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.

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: 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 1/17/80

Mine name(s) Isabella County McKinley

Section NE¼ 7 & SE¼ 6 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½' (Ambrosia L. sheet for access)

Mining district Ambrosia Lake

Elevation 6,960'

Nearest city and/or dwellings Ambrosia Lake junction, 3 mi. southeast

The Isabella Mine shaft is located in the NE¼ sec. 7 approximately 1/3 mi. west of the Spencer Shaft. It is accessible via the dirt road leaving highway no. 509 about 3.0 mi. north of Ambrosia Lake junction; follow the dirt road leading southeast for about 1 1/3 mi. to the mine site; mine is in the Poison Canyon trend.

The deposit was developed via a 250' deep vertical shaft that bottoms in the Poison Canyon sandstone tongue. The ore occurs as clusters of deposits along a north trending fault and much of it is considered to be redistributed or stack ore. The shaft was completed in 1959 and the mine was operated until 1964, first by Phillips Petroleum, and later by KSN, Inc.; United Nuclear Corporation acquired the property after 1964. Total production is unknown.

The shaft has subsequently caved in leaving a 30' diam. depression, 25' deep, (see photo a); some shaft timbers are exposed at the bottom of the depression; scintillometer readings in the shaft area outside the fence range up to 350 cps.

The tailings dump covers a considerable area to the north and west of the shaft site, with a small, but rather high dump immediately southwest of the shaft, (see photos b & c). Some of the waste dumps are actually lower grade ore deposits that would currently be acceptable at the mill; scintillometer counts on these run 1,000 to 1,700 cps with "hotter" areas up to 2,000 cps. A small drainage line passes just 100' south of the edge of the dump (see photo d). Scintillometer readings indicate that a small amount of material may be moving into the drainage; readings at the upper surface at the bank edge were 1,000 cps; on the banks of the drainage 750 cps; and 500' below the point of entry, down to 250 cps. Beyond 500' counts drop to the 80-90 cps range very quickly. Normal background in this area is about 80 cps. A 4' x 4' timbered shaft filled with sand was found just south of this drainage line across from the dump area; it was perhaps a ventillation shaft. A diagrammatic sketch of the site is shown in Fig. 1.

No detailed measurements of the dump area were made as the mine is presently being rejuvenated by Koppen Mining Construction Co.. They initially attempted to drift over from the Spencer Shaft, however, extremely high radon levels were encountered when they broke through into the Isabella workings. This access was immediately sealed off, and they have presently sunk a shaft 1,500' to the north of the Isabella and will drift southward from there. There is a possibility that the old shaft will be used for ventillation.

turn

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Koppen Mining Construction, oral communication 1/17/80.
(3) New Mexico State Mine Inspector's Office, annual reports for years 1959, through 1964.
(4) Field notes, 1/17/80.

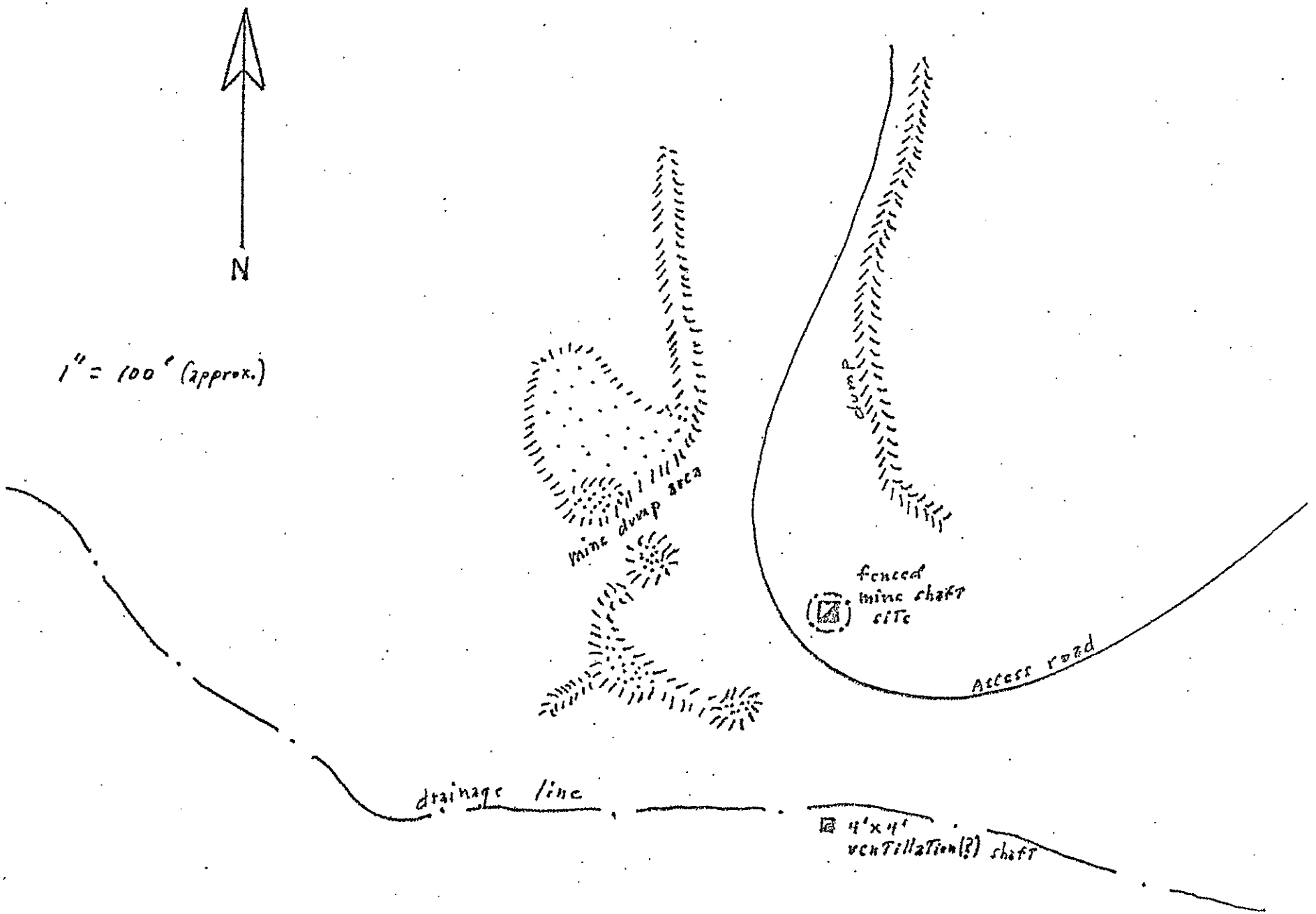

Fig. 1 Diagrammatic sketch of the Isabella Shaft site.

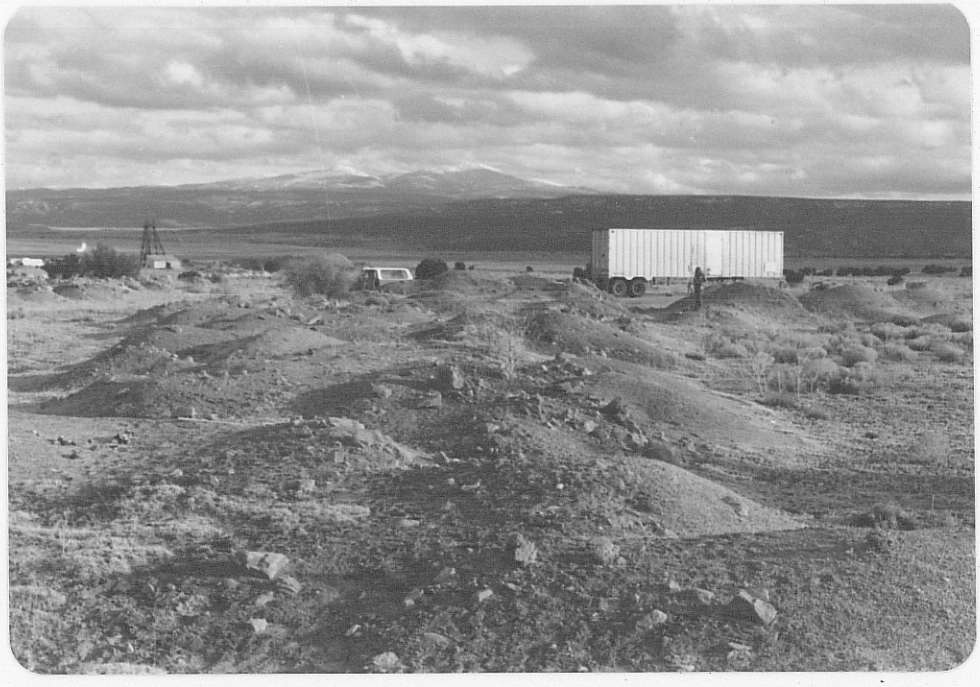

Photo (c) Looking northward at a dumping area just north of the mine shaft. Trailer rig is property of Koppen Mining Construction Co.; Mt. Taylor in background.

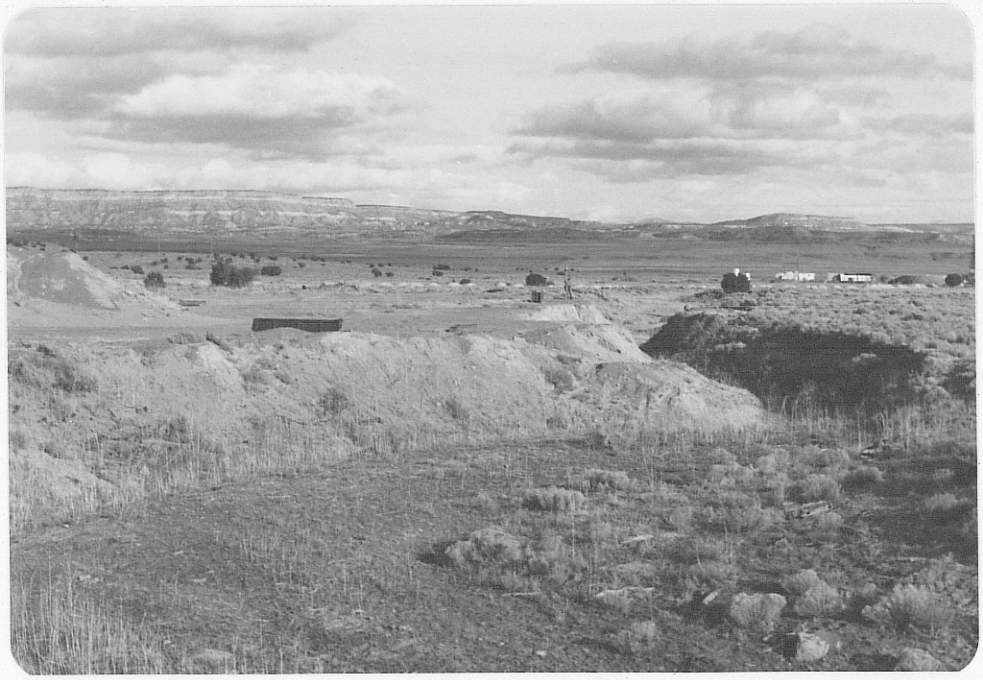

Photo (d) Looking eastward down small drainage that passes near southern edge of the dump area. Note person on left bank of drainage for scale.

Photo (a) View eastward of caved mine shaft at Isabella Mine; Spencer Shaft is visible in background.

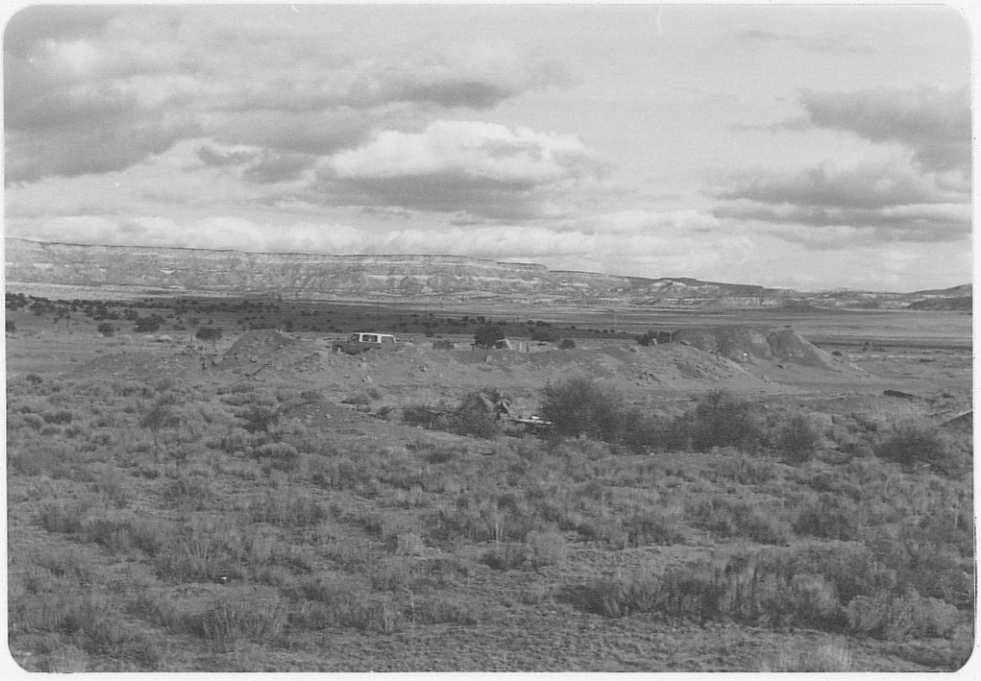

Photo (b) View northeastward of dump area on south and west sides of mine shaft; shaft location is to immediate right of vehicle in photo.