

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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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.

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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.

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-60-1-8

Date visited 11/6/79Mine name(s) Carl Yazzie #1 County San JuanSection 17 (Projected) Twنش, 25 N R. 20 WQuadrangle sheet Sonsala Butte 1 NE 7½'Mining district ChuskaElevation 7000'Nearest city and/or dwellings Sanostee, 7 mi. E

The Carl Yazzie #1 consists of two adits each of which is split into two drifts a short distance in. They are both driven generally southeastward into a 25' high face that was worked as an open cut before the mine went underground (see photo a).

The adit on the right in the photo contained standing water in a shallow pond back from the entrance. It is approximately 5' high, 5' wide, and 10' into the tunnel it splits into two which go off at 45° angles to each other. The left drift is the largest ranging up to 14' in width and contains the water about 25' back from the split; water is actively dripping from roof. The right drift goes back about 20' and contains a very small pool of water. Scintillometer readings obtained were in the 1200-1600 cps range, with local face counts up to 2000 cps.

The adit on the left in the photo is about 6' high, 7' wide and is also split a short distance in. The left drift goes back about 18', the right about 22'; each contains a small pool of water, and each produced scintillometer readings in the 600-1000 cps range (see Table 1 for water quality data).

The adits are driven in the Salt Wash Member of the Morrison Formation which here appears as oxidized ground, although some finer-grained zones may be incompletely oxidized. Evidence of uranium mineralization is mainly in the form of an oxidized yellow-green encrustation on rock faces in the adits, which have formed since development of the mine. Tailings dump lies to west of adits a short distance; it is 40' long, up to 5' high. Access is provided by dirt road leading west of Sanostee for approx. 5 mi., then left at a road fork just north of Sanostee Wash for another 3 mi. This road is currently used as an ore haul road for the nearby Enos Johnson Mine; (see Topographic sheet).

The mine was operated during the early and mid 50's and produced a total of 23 tons of ore averaging .15% U₃O₈; the ore contained 66 lbs. of U₃O₈ with a U:V ratio of about 1:3.

- References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. pp. 603, p. 50.
 (2) Blagbrough, J., et, al., 1959, Uranium Reconnaissance and Drilling in the Sanostee Area..., AEC RME-111.
 (3) AEC production records, courtesy Wm. Chenoweth, U.S. Dept. of Energy.

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Photo (a) Carl Yazzie #1; looking SE. Note person in front of right adit for scale. Small tailings dump lies off to the right.

TABLE 1

Selected Water Quality Data, obtained
From Sample Taken Inside Left Adit

Conductivity in mmhos/cm ³	pH	Fe	in ppm		Se
			SO ₄	U ₃ O ₈	
1,900	7.2	<.1	160	.40	<.005