

OFFICIAL USE ONLY
PRELIMINARY RECONNAISSANCE REPORT

FILE ED-R-1115

EXAMINED BY G. E. Klosterman
DATE(S) EXAMINED January 27 & 29, 1953

2. STATE Utah COUNTY San Juan
DISTRICT Moab District
NEAREST TOWN Monticello, Utah
PROPERTY Anomaly #5

1. SAMPLES				
NUMBER	TYPE AND WIDTH	RADIOACTIVITY		
		%V ₂ O ₅	%U ₃ O _{8c}	%ThO ₂
21117	16" channel	0.03	0.11	0.11
21118	Selected Grab	0.15	0.44	0.45
21119	" "	Trace	0.01	0.01
21120	Chip	Trace	0.03	0.03

LOCATION:
SEC. 13 T. 30S R. 24E

3. TYPE OF EXAMINATION:
Surface geologic and radiometric

4. DIRECTIONS TO DEPOSIT: From Monticello, Utah, go 18 miles north on U. S. Highway 160 to the Big Indian Wash road. Turn right and go 10 miles until passing Big Indian Butte. Turn left and go one mile into Spiller Canyon, then right until road ends. The anomaly

5. OWNER OR OPERATOR: is just beyond the end of the road.

ADDRESS:

This area of high radioactivity was claimed at one time. Apparently the claim is no

6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS: longer valid.

Several small pits and jackhammer holes indicate past activity. However, these diggings are too insignificant to allow for any ore shipments. The anomaly was located by airborne methods on January 23, 1953.

7. RADIOACTIVITY:

A radiometric map is appended.

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

A. The main topographic feature is Big Indian Valley, which was formed by the erosion of an anticline.

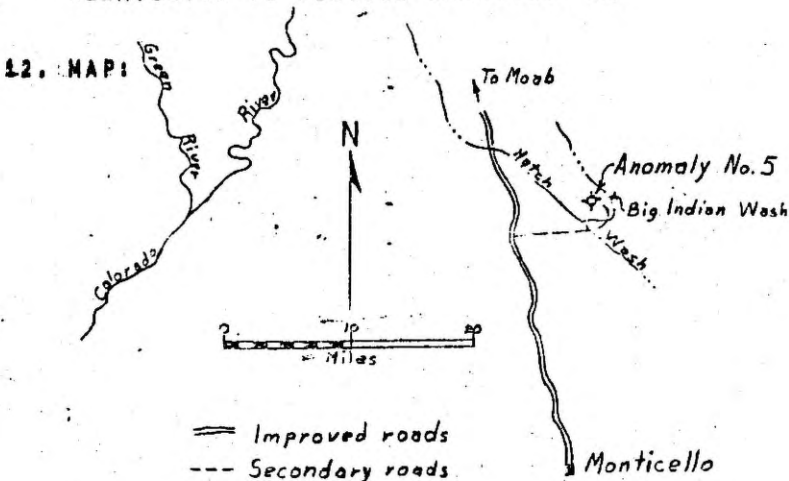
B. The anomaly was found in the Cutler fm. approximately 200 feet below the Cutler-Moenkopi contact. The formation is exposed on the inner-rim of an eroded northwest-southeast trending anticline. Locally the Cutler is composed of irregularly bedded sandstones that strike N 35°W and dip 14°SW. There are two sandstone beds within the area of high radioactivity which contain mineralization. The upper bed is medium- to coarse-grained, massive, buff- to brown-black, and contains mineralization in nodules and along fractures. The lower is light gray- to buff, medium- to coarse-grained, laminated, and is mineralized in thin seams.

C. Carnotite-type mineralization was found along fractures, in small pods and nodules, and in thin seams. Associate minerals are hematite, limonite, and possibly manganese.

9. POTENTIAL FOR FUTURE PRODUCTION: The potential for future production appears to be limited.

10. CONCLUSIONS AND RECOMMENDATIONS: A small amount of ore is present, but unless the grade increases, or the ore thickens at depth, the deposit is not minable. Shooting of the outcrop might reveal additional mineralization.

11. PROOF OF OWNERSHIP RECEIVED? No
PERMISSION TO PUBLISH RECEIVED? No



13. OTHER INVESTIGATIONS: H. E. Gregory, 1938, the San Juan Country, A Geographic and Geologic Reconnaissance of South-eastern Utah, U. S. Geol. Survey, Prof. Paper 188.

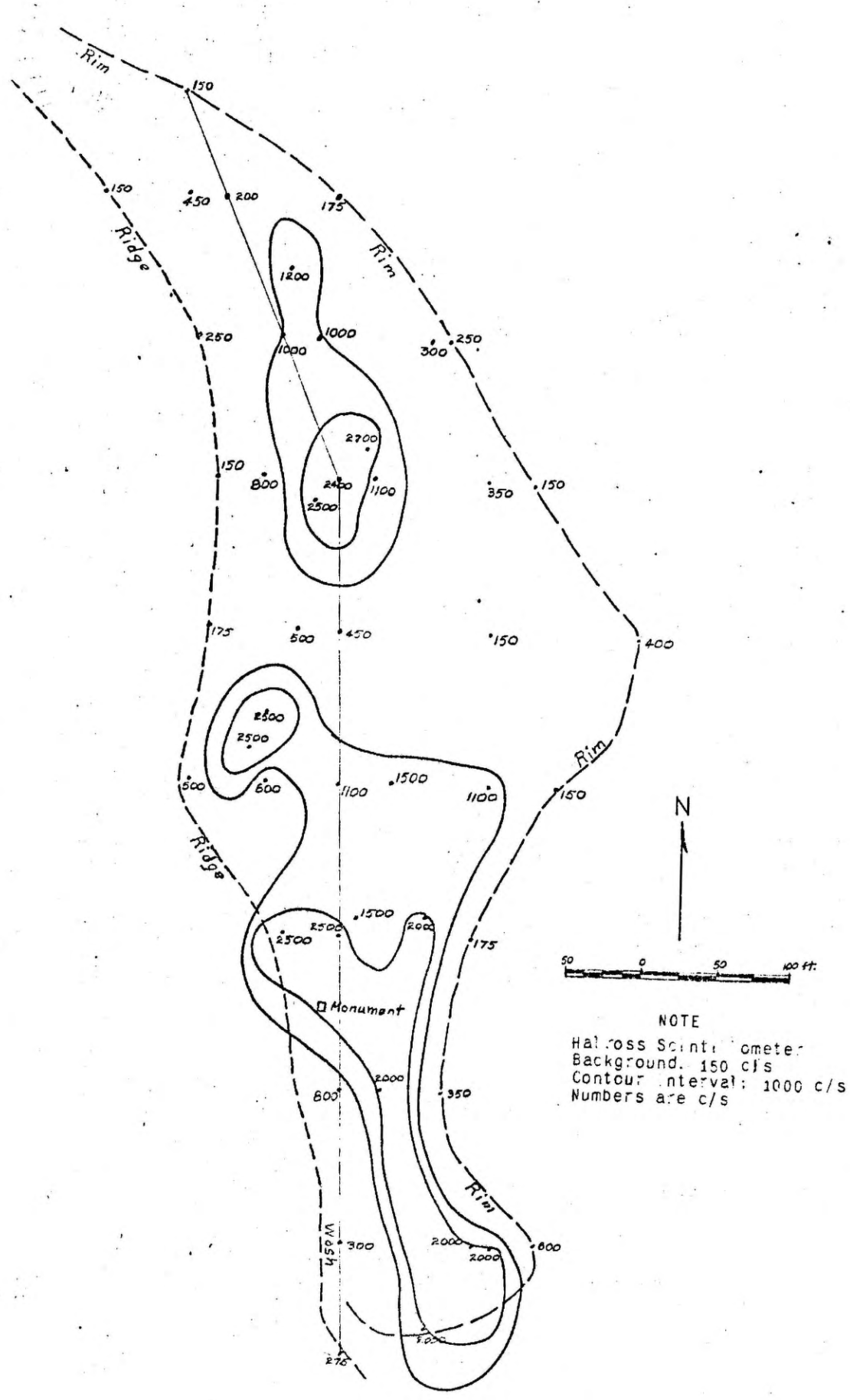
14. ADDITIONAL INFORMATION:

15. SUPPLEMENTARY RECONNAISSANCE REPORT TO FOLLOW? No

16. WARRANTS FURTHER ATTENTION? Yes

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Radiometric map of Anomaly No. 5
 San Juan Co., Utah

DISTRIBUTION: P. L. McNEIL (2)
 P. H. WILSON (2)
 Y. L. WASH (1)
 Technical Services Files (1)

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PRELIMINARY RECONNAISSANCE REPORT

File ED-3-1113

EXAMINED BY G. E. Klosterman
DATE(S) EXAMINED

2. STATE Utah COUNTY San Juan

Jan. 13, 1953

DISTRICT Moab

1. ANALYSES
SAMPLE TYPE AND QUANTITY ANALYST

NEAREST TOWN Monticello Utah

		%CaCO ₃	%V ₂ O ₅	%U ₃ O ₈ calc	%U ₃ O ₈ ge
21107	channel	8.3	Tr	0.02	0.02
21108	channel	2.8	0.02	0.07	0.07

PROPERTY Unclaimed, Anomaly #1

LOCATION:
SEC. 8 T. 38S R. 21E

3. TYPE OF EXAMINATION:

Surface, geologic and radiometric

4. DIRECTIONS TO DEPOSIT: Go north 14 miles from Monticello, Utah, on U. S. Highway 160 to the Dugout ranch sign. Turn left and go west 22 miles to the Kigalia-Gooseberry sign. Follow the left fork 11 miles up Cottonwood Canyon to the Cottonwood Ranger Station. The

5. OWNER OR OPERATOR: anomalous area is on a point 1/4 mile due east.

ADDRESS: Unclaimed

6. MINE OR PROPERTY HISTORY, PRODUCTION AND OWNERSHIP:

Found by airborne methods on January 9, 1953.

7. RADIOACTIVITY: The highest radioactivity recorded by the Halross Model 939 Scintillometer was 2000 cps. - The background count was 150 cps.

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

A. The topography consists of high mesas and buttes, deep canyons with vertical walls, and wide valleys with meandering dry washes.

B. The anomaly was recorded over the Shinarump conglomerate. Locally this bed is composed of interbedded, gray conglomerates and medium- to coarse-grained sandstones. It strikes North and dips 3° E. High radioactivity was found at the Shinarump-Moenkopi contact.

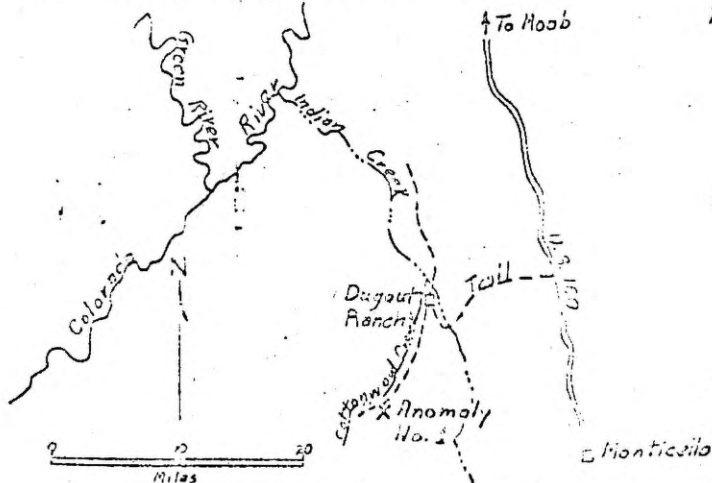
C. No uranium minerals are visible megascopically. Limonite, gypsum, jarosite, and a moderate amount of carbonaceous trash are present.

9. POTENTIAL FOR FUTURE PRODUCTION: Very limited.

10. CONCLUSIONS AND RECOMMENDATIONS: No further work warranted.

11. PROOF OF MEMBERSHIP RECEIVED? No.
PERMISSION TO PUBLISH RECEIVED? No.

12. MAP:



13. OTHER INVESTIGATIONS: None

14. ADDITIONAL INFORMATION: None

15. SUPPLEMENTARY RECONNAISSANCE REPORT TO FOLLOW? No

16. WARRANTS FURTHER ATTENTION? No

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PRELIMINARY RECONNAISSANCE REPORT

FILE NO. 2-1111

EXAMINED BY G. E. Klosterman

2. STATE Utah COUNTY San Juan

DATE(S) EXAMINED Jan. 27, 1953

DISTRICT Moab District

1. SAMPLES

NUMBER	TYPE AND WIDTH	RADIOACTIVITY			
		%Cu	%V ₂ O ₅	%U ₃ O ₈	%U ₃ O _{8e}
21114	Chip	Tr	0.09	0.08	0.07
21115	1.8' channel	0.01	0.50	0.14	0.16
21116	Selected Grab	0.77	0.44	0.17	0.15

NEAREST TOWN Monticello Utah

PROPERTY Lackey Claim (Anomaly No. 4)

LOCATION:
SEC. 13 T. 30 S R. 2 E

3. TYPE OF EXAMINATION:

Surface Geologic and radiometric.

4. DIRECTIONS TO DEPOSIT: Go north on U. S. Highway 160, from Monticello, Utah, 13 miles to the Big Indian Wash road. Turn right and go about 10 miles, pass Big Indian Butte, then turn left and go one mile into Spiller Canyon. The claim is at the end of the road.

5. OWNER OR OPERATOR: E. L. Christenson and Pete Shumway
ADDRESS: Monticello, Utah

6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS: The claim was located on August 5, 1951. An anomaly was recorded over the claim on Jan. 22, 1953.

7. RADIOACTIVITY: The highest count recorded on the Halross Model 939 Scintillometer was 6000 cps. Background count was 150 cps. High radioactivity extends along the rim for 300 feet.

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

A. Erosion along the strike of the southwesterly-dipping beds has formed a nearly vertical cliff, which is dissected by deep canyons perpendicular to its face.

B. The claim is in the Cutler formation on the southwest flank of a faulted and eroded, northwest-southeast-trending anticlinal structure. The mineralized zone is in an irregularly bedded, pink to light-gray, fine- to medium-grained, micaceous, laminated, hematitic sandstone; and a pink to dark-gray, medium- to coarse-grained, arkosic, massive, hematite-streaked sandstone. These sandstones strike N 37° W and dip 14° SW.

C. Uranium mineralization was found in nodules, along fractures, and in small seams. The maximum seam thickness is 4 inches. Iron, in the form of hematite and limonite, and manganese are associate minerals.

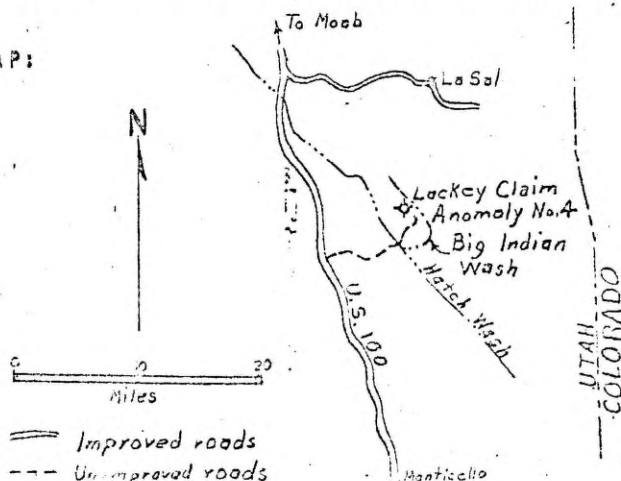
9. POTENTIAL FOR FUTURE PRODUCTION: The potential appears to be limited.

10. CONCLUSIONS AND RECOMMENDATIONS: No further work warranted at this time.

11. PROOF OF OWNERSHIP RECEIVED? No
PERMISSION TO PUBLISH RECEIVED? No

12. OTHER INVESTIGATIONS: None

12. MAP:



14. ADDITIONAL INFORMATION:

Refer to U.S. Geol. Prof. Paper 183. A. A. Baker 1933. Geology and Oil Possibilities of the Moab District, Grand and San Juan Counties, Utah, U.S. Geol. Survey, Bull. 841

15. SUPPLEMENTARY RECONNAISSANCE REPORT TO FOLLOW? No

16. WARRANTS FURTHER ATTENTION? No

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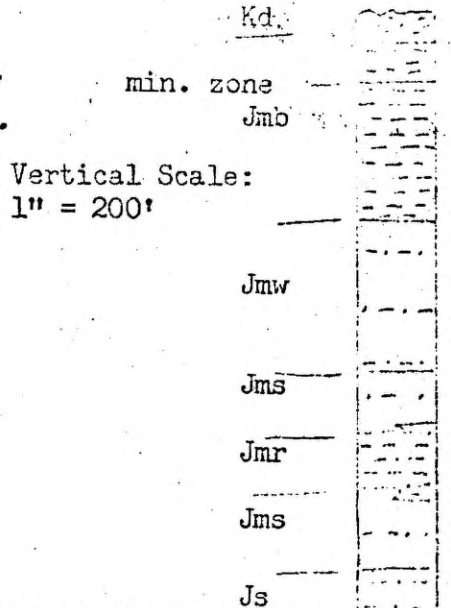
File No. W-522
Geologic Dist. No.
Names of examining party:
C. W. Torr

PROPERTY STATISTICS

Name W. 6 and No. 7 Mines Date February 21, 1946
Location: State CO County SAN JUAN Mining District Montezuma Canyon
Locality (G.L.D. and/or description) Sec. 8, T39S, R25E
Photo No. and/or map coverage
Road log 0 - 15.4 South on Utah 47 from Blanding to Government rd.
15.4 - 21.5 Govt. rd. to Hatch Trading Post
21.5 - 24.2 Govt. rd. to Int. payick turn-off to east
24.2 - 24.7 to mine 6 and 7 shafts
Owners, operators, addresses International Payick, Ltd. First National Bank Bldg.
Denver, Colorado; William Palmer, Cortez, Colorado. Supt.; Howard Chamberlain

GEOLOGIC SETTING FOR MINERAL DEPOSIT

- Name of host rock BRICKY ss
- Stratigraphic Column or Geologic Sketch (indicate min. zone)
- Petrology of host rock (incl. ore zone) Var. ms. and sts. w/ thin buff ss. Ore occurs in three distinct zones: (1) disseminated and coating fractures in brick-ss. (2) disseminated (?) and coating fractures in gray or locally buff ss. about 2' thick. (3) replacements of lenticular ss. in (?) zone.
- Sedimentary structures of host unit thin Gm observed above ore. Local scours (?) in sts. filled with V' ss.
- Regional tectonic environment Blanding Basin between Abajo Mts. and Comb Ridge on NW and W respectively and Ute Mts. to east. beds are approximately horizontal.
- Local tectonic structures and relation to ore Secondary and possibly primary U minerals along fractures. 2 fractures 35° E, 2-170° W, 1 - 120° W.
- Alteration As appears to have been in part altered from red to green in area examined. whether Gm and buff colors in sts. and ss. are due to alteration is not known. Much Fe and R Fe(?) noted along fractures.



MINERAL DEPOSIT

- Form (vein, bedded, stockwerk, etc.) Widespread thin-bedded deposit.
- Dimensions NOT KNOWN. Drilling indicates some 50 mineralized claims in vicinity.
- Orientation (orebody believed elongated east-west.)
- Method of emplacement (replacement, impregnation, etc.) Appears to be disseminated in R and Gm sts. and to replace cement (?) in V' ss. near contact with sts. and along fractures (?).
- Mineralogy (other than host rock; specimen numbers for lab. work)
 - Primary Uraninite (?), some Fe (?) sulfides. Specimen Nos. 1-T-2-15-6, 2-T-2-15-6, 3-T-2-15-6.
 - Secondary U and greenish mins. w/ bladed, acicular, and radiated habit associated with fractures.
- Ore Controls A thin (0.1-0.5 ft.) Gm mud seam directly overlies the sts. one zone may have provided a relatively impervious barrier to lateral migrating solutions. High Fe content may be significant as a means of absorbing and/or precipitating U.
- Suggested guides to ore Brick R sts., some to abundant Fe staining in and adjacent to host. Thin Gm mud seam capping thin sts. beds.

Signature(s) and Position(s) of Reporting Geologist(s)

Distribution:
R. D. Winger, Wash., DRM (1)
~~XXXXXXXXXXXXXXXXXXXX~~
A. L. Brockaw, GJ, USGS (1)
H. E. Johnson, USGS, GJ (1)
A. P. Butler, Denver, USGS (1)

Mining Division, GJ . . . (1)
E. E. Thurlow, SLEB . . . (1)
D. L. Everhart, DEB . . . (2)
ED Files (4)

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8. Adjacent mineral deposits Similar deposit on School Sec. 16, T39S, R25E. Cottonwood Mine 20 miles north in Montezuma Canyon.

9. Additional remarks At time of the temporary shut-down (Feb. 1), due to impassable wash drifts were being driven to a reported 5-7 ft. of L.O. ore found by drilling. This group of claims has been extensively drilled and the areal distribution of mineralization largely well outlined. Mineralized brick-red sts. has been noted several miles west of the mine.

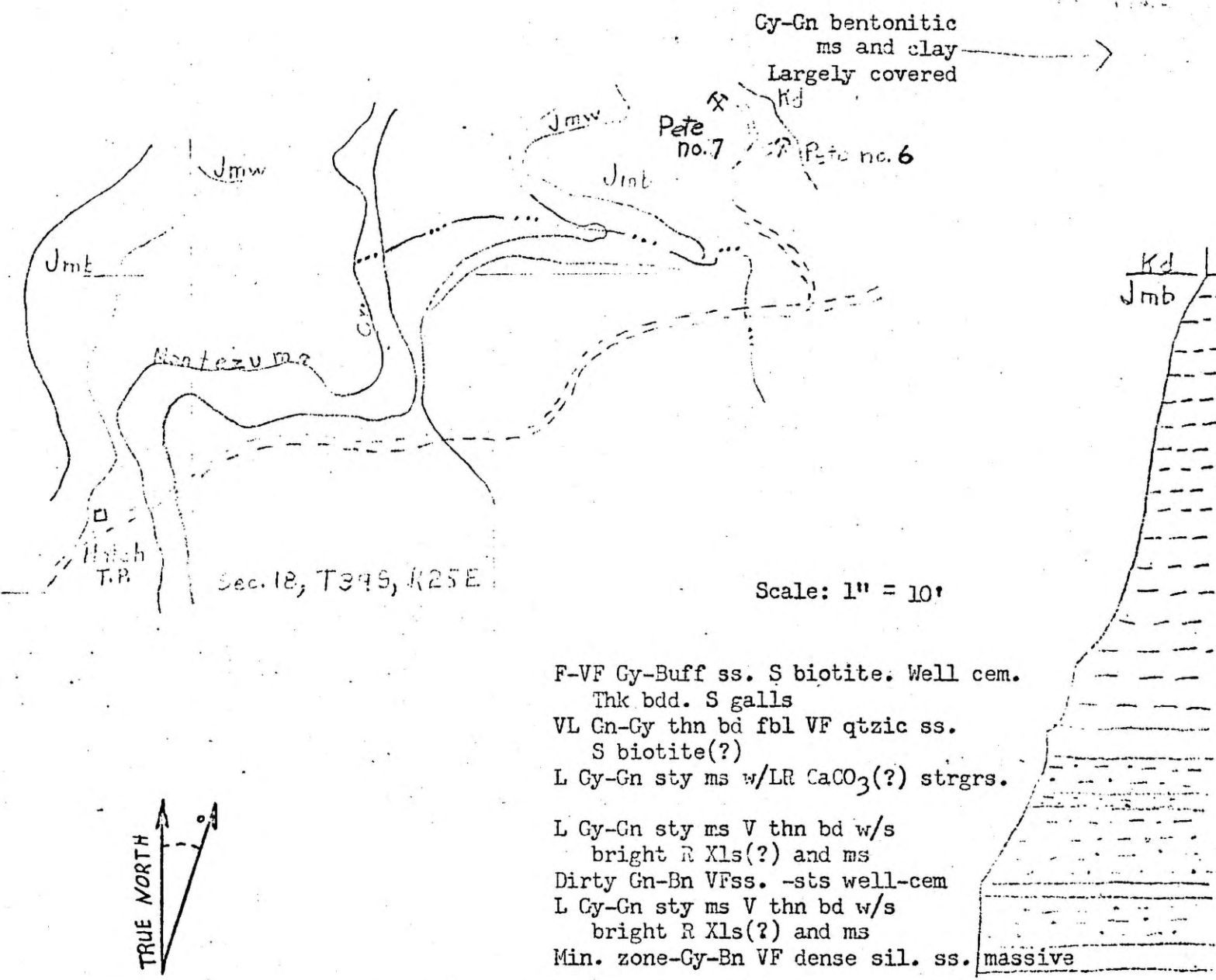
10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)

No.	Type*	Length	U ₃₀₈ %	U ₃₀₈ μ	V ₂₀₅ %	CaCO ₃ %	Other	Area or volume represented
31627	High-Grade							
31628	Specimen							
31629	"							
31630	"							
31631	"							
31632	"							
31633	"							

*Channel, chip, selected grab

11. Maps and Sections (sketch, page, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: 1" = 2640'



12. Production history: inclusive dates 9/1/55 to 2/1/56 tons 2220 grade 0.23% U₃₀₈

13. Potential reserve estimates (classifications, tons, grade under current mining conditions)
 Drill hole data must be obtained from the Company and studied before potential reserve estimate can be made.

14. Recommendation for further work This operation should be checked regularly. The spatial distribution of the min. brick-red sts. and its potential as an ore producer should be determined. In view of the intense mineralization in the Bushy Basin of this area, it should be given a closer scrutiny as well as the data is required to establish favorability criteria.

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PRELIMINARY RECONNAISSANCE REPORT

Property Indian Creek No. 2 File No. ED:R-505
 Examined by H. M. Dahl, I. T. Fisk and N. B. Young Date October 15, 1951
 1. Locations: State Utah District 1
 County San Juan Section 10 T.33 S. 21 E.
 Number of aerial photographs, if any ---

Road log to deposit: Turn west from U. S. Hwy. 160 onto Home of Truth Road
south of Moab, Utah, and drive for 10.2 miles, turn left and go 5 miles, then
turn right and go one mile to prospect.

2. Owners, operators, addresses Broad Head, Leroy H. Smith, Martha Smith, Vere Westwood,
Colo-Utah Dev. Co.

3. In what formation or member (zone within member) is mineralization located? Salt Wash member of
the Morrison formation.

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scour, lamination, mud galls, color, interrelation of lithologies)? Light gray fine- to medium-grained
cross-bedded sandstone with some brown limonite stain, some brown mud galls and
abundant carbon.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Vanadium minerals and some carnotite are disseminated in halos around mud galls.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? None noted.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Permeability and carbon.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? No.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study. Carnotite and vanadium minerals.

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10. Estimate dimensions of ore body and/or mineralized zone. Channel is 100 feet long. Thickness of orebody is not defined: two hundred holes have been drilled but results are not known to us.

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick-ness	Assays				Area or volume represented
			U ₃ O ₈	U ₂ O ₈	V ₂ O ₅	CaCO ₃	
			Grade on face estimated at 0.20 percent U ₃ O ₈ and 1.00% V ₂ O ₅				
			Estimated grade along most of tunnel is 0.10 percent U ₃ O ₈				

*Channel, composite, channel, ship, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) No information.

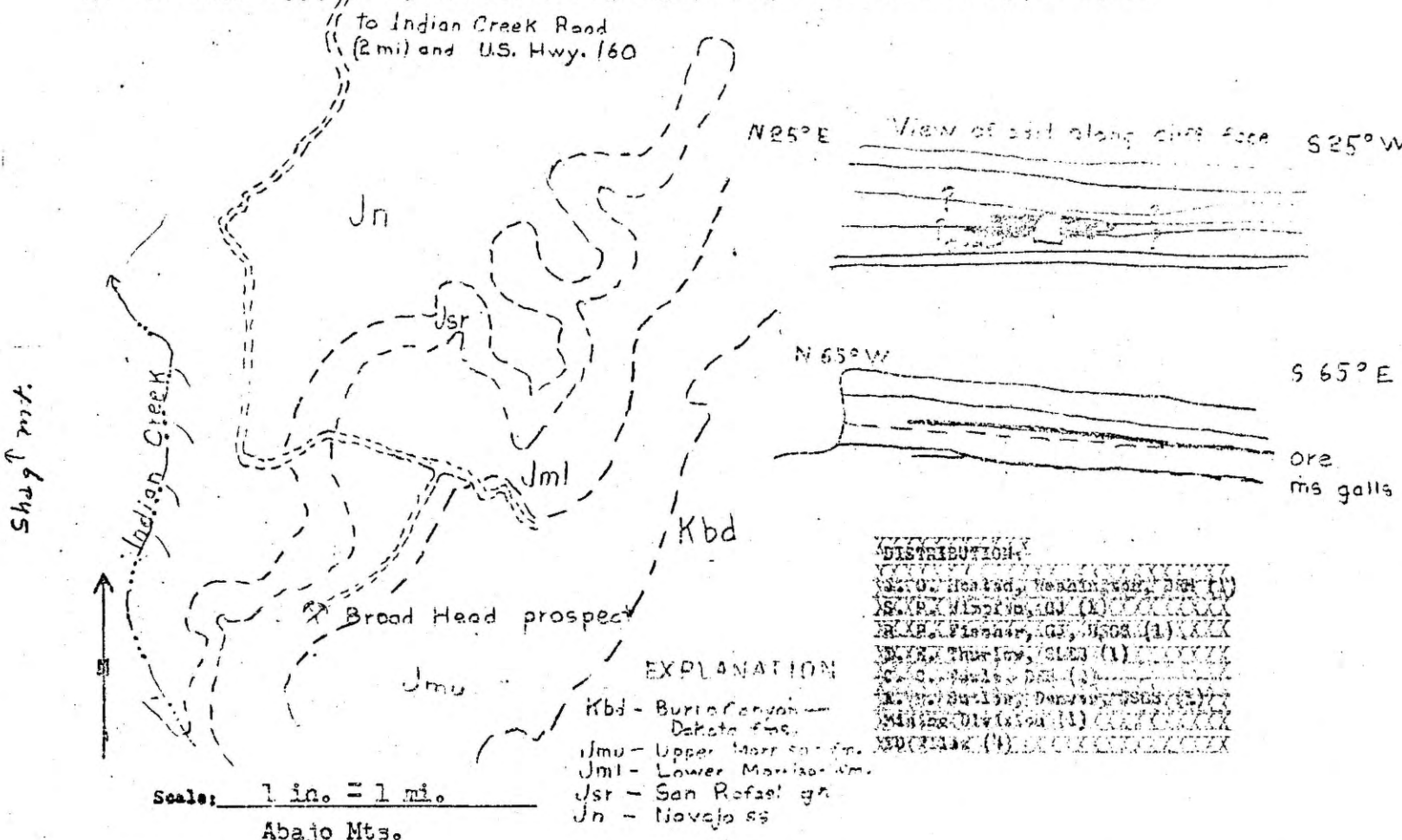
13. Estimated production potential Unknown.

14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study. Four or five short (15-foot) adits have been dug east of this showing, and numerous roads have been built; but there is no sign of recent work.

15. Is area recommended for further study?

16. Additional remarks The Salt Wash sandstone looks favorable, but the rim is poorly exposed. Ore will probably be developed by drilling.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



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PRELIMINARY RECONNAISSANCE REPORT

Property Indian Creek No. 2 File No. ED:R-505
 Examined by H. M. Dahl, I. T. Fisk and N. B. Young Date October 15, 1954
 1. Location: State Utah District 1
 County San Juan Section 10 T. 33 S. 22 E.

Number of aerial photographs, if known --

Road log to deposit Turn west from U. S. Hwy. 160 onto Home of Truth Road 4.2 miles south of Moab, Utah, and drive for 10.2 miles, turn left and go 5 miles, then turn right and go one mile to prospect.

2. Owners, operators, addresses Broad Head, Leroy H. Smith, Martha Smith, Vere Westwood, Colo-Utah Dev. Co.

3. In what formation or member (zone within member) is mineralization located? Salt Wash member of the Morrison formation.

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, lensing, mud galls, color, interrelation of lithologies)? Light gray fine- to medium-grained cross-bedded sandstone with some brown limonite stain, some brown mud galls and abundant carbon.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Vanadium minerals and some carnotite are disseminated in halos around mud galls.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? None noted.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Permeability and carbon.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? No.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study. Carnotite and vanadium minerals.

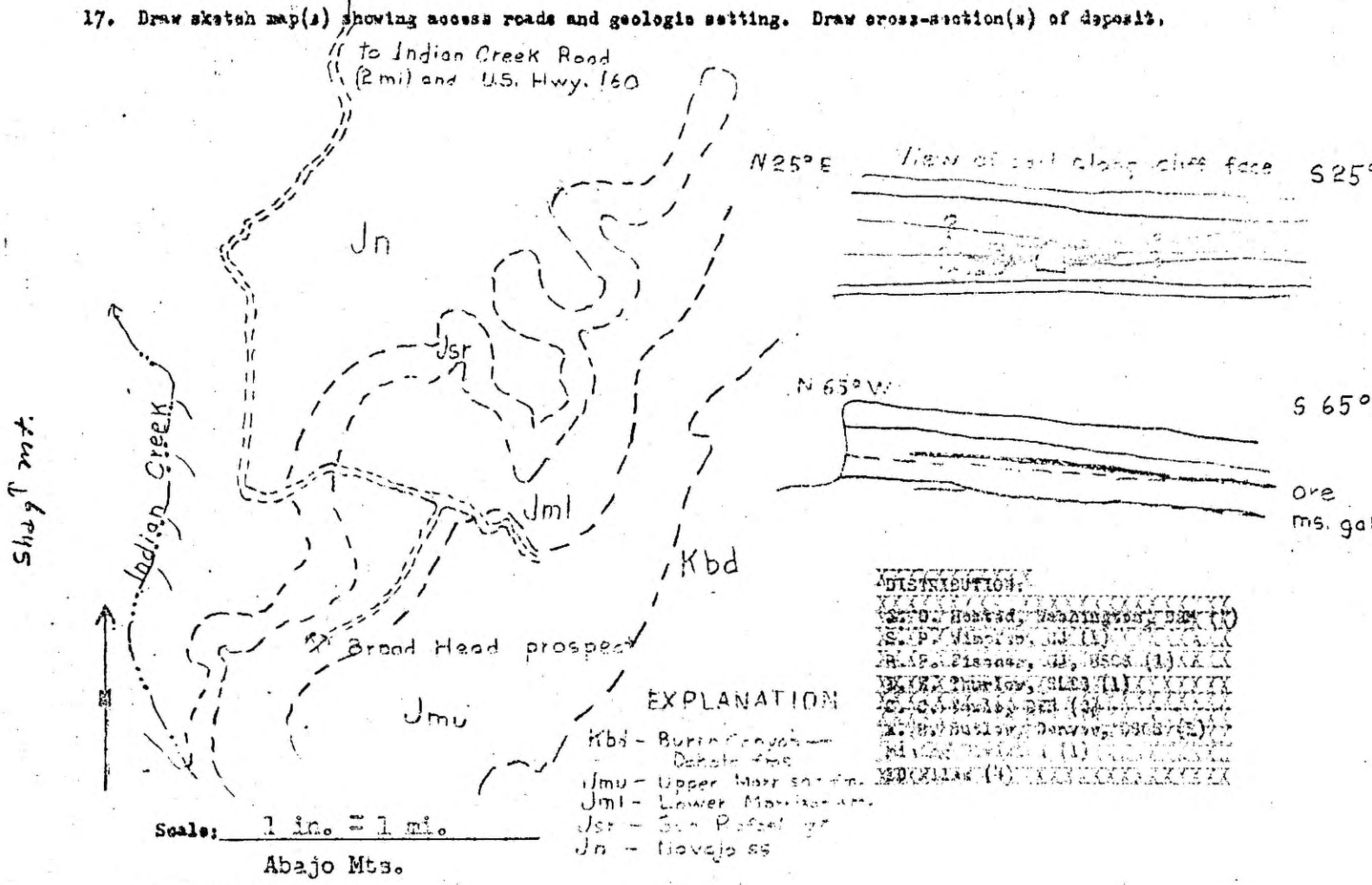
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10. Estimate dimensions of ore body and/or mineralized zone. Tunnel is 100 feet long. Length of orebody is not defined; two hundred holes have been drilled on both sides, but results are not known to us.
11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick-ness	Assays		Area or volume represented
			U ₃ O ₈	U ₂ O ₅	
			Grade on face estimated at 0.20 percent U ₃ O ₈ and 1.00% U ₂ O ₅		
			Estimated grade along most of tunnel is 1.10 percent U ₃ O ₈		

*Channel, composite, channel, chip, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) No information.
13. Estimated production potential Unknown.
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study. Four or five short (15-foot) adits have been drilled about 2 miles east of this showing, and numerous roads have been built, but there is no sign of recent work.
15. Is area recommended for further study?
16. Additional remarks The Salt Wash sandstone looks favorable, but the rim is poorly exposed. Ore will probably be developed by drilling.
17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



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PRELIMINARY RECONNAISSANCE REPORT

Property Moki Uranium Syndicate File No. ED:R-504Examined by H.M. Dahl, I. T. Fisk and N. B. Young Date October 17, 19541. Location: State Utah District ICounty San Juan Section 14 T. 31S R. 21E

Number of aerial photographs, if known _____

Road log to deposit: Turn west from U. S. Highway 160 onto Home of Truth Road 12 miles south of Moab, Utah, and drive for 21 miles. Turn right at Dugout ranch and go 1 mile; turn left and go 1000 feet to the prospect.

2. Owners, operators, addresses Moki Uranium Syndicate, 1866 E. 9 S., Salt Lake City, Utah

3. In what formation or member (zone within member) is mineralization located? Basal part of the of the Chinle formation (Moss Back member ?)

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, lensing, mud galls, color, interrelation of lithologies)? Light gray medium-grained thick-bedded sandstone and sparse conglomerate with light gray mud galls, there are some carbon trash, some interbedded siltstone lenses and some lenses which show calcite and uraninite replacement. Sediments fill a 10-foot scour in the Moenkopi formation. Five feet of ore is reported on the floor.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Predominately as replacement of carbon; some dissemination in the sandstone and in trashy zones. Abundant calcite is associated with some of the carbon replacement.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? None

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Carbon and permeability, to some extent. Also scour channel in the Moenkopi formation.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? NO

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.

Uraninite and vanadium (?) minerals

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10. Estimate dimensions of ore body and/or mineralized zone No information about drilled zone

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick- ness	Assays				Area or volume represented
			U ₃₋₈ ^o	U ₃₋₈ ^u	V ₂₋₅ ^o	CaCO ₃	
29970	Chip (channel)	8 ft.	0.30	0.32	0.07	10.9	Part of 8 ft. long 8 ft. thick channel on base, 12 ft. 2"
29971	Chip (high grade)		21.50	20.38	0.22	55.2	
29972	Grab (wall rock)		0.09	0.11	0.03	7.1	Mass of rock
29973	Chip (amorphous)		0.16	0.14	0.31	5.7	Part of 8 ft. channel about top

*Channel, composite, channel, chip, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) 120 tons

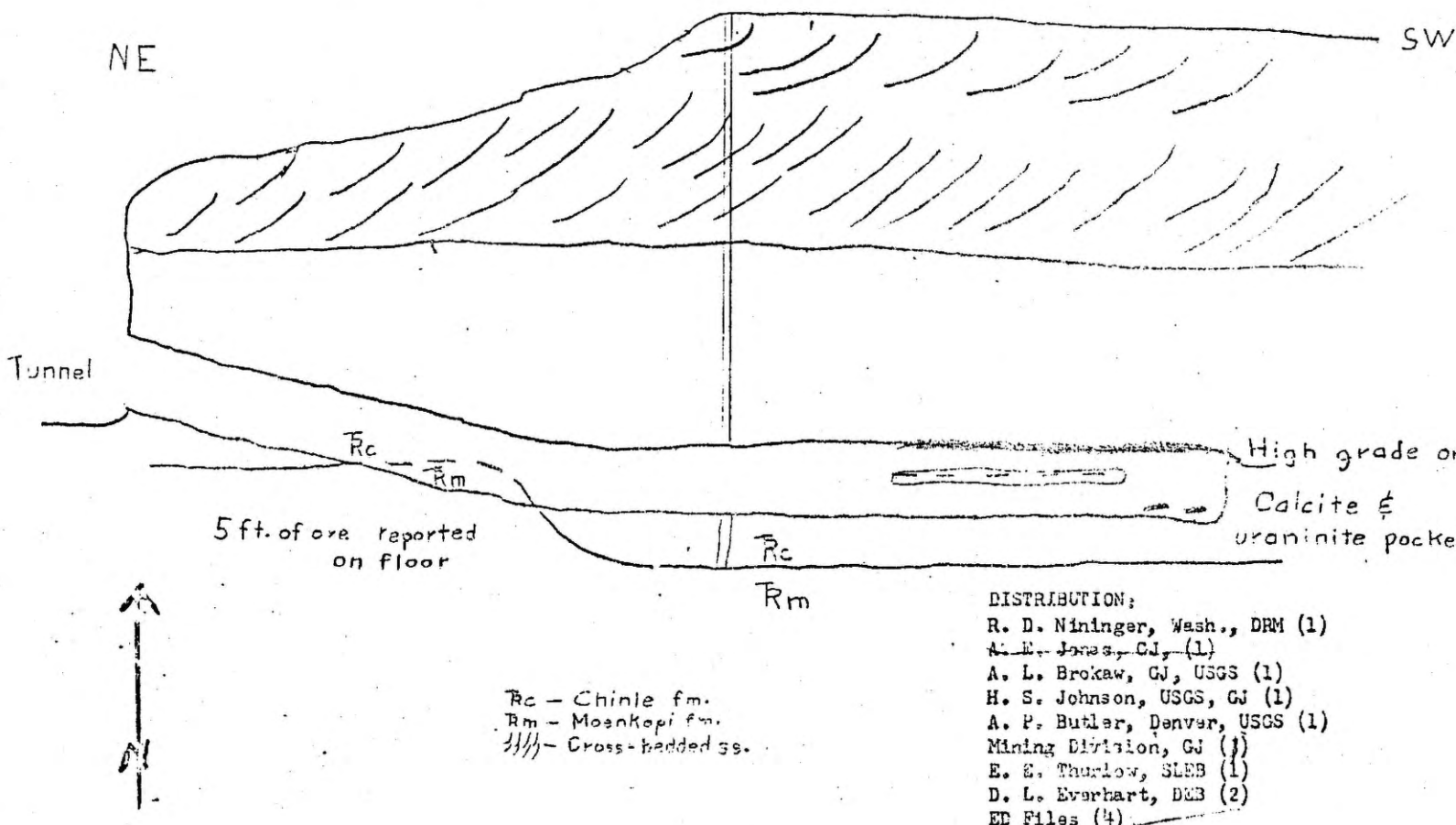
13. Estimated production potential _____

14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study. One or two outcrops a mile from the property on the west side of Lavender Creek, show a radiometric high. Also for 2 miles in the Moss Bay sandstone several miles down Indian Creek, on the east bank

15. Is area recommended for further study? No. It has already been studied.

16. Additional remarks Judging by material on the face and in the dump, the whole face would not be snippable. Selective mining is needed, because of lack of drill information operator is doing blind drifting.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



Scale: 1 inch = 20 feet

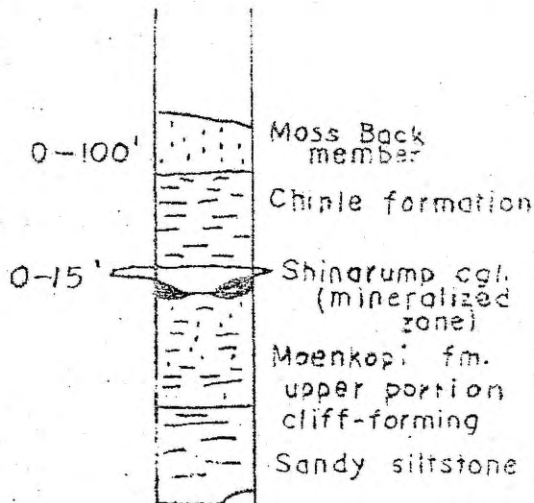
VITAL STATISTICS

Admin. Geologic Dist. I
 Property White Canyon Joint Ventures Examined by Crock File No. ED-3-121
 Location: State N.M. County SAN JUAN Mining District White Canyon Date August 23, 1955
 Locality (G.L.O. and/or description) Happy Jack area
 Photo No. and/or map coverage _____
 Road log Up Happy Jack road from White Canyon, buying station, thence south east around the rim for nearly 2 miles, past the Big Horn mine.

Owners, operators, addresses H. E. James, Manager, Director; E. L. Ross, Mine Manager; Chris Riley, Geologist, Newam Corporation, Seattle, Washington

GEOLOGIC SETTING FOR MINERAL DEPOSIT

- | | |
|---|--|
| <p>1. Petrology of host rock <u>Shinarump cgl.: coarse-grained (.145 to .75 m.m.) even-textured siltstone with occasional quartz pebbles up to 1 inch in diam.;</u></p> <p>3. Sedimentary structures of host unit <u>Channelled, cross-bedded; occurs s. 35° - 50° W.; current lineation s. 30° W.</u></p> <p>4. Regional tectonic environment <u>West flank of the Moguntian warp</u></p> <p>5. Local tectonic structures <u>No observations made.</u></p> <p>6. Alteration <u>Some questionable bleaching in Shinarump (T) sands and also in nearby Moenkopi exposures.</u></p> | <p>2. Stratigraphic Column or Geologic Sketch (indicate min. zone)</p> |
|---|--|



MINERAL DEPOSIT

1. Form (vein, bedded, stockwork, etc.) Channel bedding
2. Dimensions Channel 50 ± feet wide, 5 to 10 feet deep.
3. Orientation Approx. 111° south-southwest
4. Method of emplacement (replacement, impregnation, etc.) Cementation and replacement of carbon. Mineralization weak and spotty.
5. Mineralogy (other than host rock; specimen numbers for lab. work)
 - a. Primary _____
 - b. Secondary _____
6. Ore controls None observed (no ore observed)
7. Suggested guides to ore None observed

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8. Adjacent mineral deposits Happy Jack deposit

9. Additional remarks Company applying for DNEA loan. Examination made in company of F. Byers, Jr., U.S.G.S., and M. Salisbury, USBM (DNEA examiners). Six hundred foot cross-cut driven of estimated 2200 foot drive to intersection.

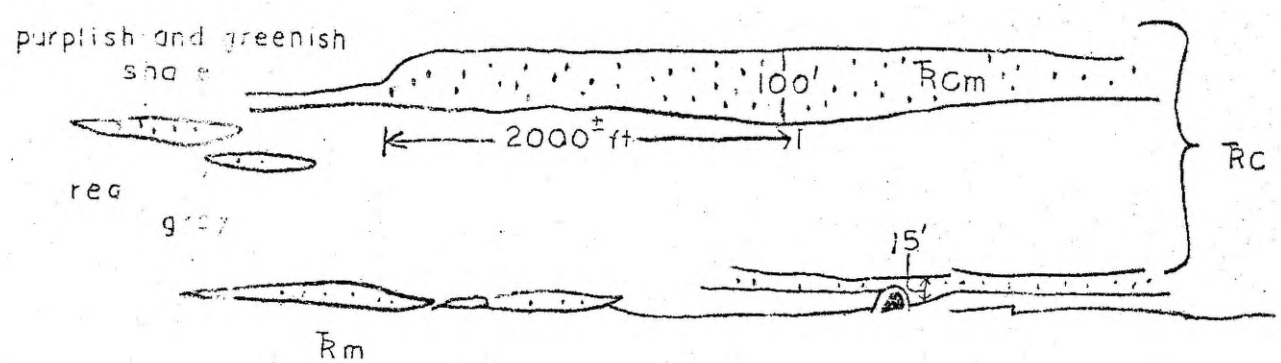
10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)

No.	Type*	Length	Assays				Area or volume represented
			U ₃ O ₈ %	U ₃ O ₈ c %	V ₂ O ₅ %	CaCO ₃ %	

No samples taken
Eyers notes some radioactive anomalies in highly localized portions of tunnel.

11. Maps and Sections (sketch, pace, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: Sketch, not to scale

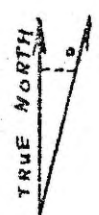


Upper part: dark red sandy siltstone; cliff forming

Longitudinal section

EXPLANATION

- Chinle formation with Moss Back member
- Shinarump cgl.
- Moenkopi fm.



12. Production history: inclusive dates No Production tons _____ grade _____

13. Reserve estimates (classification, tons, grade under current mining conditions)
Prospect is cross-cut to assumed paleostream channel.

14. Recommendation for further work Routine monthly report check.

Distribution:

- R. D. Mininger, Wash., DRM (1)
- A. E. Jones, GJ (1)
- A. L. Brown, GJ, USGS . (1)
- H. S. Johnson, USGS, GJ . (1)
- ~~Technical Services, GJ (2)~~

- A. P. Butler, Denver USGS (1)
- Mining Division, GJ . . . (3)
- E. E. Thurlow, SLEB . . . (1)
- D. L. Everhart, DEB . . . (2)
- ED Files (4)

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PRELIMINARY RECONNAISSANCE REPORT

Property Moki Uranium Syndicate File No. ED:R-504
 Examined by H.M. Dahl, L. T. Fisk and N. B. Young Date October 17, 1958
 1. Location: State Utah District I
 County San Juan Section 14 T. 31S R. 21E

Number of aerial photographs, if known _____

Road log to deposit Turn west from U. S. Highway 160 onto Home of Truth Road 10 miles south of Moab, Utah, and drive for 21 miles. Turn right at Dugout ranch and go 1 mile; turn left and go 1000 feet to the prospect.

2. Owners, operators, addresses Moki Uranium Syndicate, 1866 E. 9 S., Salt Lake City, Utah

3. In what formation or member (zone within member) is mineralization located? Basal part of the of the Chinle formation (Moss Back member ?)

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scour, lensing, mud galls, color, interrelation of lithologies)? Light gray medium-grained thick-bedded sandstone and sparse conglomerate with light gray mud galls, there are some carbon trash, some interbedded siltstone lenses and some lenses which show calcite and uraninite replacement. Sediments fill a 10-foot scour in the Moenkopi formation. Five feet of ore is reported on the floor.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Predominately as replacement of carbon; some dissemination in the sandstone and in trashy zones. Abundant calcite is associated with some of the carbon replacement.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? None

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Carbon and permeability, to some extent. Also scour channel in the Moenkopi formation.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? No

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.

Uraninite and vanadium (?) minerals

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10. Estimate dimensions of ore body and/or mineralized zone No information

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick- ness	Assays				Area or volume represented
			U ₃ O ₈	U ₂ O ₅	V ₂ O ₅	CaCO ₃	
29970	Chip (channel)	8 ft.	0.30	0.32	0.07	20.0	Face of face, 10' by 2"
29971	Chip (high grade)		21.50	20.38	0.22	65.3	Face of face, 10' by 2"
29972	Grab (wall rock)		0.09	0.10	0.03	2.5	Mass of face
29973	Chip (unconformity)		0.16	0.17	0.31	5.7	1 ft. by 1 ft. carbonaceous zone

*channel, composite, channel, chip, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) 120 tons

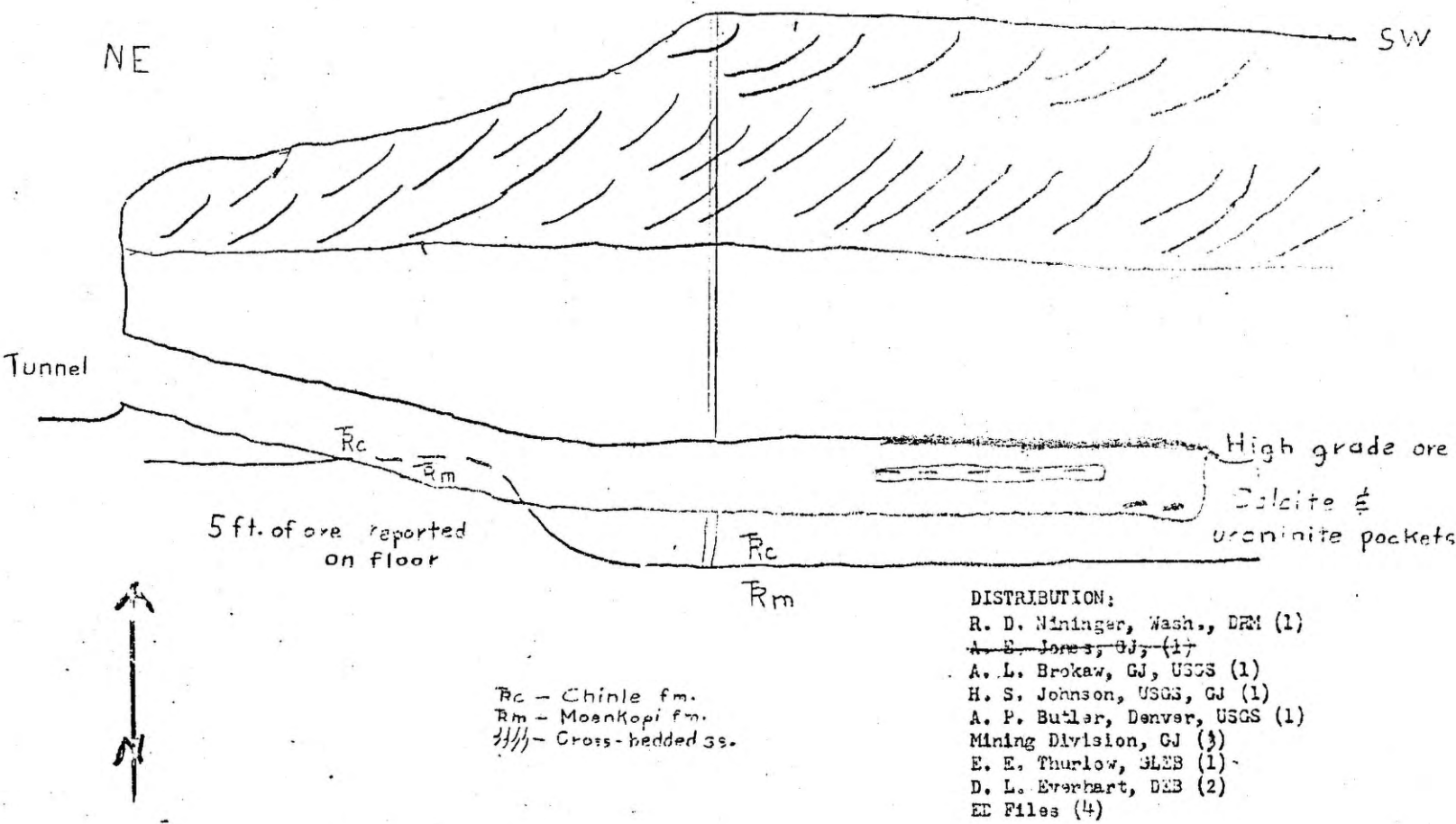
13. Estimated production potential

14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study. One or two outcrops a mile from the property on the west side of Lavender Creek, show a radiometric high. Also for 2 miles in the More Back area, several miles down Indian Creek, on the east bank.

15. Is area recommended for further study? No. It has already been studied.

16. Additional remarks Judging by material on toe face and ... not be shipable. Selective mining is needed, because of lack of drill information. operator is doing blind drifting.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



Scale: 1 inch = 30 feet

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PRELIMINARY RECONNAISSANCE REPORT

Property Rattlesnake File No. ED&R-503Examined by I.T. Flisk, H.M. Dahl, and N.B. Young Date October 22, 19511. Location: State Utah District ICounty San Juan Section 12 T. 29S R. 20E

Number of aerial photographs, if known _____

Road log to deposit Turn east from U. S. Highway 160 at La Sal Junction, Utah, and drive 2.5 miles on the road to La Sal. Turn right, cross the wash and drive south-east for about 3.5 miles.

2. Owners, operators, addresses Continental Uranium Company, Grand Junction, Colorado3. In what formation or member (zone within member) is mineralization located? Upper part of the Salt Wash member of the Morrison formation.4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, lamination, mud galls, solar, interrelation of lithologies)? Medium-grained sandstone with some limonite staining. Some mineralized siltstone splits are adjacent to the ore-bearing sandstone, some are in trashy zones formed of poorly sorted carbonaceous material.5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Disseminated and as replacing carbon; some radioactive minerals replace cement. Mineralization is concentrated above and below siltstone splits.6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? Host rock is highly fractured. Mineralization is in fracture and gouge zones, but fractures probably occurred after ore deposition.7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Permeability, carbon, and perhaps mudstone splits acting as dams.8. Any other features related to mineralization (e.g., alteration, solar change, vegetation, topographic expression, etc.)? None apparent

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.

Carnotite and vanadium minerals.

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10. Estimate dimensions of ore body and/or mineralized zone Greater than 200 by 500 feet.

11. Samples (If no samples are taken, estimate grade with field counter)

No.	Type*	Thick- ness	Assays				Area or volume represented
			U ₃ O ₈	U ₃ O ₈	V ₂ O ₅	CaCO ₃	

High grade ore will probably run over 1.0 percent U₃O₈, and most ore is high grade. Deposit would probably average between 0.75 and 1.0 percent U₃O₈. Mining will be difficult because ore occurs in pockets.

*Channel, composite, channel, chip, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) _____

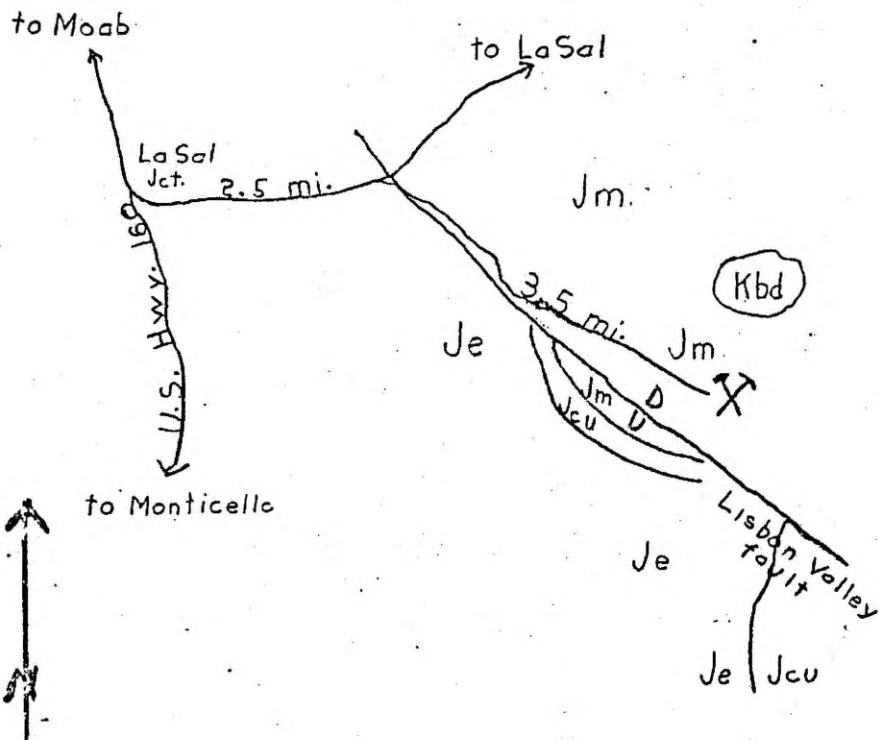
13. Estimated production potential _____

14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study. _____

15. Is area recommended for further study? No, for it is being explored by private capital.

16. Additional remarks Ore is very spotty and occurs in pods. It has been badly fractured by small faults and joints. The sandstone is either highly mineralized or barren; there is no low grade ore. A good deal of sorting will be required before shipping.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



EXPLANATION

- Kbd — Burro Canyon-Dakota fm.
- Jm — Morrison fm.
- Jcu — Curtis fm
- Je — Enfrada ss.
- Fault
- X — Prospect

DISTRIBUTION:

- R. D. Nininger, Wash., DRM (1)
- A. E. Jones, GJ, (1)
- A. L. Brokaw, GJ, USGS (1)
- H. S. Johnson, USGS, GJ (1)
- A. P. Butler, Denver, USGS (1)
- Mining Division, GJ (3)
- E. E. Thurlow, SLMB (1)
- D. L. Everhart, DEB (2)
- ED Files (4)

Scale: 1 in. = 2 mi.

VITAL STATISTICS

Admin. Geologic Dist. I

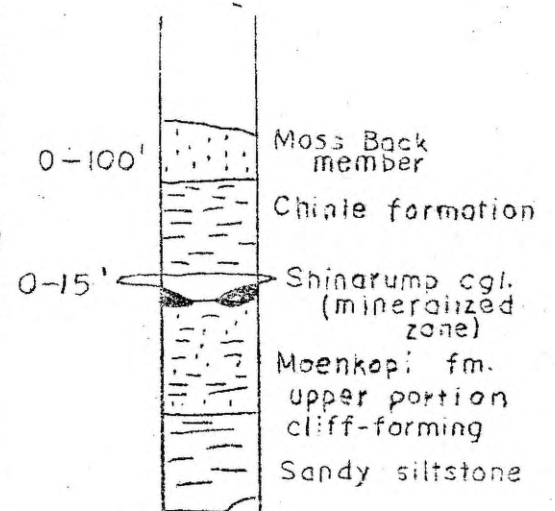
Property White Canyon Joint Ventures Examined by Cronk File No. ED:R-524
 Location: State Utah County San Juan Mining District White Canyon Date August 28, 1955
 Locality (G.L.O. and/or description) Happy Jack area
 Photo No. and/or map coverage _____
 Road log Up Happy Jack road from White Canyon buying station, thence south east around the rim for nearly 2 miles, past the Big Horn mine.

Owners, operators, addresses H. T. James, Manager, Director; H. A. Jose, Mine Manager; Chris Riley, Geologist, Newam Corporation, Seattle, Washington

GEOLOGIC SETTING FOR MINERAL DEPOSIT

1. Petrology of host rock Shinarump cgl.; coarse-grained (.125 to .75 m.m.) even-textured siltstone with occasional quartz pebbles up to 1 inch in diam.; some clay matrix and carbonized material.
3. Sedimentary structures of host unit Channelled, cross-bedded; scours s. 35° - 50° W.; current lineation s. 30° W.
4. Regional tectonic environment West flank of the Hogback upward
5. Local tectonic structures No observations made.
6. Alteration Some questionable bleaching in Shinarump (?) sands and also in nearby Moenkopi exposures.

2. Stratigraphic Column or Geologic Sketch (indicate min. zone)



MINERAL DEPOSIT

1. Form (vein, bedded, stockwork, etc.) Channel bedding
2. Dimensions Channel 50 ± feet wide, 5 to 10 feet deep.
3. Orientation Generally south-southwest
4. Method of emplacement (replacement, impregnation, etc.) Cementation and replacement of carbon. Mineralization weak and spotty.
5. Mineralogy (other than host rock; specimen numbers for lab. work)
 - a. Primary _____
 - b. Secondary _____
6. Ore controls None observed. (no ore observed)
7. Suggested guides to ore None observed

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8. Adjacent mineral deposits Happy Jack deposit
9. Additional remarks Company applying for DMEA loan. Examination made in company of F. Byers, Jr., U.S.G.S., and M. Salisbury, USBM (DMEA examiners). Six hundred foot cross-cut driven of estimated 2200 foot drive to intersection.

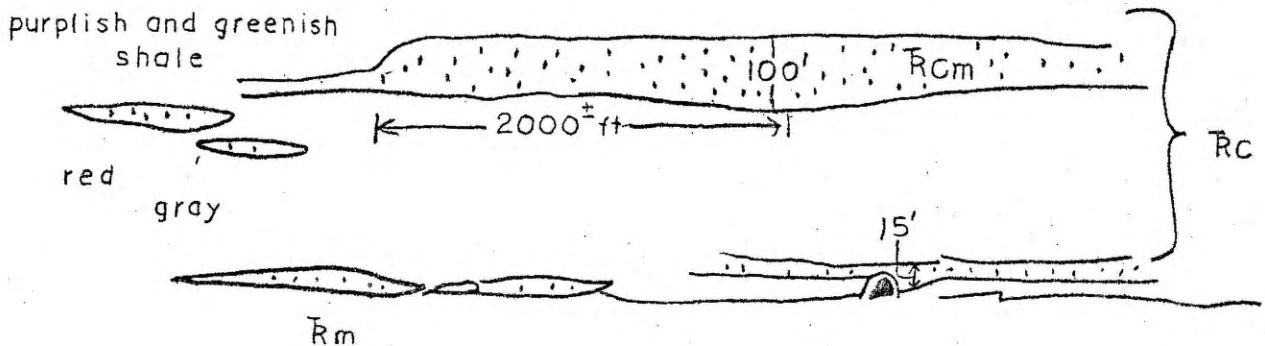
10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)
- | No. | Type* | Length | Assays | | | | Area or volume represented |
|-----|-------|--------|---------------------------------|-----------------------------------|---------------------------------|---------------------|----------------------------|
| | | | U ₃ O ₈ % | U ₃ O ₈ c % | V ₂ O ₅ % | CaCO ₃ % | |

No samples taken

Byers notes some radioactive anomalies in highly localized portions of tunnel.

11. Maps and Sections (sketch, pace, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: Sketch, not to scale



Upper part: dark red sandy siltstone; cliff forming

Longitudinal section

EXPLANATION

- Chinle formation with Moss Back member
- Shinarump cgl.
- Moenkopi fm.



12. Production history: inclusive dates No Production tons _____ grade _____
13. Reserve estimates (classification, tons, grade under current mining conditions)
Prospect is cross-cut to assumed paleostream channel.
14. Recommendation for further work Routine monthly report check.

Distribution:

- | | |
|---------------------------------------|-------------------------------|
| R. D. Nininger, Wash., DRM (1) | A. P. Butler, Denver USGS (1) |
| A. E. Jones, GJ (1) | Mining Division, GJ . . . (3) |
| A. L. Brokaw, GJ, USGS . (1) | E. E. Thurlow, SLEB . . (1) |
| H. S. Johnson, USGS, GJ . (1) | D. L. Everhart, DEB . . . (2) |
| Technical Services, GJ (2) | ED Files (4) |

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PRELIMINARY RECONNAISSANCE REPORT

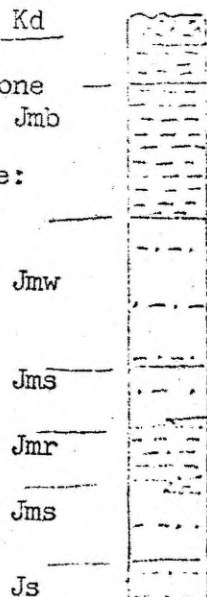
File No. ED-7-533
Geologic Dist. No. 1
Names of examining party:
C. W. Tom

PROPERTY STATISTICS

Name Pete No. 6 and No. 7 Mines Date February 21, 1956
Location: State Utah County San Juan Mining District Montezuma Canyon
Locality (G.L.O. and/or description) Sec. 8, T39S, R25E
Photo No. and/or map coverage _____
Road log C - 15.4 South on Utah 17 from Blanding to Hovenweep rd.
15.4 - 31.5 west on Hovenweep rd. to Larch Trading Post
31.5 - 34.2 east on same road to Int. Sanwick turn-off to north
34.2 - 34.7 to Pete 6 and 7 units
Owners, operators, addresses International Sanwick Ltd. First National Bank Bldg.
Denver, Colorado; William Palmer, Cortez, Colorado, Supt.; Howard Moorhouse,
Caretaker

GEOLOGIC SETTING FOR MINERAL DEPOSIT

- Name of host rock BRUSHY Basin
- Stratigraphic Column or Geologic Sketch (indicate min. zone)
- Petrology of host rock (incl. ore zone) Var. ms. and sts. w/ thin bed gray to buff ss. Ore occurs in three distinct zones: (1) thin-mineralized and coating fractures in brick-red sts. about 2' thick, (2) disseminated (?) and coating fractures in gray or locally buff sts. about 2' thick, (3) as replacements of lenticular VF ss. in (2) zone.
- Sedimentary structures of host unit thin Gn ms observed above ore. Local scours (?) in sts. filled with VF ss.
- Regional tectonic environment Blanding Basin between Abajo Mts. and Comb Ridge on NW and W respectively, and Ute Mts. to east. Beds are approximately horizontal.
- Local tectonic structures and relation to ore Secondary and possibly primary U minerals along fractures. 2 fractures N55°E, 2-77°E, 1 - N20°W.
- Alteration As appears to have been in part altered from red to green in area examined. Whether Gn and buff colors in sts. and ss. are due to alteration is not known. Much Yw and R Fe(?) noted along fractures.



MINERAL DEPOSIT

- Form (vein, bedded, stockwork, etc.) Widespread thin-bedded deposit.
- Dimensions NOT known. Drilling indicates some 50 mineralized claims in vicinity.
- Orientation (rebody believed elongated east-west.
- Method of emplacement (replacement, impregnation, etc.) Appears to be disseminated in R and Gn sts. and to replace cement (?) in VF ss. near contact with sts. and along fractures (?).
- Mineralogy (other than host rock; specimen numbers for lab. work)
 - Primary Uraninite (?), some Fe (?) sulfides. Specimen Nos. 1-T-2-15-6, 2-T-2-15-6, 3-T-2-15-6.
 - Secondary Yw and greenish mins. w/ bladed, acicular, and radiated habit associated with fractures.
- Ore Controls A thin (0.1-0.5 ft.) Gn mud seam directly overlies the sts. ore zone and may have provided a relatively impervious barrier to lateral migrating solutions. High Fe content may be significant as a means of absorbing and/or precipitating U.
- Suggested guides to ore Brick R sts. some to abundant Fe staining in and adjacent to host. Thin Gn mud seam capping thin sts. beds.

Signature(s) and Position(s) of Reporting Geologist(s)

Distribution:

- R. D. Nininger, Wash., DRM (1)
- XXXXXXXXXXXXXXXXXXXXXXXXXXXX(1)
- A. L. Brokaw, GJ, USGS (1)
- H. S. Johnson, USGS, GJ (1)
- A. P. Butler, Denver, USGS (1)
- Mining Division, GJ . . . (1)
- E. E. Thurlow, SLEB . . . (1)
- D. L. Everhart, DEB . . . (2)
- ED Files (4)

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8. Adjacent mineral deposits Similar deposit on School Sec. 16, T39S, R25E, Cottonwood Mine 20 miles north in Montezuma Canyon.

9. Additional remarks At time of the temporary shut-down (Feb. 1), due to impassable roads drifts were being driven to a reported 5-7 ft. of 1.0% ore found by drilling. This group of claims has been extensively drilled and the areal distribution of mineralization fairly well outlined. Mineralized brick-red sts. has been noted several miles west of the Pete Mine.

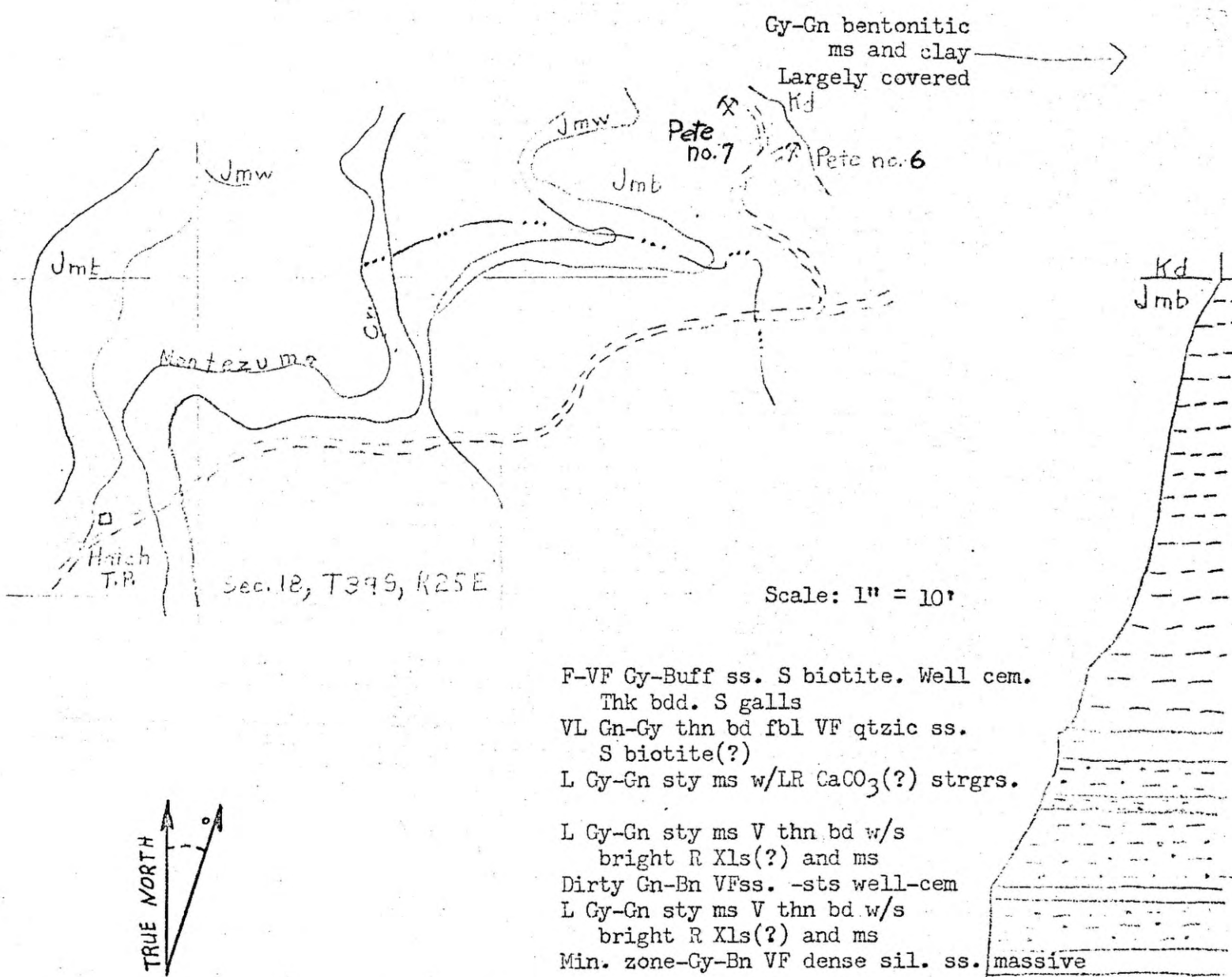
10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)

No.	Type*	Length	Assays				Area or volume represented
			U ₃₀₈ %	U ₃₀₈ %	V ₂₀₅ %	CaCO ₃ %	
34627	High-Grade						
34628	Specimen						
34629	"						
34630	"						
34631	"						
34632	"						
34633	"						

*Channel, chip, selected grab

11. Maps and Sections (sketch, pace, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: 1" = 2640'



12. Production history: inclusive dates 9/1/55 to 2/1/56 tons 2889 grade 0.23% U₃₀₈

13. Potential reserve estimates (classifications, tons, grade under current mining conditions)
Drill hole data must be obtained from the Company and studied before potential reserve estimate can be made.

14. Recommendation for further work This operation should be checked regularly. The spatial distribution of the min. brick-red sts. and its potential as an ore producer should be determined. In view of the intense mineralization in the Brushy Basin of this area, it should be given a closer scrutiny as a whole. Some work is required to ascertain favorability criteria.

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PRELIMINARY RECONNAISSANCE REPORT

File No. ED:R-549

Geologic Dist. No. 1

Names of examining party:
H. M. Dahl
W. H. Royer
E. E. Anderson

PROPERTY STATISTICS

Name Sandbar No. 10 (formerly Lucky 13) Date December 13, 1955
 Location: State Utah County San Juan Mining District _____
 Locality (G.L.O. and/or description) Sec. 15, T. 35 S., R. 13 E., 4 miles down Colorado River from Hite on east side of river opposite mouth of Four Mile Canyon.
 Photo No. and/or map coverage Hite Quadr. etc., Utah, Topo. map 1:62,500 & Tinkes et al., Roadster Geologic Map of White Canyon & Deer Flats Areas, San Juan Co., Utah, Road Log Via Utah Highway 95, west from Blending, Utah, 88 miles to White Canyon, Utah; then left at old uranium mill, on mine and drilling access road, taking right fork and proceeding down Colorado River on east bank 5 miles to pit at end of road.
 Owners, operators, addresses Utah Plateau Uranium Corporation, Luke S. Pappas

GEOLOGIC SETTING FOR MINERAL DEPOSIT

- | | |
|--|--|
| <p>1. Name of host rock <u>Basal Chinle Sandstone member, possibly Shinarump lens?</u></p> <p>3. Petrology of host rock (incl. ore zone) <u>Coarse quartz ss w/clay cement & abundant coalified carbon along bedding planes. Pyrite is abundant as replacement of carbonaceous material. Carbon occurs as twigs & foot in width down to specks but, dominantly in seams 1/2 inch to 5 inches thick (average 1 1/2 inches)</u></p> <p>4. Sedimentary structures of host unit <u>Bedding in host unit 6 inches to 3 feet thick cross-bedded within.</u></p> <p>5. Regional tectonic environment <u>The area is centrally located on the western margin of the Monument. Upward.</u></p> <p>6. Local tectonic structures and relation to ore <u>Beds dip approximately 2 to 3 degrees southerly. Moderate fracturing in overlying Wingate.</u></p> <p>7. Alteration <u>Tr. Ms and Ss below x-bed Ss shows green alteration for about 2'. Ms of interbedded Ss, Ms, & Ss above min. zone is red except on edges of splits where it is green.</u></p> | <p>2. Stratigraphic Column or Geologic Sketch (indicate min. zone)</p> <p>Navajo ss 500' ±</p> <p>Kayenta fm 200' ±</p> <p>Wingate ss 300' ±</p> <p>Chinle fm 500-700'</p> <p>Min. in basal ss (probably not Shinarump)</p> <p>Unconfor.</p> <p>Moenkopi fm 200-300'</p> <p>Unconfor.</p> <p>Cutler fm.</p> <p>Organ Rock Tongue 300' ±</p> <p>Modified from USGS Bull. 1009 H</p> |
|--|--|

MINERAL DEPOSIT

1. Form (vein, bedded, stockwork, etc.) Mineralization appears restricted to cross bedded Ss member of small channel.
2. Dimensions Unknown
3. Orientation Channel trends approximately west.
4. Method of emplacement (replacement, impregnation, etc.) Impregnation of sandstone with some control exerted by cross bedding and replacement of coalified material.
5. Mineralogy (other than host rock; specimen numbers for lab. work)
- a. Primary Carbonaceous material may contain primary uranium minerals. Pyrite replaces some carbon and is also disseminated in sandstone.
- b. Secondary Yellowish-green and yellowish-orange minerals are probably secondary uranium. They are aligned along bedding planes and coat carbon.
6. Ore Controls Whether mineralization is restricted to channel or not was not determined; however, within the mineralized sandstone observed, radioactivity is most intense along bedding planes where carbonaceous material is most abundant.
7. Suggested guides to ore Accumulations of carbonaceous material, preferably in medium to coarse permeable beds such as channel fillings should be sought. A stratigraphic position near the base of the Chinle and strong alteration of the underlying Moenkopi would appear to be favorable.

Signature(s) and Position(s) of Reporting Geologist(s)

Distribution:
 R. D. Nearing, Wash., DRM (1)
~~W. H. Royer, Denver, USGS (1)~~
 A. L. Brokaw, GJ, USGS (1)
 H. S. Johnson, USGS, GJ (1)
 A. P. Butler, Denver, USGS (1)

Mining Division, GJ . . . (1)
 E. E. Thurlow, SLEB . . . (1)
 D. L. Everhart, DEB . . . (2)
 ED Files (4)

8. Adjacent mineral deposits Prospect is 10 miles east of the Dal Monte mine and 12 miles west of the Harry Jack mine. Other mines in the immediate vicinity are known to have shipped small tonnages from time to time. (De Varyia, RMO 822, 1952)

9. Additional remarks A number of similar prospects were examined in this vicinity, one of which showed considerable copper mineralization associated with the uranium. (Jay Bird). This was mostly azurite and malachite. All prospects examined were in the base of the Chinle.

10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)

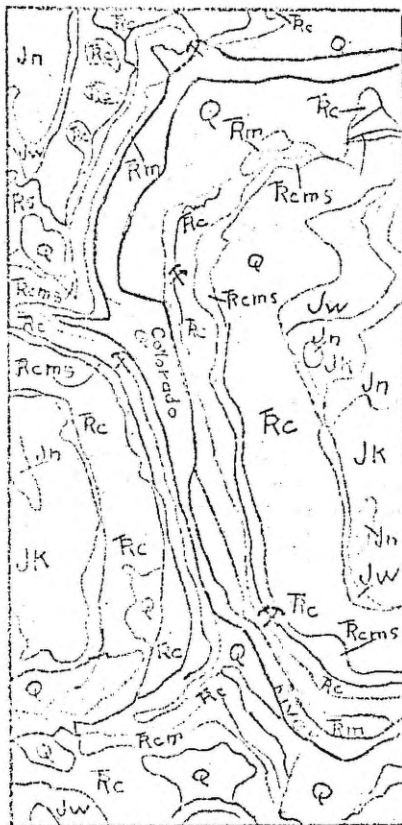
No.	Type*	Length	Assays				Area or volume represented
			U ₃₀₈₀ %	U ₃₀₈₀ p	V ₂₀₅ %	CaCO ₃ %	
0.2% estimation for small seams of high-grade based on wall survey with La Roe scintillometer.							

Highest reading obtained in the area was near the portal of the copper-bearing deposit 1/2 mile north of the Sandbar No. 10. This read greater than 5.0 mR/hr, the top reading on the La Roe scintillometer. Since it was highest at the portal, it may be due to secondary concentration of leached material.

*Channel, chip, selected grab

11. Maps and Sections (sketch, page, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: 1 1/2 in. = 1 mi.



Geology traced from Trites, et al., Geol. Map of White Canyon & Deer Flats Area, San Juan Co., Utah.

Quaternary deposits Q

Navajo sandstone Jn X prospect or mine investigated.

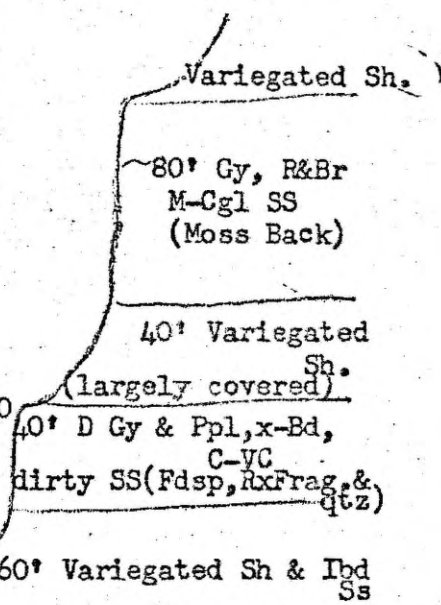
Kayenta formation Jk (X) Sandbar No. 10

Wingate formation Jw Generalized Geologic Section Sandbar No. 10

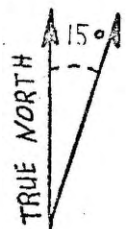
Moss Back member Chinle Rcms

Chinle formation Rc 1" = 80'

Moenkopi formation Rm



Chinle ↑ 10' Gy, x-Bd, Cbn, M-VC-Cgl SS, U+Cu
 Moenkopi ↓ bearing Br, Ibd Ms & Ss 2' Gn alteration



12. Production history: inclusive dates (see No. 8 above) tons Unknown grade Unknown

13. Potential reserve estimates (classifications, tons, grade under current mining conditions)
 More work is necessary before a potential reserve estimate can be made.

14. Recommendation for further work The companies, who have done production work, prospect drilling, stripping and drilling, should be contacted to ascertain information obtained. Both Chinle and/or Shinarump should be mapped in area to delineate their extent. Channels should be mapped as a prospecting aid.

ED:R-601

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PRELIMINARY RECONNAISSANCE REPORT

VITAL STATISTICS

Admin. Geologic Dist. # 1

Property White Canyon # 1 Mine Examined by Hanshaw File No. ED-1-501

Location: State Utah County San Juan Mining District White Can. Date 6/22/50

Locality (G.L.O. and/or description) Fry Point

Photo No. and/or map coverage

Road log Proceed from Blanding on Utah route 95 for 45 miles to intersection with road to AEC camp on left. Remain on route 95 toward Hite for another seven miles. Then take mining road on left and begin steep climb. After proceeding on this mine road for a distance of two miles, the ore

Owners, operators, addresses White Canyon Mining Company, Dove Creek, Colorado

GEOLOGIC SETTING FOR MINERAL DEPOSIT

- 1. Petrology of host rock Green Ss & Cgle of Qtz & re-worked Moenkopi pbls. Abundant con logs & trash. Ss consists mainly of Qtz w/some feldspars
- 3. Sedimentary structures of host unit Shinarump channel and occurs into underlying Moenkopi fr.
- 4. Regional tectonic environment Mine is located on west flank of Monument Upland.
- 5. Local tectonic structures Local fracture pattern apparently unrelated to deposition of ore. Fracture pattern
- 6. Alteration 2' alt. of Iron fr. from red to gn. Goethite, hematite, malachite, azurite, uranopilite, schroederite near portal (Oxid. zone) - Jarosite covellite, chalcocite deeper in mine (50' - 150').

2. Stratigraphic Column or Geologic Sketch (indicate min. zone)

Tr _c Mossback Ss	75'
Tr _c Monitor Butte Sts & Ms	120'
Tr _c Shinarump Ss & Cgle MINERALIZED	00-65'
Tr _c Moenkopi Ss, Sts, Ms	160-270'
Tr _c Hoskinnini Ss	70-150'

MINERAL DEPOSIT

- 1. Form (vein, bedded, stockwork, etc.) Bedded deposit. Uranium mainly assoc. w/con logs and trash and disseminated along bedding planes.
- 2. Dimensions 10' x 10' wide and 10' long. Workers are headed for newly drilled ore body.
- 3. Orientation Channel and mine are oriented roughly north-south as is new ore body.
- 4. Method of emplacement (replacement, impregnation, etc.) Apparently both the uranium and the iron replaced con logs; U as uraninite and Fe as pyrite. Also uranium deposited in pores of sandstone and replacing ms walls.
- 5. Mineralogy (other than host rock; specimen numbers for lab. work)
 - a. Primary Uraninite, pyrite, chalcocite, covellite (sulfide zone).
 - b. Secondary Uranopilite, schroederite, malachite, azurite, torbernite(?)
- 6. Ore Controls Channel lithology, Fe and U assoc. w/con trash and logs in channel. Uranium deposited in pores of sandstone and replacing ms walls as replacement in ms walls.
- 7. Suggested guides to ore See No. 6 above.

DISTRIBUTION:

GJCO Library (1)
Geologic Branch Files (1)

District Geologist (1)
Area Geologist (1)

MINE White Canyon # 1 LOCATION White Canyon DATE 6/19/50
GEOLOGY BY E. Hanshaw SURVEY BBH, DBG, TW SCALE 1" = 40'

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8. Adjacent mineral deposits. The Saddle Mine also owned by White Canyon is the adjacent property. It appears to be located on a smaller adjacent channel. The no Cu in its ore and only low grade (.15 - 20%) ore so far reached.
9. Additional remarks. Mining Co. is currently drilling out a large ore body oriented approx. N-S with lateral dimensions of 20-30' wide and 1500' in length. Ore usually 6' thick and runs 0.30-0.40%. Present mine will intersect ore body. Ore body still not completely delineated. (Verbal communication, E. Hanson 10/10/56)

10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)
- | No. | Type* | Length | Assays | | | | | Area or volume represented |
|-----|-------|--------|-----------------------------------|-----------------------------------|---------------------------------|---------------------|-------|----------------------------|
| | | | U ₃ O ₈ e % | U ₃ O ₈ c % | V ₂ O ₅ % | CaCO ₃ % | Other | |

Background in mine is 0.5 to 1.2 mR/hr

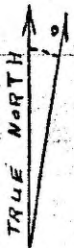
Some logs near far end of mine run 2.0 to 3.0 mR/hr

Small local concentrations of secondary uranium minerals register high but no good face of continuous ore was observed with the counter.

*Channel, chip, grab

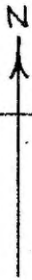
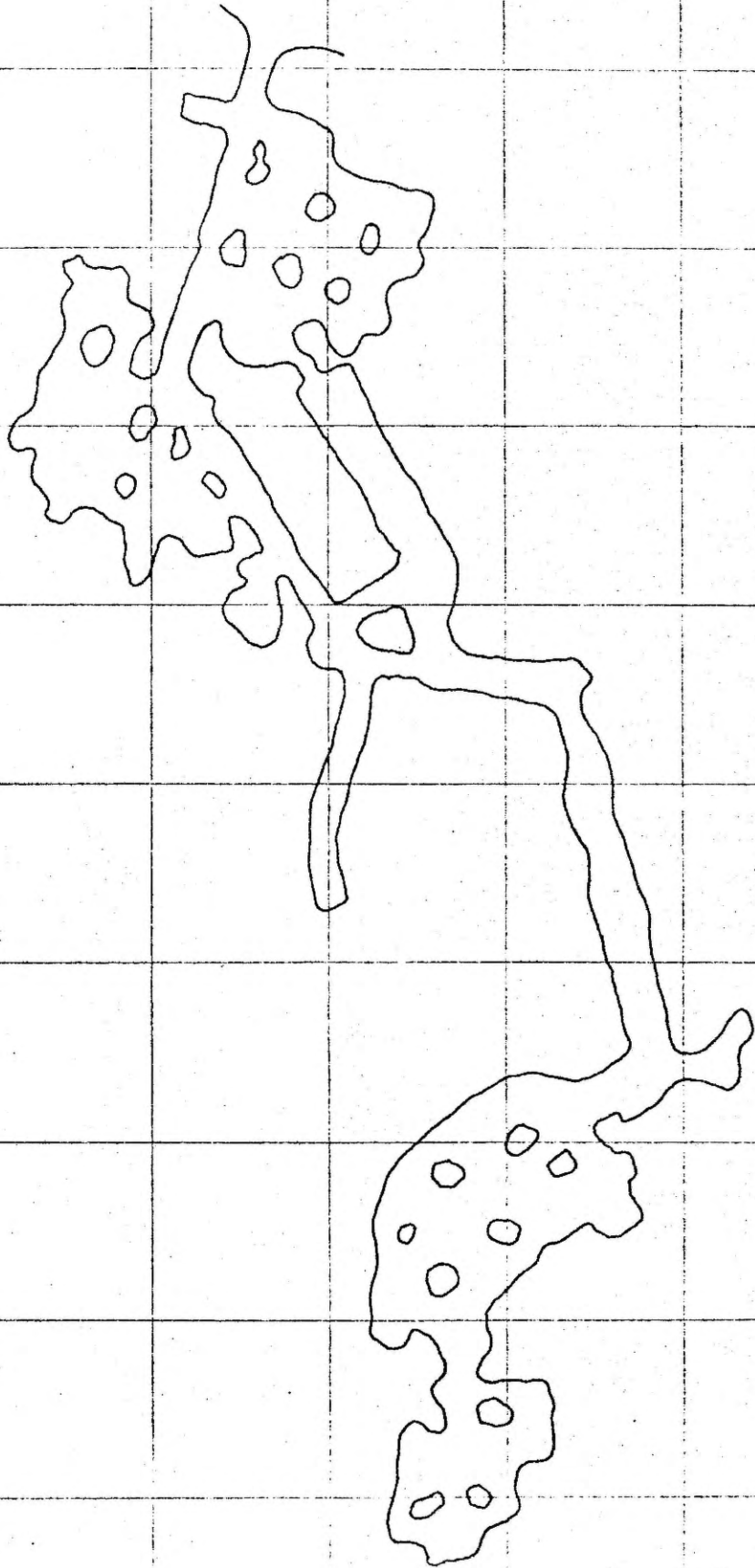
11. Maps and Sections (sketch, pace, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: 1" = 2 mi.



12. Production history: inclusive dates 6/52 - 4/56 tons 2,000 grade unknown
13. Reserve estimates (classification, tons, grade under current mining conditions)
Indicated from current drilling - 16,000 tons of 0.30-0.40% U
Drilling is not yet complete and there is no sign of the channel pinching out or of running out of ore.
14. Recommendation for further work White Canyon mining plans to continue drilling
until the full extent of the channel and ore body are definitely known.

ED-M-601



MINE White Canyon #1 LOCATION PEZ Pt., White Canyon Dist. LEVEL 1 of 1
GEOLOGY BY P. Manshaw SURVEY BSH, JBB, TW SCALE 1" = 40' DATE 6/19/56

100 M. DUNN & SONS PRINT & SUPPLY CO., CHANE JUNCTION, W. V.

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PRELIMINARY RECONNAISSANCE REPORT

Property Rattlesnake File No. ED:R-503Examined by I.T. Fisk, H.M. Dahl, and N.B. Young Date October 29, 19511. Location: State Utah District ICounty San Juan Section 12 T. 40S. 3. 20E

Number of aerial photographs, if known _____

Road log to deposit Turn east from U. S. Highway 160 at La Sal Junction, Utah, and drive 2.5 miles on the road to La Sal. Turn right, cross the wash and drive south-east for about 3.5 miles.

2. Owners, operators, addresses Continental Uranium Company, Grand Junction, Colorado3. In what formation or member (zone within member) is mineralization located? Upper part of the Salt Wash member of the Morrison formation.4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scour, lamination, mud galls, color, interrelation of lithologies)? Medium-grained sandstone with some limonite staining. Some mineralized siltstone splits are adjacent to the ore-bearing sandstone, some are in trashy zones formed of poorly sorted carbonaceous material.5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Disseminated and as replacing carbon; some radioactive minerals replace cement. Mineralization is concentrated above and below siltstone splits.6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? Host rock is highly fractured. Mineralization is in fracture and gouge zones but fractures probably occurred after ore deposition.7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Permeability, carbon, and perhaps mudstone splits acting as dams.8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? None apparent

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.

Carnotite and vanadium minerals.

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10. Estimate dimensions of ore body and/or mineralized zone Greater than 200 by 500 feet.

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick- ness	Assays				Area or volume represented
			U ₃ O ₈	U ₃ O ₈	V ₂ O ₅	CaCO ₃	
			3.0	3.8	2.5		

High grade ore will probably run over 1.0 percent U₃O₈, and most ore is high grade. Deposit would probably average between 0.75 and 1.0 percent U₃O₈. Mining will be difficult because ore occurs in pockets.

*Channel, composite, channel, chip, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade)

13. Estimated production potential

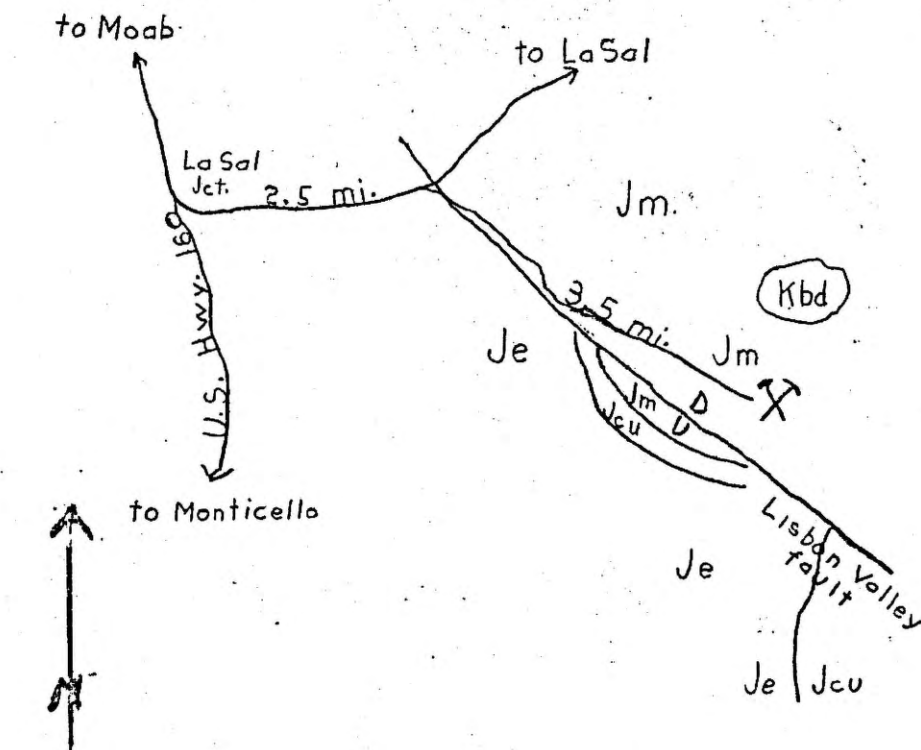
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study.

15. Is area recommended for further study? No, for it is being explored by private capital.

16. Additional remarks Ore is very spotty and occurs in pods. It has been badly fractured by small faults and joints. The sandstone is either highly mineralized or barren;

there is no low grade ore. A good deal of sorting will be required before shipping.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



EXPLANATION

- Kbd — Burro Canyon-Dakota fm.
- Jm — Morrison fm.
- Jcu — Curtis fm.
- Je — Entrada ss.
- Fault
- X Prospect

DISTRIBUTION:

- R. D. Ninninger, Wash., DDM (1)
- A. E. Jones, GJ, (1)
- A. L. Brokaw, GJ, USGS (1)
- H. S. Johnson, USGS, GJ (1)
- A. P. Butler, Denver, USGS (1)
- Mining Division, GJ (3)
- E. E. Thurlow, SLEB (1)
- D. L. Everhart, D&E (2)
- ED Files (4)

Scale: 1 in. = 2 mi.

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PRELIMINARY RECONNAISSANCE REPORT

Property Lost Treasure no. 1 File No. ED:R-462
 Examined by Otha W. McBee Date April 5, 1955
 1. Location: State Utah District 1: Cane Springs Canyon
 County San Juan Section 8 T. 28 S. 22 E

Number of aerial photographs, if known _____

Road log to deposit Travel south from Moab, Utah, on U. S. Hwy. 160 to the Hole in the Rock Diner. On the west side of the highway is an unimproved road which follows Cane Creek for about 4.5 miles to the property.

2. Owners, operators, addresses Vic Nelson, American Energy Co.; Moab, Utah

3. In what formation or member (zone within member) is mineralization located? _____

Upper part of the conglomeratic sandstone unit of the Moss Back member of the Chirle formation.

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, lensing, mud galls, color, interrelation of lithologies)? Thin-bedded to massive, in part cross-bedded, gray interbedded sandstones and conglomerates. Sandstones are fine- to coarse-grained; conglomerate contains very fine-grained sub-rounded and poorly sorted pebbles and 1/4-inch to 1 1/2-inch diameter siltstone pebbles. Green mudstone galls and seams are common.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? _____

Mineralization apparently associated with carbonaceous material, which is abundant throughout the conglomerates.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? _____

Limonite and hematite are associated with carbon trash and also coat joint surfaces. Joints occur at about 20-foot intervals striking N. 40° E., dipping 70° to 75° SW.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? _____

Carbonaceous material and joints.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? Limonite and hematite occur along joint planes and are associated

with carbonaceous material dispersed in the conglomerate.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.

No visible uranium minerals; associated minerals are limonite, hematite and
pyrite.

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10. Estimate dimensions of ore body and/or mineralized zone. Mineralization confined to carbonaceous zone about 30 feet long and 3 or 3 feet thick.

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick-ness	Assays				Area or volume represented
			U3O8	U2O8	V2O5	CaCO3	

*Channel, composite, channel, ship, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) None

13. Estimated production potential It is doubtful whether the mineralized zone extends very far behind the rim.

14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study. No

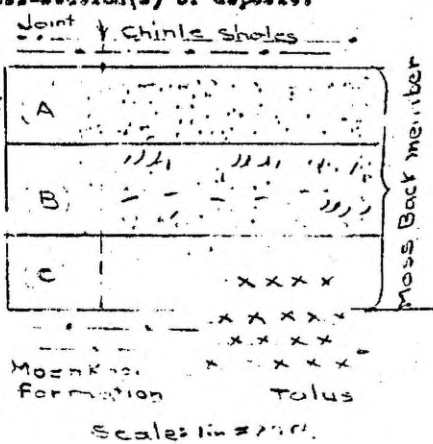
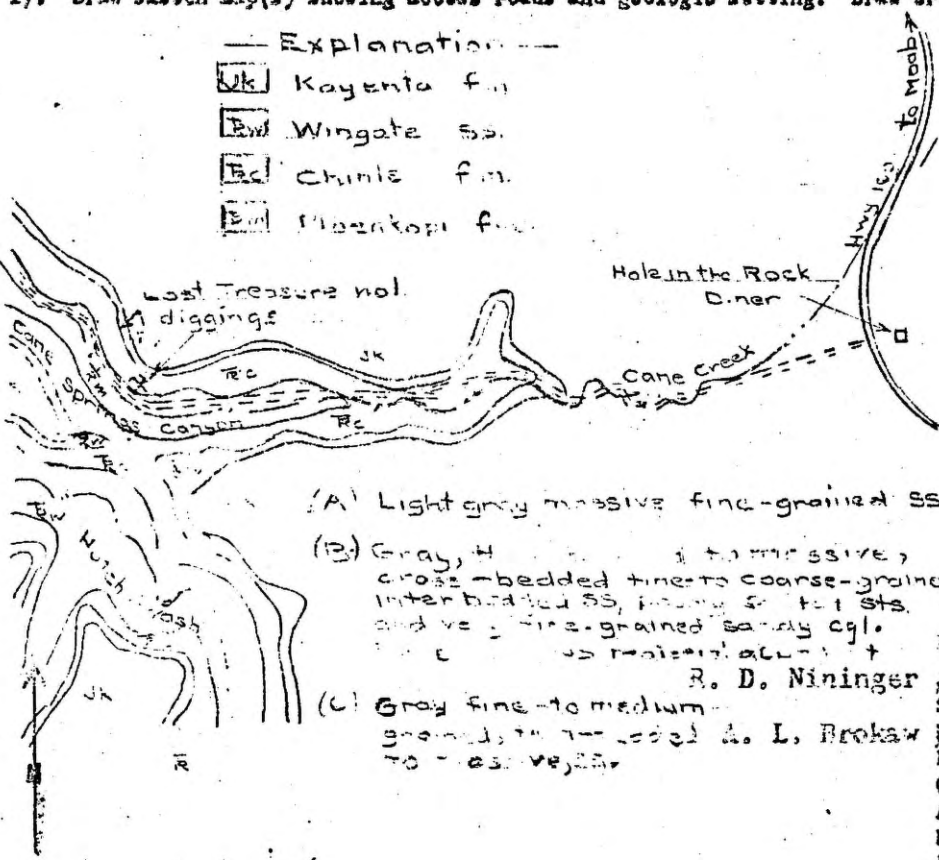
15. Is area recommended for further study? No

16. Additional remarks Continued rim blasting could possibly turn up more and better mineralization, but it is doubtful, for most of the carbon trash has already been blasted from the rim.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.

— Explanation —

- Uk Kayenta fm.
- Ew Wingate ss.
- Ec Chinle fm.
- Em Moenkopi fm.



- (A) Light gray massive fine-grained SS
- (B) Gray, thin-bedded to massive, cross-bedded fine to coarse-grained interbedded SS, passing to thin ss. and very fine-grained sandy cgl. (see notes on material above)
- (C) Gray fine to medium-grained, thin-bedded to massive SS.

- CONTRIBUTORS:
- J. O. Boyce, Washington, DRM (1)
 - S. P. Wimpfen, GS (1)
 - A. P. Wimpfen, GS, USGS (1)
 - E. E. Thurlow, SLES (1)
 - C. C. Fowls, DES (2) (1)
 - A. P. Butler, Denver, USGS (1)
 - Mining Division (1) (3)
 - ED Files (4)
 - H. S. Johnson, GS, USGS

Scale: 1 inch = 1 mile

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PRELIMINARY RECONNAISSANCE REPORT

Property Leas 1, Lease no. 1 File No. ED:R-462
 Examined by Orin M. McSore Date April 5, 1955
 1. Location: State Utah District 1: Cane Springs Canyon
 County San Juan Section 8 T. 28 S. R. 22 E

Number of aerial photographs, if known _____

Road log to deposit Travel south from Moab, Utah, on U. S. Hwy. 160 to the Hole in the Rock Mine. On the west side of the highway is an unimproved road which follows Cane Creek for about 4.5 miles to the property.

2. Owners, operators, addresses Vic Nelson, American Energy Co., Moab, Utah

3. In what formation or member (zone within member) is mineralization located? _____

Upper part of the conglomeratic sandstone unit of the Moss Back member of the Chinle formation.

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, lensing, mud galls, color, interrelation of lithologies)? Thin-bedded to massive, in part cross-bedded, gray interbedded sandstones and conglomerates. Sandstones are fine- to coarse-grained; conglomerate contains very fine-grained sub-rounded and poorly sorted pebbles and 1/4-inch to 1 1/2-inch diameter siliceous pebbles. Green mudstone galls and seams are common.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? _____

Mineralization apparently associated with carbonaceous material, which is abundant throughout the conglomerates.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? _____

Limonite and hematite are associated with carbon trash and also coat joint surfaces. Joints occur at about 20-foot intervals striking N. 40° E., dipping 70° to 75° SW.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? _____

Carbonaceous material and joints.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? Limonite and hematite occur along joint planes and are associated

with carbonaceous material dispersed in the conglomerate.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.

No visible uranium minerals; associated minerals are limonite, hematite and pyrite.

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10. Estimate dimensions of ore body and/or mineralized zone. Mineralization confined to carbonaceous zone about 30 feet long and 1 or 3 feet thick.

11. Samples (If no samples are taken, estimate grade with field counter)

No.	Type*	Thick- ness	Assays				Area or volume represented
			U308a	U308b	Y205	CaF2	
No samples							

*Channel, composite, channel, chip, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) None

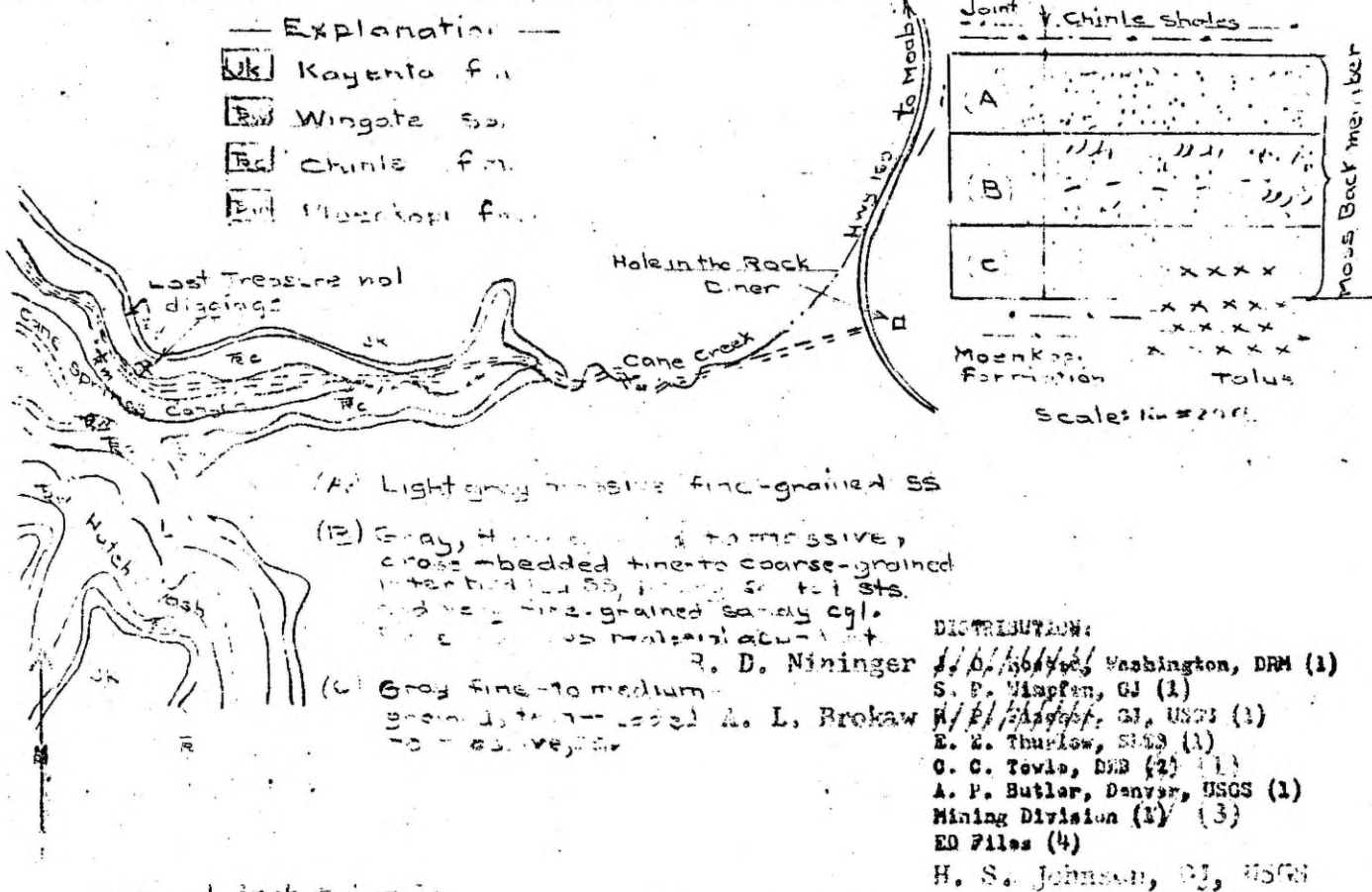
13. Estimated production potential It is doubtful whether the mineralized zone extends very far behind the rim.

14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study. No

15. Is area recommended for further study? No

16. Additional remarks Continued rim blasting could possibly turn up more and better mineralization, but it is doubtful, for most of the carbon trash has already been blasted from the rim.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



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PRELIMINARY RECONNAISSANCE REPORT

Property Red Mesa Copper Pit File No. ED-R-425
 Examined by W. L. Chenoweth Date March 1, 1955
 1. Location: State Utah District #5
 County San Juan County, Navajo Reservation Section 7.43S n. 23 E
 Number of aerial photographs, if known GS-KL 1-14 (5-29-50)

Road log to deposit Deposit is about 2 miles northwest of Red Mesa Trading Post and can be best reached by sandy wagon roads from the Trading Post (see sketch on back).

2. Owners, operators, addresses Unknown - if any

3. In what formation or member (zone within member) is mineralization located? Upper part of the Navajo sandstone

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, lamination, mud galls, spher, interrelation of lithologies)? The Navajo is a pinkish fine-grained, cross-bedded, massive sandstone of eolian origin.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below sandstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Mineralization (malachite associated with voglite) occurs interstitially.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? Mineralization follows along the edge of a dike in the vicinity of a collapse area, probably a diatreme.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Mineralization is controlled by the dike.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? Sandstone is altered from pink to light gray in the vicinity of the deposit.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study. Voglite (lab. sample #1157; petrographical report #315) associated with malachite. Biotite, hematite also present.

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10. Estimate dimensions of ore body and/or mineralized zone Exposed in test pit 10 feet long, 3 feet wide and 3 feet deep.

11. Samples (if no samples are taken, estimate grade with field analyzer)

No.	Type*	Thick-ness	Assays			Area or volume represented
			U308a	U308b	U295-Cu	
15286	chip	3'	.04	-	1.57	
15287	chip	1'	.04	-	.15	
15288	chip	1'	.03	-	6.42	
33030	grab		.07	.10	6.48	
1157	selected high grade			.18	8.26	

*Channel, composite, channel, chip, grab; thickness refers to length of out channel.

12. Past production (tonnage and grade) None

13. Estimated production potential Nil

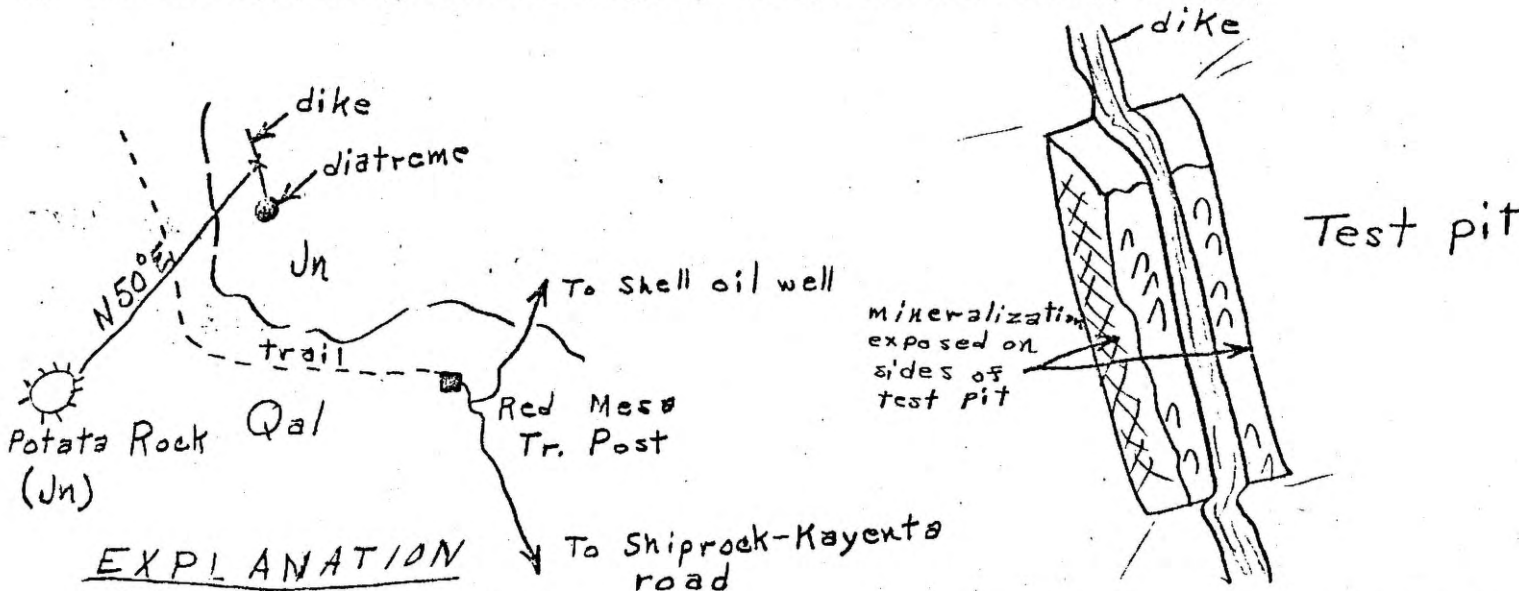
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study.

This occurrence is similar to the copper-uranium deposit to the west on Garnet Ridge.

15. Is area recommended for further study? Yes - detailed mapping of the diatreme.

16. Additional remarks

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



EXPLANATION

- Qal Quaternary alluvium
- Jn Navajo sandstone

R. D. Nininger
A. L. Brokaw

- DISTRIBUTION:
- A. D. Hooton, Washington, DPM (1)
 - B. P. Wierman, GJ (1)
 - A. P. Fisher, GJ, USGS (1)
 - E. W. Thurlow, SLEB (1)
 - C. G. Towle, DEB (3)
 - A. P. Butler, Denver, USGS (1)
 - Mining Division (I) (3)
 - ED Files (4)
 - H. S. Johnson, USGS, GJ

0 1 2 3 Feet

Scale: 1" = 1 mile

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PRELIMINARY RECONNAISSANCE REPORT

Property Red Mesa Copper Pit File No. ED-R-425

Examined by W. L. Chenoweth Date March 1, 1955

1. Location: State Utah District #5

County San Juan County, Navajo Reservation Section T. 43S R. 23 E

Number of aerial photographs, if known GS-KL 1-14 (5-29-50)

Road log to deposit Deposit is about 2 miles northwest of Red Mesa Trading Post and can be best reached by sandy wagon roads from the Trading Post (see sketch on back).

2. Owners, operators, addresses Unknown - if any

3. In what formation or member (zone within member) is mineralization located?

Upper part of the Navajo sandstone

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, lensing, and galls, color, interrelation of lithologies)?

The Navajo is a pinkish fine-grained, cross-bedded, massive sandstone of eolian origin.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)?

Mineralization (malachite associated with voglite) occurs interstitially.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)?

Mineralization follows along the edge of a dike in the vicinity of a collapse area, probably a diatrema.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)?

Mineralization is controlled by the dike.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)?

Sandstone is altered from pink to light gray in the vicinity of the deposit.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.

Voglite (lab. sample #1157; petrographical report #315) associated with

malachite. Biotite, hematite also present.

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10. Estimate dimensions of ore body and/or mineralized zone Exposed in test pit 10 feet long,
3 feet wide and 3 feet deep.

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick- ness	Assays				Area or volume represented
			U3O8a	U3O8b	Y2O5	CaCO3- Cu	
15286	chip	3'	.04	-	-	1.57	
15287	chip	1'	.04	-	-	.15	
15288	chip	1'	.03	-	-	6.42	
33030	grab		.07	.10	-	6.48	
1157	selected high grade			.18	-	8.26	

*Channel, composite, channel, chip, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) None

13. Estimated production potential Nil

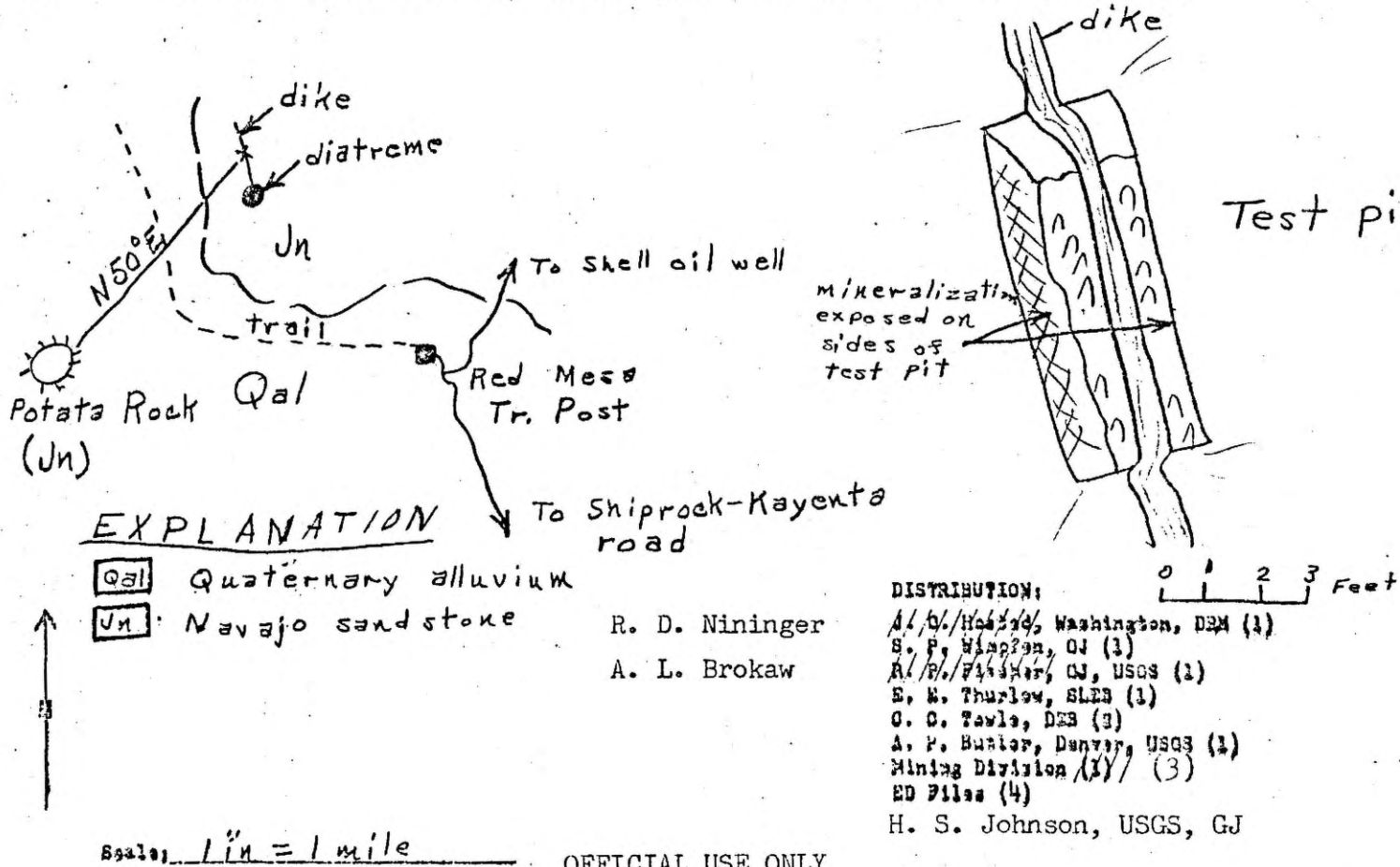
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study.

This occurrence is similar to the copper-uranium deposit to the west on Garnet Ridge.

15. Is area recommended for further study? Yes - detailed mapping of the diatreme.

16. Additional remarks

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



- Property Camoose claims File No. ED:R-389
 Examined by E. L. Moore and George Phillips Date 8/19/54
 1. Location: State Utah District Inter-River
 County San Juan Section 1 T. 28S. R. 20E
 Number of aerial photographs, if known 6-132 GSRR
 Road log to deposit: From the foot of Shafer Trail go 8 miles south to the head of White Rim reentrant; then go southeast 1 mile on left side of a canyon in the Cutler formation.
2. Owners, operators, addresses Camoose Uranium Company of America
Grand Junction, Colorado
3. In what formation or member (zone within member) is mineralization located? Cutler formation, 175 feet below the base of White Rim member, in the altered portion of a purple arkosic sandstone roll.
4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, laminating, mud galls, color, interrelation of lithologies)? Lenticular, arkosic, medium- to coarse-grained sandstone; color altered from purple to a clean white.
5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below sandstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Primarily on bedding planes
6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? No relationship noted
7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Sedimentary rolls or channels at the base of thick arkosic sandstone
8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? Mineralization definitely limited to bleached or altered zones.
9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study. Mineral, probably tyuyamunite, associated with Cu, Fe, CO?, and Mo?

10. Estimate dimensions of ore body and/or mineralized zone 1' x 100' x ?

11. Samples (if no samples were taken, estimate grade with field counter): 0.35% U₃O₈ with field counter

No.	Type*	Thick- ness	Assays				Area or volume represented
			U ₃ O ₈	U ₃ O ₈	Th ₂ O ₅	CaCO ₃	
36726	Rep.	1' x 100'	.23	.15	—	15.9	1' x 100' x ?

Also: Cu - .22

*Channel, composite, channel, ship, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) None

13. Estimated production potential 1,000 tons

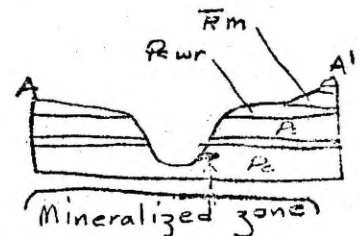
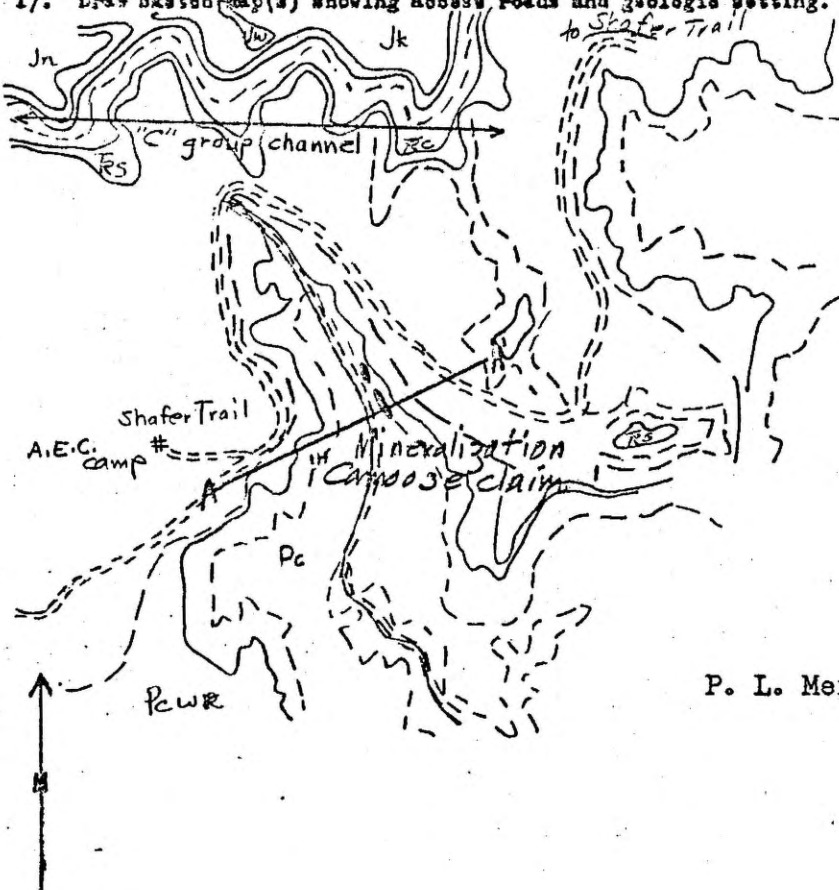
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study.

Several bleached zones in near vicinity show same type of mineralization.

15. Is area recommended for further study? Yes

16. Additional remarks Camoose Company plans a rotary drill project in the area.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



- DISTRIBUTION:
- P. L. Merritt, 3/1/61 Headquarters, Washington, DEM (1)
 - S. P. Wimpfen, CJ (1)
 - R. P. Fischer, CJ, USGS (1)
 - E. K. Tharlow, SLEB (1)
 - C. C. Toyle, DEB (2)
 - A. P. Butler, Denver, USGS (1)
 - Mining Division (1)
 - ED Files (4)

Scale: _____

Property Camoose claims File No. ED:R-389

Examined by E. L. Moore and George Phillips Date 8/19/54

1. Location: State Utah District Inter-River

County San Juan Section 1 T. 28 S. R. 20 E

Number of aerial photographs, if known 6-132 GSRR

Road log to deposit From the foot of Shafer Trail go 8 miles south to the head of White Rim reentrant; then go southeast 1 mile on left side of a canyon in the Cutler formation.

2. Owners, operators, addresses Camoose Uranium Company of America
Grand Junction, Colorado

3. In what formation or member (zone within member) is mineralization located? Cutler formation, 175 feet below the base of White Rim member, in the altered portion of a purple arkosic sandstone roll.

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, laminating, mud galls, color, interrelation of lithologies)? Lenticular, arkosic, medium- to coarse-grained sandstone; color altered from purple to a clean white.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below sandstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? Primarily on bedding planes

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? No relationship noted

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Sedimentary rolls or channels at the base of thick arkosic sandstone

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? Mineralization definitely limited to bleached or altered zones.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study. Mineral, probably tyuyamunite, associated with Cu, Fe, CO ?, and Mo ?

10. Estimate dimensions of ore body and/or mineralized zone: 1' x 100' x ?

0.35% U₃O₈ with field counter

11. Samples (if no samples were taken, estimate grade with field counter):

No.	Type*	Thick- ness	Assays				Area or volume represented
			U ₃ O ₈	U ₃ O ₈	V ₂ O ₅	CaCO ₃	
36726	Rep.	1' x 100'	.23	.35	—	15.9	1' x 100' x ?
Also: Cu = .22							

*Channel, composite, channel, ship, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) None

13. Estimated production potential 1,000 tons

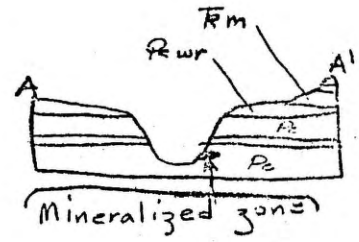
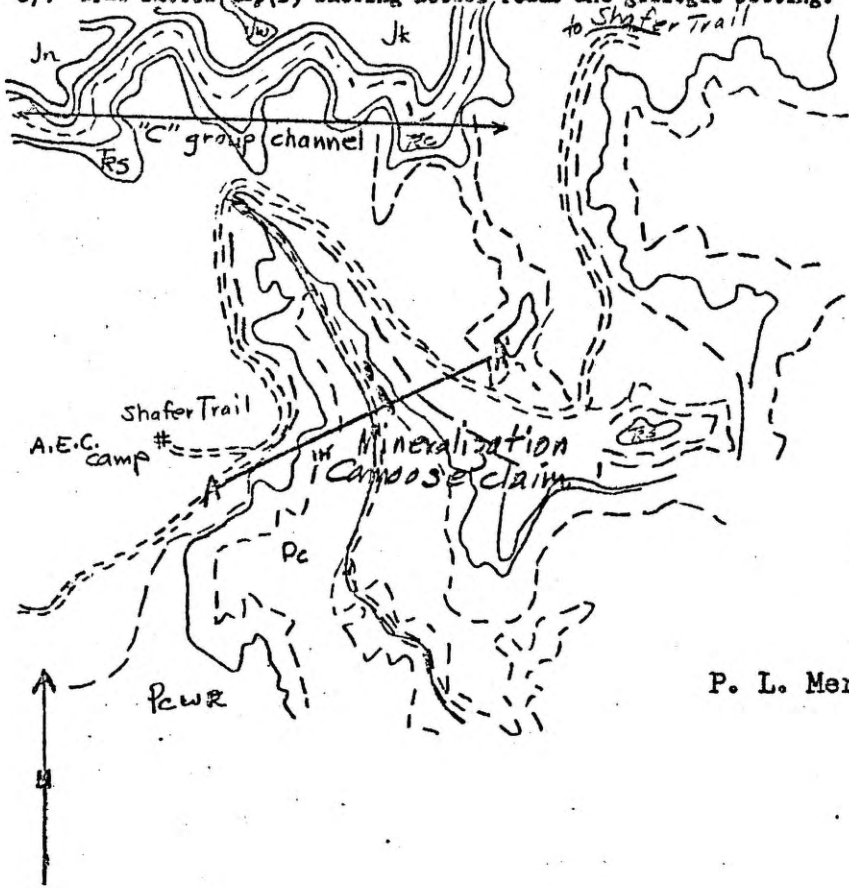
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study.

Several bleached zones in near vicinity show same type of mineralization.

15. Is area recommended for further study? Yes

16. Additional remarks Camoose Company plans a rotary drill project in the area.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



- DISTRIBUTION:
- P. L. Merritt, U.S. Geol. Survey, Washington, DRM (1)
 - S. P. Wimpfen, CJ (1)
 - R. P. Fischer, CJ, USGS (1)
 - E. E. Thurlow, SLES (1)
 - C. C. Towle, DEB (2)
 - A. P. Butler, Denver, USGS (1)
 - Mining Division (1)
 - ED Files (4)

Scale: _____

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Rev. ED:61

PRELIMINARY RECONNAISSANCE REPORT

File No. ED:R-549

Geologic Dist. No. 1

Names of examining party:

H. M. Dahl

W. H. Royer

E. E. Anderson

PROPERTY STATISTICS

Name Sandbar No. 10 (formerly Lucky 13)

Date December 13, 1955

Location: State Utah County San Juan Mining District

Locality (G.L.O. and/or description) Sec. 15, T. 35 S., R. 13 E., 4 miles down Colorado River from Hite on east side of river opposite mouth of Four Mile Canyon.

Photo No. and/or map coverage Hite Quadr. Utah, Topo. map 1:62,500 & Trikes et al. Roadlog Geologic Map of White Canyon & Deer Plate Areas, San Juan Co., Utah, Road Log Via Utah Highway 95, west from Blending, Utah, 88 miles to White Canyon, Utah; then left at old uranium mill, on mine and drilling access road, taking right fork and proceeding down Colorado River on east bank 5 miles to site at end of road.

Owners, operators, addresses Utah Plateau Uranium Corporation, Luke S. Pappas

GEOLOGIC SETTING FOR MINERAL DEPOSIT

- 1. Name of host rock Basal Chinle Sandstone member, possibly Shinarump lens?
- 3. Petrology of host rock (incl. ore zone) Coarse quartz ss w/clay cement & abundant coalified carbon along bedding planes. Pyrite is abundant as replacement of carbonaceous material. Carbon occurs as twigs & foot in width down to specks but, dominantly in seams 1/2 inch to 5 inches thick (average 1 1/2 inches)
- 4. Sedimentary structures of host unit Bedding in host unit 6 inches to 3 feet thick cross-bedded within.
- 5. Regional tectonic environment The area is centrally located on the western margin of the Monument Upward.
- 6. Local tectonic structures and relation to ore Beds dip approximately 2 to 3 degrees southerly. Moderate fracturing in overlying Wingate.
- 7. Alteration Trm Ms and Sts below x-bed Ss shows green alteration for about 2'. Ms of interbedded Ss, Ms, & Sts above min. zone is red except on edges of splits where it is green.

2. Stratigraphic Column or Geologic Sketch

- (indicate min. zone)
- Navajo ss 500' ±
- Kayenta fm 200' ±
- Wingate ss 300' ±
- Chinle fm 500-700'
- Min. in basal ss (probably not Shinarump) Unconfor.
- Moenkopi fm 200-300' Unconfor.
- Cutler fm.
- Organ Rock Tongue 300' ±
- Modified from USGS Bull. 1009 H

MINERAL DEPOSIT

- 1. Form (vein, bedded, stockwork, etc.) Mineralization appears restricted to cross bedded ss member of small channel.
- 2. Dimensions Unknown
- 3. Orientation Channel trends approximately west.
- 4. Method of emplacement (replacement, impregnation, etc.) Impregnation of sandstone with some control exerted by cross bedding and replacement of coalified material.
- 5. Mineralogy (other than host rock; specimen numbers for lab. work)
 - a. Primary Carbonaceous material may contain primary uranium minerals. Pyrite replaces some carbon and is also disseminated in sandstone.
 - b. Secondary Yellowish-green and yellowish-orange minerals are probably secondary uranium. They are aligned along bedding planes and coat carbon.
- 6. Ore Controls Whether mineralization is restricted to channel or not was not determined; however, within the mineralized Sandstone observed, radioactivity is most intense along bedding planes where carbonaceous material is most abundant.
- 7. Suggested guides to ore Accumulations of carbonaceous material, preferably in medium to coarse permeable beds such as channel fillings should be sought. A stratigraphic position near the base of the Chinle and strong alteration of the underlying Moenkopi would appear to be favorable.

Signature(s) and Position(s) of Reporting Geologist(s)

Distribution:

- R. D. Nininger, Wash., DRM (1)
- A. L. Brokaw, GJ, USGS (1)
- H. S. Johnson, USGS, GJ (1)
- A. P. Butler, Denver, USGS (1)

- Mining Division, GJ . . . (1)
- E. E. Thurlow, SLEB . . . (1)
- D. L. Everhart, DEB . . . (2)
- ED Files (4)

8. Adjacent mineral deposits Prospect is 10 miles east of the Del Monte mine and 12 miles west of the Happy Jack mine. Other mines in the immediate vicinity are known to have mined small tonnages from time to time. (De Vergie, EMO 822, 1952)

9. Additional remarks A number of similar prospects were examined in this vicinity, one of which showed considerable copper mineralization associated with the uranium. (Jay Bird). This was mostly azurite and malachite. All prospects examined were in the base of the Chinle.

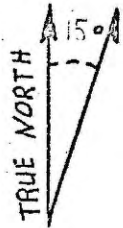
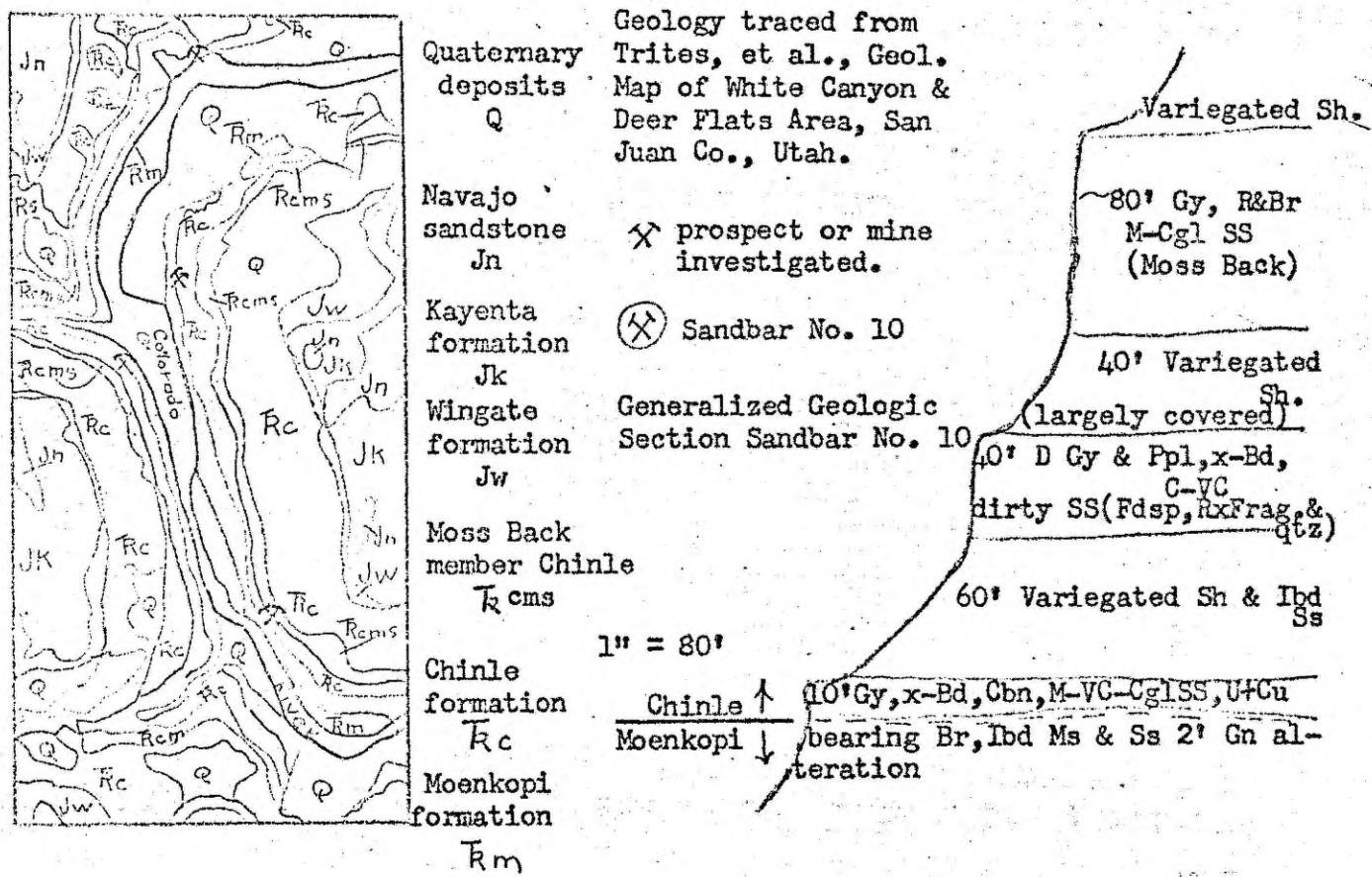
10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)

No.	Type*	Length	Assays				Other	Area or volume represented
			U ₃ O ₈ %	U ₃ O ₈ %	V ₂ O ₅ %	CaCO ₃ %		
0.2% estimation for small seams of high-grade based on wall survey with La Roe scintillometer.								

Highest readings obtained in the area was near the portal of the copper-bearing deposit 1/2 mile north of the Sandbar No. 10. This read greater than 5.0 mR/hr, the top reading on the La Roe scintillometer. Since it was highest at the portal, it may be due to secondary concentration of leached material.

11. Maps and Sections (sketch, pace, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: 1 1/2 in. = 1 mi.



12. Production history: inclusive dates (see No. 8 above) tons Unknown grade Unknown

13. Potential reserve estimates (classifications, tons, grade under current mining conditions)
More work is necessary before a potential reserve estimate can be made

14. Recommendation for further work The companies, who have done production work, prospect drilling, stripping and drilling, should be contacted to ascertain information obtained. Basal Chinle and/or Shinarump should be mapped in area to delineate their extent. Channels should be mapped as a prospecting aid.

OFFICIAL USE ONLY

Names of examining party:

H. M. Dahl

E. E. Anderson

Colo. River

PROPERTY STATISTICS

Name Shinarump and Grimm claims (Rincon Bend along south side) Date

Location: State Utah County San Juan Mining District

Locality (G.L.O. and/or description) 37° 18' 00" - 37° 19' 30" N. lat., 110° 46' 00" - 110° 48' 30" W. lon., along Colorado River at the Rincon

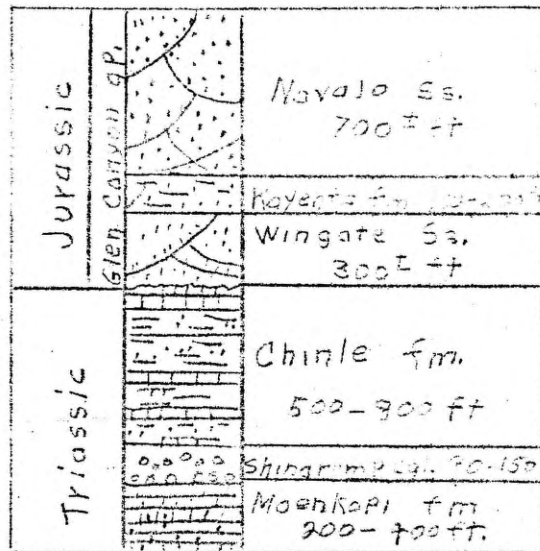
Photo No. and/or map coverage USGS Photogeologic map, Navajo Mt. quad no. 6

Road log Best access is by air (helicopter or small plane) approx. 40 mi. SW of Hite, Utah. Also accessible by boat from Hite, Utah, during high water (62 mi. and from Lees Ferry, Ariz. (100 mi.) probably all year. By road from Alton, Utah to Natural Bridges via Utah Hwy 95 then 12 mi. SW. on graded dirt road to Red House Pass, then approx. 20 mi. N. to Skelley oil well site on Noki Dome via Henry Basin, then 4 mi. W. to Hills Pass, then W. 18 mi. overland via U. deep to edge of Alton escarpment overlooking the Rincon.

OWNERS, OPERATORS, ADDRESSES: M.D. Turnage and R.D. Grimm, Marble Canyon, Arizona.

GEOLOGIC SETTING FOR MINERAL DEPOSIT

- 1. Name of host rock Shinarump cgl. and sandy ls. and sh. beds in Chinle fm. (only Shinarump described here)
- 2. Stratigraphic Column or Geologic Sketch (indicate min. zone)
- 3. Petrology of host rock (incl. ore zone) Shinarump is light gray to light yellow c. quartz to quartz cgl. containing local concentrations of coalified twigs and logs. Some clay cement. Some pyrite with carbonized wood. The U-bearing beds are qtz. cgl w/ angular to rounded pebbles up to 2 in. in diameter.
- 4. Sedimentary structures of host unit Shinarump shows consistent mild scouring within the ore-bearing member.
- 5. Regional tectonic environment Near SE. extremity of Circle Cliffs upward & near western portion of the Monument upward & southern edge of Henry Basin.
- 6. Local tectonic structures and relation to ore Beds dip 2° W. on W. flank of Circle Cliffs upward & 4° E. on E. side of upward. More min. on E. flank noted.



Alteration Moenkopi altered to gray-green to yellowish-brown for 1-3 ft. below Shinarump contact (av. 2 ft.) Fe oxides and sulphates (?), probably derived from sulphides, color weathered Shinarump outcrops.

MINERAL DEPOSIT

- 1. Form (vein, bedded, stockwork, etc.) Restrictions of coalified material in cgl scours within the Shinarump.
- 2. Dimensions Restricted to logs (2 ft. max. width) and lenses of carbonaceous material (6 in. by 10 ft. plus).
- 3. Orientation Two logs and scours appear to trend in a north direction.
- 4. Method of emplacement (replacement, impregnation, etc.) Probably adsorption by carbon. Material has low specific gravity suggesting that uranium replacement has been small.
- 5. Mineralogy (other than host rock; specimen numbers for lab. work)
 - a. Primary No uranium minerals observed.
 - b. Secondary No uranium minerals observed. Malachite and azurite are found in proximity to some mineralized occurrences.
- 6. Ore Controls Mineralization evidently associated with coalified material which is most abundant in conglomeratic scours near the base of the Shinarump.
- 7. Suggested guides to ore Inasmuch as the ore is associated with carbonaceous trash in channel lithologies, large carbon-bearing scours and channels should be sought. Alteration of the underlying Moenkopi may aid in outlining favorable ground for exploration. Cu- and Fe-bearing zones may be associated with uranium mineralization.

Signature(s) and Position(s) of Reporting Geologist(s)

Distribution:

- GJCO Library (1)
- Geologic Branch Files (1)
- District Geologist (2)

Distribution:

- R. D. Ninger, Wash., DRM (1)
- E. A. Youngberg, GJ. (1)
- A. L. Brockway, GJ, USGS (1)
- H. S. Johnson, USGS, GJ (1)
- A. P. Butler, Denver, USGS (1)

- Mining Division, GJ (1)
- E. E. Thorlow, DAO (1)
- D. L. Everhart, SAO (1)
- ED Files (4)
- A. E. Granger, SLAO (1)

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Rev. ED:61

PRELIMINARY RECONNAISSANCE REPORT

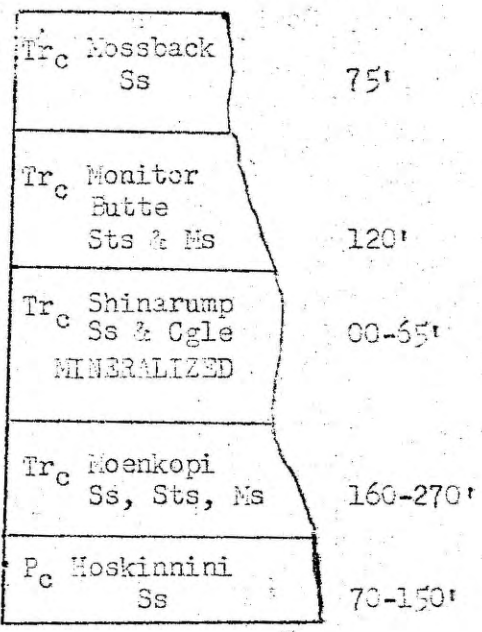
VITAL STATISTICS

Property White Canyon #1 Mine Admin. Geologic Dist. 75
 Examined by Hanshaw File No. 55-1000
 Location: State N.M. County San Juan Mining District White Can. Date 6/22/55
 Locality (G.L.O. and/or description) Ex Point
 Photo No. and/or map coverage _____
 Road log Proceed from Blanding on Utah route 95 for 40 miles to intersection with road to ABC camp on left. Remain on route 95 toward Hite for another seven miles. Then take mining road on left and begin steep climb. After proceeding on this mine road for a distance of two miles, the ore bin will be visible on the right.
 Owners, operators, addresses White Canyon Mining Company, Dove Creek, Colorado

GEOLOGIC SETTING FOR MINERAL DEPOSIT

1. Petrology of host rock Shinarump ss. & cgl. of var. thickness worked Moenkopi shls. Abundant cbn logs & trash. Ss consists mainly of cbn w/some feldspars.
3. Sedimentary structures of host unit Shinarump channel and scours into underlying Moenkopi fm.
4. Regional tectonic environment Mine is located on west flank of Monument Upland.
5. Local tectonic structures Local fracture pattern apparently unrelated to deposition of ore. Fracture pattern: N55W, N45E, N35W, due N, all near vertical.
6. Alteration 2' alt. of Trm fm. from red to gn. Goethite, hematite, malachite, azurite, uranovite, schroekingerite near portal (Oxid. zone)-Jarosite covellite, chalcocite deeper in mine (50' - 150').

2. Stratigraphic Column or Geologic Sketch (indicate min. zone)



MINERAL DEPOSIT

1. Form (vein, bedded, stockwork, etc.) Bedded deposit. Uranium mainly assoc. w/cbn logs and trash and disseminated along bedding planes.
2. Dimensions Mine is approx. 10'-40' wide and 400' long. Workings are bedded for newly drilled ore body.
3. Orientation Channel and mine are oriented roughly north-south as is new ore body.
4. Method of emplacement (replacement, impregnation, etc.) Apparently both the uranium and the iron replaced cbn logs; U as uraninite and Fe as pyrite. U: uranium deposited in cores of sandstone and replacing ms falls.
5. Mineralogy (other than host rock; specimen numbers for lab. work)
 - a. Primary Uraninite, pyrite, chalcocite, bornite (sulfide zone).
 - b. Secondary Uranovite, schroekingerite, malachite, azurite, torbernite (?)
6. Ore Controls Channel lithology. Fe and U assoc. w/cbn trash and logs in channel. Uranium also disseminated through sandstone on bedding planes and occurs as uraninite in ss. falls.
7. Suggested guides to ore See No. 6 above.

DISTRIBUTION: District Geologist (1)
 GJOO Library (1) Area Geologist (1)
 Geologic Branch Files (1)

OFFICIAL USE ONLY

White Canyon #1 LOCATION Ex Point, White Canyon Dist. LEVEL 1 of 1
 DRAWN BY R. Hanshaw SURVEY SPH, DCC, TW SCALE 1" = 40' DATE 6/19/55

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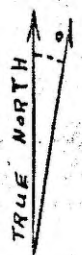
8. Adjacent mineral deposits The Saddle mine also owned by White Canyon is the only
one in the area. It appears to be a tail on a smaller adjacent channel. It
contains ore and only low grade (.15 - .20% U) ore so far reached.
9. Additional remarks Channel No. 2 is currently drilling out a large ore body
of approx. 1-2' with lateral dimensions of 20-30' wide and 1500' in length. Ore
is usually 6' thick and runs 0.30-0.40%. Present mine will intersect ore body. Ore
body still not completely delineated. (Verbal communication, E. Hanson MCM Co.)
10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)
- | No. | Type* | Length | Assays | | | | | Area or volume represented |
|--|-------|--------|----------------------------------|----------------------------------|---------------------------------|---------------------|-------|----------------------------|
| | | | U ₃ O _{8e} % | U ₃ O _{8c} % | V ₂ O ₅ % | CaCO ₃ % | Other | |
| No samples taken. Background in mine is 0.5 to 1.2 mR/hr | | | | | | | | |

Small local concentrations of secondary uranium minerals register high but
no good face of continuous ore was observed with the counter.

*Channel, chip, grab

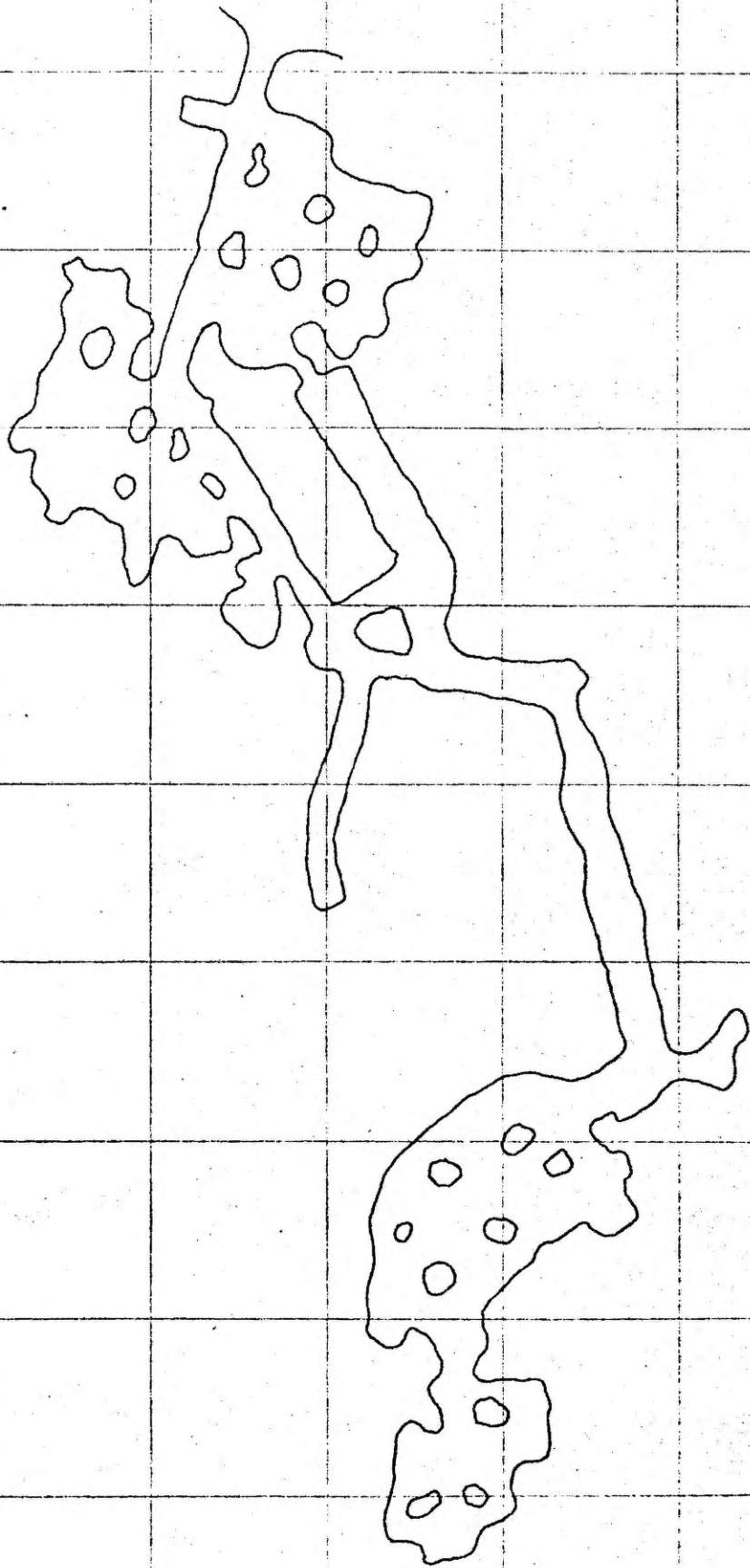
11. Maps and Sections (sketch, pace, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: 1" = 2 mi.



12. Production history: inclusive dates 6/52 - 6/56 tons 2,000 grade unknown
13. Reserve estimates (classification, tons, grade under current mining conditions)
Indicated from current drilling - 16,000 tons of 0.30-0.40% U
Drilling is not yet complete and there is no sign of the channel pinching out
or of running out of ore.
14. Recommendation for further work White Canyon mining plans to continue drilling
until the full extent of the channel and ore body are definitely known.

ED:R-651



MINE White Canyon # 1 LOCATION Fry Pt., White Canyon Dist. LEVEL 1 of 1
GEOLOGY BY E. Hanshaw SURVEY BPH, OBS, TW SCALE 1" = 40' DATE 6/13/16

108 M. DUNN LITHO PRINT & SUPPLY CO., 211 W. 10TH ST., OKLA. CITY, OKLA.

Property Jess Tony prospect File No. ED:R-279
 Examined by W. L. Chenoweth Date June 13, 1954
 1. Location: State Utah District _____
 County San Juan Section 7. R. _____
 Number of aerial photographs, if known _____
 Road log to deposit See map below.

2. Owners, operators, addresses Jess Tony, c/o Red Mesa Trading Post, P. O. Box 146,
Farmington, New Mexico

3. In what formation or member (zone within member) is mineralization located?
Morrison formation, upper Westwater Canyon or lower Brushy Basin member

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scours, lensing, mud galls, color, interrelation of lithologies)?
The sandstone in which the logs occur is a gray medium to very fine grained, cross-bedded, poorly cemented sandstone bed with abundant green mudstone galls and interbedded green mudstone seams.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)?
Carnotite occurs as disseminated halos around 7 or 8 logs exposed in a small wash. Some replacement of logs by carnotite.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)?
No apparent relationship.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)?
Carbon

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)?
In an area where red mudstone and pink sandstone predominate. The mineralized unit contains green, gray mudstones and gray sandstones. Astragalus is abundant on outcrops and in wash.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.
Carnotite with limonite, gypsum and carbon.

Rev. 10.61

10. Estimate dimensions of ore body and/or mineralized zone. Average halo ground logs is about 6" - 8" wide. Log average 3" - 5" long and 6" - 10" wide.

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick-ness	Assays				Area or volume represented
			U _{308a}	U _{308a}	Y ₂₀₅	CaCO ₃	
33047	Grab	---	0.08	0.15	0.16	0.4	Sample brought in by
33048	Channel	8"	0.03	0.04	0.09	0.4	Navajo 8" x 5"

*Channel, composite, channel, ship, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) None

13. Estimated production potential Nil

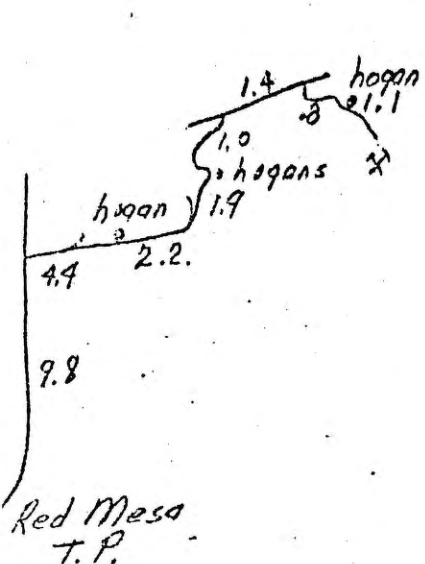
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study.

Area has been flown by AEC. A smaller, similar deposit was located 5 miles to the west near Desert Creek by this survey. Several Navajos are reported to

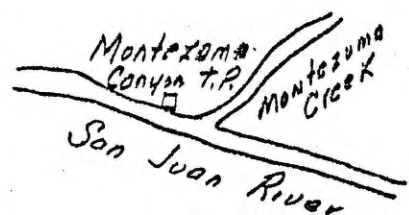
15. Is area recommended for further study? No have found mineralization in the same general area.

16. Additional remarks

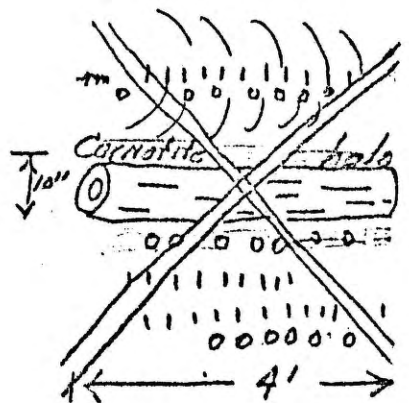
17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



1/4" = 1 mile



1" = 1 mile



- DISTRIBUTION:
- J. O. Heated, Washington, DRM (1)
 - S. P. Wimpfen, OJ (1)
 - R. P. Fischer, OJ, USGS (1)
 - E. N. Thurlow, SLES (1)
 - C. C. Towle, DEB (2)
 - A. P. Butler, Denver, USGS (1)
 - Mining Division (1)
 - ED Files (4)

Scale:

Property Jess Tony prospect File No. ED:R-279
 Examined by W. L. Chenoweth Date June 13, 1954
 1. Location: State Utah District _____
 County San Juan Section 7. 3.
 Number of aerial photographs, if known _____
 Road log to deposit See map below.

2. Owners, operators, addresses Jess Tony, c/o Red Mesa Trading Post, P. O. Box 146,
Farmington, New Mexico

3. In what formation or member (zone within member) is mineralization located?
Morrison formation, upper Westwater Canyon or lower Brushy Basin member

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scour, lensing, mud galls, color, interrelation of lithologies)?
The sandstone in which the logs occur is a gray medium to very fine grained, cross-bedded, poorly cemented sandstone bed with abundant green mudstone galls and interbedded green mudstone seams.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)?
Carnotite occurs as disseminated halos around 7 or 8 logs exposed in a small wash. Some replacement of logs by carnotite.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)?
No apparent relationship.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)?
Carbon

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)?
In an area where red mudstone and pink sandstone predominate. The mineralized unit contains green, gray mudstones and gray sandstones. Astragalus is abundant on outcrops and in wash.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.
Carnotite with limonite, gypsum and carbon.

Rev. ED:61

10. Estimate dimensions of ore body and/or mineralized zone. Average halo ground logs is about 6" - 8" wide. Log average 3" - 5" long and 6" - 10" wide.

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick- ness	Assays				Area or volume represented
			U ₃ O ₈	V ₂ O ₅	Y ₂ O ₃	CaCO ₃	
33047	Grab	---	0.08	0.15	0.16	0.4	Sample brought in by
33048	Channel	8"	0.03	0.04	0.09	0.4	Navajo 8" x 5"

*Channel, composite, channel, chip, grab; thickness refers to length of out channel.

12. Past production (tonnage and grade) None

13. Estimated production potential Nil

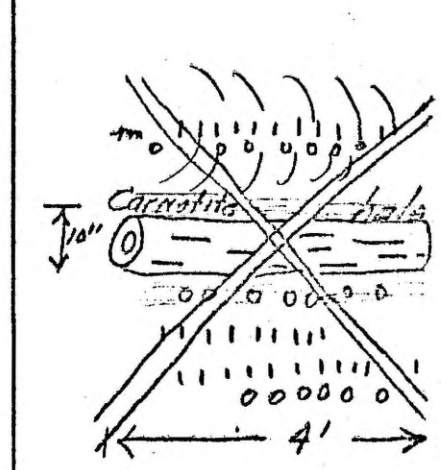
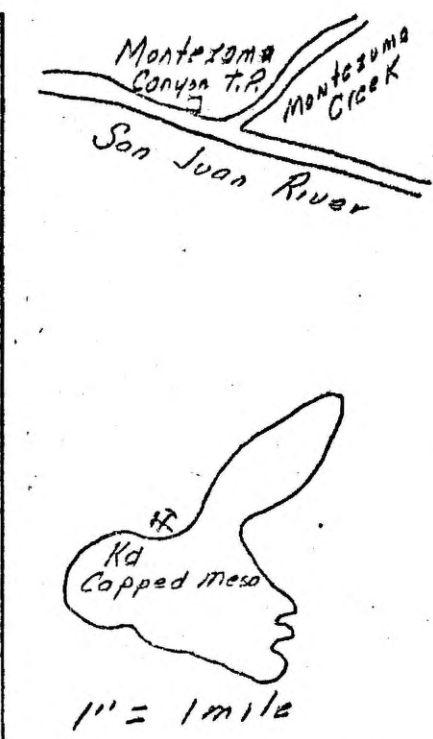
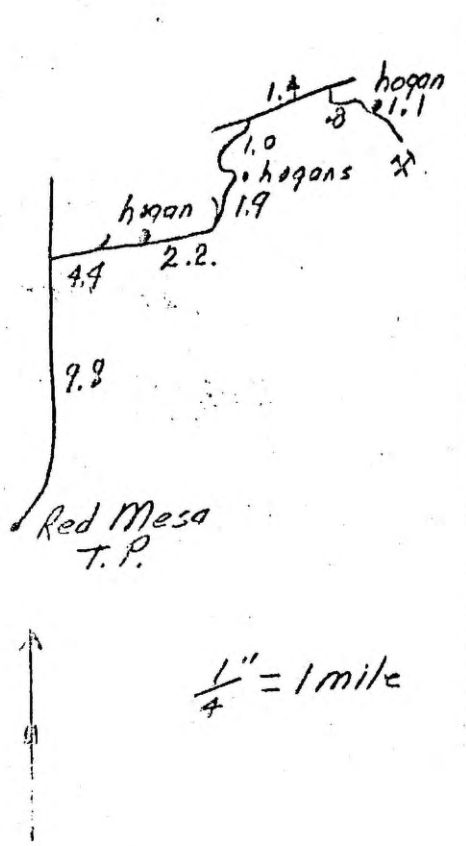
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study.

Area has been flown by AEC. A smaller, similar deposit was located 5 miles to the west near Desert Creek by this survey. Several Navajos are reported to

15. Is area recommended for further study? No have found mineralization in the same general area.

16. Additional remarks

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



- DISTRIBUTION:
- J. O. Hosted, Washington, DDM (1)
 - S. P. Wimpfen, OJ (1)
 - R. P. Fischer, OJ, USGS (1)
 - E. E. Thurlew, SLEB (1)
 - C. C. Towle, DEB (2)
 - A. P. Butler, Denver, USGS (1)
 - Mining Division (1)
 - ED Files (4)

Scale:

Property Jess Tony prospect File No. ED:R-279
 Examined by W. L. Chenoweth Date June 13, 1954
 1. Location: State Utah District _____
 County San Juan Section T. R.
 Number of aerial photographs, if known _____
 Road log to deposit See map below.

2. Owners, operators, addresses Jess Tony, c/o Red Mesa Trading Post, P. O. Box 146,
Farmington, New Mexico

3. In what formation or member (zone within member) is mineralization located? _____
Morrison formation, upper Westwater Canyon or lower Brushy Basin member

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scour, lamination, mud galls, color, interrelation of lithologies)? _____
The sandstone in which the logs occur is a gray medium to very fine grained, cross-bedded, poorly cemented sandstone bed with abundant green mudstone galls and interbedded green mudstone seams.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below mudstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? _____
Carnotite occurs as disseminated halos around 7 or 8 logs exposed in a small wash.
Some replacement of logs by carnotite.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? _____
No apparent relationship.

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? _____
Carbon

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? _____
In an area where red mudstone and pink sandstone predominate. The mineralized unit contains green, gray mudstones and gray sandstones. Astragalus is abundant on outcrops and in wash.

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study. _____
Carnotite with limonite, gypsum and carbon.

Nov. 20, 61

10. Estimate dimensions of ore body and/or mineralized zone. Average halo ground logs is about 6" - 8" wide. Log average 3" - 5" long and 6" - 10" wide.

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick-ness	Assays				Area or volume represented
			U308a	U308a	V205	CaCO3	
33047	Grab		0.08	0.15	0.16	0.4	Sample brought in by
33048	Channel	8"	0.03	0.04	0.09	0.4	Navajo 8" x 5'

*Channel, composite, channel, ship, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) None

13. Estimated production potential Nil

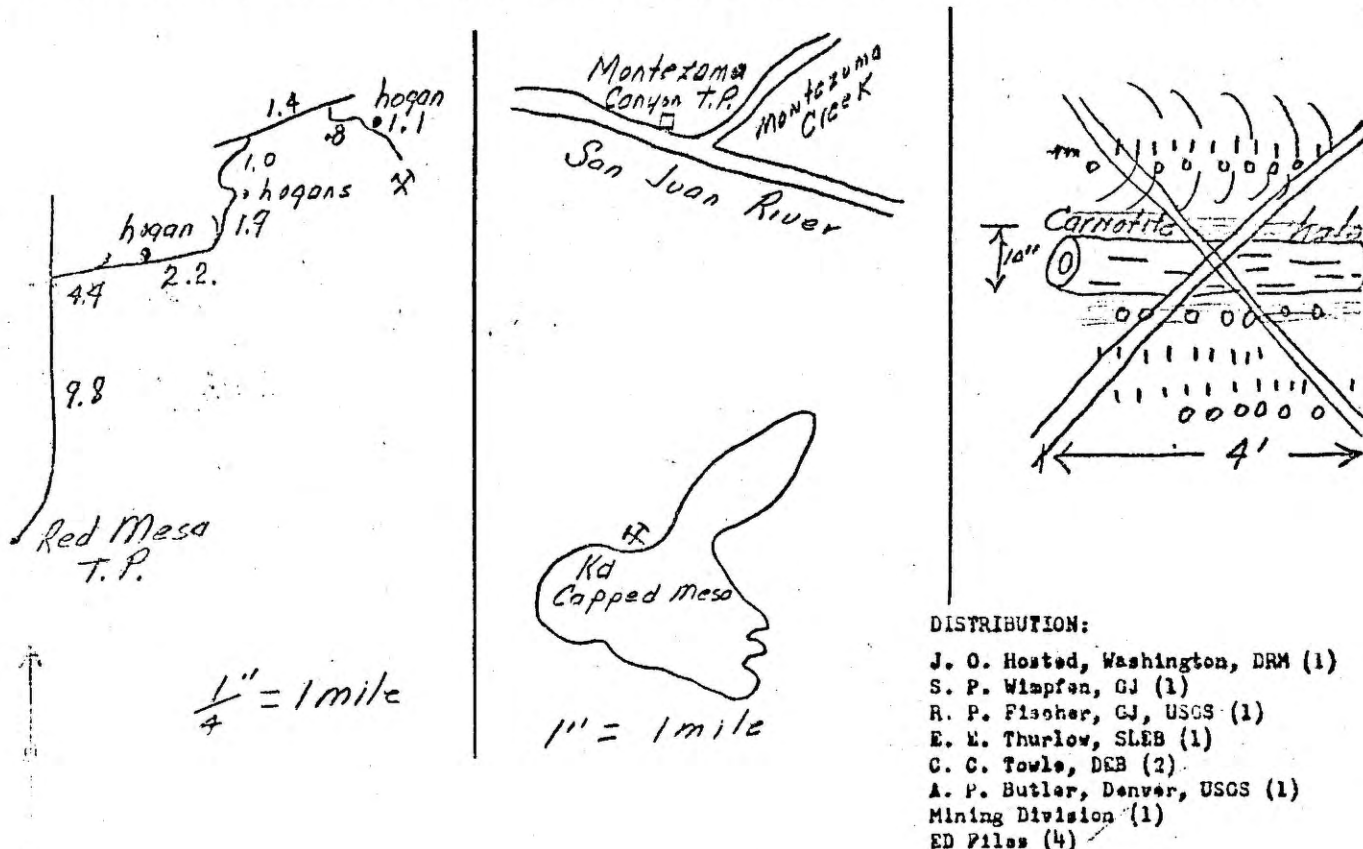
14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study.

Area has been flown by AEC. A smaller, similar deposit was located 5 miles to the west near Desert Creek by this survey. Several Navajos are reported to

15. Is area recommended for further study? No have found mineralization in the same general area.

16. Additional remarks

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



- DISTRIBUTION:
- J. O. Hosted, Washington, DRM (1)
 - S. P. Wimpfen, GJ (1)
 - R. P. Fischer, GJ, USGS (1)
 - E. E. Thurlow, SLEB (1)
 - C. C. Towle, DEB (2)
 - A. P. Butler, Denver, USGS (1)
 - Mining Division (1)
 - ED Files (4)

PRELIMINARY RECONNAISSANCE REPORT

EXAMINED BY J. H. Leonard2. STATE Utah COUNTY San JuanDATE(S) EXAMINED June 7-8, 1954DISTRICT Reservation #9

1. SAMPLES

NUMBER	TYPE AND WIDTH	RADIOACTIVITY

NEAREST TOWN Shiprock, N. Mex.PROPERTY Hosteen Shorty
Blue WhiskersSam Longjohn

LOCATION

SEC. _____ T. ? R. _____

3. TYPE OF EXAMINATION:

Sight and location survey

4. DIRECTIONS TO DEPOSIT: Take Red Mesa road to Shell Oil well site, then seismograph road north for about 5 miles to hogan at head of wash with spring. Hogan is about $\frac{1}{2}$ mile north of road.
5. OWNER OR OPERATOR: Above Navajos and Jess Wheeler. Three claims about 183 acres.
ADDRESS: Waterflow, New Mexico
6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS: None
7. RADIOACTIVITY: Counter not carried

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

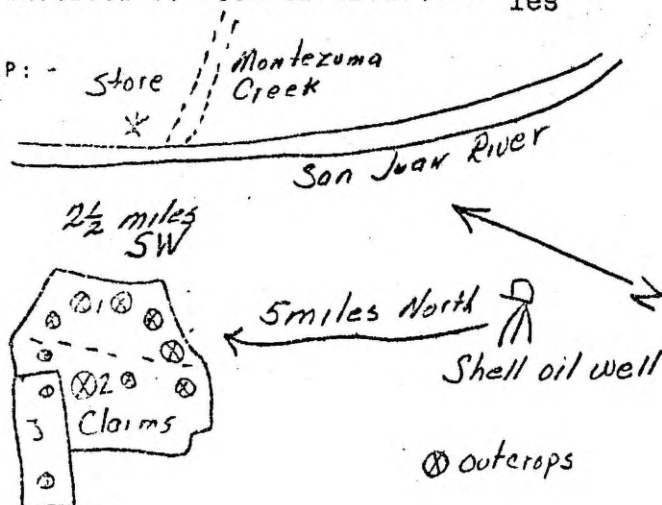
Believed to be Morrison, possibly Recapture (?), highly bleached and a great abundance of petrified logs. Some carbon noticeable. An abundance of clay lenses. Could not give outcrops much work as all time spent making surveys. Will be re-visited for samples and closer study. Am submitting samples from like outcrops but none from these claims. May possibly be only log mineralization but owners report not. And report counter reading to top of second scale. Possibly uraninite-flake in the carbon with some showings of carnotite (?). Should be good in vanadium. Probably high in lime.

9. POTENTIAL FOR FUTURE PRODUCTION: Unknown without further study.

10. CONCLUSIONS AND RECOMMENDATIONS: To be made after next examination.

11. PROOF OF OWNERSHIP RECEIVED? Yes
PERMISSION TO PUBLISH RECEIVED? Yes

12. MAP:



13. OTHER INVESTIGATIONS:

None

14. ADDITIONAL INFORMATION:

Owners report assays up to 0.93%
U₃O₈

15. SUPPLEMENTARY RECONNAISSANCE REPORT TO FOLLOW? Yes16. WARRANTS FURTHER ATTENTION? Yes

Distribution:

J. O. Hosted, Washington, DRM (1)
S. P. Wimpfen, GJ (1)
R. P. Fischer, GJ, USGS (1)
E. E. Thurlow, SLEB (1)
C. C. Towle, DEB (2)
A. P. Butler, Denver, USGS (1)
Mining Division (1)
ED Files (4)

PRELIMINARY RECONNAISSANCE REPORT

EXAMINED BY J. H. Leonard2. STATE Utah COUNTY San JuanDATE(S) EXAMINED June 7-8, 1954DISTRICT Reservation #9

1. SAMPLES

NUMBER	TYPE AND WIDTH	RADIOACTIVITY

NEAREST TOWN Shiprock, N.Mex.PROPERTY Hosteen Shorty
Blue Whiskers
Sam Longjohn

LOCATION

SEC. _____ T. ? R. _____

3. TYPE OF EXAMINATION:

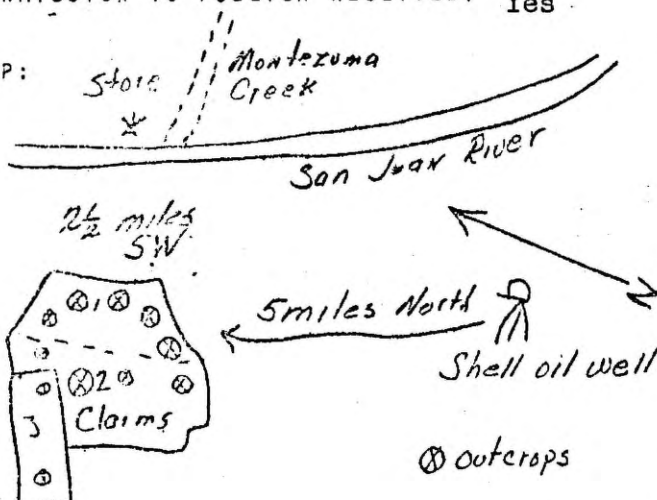
Sight and location survey4. DIRECTIONS TO DEPOSIT: Take Red Mesa road to Shell Oil well site, then seismograph road north for about 5 miles to hogan at head of wash with spring. Hogan is about $\frac{1}{2}$ mile north of road.5. OWNER OR OPERATOR: Above Navajos and Jess Wheeler. Three claims about 183 acres.
ADDRESS: Waterflow, New Mexico6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS: None7. RADIOACTIVITY: Counter not carried

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy).

Believed to be Morrison, possibly Recapture (?), highly bleached and a great abundance of petrified logs. Some carbon noticeable. An abundance of clay lenses. Could not give outcrops much work as all time spent making surveys. Will be re-visited for samples and closer study. Am submitting samples from like outcrops but none from these claims. May possibly be only log mineralization but owners report not. And report counter reading to top of second scale. Possibly uraninite flake in the carbon with some showings of carnotite (?). Should be good in vanadium. Probably high in lime.

9. POTENTIAL FOR FUTURE PRODUCTION: Unknown without further study.10. CONCLUSIONS AND RECOMMENDATIONS: To be made after next examination.11. PROOF OF OWNERSHIP RECEIVED? YesPERMISSION TO PUBLISH RECEIVED? Yes

12. MAP:



13. OTHER INVESTIGATIONS:

None

14. ADDITIONAL INFORMATION:

Owners report assays up to 0.936
U₃O₈

15. SUPPLEMENTARY RECONNAISSANCE

REPORT TO FOLLOW? Yes16. WARRANTS FURTHER ATTENTION? Yes

Distribution:

J. O. Hosted, Washington, DRM (1)
S. P. Wimpfen, GJ (1)
R. P. Fischer, GJ, USGS (1)
E. E. Thurlow, SLEB (1)
C. C. Towle, DEB (2)
A. P. Butler, Denver, USGS (1)
Mining Division (1)
ED Files (4)

PRELIMINARY RECONNAISSANCE REPORT

EXAMINED BY Edward V. Mace2. STATE Utah COUNTY San JuanDATE(S) EXAMINED December 24, 1953DISTRICT Monticello Mining District

1. SAMPLES

NUMBER	TYPE AND WIDTH	RADIOACTIVITY				
		$\%V_2O_5$	$\%Cu$	Radio.	$\%U_{308}$ Chem.	$\%CaCO_3$
30330	grab	0.33	Tr	0.02	----	12.5
30331	"	0.07	Tr	0.01	----	8.0
30332	"	0.09	Tr	0.02	----	8.9
30333	"	1.36	0.01	0.11	0.09	2.2
30334	"	1.29	Tr	0.04	----	6.8

NEAREST TOWN Blanding, UtahPROPERTY Unknown

LOCATION

SEC. 32 T. 34 S. R. 21 E
(Projected)3. TYPE OF EXAMINATION:
Reconnaissance4. DIRECTIONS TO DEPOSIT: Utah 95 from Blanding, Cottonwood Indian Service road 3 miles north.5. OWNER OR OPERATOR:
ADDRESS: Unknown6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS: Unknown7. RADIOACTIVITY: Moderate to low.

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

Base of Salt Wash/sandstone northeast of Indian Village in southern part of Chippean area. Small excavation pit (3'x3'x3') in an area covered by overburden 3 to 4 feet thick. Extent of mineralization unknown. No unusual increase in Geiger background may indicate that deposit is limited in size. Discovery monument is present but no claim papers. The location has been named (by Mace) as Cowbell Point on assays to serve as identification.

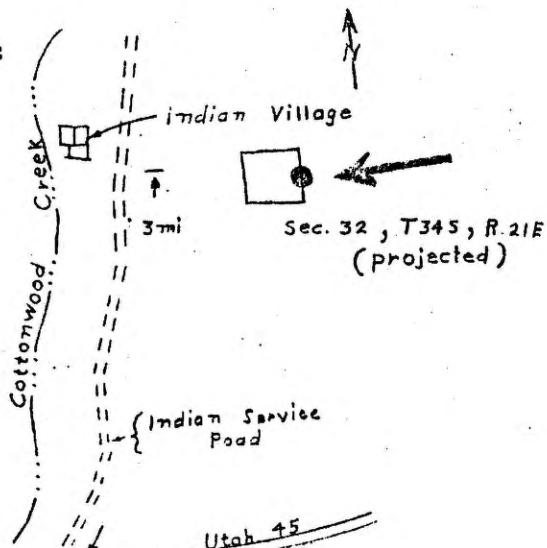
9. POTENTIAL FOR FUTURE PRODUCTION: Unknown

10. CONCLUSIONS AND RECOMMENDATIONS:

Area and the entire Salt Wash outcrops in the vicinity of Chippean area should be systematically examined. There is no record of such a reconnaissance by the AEC in recent years.

11. PROOF OF OWNERSHIP RECEIVED? No.
PERMISSION TO PUBLISH RECEIVED? Not applicable

12. MAP:



13. OTHER INVESTIGATIONS:

Radioactive mineral is carnotite
(AEC lab)

14. ADDITIONAL INFORMATION:

Warrants further attention.

15. SUPPLEMENTARY RECONNAISSANCE
REPORT TO FOLLOW? No.

DISTRIBUTION: P. L. Merritt, NYDRM (4) S. Steinhauser, Richfield
J. O. Hosted, Washington, DRM L. D. Jarrard, Butte
S. P. Wimpfen, GJ A. J. Rambosek, Phoenix
L. P. Barrett, Ishpeming, Mich. C. C. Towle, DEB (2) (1 page, USGS)
Mining Branch (3) H. W. Stafford
R. P. Fischer, GJ, USGS H. D. Wolfe, Albuquerque
T. B. Nolan, Washington, USGS Sub-Office, Douglas, Wyoming
E. E. Thurlow, SLEB ED, Files (3)

PRELIMINARY RECONNAISSANCE REPORT

EXAMINED BY Edward V. Mace2. STATE Utah COUNTY San Juan

DATE(S) EXAMINED

December 24, 1953DISTRICT Monticello Mining District

1. SAMPLES

NUMBER	TYPE AND WIDTH	RADIOACTIVITY				
		%V ₂ O ₅	%Cu	Radio.	²³⁸ U	%CaCO ₃
30330	grab	0.33	Tr	0.02	----	12.4
30331	"	0.07	Tr	0.01	----	8.5
30332	"	0.09	Tr	0.02	----	8.9
30333	"	1.36	0.01	0.11	0.09	2.2
30334	"	1.29	Tr	0.04	----	6.8

NEAREST TOWN Blanding, UtahPROPERTY Unknown

LOCATION

SEC. 32 T. 34 S R. 21 E
(Projected)

3. TYPE OF EXAMINATION:

Reconnaissance

4. DIRECTIONS TO DEPOSIT: Utah 95 from Blanding, Cottonwood Indian Service road 3 miles north.

5. OWNER OR OPERATOR:

ADDRESS: Unknown6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS: Unknown7. RADIOACTIVITY: Moderate to low.

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

Base of Salt Wash/sandstone northeast of Indian Village in southern part of Chippean area. Small excavation pit (3'x3'x3') in an area covered by overburden 3 to 4 feet thick. Extent of mineralization unknown. No unusual increase in Geiger background may indicate that deposit is limited in size. Discovery monument is present but no claim papers. The location has been named (by Mace) as Cowbell Point on assays to serve as identification.

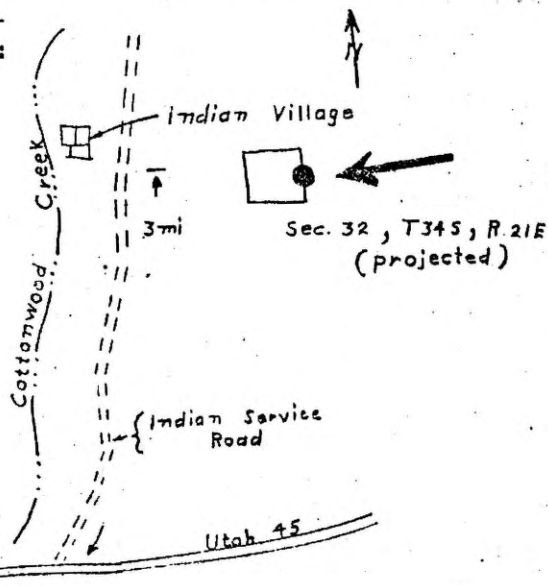
9. POTENTIAL FOR FUTURE PRODUCTION: Unknown

10. CONCLUSIONS AND RECOMMENDATIONS:

Area and the entire Salt Wash outcrops in the vicinity of Chippean area should be systematically examined. There is no record of such a reconnaissance by the AEC in recent years.

11. PROOF OF OWNERSHIP RECEIVED? No.PERMISSION TO PUBLISH RECEIVED? Not applicable

12. MAP:



13. OTHER INVESTIGATIONS:

Radioactive mineral is carnotite
(AEC lab)

14. ADDITIONAL INFORMATION:

Warrants further attention.

15. SUPPLEMENTARY RECONNAISSANCE

REPORT TO FOLLOW? No.

DISTRIBUTION: P. L. Merritt, NYDRM (4) S. Steinhauser, Richfield
J. O. Hosted, Washington, DRM L. D. Jarrard, Butte
S. P. Wimpfen, GJ A. J. Rambosek, Phoenix
L. P. Barrett, Ishpeming, Mich. C. C. Towle, DEB (2) (1 page, USGS)
Mining Branch (3) H. W. Stafford
R. P. Fischer, GJ, USGS H. D. Wolfe, Albuquerque
T. B. Nolan, Washington, USGS Sub-Office, Douglas, Wyoming
E. E. Thurlow, SLEB ED, Files (3)

PRELIMINARY RECONNAISSANCE REPORT

EXAMINED BY Richard T. Zitting & K. G. Hatfield
DATE(S) EXAMINED

2. STATE Utah COUNTY San Juan

SAMPLES June 28, 1953

DISTRICT No. 5

NUMBER TYPE AND WIDTH RADIOACTIVITY

NEAREST TOWN Shiprock, New Mexico

PROPERTY Unclaimed

LOCATION
SEC. _____ T. _____ R. _____

3. TYPE OF EXAMINATION:
Reconnaissance

4. DIRECTIONS TO DEPOSIT: Turn off the Shiprock-Kayenta road at Boundary Butte and travel north and west toward the San Juan River. Deposit is located about 3 miles south of the river almost opposite Bluff, Utah.

5. OWNER OR OPERATOR:
ADDRESS:

6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS:
No production.

7. RADIOACTIVITY:
600 c/m on Halross scintillometer.

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

- A. The deposit is located on the rim of low-lying sandstone knobs protruding from a sand-covered plain.
- B. The deposit is in the lower part of the Salt Wash sandstone above the Bluff contact about 5 feet. Mineralization extends laterally 20 feet, has a maximum thickness of 2 feet. Sandstone is medium- to coarse-grained, well-rounded, water-deposited quartz grains with 5 percent pink feldspar. No mudstone at the site. No carbon was observed, though a log replaced by silica and calcite is present. Parts of the outcrop have abundant lime.
- C. Mineralization is carnotite. Effluorescent scales below the zone include pin-tadoite and pascoite. Some cobalt bloom near the zone was seen. A trace of copper was found several yards from the outcrop.

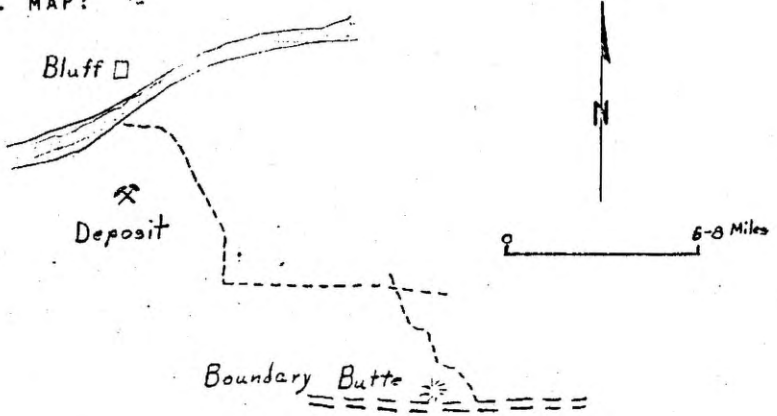
9. POTENTIAL FOR FUTURE PRODUCTION:
Nil.

10. CONCLUSIONS AND RECOMMENDATIONS: The deposit is non-commercial and no additional work is warranted at the site. However, it does indicate the possibilities of ore in an area not known previously to be mineralized. It is recommended that Navajo prospectors continue to work in the area.

11. PROOF OF OWNERSHIP RECEIVED? No
PERMISSION TO PUBLISH RECEIVED? None required.

13. OTHER INVESTIGATIONS:
None

12. MAP:



14. ADDITIONAL INFORMATION:

The deposit was discovered by a Navajo prospector working for the Commission under Jack Leonard.

15. SUPPLEMENTARY RECONNAISSANCE REPORT TO FOLLOW? No

16. WARRANTS FURTHER ATTENTION? No

DISTRIBUTION: P. L. Merritt, NYDRM (4) E. E. Thurlow, SLEB
J. O. Hosted, Washington, DRM S. Steinhauser, Richfield
S. P. Wimpfen, GJ L. D. Jarrard, Butte
L. P. Barrett, Ishpening, Mich. A. J. Rambosek, Phoenix
Mining Branch (3) C. C. Towle, DEB (2) (1 page, USGS)
R. P. Fischer, GJ, USGS H. W. Stafford
T. B. Nolan, Washington, USGS H. D. Wolfe, Albuquerque
Ira B. Joralemon, Advisory Sub-Office, Douglas, Wyo.
Committee, San Francisco ED, Files (3)

PRELIMINARY RECONNAISSANCE REPORT

EXAMINED BY Richard T. Zitting & K. G. Hatfield2. STATE Utah COUNTY San Juan

DATE(S) EXAMINED

1. SAMPLES June 28, 1953DISTRICT No. 5

NUMBER TYPE AND WIDTH RADIOACTIVITY

NEAREST TOWN Shiprock, New MexicoPROPERTY UnclaimedLOCATION
SEC. _____ T. _____ R. _____

3. TYPE OF EXAMINATION:

Reconnaissance

4. DIRECTIONS TO DEPOSIT: Turn off the Shiprock-Kayenta road at Boundary Butte and travel north and west toward the San Juan River. Deposit is located about 3 miles south of the river almost opposite Bluff, Utah.

5. OWNER OR OPERATOR:

ADDRESS:

6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS:

No production.

7. RADIOACTIVITY:

600 c/m on Halross scintillometer.

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

A. The deposit is located on the rim of low-lying sandstone knobs protruding from a sand-covered plain.

B. The deposit is in the lower part of the Salt Wash sandstone above the Bluff contact about 5 feet. Mineralization extends laterally 20 feet, has a maximum thickness of 2 feet. Sandstone is medium- to coarse-grained, well-rounded, water-deposited quartz grains with 5 percent pink feldspar. No mudstone at the site. No carbon was observed, though a log replaced by silica and calcite is present. Parts of the outcrop have abundant lime.

C. Mineralization is carnotite. Effluorescent scales below the zone include pin-tadoite and pascoite. Some cobalt bloom near the zone was seen. A trace of copper was found several yards from the outcrop.

9. POTENTIAL FOR FUTURE PRODUCTION:

Nil.

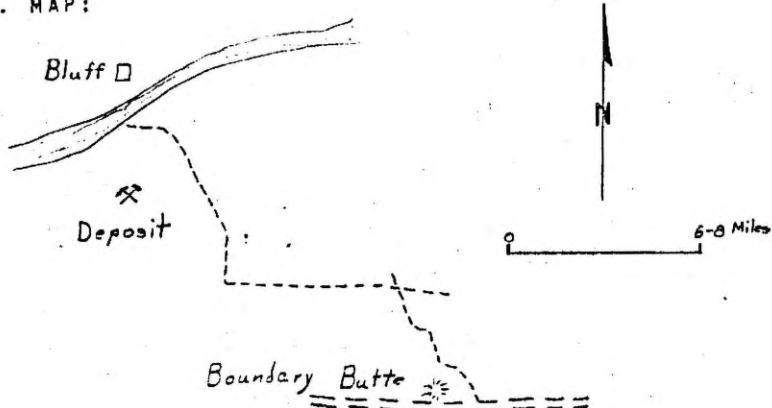
10. CONCLUSIONS AND RECOMMENDATIONS: The deposit is non-commercial and no additional work is warranted at the site. However, it does indicate the possibilities of ore in an area not known previously to be mineralized. It is recommended that Navajo prospectors continue to work in the area.

11. PROOF OF OWNERSHIP RECEIVED? NoPERMISSION TO PUBLISH RECEIVED? None required.

13. OTHER INVESTIGATIONS:

None

12. MAP:



14. ADDITIONAL INFORMATION:

The deposit was discovered by a Navajo prospector working for the Commission under Jack Leonard.

15. SUPPLEMENTARY RECONNAISSANCE REPORT TO FOLLOW? No16. WARRANTS FURTHER ATTENTION? No

DISTRIBUTION: P. L. Merritt, NYDRM (4) E. E. Thurlow, SLEB
J. O. Hosted, Washington, DRM S. Steinhauser, Richfield
S. P. Wimpfen, GJ L. D. Jarrard, Butte
L. P. Barrett, Ishpening, Mich. A. J. Rambosek, Phoenix
Mining Branch (3) C. C. Towle, DEB (2) (1 page, USGS)
R. P. Fischer, GJ, USGS H, W. Stafford
T. B. Nolan, Washington, USGS H. D. Wolfe, Albuquerque
Ira B. Joralemon, Advisory Sub-Office, Douglas, Wyo.
Committee, San Francisco ED, Files (3)

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PRELIMINARY RECONNAISSANCE REPORT

FILE ED-R 206

EXAMINED BY G. E. Klosterman
DATE(S) EXAMINED 12/2-3/52

2. STATE Utah COUNTY San Juan
DISTRICT Moab

NUMBER	TYPE AND WIDTH	RADIOACTIVITY	
		Chemical Assays %U ₃ O ₈	%V ₂ O ₅
22245	Grab	0.08	.35
22246	Chip	0.03	0.07
22247	Chip	0.01	0.02

NEAREST TOWN Monticello, Utah
PROPERTY Lavender Canyon workings

LOCATION:
SEC. 8, 9 T. 31S R. 21E
16 & 17

3. TYPE OF EXAMINATION:
Surface-geologic

4. DIRECTIONS TO DEPOSIT: From Moab, Utah, go south on U.S. Highway 160 for 40.5 miles, then turn west on secondary road for 21 miles to the Dugout Ranch. The workings are on the south side of Lavender Canyon approximately 4 miles from this ranch. (See

5. OWNER OR OPERATOR: Intermountain Uranium Corporation
ADDRESS: ?

map below)

6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS: Conglomerate No. 2 was located on Nov. 20, 1950, by C. Alfred Frost. This claim was relocated on April 26, 1952, by Don B. AcAffee of Intermountain Uranium Corporation. Lavender No. 1 and many other claims were located by the same corporation.

7. RADIOACTIVITY: The highest count recorded by the Halross Model 939 Scintillometer was 500 cps. High radioactivity was encountered intermittently along the Shinarump-Moenkopi contact between Lavender No. 1 and Conglomerate No. 2 claims. The background count was 20 cps, except in workings, where it increased slightly. (see map)

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)
A. Deep canyons with wide valley floors and arroyos are the main topographic features.
B. The Shinarump conglomerate is composed of interbedded, massive, gray conglomerate, medium- to coarse-grained, light brown sandstone, and fissile, gray-green shale. Locally it strikes N 43°W and dips 3°NE. Mineral zation is found directly above the Moenkopi contact, with a small amount of leaching into this underlying, impermeable bed.
C. Carnotite-type uranium minerals were found with jarosite, limonite, malachite, azurite, gypsum, and calcite. Some carbonaceous material was also present.

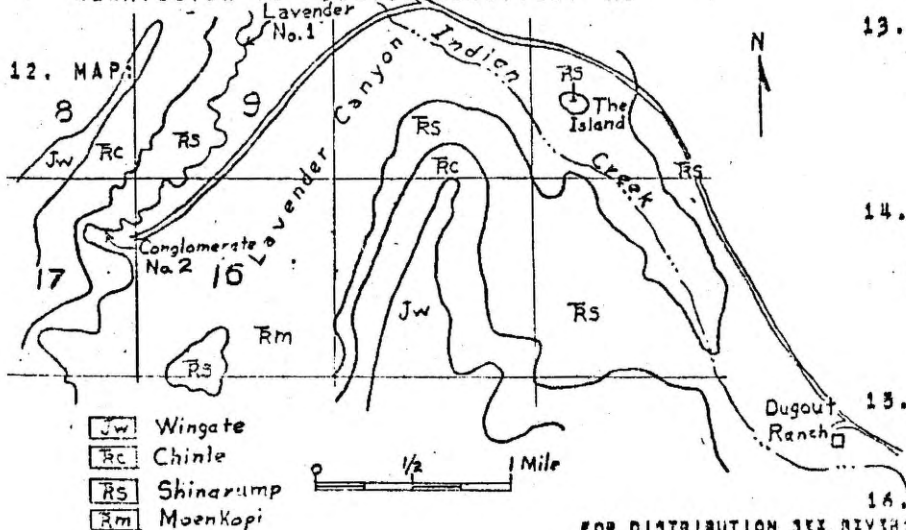
A production record is given on reverse side.

9. POTENTIAL FOR FUTURE PRODUCTION: With considerable sorting a limited amount of low grade, high lime content ore could be extracted. However, production is not economic under the present buying program.

10. CONCLUSIONS AND RECOMMENDATIONS:

No further work is necessary at this time.

11. PROOF OF OWNERSHIP RECEIVED? No
PERMISSION TO PUBLISH RECEIVED? No



13. OTHER INVESTIGATIONS: None

14. ADDITIONAL INFORMATION:
Refer to: Baker, A. A., U.S. Geol. Bull. 841, 1933.

15. SUPPLEMENTARY RECONNAISSANCE REPORT TO FOLLOW? No

16. WARRANTS FURTHER ATTENTION? No

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 H. E. Nelson, Richfield T. B. Nolan, Washington, USGS
 Ira B. Joralemon, Advisory L. J. Jarrard, Butte
 Committee, San Francisco ED, GJCO files (3)✓

8. Lavender Canyon Production Record*

Claim	Tons Shipped	%U ₃ O ₈	%V ₂ O ₅	%CaCO ₃
Conglomerate No. 2	6.35	0.36	0.06	27.20
Conglomerate No. 7	11.23	0.28	0.08	22.40
Lavender No. 1	10.56	0.06	0.05	29.10

*Data taken from the settlement sheets of the Monticello mill.

It is evident that considerable high-grading was done in shipments made from the Conglomerate claims.

Forty-three wagon drill holes have been drilled behind the Conglomerate No. 2 claim. They reported 2 to 3 feet of mineralization in an area 50 feet by 600 feet. This mineralization averaged 0.07 percent U₃O₈ with the highest assay being 0.13 percent. However, the accuracy of this drilling data is questionable.

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PRELIMINARY RECONNAISSANCE REPORT

FILE NO. 206

EXAMINED BY G. E. Klosterman

2. STATE Utah COUNTY San Juan

DATE(S) EXAMINED 12/2-3/52

DISTRICT Noab

1. SAMPLES

NUMBER	TYPE AND WIDTH	RADIOACTIVITY	
		Chemical Assays	
		%U ₃ O ₈	%V ₂ O ₅
22245	Grab	0.08	0.05
22246	Chip	0.03	0.07
22247	Chip	0.01	0.01

NEAREST TOWN Monticello, Utah

PROPERTY Lavender Canyon workings

LOCATION:
SEC. 8, 9 T. 31S R. 21E
16 & 17

3. TYPE OF EXAMINATION:

Surface-geologic

4. DIRECTIONS TO DEPOSIT: From Moab, Utah, go south on U.S. Highway 160 for 40.5 miles, then turn west on secondary road for 21 miles to the Dugout Ranch. The workings are on the south side of Lavender Canyon approximately 4 miles from this ranch. (See

5. OWNER OR OPERATOR: Intermountain Uranium Corporation map below)
ADDRESS: ?

6. MINE OR PROPERTY HISTORY, PRODUCTION AND WORKINGS: Conglomerate No. 2 was located on Nov. 20, 1950, by C. Alfred Frost. This claim was relocated on April 25, 1952, by Don B. AcAffee of Intermountain Uranium Corporation. Lavender No. 1 and many other claims were located by the same corporation.

7. RADIOACTIVITY: The highest count recorded by the Halross Model 939 Scintillometer was 500 cps. High radioactivity was encountered intermittently along the Shinarump-Moenkopi contact between Lavender No. 1 and Conglomerate No. 2 claims. The background count was 20 cps, except in workings, where it increased slightly. (see map)

8. DESCRIPTION OF DEPOSIT (Discuss under: A. Topography, B. Geology, C. Mineralogy)

A. Deep canyons with wide valley floors and arroyos are the main topographic features.

B. The Shinarump conglomerate is composed of interbedded, massive, gray conglomerate, medium- to coarse-grained, light brown sandstone, and fissile, gray-green shale. Locally it strikes N43°W and dips 3°NE. Mineral zonation is found directly above the Moenkopi contact, with a small amount of leaching into this underlying, impermeable bed.

C. Carnotite-type uranium minerals were found with jarosite, limonite, malachite, azurite, gypsum, and calcite. Some carbonaceous material was also present.

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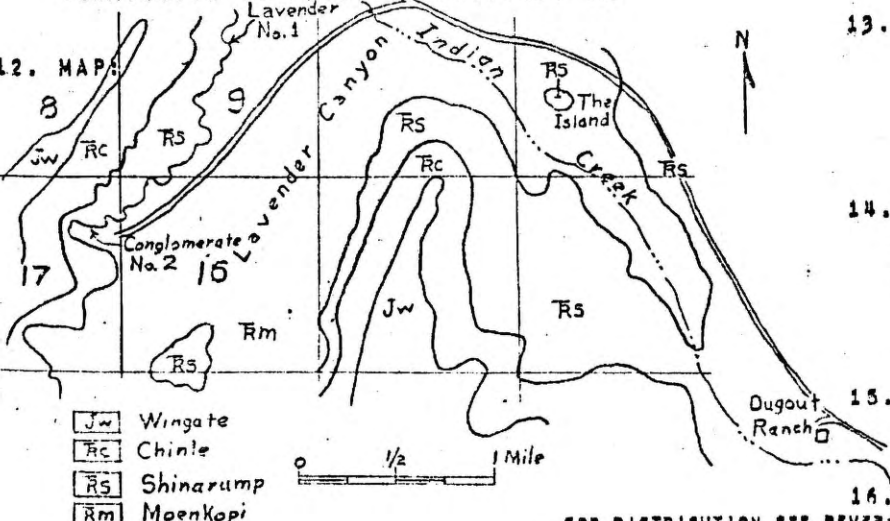
10. CONCLUSIONS AND RECOMMENDATIONS:

No further work is necessary at this time.

11. PROOF OF OWNERSHIP RECEIVED? No

PERMISSION TO PUBLISH RECEIVED? No

12. MAPS:



13. OTHER INVESTIGATIONS: None

14. ADDITIONAL INFORMATION:

Refer to: Baker, A. A., U.S. Geol. Bull. 841, 1933.

15. SUPPLEMENTARY RECONNAISSANCE REPORT TO FOLLOW? No

16. WARRANTS FURTHER ATTENTION? No

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8.

Lavender Canyon Production Record*

Claim	Tons Shipped	%U ₃ O ₈	%V ₂ O ₅	%CaCO ₃
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*Data taken from the settlement sheets of the Monticello mill.

It is evident that considerable high-grading was done in shipments made from the Conglomerate claims.

Forty-three wagon drill holes have been drilled behind the Conglomerate No. 2 claim. They reported 2 to 3 feet of mineralization in an area 50 feet by 600 feet. This mineralization averaged 0.07 percent U₃O₈ with the highest assay being 0.13 percent. However, the accuracy of this drilling data is questionable.

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PRELIMINARY RECONNAISSANCE REPORT

File No. ED-2-533

Geologic Dist. No. _____

Names of examining party:

C. W. Tom

PROPERTY STATISTICS

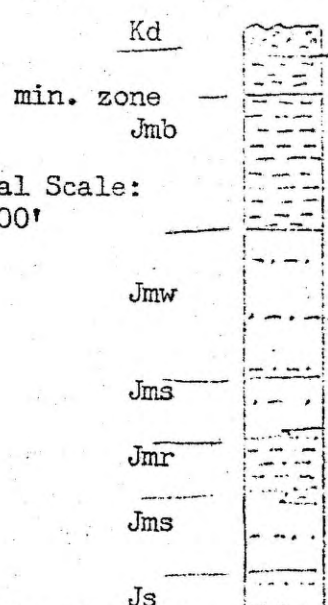
Name Pete No. 6 and No. 7 Mines Date February 21, 1956
 Location: State Utah County San Juan Mining District Montezuma Canyon
 Locality (G.L.O. and/or description) Sec. 8, T39S, R25E

Photo No. and/or map coverage _____
 Road log 0 - 15.4 South on Utah 47 from Blanding to Hovenweep Rd.
15.4 - 31.5 east on Hovenweep rd. to Hatch Trading Post
31.5 - 34.2 east on same road to int. Warwick turn-off to north
34.2 - 34.7 to Pete 6 and 7 mines

Owners, operators, addresses International Warwick, Ltd. First National Bank Bldg.
Denver, Colorado; William Palmer, Cortez, Colorado, Supt.; Howard Moorabapas
Caretaker

GEOLOGIC SETTING FOR MINERAL DEPOSIT

- Name of host rock Brushy Basin
- Stratigraphic Column or Geologic Sketch (indicate min. zone)
- Petrology of host rock (incl. ore zone) Var. ms. and sts. w/ thin bed gray to buff ss. Ore occurs in three distinct hosts: (1) disseminated and coating fractures in brick-red sts. about 2' thk, (2) disseminated (?) and coating fractures in gray or locally buff sts. about 2' thk. (3) as replacements of lenticular vf ss. in (2) zone.
- Sedimentary structures of host unit/inn Gn ms observed above ore. Local scours (?) in sts. filled with vf ss.
- Regional tectonic environment Blanding Basin between Abajo Mts. and Comb Ridge on NW and W respectively and Ute Mts. to east. beds are approximately horizontal.
- Local tectonic structures and relation to ore Secondary and possibly primary U minerals along fractures. 2 fractures N55°E, 2-77°E, 1 - 420°W.
- Alteration Ms appears to have been in part altered from red to green in area examined. whether Gn and buff colors in sts. and ss. are due to alteration is not known. Much Yw and R Fe(?) noted along fractures.



MINERAL DEPOSIT

- Form (vein, bedded, stockwork, etc.) Widespread thin-bedded deposit.
- Dimensions NOT known. Drilling indicates some 50 mineralized claims in vicinity.
- Orientation Orebody believed elongated east-west.
- Method of emplacement (replacement, impregnation, etc.) Appears to be disseminated in R and Gn sts. and to replace cement (?) in vf ss. near contact with sts. and along fractures (?)
- Mineralogy (other than host rock; specimen numbers for lab. work)
 - Primary Uraninite (?), some Fe (?) sulfides. Specimen Nos. 1-T-2-15-6, 2-T-2-15-6, 3-T-2-15-6.
 - Secondary Yw and greenish mins. w/ bladed, acicular, and radiated habit associated with fractures.
- Ore Controls A thin (0.1-0.5 ft.) Gn mud seam directly overlies the sts. ore zone and may have provided a relatively impervious barrier to lateral migrating solutions. High Fe content may be significant as a means of absorbing and/or precipitating U.
- Suggested guides to ore Brick R sts., some to abundant Fe staining in and adjacent to host. Thin Gn mud seam capping thin sts. beds.

Generalized Stratigraphic Sect. taken from Chamberlain, RM00/448

Signature(s) and Position(s) of Reporting Geologist(s)

Distribution:

- R. D. Ninninger, Wash., DRM (1)
- ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~
- A. L. Brokaw, GJ, USGS (1)
- H. S. Johnson, USGS, GJ (1)
- A. P. Butler, Denver, USGS (1)

- Mining Division, GJ . . . (1)
- E. E. Thurlow, SLEB . . . (1)
- D. L. Everhart, DEB . . . (2)
- ED Files (4)

8. Adjacent mineral deposits Similar deposit on School Sec. 16, T39S, R25E, Cottonwood Mine 20 miles north in Montezuma Canyon.

9. Additional remarks At time of the temporary shut-down (Feb. 1), due to impassable roads drifts were being driven to a reported 5-7 ft. of 1.0% ore found by drilling. This group of claims has been extensively drilled and the areal distribution of mineralization fairly well outlined. Mineralized brick-red str. has been noted several miles west of the Pete Mine.

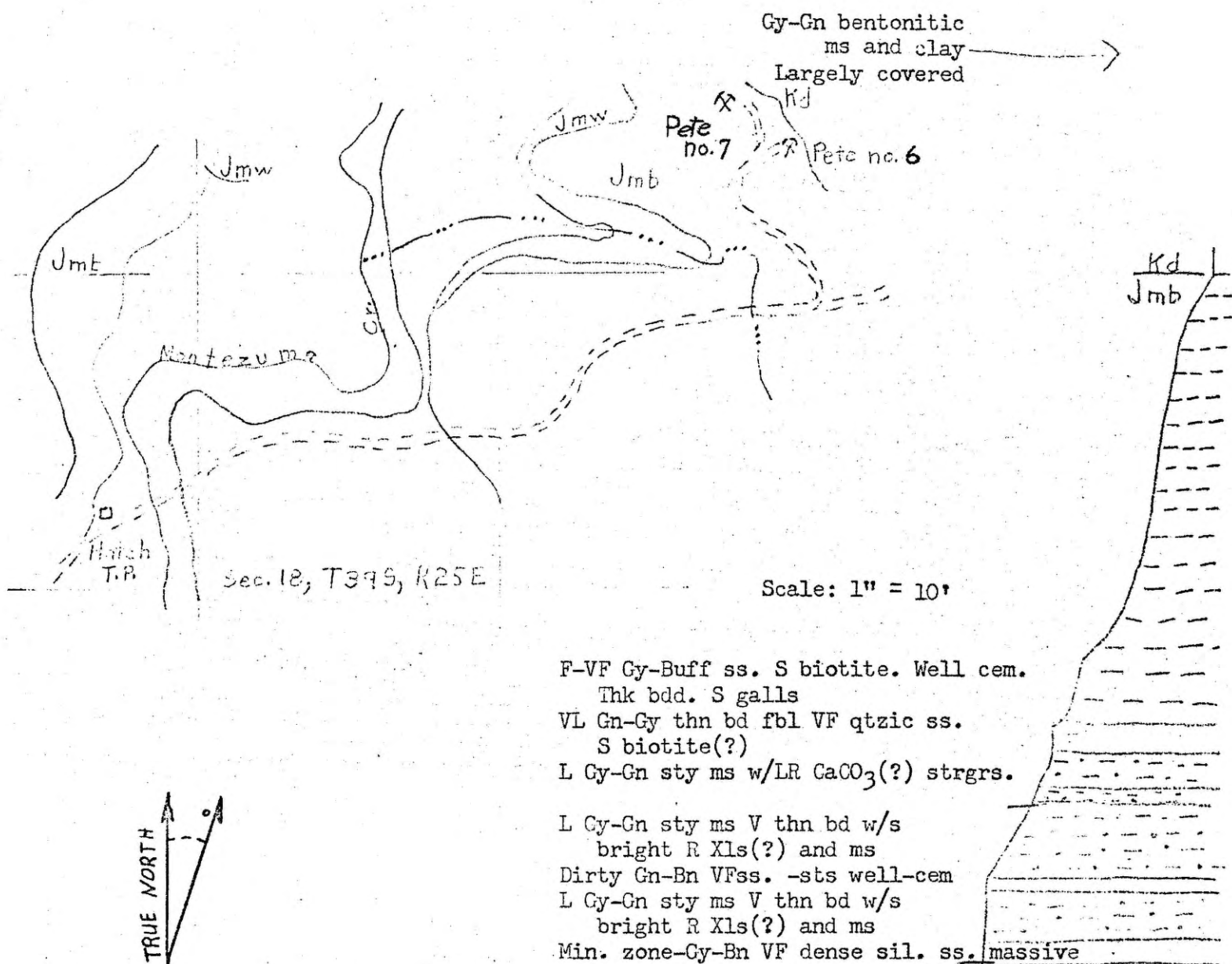
10. Samples (if no samples are taken give radiation value in mR/hr or estimate grade)

No.	Type*	Length	Assays				Area or volume represented
			U ₃ O ₈ %	U ₂ O ₈ %	V ₂ O ₅ %	CaCO ₃ %	
34627	High-Grade						
34628	Specimen						
34629	"						
34630	"						
34631	"						
34632	"						
34633	"						

*Channel, chip, selected grab

11. Maps and Sections (sketch, pace, or tape - suggest both plan and section of mineral deposit with insert block giving regional geology and location - attach additional sheets for detail mine maps etc.)

Scale: 1" = 2640'



12. Production history: inclusive dates 9/1/55 to 2/1/56 tons 2889 grade 0.23% U₃O₈

13. Potential reserve estimates (classifications, tons, grade under current mining conditions)
Drill hole data must be obtained from the Company and studied before potential reserve estimate can be made.

14. Recommendation for further work This operation should be checked regularly. The spatial distribution of the min. brick-red str. and its potential as an ore producer should be determined. In view of the intense mineralization in the Brushy Basin of this area, it should be given a closer scrutiny as a whole. More work is required to ascertain favorability criteria.

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PRELIMINARY RECONNAISSANCE REPORT

Property Moki Uranium Syndicate File No. ED:R-504

Examined by H.M. Dahl, I. T. Fisk and N. B. Young Date October 17, 1958

1. Location: State Utah District I

County San Juan Section 11 T. 31S R. 21E

Number of aerial photographs, if known _____

Road log to deposit Turn west from U. S. Highway 160 onto Home of Truth Road
miles south of Moab, Utah, and drive for 21 miles. Turn right at Dugout ranch and
go 1 mile; turn left and go 1000 feet to the prospect.

2. Owners, operators, addresses Moki Uranium Syndicate, 1866 E. 9 S., Salt Lake City,
Utah

3. In what formation or member (zone within member) is mineralization located? Basal part of the
of the Chinle formation (Moss Back member ?)

4. What is sedimentary structure and lithology of host rock (e.g., cross bedding, channels, scour, lensing, mud galls, color, interrelation of lithologies)? Light gray medium-grained thick-bedded
sandstone and sparse conglomerate with light gray mud galls, there are some carbon
trash, some interbedded siltstone lenses and some lenses which show calcite
and uraninite replacement. Sediments fill a 10-foot scour in the Moenkopi for-
formation. Five feet of ore is reported on the floor.

5. What is specific occurrence of mineralization (e.g., disseminated, on bedding planes, above-below sandstone, filling interstices; replacement of rock grains, cement, carbon mudstone, etc.)? _____

Predominately as replacement of carbon; some dissemination in the sandstone and in
trachy zones. Abundant calcite is associated with some of the carbon replacement.

6. What is relation of ore to tectonic features (e.g., folds, fractures, faults, intrusives, lava flows, etc.)? None

7. What are apparent mineralization controls (e.g., permeability, carbon, channels, tectonic features, etc.)? Carbon and permeability, to some extent. Also scour channel in the Moenkopi
formation.

8. Any other features related to mineralization (e.g., alteration, color change, vegetation, topographic expression, etc.)? NO

9. What is the mineralogy (e.g., "carnotite", pitchblende, asphaltite, associated minerals, etc.)? Give sample numbers for specimens collected for laboratory study.

Uraninite and vanadium (?) minerals

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10. Estimate dimensions of ore body and/or mineralized zone No information - see attached map

11. Samples (if no samples are taken, estimate grade with field counter)

No.	Type*	Thick- ness	Assays				Area or volume represented
			U ₃ O ₈	U ₂ O ₅	V ₂ O ₅	CaCO ₃	
29970	Chip (channel)	8 ft.	0.30	0.32	0.07	10.0	Sample taken from 1 ft. thick channel in area 20' by 20'
29971	Chip (high grade)		21.50	20.38	0.22	65.0	
29972	Grab (wall rock)		0.09	0.0	0.03	1.0	Mass of rock from 10' by 10' carbonaceous zone
29973	Chip (carbonaceous)		0.16	0.14	0.31	5.0	

*Channel, composite, channel, chip, grab; thickness refers to length of cut channel.

12. Past production (tonnage and grade) 120 tons

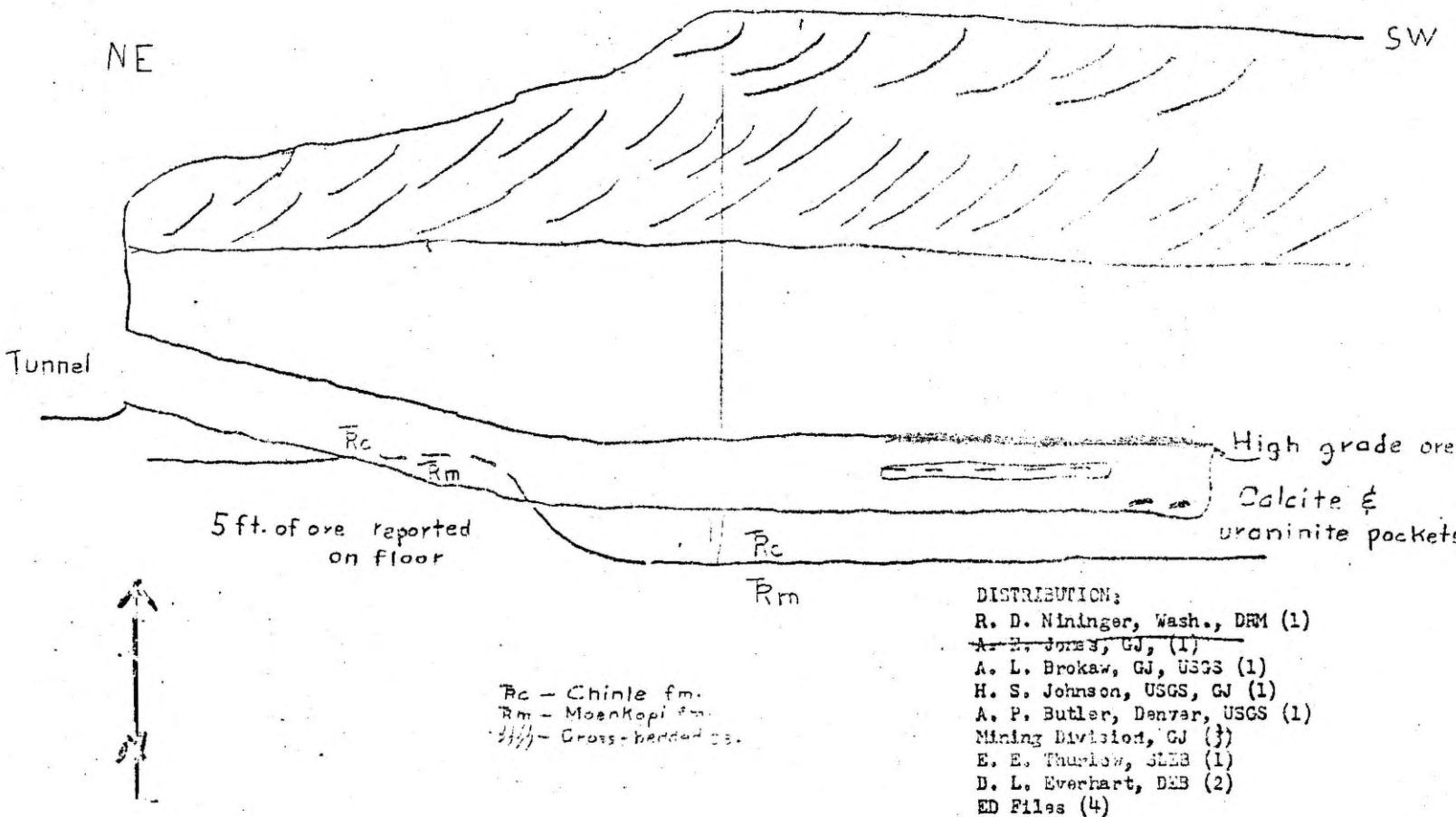
13. Estimated production potential _____

14. Are there any localities nearby which show favorable characteristics? Describe with view towards further study. One or two outcrops a mile from the property, on the west side of Lavender Creek, show a radiometric high. Also for 2 miles in the Moenkopi sandstone several miles down Indian Creek, on the east bank.

15. Is area recommended for further study? No. It has already been studied.

16. Additional remarks Judging by material on the face and in the dump, the whole area would not be amenable. Selective mining is needed because of lack of drill information, operator is doing blind drifting.

17. Draw sketch map(s) showing access roads and geologic setting. Draw cross-section(s) of deposit.



Scale: 1 inch = 10 feet