

ABANDONED OR INACTIVE URANIUM
MINES IN NEW MEXICO

A report of investigation carried out
between August 1979 and May 1980 under
contract with the New Mexico Energy and
Minerals Department.

by

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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
Dona Ana County	6 pages	\$1.20
Eddy County	5 pages	\$1.00
Grant County	22 pages	\$4.40
Harding County	3 pages	\$.60
Hidalgo County	10 pages	\$2.00
McKinley County	275 pages	\$55.00
Mora County	6 pages	\$1.20
Quay County	7 pages	\$1.40
Rio Arriba County	30 pages	\$6.00
Sandoval County	24 pages	\$4.80
San Juan County	192 pages	\$38.40
San Miguel County	15 pages	\$3.00
Santa Fe County	11 pages	\$2.20
Sierra County	19 pages	\$3.80
Socorro County	25 pages	\$5.00
Taos County	10 pages	\$2.00
Torrance County	5 pages	\$1.00
Valencia County	98 pages	<u>\$19.60</u>
		\$ 153.60

SIERRA COUNTY

Quad: Caballo 7½'

1. NM-391-1-1

Page 1

Red Rock (Red Rock Claim 1)

Quad: Chise 7½'

1. NM-342-4-1

Page 3

Trujillo Lease (Chise)

Quad: Cuchillo 7½'

1. NM-367-1-1

Page 4

Mitchell Price Prospect

Quad: Garfield 7½'

1. NM-391-4-1

Page 5

Sierra (Sierra Mining)

Quad: Jaralosa Mountain 7½'

1. NM-342-1-1

Page 8

Glory and Empire Claims

Quad: Monticello 7½'

1. NM-343-2-1

Page 11

Pitchblende Strike (Terry Prospect)

Quad: Thumb Tank Peak 7½'

1. NM-366-1-1

Page 15

Red Tiger (Bobby Johnson)

Quad: Upham 15'

1. NM-392-0-1

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Paran (Paran Claim)

Date visited 5/20/80

Mine name(s) Red Rock (Red Rock Claim 1) County Sierra

Section 28 & 33 Twنش. 16 S R. 4 W

Quadrangle sheet Caballo

Mining district Pittsburg

Elevation 4,990'

Nearest city and/or dwellings Caballo Dam (2½ mi. to the NW)

The Red Rock Claims are listed as being in both sec. 28 and 33 (RME-160). The workings described herein are in sec. 33. They may be reached by taking old highway no. 85 south of Truth or Consequences, crossing the Rio Grande at Caballo Dam, and proceeding south on the east river road for about 1½ miles to where the road ascends from river level to higher terrace level. At this point take side road to east towards the mountains to the mine site.

The workings consist of a NE trending, 90' long trench cut at the center of a larger oval shaped prospected area, (see photos a & b). Trench is 6' to 7' wide, and is up to 12' deep at the terminus. Trench followed a hematite stained vertical fracture in chloritic rich coarse grained quartz monzonite. Scintillometer readings up to 1,700 cps were recorded at the end face, but no uranium mineralization is visible. Staatz, 1965, reported that "four bodies have at least some parts in which the radioactivity value is greater than 40 x background".

Workings represent little if any hazard. Mine was registered with State Mine Inspector's Office in the mid 1950's by Badger Mining Co., Inc.

Additional prospecting pits and perhaps small workings may be seen in sec 33 and in adjacent sec. 4, and it is possible some were overlooked.

- References:
- (1) U.S. AEC RME-160, 1970, Preliminary REconnnaissance for uranium in New Mexico, 1950-1958; GJO/AEC; p. 189.
 - (2) State Mine Inspector's Office, inactive uranium mine file.
 - (3) Staatz, Mortimer H., et. al., 1965, Thorium Bearing Microcline Rich Rocks in the Southern Caballo Mountains, Sierra County, New Mexico, USGS prof. paper 525-D.
 - (4) Field notes, 5/20/80.



Photo (a) Looking northeastward into 90' long trench cut into chlorite rich granitic rock; trench is in center of larger oval shaped stripped area.



Photo (b) Close-up of trench shown above in photo (a). Hematite stained vertical fracture is visible just to left of person in photo.

Date visited 5/21/80

Mine name(s) Trujillo Lease (Chise) County Sierra

Section 18 Twنش. 12 S R. 7 W

Quadrangle sheet Chise 7½'

Mining district -

Elevation 5,760'

Nearest city and/or dwellings Chise (½ mi. NW)

Some very minor prospecting was done in sec. 18 in the mid 1950's. The area is about ¼ mile east and ¼ mile south of Chise, which in turn is about 8 miles by good dirt road south and east of Winston.

The prospected area was not visited. Mr. Nick Ortega, who is head of the only permanent family in Chise, explained that the prospect is on Ladder Ranch property and that he did not have authority to grant us permission to go on the property. He further explained that the Trujillo lease property belonged to his relatives at the time of the prospecting. The prospecting was done with no heavy equipment at the site, and no ore was ever hauled off the lease. The Trujillos subsequently sold the property to Graves Evans of the Evans Ranch, and since then the Diamond A cattle Co., of Roswell has purchased it and incorporated it into the Ladder Ranch. Permission to go on the Ladder Ranch must be obtained from Art Evans, manager, telephone 895-5381.

The deposit occurs in a gray and red shale and limestone pebble conglomerate of the Abo fm.; 4 small trenches were dug (RME-160, 1970).

The prospect was registered with the State Mine Inspector's Office under the name Trujillo lease in April, 1956 with Gar-Pac, Inc., as the owner/operator.

- References:
- (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-1958; GJO/AEC; p. 182, (microfiche only).
 - (2) N.M. State Mine Inspector's Office, inactive uranium mine file.
 - (3) Field notes, 5/21/80.

Date visited May 20, 1980

Mine name(s) Mitchell Price Prospect County Sierra

Section 12 Twنش. 13S R. 5W

Quadrangle sheet Cuchillo 7½'

Mining district _____

Elevation approximately 4700'

Nearest city and/or dwellings Truth or Consequences, 7 miles southeast;
municipal airport, 3 miles northeast.

The prospect is located in the north ½ of Sec. 12 (exact location not known). Directions given in RME-160 (1970), are as follows. Go north of Truth or Consequences on (old) highway No. 85. Then turn left and proceed up Cuchillo Negro Creek (passing under I-25) for 6.7 miles; then left out of canyon to the south for 0.3 miles to the claim.

During the present investigation a locked gate was encountered at about 3 miles up the creek. It was later learned from Dr. Hubble in Truth or Consequences (telephone 894-3531 office, or 894-2861 residence) that there is a way around the locked gate, namely by driving in the stream bed, but that the prospecting up in section 12 was minor, consisting of a few piles of rock.

RME-160 (1970) stated that there is one small discovery pit, 4' x 6', 10' deep in a recrystallized limestone member of the Magdalena formation. No uranium minerals observed during the AEC examination of the property in September, 1955. Radiometrically determined U₃O₈ content was .002%. Owners were A. Armstrong and Buell Price of Truth or Consequences.

The prospect was never registered with the State Mine Inspector's office, and there is no recorded production.

References: (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in in New Mexico, 1950-1958; GJO/AEC; p. 177 (microfiche only).
(2) Field notes, 5/20/80.

Date visited 5/20/80

Mine name(s) Sierra (Sierra Mining)(Plainview #6) County Sierra

Section N $\frac{1}{2}$ 4 Twنش. 17 S R. 4 W

Quadrangle sheet Garfield 7 $\frac{1}{2}$ '

Mining district Pittsburg

Elevation 4,840'

Nearest city and/or dwellings Arrey (3 3/4 mi. W-SW)

The Sierra Mining workings are located in the N $\frac{1}{2}$ sec. 4. To reach the workings from Truth or Consequences proceed southward on old U.S. no. 85 to Caballo Dam. Cross the Rio Grande at Caballo Dam and proceed south along the east river road for about 1 $\frac{1}{2}$ miles, or until the road ascends the river bank to higher level. At this point take the side road leading eastward towards the mountains. Road will lead to both the Sierra and the Red Rock Claims.

The Sierra workings consist of a 180' long east-west trending face cut with an adit driven northward into it just to east of center (see photos a & b). Adit is 5' high, 4' wide, and 20' long. Scintillometer readings at portal were up to 2,300 cps. On small muck piles or waste piles just outside readings ranged up to 3,800 cps. Mineralization is apparently in the form of fracture fillings and veinlets in an altered granitic rock. Photo (c) is an additional view of the mine site showing relationship to small drainage below.

A location notice at the site stated the claim was located in November, 1952, in sec. 4 of T 17 N., R 4 W. The claim was given the name Plain View No. 6 and was ascribed to the Pittsburg Mining district. The deposit is discussed in Staatz, et.al., 1965

The adit poses no great hazard other than the radiation level which is about 46 x background. Mine was last registered with State Mine Inspector's Office on March 26, 1954.

Approximately $\frac{1}{4}$ mile southwest of the mine still in sec. 4 is the site of other claims staked for uranium (photo d) in similar granitic rock. Rocky Mountain Energy Co., drilled a 10' deep hole in January 20, 1976 and put up a discovery monument. The claim was given the name Add 14, but they described the location as being in sec. 33 of T 17 S. It is actually in sec. 4, but if it were sec. 33 it would have to be in T 16 S.

- References:
- (1) State Mine Inspector's Office, inactive uranium mine file.
 - (2) Staatz, Mortimer H., Adams, John W., and Conklin, Nancy M., 1965, Thorium Bearing Microcline - Rich Rocks in the Southern Caballo Mountains, Sierra County, New Mexico, U.S.G.S. prof. paper 525-D.
 - (3) Field notes, 5/20/80.



Photo (a) Looking eastward along face cut and bench in granitic rock at the Sierra Mining workings; person at center photo is standing directly out from adit shown in photo (b).

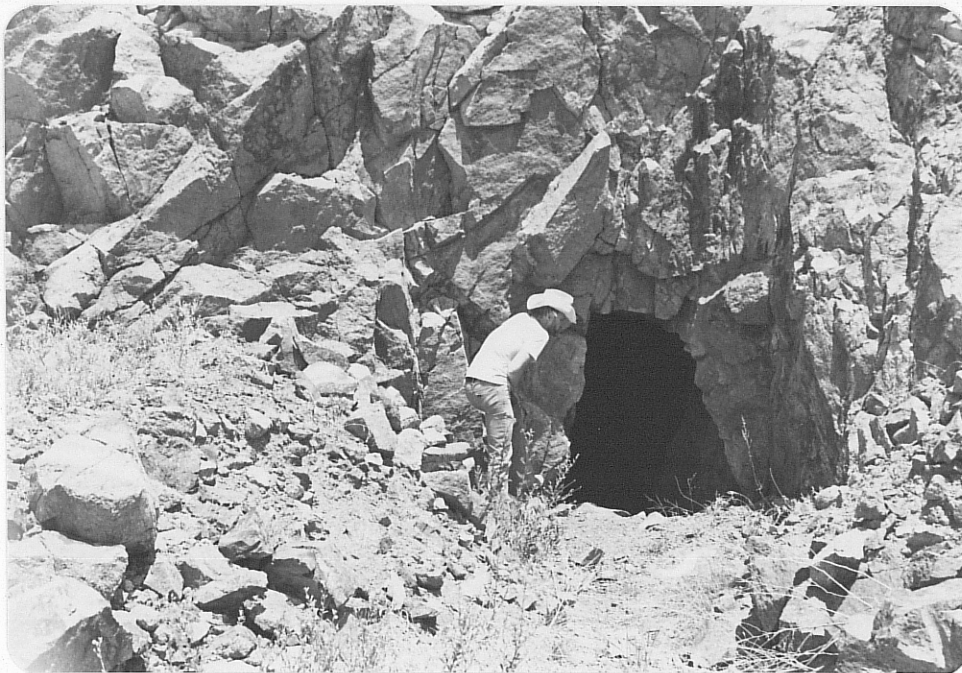


Photo (b) Looking northward into 5' high, 4' wide, 20' long adit driven into face cut shown in photo (a).



Photo (c) Looking westward at small tailings pile and lip of bench cut directly out front of adit in photo (b). Note small drainage at far left.



Photo (d) Claim markers in sec. 4 about $\frac{1}{4}$ mile southwest of Sierra Mining workings. Cut in background is in altered granitic rock. Rocky Mountain Energy Co., did some drilling at this site on 1/20/76.

65 SI-7

Date visited 5/21/80

Mine name(s) Glory and Empire Claims County Sierra
Section 13 & 14 Twنش. 10 S R. 8 W
Quadrangle sheet Jaralosa Mountain 7½'
Mining district Iron Mountain
Elevation 7,500'
Nearest city and/or dwellings Double Arrow Ranch, 3½ miles southwest, Mr. Pat Garrett, Manager.

The claims are in section 13 primarily, but extend into section 14. The workings and claim markers found during this investigation lay in the NW¼ section 13. The access road crosses private land at several points and permission to travel it and key to locked gate must be obtained from Mr. or Mrs. Pat Garrett at the Double Arrow ranch which is located 3 miles north of Winston on the left side of the highway. (For correspondence their address is Winston, N.M. 87943).

One of the Empire claim markers was found in the NW¼ sec. 13, just 50' north of the road. It was the Empire #42, dated April, 1969; no nearby workings noted. A preliminary reconnaissance report in RME-160 (1970) stated that the Glory prospect lay immediately south of the Empire claims, so a southward traverse was made which led to the discovery of another claim marker. This one much more recent named the WRB #44, dated April 1979 (see photo a). Again, no nearby workings noted. A southward and westward traverse was continued, leading into the E½ of sec. 14 and the east-west road shown in photo (b) was found, with no workings nearby. The road continues westward to the Invincible Mine and other copper prospects in section 14. RME-160 (1970) also stated a 5' x 10' prospect pit, 3' deep was dug on the Glory claim in a silicified siltstone member of the Abo fm. A grayish siltstone member was noted in several localities, but no prospect pit was found.

The Empire Claims are discussed in DAO-4-TM-4 (Boyd, 1957). The claims were examined in late 1955, early 1956, and some trenching and bulldozing had been done at that time. Mineralization was listed as uranophane and beta-uranophane, plus a black uranium mineral, probably uraninite, which is associated with chalcocite. No claim markers were found that dated back to the initial discovery period of 1955-56.

The State Mine Inspector's Office records show a Glory prospect (Cu and U₃O₈) in section 12, 13 and 4? registered in January, 1958 by the Millite Mining and Development Corporation. An Empire Mine in sec. 13 was registered in June, 1955 as a uranium and copper property by R. R. Benedict Exploration.

A very small amount of uranium was produced from this property according to William Chenoweth (personal communication) who has informed us that production statistics are being made available in the form of U.S. Dept. of Energy Ore Production Reports-U.S. Government Contracts, 1948-1970.

- References: (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-1958; GJO/AEC; p. 178.
(2) Boyd, Fred S., Jr., 1957, Uranium Occurrences on the Empire Claims, Iron Mountain Mining District, Sierra Co., New Mex.; U.S. AEC, DAO-4-TM-4 (Raw Materials Office).

- (3) State Mine Inspector's Office, inactive uranium mine file.
- (4) Field notes, 5/21/80.



Photo (a) Looking northwestward on old Empire claim; 4" x 4" post at center marks a recent location by D. E. Schneider, called the WRB #44. The WRB #40 was found a short distance to north.



Photo (b) Looking west at remains of old prospecting road immediately south of old Empire claims, possibly on Glory claim.

Date visited 5/21/80

Mine name(s) Pitchblende Strike (Terry prospect) County Sierra

Section 26 Twنش. 10 S R. 6 W

Quadrangle sheet Monticello 7½'

Mining district -

Elevation 5,710'

Nearest city and/or dwellings Monticello (1 3/4 mi. SW)

The Pitchblende strike is located in the NE¼ of sec. 26 about 1 3/4 miles northeast of the town of Monticello. To reach the site take the dirt road leading northeastward at the west edge of town and travel northeastward for about 1 3/4 miles then take side road to right. Proceed about another 3/4 miles to the mine site.

The workings consist of a 12' wide, 175' long trench cut in coarse Quaternary alluvium (photo a), and a regraded area several hundred feet long (photo b), that was either the site of 2 prospect pits (Lovering, 1956), or the site of a small shaft and adit as indicated by the symbols on the Monticello 7½' quadrangle. The regrading or backfilling has made it impossible to determine the type of workings. A timber partially exposed in the rubble at this site could be a shaft collar; an adit here seems a little unlikely. The State Mine Inspector's Office records do not indicate the type of mine.

In addition to the above there is a bench cut several hundred feet long just up slope to the east (see photo c) from the site; and a 6' x 8' circular pit in between (photo d). Workings shown in photos (b) through (d) are 600' northwest of trench cut in the Quaternary alluvium.

Uranophane is associated with fluorite in a jasperoid breccia that has been identified as the Kelly limestone (Lovering, 1956). The deposit is in a fault breccia that strikes N 68° E across the jasperoid. The breccia is composed of jasperoid fragments, igneous rock fragments, and limestone. The matrix consists of silica and fluorite. Vugs in the fluorite are filled with clay, and fractures in the fluorite and jasperoid contain uranophane and iron oxide (Lovering, 1956). Scintillometer readings at the deposit were in the 1000-1400 cps range except for the upper bench cut (photo c) which registered only 300 cps. Purpose of the cut in the coarse alluvium is not clear; scintillometer response was up to 140 cps (or 2½ x background).

A total of 4 claims were located at this locality (Pitchblende nos. 1-4). No production is indicated in any of the references cited. The State Mine Inspector's Office does not give a final registration date in the inactive uranium mine file, however, the mine is listed under "metal mines" in the 43rd and 44th annual reports of that office; the operator was McDaniel Investment Company.

- References: (1) Lovering, T. G., 1956, Radioactive Deposits in New Mexico; U.S.G.S., Bull. 1009-L; p. 368.
(2) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bur. of Mines and Mineral Resources, Bull. 87; p. 223.

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SI-11

- (3) New Mexico State Mines Inspector's Office, inactive uranium mine file.
- (4) New Mexico State Mines Inspector's Office, 1955, 43rd annual report; p. 49.
- (5) New Mexico State Mines Inspector's Office, 1956, 44th annual report; p. 55.
- (6) Field notes, 5/21/80.



Photo (a) Looking southwest at 12' wide, 175' long trench in alluvium at Pitchblende strike; pit attains maximum depth of nearly 18' at middle.



Photo (b) Looking northward at backfilled and regraded shaft or adit site. Uranophane is associated with fluorite in a fault breccia in the Kelly limestone.



Photo (c) Looking eastward at upper bench cut, several hundred feet upslope (eastward) from site of photo (b).

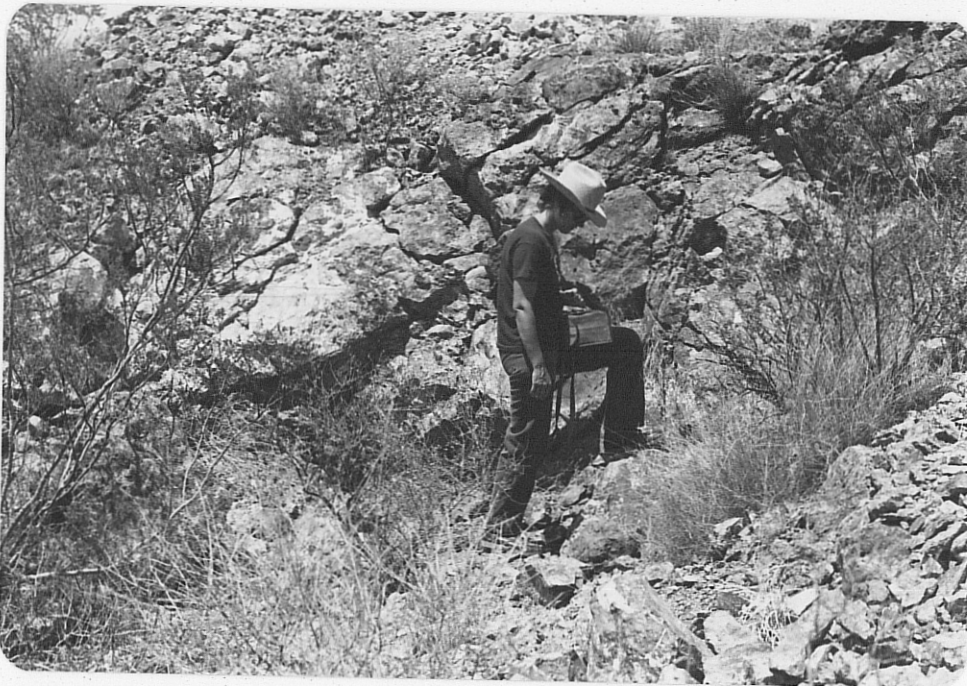


Photo (d) Small pit at intermediate level between shaft or adit level shown in photo (b) and the upper bench shown in photo (c).

042 SI-14

Date visited 5/20/80

Mine name(s) Red Tiger (Bobby Johnson) County Sierra

Section 1 and 2 Twنش. 13 S R. 7 W

Quadrangle sheet Thumb Tank Peak 7½'

Mining district _____

Elevation 5,320'

Nearest city and/or dwellings Ladder Ranch Camp (2 mi. SW). Foreman (Ronnie Calvert)

Some very old prospecting pits occur in the south ½ of sec. 1 just southeast of the Double S Peaks on the Ladder Ranch. To reach the area take the Cuchillo exit just north of Truth or Consequences on I-25, and proceed westward to the town of Cuchillo. On the west edge of town take dirt road to left leading southwesterly and follow for about 9 miles to the entrance to the Ladder Ranch.

The prospected area was not visited. Ranch foreman, Mr. Ronnie Calvert did not have the authority to grant access to the site. Mr. Art Evans, Ranch Manager, telephone no. 895-5381 must be contacted before site can be investigated. (He was not reached by telephone that evening, and so we could not return the following day). Mr. Calvert, however, did describe the site as consisting of a few very old ridges and pits that pose no hazard to man or beast. Neither the ranch hands nor the management has any complaints.

According to RME-160, (1970) there was some prospecting for copper back in the 1930's. In 1956 some exploration work for uranium was done; 6 small pits about 4' x 4' and 2' deep were dug in a greenish gray siltstone of the Abo formation. Mineralization was apparently along small fractures. No production reported.

The State Mine Inspector's Office, however, has the workings listed as "uranium (open cut)". It was last registered with that office in January, 1957.

- References:
- (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-1958; GJO/AEC; p. 188; (microfiche only).
 - (2) State Mine Inspector's Office, inactive uranium mine file.
 - (3) Field notes, 5/20/80.

Date visited 5/14/80

Mine name(s) Paran (Paran Claim) County Sierra

Section 27 Twنش. 17 S R. 4 W

Quadrangle sheet Upham 15'

Mining district -

Elevation 5,000'

Nearest city and/or dwellings Tipton Ranch (3 mi. N-NE)

The Paran Claim is located in the SE $\frac{1}{4}$ sec. 27 about 1 $\frac{1}{2}$ miles east of I-25 near the Sierra-Dona Ana County line. To reach the claims from I-25 take the Derry and Garfield exit and proceed east about 3/4 mi. on dirt road. Then take side road to the right, cross stream bed, and proceed northeastward to claim/mine site.

The workings consist of a 6' wide, 10' long, and 6' deep open cut driven northwestward in altered Pennsylvanian limestone (see photos a & b). The Garfield fault trends east-west through the site, with Bliss sandstone on the north faulted against Penn-Perm strata on the south (probably Abo & Madera). Mineralization is in the limestone; limestone is altered and brecciated. Minerals noted were limonite, hematite, siliceous vein and fracture fillings, and traces of yellow mineralization which could be uraniferous. Maximum scintillometer reading in the cut was 300 cps; the small ore pile at the entrance to cut (at left in photo b) read up to 350 cps.

No production is recorded from the site and the "mine" is not on file at the State Mine Inspector's Office.

A small 6' x 6' open pit was found approximately 1/3 mile northeast of the above pit. Scintillometer response was not above background. Additional prospecting is evident $\frac{1}{2}$ mile to the east, but may not be in sec. 27.

- References: (1) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-1958; GJO/AEC, p. 191.
(2) Field notes, 5/14/80.

5/14/80



Photo (a) Looking W-NW down ramp leading to small open cut (left center) on Paran Claim.



Photo (b) Looking NW into 6' wide, 10' long, open cut shown in background in photo (a).