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

Orin J. Anderson

New Mexico Bureau of Mines and
Mineral Resources
Open-File Report 148

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.

ABANDONED OR INACTIVE URANIUM MINES IN NEW MEXICO

Orin J. Anderson

Bernalillo County	6 pages	$1.20
Catron County	9 pages	$1.80
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Torrance County	5 pages	$1.00
Valencia County	98 pages	$19.60
		$ 153.60

McKINLEY COUNTY

Quad: Ambrosia Lake 7½'

1. NM-149-1-1 Page 1

Mary No. 1 (Dysart No. 3)

2. NM-149-1-2 Page 5

Dysart #1 (Rio de Oro)

3. NM-149-1-3 Page 9

Dysart #2

4. NM-149-1-4 Page 12

United Western (J and M)

5. NM-149-1-5 Page 16

UN-NP Sec. 32

6. NM-149-1-6 Page 18

Sec. 26 (Ike No. 1)

Quad: Bluewater 7½'

1. NM-149-3-1 Page 21

Red Point Lode

2. NM-149-3-2 Page 24

Williams & Thompson (Sec. 18)

3. NM-149-3-3 Page 29

Sec. 24 (Glen & Edith)

Quad: Bread Springs 7½'

1. NM-146-2-1 Page 33

Diamond 2 (Largo)

Quad: Church Rock 7½'

1. NM-122-4-1 Page 39

CD & S (Sec. 35)

2. NM-122-4-2 Page 41

Foutz #3 (Yellow Jacket)

3. NM-122-4-3 Page 45

Foutz 1 and 2

4. NM-122-4-4 Page 48

William and Reynolds

5. NM-122-4-5 Page 50

Christenson (Rimrock #2)

6. NM-122-4-6 Page 58

Santa Fe Christensen (Rimrock #1)

Quad: Dos Lomas 7½'

1. NM-149-4-1 Page 62

Isabella

2. NM-149-4-2 Page 67

Spencer Shaft (Centennial)

3. NM-149-4-3 Page 69

Hogan

4. NM-149-4-4 Page 74

Gossett Incline (Beacon Hill #23)

5. NM-149-4-5 Page 78 77

Blue Peak (Garcia 1)

6. NM 149-4-6 Page 84 83

Mesa Top 7 & 18 (Malpais Raise)

7. NM-149-4-7 Page 93 92

Dog Incline (Dog and Flea)

8. NM-149-4-8 Page 99 98

Marquez

9. NM-149-4-9 Page 104

Faith (Westvaco) (Sec. 29)

10. NM-149-4-10 Page 109

Barbara J #3

11. NM-149-4-11 Page 112

Barbara J #1

12. NM-149-4-12 Page 114

Baily and Fife (Rimrock)

13. NM-149-4-13 Page 117

T-20 Shaft (T-9 ore body)

14. NM-149-4-14 Page 120

Flat Top (Flat Top #3 & 4)

15. NM-149-4-15 Page 124 ✓

Roundy Shaft (Rimrock)

16. NM-149-4-16 Page 126

SW ¼ 30 Strip

17. NM-149-4-17 Page 131

Sec. 25 Strip Complex

18. NM-149-4-18 Page 141

Sec. 25 Shaft

19. NM-149-4-19 Page 144

NW ¼ 25, Decline and Open Pits

20. NM-149-4-20 Page 149

Hanosh

21. NM-149-4-21 Page 152

Sec. 23 and 26 Open Pit

22. NM-149-4-22 Page 156

NE ¼ Sec. 36 (Rimrock) Homer Scriven)

23. NM-149-4-23 Page 160

Sec. 31 Open Pit

24. NM-149-4-24 Page 163

Moe No. 4 (Sec. 32)

25. NM-149-4-25 Page 165

Charlotte

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

Quad: Gallup East 7½'

1. NM-122-3-1 Page 167

Hogback (Hogback 3-5)

2. NM-122-3-2 Page 171

Becenti

Quad: Goat Mountain 7½'

1. NM-149-2-1 Page 174

Kermac Sec. 10 (Kermac No. 10)

2. NM-149-2-2 Page 178

Sec. 34

3. NM-149-2-3 Page 180

Sec. 35 Strip (Lost Mine)

4. NM-149-2-4 Page 183

Febco (Small Stake)

5. NM-149-2-5 Page 188

Silver Spur 1 (Silver Spur 5)

6. NM-149-2-6 Page 194

Pat Mine

7. NM-149-2-7 Page 197

Dakota

8. NM-149-2-8 Page 199

Junior

9. NM-149-2-9 Page 201

Sec. 5 (Westvaco) (No. 2)

10. NM-149-2-10 Page 202

Sec. 1 Strip

11. NM-149-2-11 Page 204

Sec. 2 Strip

Quad: Hosta Butte 7½'

1. NM-124-3-1 Page 206

Blackjack #1

2. NM-124-3-2 Page 212

Mac #2

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

6. NM-148-1-6 Page 252

Elkins (Tom Elkins) (Lawrence Elkins)

7. NM-148-1-7 Page 255

Maddox and Teague

8. NM-148-1-8 Page 258

Golver

9. NM-148-1-9 Page 260

Red Top

10. NM-148-1-10 Page 262

Haven (Sec. 21)

11. NM-148-1-11 Page 265

Red Cap Prospect

12. NM-148-1-12 Page 267

Yucca #2

Date visited 1/31/80

Mine name(s) Mary No. 1 (Dysart No. 3) County McKinley

Section NW¼ 11 Twnsh. 14 N R. 10 W

Quadrangle sheet Ambrosia Lake 7½'

Mining district Ambrosia Lake

Elevation 7,100'

Nearest city and/or dwellings Ambrosia Lake Junction, 9½ mi. southeast

The Mary No. 1 is located in the NW¼ of sec. 11, ½ mi. north of the Dysart no. 1 at the very northwest edge of the Ambrosia Lake district. It may be reached via highway 509; from the junction of no. 53 and no. 509 travel northwestward on no. 509 for approximately 10 mi. to the Dysart No. 1 (Rio de Oro) headframe, and then turn right (north) for an additional ½ mi. to the Mary No. 1 Mine.

The mine consists of vertical shaft, approximately 500' deep, sunk in 1959 on property owned by Stella Dysart, later picked up by Homestake-Sapin partners. The mine collars in Mancos Shale and bottoms in Westwater Canyon sandstone; it produced from several mineralized zones in the upper Westwater Canyon that appear to be fracture controlled. The mine was last registered at the State Mine Inspector's Office in January, 1966.

The shaft has subsequently caved leaving a 75' diameter funnel shaped hole perhaps 75' deep or deeper (see photos a & b). A close up of the lower portion of the hole is shown in photo (c). The shaft site is enclosed with a 6' high wire mesh fence that is nearly 250' long on each side; however, a section along the south side has been damaged and this allows access to the mine shaft. Scintillometer readings around the shaft site range from 400-600 cps; one area along the north fence line up to 1,200 cps. The mine dump extends mainly eastward from the shaft; it is composed of very low, 3'-4' high, scattered conical piles and ridges that extend 600' east of the shaft. Scintillometer readings were in the 600-1500 cps. range in the dump area (see photos d & e). A small powder magazine remains about 700' west of the shaft.

United Nuclear-Homestake Partners representative, Mr. Gary Boyer, has stated that the company now controls the mining interests in sec. 11 and that they consider the property active. When they go back into the Dysart #1 they will work generally northward and will perhaps use the Mary No. 1 shaft for ventillation. Radon gas buildup can be a problem in mine rejuvenation.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Gary Boyer, United Nuclear-Homestake Partners representative, oral communication 1/29/80
(3) Field notes 1/31/80.

MC-1



Photo (a) Looking eastward at caved shaft site showing fence and general debris.



Photo (b) Looking southeastward into caved shaft.

#74 MC-2

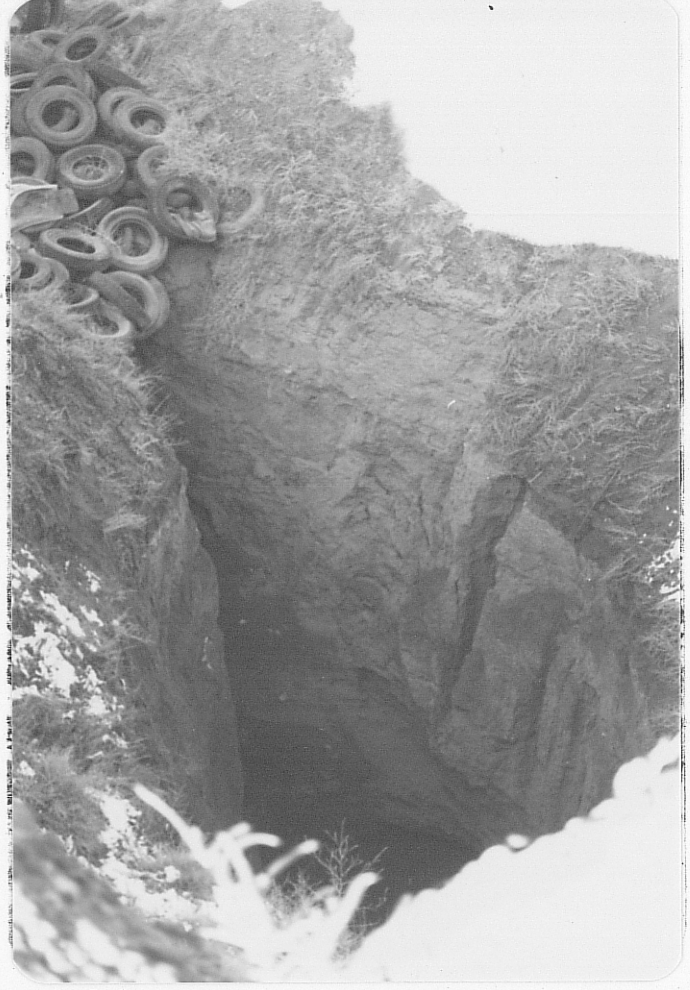

Photo (c) Close-up of lower portion of caved depression where it funnels into the old shaft.



Photo (d) View northward at east fence line of the mine shaft; note small dump at center and right and electric utility line.



Photo (e) Looking northwest at dump (ore stockpile are?) 600' east of the mine shaft which is indicated by arrow at left. Note range pole at center for scale.

Date visited 1/31/80

Mine name(s) Dysart #1 (Rio de Oro) County McKinley

Section SW¼ 11 Twnsh. 14 N R. 10 W

Quadrangle sheet Ambrosia Lake 7½'

Mining district Ambrosia Lake

Elevation 7,100'

Nearest city and/or dwellings Ambrosia Lake junction, 9½ mi. southeast

The Dysart #1 is located in the SW¼, sec. 11, near the northwestern edge of the Ambrosia Lake District. It may be reached by highway no. 509; from the junction of no. 53 and no. 509 proceed northwestward on no. 509 for approximately 9½ mi. to the Dysart #1 headframe.

The mine consists of a 395' deep, 3 compartment, vertical shaft completed in 1956 by Rio de Oro Mining Company. The mine produced from a cluster of east-west trending deposits in the Westwater Canyon member sandstones. It was operated until 1961, during which time it produced 900,000 tons of low vanadium, low lime ore that averaged .21% U_3O_8. Structurally the mine is located on the northern flank of Ambrosia Lake dome. An oil test well drilled ½ mi. south of the mine near the crest of the dome in 1959 was terminated at 2,869 ft.; no oil show reported, but the topographic sheet identified it as an oil well.

At present the mine site is much as it was upon cessation of activity in 1962. The headframe, most of the buildings, and the dump remain (see photo a); a caretaker lives at the site to watch the property for the present owner, United Nuclear-Homestake Partners. The shaft is covered with timber and the skip rests at top of the shaft; no unusually high scintillometer readings were recorded at the shaft-700 to 1,000 cps. is common, but related to ore spillage in area and not to proximity of scintillometer to shaft opening. The covered ore bin and load out facility is in place on east side of headframe (see photo b). Scintillometer readings in the mine dump and ore stockpile areas west and south of the shaft range from 400 to 700 cps, or up to 10 x background.

United Nuclear-Homestake Partner representative Mr. Gary Boyer explained that the company considers the property "active," and they are in no way waiting for assistance in any reclamation work. There are several ore bodies under sec. 11 and in adjoining sec. 10, and development of these will ultimately take place, the time depending only upon market conditions. UN-HP controls all but the NE¼ of sec. 11. For these reasons no detailed measurements of the buildings and mine dump area were made during the investigation. The caretakers are Mr. and Mrs. Arnold Seat; Mr. Seat is also employed by Cobb Nuclear Corporation at the Sec. 12 Mine.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.

turn

NL 5

(2) U.S. AEC-PED-1, 1959, Mine Operation Data Report, GJO/AEC; p. 51; (microfische only).
(3) New Mexico State Mine Inspector's Office, inactive uranium mine file.
(4) United Nuclear-Homestake Partners, oral communication with Mr. Gary Boyer, 1/29/80.
(5) Field Notes 1/31/80.

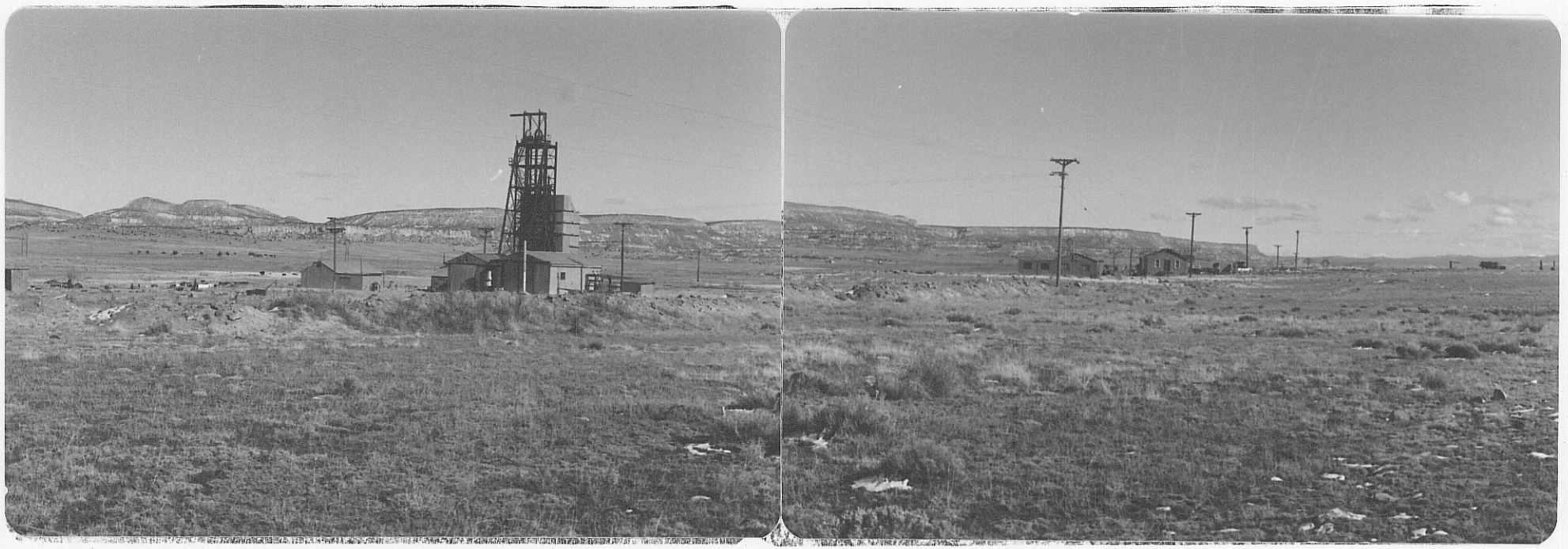

Photo (a) Looking eastward at Dysart No. 1 Mine; headframe is 40' high. House at far right is used by United Nuclear-Homestake Partner's caretaker.



Photo (b) Close-up, looking northward at the Dysart #1 headframe and ore bin.

#80 MC 8

Date visited 1/31/80

Mine name(s) Dysart No. 2 County McKinley

Section SE¼ 11 (SW¼ 12) Twnsh. 14 N R. 10 W

Quadrangle sheet Ambrosia Lake, 7½'

Mining district Ambrosia Lake

Elevation 7,070'

Nearest city and/or dwellings Ambrosia Lake junction, 9½ mi. southeast

The Dysart No. 2 is located in the SE¼ of sec. 11 at the west end of the physiographic feature called Ambrosia Lake. It may be reached via highway no. 509; from the junction of no. 53 and no. 509 proceed northwestward on highway 509 for 9 mi., or .60 mi. past the end of the pavement, and turn right (north) for an additional 1/2 mi. to the mine site. United Nuclear-Homestake Partners currently controls the mining interests on this property, including all but the NE¼ of sec. 11.

The mine consists of a 450' deep vertical shaft, collared in Mancos shale, bottomed in the Westwater Canyon member. It was operated from 1959-1963 (Hilpert, 1969), by Sabre-Pinon Corp., however, the last registration with the State Mine Inspector's Office is dated September, 1961. A 30' headframe remains at the shaft; a fenced ventillation shaft is located 100' west of the headframe (see photos a & b). A 36" diam. ventillation shaft is located 800' north of the headframe. Approximately 1/3 mi. to the east of headframe is Cobb Nuclear Corporation's sec. 12 mine. Cobb has leased the Dysart No. 2 shaft from United Nuclear-Homestake Partners to use as a ventillation shaft and escape way for the section 12 mine. The mine is therefore part of an active mine operation and no physical or radiometric measurements were made at the shaft site.

The mine dump area is sprawling and extends northwestward from the mine shaft for over 500' consisting of clusters of conical piles and elongate ridges. One prominent 200' long ridge intersects the present access road and at the intersection (see photo c) scintillometer readings of 1,500 cps (or 20 x background) were recorded. Immediately northeast of this ridge is a compact dump area, 3'-5' high, up to 250' in maximum dimension, with scintillometer readings up to 1,100 cps.; the site has now been partially revegetated and cattle graze in and about the area (see photo d).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) United Nuclear-Homestake Partners, oral communication with Mr. Gary Boyer, 1/29/80.
(3) Field notes 1/31/80.
(4) New Mexico State Mine Inspector's Office, inactive uranium mine file.



Photo (a) Dysart No. 2 headframe, approximately 30' high; shaft is used as an upcast ventillation shaft by Cobb Nuclear at the Sec. 12 Mine. Cobb equipment is visible in background.



Photo (b) Dysart No. 2 ventillation shaft in foreground, and headframe 150' to east.

A-22 Mc-10



Photo (c) Looking southeastward toward the Dysart No. 3 Mine dump area; note portion of dump intersecting road at center photo. Headframe is at right with Mt. Taylor in background.



Photo (d) Compact dump area northeast of ridge shown in photo (c); note cattle grazing in background.

#83 MC-11

Date visited 1/31/80

Mine name(s) United Western (J. and M.) County McKinley

Section NE¼ 36 Twnsh. 14 N R. 10 W

Quadrangle sheet Ambrosia Lake, 7½'

Mining district Ambrosia Lake

Elevation 6,980'

Nearest city and/or dwellings Kerr McGee Nuclear Fuels Processing Mill, ½ mi.

The United Western Mine shaft is located in the NE¼ NE¼ sec. 36 about ½ mi. northwest of the Kerr McGee uranium mill. It may be reached by proceeding southwestward on the mill road which leaves highway 509 approximately 5.2 mi. north of the junction with highway no. 53. As the mill entrance is approached the mine will be .2 mi. to the right (west).

The mine consists of a 5' x 9', two compartment , vertical shaft sunk 407' into the Westwater Canyon member of the Morrison fm. The shaft was completed in 1957 and the initial operator was Vanadium Corporation of America; sometime later Jordan and Marshall took over the operation and the mine was registered in 1959 with the State Mine Inspector's Office as the J and M. Production through 1958 had totaled more than 3,200 tons of low vanadium, low lime ore averaging .51% U_3O_8; total production is not known. Mine has been inactive since 1959.

The mine shaft has apparently been backfilled, the buildings removed, and most equipment salvaged; the most prominent features remaining are the mine dump and powder magazine (see photo a). The mound of waste at the shaft site is cratered at top showing some evidence of a recent collapse and the earth is very soft, (see photo b). The remains of a small timber headframe lie 50' to the southeast of the shaft site, (see photo c). The powder magazine is a 5' high dugout in a gentle slope 400' southeast of the mine; entrance is timbered, (see photo d).

The mine dump lies across the access road directly west of the mine shaft. Maximum dimension is 250' in a generally E-W direction, and height varies between 3' to 6'. It consists of a cluster of conical piles in a fairly compact area on a gentle slope; scintillometer readings ranged up to 900 cps, but were generally less than 700 cps (see again photo a).

The mine is on a section owned by the State of New Mexico; it was probably the first uranium mine to produce from state land.

References: (1) U.S. AEC-PED-1, 1959, Mine Operation Data Report, GJO/AEC; p. 64; (microfische only).
(2) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(3) New Mexico State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes 1/31/80.

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Photo (a) Looking eastward at mine site; dump area in foreground, shaft site indicated by arrow, powder magazine (circled), and Kerr McGee uranium mill at far right. Note range pole between dump and road for scale. The mound extending northward from the powder magazine to the double utility pole is a natural topographic feature formed on a thin sandstone unit in the lower Mancos Shale.



Photo (b) Looking southeast at mine shaft site which shows collapse features; note range pole for scale.



Photo (c) Looking southeastward at remains of headframe which lie 50' southeast of the mine shaft; note range pole for scale. Kerr McGee uranium mill is in background.



Photo (d) Looking northeast at powder magazine which is located 400' southeast of the mine shaft; note range pole for scale.

Date Visited 3/20/80

Mine name(s) UN-NP Sec. 32 County McKinley

Section N½ Sec. 32 Twnsh. 14 N R. 9 W

Quadrangle Sheet Ambrosia Lake 7½'

Mining district Ambrosia Lake

Elevation 6,940'

Nearest City and/or dwelling Ambrosia Lake junction, 5 mi. SE

The Sec. 32 Mine was active through 1979. It is presently inactive, but it is not abandoned, (see photo a).

The vertical shaft was completed in 1958 at a total depth of 651', 593' to haulage way. Production was from a multi-layered deposit in the Westwater Canyon member, near the point where the middle and southern trends of the Ambrosia Lake district come together. Ore was low lime, low vanadium, and throughout production history has averaged better than 20% U_3O_8.

Mine is wet; it is not known whether pumpage is continuing.

The mine is not considered abandoned, merely inactive.

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. 62; (microfische only).
(3) Field notes, 3/20/80.



Photo (a) Looking southwest at the UN-HP Sec. 32 Mine site and headframe; portion of Kerr McGee Ambrosia uranium mill visible at far right.

Date visited 3/20/80

Mine name(s) Sec. 26 (Ike No. 1) County McKinley

Section SW¼ 26 Twnsh. 14 N R. 9 W

Quadrangle sheet Ambrosia Lake, 7½'

Mining district Ambrosia Lake

Elevation 7,140'

Nearest city and/or dwellings

The Sec. 26 Mine is located in the SW¼ of sec. 26 at the east end of the middle trend of the Ambrosia Lake district. It is accessible via the road leading eastward past the abandoned Phillips Petroleum Ambrosia Uranium Mill (now occupied by UNC). Proceed eastward on this road 1½ mi. past the abandoned mill to the brass cap section marker at the northeast corner of section 34. The mine is about 1,000' northeast of the section corner marker.

The mine workings consist only of an incompleted shaft begun and abandoned in 1957 by Rio de Oro Uranium Mines, Inc., (see photo a). It is impossible to tell whether the remaining structure constitutes the beginnings of a two compartment vertical shaft, as is indicated by the 6' x 12' collar (see photo b), or whether it was to be an inclined adit driven northward; blow sand and tumble weeds are rapidly filling in the remaining hole which is no more than 4' deep. Scintillometer readings at the site were not significantly above background.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) New Mexico State Mine Inspector's Office, 45th annual report; p. 46; (also inactive uranium mine file).
(3) Field notes, 3/20/80.
(4) U.S. AEC-PED-1, 1959, Mine Operation Data Report, GJO/AEC; p. 58; (microfische only).



Photo (a) Looking northwestward at the remains of the incompleted sec. 26 shaft; the headframes of the sec. 27 mines (nos. 1 and 2) and the Ann Lee Mine show in the background.

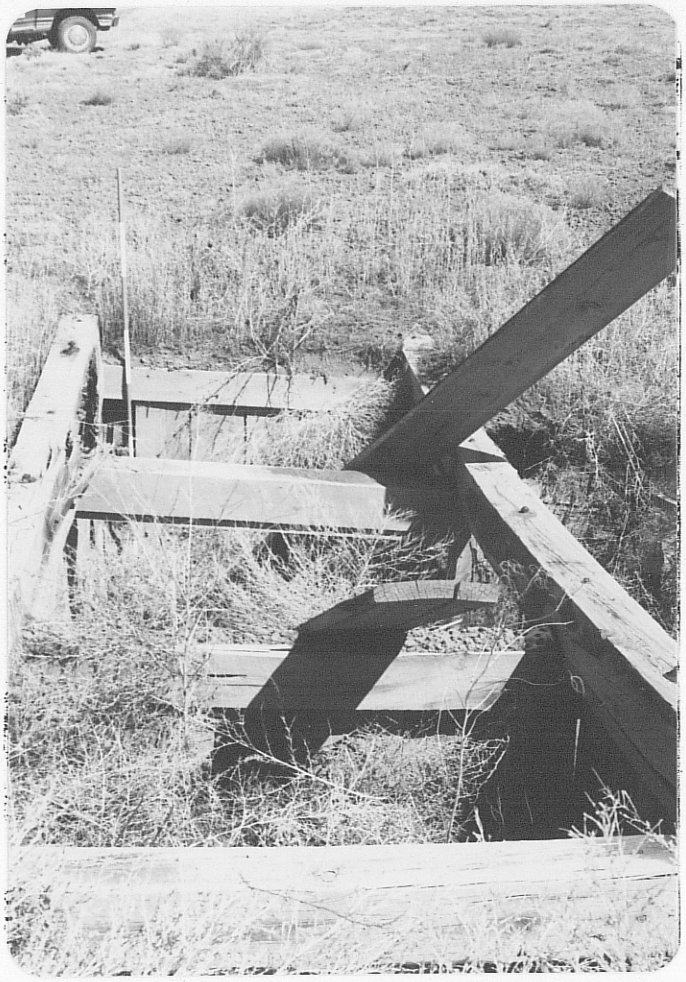

Photo (b) Close-up looking northward at the 6' x 12' collar of sec. 26 shaft, note range pole at left for scale.

72 Mc-80

Date visited 12/14/79

Mine name(s) Red Point Lode County McKinley

Section SW¼, NW¼ 16 Twnsh. 13 N R. 10 W

Quadrangle sheet Bluewater 7½'

Mining district Ambrosia Lake

Elevation 7,040'

Nearest city and/or dwellings Single family dwellings within 1½ miles to the west at the base of Haystack Mountain.

The Red Point is located in the NW¼ of sec. 16 on an isolated Todilto limestone knob. The mine may be reached by proceeding west on the Poison Canyon road for about 5 miles from its junction with highway no. 53. Then proceed north on side road for about 1½ miles and jog left to mine.

The mine consists of a cluster of small open pits and trenches ranging from 3' to 6' deep. A few are isolated, such as in photo (a) and others are very closely spaced (photo b). Photo (c) offers a view of the deepest pit at the site; it is 18' wide, 35' long, and 6' deep. Scintillometer readings here were in the 1200-1500 cps range. The small pit in photo (a) yielded readings of up to 3,800 cps.

Conical mine dump piles are scattered throughout the workings; one of the larger ones is shown in photo (d); scintillometer readings here ranged up to 1,500 cps. A linear ridge of waste material 3'-4' high and over 200' long, stands isolated about 300' west of the main cluster of workings; scintillometer readings of about 500-600 cps were recorded.

The deposit is classified as small, Hilpert (1969). Mineralization is associated with an eastward trending intraformational fold in the Todilto limestone. Secondary uranium minerals are present on rock fragments in muck and waste piles.

The mine is not mentioned in the State Mine Inspector's inactive uranium mine file.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 36.
(2) Field notes, 12/14/79.



Photo (a) Looking north at 3' deep pit, about 20' across at eastern edge of Red Point workings.



Photo (b) Looking east at group of closely spaced open pits, up to 4' deep.

#74 Mc. 22

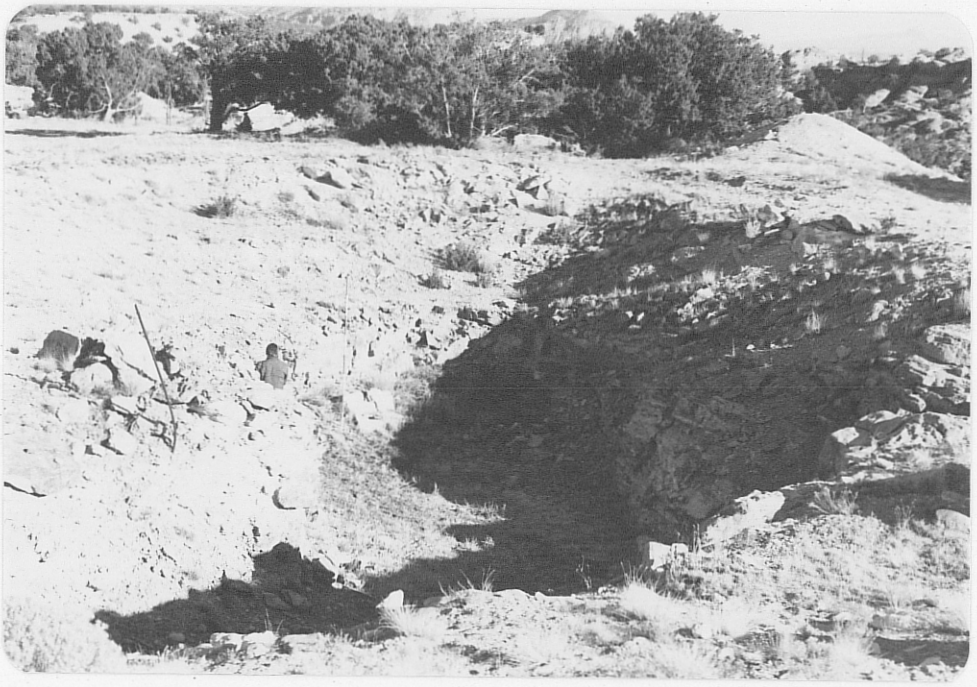

Photo (c) Looking east at deepest pit at the site slightly more than 6' deep; note range pole just left of center for scale.



Photo (d) Looking northward near west edge of Red Point workings at one of the more prominent waste dumps, 6'-7' high.

#95 MC-23

Date Visited 12/14/79

Mine name(s) Williams & Thompson (Sec. 18) County McKinley

Section SW¼ 18 Twnsh. 13 N R. 10 W

Quadrangle Sheet Bluewater 7½'

Mining district Ambrosia Lake

Elevation 7,060'

Nearest City and/or dwelling Numerous single family dwellings within 1 mi. radius.

The Williams and Thompson is located in the SW¼ sec. 18 immediately east of the active Todilto Exploration Mine in sec. 13. Mine is indicated on Bluewater quadrangle by a shaft symbol. It is accessible via the Poison Canyon road which leaves highway no. 53 about 10 miles north of Milan; proceed west on Poison Canyon road for about 8 miles to mine.

The mine consists of a shaft, a loadout facility, and a long trench with a decline driven at the end; (see Fig. 1). The shaft has caved (photo a) but a portion of the collar or timbering is still visible in the hole. Present depression is circular in plan and is about 10' deep. The shaft may have been inclined.

The dump, shown in photo (b), is about 60' x 40', 8'-9' high, and is immediately south of the shaft. A deteriorating wooden load out structure is at west edge of dump. A stockpile area for low grade ore lies 100' south of the mine dump, and consists of a cluster of conical piles up to 3' high spread over an area that measures 100' x 100' (see photo c). Scintillometer readings on these piles ranged up to 1,000 cps. The only building structure remaining on the site is a metal shed (photo d) which stands about 350' southwest of the shaft.

Also southwest of the above described workings is a 250' long NW trending trench that descends gently to an open stope (see photo e) with a timbered drift driven NW into the north face (see photo f). Opening is about 4½' high and 12' wide; length of drift is about 12'. Scintillometer readings in stope near opening to drift were about 150 cps.

The deposits explored at these workings are in basal Todilto limestone. Hilpert (1969) described them as a cluster of medium and small irregularly shaped deposits. Ore was mined during the 1952-1964 period, but probably not continuously.

The State Mine Inspector's Office carried an active registration on this property as late as January, 1967. It was registered as the Section 18 Mine (or Federal Mine) with Cibola Mining as the operator.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 36.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 12/14/79.

ms-24

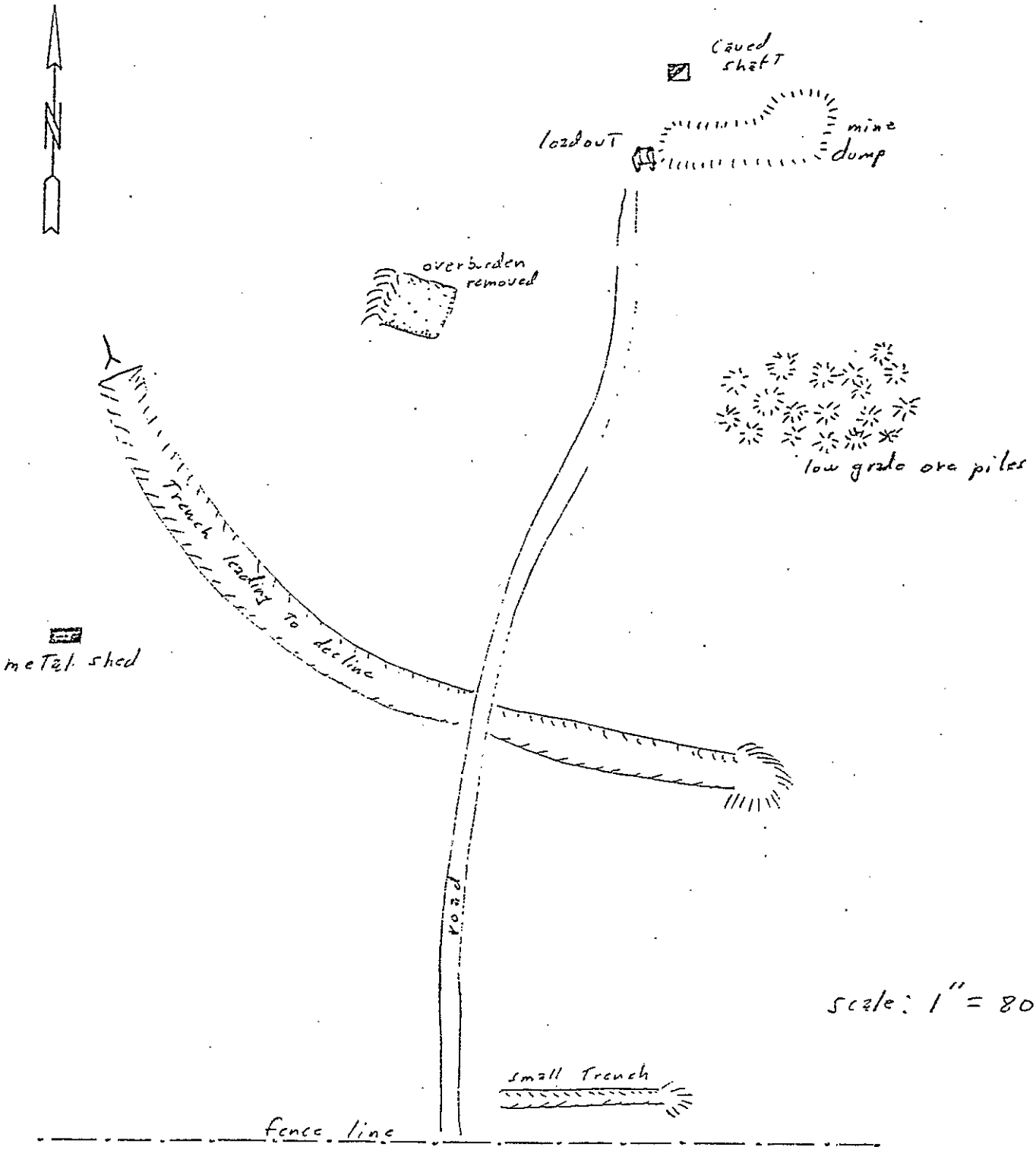

Fig. 1 Diagrammatic sketch of workings at the Williams and Thompson Mine.

MC 2c



Photo (a) Looking north at caved shaft; note range pole at right side of shaft for scale.

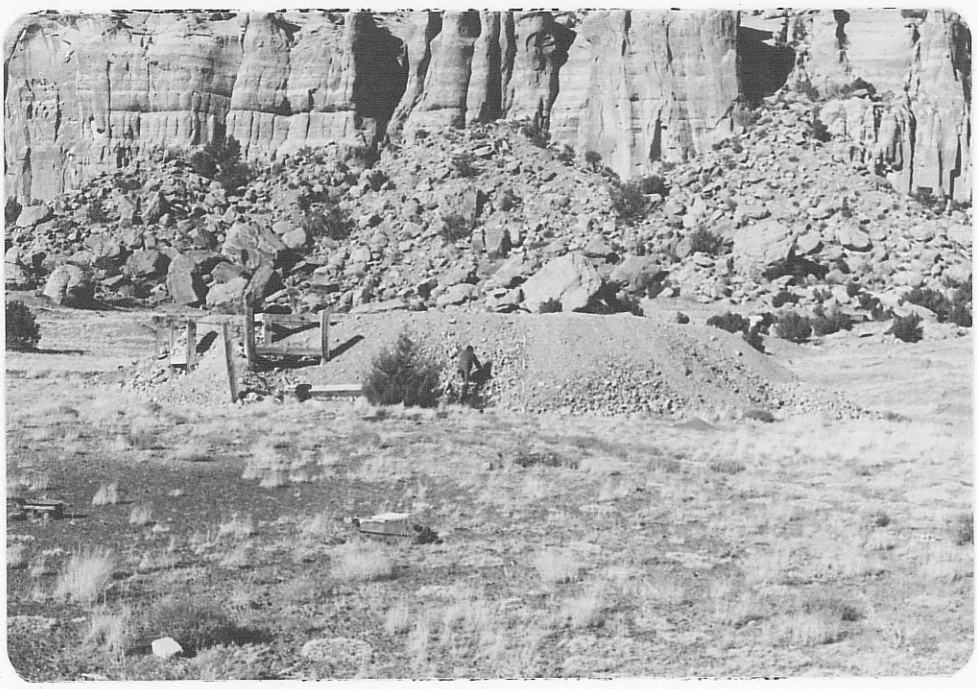

Photo (b) Looking north at mine dump and wooden load out facility at left; note person at center on toe of dump for scale.

#98 mc 26 ~~35~~



Photo (c) Looking south at low grade ore stock pile area 200' south of the shaft in photo (b); note person at right on pile for scale.

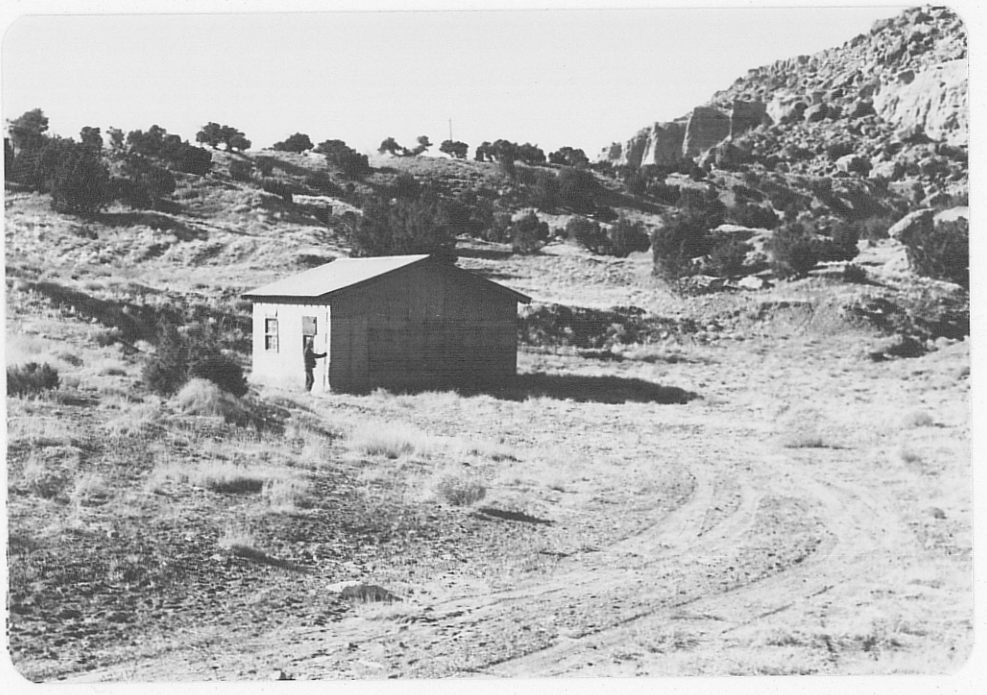

Photo (d) Metal shed about 350' southwest of shaft; note person at left side of shed for scale.

#99 mc 27 34

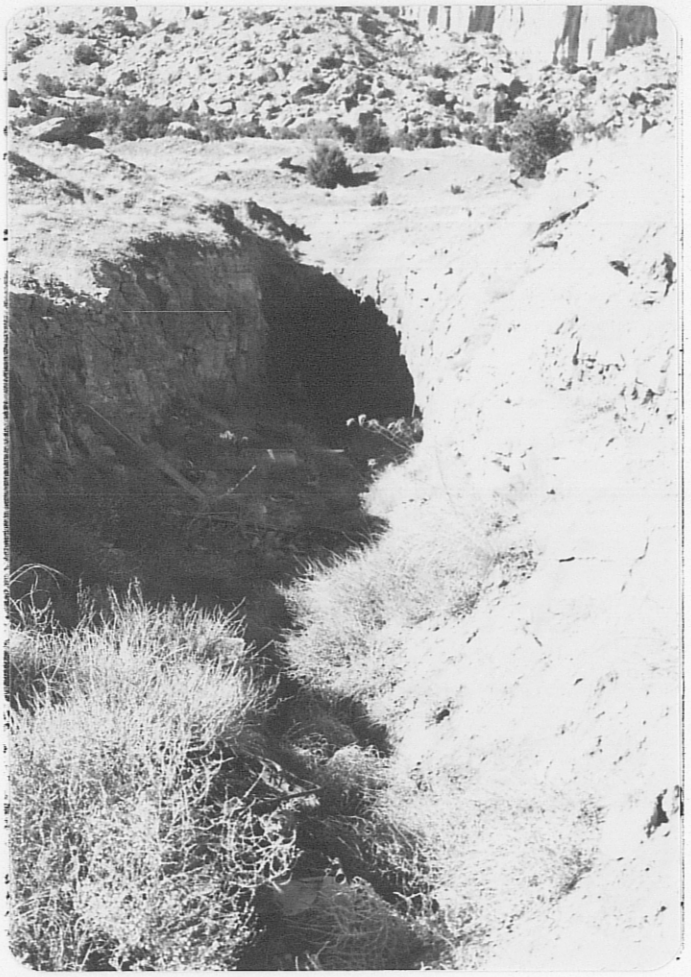

Photo (e) Looking NW into trench with drift at far end; note person standing on floor of trench at upper center.



Photo (f) Drift driven NW at end of trench shown in photo (e); trench terminates in a 25' high open stope, and drift is driven into north face of stope; range pole at center for scale.

#100 mc 28 30

Date visited 1/8/80

Mine name(s) Sec. 24 (Glen & Edith) County McKinley

Section NE¼ 24 Twnsh. 13 N R. 11 W

Quadrangle sheet Bluewater 7½'

Mining district Ambrosia Lake

Elevation 7,100'

Nearest city and/or dwellings Numerous single family dwellings clustered around Haystack Mtn., within 1 mile of mine.

The mine is located just south of Haystack Mountain in the NE¼ of sec. 24. It may be reached by proceeding northward on highway no. 53 for about 10 miles north of Milan (from U.S. 66 junction) and turning left on the Poison Canyon road. Proceed eastward on Poison Canyon road for about 8 miles to Todilto Exploration Companies Haystack Mine in sec. 13; get permission to proceed into sec. 24. Todilto Exploration has sections 13 and 19 under active lease.

The mine consists of an extensively worked NW trending area measuring about 900' by 300' (see photo a). The stripping sometimes involved removing more than 10' of unconsolidated overburden from the underlying Todilto limestone, forming conspicuous piles (photo b). Some of the cuts and pits extend for several hundred feet in maximum dimension (see photos b, c, and d). Photo (e) shows a small mine dump near the center of the strip complex. Photo (f) is a view "backward" toward the starting point shown in photo (a).

The deposit is in Todilto limestone. It is classified as a medium deposit by Hilpert, (1969). Ore was produced from 1952-1957. Mine was last registered with the State Mine Inspector's Office in December, 1954, under the name Glen and Edith Mine, with the Federal Uranium Corporation as owner/operator.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 37.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 1/8/80.



Photo (a) Looking NW into stripped area from SE edge of sec. 24 mine; note overburden piles at upper center and upper left extending for nearly 1,000' away from viewer. Mine trends NW.



Photo (b) Looking again to NW, from within mine area, showing size and nature of individual pits; unconsolidated overburden is often more than 10' thick as seen in highwall below vehicle at left. Note large overburden and waste piles at center, middle distance.



Photo (c) Looking NE at SE trending cut with waste piles on far side; note person at left for scale. Todilto Exploration Co., offices are just visible at left between last two utility poles.



Photo (d) View to NW from small pit within the mine complex showing proximity of Haystack Mountain.

HMC Mc 51 27



Photo (e) View eastward from near the center of the mine showing veneer of mine waste on slope behind shallow cut.



Photo (f) Looking SE back toward starting point in photo (a).

Date visited 12/4/79

Mine name(s) Diamond 2 (Largo) County McKinley

Section N½ 33 Twnsh. 15 N R. 17 W

Quadrangle sheet Bread Springs 7½'

Mining district -

Elevation 6,970'

Nearest city and/or dwellings Rehoboth, 2½ mi. N; numerous other single family dwellings within 2 mi. radius of mine.

The Diamond 2 is located approximately 4 mi. east and 3 mi. south of Gallup. The Sundance Coal Mine road passes 500' east of the mine site in the N½ of Sec. 33, (see photo a).

The workings as found during the present investigation consist of 2 declines driven into the hogback in basal Dakota sandstone, plus an area of open pit prospecting up on the crest of the hogback.

The southern decline is about 8' high, 5' wide (see photo b), and extends down/dip at 30° for several hundred feet. Hilpert (1969) stated that the ore bodies pinch out at about the 500 level which is 275 feet vertically below the mine entry. 20 feet into the adit on the right is a powder magazine, 6' high, 4' wide, and about 12' deep, secured by wooden doors, (see photo c). Scintillometer counts in the decline ranged up to 1,600 cps.

The northern decline is located about 125' N-NW of the first one along strike. It is approximately 10' high, 7' wide, and is likewise driven down dip for several hundred feet (see photo d). Scintillometer readings within ranged up to 2,500 cps; a warm draft blew from the mine entrance. Vertical distance from top of portal to crest of hogback is about 25'.

The open pit workings are located on the crest about 200' north of the northern decline. They may be reached on foot from below, however, another access road leads to this property from the back side (dip slope) of the hogback. The main pit is about 300' long by 150' wide, with one small ore pile remaining near the center that produced scintillometer readings up to 2,500 cps, (see photo c). Sandstone fragments in the ore pile show yellow uranium mineralization.

An additional small prospected area right at the crest and just east of the main pit is shown in photo (f); it measures about 40' in length with scintillometer readings along sandstone outcrops up to 900 cps.

The mine dump below the two declines is shown in photo (g). Dump measures about 250' in maximum dimension (NW-SE) and is generally 25' high; scintillometer readings average in the 1000-1100 cps range.

The mine produced a total of 50,000 tons of ore during the 1953-64 period; U:V ratio was 3:1 (Hilpert, 1969). However, according to a 1959 AEC-PED report 41,442 tons had been produced by the end of 1958, at an average grade

NM-33

of .23% U_3O_8.

References: (1) Hilpert, L., 1969 Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper No. 603.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mex. Bur. of Mines and Min. Res., Bull. 87.
(3) Field notes, 12/4/79.
(4) U.S. AEC-PED-1, 1959, Mine Operation Data Report; GJO/AEC; (microfische only)

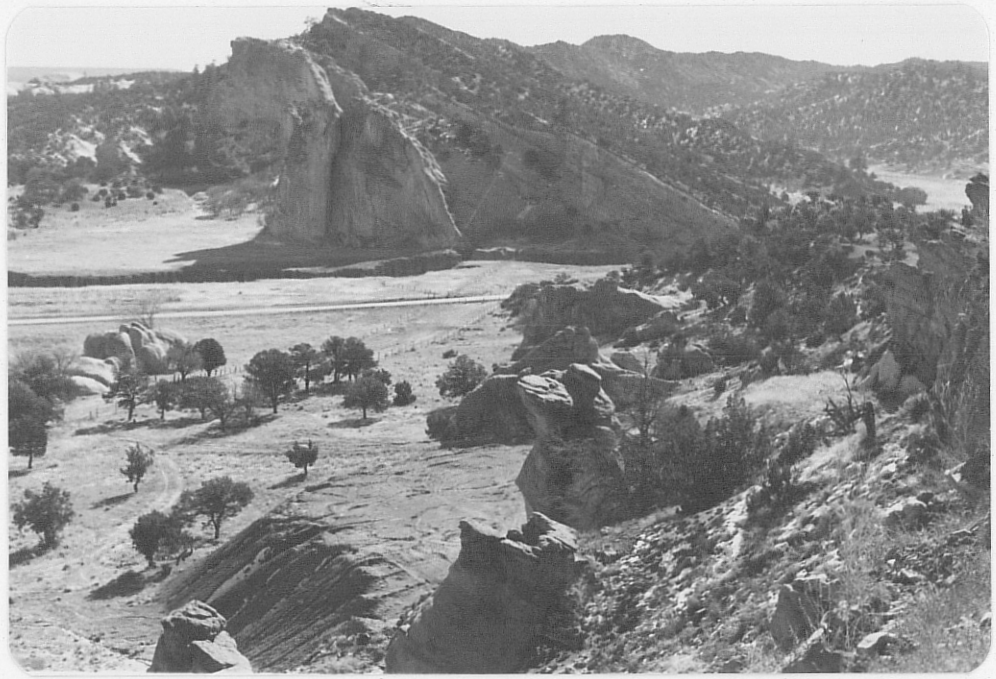

Photo (a) Looking southeast from crest of hogback above Diamond Mine showing Sundance Coal Mine road in middle distance; note mine dump at center foreground.

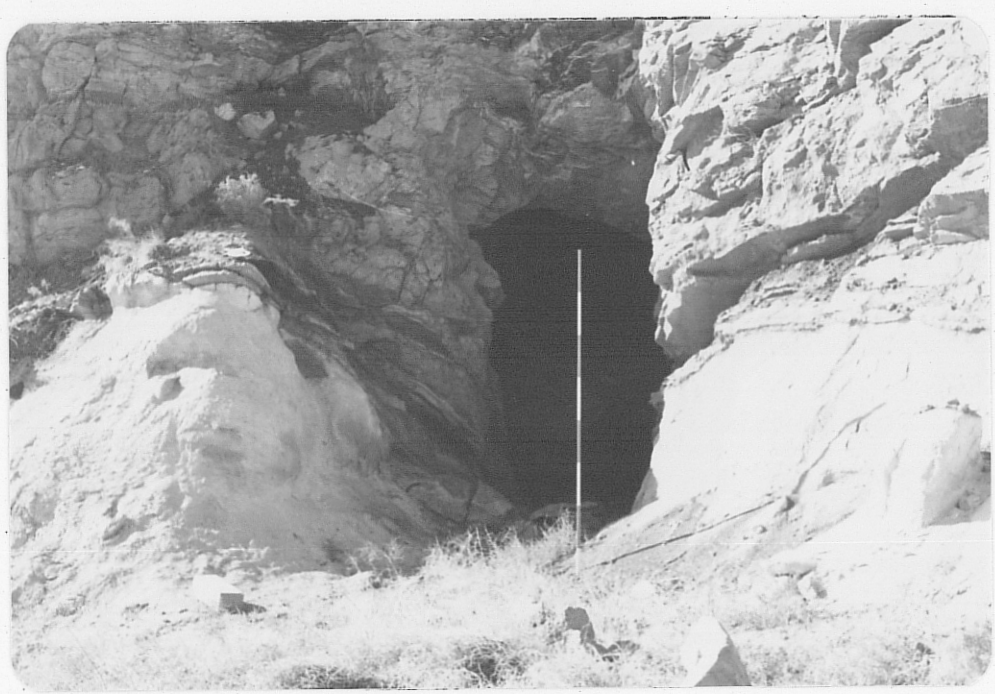

Photo (b) Looking southwest into opening of southern decline.

#107 MC 35



Photo (c) Looking northwest within the southern decline, into powder magazine driven off the side just below a carb. shale zone.

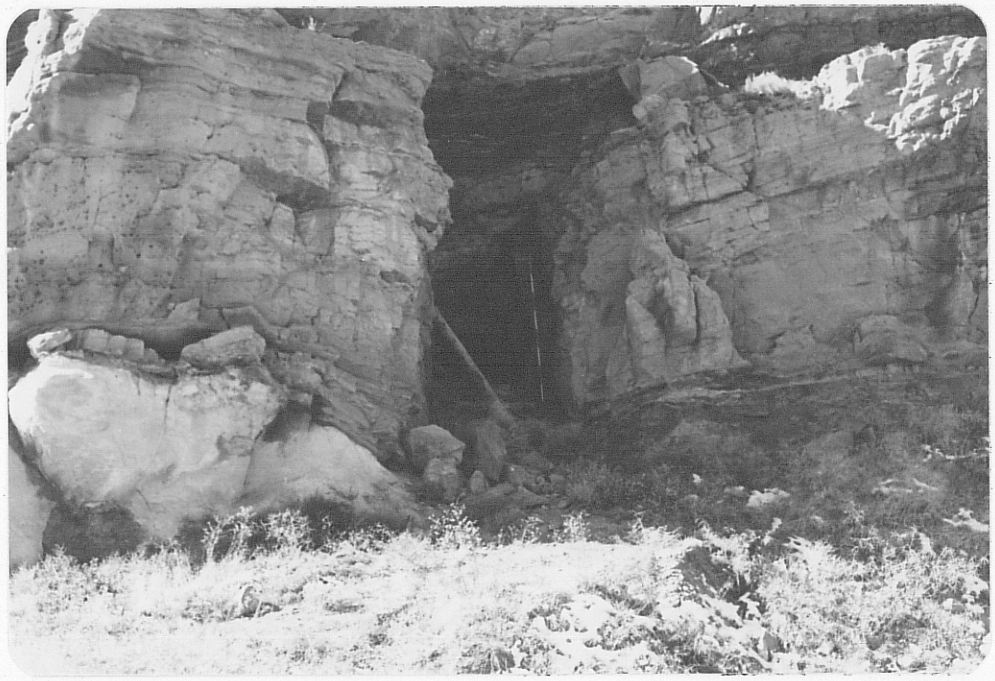

Photo (d) Looking southwest into northern decline, driven down dip just below 4' thick carb. shale zone.

4102 Mc 36



Photo (e) Looking north in main pit near crest of hogback; note small ore pile at left center.



Photo (f) Looking southeast along crest of hogback showing 40' long prospected area.

#109 MC-37

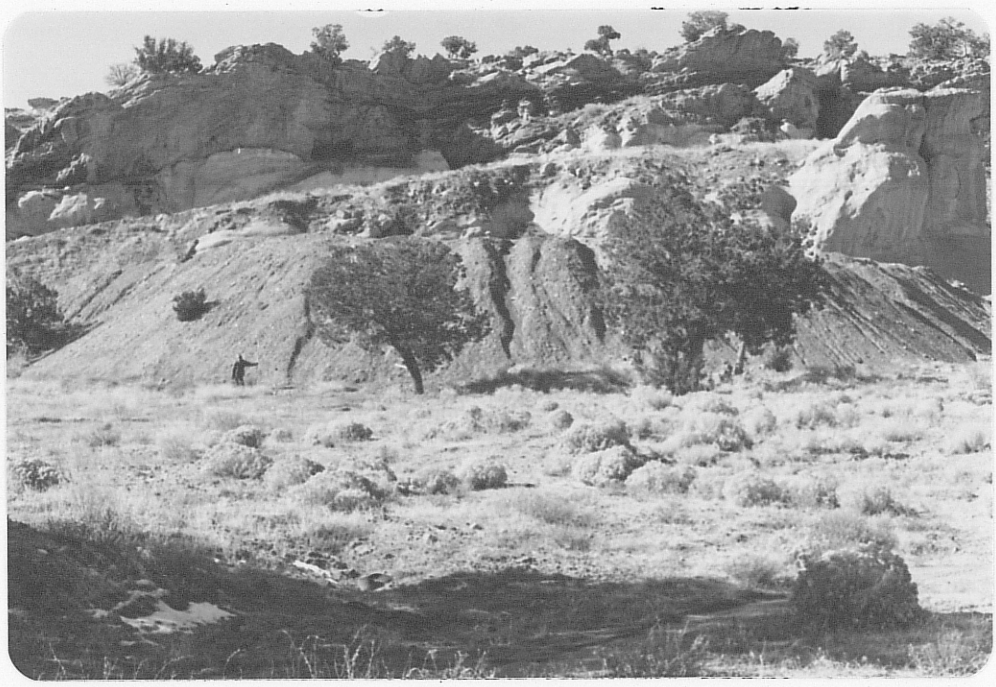

Photo (g) Looking west at mine dump; note portals of the two declines indicated by arrows, and person at lowel level for scale.

#110 MC 38

Date Visited 12/6/79

Mine name(s) CD & S (Sec. 35) County McKinley

Section NW¼ SE¼ 35 Twnsh. 16 N R. 17 W

Quadrangle Sheet Church Rock 7½'

Mining district Gallup

Elevation 7,000'

Nearest City and/or dwelling Farm ¼ mile to the southeast. Church Rock is 2¼ miles south of the prospect.

To reach the CD & S, go north from Churchrock for 3 miles, to the S½ of Section 36. Proceed west on a dirt road for 1 mile, where the road ends. Proceed on foot for the last ½ mile to the west side of a north-south trending spine.

Workings at the CD & S consist of road building and a small face cut (photo a). An old road leads to the base of the sandstone bluff, where a small waster pile and timbers mark the site of the prospecting (photo b).

The workings are in a mudstone lens in the Westwater Canyon Member of the Morrison Formation. No uranium minerals were visible. Scintillometer readings at the face cut were up to 100 cps.

According to Hilpert (1969), some ore was mined at the outcrop in 1957.

References: (1) Hilpert, L., 1969, Uranium Resources of Northwestern New Mexico, U.S.G.S. Prof. Paper 603, p.44.
(2) U.S. AEC, Uranium Mine Records, GJO/AEC.

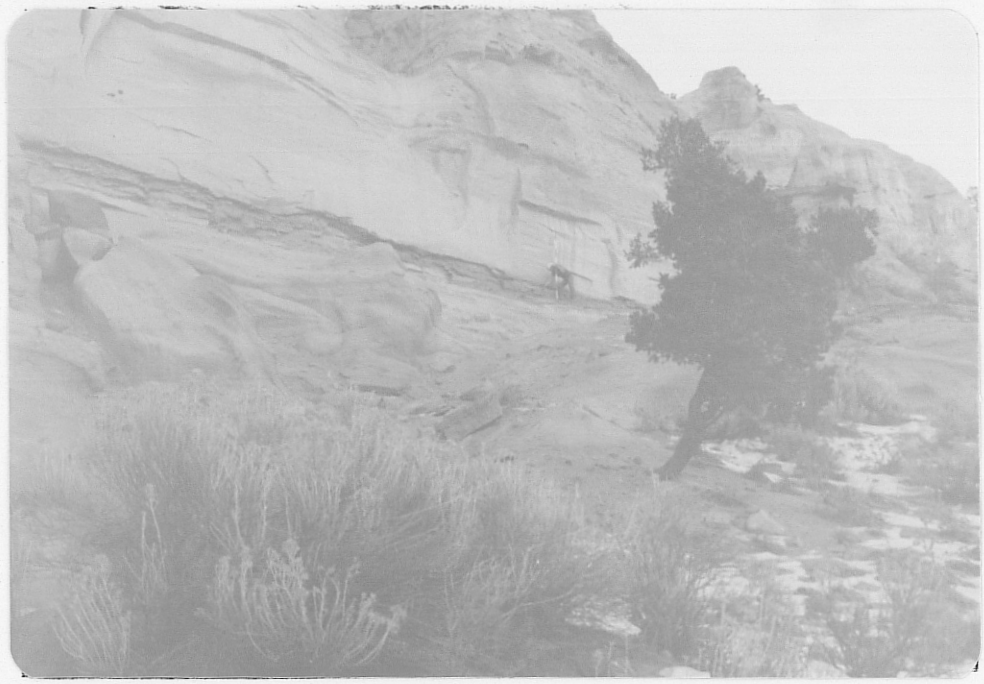

Photo (a) Looking SW at prospecting on the CD & S property.

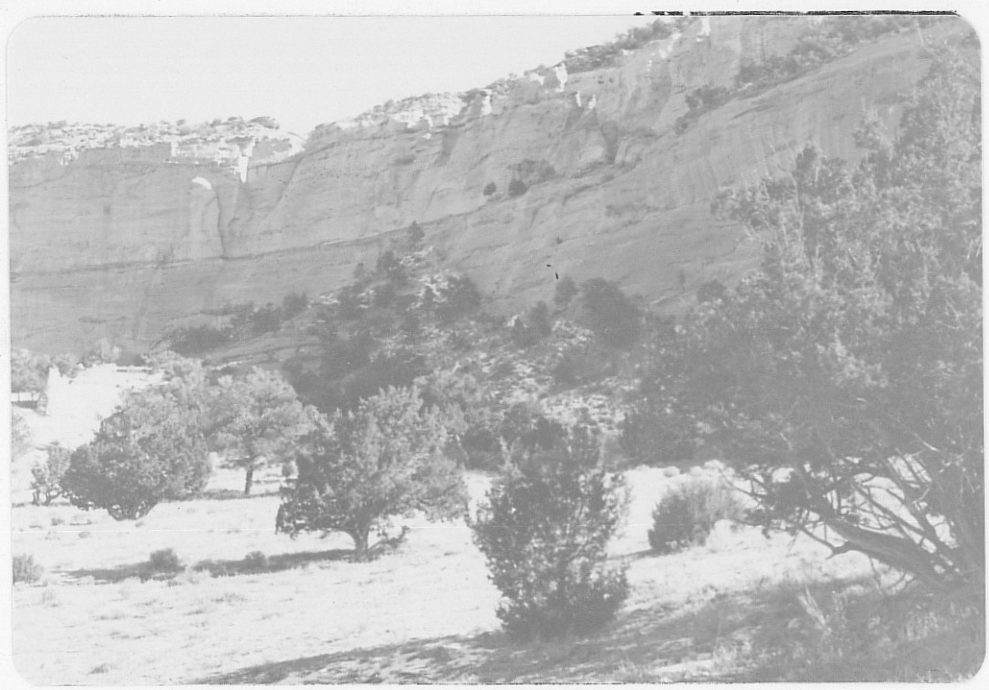

Photo (b) Looking NE at bluff on which the CD & S workings (circled) are located.

#112 mc, 40

Date Visited 12/4/79

Mine name(s) Foutz #3 (Yellow Jacket) County McKinley

Section SE¼, SE¼ 31 Twnsh. 16 N R. 16 W

Quadrangle Sheet Church Rock 7½'

Mining district Church Rock

Elevation 7,200'

Nearest City and/or dwelling Springstead Trading Post, 1¼ mi. NW. Numerous single family dwellings within 2 mi. radius of mine.

The Foutz #3 is located approximately 2¼ air miles NE of Church Rock (Red Rock State Park area). Mine is accessible by dirt road leaving the Church Rock highway about 3 mi. north of Church Rock and traveling east for 1 mi. Take turn off on another dirt road to right (south) for 1 mi. to mine site.

The mine consists of 4 interconnected adits driven into a 25' sandstone of the Brushy Basin member of the Morrison fm,; 3 are driven southwestward and 1 eastward. The easternmost adit, photo (a), has an 8' x 8' portal that leads southward into fairly extensive workings. An open stope area lies off to the left about 15' into the mine. The area is up to 50' across with a raise and 2 drifts begun at the southern end. Several places along the face just inside the adit produce maximum deflection on the scintillometer (10,000 cps).

The middle two adits, driven southward side by side, are shown in photo (b). These lead to another open stope working which is about 120' west of the first described adit. A view inside this stope is afforded by photo (c). The photo shows several drifts leading off southward and eastward, one of which connects with the eastern workings. The fourth adit, photo (d), also leads into the workings shown in photo (c), but from the west side of the sandstone nose; this adit is driven eastward. Scintillometer readings in this stope were in the 4000-6000 cps range.

The mine dump extends downslope northward from the eastern and middle two adits (see photo e). While the dump is not large, extending downslope for several hundred feet, slopes are very steep and tailings are being eroded away.

A view westward from the western workings of the mine is shown in photo (f). The numerous dwellings shown in the valley below are about ½ mile away.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) Hilpert, L., 1965, Uranium section, in Mineral and Water Resources of New Mexico: New Mexico Bureau of Mines and Mineral Resources Bull. 87.
(3) Field notes, 12/4/79.

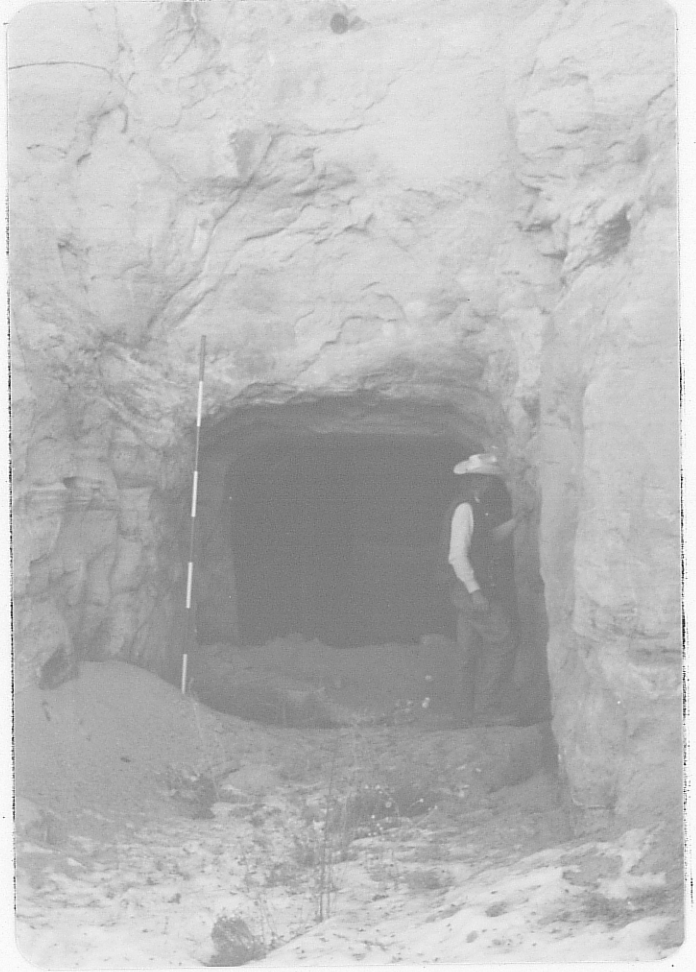

Photo (a) Foutz 3, looking southwest into eastern adit; a jog to left just inside leads to open stope. To right a drift leads to western workings.

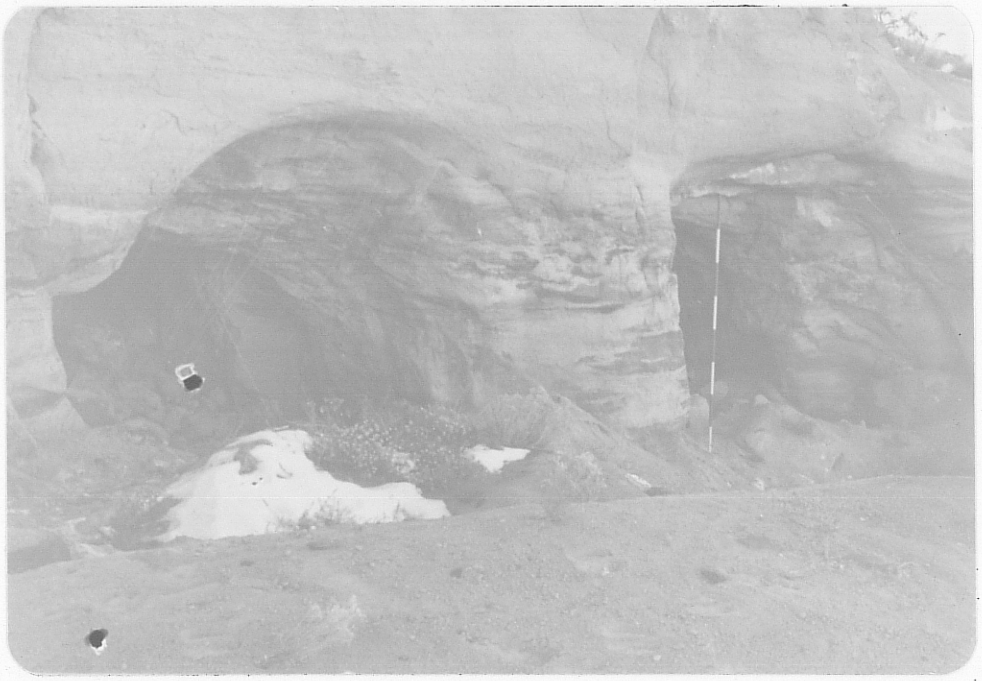

Photo (b) Foutz 3, looking southwest into middle two adits each about 8' high, 10' wide; note range pole for scale. Adits lead to western workings which are open stope and drifts.

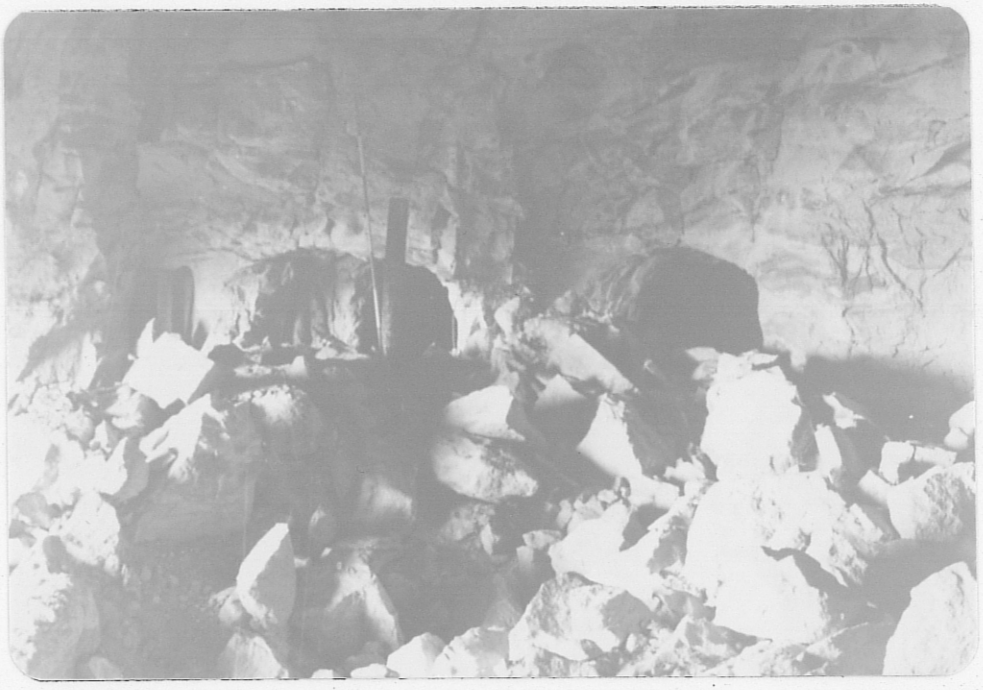

Photo (c) View southeastward inside western workings; note drifts at rear, and range pole left of center for scale.

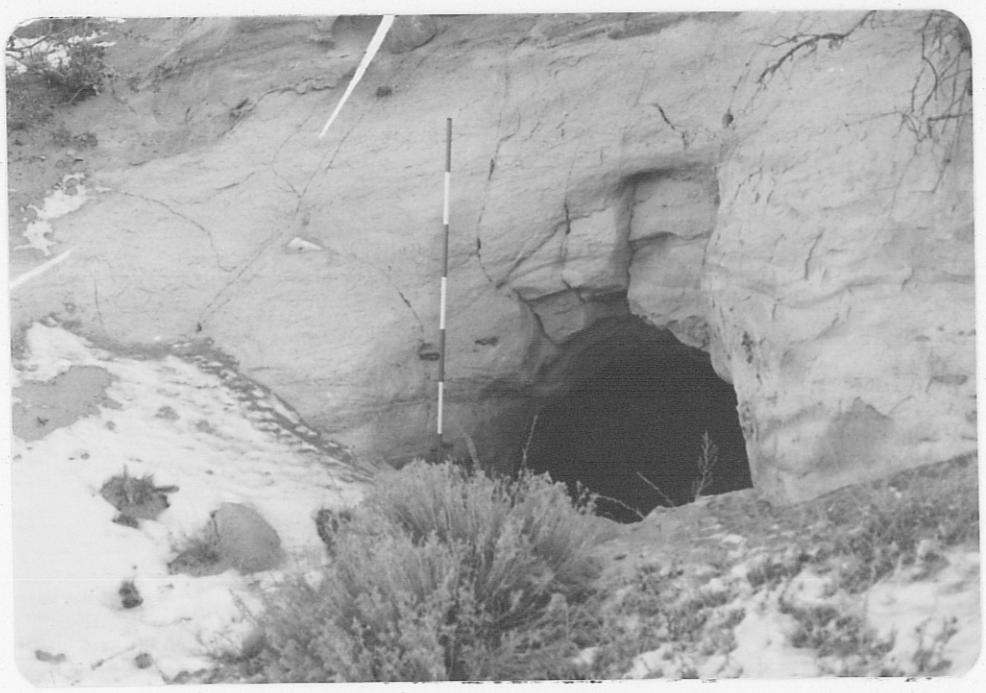

Photo (d) View eastward showing western entrance to open stope area shown in photo (c). Photo (c) was taken from a point just inside this entrance.

#115 mc-43

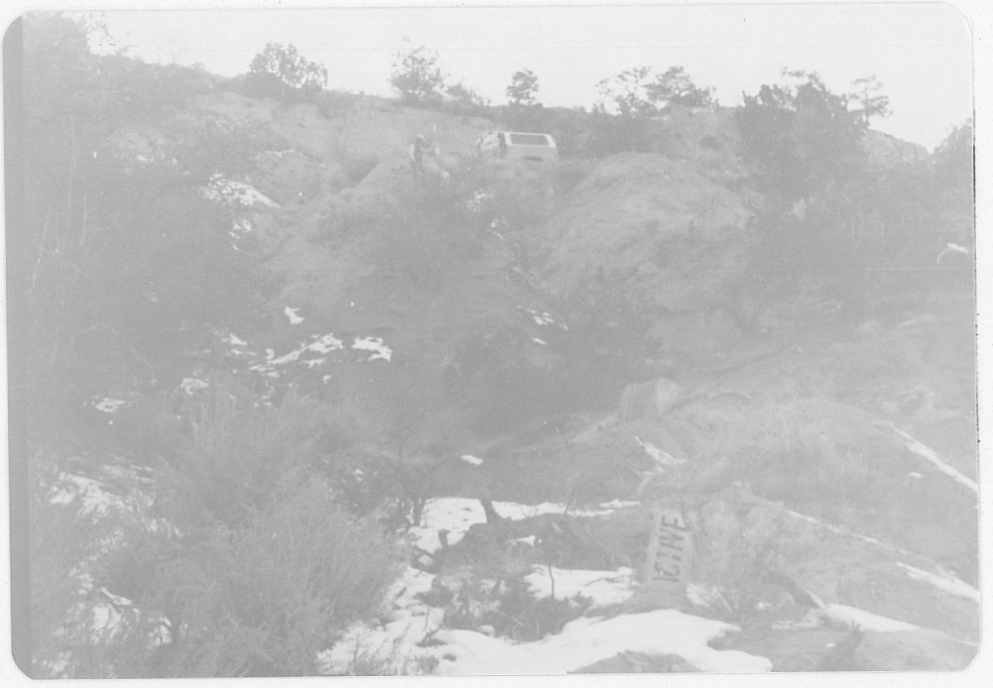

Photo (e) Mine dump just below eastern workings; note remains of sign warning of radioactivity at the site.



Photo (f) View westward from mine showing local topography and proximity of dwellings just visible at left center in middle distance.

Date visited 12/4/79

Mine name(s) Foutz 1 and 2 County McKinley

Section NW¼, NW¼ 4; NE¼, NE¼ 5 Twnsh. 15 N R. 16 W

Quadrangle sheet Church Rock 7½'

Mining district Church Rock

Elevation 7,250'

Nearest city and/or dwellings Springstead Trading Post, 2¼ mi. N.W.; numerous additional single family dwellings within a 2 mi. radius of mine site.

The Foutz 1 and 2 Prospects are located adjacent to one another, #1 being in Sec. 4, and #2 being in Sec. 5. They are 1 mi. east of the Foutz 3 and may be reached by taking the same dirt road to the east 3 mi. north of Church Rock that leads to the Foutz 3. At 1.5 mi. down this dirt road take right fork and proceed 1/2 mi. and take right fork again. This is the road to the Williams and Reynolds Mine and to reach the Foutz 1 and 2 requires a 1/2 mi. trip on foot to the west. The old mine access road lies in the N-S trending canyon in the E½ of adjacent Sec. 32; the condition of this road is unknown, but it is not in general use.

The Foutz 1 consists of a stub adit with a northward heading driven into a nose of the Westwater Sandstone member of the Morrison fm. (see photos a & b). This working is about 20' wide and 6' long; height is difficult to determine due to slumping, but is presently about 3½'. Radioactivity is low, about 2 x background, and no uranium mineralization was noted. The dump appears disproportionately large for the size of the workings, being of the order of 150' x 100'.

The Foutz 2 lies adjacent to the #1, about 300' to the west. A 110' long E-W dozer cut is the primary workings (see photo c); south trending adit referred to by Hilpert, 1969, is not in evidence. Scintillometer readings in the cut were about 120 cps (or 2 x background) and no uranium mineralization was noted.

Some ore was reportedly shipped from these workings in 1953.

References: (1) Hilpert, L., 1969, Uranium Resources of New Mexico, U.S.G.S. Prof. Paper 603.
(2) Hilpert, L., 1965, Uranium Section, in Mineral & Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87.
(3) Field Notes, 12/4/79.

45



Photo (a) Looking N-NE at access road to Foutz 1; person in photo standing on mine dump.



Photo (b) Looking N, into beginnings of adit on Foutz 1 claim, Sec. 4.

#118 Mc 46



Photo (c) Looking E at 110' long bulldozer cut on Foutz 2 claim.

Date visited 12/5/79

Mine name(s) William and Reynolds County McKinley

Section NE¼ SW¼ 4 Twnsh. 15 N R. 16 W

Quadrangle sheet Church Rock

Mining district Gallup

Elevation 7,540'

Nearest city and/or dwellings 3½ miles NE of Church Rock

To reach the mine, go north from Church Rock 4½ miles to the southern ½ of Section 29. Turn right and go east for one mile just past several local dwellings, at which point the road forks. Take the right fork south for 1 3/4 miles to the mine.

The Williams and Reynolds is an open pit 40' wide north to south, 125' long east to west, with the north face being 20' high, and the south face 10' high (photo a). The dump directly west of the pit is 75' x 100' x 8' high (photo b). Several smaller waste and ore piles are found to the east and south of the pit.

The pit exposes a section of Dakota Sandstone. The ore zone lies in and just below a carbonaceous shale zone in the Dakota. Yellow uranium oxides were visible on some of the ore stockpiles south of the pit, and scintillometer readings on some of these small piles were as high as 800 cps. Readings in the pit itself were up to 150 cps, and the western dump registered a maximum of 125 cps.

References: (1) S. Skotte and O. Anderson field notes, 5 December, 1979.
(2) Church Rock 7½ min. quadrangle.

MC 49



Photo (a) Looking west at the William and Reynolds open pit.



Photo (b) Looking north at the western dump of the William and Reynolds open pit.

#121 mc 4/9

Date visited 12/5/79

Mine name(s) Christenson (Rimrock #2) County McKinley

Section SW¼ 4 Twnsh. 15 N R. 16 W

Quadrangle sheet Church Rock 7½'

Mining district Gallup (Church Rock)

Elevation 7,600'

Nearest city and/or dwellings Church Rock, 4½ mi. southwest

The workings are located in the SE¼ of sec. 4, about 3 air miles north of U.S. I-40 at Wingate Siding. To reach the site proceed north from Church Rock at U.S. I-40 for 4½ miles to the south ½ of sec. 29; turn right at this point and travel eastward on dirt road for one mile just past several dwellings where the road will fork. Take the right fork southward for about 1 3/4 miles to the Williams and Reynolds Mine. Proceed eastward on foot from the mine for approximately ¼ mile and look for workings just below the Dakota ss. rim of the south facing mesa escarpment.

The workings consist of 7 adits which had significant production and several stub adits strung out along a distance of 1600'-1800' just below the mesa top. The easternmost adit is very near the sec. 4-sec. 3 line and may be in sec. 3, but is discussed here as a sec. 4 working. All are driven northward into one of the several carbonaceous shale zones near the base of the Dakota Sandstone. In order from west to east they are:

(1) A 6' high, 7' wide, untimbered adit (photo a) that is at least 40' deep; scintillometer readings 20' inside are up to 4200 cps. Some minor roof falls have occurred. Immediately to right of portal is a stub adit, 3'-4' deep (see again photo a). The mine-level road to these workings is shown in photo (b). The small dump extends downslope from this road at the angle of repose; scintillometer readings along the road are frequently 500 cps, on dump, 500 to 800 cps.

(2) 70' east of above is a 6' high, 5' wide, untimbered adit (photo c) at least 80' deep; roof collapse is occurring along a carbonaceous shale parting (see photo d). Scintillometer counts along the first 20' range between 2000 and 4000 cps.

(3) About 170' east of the above is the main adit of these workings. A 6' wide notch cut in the sandstone just above and to the left of the portal has a 45° incline and was used to trolley ore to the top of the mesa 30' above (see photo e). A view of the well timbered adit is shown in photo (f). The first 90' were explored, but Hilpert, 1969 stated that this adit is 500' long and was mined from 1953-55. The width varies considerably from the 6' entrance to areas where face cuts resulted in 20' wide open stopes that were later timbered. Scintillometer readings up to 6100 cps were recorded, but generally in 2500-5000 range. Dump is relatively small for a 500' adit.

(4) 1500' east of the above is another group of closely spaced adits that extend for several hundred feet along the carbonaceous zone outcrop and approach the east sec. line or perhaps cross it. The first is shown in photo (g). It is driven in the thickest and lowest carb. shale zone, here about 4' thick; it is reached by the road descending to the east from the mesa top as shown in photo (g). The adit is 7' high, 4' wide, is timbered the first 20', and goes back a total of 60' or more; scintillometer readings up to 1700 cps. were noted. Immediately east of this adit is another small adit, partially caved at entrance, that has a 5' x 6' opening and goes back nearly 100' feet (see photo h); scintillometer readings ranged from 1000 to a high of 2600 cps.

(5) At about 100' east of the two adits just described is a 5' high 5' wide, timbered adit, partially caved at entrance (see photo i); timbering goes back for the first 10', total length of adit about 50', with scintillometer readings averaging 500 cps. Just above the adit another small adit was started in a thinner overlying carb. shale zone (see again photo i). To the east another 55' is the last in this group of adits. It has a partially caved entrance that measures about 6' high, 6' wide, and goes in 15' (see photo j); scintillometer readings were in the 1500-2500 cps range with a high of 3200 cps. This eastern group of workings were active until 1958 after which ownership transferred to M. P. Grace. Workings were last registered with the State Mine Inspector's Office in 1975.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) New Mexico State Mine Inspector's Office, inactive uranium mine file.
(3) U.S. AEC, uranium mine records.
(4) Field notes, 12/5/79.

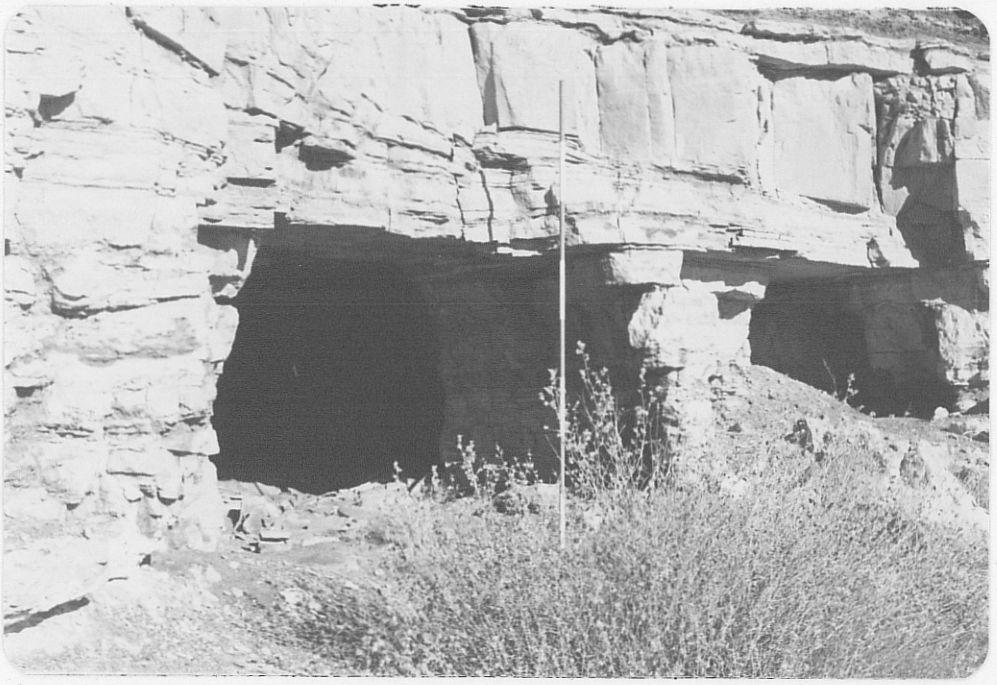

Photo (a) Looking northward into westernmost workings of Rimrock #2 group; entrance to main adit is 6' high; stub adit on right is only 3' deep.



Photo (b) Looking eastward from the westernmost workings showing mine level road; note person on road for scale.

#124 Mc 52

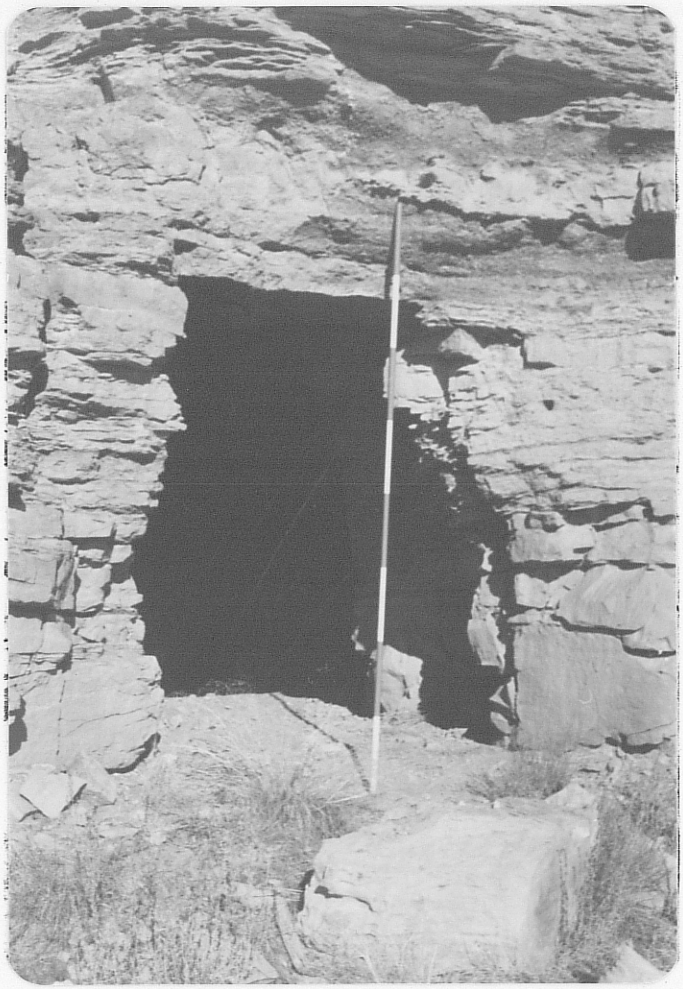

Photo (c) Next adit to east of workings shown in (a).

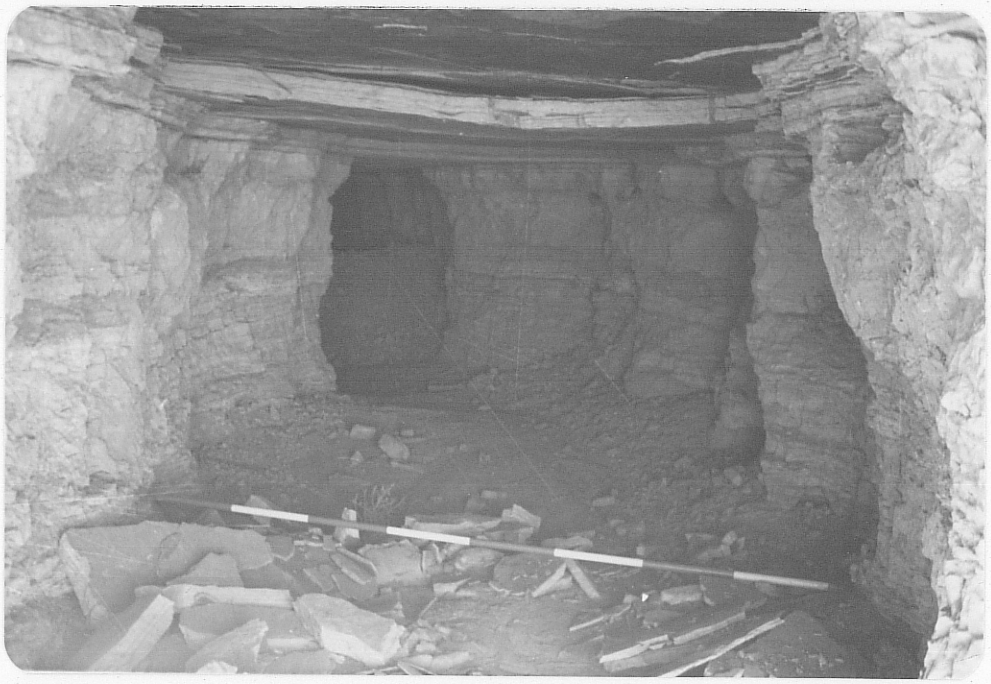

Photo (d) Interior view of adit shown in (c) above.

H.125 Mc 53

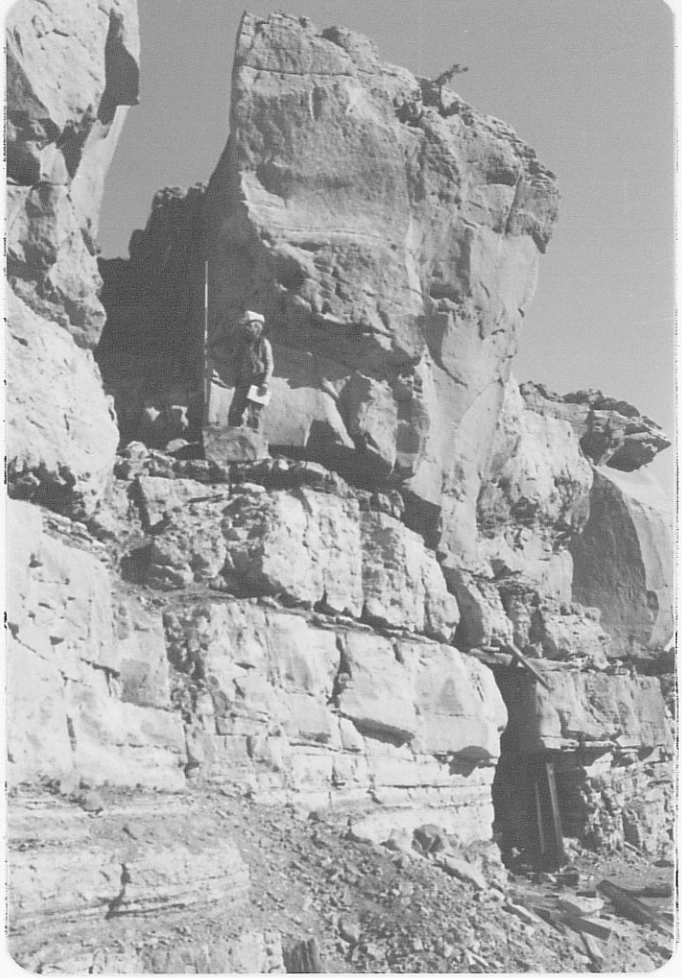

Photo (e) View northeastward at main adit showing portal at lower right and notched cliff for ore hoisting at upper left.

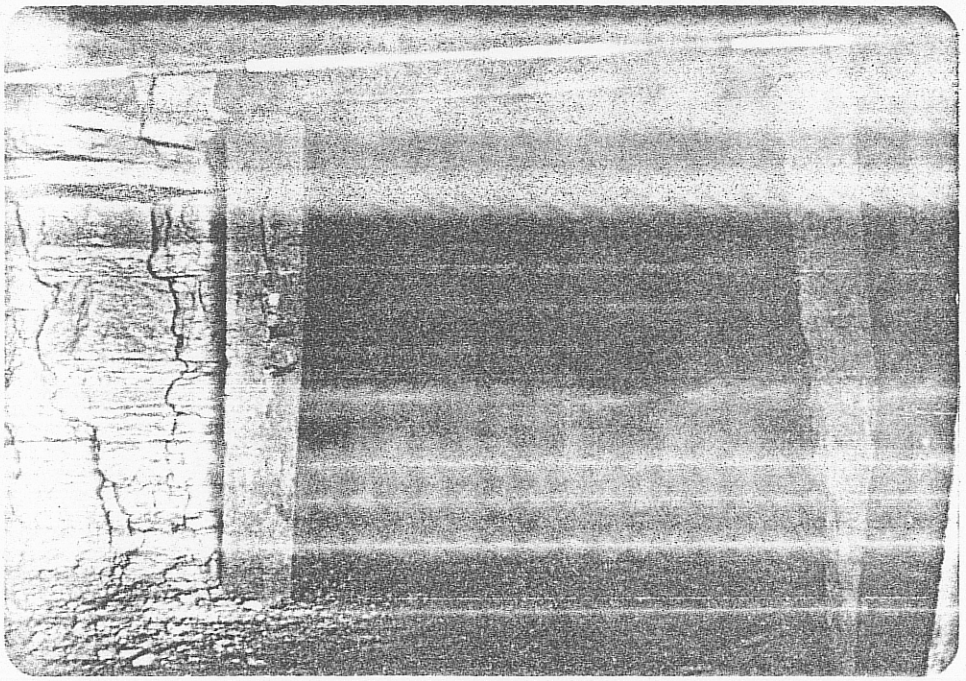

Photo (f) Interior view of main adit shown in (e) above; note range pole overhead for scale.

mc 54



Photo (g) Looking westward at adit with timbered portal (left of center) and dump of another adit at far right.



Photo (h) Looking northeastward at the adit just off the right edge of photo (g).

H127 M 55



Photo (i) Looking northward into timbered adit in group of eastern sec. 4 workings; note small adit begun above timbered portal.

#128 Mc 56

Date visited 12/5/79

Mine name(s) Santa Fe Christensen (Rimrock #1) County McKinley

Section SW¼ 3 Twnsh. 15 N R. 16 W

Quadrangle sheet Church Rock 7½'

Mining district Gallup

Elevation 7,520'

Nearest city and/or dwellings Church Rock is 4½ miles to the southwest

To reach the workings, go north from Church Rock 4½ miles to the southern ½ of section 29. Turn right, and go east for one mile just past several local dwellings, at which point the road forks. Take the right fork south for 1 3/4 miles to the Williams and Reynolds Mine. Proceed east by foot on an old road, from the mine for one mile. The Santa Fe Christensen is below the rim of the mesa (photo a).

The workings consist of two adits located 25' above the road surface, which must be reached by a wooden ladder (photo b). The westernmost, and largest of the adits is 6' x 6' x at least 60' deep (photo c). The portal and the first 15' of the adit is timbered. The second adit is 125' east of the larger western adit, and is 4' high x 6' wide x 15' deep (photo d). Ore was brought to road level through an ore chute (photo e), located between and below the two adits. No dump was noted below the workings, indicating that most of the material was removed by truck.

Mineralization is in a coaly, carbonaceous shale zone 15-20' above the base of the Dakota Sandstone (photo a). A yellow-green mineralization (perhaps tyuyamunite) was noted on some of the carbonaceous material. Scintillometer readings on the road below the adits averaged 220 cps, while the large adit had a maximum reading of 2,200 cps and the eastern adit had a maximum reading of 3,100 cps.

The mine was last registered with the State Mine Inspector's Office in 1975 as the Rimrock #1.

References: (1) Hilpert, L., 1969, Uranium Resources of Northwestern New Mexico, U.S.G.S., Prof. Paper 603, p. 43.
(2) U.S. AEC, uranium mine records.
(3) Mirsky, A., 1953, Preliminary report on uranium mineralization in the Dakota Sandstone, Zuni uplift, New Mexico, U.S. A.E.C. RME-47, 21 p.
(4) New Mexico State Mine Inspector's Office; inactive uranium mine file.

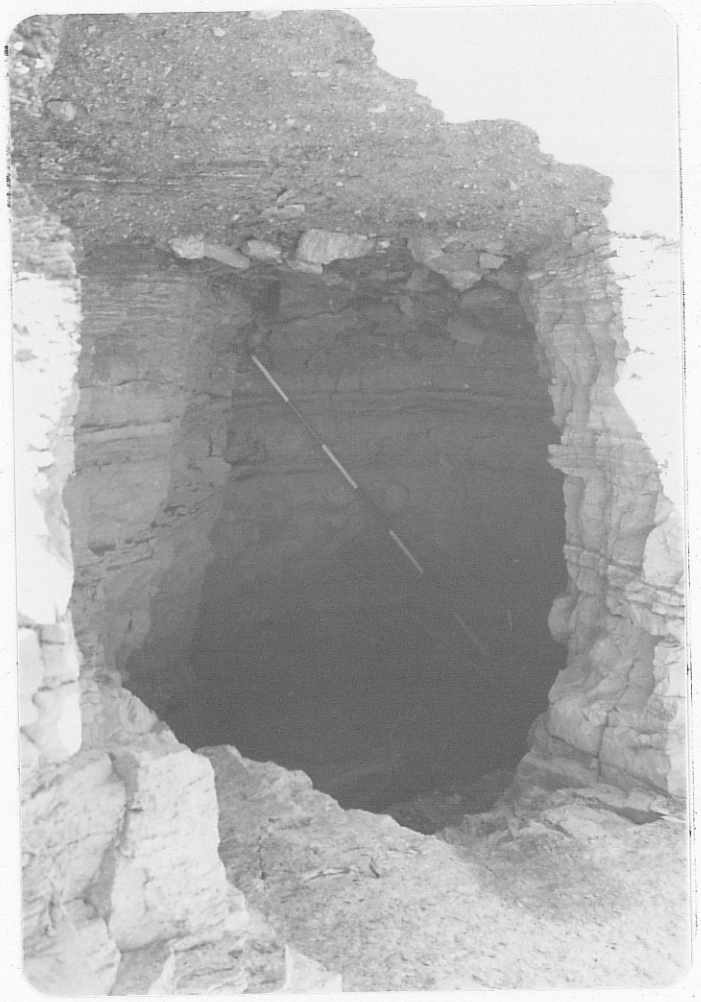

Photo (j) View northward into easternmost adit of the sec. 4 Rimrock workings.

#130 Mc 54



Photo (a) Looking west at access to the Santa Fe Christensen. Note wooden platform in foreground, and Christensen adit circled in background.



Photo (b) Looking east at ladder leading to Santa Fe Christensen adits (circled). The ore chute (lower circle) is just to the right of the ladder.

#131 MC 59

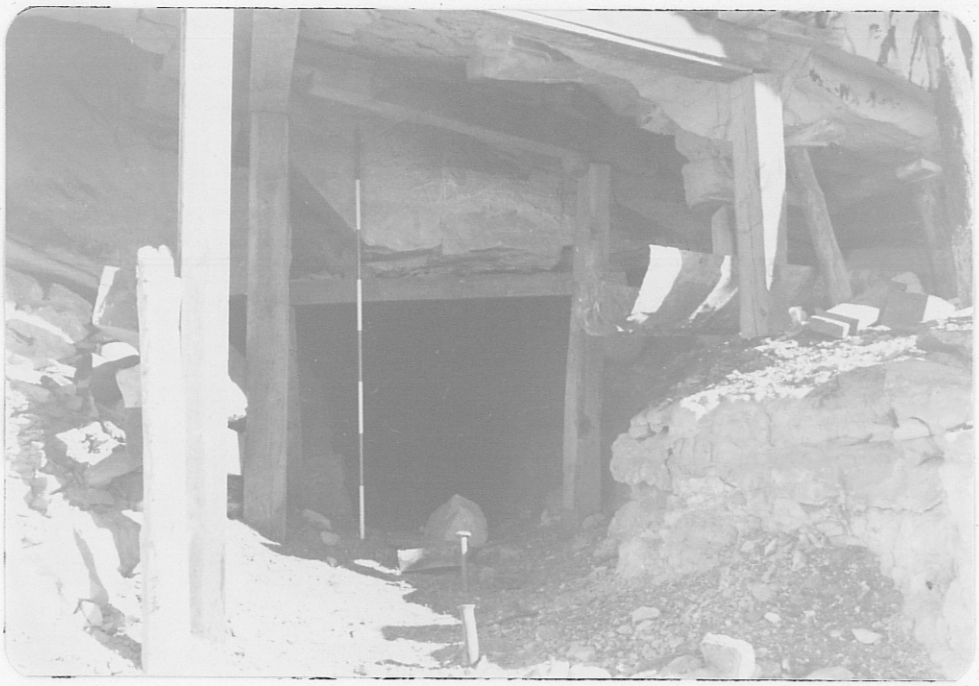

Photo (c) Looking NE at westernmost adit of the Santa Fe Christensen workings.



Photo (d) Looking east at the smaller adit on the Santa Fe Christensen workings. The adit is 125' east of the larger adit.

#132 Mc 60

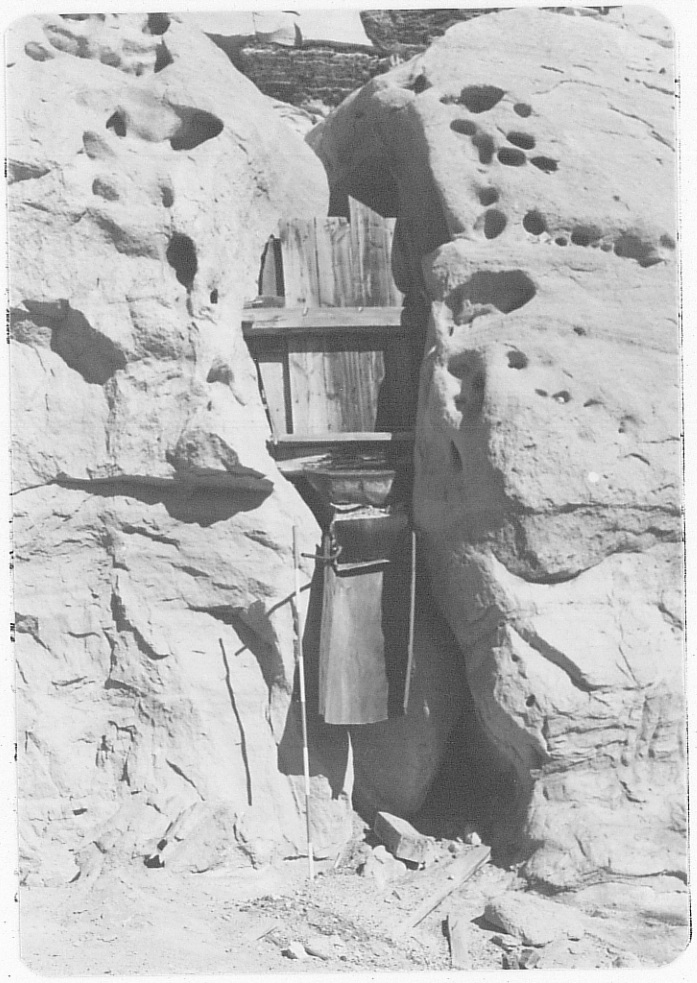

Photo (e) Looking north at the ore chute below the two Santa Fe Christensen adits.

#133 M-61

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.

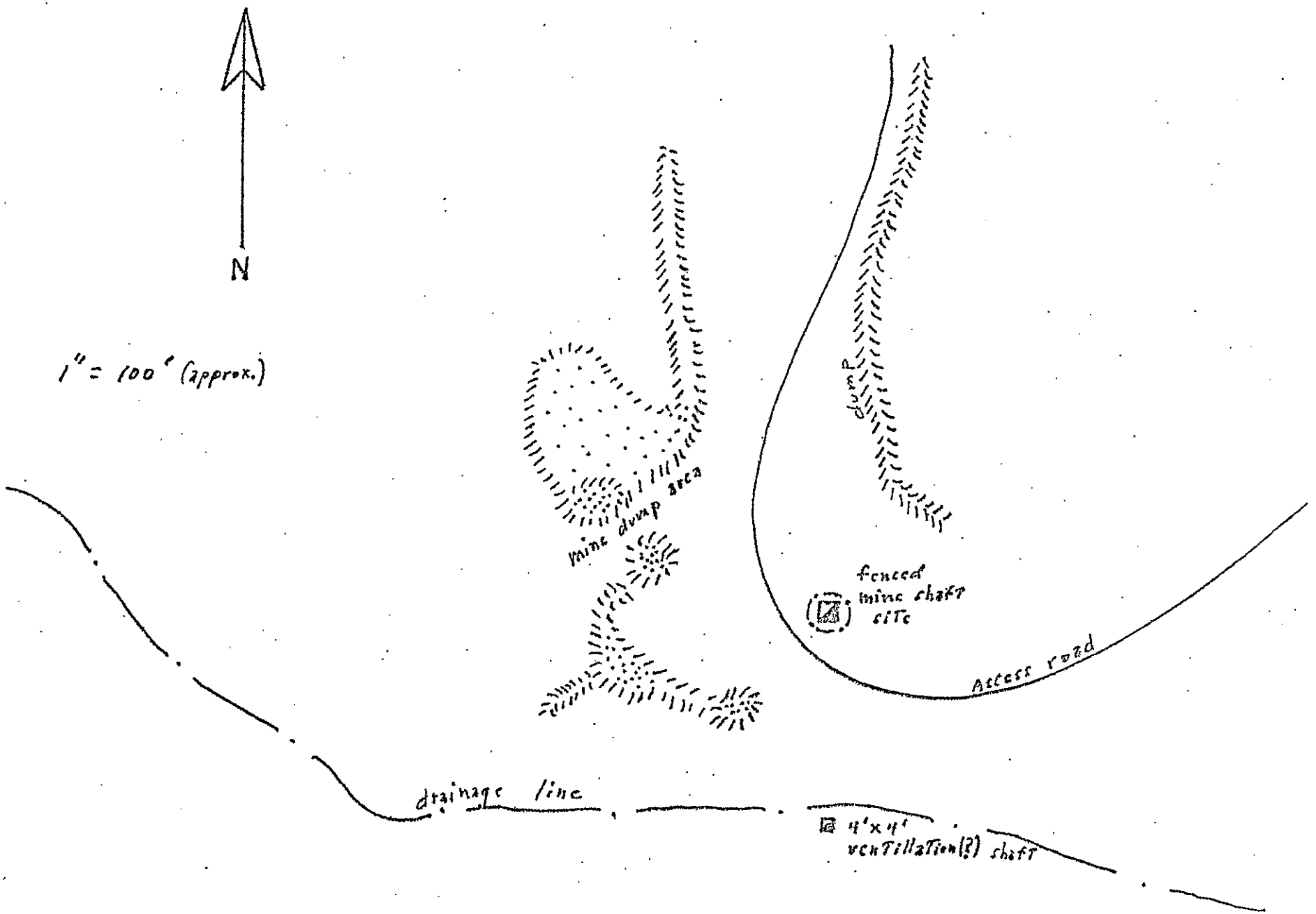

Fig. 1 Diagrammatic sketch of the Isabella Shaft site.

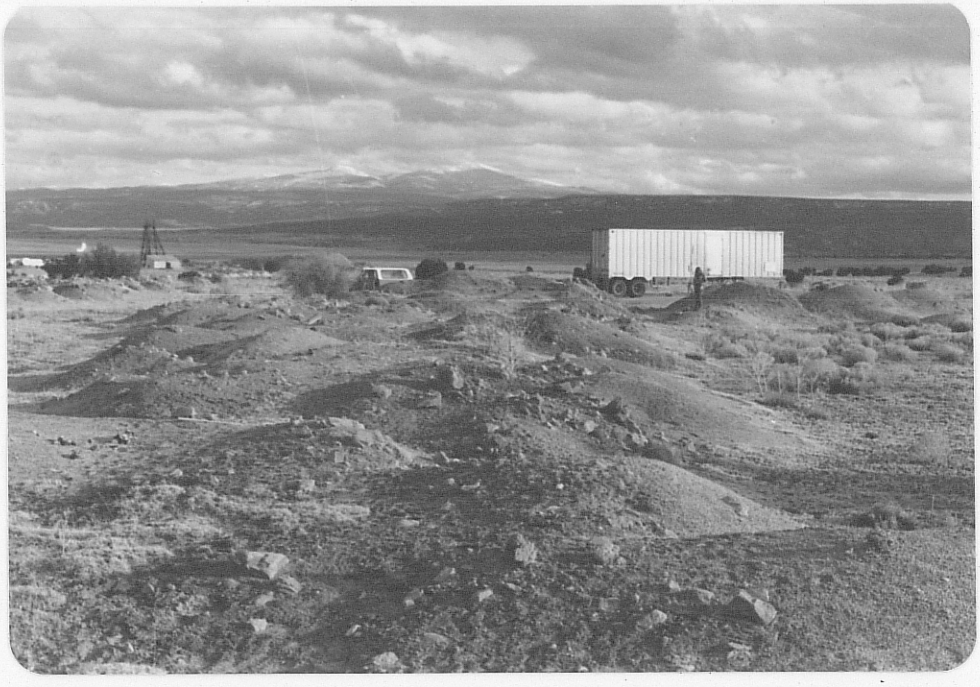

Photo (c) Looking northward at a dumping area just north of the mine shaft. Trailer rig is property of Koppen Mining Construction Co.; Mt. Taylor in background.

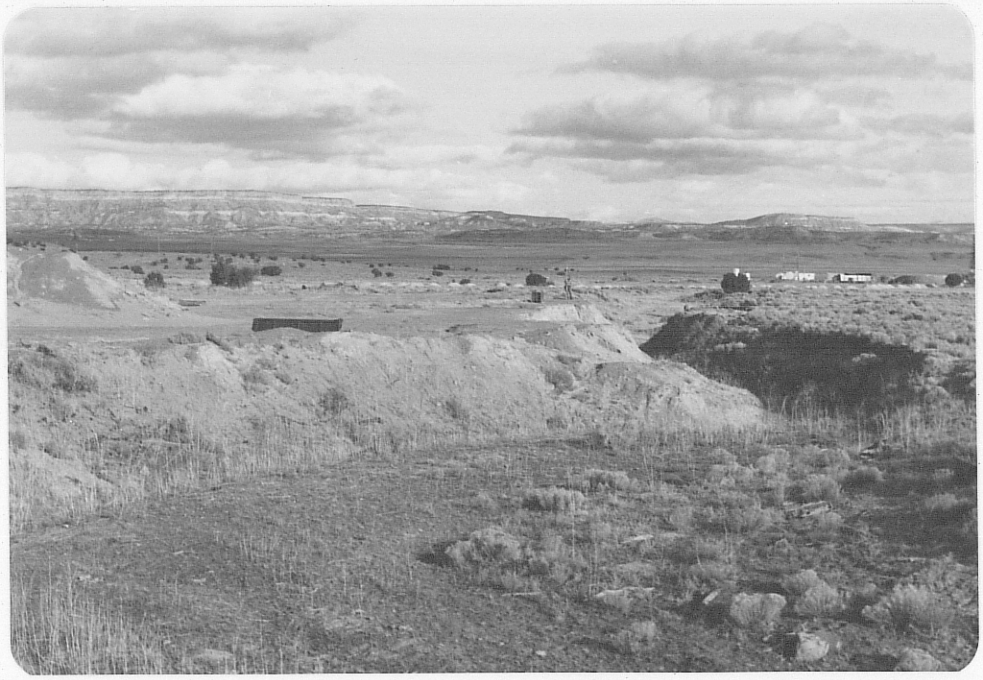

Photo (d) Looking eastward down small drainage that passes near southern edge of the dump area. Note person on left bank of drainage for scale.

#137 Mc 66



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

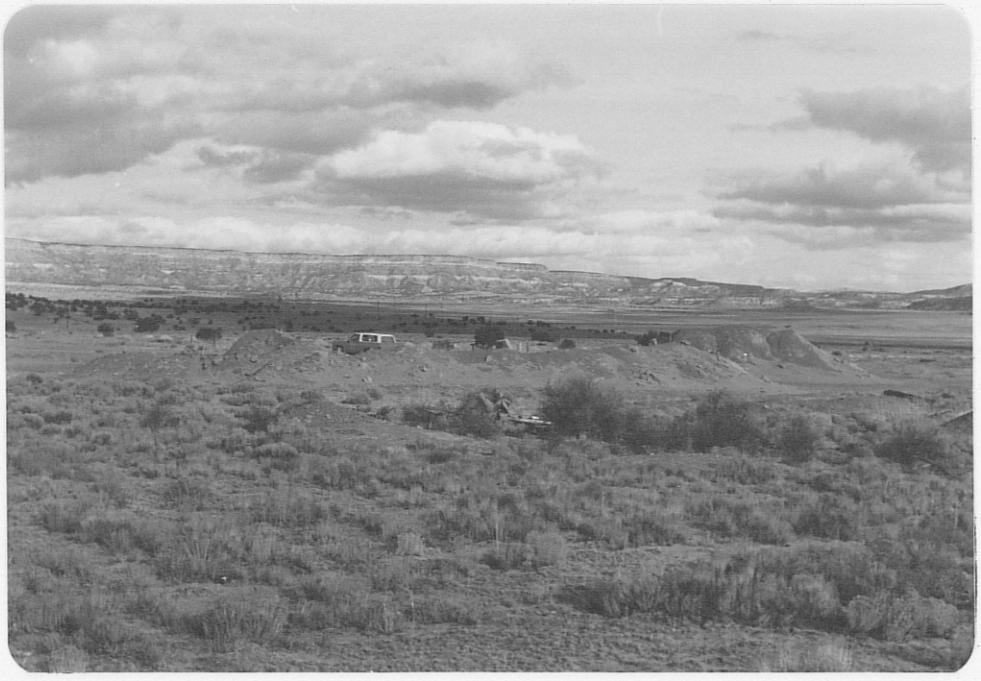

Photo (b) View northeastward of dump area on south and west sides of mine shaft; shaft location is to immediate right of vehicle in photo.

#158 Mc 65

Date visited 1/17/80

Mine name(s) Spencer Shaft (centennial) County McKinley

Section NW¼ 8 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 Spencer Shaft is located in the NW¼ sec. 8 of T. 13 N., R. 9 W., near the northern edge of the Dos Lomas quadrangle sheet. It is accessible via dirt road leaving highway 509 approximately 3 mi. north of Ambrosia Lake junction. Take the dirt road leading southeast for about 1 mi. to the mine site.

The mine is in the Poison Canyon trend and was developed in 1959 and 1960 through a 245' deep vertical shaft. It was operated intermittently until 1966 first by Hyde and Cosper, and later by W. D. Tripp Mining. It was rejuventated in 1978 by Koppen Mining Construction Co., who retimbered the shaft and operated it until the second and final closing in January of 1980. During this last phase of operation which spanned a period of about 16 months the mine produced 100-150 tons of ore per day averaging .09% U_3O_8.

The metal headframe, several buildings, and a sizeable tailings dump remain at the site (see photo a). A portion of the dump is comprised of very low grade ore, unacceptable at the mill at present. No detailed measurements were made at the site due to the very recent closing. Scintillometer readings along south edge of the dump area ranged from 300 to 600 cps., or up to 9 x background. Mine is on federal land.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) New Mexico State Mine Inspector's Office, 53rd and 54th annual reports.
(3) Koppen Mining Construction, oral communication 3/6/79 and 1/17/80
(4) Field notes, 1/17/80

MC 68



Photo (a) Looking northward at the Spencer Mine site and tailings dump.

Date visited 1/31/80

Mine name(s) Hogan County McKinley

Section W½ SE¼ Sec. 14 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend-Grants District

Elevation 6,920'

Nearest city and/or dwellings Ambrosia Lake junction, 1½ mi. west

The Hogan Mine is located approximately 1½ mi. east of Ambrosia Lake junction, 200' N of state highway no. 53 in the SE¼ of sec. 4. The mine was developed in the Poison Canyon sandstone tongue through a 340' deep vertical shaft. The ore body, which is at the northern boundary of the Poison Canyon trend, is not typically elongate southeastward as are others in the trend, and is thought to be comprised of redistributed deposits along the flanks of an anticlinal fold which strikes parallel to the San Mateo fault (Rapaport, 1963). Although not considered a large deposit it was one of the higher grade deposits in the Grants region. It was mined from 1959-1962 by Four Corners Exploration, Inc., with United Western coming in during the late stages with a small interest. Total production is not known.

The mine shaft site is shown in photo (a) with highway no. 53 in the background. The site is level and clean. The reinforced concrete slab over the shaft and one of the head-frame footings are shown in photo (b). At the west edge of the slab a small amount of caving has begun. The shaft was not backfilled because of the possibility of mine rejuvenation. The upper shaft was cross timbered and a 10-15 foot thick concrete plug was poured (Irving Rapaport, oral communication). Scintillometer counts around the shaft site range up to 450 cps, or 9 x background.

Immediately southwest of the shaft is a concrete slab, measuring approximately 30' x 70', that was the site of the hoist and drum and a maintenance shop, (see photo c).

The dump area to the northwest of the mine shaft measures about 220' (N-S) by 120', however, patches within this area contain no waste. It is an area with closely spaced individual conical piles up to 4' high, (see photos d & e). Scintillometer readings recorded on traverse of dump were in the 200-400 cps range.

United Nuclear Corporation has picked up most of the mining claims in sec. 14.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Rapaport, Irving, 1963, Uranium Deposits of the Poison Canyon Trend, Grants District, in, Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines & Mineral Resources, Mem. 15.
(3) Irving Rapaport, oral communication, 4/17/80
(4) Field notes, 1/31/80

NM 69



Photo (a) Looking southwest at Hogan Mine shaft site; note highway no. 53 in background and range pole (center) for scale.



Photo (b) Close-up looking south at concrete slab over the mine shaft. Note head frame footing behind slab to right. A small amount of caving has begun near corner of slab at right. Marquez Mine is visible at center background.

#142 mc 70



Photo (c) Looking southwest at concrete slab for hoisting equipment and maintenance shop.



Photo (d) View northward at south edge of main dump area; note range pole (center) for scale.

4143 Mc 71

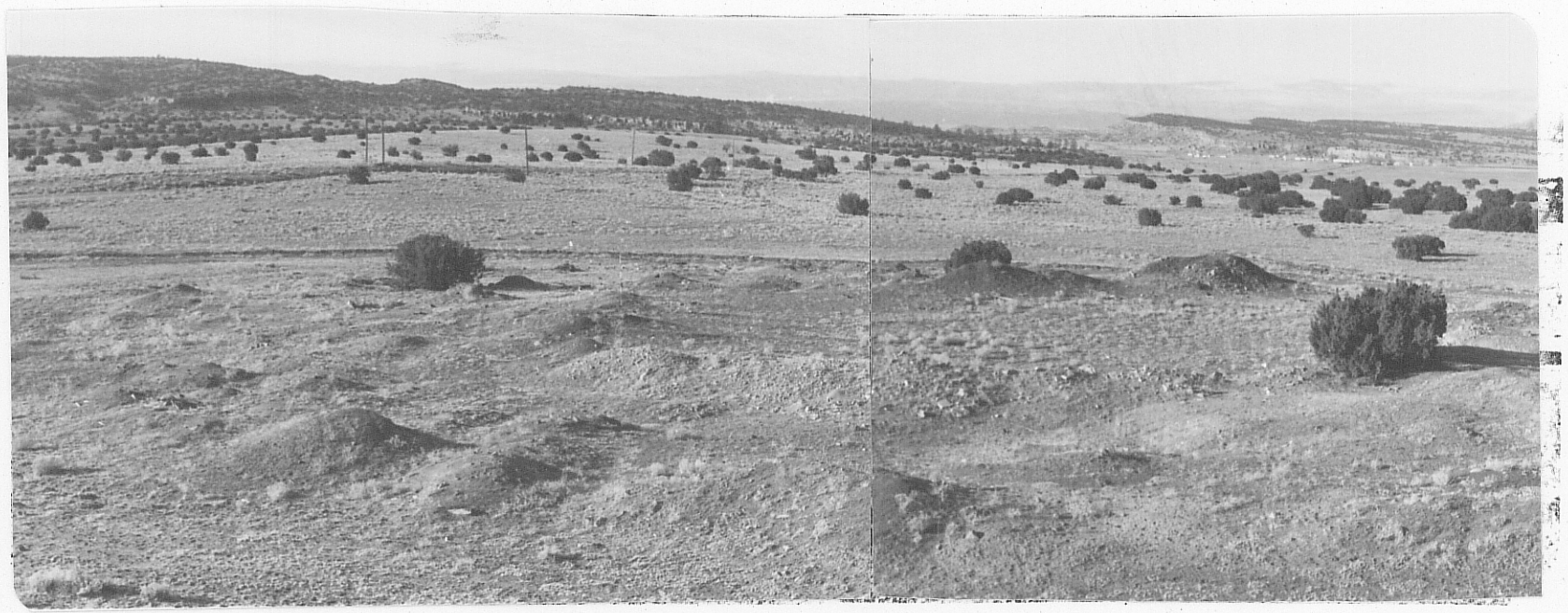

Photo (e) Looking westward showing dump area with small scattered 3'-4' high waste piles; area measures 220' N-S, but there are patches within that have no waste material. Ambrosia Lake junction (numerous light colored buildings) is visible at right in the distance 1¼ mi. away; note range pole at left of center for scale.

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.

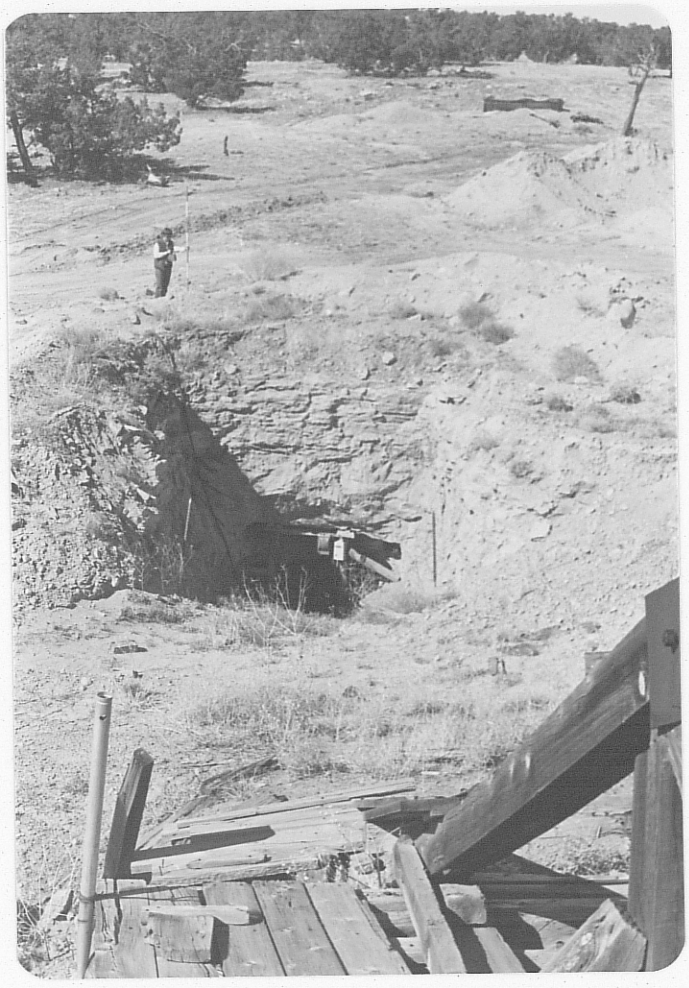

Photo (a) Looking westward into Gossett Incline from the headframe; it is presently in use as upcast air ventillation shaft for Poison Canyon Mine.

#147 M-75



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

#141 Mc 76

Date visited 1/9/80

Mine name(s) Blue Peak (Garcia 1) County McKinley

Section S½ NE¼ 24 Twnsh. 13 N R. 10 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 7,350'

Nearest city and/or dwellings Ambrosia Lake junction, 3½ air miles east.

The Blue Peak is located in the S½ NE¼ sec. 24 on the south facing escarpment of Mesa Montanosa. The mine is immediately west of the active Hope Mine, operated by Ranchers Exploration. Before proceeding on to property stop at Ranchers Hope Mine office and obtain permission to cross their property. Also a sign on approach to the Blue Peak indicates that Mr. Lee Garcia of Grants (Tele. 287-2406) may have active claims in area. Some recent drilling was noted in area.

The Blue Peak workings consist of 6 separate localities along the outcrop where adits have been driven or started. Going from east to west they are (1) a northward driven 3½' high, 10' wide, 12' long adit with maximum scintillometer reading of 1,700 cps (see photo a); (2) 85' west of first adit is a 4' high, 9' wide portal opening to a 100' long tunnel driven on a N 25° W heading with scintillometer readings up to 3,200 cps (photo b); (3) 100' west of second adit is the 3rd adit with a 6' high, 7' wide portal, going back at least 75' (photo c). Some roof falls have occurred in this adit and entire length was therefore not explored; scintillometer readings 25' inside were up to 1,500 cps. The wooden ore chute shown in the last photograph of series is between 2nd and 3rd adits; (4) 200' west of 3rd adit is the 4th locality, which consists of a pair of gopher holes 3' deep, one of which has caved (see photo d); (5) 15' west of the gopher holes is a stub adit 3' high, 6' wide, 4' long (photo e); and (6) the main adit is 85' to the west of (5); it has a 7' high, 8' wide timbered portal (see photo f). The adit goes in on a N 15° E heading for at least 75", at which point there appears to be some room and pillar structures. Scintillometer reading at portal is 4,000 cps, at 50' inside where drifts to both left and right were noted, readings of 3,600 cps were recorded. This adit still carries a notice of a 1964 inspection by Mine Inspector's Office to determine working levels of Radon daughters; inspector was D. B. Buddeke.

Photo (g) is a view of the wooden ore chute between the 2nd and 3rd adits. It dropped ore about 40' to the load out level.

The deposits are all in the Poison Canyon sandstone tongue in the Brushy Basin member of the Morrison fm. They were mined intermittently between 1951-1964 (Hilpert, 1969), probably by Four Corners Exploration. Additional information on the geology and uranium mineralization is given in Rapaport (1963).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 37.
(2) Rapaport, I., 1963, Uranium Deposits of the Poison Canyon Ore Trend, Grants District, in Geology and Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources, Mem. 15, p. 123.

turn

NM 77

(3) Field notes, 1/9/80.



Photo A Looking northward at easternmost workings at Blue Peak; adit is 3½' high, 10' wide, 12' long; (may be only powder magazine but scintillometer read 1700 cps).

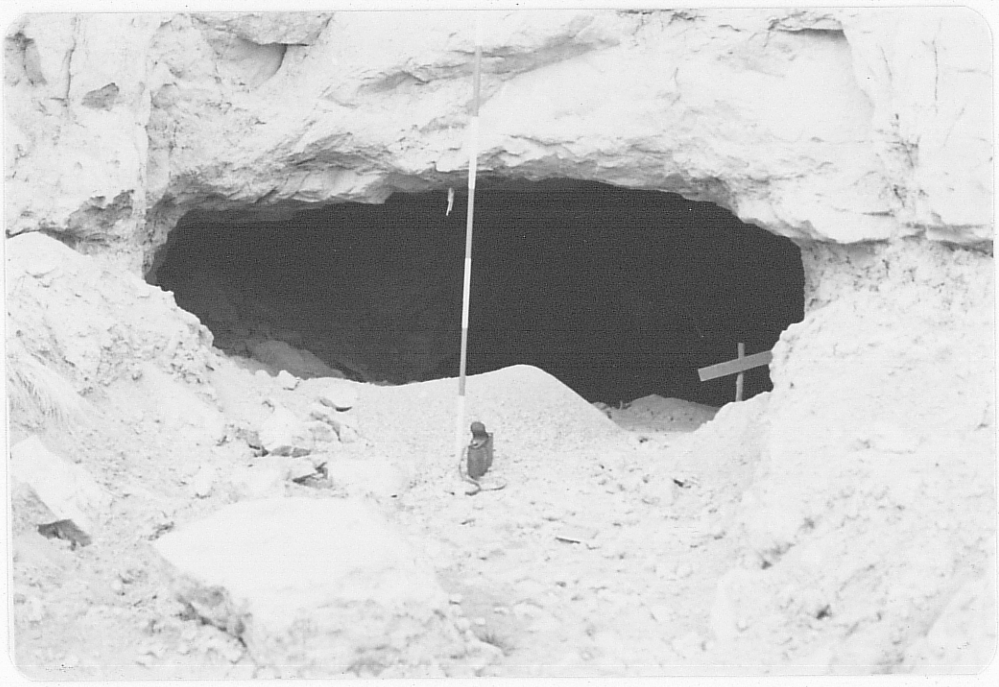

Photo B Looking northward at second adit 85' west of A; portal is 4' high, 9' wide and tunnel continues on a N 25° W trend for at least 100'.

#15, MC79

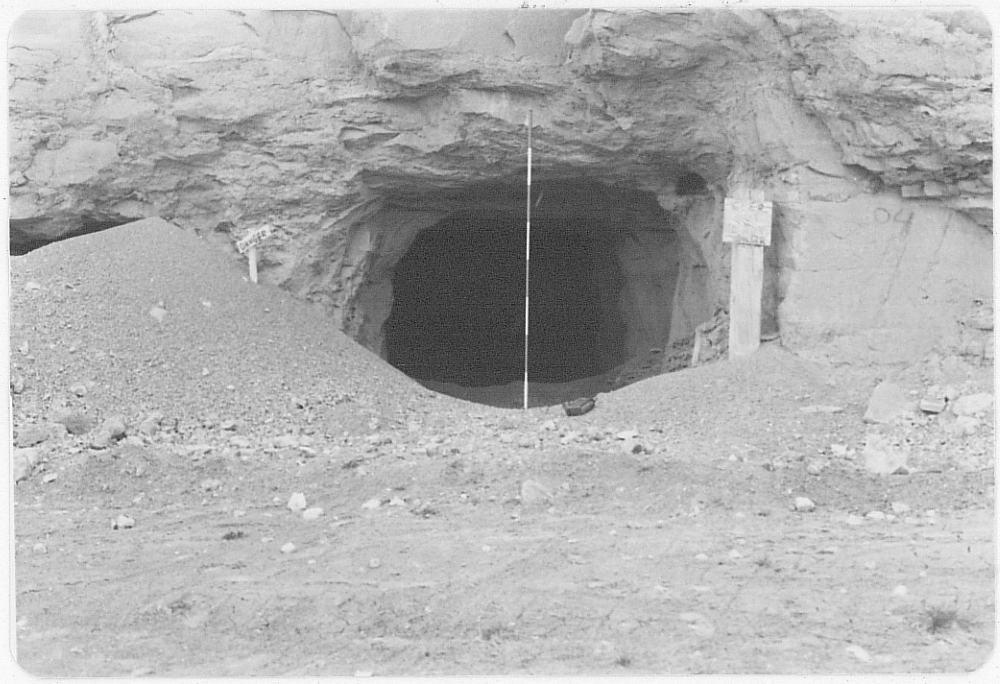

Photo C Looking northward at 3rd adit going west; portal is nearly 6' high, 7' wide, and continues on a N 15° W trend for as far as light goes (at least 75').

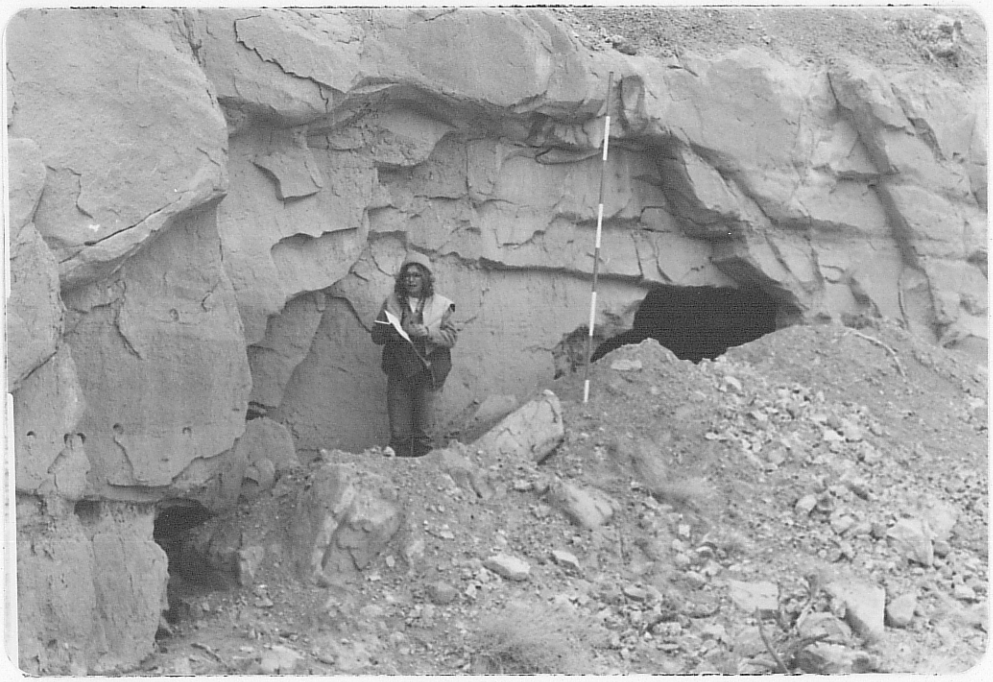

Photo D Looking northward at 4th workings in series, 200' west along outcrop from No. 3 in C; probably consists of a pair of gopher holes, each about 3' deep, but left one has caved or has been blasted.

11 52 mc80

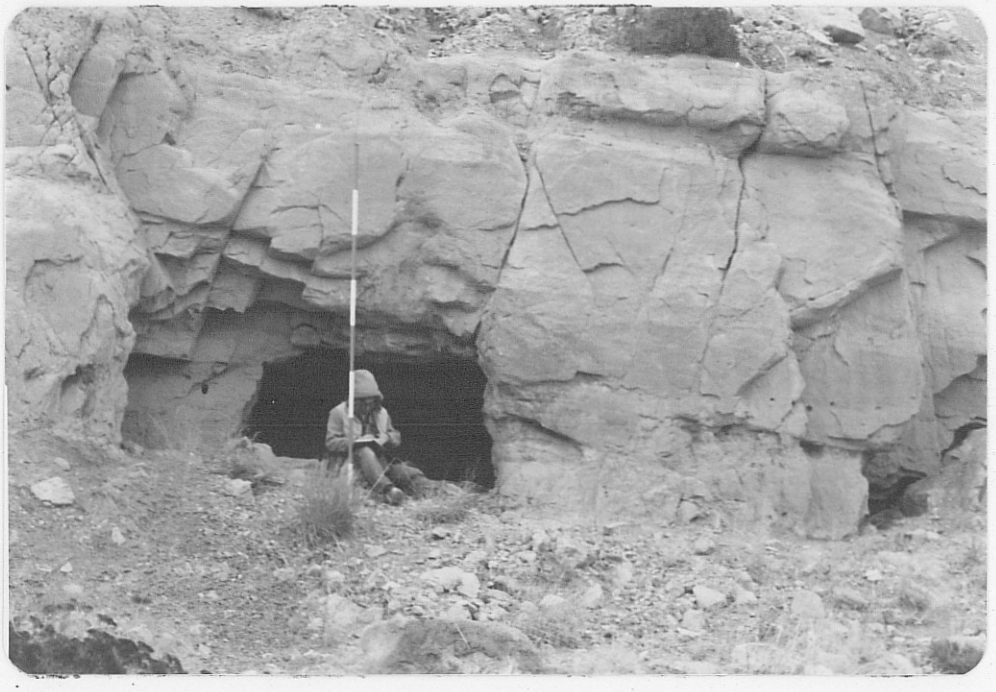

Photo E Looking northward at 5th workings, 15'-20' west of No. 4 shown in D; portal is 4' high, 6' wide, but adit is a stub going in only 4'.

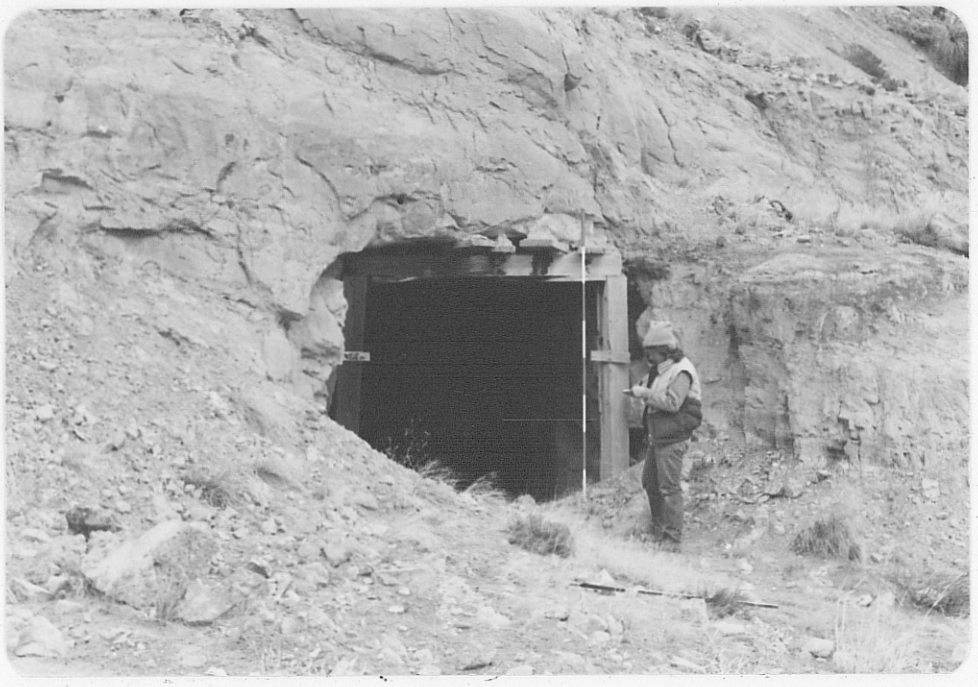

Photo F Looking northward at last or westernmost adit on Blue Peak workings, 85'west of stub shown in E. Portal is 7' high, 8' wide, and adit continues on a N 15° E trend for at least 75' at which point there may be some room and pillar structures.

#153 MC 81.



Photo G View westward along south facing escarpment into which Blue Peak adits were driven (upper cut); wooden ore chute extends from adit level down to loadout level, a vertical distance of about 40'.

#154 mc 82

Date visited 1/16/80

Mine name(s) Mesa Top 7 and 18 (Malpais Raise) County McKinley

Section W½ 20 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon

Elevation 7,100'

Nearest city and/or dwellings Ambrosia Lake junction, 2 air miles northeast.

The Mesa Top workings are located in the W½ sec. 20 in the Poison Canyon trend. Permission to go up on the mesa must be obtained from Mr. Bob Miles of M & M Mining in Grants. Mr. Miles operates the Doris Mine in sections 21 and 20 and has patented claims in sec. 20.

The workings consists of two inclined shafts (or declines) on the Mesa Top 7 property near the center of W½, W½, sec. 20 shown in photos (a) through (f); and a vertical shaft and a raise (Malpais raise) on the Mesa Top 18 near the center of the E½, W½ sec. 20, shown in photos (g) through (n).

The two shafts in the W½ W½ are about 1,000' apart. The southern one, photos (a)-(c), is a decline with a portal about 10' high, 12'-14' wide at the bottom of a 30' x 120' box cut. The waste dump immediately to north is ramp shaped, 8' high at maximun, 50' long, with scintillometer readings of up to 1,200 cps (photo c). The other shaft, about 1,000' to the northwest of decline just described, is readily identified by presence of small metal headframe (photos d-f). Headframe is about 20' high, with the shaft extending out northward at about a 30° incline. Shaft is timbered, but caved or backfilled almost to top (photo f). The dump to the east of the shaft forms a linear ridge about 110' long and is composed of conical piles 3'-4' high (see photo d). Counts on dump were generally in 450 to 1,200 cps range, but black carbonaceous ore material present in places will produce a reading of over 7,000 cps.

The shafts (one shaft and one raise) in the E½ W½ sec. 20 are the Mesa Top 18 workings of Hilpert (1969). The raise was not constructed until about 1960 and Hilpert does not refer to it. The main shaft area is shown in photos (g) through (j). The shaft site is enclosed with a 5' high wire mesh fence recently reinforced with steel posts as the wooden posts are decaying. The shaft is covered with deteriorating wooden planks (photo h) but appears to have been about a 6' x 8' opening. The mine dump and load out area are west and southwest of the shaft (photo i). Scintillometer readings in and around dump ranged up to 2,000 cps. A 30" diameter metal lined ventillation shaft and escapeway is located about 275' southwest of the shaft (photo j); a small door to the escapeway is open and ladder inside is still usable but temperatures are high inside-a warm draft blows. The Malpais Raise, or hoisting shaft, is located about 900' northeast of the main shaft and is shown in photos (k) through (n). The shaft is covered with a concrete slab, but some washing was noted at north edge indicating a potential problem (photo L). The mine dump lies several hundred feet west of the shaft and is 120' x 180' and up to 9' high. Scintillometer readings at the dump edge ranged between 500 and 2,200 cps (background <100 cps). A close-up of the mine dump is shown in photo (m). A concrete slab about 40' long, remains at the site; it was probably a foundation and floor of hoisting shed and/or machine shop, (photo n).

turn

MC 83

All deposits mined at the Mesa Top workings were in the Poison Canyon sandstone tongue in the Brushy Basin member of the Morrison fm. Deposits were mined between 1954 and 1961. The State Mine Inspector's Office last registered the Mesa Top 18 (Malpais Raise) in August, 1961 with the See-Tee Mining Corporation as operator.

Mr. Bob Miles considers a large portion of section 20, if not the whole, to be an "active" area.

A detailed account of the geology and ore zones at this mine is provided in Rapaport, (1963).

References: (1) Hilpert, 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 34.
(2) Rapaport, I., 1963, Uranium Deposits of the Poison Canyon Trend Grants District, in Geology and Technology of the Grants Uranium Region: New Mex. Bur. of Mines and Mineral Resources, Mem. 15, p. 126.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 1/16/80.

MC 84



Photo (a) Looking southward at decline, Mesa Top 7 workings.

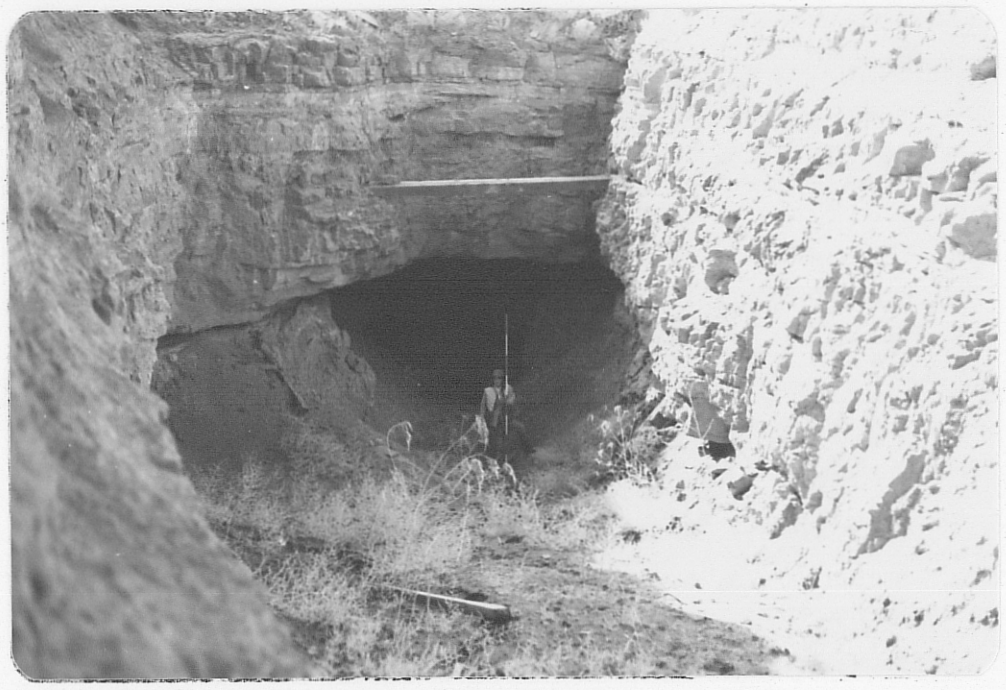

Photo (b) Close-up of decline shown in (a); portal is about 10' high, 14' wide.

#157 MC 85



Photo (c) Looking southeast at waste dump from decline shown in (b).



Photo (d) Headframe and waste piles at inclined shaft 1,000' northwest of one shown in (b); close-ups are shown in photos (e) and (f).

#15 MC 86



Photo (e) Close-up of headframe and inclined shaft shown in (d).

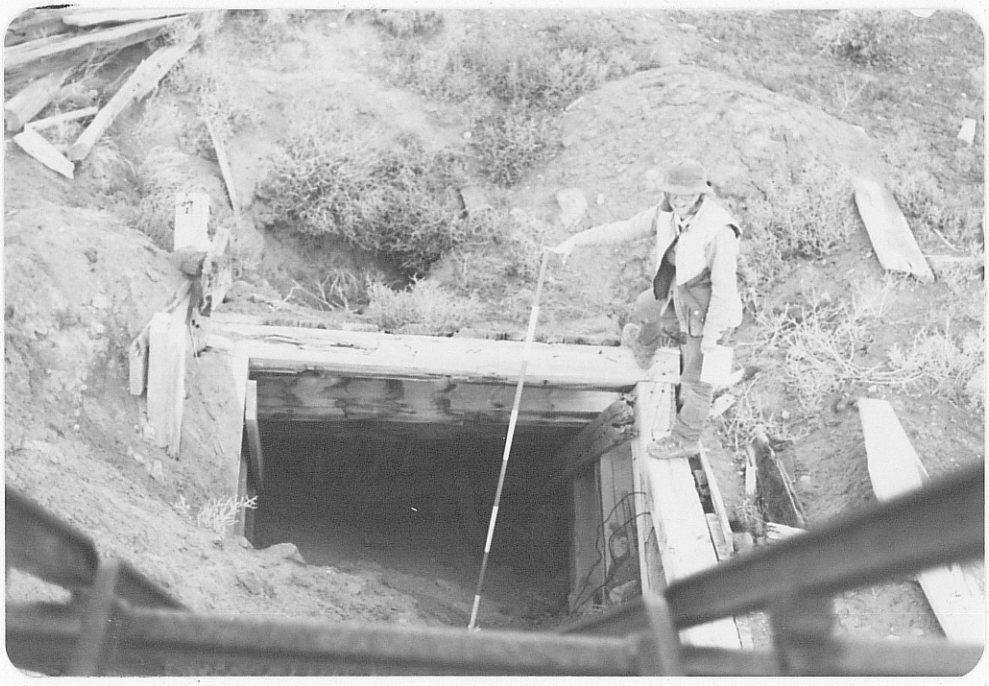

Photo (f) Close-up of inclined shaft shown in (e).

#109 MC 89



Photo (g) Mesa Top 18, fenced vertical shaft site.



Photo (h) Close-up of Mesa Top 18, showing deteriorating planks covering shaft.

#160 Mc-88



Photo (i) Looking SW at remains of wooden loadout facility and waste piles at Mesa Top 18 workings.



Photo (j) Looking southward at 30" diameter metal lined ventillation shaft and escapeway at Mesa Top 18 workings. Shaft is open and air inside lining is very warm.

#161 MC89



Photo (k) Looking westward at the Malpais raise site, about 900' northeast of Mesa Top 18 shaft; note mine dump in middle distance.

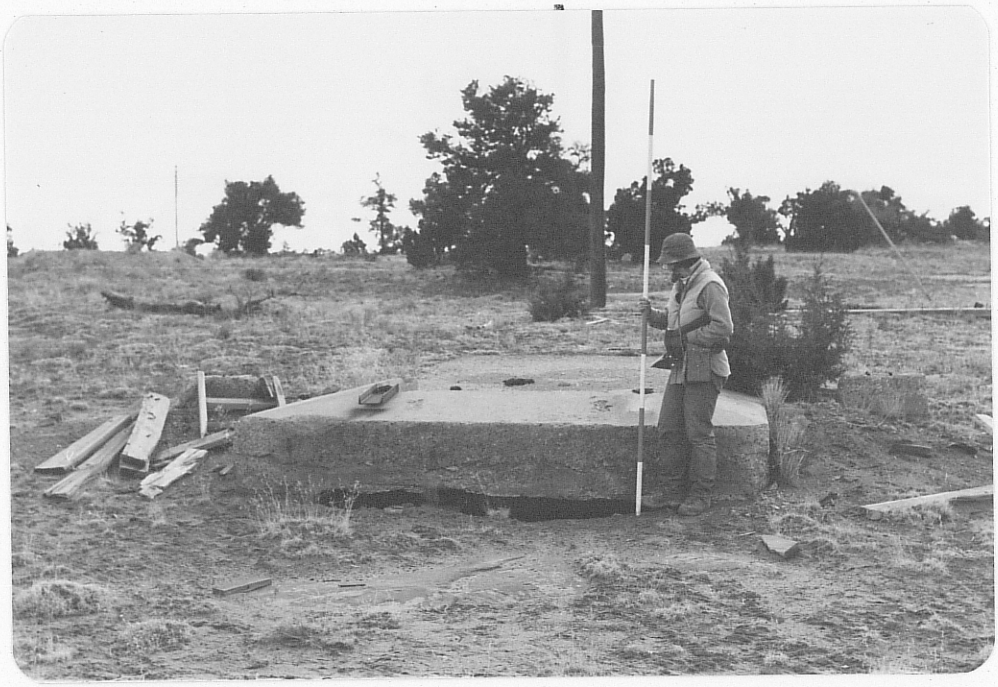

Photo (L) Close-up of raise shown in (k); some erosion around base of concrete covering is noticeable on north edge.

H-162 mc 9D



Photo (m) Looking westward at mine dump on Malpais raise site.



Photo (n) Foundation and concrete slab remaining at Malpais raise site.

#163 MC-91

Date visited 1/16/80

Mine name(s) Dog Incline (Dog and Flea) County McKinley

Section SW¼ SW¼ NE¼ 20 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 7,020'

Nearest city and/or dwellings Ambrosia Lake junction, 2 air miles northeast.

The Dog is located in the SW¼ SW¼ NE¼ of sec. 20. It is considered private property; Mr. Bob Miles of M & M Mining in Grants has patented mining claims in the section and he must be contacted before proceeding on to property.

The Dog Mine consists of a 250' long inclined shaft driven generally southwest (photo a). The portal and shaft are timbered; portal is only partially open as one or two boards have fallen (photo b); caving has blocked shaft about 20' inside.

Mine dumps are quite extensive at the site. To the south of the shaft is a compact area, measuring about 50' x 165', of closely spaced conical waste (low grade ore?) piles, 2' to 4' high; this area is bordered on the east by a small drainage line (photo c). Several very small waste piles and other general debris occur immediately north of the shaft (photo d) along the continuation of the drainage line just mentioned.

About 400' north of the shaft are the two main waste dumps. They are ramp shaped, slope to the west, elongate E-W, and are in an en echelon relationship (photo e). The eastern one is 50' by 150', with maximum height of 30'. The toe of this dump nearly reaches the small drainage that continues northward from the shaft site. Scintillometer readings range up to 350 cps. The western one is 45' x 175', with a maximum height of 25'. Scintillometer readings range up to 750 cps. Photo (f) offers a view of this dump from the other side. Photo (g) is a view of the mine site from atop the western dump. The ridge extending across photo from lower left to upper right is composed of individual conical waste piles, 3'-4' high, with average scintillometer readings of 550 cps. Ridge is about 280' long and parallels the access road.

The deposit mined at this site is in the Poison Canyon sandstone tongue in the Brushy Basin member of the Morrison fm. The mine was active between 1957 and 1964 (Hilpert, 1969). Initially, 1957-58, the mine run ore was averaging 0.26% U_3O_8 (AEC-PED-1, 1959). Additional information on the geology and ore grade of the deposit is given in Rapaport, (1963).

The State Mine Inspector's Office last registered the mine under the name Dog & Flea in January, 1969, with Four Corners Exploration as the operator. At present the mine is inactive, but M & M Mining should be contacted to determine relationship of these workings to the active Doris Mine workings.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 34.
(2) Rapaport, I., 1963, Uranium Deposits of the Poison Canyon Ore Trend,

turn

Grants District, in Geology and Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources, Mem. 15, p. 126.
(3) U.S. AEC PED-1, 1959, Mine Operation Data Report; GJO/AEC, p. 45 (microfiche only).
(4) State Mine Inspector's Office, inactive uranium mine file.
(5) Field notes, 1/16/80.



Photo A Looking southwest at wooden headframe at Dog Mine; note person with range pole at left of headframe for scale.



Photo B Looking southwest at 6' x 6' portal of Dog Incline; workings have caved 20' down.

+/600 MC 94



Photo C Looking northward at mine dump area south of shaft; note wooden headframe at left and small drainage line at right; person with range pole to right of shaft provides scale.



Photo D Looking northward from shaft site at small waste piles and timber along north flowing drainage line.

467 mc 95

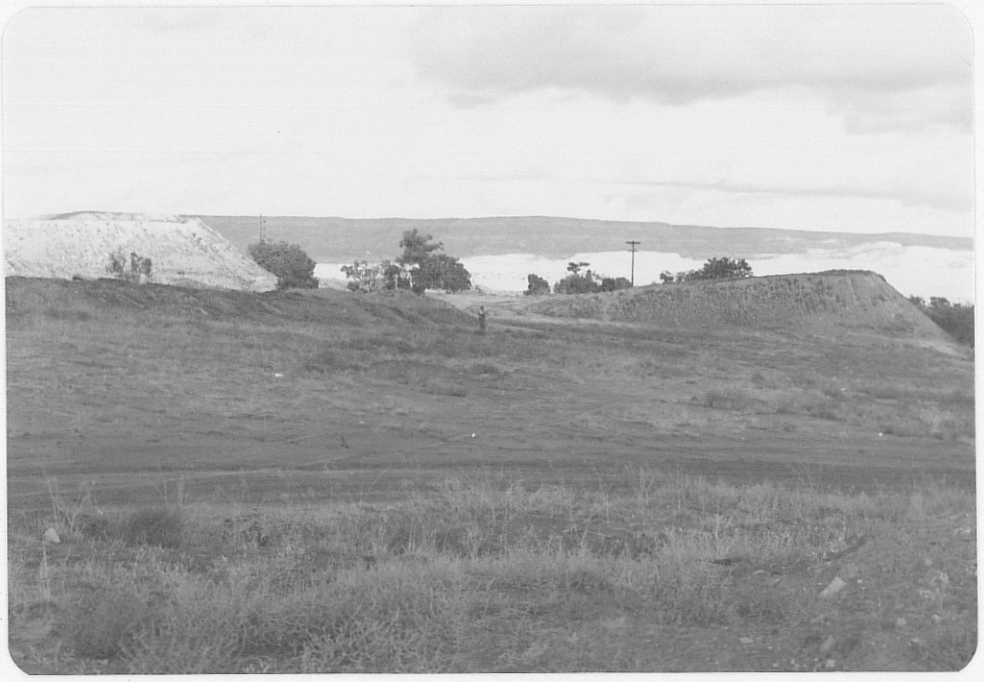

Photo E Looking northward at the two ramp shaped mine dumps; one on right (east) extends nearly to small drainage line. The one on the left (west) is about same size and is shown from other direction in F below; note person at center for scale.



Photo F Looking southward at westernmost mine dump (shown at left in E). Note person at toe of dump at left for scale.

mc96



Photo G Looking southward at mine site from atop westernmost mine dump; ridge at center photo, marked by person, is composed of conical waste piles and extends for 280' along road. Note headframe and shaft at upper left, with drainage line to immediate left of it.

#109 Mc 97

Date visited 1/31/80

Mine name(s) Marquez County McKinley

Section NE¼ 23 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend, Grants District

Elevation 6,900'

Nearest city and/or dwellings Ambrosia Lake junction, 1¼ air miles to west

The Marquez Mine is located about 1¼ mi. west and 2/3 mi. south of Ambrosia Lake junction (2/3 mi. south of state highway no. 53) on the south edge of San Mateo Creek. The mine was owned and operated by the Uranium Division of Calumet and Hecla, Inc., who acquired the property in 1955. Discovery of an ore body in the Poison Canyon sandstone tongue was made the same year on the 54th drill hole. Due to the shallow nature of the ore body, 180' to 270' below the surface, the decision was made to mine via an incline. Entrance to the ore body was driven between August 1957 and February 1958 and resulted in an 1,800' long incline at 10% grade; portal is in Dakota Sandstone (see photos a & b). Details of the ore body may be found in Weege, (1963). An excellent and detailed account of the retreat mining-subsidence and pillar recovery is given in Johnston, (1963). The mine produced from 1958-1964.

At present the workings stand very much as they were upon cessation of activity in 1964, except that all buildings have been removed. Scintillometer readings in the portal area and westward toward the dump range from 700 to 1,500 cps. The mine dump extends 400' westward from a point 100' northwest of the portal, varying in width from 60'-200' (see photo c). A ramp extends from the southeast corner of the dump, near the portal, westward to the upper surface (see photo d). Scintillometer readings in traverse across top and down the west toe ranged from a minimum of 800 to a high of 2,500 cps. The height at the west toe is approximately 25' (see photo e). The southern edge of the dump plus some mine timbering is shown in photo (f). A view northward from the southern edge of the tailings dump shows additional mine debris and the proximity to San Mateo Creek, less than 400' away (see photo g). Some waste material or perhaps ore was stockpiled very near the south bank of the creek as scintillometer readings of 10,000 cps were recorded and large chunks of ore grade material were found at the upper edge of the bank (photo h).

Anomalously high counts were also registered upstream where the old mine access road crosses San Mateo Creek. At the stream bed on the west side of the road readings up to 8 x background were recorded which may indicate the use of tailings material to build up the road bed at this point.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) Johnston, G. C., 1963, Subsidence and Pillar Recovery in the West Area of the Marquez Mine, in, Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15.

turn

NM 98

(3) Weege, R. J., 1963, Geology of the Marquez Mine, Ambrosia Lake Area, in, Geology and Technology of the Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15.
(4) U.S. AEC-PED-1, 1959, Mine Operations Data Report, GJO/AEC; p. 55; (microfische only).
(5) Field notes

MC-99

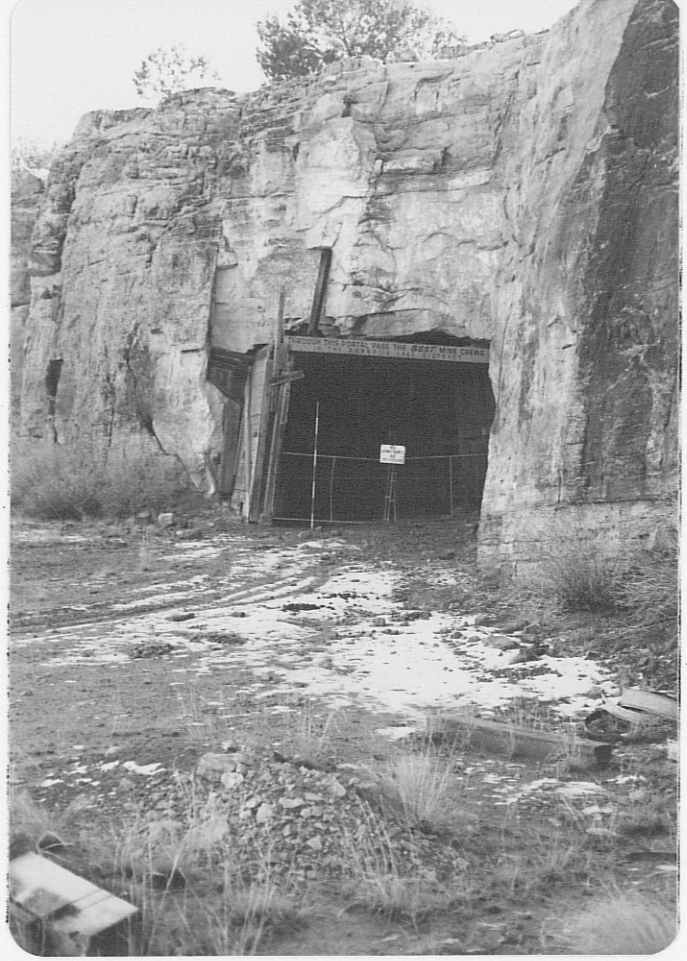

Photo (a) Portal of Marquez Mine in vertical cliff of Dakota Sandstone.

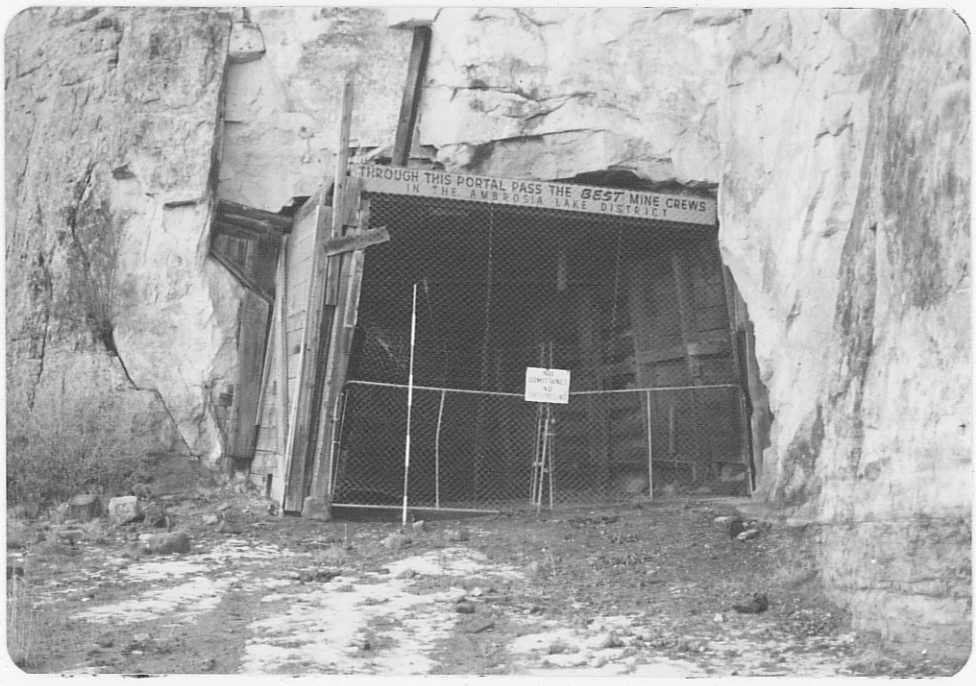

Photo (b) Close-up showing 11' by 15' portal secured by wire mesh gates; vertical timbers are 4" x 6", back is metal I beams crosswise with timbering lengthwise overlying. Note range pole for scale.

+172 MC=100



Photo (c) Looking westward at east face of dump; portal immediately behind viewer. Note range pole at left of dump for scale.



Photo (d) View eastward on upper surface of tailings dump showing ramp ascending from mine level at center right; note range pole at far left for scale.

#173 mc 101



Photo (e) Looking north at 25' high west toe of tailings dump; note range pole at base of slope for scale.



Photo (f) Looking east at southern edge of tailings dump. San Mateo Creek lies 400' to south; portal is at base of sandstone cliff behind dump at right.

#174 Mc 102



Photo (g) View northward from toe of tailings dump; San Mateo Creek is incised between bench in middle distance and sandstone cliff. Circle identifies area shown in photo (h).



Photo (h) South bank of San Mateo Creek; areas along the edge of bank have very high gamma counts. Black sandstone boulder in foreground, 19" in diam. is high grade ore.

#175 NM103

Date visited 1/17/80

Mine name(s) Faith (Westvaco) (Sec. 29) County McKinley

Section E½ W½ 29 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon

Elevation 6,840'

Nearest city and/or dwellings Ambrosia Lake junction, 2½ miles northeast.

The Faith Mine is located in the E½ W½ sec. 29 just 1/3 mile to the west of highway no. 53. Gates are kept locked and permission to go on the property should be obtained from Ranchers Exploration at their Hope Mine office (Mr. Tim Hurley), or from the Albuquerque office (Tele. 344-3542). Ranchers has the section under active lease.

The mine consists of the main shaft on the south bank of a small drainage (photos a through c), and a hoisting shaft about 1,000' to the south (photos d through f).

The main shaft has caved leaving a 25' diam. hole 24'-26' deep (photo b); scintillometer readings at shaft site range up to 500 cps (background = 50-60 cps). Mine dumps are scattered about the site, with small piles to west and southwest of shaft, and on stream bank to north of shaft (photo c) where scintillometer readings of 500 cps (10 x background) were recorded. The small conical piles immediately northwest of the shaft read up to 1,400 cps, but they are 100' back from the stream bank.

The hoisting shaft, about 1,000' south of the main shaft, is covered with a concrete slab with a metal vent at the center (photo d). The shaft is probably about 6' x 8'. Radiation levels are not unusually high at small opening in vent. The dumps associated with the hoisting shaft are (1) an area of low piles and ridges (photo e) extending northwest of the shaft with scintillometer readings of up to 850 cps, and (2) the main dump to the east of the shaft, and visible from the highway that appears large, but in reality is composed of a thin layer of waste forming a veneer on a rock cored natural topographic feature (photo f). It covers an area of 200' x 300' and scintillometer readings on it range from 300 to 2,600 cps.

The Faith Mine produced from a cluster of deposits in the Todilto limestone, during the 1958-1964 period. A map of the uraniferous zone is provided in McLaughlin (1963). The mine was last registered with the State Mine Inspector's office in February, 1964 with the KSN Company as the operator.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 35.
(2) McLaughlin, E. D., 1963, Uranium Deposits of the Todilto Limestone of the Grants District, in Geology and Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources, Mem. 15, p. 144-145.

turn

MC 104

(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 1/17/80.



Photo A Looking SE into main shaft area; shaft is enclosed by fence immediately behind person to right of center; gully along south bank of drainage may be seen at left. Close-ups of shaft and drainage shown on following photos.



Photo B Look NE at caved shaft; enclosing fence is effective for livestock, not for people.

#178 Mc 106



Photo C Looking southeastward down drainage that skirts main shaft area; mine waste perched on edge of bank has gamma values of 10X background.



Photo D Looking east at hoisting shaft site, 1000' south of main shaft; a raised cylindrical metal lined vent protrudes about 1' above the concrete cover on shaft (arrow).

#179 Mc 107

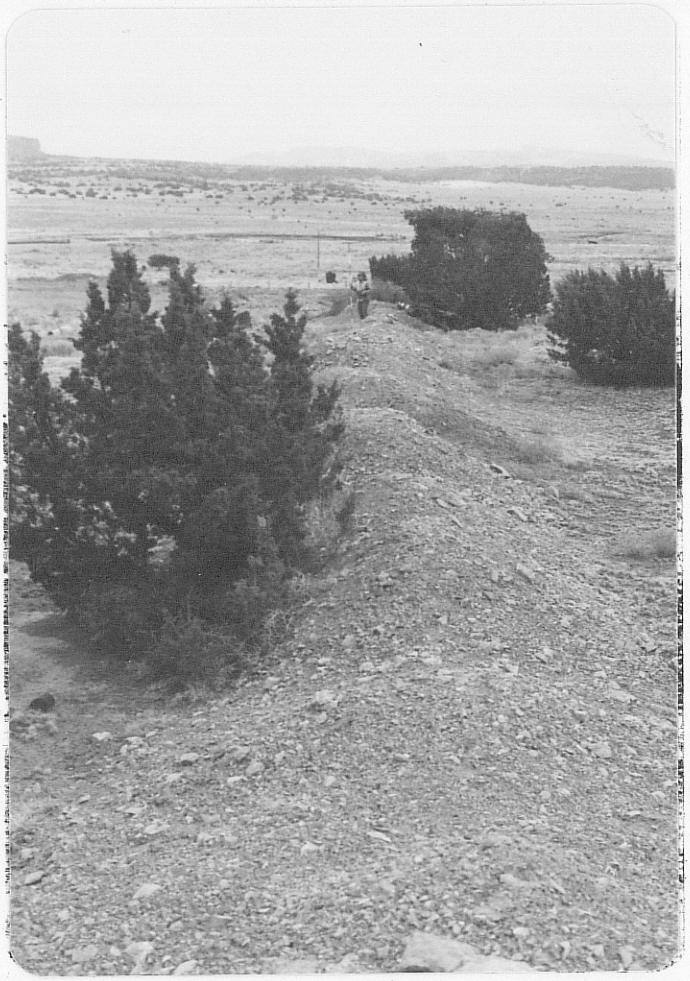

Photo E Looking SE at 4' high 200' long mine dump or low grade ore; dump extends NW of hoisting shaft.

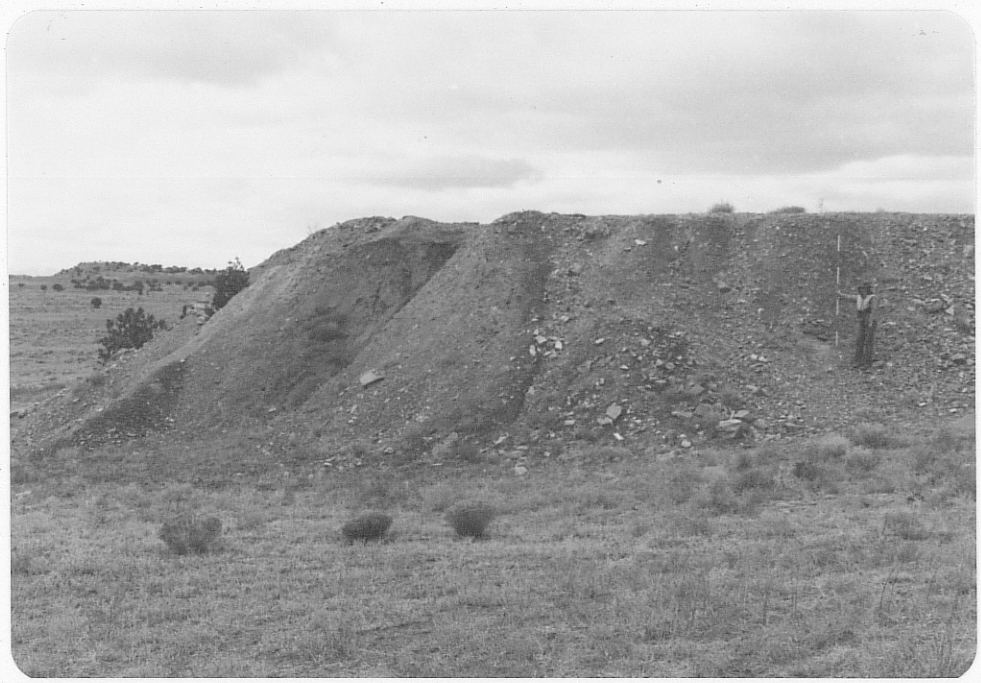

Photo F Main dumping area for hoisting shaft; waste forms only veneer on rock cored natural feature.

+180 Mc 108

Date visited 1/16/80

Mine name(s) Barbara J #3 County McKinley

Section C N½ N½ NE¼ 30 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,940'

Nearest city and/or dwellings Ambrosia Lake junction, 4 miles by road, northeast.

The Barbara J #3 is located about ½ mile northeast of Todilto Exploration and Developments Piedra Triste Mine (Dalco Shaft). The sign identifying Midcontinent Uranium Corporation as the operator still stands on approach to the mine site.

The mine consists of a 5' x 6' vertical shaft, probably 300'-400' deep, that is presently covered rather crudely with several pieces of ¼ inch plate metal (see photo a). A 20' high 30" diameter ventillation stack is present 25' southwest of the shaft; it is not known what type of cover if any rests at the top. A smaller diameter vent pipe protrudes from the shaft cover, but has a right angle bend to discharge horizontally (see again photo a). The mine shaft itself is still visible through cracks in the cover, and a ladder which looks serviceable is in place; shaft was not entered during investigation.

The mine dump area lies immediately to south of shaft and measures approximately 200' x 120', with a maximum height of about 20' (see photo b). Scintillometer readings on dump were generally about 700 cps, but on the upper surface, northward toward the mine shaft readings up to 1,700 were recorded.

A small 4' x 4' shaft structure with a wooden colar was found about 100' south of toe of dump (photo c). Purpose of shaft, which is now backfilled, is not clear, but could have been a ventillation shaft.

The Barbara J #3 produced from several medium and small deposits in the Todilto limestone. The mine was worked from 1959 to 1963 (Hilpert, 1969).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 35.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87, p. 214.
(3) Field notes, 1/16/80.

NM-109



Photo A Looking southwest at covered shaft site at left of person, and 30" diameter ventilation shaft in background.

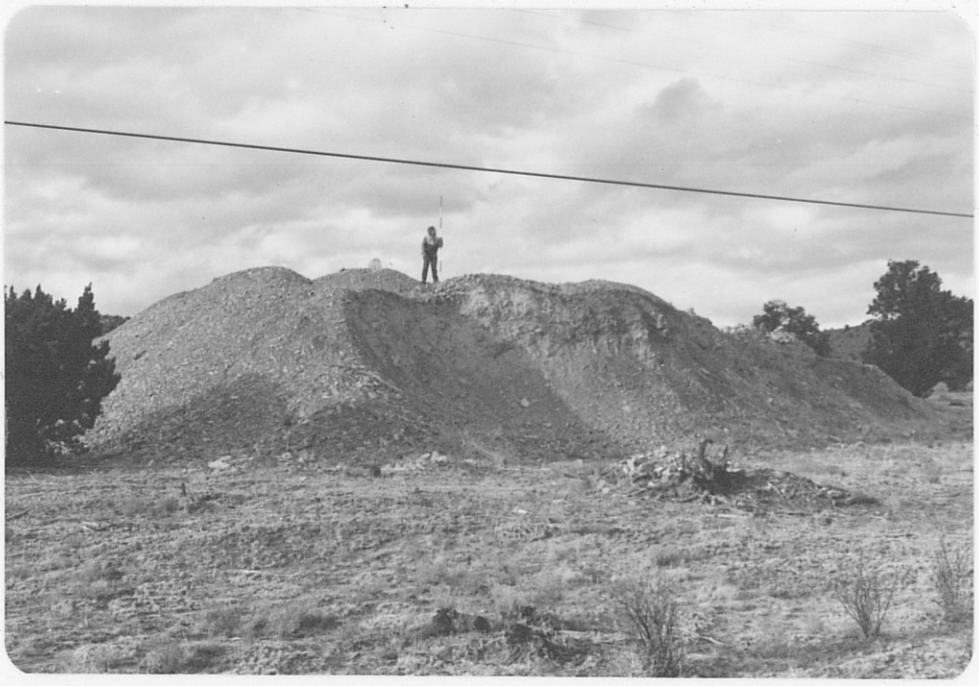

Photo B Looking northward at mine dump, here nearly 20' high; upper surface slopes gently to north.

#182 mc 110

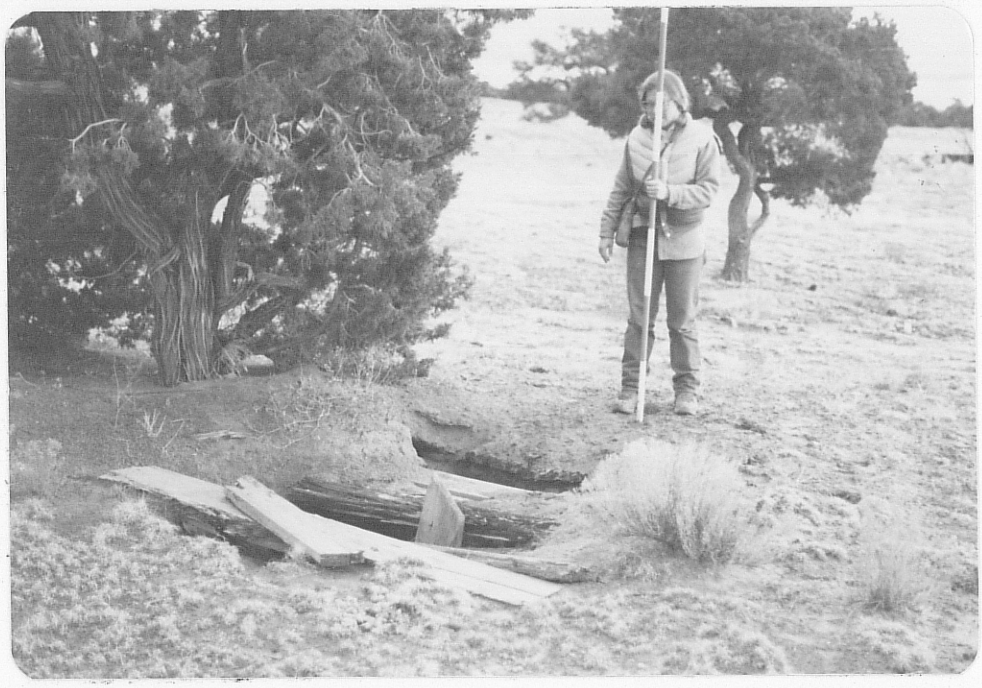

Photo C Small 4' x 4' backfilled shaft with wooden collar about 100' south of mine dump.

#183 mc 111

Date visited 1/17/80

Mine name(s) Barbara J #1 County McKinley

Section NW¼ NE¼ 30 Twnsh. 13 N. R. 9 W.

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,900'

Nearest city and/or dwellings Ambrosia Lake junction, about 4 miles by road northeast

The Barbara J #1 is located in the NW¼ NE¼ sec. 30 immediately east of the junction of the Poison Canyon and Mesa Top roads. The site is 1/3 mile north of the active Piedre Triste Mine of Todilto Exploration and Development.

The mine consisted of a two compartment vertical shaft, circular in plan with an 8½" inside diameter, more than 400' deep (AEC PED-1, 1959). The shaft has been backfilled and the site partially regraded (see photos a & b). The exact location of the site was impossible to ascertain. Some of the regrading was probably done with low grade ore material as surface counts in the area range up to 1,900 cps. A 30" diameter ventillation shaft and a 10" ventillation pipe remain at the site along with a deteriorating 6' x 6' metal shed (photo a). Immediately to north of shed area is a 12' x 20' concrete slab (not shown).

Several hundred feet to the southeast of the mine shaft is a mine dump area (photo b) with one main pile about 5' high and several additional very small piles 2'-3' high scattered to the north, west, and south. Scintillometer readings on the dumps were generally low, 150-250 cps. A small south flowing intermittent drainage skirts the east edge of the dump (see again photo b).

The Barbara J #1 produced from one medium and several small deposits in the Todilto limestone, (Hilpert, 1969). Initial production was in late 1956 and production through 7/1/58 had totaled 18,086 tons of ore averaging .25% U_3O_8 (AEC PED-1, 1959). This may represent total production as Hilpert (1969) indicated the mine was inactive after 1957.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 35.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87, p. 214.
(3) U.S. AEC PED-1, 1959, Mine Operation Data Report, GJO/AEC, p. 43 (microfiche only).
(4) Field notes, 1/17/80.
(5) Field notes, 1/15/80.



Photo (a) Looking north at entrance to incline; shaft slopes off to left at 30°.



Photo (b) Looking west into entrance showing 2½' high opening that remains; natural processes are filling in portal area. Note scattered waste piles in background behind box cut.

Date visited 1/17/80

Mine name(s) Bailey and Fife (Rimrock?) County McKinley

Section SW¼ NE¼ 30 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,880'

Nearest city and/or dwellings Ambrosia Lake junction; 4 miles by road to northeast.

The Bailey and Fife is located in the SW¼ NE¼ sec. 30 about ¼ mile east of the Old Dalco Mine, site of the new Piedre Triste Mine. Access is by the Poison Canyon road to the Piedre Triste Mine, then east ¼ mile.

The Bailey and Fife head frame site stands over the shaft (photos a & b). It is a metal structure about 35' high with the skip suspended at the shaft opening (photo b). Shaft is about 6' x 6', depth unknown; no unusually high scintillometer readings at opening.

A small mine dump area exists to the northwest of the shaft about 200' (photo c). It is composed of a cluster of conical piles up to 4' high with scintillometer readings of up to 1,500 cps. Another dumping area lies immediately to the south of the shaft; it measures about 40' x 200' and contains clusters of conical piles up to 3' high, with maximum scintillometer readings of about 900 cps (see photo d).

The mine produced from a small deposit in the Todilto limestone. It was probably active around 1960, but may have been registered with the State Mine Inspector's Office as late as February, 1968 under the name Rimrock #2 or Q-32.

References: (1) State Mine Inspector's Office, inactive uranium mine file.
(2) Field notes, 1/17/80.



Photo (a) Looking northwestward at Bailey and Fife head frame, about 35' in height.



Photo (b) Close-up of shaft opening with skip in place suspended by cable; person at left is measuring gamma radiation at site.



Photo C Looking northwest at mine dump area to northwest of mine shaft.



Photo D Looking southward at mine dump area south of the mine shaft.

#186 MC 116

Date visited 1/15/80

Mine name(s) T-20 Shaft (T-9 ore body) County McKinley

Section SE¼ 30 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,820'

Nearest city and/or dwellings Ambrosia Lake junction, about 3½ road miles to northeast.

The T-20 Shaft is located in the SE¼ sec. 30 about ¼ mile northwest of the Flat Top Mine. It is about 3/4 mile west of highway no. 53 along the north side of the Poison Canyon road.

The mine consists of a single vertical shaft, about 4' x 8', now covered with a concrete slab fitted with a small metal trap door (see photo a). Two 12" diameter ventillation shafts are visible immediately northeast of the shaft: A mine dump several hundred feet east of the shaft is about 100' x 150', up to 4' high and has maximum scintillometer readings of about 950 cps (see photo b).

An additional dumping area occurs in the small drainage line immediately north of the shaft (photo c). A series of conical piles up to 3' high form a ridge about 300' long on the north side of the intermittent stream channel.

The mine produced in the late 1950's from a small deposit in the Todilto limestone. The State Mine Inspector's Office last registered the mine in July, 1959 under the name(s) T-9 ore body (T-20 Shaft) with Rimrock Mining as the operator.

References: (1) State Mine Inspector's Office, inactive uranium mine file.
(2) Field notes, 1/15/80.

MK-114



Photo (a) Close-up of T-20 shaft opening, showing concrete slab with rectangular opening covered with plate metal door.



Photo (b) Mine dump east of T-20 shaft.

MC 119



Photo (c) Looking northward from shaft at mine dump forming ridge in small drainage line; person with range pole is standing on ridge. Note head frame of Bailey and Fife Mine in background.

Date visited 1/15/80

Mine name(s) Flat Top (Flat Top #3 & 4) County McKinley

Section SE¼ SE¼ 30 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,800'

Nearest city and/or dwellings Ambrosia Lake junction, about 3½ miles by road to northeast.

The Flat Top is in the SE¼ SE¼ sec. 30 about ½ mile west of highway no. 53. Mine location is printed on the Dos Lomas 7½' quadrangle sheet, marked by a shaft symbol.

The mine consists of a 30° incline driven west into Todilto limestone for a total length of 230' (photos a & b). Wooden super-structure at portal is badly deteriorating; a small opening about 2½' high, 5' wide, remains but workings have nearly filled by natural processes (see photo b). A small box cut was made behind entrance to incline, but slopes on highwalls have grown gentle with time. Gamma radiation at entrance measured 250 cps.

Dump piles are scattered around the site. A few small conical piles may be seen west of the incline, in the background of photo (a). Larger dumps occur north and east of the incline several hundred feet. An area about 50' wide and nearly 200' long has scattered waste dumps in the form of conical piles or short ridges up to 4' high (see photo c). Scintillometer readings on traverse of this dump ranged from 450 to 900 cps.

The mine produced from a medium sized deposit in Todilto limestone during the 1955-64 period (Hilpert, 1969). Production through July 1, 1958 had totaled 30,217 tons of ore averaging 0.22% U_3O_8 (AEC-PED-1, 1959). The State Mine Inspector's office last registered the mine in February, 1968, with Bailey and Fife as the operator.

To give an idea of what Hilpett (1969) means by a "medium" deposit, McLaughlin (1963) stated that the Flat Top deposit is "approximately 420' long with an average width of approximately 170 feet."

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 35.
(2) McLaughlin, E. D., 1963, Uranium Deposits in the Todilto Limestone of the Grants District, in Geology and Technology of Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15, p. 147.
(3) U.S. AEC PED-1, 1959, Mine Operation Data Report, GJO/AEC, p. 46.
(4) State Mine Inspector's Office, inactive uranium mine file.

turn



Photo A Looking southwest toward mine shaft site; shaft has been backfilled; note 30" diameter metal ventillation shaft just left of center with 10" diameter pipe left of it, and metal shed at far left.



Photo B Looking southward from mine shaft area to mine dump at left; note person on dump for scale. A small drainage flows south through trees at far left in photo.

#193 MC/22

MC 123

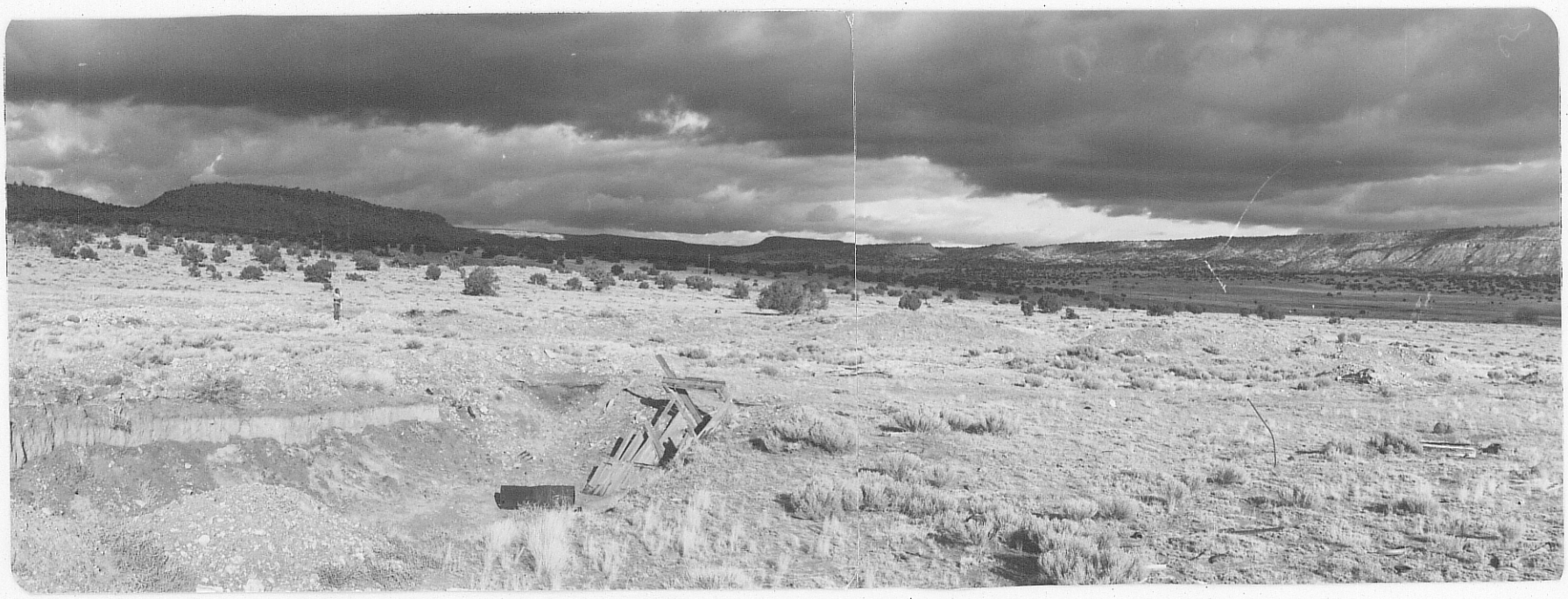

Photo (c) Looking northeastward at Flat Top Mine site showing (1) entrance to 30° incline (wooden framing) going off to left, (2) the small box cut just behind entrance to incline, and (3) scattered waste piles extending from left to right across picture in middle distance, note person at left for scale.

Date visited 1/15/80

Mine name(s) Roundy Shaft (Rimrock) County McKinley

Section N½ SW¼ 30 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,860'

Nearest city and/or dwellings Offices and several dwellings at Todilto Exploration and Development Co. Piedre Triste Mine, ½ mile north.

The Roundy Shaft is located in the N½ SW¼ sec. 30. It is about 200' south of the fence that encloses the Piedre-Triste Mine (active) of Todilto Exploration and Development. Permission should be obtained from the local Todilto Exploration Office before proceeding on to property.

The mine consists of a single vertical shaft sunk to a total depth of 115' (AEC PED-1, 1959). The shaft has since caved leaving a depression about 12' x 20' and maybe 10' deep (see photo a). The depression is filling in with tumbleweed and blow sand. Scintillometer readings at the site ranged between 1,000 and 2,200 cps, probably due to some ore grade material still lying around on the surface. No fence surrounds the site.

A small waste dump area lies several hundred feet off to the south of the shaft (photo b). It is about 125' long (E-W) and up to 5' high.

Hilpert, (1969) called this mine the Rimrock, which is very confusing because of all the other mines nearby which carry the name Rimrock in one way or another. It is, however, the same workings called Roundy by others, as it is the only shaft in the SW¼ sec. 30; Roundy is the preferred name.

The mine produced from a medium sized deposit in the Todilto limestone. Initial production was in 1952 and it was active intermittently until 1958. Total production through July 1, 1958 was 35,087 tons of ore averaging 0.29% U_3O_8 (AEC PED-1, 1959). This figure may represent total production for the property.

The mine is on an active lease area; lease is held by Todilto Exploration and Development, Albuquerque, New Mexico.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 35.
(2) U.S. AEC PED-1, 1959, Mine Operation Data Report, GJO/AEC, p. 60 (microfiche only).
(3) Field notes, 1/15/80.

NM 124



Photo (a) Looking northeast at caved mine shaft at Roundy site.



Photo (b) Looking southward at waste dump area several hundred feet south of shaft.

#176 mc 125

Date visited 1/10/80

Mine name(s) SW¼ 30 Strip County McKinley

Section SW¼ 30 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,920'

Nearest city and/or dwellings Office and dwellings at headquarters of Todilto Exploration and Development, Piedre Triste Mine.

The Sec. 30 (SW¼) Strip Mine is southwest of the Roundy Shaft immediately south of the "old" road. The new road makes a dog leg to the north and passes by the Piedre Triste Mine. (active).

The mine complex extends from the west section line southeastward for 1/3 mile, with more or less continuous workings within a 500'-600' wide belt. Southwest of this belt is another separate area, considerably smaller, in the SW¼ SW¼ 30 that is probably the Manol of Hilpert (1969).

Starting near the west section line and working southeastward through the larger area there are first of all two large cuts, each nearly 200' long, that expose only overburden on the highwalls (photos a & b). The bottoms of these may have reached bedrock, but have filled back in since abandonment; this is likely the case in photo (b) as several small ore (rock) piles were found at the south end of this trench. Several hundred feet to the south and east of these two cuts are several additional open pits that expose bedrock, the first of these contained meltwater (photo c); because of livestock tracks in the area a water sample was taken. Analysis showed pH of 7, TDS of 194 ppm, and U_3O_8 of .67 ppm. Selenium was less than .005 ppm. Scintillometer response around pit was up to 300 cps. A nearby pit, shown in photo (d), measures about 60' x 100' with small waste and ore piles that produce readings up to 600 cps. Overburden and waste piles are very prominent features locally on this strip mine complex.

In the SW¼ SW¼ of the section several hundred feet southwest of the workings just described is another area of open pit workings (photo e). Area is more than 500' across, very shallow, and may have been partially regraded. Scintillometer readings were low, 150-200 cps, which lends further support to the regrading idea. The area is or at least part of the Manol workings of Hilpert (1969).

The mine produced from several medium and small deposits in the middle and lower parts of the Todilto limestone. Deposits are often associated with diversely trending intraformational folds. The mines in this ¼ section produced during the 1952-64 period (Hilpert, 1969). The State Mine Inspector's Office last registered an open pit in sec. 30 under the name Rimrock in January, 1971.

turn

A description of the ore bodies in section 30 is given in McLaughlin, (1963).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 35.
(2) McLaughlin, E. D., Jr., Uranium Deposits 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, Mem. 15, p. 147.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 1/10/80.

MS 127



Photo (a) Looking SW into a 200' x 200', 45' deep cut in overburden; no rock exposed.



Photo (b) Looking southward into 25' x 200', deep trench in overburden with some ore and waste piles at southeast end. Note person at bottom of trench for scale.

MC128

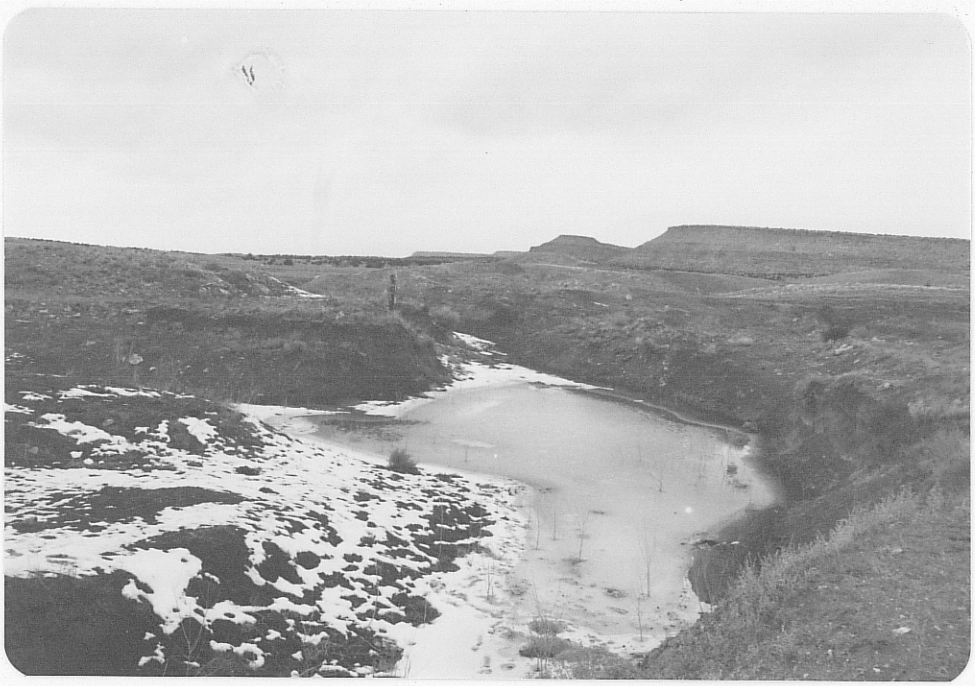

Photo (c) Shallow pit southeast of trench in (b), containing meltwater. Livestock tracks noted in area. Note person at left of center for scale.



Photo (d) Small open pit, 60' x 100' just east of (c), near the southeast end of the Sec. 30 Strip Mine. Note person at left of center for scale.

H200 MC-129



Photo (e) Looking E NE at extensively dozed area (possibly regraded) more than 500' across; probably the Manol of Hilpert (1969).

#201 MC-130

Date visited 1/10/80

Mine name(s) Sec. 25 Strip Complex County McKinley

Section 25 Twnsh. 13 N R. 10 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,900'-7,000'

Nearest city and/or dwellings Single family dwellings in sec. 26, 1 mile W NW.

The Sec. 25 Mine is one of the most extensive strip complexes on the Todilto bench. It extends from the break in the workings that exists at the southeast edge of the sec. 25 decline in the NW¼ (see sec. 25 decline report) all the way to the east section line, a distance of at least 5/8 of a mile.

The workings consist of open pits, trenches, box cuts, and one decline. They range from shallow pits less than 5' deep to box cuts with shear walls of 40'-50'. A silty overburden approaches 50' thick in places.

The workings are shown and described photographically on the following pages, beginning in the southwest ¼ of the section, then the center, the southeast, and then the area along the road just north of center.

The various workings exploited many small, medium, and large deposits generally in the lower part of the Todilto limestone; the cluster of deposits trends southeastward from the central part of the section into the SW¼ of adjoining section 30 (Hilpert, 1969). The area was mined during the 1952-64 period, however, the State Mine Inspector's Office has a registration on the section as recently as March, 1973 with Bailey and Fife as the operator. Production through 1958 totaled 75,739 tons of ore averaging 0.195% U_3O_8 (AEC PED-1, 1959). The section belongs to the Santa Fe Pacific Railroad Co.

Details on the ore bodies in sec. 25 are discussed in McLaughlin (1963); it was stated that the ore bodies number 50 or more but the great majority of them have been mined out.

The productivity of this section in terms of biomass production and carrying capacity has definitely been impaired as a result of the strip mining activity. The rather large spoil piles of unconsolidated overburden that occur throughout the mine complex might allow some regrading at a lower cost than otherwise might be.

The Frontispiece of New Mexico Bureau of Mines and Mineral Resources Memoir 15 is a distant aerial view of the sec. 25 area.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 37.
(2) McLaughlin, E. D. Jr., 1963, Uranium Deposits 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, Mem. 15, p. 146.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) U.S. AEC PED-1, 1959, Mine Operation Data Report, GJO/AEC, p. 57 (microfiche only).
(5) Field notes, 1/10/80.



Photo (a) Looking westward at a 20' deep pit in the SW¼ 25; pit is about 175' long with gamma levels up to 2,200 cps; note person at center for scale.



Photo (b) Looking southward immediate adjacent to (a); pit is 25' deep several hundred feet long, with gamma readings to 2,000 cps. Trees in background are near edge of mesa in the SW¼ 25.

204 MC-133



Photo (c) Looking west northwest into a 600' long extensively stripped area lying just several hundred feet to southwest of center of section; gamma levels on traverse range up to 3,000 cps. Note person at center for scale.



Photo (d) Side workings off the area shown in (c); extensively worked pit with gamma levels ranging up to 2,800 cps. Note person for scale.

205 MC 134



Photo (e) View of 12' high coarse waste pile composed of Todilto limestone fragments, gamma reading about 900 cps. Note person at center for scale.



Photo (f) Spoils pile near center of section, several hundred feet north of area shown on preceeding pages. Pile is 18' high, 250' long. Note person left of center for scale.

200 MC 135



Photo (g) Looking westward into 25' deep 200' diameter pit near center of section 25. Highwall is in unconsolidated overburden; no bedrock exposed in pit at present. Note person (circled) for scale.



Photo (h) Looking southward from near center of section into area shown in photos (a) through (f). Disturbed area extends more than 1,000' into background.

207 MC 136



Photo (i) Looking east in southeast ¼ 25 at 20' high, 300' long spoils pile along south side of pit; pit is shown below.



Photo (j) Looking east into 500' long open pit on north edge of spoils pile shown in (i). Pit averages 100' wide, gamma levels= 500-600 cps. Note person left of center for scale.

20E Mc 137



Photo (k) Looking southeast into an area about 500' northwest of center of sec. 25 just south of road showing extensive spoil piles and mine dumps. Note person at center for scale.

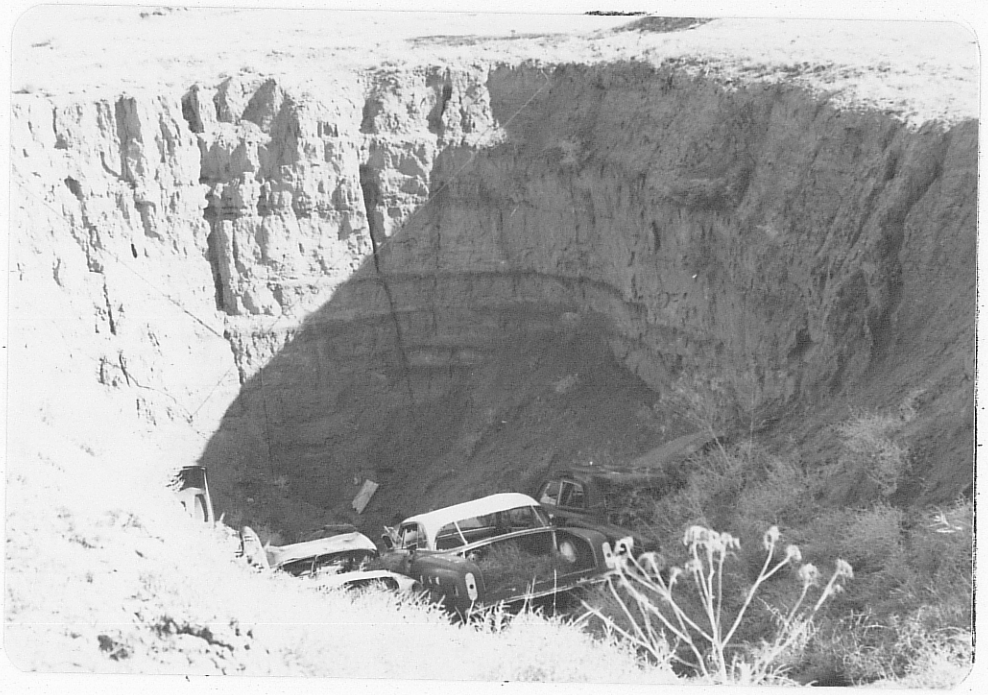

Photo (L) Additional workings near center of sec. 25; this pit is 25' deep and may have had decline diven at bottom. Highwall is in unconsolidated overburden. Site is just 75' south of main road, tumbleweed and blowsand have already buried several layers of auto bodies.

209 MC-138



Photo (m) Decline driven northward at site about 400' south of road near center of section 25. Portal is about 8' wide, timbered, but silting in. Workings go back at least 170' at 6°-8° decline. Gamma levels=700 to 4,000 cps.



Photo (n) Open pit in overburden, 250' east of decline shown in (m); pit measures 150' x 350' and is 40' deep. Blow sand and wash have concealed bedrock on the floor.

210 Mc 139

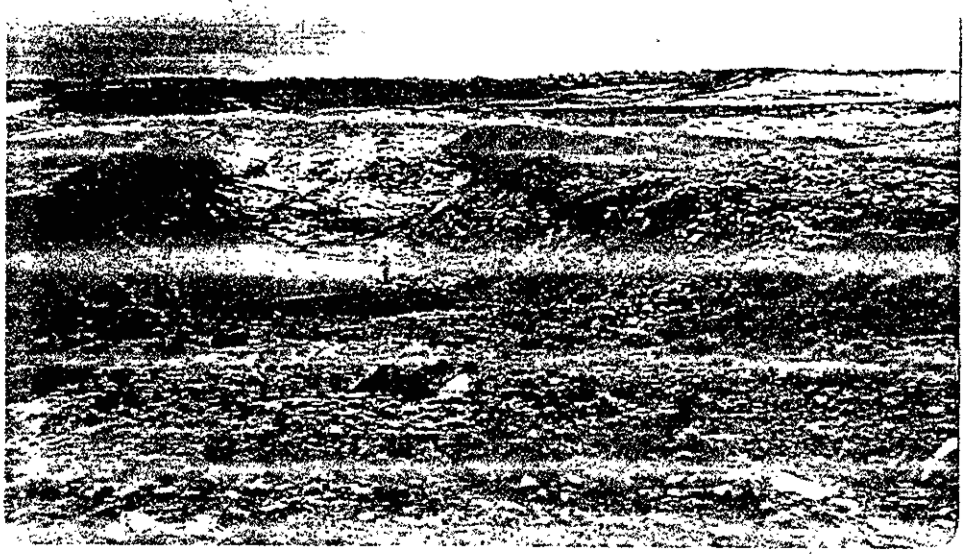

Photo (o) Looking south into small pit exposing Todilto limestone on face at right. This pit is 60' wide, 200' long and is readily visible to passerby on road 150' to north; gamma levels up to 1,800 cps recorded on face.

Date visited 1/9/80

Mine name(s) Sec. 25 Shaft County McKinley

Section N½ N½ 25 Twnsh. 13 N R. 10 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,920'

Nearest city and/or dwellings Single family dwellings on Navajo land in NE¼ sec. 26, 1 mile to west.

The mine is located in the N½, N½ sec. 25 immediately north of the Poison Canyon-Haystack Mountain road. Site is just two miles west of highway no. 53.

The mine consists of a vertical shaft with the 35' high head frame still in place (photo a). The hoisting shed, 18' x 32' stands immediately north of head frame with hoist and engines still in place. Hoist spool is 6' in diameter, with about 20 wraps of cable on it (could indicate shaft depth of 120'). The skip remains suspended at ground level, shaft is open for first 25' or so and steel ladder in shaft allows entry to that depth. Scintillometer response at shaft area ranges up to 4,000 cps, but is not sensitive to proximity to shaft opening. The small ore pile just below ore chute at south edge of head frame produced the highest readings (see photo b).

A mine dump area exists south of the head frame (photo a), but a much more extensive dump area occurs 175' to the northwest; it would appear that much of this dump area extends up into sec. 24. Photo (c) shows a portion of the dump and an 8' x 20' reinforced concrete slab which rests over some type of ventillation shaft or escapeway; the slab and shaft appear stable. Counts at this covered shaft were about 2,000 cps, and vary between 1,200 cps and 1,700 cps throughout the dump area which may extend for about 800' northwest of head frame.

The mine produced from a deposit in the Todilto limestone during the middle to late 1960's. A description of the ore bodies in sec. 25 is given in McLaughlin, (1963). The State Mine Inspector's Office last registered the mine in February, 1967 with Farris Brothers Mines as the operator.

Additional workings exist ¼ mile to southwest in the form of a decline (described separately).

References: (1) McLaughlin, E. D., Jr., 1963, Uranium Deposits 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, Mem. 15, p. 146.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 1/9/80.



Photo (a) Looking north at head frame and hoisting shed at Sec. 25 shaft; note small dump area in foreground. Shaft is about 35' high.



Photo (b) Close up of head frame, showing the skip suspended over shaft at ground level, and small ore pile lying below chute where person is standing.

25. MC 142



Photo (c) View to northwest of shaft and head frame, showing an extensive mine dump area that continues into the background, and an 8' x 20' concrete slab covering a small ventillation shaft and/or escapeway; person is standing on concrete slab.

Date visited 1/15/80

Mine name(s) NW¼ 25, Decline and Open Pits County McKinley

Section NW¼ 25 Twnsh, 13 N R. 10 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,920'

Nearest city and/or dwellings Single family dwellings, 3/4 miles to west.

The Sec. 25 (NW¼) workings lie immediately east of the Hanosh Mine and just south of the road leading to Haystack Mountain.

The workings are a continuation of those in sec. 26 (Hanosh) and extend from the section line eastward for 1/3 mile to the small drainage that forms a water gap in the Todilto bench in the NW¼ 25. They are mostly open pits and trenches as shown in photos (a) through (c) with the expected assortment of spoil piles and mine dumps. Workings are up to 30' in depth, 100' across, and several hundred feet in length.

At the east edge of the complex is a decline (State Mine Inspector's term for this working) driven eastward at the bottom of a 40' deep box cut (photo d). Decline is timbered, but portal is nearly caved shut (photo e); no attempt was made to enter, but it appears original opening was about 6' x 6'; scintillometer response was 300-400 cps. Approximately 20' to west of the decline is the remains of a cribbed shaft (photo f). It probably represents a collapsed ventillation shaft or escapeway from a lower level working mined through the decline. It is unfenced, and at 22' deep it represents a hazard.

A north-south trending fault down drops the Todilto limestone on the east about 23'. The uranium deposits are in the Todilto limestone, but not associated with the faulting. The deposits were mined during 1952-1964 Hilpert (1969). It is not known for certain whether the decline described herein connects to the working at the sec. 25 shaft, which is less than 1,000 away, but it is likely that it does.

The ore bodies in section 25 are described by McLaughlin, (1963).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 37.
(2) McLughlin, E. D. Jr., 1963, Uranium Deposits 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, Mem. 15, p. 146.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 1/15/80.



Photo (a) Looking NW at 35' deep pit with some "gophering" along the north face; site is just east of sec. 25-26 line. Scintillometer readings ranged up to 1,100 cps.



Photo (b) Looking west at "trench" created by two parallel 18' high waste piles.



Photo (c) Looking SW at 30' deep, 100' diameter pit about 450' east of sec. 25-26 line; face counts range up to 2,000 cps. Highwall is half limestone, half overburden.

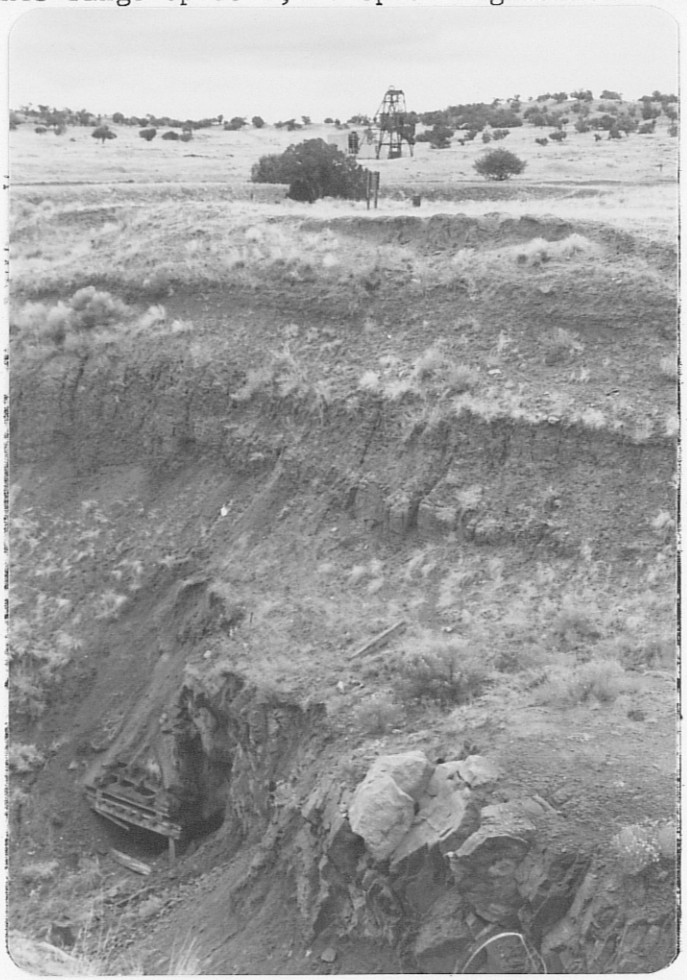

Photo (d) Looking northward into box cut with decline driven eastward at bottom. Close-up of decline is given on next page. Note section 25 head frame in background 1,000' away.

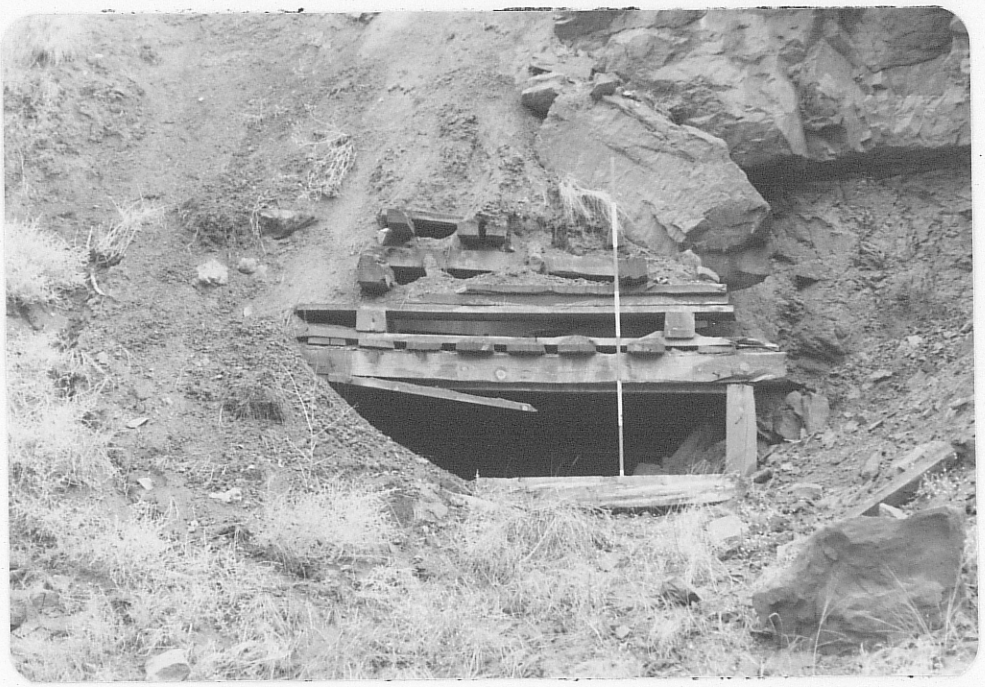

Photo (e) Close up of decline show in photo (d); present opening is less than 3' high. Note range pole for scale.



Photo (f) Caved vertical shaft 20' west of decline; hole is presently 22' deep. Note portion of range pole at left for scale.

Addendum: A drainage by-pass was constructed to take the flow around the east edge of the workings and keep it out of the box cut with the decline (photo d). The flow re-enters the original stream bed just 500' south of the box cut, but some of the material used in diverting the stream and perhaps some of the waste material that was placed along its banks later is somewhat radioactive. In the example shown in photo (1) the waste material produced readings of 1,400 cps.



Photo (1) Looking northward at diverted drainage line flanked on west by waste pile.

#219 M2 1V8

Date visited 1/15/80

Mine name(s) Hanosh County McKinley

Section N½ NE¼ 26 Twnsh. 13 N R. 10 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 7,020'

Nearest city and/or dwellings Single family dwellings, ½ mile west.

The Hanosh Mine is located in the N½ NE¼ sec. 26 on an Indian allotment section. It is about 3 miles west of highway no. 53 just off the road to Haystack Mountain.

The mine consists of an inclined shaft and several open pits that extend northwestward and east of the shaft. Photo (a) shows the load out facility surrounded with small ore piles, the box cut into which the incline was driven, and an extensive area of strip mining activity in the background which belongs to the NW¼ sec. 25 workings. The portal of the decline measures about 8' x 8' and is located at the bottom of a 75' long, 20' deep box cut (photo b); the 20' cut is entirely in unconsolidated overburden. A few timbers are in place just inside the portal and the south drift (photo c) is tracked. A drift back to the north underneath the entrance ramp goes back an unknown distance. Scintillometer readings inside the shaft ranged up to 2,400 cps and uranium mineralization was noted on roof and faces; at close range mineralized faces read up to 6,000 cps.

An open pit or trench extends east of the shaft across the east section line (photo d). This cut is 25' deep and about 50' square with maximum gamma readings of 1,800 cps.

The mine produced from an irregularly shaped medium deposit in the middle and lower parts of the Todilto limestone; locally pockets of fine grained fluorite were uncovered. The mine was worked between 1952 and 1957 (Hilpert, 1969). Last registration with the State Mine Inspector's office was in August, 1958, which listed Hanosh Mines, Inc., as the operator.

A description of ore deposits in section 26 is given in McLaughlin (1963).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 37.
(2) McLaughlin, E. D. Jr., 1963, Uranium Deposits 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, Mem. 15, p. 147.
(3) State Mine Inspector's office, inactive uranium mine file.
(4) Field notes, 1/15/80.



Photo (a) Looking southeastward at the Hanosh shaft site showing load out facility at lower left, and box cut immediately to right which contains entrance to shaft. In background at center and left is spoil piles from strip mining in section 25.

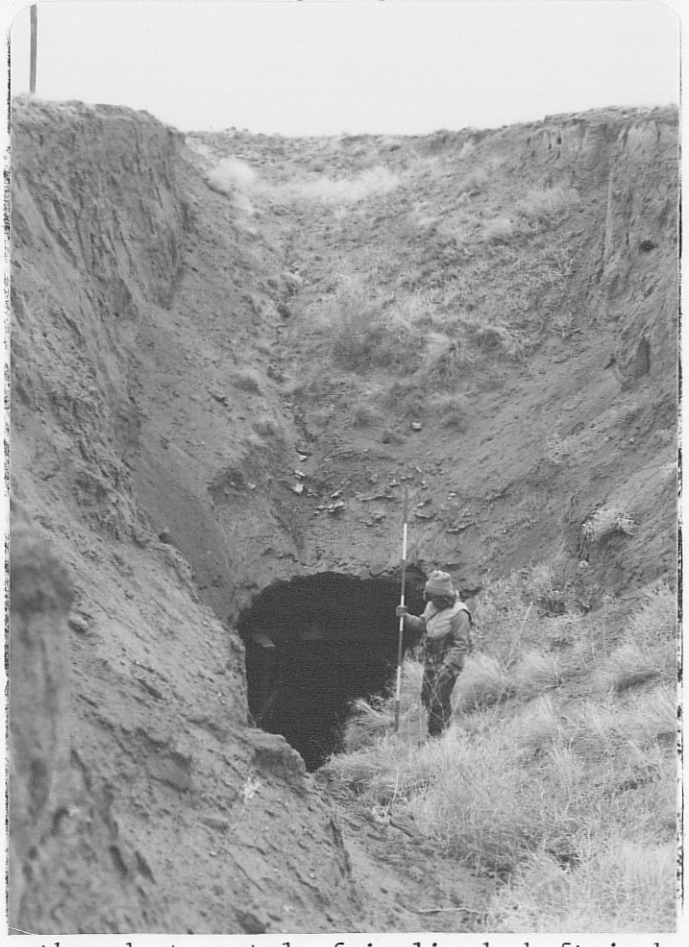

Photo (b) Looking southward at portal of inclined shaft in bottom of box cut.

#221 MC 150

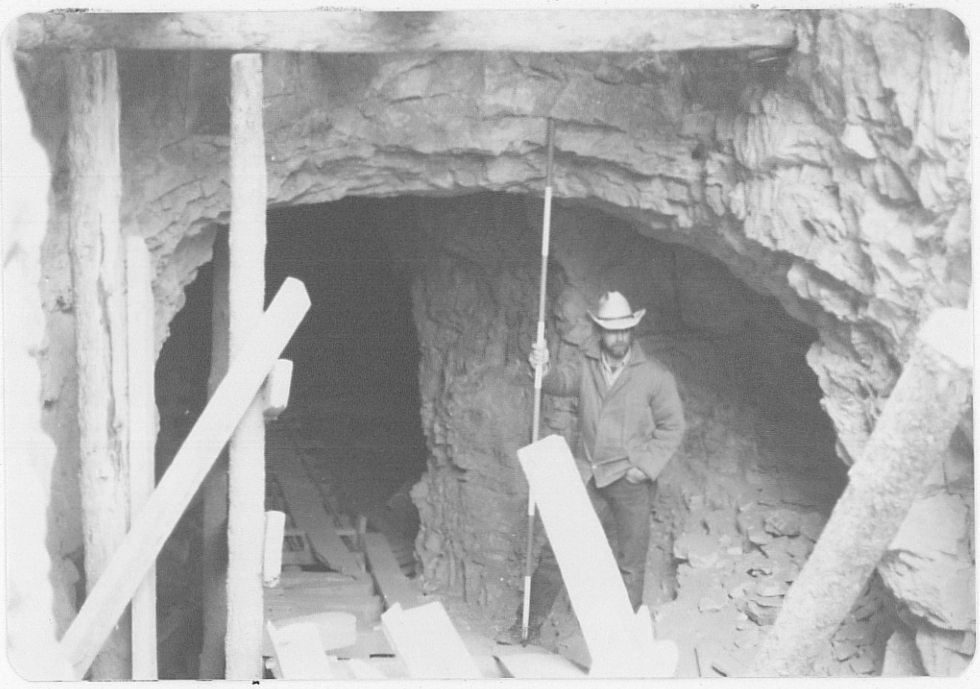

Photo (c) Inside portal of inclined shaft showing timbering and tracked haulage way.



Photo (d) Open pit at section line several hundred feet east of shaft site; note person at right of center for scale.

#222 Mc 151

Date visited 1/15/80

Mine name(s) Sec. 23 and 26 Open Pit County McKinley

Section S½ 23, NE¼ 26 Twnsh. 13 N R. 10 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 7,040'

Nearest city and/or dwellings Single family dwellings, ½ mile southwest

The Sec. 23-Sec. 26 Open Pit complex extends for about 1/3 mile along the south side of main road through the area. The workings have a W NW-E SE trend overall, but individual pits follow no such pattern.

The workings are actually a westward continuation of the Hanosh Mine, also in NE¼ 26; however, the Hanosh workings contain a incline and are limited to sec. 26, and are therefore described in a separate report.

The Sec. 23-26 Open Pit complex exploits an ore body or cluster of ore bodies in the middle and lower parts of the Todilto limestone. Trenches up to 40' deep and 450' long occur, with secondary oxidized uranium mineralization apparent on face cuts; scintillometer readings up to 5,000 cps were recorded in mineralized zones. Area was worked between 1952 and 1958. A description of the ore bodies in these two sections is given in McLaughlin (1963).

The photographs on the following pages illustrate the type of workings on the complex and each carries its own description.

References: (1) McLaughlin, E. D. Jr., 1963, Uranium Deposits in the Todilto Limestone of the Grants District, in Geology and Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources, Mem. 15, p. 146-147.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 1/15/80.



Photo (a) Looking southwestward at Sec. 23-26 Strip Mine complex with soil overburden piles up to 16' high in foreground, and a cluster of 6 to 8 indian dwellings in background; note person at lower left for scale. The photographs on the following pages show nature of pits and trenches within these spoil piles.



Photo (b) Looking southwest very near the Sec. 23-26 line at 30' deep sinuous trench; face counts up to 1,500 cps.



Photo (c) Looking eastward into small box cut 18' deep, showing some fold structures in the Todilto; unconsolidated overburden runs to 12'-14' thick locally. Face counts here run as high as 4,800 cps.



Photo (d) Looking east into a 450' long, 35' deep pit at eastern edge of area described in this report; dump from Hanosh incline may be seen at upper right. This locality is very near north line of Sec. 26. Note person at bottom of pit for scale.



Photo (e) Looking southward at an example of "undisturbed ground" at this locality, except for small prospect pit with 8' high waste piles at each end, in center middle distance.

#220 MC 155

Date visited 1/10/80

Mine name(s) NE¼ Sec. 36 (Rimrock) (Homer Scriven) County McKinley

Section NE¼ Sec. 36 Twnsh. 13 N R. 10 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,970'

Nearest city and/or dwellings Office and dwellings at Todilto Exploration's Piedre Triste Mine headquarters.

The Sec. 36 or Rimrock is located in the NE¼ NE¼ sec. 36. Old mine roads extend southward and eastward from the Roundy Mine area out to the mesa edge in sec. 36.

The mine consists of two open pit areas, one along the east section line shown in photos (a) through (d) and another area long the north section line shown in photos (e) and (f).

The eastern workings consist of a stripped NE-SW trending mesa top. The workings extend from the edge of the mesa northeastward (down dip) for about 600'-800' varying in width from 200'-300' (see photos a & b). The waste dumps from the operation are highly visible locally (see photos c & d), but often constitute only a thin veneer of waste rock on a natural slope or other feature.

The northern workings lie about 800' to the northwest and consist of an area at least 150' x 400' and up to 16'-18' in depth (see photos (e) & (f). Some interesting Tee Pee folds may be seen in this area (photo f); gamma levels range up to 1,100 cps in a traverse of this pit.

The mine produced from a small deposit at outcrop of Todilto limestone. It was operated between 1952-1958 (Hilpert, 1969); however, the State Mine Inspector's Office received registrations on this property in November, 1960 under the name Rimrock, and again in February, 1964 under the name Homer Scriven. Mesa Mining was the operator at the time of the last registration.

References (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 37.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 1/10/80.



Photo (a) Looking southwestward at stripped surface on dip slope of Todilto limestone.



Photo (b) Looking northeastward from southern edge of workings shown in photo (a). Stripped area extends for 600' to 800' into distance.

#228 MC 157



Photo (c) Looking eastward at prominent dump from stripped area shown in photos (a) and (b).

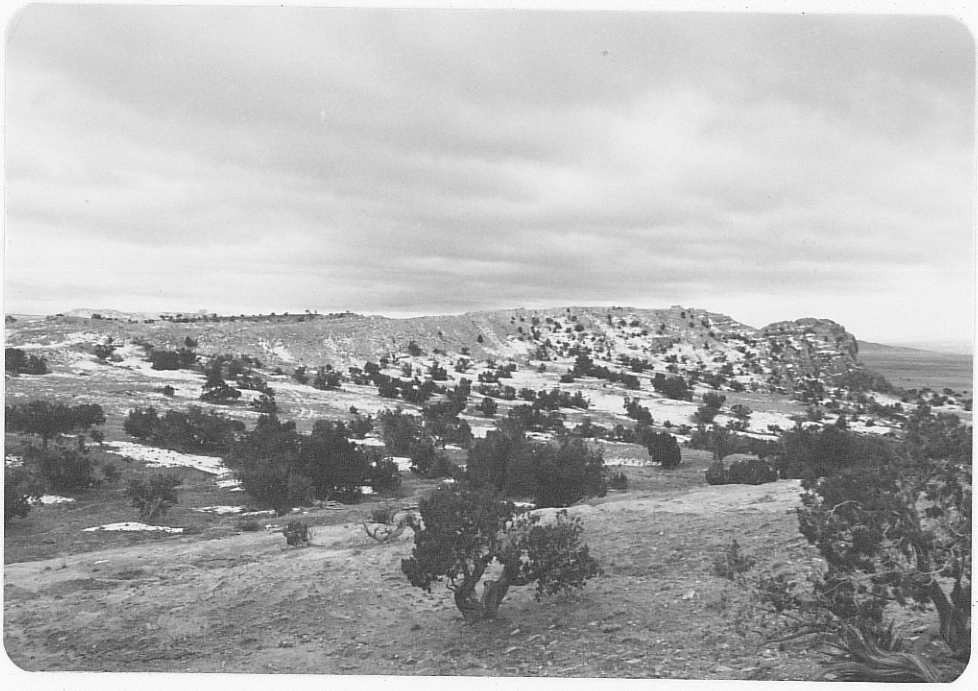

Photo (d) View eastward of sec. 36 mesa top shown in photos (a) and (b), and the waste dump extending down slope (arrow) along west side of mesa.

#229 MC 158



Photo (e) Looking eastward near north section line showing stripped area up to 16' deep in limestone; workings extend for about 400' into background; note person at left of center for scale.



Photo (f) Close up of Tee pee fold in workings shown in (e); note range pole for scale.

#230 M^e 159

Date visited 1/16/80

Mine name(s) Sec. 31 open pit County McKinley

Section N½ N½ 31 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon Trend

Elevation 6,900'

Nearest city and/or dwellings Office and dwellings at Todilto Exploration and Development, Piedre Triste Mine, 1 mile north.

The Sec. 31 Mine is located on the Todilto limestone capped mesa (Todilto Bench) in the N½ N½ sec. 31. The workings are ½ to 3/4 mile west of highway #53 and may be reached by getting off at the Poison Canyon road.

The mine consists of several open pits and prospecting trenches. The largest is 150' x 325' elongate E-W and up to 12' deep, but depth is often difficult to determine in this type of working, (see photo a). Small intraformational folds of flexures are visible on faces within cut. Scintillometer response in traverse was up to 3,000 cps. Photo (b) is a view of a prospecting cut 400' east of open pit just described. It is about 125' long, 12' wide, and 2'-3' deep with counts up to 400 cps in center.

Approximately 225' S SW of the north ¼ corner is an 18' deep, 175' long open pit (photo c), cut into the gentle dip slope on the Todilto limestone. Scintillometer response was generally between 1800-2500 cps with a 3000 cps maximum.

The mine exploited several small deposits in the middle and lower parts of the Todilto limestone. The nature of ore bodies in this vicinity is described in McLaughlin (1963). The mine was operated 1953-62 (Hilpert, 1969). The State Mine Inspector's office last registered the mine in March, 1970 with United Nuclear Corp., as the operator.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 35.
(2) McLaughlin, E. D., 1963, Uranium Deposits 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, Mem. 15, p. 147.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 1/16/80.



Photo (a) Looking west into a 325' long cut in the W½ N½ N½ sec. 31.



Photo (b) Looking east into small prospecting cut 400' east of open pit shown in (a).

#232 MC 161

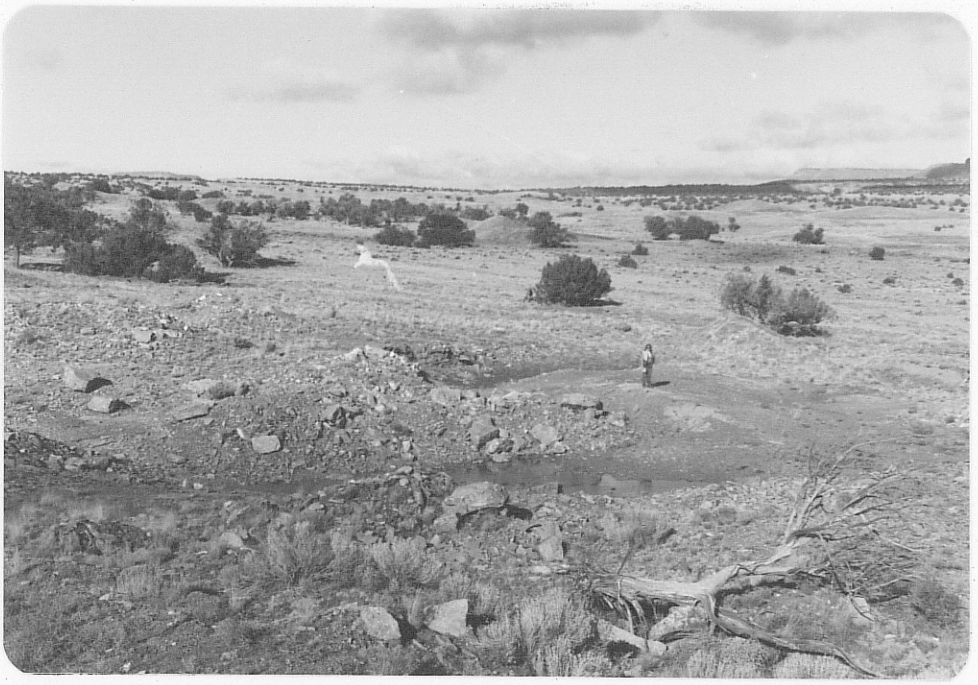

Photo (c) Looking west at a 175' long open pit just south of the north ¼ corner in sec. 31.

#233 MC 162

Date visited 1/17/80

Mine name(s) Moe No. 4 (Sec. 32) County McKinley

Section 32 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas 7½'

Mining district Poison Canyon

Elevation 6,720'

Nearest city and/or dwellings Ambrosia Lake junction, 3 miles NE

The Moe No. 4 is located very near the center of sec. 32 on the east side of San Mateo Creek. At present the easiest access is to travel north from Milan on highway no. 53 for 10 miles to the old Ambrosia Lake supply buildings and turn off to right (east), park and walk in the remaining ½ mile to mine site.

The mine consists of a decline driven north-northeastward into a Todilto limestone deposit. The site is marked by a wooden headframe and small ore and waste piles (see photo a). Apex of headframe is about 10' high and waste piles are scattered to the east of the site for about 80'-100' and to the southwest in the form of a ridge 100'-150' long.

The decline has collapsed in 3 segments along the first 175' of workings (photo b). The first one is at the site of the portal and is 35' long, 75' wide, and 15' deep. The second one is about 60' x 30', and the third is 40' x 20', each being about 10' deep. No evidence of recent collapse or movement was noted and all three are filling with tumbleweed and blow sand. None of the 3 collapse features were centered.

Scintillometer readings on dump piles east of decline ran to 2,200 cps, on the west side generally low, 300-500 cps, but one area that contained abundant limestone fragments ran to 1,200 cps.

Hilpert, (1969) described the deposit as medium in size, and as occurring in the lower-middle part of the Todilto. Deposit was mined in 1964. The State Mine Inspector's Office last registered the mine in June, 1962 with the operator listed as Lloyd Sutton.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 35.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 1/17/80.

NM-163



Photo (a) Looking NW at Moe Mine, showing wooden headframe at left, and mine dump or low grade ore stockpiled at center and right foreground. Note person at left near headframe for scale.



Photo (b) Looking northward from atop headframe down the collapsed decline. Note 3 separate collapse features, the first one being at the portal.

#255 MC 164

Date visited 2/1/80

Mine name(s) Charlotte County McKinley

Section S½ S½ 33 Twnsh. 13 N R. 9 W

Quadrangle sheet Dos Lomas, 7½'

Mining district Mt. Taylor

Elevation 6,880'

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

The Charlotte Prospect is located in the S½ S½ of sec. 33 just north of the large sec. 4 mine complex. It is accessible via the Roundy Ranch road which leaves state highway no. 53 7.3 mi. N of the no. 53 and U.S. no. 66 junction. Proceed northeastward on the ranch road, staying to left at all road forks until reaching sec. 4. Near the center of sec. 4 turn left, cross arroyo and continue to sec. line. The Charlotte Prospect is 60' north of the sec. 4/33 line.

The workings consist only of one 40' long, 8' wide, and 3' deep cut in Todilto limestone. Maximum scintillometer reading of 125 cps (2x background) was recorded along west face of cut which trends N 20° E (see photo a). No mineralization apparent at this site. It is doubtful any ore was produced from this cut, however, Hilpert, 1969, stated that some ore was mined from an open pit on the Charlotte Prospect in 1958. An additional small dozer cut was identified approximately 1000' NW of the cut described, but it also is too small to have produced appreciable ore.

Additional information on workings in sec. 33 is provided in the U.S. Atomic Energy Commission report AEC-PED-1, 1959. The report stated that a total of 208 tons of ore averaging .17% U_3O_8 was produced in 1958. Sec. 33 is Santa Fe Railway land.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) Field notes, 2/1/80.
(3) U.S. AEC-PED-a, 1959, Mine Operations Data Report, GJO/AEC; p. 63; (microfische only).

NM-165



Photo (a) Looking northeastward into 40' long prospecting trench, 3' deep.

#237 Mc 166

Date visited 12/3/79

Mine name(s) Hogback (Hogback 3-5) County McKinley

Section NE¼ 12 Twnsh. 15 N R. 18 W

Quadrangle sheet Gallup East 7½'

Mining district -

Elevation 6,950'

Nearest city and/or dwellings Gallup, 1½ mi. SW

The Hogback Mine is located approximately 1 mi. north of the new Interstate Highway No. 40 at the point where it crosses the Hogback east of Gallup. The dump is discernible from old U.S. Highway 66.

The workings consist of a 400' decline driven down dip in basal Dakota Sandstone fm., and a N-S trending stripped area which is about 100' by 450'. The decline, shown in photos (a) and (b), has a opening about 12' x 12', is untimbered and collapsed down at 25'. Scintillometer readings up to 900 cps were recorded near the opening at place marked by person in photo (a). The mine dump, shown in photo (c), is about 20' long at crest and extends about 70' downslope at angle of repose.

The strip mine or stripped area lies immediately to the north of the decline and it appears that material was stripped off the dip slope at the right in photo (d) and piled at the left (in the same photo) forming a bench. An additional view of this bench, photo (e), shows the 45° dip slope, and the Gallup trailer park in the background.

The deposit occurs in a carbonaceous coaly shale lens near the base of the Dakota Sandstone. Mineralization is apparently related to thick part of carbonaceous zone which thins away from this deposit (Hilpert, 1969). Deposit was mined from 1952-60 from the open pit; decline was driven to explore southern end of property.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Field notes, 12/3/79.



Photo (a) Looking SW down dip slope at Hogback decline.

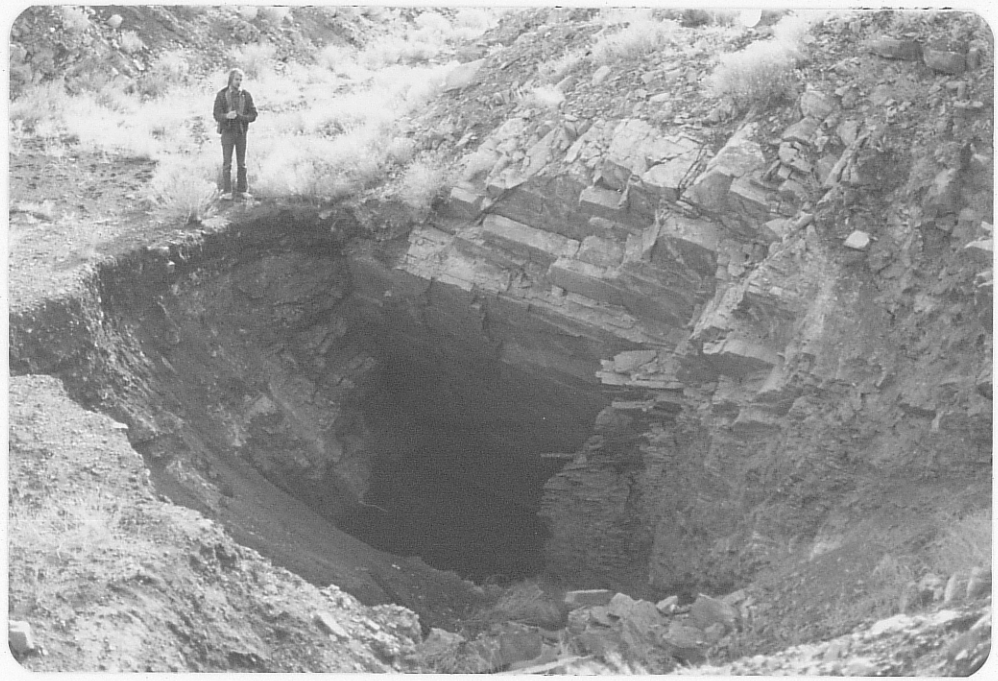

Photo (b) Close-up of decline; caved at 25' down.

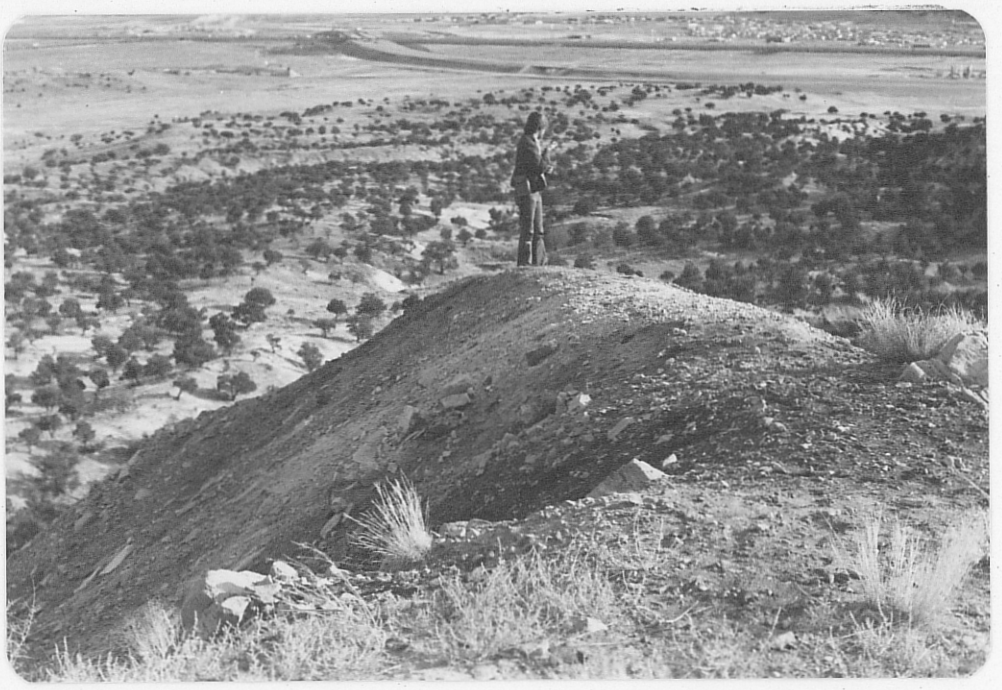

Photo (c) Dump from decline, looking SE; note construction along new I-40 route in background.



Photo (d) Looking north at stripped area. Bench has been constructed by open pit mining on dip slope in basal Dakota Sandstone.

240 Mc 169



Photo (e) Looking south from bench shown in photo (d). Note dip slope of hogback at left and Gallup trailer park in background.

341 Mc 170

Date visited 12/4/79

Mine name(s) Becenti County McKinley

Section NW¼ 28 Twnsh. 15 N R. 17 W

Quadrangle sheet Gallup East 7½'

Mining district Gallup

Elevation 6,960'

Nearest city and/or dwellings Rehoboth, 1½ mi. N; additional single family dwellings within 1 mi. radius of mine.

The Becenti Mine is located 2 mi. south of U.S. Interstate 40 and may be reached via the Sundance Coal Mine road which runs southward from I-40 at a point 4 mi. east of Gallup on the frontage road. At 1.8 mi. down the coal mine road turn west for approximately 1 mi. to vicinity of mine site.

The workings consist of an open pit on the dip slope of a sandstone lens near the crest of the hogback. The pit is approximately 175' along the crest and up to 80' in the down dip direction (see photo a). Dip is about 30' in a southwesterly direction.

The deposit occurs near the upper part of a 10-15' thick sandstone at the base of the Dakota Sandstone and is overlain by a 2' to 3' thick carbonaceous shale (see photo b). Scintillometer readings along the sandstone face range up to 1,500 cps; in the overlying shale only 250 cps.

The mine dump lies immediately west of and downslope from the mine; it measures about 160' by 50', up to 30' high; (width of the dump is very difficult to determine, and may be anywhere between 25' and 100'). The dump is shown from the downslope direction in photo (c). Yellow uranium mineralization may be seen on sandstone fragments in the dump; scintillometer readings up to 900 cps recorded on dump traverse.

Mine reportedly produced some ore between 1952-58.

References: (1) Hilpert, L., 1969 Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) Field notes, 12/4/79

NM 171



Photo (a) Looking southeast into Becenti open pit; note range pole at right center for scale.

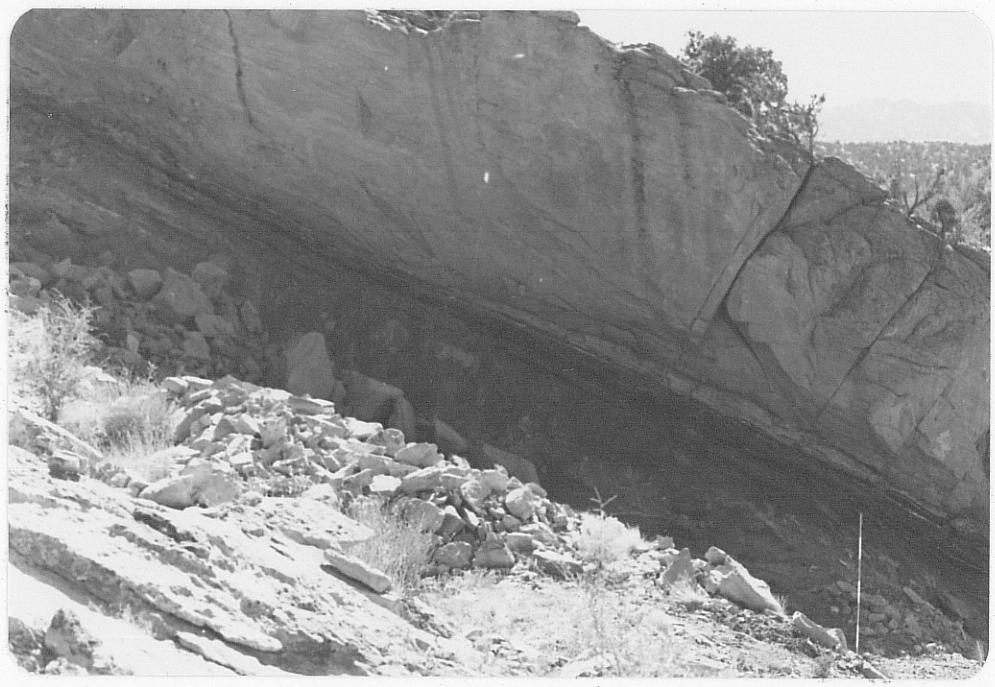

Photo (b) Looking south at south face of cut showing ore bearing sandstone at base with overlying carbonaceous shale in turn overlain by massive red sandstone; again note range pole.

#243 Me 172



Photo (c) Looking northeast from below at toe of tailings dump.

#244 Mc 173

Date visited 1/31/80

Mine name(s) Kermac Sec. 10 (Kermac No. 10) County McKinley

Section E½ 10 Twnsh. 14 N R. 10 W

Quadrangle sheet Goat Mountain 7½'

Mining district Ambrosia Lake

Elevation 7,120'

Nearest city and/or dwellings Ambrosia Lake Junction, 10 mi. southeast

The Kermac Sec. 10 Mine is located in the E½ of sec. 10 at the northwest edge of the Ambrosia Lake mining district. It may be reached via highway 509; from junction of no. 53 and no. 509 travel northwestward on no. 509 for approximately 10 mi. to the Rio de Oro headframe; take dirt road past headframe and travel 1/3 mi. westward to Kermac Mine site.

The Sec. 10 Mine consists of a 520' deep, 3 compartment vertical shaft, and a headframe (see photo a). The mine went into production in 1957 and produced from a cluster of deposits in the upper sands of Westwater Canyon member of the Morrison fm.; production averaged about .21% U_3O_8. The deposit is a westward extension of the Dysart No. 1 (Rio de Oro) Mine. The sec. 10 shaft is now covered and secured by a wire mesh fence in good condition; fence is 6' high and encloses a 12' x 12' area. Scintillometer readings at shaft area are generally about 400 cps, but one area at southeast corner of fence reads up to 900 cps. A recently repaired or reconstructed 16' x 20' metal shed stands immediately behind the headframe (see again photo a).

The mine dump lies several hundred feet to northwest of shaft; it is 250' long (N-S), up to 60' wide, and reaches a maximum height of 18'-20' at the north end (see photo b). Scintillometer readings in dump area range from 400-700 cps. An additional dump or low grade ore area exists 300' northeast of the shaft. This area measures about 50' x 100', up to 4' high, with scintillometer readings up to 750 cps, (see photo c). A 36" diameter metal lined ventillation shaft at this smaller dump area stands about 6' high and is open on top, (see again photo c). Warm air is escaping through the open shaft and scintillometer response at the opening was +6000 cps. Another of these ventillation shafts is located 500' northeast. Cattle are grazed in the area.

Cobb Nuclear Corporation has obtained the mining claims covering most of the S½ of sec. 10. They are currently seeking a patent on the two mining claims directly overlying the ore body which is near the center of the E½ E½ of the section. They plan to re-open the mine if market conditions do not deteriorate any further.

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. 50; (microfische only).
(3) New Mexico State Mine Inspector's Office, inactive uranium mine file.

(4) Cobb Nuclear Corporation, oral communication, 3/12/79 and 1/28/80.
(5) Field notes, 1/31/80.



Photo (a) Looking northwest at headframe and fenced mine shaft at Sec. 10 Mine. Metal shed is 16' x 20'; note range pole at nearest corner of headframe for scale.



Photo (b) Looking northwest at mine dump; height is 20' at distant end. Note range pole at right for scale.

#247 MC 176



Photo (c) Looking northeastward from the mine shaft area at smaller dump area and 36" ventillation shaft (arrow); note cattle grazing on and around dump.

#345 MC 177

Date visited 1/8/80

Mine name(s) Sec. 34 County McKinley

Section NE¼ 34 Twnsh. 14 N R. 11 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,200'

Nearest city and/or dwellings Single family dwellings are visible from mine area, several miles down the Rincon Canyon southwest of mine.

The Sec. 34 Mine is indicated by an adit symbol and a strip mine symbol in the NE¼ sec. 34. It may be reached by proceeding northward from the Silver Spur Mine in sec. 31 for several miles to the old pipeline road, and then turning left to follow pipeline road into the SE¼ of sec. 26. From this point on it is adviseable to walk.

The workings consist of 270' long bench cut (photo a). Near the center a small adit was driven northward into the highwall (photo b), but caving and slumping has nearly concealed the portal. Opening was originally about 5' x 5'; adit turns left immediately inside; total length unknown. Workings are in carbonaceous shale zone in basal Dakota sandstone. Maximum scintillometer readings along bench cut = 170 cps, at portal = 600 cps, and on mine dump 150 cps. No uranium mineralization is apparent.

References: (1) Thaden, R.E., et al, 1966, Geologic Map of Goat Mountain Quadrangle, GQ-518.
(2) Field notes, 1/8/80.

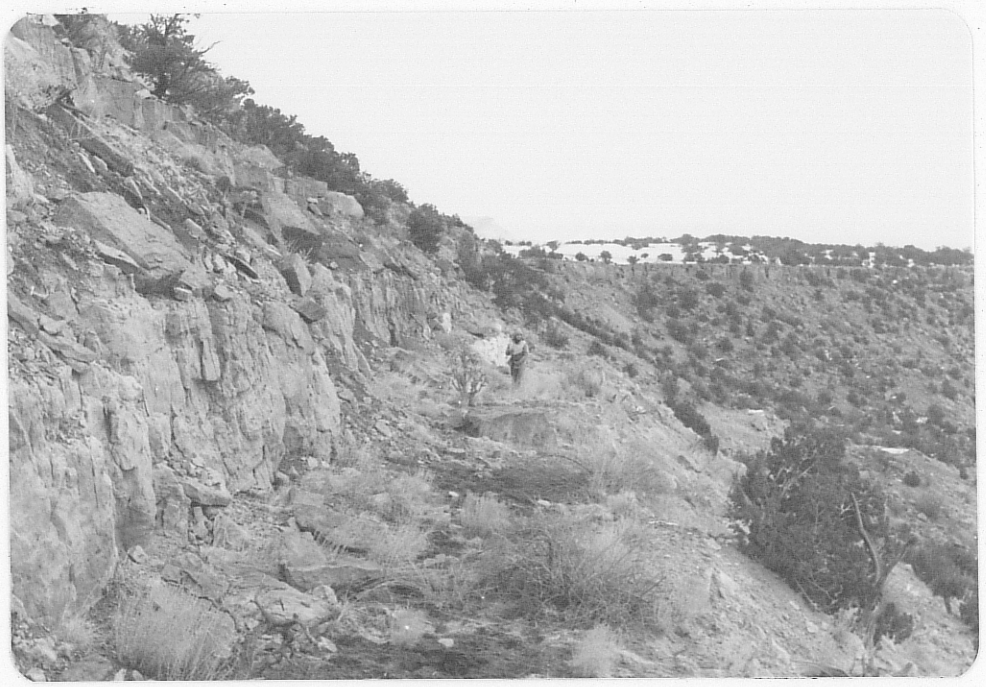

Photo (a) Looking eastward along bench cut in basal Dakota ss. at sec. 34 Mine. Note person at center for scale.



Photo (b) Caving at portal of adit near center of cut shown in photo (a); person is pointing to remaining small opening.

250 MC 179

Date visited 1/8/80

Mine name(s) Sec. 35 Strip (Lost Mine) County McKinley

Section NW¼ 35 Twnsh. 14 N R. 11 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,120'

Nearest city and/or dwellings Single family dwellings are visible several miles southwest down the Rincon Canyon.

The Sec. 35 Strip Mine is indicated by a strip mine symbol in the NW¼ sec. 35 on the Goat Mountain quadrangle. It may be reached by proceeding northward from the Silver Spur Mine in sec. 31 for several miles to the old pipeline road and then turning left to follow the pipeline road into the SE¼ of sec. 26; walk in from this point.

The workings consist of a 400' long, east-west trending strip mine or bench cut about 70' below the rim of the mesa (see photo a & b). Workings are in a zone of multiple carbonaceous beds at the base of the Dakota sandstone. Scintillometer readings recorded were up to 180 cps (or 3 x background); on dump immediately below cut (photo c) readings were about the same 150-170 cps.

The highwall (photo b) and the dump slope are both somewhat unstable; waste material will eventually reach the drainage line in Rincon Canyon.

References: (1) Thaden, R.E., et al, 1966, Geologic Map of Goat Mountain Quadrangle, GQ-518.
(2) Field notes, 1/8/80.

NM-180



Photo (a) Looking eastward along bench cut at sec. 35 Strip Mine; most of face is natural exposure now made somewhat unstable by 25' cut in soft carbonaceous shales. Note person (center) for scale.



Photo (b) View northward showing a 15' thick sequence of carbonaceous shale just above floor of cut.

#252 MC181



Photo (c) View northeastward from valley floor showing 50' "high" veneer of mine waste on slope.

#253 MC 182

Date visited 12/13/79

Mine name(s) Febco (Small Stake) County McKinley

Section S½, SW¼ 31 Twnsh. 14 N R. 10 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,200'

Nearest city and/or dwellings Single family dwellings, 1½ mile S

The mine is located on the north side of small east-west trending drainage line near the south line of sec. 31. It may be reached via the road leading northward from the east side of Haystack Mountain. Proceed northward on this road for approximately 3 3/4 miles; road passes through gate at the sec. 6-sec. 31 line and mine will be visible at that point.

The workings consist of a series of 4 adits driven northward into a coaly carbonaceous, shale zone in basal Dakota sandstone. The westernmost is the largest (photo a) with a 6' x 6' portal; timbering is visible just inside, but adit was not entered. Caving or bulldozing has partially blocked the portal, but with a little effort a man could enter.

The next 3 adits seem to get progressively smaller as indicated by the size of the tailings dumps below them, but caving, or blasting to seal, has blocked the adits to the extent that no one can enter. The 2nd through 4th adits are shown in photos (b) thru (d). Scintillometer readings near the portals of the adits ran to 350 cps. Tailings dumps, shown in photo (e), produced readings of 1,200 cps for largest (westernmost) dump, 800 cps for smaller dumps. Larger dump is about 60' high (see photo f) and fans out to more than 200' wide at the toe.

Mine was opened in 1952 and operated by Febco Mines, Inc. Total period of operation is not known, however, production through July 1, 1958 was listed as 3,912 tons of ore averaging .27% U_3O_8 (AEC PED-1).

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. 65; (microfiche only).
(3) Hilpert, L., 1969, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87, p. 218.
(4) Field notes, 12/13/79.

MC-182



Photo (a) Looking northward at partially caved entrance to westernmost adit at the Febco Mine.

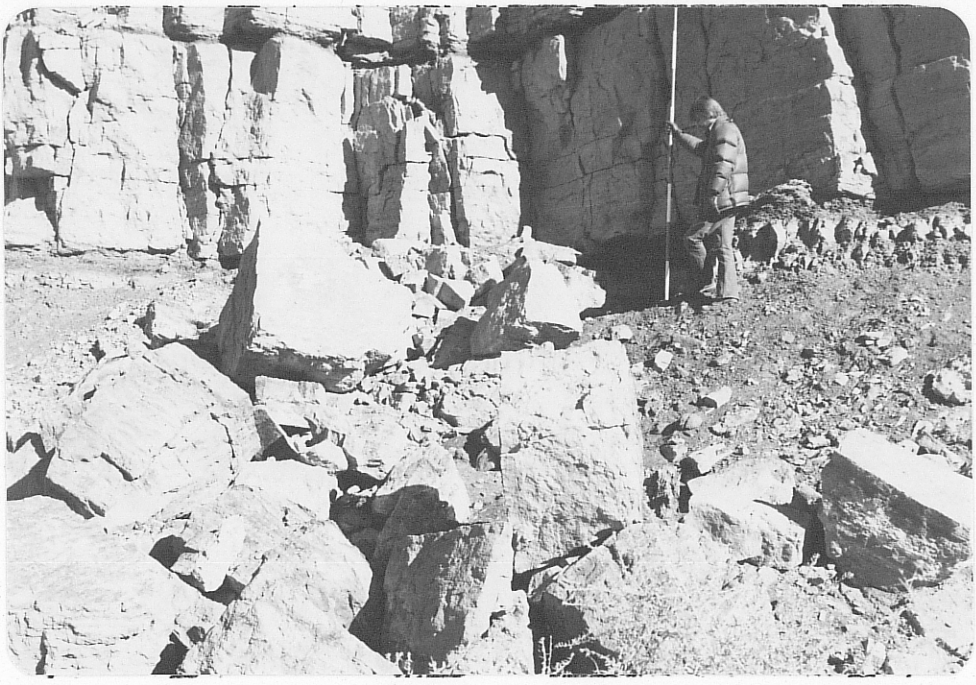

Photo (b) Looking northward at caved entrance to second adit (going eastward) in series of four.

+1255 Me 184



Photo (c) Looking northwestward at caved entrance to third adit in series (going eastward).

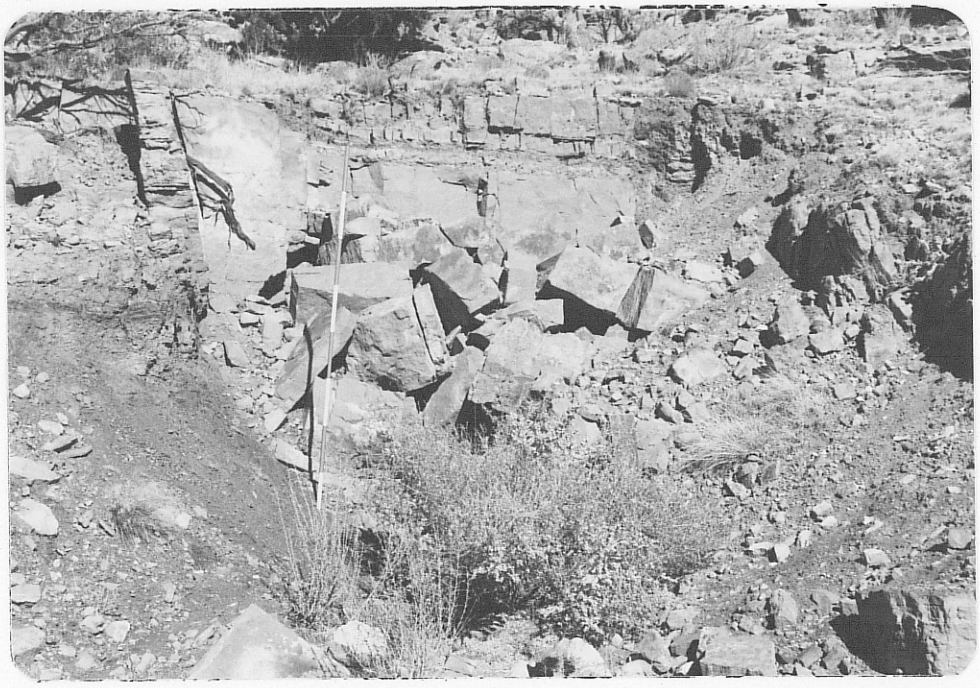

Photo (d) Looking northward at caved entrance to fourth adit (easternmost) in series of four.

250 Mc 185

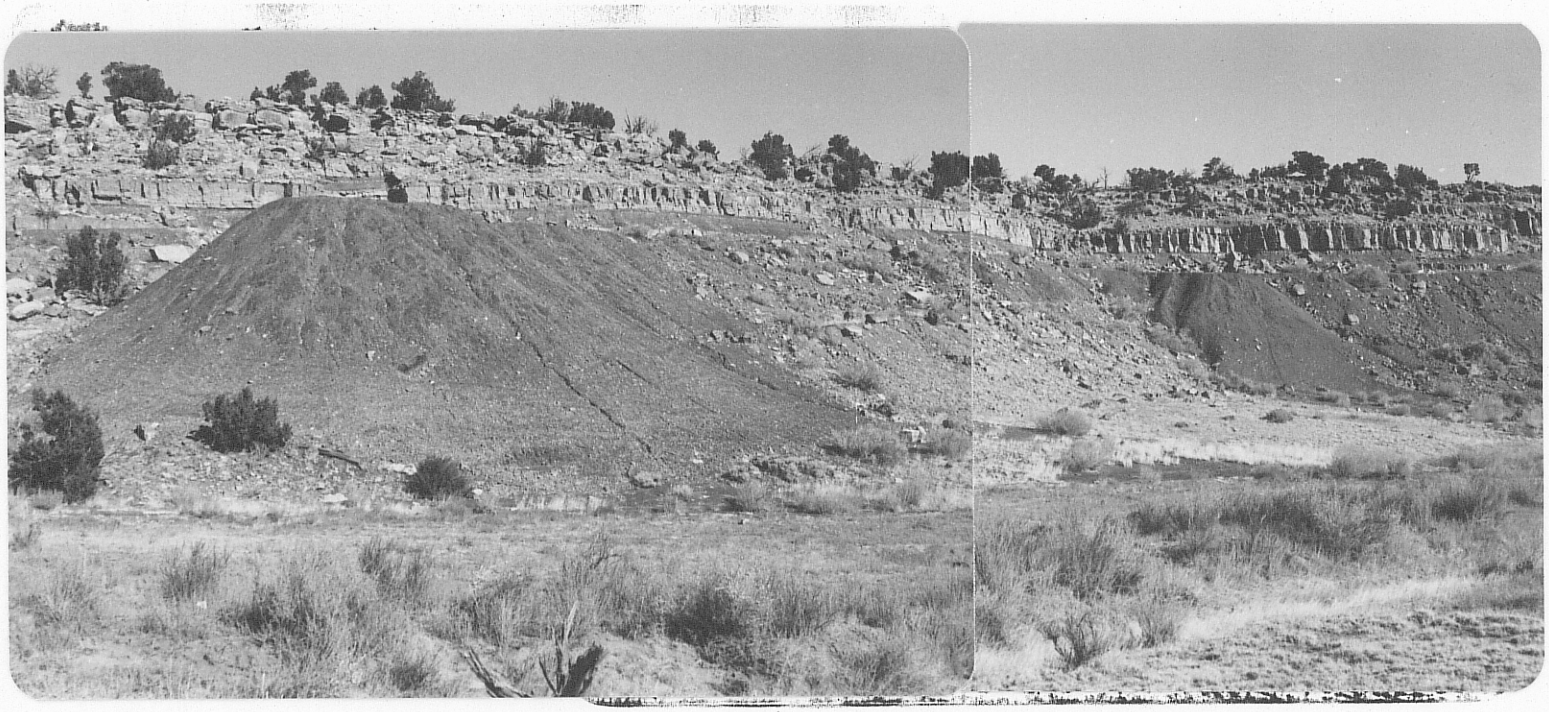

Photo (e) Looking north-northeastward at Febco Mines showing tailings dump from largest adit at left, and the coalesced tailings dumps from the other 3 adits at right. Dump at left is 60' high, but is spread thinly. (For close-up see photo (f)).



Photo (f) Looking westward at upper surface of largest (western) tailings dump. Note person with range pole for scale.

Date visited 12/13/79

Mine name(s) Silver Spur 1 & Silver Spur 5 County McKinley

Section E½, 31 Twnsh. 14 N R. 10 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,200'

Nearest city and/or dwellings Scattered single family dwellings within 2 mile radius of the mine.

The mine is located on the west bank of a small north-south trending drainage in the E½ of sec. 31. It may be reached via the Haystack Mountain-Two Fault Butte road that extends northward along the east side of these two topographic features. The mine is indicated by a stipled pattern along the 7,200' contour on the Goat Mountain quadrangle sheet (1957).

The mine consists of 5 separate recognizable shallow pits or trenches in basal Dakota sandstone, the largest being at the north end of the workings with a small, 22' long adit driven at the north end of it. Several other areas up to 100' across have had soil overburden stripped off, but no bedrock disturbed.

The southern area open cuts range from 35'-60' long, 8'-25' wide, and up to 5' deep, see photos (a) and (b). The north end cut is 15' wide, 110' long, and 9' deep at the face where the adit is driven, see photo (c). The adit portal is 5' high, 6' wide, with one set of timbers just inside, see photo (d). Scintillometer response at the southern pits was 750 cps to 1,800 cps, at the larger one on the north 2,000 cps.

Photo (e) shows several small scattered tailings piles along the west side of the workings; they are generally not over 3' high and less than 10' in diameter. Photo (f) is a view of the tailings dump from the north cut and adit. Readings of up to 900 cps were recorded on the dump, which measures about 200' by 20' and 5' in height.

The mine was one of the earliest producers in the district (Melancon, 1963); it produced between 1952-1959; operator was Febco Mines. Inc. It was last registered with the State Mine Inspector's Office in February, 1968 by the Farris Brothers.

Some recent drilling has been done at the site, but it is not known if the section is under active lease. Sec. 31 is owned by the Berryhill family.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Melancon, Paul, 1963, History of Exploration, in Geology and Technology of the Grants Uranium Region: New Mexico Bureau of Mines and Mineral Resources, Mem. 15, p. 5.

turn

(3) State Mine Inspector's Office, inactive uranium mine file.
(4) U.S. AEC PED-1, 1959, Mine Operation Data Report, GJO/AEC; p. 65; (microfiche only).
(5) Field notes, 12/13/79.



Photo (a) Looking south into 8' x 35' trench at southern edge of Silver Spur workings; note range pole for scale.



Photo (b) Looking northward near middle of workings, 200' north of photo (a); poorly defined cut is about 25' x 60'.

#261 Mc 190



Photo (c) Looking northward at northernmost cut; trench is 110' long with adit at far end.



Photo (d) Close-up of adit shown at end of trench in photo (c). Portal is 5' x 6', workings go in about 22'. Note range pole for scale.

#202 MC 191



Photo (e) Panorama looking northwestward from near middle of Silver Spur workings, showing numerous small overburden and tailings piles from the small open pits described in text. Note range pole at far right for scale.



Photo (f) Looking eastward at tailings dump from long cut with adit.

#264 MC193

Date visited 12/14/79

Mine name(s) Pat Mine County McKinley

Section SE¼, NE¼, 4 Twnsh. 13 N R. 10 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,220'

Nearest city and/or dwellings Numerous scattered dwellings along the Two Fault Butte-Haystack Mountain road 2 miles west of mine.

The Pat Mine is shown by two closely spaced adit symbols on the Goat Mountain 7½' qudrangle. The mine may be reached via dirt road leading northward from Haystack Mountain. Two miles north of Haystack Mountain (on Bluewater quadrangle) take dirt road leading northeastward for 1.2 miles; then take side road to right (east) for .75 miles to mine site.

The mine consists of 3 northward driven adits, 2 of which are stubs and interconnect, with drifts off of these (see photos a thru c). One drift, parallel to the face cut has collapsed resulting in a hole exposed just west of the two interconnecting adits (see photo a). About 25' west of the hole is the longest of the three adits, more than 65' long, with a drift off to the left at about 30'. This adit is shown in photo (c). It produced a scintillometer response of 3,900 cps. A small stope between the two interconnecting adits produced readings up to 3,500 cps; (background between 90-130 cps).

Host rock is a 60'-80' thick sandstone in the upper Westwater Canyon member or the lower Brushy Basin member of the Morrison fm. A zone about 15' thick near the top of this sandstone contains several lenses of dark gray radioactive material (Hilpert, 1969).

The mine was active between 1952-1963, but most ore was mined after 1958 (Hilpert, 1969).

References: (1) Hilpert, 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Field notes, 12/14/79.



Photo (a) Looking northwestward at two interconnecting adits center and right, and collapse hole, directly in front of person. Hole formed when a drift parallel to the face collapsed. Adits are 5' high x 5' wide; note range pole.



Photo (b) Looking northeastward at the two adits shown in photo (a); note range pole at adit on right for scale.

#266 MC 195

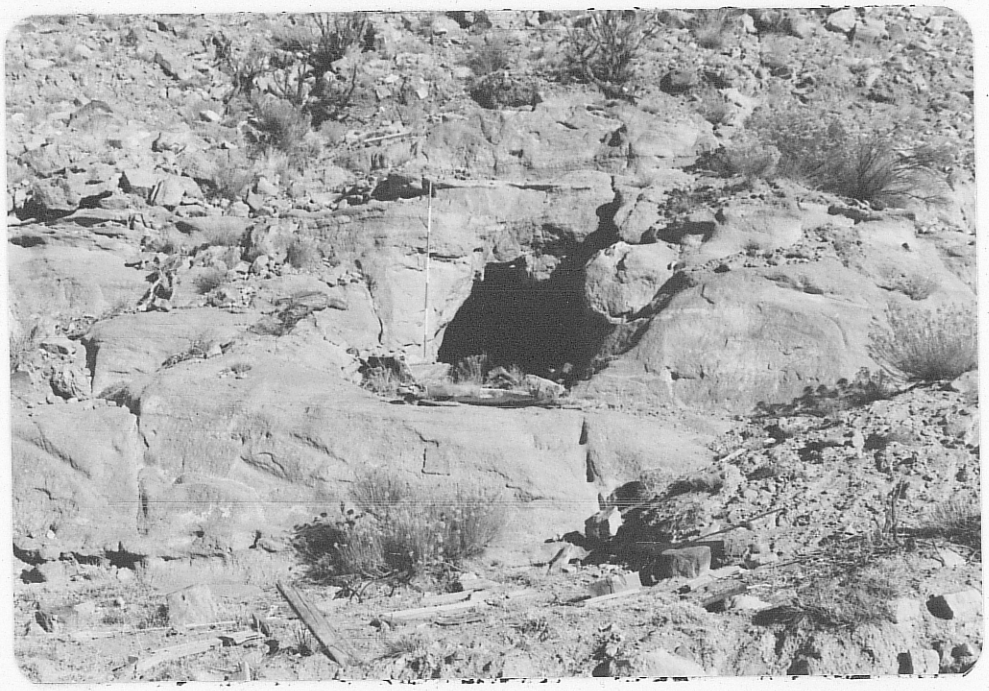

Photo (c) Looking northward into adit, about 5' high, 6' wide, and more than 65' long, located about 25' to the west (beyond) the collapse hole shown in photo (a).

#267 M-196

Date visited 12/14/79

Mine name(s) Dakota County McKinley

Section SE¼ NE¼ 4 Twnsh. 13 N R. 10 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,160'

Nearest city and/or dwellings Numerous scattered single family dwellings along Two Fault Butte-Haystack Mtn., road 2 miles west of mine.

The Dakota Mine is indicated on the Goat Mountain 7½' quadrangle by an adit symbol. The mine may be reached via the dirt road leading northward from Haystack Mountain. Two miles north of Haystack Mountain (On Bluewater quadrangle) take dirt road leading northeastward for 1.2 miles; then take side road to right (east) for .75 miles to mine site.

The mine consists of a single adit driven northward into the north wall of a small 15' deep drainage line (see photo a). Portal is boarded up with heavy planking (see photo b), making access to the mine impossible. Scintillometer readings of 300-400 cps were recorded in drainage line as portal was approached; 500 cps recorded at the portal. Tailings dump, if any existed, has been eroded away.

The adit is located about 600' west of the multiple adits called the Pat Mine (see Pat Mine report), and 60' stratigraphically and topographically lower; host rock is the Westwater Canyon sandstone member of the Morrison fm. No uranium mineralization is visible. A small north trending fault, downthrown on the west, passes just 100' west of the adit (GQ-518). The mine was active in the middle and late 1950's.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) U.S.G.S., Geologic Quadrangle Map, GQ-518.
(3) U.S. A.E.C., New Mexico Uranium Mines, GJO/AEC.
(4) Field notes, 12/14/79.



Photo (a) Looking eastward at small drainage line in which boarded up portal of Dakota adit may be seen (arrow).



Photo (b) Looking northeastward at boarded up portal of Dakota adit; note range pole at left.

#209 MC 198

Date visited 12/14/79

Mine name(s) Junior County McKinley

Section NE¼ 4 Twnsh. 13 N R. 10 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,200'

Nearest city and/or dwellings 2 miles west along Two Fault Butte-Haystack Mountain road, single family dwellings.

The Junior Mine is indicated on the Goat Mountain 7½' quadrangle by a stipled pattern along the 7,200' contour 700' west of the Dakota Mine. Access road is same as for Dakota Mine.

Mine consists of several dozer cuts and several linear open pits (photos a & b) in basal Dakota sandstone along the south edge of the mesa in NE¼ of sec. 4. Disturbance is minimal and scintillometer response was somewhat weak in a waist-high traverse; maximum readings were approximately 200 cps (or 3 x background). Much of the disturbed area has become revegetated.

No uranium mineralization was visible, even though ore was reported mined from an open pit in 1953 (Hilpert, 1969).

A small north trending fault cuts through several hundred feet east of the mine; mine is on the downthrown side (see GQ-518).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Thaden, R.E., et al, 1966, Geologic Map of Goat Mountain Quadrangle, GQ-518.
(3) Field notes, 12/14/79.

M² 199



Photo (a) Looking westward into bulldozed area along south edge of mesa at the Junior Mine workings. Note range pole for scale.



Photo (b) Looking southwestward at small open cut along south edge of mesa at the Junior Mine workings. Note range pole for scale.

#771 MC 200

Date visited 12/14/79

Mine name(s) Sec. 5 (Westvaco) (No. 2) County McKinley

Section W½ 5 Twnsh. 13 N R. 10 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,220'

Nearest city and/or dwellings Single family dwellings along the Two Fault Butte-Haystack Mountain road ½ mi., to the west.

The Sec. 5 Mine (Westvaco) is located just below the top of the mesa in the west ½ of sec. 5. Access is via the Haystack Mountain-Two Fault Butte road. Two miles north of Haystack Mountain take dirt road leading to the northeast for 1.4 miles. Old access road takes off to the left at this point but is no longer passable and gate is locked at east section 5 line. Last 3/4 miles is on foot. Alternatively, one can walk in from the road on the west side of the mesa in sec. 6.

The mine workings consist of one adit driven northeastward into a carbonaceous shale zone at the base of the Dakota sandstone. Some mineralization may extend down into the underlying Brushy Basin member of the Morrison fm. Portal is 6' x 6', adit is well timbered, and at least 60' long, but total length was not explored. Maximum scintillometer readings in the adit were about 800 cps. No secondary, oxidized, uranium mineralization was visible. The dump extends downslope immediately out front of the portal 70' downslope at the angle of repose. Maximum scintillometer readings on dump were 300 cps. Dump is visible from the road ½ mile to west. Access road which descends from mesa top just to north of the adit continues for 200' south of the mine and terminates.

The mine was operated by Farris Brothers Mining during 1958 (Hilpert, 1969); total production is not known. Mine is on a Santa Fe Railway section (AEC, RME 160). No photographs available.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 36.
(2) U.S. AEC-PED-1, 1959, Mine Operation Data Report, GJO/AEC, p. 49; (microfiche only).
(3) Field notes, 12/14/79.

Date visited 12/13/79

Mine name(s) Sec. 1 Strip County McKinley

Section 1 Twnsh. 13 N R. 11 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,420'

Nearest city and/or dwellings Single family dwellings 1½ mile southeast near Two Fault Butte

The Sec. 1 Strip Mine may be reached by proceeding southwestward for 1 mile from the Febco Mine (small stake) in sec. 31.

No references exist except for the Strip Mine notation on the Goat Mountain quadrangle. The 300' long stripped area (photo a) lies in a 30' thick gray clay with a carbonaceous shale zone of the basal Dakota sandstone overlying it, and a sandstone of the Brushy Basin member underlying it.

Maximum scintillometer reading = 60 cps which is just background. It is unlikely that this was a uranium prospect.

References: (1) Thaden, R.E., et al, 1966, Geologic Map of Goat Mountain Quadrangle, GQ-518.
(2) Field notes, 12/13/79.

MC 202



Photo (a) Looking northwestward at small strip or road cut labelled as Strip Mine on Goat Mountain quadrangle sheet.

374 Mc 203

Date visited 12/13/79

Mine name(s) Sec. 2 Strip County McKinley

Section N½ 2 Twnsh. 13 N R. 11 W

Quadrangle sheet Goat Mountain 7½'

Mining district Grants

Elevation 7,340'

Nearest city and/or dwellings Single family dwellings 2½ miles southeast near Two Fault Butte

The Section 2 Strip Mine was reached during the present investigation by driving southward from the Febco Mine (Small Stake) in sec. 31 to the sec. 1 Strip Mine, and then hiking from sec. 1 into sec. 2.

No references exist except for the Strip Mine notation on the Goat Mountain Quadrangle. The 350' long stripped area is 20'-30' below the rim of the mesa in a carbonaceous shale zone at the base of the Dakota sandstone (see photos a & b). Maximum scintillometer reading = 90 cps. No uranium minerals visible.

References: (1) Thaden, R.E., et al, 1966, Geologic Map of Goat Mountain Quadrangle, GQ-518.
(2) Field notes, 12/13/79.

MC 204

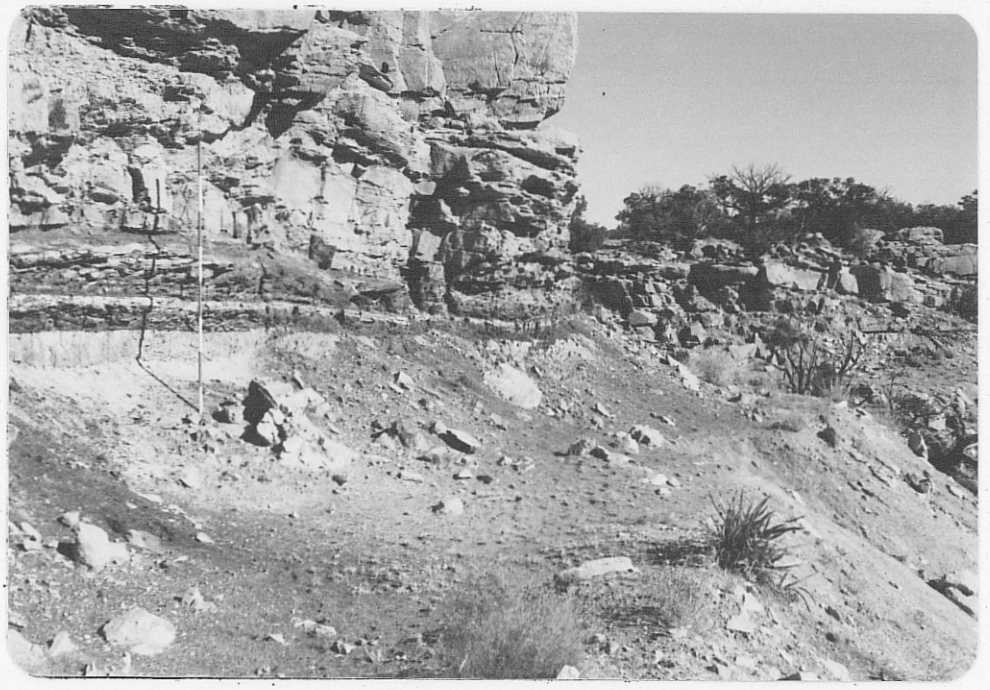

Photo (a) Looking northeastward at section 2 Strip Mine; note carbonaceous shale zones behind range pole.



Photo (b) Looking eastward at section 2 Strip Mine.

Date visited 12/7/79

Mine name(s) Blackjack #1 County McKinley

Section 12 Twnsh. 15 N R. 13 W

Quadrangle sheet Hosta Butte 7½'

Mining district Smith Lake

Elevation 7,450'

Nearest city and/or dwellings Smith Lake Trading Post, 2 air miles southeast; numerous single family dwellings within 1 mi. radius of mine site.

The Blackjack #1 is located near the center of sec. 12 approximately 0.8 mi. north of the Mariano Lake road. The turn off to the mine is a dirt road leading northward 2 mi. west of the intersection of State Highway No. 56 and the Mariano Lake road.

The mine is collared in Mancos Shale and the vertical shaft extends down 825' into the Westwater Canyon member of the Morrison fm. The shaft was sunk early in 1959 and the mine was operated by United Nuclear-Homestake Partners until it closed down in 1964. Total production is unknown.

The shaft has since been sealed, the headframe removed, and most buildings raized. All that remains is the headframe foundation and concrete slabs, a few small buildings, the mine tailings, and a considerable amount of general debris-cans, tires, scrap metal, sheet metal, lumber, and cable. Photo (a) is a view of the mine site as it is approached from the west; the most prominent features are the buildings and the mine tailings. Photo (b) is a close-up of the shaft site and the headframe foundation. No evidence of subsidence has appeared around the shaft thus far. Photo (c) is a view eastward of the largest remaining concrete slab, 190' long, on the site. Photo (d) is a view of the tailings dump which measures 260' long (E-W), by 180' wide, and generally 5' to 6' high. A sketch of the area is shown in Fig. 1.

Scintillometer readings on the tailings dump were in the 900-1000 range in a "waist high traverse," or about 12x background. The only other area that produced readings of 1,000 cps or more was the small waste dump immediately south of the shaft site (see photo e).

Approximately 500' west of the mine site are 3 additional house sized concrete slabs and a considerable amount of domestic type debris.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S. Prof. Paper 603.
(2) MacRae, M. E., 1963, Geology of the Blackjack #1 Mine, in Geology and Technology of the Grants Uranium Region: New Mex. Bur. of Mines and Mineral Resources, Mem. 15, Vincent C. Kelley, editor.

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MC 206

(3) Field notes, 12/7/79.

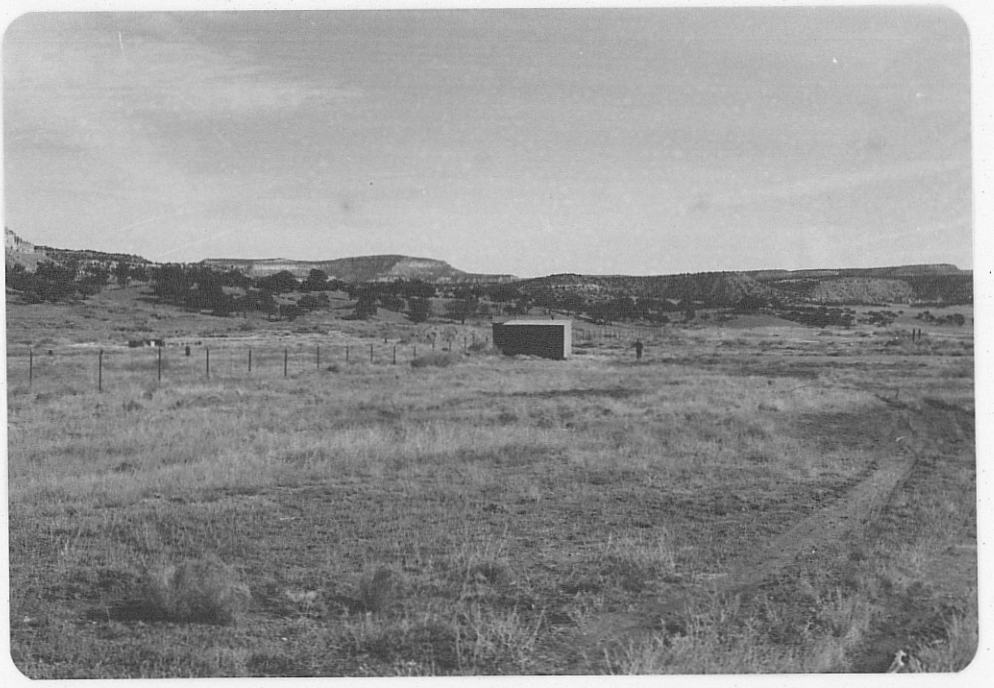

Photo (a) Looking eastward toward the Blackjack #1 site; headframe foundation at left indicated by arrow.

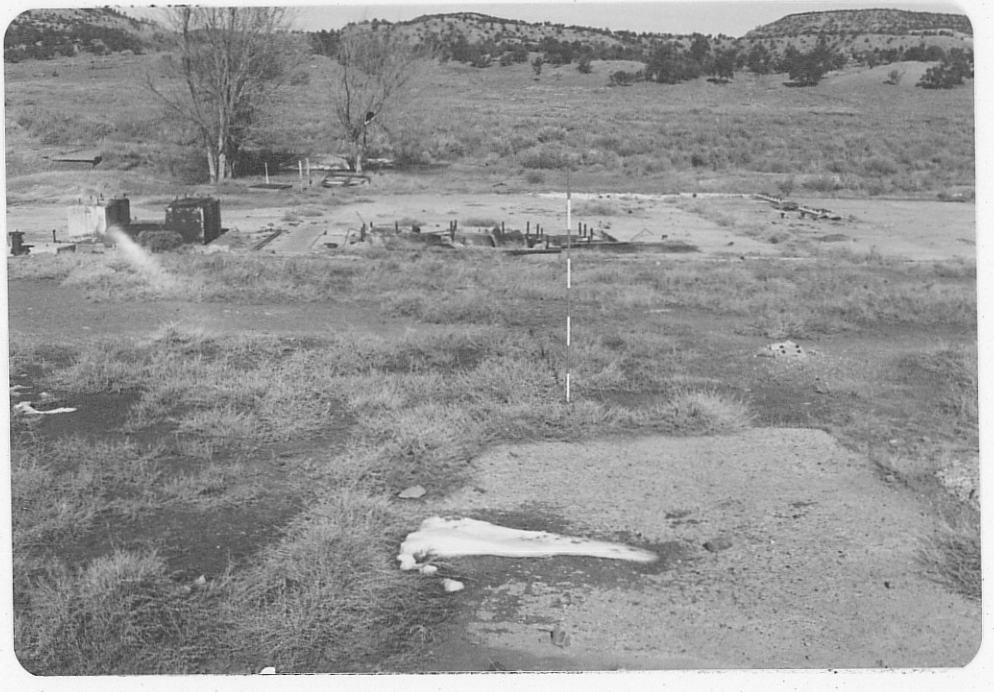

Photo (b) Looking north at shaft site immediately in front of range pole, and one corner of headframe foundation (arrow). Hoist foundation lies behind range pole.

H 279 Mc 208



Photo (c) Looking east at 190' long concrete slab; hoist and drum foundation at right.



Photo (d) Looking northwestward at tailings dump; note range pole (circled) for scale.

#220 Mc209

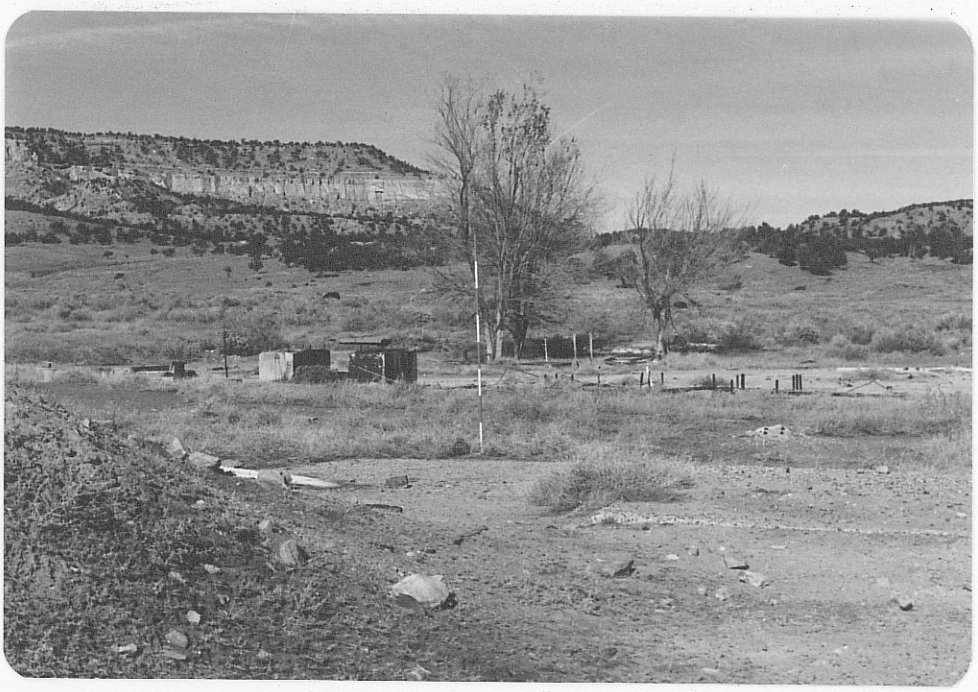

Photo (e) Looking northwestward at shaft site with 5' high tailings dump showing at lower left; dump produced scintillometer readings up to 1,200 cps.

#781 MC 210

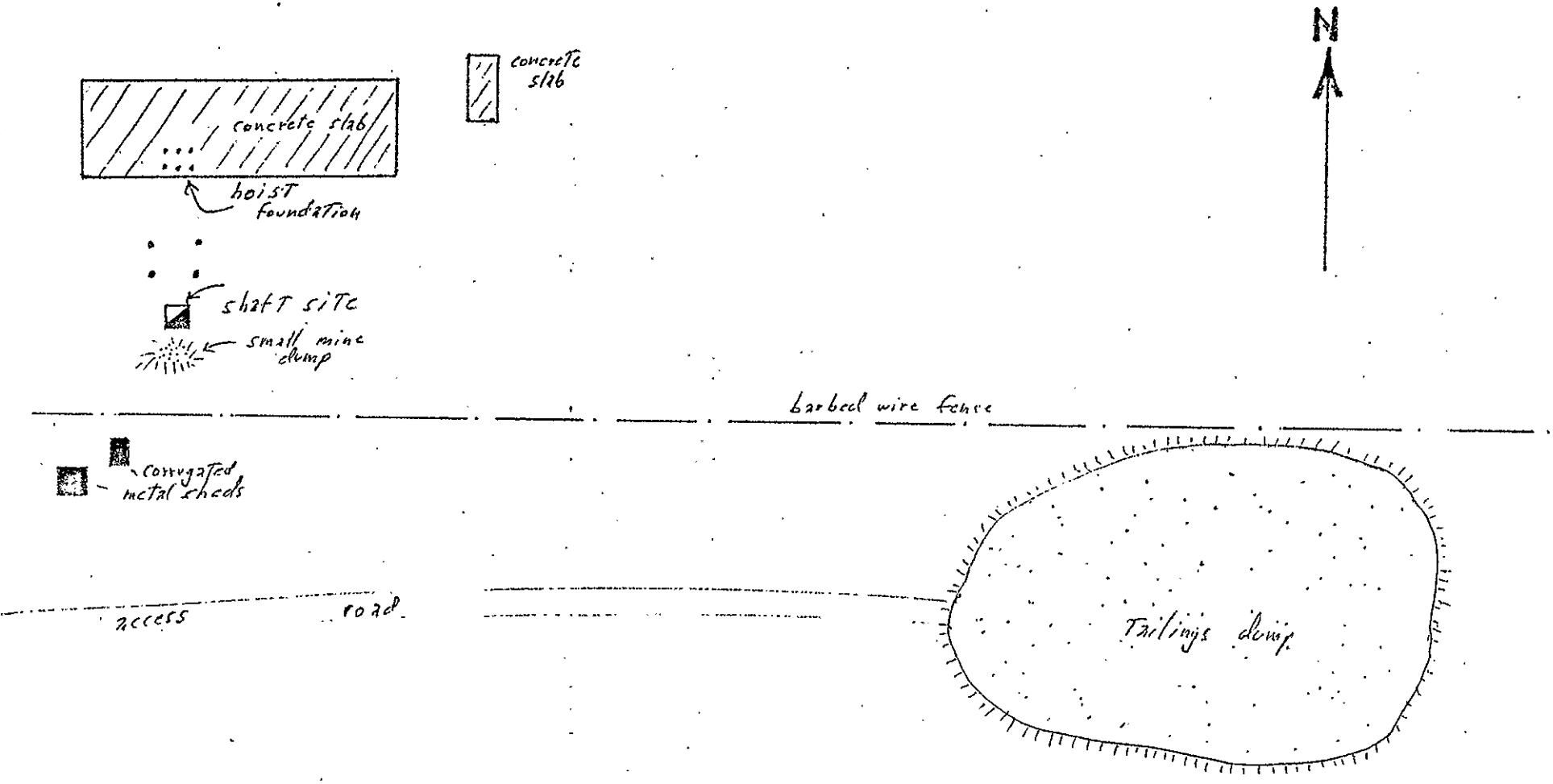

Fig. 1 Sketch map of Blackjack #1 mine site.

scale: 1" = 100'

Date visited 12/6/79

Mine name(s) Mac #2 County McKinley

Section SE¼ 18 Twnsh. 15 N R. 13 W

Quadrangle sheet Hosta Butte 7½'

Mining district Smith Lake

Elevation 7,440'

Nearest city and/or dwellings Smith Lake Mercantile, 6 air miles east; numerous single family dwellings on indian allotments within a 3 mile radius of the mine.

The Mac #2 is located nearly on the east line of section 18, or about 1 3/4 miles southeast of Gulf Minerals Mariano Lake Mine. The mine may be reached by taking the Mariano Lake road for 5 miles west of Smith Lake. At this point turn south on the Ruby Mine road and continue southwestward past the Ruby Mine turn-off for another 1½ miles into sec. 18. Mine dump will be noticeable.

The deposit occurs in the Poison Canyon sandstone tongue of the Brushy Basin member. It was mined through a vertical shaft, probably not more than 350' deep, by United Nuclear-Homestake Partners during the late 1960's and early '70. The shaft has been backfilled and no trace of subsidence or caving has appeared. The mine dump remains (photo a), and the foundation or concrete pad for the hoisting equipment (photo b). Maximum scintillometer reading on the 40' x 110' tailings dump was 1,100 cps. Some drainage pipe has been left behind, but site is not trashy.

Western Nuclear Corp., (Phelps-Dodge subsidiary) has conducted a recent drilling program near the site as evidenced by their cemented in drill holes; the section is probably under active lease to Western Nuclear.

The mine was last registered with the State Mine Inspector's Office in February, 1970. Total production is not known.

References: (1) State Mine Inspector's Office, inactive uranium mine file.
(2) Field notes, 12/6/79



Photo (a) Looking northeastward at the Mac #2 mine site; main tailings dump at center is 40' x 110', up to 10' high. Note person at left of center for scale.



Photo (b) Looking northward from concrete pad in the foreground to the tailings dump. Maximum scintillometer reading on dump was 1,100 cps. Fence on right side of the dump follows the section line.

284 Mc 213

Date visited 12/7/79

Mine name(s) Mac #1 County McKinley

Section SE¼ 12 Twnsh. 15 N R. 14 W

Quadrangle sheet Mariano Lake 7½'

Mining district Ambrosia Lake

Elevation 7,460'

Nearest city and/or dwellings Indian dwelling 800' east of the east edge of the mine.

To reach the Mac #1, proceed west on the Mariano Lake Road 9¼ miles from the intersection with New Mexico 56. Take the Gulf Mine road south for 2 miles to the Gulf Mariano Lake Mine, then east for 3/4 of a mile to the Mac #1.

The shaft at the Mac #1 is covered and fenced with heavy duty steel posts and fencing, 6' high and 21' square (photo a). Several buildings and dumps mark the site (photo a). Two sheet metal buildings are found directly north of the shaft. The larger building is 72' x 30', and housed the draw works, the smaller building is 66' x 20', and was used as office and storage space.

The main dump is 225' x 45' x 6', and is located several hundred feet west of the shaft (photo b). A series of small piles forms a smaller dump, 220' x 40' x 2', just west of the larger dump (photo c). South of the shaft is a circular dump, 80' in diameter and up to 3' high (photo d).

The mine produced from the Poison Canyon Sandstone. Carnotite was visible in the circular dump, and the main dump. Scintillometer readings in the circular dump were up to 5,000 cps, 2,600 in the main dump, and 900 cps in the low dump.

A small drainage line trends eastward from the circular dump towards an Indian dwelling 800 feet east of the dump. There does not appear to be a radiation hazard, as scintillometer readings in the stream bed fall to less than 100 cps within 150' of the mine area.

The mine was operated by United Nuclear-Homestake Partners; it was last registered with the New Mexico State Mine Inspector's Office in February, 1970.

References: (1) U.S. AEC, Uranium Mine Records, GJO/AEC.
(2) New Mexico State Mine Inspector's Office.



Photo (a) Panorama looking north at the buildings and shaft (circled) at the Mac #1 Mine. The main dump is in the foreground, and the circular dump is on the right center of the photo (as indicated by geologist).



Photo (b) Looking west at the main Mac #1 dump. Note the Gulf Mariano Lake Mine headframe in the background (circled).



Photo (c) Looking NE at the smaller dump. Note the larger main dump on the right of the photo.



Photo (d) Looking west at the circular dump on the Mac #1 property. Note Gulf's Mariano Lake headframe in the background (circled).

#257 MC 216

Date visited 12/6/79

Mine name(s) Black Jack #2 County McKinley

Section N½ 18 Twnsh. 15 N R. 13 W

Quadrangle sheet Mariano Lake 7½'

Mining district Smith Lake

Elevation 7,420'

Nearest city and/or dwellings Smith Lake Mercantile, 6 air miles east; numerous single family dwellings on indian allotments within a 3 mile radius of the mine.

The Black Jack #2 is located in the N½ of sec. 18 about 1¼ miles southeast of Gulf Minerals Mariano Lake Mine. The mine is accessible via the Mariano Lake road leading westward from Smith Lake. Five miles west of Smith Lake turn south onto the Ruby Mine road and continue southwestward past the Ruby Mine turn-off for another 2 miles into sec. 18. The first abandoned mine on the right will be the Mac #2, the second ½ mi. further on will be the Black Jack #2, identifiable by the large metal shed shown in photo (a).

The deposit occurs in the Poison Canyon sandstone tongue of the Brushy Basin member at the 7,100' level; surface elevation is 7,420'. It was mined through a 325' deep vertical shaft by United Nuclear-Homestake Partners during the 1959-1964 period. The shaft has since been backfiled with no evidence of subsidence at the shaft site. Several prominent tailings dumps remain, one in photo (b) that is several hundred feet long, up to 10' high, with scintillometer readings up to 1,200 cps (background = 200 cps); and another immediately northwest that is 35' wide, 300' long, and up to 12' high with a maximum scintillometer response of 900 cps.

Some caving has occurred at one of the ventillation shafts just west of the metal shed. A 2' diameter metal lined vent shaft stands in the middle of a 20' diameter caved hole (see photo d). The caved shaft is protected by a 4½' high wire mesh fence in good condition. Scintillometer response was not significantly above background. Another ventillation shaft was found ¼ mi. to the north of the mine site. It is covered and represents no hazard, see photo (e).

Future plans for re-entry of this mine are presently unclear, however, a 1978 announcement by Cobb Nuclear Corporation (see attached sheet) indicated a strong interest in the property.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(2) Hoskins, W. G., 1963, Geology of the Black Jack No. 2 Mine, Smith Lake Area, in Geology and Technology of the Grants Uranium Region: New Mex. Bur. of Mines & Mineral Resources, Memoir 15, p. 49.
(3) State Mine Inspector's Office, 52nd annual report, p. 51.
(4) Field notes, 12/6/79.

NMC 217



Photo (a) Looking southeastward at 24' x 80' metal shed at Black Jack #2 Mine site.



Photo (b) Looking east toward Black Jack #2 tailings dump; dump is more than 300' long, up to 10' high; note person with range pole for scale.

289 MC 218



Photo (c) Looking northeast at another tailings dump, 35' wide, 300' long, and up to 12' high.



Photo (d) Caved ventillation shaft just west of metal shed shown in photo (a).

290 MC 219



Photo (e) Black Jack #2 ventillation shaft ¼ mile north of mine site. This shaft along with the mine site are indicated on the Mariano Lake 7½' Quadrangle.

291 MC 220

"George O. Lotspeich, President of Cobb Nuclear Corporation, Albuquerque, New Mexico, announced today that the company had closed a transaction with Anschutz-United Mining Venture, a joint venture consisting of Anschutz Uranium Corporation, Denver, Colorado and United Mining Corporation, New York City, for the joint venture exploration and development of the Black Jack No. 2 mine and adjacent lands, McKinley County, New Mexico.

The agreement covering 480 acres in the Smith Lake area is held by Cobb Nuclear under mining leases on allotted Indian lands.

The Black Jack No. 2 mine in Section 18 was mined in the early 1960's by United Nuclear-Homestake Mining Company, operated by Sabre-Pinon Mining Division of United Nuclear. The southwest one-fourth of Section 7 has not been mined, however, ore grade intercepts have been encountered which indicate a trend between the old Black Jack workings to the south and the Mac No.1 mine, which is adjacent to Section 7 to the northwest."

Quote from Cobb Nuclear Corp., 1978 News Release.

Date visited 12/5/79

Mine name(s) Westwater County McKinley

Section SE½ 2 Twnsh. 15 N R. 16 W

Quadrangle sheet Pinedale 7½'

Mining district Gallup (Church Rock)

Elevation 7,500'

Nearest city and/or dwellings Church Rock, 6 mi. west-southwest

The Westwater Mine may be reached on foot from the Williams and Reynolds Mine in sec. 4, 2 mi. away. Access roads to the north and to the east exist, but were not investigated. Mine is on state owned land.

The workings found during this investigation consist of a NE-SW trending open cut across a nose of Westwater Canyon member sandstone. The cut measures 20' wide, up to 15' deep, and is about 35' long, (photo a). A knob of sandstone left isolated by the cut yielded higher gamma counts outside the cut than inside; inside readings were about 900 cps while outside (photo b) readings near a channel sand/mudstone contact ranged up to 1100 cps.

The U.S. AEC-PED-1 report, 1959, stated that two small parallel adits totaling 350' of underground drifts were driven on this property in 1957. Production through mid 1958 had totaled 496 tons of ore averaging .41% U_3O_8. No trace of these two adits was found during the on site visit. It seems very likely, however, that some ore was hauled off from the open cut described above.

The mine was last registered with the State Mine Inspector's Office in August, 1959. The workings as found represent no hazard.

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. 65, microfische only.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 12/5/79.

MC-222



Photo (a) Looking northeastward into open cut.



Photo (b) View of sandstone knob isolated by cut, showing channel sands with uranium values.

#274 MC 223

Date visited 1/30/80

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

Section NW¼ 24 Twnsh. 13 N R. 9 W

Quadrangle sheet San Mateo 7½'

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.

DI-824

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.

#297 Mc 226

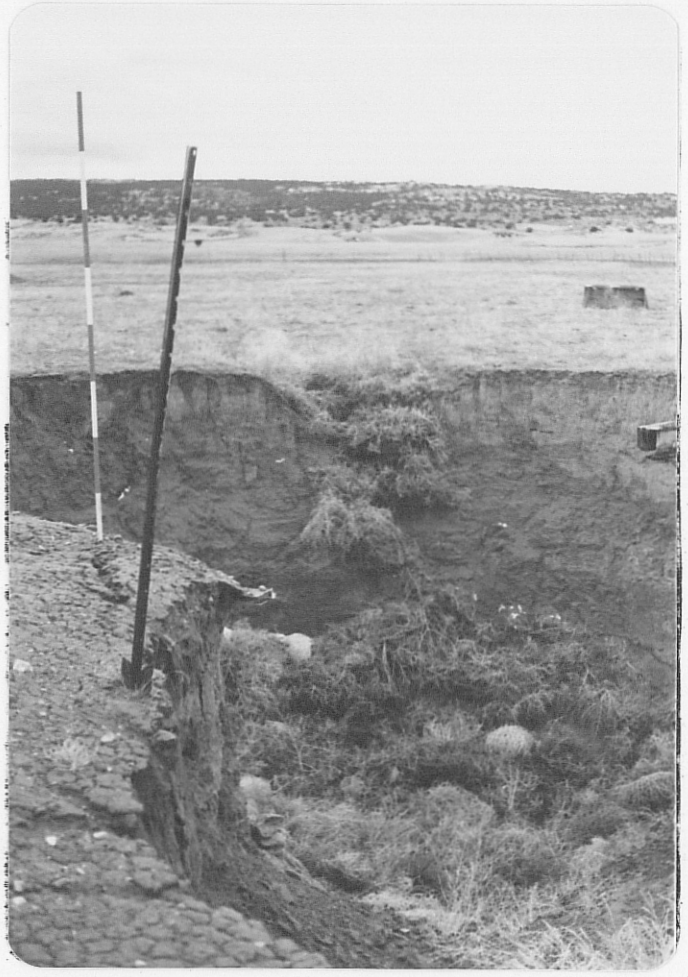

Photo (c) Close-up of caved shaft showing accumulation of tumbleweed at bottom.



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

#228 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.

#249 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.

± 300 MC 229

Date visited 12/11/79

Mine name(s) Alta County McKinley

Section SW¼ 5 Twnsh. 14 N R. 11 W

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake District

Elevation 7,120'

Nearest city and/or dwellings Prewitt S. 7½ mi.

The Alta is located in the SW¼ sec. 5 1 mile west of the Borrego Pass road. It is accessible by proceeding north on the dirt road from Prewitt for 5½ miles to the ranch road (private).* Travel east on the ranch road (ore haulage road) for ½ mile then turn left and proceed northward on dirt trail for 2 miles to the mine.

The mine consists of 3 adits driven northward in the uppermost sandstone of the Westwater Canyon member of the Morrison fm., and a wooden ore chute leading to a loadout level 40' below (see photos a & b). The middle adit is the largest; with a 5' high, 6' wide portal (see photo c), it goes in at least 50' then makes a right turn. Total length is unknown; maximum scintillometer reading observed inside was 3000 cps.

The adit on left (also photo c) is questionable; it is timbered differently and goes back only a few feet. It may have been a powder magazine.

The adit on the far right (east) shown in photo (d); the portal is 5' high, 6' wide, and the adit is timbered similar to middle adit. It is caved 12' back. Scintillometer readings of 1,200 cps were recorded.

Maximum scintillometer reading of 3,000 cps on mine dump was recorded at west end to left of ore chute in photo (a). Background at this site is about 70 cps.

The road at adit level descends to the east. The road at loadout level descends to west.

The deposit occurs in the upper Westwater Canyon member. Top foot or so of the host sandstone contains abundant macerated carbonized plant fragments. The mineralization is immediately below carbonaceous zone in a coarse grained sandstone that is free of obvious carbonaceous material (Hilpert, 1969).

The mine was active during the 1951-1961 period. It was operated (for part of the time at least) by the Anaconda Company.

References: (1) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87; p. 216.
(2) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 41.
(3) Granger, H. C., 1963, Mineralogy, in Geology and Technology of the

turn

Grants Uranium Region: New Mexico Bur. of Mines and Mineral Resources, Mem. 15, p. 28, 29.

(4) Field notes, 12/11/79.

* For permission to go on private road contact Mr. Buddy Elkins in Grants, New Mexico.



Photo (a) Looking northward at the Alta Mine showing upper face with adits, wooden ore chute (center) and lower loadout level.

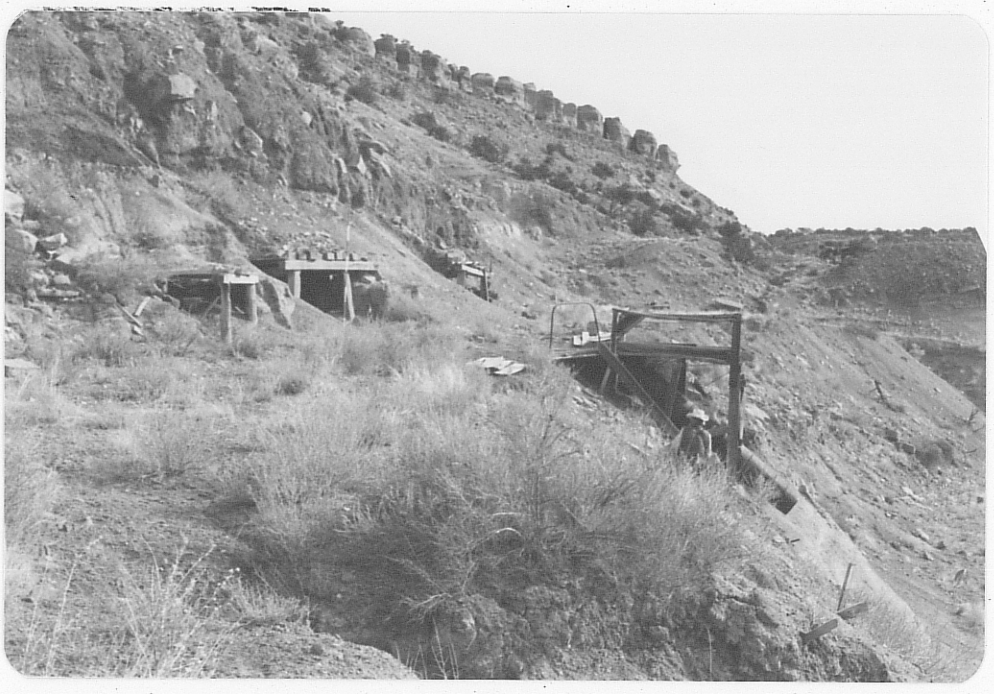

Photo (b) Looking eastward at the three adits driven in upper face and deteriorating wooden ore chute at right; note range pole at center adit for scale.

303 MC-232

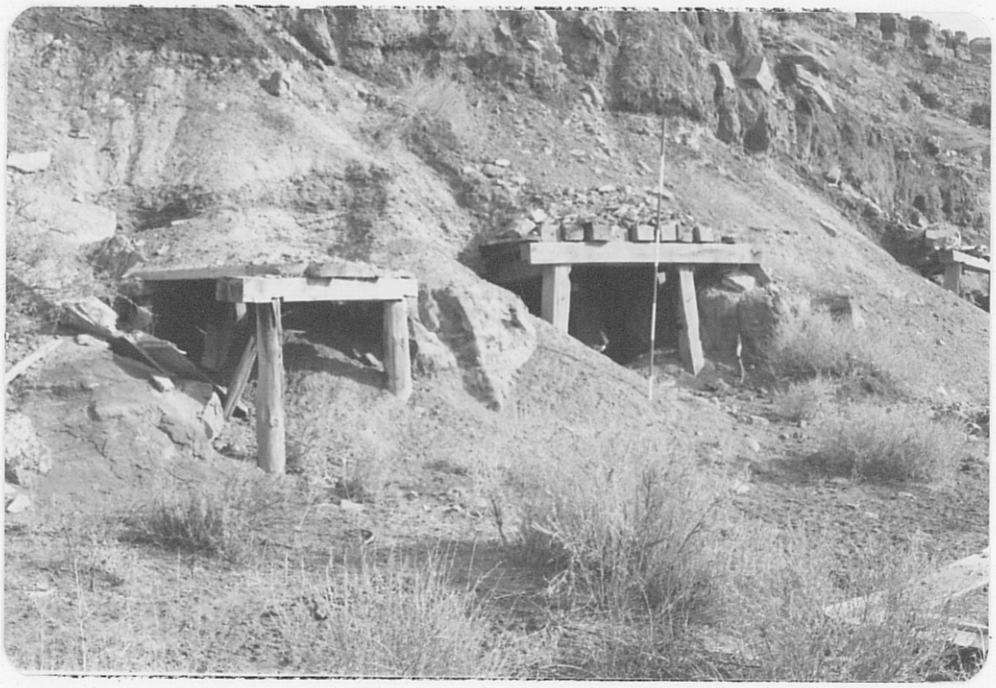

Photo (c) Looking northeastward at two adits at west edge of cut; adit at right behind range pole is main adit 50' or more in length.



Photo (d) Looking northeastward at easternmost adit, caved at 12' inside.

Date visited 12/12/79

Mine name(s) Silver Bit 15 and 18 (Pentada Prospect) County McKinley

Section NE¼ 10 Twnsh. 14 N R. 12 W

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake

Elevation 7,420' and 7,600'

Nearest city and/or dwellings Prewitt, 8 miles southeast

The Silver Bit 18 and 15 are located in the NE¼ sec. 10. They may be reached by traveling north from Prewitt for 5½ miles to the private ranch road, then proceeding west for 2½ miles. At this point there is a locked gate on the north side of road. Mr. Buddy Elkins of Grants has grazing lease on this section and will permit access if contacted in advance. Mine is one mile north of locked gate; it is indicated on GQ-954 by an open pit and an adit symbol.

The Silver Bit 18 is on the east side of the canyon and consists of one northeastward driven adit (see photos a & b). Portal is 6' high, 8' wide, and workings go back for about 20'. The adit is driven at the Brushy Basin/Dakota sandstone contact. A carbonaceous shale zone is exposed 4' above the heading at portal. Maximum scintillometer readings inside the adit ranged up to 1,100 cps.

The Silver Bit 15 is on the west side of the canyon and consists of a small bench cut on a moderate slope (see photos c & d). The cut is really no more than a wide spot at the end of an exploration road. It is about 100' long with an 8'-10' highwall. Scintillometer readings were in the 60-70 cps range (scarcely above background). Cut is in an upper sandstone bed of Westwater Canyon member. No mineralization noted.

Some ore was reportedly mined from these properties in 1955-57 (Hilpert, 1969). The State Mine Inspector's Office registered mines in this section in March, 1956 under the name Pentada Prospect, and in August, 1957 under the name Silver Bit.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 42.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Green, M.W., et al, 1971, Geologic Map of The Thoreau NE Quadrangle, GQ-954.
(4) Field notes, 12/12/79.

MK 334

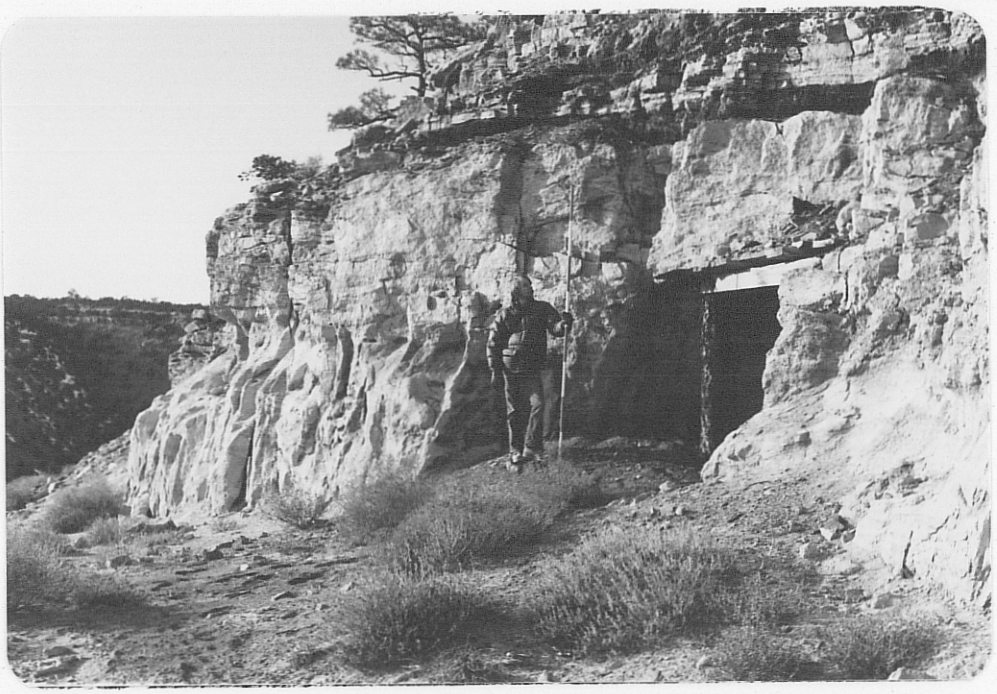

Photo (a) Looking northward at entrance to Silver Bit adit, driven at Dakota/Morrison contact.

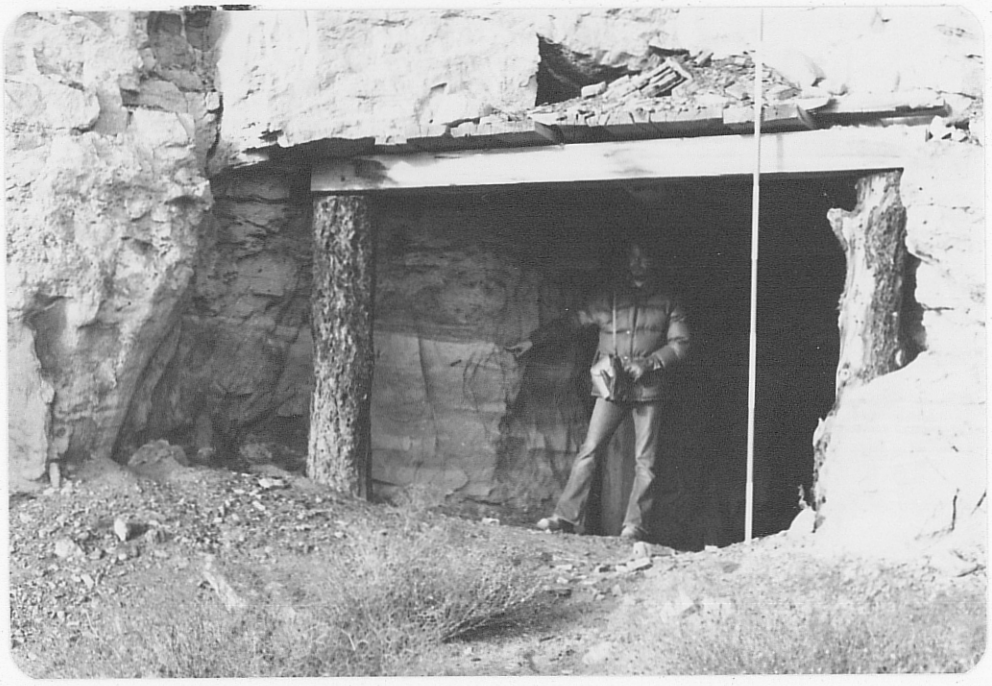

Photo (b) Looking northeastward at portal of Silver Bit adit, 6' high, 8' wide. Person in adit is pointing to color and lithology change probably at Dakota/ Morrison contact.

306 MC 235



Photo (c) Looking across canyon to west from access road to the Silver Bit adit, showing cut at end of road (circled) thought to be the Silver Bit 15.



Photo (d) Close-up of cut shown above in (c).

307 MC 236

Date visited 12/11/79

Mine name(s) Francis County McKinley

Section NW¼, NE¼ 8 Twnsh. 14 N R. 11 W

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake

Elevation 7,250'

Nearest city and/or dwellings Prewitt S 7 mi.

The Francis is located about 3/4 mile southeast of the Alta. The jeep trail ascending the mesa to the east of the Alta Mine becomes impassable part way up and the present investigators walked the ramaining distance to the Francis Mine. An alternative way might be to proceed southward on dirt road from the vicinity of the Moe Mine (active), but this road was not attempted.

The Francis workings consist of 3 small adits, one of which is inaccessible. The first is on the east side of a small canyon, and is called the eastern workings (see photos a & b). The adit is 6' high, 4' wide, and goes in about 15' generally east. Scintillometer readings inside were 900-1000 cps. Dump, which is very small gave readings of 90 cps.

The second adit lies immediately across the canyon on the west wall (see photos c & d). It is 6' high, 5' wide at portal and it also goes in about 15'. Maximum scintillometer count inside was 4000 cps. The mine dump gave readings of 275 cps. The third adit lies 150' north of the second on the same side of the canyon, but no dimensions are available as the workings are inaccessible; a ladder which leads from small waste pile at foot of slope 20' up to the workings was not in good condition (see photo e). Judging from the size of the dumps at the other adits this one probably goes in less than 6'-10'.

The deposit consists of several mineralized masses from a few feet up to 80' thick in a sandstone lens in the upper part of the Brushy Basin member of the Morrison fm. (Hilpert, 1969). The sandstone is bleached white and lies immediately beneath the Dakota sandstone.

The mine was worked in 1953 and 1954 (Hilpert, 1969). The State Mine Inspector's Office last registered the mine in July, 1953 with Farris Brothers listed as the operator.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 41.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 12/11/79.

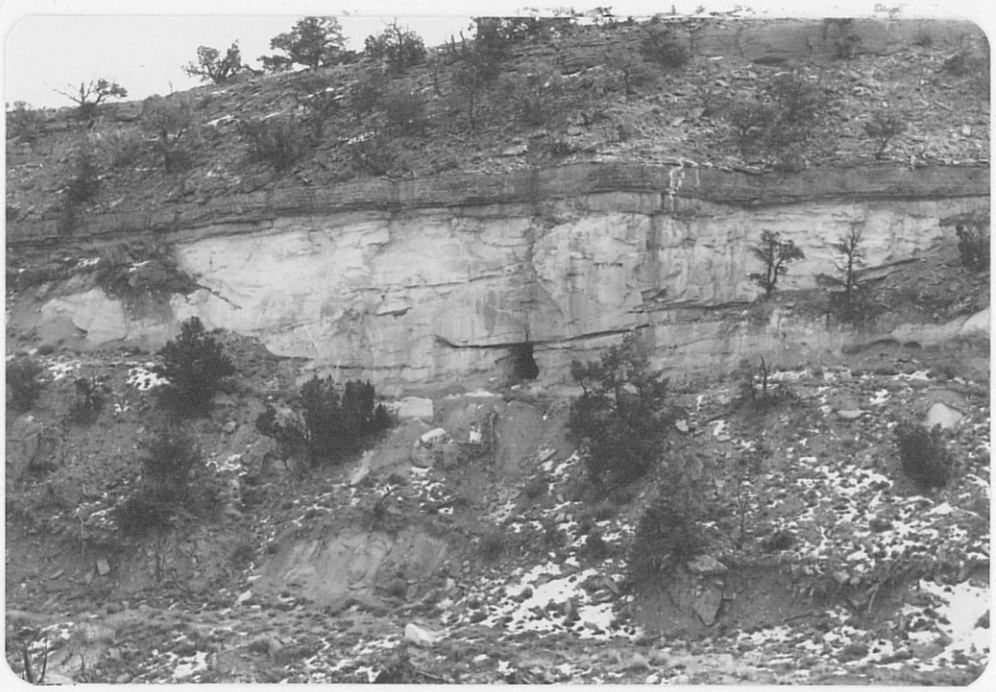

Photo (a) Looking eastward at adit driven into bleached sandstone of upper Brushy Basin member of Morrison fm.; at Francis Mine.

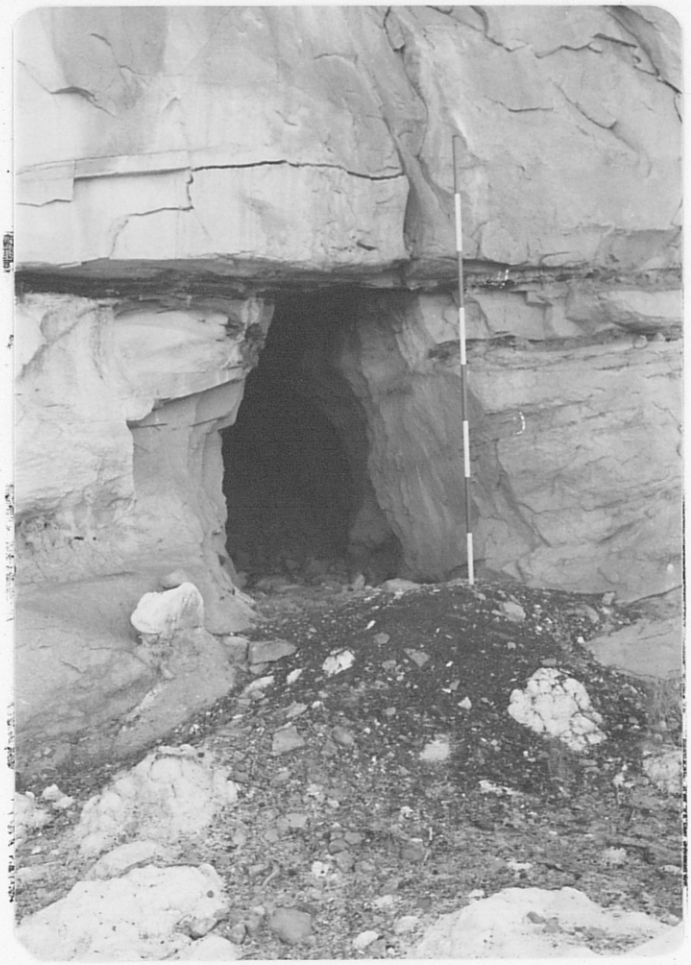

Photo (b) Close-up of adit shown above in (a).

309 Mc 238



Photo (c) Looking westward at west side of canyon showing small adit (arrow) and mine dump below.

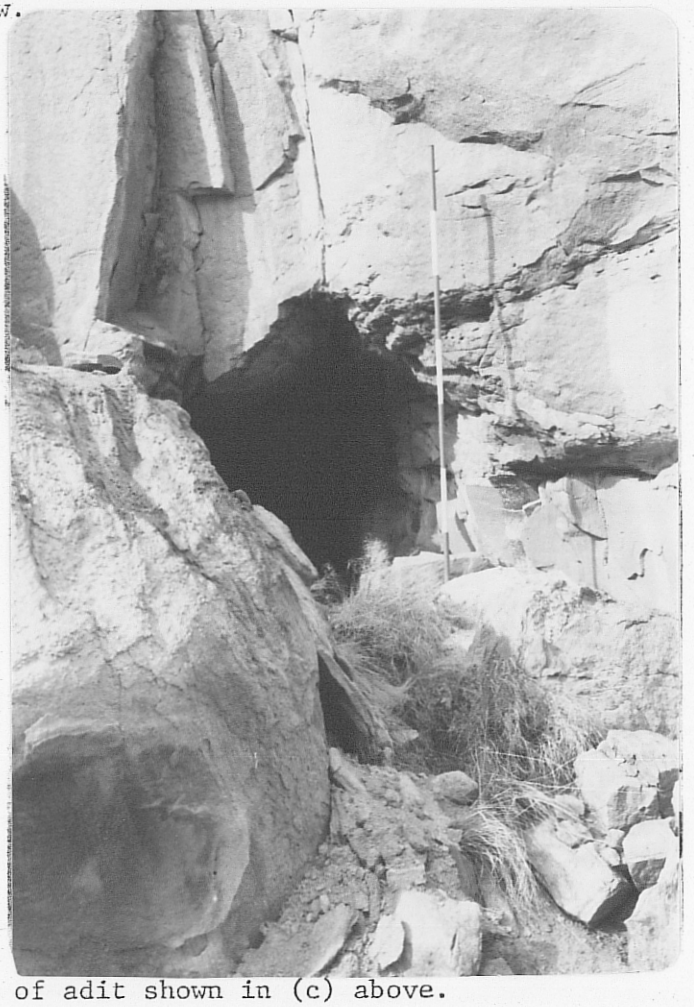

Photo (d) Close-up of adit shown in (c) above.

370 Mc 239

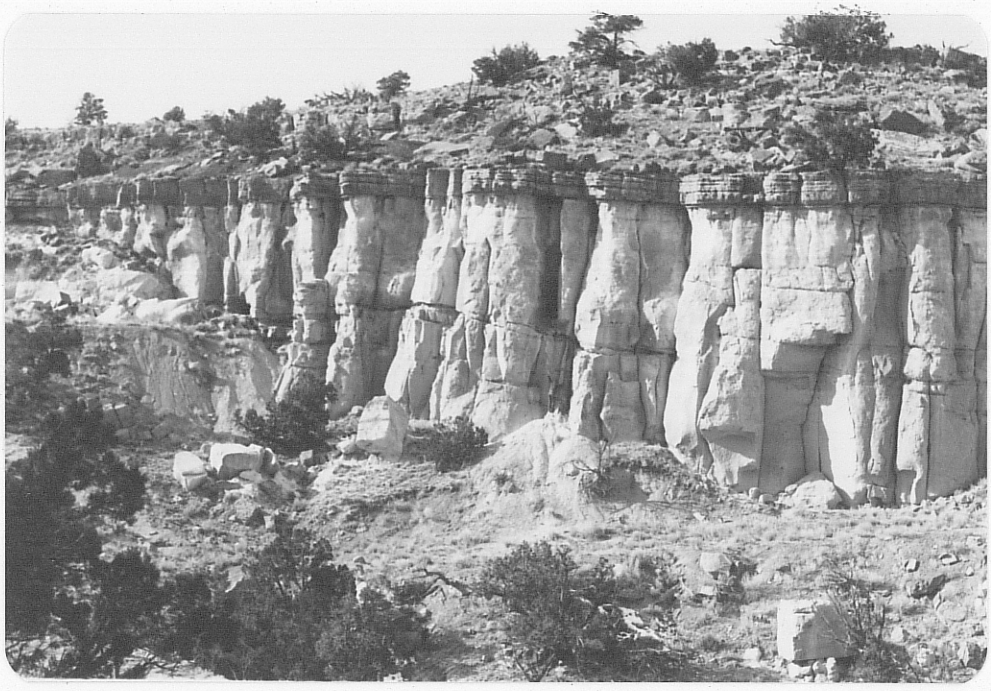

Photo (e) Looking westward at west wall of canyon showing the area where third adit is driven (upper circle) and person below (lower circle) at a crude ladder leading from dump level to adit 20' above.

311 Mc 240

Date visited 12/11/79

Mine name(s) Evelyn County McKinley

Section NW¼ 9 Twnsh. 14 N R. 11 W.

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake

Elevation 7,200'

Nearest city and/or dwellings Prewitt, 7½ miles S-SW

The Evelyn Mine is located in the NW¼ sec. 9. It may be reached by walking in from the jeep trail that leads to the Francis Mine, or alternatively by following the dirt road southward from the Moe Mine (active) through sec. 4.

The mine workings consist of one "main" adit on the south and 3 more minor ones 250' to the north along the outcrop (see photo a). All are driven westward. The main adit portal measures 7' x 7' and has a wire mesh barrier out front advising no one to enter mine (see photo b). The adit is stable and clean (no roof falls) and goes back at least 300'; maximum scintillometer reading was 350' cps inside. The ground immediately in front of portal gave readings of 1,000 cps.

The north adits are much shorter. The two shown in photo (c) are each about 5' high. They connect about 30' back where the one on the right is worked into an open stope with one rock pillar. Photo (d) is a view inside the adit on the left showing one timber standing by a waste pile. Scintillometer response in these workings was up to 3,500 cps.

The northernmost adit, 50' north of the pair shown in (c) is about 6' high, 6' wide, and goes in about 40' (see photo e). At about 30' inside is a timbered partition that isolates the last 10' length of the workings (photo f). Maximum scintillometer reading along the 30' length was 950 cps.

The dump outside the main adit is shown in photo (g). It is about 40' high with the front face at the angle of repose. Scintillometer readings up to 950 cps recorded on this dump. The one remaining building at the site is also shown in photo (g).

Several 18" diameter metal lined ventillation shafts were found on the mesa top above and west of the entrance to the mine; one of these is shown in photo (h).

The deposit consists of several mineralized bodies, associated with abundant carbonized and macerated plant debris in a sandstone lens in the upper part of the Brushy Basin member of the Morrison fm. (Hilpert, 1969). The scarp into which adits are driven represents the upthrown block of the N trending Bluewater fault.

The deposit was mined from 1953 to 1956 (Hilpert, 1969). The State Mine Inspector's Office last received a registration on the mine in July 1972 with Clark and Company as the operator.

turn

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 41.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 12/11/79.



Photo (a) View northward at Evelyn Mine site with arrows pointing to the major adits.

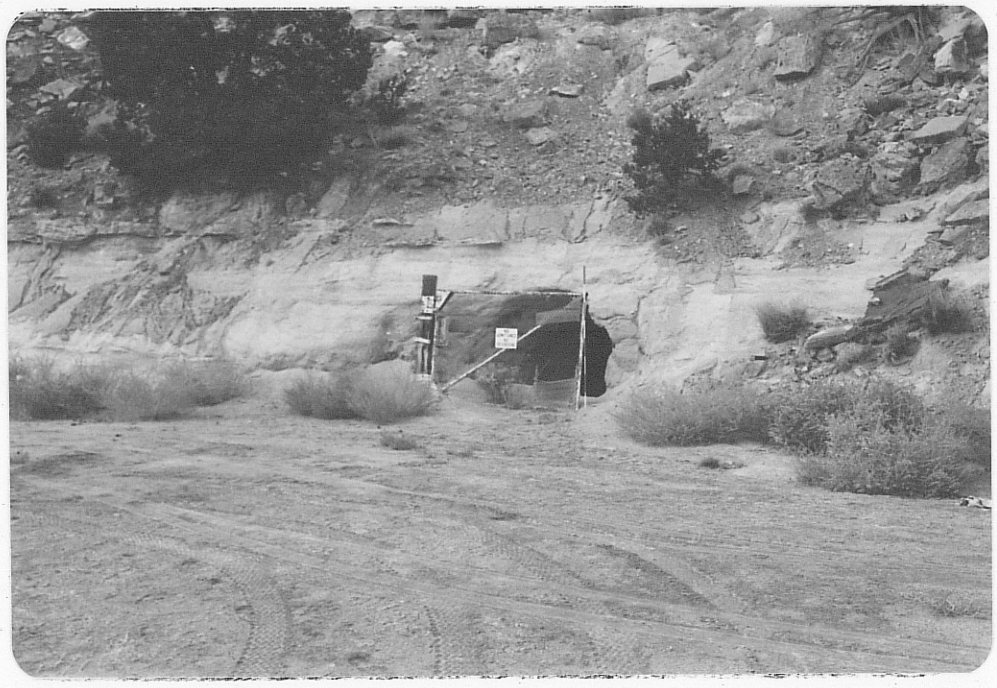

Photo (b) Looking westward at "screened" portal of main adit shown in foreground in photo (a).

#314 Mc 243



Photo (c) Northern adits, 250' from main adit; note range pole at center for scale.

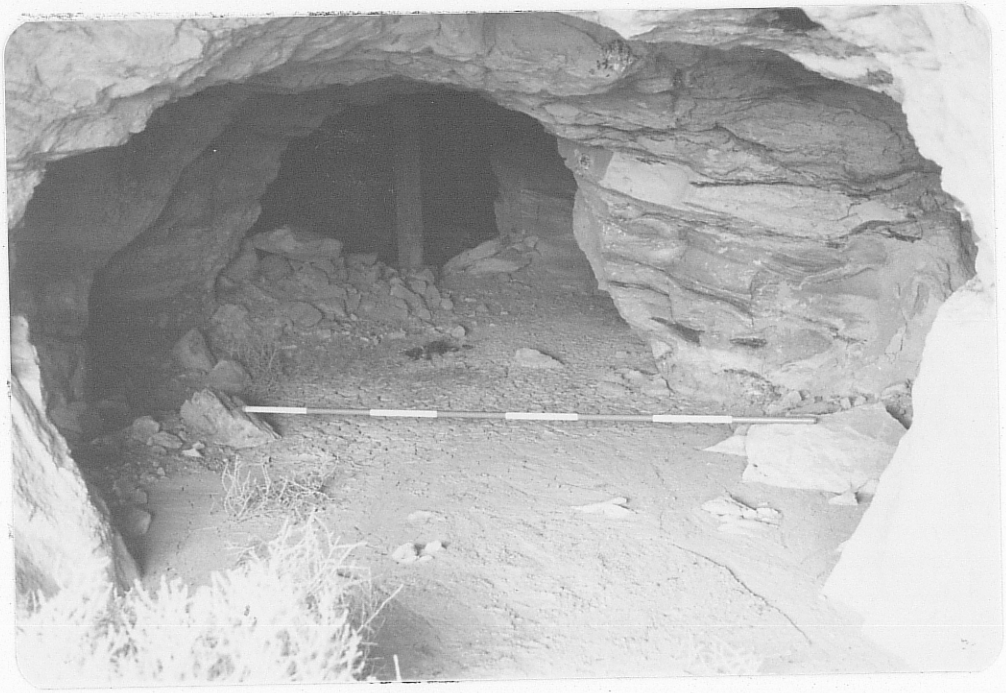

Photo (d) View inside adit at left in photo (c), showing vertical timber; note range pole (crosswise) for scale.

4315 Mc 244

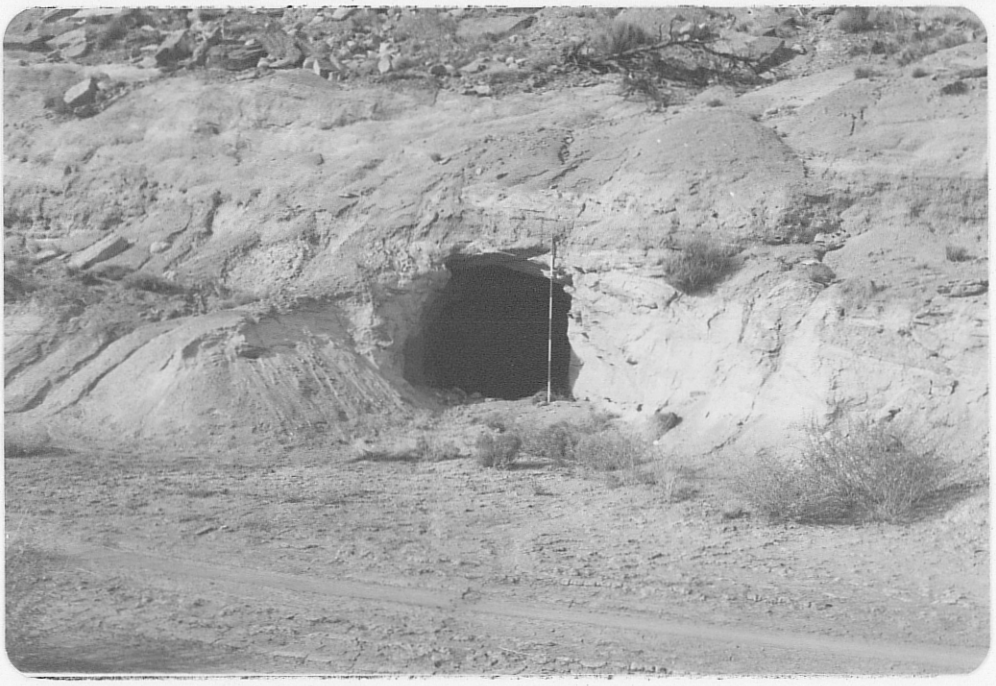

Photo (e) Looking west at northernmost group of adits at Evelyn Mine; note range pole for scale.



Photo (f) Partition 30' inside northernmost adit.

+310 Mc 245



Photo (g) Looking southward at dump from main adit, with only building on the site shown at center; note person on front face of dump for scale.



Photo (h) 18" diameter ventillation shaft on mesa top above main adit; several more are present in the area.

#317 MC 246

Date visited 12/11/79

Mine name(s) Billy The Kid & Greer Warren & McCormack County McKinley

Section NE¼ 19 Twnsh. 14 N R. 11 W

Quadrangle sheet Thoreau NE 7½'

Mining district

Elevation 6,960'

Nearest city and/or dwellings Prewitt, 5 miles south

The Billy The Kid and the Greer, Warren, and McCormack are both in the NE¼ sec. 19, however, the Billy The Kid is supposed to be south of the other (Hilpert, 1969). In reality they are probably run together. The location of the Billy the Kid Mine is given on GQ-954 and this location was used as a reference during the present investigation. To reach the workings proceed north of Prewitt 5 miles on the dirt road to the Andrews Ranch and turn right for 3/4 miles to mine.

The mine consists of an area nearly 1,000' E-W, by 300'-600' N-S, that has been extensively prospected by open pits and shallow trenches, (see photos a & b). No deep pits or highwalls really exist, but rather, broad areas of very shallow stripping. Close ups are afforded in photos (c) and (d). A drainage line truncates the workings on the north and a portion of the mine dump rests on the bank of the drainage (photo e).

The deposits occur in Todilto limestone. Secondary oxidized uranium minerals were noted in waste piles and on outcrop. Scintillometer readings ranged up to 1,000 cps, but more often were in the 500-900 cps range. Some ore was mined between 1952-1958 (Hilpert, 1969).

A 200' x 425' quary in the Todilto limestone exists just north of the mines near the ranch road (ore haulage road). Limestone was quaried here for road metal. It is not radioactive.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 41.
(2) U.S.G.S., Geologic Map GQ-954.
(3) Field notes, 12/11/79.

MF 241

379 Me 248



Photo (a) Looking northwestward at stripped and prospected area; note person standing on waste pile at left for scale.

320 Mc 249



Photo (b) Looking northeastward at stripped and prospected area.



Photo (c) Close-up of small stripped area; looking south near western end of workings.



Photo (d) Looking northwestward at 10' high waste piles in stripped area near middle of workings; note range pole for scale.

321 Mc 250

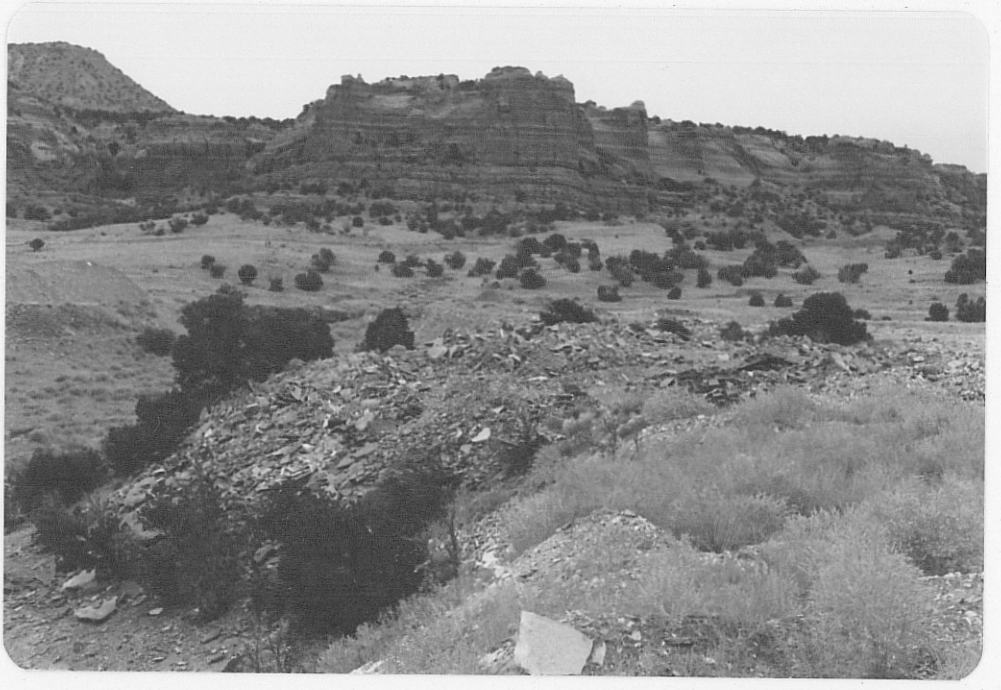

Photo (e) Looking northeastward at north edge of workings showing waste dump on bank of small drainage line.

322 Mc 25

Date visited 12/12/79

Mine name(s) Elkins (Tom Elkins) (Lawrence Elkins) County McKinley

Section NE¼ 24 Twnsh. 14 N R. 12 W

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake

Elevation 7,140'

Nearest city and/or dwellings Prewitt, 4 3/4 miles south

The Elkins is located in the NE¼ sec. 24. To reach the site proceed 4 3/4 miles north of Prewitt on dirt road and hike up to top of the mesa ¼ mile west of the road.

The mine consists of two nearly adjacent shallow stripped areas. The northern area is the smaller of the two, measuring about 100' x 150' (see photo a). The southern area, about 400' to the south, measures about 200' x 450', and extends out to the edge of the mesa on the east side (see photos c & d). No deep cuts or pits occur in either of the two prospected areas. Maximum scintillometer readings were 60 cps for the north area, 70 cps for the south area (background is about 45 in this area).

The prospects explored the Todilto limestone. No mineralization was noted and it is doubtful any production came from the two prospects. Hilpert, (1969), however, stated that the southern one was mined in 1954-55 and the northern one may have been mined about the same time.

The property was registered with the State Mine Inspector's Office in October, 1954 with the Jackpot Oil Co., as the operator.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 42.
(2) Green, M.W., et al, 1971, Geologic Map of The Thoreau NE Quadrangle, GQ-954.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 12/12/79.



Photo (a) Looking northeastward into northern stripped area; note range pole on waste pile just right of center for scale.



Photo (b) Looking northwest at linear prospecting trench or road at northwest corner of southern prospecting area.

324 MC 253



Photo (c) Looking north at southern prospected area; extensive clearing took place, but scintillometer response is weak. Note person at far right for scale.



Photo (d) Looking northeastward at southern prospected area, showing dozer activity right out to the mesa edge.

325 mc 254

Date visited 12/12/79

Mine name(s) Maddox and Teague County McKinley

Section NE¼ 19 Twnsh. 14 N R. 11 W.

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake

Elevation 7,040'

Nearest city and/or dwellings Prewitt, 5 miles south

The Maddox and Teague is located in the SE¼, NE¼ sec. 19, a little south and east of the Billy The Kid. To reach the site travel north from Prewitt on dirt road for 5 miles to the Andrews Ranch, then east to the mine.

The mine consists of several shallow open pit areas and at least two small areas where soil overburden has been stripped, but no rock disturbed. Photo (a) is a view of an 80' x 100' area prospected by bulldozer to a depth of about 3', with the waste piles being the most conspicuous feature. Photo (b) is of the same workings, but gives a better feel for how shallow the pits are and how little overburden there is on the Todilto limestone at this site. Scintillometer readings ranged up to 650 cps.

About 250' north of the area just described is another very shallow pit prospected by bulldozer (see photo c). This area measures about 40' x 75', 2'-3' deep with scintillometer readings up to 1,000 cps. However, even with this strong response, secondary oxidized uranium minerals are only sparingly present.

To the east of the first described area about 300' is another shallow pit measuring 30' x 70', and 2' deep (see photo d). Scintillometer readings ranged from 700-900 cps. Again the workings are conspicuous mainly because of the surrounding waste piles.

Hilpert, (1969) describes the property as one or more deposits in Todilto limestone; some ore mined in 1953. The State Mine Inspector's Office registered the property in July, 1953. Location was given as sections 18, 19, and 20. However, during the present investigation no workings were identified in sec. 18. It is possible some workings of this mine may extend across the sec. 20 line towards the Glover workings.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 41.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bureau of Mines and Mineral Resources, Bull. 87; p. 214.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 12/12/79.

MF 255



Photo (a) Looking northeastward into 80' x 100' shallow prospect pit at Maddox and Teague workings.



Photo (b) Looking northward at same pit as shown in (a).

327 Me 256



Photo (c) Looking north at a 40' x 75' prospected area.



Photo (d) Looking northeastward at a 30' x 70' area prospected by bulldozer.

328 M-257

Date visited 12/12/79

Mine name(s) Glover County McKinley

Section NW¼ 20 Twnsh. 14 N R. 11 W

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake

Elevation 7,040'

Nearest city and/or dwellings Prewitt, 6 miles southwest

The Glover Prospect is in the SW¼ NW¼ of sec. 20 east of the Maddox and Teague. The site may be reached by traveling north from Prewitt on dirt road for 5 miles to the Andrews Ranch, then proceeding east for about 1½ miles to the mine.

The Glover workings consist of some shallow prospecting that has disturbed an area about 120' x 70' (see photos a & b). Pits are no more than 3' deep, and waste piles about 4'-5' high. The workings are at the point of a small re-entrant in mesa front.

The deposit is in Todilto limestone. Secondary oxidized uranium minerals were noted in fractures and in cavities and bedding planes in rock fragments on muck piles. Maximum scintillometer readings at the site were 450-500 cps.

The Glover Claims were owned by Fred Glover of Prewitt, N.M., in 1950. A geiger counter was used to examine the claims in 1950, after carnotite, manganese oxide, and calcite had been identified along a Todilto outcrop (Lovering, 1956).

According to Hilpert (1969) some ore was mined in 1950. The State Mine Inspector's Office carries no record of a mine under this name in the inactive file.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 41.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87, p. 214.
(3) Lovering, T. G., 1956, Radioactive Deposits in New Mexico. U.S.G.S., Bull. 1009-L, p. 374.
(4) Field notes, 12/12/79.

III-258



Photo (a) Looking northeast at a shallow prospect pit 70' x 120', with 5' high waste pile at right; note range pole (center) for scale.

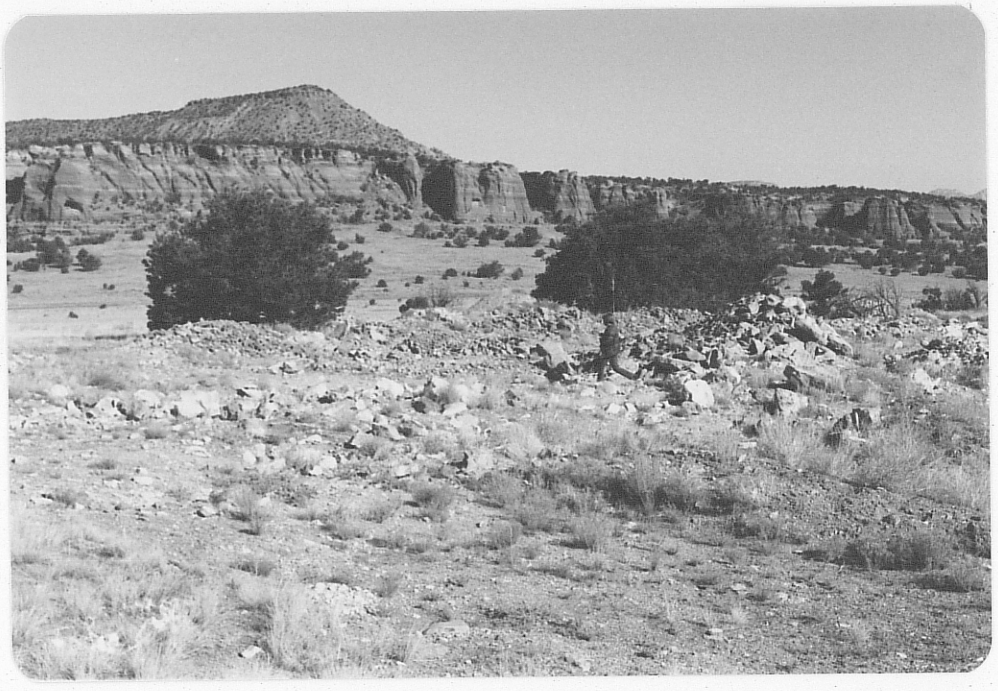

Photo (b) Looking north at west edge of prospect area shown in photo (a); note person just right of center for scale.

#330 Mc 259

Date visited 12/12/79

Mine name(s) Red Top County McKinley

Section SE¼ NW¼ 20 Twnsh. 14 N R. 11 W.

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake

Elevation 7,010'

Nearest city and/or dwellings Prewitt, 6½ miles southwest

The Red Top is located in the SE¼ NW¼ sec. 20 very near the center of the section. The site may be reached by proceeding southeastward for about 1 mile from the Billy The Kid Mine.

At the locality indicated as the Red Top Mines on GQ-954 all that was found were two shallow, parallel bulldozer cuts (see photos a & b). The longest cut was 30', the shorter one about 15', but it was about 1' deeper. Scintillometer response was 300 cps in cut; no bedrock exposed.

The deposit is on a dip slope of Todilto limestone, but no bedrock is exposed in cut.

References: (1) Green, M.W., et al, 1971, Geologic Map of The Thoreau NE Quadrangle, GQ-954.
(2) U.S. AEC, list of Uranium Mines in New Mexico.
(3) Field notes, 12/12/79.

260



Photo (a) Looking northeast at prospected area marked as Red Top Mine in GQ-954.



Photo (b) Looking south into dozer cuts at site shown in photo (a).

332 mc 261

Date visited 12/12/79

Mine name(s) Haven (Sec. 21) County McKinley

Section NW¼ SW¼ 21 Twnsh. 14 N R. 11 W

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake (Prewitt subdistrict)

Elevation 6,940'

Nearest city and/or dwellings Prewitt, 7 miles south and west

The Haven (Sec. 21) is located in the NW¼ SW¼ of sec. 21 just a few hundred feet east of the access road. It is 5 miles north and 2½ miles east of Prewitt.

The mine consists of an open pit 70' x 160', 4' deep, elongate NW-SE; the mine dump extends along the north edge of the pit, (see photo a). An ore chute at the south edge of the pit (photos b & c) took ore from the pit level on the low Todilto limestone knob, down to the access road level. Scintillometer readings in pit ranged up to 950 cps. Secondary oxidized uranium minerals were noted on rock fragments in muck piles and waste piles.

The deposit is in Todilto limestone and is classified as small by Hilpert (1969). It is immediately west of the north trending Big Draw fault. Some ore was produced in 1953 (Hilpert, 1969). The State Mine Inspector's Office registered the mine in August, 1953 with Havens, Doerrie, and Fitzhugh as the operators.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 41.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 12/12/79.



Photo (a) Panorama looking NW at Haven Mine; main pit at center and left is about 70' x 160', up to 4' deep. Some additional minor prospecting has been done to the north (at right). Note person at left for scale.



Photo (b) Looking NW at ore chute from access road level.

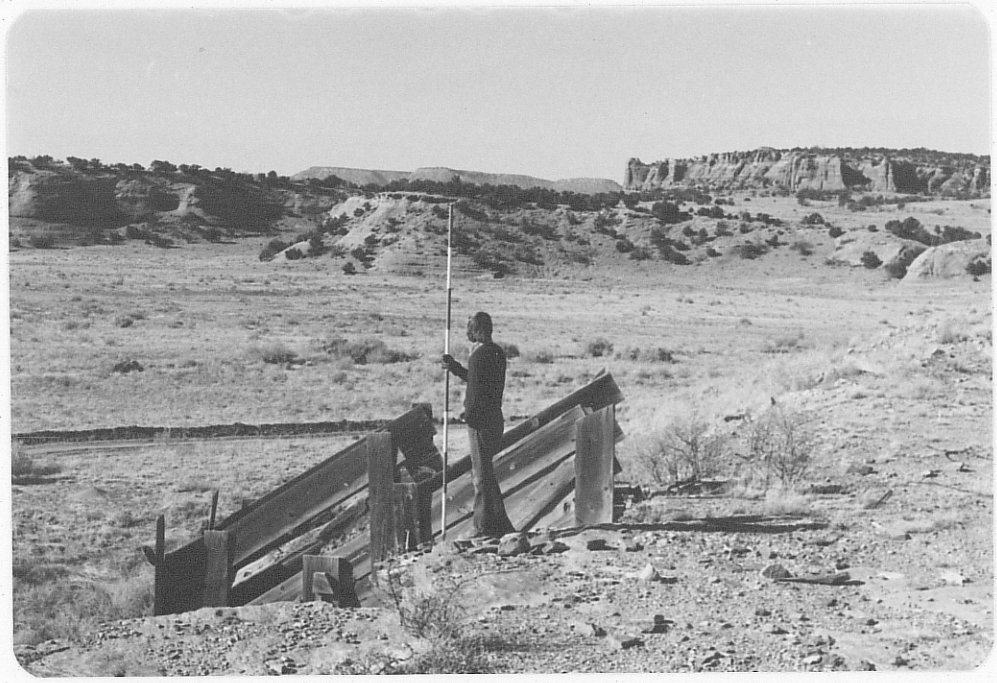

Photo (c) Looking west at ore chute from top of dump.

335 mc 264

Date visited 12/12/79

Mine name(s) Red Cap Prospect County McKinley

Section NW¼ NW¼ 28 Twnsh. 14 N R. 11 W

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake (Prewitt subdistrict)

Elevation 7,050'

Nearest city and/or dwellings Prewitt, 3 miles west, 5 miles south

The Prospect is located in the NW¼ NW¼ of sec. 28 on GQ-954. Hilpert (1969) called this deposit the T group (T 2 and T 10) and located them in the W½ NW¼ SW¼. The AEC listing of New Mexico uranium mines equates the two names, but gives no location. The present investigation found only an exploration road (photo a) at the site indicated on GQ-954, and no disturbed ground at the location described by Hilpert (1969).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 42.
(2) U.S. AEC, List of Uranium Mines in New Mexico, GJO/AEC.
(3) Field notes, 12/12/79.

NMC 265



Photo (a) Looking NE at exploration road in vicinity of Red Cap Prospect.

337 MC 266

Date visited 12/12/79

Mine name(s) Yucca #2 County McKinley

Section SW¼ NW¼ 28 Twnsh. 14 N R. 11 W

Quadrangle sheet Thoreau NE 7½'

Mining district Smith Lake (Prewitt subdistrict)

Elevation 7,110'

Nearest city and/or dwellings Prewitt, 3½ airmiles southwest, by road 8½ miles.

The Yucca #2 is located in the SW¼ NW¼ sec. 28 on the mesa just east of the N-S drainage line. It may be reached by traveling 5 miles N, 2½ miles E, and 1 mile south, from Prewitt.

The mine consists of a 100' x 230' area of surface workings no more than 4' deep (see photo a). Area is elongate N-S and is slightly kidney shaped. Scintillometer readings ranged up to 950 cps, more generally in the 750-800 cps range. A small amount of household type garbage is strewn about.

Deposit is in Todilto limestone; secondary oxidized uranium minerals were noted on limestone rock fragments. The deposit may be an extension of the T 2 or T 10 of Hilpert (1969). The mine was registered with the State Mine Inspector's Office in July 1955, with Yucca Uranium, Inc., as the owner/operator.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603, p. 42.
(2) State Mine Inspector's Office inactive uranium mine file.
(3) Field notes, 12/12/79.

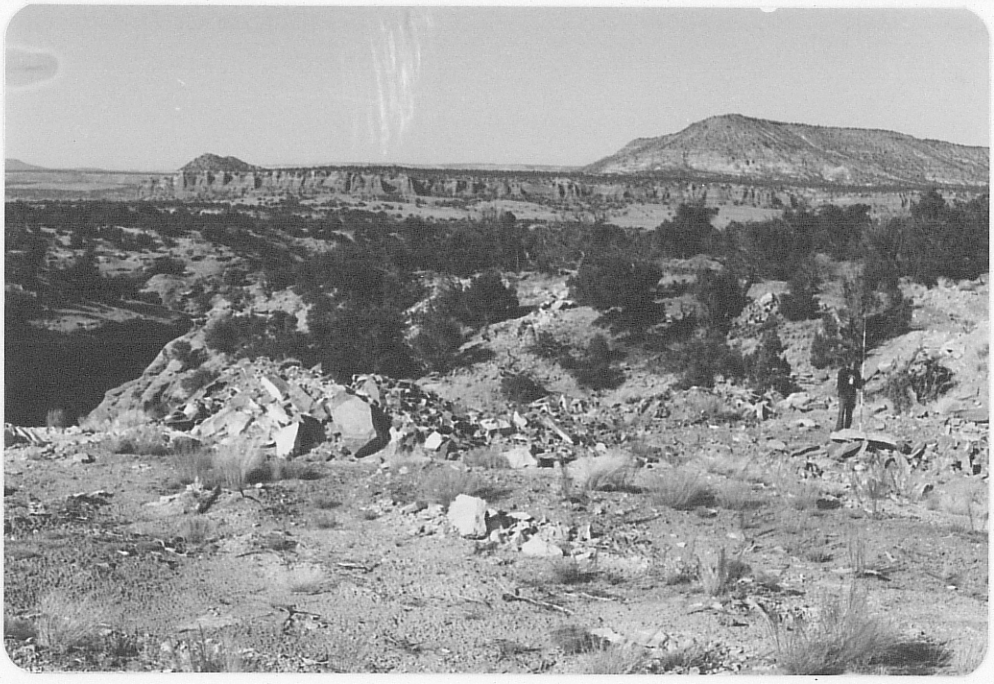

Photo (a) Looking north at small open pit and waste piles of Todilto limestone at Yucca #2 Mine.

#339 MC 268