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.

VALENCIA COUNTY

Quad: Dos Lomas 7½'

Quad: Dough Mountain 7½'

Date visited 3/19-20/80

Mine name(s) Section Nine County Valencia

Section 9 Twnsh. 12 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Mt. Taylor

Elevation 7,020'

Nearest city and/or dwellings Milan, about 8 air miles south

The Section Nine Mine workings are in the north ½ of the section; several small prospect pits were noted in the SW¼. The mine may be reached by taking the Roundy Ranch road which leaves highway no. 53 at a point 7.3 miles north of the no. 53 and U.S. no. 66 junction 2 miles east of Milan. Proceed northeastward about 3 mi. on the Roundy Ranch road to the top of the mesa in sec. 4 and then take right fork and proceed southward to fence on sec. 9 line. Mine workings will be obvious at this point.

All the workings explored Todilto limestone ore bodies; they may be broken down into 3 separate areas (see sketch, Fig. 1). Going from north to south they are as follows: (1) An east-west trending cut that extends across the north ¼ corner as a continuation of the Red Bluff 8 and 10 workings. The cut is 800' long, 20' to 60' wide, and generally no more than 12' deep, (see photo a). It is interrupted by the access road shown in photo (a), but the workings continue near the section line on the west side of the road in the form of a rectangular shaped 275' x 500' stripped area with an 18' deep area quarried out in the center of it (see photo b). The waste from this center area forms a conspicuous tailings dump that extends down into the head of a small drainage in the SW¼ of sec. 4. Area (2) 600' to the south is composed of a linear cut, 750' long, 30'-50' wide, and up to 30' deep (photo c), that exposes the intraformational fold shown in photo (d). To the southeast of this cut is the "eyeball pit," a circular cut about 400' in diameter and 30' deep with a Todilto limestone knob in the center (see photo e). Fluorite was noted on the south side of the limestone knob. Perry (1963) has discussed the "eyeball pit" in relation to the reef structures in the area. West of the eyeball 600' is a "C" shaped cut, 250' in diameter, open to the west; it is up to 25' deep and up to 50' wide (see photo f and g). Waste piles are of two types; unconsolidated sandy overburden material which are smooth and rounded and largely revegetated, and limestone tailings which are not revegetated.

Area (3) is nearly 1000' west of area 2 (see Fig. 1), but there are minor prospecting pits and trenches in between. This area probably produced the highest grade ore based on the scintillometer response. The major workings consist of a northwest trending linear cut, photo (h), 500' long, 50' wide with a road on one side, and a west trending linear cut immediately to southwest with an adit at the west end, photos (i) and (j). The cut leading to the adit is 325' long, 50' wide at maximum, and 10' deep. The portal is 6' high, 7' wide and timbered (photo j); 85' into the adit it forks into two drifts, total length is not known. Adit is not ventillated and radiation levels are very high; scintillometer readings at 20' inside adit went off scale in excess of 10,000 cps. A radon gas build up may have occurred since workings were abandoned.

A portion of the Section Nine Mine went into production in late 1950. By mid 1958 it had produced a total of 57,085 tons of ore averaging .14% (AEC PED-1, 1959). It was operated by the Anaconda Corporation until 1962 (Hilpert, 1969), however, last registration with the State Mine Inspector's Office was in September, 1960.

Several areas on this mine complex might constitute a hazard.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Perry, Bobbie L., 1963, Limestone Reefs as an Ore Control in the Todilto Limestone of the Grants District, in Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Memoir 15, p. 150.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) U.S. AEC-PED-1, 1959, Mine Operation Data Report; GJO/AEC, p. 50 (microfiche only).
(5) Field notes, 3/20/80.

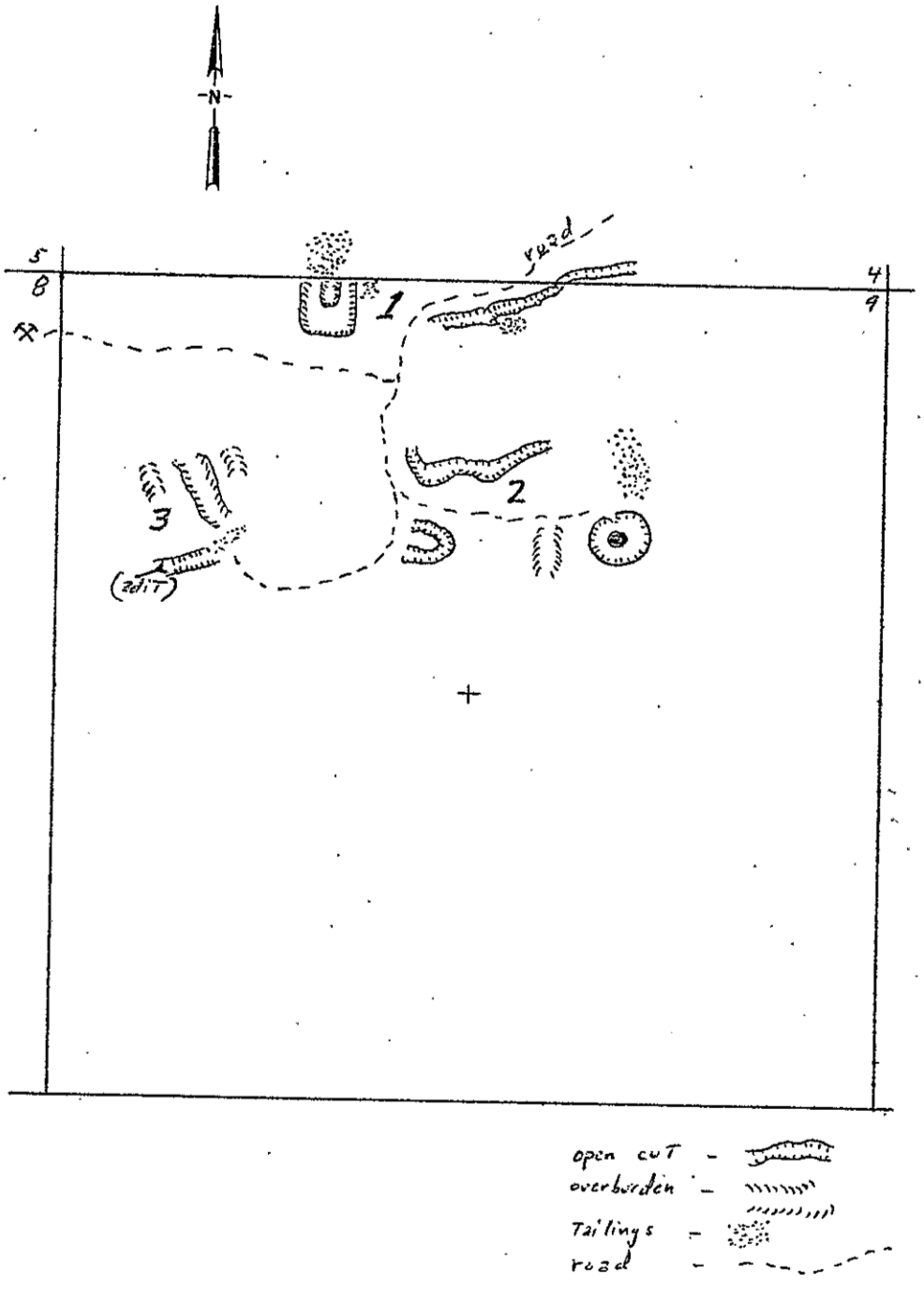

Fig. 1 Diagrammatic sketch of Section Nine Mine workings. Numbers refer to areas as they are discussed in text. The overburden piles are composed of unconsolidated material; the tailings piles are limestone fragments.

Photo (a) Looking eastward along the north section 9 line at east-west trending cut in area 1. Note person at left of center for scale, and access road at far left.

Photo (b) Looking south into 75' x 100' open pit several hundred feet west of linear cut in photo (a).

Photo (c) Looking northwest at linear cut in area 2.

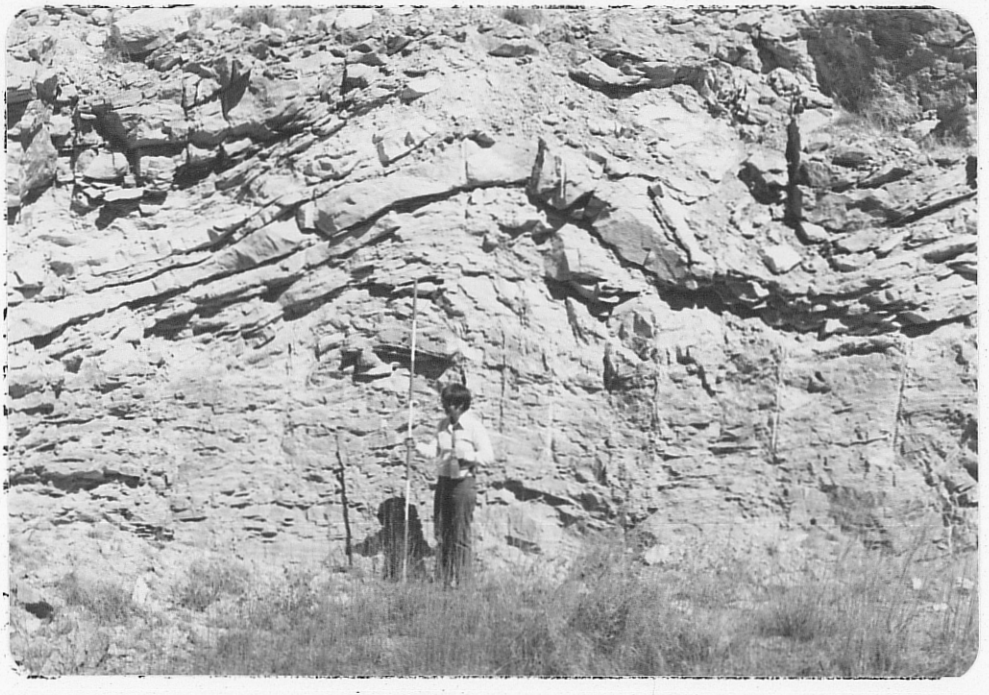

Photo (d) Intraformational fold exposed in cut shown in photo (c).

Photo (e) Looking eastward into the "eyeball pit" at the east edge of area 2 in Fig. 1. The unconsolidated overburden is here 25' thick.

Photo (f) Looking eastward into north limb of "C" shaped open cut in area 2.

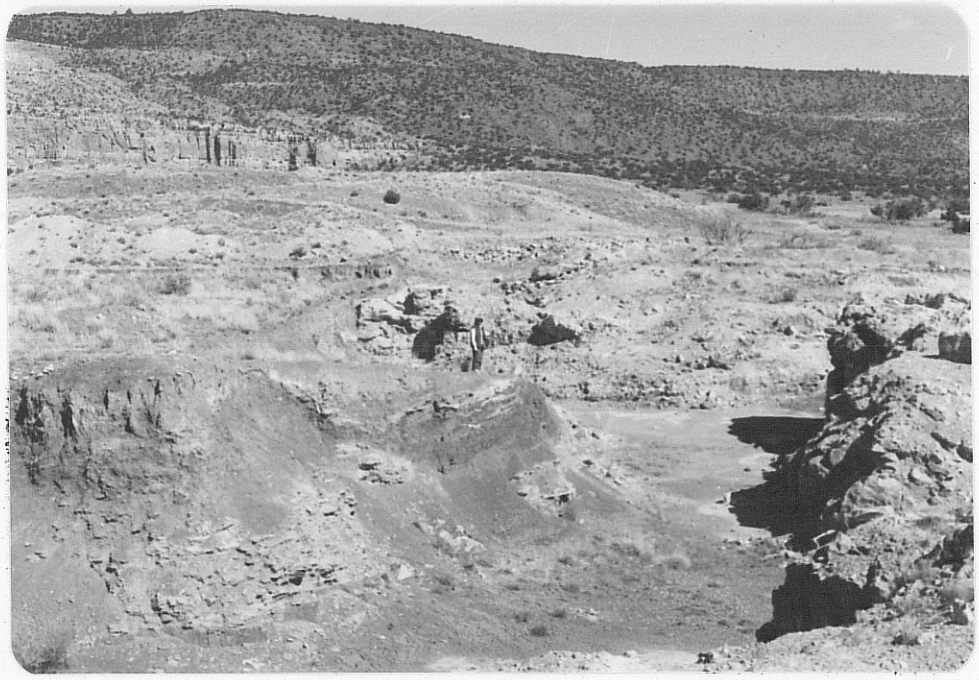

Photo (g) Looking eastward into south limb of "C" shaped open cut in area 2.

Photo (h) Looking northwest at 500' long cut in northern portion of area 3. The tailings in this area gave strong scintillometer response-up to 3000 cps.

Photo (i) Looking westward inot west trending cut with adit at west end; cut is 325' long, up to 50' wide. Scintillometer response is strong, 1000 cps.

Photo (j) Close up of adit shown in (i); portal is 6' high, 7' wide, and timbered in about 20'.