

ored haunt of the Mescalero Apache, was on the western fringe of Comanche territory by the middle 1700's; hence, it was the 1850's before American military expeditions and patrols began to report, with little favor, on the physical features and resources of the area. These reports, together with the constant threat of Apache raiding parties, discouraged both travelers and settlers until the 1860's. The demand for beef at military posts and Indian reservations following the Civil War provided a market for Texas cattle and eventually led to

the establishment of ranches along the Pecos Valley.

Introduction of irrigated agriculture signaled a period of accelerated settlement of the valley. Carlsbad, originally named Eddy after one of the principal developers, owes its origin to this industry. The discovery of potash minerals in Permian salt beds east of Carlsbad in 1925 led to a new industrial boom centered on mining potash salts for use as fertilizers. Carlsbad mines are now the leading potash producers in the United States. □

# Aeromagnetic and aeroradiometric maps and profiles

published or open-filed by the U.S. Geological Survey

The accompanying index maps show the location of aeromagnetic and aeroradiometric surveys for which results are available to the public. A supplemental list of publications and open-file reports is keyed to each index map. Also included are aeromagnetic and aeroradiometric maps published or open-filed by various states and *available only from the states*. Not included are airborne maps and profiles by other government agencies and private industry except when incorporated in USGS or individual state publications.

Many of the publications listed are Geophysical Investigations Maps (GP). These and other Survey maps can be purchased from the Branch of Distribution, U.S. Geological Survey, Bldg. 41, Box 25286, Federal Center, Denver, CO 80225, for areas west of the Mississippi River, including Alaska and Louisiana.

Professional papers and bulletins that are not out of print can be purchased by mail from Eastern Distribution Branch, Text Products Section, U.S. Geological Survey, 604 S. Pickett Street, Alexandria, VA 22304 and over the counter from the U.S. Geological Survey Public Inquiries Offices (P.I.O.'s) located in Anchorage, Dallas, Denver, Los Angeles, Menlo Park, Reston, Salt Lake City, San Francisco, Spokane, and Washington, D.C.

Most all open-file reports are available in

microfiche or paper duplicate copies from Open-File Services Section, U.S. Geological Survey, Box 25425, Federal Center, Denver, CO 80225. (Telephone: 303-234-5888)

Prices for the above publications are published in the monthly listing "New Publications of the Geological Survey." Current price and availability information for older publications can be obtained by calling or writing the appropriate location listed above. Prepayment is required when ordering. Order by series and number (GP-233, OF77-123, etc.) and title. Do not mix orders for maps, professional papers and bulletins, and open-files. Each must be ordered from a separate location.

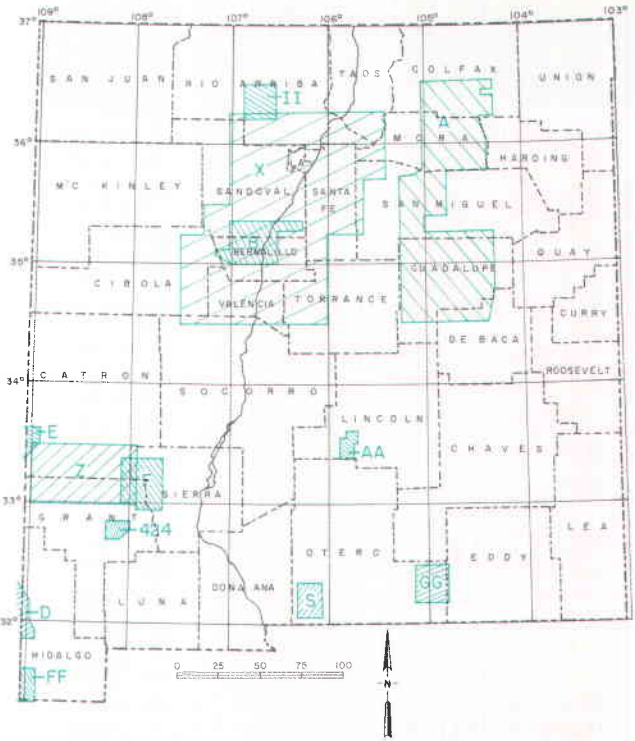
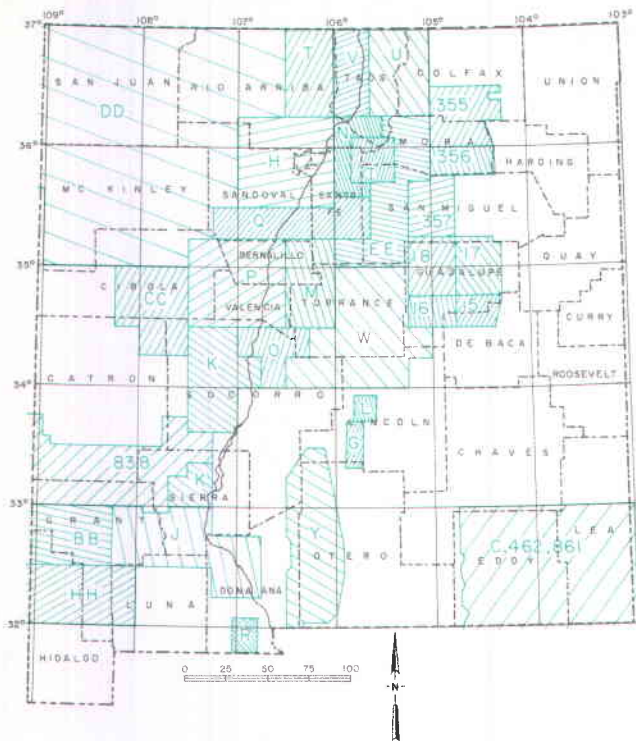
Some of the maps and profiles appear as illustrations in professional journals, technical books, and out-of-print government publications. These may be viewed at USGS libraries and many universities and public libraries. Open-file releases may be examined at libraries and certain offices of the USGS, state surveys, and universities. These locations are noted in the state index.

The U.S. Department of Energy has completed an aerial radiometric and magnetic reconnaissance survey program over the conterminous United States and part of Alaska in support of the National Uranium Resource Evaluation (NURE) program. Information on these surveys can be obtained from: Bendix

Field Engineering Corporation, Technical Library, P.O. Box 1569, Grand Junction, CO 81501. (Telephone: 303-242-8621, ext. 278).

## Map references

- A Regional geological interpretation of aeromagnetic and gravity data for Rowe-Mora area, New Mexico, by G. E. Andreasen, M. F. Kane, and Isidore Zietz, *in Prof. Paper 400-B*, p. 238-239, 1960
- A Aeromagnetic and gravity studies of the Precambrian in northeastern New Mexico, by G. E. Andreasen, M. F. Kane, and Isidore Zietz, *Geophysics*, v. 27, no. 3, p. 343-358, 1962, (fig. 3 is an aeromagnetic map)
- B The Rio Grande trough near Albuquerque, New Mexico, by H. R. Joesting, J. E. Case, and L. E. Cordell, *in Prof. Paper 424-D*, p. 282-286, 1961, (fig. 392.4 shows magnetic profiles; reprinted in *New Mexico Geological Society, Guidebook 12th field conference*, 1961)
- C CEX 59.4.24—Aeroradioactivity survey and geology of the Gnome (Carlsbad) area, New Mexico and Texas (ARMS-1), by J. A. MacKallor, scale 1:250,000, 1965, (published by the U.S. Atomic Energy Commission, available from U.S. Department of Commerce, National Technical Information Service, Springfield, VA 22161)
- D Aeromagnetic map of the San Simon Valley area, Cochise, Graham, and Greenlee Counties, Arizona, and Hidalgo County, New Mexico, 2 sheets, scale 1:125,000, (OF Rept. 66-139), 1966, (copies on file at 1, 2, 3, 4, 5, 6, 8, 11)
- E Bull. 1261-E—Mineral resources of the Blue Range Primitive Area, Greenlee County, Arizona, and Catron County, New Mexico, by J. C. Ratté and others, *with a section on aeromagnetic interpretation* by G. P. Eaton, 91 p., 1969, (pl. 1 is a geologic-aeromagnetic map, scale 1:62,500)
- F Bull. 1319-E—Mineral resources of the Black Range Primitive Area, Grant, Sierra, and Catron Counties, New Mexico, by G. E. Erickson and others, 162 p., 1970, (pl. 1 is a geologic-aeromagnetic map, scale 1:63,360)
- G Aeromagnetic map of part of south-central New Mexico, scale 1:62,500, (OF Rept. 71-288), 1971, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- H Aeromagnetic map of the Jemez area, New Mexico, scale 1:250,000, (OF Rept. 72-391), 1972, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- I Aeromagnetic map of an area northeast of Santa Fe, New Mexico, scale 1:62,500, (OF Rept. 73-290), 1973, (copies on file at 1, 2, 3, 4, 7, 8, 10)
- I Mineral resources of the Pecos Wilderness and adjacent areas, Santa Fe, San Miguel, Mora, Rio Arriba, and Taos Counties, New Mexico, by U.S. Geological Survey, U.S. Bureau of Mines, and New Mexico Bureau of Mines and Mineral Resources, 117 p., aeromagnetic map scale 1:62,500, (OF Rept. 80-382), 1980, (copies on file at 1, 2, 3, 7, 8, 9, 10)
- J Aeromagnetic map of parts of the Silver City and Las Cruces 1° by 2° quadrangles, southwestern New Mexico, scale 1:250,000, (OF Rept. 74-1107), 1974, (copies on file at 1, 2, 3, 4, 7, 8, 10; copies of the 1:62,500 maps from which the 1:250,000 map was prepared may be ordered from 10)
- K Aeromagnetic map of parts of the Socorro and Tularosa 1° by 2° quadrangles, southwestern New Mexico, scale 1:250,000, (OF Rept. 74-1108), 1974, (copies on file at 1, 2, 3, 4, 7, 8,



- 10; copies of the 1:62,500 maps from which the 1:250,000 map was prepared may be ordered from 10)
- L** Aeromagnetic map of the Jicarilla-White Oaks area, Lincoln County, New Mexico, scale 1:62,500, (OF Rept. 74-104), 1974, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- M** Aeromagnetic map of an area east of Albuquerque, New Mexico, scale 1:125,000, (OF Rept. 75-183), 1975, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- N** Aeromagnetic map of Santa Fe and vicinity, New Mexico, scale 1:125,000, (OF Rept. 75-184), 1975, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- O** Aeromagnetic map of an area north and east of Socorro, New Mexico, scale 1:125,000, (OF Rept. 75-185), 1975, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- P** Aeromagnetic map of Albuquerque and vicinity, New Mexico, scale 1:125,000, (OF Rept. 75-186), 1975, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- Q** Aeromagnetic map of an area north of Albuquerque, New Mexico, scale 1:125,000, (OF Rept. 75-187), 1975, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- R** Combined geophysical studies at Kilbourne Hole maar, New Mexico, by Lindrieth Cordell, in *New Mexico Geological Society, Guidebook 26th field conference*, p. 269-271, 1975, (fig. 3 is an aeromagnetic map)
- S** Interpretation of magnetic surveys in intermontane valleys of Nevada and southern New Mexico, by G. D. Bath, (OF Rept. 76-440), 1976, (data from U.S. Naval Oceanographic Office; copies on file at 1, 2, 3, 4, 7, 8, 9, 12)
- T** Aeromagnetic map of an area north of Abiquiu, New Mexico, scale 1:62,500 (OF Rept. 76-503), 1976, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- U** Aeromagnetic map of Wheeler Peak and vicinity, New Mexico, scale 1:62,500, (OF Rept. 76-504), 1976, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- U** Aeromagnetic map of the Wheeler-Latir-Costilla section of the Sangre de Cristo Mountains in New Mexico, by L. Cordell, in *New Mexico Geological Society, Guidebook 27th field conference*, p. 281-282, 1976
- V** Aeromagnetic map of Carson and vicinity, New Mexico, scale 1:62,500, (OF Rept. 76-686), 1976, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- W** Residual magnetic intensity map of central New Mexico, scale 1:250,000, (OF Rept. 76-806), 1976, (copies on file at 1, 2, 3, 4, 7, 8, 9, 10)
- X** Aeromagnetic and gravity studies of the Rio Grande graben in New Mexico between Belen and Pilar, by L. Cordell, in *Tectonics and mineral resources of the southwestern North America*, New Mexico Geological Society, Spec. Pub. No. 6, p. 62-70, 1976, (fig. 10 is an aeromagnetic map)
- Y** Aeromagnetic maps with geologic interpretations for the Tularosa Valley, south-central New Mexico, by G. D. Bath, scales 1:62,500 and 1:400,000, (OF Rept. 77-258, 1977, (data from U.S. Naval Oceanographic Office; copies on file at 1, 2, 3, 4, 7, 8, 9)
- Z** Bull. 1451—Mineral resources of the Gila Primitive Area and Gila Wilderness, Catron and Grant Counties, New Mexico, by J. C. Ratté and others, 229 p., 1979, (pl. 2B is an aeromagnetic map, scale 1:200,000)
- AA** Bull. 1453—Mineral resources of the White Mountain Wilderness and adjacent areas, Lincoln County, New Mexico, by K. Segerstrom and others, with a section on Aeromagnetic interpretation, by Lindrieth Cordell, 135 p., scale 1:62,500, 1979
- BB** Aeromagnetic map of the north and west parts of the Silver City 1° by 2° quadrangle, New Mexico and Arizona, 5 sheets, scale 1:62,500, (OF Rept. 79-1452), 1979, (copies on file at 1, 2, 3, 4, 5, 6, 7, 8, 9, 11)
- CC** Aeromagnetic map of the Malpais area, New Mexico, scale 1:250,000, (OF Rept. 79-1644), 1979, (copies on file at 1, 2, 3)
- DD** Aeromagnetic map of northeast Arizona and northwest New Mexico, 4 sheets, scale 1:250,000, (OF Rept. 80-614), 1980, (copies on file at 1, 2, 3, 5, 6, 7, 8, 9, 10, 11)
- EE** Aeromagnetic map of the Pecos area, New Mexico, 4 sheets, scale 1:62,500, (OF Rept. 80-671), 1980, (copies on file at 1, 2, 3, 7, 8, 9, 10)
- FF** Aeromagnetic map of the Buck Robinson Peak area, Arizona and New Mexico, scale 1:62,500, (OF Rept. 80-995), 1980, (copies on file at 1, 2, 3, 5, 6, 7, 8, 9)
- GG** Aeromagnetic map of the Little Dog-Pup Canyon area, New Mexico, scale 1:62,500, (OF Rept. 80-997), 1980, (copies on file at 1, 2, 3, 7, 8, 9)
- HH** Aeromagnetic map of the southern part of the Silver City 1° by 2° quadrangle, Arizona and New Mexico, 4 sheets, scale 1:62,500, (OF Rept. 80-1128), 1980, (copies on file at 1, 2, 3, 5, 6, 7, 8, 9, 11)
- II** Aeromagnetic map of an area south of Chama, New Mexico, scale 1:62,500, (OF Rept. 81-88), 1981, (copies on file at 1, 2, 3, 4, 7, 8, 9)
- Aeromagnetic maps of the following areas are by W. J. Dempsey and others, scale 1 mi = 1 inch:
- 15** GP-15—Parts of Guadalupe and De Baca Counties (R. 21 E.-R. 26 E. and T. 3 N.-T. 6 N.), 1950
- 16** GP-16—Parts of Guadalupe and De Baca Counties, (R. 16 E.-R. 21 E. and T. 3 N.-T. 6 N.), 1950
- 17** GP-17—Parts of San Miguel and Guadalupe Counties, (R. 21 E.-R. 25 E. and T. 6 N.-T. 12 N.), 1950
- 18** GP-18—Parts of San Miguel and Guadalupe Counties, (R. 16 E.-R. 21 E. and T. 6 N.-T. 10 N.), 1950
- 355** GP-355—Parts of southern Colfax, northern Mora, and western Harding Counties, 1963
- 356** GP-356—Parts of southern Mora, northern San Miguel, and western Harding Counties, 1963

(continued on p. 32)

Date and operation	Operators and owners	Location
11-13-81 coal	Operator—Burnham mine, Consolidation Coal Co., 3535 E. 30th St., Farmington, NM 87401; Gen. Mgr.: Mike Thurman, same address, phone: 327-6333 Property owner—Navajo Nation, Window Rock, AZ 86515	San Juan Co.; sec. 25, T. 25 N., R. 16 W. type: sub-bituminous; surface; private land belonging to the Navajo Nation; southwest of Farmington, NM, near Burnham Chapter house
11-23-81 coal	Operator—Arroyo No. 1 (ID 2901820), Energy Constructors, Inc., P.O. Box 30025, Sta. D, Albuquerque, NM 87110; Gen. Mgr.: Jack A. Lawrence, same address, phone: 247-1062; Person in charge: Dick Rowan (Energy Constructors), same address and phone; Gen. Supt.: Ed Murzyn, same address and phone Property owner—Page Mill Energy Corp., same address and phone	Sandoval Co.; sec. 16, T. 17 N., R. 2 W.; strip; state land; 42 mi out NM-44, turn left, back to town of San Luis
12-14-81 uranium	Operator—Northeast Churchrock, Teton Exploration Drilling Co., P.O. Drawer A-1, Casper, WY 82603; Gen. Mgr.: Victor Magnus, same address, phone: (307) 265-4102; Person in charge: Joe Pendergast, (DUR 2000) P.O. Box 2125, Milan, NM, phone: 287-4221; Gen. Supt.: Kerry Roe, P.O. Drawer A-1, Casper, WY, phone: (307) 265-4102 Property owner—United Nuclear Corp., P.O. Drawer QQ, Gallup, NM 87301	McKinley Co.; sec. 17, T. 16 N., R. 16 W.; Grants mining district; uranium; type—surface; works—vent hole; private land; from Grants, west on I-40 to McGaffey exit, service road west approx. 5 mi, turn right on CR hwy to end of road

(TO BE CONTINUED NEXT ISSUE)

### Oil and gas wells drilled

(continued from p. 19)

- Kinney, E. E., 1967, The oil and gas fields of southeastern New Mexico: Roswell Geological Society, 1967 symposium supplement, 195 p.
- Meyer, R. F., 1966, Geology of Pennsylvanian and Wolfcampian rocks in southeast New Mexico: New Mexico Bureau of Mines and Mineral Resources, Mem. 17, 123 p.
- Molenaar, C. M., 1977, Stratigraphy and depositional history of Upper Cretaceous rocks of the San Juan Basin area, New Mexico and Colorado, with a note on economic resources: New Mexico Geological Society, Guidebook 28th field conference, p. 159-166
- Oil and Gas Journal, 1981, Permian Basin CO<sub>2</sub> targets pinpointed: Oil and Gas Journal, v. 79, no. 47, p. 185-186
- Roberts, J. W., Barnes, J. J., and Wacker, H. J., 1976, Subsurface Paleozoic stratigraphy of the northeastern New Mexico basin and arch complex: New Mexico Geological Society, Guidebook 27th field conference, p. 141-152
- Speer, W. R., 1976, Oil and gas exploration in the Raton Basin: New Mexico Geological Society, Guidebook 27th field conference, p. 217-226
- Thompson, Sam, III, Tovar R., J. C., and Conley, J. N., 1978, Oil and gas exploration wells in the Pedregosa Basin: New Mexico Geological Society, Guidebook 29th field conference, p. 331-342
- Wheatley, R., 1981, 'Tight' designation sparks Abo play: Oil and Gas Journal, v. 79, no. 25, p. 26-27 □

### New USGS publication

Bulletin 1535. GEOLOGIC NAMES OF THE UNITED STATES THROUGH 1975, by R. W. Swanson, M. L. Hubert, G. W. Luttrell, and V. M. Jussen, 1981, 643 p. \$9.00

This report lists most of the rock-stratigraphic names in published use in the United States through 1975 and the major elements necessary for their definition. The report was prepared primarily from U.S. Geological Survey lexicons published in 1938, 1957, 1966, 1970, and 1981, from library research, and from data in the files of the Survey's Geologic Names Committee. It also incorporates information supplied by State geologists.

The information is maintained in the computer of the U.S. Geological Survey in Reston (Virginia), Denver (Colorado), and Menlo Park (California). In the interests of usability the published list is necessarily selective. Informal names have been omitted until given formal status. Names used in charts, figures, map explanations, tables, abstracts, or in text without proper description must be considered informal.

### Aeromagnetic maps

(continued from p. 27)

- 357 GP-357—Central part of San Miguel County, 1963
- 424 GP-424—Aeromagnetic and geologic map of part of the Silver City mining region, Grant County, New Mexico, by W. R. Jones, J. E. Case, and W. P. Pratt, scale 1:63,360, 1974
- 462 GP-462—Natural gamma aeroradioactivity of the Gnome (Carlsbad) area, New Mexico and Texas, by J. A. MacKallor, scale 1:250,000, 1964
- 838 GP-838—Aeromagnetic map of the Morenci-Monticello area, southeastern Arizona and southwestern New Mexico, scale 1:250,000, 1972
- 861 GP-861—Aeromagnetic map of the Carlsbad area, New Mexico and Texas, scale 1:250,000, 1973

### Map inspection locations

1. U.S. Geological Survey Library, Rm. 4-A-100, 12201 Sunrise Valley Dr., Reston, VA 22092
2. U.S. Geological Survey Library, 1526 Cole Blvd. at W. Colfax Ave., Golden, CO (mail address: Stop 914, Box 25046, Federal Center, Denver, CO 80225)
3. U.S. Geological Survey Library, 345 Middlefield Rd., Menlo Park, CA 94025
4. P.I.O., Rm. 169, Federal Building, 1961 Stout St., Denver, CO 80294
5. P.I.O., Rm. 7638, Federal Building, 300 N. Los Angeles St., Los Angeles, CA 90012
6. P.I.O., Rm. 504, Custom House, 555 Battery St., San Francisco, CA 94111
7. P.I.O., Rm. 1C45, Federal Building, 1100 Commerce St., Dallas, TX 75242
8. P.I.O., Rm. 8105, Federal Building, 125 S. State St., Salt Lake City, UT 84138
9. U.S. Geological Survey, 505 Marquette, NW, Albuquerque, NM 87125
10. New Mexico Bureau of Mines and Mineral Resources, Campus Station, Socorro, NM 87801
11. Arizona Bureau of Geology and Mining Technology, 845 N. Park Ave., Tucson, AZ 85719
12. Nevada Bureau of Mines and Geology, University of Nevada, Reno, NV 89507 □

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