DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS INVESTIGATIONS SERIES
MAP I-1327

ENERGY RESOURCES MAP OF NEW MEXICO

By
United States Geological Survey and New Mexico
Bureau of Mines and Mineral Resources

1981

All production inside dashed line is from the Cretaceous (K)

PETROLEUM AND NATURAL GAS

PRODUCING AREAS
- Oil
- Gas

AGE OF PRODUCING ROCKS
- K Cretaceous
- J Jurassic
- P Permian
- P Pennsylvanian
- M Mississippian
- D Devonian
- S Silurian
- O Ordovician

CARBON-DIOXIDE WELL

DRY HOLE—Showing total depth, where known in feet. Symbol may represent more than one hole

OIL, GAS, AND PRODUCTS PIPELINES—Showing size, in inches, and flow direction
- 16" Oil
- 16" Gas
- 16" Products

OIL REFINERY—Showing capacity in barrels/day (14,000)

GAS PROCESSING PLANT—Showing capacity in thousand cubic feet/day (12,000)

GAS STORAGE FACILITY

GEOTHERMAL

THERMAL SPRING OR WELL
- 38-58 20E Temperature—In degrees celsius
- 20 Discharge—In gallons/minute
- E Estimate
- ? Unknown

THERMAL CONTROL POINT—Showing value in heat-flow units (measure of heat flowing from the earths' interior: 1 heat-flow unit=10⁻⁶cal/cm²/second)

2.0 — CONTOUR—Showing value in heat-flow units. Dashed where indefinite

ELECTRICITY

SANTA FE 12 (C) GENERATING STATIONS—Showing names of plants and capacities in megawatts
- (O) Oil-fired
- (G) Natural gas-fired
- (C) Coal-fired
- (H) Hydroelectric
- (W) Wind

345 TRANSMISSION LINES—Showing capacities in kilovolts. Lines with capacity less than 69 kV not shown

URANIUM

ISOLATED URANIUM LOCALITY OR MINE—Symbol may represent more than one site

URANIUM DISTRICT BOUNDARY

Area of closely spaced mines and prospects

URANIUM MILL

COAL

SEMIANTHRACITE

BITUMINOUS COAL
- Locally contains bituminous coal

SUBBITUMINOUS COAL

BITUMINOUS OR SUBBITUMINOUS COAL

OVERBURDEN
- Less than 3,000 ft (910 m); lines locally indicate areas with less than 250 ft (76 m) of overburden that are known to contain coal of potential value
- More than 3,000 ft (910 m)

COAL MINE—Asterisk (*) indicates more than one opening
- Underground mine
- S Strip mine
- A Abandoned, or inactive
- C Isolated inactive or abandoned mine or prospect

ROCKS KNOWN TO CONTAIN COAL IN SOUTHWESTERN COLORADO—May not contain economic coal in New Mexico

GEOLOGY

MAJOR IGNEOUS INTRUSIONS IN COAL BEDS

PRECAMBRIAN ROCKS EXPOSED AT SURFACE—From Dane and Bachman (1966)

Base from U.S. Geological Survey, 1967

SCALE 1:500 000

10 0 10 20 30 40 50 MILES

10 0 10 20 30 40 50 KILOMETERS

CONTOUR INTERVAL 500 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

SELECTED REFERENCES

Beaumont, E. C., Shomaker, J. W., Stone, W. J., 1976, Guidebook to coal geology of northwest New Mexico: New Mexico Bureau of Mines and Mineral Resources Circular 154, 58 p.

Dane, C. H., and Bachman, G. O., 1965, Geologic map of New Mexico: U.S. Geological Survey, scale 1:500,000.

Decker, E. R., and Smithson, S. B., 1975, Heat flow and gravity interpretation across the Rio Grande rift in southern New Mexico and west Texas: Journal of Geophysics Research, v. 80, no. 17, p. 2542-2552.

Fassett, J. E., and Hinds, J. S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: U.S. Geological Survey Professional Paper 676, 76 p.

Foster, R. W., Gutjahr, A. L., and Warner, G. H., 1978, Estimates of New Mexico's future oil production: New Mexico Bureau of Mines and Mineral Resources Circular 166, 56 p.

Herrin, Eugene, and Clark, S. P., 1956, Heat flow in west Texas and eastern New Mexico: Geophysics, v. 21, no. 4, p. 1087-1099.

Hilpert, L. S., 1969, Uranium resources of northwestern New Mexico: U.S. Geological Survey Professional Paper 603, 166 p.

Read, C. B., Duffner, R. T., Wood, G. H., and Zapp, A. D., 1950, Coal resources of New Mexico: U.S. Geological Survey Circular 89, 24 p.

Roy, R. F., Decker, E. R., Blackwell, D. D., and Birch, Francis, 1968, Heat flow in the United States: Journal of Geophysics Research, v. 73, no. 16, p. 5207-5221.

Sass, J. H., Lachenbruch, A. H., Munroe, R. J., Greene, G. W., and Moses, T. H., Jr., 1971, Heat flow in the western United States: Journal of Geophysics Research, v. 76, no. 26, p. 6376-6413.

Shearer, Charles, and Reiter, M. A., compilers, 1978, Basic heat-flow data in New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 93.

Shomaker, J. W., Beaumont, E. C., and Kottlowski, F. E., 1971, Strippable low-sulfur coal resources of the San Juan Basin in New Mexico and Colorado: New Mexico Bureau of Mines and Mineral Resources Memoir 25, 189 p.

Summers, W. K., 1976, Catalogue of thermal waters in New Mexico: New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 4, 80 p.

Tabet, D. E., and Frost, S. J., compilers, 1977, Coal fields and mines of New Mexico: New Mexico Bureau of Mines and Mineral Resources, Resource map 10.

TEN LARGEST OIL FIELDS

(Estimate compiled from Foster and others, 1978; unit of measurement in thousands of barrels)

Name of field—Producing unit	Estimated reserves as of Jan. 1, 1979	1978 production as of Jan. 1, 1979	Cumulative production as of Jan. 1, 1979	Location Township	Location Range
				South	East
Vacuum—Grayburg-San Andres	96,751	5,129	175,739	16-18	32-35
Empire—Abo	40,190	14,368	172,610	17-18	26-28
Eunice Monument— Grayburg-San Andres	38,923	3,335	331,354	19-21	35-36
Vacuum—Glorieta	24,967	2,132	45,868	17-18	33-34
Maljamar— Grayburg-San Andres	20,936	3,644	118,162	16-18	30-32
North Vacuum—Abo	16,511	2,136	18,861	16-17	33-34
Langlie Mattix— Seven Rivers-Queen-Grayburg	12,605	2,840	100,547	22-26	36-38
Hobbs—Grayburg-San Andres	11,165	4,087	238,141	18-19	36-37
Grayburg Jackson— Queen-Grayburg-San Andres	9,514	1,463	79,298	16-17	28-30
Lovington—Abo	5,444	558	29,168	16-17	35-36

Compiled by D. A. Myers and J. A. Sharps, U.S. Geological Survey, and by George J. Austin, Robert A. Bieberman, Richard R. Chavez, Stephen J. Frost, Marshall A. Reiter, Wm. Terry Siemers, and David I. Tabet, New Mexico Bureau of Mines and Mineral Resources. Electric power-net data supplied by Public Service Co. of New Mexico and Anthony Garcia, Public Service Commission, State of New Mexico

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