

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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## 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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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.

Horace Ben

Quad: Sonsala Butte 1. NE 7 1/2'

1. AZ-60-1-1

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Kee and Tohe

2. AZ-60-1-2

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John Joe

3. AZ-60-1-3

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Castle Tsosie

4. AZ-60-1-4

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Joe Ben #2 Prospect

5. AZ-60-1-5

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Joe Ben #1 Prospect

6. AZ-60-1-6

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Joe Ben #3

7. AZ-60-1-7

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Enos Johnson

8. AZ-60-1-8

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Carl Yazzie #1

9. AZ-60-1-9

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H.B. Roy #2

10. AZ-60-1-10

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Reed Henderson (Reed Henderson Claims)

REFERENCES FOR CHUSKA DISTRICT

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AZ-60-1-6  
Date Visited 11/6/79

Mine name(s) Joe Ben #3 County San Juan

Section (Unsurveyed) Sec. 8 Twنش. 25 N R. 20 W

Quadrangle Sheet Sonsala Butte #1, NE, 7½'

Mining district Chuska

Elevation 6900'

Nearest City and/or dwelling Sanostee, 7 mi. E.

The major workings on the Joe Ben #3 consists of 125' of rim stripping along the NW side of a Salt Wash sandstone nose just 1/2 mi. N of the Enos Johnson Mine. The cut is shown from above in photo (a); the resulting bench is up to 30' wide and a small tailings dump extends downslope for several hundred feet at the angle of repose.

A close-up of the cut, see photo (b), shows that the sandstone beds are interrupted repeatedly by shale (mudstone) lenses. Although it has been thought that the Salt Wash is most favorable where the sandstone-mudstone ratio is about 1:1 (Gruner, 1956), as it is at this locality, the deposits are often too small to be mineable. Further north toward the Carrizo district, the mudstone percentage in the Salt Wash decreases and the deposits become somewhat larger.

According to Blagbrough, 1959, exploration on the Joe Ben #3 claim totaled about 2500' of rim stripping in the Salt Wash member mostly during the summer of 1953. Many of the small cuts are indistinguishable from exploration roads. There are, however, two adits in the vicinity of the Joe Ben #3 cut described above. It is not certain they are on the Joe Ben #3 claim, but will be included here because of their proximity and for the sake of convenience. One is a 5' x 5' opening located approximately 1000' to the SW of the cut; the length of this adit is not known for certain, but judging from the size of the tailings dump it probably is no more than 15'-20', (no photograph available). The other is a 4' high by 5' wide opening located approximately 1/4 mi. to the NE of the cut on the other side of the prominent spur, see photo (c). It is about 15' long and driven generally westward into a massive sand unit of the Salt Wash member; some crude timbering remains in place. A scour and fill feature is visible just above the adit entrance.

Access is provided by dirt road leading west of Sanostee; at approximately 5 mi. take right fork after passing windmill and follow jeep trail along Sanostee Wash for 3½ mi. At this point the Joe Ben #3 cut will lie above on canyon wall to south; the last ½ mi. is made on foot.

Total production from the Joe Ben #3 was reported as 219 tons of ore averaging 20% U<sub>3</sub>O<sub>8</sub>; contained U<sub>3</sub>O<sub>8</sub> was 884 lbs. U:V ratio of samples taken on this claim are about 1:2.5.

- References: (1) Blagbrough, J., et. al., 1959, Uranium Reconnaissance and Drilling in the Sanostee Area...; AEC RME-111.
- (2) Gruner, J., 1956, Concentration of Uranium in Sediments by Multiple Migration-Accretion; Econ. Geol., vol. 51, no. 6.
- (3) Hilpert, L., 1969, Uranium Resources of NW New Mexico; U.S.G.S. PP 603, p. 50.
- (4) AEC production records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.



Photo\_(a) Joe Ben #3 rim cut; looking N from cliff top.



Photo-(b) Joe Ben #3 rim cut; looking S. Note numerous shale (mudstone) beds at this locality.



Photo (c) Adit in Salt Wash member, thought to be on Joe Ben #3 claim; looking westward. Note field glasses hanging above adit entrance for scale; also note scour and fill feature above and to right of adit.