

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.

Quad: Mariano Lake 7½'

1. NM-123-4-1 Page 214  
Mac #1
2. NM-123-4-2 Page 217  
Black Jack #2

Quad: Pinedale 7½'

1. NM-123-3-1 Page 222  
Westwater

Quad: San Mateo 7½'

1. NM-150-3-1 Page 224  
Rialto (Chill Wills)

\*San Mateo Quad report #2 found under Valencia County

Quad: Thoreau NE 7½'

1. NM -148-1-1 Page 230  
Alta
2. NM-148-1-2 Page 234  
Silver Bit 15 and 18 (Pentada Prospect)
3. NM-148-1-3 Page 237  
Francis
4. NM-148-1-4 Page 241  
Evelyn
5. NM-148-1-5 Page 247  
Billy The Kid and Greer Warren and McCormack

Date visited 1/30/80

Mine name(s) Rialto (Chill Wills) County McKinley

Section NW $\frac{1}{4}$  24 Twنش. 13 N R. 9 W

Quadrangle sheet San Mateo 7 $\frac{1}{2}$ '

Mining district Poison Canyon Trend

Elevation 6,900'

Nearest city and/or dwellings Ambrosia Lake junction, 1 3/4 mi. west

The Rialto Mine is located approximately 1 3/4 mi. east of Ambrosia Lake junction (no. 53 and no. 509) and 1/4 mi. south of no. 53. It is accessible from the Marquez Ranch, but the gates along no. 53 are kept locked by Mr. Sonny Marquez of San Mateo.

The deposit occurs in the Poison Canyon sandstone tongue in the lower Brushy Basin member of the Morrison fm. It was mined through a 375' deep timbered, vertical shaft from 1960 until 1963 at which time the shaft caved with some loss of equipment. Mine was operated first by Bailey and Fife and later by Farris Mines, who was operating it at the time of the caving. The caving occurred during a period when the mine had been temporarily shut down while some additional surface drilling was being carried out. De-watering pumps were of course kept in operation during the shut down, and one of the hoses sprang a major leak at the 90' level in blow sand (or alluvial sand). Upon discovery it was found that the sand had washed out 50' or more back from the shaft and when material began flowing back into the void some shaft timbering failed under the pressure. Equipment salvage attempts began, however, only some water line, electrical line, and miscellaneous items were recovered, as the entire shaft caved and the 45' headframe toppled that evening; most of the headframe remains entombed at the site. The mine was tracked and some ore cars and electrical equipment were lost. Farris Mines estimates the loss at \$50,000 or more in 1963 currency.

Photos (a) through (c) offer views of the caved shaft. Crater is about 30' in diameter and 20' deep; but the bottom has a considerable accumulation of tumbleweed. Photo (d) shows the powder magazine which is nearly 600' northeast of the shaft. Photo (e) is a view of the main dump area immediately south of the shaft, and photo (f) shows the proximity of the dump to San Mateo Creek, 400' to the south. This main dump measures about 85' in length, 35' in width, and attains its maximum height of 11' at the south end. Scintillometer counts in and near the dump area range up to 1,500; but are more commonly about 600 cps. No significantly elevated readings were found south of the dump in the direction of San Mateo Creek. A small trench extends from the east side of the dump southward for several hundred feet toward San Mateo Creek. (see again photo f).

Photo (g) shows an ore stock pile area and/or dump extending eastward for more than 400' from the main dump. This area has numerous isolated and clustered conical piles of waste with scintillometer readings in the 600-1,000 cps range. Both dump areas are on relatively flat lying ground.

Conoco, Minerals Division has subsequently gained control of the mining interests in sec. 24.

ms 224

- References:
- (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 34.
  - (2) New Mexico State Mine Inspector's Office, inactive uranium mine file.
  - (3) Farris Mines, Inc., Grants New Mexico, oral communication 4/23/80.



Photo (a) Looking northwest at caved mine shaft site, Rialto Mine; note range pole (center) for scale.



Photo (b) Looking north into caved mine shaft.



Photo (c) Close-up of caved shaft showing accumulation of tumbleweed at bottom.



Photo (d) Looking southwest at small powder magazine (foreground) with main dump visible at right in the background.

#201 MC 227



Photo (e) Looking southwest at ramp shaped main dump; mine shaft is to right just out of photograph. Note range pole at left edge of dump for scale.



Photo (f) View from main dump southward toward San Mateo Creek 400' away.

#299 Mc 228



Photo (g) Looking east from top of main dump toward scattered conical piles of low grade ore and tailings; note Marquez Ranch in center distance, windmill at left. Fence posts at lower right corner provide scale.