

Oil and natural gas extraction data

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Petróleos Mexicanos (PEMEX), Mexico

www.pemex.com Mexico City

yellow column indicates original reported units
 100% State-owned entity

Production / Extraction data

Year	Crude Oil & NGL			Natural Gas			Background data
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Net production	Net production	Net production	Net production	Net production	Net production
Thousand bbl/d	Million bbl/yr	Million tonnes/yr	Million cf/d	Million SCM/yr	Billion cf/yr

- 1936
- 1937
- 1938
- 1939
- 1940
- 1941
- 1942
- 1943
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- 2005
- 2006
- 2007
- 2008
- 2009
- 2010

Non-Pemex estimates

Nations Encycl:	44
interpolated	47
interpolated	49
interpolated	52
interpolated	54
interpolated	57
interpolated	60
interpolated	62
interpolated	65
interpolated	68
interpolated	70
interpolated	73
interpolated	75
Nations Encycl:	78
interpolated	81
interpolated	85
interpolated	88
interpolated	92
interpolated	95
interpolated	99
interpolated	102

Pemex created by President Cardenas in June 1938

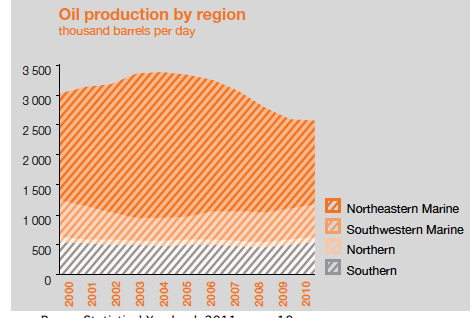
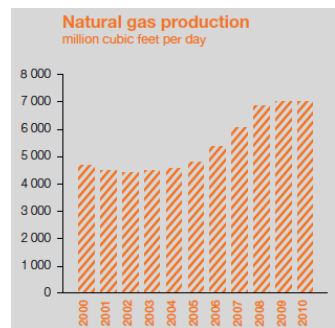


Pemex Statistical Yearbook 2011, page 10.

Year	Crude Oil & NGL (Thousand bbl/d)	Crude Oil & NGL (Million bbl/yr)	Crude Oil & NGL (Million tonnes/yr)	Natural Gas (Million cf/d)	Natural Gas (Million SCM/yr)	Natural Gas (Billion cf/yr)
1959					9,311	329
1960					9,665	341
1961					10,210	361
1962					10,516	371
1963					11,371	402
1964					14,000	494
1965					interpolated	485
1966	354	129		1,302		475
1967	382	139		1,569		573
1968	372	136		1,576		575
1969	411	150		1,668		609
1970	438	161		1,822		665
1971	461	168				643
1972	487	178				643
1973	486	177	29.11 million cubic metres/yr		18,200	677
1974		184			19,164	745
1975		191			21,087	787
1976		238				769
1977	894	326		2,108		852
1978	interpolated	406		interpolated		935
1979		485				1,065
1980		537				1,299
1981		709				1,482
1982	2,312	844				1,448
1983	interpolated	858				1,414
1984	interpolated	872				1,380
1985	interpolated	886				1,345
1986	interpolated	899				1,311
1987	interpolated	913				1,277
1988	OGJ100	927				1,273
1989	1987-2003	917				1,304
1990		917				1,333
1991		964				1,326
1992		1,013				1,312
1993		973				1,311
1994		976				1,323
1995		1,147				1,372
1996		1,119				1,535
1997		1,199				1,630
1998		1,245				1,749
1999		1,278	Energy Intelligence			1,748
2000	Statistical Yearbook	1,220	thousand bbl/day	Statistical Yearbook	Energy Intelligence	
2001	3,450	1,259	3,450	Bcf/day	million cf/day	1,708
2002	3,560	1,299	3,560	4.68	4,679	1,647
2003	3,585	1,309		4.51	4,511	1,614
2004	3,789	1,383		4.42		1,642
2005	3,825	1,396		4.50		1,669
2006	3,760	1,372		4.57		1,759
2007	3,683	1,344		4.82		1,955
2008	3,471	1,267		5.36		2,211
2009	3,158	1,153		6.06		2,525
2010	2,971	1,084		6.92		2,566
	2,953	1,078		7.03		2,562
				7.02		



Pemex Statistical Yearbook 2011, page 1.



Pemex Statistical Yearbook 2011, page 18.

Total	na	39,797	na	na	62,824
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Cell: I9

Comment: Rick Heede:

"Petróleos Mexicanos or Pemex is a Mexican state-owned petroleum company. Pemex has a total asset worth of \$415.75 billion, and is the world's second largest non-publicly listed company by total market value, and Latin America's second largest enterprise by annual revenue as of 2009. However, the majority of its shares are non-publicly listed and under control of the Mexican government. The value of its publicly listed shares totalled \$102 billion in 2010, representing approximately one quarter of the company's total worth.

Asphalt and pitch had been worked in Mexico since the time of the Aztecs. Small quantities of oil were first refined into kerosene around 1876 near Tampico. By 1917 commercial quantities of oil were being extracted and refined by subsidiaries of the British Pearson and American Doheny companies, and had attracted the attention of the Mexican government who then claimed all mineral rights for the state as part of its Constitution.

In 1938, President Lázaro Cárdenas sided with oil workers striking against foreign-owned oil companies for an increase in pay and social services. On March 18, 1938, citing the 27th article of the 1917 constitution, President Cárdenas embarked on the state-expropriation of all resources and facilities, nationalizing the United States and Anglo-Dutch operating companies, creating Pemex. In retaliation, many foreign governments closed their markets to Mexican oil. In spite of the boycott, Pemex developed into one of the largest oil companies in the world and helped Mexico become the fifth-largest oil exporter in the world.

In 1979, Pemex's Ixtoc I exploratory oil well in the Bay of Campeche suffered a blowout resulting in one of the largest oil spills in history. Pemex spent \$100 million to clean up the spill and avoided most compensation claims by asserting sovereign immunity as a state-run company.

en.wikipedia.org/wiki/Pemex

See also: History of Petroleos Mexicanos at www.pemex.com/index.cfm?action=content§ionID=112&catID=11682, though uninformative:

"1937: After a series of events that damaged the relationship between employees and companies, a strike broke out against the foreign oil companies paralyzing the country. The Conciliation and Arbitration Board ruled in favor of the workers, but the companies filed a writ of amparo in the Nations Supreme Court of Justice.

1938: As the writ of amparo was rejected, the Supreme Court ratified the judgment rendered by the Federal Conciliation and Arbitration Board in favor of the workers. After the companies' rejection to fulfill the court order, during the afternoon of March 18th, President Lazaro Cardenas del Rio issued an executive order to expropriate the real estate property and the movable property of 17 oil companies in favor of the Nation. On June 7, Petroleos Mexicanos is created."

Cell: M9

Comment: Rick Heede:

World Bank, 2008b, page 357: "Petroleos Mexicanos is a decentralized public entity of the Mexican government. The Mexican government owns 100% of PEMEX. The company is a decentralized entity of the federal government."

World Bank (2008b) A Citizen's Guide to National Oil Companies, Part B: Data Directory, World Bank, Washington, & Center for Energy Economics, Bureau of Economic Geology Jackson School of Geosciences University of Texas, Austin, 764 pp.

See also: Stojanovski, Ognen (2012) "Handcuffed: an assessment of Pemex's performance and strategy," pp. 280-333, in Victor et al, eds, Oil and Governance, Cambridge Univ. Press, 1034 pp

Cell: D12

Comment: Rick Heede:

Total net worldwide crude oil plus natural gas liquids produced by each company or state-owned enterprise. Where data is available, we list net production.

Crude production includes natural gas liquids (NGL) unless noted.

Cell: H12

Comment: Rick Heede:

Natural gas is typically reported as dry gas; natural gas liquids are reported under crude oil.

Carbon dioxide is normally removed from the gas flow at the production site (see "Vented Carbon Dioxide").

"SCM/d" = standard cubic meters per day. "cf/d" = cubic feet per day.

Net production typically excludes a number of diverted gas streams. Quantities and fractions vary; ExxonMobil's exclusions are probably typical of the industry: "Net production available for sale quantities are the volumes withdrawn from ... natural gas reserves, excluding royalties and volumes due to others when produced, and excluding gas purchased from others, gas consumed in producing operations, field processing plant losses, volumes used for gas lift, gas injections and cycling operations, quantities flared, and volume shrinkage due to the removal of condensate or natural gas liquids production."

ExxonMobil Corporation (2004) 2003 Financial and Operating Review, www.exxonmobil.com, p. 55.

Cell: E15

Comment: Rick Heede:

Petroleos Mexicanos was created by President Lazaro Cardenas in June of 1938.

Cell: E17

Comment: Rick Heede:

The Nations Encyclopedia ("The Encyclopedia of the Nations is a complete source for detailed information about one hundred ninety three countries in the world, information about the United Nations and the associated agencies, and World Leaders."): www.nationsencyclopedia.com/ and specifically: www.country-data.com/cgi-bin/query/r-8749.html

Despite disruption caused by the Revolution, Mexico's oil production peaked in 1921 at 193 million barrels (some 25 percent of world production), largely as a result of increased international demand generated by World War I. During much of the 1920s, Mexico was second only to the United States in petroleum output and led the world in oil exports. By the early 1930s, however, output had fallen to just 20 percent of its 1921 level as a consequence of worldwide economic depression, the lack of new oil discoveries, increased taxation, political instability, and Venezuela's emergence as a more attractive source of petroleum. Production began to recover with the 1932 discovery of the Poza Rica field near Veracruz, which became Mexico's main source of petroleum until the late 1950s.

In 1938 President Lázaro Cárdenas nationalized the petroleum industry, giving the Mexican government a monopoly in the exploration, production, refining, and distribution of oil and natural gas, and in the manufacture and sale of basic petrochemicals. Although Cárdenas offered compensation, United States oil companies pressured the United States government to embargo all imports from Mexico in order to discourage similar nationalizations in other countries. The boycott was in effect briefly, but the United States government soon pressured the oil companies to come to terms with Mexico as a result of President Franklin D. Roosevelt's Good Neighbor Policy and United States security needs arising from World War II. In 1943 Mexico and the oil companies reached a final settlement under which the companies received US\$24 million (a fraction of the book value of the expropriated facilities) as compensation. Nevertheless, the oil nationalization deprived Mexico of foreign capital and expertise for some twenty years.

Mexico's oil output expanded at an average annual rate of 6 percent between 1938 and 1971. Production increased from 44 million barrels in 1938 to 78 million barrels in 1951. Domestic demand progressively exceeded output, and in 1957 Mexico became a net importer of petroleum products. Production rose to 177 million barrels by 1971 with the exploitation of new oil fields in the isthmus of Tehuantepec and natural gas reserves near the northeastern border city of Reynosa, but the gap between domestic demand and production continued to widen.

Extensive oil discoveries in the 1970s increased Mexico's domestic output and export revenues. In 1972 explorers discovered deep oil wells in the states of Chiapas and Campeche that showed huge reservoirs of petroleum extending for 200 kilometers northeast below the Bahía de Campeche, and possibly in the opposite direction toward Guatemala. Almost every drilling operation conducted after 1972 struck oil. In 1973 oil production surpassed the peak of 190 million barrels achieved in the early 1920s. In 1974 Pemex announced additional petroleum discoveries in Veracruz, Baja California Norte, Chiapas, and Tabasco.

By 1975 Mexico's oil output once again exceeded internal demand, providing a margin for export. President López Portillo announced in 1976 that Mexico's proven hydrocarbon reserves had risen to 11 billion barrels. They rose further to 72.5 billion barrels by 1983. López Portillo decided to increase domestic production and use the value of Mexico's petroleum reserves as collateral for massive international loans, most of which went to Pemex. Between 1977 and 1980, the oil company received US\$12.6 billion in international credit, representing 37 percent of Mexico's total foreign debt. It used the money to construct and operate offshore drilling platforms, build onshore processing facilities, enlarge its refineries, engage in further exploration, prove fresh reserves, and purchase capital goods and technical expertise from abroad. These investments helped to increase petroleum output from 400 million barrels in 1977 to 1.1 billion barrels by 1982. Between 1983 and 1991, Mexico's petroleum exports by volume remained roughly constant at 1.4 million barrels per day (bpd), while total production increased from 2.7 million bpd to 3.1 million bpd."

Cell: E39

Comment: Rick Heede:

Oil plus NGL production for 1959-1963 from Petroleos Mexicanos (1964) Informe del Director General, p. 22.

Cell: I39

Comment: Rick Heede:

Natural gas production for 1959-1963 from Petroleos Mexicanos (1964) Informe del Director General, p. 22.

Cell: D44

Comment: Rick Heede:

Oil plus NGL production for 1964-1967 from Petroleos Mexicanos (1965) Petroleum Policy, by Mr. Jesus Reyes Heróles (Dir Gen), p. 3.

Note: 1966 production is estimated at 388 kbbld, but we adjust this figure downwards based on the next year's annual report that notes 1967 production was 11 percent above 1966 (411 kbbld): ie, 1966 = ~372.4 k/bbld.

No data given for natural gas production in our photocopy.

Cell: D47

Comment: Rick Heede:

PEMEX

Oil plus NGL production for 1967 from Petroleos Mexicanos (1968) Petroleum Policy, by Mr. Jesus Reyes Heroles (Dir Gen), p. 6.

Cell: H47

Comment: Rick Heede:

Natural gas production for 1967 from Petroleos Mexicanos (1968) Petroleum Policy, by Mr. Jesus Reyes Heroles (Dir Gen), p. 6.
Note: we derive 1966 gas production from this report's increased production of 8.3 percent over 1966.

Cell: E48

Comment: Rick Heede:

Oil plus NGL production for 1969 from Petroleos Mexicanos (1970) Petroleum Policy, by Mr. Jesus Reyes Heroles (Dir Gen), p. 5-6.

Cell: E49

Comment: Rick Heede:

Oil plus NGL production for 1969 from Petroleos Mexicanos (1970) Petroleum Policy, by Mr. Jesus Reyes Heroles (Dir Gen), p. 12.

Cell: F52

Comment: Rick Heede:

Oil plus NGL production for 1972 from Petroleos Mexicanos (1973) Informe del Director General, by Ing. Antonio Dovali Jaime (Dir Gen), p. 16.

Data only given in production units of million cubic metres or oil per year. Using the previous year's annual report plus 3.45 percent increase to calculate 1972 production (= 183.5 million bbl), the datum given of 29.111 million cubic meters of oil produced in 1972, then 1 million cubic metres equals 6.304 bbl.

Cell: E53

Comment: Rick Heede:

Oil plus NGL production for 1973 from Petroleos Mexicanos (1974) Informe del Director General, by Ing. Antonio Dovali Jaime (Dir Gen), p. 4.

Cell: E54

Comment: Rick Heede:

Oil plus NGL production for 1974 from Petroleos Mexicanos (1975) Informe del Director General, by Ing. Antonio Dovali Jaime (Dir Gen), p. 9 and 16.

Cell: E55

Comment: Rick Heede:

Oil plus NGL production for 1975 from Petroleos Mexicanos (1976) Report of the Director General, by Ing. Antonio Dovali Jaime (Dir Gen), p. 9 and 10.

Cell: D56

Comment: Rick Heede:

Oil plus NGL production for 1976 from Petroleos Mexicanos (1977) Informe del Director General, by Ing. Antonio Dovali Jaime (Dir Gen), p. 4.

Cell: E58

Comment: Rick Heede:

Oil plus NGL production for 1978 from Petroleos Mexicanos (1979) Informe del Director General, by Ing. Antonio Dovali Jaime (Dir Gen), p. 10.

Cell: E59

Comment: Rick Heede:

Oil plus NGL production for 1979-1980 from Petroleos Mexicanos (1981) Memoria de Labores, p. 73.

Cell: D61

Comment: Rick Heede:

Oil plus NGL production for 1981 from Petroleos Mexicanos (1982) Memoria de Labores, p. 79.

Cell: D80

Comment: Rick Heede:

PEMEX (2011) Statistical Yearbook, page 4. Adds crude oil and natural gas liquids; in 2000: 3.012 + 0.438 million bbl per day; crude oil 87.3 percent of total liquids.

Cell: F80

Comment: Rick Heede:

Oil and gas data from EI (2003) Top 100, p. 198.

Cell: H80

Comment: Rick Heede:

PEMEX (2011) Statistical Yearbook, page 23.

Cell: I80

Comment: Rick Heede:

EI (2003) Top 100, p. 194.

Cell: J84

Comment: Rick Heede:

Pemex data is identical to OGJ100.

Cell: D86

Comment: Rick Heede:

Pemex (2011) Monthly Petroleum Statistics, Nov11. Table reproduced at right, and adds crude oil & NGLs.

Cell: H86

Comment: Rick Heede:

Pemex (2011) Monthly Petroleum Statistics, Nov11.

Cell: E97

Comment: Rick Heede:

Pemex "working interest liquids production in 2008" at 3,257 thousand bbl per day.
Victor, Hufts, & Thurber, 2012, Introduction, Table 1.1, page 24, in Victor et al, eds, 2012, Oil and Governance. Table 1.1 is based on information from Wood Mackenzie's Pathfinder Database; www.woodmacresearch.com

Cell: J97

Comment: Rick Heede:

Pemex "working interest natural gas production in 2008" at 3,953 thousand cf per day.
Victor, Hufts, & Thurber, 2012, Introduction, Table 1.1, page 24, in Victor et al, eds, 2012, Oil and Governance. Table 1.1 is based on information from Wood Mackenzie's Pathfinder Database; www.woodmacresearch.com