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: Bread Springs 7½'

Quad: Church Rock 7½'

Quad: Dos Lomas 7½'

*Dos Lomas Quad reports #26 - #35 found under Valencia County

Quad: Gallup East 7½'

Quad: Goat Mountain 7½'

Date visited 3/20/80

Mine name(s) Gossett Incline (Beacon Hill #23) County McKinley

Section SE¼ 18 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend - Grants District

Elevation 7,100'

Nearest city and/or dwellings Ambrosia Lake junction; 2½ air miles east

The Gossett Incline is located in the SE¼ of sec. 18 on the mesa top north of the Poison Canyon Mine. It may be reached by taking the mine access road that leaves highway no. 53 at a point 10.5 mi. north of the no. 53 - U.S. no. 66 junction. Take the dirt mine access road westward for approx. 1 mi. to the Piedra Triste Mine (Todilto Exploration), then take right fork and proceed northward for 1 mi. to the Poison Canyon Mine (Reserve Oil and Minerals). Obtain permission from Reserve Oil and Minerals officials to proceed northward onto mesa to the Gossett Incline.

The mine consists of a 515' long 70° incline with the portal in Dakota Sandstone and the bottom in the Poison Canyon sandstone tongue (Lower Brushy Basin member). The shaft was completed in 1956 and subsequently operated by E. P. Moe. Initially, the ore was averaging .54% U_3O_8; it was classified as low vanadium, intermediate lime ore. The mine was last registered with the State Mine Inspector's Office in January, 1968. Total production is unavailable. The hoisting headframe remains at the site, (see photo a).

The mine is of interest because it is not only an example of a redistributed ore body, but it also shows evidence of uranium mobilization by recent meteoric waters (Rapaport, 1963). As a direct result of this the ore tends not to be in secular equilibrium.

The main dump area is located immediately west of the incline (see photo b), with a lesser one several hundred feet southeast of the shaft. The main one consists of a cluster of conical piles 3'-5' high forming an arcuate shaped ridge 300' long; scintillometer readings on the ridge ranged from 600 to 1,500 cps. The lesser dump consists of a 12' high pile 20' in diameter at the base; scintillometer readings here also ranged up to 1,500 cps.

The Gossett Incline is currently in use by Reserve Oil and Minerals as an upcast air ventillation shaft for the Poison Canyon Mine. The portal could not therefore be investigated in detail.

The Gossett is considered part of an active mine operation at the present time.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) U.S. AEC-PED-1, 1959, Mine Operation Data Report, GJO/AEC; p. 44; (microfische only).
(3) Rapaport, Irving, 1963, Uranium Deposits of the Poison Canyon Ore

trend, in, Geology and Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources, Mem. 15.
(4) New Mexico State Mine Inspector's Office, inactive uranium mine file.
(5) Field notes, 3/20/80.

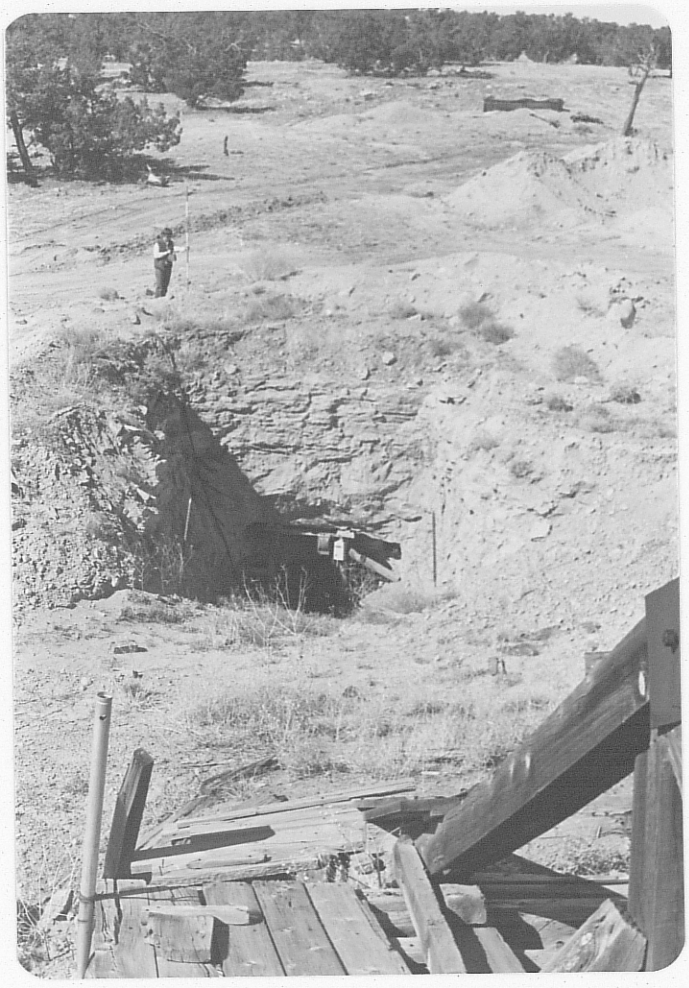

Photo (a) Looking westward into Gossett Incline from the headframe; it is presently in use as upcast air ventillation shaft for Poison Canyon Mine.

Photo (b) View westward of the mine site showing the headframe and main dump area forming arcuate pattern behind the portal.

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