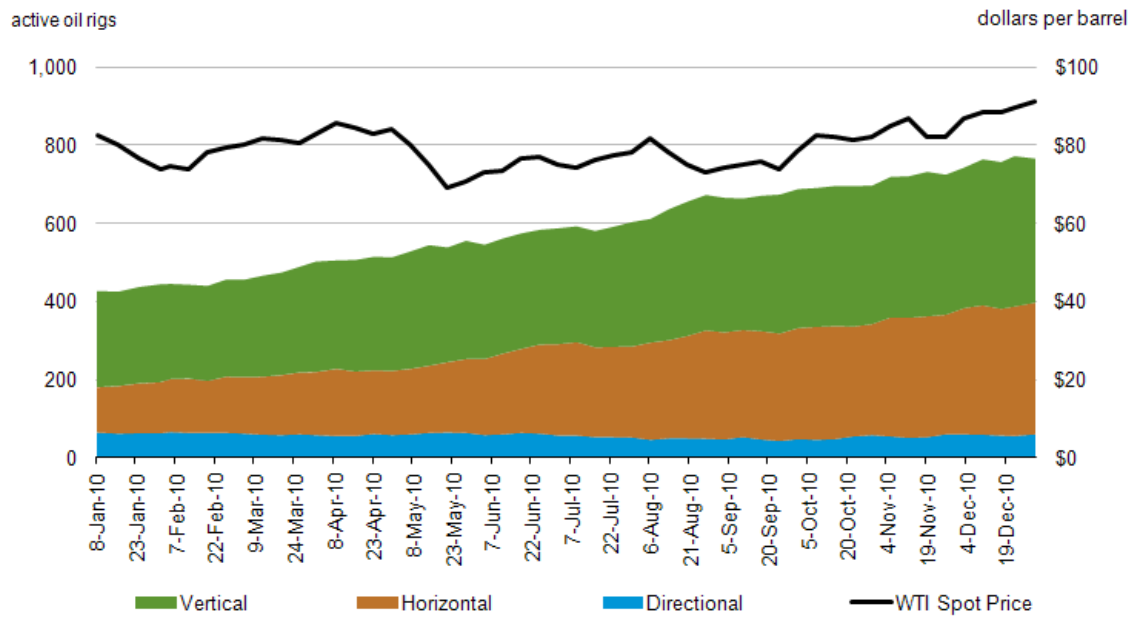


Source: U.S. Energy Information Administration, U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1980 through 2010 annual reports.

Overall reported U.S. oil proved reserves rose by nearly 3.0 billion barrels in 2010, driven essentially equally by net revisions and a fourth consecutive increase in total discoveries, which added a combined 4.0 billion barrels (more than double the year's production) (Figure 4). Among individual states, the 860 million barrel addition in Texas represented the year's largest volumetric increase in oil proved reserves, due in large part to expanding horizontal drilling and hydraulic fracturing programs in the [Eagle Ford](#) and other shale formations. Similar programs were essential in adding significantly to proved oil reserves in other states, particularly North Dakota, where drilling in the [Bakken](#) and underlying Three Forks formations in the Williston Basin accounted for the bulk of North Dakota's 829 million barrel net addition in 2010.

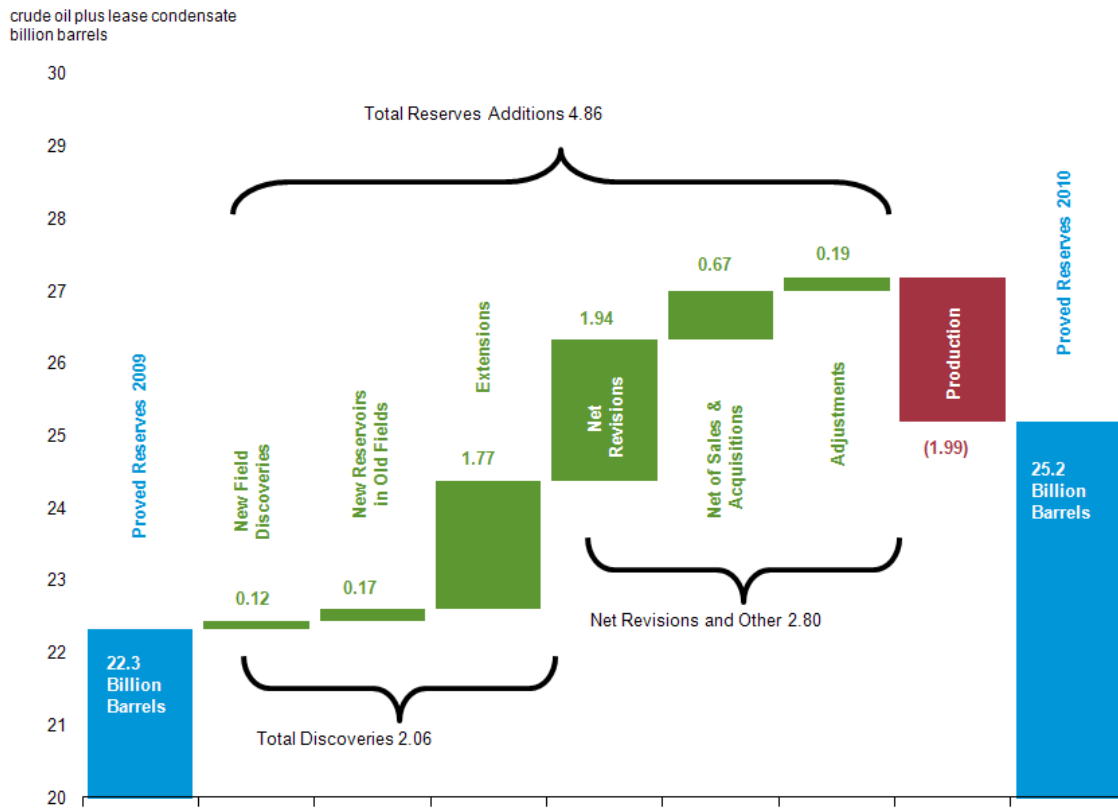
Weekly active rotary rig counts can be a useful gauge of exploration and development activity generally, with changes in the horizontal count, in particular, indicating the pace of activity in shale formations and other tight plays. During 2010, the overall number of active oil-directed drilling rigs in the United States rose by 79 percent, an increase driven largely by a near tripling of horizontal rigs usage. Horizontal rigs accounted for 27 percent of active oil rigs at the beginning of 2010; that share had climbed to 44 percent by year's end (Figure 3).

Figure 3. U.S. weekly oil rig count and average spot price of West Texas Intermediate crude oil



Sources: Baker Hughes Inc. (rigs) Thomson Reuters (WTI spot prices)

Figure 4. Oil proved reserves changes in 2010



Source: U.S. Energy Information Administration.

**Total Discoveries.** Total discoveries consist of discoveries of new fields, identification of new reservoirs in fields discovered in prior years, and extensions (reserve additions that result from the additional drilling and exploration in previously discovered reservoirs). Total discoveries added 2,059 million barrels to U.S. oil reserves in 2010, the highest volume of total discoveries since 2001. As is typical, extensions comprise the bulk of total discoveries (86 percent) (Figure 4).

Geographically, the bulk of total oil discoveries in 2010 came from Texas, North Dakota, and the deepwater Gulf of Mexico. Texas led in 2010, with discoveries of 752 million barrels. North Dakota marked its second consecutive year as a major source of total discoveries, adding 565 million barrels. As in 2009, North Dakota's discoveries (mostly extensions) are associated with rapid growth in reserves of the Bakken and underlying Three Forks formations. Total discoveries in the Gulf of Mexico Federal Offshore added 232 million barrels in 2010, a decline of 29 percent from the 328 million barrels of discoveries in 2009, reflecting the impact of the moratorium on most deepwater Gulf of Mexico drilling activity following the Macondo well explosion in April 2010.

**Net Revisions and Other Changes.** Revisions to proved reserves occur primarily when operators change their estimates of what they will be able to produce from the properties they operate using existing technology and prices. These revisions reflect changing prices, changing cost structures (for example, because of technological advances), and other factors. Other small changes occur when operators buy and sell properties (revaluing the proved reserves in the process), and as various adjustments are made to reconcile estimated volumes.

Net revisions added 1.9 billion barrels to oil proved reserves in 2010, the highest level since 1999 and largely reflective of the significant increase in oil prices relative to 2009. Under the SEC rules adopted for the 2009 reporting year, the 12 first-day-of-the-month average spot price for West Texas Intermediate (WTI) crude oil in 2010 was \$79.79 per barrel, an increase of 31 percent over the 12 first-day-of-the-month average price in 2009 (\$61.08).

The net change to U.S. proved oil reserves associated with buying and selling properties and adjustments was modest compared with net revisions in 2010. The net of sales and acquisitions added 667 million barrels to the U.S. totals, significantly more than the prior year (95 million barrels in 2009), but much less than net revisions of 1,943 million barrels in 2010. Adjustments (reserves changes that EIA cannot attribute to any other category) added 188 million barrels in 2010.

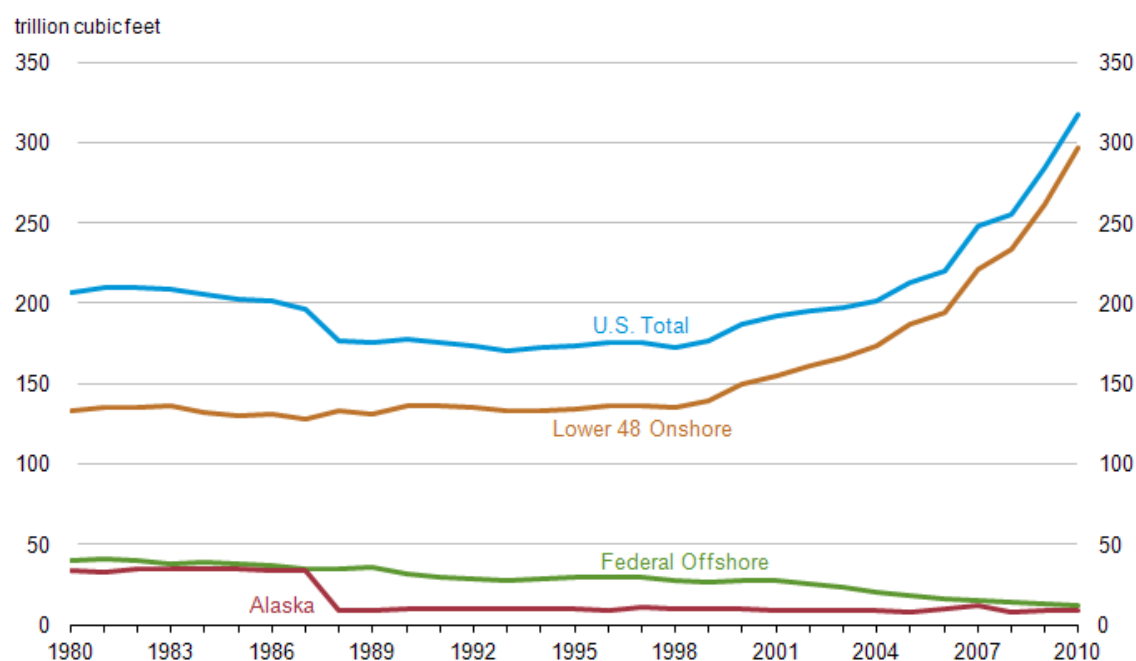
**Production.** Operators reported oil production of about 2.0 billion barrels in 2010, an increase of 3 percent from 2009. This represents the country's second consecutive annual increase and its highest level since 2004. Production from the onshore lower 48 states (primarily Texas and North Dakota), which was up nearly 8 percent from the previous year, more than offset declines in Alaska and the Gulf of Mexico Federal Offshore. While production from Alaska has generally declined for several years, the dip in Gulf of Mexico Federal Offshore output followed a major deepwater-driven production increase in 2009 (again reflecting the influence of the drilling moratorium).

## Wet natural gas proved reserves (includes natural gas plant liquids)

### Overview

Total reported U.S. proved reserves of wet natural gas rose by 33.8 Tcf in 2010, supplanting the 2009 reporting year's 28.8 Tcf as the highest annual volumetric increase on record and boosting the country's proved reserves to over 300 Tcf for the first time (Figure 5). The increase was driven largely by an eighth consecutive annual rise in discoveries, which added nearly 50 Tcf (mostly from extensions) (Table 2). U.S. natural gas proved reserves have increased in every year since 1999, with the pace accelerating in recent years in step with expanding exploration and development activity in several of the [nation's shale formations](#).

**Figure 5. U.S. wet natural gas proved reserves, 1980-2010**



Source: U.S. Energy Information Administration, U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 1980 through 2010 annual reports.

Note: Natural gas reserves are measured at 4.73 psia and 60 degrees Fahrenheit.

**Table 2. Changes to proved reserves of wet natural gas by source, 2010**

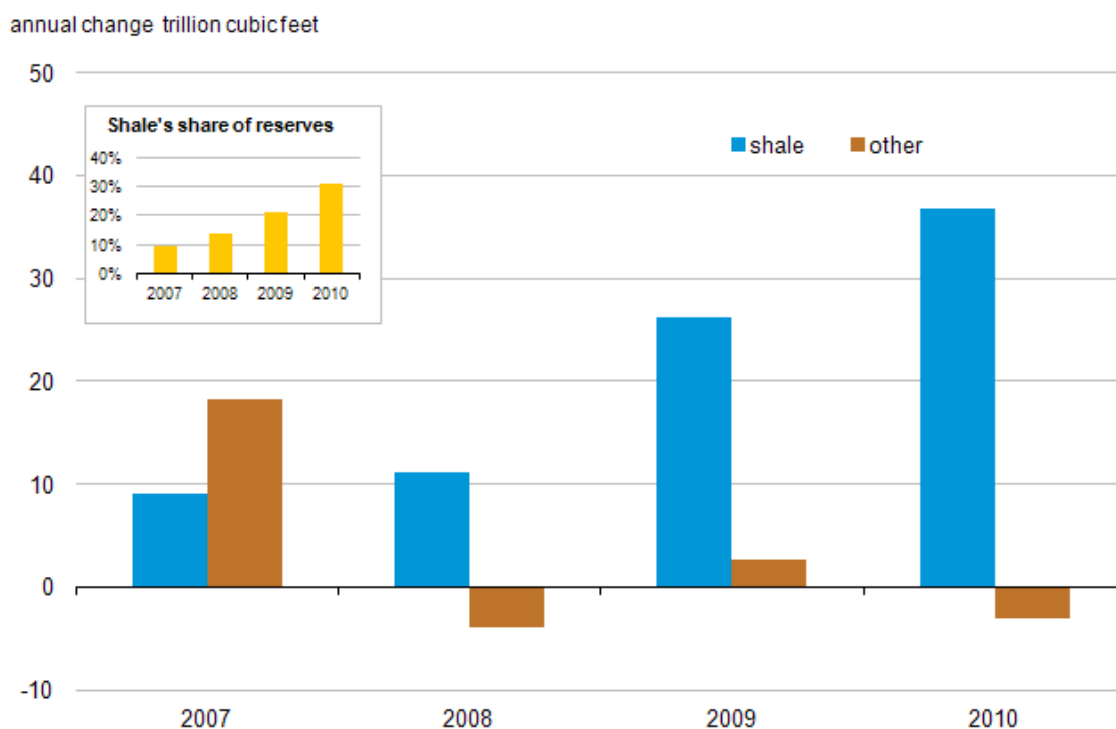
trillion cubic feet at 14.73 psia and 60 degrees Fahrenheit

Source of Gas	Proved Reserves Year-End 2009	Discoveries 2010	Revisions & Other Changes 2010	Production 2010	Proved Reserves Year-End 2010
Coalbed Methane	18.6	0.5	0.3	-1.9	17.5
Shale	60.6	30.8	11.4	-5.3	97.4
Other (Conventional & Tight)					
Lower 48 Onshore	182.6	16.9	-4.4	-13.5	181.7
Lower 48 Offshore	12.9	0.6	0.8	-2.2	12.1
Alaska	9.2	0.0	0.0	-0.3	8.9
<b>TOTAL</b>	<b>283.9</b>	<b>48.9</b>	<b>8.1</b>	<b>-23.2</b>	<b>317.6</b>

Source: U.S. Energy Information Administration, Form EIA-23

The combination of horizontal drilling and hydraulic fracturing in shale formations continues to be instrumental to the expansion of U.S. natural gas proved reserves over the last few years. This held especially true in 2010, when an increase in shale natural gas reserves of 36.8 Tcf offset a decrease in net reserves from all other sources combined (Figure 6). The significant impact of shale developments can also be seen by examining the share of shale gas relative to total U.S. natural gas proved reserves. That share has increased steadily and significantly, from less than 10 percent in 2007 to over 30 percent in 2010 (Figure 6).

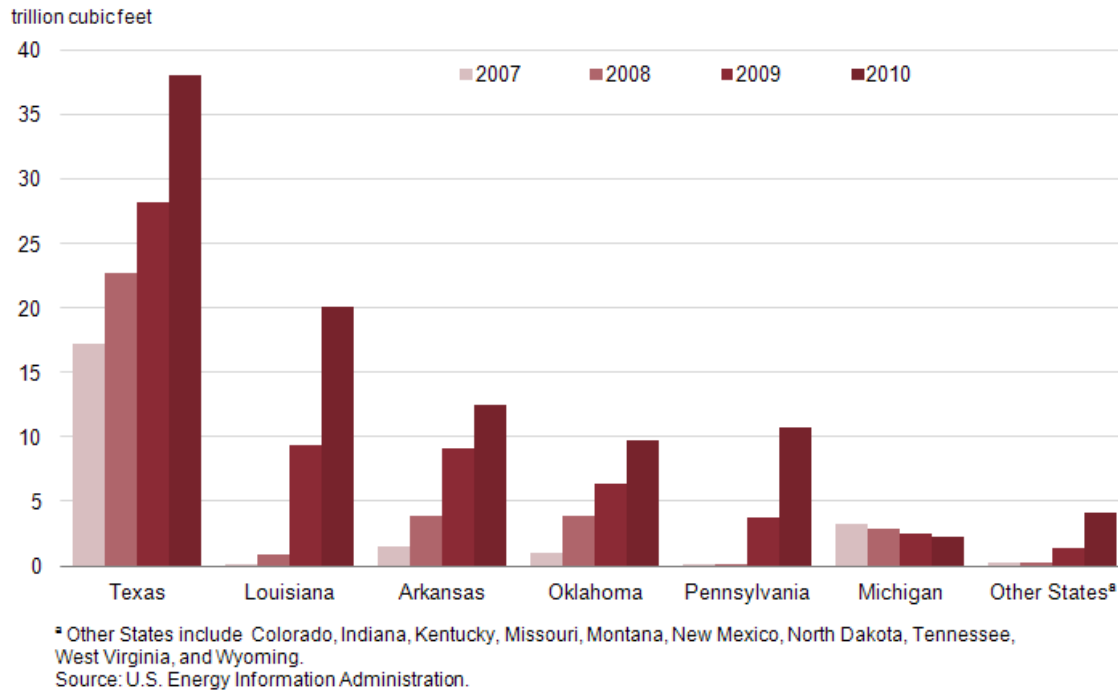
**Figure 6. Annual change in U.S. natural gas proved reserves, shale and other sources, 2007-2010**



Source: U.S. Energy Information Administration.

At the state level, Texas' 9.3 Tcf addition represents the largest volumetric increase in natural gas proved reserves in 2010, driven by continued development of the [Barnett](#) and Haynesville/Bossier shale formations. In Louisiana, an increase in total proved natural gas reserves of 8.5 Tcf was largely the result of ongoing drilling programs at the Haynesville shale formation. Shale activity contributed 10.8 Tcf to Louisiana's proved natural gas reserves, offsetting declines from non-shale sources. In Pennsylvania, expanding drilling programs at the Marcellus shale formation drove the state's 7.1 Tcf increase in total proved natural gas reserves, more than doubling year-end 2009 volumes. Figure 7 shows the shale gas proved reserves in the nation's key shale states in 2010, which also included Arkansas (the Fayetteville shale play) and Oklahoma (the Woodford shale play).

Figure 7. Shale gas proved reserves by State



Nearly all (96 percent) of the country's shale natural gas proved reserves in 2010 came from the six largest shale plays (Table 3). While the Barnett again ranked as the largest shale gas play in the United States, significantly higher increases over 2009 proved reserves were registered by the Haynesville/Bossier (which more than doubled 2009 volumes) and the Marcellus (which nearly tripled). Among these six shale plays, the only decline from 2009 volumes was in the Antrim of northern Michigan—a mature, shallow biogenic shale gas play discovered in 1986 that is no longer being developed at the same pace as the other leading shales. EIA has a [series of maps](#) showcasing the nation's shale gas resources for both shale plays and geologic basins.

**Table 3. Principal shale gas plays: natural gas production and proved reserves, 2008-2010**

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

Shale Play	2008		2009		2010		Change 2010-2009	
	Production	Reserves	Production	Reserves	Production	Reserves	Production	Reserves
Barnett	1,501	22,492	1,745	26,493	1,918	31,040	173	4,547
Haynesville/Bossier	25	1,031	321	10,468	1,451	24,451	1,130	13,983
Fayetteville	279	3,833	527	9,070	794	12,526	267	3,456
Woodford	168	3,845	249	6,389	403	9,670	154	3,281
Marcellus	2	102	76	4,478	476	13,199	400	8,721
Antrim	122	2,894	132	2,499	120	2,306	-12	-193
<b>Sub-total</b>	<b>2,097</b>	<b>34,197</b>	<b>3,050</b>	<b>59,397</b>	<b>5,162</b>	<b>93,192</b>	<b>2,112</b>	<b>33,795</b>
Other Shale Plays	19	231	60	1,247	174	4,257	114	3,010
<b>All U.S. Shale Plays</b>	<b>2,116</b>	<b>34,428</b>	<b>3,110</b>	<b>60,644</b>	<b>5,336</b>	<b>97,449</b>	<b>2,226</b>	<b>36,805</b>

Note: The above table is based on shale gas proved reserves and production volumes reported and imputed from data on Form EIA-23.

For certain reasons (e.g., incorrect or incomplete submissions, misidentification of shale versus non-shale reservoirs)

the actual proved reserves and production of natural gas from shale plays may be higher or lower.

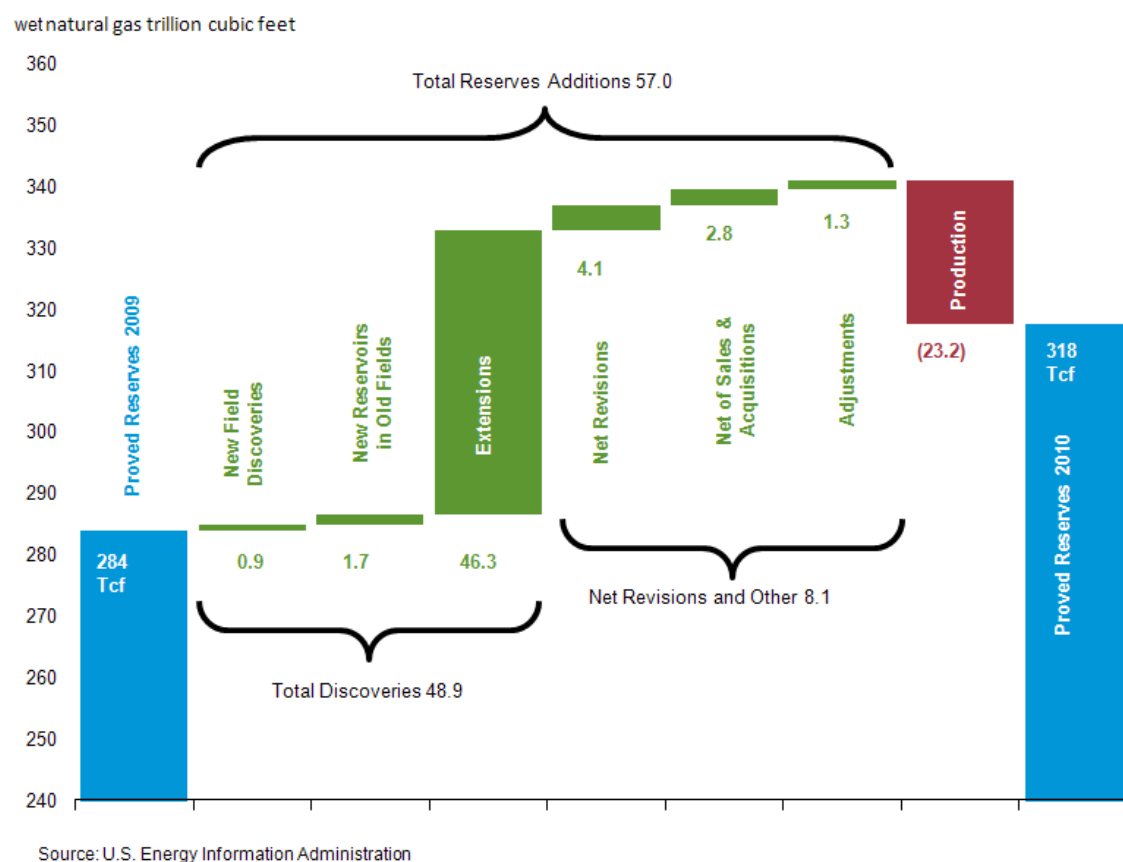
The production estimates are offered only as an observed indicator of production trends and may differ from EIA production volumes listed elsewhere on the EIA web site.

Sources: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 2008 through 2010 annual reports.

The sustained lower price environment for natural gas relative to oil has encouraged operators to shift drilling and development programs toward “liquids-rich” areas within these and other shale gas plays that offer a higher yield of natural gas liquids (NGLs) and crude oil. These areas include southwestern portions of the Marcellus in Pennsylvania and parts of the Eagle Ford Shale covering much of south Texas. Due to their relative price premium over natural gas, the production of crude oil and NGLs along with natural gas improves project economics.



Figure 8. Natural gas proved reserves changes in 2010



**Total Discoveries.** Total wet natural gas discoveries of 48.9 Tcf represented the eighth consecutive annual increase and were the highest volume of discoveries since EIA began publishing proved reserves estimates in 1977 (Figure 8). In 2010, 95 percent of total wet natural gas discoveries (and a similar share of shale gas discoveries) came from extensions of existing fields. New field discoveries and new reservoir discoveries in previously discovered fields totaled 0.9 Tcf and 1.7 Tcf, respectively, each representing a decrease from 2009. Texas and Louisiana, with discoveries of 13.0 Tcf and 11.4 Tcf, respectively, were the leading individual states, while Pennsylvania more than doubled its total discoveries, adding 6.8 Tcf. In each of these states, shale gas developments drove volumetric additions. Pennsylvania, in particular, may expect substantial proved reserves increases for the 2011 reporting year, given the significant quickening pace of drilling and development programs in the Marcellus.

**Net Revisions and Other Changes.** For 2010, net revisions of wet natural gas proved reserves added 4.1 Tcf. Positive revisions of 42.4 Tcf were the largest since 1999, reflecting an increase in the price used to estimate reserves and, consequently, an enhanced ability to economically produce natural gas, particularly from relatively costly unconventional sources such as shale. The 12 first-day-of-the-month average spot price at Henry Hub rose from \$3.83 per MMBtu in 2009 to \$4.39 per MMBtu in 2010.

The net change to wet natural gas proved reserves from the purchase and sale of properties and adjustments (4.1 Tcf) was comparable to net revisions; both were significantly less than 2010 extensions.

**Production.** As reported on the EIA Form-23 survey, production of wet natural gas in 2010 totaled 23.2 Tcf, up 3 percent from 2009, marking the fifth consecutive increase and the highest since EIA began reporting. Three states – Louisiana, Texas, and Pennsylvania – accounted for nearly three-quarters of the overall increase, much of which was tied to expanded drilling programs in shale formations.

## Dry natural gas reserves

Dry natural gas is that volume of gas that remains after all of the liquefiable hydrocarbons and nonhydrocarbon impurities are removed from the natural gas stream; first at lease separation facilities near the producing well(lease condensate), then downstream at a natural gas processing plant (natural gas plant liquids). Proved reserves of U.S. dry natural gas also increased by 12 percent from 2009 to 2010, to 304.6 Tcf.<sup>4</sup>

## Natural gas liquids proved reserves

Natural gas liquids are those hydrocarbons in natural gas that are separated from the gas as liquids through the process of absorption, condensation, adsorption, cooling in gas separators, gas processing, or gas cycling plants. Generally, natural gas liquids include lease condensate and natural gas plant liquids.

EIA continues to provide separate estimates of lease condensate and natural gas plant liquids volumes, and changes to proved reserves of each during 2010 are summarized in this section.

Because NGLs sell at a premium to natural gas, there is often an economic incentive for operators to focus exploration and development activities on areas that have natural gas with high liquids content. This "liquids boost" is especially important in the development of unconventional resources (such as shale gas) because of the relatively high cost of drilling and completing horizontal wells. The high liquids content of certain shale formations helps operators to profitably develop shale gas resources during periods of low natural gas prices.

### *Lease Condensate*

U.S. lease condensate proved reserves increased from 1,633 million barrels in 2009 to 1,914 million barrels in 2010, a 17 percent increase driven primarily by extensions. By a considerable margin, Texas had the largest increase in lease condensate proved reserves in 2010 (192 million barrels), followed by North Dakota and Oklahoma. In these (and other) states, additions to lease condensate proved reserves can be closely linked to expanding drilling programs in liquids-rich portions of shale and other tight formations, such as the Eagle Ford in Texas and the Bakken in North Dakota. Lease condensate comprised almost eight percent of total oil proved reserves in 2010.

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<sup>4</sup> Detail on dry natural gas proved reserves is available in the additional data tables, "Table 9. Dry Natural Gas Proved Reserves, Reserves Changes, and Production, 2010."

U.S. lease condensate production increased 26 percent, from 178 million barrels in 2009 to 224 million barrels in 2010, the highest production volume registered since EIA began publishing proved reserves estimates.

Lease condensate, which is extracted from the natural gas production stream at the field (lease) level, is often blended into other crude oil to enhance the blend quality for refiners.

### ***Natural Gas Plant Liquids***

U.S. natural gas plant liquids proved reserves rose from 8,557 million barrels in 2009 to 9,809 million barrels in 2010, an increase of 15 percent. Texas had the largest volumetric increase in natural gas plant liquids proved reserves in 2010, followed by Oklahoma and Colorado. As is the case with lease condensate, increasing proved reserves of natural gas plant liquids is associated with escalating drilling activity in shale formations, including the Barnett in Texas and Woodford in Oklahoma.

U.S. natural gas plant liquids production in 2010 increased more than 4 percent, from 714 million barrels in 2009 to 745 million barrels in 2010.

Natural gas plant liquids remain in gaseous form at the surface and must be separated at a gas processing plant. Once extracted, these liquids are separated into distinct products, or "fractions," such as propane, butane, and ethane.

### **Additional data tables and maps**

For more detailed 2010 proved reserves information than discussed in the report see Tables 4-18 and Figures 9-12.

Figure 9 shows a thematic map of the 2010 crude oil proved reserves volumes by State and Federal Offshore areas, and Figure 10 shows the change in crude oil proved reserves by area from 2009 to 2010.

**Figure 9. Oil proved reserves by state/area, 2010**

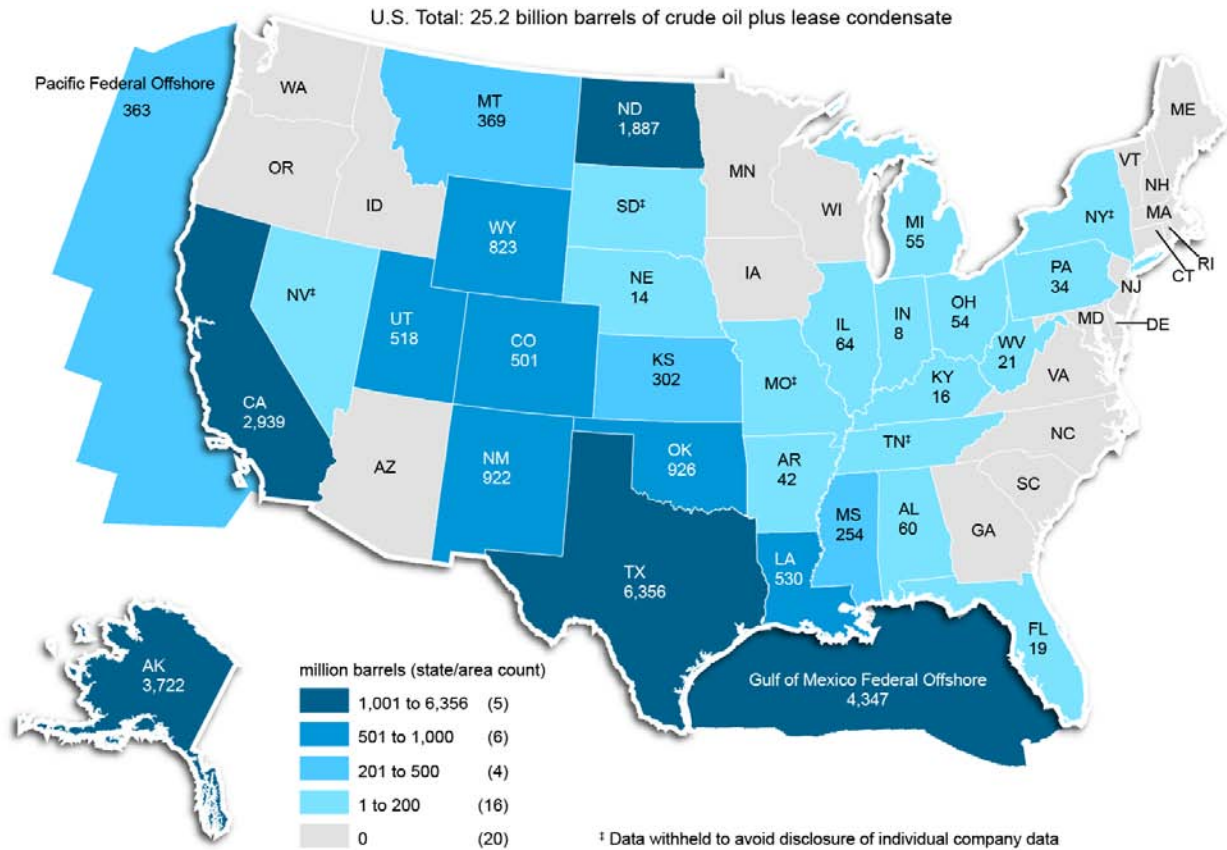
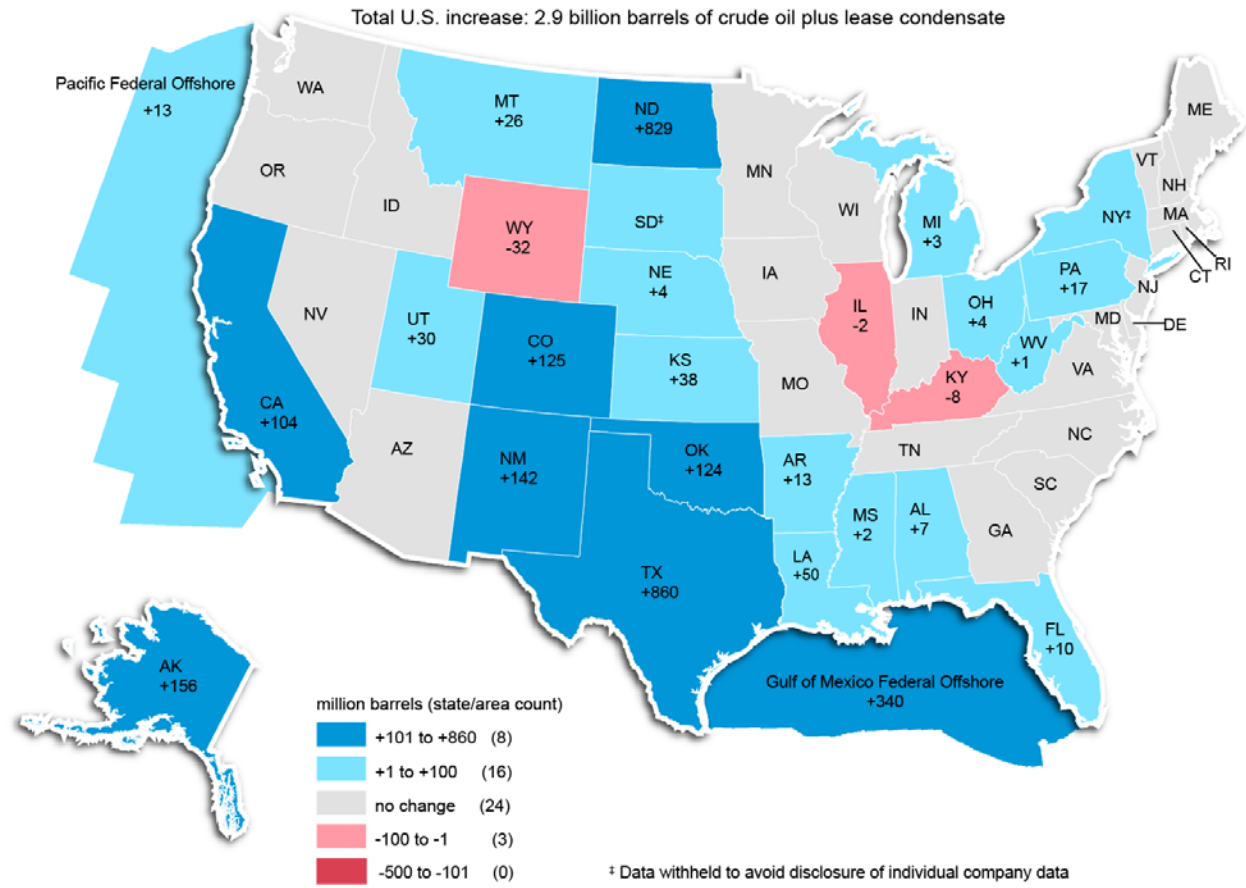


Figure 10. Changes in oil proved reserves by state/area, 2009 to 2010



Similarly, Figure 11 shows a thematic map of the 2010 wet natural gas proved reserves volumes by State and Federal Offshore areas, and Figure 12 shows the change in wet natural gas proved reserves by area from 2009 to 2010.

**Figure 11. Wet natural gas proved reserves by state/area, 2010**

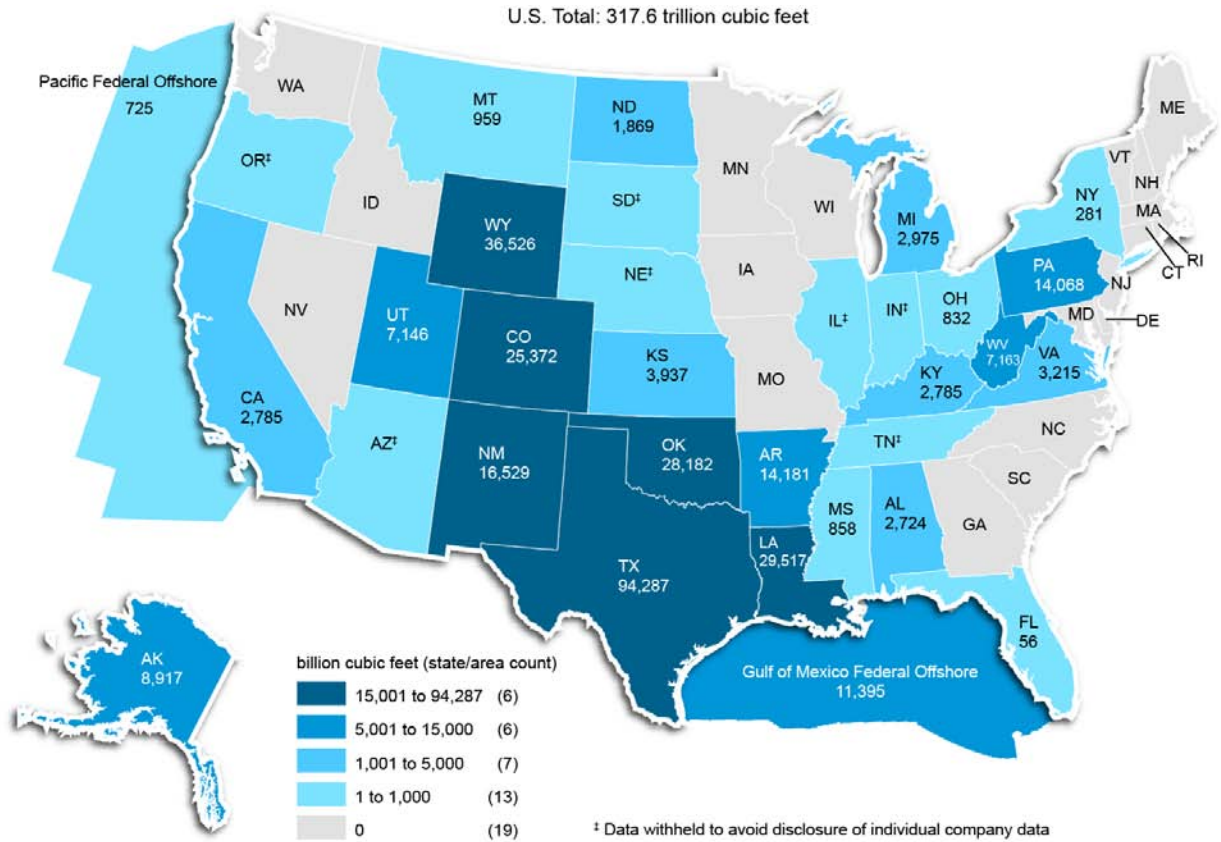
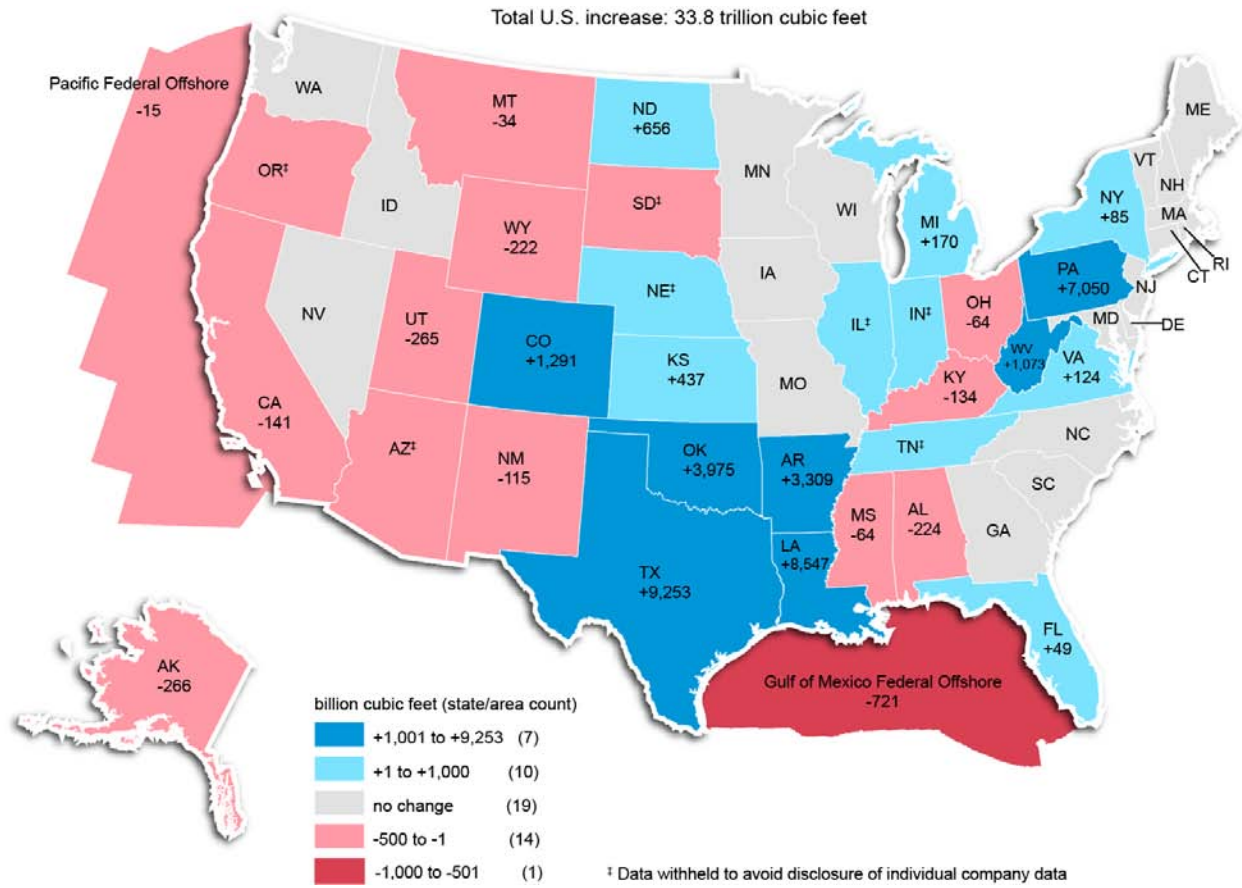


Figure 12. Changes in wet natural gas proved reserves by state/area, 2009 to 2010



Some areas on the maps are shaded but display no volume information to avoid disclosure of individual company data.

Table 4. Total U.S. proved reserves of wet natural gas, and crude oil plus lease condensate, 2001-2010

Year	Adjustments (1)	Revisions <sup>a</sup> and Net Revisions <sup>a</sup>		Net of Sales <sup>b</sup> and Acquisitions		Extensions (5)	New Field Discoveries (6)	New Reservoir Discoveries in Old Fields (7)	Total <sup>c</sup> Discoveries (8)	Estimated Production (9)	Proved <sup>d</sup> Reserves 12/31 (10)	Change from Prior Year (11)
		(2)	(3)	(4)								
<b>Wet Natural Gas</b> (billion cubic feet, 14.73 psia, 60 degrees Fahrenheit)												
2001	1,849	-2,438	-589	2,715	17,183		3,668	2,898	23,749	20,642	191,743	5,233
2002	4,006	1,038	5,044	428	15,468		1,374	1,752	18,594	20,248	195,561	3,818
2003	2,323	-1,715	608	1,107	17,195		1,252	1,653	20,100	20,231	197,145	1,584
2004	170	825	995	1,975	19,068		790	1,244	21,102	20,017	201,200	4,055
2005	1,693	2,715	4,408	2,674	22,069		973	1,243	24,285	19,259	213,308	12,108
2006	946	-2,099	-1,153	3,178	22,834		425	1,197	24,456	19,373	220,416	7,108
2007	990	15,936	16,926	452	28,255		814	1,244	30,313	20,318	247,789	27,373
2008	271	-3,254	-2,983	937	27,800		1,229	1,678	30,707	21,415	255,035	7,246
2009	5,923	-1,899	4,024	-222	43,500		1,423	2,656	47,579	22,537	283,879	28,844
2010	1,292	4,055	5,347	2,766	46,283		895	1,701	48,879	23,224	317,647	33,768
<b>Crude Oil plus Lease Condensate</b> (million barrels of 42 U.S. gallons)												
2001	-61	-346	-407	-53	1,002		1,480	358	2,840	2,133	23,843	326
2002	423	682	1,105	51	600		318	187	1,105	2,082	24,023	180
2003	192	-9	183	-416	530		717	137	1,384	2,068	23,106	-917
2004	80	444	524	37	731		36	159	926	2,001	22,592	-514
2005	237	558	795	327	946		209	57	1,212	1,907	23,019	427
2006	109	43	152	189	685		38	62	785	1,834	22,311	-708
2007	21	1,275	1,296	44	865		81	87	1,033	1,872	22,812	501
2008	318	-2,189	-1,871	187	968		166	137	1,271	1,845	20,554	-2,258
2009	46	2,008	2,054	95	1,305		141	95	1,541	1,929	22,315	1,761
2010	188	1,943	2,131	667	1,766		124	169	2,059	1,991	25,181	2,866

<sup>a</sup> Revisions and adjustments = Col. 1 + Col. 2.

<sup>b</sup> Net of sales and acquisitions = acquisitions - sales

<sup>c</sup> Total discoveries = Col. 5 + Col. 6 + Col. 7.

<sup>d</sup> Proved reserves = Col. 10 from prior year + Col. 3 + Col. 4 + Col. 8 - Col. 9.

NA = Not available

Notes: Old means discovered in a prior year. New means discovered during the report year.

The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves" and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." They may differ from the official EIA production data for crude oil, lease condensate, and wet natural gas for 2010 contained in the Petroleum Supply Annual 2010, DOE/EIA-0340(10) and the Natural Gas Annual 2010, DOE/EIA-0131(10).

[EIA Petroleum & Other Liquids Data](#)

[EIA Natural Gas Data](#)

Sources: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 2001 through 2010 annual reports.



**Table 5. Total Natural gas proved reserves, reserves changes, and production, wet after lease separation, 2010**

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

State and subdivision	Published Proved Reserves 12/31/09	Changes in reserves during 2010						New Field Discoveries (+)	New Reservoir Discoveries in Old Fields (+)	Estimated Production (-)	Proved Reserves 12/31/10
		Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)				
Alaska	9,183	-3	628	455	132	0	15	0	0	319	8,917
<b>Lower 48 States</b>	<b>274,696</b>	<b>1,295</b>	<b>41,766</b>	<b>37,884</b>	<b>10,450</b>	<b>13,348</b>	<b>46,268</b>	<b>895</b>	<b>1,701</b>	<b>22,905</b>	<b>308,730</b>
Alabama	2,948	60	214	180	272	153	29	3	0	231	2,724
Arkansas	10,872	-34	1,072	301	393	807	3,083	0	27	952	14,181
<b>California</b>	<b>2,926</b>	<b>4</b>	<b>575</b>	<b>476</b>	<b>3</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>255</b>	<b>2,785</b>
Coastal Region Onshore	169	2	39	17	1	0	0	0	0	12	180
Los Angeles Basin Onshore	91	3	9	5	0	0	0	0	0	6	92
San Joaquin Basin Onshore	2,609	-1	514	451	2	0	9	1	0	232	2,447
State Offshore	57	0	13	3	0	0	4	0	0	5	66
Colorado	24,081	646	3,127	3,834	255	241	2,986	23	29	1,672	25,372
Florida	7	64	0	0	0	0	0	0	0	15	56
Kansas	3,500	166	736	178	18	24	29	4	1	327	3,937
Kentucky	2,919	-15	110	576	0	42	408	0	0	103	2,785
<b>Louisiana</b>	<b>20,970</b>	<b>-693</b>	<b>3,183</b>	<b>3,222</b>	<b>746</b>	<b>861</b>	<b>11,045</b>	<b>49</b>	<b>285</b>	<b>2,215</b>	<b>29,517</b>
North	17,273	-451	2,604	2,495	604	564	10,751	48	174	1,728	26,136
South Onshore	2,969	-5	510	640	72	253	292	1	97	410	2,995
State Offshore	728	-237	69	87	70	44	2	0	14	77	386
Michigan	2,805	258	265	385	539	725	1	2	0	157	2,975
Mississippi	922	3	77	71	31	13	33	0	0	88	858
Montana	993	-22	105	101	41	30	88	0	1	94	959
<b>New Mexico</b>	<b>16,644</b>	<b>-32</b>	<b>2,364</b>	<b>1,960</b>	<b>161</b>	<b>469</b>	<b>514</b>	<b>0</b>	<b>3</b>	<b>1,312</b>	<b>16,529</b>
East	4,558	-159	537	466	148	469	364	0	3	438	4,720
West	12,086	127	1,827	1,494	13	0	150	0	0	874	11,809
New York	196	104	35	83	2	11	0	56	0	36	281
North Dakota	1,213	-5	950	810	53	152	496	28	3	105	1,869
Ohio	896	127	68	59	374	239	8	0	0	73	832
Oklahoma	24,207	-271	3,448	3,716	234	1,625	4,890	54	1	1,822	28,182
Pennsylvania	7,018	-357	2,914	1,953	683	938	5,824	51	911	595	14,068
<b>Texas</b>	<b>85,034</b>	<b>1,263</b>	<b>11,639</b>	<b>9,893</b>	<b>2,807</b>	<b>3,442</b>	<b>12,317</b>	<b>552</b>	<b>129</b>	<b>7,389</b>	<b>94,287</b>
RRC District 1	1,523	-110	459	347	505	451	1,108	126	16	122	2,599
RRC District 2 Onshore	1,909	5	356	323	19	32	190	328	10	253	2,235
RRC District 3 Onshore	2,802	90	517	342	197	213	188	21	27	545	2,774
RRC District 4 Onshore	7,057	37	1,143	895	220	190	993	25	3	941	7,392
RRC District 5	22,623	53	1,598	1,292	1	5	3,504	0	0	1,796	24,694
RRC District 6	13,257	413	2,755	2,776	523	989	2,250	52	52	1,053	15,416
RRC District 7B	2,424	87	304	270	3	0	258	0	0	175	2,625
RRC District 7C	5,430	125	608	806	653	511	563	0	11	357	5,432
RRC District 8	7,440	407	1,217	1,426	409	853	638	0	2	617	8,105
RRC District 8A	1,289	-47	146	66	15	4	15	0	0	98	1,228
RRC District 9	11,522	356	1,131	233	97	48	1,212	0	8	775	13,172
RRC District 10	7,594	-164	1,385	1,061	145	107	1,398	0	0	630	8,484
State Offshore	164	11	20	56	20	39	0	0	0	27	131
Utah	7,411	-65	893	224	543	7	109	0	0	442	7,146
Virginia	3,091	59	658	560	124	166	97	0	0	172	3,215
West Virginia	6,090	-373	1,058	1,100	916	1,007	1,631	0	66	300	7,163
Wyoming	36,748	538	5,082	5,769	1,331	1,362	2,205	1	0	2,310	36,526
<b>Federal Offshore<sup>a</sup></b>	<b>12,856</b>	<b>-55</b>	<b>3,082</b>	<b>2,312</b>	<b>910</b>	<b>1,034</b>	<b>333</b>	<b>71</b>	<b>245</b>	<b>2,224</b>	<b>12,120</b>
Pacific (California)	740	1	23	10	0	0	0	0	0	29	725
Gulf of Mexico (Louisiana) <sup>b</sup>	9,665	-39	2,721	1,841	771	816	193	71	221	1,786	9,250
Gulf of Mexico (Texas)	2,451	-17	338	461	139	218	140	0	24	409	2,145
Miscellaneous <sup>b</sup>	349	-75	111	121	14	0	129	0	0	16	363
<b>U.S. Total</b>	<b>283,879</b>	<b>1,292</b>	<b>42,394</b>	<b>38,339</b>	<b>10,582</b>	<b>13,348</b>	<b>46,283</b>	<b>895</b>	<b>1,701</b>	<b>23,224</b>	<b>317,647</b>

<sup>a</sup> Includes Federal offshore Alabama.<sup>b</sup> Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, Oregon, South Dakota, and Tennessee.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves," They may differ from the official Energy Information Administration production data for natural gas for 2010 contained in the Natural Gas Annual 2010, DOE/EIA-0131(10).

[EIA Natural Gas Data](#)

Source: U.S. Energy Information Administration, Form EIA-23

Table 6. Crude oil plus lease condensate proved reserves, reserves changes, and production 2010

million barrels of 42 U.S. gallons

State and Subdivision	Published Proved Reserves 12/31/09	Changes in Reserves During 2010							New Field Discoveries (+)	New Reservoir Discoveries in Old Fields (+)	Estimated Production (-)	Proved Reserves 12/31/10
		Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)	Discoveries (+)				
Alaska	3,566	0	397	76	0	0	30	0	0	195	3,722	
<b>Lower 48 States</b>	<b>18,749</b>	<b>188</b>	<b>3,503</b>	<b>1,881</b>	<b>803</b>	<b>1,470</b>	<b>1,736</b>	<b>124</b>	<b>169</b>	<b>1,796</b>	<b>21,459</b>	
Alabama	53	12	9	5	3	0	0	1	0	7	60	
Arkansas	29	3	12	0	3	0	6	0	0	5	42	
<b>California</b>	<b>2,835</b>	<b>14</b>	<b>276</b>	<b>167</b>	<b>1</b>	<b>156</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>198</b>	<b>2,939</b>	
Coastal Region Onshore	341	0	40	39	1	154	1	0	0	18	478	
Los Angeles Basin Onshore	235	15	22	2	0	1	1	0	0	15	257	
San Joaquin Basin Onshore	2,095	1	204	125	0	1	13	0	0	152	2,037	
State Offshore	164	-2	10	1	0	0	9	0	0	13	167	
Colorado	376	25	52	34	3	38	80	0	0	33	501	
Florida	9	2	10	0	0	0	0	0	0	2	19	
Illinois	66	10	0	4	15	9	2	0	0	4	64	
Indiana	8	1	0	0	2	2	0	0	0	1	8	
Kansas	264	61	52	47	6	8	5	2	4	41	302	
Kentucky	24	-11	1	3	0	6	0	0	0	1	16	
<b>Louisiana</b>	<b>480</b>	<b>7</b>	<b>139</b>	<b>93</b>	<b>23</b>	<b>52</b>	<b>28</b>	<b>0</b>	<b>6</b>	<b>66</b>	<b>530</b>	
North	81	-7	69	11	5	12	2	0	0	10	131	
South Onshore	343	13	57	73	7	26	25	0	5	47	342	
State Offshore	56	1	13	9	11	14	1	0	1	9	57	
Michigan	52	10	4	5	0	0	0	0	0	6	55	
Mississippi	252	25	17	9	8	1	0	0	0	24	254	
Montana	343	-4	54	44	115	115	41	2	2	25	369	
Nebraska	10	4	1	0	0	0	0	1	0	2	14	
<b>New Mexico</b>	<b>780</b>	<b>-2</b>	<b>90</b>	<b>67</b>	<b>22</b>	<b>131</b>	<b>76</b>	<b>0</b>	<b>1</b>	<b>65</b>	<b>922</b>	
East	748	0	85	65	22	131	76	0	1	63	891	
West	32	-2	5	2	0	0	0	0	0	2	31	
North Dakota	1,058	-8	709	486	63	226	533	29	3	114	1,887	
Ohio	50	22	4	2	37	22	0	0	0	5	54	
Oklahoma	802	10	135	106	56	58	146	0	0	63	926	
Pennsylvania	17	37	13	12	23	1	4	0	0	3	34	
<b>Texas</b>	<b>5,496</b>	<b>-72</b>	<b>846</b>	<b>423</b>	<b>252</b>	<b>469</b>	<b>666</b>	<b>78</b>	<b>8</b>	<b>460</b>	<b>6,356</b>	
RRC District 1	96	-20	16	10	4	9	137	54	0	15	263	
RRC District 2 Onshore	66	-2	14	5	0	2	72	22	0	15	154	
RRC District 3 Onshore	257	26	53	31	42	21	29	2	1	44	272	
RRC District 4 Onshore	92	-3	109	15	2	2	39	0	0	15	207	
RRC District 5	24	1	3	3	0	0	0	0	0	3	22	
RRC District 6	224	3	45	29	5	11	9	0	0	18	240	
RRC District 7B	102	4	9	3	0	0	0	0	0	10	102	
RRC District 7C	509	-10	69	37	56	83	88	0	6	34	618	
RRC District 8	1,985	-93	273	149	116	315	196	0	1	158	2,254	
RRC District 8A	1,790	21	181	66	23	12	15	0	0	108	1,822	
RRC District 9	149	13	11	21	4	10	14	0	0	17	155	
RRC District 10	198	-12	63	54	0	3	67	0	0	22	243	
State Offshore	4	0	0	0	0	1	0	0	0	1	4	
Utah	488	13	71	21	24	3	13	0	0	25	518	
West Virginia	20	-3	2	0	1	2	2	0	0	1	21	
Wyoming	855	25	124	138	81	58	32	1	0	53	823	
<b>Federal Offshore<sup>a</sup></b>	<b>4,357</b>	<b>-6</b>	<b>879</b>	<b>214</b>	<b>56</b>	<b>108</b>	<b>77</b>	<b>10</b>	<b>145</b>	<b>590</b>	<b>4,710</b>	
Pacific (California)	350	-2	38	4	0	0	0	0	0	19	363	
Gulf of Mexico (Louisiana) <sup>a</sup>	3,704	-3	790	183	54	102	61	10	134	518	4,043	
Gulf of Mexico (Texas)	303	-1	51	27	2	6	16	0	11	53	304	
Miscellaneous <sup>b</sup>	25	13	3	1	9	5	1	0	0	2	35	
<b>U.S. Total</b>	<b>22,315</b>	<b>188</b>	<b>3,900</b>	<b>1,957</b>	<b>803</b>	<b>1,470</b>	<b>1,766</b>	<b>124</b>	<b>169</b>	<b>1,991</b>	<b>25,181</b>	

<sup>a</sup> Includes Federal offshore Alabama.<sup>b</sup> Includes Arizona, Missouri, Nevada, New York, South Dakota, Tennessee, and Virginia.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves." They may differ from the official Energy Information Administration production data for crude oil and lease condensate for 2010 contained in the Petroleum Supply Annual 2010, DOE/EIA-0340(10).

[EIA Petroleum & Other Liquids Data](#)

Source: U.S. Energy Information Administration, Form EIA-23

Table 7. Total U.S. proved reserves of crude oil, natural gas, and lease condensate, 2001-2010

Year	Adjustments (1)	Revisions <sup>a</sup> Net of Sales <sup>b</sup>		New Field Discoveries (6)	New Reservoir Discoveries in Old Fields (7)	Total <sup>c</sup> Estimated Discoveries Production (8)	Estimated Production (9)	Proved <sup>d</sup> Reserves 12/31 (10)	Change from Prior Year (11)		
		Net Revisions (2)	and and Acquisitions (3)							and Extensions (4)	(5)
<b>Crude Oil</b> (million barrels of 42 U.S. gallons)											
2001	-4	-158	-162	-87	866	1,407	292	2,565	1,915	22,446	401
2002	416	720	1,136	24	492	300	154	946	1,875	22,677	231
2003	163	94	257	-398	426	705	101	1,232	1,877	21,891	-786
2004	74	420	494	23	617	33	132	782	1,819	21,371	-520
2005	221	569	790	278	805	205	41	1,051	1,733	21,757	386
2006	94	2	96	194	504	30	43	577	1,652	20,972	-785
2007	65	1,200	1,265	-19	651	66	73	790	1,691	21,317	345
2008	278	-2,039	-1,761	166	805	142	124	1,071	1,672	19,121	-2,196
2009	-4	1,863	1,859	95	1,155	122	81	1,358	1,751	20,682	1,561
2010	144	1,859	2,003	605	1,495	88	161	1,744	1,767	23,267	2,585
<b>Dry Natural Gas</b> (billion cubic feet, 14.73 psia, 60 degrees Fahrenheit)											
2001	2,742	-2,318	424	2,630	16,380	3,578	2,800	22,758	19,779	183,460	6,033
2002	3,727	937	4,664	380	14,769	1,332	1,694	17,795	19,353	186,946	3,486
2003	2,841	-1,638	1,203	1,034	16,454	1,222	1,610	19,286	19,425	189,044	2,098
2004	-114	744	630	1,844	18,198	759	1,206	20,163	19,168	192,513	3,469
2005	1,887	2,699	4,586	2,544	21,050	942	1,208	23,200	18,458	204,385	11,872
2006	743	-1,836	-1,093	2,996	21,778	409	1,155	23,342	18,545	211,085	6,700
2007	1,147	15,461	16,608	408	27,107	796	1,188	29,091	19,466	237,726	26,641
2008	207	-3,128	-2,921	895	26,687	1,170	1,622	29,479	20,523	244,656	6,930
2009	5,098	-1,619	3,479	-141	42,139	1,372	2,598	46,109	21,594	272,509	27,853
2010	509	3,950	4,459	2,595	44,783	850	1,668	47,301	22,239	304,625	32,116
<b>Lease Condensate</b> (million barrels of 42 U.S. gallons)											
2001	-57	-188	-245	34	136	73	66	275	218	1,397	-75
2002	7	-38	-31	27	108	18	33	159	207	1,346	-51
2003	29	-103	-74	-18	104	12	36	152	191	1,215	-131
2004	6	24	30	14	114	3	27	144	182	1,221	6
2005	16	-11	5	49	141	4	16	161	174	1,262	41
2006	15	41	56	-5	181	8	19	208	182	1,339	77
2007	-44	75	31	63	214	15	14	243	181	1,495	156
2008	40	-150	-110	21	163	24	13	200	173	1,433	-62
2009	50	145	195	0	150	19	14	183	178	1,633	200
2010	44	84	128	62	271	36	8	315	224	1,914	281

<sup>a</sup> Revisions and adjustments = Col. 1 + Col. 2.

<sup>b</sup> Net of sales and acquisitions = acquisitions - sales

<sup>c</sup> Total discoveries = Col. 5 + Col. 6 + Col. 7.

<sup>d</sup> Proved reserves = Col. 10 from prior year + Col. 3 + Col. 4 + Col. 8 - Col. 9.

NA = Not available

Notes: Old means discovered in a prior year. New means discovered during the report year.

The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves" and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." They may differ from the official EIA production data for crude oil, natural gas, and lease condensate for 2010 contained in the Petroleum Supply Annual 2010, DOE/EIA-0340(10) and the Natural Gas Annual 2010, DOE/EIA-0131(10).

[EIA Petroleum & Other Liquids Data](#)

[EIA Natural Gas Data](#)

Sources: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 2001 through 2010 annual reports.

Table 8. Crude oil proved reserves, reserves changes, and production, 2010

million barrels of 42 U.S. gallons

State and Subdivision	Published Proved Reserves 12/31/09	Changes in Reserves During 2010							New Field Discoveries (+)	New Reservoir Discoveries in Old Fields (+)	Estimated Production (-)	Proved Reserves 12/31/10
		Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)	Extensions (+)				
Alaska	3,566	0	397	76	0	0	30	0	0	195	3,722	
<b>Lower 48 States</b>	<b>17,116</b>	<b>144</b>	<b>3,032</b>	<b>1,494</b>	<b>725</b>	<b>1,330</b>	<b>1,465</b>	<b>88</b>	<b>161</b>	<b>1,572</b>	<b>19,545</b>	
Alabama	37	12	5	5	3	0	0	1	0	5	42	
Arkansas	28	2	12	0	3	0	6	0	0	5	40	
<b>California</b>	<b>2,835</b>	<b>13</b>	<b>276</b>	<b>167</b>	<b>1</b>	<b>156</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>198</b>	<b>2,938</b>	
Coastal Region Onshore	341	0	40	39	1	154	1	0	0	18	478	
Los Angeles Basin Onshore	235	15	22	2	0	1	1	0	0	15	257	
San Joaquin Basin Onshore	2,095	0	204	125	0	1	13	0	0	152	2,036	
State Offshore	164	-2	10	1	0	0	9	0	0	13	167	
Colorado	279	21	34	17	2	36	61	0	0	26	386	
Florida	9	1	10	0	0	0	0	0	0	2	18	
Illinois	66	10	0	4	15	9	2	0	0	4	64	
Indiana	8	1	0	0	2	2	0	0	0	1	8	
Kansas	259	61	49	46	5	5	5	2	4	39	295	
Kentucky	20	-11	1	0	0	6	0	0	0	1	15	
<b>Louisiana</b>	<b>370</b>	<b>-5</b>	<b>120</b>	<b>60</b>	<b>17</b>	<b>41</b>	<b>24</b>	<b>0</b>	<b>3</b>	<b>52</b>	<b>424</b>	
North	55	-9	67	8	1	6	1	0	0	7	104	
South Onshore	269	5	42	45	5	21	22	0	2	37	274	
State Offshore	46	-1	11	7	11	14	1	0	1	8	46	
Michigan	33	10	3	1	0	0	0	0	0	5	40	
Mississippi	244	22	17	6	8	1	0	0	0	23	247	
Montana	343	-4	54	44	115	115	41	2	2	25	369	
Nebraska	9	0	1	0	0	0	0	1	0	1	10	
<b>New Mexico</b>	<b>700</b>	<b>-10</b>	<b>74</b>	<b>56</b>	<b>21</b>	<b>120</b>	<b>73</b>	<b>0</b>	<b>1</b>	<b>58</b>	<b>823</b>	
East	688	-7	72	56	21	120	73	0	1	57	813	
West	12	-3	2	0	0	0	0	0	0	1	10	
North Dakota	1,046	-8	672	474	63	190	532	29	3	113	1,814	
Ohio	38	26	2	0	37	17	0	0	0	4	42	
Oklahoma	622	-4	89	52	55	56	98	0	0	44	710	
Pennsylvania	10	33	9	6	23	1	0	0	0	2	22	
<b>Texas</b>	<b>5,006</b>	<b>-54</b>	<b>657</b>	<b>315</b>	<b>234</b>	<b>421</b>	<b>499</b>	<b>44</b>	<b>7</b>	<b>357</b>	<b>5,674</b>	
RRC District 1	82	-15	14	7	0	5	121	42	0	14	228	
RRC District 2 Onshore	51	-3	10	1	0	2	57	1	0	10	107	
RRC District 3 Onshore	183	28	34	15	38	9	19	1	0	24	197	
RRC District 4 Onshore	18	-2	97	1	0	0	2	0	0	3	111	
RRC District 5	16	1	3	2	0	0	0	0	0	2	16	
RRC District 6	129	2	22	12	2	3	5	0	0	11	136	
RRC District 7B	97	4	8	2	0	0	0	0	0	9	98	
RRC District 7C	475	-8	63	31	54	81	74	0	6	30	576	
RRC District 8	1,956	-90	222	143	115	299	166	0	1	120	2,176	
RRC District 8A	1,780	24	151	60	23	12	14	0	0	108	1,790	
RRC District 9	124	13	8	14	2	8	12	0	0	15	134	
RRC District 10	94	-8	25	27	0	1	29	0	0	11	103	
State Offshore	1	0	0	0	0	1	0	0	0	0	2	
Utah	398	10	65	18	0	3	13	0	0	22	449	
West Virginia	19	-4	1	0	1	2	1	0	0	1	17	
Wyoming	583	17	58	45	68	46	15	1	0	40	567	
<b>Federal Offshore<sup>a</sup></b>	<b>4,129</b>	<b>-8</b>	<b>820</b>	<b>177</b>	<b>43</b>	<b>98</b>	<b>70</b>	<b>8</b>	<b>141</b>	<b>542</b>	<b>4,496</b>	
Pacific (California)	348	-2	38	4	0	0	0	0	0	19	361	
Gulf of Mexico (Louisiana) <sup>a</sup>	3,570	-6	746	155	41	92	57	8	133	490	3,914	
Gulf of Mexico (Texas)	211	0	36	18	2	6	13	0	8	33	221	
Miscellaneous <sup>b</sup>	25	13	3	1	9	5	1	0	0	2	35	
<b>U.S. Total</b>	<b>20,682</b>	<b>144</b>	<b>3,429</b>	<b>1,570</b>	<b>725</b>	<b>1,330</b>	<b>1,495</b>	<b>88</b>	<b>161</b>	<b>1,767</b>	<b>23,267</b>	

<sup>a</sup> Includes Federal offshore Alabama.<sup>b</sup> Includes Arizona, Missouri, Nevada, New York, South Dakota, Tennessee, and Virginia.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves." They may differ from the official Energy Information Administration production data for crude oil for 2010 contained in the Petroleum Supply Annual 2010, DOE/EIA-0340(10).

[EIA Petroleum & Other Liquids Data](#)

Source: U.S. Energy Information Administration, Form EIA-23

**Table 9. Dry natural gas proved reserves, reserves changes, and production, 2010**

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

State and Subdivision	Published Proved Reserves 12/31/09	Changes in Reserves During 2010			New Reservoir Discoveries			Estimated Production (-)	Proved Reserves 12/31/10		
		Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)			New Field Discoveries (+)	in Old Fields (+)
Alaska	9,101	1	622	452	131	0	14	0	0	317	8,838
<b>Lower 48 States</b>	<b>263,408</b>	<b>508</b>	<b>39,899</b>	<b>36,119</b>	<b>10,022</b>	<b>12,748</b>	<b>44,769</b>	<b>850</b>	<b>1,668</b>	<b>21,922</b>	<b>295,787</b>
Alabama	2,871	32	206	173	263	148	28	3	0	223	2,629
Arkansas	10,869	-34	1,072	301	393	807	3,082	0	27	951	14,178
<b>California</b>	<b>2,773</b>	<b>10</b>	<b>548</b>	<b>451</b>	<b>3</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>243</b>	<b>2,647</b>
Coastal Region Onshore	163	1	38	16	1	0	0	0	0	12	173
Los Angeles Basin Onshore	84	5	9	5	0	0	0	0	0	6	87
San Joaquin Basin Onshore	2,469	4	488	427	2	0	8	1	0	220	2,321
State Offshore	57	0	13	3	0	0	4	0	0	5	66
Colorado	23,058	449	2,973	3,645	242	229	2,838	22	27	1,590	24,119
Florida	7	64	0	0	0	0	0	0	0	15	56
Kansas	3,279	140	687	166	17	23	27	4	1	305	3,673
Kentucky	2,782	-58	103	540	0	39	383	0	0	96	2,613
<b>Louisiana</b>	<b>20,688</b>	<b>-612</b>	<b>3,149</b>	<b>3,184</b>	<b>738</b>	<b>847</b>	<b>10,989</b>	<b>48</b>	<b>279</b>	<b>2,189</b>	<b>29,277</b>
North	17,143	-387	2,593	2,485	602	562	10,707	47	173	1,721	26,030
South Onshore	2,844	3	490	615	69	243	280	1	93	394	2,876
State Offshore	701	-228	66	84	67	42	2	0	13	74	371
Michigan	2,763	243	260	378	529	711	1	2	0	154	2,919
Mississippi	917	1	77	70	31	13	33	0	0	87	853
Montana	976	-19	103	100	40	30	86	0	1	93	944
<b>New Mexico</b>	<b>15,598</b>	<b>-89</b>	<b>2,211</b>	<b>1,833</b>	<b>145</b>	<b>419</b>	<b>468</b>	<b>0</b>	<b>3</b>	<b>1,220</b>	<b>15,412</b>
East	4,141	-200	480	418	133	419	326	0	3	392	4,226
West	11,457	111	1,731	1,415	12	0	142	0	0	828	11,186
New York	196	104	35	83	2	11	0	56	0	36	281
North Dakota	1,079	-2	848	722	47	136	442	25	2	94	1,667
Ohio	896	127	68	59	374	239	8	0	0	73	832
Oklahoma	22,769	-394	3,224	3,474	219	1,519	4,571	51	1	1,703	26,345
Pennsylvania	6,985	-373	2,892	1,938	678	930	5,779	50	904	591	13,960
<b>Texas</b>	<b>80,424</b>	<b>985</b>	<b>10,917</b>	<b>9,252</b>	<b>2,580</b>	<b>3,179</b>	<b>11,657</b>	<b>519</b>	<b>122</b>	<b>6,974</b>	<b>88,997</b>
RRC District 1	1,398	-95	424	320	466	416	1,023	117	15	113	2,399
RRC District 2 Onshore	1,800	-10	333	302	18	30	178	307	9	237	2,090
RRC District 3 Onshore	2,616	82	482	319	184	199	175	20	25	508	2,588
RRC District 4 Onshore	6,728	3	1,084	850	208	180	943	24	3	893	7,014
RRC District 5	22,343	27	1,577	1,274	1	5	3,457	0	0	1,771	24,363
RRC District 6	12,795	403	2,660	2,680	505	955	2,173	51	51	1,017	14,886
RRC District 7B	2,077	68	260	231	3	0	220	0	0	149	2,242
RRC District 7C	4,827	68	535	710	575	451	496	0	10	315	4,787
RRC District 8	6,672	304	1,082	1,268	363	758	568	0	2	549	7,206
RRC District 8A	1,218	-40	138	63	14	4	14	0	0	93	1,164
RRC District 9	10,904	336	1,070	221	92	46	1,147	0	7	733	12,464
RRC District 10	6,882	-172	1,252	958	131	96	1,263	0	0	569	7,663
State Offshore	164	11	20	56	20	39	0	0	0	27	131
Utah	7,257	-80	872	219	530	7	106	0	0	432	6,981
Virginia	3,091	59	658	560	124	166	97	0	0	172	3,215
West Virginia	5,946	-359	1,034	1,075	895	984	1,594	0	64	293	7,000
Wyoming	35,283	521	4,880	5,540	1,278	1,308	2,117	1	0	2,218	35,074
<b>Federal Offshore<sup>a</sup></b>	<b>12,552</b>	<b>-123</b>	<b>2,978</b>	<b>2,242</b>	<b>880</b>	<b>1,003</b>	<b>326</b>	<b>68</b>	<b>237</b>	<b>2,154</b>	<b>11,765</b>
Pacific (California)	739	0	23	10	0	0	0	0	0	28	724
Gulf of Mexico (Louisiana) <sup>a</sup>	9,362	-106	2,617	1,771	741	785	186	68	213	1,717	8,896
Gulf of Mexico (Texas)	2,451	-17	338	461	139	218	140	0	24	409	2,145
Miscellaneous <sup>b</sup>	349	-84	104	114	14	0	125	0	0	16	350
<b>U.S. Total</b>	<b>272,509</b>	<b>509</b>	<b>40,521</b>	<b>36,571</b>	<b>10,153</b>	<b>12,748</b>	<b>44,783</b>	<b>850</b>	<b>1,668</b>	<b>22,239</b>	<b>304,625</b>

<sup>a</sup> Includes Federal offshore Alabama.<sup>b</sup> Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, Oregon, South Dakota, and Tennessee.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves," and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." They may differ from the official Energy Information Administration production data for natural gas for 2010 contained in the Natural Gas Annual 2010, DOE/EIA-0131(10).

[EIA Natural Gas Data](#)

Source: U.S. Energy Information Administration, Form EIA-23

**Table 10. Lease condensate proved reserves, reserves changes, and production, 2010**

million barrels of 42 U.S. gallons

State and Subdivision	Changes in Reserves During 2010										Proved Reserves 12/31/10	
	Published Proved Reserves 12/31/09	Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)	New Field Discoveries (+)	New Reservoir Discoveries in Old Fields (+)	Estimated Production (-)		
Alaska	0	0	0	0	0	0	0	0	0	0	0	0
<b>Lower 48 States</b>	<b>1,633</b>	<b>44</b>	<b>471</b>	<b>387</b>	<b>78</b>	<b>140</b>	<b>271</b>	<b>36</b>	<b>8</b>	<b>224</b>	<b>1,914</b>	
Alabama	16	0	4	0	0	0	0	0	0	0	2	18
Arkansas	1	1	0	0	0	0	0	0	0	0	0	2
<b>California</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
Coastal Region Onshore	0	0	0	0	0	0	0	0	0	0	0	0
Los Angeles Basin Onshore	0	0	0	0	0	0	0	0	0	0	0	0
San Joaquin Basin Onshore	0	1	0	0	0	0	0	0	0	0	0	1
State Offshore	0	0	0	0	0	0	0	0	0	0	0	0
Colorado	97	4	18	17	1	2	19	0	0	0	7	115
Florida	0	1	0	0	0	0	0	0	0	0	0	1
Kansas	5	0	3	1	1	3	0	0	0	0	2	7
Kentucky	4	0	0	3	0	0	0	0	0	0	0	1
<b>Louisiana</b>	<b>110</b>	<b>12</b>	<b>19</b>	<b>33</b>	<b>6</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>14</b>	<b>106</b>	
North	26	2	2	3	4	6	1	0	0	3	27	
South Onshore	74	8	15	28	2	5	3	0	3	10	68	
State Offshore	10	2	2	2	0	0	0	0	0	1	11	
Michigan	19	0	1	4	0	0	0	0	0	1	15	
Mississippi	8	3	0	3	0	0	0	0	0	1	7	
Montana	0	0	0	0	0	0	0	0	0	0	0	
<b>New Mexico</b>	<b>80</b>	<b>8</b>	<b>16</b>	<b>11</b>	<b>1</b>	<b>11</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>99</b>	
East	60	7	13	9	1	11	3	0	0	6	78	
West	20	1	3	2	0	0	0	0	0	1	21	
North Dakota	12	0	37	12	0	36	1	0	0	1	73	
Oklahoma	180	14	46	54	1	2	48	0	0	19	216	
<b>Texas</b>	<b>490</b>	<b>-18</b>	<b>189</b>	<b>108</b>	<b>18</b>	<b>48</b>	<b>167</b>	<b>34</b>	<b>1</b>	<b>103</b>	<b>682</b>	
RRC District 1	14	-5	2	3	4	4	16	12	0	1	35	
RRC District 2 Onshore	15	1	4	4	0	0	15	21	0	5	47	
RRC District 3 Onshore	74	-2	19	16	4	12	10	1	1	20	75	
RRC District 4 Onshore	74	-1	12	14	2	2	37	0	0	12	96	
RRC District 5	8	0	0	1	0	0	0	0	0	1	6	
RRC District 6	95	1	23	17	3	8	4	0	0	7	104	
RRC District 7B	5	0	1	1	0	0	0	0	0	1	4	
RRC District 7C	34	-2	6	6	2	2	14	0	0	4	42	
RRC District 8	29	-3	51	6	1	16	30	0	0	38	78	
RRC District 8A	10	-3	30	6	0	0	1	0	0	0	32	
RRC District 9	25	0	3	7	2	2	2	0	0	2	21	
RRC District 10	104	-4	38	27	0	2	38	0	0	11	140	
State Offshore	3	0	0	0	0	0	0	0	0	1	2	
Utah	90	3	6	3	24	0	0	0	0	3	69	
West Virginia	1	1	1	0	0	0	1	0	0	0	4	
Wyoming	272	8	66	93	13	12	17	0	0	13	256	
<b>Federal Offshore<sup>a</sup></b>	<b>228</b>	<b>2</b>	<b>59</b>	<b>37</b>	<b>13</b>	<b>10</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>48</b>	<b>214</b>	
Pacific (California)	2	0	0	0	0	0	0	0	0	0	2	
Gulf of Mexico (Louisiana) <sup>a</sup>	134	3	44	28	13	10	4	2	1	28	129	
Gulf of Mexico (Texas)	92	-1	15	9	0	0	3	0	3	20	83	
Miscellaneous <sup>b</sup>	20	4	6	8	0	5	4	0	0	3	28	
<b>U.S. Total</b>	<b>1,633</b>	<b>44</b>	<b>471</b>	<b>387</b>	<b>78</b>	<b>140</b>	<b>271</b>	<b>36</b>	<b>8</b>	<b>224</b>	<b>1,914</b>	

<sup>a</sup> Includes Federal Offshore Alabama<sup>b</sup> Includes Arizona, Nebraska, Nevada, New York, Ohio, Pennsylvania, South Dakota, Tennessee, and Virginia.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves." They may differ from the official Energy Information Administration production data for crude oil for 2010 contained in the Petroleum Supply Annual 2010, DOE/EIA-0340(10).

[EIA Petroleum & Other Liquids Data](#)

Source: U.S. Energy Information Administration, Form EIA-23

**Table 11. Nonassociated natural gas proved reserves, reserves changes, and production, wet after lease separation, 2010**

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

State and Subdivision	Changes in Reserves During 2010										Proved Reserves 12/31/10
	Published Reserves 12/31/09	Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales Acquisitions (-)	Acquisitions (+)	Extensions (+)	New Field Discoveries (+)	New Reservoir Discoveries in Old Fields (+)	Estimated Production (-)	
Alaska	1,090	-2	392	195	132	0	13	0	0	145	1,021
<b>Lower 48 States</b>	<b>249,406</b>	<b>1,776</b>	<b>37,019</b>	<b>34,180</b>	<b>9,304</b>	<b>10,879</b>	<b>43,610</b>	<b>793</b>	<b>1,515</b>	<b>20,634</b>	<b>280,880</b>
Alabama	2,919	47	208	176	270	153	29	1	0	225	2,686
Arkansas	10,852	-31	1,060	301	393	807	3,079	0	27	948	14,152
<b>California</b>	<b>612</b>	<b>-3</b>	<b>50</b>	<b>87</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>69</b>	<b>503</b>
Coastal Region Onshore	1	0	1	0	0	0	0	0	0	0	2
Los Angeles Basin Onshore	0	0	0	0	0	0	0	0	0	0	0
San Joaquin Basin Onshore	607	-3	47	84	2	0	0	1	0	68	498
State Offshore	4	0	2	3	0	0	1	0	0	1	3
Colorado	22,199	578	2,985	3,763	253	81	2,668	23	29	1,546	23,001
Florida	0	33	0	0	0	0	0	0	0	7	26
Kansas	3,417	168	718	163	17	21	26	3	1	316	3,858
Kentucky	2,887	-17	40	576	0	34	408	0	0	102	2,674
<b>Louisiana</b>	<b>19,898</b>	<b>-411</b>	<b>3,039</b>	<b>3,051</b>	<b>658</b>	<b>792</b>	<b>11,019</b>	<b>49</b>	<b>268</b>	<b>2,107</b>	<b>28,838</b>
North	17,220	-484	2,594	2,489	598	564	10,751	48	173	1,716	26,063
South Onshore	2,463	-42	399	498	55	205	266	1	95	338	2,496
State Offshore	215	115	46	64	5	23	2	0	0	53	279
Michigan	2,728	254	255	372	539	725	1	2	0	151	2,903
Mississippi	884	-8	67	59	25	11	33	0	0	81	822
Montana	681	16	65	70	12	0	47	0	0	70	657
<b>New Mexico</b>	<b>14,662</b>	<b>71</b>	<b>2,134</b>	<b>1,711</b>	<b>104</b>	<b>150</b>	<b>244</b>	<b>0</b>	<b>1</b>	<b>1,131</b>	<b>14,316</b>
East	2,658	-49	339	225	91	150	94	0	1	265	2,612
West	12,004	120	1,795	1,486	13	0	150	0	0	866	11,704
New York	196	104	35	83	2	0	0	56	0	35	271
North Dakota	143	-5	245	264	2	24	21	0	0	10	152
Ohio	799	184	63	58	374	185	8	0	0	65	742
Oklahoma	23,115	-93	3,271	3,613	164	1,535	4,492	54	1	1,725	26,873
Pennsylvania	6,885	-303	2,904	1,935	683	855	5,824	51	911	585	13,924
<b>Texas</b>	<b>76,272</b>	<b>1,057</b>	<b>10,189</b>	<b>8,835</b>	<b>2,075</b>	<b>2,254</b>	<b>11,332</b>	<b>488</b>	<b>116</b>	<b>6,641</b>	<b>84,157</b>
RRC District 1	1,456	-95	430	331	505	445	960	63	16	107	2,332
RRC District 2 Onshore	1,837	18	321	308	19	29	123	327	10	237	2,101
RRC District 3 Onshore	2,326	56	419	288	157	202	181	21	27	479	2,308
RRC District 4 Onshore	6,961	38	1,129	882	219	189	984	25	3	927	7,301
RRC District 5	22,602	65	1,596	1,290	1	5	3,504	0	0	1,795	24,686
RRC District 6	12,806	400	2,732	2,739	523	985	2,213	52	52	1,020	14,958
RRC District 7B	2,322	48	295	256	3	0	258	0	0	160	2,504
RRC District 7C	3,724	84	380	714	261	173	358	0	0	242	3,502
RRC District 8	3,950	229	642	894	124	48	262	0	0	336	3,777
RRC District 8A	43	20	5	7	3	0	8	0	0	8	58
RRC District 9	11,100	345	932	223	95	44	1,207	0	8	731	12,587
RRC District 10	6,984	-144	1,288	868	145	99	1,274	0	0	573	7,915
State Offshore	161	-7	20	35	20	35	0	0	0	26	128
Utah	6,810	-50	776	163	543	1	89	0	0	405	6,515
Virginia	3,091	59	658	560	124	166	97	0	0	172	3,215
West Virginia	6,066	-370	1,055	1,098	909	993	1,628	0	66	297	7,134
Wyoming	36,386	542	5,038	5,688	1,314	1,308	2,191	0	0	2,271	36,192
<b>Federal Offshore<sup>a</sup></b>	<b>7,633</b>	<b>-41</b>	<b>2,054</b>	<b>1,433</b>	<b>827</b>	<b>784</b>	<b>246</b>	<b>65</b>	<b>95</b>	<b>1,660</b>	<b>6,916</b>
Pacific (California)	9	0	0	5	0	0	0	0	0	1	3
Gulf of Mexico (Louisiana) <sup>a</sup>	5,802	-25	1,814	1,000	697	594	139	65	83	1,318	5,457
Gulf of Mexico (Texas)	1,822	-16	240	428	130	190	107	0	12	341	1,456
Miscellaneous <sup>b</sup>	271	-5	110	121	14	0	127	0	0	15	353
<b>U.S. Total</b>	<b>250,496</b>	<b>1,774</b>	<b>37,411</b>	<b>34,375</b>	<b>9,436</b>	<b>10,879</b>	<b>43,623</b>	<b>793</b>	<b>1,515</b>	<b>20,779</b>	<b>281,901</b>

<sup>a</sup> Includes Federal offshore Alabama.<sup>b</sup> Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, Oregon, South Dakota, and Tennessee.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves." They may differ from the official Energy Information Administration production data for natural gas for 2010 contained in the Natural Gas Annual 2010, DOE/EIA-0131(10).

[EIA Natural Gas Data](#)

Source: U.S. Energy Information Administration, Form EIA-23

**Table 12. Associated-dissolved natural gas proved reserves, reserves changes, and production, wet after lease separation, 2010**

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

State and Subdivision	Published Proved Reserves 12/31/09	Adjustments (+,-)	Revision		Changes in Reserves During 2010			New Field Discoveries (+)	New Reservoir Discoveries in Old Fields (+)	Estimated Production (-)	Proved Reserves 12/31/10
			Increases (+)	Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)				
Alaska	8,093	-1	236	260	0	0	2	0	0	174	7,896
<b>Lower 48 States</b>	<b>25,290</b>	<b>-481</b>	<b>4,747</b>	<b>3,704</b>	<b>1,146</b>	<b>2,469</b>	<b>2,658</b>	<b>102</b>	<b>186</b>	<b>2,271</b>	<b>27,850</b>
Alabama	29	13	6	4	2	0	0	2	0	6	38
Arkansas	20	-3	12	0	0	0	4	0	0	4	29
<b>California</b>	<b>2,314</b>	<b>7</b>	<b>525</b>	<b>389</b>	<b>1</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>186</b>	<b>2,282</b>
Coastal Region Onshore	168	2	38	17	1	0	0	0	0	12	178
Los Angeles Basin Onshore	91	3	9	5	0	0	0	0	0	6	92
San Joaquin Basin Onshore	2,002	2	467	367	0	0	9	0	0	164	1,949
State Offshore	53	0	11	0	0	0	3	0	0	4	63
Colorado	1,882	68	142	71	2	160	318	0	0	126	2,371
Florida	7	31	0	0	0	0	0	0	0	8	30
Kansas	83	-2	18	15	1	3	3	1	0	11	79
Kentucky	32	2	70	0	0	8	0	0	0	1	111
<b>Louisiana</b>	<b>1,072</b>	<b>-282</b>	<b>144</b>	<b>171</b>	<b>88</b>	<b>69</b>	<b>26</b>	<b>0</b>	<b>17</b>	<b>108</b>	<b>679</b>
North	53	33	10	6	6	0	0	0	1	12	73
South Onshore	506	37	111	142	17	48	26	0	2	72	499
State Offshore	513	-352	23	23	65	21	0	0	14	24	107
Michigan	77	4	10	13	0	0	0	0	0	6	72
Mississippi	38	11	10	12	6	2	0	0	0	7	36
Montana	312	-38	40	31	29	30	41	0	1	24	302
<b>New Mexico</b>	<b>1,982</b>	<b>-103</b>	<b>230</b>	<b>249</b>	<b>57</b>	<b>319</b>	<b>270</b>	<b>0</b>	<b>2</b>	<b>181</b>	<b>2,213</b>
East	1,900	-110	198	241	57	319	270	0	2	173	2,108
West	82	7	32	8	0	0	0	0	0	8	105
New York	0	0	0	0	0	11	0	0	0	1	10
North Dakota	1,070	0	705	546	51	128	475	28	3	95	1,717
Ohio	97	-57	5	1	0	54	0	0	0	8	90
Oklahoma	1,092	-178	177	103	70	90	398	0	0	97	1,309
Pennsylvania	133	-54	10	18	0	83	0	0	0	10	144
<b>Texas</b>	<b>8,762</b>	<b>206</b>	<b>1,450</b>	<b>1,058</b>	<b>732</b>	<b>1,188</b>	<b>985</b>	<b>64</b>	<b>13</b>	<b>748</b>	<b>10,130</b>
RRC District 1	67	-15	29	16	0	6	148	63	0	15	267
RRC District 2 Onshore	72	-13	35	15	0	3	67	1	0	16	134
RRC District 3 Onshore	476	34	98	54	40	11	7	0	0	66	466
RRC District 4 Onshore	96	-1	14	13	1	1	9	0	0	14	91
RRC District 5	21	-12	2	2	0	0	0	0	0	1	8
RRC District 6	451	13	23	37	0	4	37	0	0	33	458
RRC District 7B	102	39	9	14	0	0	0	0	0	15	121
RRC District 7C	1,706	41	228	92	392	338	205	0	11	115	1,930
RRC District 8	3,490	178	575	532	285	805	376	0	2	281	4,328
RRC District 8A	1,246	-67	141	59	12	4	7	0	0	90	1,170
RRC District 9	422	11	199	10	2	4	5	0	0	44	585
RRC District 10	610	-20	97	193	0	8	124	0	0	57	569
State Offshore	3	18	0	21	0	4	0	0	0	1	3
Utah	601	-15	117	61	0	6	20	0	0	37	631
West Virginia	24	-3	3	2	7	14	3	0	0	3	29
Wyoming	362	-4	44	81	17	54	14	1	0	39	334
<b>Federal Offshore<sup>a</sup></b>	<b>5,223</b>	<b>-14</b>	<b>1,028</b>	<b>879</b>	<b>83</b>	<b>250</b>	<b>87</b>	<b>6</b>	<b>150</b>	<b>564</b>	<b>5,204</b>
Pacific (California)	731	1	23	5	0	0	0	0	0	28	722
Gulf of Mexico (Louisiana) <sup>a</sup>	3,863	-14	907	841	74	222	54	6	138	468	3,793
Gulf of Mexico (Texas)	629	-1	98	33	9	28	33	0	12	68	689
Miscellaneous <sup>b</sup>	78	-70	1	0	0	0	2	0	0	1	10
<b>U.S. Total</b>	<b>33,383</b>	<b>-482</b>	<b>4,983</b>	<b>3,964</b>	<b>1,146</b>	<b>2,469</b>	<b>2,660</b>	<b>102</b>	<b>186</b>	<b>2,445</b>	<b>35,746</b>

<sup>a</sup> Includes Federal offshore Alabama.<sup>b</sup> Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, Oregon, South Dakota, Tennessee, and Virginia.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves." They may differ from the official Energy Information Administration production data for natural gas for 2010 contained in the Natural Gas Annual 2010, DOE/EIA-0131(10).

[EIA Natural Gas Data](#)

Source: U.S. Energy Information Administration, Form EIA-23



**Table 13. Shale natural gas proved reserves and production, 2007 – 2010**

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

State and Subdivision	Reserves				Production			
	2007	2008	2009	2010	2007	2008	2009	2010
Alaska	0	0	0	0	0	0	0	0
<b>Lower 48 States</b>	<b>23,304</b>	<b>34,428</b>	<b>60,644</b>	<b>97,449</b>	<b>1,293</b>	<b>2,116</b>	<b>3,110</b>	<b>5,336</b>
Alabama	1	2	0	0	0	0	0	0
Arkansas	1,460	3,833	9,070	12,526	94	279	527	794
California	0	0	0	0	0	0	0	0
Colorado	0	0	4	4	0	0	1	1
Florida	0	0	0	0	0	0	0	0
Kansas	0	0	0	0	0	0	0	0
Kentucky	21	20	55	10	2	2	5	4
<b>Louisiana</b>	<b>6</b>	<b>858</b>	<b>9,307</b>	<b>20,070</b>	<b>1</b>	<b>23</b>	<b>293</b>	<b>1,232</b>
North	6	858	9,307	20,070	1	23	293	1,232
South	0	0	0	0	0	0	0	0
State Offshore	0	0	0	0	0	0	0	0
Michigan	3,281	2,894	2,499	2,306	148	122	132	120
Mississippi	0	0	0	0	0	0	0	0
Montana	140	125	137	186	12	13	7	13
<b>New Mexico</b>	<b>12</b>	<b>0</b>	<b>36</b>	<b>123</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>6</b>
East	12	0	7	35	2	0	1	3
West	0	0	29	88	0	0	1	3
New York	0	0	0	0	0	0	0	0
North Dakota	21	24	368	1,185	3	3	25	64
Ohio	0	0	0	0	0	0	0	0
Oklahoma	944	3,845	6,389	9,670	40	168	249	403
Pennsylvania	96	88	3,790	10,708	1	1	65	396
<b>Texas</b>	<b>17,256</b>	<b>22,667</b>	<b>28,167</b>	<b>38,048</b>	<b>988</b>	<b>1,503</b>	<b>1,789</b>	<b>2,218</b>
RRC District 1	0	2	435	1,564	0	0	11	41
RRC District 2 Onshore	0	0	0	395	0	0	0	7
RRC District 3 Onshore	0	0	0	0	0	0	0	0
RRC District 4 Onshore	0	0	78	565	0	0	5	26
RRC District 5	8,099	11,408	13,691	16,032	437	769	954	1,053
RRC District 6	0	173	1,161	4,381	0	3	28	219
RRC District 7B	2,018	2,336	2,022	2,435	90	141	145	140
RRC District 7C	0	0	0	13	0	0	0	0
RRC District 8	5	48	24	90	1	4	3	7
RRC District 8A	0	0	0	0	0	0	0	0
RRC District 9	7,134	8,700	10,756	12,573	460	586	643	725
RRC District 10	0	0	0	0	0	0	0	0
State Offshore	0	0	0	0	0	0	0	0
Utah	0	0	0	0	0	0	0	0
Virginia	0	0	0	0	0	0	0	0
West Virginia	0	14	688	2,491	0	0	11	80
Wyoming	0	0	0	1	0	0	0	0
Federal Offshore	0	0	0	0	0	0	0	0
Miscellaneous <sup>a</sup>	66	58	134	121	2	2	4	9
<b>U.S. Total</b>	<b>23,304</b>	<b>34,428</b>	<b>60,644</b>	<b>97,449</b>	<b>1,293</b>	<b>2,116</b>	<b>3,110</b>	<b>5,336</b>

<sup>a</sup> Includes Indiana, Missouri, and Tennessee.

Note: The above table is based on shale natural gas proved reserves and production volumes reported and imputed from data on Form EIA-23 "Annual Survey of Domestic Oil and Gas Reserves." For certain reasons (e.g. incorrect or incomplete respondent submissions, respondent mis-identification of shale vs non-shale reservoirs) the actual proved reserves and production of natural gas from shales may be higher or lower. The production estimates are offered only as an observed indicator of production trends and may differ from official EIA production volumes listed elsewhere on the EIA web page.

Sources: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 2007 through 2010 annual reports, DOE/EIA-0216.

**Table 14. Shale natural gas proved reserves, reserves changes, and production, wet after lease separation, 2010**

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

State and Subdivision	Changes in Reserves During 2010							New Reservoir		Estimated Production (-)	Proved Reserves 12/31/10
	Published Proved Reserves 12/31/09	Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)	Field Discoveries (+)	Discoveries in Old Fields (+)		
Alaska	0	0	0	0	0	0	0	0	0	0	0
<b>Lower 48 States</b>	<b>60,644</b>	<b>7,579</b>	<b>10,661</b>	<b>9,491</b>	<b>1,685</b>	<b>4,290</b>	<b>29,081</b>	<b>557</b>	<b>1,149</b>	<b>5,336</b>	<b>97,449</b>
Alabama	0	0	0	0	0	0	0	0	0	0	0
Arkansas	9,070	63	861	126	336	774	3,014	0	0	794	12,526
California	0	0	0	0	0	0	0	0	0	0	0
Colorado	4	-1	1	2	0	0	3	0	0	1	4
Florida	0	0	0	0	0	0	0	0	0	0	0
Kansas	0	0	0	0	0	0	0	0	0	0	0
Kentucky	55	-1	3	43	0	0	0	0	0	4	10
<b>Louisiana</b>	<b>9,307</b>	<b>2,347</b>	<b>1,856</b>	<b>1,878</b>	<b>11</b>	<b>115</b>	<b>9,346</b>	<b>48</b>	<b>172</b>	<b>1,232</b>	<b>20,070</b>
North Onshore	9,307	2,347	1,856	1,878	11	115	9,346	48	172	1,232	20,070
South Onshore	0	0	0	0	0	0	0	0	0	0	0
State Offshore	0	0	0	0	0	0	0	0	0	0	0
Michigan	2,499	305	165	325	553	333	0	2	0	120	2,306
Mississippi	0	0	0	0	0	0	0	0	0	0	0
Montana	137	40	14	16	1	0	25	0	0	13	186
<b>New Mexico</b>	<b>36</b>	<b>3</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>123</b>
East	7	3	1	2	0	0	29	0	0	3	35
West	29	0	0	9	0	0	71	0	0	3	88
New York	0	0	0	0	0	0	0	0	0	0	0
North Dakota	368	235	528	343	28	87	393	8	1	64	1,185
Ohio	0	0	0	0	0	0	0	0	0	0	0
Oklahoma	6,389	713	1,352	2,117	0	1,302	2,380	54	0	403	9,670
Pennsylvania	3,790	235	1,994	1,583	163	757	5,154	49	871	396	10,708
<b>Texas</b>	<b>28,167</b>	<b>2,940</b>	<b>3,580</b>	<b>2,425</b>	<b>580</b>	<b>594</b>	<b>7,558</b>	<b>396</b>	<b>36</b>	<b>2,218</b>	<b>38,048</b>
RRC District 1	435	8	322	251	409	401	971	114	14	41	1,564
RRC District 2 Onshore	0	6	6	5	0	2	109	282	2	7	395
RRC District 3 Onshore	0	0	0	0	0	0	0	0	0	0	0
RRC District 4 Onshore	78	0	66	12	0	0	459	0	0	26	565
RRC District 5	13,691	105	643	405	0	6	3,045	0	0	1,053	16,032
RRC District 6	1,161	1,968	1,206	1,319	88	150	1,520	0	2	219	4,381
RRC District 7B	2,022	267	273	242	0	0	255	0	0	140	2,435
RRC District 7C	0	0	0	0	0	3	0	0	10	0	13
RRC District 8	24	53	20	0	0	0	0	0	0	7	90
RRC District 8A	0	0	0	0	0	0	0	0	0	0	0
RRC District 9	10,756	533	1,044	191	83	32	1,199	0	8	725	12,573
RRC District 10	0	0	0	0	0	0	0	0	0	0	0
State Offshore	0	0	0	0	0	0	0	0	0	0	0
Utah	0	0	0	0	0	0	0	0	0	0	0
Virginia	0	0	0	0	0	0	0	0	0	0	0
West Virginia	688	701	289	543	2	324	1,045	0	69	80	2,491
Wyoming	0	-1	0	2	0	4	0	0	0	0	1
Federal Offshore	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous <sup>a</sup>	134	0	17	77	11	0	63	0	0	5	121
<b>U.S. Total</b>	<b>60,644</b>	<b>7,579</b>	<b>10,661</b>	<b>9,491</b>	<b>1,685</b>	<b>4,290</b>	<b>29,081</b>	<b>557</b>	<b>1,149</b>	<b>5,336</b>	<b>97,449</b>

<sup>a</sup> Includes Indiana, Missouri, and Tennessee.

Note: The above table is based on shale natural gas proved reserves and production volumes reported and imputed from data on Form EIA-23 "Annual Survey of Domestic Oil and Gas Reserves." For certain reasons (e.g. incorrect or incomplete respondent submissions, respondent mis-identification of shale vs non-shale reservoirs) the actual proved reserves and production of natural gas from shales may be higher or lower. The production estimates are offered only as an observed indicator of production trends and may differ from official EIA production volumes listed elsewhere on the EIA web page.

Source: U.S. Energy Information Administration, Form EIA-23

**Table 15. Coalbed methane proved reserves and production, 2006 – 2010**

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

State and Subdivision	Reserves					Production				
	2006	2007	2008	2009	2010	2006	2007	2008	2009	2010
Alaska	0	0	0	0	0	0	0	0	0	0
<b>Lower 48 States</b>	<b>19,620</b>	<b>21,874</b>	<b>20,798</b>	<b>18,578</b>	<b>17,508</b>	<b>1,758</b>	<b>1,753</b>	<b>1,966</b>	<b>1,914</b>	<b>1,886</b>
Alabama	2,068	2,126	1,727	1,342	1,298	114	114	107	105	102
Arkansas	34	31	31	22	28	3	3	3	3	3
California	0	0	0	0	0	0	0	0	0	0
Colorado	6,344	7,869	8,238	7,348	6,485	477	519	497	498	533
Florida	0	0	0	0	0	0	0	0	0	0
Kansas	234	340	301	163	258	25	38	47	43	41
Kentucky	0	0	0	0	0	0	0	0	0	0
<b>Louisiana</b>	<b>1</b>	<b>7</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>
North	1	7	9	0	0	0	0	1	1	0
South Onshore	0	0	0	0	0	0	0	0	0	0
State Offshore	0	0	0	0	0	0	0	0	0	0
Michigan	0	0	0	0	0	0	0	0	0	0
Mississippi	0	0	0	0	0	0	0	0	0	0
Montana	77	66	75	37	64	12	13	14	12	10
<b>New Mexico</b>	<b>4,894</b>	<b>4,169</b>	<b>3,991</b>	<b>3,646</b>	<b>3,532</b>	<b>510</b>	<b>394</b>	<b>443</b>	<b>432</b>	<b>402</b>
East	322	389	530	474	523	26	23	23	26	27
West	4,572	3,780	3,461	3,172	3,009	484	371	420	406	375
New York	0	0	0	0	0	0	0	0	0	0
North Dakota	0	0	0	0	0	0	0	0	0	0
Ohio	1	1	1	0	0	0	0	0	0	0
Oklahoma	684	1,265	511	338	325	68	82	69	55	45
Pennsylvania	50	108	102	131	129	5	5	11	16	3
<b>Texas</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
RRC District 1	0	0	0	0	0	0	0	0	0	0
RRC District 2 Onshore	0	0	0	0	0	0	0	0	0	0
RRC District 3 Onshore	0	0	0	0	0	0	0	0	0	0
RRC District 4 Onshore	0	0	0	0	0	0	0	0	0	0
RRC District 5	0	0	0	0	0	0	0	0	0	0
RRC District 6	0	0	0	0	0	0	0	0	0	0
RRC District 7B	0	0	0	0	0	0	0	0	0	0
RRC District 7C	0	0	0	0	0	0	0	0	0	0
RRC District 8	0	0	0	0	0	0	0	0	0	0
RRC District 8A	0	0	0	0	0	0	0	0	0	0
RRC District 9	0	0	0	0	0	0	0	0	0	0
RRC District 10	0	0	0	0	0	0	0	0	0	0
State Offshore	0	0	0	0	0	0	0	0	0	0
Utah	750	922	893	725	718	66	73	71	71	66
Virginia	1,813	1,948	1,851	2,261	1,752	81	85	101	111	97
West Virginia	194	255	246	220	220	18	25	28	31	17
Wyoming	2,448	2,738	2,781	2,328	2,683	378	401	573	535	566
Federal Offshore	0	0	0	0	0	0	0	0	0	0
Miscellaneous <sup>a</sup>	28	29	41	17	16	1	1	1	1	1
<b>U.S. Total</b>	<b>19,620</b>	<b>21,874</b>	<b>20,798</b>	<b>18,578</b>	<b>17,508</b>	<b>1,758</b>	<b>1,753</b>	<b>1,966</b>	<b>1,914</b>	<b>1,886</b>

<sup>a</sup> Includes Illinois and Indiana.

Sources: U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves, 2006 through 2010 annual reports, DOE/EIA-0216.

Table 16. Coalbed methane proved reserves, reserves changes, and production, 2010

billion cubic feet at 14.73 psia and 60 degrees Fahrenheit

State and Subdivision	Published Proved Reserves 12/31/09	Changes in Reserves During 2010							New Field Discoveries (+)	New Reservoir Discoveries in Old Fields (+)	Estimated Production (-)	Proved Reserves 12/31/10
		Adjustments (+,-)	Revision Increases (+)	Revision Decreases (-)	Sales (-)	Acquisitions (+)	Extensions (+)					
Alaska	0	0	0	0	0	0	0	0	0	0	0	
<b>Lower 48 States</b>	<b>18,578</b>	<b>784</b>	<b>2,589</b>	<b>2,914</b>	<b>366</b>	<b>226</b>	<b>497</b>	<b>0</b>	<b>0</b>	<b>1,886</b>	<b>17,508</b>	
Alabama	1,342	61	134	51	266	151	29	0	0	102	1,298	
Arkansas	22	1	9	1	0	0	0	0	0	3	28	
California	0	0	0	0	0	0	0	0	0	0	0	
Colorado	7,348	106	937	1,557	0	0	184	0	0	533	6,485	
Florida	0	0	0	0	0	0	0	0	0	0	0	
Kansas	163	-22	157	0	0	0	1	0	0	41	258	
Kentucky	0	0	0	0	0	0	0	0	0	0	0	
<b>Louisiana</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
North Onshore	0	0	0	0	0	0	0	0	0	0	0	
South Onshore	0	0	0	0	0	0	0	0	0	0	0	
State Offshore	0	0	0	0	0	0	0	0	0	0	0	
Michigan	0	0	0	0	0	0	0	0	0	0	0	
Mississippi	0	0	0	0	0	0	0	0	0	0	0	
Montana	37	11	23	0	0	0	3	0	0	10	64	
<b>New Mexico</b>	<b>3,646</b>	<b>261</b>	<b>562</b>	<b>565</b>	<b>12</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>402</b>	<b>3,532</b>	
East	474	4	72	0	0	0	0	0	0	27	523	
West	3,172	257	490	565	12	0	42	0	0	375	3,009	
New York	0	0	0	0	0	0	0	0	0	0	0	
North Dakota	0	0	0	0	0	0	0	0	0	0	0	
Ohio	0	0	0	0	0	0	0	0	0	0	0	
Oklahoma	338	27	82	84	6	11	2	0	0	45	325	
Pennsylvania	131	-1	2	0	0	0	0	0	0	3	129	
<b>Texas</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
RRC District 1	0	0	0	0	0	0	0	0	0	0	0	
RRC District 2 Onshore	0	0	0	0	0	0	0	0	0	0	0	
RRC District 3 Onshore	0	0	0	0	0	0	0	0	0	0	0	
RRC District 4 Onshore	0	0	0	0	0	0	0	0	0	0	0	
RRC District 5	0	0	0	0	0	0	0	0	0	0	0	
RRC District 6	0	0	0	0	0	0	0	0	0	0	0	
RRC District 7B	0	0	0	0	0	0	0	0	0	0	0	
RRC District 7C	0	0	0	0	0	0	0	0	0	0	0	
RRC District 8	0	0	0	0	0	0	0	0	0	0	0	
RRC District 8A	0	0	0	0	0	0	0	0	0	0	0	
RRC District 9	0	0	0	0	0	0	0	0	0	0	0	
RRC District 10	0	0	0	0	0	0	0	0	0	0	0	
State Offshore	0	0	0	0	0	0	0	0	0	0	0	
Utah	725	8	77	30	0	0	4	0	0	66	718	
Virginia	2,261	1	16	459	0	0	30	0	0	97	1,752	
West Virginia	220	0	15	25	0	5	22	0	0	17	220	
Wyoming	2,328	329	575	140	82	59	180	0	0	566	2,683	
Federal Offshore	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous <sup>a</sup>	17	2	0	2	0	0	0	0	0	1	16	
<b>U.S. Total</b>	<b>18,578</b>	<b>784</b>	<b>2,589</b>	<b>2,914</b>	<b>366</b>	<b>226</b>	<b>497</b>	<b>0</b>	<b>0</b>	<b>1,886</b>	<b>17,508</b>	

<sup>a</sup> Includes Illinois and Indiana.

Source: U.S. Energy Information Administration, Form EIA-23

**Table 17. Natural gas plant liquids proved reserves and production, 2009 – 2010 (excludes lease condensate)**

million barrels of 42 U.S. gallons

State and Subdivision	Reserves		Production	
	2009	2010	2009	2010
Alaska	299	288	13	11
<b>Lower 48 States</b>	<b>8,258</b>	<b>9,521</b>	<b>701</b>	<b>734</b>
Alabama	55	68	5	6
Arkansas	2	2	0	0
<b>California</b>	<b>129</b>	<b>114</b>	<b>11</b>	<b>10</b>
Coastal Region Onshore	10	11	1	1
Los Angeles Basin Onshore	6	5	0	0
San Joaquin Basin Onshore	113	98	10	9
State Offshore	0	0	0	0
Colorado	722	879	48	58
Florida	0	0	0	0
Kansas	162	195	16	16
Kentucky	101	124	4	5
<b>Louisiana</b>	<b>231</b>	<b>216</b>	<b>26</b>	<b>25</b>
North	98	79	6	5
South Onshore	90	113	15	15
State Offshore	43	24	5	5
Michigan	43	48	2	3
Mississippi	4	4	0	0
Montana	12	11	1	1
<b>New Mexico</b>	<b>715</b>	<b>764</b>	<b>65</b>	<b>63</b>
East	289	342	32	32
West	426	422	33	31
North Dakota	104	157	8	9
Oklahoma	985	1,270	77	82
Pennsylvania	25	81	1	3
<b>Texas</b>	<b>3,432</b>	<b>3,983</b>	<b>300</b>	<b>311</b>
RRC District 1	87	163	5	8
RRC District 2 Onshore	77	113	11	13
RRC District 3 Onshore	127	129	25	25
RRC District 4 Onshore	231	258	35	33
RRC District 5	192	225	15	16
RRC District 6	330	369	26	25
RRC District 7B	326	359	27	24
RRC District 7C	412	465	28	31
RRC District 8	536	618	44	47
RRC District 8A	201	230	18	18
RRC District 9	419	488	26	29
RRC District 10	494	566	40	42
State Offshore	0	0	0	0
Utah	116	132	7	8
West Virginia	108	122	5	5
Wyoming	1,010	1,001	64	63
<b>Federal Offshore<sup>a</sup></b>	<b>302</b>	<b>341</b>	<b>61</b>	<b>66</b>
Pacific (California)	1	1	0	0
Gulf of Mexico (Louisiana) <sup>a</sup>	301	340	61	66
Gulf of Mexico (Texas)	0	0	0	0
Miscellaneous <sup>b</sup>	0	9	0	0
<b>U.S. Total</b>	<b>8,557</b>	<b>9,809</b>	<b>714</b>	<b>745</b>

<sup>a</sup> Includes Federal offshore Alabama.<sup>b</sup> Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, New York, Ohio, Oregon, South Dakota, Tennessee, and Virginia.

Note: The production estimates in this table are based on data reported on Form EIA-23, "Annual Survey of Domestic Oil and Gas Reserves" and Form EIA-64A, "Annual Report of the Origin of Natural Gas Liquids Production." They may differ from the official EIA production data for 2010 natural gas plant liquids contained in the Petroleum Supply Annual 2010, DOE/EIA-0340(10) and the Natural Gas Annual 2010, DOE/EIA-0131(10).

[EIA Natural Gas Data](#)

Source: U.S. Energy Information Administration, Form EIA-64A and Form EIA-23

**Table 18. Reported proved nonproducing reserves of crude oil, lease condensate, nonassociated gas, associated dissolved gas, and total gas (wet after lease separation) 2010<sup>a</sup>**

State and Subdivision	Crude Oil (Million bbls)	Lease Condensate (Million bbls)	Nonassociated Gas (Bcf)	Associated Dissolved Gas (Bcf)	Total Gas (Bcf)
Alaska	622	0	231	15	246
<b>Lower 48 States</b>	<b>6,358</b>	<b>694</b>	<b>104,109</b>	<b>9,084</b>	<b>113,193</b>
Alabama	0	0	162	0	162
Arkansas	1	0	7,273	1	7,274
<b>California</b>	<b>522</b>	<b>0</b>	<b>254</b>	<b>187</b>	<b>441</b>
Coastal Region Onshore	199	0	1	34	35
Los Angeles Basin Onshore	66	0	0	21	21
San Joaquin Basin Onshore	210	0	253	106	359
State Offshore	47	0	0	26	26
Colorado	180	41	6,768	759	7,527
Florida	2	0	0	0	0
Kansas	2	0	235	1	236
Kentucky	0	0	106	0	106
<b>Louisiana</b>	<b>183</b>	<b>29</b>	<b>19,037</b>	<b>289</b>	<b>19,326</b>
North	45	6	17,635	12	17,647
South Onshore	126	19	1,225	245	1,470
State Offshore	12	4	177	32	209
Michigan	0	4	311	3	314
Mississippi	94	0	207	0	207
Montana	74	0	91	55	146
<b>New Mexico</b>	<b>180</b>	<b>17</b>	<b>3,043</b>	<b>557</b>	<b>3,600</b>
East	180	16	664	552	1,216
West	0	1	2,379	5	2,384
New York	0	0	15	0	15
North Dakota	969	42	20	900	920
Ohio	1	0	14	5	19
Oklahoma	143	66	9,856	432	10,288
Pennsylvania	0	3	5,472	0	5,472
<b>Texas</b>	<b>1,883</b>	<b>274</b>	<b>32,605</b>	<b>3,585</b>	<b>36,190</b>
RRC District 1	144	28	1,545	180	1,725
RRC District 2 Onshore	53	22	810	76	886
RRC District 3 Onshore	37	15	739	140	879
RRC District 4 Onshore	80	43	3,147	24	3,171
RRC District 5	0	0	9,340	0	9,340
RRC District 6	11	34	6,977	113	7,090
RRC District 7B	8	1	890	7	897
RRC District 7C	286	13	789	870	1,659
RRC District 8	790	44	1,157	1,361	2,518
RRC District 8A	418	11	1	368	369
RRC District 9	21	8	4,043	231	4,274
RRC District 10	35	55	3,138	215	3,353
State Offshore	0	0	29	0	29
Utah	257	40	3,125	351	3,476
Virginia	0	0	67	0	67
West Virginia	0	1	924	2	926
Wyoming	152	86	11,593	35	11,628
<b>Federal Offshore<sup>b</sup></b>	<b>1,710</b>	<b>91</b>	<b>2,869</b>	<b>1,922</b>	<b>4,791</b>
Pacific (California)	13	2	0	35	35
Gulf of Mexico (Louisiana) <sup>b</sup>	1,595	60	2,367	1,515	3,882
Gulf of Mexico (Texas)	102	29	502	372	874
Miscellaneous <sup>c</sup>	5	0	62	0	62
<b>U.S. Total</b>	<b>6,980</b>	<b>694</b>	<b>104,340</b>	<b>9,099</b>	<b>113,439</b>

<sup>a</sup> Includes only those operators who produced during the report year 400,000 barrels of crude oil or 2 billion cubic feet of wet natural gas, or more (Category I and Category II operators).

<sup>b</sup> Includes Federal offshore Alabama.

<sup>c</sup> Includes Arizona, Illinois, Indiana, Maryland, Missouri, Nebraska, Nevada, Oregon, South Dakota and Tennessee.

Source: U.S. Energy Information Administration, Form EIA-23