

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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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: Red River Pass 7½'

1. NM-39-1-1

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Black Copper Canyon

Quad: Trampas 7½'

1. NM-85-1-1

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Wichita (Tungsten) Mine

Mine name(s) Black Copper Canyon County TaosSection 26 (Unsurveyed) Twnsh. 28 N R. 15 EQuadrangle Sheet Red River Pass 7½'Mining district Red RiverElevation 9,500'Nearest City and/or dwelling 1 mi. east of new housing development, 5 mi. southeast of Red River.

The workings are reached by proceeding southward from the town of Red River by paved road along the Red River to a dirt road at the intersection with Black Copper Canyon. The workings are 1 mile east up the canyon, at a "Y" intersection of Black Copper Creek.

Workings consist of several small prospect pits, and a shaft with three interconnecting adits. The shaft (photo a) is collapsed, but according to Schilling (1960), the shaft is approximately 300' deep, with drifts and crosscuts running off 5 levels. One adit runs off the 1st level, and two longer adits run off the 2nd level and all are open to the surface. All the adits are collapsed. A small pond and earthen works can be seen where the two longer adits began (oral communication Bob Prunty, Red River Post Office) and a stream sample was taken here (photo b). A copy of the water analysis is attached. Although the shaft is collapsed, remains of the draw works and a 5 stamp mill (photo c) remain. A dump (photo d) extends south from the workings into the Black Copper Creek Canyon. Dimensions of the dump are 40' from hoist area to creek bed, and 50' east-west, along the creek bed. Maximum height from creek bed to the top of the dump is about 35-40'. Scintillometer readings taken on the dump were less than 100 CPS. Forty feet east of the main shaft is the discovery adit (photo e) (Schilling, 1960). The adit strikes N67°W, is 4' wide and 6' high. Minimum depth appears to be 20'.

A number of small exploration holes and diggings were found east of the main working; photo f shows the beginning of a small adit 130 yards east of the mine dump, and 40' upslope from the creek bed. Photo g is a small shaft, 6 x 6 x 12' deep on the southside of the stream.

The mineralization appears to be associated with a set of shear zones which range in strike from N65-70°W. The shear zone is well exposed in the discovery adit in photo e. Drusy quartz and some pyrite can be seen coating the shears at the adit entrance. Schilling (1960) notes the occurrence of galena, chalcopyrite, sphalerite, and chalcocite in the shear zone as well, and some of these minerals could be seen on the dump, although none were seen at the adit entrance. No mention of uranium mineralization has been given in the literature.

The host rock is Precambrian granite gneiss (Clark & Read, 1972). A series of diabase dikes striking N10-15°E are exposed 300' NE of the shaft.

- References: (1) Clark, R. F., and Read, C. B., 1972, Geology and Ore Deposits of Eagle Nest Area, New Mexico, N.M.B.M. Bull. 94, p. 110, pl. 1.
- (2) Schilling, John H., 1960, Mineral Resources of Taos County, New Mexico, N.M.B.M. Bull. 71, p. 124.
- (3) Oral communication with Bob Prunty, U.S. Post Office, Red River, New Mexico.

Analysis of Black Copper Canyon  
prospect water sample

pH	TDS	Conductivity	Fe	Cu	SO <sub>4</sub>
7.4	171 ppm	230 umho	0.52 ppm	<.05 ppm	<25 pp



Photo (a) Collapsed shaft at Black Copper Canyon.



Photo (b) Stream sample taken at the west end of Black Copper Canyon workings.



Photo (c) Stamp mill west of the Black Copper Canyon shaft.



Photo (d) Dump below the Black Copper Canyon shaft.

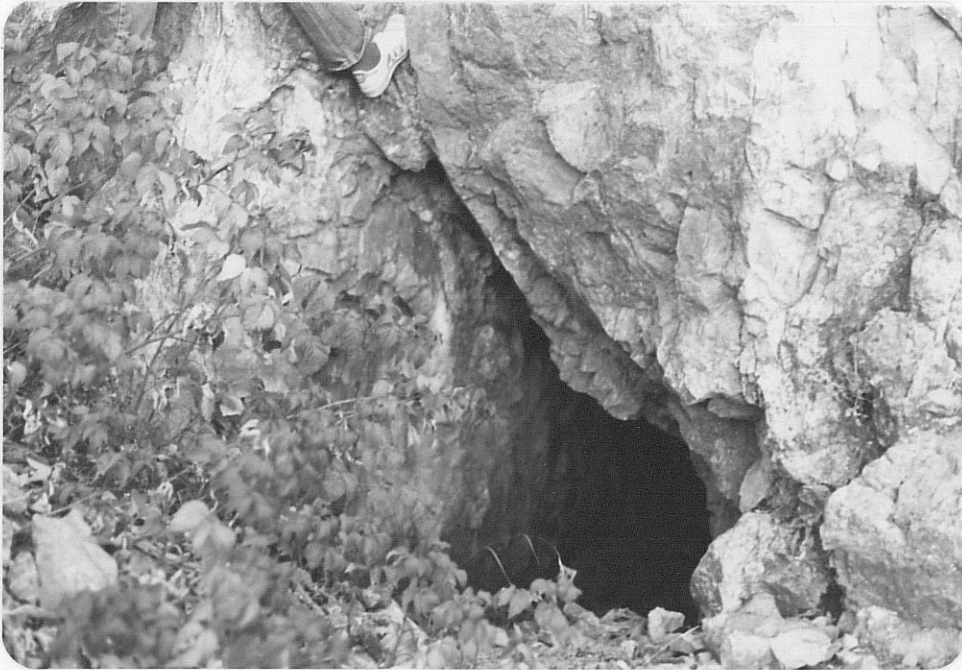


Photo (e) Discovery adit of the Black Copper mine.



Photo (f) Beginnings of small adit east of the main dump.



Photo (g) Small shaft east of the main Black Copper workings.