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.

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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	$19.60
		$ 153.60

SOCORRO COUNTY

Date visited 8/14/79

Mine name(s) Lucky Don (Bonanza) County Socorro

Section NE¼ 35 Twnsh. 2 S R. 2 E

Quadrangle sheet Bustos Well 7½'

Mining district Chupadera

Elevation 6,040'

Nearest city and/or dwellings Ranch house, 1½ miles west

The Lucky Don (Bonanza) is located in the NE¼ NE¼ sec. 35 on the west side of a San Andreas limestone ridge. It is accessible by the dirt ranch road that leaves highway no. 380 about 10 miles east of San Antonio. Follow the ranch road northward along the east side of the hogbacks for about 19 miles to sec. 35; look for old wooden loadout facility and tailings dump on right hand side of road (see photos a & b).

The mine consists of a face cut about 170' long on a moderate slope in dense gray limestone of the San Andreas fm. (photo c). A cluster of 4 gopher holes or stub adits have been driven into the face, following small mineralized fracture zones or bedding planes, (photos c, d, and e). Maximum length of underground workings is about 20'; roofs in general appeared stable, but were not closely examined.

The deposit consists of tyuyamunite and possibly carnotite disseminated along fracture and bedding surfaces as intergranular fillings in a tabular zone 300'-400' long, 50' wide, and 35' thick (Hilpert, 1969).

The deposit was examined by AEC geologists in April, 1955. At that time Holly Uranium Corporation owned the property which consisted of 103 claims (RME-160, 1970).

The mine was active during 1955-1956 and again during 1960-63 (Hilpert, 1969). The State Mine Inspector's Office carried the mine as active in the 43rd, 44th, and 45th annual reports of that office. By 1956 the property had been transferred to the Union (Umino)? Company.

Production statistics are being made available in the form of "U.S. Dept. of Energy Ore Production Reports - U.S. Government Contracts, 1948-1970", according to William Chenoweth U.S. Department of Energy (personal communication)

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 55.
(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.
(3) U.S. AEC RME-160, 1970, Preliminary Reconnaissance for Uranium in New Mexico, 1950-58; GJO/AEC; p. 202 (microfiche only).

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(4) N. Mex. State Mine Inspector's Office, 1955, 43rd annual report; p. 50.
(5) N. Mex. State Mine Inspector's Office, 1956, 44th annual report; p. 56.
(6) N. Mex. State Mine Inspector's Office, 1957, 45th annual report; p. 49.
(7) N. Mex. State Mine Inspector's Office, inactive uranium mine file.

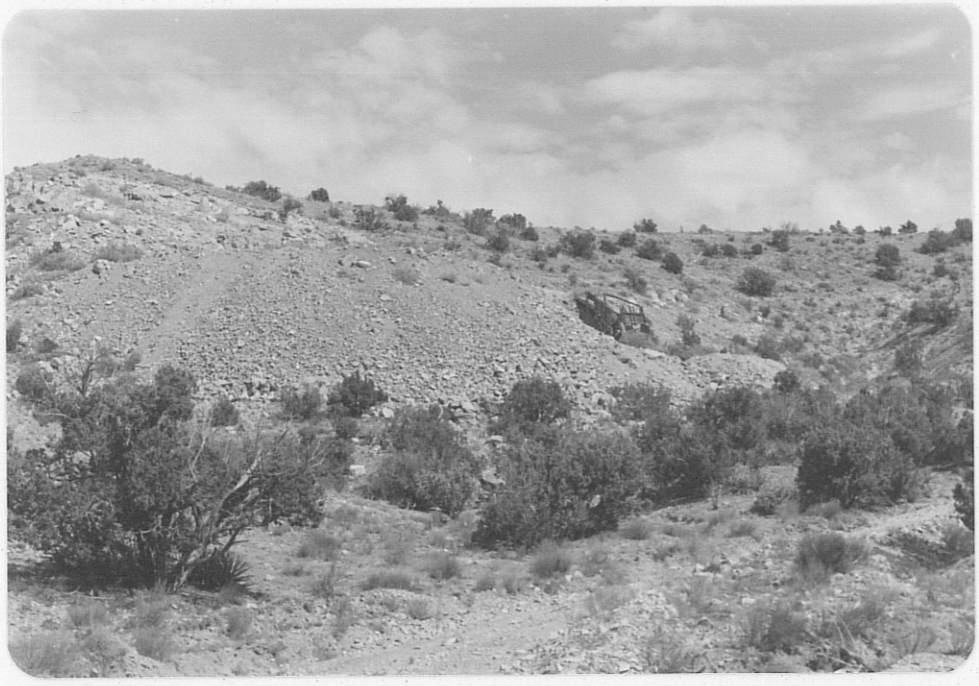

Photo (a) Looking southeastward at mine dump (center and left) and wooden ore chute at Lucky Don Mine; close-up of ore chute shown below.

Photo (b) Looking northward at wooden ore chute and load out area at Lucky Don Mine; note person at claim marker in load out area for scale.

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Photo (c) Looking eastward at open cut showing gopher holes or stub adits driven into face-close ups on following two photographs.

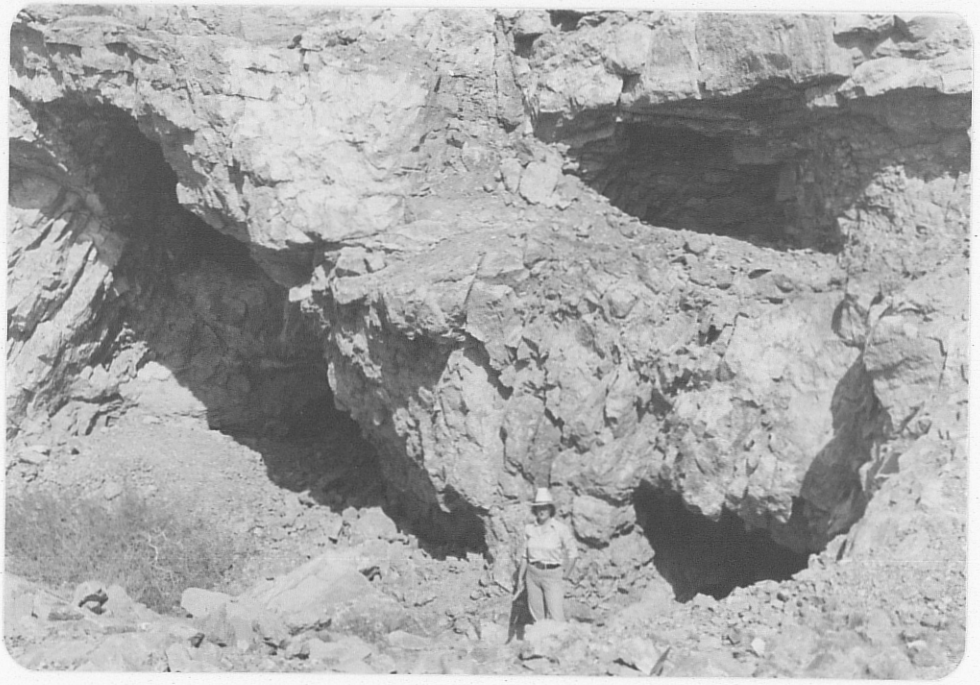

Photo (d) Close-up of gophering shown on face of cut in photo (c). Area at left shown in more detail in photo (e).

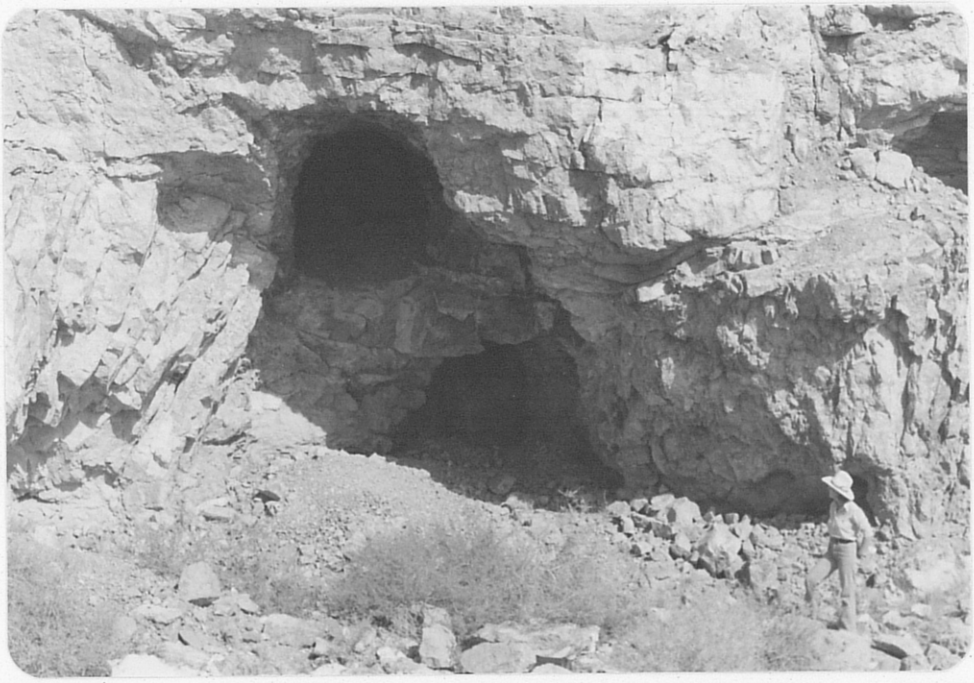

Photo (e) Close-up of gopher holes shown at left in photo (d); note person at lower right for scale.

Date visited 8/14/79

Mine name(s) Little Davie County Socorro

Section NE¼ 35 Twnsh. 2 S R. 2 E

Quadrangle sheet Bustos Well 7½'

Mining district Chupadera (or Trementina)

Elevation 6,200'

Nearest city and/or dwellings Ranch house, 1½ miles west

The Little Davie is located in the SW¼ NE¼ of sec. 35 (Hilpert, 1969) about ¼ mile south-southwest of the Bonanza, on a locally prominent ridge. The site may be reached by taking highway no. 380 east from San Antonio for about 10 miles to the Carthage area. Then take the ranch road to the left (north) along east side of hogbacks about 19 miles to sec. 35. Continue northeastward around north side of limestone ridge and take right fork and head south, east for about 1/3 mile, then turn right again and begin climbing back side of ridge to mine site.

The workings consist of an 8' x 12' prospect pit about 6' deep (see photos a & b). Deposit is in middle limestone member of the San Andres fm. immediately east of and in footwall of a northeastward trending normal fault (Hilpert, 1969). No secondary uranium minerals are visible.

The mine was registered with the State Mine Inspector's Office in June, 1956 by the Umino Co.; Hilpert (1969), however, stated that some ore was produced in 1955.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603.
(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.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) Field notes, 8/14/79.

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Photo (a) Looking eastward at 8'x 12' open pit on Little Davie workings; access road shows in background. Size of waste pile in background indicates additional stripping in immediate area.

Photo (b) Close-up of open pit shown in (a).

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Date visited 5/14/80

Mine name(s) Hook Ranch Prospect (Jaralosa) County Socorro

Section SE¼ SW¼ 13 Twnsh. 1 N R. 6 W

Quadrangle sheet Indian Spring Canyon 7½'

Mining district -

Elevation 6,700'

Nearest city and/or dwellings Henderson (Hook) Ranch, 1¼ miles southwest

The Prospect is located in the SE¼ SW¼ sec. 13 on the west bank of Jaralosa Creek. It may be reached by traveling northwestward out of Magdalena on the Alamo Reservation road for about 18 miles to Jaralosa Creek; then turn northward along creek bed for about 2 miles to prospect.

Prospect consists of a 200' x 500' area of bulldozed ground, elongate north-south with, the main prospect at the southern edge. The main prospect is a somewhat circular cut, 40' to 50' across, with a 15'-20' highwall on the south (see photos a & b). The deposit is in a yellowish brown (oxidized) conglomeratic sandstone in the upper 2/3 of the Baca formation. Uranium minerals appear to be associated with carbonized wood fragments up to 1' long. Scintillometer readings in the deposit range up to 6,000 cps. (background about 40 cps). The waste pile immediately to the east produced readings of 500-700 cps.

About 150' north of the main prospect is an 80' long north-south trending dozer cut in red sandstone; maximum depth of cut is 5'-10' (see photo c). Scintillometer response was in the 300-700 cps range. Immediately to the northwest of this cut is a small east-west trending cut in oxidized conglomeratic sandstone (photo d).

Hilpert (1969) listed a Hook Ranch airborn anomaly in section 13 with a sample that assayed 3.27% U_3O_8. He also mentioned a Hook Ranch prospect in sec. 24 that produced some ore in 1959-61. The sec. 24 prospect was not identified during the present investigation.

The State Mine Inspector's Office received a registration on this property under the name Jaralosa in June, 1961. The operator was listed as Big Tex Mining Company. The registration indicated a uranium-vanadium deposit.

The writer wishes to acknowledge the field assistance of Dr. Richard Chamberlain during this investigation.

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 54.
(2) State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 5/14/80.

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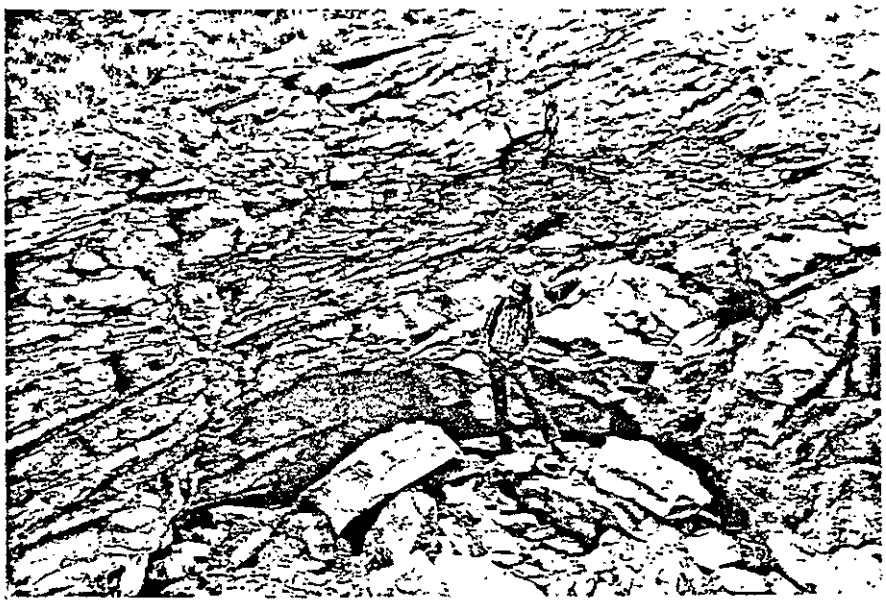

Photo (a) Looking southward into main prospect on Hook Ranch deposit.

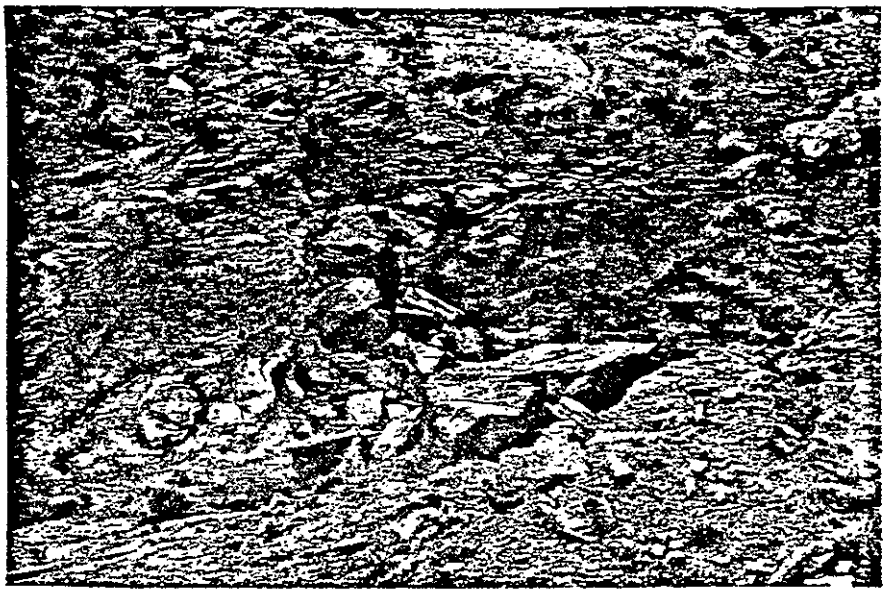

photo (b) Looking southwestward at main prospect of same.

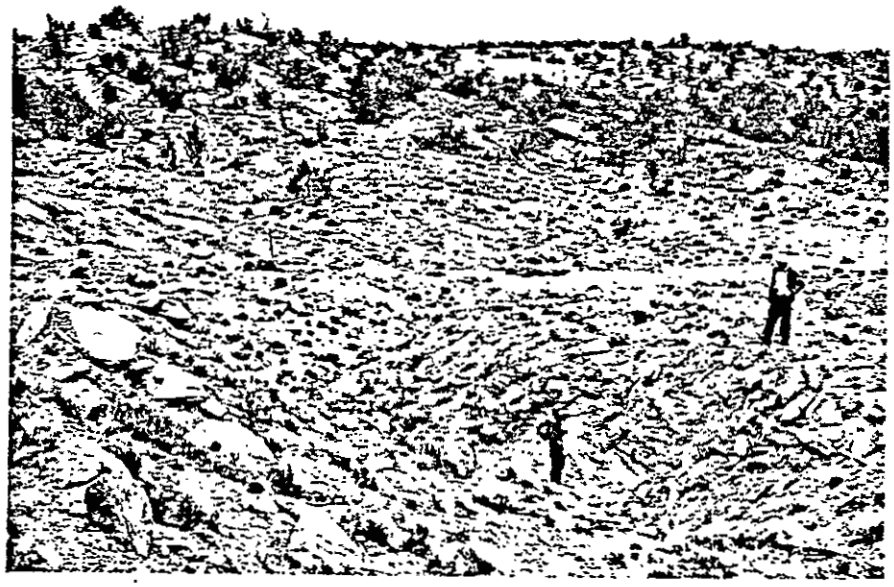

Photo (c) Looking northward into an 80' long dozer cut in red sandstone; 150' north of main prospect.

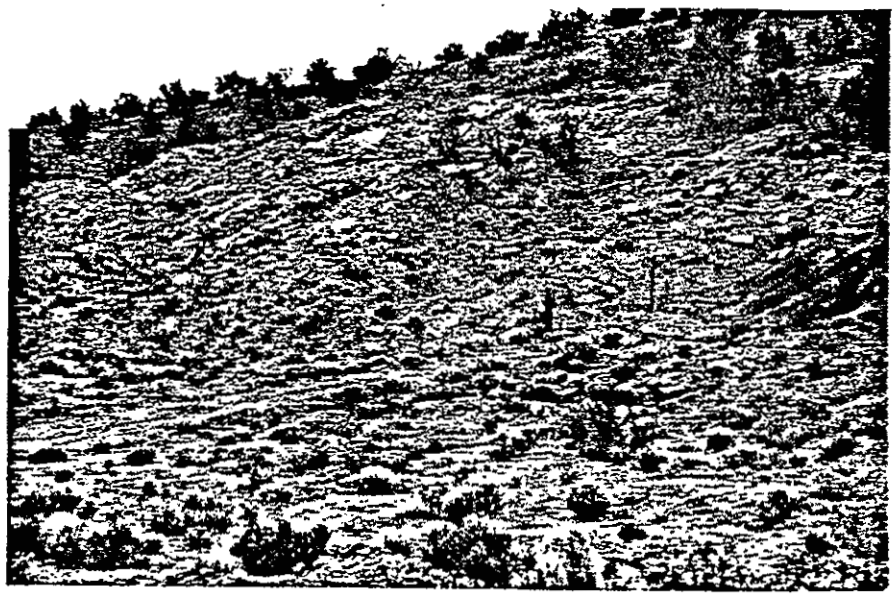

Photo (d) Looking southwestward small prospected area in conglomeratic sandstone, just northwest cut shown in photo (c).

Date visited 10/5/79

Mine name(s) Jackpot No. 1 (Carter, Tolliver, Cook) County Socorro

Section W½, W½ 5 Twnsh. 2 S R. 1 W

Quadrangle sheet Lemitar 7½'

Mining district Lemitar Mountain

Elevation 5,600'

Nearest city and/or dwellings Lemitar, 3½ miles east

The Jackpot Prospect examined during the present investigation is a small barite deposit in the W½, W½ of sec. 5. It may be reached by proceeding north from Lemitar on the frontage road for ½ mile, then turning left (west) and proceeding on dirt road for 3.2 miles to the prospect.

The workings consist of a bulldozed area, 300' x 400', with a mineralized knob of Madera limestone in the center (see photos a & b). The limestone contains barite along fractures and bedding planes, but no anomalous radioactivity was recorded. Maximum scintillometer readings at the 12' highwall shown in the open pit in photo (a) were 50-60 cps (normal background).

The site was visited because the State Mine Inspector's Office carried a registration of the Jackpot #1 in 1956, as a uranium, vanadium, thorium, and cerium deposit. Operator was Iola Uranium Corporation.

Hilpert, 1969, mentioned a Carter-Tolliver-Cook prospect in the E½ sec. 5; uranium mineralization consists of uranophane and carnotite associated with galena, pyrite, and chalcopyrite in mafic dikes that crosscut a diorite intrusive. No prospecting was described.

The present investigation turned up additional prospecting pits and shafts 500' to 800' north of the barite pit shown in the photographs. The workings are in the diorite intrusive mass described by Hilpert (1960).

McLemore, 1980, describes radioactive carbonatite occurrences (100 times background) in adjacent sections 6 and 7. The SE¼ sec. 6 and the NW¼ sec 7 have been prospected, and a 200 ft. long adit was driven in the SE¼ SE¼ sec. 6, (Virginia McLemore personal communication)

References: (1) Hilpert, L., 1965, Uranium, in Mineral and Water Resources of New Mexico: New Mexico Bureau of Mines and Mineral Resources, Bull. 87; p. 223.
(2) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. Paper 603; p. 55.
(3) State Mine Inspector's Office, inactive uranium mine file.
(4) McLemore, Virginia T., 1980, Carbonatites of the Lemitar Mountains, Socorro County, New Mexico in New Mexico Geology, vol. 2, no. 4.

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Photo (a) Looking north at small open cut in Madera limestone; highwall is about 12'.

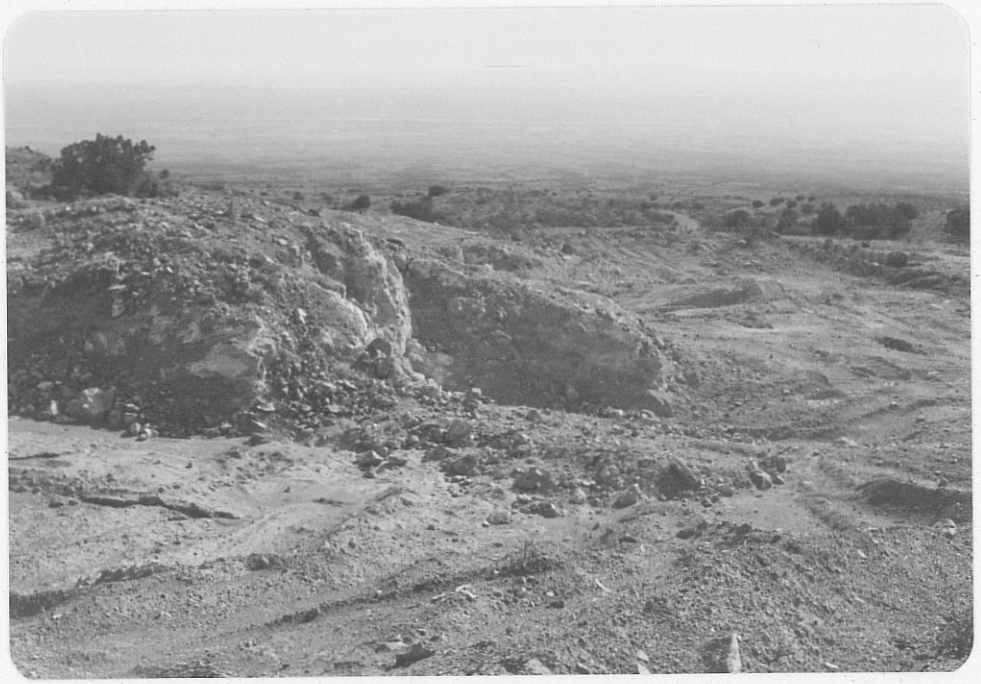

Photo (b) Looking westward at same, with extensively bulldozed area at right and in middle background. Rio Grande Valley in background.

Date visited 8/8/79

Mine name(s) Jeter (or Charley #2) County Socorro

Section SW¼, NE¼ 35 Twnsh. 3 N R. 2 W

Quadrangle sheet Riley 15'

Mining district Ladrone

Elevation 5,700'

Nearest city and/or dwellings Mack Brown Ranch; 2 miles southwest

The Jeter or Charley #2 Mine is located on the east edge of the Ladrone Mountains. It may be reached by taking the U.S. no. 60 exit 25 miles north of Socorro on I-25. Then get on old U.S. no. 85 southward and cross old bridge over the Rio Puerco and take dirt road to west for 11 miles to the mine.

The mine consists of a decline and one open pit, (see photos a & b). The 12°-15° decline is oriented approximately N 80° E, is well timbered, but caved in at 25' feet from portal. Portal dimensions are 6' high, 10' wide; a row of timbers leads down the center of the decline. Back is stable for the 25 foot distance to the cave in; although the timbers lean to the left danger appears minimal at this point.

The open pit is about 125 feet to the north of the portal. It is approximately 150 x 300 feet, elongate N-S, and contained a shallow pond nearly 100 feet long at the time of the visit. Local rancher who grazes the section did not complain of stock hazards or the water quality.

Directly out from the decline is a 25 x 25 foot concrete slab upon which rested the hoist and draw works; 1½ in. diam. bolts remain anchored in the foundations, see photos. The mine dump is to the immediate NW of the concrete slab and shown in the same photo; it is about 4' high and up to 100' feet in maximum dimension. No scintillometer readings are available.

Disturbance is not severe or extensive, but nevertheless highly visible; no buildings remain. Total disturbed area is 400 x 400 feet or approximately 3.5 acres.

The uranium occurs in mostly oxidized forms in a 1-10 foot thick sheared dark gray clayey material and bleached tuffaceous sandstone near the base of the Popotosa fm. (Hilpert, 1969, p. 55). The Popotosa fm., has here been faulted against the underlying Precambrian granite along the Cerro Colorado fault.

The mine was operated during the 1954-1958 period, Hilpert, (1969), however, last registration with the State Mine Inspector's Office was in August, 1957. By that time it had acquired the additional names of "Jeter and Hattie" and "Hattie #2"; the owner was listed as Seaboard Oil and Gas. Production statistics are being made available in the form of "U.S. Dept. of Energy Ore Production Reports-U.S. Government Contracts, 1948-1970" according to William Chenoweth U.S. Department of Energy (personal communication).

References: (1) Hilpert, L., 1969, Uranium Resources of NW New Mexico, U.S.G.S., Prof. paper 603, p. 55.
(2) New Mexico State Mine Inspector's Office, inactive uranium mine file.
(3) Field notes, 8/8/79.

Photo (a) Jeter Decline, looking east from hoist foundation area; note hat for scale.

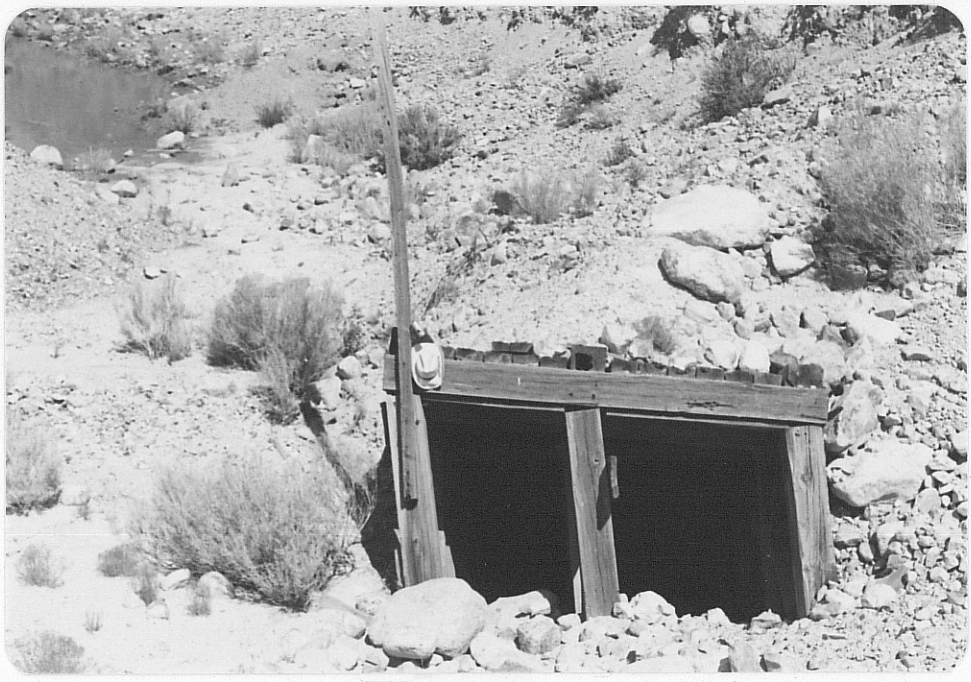

Photo (b) Close-up of Jeter Decline.

Photo C - Jeter open cut, looking north.

Photo D - Jeter hoist foundation and mine dump looking NW.

Date visited 8/14/79

Mine name(s) Union #1 County Socorro

Section SW¼ 31 Twnsh. 1 S R. 3 E

Quadrangle sheet Sierra de la Cruz 7½'

Mining district -

Elevation 5,900'

Nearest city and/or dwellings Ranch, 4 miles to south

The Union Mine is located in the SW¼ SW¼ of sec. 31. It may be reached by taking highway no. 380 east of San Antonio about 10 miles to the Carthage area. Then take ranch road to left (north) along east side of hogbacks for about 24 miles to sec. 6 T. 2 S., R. 3 E. No mine access road exists so last ½ mile must be made on foot. Mine is indicated by shaft symbol on Sierra de la Cruz quadrangle (1972).

The mine consists of a 50° decline driven eastward in the Abo fm. (see photo a). Opening is about 5' x 5', workings go down about 18'. The timbering remains in place and holding, but it is rapidly deteriorating (see photo b). Small mine dump exists out front of decline. No uranium minerals observed on face in shaft or on the mine dump. Host rock is a very fine grained reddish brown sandstone or siltstone. A small amount of old lumber is scattered about the site; small drainage line passes several hundred feet west of mine.

The mine was registered with the State Mine Inspector's Office in November, 1955, when it was reported that a "78° adit" was being sunk. The owner/operator was Union-Gulf Oil and Mining Corporation.

References: (1) State Mine Inspector's Office, inactive uranium mine file.
(2) Field notes, 8/14/79.

Photo (a) Looking northeastward at timbered decline of the Union No. 1 Mine.

Photo (b) Close-up of opening to the Union decline.

Date visited 8/9/79

Mine name(s) Big Chief #4 County Socorro

Section SW¼ 3 Twnsh. 4 S R. 3 W

Quadrangle sheet South Baldy 7½'

Mining district Water Canyon, Silver Mountain subdistrict

Elevation 8,600'

Nearest city and/or dwellings Langmuir Laboratory, 2½ mi. to west

The Big Chief #4 as we found it consists of 5 more or less separate workings all within a 400 foot E-W distance; in addition there are several prospecting pits in the vicinity, some of which are shown on the topographic sheet.

The easternmost of the 5 workings is an adit, 7' high, 5' wide, extending in at least 40' at which point it forks. Orientation is N 8° E; it is not timbered (see photos a & b). At the right of the portal is a decline to some lower level workings still partially open so that a man could enter but water stands a short distance down, see photo c.

Several open cuts or prospect pits were noted 100' to 200' west of adit along the upper roadway, see photo d. These are small and largely overgrown with trees and shrubs.

About 150' west of these pits is a caved shaft, photo e, which has a badly deteriorated colar indicating a size of 6' x 6'. Present depression is about 3'-4' deep and appears stable. No nearby dump was discernible.

Below this shaft downslope to the south several hundred feet is evidence of more open cut workings. It is pretty much filled with waste and rubble and it is difficult to determine how much if any material was removed, see photo f.

Downslope another 75' and back to the east approximately 200 ft. from the open cut is another adit with an orientation of N 45° W. The portal is partially blocked with coarse rubble but appears to be about 5' high, 3' wide, and is open back at least 30 ft., and maybe connects with other workings as a cold wind blows from the portal. Water stands on the floor see photo g (see insert on back of page).

Access road to mine takes off from the Langmuir Laboratory road in the NW¼ sec. 3 and winds around the wall of South Canyon for approx., 1.5 miles. Road will not accomodate heavy equipment in its present condition. This factor plus the relatively low danger level and remoteness of the mine would not seem to warrant any immediate action at the site.

Host rock for the uranium ore is a Tertiary andesite. Primary interest in the area probably was gold and silver. (It is doubtful this mine ever produced any uranium). Mine last registered with State Mine Inspector's Office in June, 1959.

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References: (1) State Mine Inspector's Office.
(2) R. H. Weber (oral communication).
(3) Field notes, 8/9/79.

Note: Additional photo h is looking south at mine area showing remains of chute that carried ore to a lower, more accessible, load out area. Mine workings shown in all previous photographs are distributed both east and west of area at top of chute.

The Big Chief Group has been staked by Don Kilgore, as The C & K #2, dated August, 1977.

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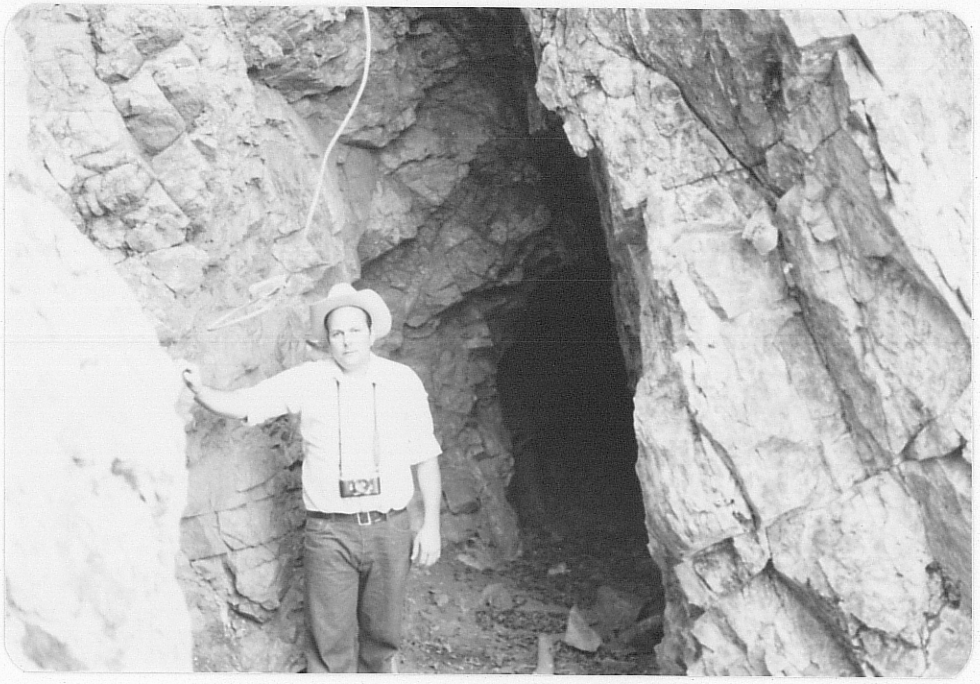

Photo (a) Big Chief #4, easternmost workings-adit.

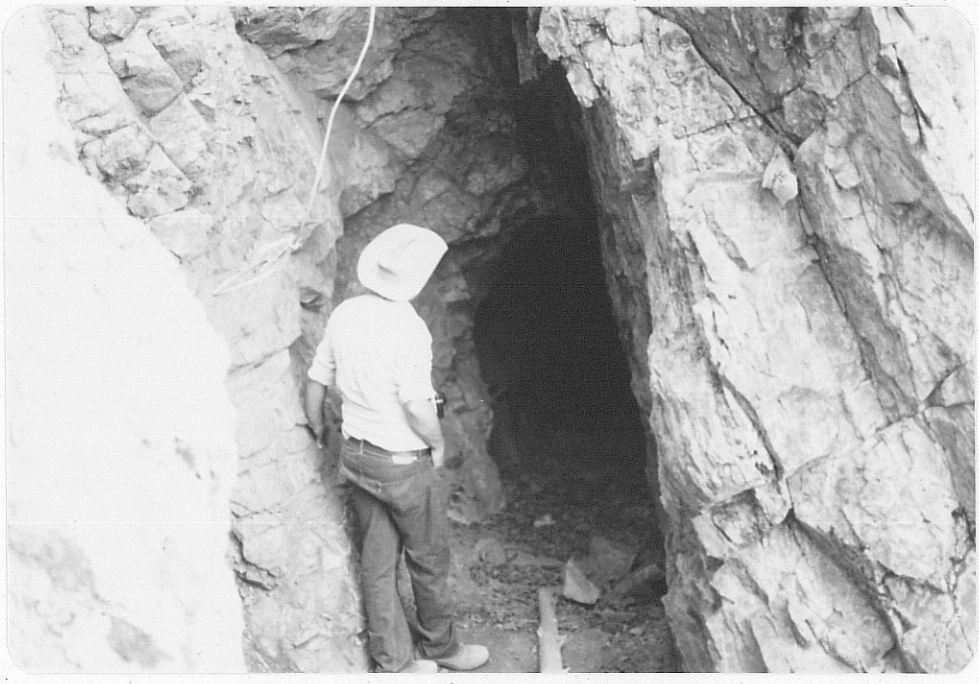

Photo (b) Big Chief #4, same as above.

Photo (c) Big Chief #4, easternmost workings, lower level.

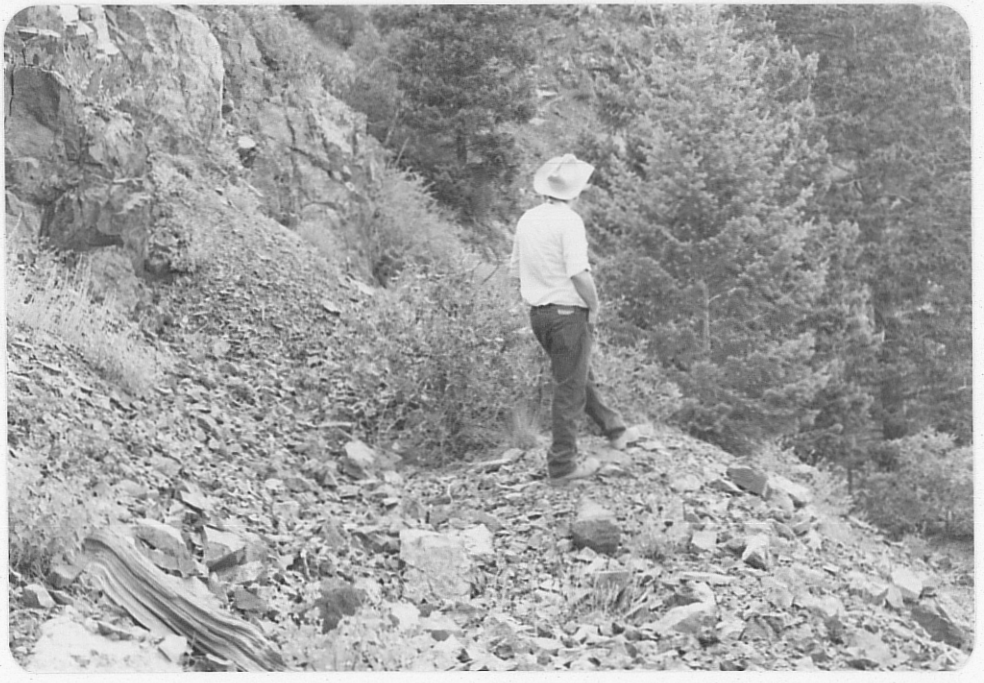

Photo (d) Big Chief, prospect pits due west of adit.

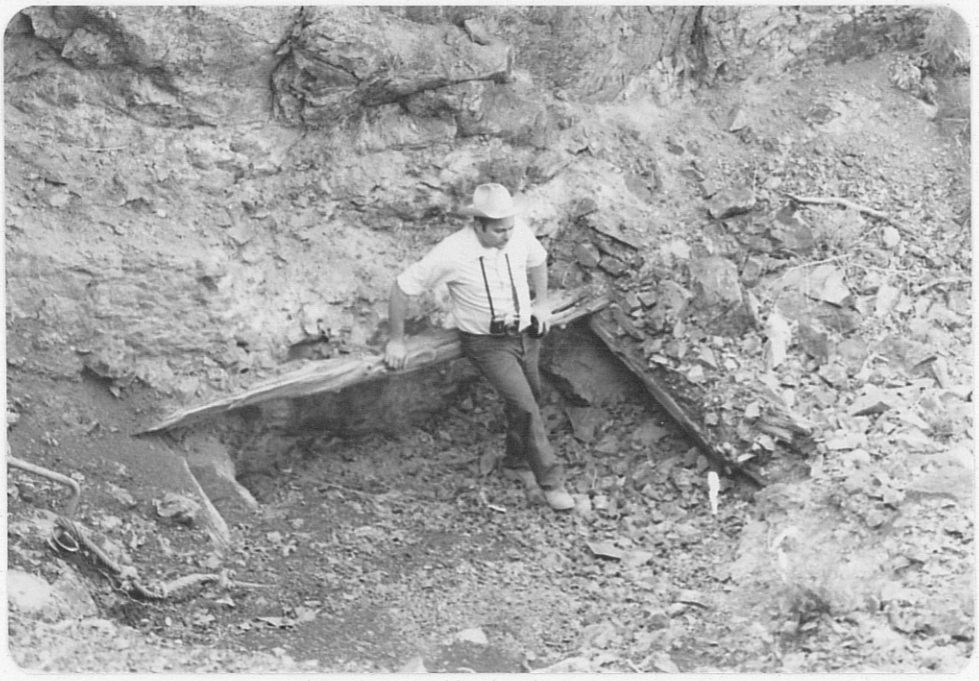

Photo (e) Big Chief, caved shaft west of prospect pits.

Photo (f) Big Chief, open cut workings downslope to north of caved shaft.

Photo (g) Big Chief lower adit to northeast of open cut.

Photo (h) Ore chute (center photo) at Big Chief, conveyed ore to lower load out area.