

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

Orin J. Anderson

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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.

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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.

Quad: Bread Springs 7½'

1. NM-146-2-1 Page 33
Diamond 2 (Largo)

Quad: Church Rock 7½'

1. NM-122-4-1 Page 39
CD & S (Sec. 35)
2. NM-122-4-2 Page 41
Foutz #3 (Yellow Jacket)
3. NM-122-4-3 Page 45.
Foutz 1 and 2
4. NM-122-4-4 Page 48
William and Reynolds
5. NM-122-4-5 Page 50
Christenson (Rimrock #2)
6. NM-122-4-6 Page 58
Santa Fe Christensen (Rimrock #1)

Quad: Dos Lomas 7½'

1. NM-149-4-1 Page 62
Isabella
2. NM-149-4-2 Page 67
Spencer Shaft (Centennial)
3. NM-149-4-3 Page 69
Hogan
4. NM-149-4-4 Page 74
Gossett Incline (Beacon Hill #23)

5.	NM-149-4-5	Page 78 ⁷⁷
	Blue Peak (Garcia 1)	
6.	NM 149-4-6	Page 84 ⁸³
	Mesa Top 7 & 18 (Malpais Raise)	
7.	NM-149-4-7	Page 93 ⁹²
	Dog Incline (Dog and Flea)	
8.	NM-149-4-8	Page 99 ⁹⁸
	Marquez	
9.	NM-149-4-9	Page 104
	Faith (Westvaco) (Sec. 29)	
10.	NM-149-4-10	Page 109
	Barbara J #3	
11.	NM-149-4-11	Page 112
	Barbara J #1	
12.	NM-149-4-12	Page 114
	Baily and Fife (Rimrock)	
13.	NM-149-4-13	Page 117
	T-20 Shaft (T-9 ore body)	
14.	NM-149-4-14	Page 120
	Flat Top (Flat Top #3 & 4)	
15.	NM-149-4-15	Page 124 ✓
	Roundy Shaft (Rimrock)	
16.	NM-149-4-16	Page 126
	SW ¼ 30 Strip	
17.	NM-149-4-17	Page 131
	Sec. 25 Strip Complex	

18.	NM-149-4-18	Page 141
	Sec. 25 Shaft	
19.	NM-149-4-19	Page 144
	NW $\frac{1}{4}$ 25, Decline and Open Pits	
20.	NM-149-4-20	Page 149
	Hanosh	
21.	NM-149-4-21	Page 152
	Sec. 23 and 26 Open Pit	
22.	NM-149-4-22	Page 156
	NE $\frac{1}{4}$ Sec. 36 (Rimrock) Homer Scriven)	
23.	NM-149-4-23	Page 160
	Sec. 31 Open Pit	
24.	NM-149-4-24	Page 163
	Moe No. 4 (Sec. 32)	
25.	NM-149-4-25	Page 165
	Charlotte	

*Dos Lomas Quad reports #26 - #35 found under Valencia County

Quad: Gallup East 7 $\frac{1}{2}$ '

1.	NM-122-3-1	Page 167
	Hogback (Hogback 3-5)	
2.	NM-122-3-2	Page 171
	Becenti	

Quad: Goat Mountain 7 $\frac{1}{2}$ '

1.	NM-149-2-1	Page 174
	Kermac Sec. 10 (Kermac No. 10)	

Date visited 1/31/80

Mine name(s) Marquez County McKinley

Section NE $\frac{1}{4}$ 23 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7 $\frac{1}{2}$ '

Mining district Poison Canyon Trend, Grants District

Elevation 6,900'

Nearest city and/or dwellings Ambrosia Lake junction, $\frac{1}{2}$ air miles to west

The Marquez Mine is located about $\frac{1}{2}$ mi. west and $\frac{2}{3}$ mi. south of Ambrosia Lake junction ($\frac{2}{3}$ mi. south of state highway no. 53) on the south edge of San Mateo Creek. The mine was owned and operated by the Uranium Division of Calumet and Hecla, Inc., who acquired the property in 1955. Discovery of an ore body in the Poison Canyon sandstone tongue was made the same year on the 54th drill hole. Due to the shallow nature of the ore body, 180' to 270' below the surface, the decision was made to mine via an incline. Entrance to the ore body was driven between August 1957 and February 1958 and resulted in an 1,800' long incline at 10% grade; portal is in Dakota Sandstone (see photos a & b). Details of the ore body may be found in Weege, (1963). An excellent and detailed account of the retreat mining-subsidence and pillar recovery is given in Johnston, (1963). The mine produced from 1958-1964.

At present the workings stand very much as they were upon cessation of activity in 1964, except that all buildings have been removed. Scintillometer readings in the portal area and westward toward the dump range from 700 to 1,500 cps. The mine dump extends 400' westward from a point 100' northwest of the portal, varying in width from 60'-200' (see photo c). A ramp extends from the southeast corner of the dump, near the portal, westward to the upper surface (see photo d). Scintillometer readings in traverse across top and down the west toe ranged from a minimum of 800 to a high of 2,500 cps. The height at the west toe is approximately 25' (see photo e). The southern edge of the dump plus some mine timbering is shown in photo (f). A view northward from the southern edge of the tailings dump shows additional mine debris and the proximity to San Mateo Creek, less than 400' away (see photo g). Some waste material or perhaps ore was stockpiled very near the south bank of the creek as scintillometer readings of 10,000 cps were recorded and large chunks of ore grade material were found at the upper edge of the bank (photo h).

Anomalously high counts were also registered upstream where the old mine access road crosses San Mateo Creek. At the stream bed on the west side of the road readings up to 8 x background were recorded which may indicate the use of tailings material to build up the road bed at this point.

- References:
- (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
 - (2) Johnston, G. C., 1963, Subsidence and Pillar Recovery in the West Area of the Marquez Mine, in, Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15.

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- (3) Weege, R. J., 1963, Geology of the Marquez Mine, Ambrosia Lake Area, in, Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15.
- (4) U.S. AEC-PED-1, 1959, Mine Operations Data Report, GJO/AEC; p. 55; (microfische only).
- (5) Field notes

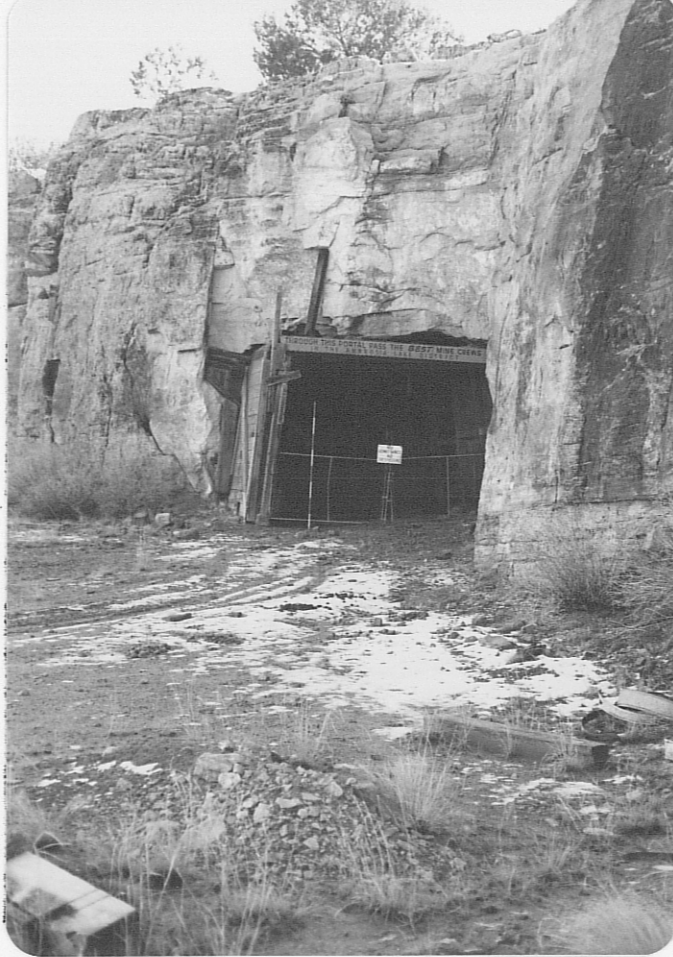


Photo (a) Portal of Marquez Mine in vertical cliff of Dakota Sandstone.

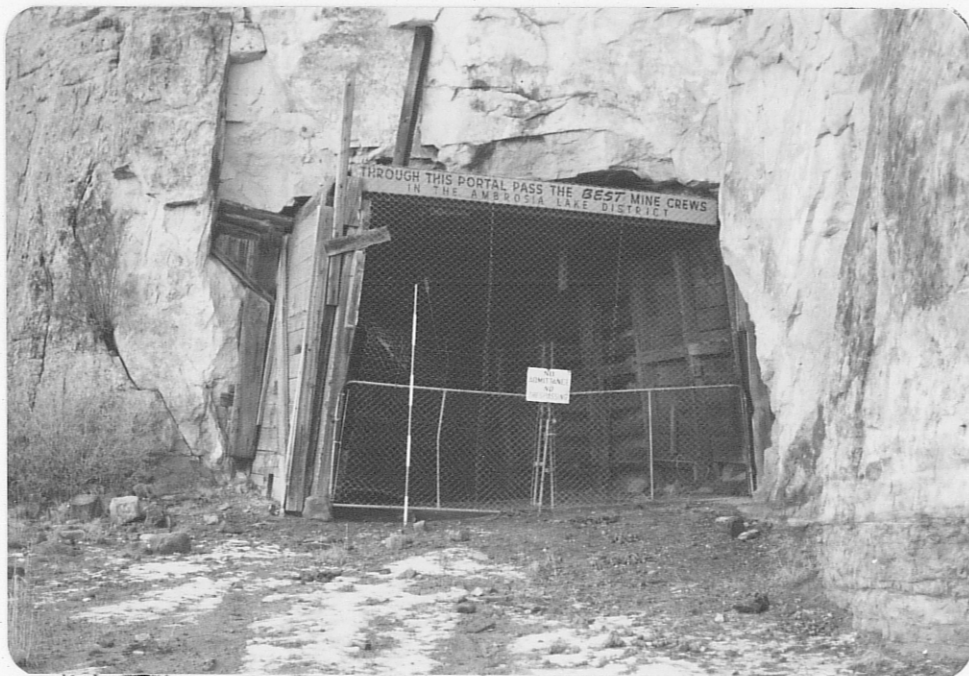


Photo (b) Close-up showing 11' by 15' portal secured by wire mesh gates; vertical timbers are 4" x 6", back is metal I beams crosswise with timbering lengthwise overlying. Note range pole for scale.

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Photo (c) Looking westward at east face of dump; portal immediately behind viewer. Note range pole at left of dump for scale.



Photo (d) View eastward on upper surface of tailings dump showing ramp ascending from mine level at center right; note range pole at far left for scale.

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Photo (e) Looking north at 25' high west toe of tailings dump; note range pole at base of slope for scale.



Photo (f) Looking east at southern edge of tailings dump. San Mateo Creek lies 400' to south; portal is at base of sandstone cliff behind dump at right.



Photo (g) View northward from toe of tailings dump; San Mateo Creek is incised between bench in middle distance and sandstone cliff. Circle identifies area shown in photo (h).



Photo (h) South bank of San Mateo Creek; areas along the edge of bank have very high gamma counts. Black sandstone boulder in foreground, 19" in diam. is high grade ore.

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