

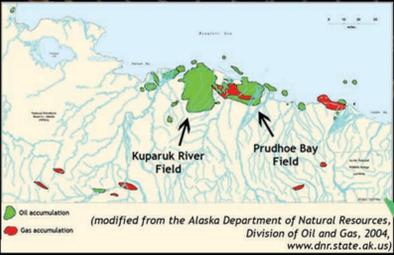
# U.S. Oil Endowment

The US' original oil endowment has been estimated at 260 billion barrels, ranking third in the world.

Walter Youngquist, PhD., 1997, Chair Emeritus  
Department of Geology, University of Oregon

## Our Largest Oil Fields Expected Ultimate Recovery

The largest oil fields in the United States, based on cumulative oil that has already been produced PLUS estimated reserves that are yet to be produced, are in Alaska, Texas and California:

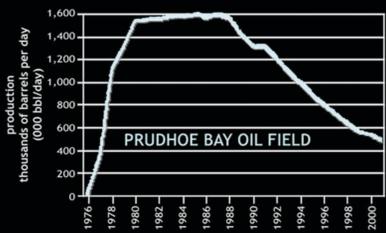


Prudhoe Bay, Alaska	10+ billion barrels
East Texas, Texas	6.0 billion barrels
Wilmington, California	2.8 billion barrels
Midway-Sunset, California	2.2 billion barrels
Kern River, California	1.95 billion barrels
Yates, Texas	1.95 billion barrels
Wasson, Texas	1.8 billion barrels
Elk Hills, California	1.5 billion barrels
Kuparuk River, Alaska	1.5 billion barrels

(Gibson Consulting, 2005, www.gravmag.com)

### Prudhoe Bay

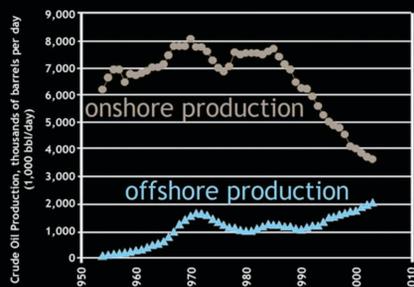
Prudhoe Bay oil field was discovered in 1968 and production began in 1977. Nearly 13 billion barrels of oil had been produced from Prudhoe Bay by 2003. Production peaked in 1988 at almost 1,600,000 barrels of oil per day. By 2001, production was under 500,000 barrels of oil per day. Prudhoe Bay is in decline, but is not yet depleted.



(modified from Matthew R. Simmons, Offshore Magazine, February 1999, www.simmonsco-intl.com)

## New Horizons Offshore Gulf of Mexico Deepwater Fields

Over the past 50 fifty years, US' crude oil production from onshore fields has declined, while production from offshore fields has grown. This is in part due to advances in technology which have enabled exploration and development of deep water oil reservoirs which were previously inaccessible.



(Energy Information Administration, DOE, 2004, www.eia.doe.gov)

## Strategic Petroleum Reserve Flexibility and Security

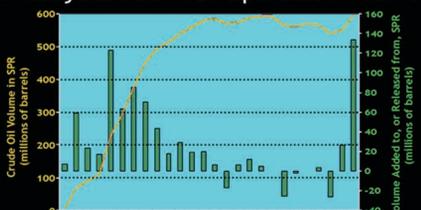
The Strategic Petroleum Reserve (SPR) was established in December 1975 after oil imports were stopped by the 1973-1974 oil embargo. The SPR was created to maximize protection against oil supply disruptions and provide a national defense fuel reserve. As of June 2005, the SPR's inventory was 694 million barrels of oil; the SPR has a capacity of 727 million barrels of oil.

### SPR Storage Sites



The SPR comprises about 50 huge underground caverns in four locations in Texas and Louisiana. The caverns range in capacity from 6 to 35 million barrels, currently providing a potential total capacity of 727 million barrels.  
(Office of Fossil Energy, DOE, 2005)

Since its inception, crude oil has been withdrawn from SPR several times. In 1991, SPR oil was used in conjunction with Operation Desert Storm.

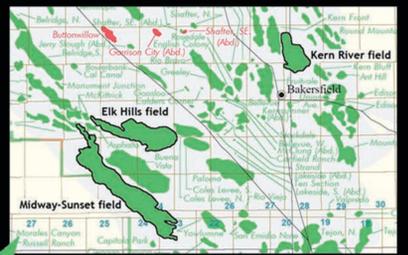


(Energy Information Administration, DOE, 2003, www.eia.doe.gov)

Three times during 1996, non-emergency sales of oil from the SPR were authorized by Congress to raise revenues.

When Hurricane Lili disrupted commercial oil shipments in 2002, an exchange from SPR was carried out so that a major oil pipeline operator could continue critical crude oil shipments.

(Office of Fossil Energy, DOE, 2005, www.fe.doe.gov)



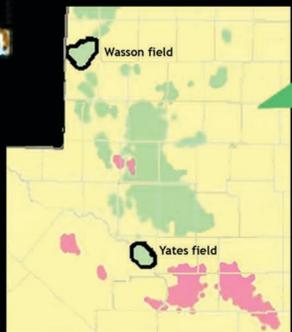
(modified from California Department of Conservation, Division of Oil, Gas and Geothermal Resources, 2001, www.consrv.ca.gov)



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(modified from Texas Railroad Commission, Oil and Gas Division, 1999)



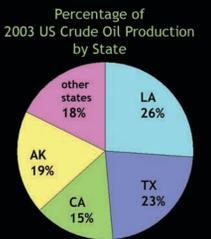
(modified from Texas Railroad Commission, Oil and Gas Division, 1999, www.rrc.state.tx.us)

## Producing Regions

The United States has more than 500,000 oil wells which produced in total over 5.7 million barrels per day of crude oil in 2003. Current top producing states are Louisiana, Texas, Alaska and California.

Louisiana's current position as top producing state is due to discovery and development of large oil fields in deepwater regions off Louisiana's coast in the Gulf of Mexico.

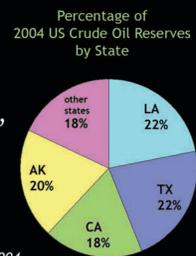
(Energy Information Administration, DOE, 2004, www.eia.doe.gov)



## Proved Oil Reserves

As of January 1, 2004, the US had about 21.9 billion barrels of proved oil reserves, making it 11th-ranked in oil reserves in the world. Eighty percent of the US' oil reserves are concentrated in Texas, Louisiana, Alaska and California.

(Energy Information Administration, DOE, 2004, www.eia.doe.gov)



Many large oil fields have been discovered in the deepwater region of the Gulf of Mexico. As of 2005, the Thunder Horse complex is the largest. Thunder Horse lies below 6,050 feet of Gulf ocean and 25,000 feet of mud, rock and salt deposits. Estimated reserves for the Thunder Horse complex, which includes the Thunder Horse North oil field, are one billion barrels of oil equivalent.

(BP Global, March 2005, www.bp.com)

Mad Dog, a Gulf of Mexico oil field which went on production in January 2005, has reserves which were initially estimated at 200 - 450 million barrels of oil equivalent.

(news.rigzone.com, February 2005)

However, in March 2005, an appraisal well drilled on the flank



(modified from Upstream, 2002, www.exxonmobil.com)

of the Mad Dog field encountered oil, increasing the previously known limits and reserves of the reservoir.  
(news.rigzone.com, February 2005)

## Naval Petroleum Reserves "Open-Up" Legislation

On April 5, 1976, in response to the oil shortages created by the Arab oil embargo of 1973-74, President Ford signed into law the Naval Petroleum Reserves Production Act. Referred to as the "Open Up" legislation, this law enabled the Naval Petroleum Reserves (NPR) to operate in a production mode rather than a conservation mode.

(Office of Fossil Energy, DOE, 2005, www.fe.doe.gov)



President Gerald R. Ford, right, confers with Commander Roger Martin, Director, NPR-C, during the "Open Up" at Elk Hills, 1976.

(photograph courtesy of Office of Fossil Energy, DOE, 2005)

