

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.

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.

Quad: Chimney Rock 15'

1. NM-2-0-1

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Hogback Claim

Quad: Waterflow 7½'

1. NM-3-3-1

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Boyd Claims (Boyd deposit)

Date visited Nov. 16, 1979

Mine name(s) Boyd Claims (Boyd deposit) County San Juan

Section N/2, 3 Twنش. 30N R. 15W

Quadrangle sheet Waterflow 7 1/2'

Mining district sole occurrence (in Fruitland Coal Field)

Elevation 5,680'

Nearest city and/or dwellings N.M. Public Service Co., San Juan Generating Plant,
3 1/2 mi. south

Workings on the Boyd Claims consist of very small open pit work and some rim stripping and blasting of vertical cliffs in Fruitland fm. sandstone beds. The claims may be reached by leaving U.S. Highway 550 about 12 mi. west of Farmington and traveling north on the hard surfaced road 3 mi. to the New Mexico Public Service Co. San Juan Electrical Generating Plant. At this point a Public Service Co. escort will be required for the remaining 3 1/2 mi. trip northward, as the property is all leased and being actively mined to supply coal to the generating plant. The claims lie in sec. 3 about 1/4 mi south of the Ute Mountain Indian Reservation.

Uranium occurs at the base of a yellowish gray to dusky yellowish gray sandstone lens of the Fruitland fm. At places, such as the prospect pit near the east side of claim no. 10 (see claim map, Fig. 1), this lens contains small (0.5 to 1.5 cm diam.) limonite stained plant impressions. The base of the ore bearing sandstone is usually sharply defined. Underlying it is generally a 0.3' to 1.2' bed of friable sandstone; fine grained, greenish-gray, and argillaceous (Chenoweth, 1958). Photo (a) offers a view of the base of the ore zone in claim no. 10. Photo (b) gives a similar view of the ore zone at the main pit in claim no. 5. Scintillometer readings at these two sites ranged up to 2,500 cps, but no uranium mineralization is apparent. Chenoweth (1958) cited earlier work which indicated most of the uranium occurs as a micro-crystalline film on quartz grains. The main pit is a 50 to 60' long (E-W) rim stripped area which probably produced most of the 73.8 tons of ore reportedly shipped to the mill in Shiprock in 1955. The ore averaged 0.05% U_3O_8 and 0.05% V_2O_5 , although one shipment reportedly went at 0.10% U_3O_8 .

Photos (c) and (d) are views of small prospect pits in the southern portion of claim no. 5 where scintillometer readings of 2,000 cps or higher were recorded.

None of the workings constitute a hazard. The Public Service Land Co., a subsidiary of New Mexico Public Service Co. has recently staked claims in the area, perhaps to insure that their coal exploration and development work can progress as planned.

References:

- (1) Chenoweth, W., 1958, The Boyd Uranium Deposit in the Fruitland Formation, San Juan Co. N.M., U.S. A.E.C. RME-107.

(over)

S.S. 100

(2) Hilpert, L., 1969, Uranium Resources of N.W. New Mexico, U.S.G.S. Prof. paper 603, p. 52

(3) Field notes, 11/16/79

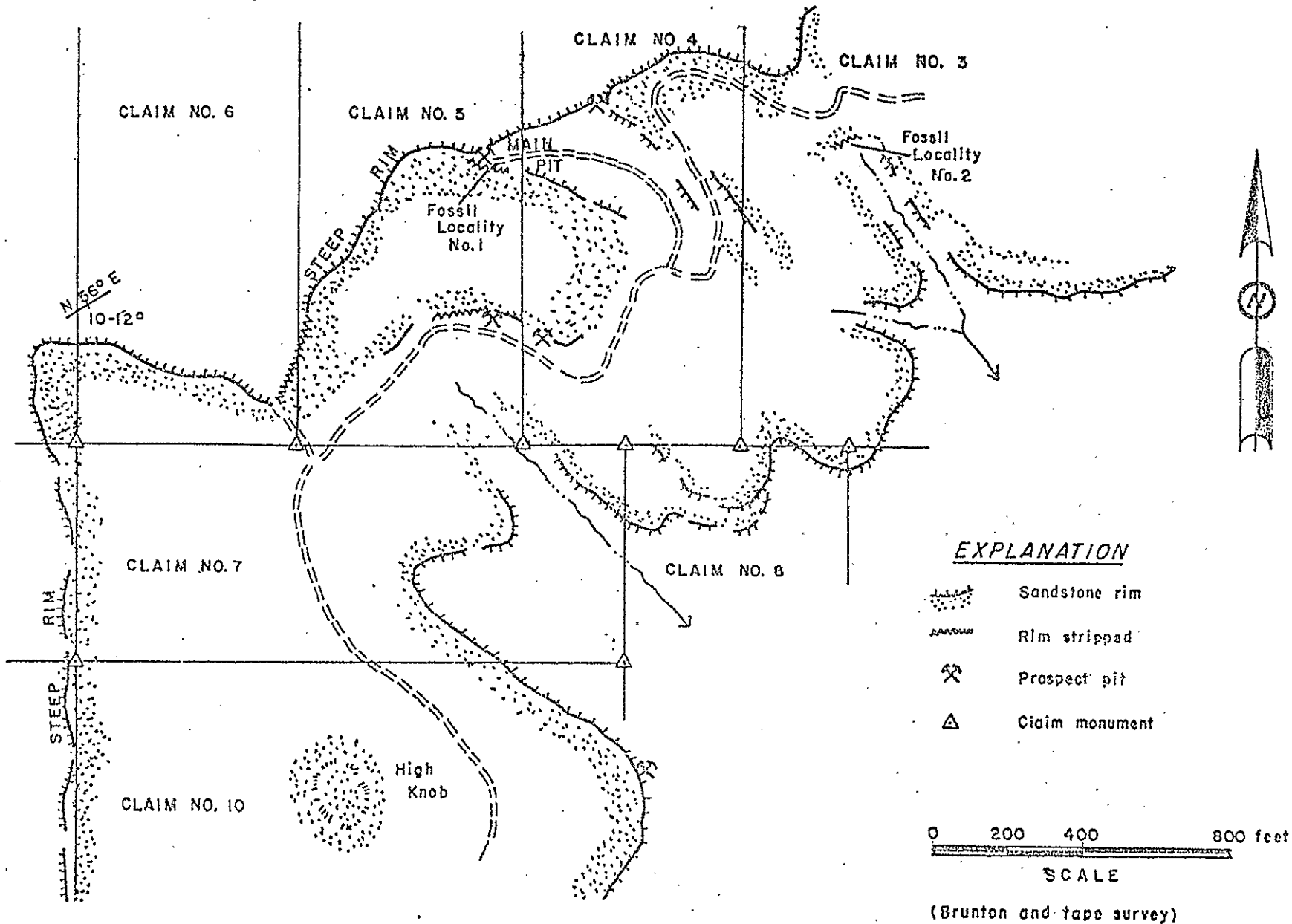


Figure - 1 Plan of the Boyd claims, San Juan County, New Mexico

RME 107

After Chenoweth (1958)

55-184

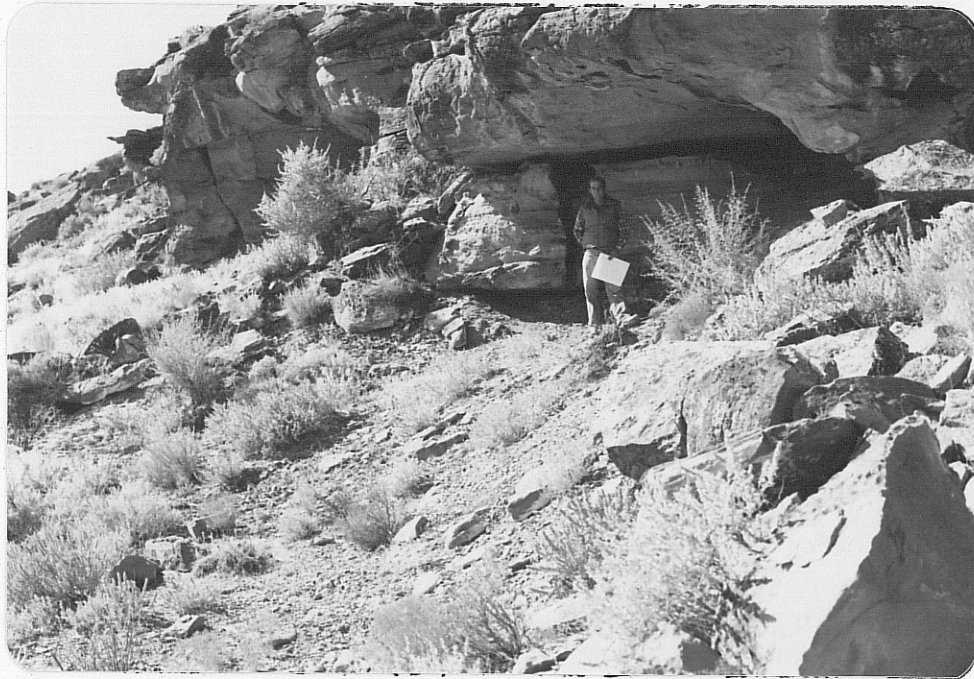


Photo (a) Looking SW at prospect pit, east end of claim no. 10 of Boyd Claims. Person in photo is standing near base of ore zone.



Photo (b) Looking SW at main pit in claim no. 5. Again note person standing at level of ore zone.



Photo (c) Small prospect pit in southern portion of claim no. 5, looking NW.



Photo (d) Small prospect pit in southern portion claim no. 5, showing evidence of blasting.