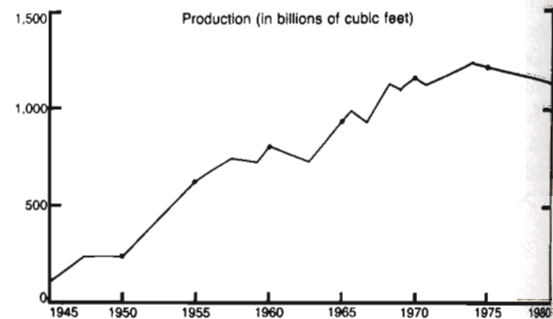
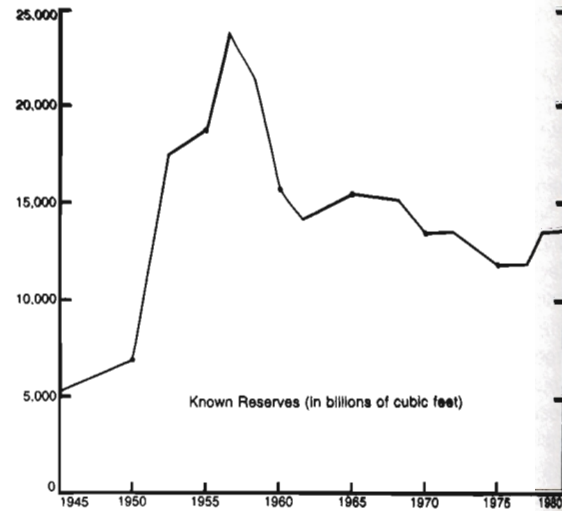
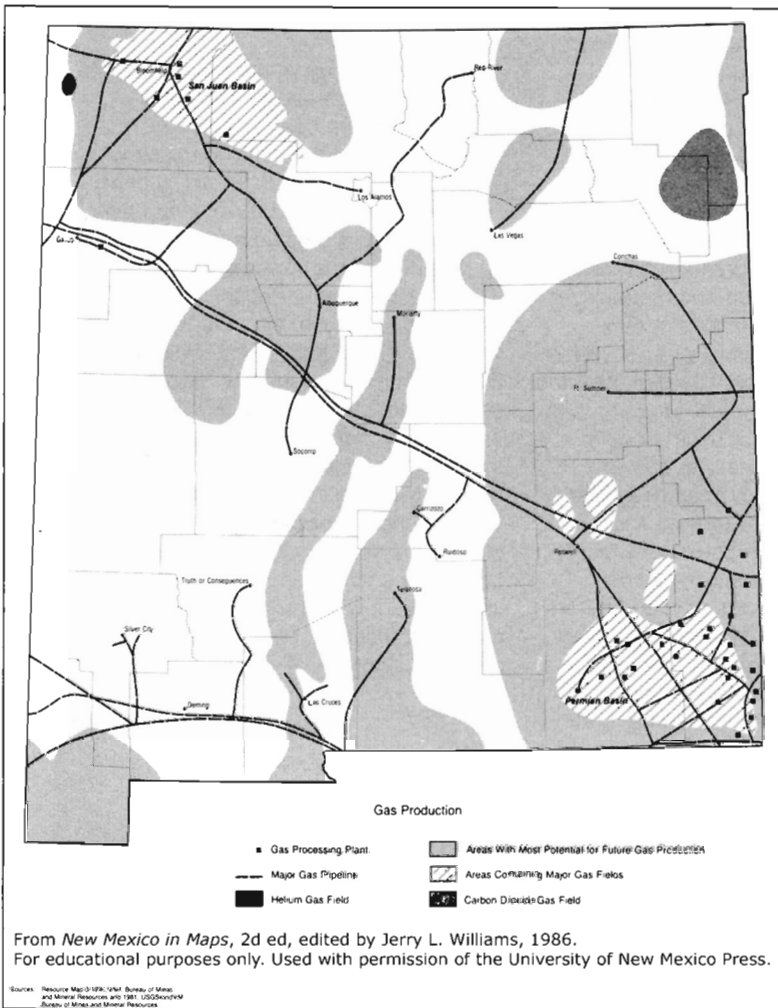


Oil and Gas Production



In 1982 New Mexico ranked fourth in the country in gas production and seventh in oil production. Oil and gas have an enormous impact on the state in the form of revenue for operation of the state government and the public schools and universities. The direct taxes collected from the industry in 1982 totaled \$353 million, of which \$107 million was listed as the "emergency school tax." The state received other revenues (lease rentals, royalties, and severance taxes from oil and gas production), increasing the industry's 1982 contribution to more than \$616 million.

The public school system is a major beneficiary of those revenues, receiving nearly \$404 million or 66 percent of the total statewide school operating costs from them during the 1981-82 school year. Each of the 88 school districts received operating funds, although 94 percent of the gas and oil was produced in only four counties. The seven state

universities and colleges and 12 other institutions of higher education received \$80 million from assessments on the oil and gas industry.

The petroleum industry accounted for 84 percent of the 1982 value of mineral production in New Mexico. The industry provided jobs for more than 25,700 people, of which over 14,600 were employed in the production of crude oil and natural gas. The remainder were involved with the refinement, transportation, and distribution of production.

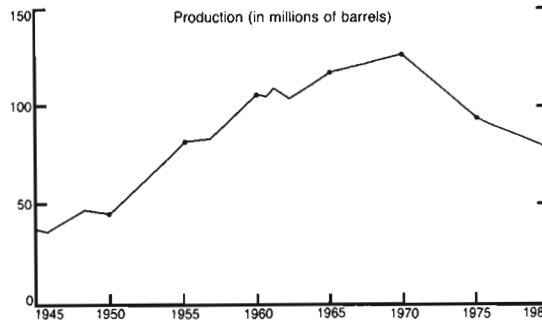
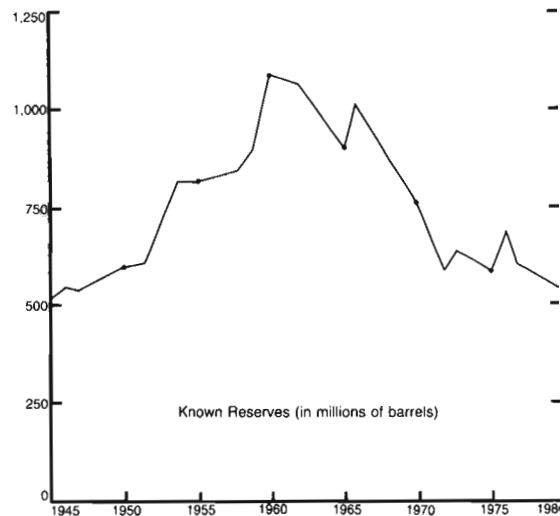
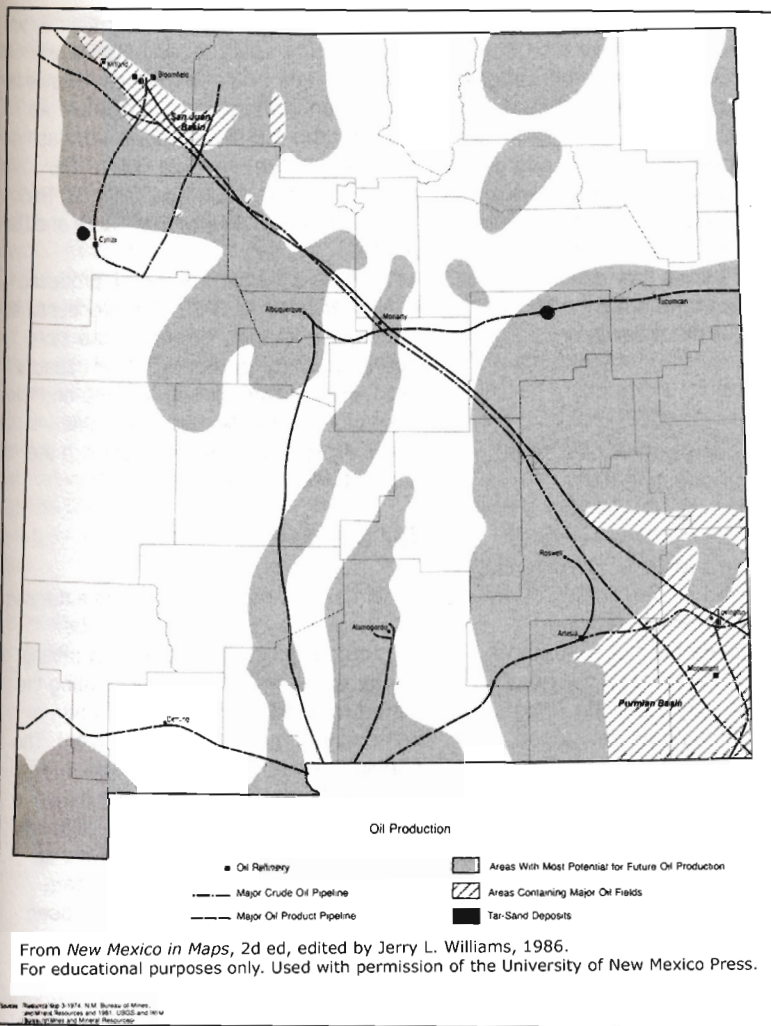
Natural Gas

By 1921 pockets of natural gas in the San Juan Basin were producing fuel for lighting and heat in the town of Aztec. Other towns located near gas wells were able to use the fuel as a resource, but because of the lack of a nearby market, most of the gas discovered in oil drilling was capped, or else the fumes simply

flared into the atmosphere. The development of new pipeline technology enabled El Paso Natural Gas to operate a 16-inch pipeline from the Lea County fields into Arizona and Mexico. By 1956 New Mexico's San Juan Basin had pipelines extending into California and the Pacific Northwest. Since 1935 the state has produced around 29 trillion cubic feet of gas, with the major increase in development occurring in the mid-1950s.

The northwest corner of New Mexico is primarily a gas-producing province, accounting for 47 percent of the 1982 natural gas production in the state, against only 9 percent of the recovered oil. The oil-rich Permian Basin in the southeast accounted for the remaining 53 percent of the natural gas production. Nearly all of the 990 billion cubic feet produced in 1982 came from the counties of Lea, San Juan, Eddy, and Rio Arriba. Approximately 20 percent of the gas is casinghead gas produced from

Oil and Gas Production



Natural Gas Production in New Mexico

Year	Gas Production in MCF* (1000s)	Value of Gas Production (\$1000s)
1945	124,480	2,103
1950	225,212	7,858
1955	520,209	45,458
1960	792,541	81,180
1965	901,522	112,760
1970	1,131,630	164,443
1975	1,203,107	485,333
1980	1,132,316	2,038,168

* MCF = 1000 cubic feet

Oil Production in New Mexico

Year	Oil Production in Barrels (1000s)	Value of Oil Production (\$1000s)
1945	37,351	37,610
1950	47,351	115,100
1955	82,426	224,200
1960	107,388	307,131
1965	119,141	345,508
1970	128,184	410,187
1975	95,063	788,068
1980	75,324	1,808,529

1 barrel = 42 gallons

Oil Refineries in New Mexico, 1982

Name	Location	Capacity (Barrels/Day)
Navajo	Artesia	29,990
Southern Union	Monument	(shut down)
Southern Union	Lovington	36,100
Shell Oil	Ciniza	18,000
Plateau	Bloomfield	16,900
Caribou	Kirtland	3,500
Thriftway	Bloomfield	7,500
Giant	Bloomfield	13,500

Oil and Gas Production

oil wells; the remaining 80 percent is dry gas produced from gas wells.

Forty-six natural gas plants in New Mexico processed over 818 billion cubic feet of gas in 1982. By-products of the field gas were 50 million barrels of butane, propane, natural gasoline, and composite liquids. Natural gas is second to coal as an energy fuel for electricity generation in New Mexico. In 1982 power plants along the Rio Grande and in the southeast consumed 45 billion cubic feet of natural gas in generating 26 percent of the electricity produced in New Mexico. Residential use amounted to 26 billion cubic feet, commercial use totaled 22 billion cubic feet, and the industrial sector consumed 21 billion cubic feet in New Mexico during 1982.

Carbon Dioxide

Carbon dioxide is a natural gas produced from the Bravo Dome of northeast New Mexico. Although carbon-dioxide gas is not an energy resource, it is used mainly for enhanced recovery of oil from old oil fields. The carbon dioxide is injected into the oil reservoir, where it helps to recover oil left behind after the primary recovery and waterflood operations are concluded. Carbon dioxide produced in northeast New Mexico will be used for enhanced oil recovery in the Permian Basin of southeast New Mexico and west Texas. It is estimated that by 1990 as much as 11 million barrels of oil per year might be produced in New Mexico with the aid of carbon dioxide.

Helium

Helium is an inert nonfuel gas that occurs as a minor component of some

natural gases. Its principal uses are in cryogenics, welding, and pressurizing and purging. Helium-bearing natural gas is produced from the Beautiful Mountain gas field in northwest New Mexico. The helium is extracted from the natural gas at a plant near Shiprock. Approximately 35 million cubic feet of helium gas are produced each year in New Mexico. The U.S. Bureau of Mines has estimated that helium reserves in the state totaled 728 million cubic feet as of January 1, 1981.

Oil

The first official report of oil was in 1882 when a prospecting party discovered a flowing oil well only a few miles from the Navajo Reservation in northwestern New Mexico. Commercial production started in San Juan County in 1922 when the Midwest Refining Company completed a gas well at the Dome Field and discovered the nearby Hogback oil pool. By 1924 the Artesia oil field in Eddy County was developed, and the discovery of the famous Hobbs pool in 1929 quickly boosted the state as a major oil producer. By 1932 large oil pipelines extended into Lea County to transport New Mexico crude to the eastern markets. Crude oil was transported by pipeline from the Rattlesnake and Table Mesa fields of San Juan County to Gallup and subsequently shipped by railway tank cars to the Continental refinery in Albuquerque.

During the past 50 years, New Mexico has moved from 17th to 7th among the states in production of oil. In 1928, 1.2 million barrels were produced, compared to 71 million barrels in 1982. Production peaked in 1969, with over 129 million barrels. Ninety-one percent of the 1982

production came from the Permian Basin in Lea, Eddy, Chaves, and Roosevelt counties. The southeastern dominance in production is expected to continue, as 1,370 of the 1,565 known oil and gas pools are in the Permian Basin. The remaining production was from the San Juan Basin counties of San Juan and Rio Arriba.

Thirty-five percent of the oil produced in New Mexico in 1982 was processed at the eight refineries located in the state, operating at 59 percent of their capacity. One refinery was closed in 1980 and two suspended operations during 1982. There were five active refineries in the state at the end of 1982.

Tar Sands

Tar sand is sandstone that is saturated with heavy, viscous oil. Oil may be extracted from tar sands by first mining the tar sand and then either heating the mined rock with steam or hot water, or immersing it in a petroleum solvent. The principal tar sand deposit in New Mexico is located approximately seven miles north of Santa Rosa. Between 1930 and 1939, 153,000 tons of Santa Rosa tar sand were mined and used for road-surfacing material. The mine has been closed since 1939. Approximately 97 million barrels of oil are present in the Santa Rosa tar sands. A smaller tar sand deposit is located 15 miles northeast of Gallup but has not been mined.

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