

ABANDONED OR INACTIVE URANIUM
MINES IN NEW MEXICO

A report of investigation carried out
between August 1979 and May 1980 under
contract with the New Mexico Energy and
Minerals Department.

by

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New Mexico Bureau of Mines and
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Open-File Report 148

INTRODUCTION

During the course of this investigation approximately 200 uranium mine sites were visited. Although these sites are distributed throughout 20 counties the majority are in McKinley, San Juan, and Valencia Counties, along the western and southern margin of the San Juan Basin. Other counties with an appreciable number of sites are Grant, Rio Arriba, Sandoval, Sierra, and Socorro.

Field work commenced in August, 1979 and extended although not continuously, into May, 1980. Information obtained during the on-site visits included location, type and size of mine, condition of mine, host formation, dimensions of remaining structures, proximity to residences or villages, water quality data, and radiation levels, although a gamma ray scintillometer was not obtained for the project until October 20, 1979. An effort was made to contact landowners whenever and wherever possible, however, no systematic attempt was made to determine land and mineral ownership during this phase of the investigation.

Mine operation data has been included where available. This consists of information on ore grades, production history mineralogy, and mine operator. Old publications of the U.S. AEC and the State Mine Inspectors office were helpful in this area.

The mine reports are arranged alphabetically by county with each county having its own index. A NM- or AZ-mine identification number is given with each mine name in the index. It is an AML numbering system devised by Don Baker, Jr. The first part of this

identification number is based on a U.S. Soil Conservation Service numbering system of 15' quadrangles beginning with 1 in the northwest corner of the state to 24 in the northeast corner, then returning to the western border to start a new tier. The second part refers to a 7½' quad within the 15' quad; these are numbered counterclockwise from 1 in the NE quadrant to 4 in the SE. The last part of the number refers to a particular mine within the 7½' quad. An AZ- prefix indicates the 15' quadrangle is an Arizona quad that overlaps the New Mexico state boundary.

Acknowledgments - The writer wishes to thank the following people for their valuable assistance in the field: Lars (Skip) Skotte, Richard Chamberlin, JoAnne Osburn, Mary Ann Anderson, and Cheryl Kyllonen.

A special thanks is extended to Mr. William Chenoweth of the U.S. Department of Energy, both for his time in the field as well as the claim maps and A.E.C. mine production records he provided. Mr. John Blagbrough provided helpful information about the Chuska district. The editorial assistance of Wyatt Brewster and Lars (Skip) Skotte is gratefully acknowledged.

The help and cooperation of the Navajo Tribe Office in Window Rock, Arizona permitted a statewide investigation to be completed; a note of thanks goes to Mr. R. Zaman and Mr. William Armstrong of that office.

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Orin J. Anderson

Bernalillo County	6 pages	\$1.20
Catron County	9 pages	\$1.80
Dona Ana County	6 pages	\$1.20
Eddy County	5 pages	\$1.00
Grant County	22 pages	\$4.40
Harding County	3 pages	\$.60
Hidalgo County	10 pages	\$2.00
McKinley County	275 pages	\$55.00
Mora County	6 pages	\$1.20
Quay County	7 pages	\$1.40
Rio Arriba County	30 pages	\$6.00
Sandoval County	24 pages	\$4.80
San Juan County	192 pages	\$38.40
San Miguel County	15 pages	\$3.00
Santa Fe County	11 pages	\$2.20
Sierra County	19 pages	\$3.80
Socorro County	25 pages	\$5.00
Taos County	10 pages	\$2.00
Torrance County	5 pages	\$1.00
Valencia County	98 pages	<u>\$19.60</u>
		\$ 153.60

CATRON COUNTY

Quad: Mogollon 7½'

1. NM-377-1-1

Page 1

Baby Mine

Quad: Tejana Mesa 7½'

1. NM-242-1-1

Page 3

Section 21 (Varnum)

Quad: Telephone Canyon 7½'

1. NM-314-4-1

Page 5

Quary

Quad: Third Canyon 7½'

1. NM-245-2-1, NM-245-2-2

Page 7

Midnight #2, McPhaul Adit

Date visited 8/31/79

Mine name(s) Baby Mine County Catron

Section 20 Twnsh. 10 S R. 19 W

Quadrangle sheet Mogollon 7½'

Mining district Mogollon

Elevation 5,600'

Nearest city and/or dwellings Mogollon; 2.1 airmiles southeast

The mine site may be reached by taking Mineral Creek road northeastward out of Alma for approximately 6 miles; the last ¼ mile must be made on foot as the jeep trail that once existed along the creek as it enters Cooney Canyon is no longer passable.

The workings consist of lower and upper adits driven into the south wall of Cooney Canyon about 40' and 140' respectively above the floor. The lower and largest adit was entered and explored for the first 25' to 30'; at that point it makes a left and according to a mine sketch by Collins, 1957, continues for another 70'-75'. A wooden door remains in place about 15'-20' into the adit (see photos on following page).

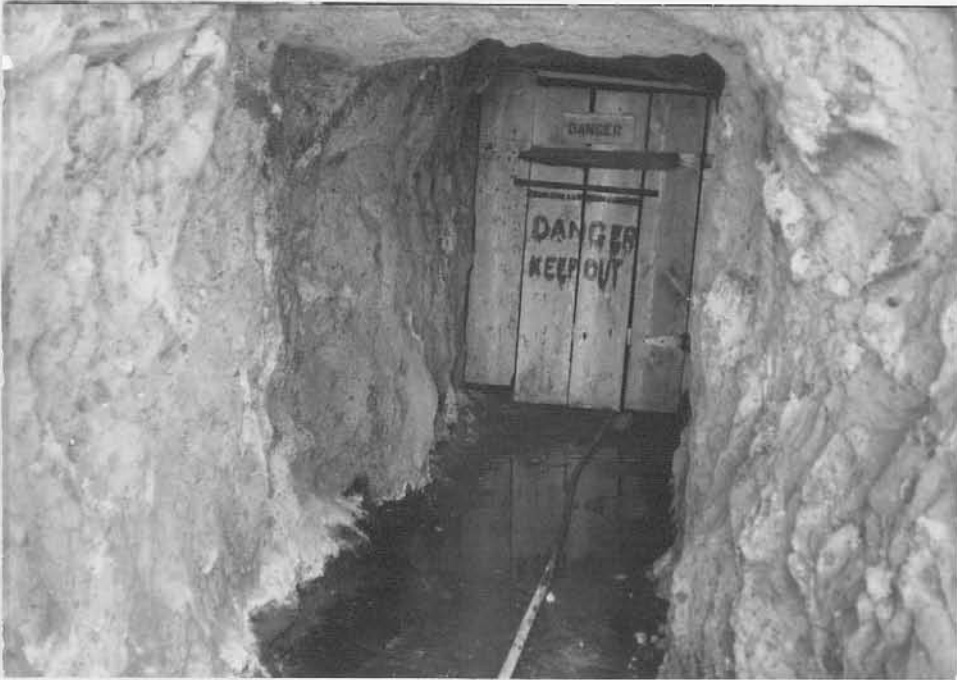
The adits were driven into a fracture zone in a purplish gray andesite; euhedral pyrite is disseminated throughout the andesite. In addition local concentrations of drusy quartz, calcite, and colorless to light green or dark purple fluorite occupy small fissures and brecciated zones in the hydrothermally altered portions of the andesite (Collins, 1957). Scintillometer readings in the lower adit were measured by Virginia McLemore who reported they were in the 250-350 cps range (background=100cps)

Collins, 1957, stated that;

"In April, 1955, anomalous radio-activity was discovered in two abandoned prospect adits in the south wall of Cooney Canyon in Section 20. The occurrence was staked as the Baby Mine and was leased to the Rome Mining Company of Rome, New York. Slightly more than 7 tons of poorly sorted ore that averaged 0.10% U₃O₈ and 0.68% V₂O₅ have been shipped from the lower adit".

The assistance of Virginia McLemore and Robert Eveleth of the NMBMMR in the investigation of this site is gratefully acknowledged.

- References:
- (1) Collins, G.E., 1957, Reconnaissance for Uranium in the Mogollon Mining District, Catron County, New Mexico, U.S. AEC Technical Memorandum DAO-4-TM-7.
 - (2) Collins, G.E., and Hye, T.S., 1955, Preliminary Reconnaissance Report on the Baby Mine, in U.S. AEC Uranium Investigation Reports 1951-56.
 - (3) Hilpert, L., 1965, Uranium Section in Mineral and Water Resources of New Mexico: New Mexico Bureau of Mines and Mineral Resources, Bull. 87, p. 222.
 - (4) Weber, R.H., and Willard, M.E., 1959, Reconnaissance Geologic Map of the Mogollon 30' quadrangle, N.M. Bur. of Mines and Mineral Resources Geol. Map #10.
 - (5) Field notes, 8/31/79.



View inside lower (larger) adit of Baby Mine



Entrance to upper level (smaller) adit of Baby Mine

Date visited 9/6/79

Mine name(s) Section 21 (Varnum) County Catron

Section NE $\frac{1}{4}$ 21 Twنش. 3 N R. 16 N

Quadrangle sheet Tejana Mesa

Mining district. N.A.

Elevation 6,960'

Nearest city and/or dwellings a local ranch house is 1 mile to the southeast

To reach the deposit go northeast on New Mexico 117 from Quemado for 8 miles, to the center of Sec. 32; T. 3 N., R. 15 W. Proceed west on a dirt road along Lopez Draw for 6 miles to a "T" intersection. Turn right and go north for 5 miles to a local ranch house, at a "Y" intersection. Take the right fork for 3/4 of a mile. Proceed north on foot for approximately 3/10 of a mile to the prospect.

The workings on the prospect consist of a shallow bulldozer cut 10' x 15' x 2' deep. A small dump 2' high, 5' long and 4' wide (photo a) lies just west of the cut.

No uranium minerals were visible, and no scintillometer readings were available. The workings are in sandstone of the Mesaverde Group, Hilpert (1969).

- References:
- (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603, p. 33.
 - (2) U.S. AEC, Uranium Mine Records, GJO/AEC.
 - (3) Field notes, 9/6/79.



Photo (a) Looking east at the small dump on the Section 21
(Varnum) Prospect.

Date visited 9/5/79

Mine name(s) Quary County Catron

Section SW $\frac{1}{2}$ 27 Twنش. 8 S R. 17 W

Quadrangle sheet Telephone Canyon 7 $\frac{1}{2}$ '

Mining district N.A.

Elevation 7,450'

Nearest city and/or dwellings Reserve is 20 miles to the west.

To reach the deposit, proceed east from Reserve on the Reserve-Beaverhead road for 27 miles, to the Rainy Mesa Airstrip on the Telephone Canyon Quadrangle. Go north on a dirt road for approximately 6 miles to the north fork of Negrito Creek. Go east 1 mile to Pasture Canyon, then south for 2 miles by jeep trail. At this point the road becomes impassable, and the last 2 miles must be made on foot.

Workings at the Quary Prospect consist of a shallow cut (photo a), 1-2' deep, 20' long, x 15' wide. A small dump (photo b), 15' x 4' x 2' high, is just west of the pit.

No uranium minerals were visible, and no scintillometer readings were available.

References: (1) New Mexico State Mine Inspector's Office.



Photo (a) Looking east at small pit on the Quarry Prospect.



Photo (b) Looking west at Quarry Pit and Dump.

Date visited 9/6/79

Mine name(s) Midnight #2, McPhaul Adit County Catron

Section E $\frac{1}{2}$ 11, W $\frac{1}{2}$ 12 (Midnight #2)
NE $\frac{1}{4}$, SE $\frac{1}{4}$ 14 (McPhaul) Twnsh. 2 N R. 11 W

Quadrangle sheet Third Canyon 7 $\frac{1}{2}$ '

Mining district Datil

Elevation 7,745'

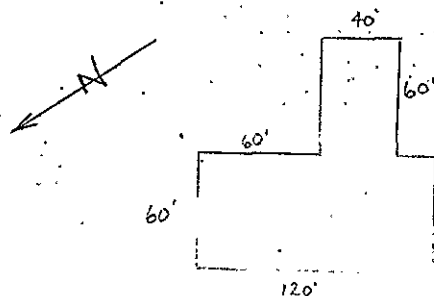
Nearest city and/or dwellings The McPhaul Adit is $\frac{1}{4}$ mile NE of the McPhaul Ranch. The Midnight #2 workings are $1\frac{1}{2}$ miles northeast of the ranch.

To reach the deposits, proceed west on New Mexico 60 from Datil for 13 miles. Take a dirt road leaving the highway, north, for approximately 11 miles to the McPhaul Ranch. The McPhaul adit is $\frac{1}{4}$ mile northeast of the ranch on a small knoll on the east side of the road. To reach the Midnight #2 open pit, continue north on the dirt road, across Alamocita Creek. The road will form a "T" intersection. Take the left fork for $\frac{1}{2}$ a mile, where the road forks again. Take the right fork and proceed north. The road turns into a jeep trail as it goes up the mesa. The pit is to the southwest of Oat Canyon on the northeast edge of a small mesa.

The McPhaul adit (photo did not turn out), is 6' x 6', and approximately 50 feet deep. A small dump spills down the slope northwest of the adit. The adit exposes a 1"-6" thick zone of dark gray sandstone at the base of the Point Lookout (?) Sandstone. Radioactivity is most pronounced where carbonaceous material is concentrated. A grab sample measured 0.04% eu (Hilpert, 1969).

The Midnight #2 is an "L" shaped open pit (photos a and b), as indicated by the sketch map (below).

Sketch Map of Midnight #2



The dimensions are indicated on the sketch map. Maximum depth on the pit is approximately 20 feet. A low dump 30' x 30' x 1-2' deep, lies to the south of the pit.

The pit is in the Point Lookout Sandstone (Hilpert, 1969). Yellow uranium oxides were visible coating grains (tyuyamunite?), and were more abundant in zones containing carbonaceous trash. No scintillometer readings were available.

A trial shipment of 38 tons was made in March of 1957 (Collins). It is unclear as to which deposit the 38 tons were from, but it was probably the Midnight #2.

- References:
- (1) Collins, G., Uranium Occurrences in the Datil Mountain Area, Catron and Socorro Counties, New Mexico, U.S.A.E.C., DBO-4-Tm-6.
 - (2) Hilpert, L., 1969, Uranium Resources of Northwestern New Mexico, U.S.G.S. Bull. 603, p. 33.
 - (3) U.S., AEC, Uranium Mine Records, GJO/AEC.
 - (4) New Mexico State Mine Inspectors Office



Photo (a) Looking E at the Midnight #2 open pit.



Photo (b) Looking N at entrance to Midnight #2 open pit.