

Doelling, H. H.

U. G. M. S. Special Studies #22, Sept. 1967

Uranium Deposits of Garfield Co., Ut.

John Hill - Sec. 6, T33S, R12E

Ore body 400 ft. long

Minnie Pearl claims - Sec. 6, T33S, R12E

Vanadium-Uranium ratio 134:1 (hand sample)

Delmonte Mines - Sec. 12, T35S, R11E

Lucky Strike - Sec. 16, T35S, R11E

Agate Claims - Sec. 21, T25S, R11E

Yellow Paint Claims - Sec. 34, T35S, R11E

June Bells - Sec. 17, T33S, R12E

Rainy Day Mine - NW Sec. 3, T35S, R8E

Average dip 12° NE Strike N15°W

Ore body - 1-1/2 x 4 x 1800 Ft.

Minerals - sphalerite, chalcopyrite, pyrite, marcasite, galena

Uranium mineral - uraninite

Ore grade - .30% U<sub>3</sub>O<sub>8</sub> .15% V<sub>2</sub>O<sub>5</sub>

Blue Goose - Sec. 34, T33S, R6E

Minerals - antunite, torbernite, azurite, malachite

Lone B Prospect -

Mineralization found near fault.

Black Widow claims - Sec. 26, T34S, R6E

Minerals - Uraninite, torbernite, antunite, azurite, malachite

Sample Assay 15% Cu. No U<sub>3</sub>O<sub>8</sub> No U<sub>2</sub>O<sub>5</sub>

Yellow Jacket Mine - Sec. 14, T35S, R7E

Minerals - Uranium (Johannite, uraninite)

Hot Shot Claims - Sec. 27, T35S, R7E

Uranium principally - yellow uranyl sulphates

Oasis Prospect - Sec. 2, T35S, R6E  
Bulldozer pits

Ekkers Claims -  
Logs assayed at 5.71%  $U_3O_8$  and 32.6% lime

Yellow Bird claim - Teasdale anticline  
Spotted Dog claim - Teasdale anticline  
Brown Mule claim - Teasdale anticline

Poison Springs Canyon Prospects - Sec. 14, T31S, R13E  
Workings in Moenkopi

Unknown Prospect - Sec. 21, T31S, R14E  
Workings in Moenkopi

Cedar Point Group - Sec. 30, T31S, R14E  
Workings in Moenkopi  
Minerals - torbernite, malachite

Unknown Prospect - Sec. 27, T33S, R13E  
Workings in Moenkopi and Monitor Butte member of  
the Chinle fm.

Blue bird prospect - Sec. 14, T34S, R6E  
Two samples - .04%  $U_3O_8$ , .09%  $U_3O_8$  and .01%  $V_2O_5$

Zelda Prospect - Sec. 2, T34S, R7E  
Workings in Moenkopi and Shinarump

Sneaky or Silver Falls Prospect - Sec. 26, T35S, R7E

Duke Prospects - Sec. 35, T35S, R7E  
Tunnels in Shinarump

Red Head or Lamp Stand Prospect - Sec. 33, T32S, R7E  
Tunnel in Shinarump

Rocky Mountain Uranium Corp. Prospects - Sec. 33, T34S, R8E  
Tunnel in Shinarump

Horse Head Prospect - Sec. 38, T32S, R6E  
Ore in Shinarump  
Minerals - Uraninite, torbernite, chalcopyrite, pyrite



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Oil and Mining Journal - Jan. 6, 1970, page 6  
Rio Algon Uranium Mine Takes Shape in Utah

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Rio Algon Mine -

2 shafts 18 ft. in diameter x 2400 ft. deep  
Projected production 1 million pounds  $U_3O_8$ /year  
Mining method - room and pillar  
Discovered by drilling. Ore is 2400 ft. from surface.

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Anonymous News Article

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Union Carbide locates vanadium ore  
Miscellaneous Reports Vol. 5

Discovered 2 miles from Lasal Ut. by drilling  
500 feet from surface  
Expected production 1000 to 2000 ft.  
Average grade of samples 1.25%  $U_3O_8$  and 25%  $V_2O_5$

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Geol. Inv. of Trachyte Dist., Henry Mts., Ut.  
~~Brown~~<sup>Brooke</sup>, G. L., Shirley, R. F. and Swanson, M. A.  
U. S. A. E. C. Report RMO 912, 7 p., 1951

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Trachyte #1-20, Blitz #1-7, June Bell #1-4,  
Owners - Vanadium Corp. of America

Straight Creek Claims  
Minnie Pearl No. 1 and 2

Ore found in the Salt Wash member of Morrison  
Mineralization - Carnotite, ~~Varosite~~ (Pyrite, Bornite  
in Adit #11 at Farmers Knob)  
Depth to ore zone - 180 ft. (Farmers Knob), 155 ft. (John Hill) -  
Average ore grade in the area  $U_3O_8 = .245%$ ;  $V_2O_5 = 1.307%$

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Thaden, N. E., Trites, A. F., Jr., Finnell, T. L.  
Geology and Ore Deposits of the White Canyon Area  
San Juan and Garfield Cos., Ut.  
U. S. G. S. Bull. 1125, 1964

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1916 copper uranium ore shipped from the Blue Dike  
(Happy Jack Mine) and the Dolly Varden Claim (Four Aces Claim)

1949 Shipments from Hideout Mine received at White Canyon  
also from the North Point Claim

1951 Mining began at the following claims: Posey, Joe Bishop, Yellow John, Jomac, Jerry and White Canyon #1, Bell, Fry #4, Scenic No. 4

Bell and Jerry claims started and stopped production in 1951

Discovered by drilling: Blue Lizzard, Gonaway, Maybe, Gismo, and Spook mines

All deposits in Shinarump

Secondary U. Minerals -

Posey Mine - meta-antunite, metatorbernite, phosphuranylite  
becquerelite, cuprosklodowskite

Fry No. 4 Mine - metatorbernite, cuprosklodowskite,  
becquerelite, schoepite, Johannite

Hideout Nail - Bagleyite, schroeckingerite

Happy Jack - metazeunerite, Johannite, Zippeite like mineral,  
uranopilite

Blue Lizzard - zippeite like mineral

White Canyon #1 - metatorhernite

Joe Bishop - metatorbernite

Jomac - metatorbernite, metazeunerite

Walt Mine - metaborbernite

Markey Mine - metatorbernite, metazeunerite

North Point - phosphuranylite

Yellow John - Uranophane

Secondary Copper Minerals -

White Canyon No. 1 - native copper

Hideout Mine - cuprite

Posey Mine - melaconite, azurite

Happy Jack - chalcantite

Markey Mine - chalcantite

Ears claim - antlerite

Bell claim -

Host rock - Shinarump

Altitude - 6,480 ft.

Mine workings - main adit trend N88°E for 50 ft.  
side drift trend due south for 15 ft.  
and turns S56°E for 105 ft.

Dip 2° S 80° W

Blue Lizzard Mine -

Altitude - 4,800 ft.

Owners - Red Canyon Mines (Preston Redd, Robert Redd,  
Lyman Redd, John Redd, Donald T. Adams, Leon Adams)

Discovered at outcrop - additional reserves discovered by drilling.

Mine Workings - 1065 ft. drift along channel

3 - 50 ft. side drifts

Strike due north; Dip 1°30' W.

Fry No. 4 mine - NW-1/4 NE-1/4 Sec. 24, T37S, R17E SLM

Access by dirt roads

Owners - White Canyon Mining Co.

Mine Workings - 180 ft. underground workings

several tons shipped during spring and summer 1951

Host rock - Shinarump

Ore body trend N. 70° E.

Happy Jack Mine -

Access - Dirt road 1 mile to U. S. Highway 95

Owners - Joe W. Cooper, Fletcher Bronson, Brant L. Bronson

Mine workings - 5 main adits connected by cross-cuts

Total workings consist of more than 5000 ft.

Host is Shinarump

Trent of ore channel - due west

Jomac Mine - T34S, R14E SLM

Altitude - 5200 ft.

Owners - Ellihill Mining Co. ✓

Mine workings - two adits 315 and 130 ft. long

connected by 75 ft. cross-cut

25 ft. cross-cut from adit 1

Drilling - 2983.5 ft.

Production - a few hundred tons shipped May - Nov. 1951

Host - Shinarump

Trend of ore channel - N. 24° W.

Posey Mine -

Owners - Red Canyon Mines

Mine Workings - two parallel adits S. 60° E.

Portal to deepest point 280 ft. 130 ft. wide

Drilling - 1570 ft.

Several truck loads of ore shipped in 1950

Host is Shinarump

Trend of channel N. 40° W.

White Canyon No. 1 Mine -

Altitude 6200 ft.

Owners - White Canyon Mining Co.

Mine workings - 300 ft. of adit and cross-cuts

Ore body trend S. 36° W.

Host - Shinarump



**Hide Out #1 - Sec. 14, T36S, R17E**

Discovered by S. Wiley Redd, sold to A. F. Shumway, sold to  
 F. A. Sitton - Present owners White Canyon Mining Co.  
 1949 - 128 tons shipped - .18%  $U_3O_8$ , 3.44% Cu.  
 1953 - 1,500 tons shipped - .17%  $U_3O_8$ , 1.74% Cu.  
 Host is Shinarump - Trend N.  $70^\circ$  W.  
 Dip -  $1^\circ$  -  $3^\circ$  S.  $62^\circ$  W.

**W.N. Mine - SE 1/4 Sec. 21, T36S, R17E**

Owners - White Canyon Drilling Co.  
 1953 - 10 tons shipped .08%  $U_3O_8$ , .5% cu.  
 1955 - 2,170 tons shipped .20%  $U_3O_8$ , .39% cu.  
 Drilling - 8972 ft. discovered bulk of deposit  
 Strike of beds -  $N30^\circ$  W. dip  $2^\circ$  SW

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**Clark E. L. and Million Isadore**

Uranium deposits in the Morrison fm. of the Sam Rafael River District  
 IAPG - Seventh Annual Field Conference, 1956

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**Four Corners Uranium Corp. workings in San Rafael Swell**

Elevation - 4100 - 4400 ft.  
 Host - Salt Wash  
 Minerals - coffinite, ~~corvusite~~, ~~monrosite~~, carnotite(?)  
 Exploration - outcrop discovery  
     200,000 feet drilled to outline other ore bodies  
 Mining - 6 inclines  
     2 vertical shafts  
 Production - 2000 tons/month  
     ore has lime content (6-10%)  
  
 Reserves - 235,000 tons @ .27%  $U_3O_8$

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**Grunner, J. W.**

IAPG 7th Ann. Field Conf. p. 151-154, 1956

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**Delta group - San Rafael Swell**

Uraninite in microcopic grains

**Happy Jack Mine -**

Uraninite - copper sulfide  
 pyrite, chalcopyrite, bornite, chalcocite  
 uranopilite, zippeite, johannite

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Lekas, M.A., H.M. Dahl

IAPG Guidebook, 7th Ann. Field Conf. p. 161-168, 1956

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1917 - Uranium - Service Berry and Divide Mines

Producing from surface deposits

1953 - Rattlesnake Mine - host is Salt Wash

Standard Uranium Mine -

Native copper

Host - Moss back

Waterfall and Wilson groups -

Host is salt wash

Minerals: carnotite, tynyamunite

Big Buck Mine -

Minerals - carnotite, becquerelite

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Grunner, J.W., Fetzner, W.G., Rapaport, L.

Econ. Geol. V. 46, No. 3, p. 243-25), 1951

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Bullion Monarch Mine -

Open pit mining at first contacts dip  $30^{\circ}$  -  $70^{\circ}$  south

Adit below open pit - 500-600 ft. long

Minerals: sordisite

Buddy Mine -

Ore zone is near vertical

pitchblende

Prospector Mine -

Strike of ore zone N.  $65^{\circ}$  E., Dip near vertical

pitchblende

Freedom #2 Mine -

Ore bodies strike N.  $65^{\circ}$  E., dip nearly vertical

Papsy's Hope Claim - Autunite - 7000 ft. east of main mines

East Slope claim - autunite - 6000 ft. west of main mines

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Kelley, D. R., Kerr, P.F.  
 Clay Alteration and Ore, Temple Mt., Ut.  
 G.S.A. Bull. Vol. 68, pp. 1101-1116, 1957

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Campbird Mines -

Interstitial Minerals - Mica, Jarosite, Kaolinite

Calyx #3 Mine -  
 Interstitial Minerals - Mica, Kaolinite

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Kerr, P.F., Hamilton P.K.  
 Am. Mineralogist v. 43, p. 24-47, 1958

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Eagle's Nest -  
 Highest chromium content 3% in chroma-mica-clay

Incline Nail -  
 Chrome-mica-clay

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~~Kelley~~, D. R., Kerr P.F.  
 G.S.A. Bull. vol. 69, p. 701-756, 1968

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Delta Mine - (Hidden Splendor)  
 Ore is pitchblende  
 Sphalerite

*Calyx*  
 Culyz Hole Mines #3, 6, 9 -

Camp Bird Workings -  
 Host is Moss Back  
 Ore at Camp Bird #13 dated at 80 million years

North Mesa #9 Mine -  
 Urano-Organic replacement of log

Rex No. 9 Mine -  
 Minerals: Montrosite

Calyx

Culyx Hole No. 8 -

Mineral: Montrosite

Vanadium King Claims -

Silicified logs found

Little Joe Claims -

Urano-organic ore localized along fault

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Gross, E. B.

Econ. Geol., v. 51, no. 7, p. 632-648, 1956

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MiVida Mine -

Ore zone thickness - 2 - 23 ft.

Ore minerals replace cement in S. S. size .01-.02 mm.

Massive minerals up to several centimeters.

U - Ore minerals - coffinite, uraninite

V - ore minerals - montrosite, corvusite, pascoite, metatyuyamunite

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Davidson, E. W.

Geology of the Circle Cliffs Area, Garfield and Kane Cos., Ut.

U. S. G. S. Bull. 1239, 1967

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Rainy Day Mine -

Ore sample grades - .001 - 4.15%  $U_3O_8$

Buff Prospect -

N. W. Circle Cliffs

Mine Workings - 30 - 40 ft. of drift

Host - Sinarump and Moenkopi

Red Cliffs Prospect -

N. W. Circle Cliffs

Mine workings - 70-80 ft. of drift (inaccessible)

Host - Shinarump

Some copper mineralization

Cool prospect -

Ore channel trends N. 70° W.

Mine workings - Adit 6 ft. long

Host is Shinarump

Midas Prospect -

Host - Shinarmump - Moenkopi contact

**Centipede Prospect -**

Host - Shinarump

Ore sample grades - .015 - .46%  $U_3O_8$ 

Minerals - Uraninite, chalcopyrite, pyrite

**Horsehead Prospect -**

Mine workings - 50 ft. of drift

Channel trends N. 87° W.

Minerals: yellow and green uranium minerals

chalcopyrite, pyrite &amp; (zinc, nickel, lead minerals)

grab sample grade - 3.44%  $U_3O_8$ **Blue Goose Prospect -**

Channel trend N. 55° W.

Host is Shinarump

Mine workings - 65 ft. of drift

Minerals - copper staining, green and yellow uranium minerals

**Horse Canyon Prospect -**

Mine workings - 30 ft. of drift

Host is Monitor Butte member of Chinle

Minerals - zunneville(?)

**Stud Horse Prospect -**

Mine workings - several hundred feet of drift

Drilling - several hundred feet

Pod-shaped ore body (1-1/2 x 10 x 70 ft.)

Minerals: zinnerite, autunite, uraninite, chalcopyrite, pyrite,  
galena, sphalerite

Host: Shinarump and Moenkopi

**Glen Rae Prospect -**

Mine workings - 10 ft. drift, two 5 ft. long cross-cuts

Minerals - copper stain, pyrite

Host - Shinarump

Two uranium indicator plants - princess plum, rice grass

**Blue Bird Prospect -**

Mine workings - two adits - 50 - 60 ft. long

Host - Shinarump

Minerals - copper minerals low radioactivity

**Lone B Prospect -**

Mine workings - two 100 ft. long adits in Shinarump

low radioactivity - some pyrite.



## Black Widow Prospect -

Mine workings - Main adit and 5 ft. long dog hole  
 one 40 ft. long adit and two 10 ft. dog holes

Host - Shinarump

Ore body pot-shaped

Minerals: copper minerals, yellow and green uranium minerals

## Mesa Prospect -

Mine workings - 100 ft. of drift

Host is Shinarump

## Yellow Jacket Prospect -

Mine workings - three adits (total length 300 ft.)

Ore sample grades - .001 - .29%  $U_3O_8$

Some copper minerals

Host is Shinarump

## Hot Shot Prospect -

Mine workings - 50 ft. of drift

Host is Shinarump

Ore grade samples - .079 - .20%  $U_3O_8$

## Sneaky-Silver Falls Prospect -

Mine workings - 200 ft. of drift

Minerals: chalcopyrite, pyrite ore associated with uranium minerals

Host is Shinarump

## Duke Prospect -

Host is Shinarump

Mine workings - 100 ft. bulldozing

a 1-1/4 ft. channel sample - .004%  $U_3O_8$

## Sun Dog Prospect -

Host is Shinarump

Mine workings - 130 ft. deep shaft

## Betty Jack Prospect -

Host is Shinarump

Mine workings - 125 ft. incline and 70 ft. of cross-cuts.

One grab sample - 1.58%  $U_3O_8$

## Rainy Day Mine -

Ore body - 1800 ft. long x a few ft. wide

Host is Shinarump

Chalcopyrite and pyrite occur with the uranium

**Rocky Mountain Prospects - near the Rainy Day Mine**

Mine workings - several hundred ft. of drifts

Host is Shinarump - Moenkopi contact

**Copper Head Prospect -**

Mine workings - 80 ft. of drifts and cross-cuts

Minerals: pyrite, marcasite, chalcopyrite - associated with uranium

1 grab sample - 1.38%  $U_3O_8$

**Hope Prospect -**

Mine workings - Bulldozer cuts in Shinarump

**Zelda Prospect -**

Mine workings - 150 ft. adit in Moenkopi

**Three Partners Prospect -**

Mine workings - 25 ft. adit and dog holes along the cliff face

Uranium minerals coat sand grains

Host is Shinarump

**Dodie (Midas #3) Prospect -**

Some copper stain in Moenkopi

**Moqui Prospect -**

Mine workings - two adits 60 and 40 ft. long

Host is Shinarump

**Olympic Prospect -**

Mine workings - adit 40 ft. long in Salt Wash

Samples contained: .033%  $U_3O_8$  and 2 ppm selenium

**Dream Prospect -**

Mine workings - 100 ft. incline, 10 ft. drift, Bulldozer trenches and cuts

Minerals - carnotite

Host is Salt Wash

Mineralization grade averages - .10%  $U_3O_8$  15 - 625 ppm selenium

**Salitude Prospect -**

Mine workings - 180 ft. adit

Beds strike NW; Dip 48° NE

Host is Salt Wash

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 Stugart, F. Jr.

 GSA V. 63, p. 1373, 1952
 

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Silver Reef deposit -

Host - Chinle

Minerals - Carnotite, volborthite(?), copper carbonates, horn silver

Bulloch properties:

Jurassic host rock

Minerals: autunite, tyuyamunite

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 Wood, H. B.

Uranite ore controls and guides in the San Rafael Swell, Utah

International Geological Congress, 20th, Mexico, D.F.

 Section 13, p. 415-434, 1949
 

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TABLE I. - APPARENT URANIUM ORE CONTROLS AND GUIDES - SAN RAFAEL SWELL, UTAH

Mine or cluster of mines	No. of deposits	CONTROLS AND GUIDES												
		Host rock				Structural features					Sedimentary features Filled Facies scours change	Organic material	Fe, Cu, Co minerals	
		Wingate Sandstone	Moss Back Sandstone	Monitor Sandstone	Butte Jasper	Crestal break	Secondary flexure	Fault proximity	Collapse	Joints				
Calf Mesa	3		X			X			X			X	X	X
Green Vein Mesa	6			X		Above			Near			X	X	X
Sulphur Spgs. Canyon	1	X	X			X	X		X				X	
Lucky Strike Mine	1		X			X	X		Near			X	X	X
Green Dragon No. 3	1		X		X	Below	X					X	X	
Tomsich Mt.	5		X		X	Below	X		X			X	X	X
Delta Mine	1			X		X	X					X	X	X
Chug Canyon	2		X			Below	X		Near			X	X	X
Shinarump Mesa	2		X			Above			Near	X		X	X	
Calyx Bench Temple Mt.	8		X			X	X		Near	X	X	X	X	X
Lopez Incline	1		X			X	X		X	X			X	
Fumarole Mine	1		X			X	X		Near	X	X		X	
Young Mine	1	X				X				X			X	

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Wilson, W. H.

Uranium Deposits in Southwestern Wyoming and Northern Utah  
Wyoming Geological Association, 10th GB, p. 186-189, 1955

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Yellow Canary Area - North Daggett Co., Utah

Host - PE red creek quartzite

Ore in veins

Minerals - chalcopryrite, chalcocite, carnotite, hemotite, bornite,  
malachite, azurite, tyllanunite, volborthite, brochantite,  
hyalite

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Gruner, S. W.

UGS GB #9 p. 70-77, 1954

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Happy Jack Mine

Unoxidized uranium mineral - uraninite; also, pyrite, chalcopryrite  
bornite, chalcocite

Oxidized - yellow uranopilite, yellow zippeite, green Johannite

Delta group mine -

minerals: autunite, torbernite, becquerelite, schoepite

Mi Vida Mine - no copper minerals

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Isachsen, Y. W.

U. G. S. GB #9, p. 95-105, 1954

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Big Buck Mines -

Host- Cutler fm.

Production - 1948-1952 - Small scale production

Ore minerals - carnotite, becquerelite

Small Fry Mine -

Host - Cutler fm.

Production - 1953 - small amount

Ore minerals - carnotite, becquerelite  
irregular ore body

## Mi Vida -

Minerals - uraninite, montroseite, tyuyamunite, pascoite, pyrite  
 coffinite, doloresite, fluorite, greenochite, sphalerite, galena

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Young, E. S., Wicks, A.D., Meyrowite, R.  
 Am. Mineralogist - v. 51, p. 651-663

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## Jomac Mine - T34S, R14E

Coconinoite found (referred to as an unidentified massive yellow uranium  
 mineral)

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Davidson, D.M., Jr., Kerr, P.F.  
 Uranium Deposits of Kane Creek, Utah  
 Mining Engineering v. 17, p. 50, 1965

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## Kane Creek Area -

Fissure-vein type uranium deposits associated with weak argillic  
 alteration and base metal sulfide mineralization  
 Mineralization is in the Cutler fm.

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Davidson, D. M., Jr., Kerr P.F.  
 Uranium-bearing Veins in Plateau Strata, Kane Creek, Ut.  
 GSA, v. 79, p. 1503-1585, 1968

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## Honey Bee No. 1 - Kane Creek Mining District

Fissure vein Deposit

Argillic alteration

Interstitial clays rich in vanadium (hydro mica-montmorillonite)

Mine workings - 60 ft. adit upper adit

400 ft. adit lower adit

Mining has extended from the lower adit to the upper adit

135 ft. and 50 ft. below lower adit.

Minerals - ankerite, calcite, barite, vanadium clay, montrosite,  
 chalcopryrite, galena, chalcocite, pyrite, uraninite

Secondary minerals: carnotite, andersonite

Southernmost Transversa fault contains minerals: barite, celestite,  
 strontianite

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El-Mahdy, O. R.

Dissert. Abs., Sec. B, Science & Engineering, v. 37, no. 8,  
p. 2744B - 2745B 1966

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Freedom No. 2 and Farmer John Mines -  
Vein Deposits

Alteration minerals: montmorillonite, illite, kaolinite, sericite,  
limonite, hematite, goethite, jarosite, gypsum, chlorite, calcite,  
quartz, pyrite, kucoxene

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Kerr, P.F. and others

Marysvale, Utah Uranium Area  
GSA Special Paper #64, 212 p.

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Ore controls for Marysvale mineralization - argillic alteration and  
hydrothermal solutions

Freedom #1 and 2

Vein explored for a distance of 350 ft. and a depth of 200 ft.  
Autunite is main mineral, some torbernine and schroekingevite and  
pitchblende  
Vein strikes N. 54° E. average width of vein 1 ft. dip varies from  
vertical to 65° N. to vertical with depth.  
Other minerals - quartz, fluorite, magnetite, pyrite, sericite, clay  
minerals, alunite

Sunnyside Mine -

Mineralization along a vein  
autunite is main mineral, some torbernite, schroekingevite and pitchblende  
Mineralization occurs in highly altered quartz monzonite  
Origin of mineralization - faulting and fracturing  
hydrothermal alteration and solution mineralization

Bullion Monarch

Potts



## Buddy Mine -

Mineralization along the rhyolite - quartz monzonite contact which dips moderately west. Intense alteration associated with mineralization. Secondary mineralization - autunite  
Other mineralization in vein - pitchblende, fluorite, quartz, jordesite, pyrite

## Lucky Strike

## Farmer John (Bullion Monarch)

Open pits to start with  
Adit later under the pits

## Yellow Canary Prospect -

Intense argillic alteration  
Bulldozer cuts on surface. Then 235 ft. incline shaft, 140 ft. exploration tunnel ( a 50 ft. level), 100 ft. drift, cross-cut for 175 ft.

## Prospector No. 4 Prospect -

Discovered by Rex Smith - Marysvale methods of discovery: vegetation ash, scintillometer survey, test pits  
Uranium minerals occur along the contact between Mount Belknap rhyolite and quartz monzonite, also in a vertical vein 3-8 inches wide  
Dip of the contact  $35^{\circ}$  W.  $65^{\circ}$  W.  
Intense argillization has taken place along the contact between rhyolite and quartz monzonite

## Prospector Mine -

discovered in 1949  
Mine workings - 5 levels (vertical distance 425')  
Consists of a main incline, a subsidiary incline, three intermediate winzes for a total of 1800 ft. of incline workings. About 1/2 mile of drifts have been dug. A cross-cut driven 2000 ft. to the Freedom #2 workings. Vertical shaft 1020 ft.  
Mineralization is post-Mount Belknap red rhyolite and is found in fractures, veins  
Prospector No. 1 and 3 veins contain appreciable mineralization.  
Prospector No. 1 strike N.  $60-70^{\circ}$  E., dip  $80^{\circ}$  -  $90^{\circ}$  SE,  
Prospector #3 strikes N.  $55^{\circ}$  W. dip  $45-60^{\circ}$  SW  
Pitchblends - primary vein mineral associated with fluorite, pyrite, magnetite, quartz, adularia, calcite, hematite, limonite, gypsum, jordesite, ilsemanite, alunite, marcasite, silcrete  
Pitchblende occurs as minute discrete grains

## Fluorite mine -

Vein is fluorite 2 ft. wide. Some uranium

## Dark Horse Prospect -

Host is quartz monzonite intrusive

200 ft. of workings

uranoplane present

intense alteration associated with mineralization

## East Slope Prospects - J&amp;L Mine

Mineralization - occurs as fracture filling in alunite - autunite, metatorbernite, uranophane, schroekingerite

1026 ft. of drilling done

## Winkleman - Copper Butte area - autunite, torbernite, uranophane

## Trinity Prospect -

Mine workings - 2115 ft.

Host - impure quartzite xenolith

Location - .3 miles north of Sevier-Piute County line, .35 miles east of Big Rock Candy Mtn.

Strike N. 75° E. dip 60° NW

Minerals - quartz, orthoclase, microcline, apatite, rutile, albite, phlogopite, wollastonite, serpentine, schpolite, antigorite(?), andradite, grossularite, epidote, gypsum, diopside, calcite, hyalite, opal, muscovite, sphena, magnetite, specularite, red iron oxide, chalcopryrite, galena, chalcantite, hematite, chalcedony, pyrolusite(?), clay minerals, tremolite, penninite, prochlorite

## LaVeta - Uranium Prospect -

Host rock is Bullion Canyon pyroxene andesite

Owners - Uranium Exploration Company

8 claims in T26S, R3, 4 W

Workings - 13 bulldozer cuts, 112 ft. vertical shaft, 340 ft. of underground markings

Alteration follows fractures, faults and veins

U-minerals - occur in altered quartz monzonite porphyry - tyuyamuniti, rauvite, meta-autunite, metatorbernite

Associated minerals - pyrite, molybdenite, fluorite, hematite, goethite, jarosite, wad

## Flat Tire Prospect -

Disseminated autunite and torbernite in two small adits near altered dike area.

## Papsy's Hope Prospect -

Uranium mineralization is disseminated in the altered pyroxene andesite

Minerals - uranophane, meta-autunite



## Benny K Area -

No uranium minerals, however, uranium bearing opal found.  
Alteration is fracture controlled.

## Scorpion Fault Area -

## Charlotte Prospect-

Minerals - Jordisite, ilsemannite vein. Moderate hydrothermal alteration along fractures and faults.

---

Beroni, E. P., McKeown, F. A.

Reconnaissance for Uraniferous Rocks in NW Colorado,  
SW Wyo., N.E. Utah  
USGS TEI 308A, 1952

---

## Uteland Mine -

Copper-uranium ore - 15 tons stock piled average uranium content .017%

## Eureka - Happy Landing claims, Castle Peak draw-area -

Uranium concentrated in carbonaceous material  
Claims owned by Charles Sands and Lee Cooper, Myton, Utah

## Uraniferous Freshwater Limestone Deposit

Location - R16E, T4S, 10 to 10.5 miles south of U. S. Highway 40  
on road to Parriet Gilsonite Mine.

Uranium is a fine-grained uranium asphalt grade of sample  
taken - .019%  $U_3O_8$ , .03  $V_2O_5$

## Snow and Bonnie Bell Claims -

Host - Mesaverde fm.

Location: sec. 17, 18, 24, T6S, R24E SLM

Mine info.: 13 claims developed by 4 bulldozer cuts and several  
small prospecting pits, 8 ft. square shaft 75' deep

Owners - Snow Brothers of Vernal and Jensen, Utah

Leased by W.L. Goldston of Houston, Texas

Bedding strike S.  $80^\circ$  N. dip  $30^\circ$  -  $70^\circ$  S.

Uranium mineral - phosphuranylite(?)

---

Bregar, I.A., and Denl, M.

Geochemistry of Uranium Bearing Carbonaceous Rocks  
USGS TEI 490 p. 171-175

---

## Mine in the north workings, temple mtn.

.00343% U in oil seeping in mine

---

Staatz, M. H.  
 Thomas Range, Utah  
 TEI 490, p. 143-145, 1954

---

Bell Hill Mine - uraniferous fluorite deposits

---

Robeck, R. C. and H. B. Dyer  
 San Rafael Swell Area, Utah  
 USGS TEI 590, p. 49-51, 1955

---

Delta Mine - San Rafael Swell  
 Host is Monitor Butte member of Chinle

---

Staatz, M. H.  
 Thomas and Dugway Ranges, Utah  
 USGS TEI 590, p. 217-220

---

Good Will Uranium Property - Thomas Range, Utah  
 Host - Tertiary Sandstone lens between volcanic tuffs  
 Exploration - Bulldozer cuts  
 Minerals - uranophane(?), chief mineral Beta-uranophane,  
 schroeckingerite  
 30 ft. channel sample - .51% uranium

---

Hawley, C. C.  
 San Rafael Swell, Utah  
 USBS TEI 690, p. 121-123, 1957

---

Vanadium King #5 mine )  
 Camp Bird #7 Mine ) Low angle fractures control  
 the occurrence of some ore

Black Beauty Mine - 7% calcite in ores

---

Osterwald, F. W.  
 Thomas Range, Utah  
 USGS TEI 330 p. 104-106, 1953

---

Lost Sheep claim  
 Bell Hill Claim  
 Lucky Lonie Claim decreases of uranium content with depth  
 Fluorine Queen Claim  
 Floride claim  
 (south pipe)

Blowout pipe claim - Uniform grade of uranium to 240 ft.

Lost Sheep claim (main pipe) - uniform grade with depth.

---

Smith, J. F., Jr.

Capitol Reef Project

USGS TEI 330, p. 40-43, 1953

---

Birch Spring claim -

Mineral - metatorbernite

Associated minerals - chalcopyrite, pyrite, gypsum,

Secondary copper mine

Oyler Mine -

Minerals - Beta-zippeite, metatorbernite, johannite, pitchblende

Associated minerals - Chalcopyrite, pyrite, gypsum,

Secondary copper minerals.

Floral Reef claims -

Host - Shinarump

3 vertical fractures mineralized along with the sandstone

Mineral - meta torbernite

Associated minerals - chalcopyrite, pyrite, gypsum,

Secondary copper minerals

Radioactive location - Sec. 36, T29S, R26E just south of Pleasant Creek

Moenkopi - Chinle contact - asphaltite coatings on red chert.

---

Stugard, F. Jr.

Silver Reef District, Washington Co., Utah

USGS TEI 330, p. 83-84, 1953

---

Big Hill Area

Vandebilt Mine

Leeds Uranium Mine

Additional exploration might discover more ore bodies  
near these.

---

Trimble, D. E.

Geologic Mapping - Monument Valley

USGS TEI 330, p. 31-34, 1953

---

Radioactivity 10 times background along road to Whirlwind Mine on Monitor  
Mesa in the Chinle.

**Mittion No. 1 Mine - Monument Valley, Utah (Oljeto Mesa)**

Minerals: carnotite, tyuyamunite, uranophane, torbernite, autunite,  
some copper minerals found.

Discovered by drilling.

---

**Trites, A.F., Jr.**

White Canyon Project

USGS TEI 330, p. 38-40, 1953

---

**White Canyon No. 1 claim**

Jomac Claim

Happy Jack

Frey Point                      Drilling recommended

Deer Flats

Posey

**North Point Claim -**

Ground water solutions have removed uranium, copper, manganese, iron,  
calcium, lead, zinc, molybdenum, cobalt, nickel from the ore body and  
deposited them in fractures.

---

**Weeks, A.D.**

General Mineralogic Studies

USGS TEI 330, p. 61-65, 1953

---

**Lucky Strike #2 Mine -**

New Mineral - 'rabbittite'

**Corvusite Mine -**

New mineral - "rammelsbergite(?)"

*Polar mesa.*

---

**Taylor, A.O.**

Utah-Nevada District

USGA TEI 330, p. 217-221, 1953

---

**Wah-Wah lead-zinc mine -**

Location NE-1/4, Sec. 34, T28S, R16W.

Abnormally high radioactive material found in the dump

Mine development - 200 ft. shaft and 3 connecting levels which  
are now inaccessible.

Sample analysis - .05% U.

Radioactive tertiary rhyolite porphyry.

Location 6 miles east of Wah-Wah Mine.



---

Smith, J.F., Jr.

Capitol Reef Area, Utah, Quadrangle Mapping Project  
USGS TEI 390, p. 25-26, 1953

---

Oyler Mine -

U-minerals - betazippeite, metatorbernite, johannite, pitchblende  
Secondary copper minerals, calcopyrite, pyrite, gypsum

Billy's Dream claim -

Host is Salt Wash  
Minerals - carnotite

---

Taylor, A.O.

Utah-Nevada District  
USGS TEI 390, p. 213-216, 1953

---

Two low grade uranium occurrences discovered 1/2 mile NE of Staatz Mine.

One occurrence is vein in rhyolite porphyry with fluorite and autunite

Staatz Mine -

Minerals - autunite, fluorite  
grade of ores .01 - .15% U.  
Reserves - a few tons can be obtained by hand sorting

Silver King claim group - Erickson district -

Uranium in veins associated with copper, silver, cobalt, manganese

---

Smith, F. J., Jr., Hinrichs, E.N., Luedke, R.G.

Progress Report on Geologic Studies in the Capitol Reef Area, Wayne  
County, Utah  
USGS TEI 203, 29 p., 1952

---

High radioactivity area (Capitol Claim)

Location: NW-1/4 Sec. 36, T29S, R6E  
Ore is Jasper coated with hydrocarbons, also carbonated wood  
Some copper stain, pyrite  
Host is Shinarump

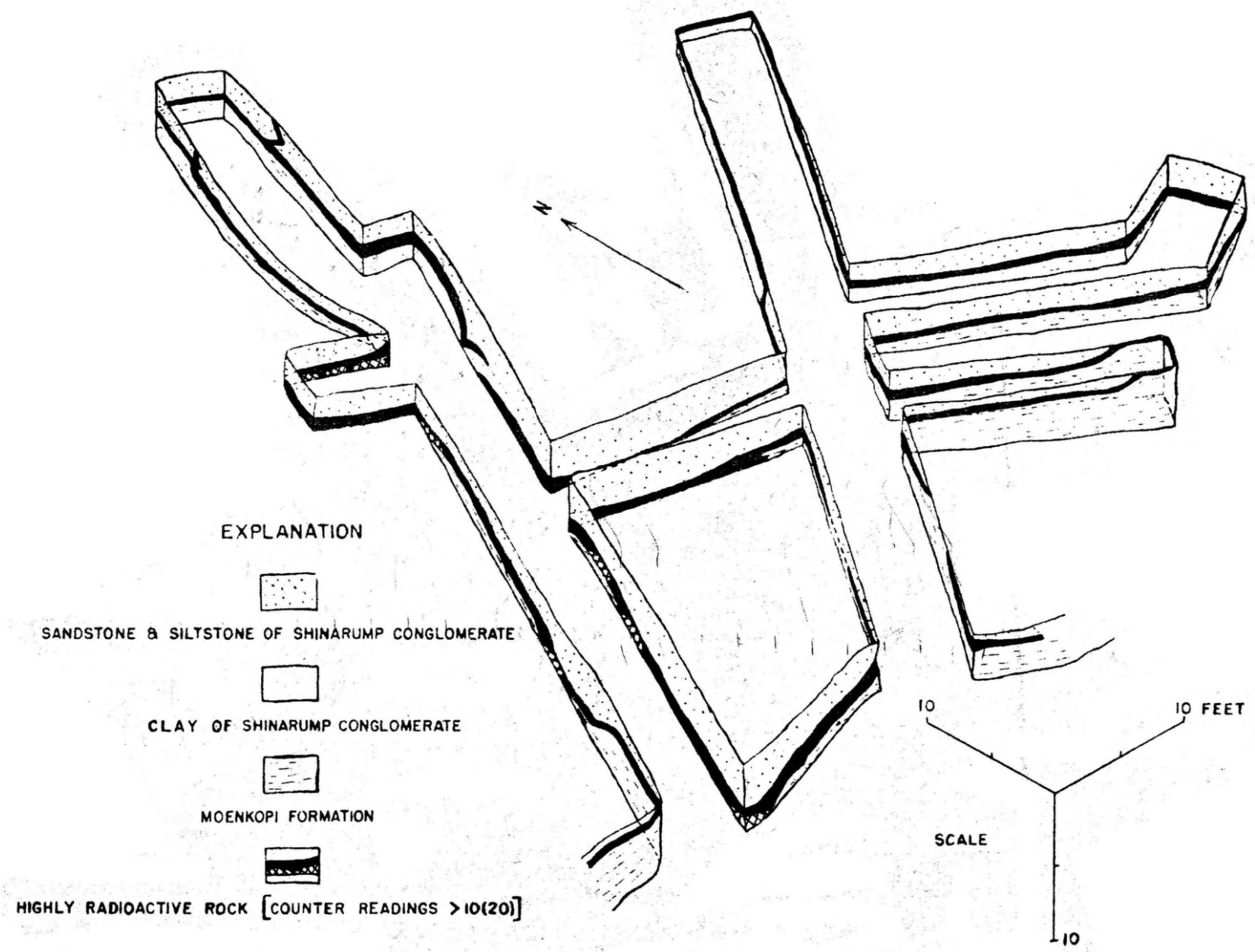


FIGURE 4.—ISOMETRIC DIAGRAM OF THE OYLER MINE

## Birch Spring Prospect -

Location - south side of Moonie Draw

Host is Shinarump - trend of chanel N. 40° W.

Grab Sample of clay at base of Shinarump: U = .33%; V<sub>2</sub>O<sub>5</sub> = .09%,  
Cu. = 8.22%

## Oyler Point -

Location: SE-1/4 Sec. 26, T29S, R6E

Mine workings: 2 adits connected by a cross-cut  
3 short cross-cuts

Host is Shinarump

Trend of channel almost due north

Most abundant mineral - zippeite

Other minerals: metatorbernite,

Associated Minerals: chalcopyrite, gypsum, schoepite, para schoepite,  
sklodowskite, alunite, lepidocrocite, copper sulfatesBluebird Claims - due south of Oyler Mine - on the line between Sec. 35 and 36,  
T29S, R6E

Minerals - metatorbernite

Host is Shinarump

Grab sample grade: .061% U., .10% V<sub>2</sub>O<sub>5</sub>, .05% Cu.

All American #3 Claim - Sec. 1, T30S, R6E

Selected sample grade - .41% U, .15T Cu.

---

Trimble, D. E.Monument Valley, Utah, project  
USGS TEI 380, p. 15-16, 1953

---

Un-named mineral area - NW-1/4SE-1/4 Sec. 15, T43S, R14E

Carnotite on cliff face

Dominant mineral probably uraninite

045E70 Quad.

---

Riley, L. B.General Mineralogic Studies  
USGS TEI 280, p. 26-30, 1952

---

Hideout Mine - White Canyon District, Utah

New mineral - bayleyite

Camp Bird #13 Mine - Temple Mtn., Emery Co., Utah

Uraninite found.

---

Breger, I.A. and Deal, M.  
 Geo. Chem. of U-Bearing Carbonaceous Rocks  
 USGS TEI 540, p. 183-190

---

uranium in asphaltenes

AEC No. 4 Mine	.0000438%
AEC No. 5 Mine	.00045%
AEC No. 8 Mine	.0310%
AEC No. 9 Mine	

---

Staatz, M. H.  
 Thomas Range, Utah  
 USGS TEI 640, p. 143-144, 1956

---

Dell No. 5          uraniferous fluorspar pipe  
 Florida No. 5      contain beteen .02 and .03% U.

Goodwill Property - Chief ore mineral - betauranophane deposit in lens  
 of tuffaceous sandstone in a series of volcanics (tertiary)

---

Vine, J.D., Moore, G. W.  
 Reconnaissance for Uranium-Bearing Carbonaceous Rocks in  
 North Western Colorado, Southwestern Wyoming, and adjacent  
 parts of Utah and Idaho.  
 USGS TEI - 281, 25 p., 1952

---

Morrison fm.  
 Brown Shale deposit - NE-1/4 Sec. 13, T3S, R21E  
 Grab Sample - .50% uranium

Bituminous sandstone quarry west of Vernal  
 Sample contained .003% uranium, Sec. 3, T4S, R20E.

---

Vine, J.D., Flege, R.F., Jr.  
 Recon. During 1952 from Uranium-Bearing Carbonaceous Rocks  
 in Parts of Colo., Utah, Idaho, Wyo.  
 USGS TEI 336-A, 18 p., 1953

---



**Asphalt Ridge -**

Sampling - oil from asphalt - .00002 to .0006% U.

Ash from Asphalt - .00048 to .026% U.

Highest U content from weathered exposures

Uintah County Highway quarry .00004% U in oil

.00048% U in Ash

Table 2.--Samples of bituminous sandstone

Field number	Serial number	Oil in sample (percent)	Uranium in oil (percent)	Ash in oil (percent)	Uranium in ash (percent)	Location Sec., Tp., R.
Vernal area, Uintah County, Utah						
VU-1010	85728	16.0	0.00004	1.77	0.0023	25-4S-20E
VU-1011	85729	11.4	0.00005	5.90	0.00085	"
VU-1012	85730	3.1	0.0002	0.96	0.021	"
VU-1013	85731	12.3	0.00007	6.31	0.0011	11-4S-20E
VU-1014	85732	13.0	0.00018	3.82	0.0047	"
VU-1015	85733	10.8	0.00024	3.68	0.0066	30-4S-21E
VU-1016	85734	11.6	0.00004	8.42	0.00048	31-4S-21E
VU-1017	85735	6.6	0.00036	1.35	0.026	"
VU-1018	85736	10.0	0.00002	2.66	0.00075	4-5S-21E
VU-1019	85737	7.4	0.00017	3.45	0.0049	9-5S-21E
VU-1020	85738	8.0	0.00047	2.75	0.017	23-5S-21E
VU-1021	85739	9.4	0.0006	3.24	0.0018	25-5S-21E

---

**Malan, R. C.**

Graton-Sales - Vol. 1, p. 790-804.

---

**Happy Jack Mine -**

First uranium production 1949

room and pillar method of mining

Host is Shinarump

Non-linear ore body

**Betty Mine -**

Non-linear ore body

**Royal Mine - near Indian Creek, White Canyon District**

Shinarump is Host rock

**Fry No. 4 Claim -**

First production 1946

**Markey Mine**

Linear ore body

Hideout Mine - several curving channels sub parallel to each other. Have irregular ore bodies

Costs of drilling -

Monument valley \$1.04 per ton of ore discovered

White Canyon \$1.48 " " "

Average drilling cost \$1.50 per ft.

---

Wood, H.B.

Graton-Sales, Vol. 1, p. 770-789

---

MiVida Mine -

Discovered 1952 by drilling

Dec. 1959 first ore shipped

Molybdenum associated with ores

Entered by incline

Standard (Big Buck)

Production began 1948

Molybdenum associated with ores

Entered by incline

Little Beaver

Louise

Entered by incline

Texwood - Stinko

Ike-Nixon

LaSal

Columbia

San Juan

Cord (Jen) (South Almar)

Molybdenum associated with ores.

Bedded ore displaced by faulting

Radon (Hecla)

Far West -

Bedded ore deposits displaced by faulting

## North Alice -

Molybdenum associated with ores  
Entered by incline  
Bedded ore deposits displaced by faulting.

## Costanza Mine -

Location - Sec. 26, 35, T30S, R25E  
Discovered 1962

R:O  
ALGOM.

## Drill Holes - center section 21, T29S, R24E

SW corner Sec. 22, T29S, R24E

5 holes drilled and 2 holes penetrated 2 - 8 ft. of uranium ore  
Depth of holes 2500 ft.

Drilling costs in the district 1959, \$1.25/ft.

## Divide Mine -

vanadium ore production 1917, 1940, 1941, 1948

## Service Barry Mine -

Vanadium ore production 1917, 1940, 1941, 1948

Velvet - Molybdenum associated with ores

Uranium mineralization Sec. 30, T30S, R25E

## Continental Mines -

Bedded ore displaced by faulting.

---

Kerr, B.F. 1968

The Marysvale, Utah Uranium Deposits  
Ore Deposits of the Graton-Sales, 1933-1967, v. 1, p. 1020-1043

---

Uranium discovered 1949

## Bullion Monarch -

Began as an open pit  
Ore body located in intensely altered contact area between rhyolite  
and quartz monzonite.

## Prospector -

A cross-cut 2000 ft. long connects with the Freedom workings.

Minerals - uranopilite, johannite, zippeite, schrockingerite

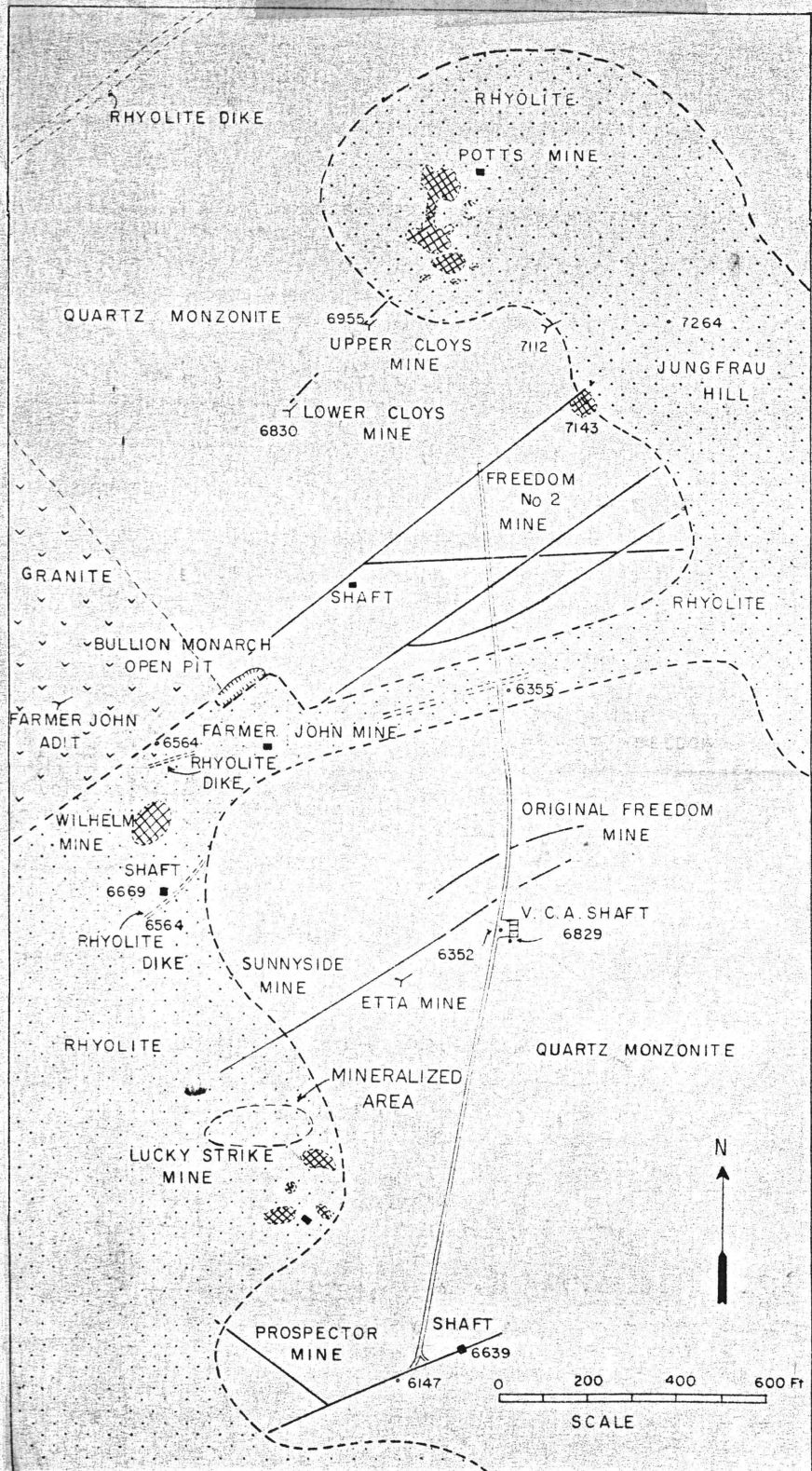


FIG. 5. A Sketch Map of the Main Mining Area. Shallow workings in rhyolite are cross-hatched. Surface projections of the principal veins are shown as black lines.



Freedom No. 1 mine -

Vein deposits mineralization in fractures in quartz monzonite and rhyolite

Freedom No. 2 mine -

New mineral - umohoite also uranophane, Beta-uranotite

Buddy Mine -

Seegmiller Mine - (Sunnyside Mine)

Potts Mine -

Willhelm Mine -

Lucky Strike Mine -

Clays Mine -

Deer Trail mine

Uraninite. Associated with lead-zinc ores.

Farmer John Mine

Etta Mine

J & L Annite Mine -

Phospharanylite

Al-Kea-Me Prospect -

Sodium alumite found in veins.

---

Smith J. F.

Capitol Reed<sup>f</sup> Project  
USGS TEI, pp. 25-26

---

Group of claims along Oak Creek -

Uraniferous rock in Shinarump. Uranium content .002 - .094% in channel sample.

Mineral: *META TORBERNITE(?)*  
Metabornite(?)

Billy's Dream Claim -

Host is Salt Wash member of Morrison

Channel sample .031-.097%  $U_3O_8$  and .22-20%  $V_2O_5$

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Taylor, A. O.  
Nevada- Utah District  
USGS TEI 440, p. 182-184, 1954

---

Mystery-Sniffer Mine, Beaver Co., Utah  
a zone 1/2 to 2 ft. wide contains autunite  
Samples 255 from .15 - .32% U.

Staatz - fluorite mine, Beaver Co., Utah  
Fluorite containing .004 - .093% U.  
Average about .01% U.

---

Johnson, H. S., Jr., 1957  
Uranium Resources of the San Rafael District  
Emery County, Utah - a regional synthesis:  
USGS Bull. 1046-D, p. 37-54

---

Lucky Strike Mine -  
San Rafael Swell  
1951 Production began

Delta Mine -  
1952 Production began  
Owner 1952 - Vernon Rick  
Max. thickness of 20-30 ft. in ore body  
Host is Monitor Butte

2-1/2 miles NE of Lucky Strike Mine - uranium occurs in a fault zone  
in the Church Rock member of the Chinle.

Copper Globe Mine -  
Uranium in bedded deposits associated with malachite, azurite, chalcocite  
Host is Navajo S. S.

---

Johnson, H. S., Jr. 1957  
Uranium Resources of the Cedar Mountain Area, Emery County, Utah  
A Regional Synthesis: USGS Bull. 1087-B, p. 27-58

---

Delta Mine -  
Deposits larger than 100,000 tons  
Average grade .40% U<sub>3</sub>O<sub>8</sub>

South Rim Mine -  
 14 miles east of Castle Dale, Utah  
 1951 first production

Cedar Ridge Claims -  
 9 miles east of Cleveland, Utah  
 1954 first production

Copper Globe Mine -  
 T23S, R9E

Fault Zone - Mineralized  
 T19S, R13E

Unnamed deposit -  
 T20-S, R9E 10 miles east of Ferron  
 Host is Salt Wash  
 Size of deposit - 100-1000 ton

---

Lewis, R.Q., Trimble, D.E.  
 Geology and Uranium deposits of Monument Valley  
 San Juan County, Utah  
 USGS Bull. 1087-D, p. 105-131, - 1959

---

Mitten No. 1 Mine -  
 Minerals - tyuyamunite, uranophane, torbernite, uraninite

Skyline Mine - uraninite  
 Updip and 1/2 mile east of the Mitten No. 1 mine  
 Tyuyamunite most common mineral  
 uranophane and autunite

Whirlwind Mine -  
 Mineral - calciovolborthite

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The Mining Record - March 27, 1974, p. 1

---

Callihan and Sage Properties:  
 Owners - Atlas Minerals  
 Location - 20 miles east of Monticello, S.J. Co., Ut.  
 Miners required - 40-50

The Moab Times Independent - Mar. 28, 1974 - same as above

---

Hawley, C. C., Wyant, D.G., Brooks, D.B.  
 Geology and Uranium Deposits of the Temple Mountain District,  
 Emery County, Utah  
 USGS Bull. 1193, 154 p., 1965

---

Calyx #8 Mine -

Production - 42,000 tons ore containing 228,320 pounds of  $U_3O_8$ ,  
 753,809 pounds  $V_2O_5$  grade of ore .27%  $U_3O_8$  .9%  $V_2O_5$   
 leased by Consolidated Uranium Co. 1951-1956; 1956  
 interests sold to Union Carbide Nuclear Corp.

Mineral: Ferroselite

Host is Moss back

Calyx #3

Leased by Consolidated Uranium Co. 1951-56  
 1951 interests sold to Union Carbide Nuclear Corp.

Vanadium King #1

Host is Moss back

Minerals - torbernite, metazenerite

Black Beauty Mine -

North Mesa #2 Mine -

Host is Moss back

Ore body size - 120 ft. x 70 ft. x up to 12 ft.

Megascopic galena present

Calyx #12 Mine -

Largest single ore body in Temple Mountain Area  
 20,000 tons mined

Calyx #9 Mine -

Ore body size 120 ft. x 70 ft. x up to 12 ft.

Vagabond Mine -

Host is Wingate-Chinle Contact

Minerals - Torbernite, metazeunerite

Eagles Nest Mine -

Host is Wingate

Migliaccio Prospect -

Host is Wingate

Young Prospect -

Host is Church Rock Member of Chinle



F

Mumerol Mine -

Production - over 100 tons

Camp Bird #7 Mine -

Host is in Moss Back

Ore Control - fractures

Native Arsenic

Megascopic galena found

Vanadium King #5

Native arsenic found

Sphalerite, montroseite

North Mesa #9 -

Mineral - ferroselite

Campbird #19 (South Workings)

Minerals - Carnotite, tyuyamunite, torbernite, metazeumerite, pintadoite, pascoite, schroekingerite, zippeite

Calyx #8 Mine -

Mine workings - shaft, 3500 ft. of tunnels

Strike - N40°E

Secondary uranium minerals: carnotite, curvusite, pascoite, cobaltomenite

Ore grade about .7%  $U_3O_8$  in highest grade areas.

North Mesa 1, 2, 5

Mine Workings - Adits

Host is Moss Back Member; Chinle

Strike N30°E dip 12° SE

Campbird 12 -

Ore production several hundred tons

Mine access through adit

Host is Moss Back

Minerals - carnotite

Campbird #7 Mine -

Host is Moss Back

"C" roll shaped ore body

Vagabond Mine -

Workings - two short adits

37 tons assayed @ .08%  $U_3O_8$  and .86%  $V_2O_5$ 

Migliaccio Prospect -

Access through adits

---

Huff, L. C., Lesure, F. G.

Geology and Uranium Deposits of Montezuma Canyon Area, San Juan Co., Utah  
USGS Bull. 1190, 102 p., 1965

---

Strawberry Mine -

Location: Montezuma Canyon area, east side

Minerals: Roscoelite, chlorite in cement between sand grains,  
metatyuyamunite

Host is Salt Wash

Ore body is 4 different ellipsoidal bodies.

Owners: Otley, F. J., Dalton, V., Keele, W.A., Jensen, B. original owner  
Union Carbide Nuclear Co. - owners in 1957

Workings - 8 adits - 535 ft. of tunneling

Partially inaccessible due to caving

Pay Day Mine -

Host is Salt Wash

Minerals - carnotite

L. E. May Mine-

Host is Salt Wash

Minerals - carnotite

Rim Rock Mine -

Host is Salt Wash

Minerals - carnotite

Mine workings - 2 adits, 160 ft. of drift

Ore grade - .05 - .15%  $U_3O_8$ , 1.5 - 2%  $V_2O_5$

Horsehead Mines -

Minerals - metatyuyanunite, metarossite, simplotite

Slum Mine -

Mine workings - 2 adits, 150 ft. of workings

Host is Salt Wash

Ore grade .1 - .2%  $U_3O_8$ , 1-2%  $V_2O_5$

Titus No. 3 Mine -

Workings - 2 adits, 250 ft. + some rim stripping

Last Chance #1 ) ore grade 0.1% - .2%  $U_3O_8$

Yellow Cake #4 ) 1-2%  $V_2O_5$

Host is Salt Wash

## Cottonwood Mine -

Location - west side Montezuma Canyon 1-1/2 miles south of long canyon  
 Owner - Atlas Corporation  
 First owner - H. L. Shumway 1940-1954  
 Minerals: Roscoelite, carnotite

Mine workings - 4 adits, 1,700 ft. of drifts  
 Ore grades - .001-.39%  $U_3O_8$ , .29 - 5.75%  $V_2O_5$

## Lucky Boy Mine -

Location - west side of Montezuma Canyon 1/2 mile south of long canyon

Owners: H. L. Shumway 1954, later sold to Atlas Corporation  
 Joints: Strike  $N20^{\circ}W$ . and secondary strike  $N80^{\circ}W$   
 Minerals: Roscoelite, carnotite  
 Ore body shape - roll type - flattened NW trending ellipsoid 120 ft. long  
 40 ft. wide

## Rock Mine -

Location: West side of Montezuma Canyon South of the Verdure Mine  
 and 1 mile south of long canyon

Owners: original H. Shumway - 1940-1954  
 Atlas Corp. 1954-1956  
 Paramount Uranium Cor. 1956

Mine workings - 8 adits - 855 ft. of drift  
 Minerals - roscoelite

## Verdure Mine -

Location - west side of Montezuma Canyon about 1 mile south of long  
 canyon - just north of the Rock Mine.

Workings - 800 ft. of drift in an area 250 ft. long and 80 ft. wide

Owners: H. Shumway 1940  
 Atlas Corp. 1954  
 Paramount Uranium Corp. 1956

Minerals: Roscoelite, carnotite

## West Cliff House #8 Claim -

Owners - U.S. Vanadium Corp. 1940 staked

Location: Coal Bed Canyon

Mine workings: 4 adits

Minerals - Roscoelite, carnotite, pascoite

Ore grade - .1 - .2%  $U_3O_8$ , 1-2%  $V_2O_5$

Also in Coal Bed Canyon: East Cliff house #5 claim, White House #1 and 2

Dixie No. 1 claim (Sunny Boy 1952) (Cloudy Day 1937)

Ore grade - .1 - .2%  $U_3O_8$ , 1-2%  $V_2O_5$

Owners: Climax Uranium Co. - 1953

Mine Workings - 6 adits - 260 ft. of tunnel

Pure Luck Mine -

Monument Canyon

Ore grade - .1 - 2%  $U_3O_8$ , .5 - 1%  $V_2O_5$

Bradford No. 5 mine

Bradford Canyon

Mine workings - 10 adits - 510 ft. of workings

Ore grade - .1 - .2%  $U_3O_8$ , 1 - 2%  $V_2O_5$

Host is Salt Wash

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Cannon, H.L., 1964

Geo. Chem. of Rocks and Related Soils and Vegetation  
in the Yellow Cat Area, Grand Co., Utah

USGS Bull. 1176, 127 p., 1964

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McCoy and Flattop groups of claims

Yellow Cat area

Production 1939-1944 - 16,000 tons

Yellow Cat ore deposits -

Grade - 2%  $V_3O_5$ , .25%  $U_3O_8$

McCoy Group -

Schroeckingerite mined

Peanut Mine -

Bull Canyon District

Native selenium occurs along fractures

All or 12 Mine -

Yellow Cat area

Sample contained 200 ppm selenium

Blackstone #6

Thompson's district - ore shows/81 ppm selenium

Cactus Rat Mine -

Open cut mine

Little Eva Mine - Pittsburg Park

Discovery due to surface minerals

## Other mines in the Thompson District (Yellow Cat area)

Little Pittsburg #3  
 Telluride #3  
 Schroeckingerite Mine  
 Flattop #1  
 Allor #2  
 Bobtail claims  
 Memphis Hill group

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Smith, J. F. (Capitol Reef)  
 USGS P. P. 363, 102 p., 1963

---

## Oyler Mine -

Location: Sec. 34, T28S, R5E  
 First claimed - 1901 mined for radium  
 Host is Shinarump and most abundant mineral - zippeite, also  
 pitchblende, chalcopyrite, pyrite  
 Minerals: schoepite, bacquerelite, sklodowskite, alunite, lapidocrocite,  
 metatorbernite  
 Radioactive locality  
 Location Sec. 10-11, T29S, R4E, 1-1/2 miles NW of Torrey.  
 Host is Moenkopi

Sample taken at NE-1/4, Sec. 13, T30S, R6E

Content: .005%  $U_2O_8$   
 Host is Moenkopi

Prospect <sup>P</sup>Bit -

Location - NW-1/4 Sec. 36, T29S, R6E  
 Mineral: metatorbernite

## Chert with coatings of asphaltic material

Location: Sec. 36, T29S, R6E  
 Uranium in asphaltite

## Uraniferous area -

Sec. 32 and 30 S., R7E  
 Minerals - metatorbernite, azurite, malachite

## High background radiation - W-1/2 Sec. 5, T31S, R7E

## Radioactive area -

Location: Bench in Sec. 7 and 18, T31S, R7E in small re-entrant  
 on south side of bench.  
 Minerals: metatorbernite, azurite, malachite



Prospect adit -

Sec. 18, T31S, R7E

Silicified Log -

Sec. 2, T29S, R5E - Radioactivity 5 times background

Above background radioactivity -

N-1/4 Sec. 28, T30S, R6E and  
NE-1/4 Sec. 14, T30S, R5E

Prospect Adit -

Sec. 7, T30S, R8E

Minerals - carnotite

Channel sample: .036%  $U_3O_8$ , .22%  $V_2O_5$

Uraniferous Rock -

NE-1/4 Sec. 18, T30S, R8E

---

Keys, W. S.

USGS P.P. 300, p. 285-289, 1956

---

Calyx No. 3 - green mudstone underlies ore body

Campbird No. 7 - uranium selenium ratio 950:1

---

Kerr, P.F., Kelley, P.R., Keys, W.S., Bodine, M.W., Jr.  
Collapse Fractures, Temple Mountain Uranium Area, Utah  
USAEC - RME 3110, pt. 3, 138 p., 1955

---

Campbird No. 13

Age of ore mineralization  $80 \pm 5$  million years

Vanadium King Deposits

Host is Moss Back

Minerals: pyrite

Marshbank Incline

Calyx Hole Mine No. 6

Calyx Hole Mine No. 9

South Workings

} Tar seep coming from a fault

Calyx Hole #3

Tar seep coming from fault



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Drouillard, R. F., Jones, E. E.

Geology of the Seven Mile Canyon Uranium Deposits, Grand Co., Utah  
 USAEC RME 4066, 18 p., 1955

---

Copper Queen Mine -

Near mouth of Corral Canyon

Host is Salt Wash

Sample assayed - .10%  $U_3O_8$

Minerals - carnotite - vanoxite

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Gruner, J. W., Marysvale, Piute Co., Utah

USAEC RMO, 612, p. 5-19, 1950

---

Prospector Mine -

Host is quartz monzonite Vein deposit

Workings - incline 300 ft. long

two drifts 200 and 110 ft. long

Strike of ore zone N.  $60^\circ$  -  $65^\circ$  Dip vertical

Secondary Uranium Minerals: uranophane, autunite, schroekingerite,  
 uranium-bearing opal

Associated minerals: fluorite, chalcedony, calcite, pyrite  
 also pitchblends associated with pyrite

**Bullion Monarch Mine -**

Mine workings - open pit and tunnel 300 ft. long  
 Ore zones strike N. 65°E.  
 Host is quartz monzonite  
 Minerals: Uranophane, autunite, schroeckingerite

**Buddy Mine - (Lane Bertelson's property)**

Mine workings - short incline  
 Host is contact between quartz monzonite and rhyolite agglomerate  
 Principal secondary mineral - uranophane

**Freedom #1 and #2 claims**

Ore zone trend N. 55° - 70° E.  
 Host is quartz monzonite  
 Minerals same as in Bullion Monarch Mine

**Papsy's Hope claim -**

Host is Bullion Canyon Series  
 Minerals: autunite, schroeckingerite  
 Workings - Bulldozer cuts and 30 ft. incline

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**Gruner, J. W., Gardiner, L.**

Observations on the Mineralogy and Geology of the Happy Jack Mine,  
 White Canyon, Utah  
 USGS RMO 612, p. 20-27, 1950

---

**Happy Jack Mine (Blue Dike Mine)**

Host is Shinarump  
 Strike is N. 10°W. Dip 10°W.  
 Mine workings - 4 adits 150 ft., 150 ft., 65 ft., 35 ft., respectively  
 Ore minerals very fine grained  
 Ore grade .5 - .8% U<sub>3</sub>O<sub>8</sub> Copper 6%  
 1950 reserves 6000 tons

---

 Reyner, M. L.

Preliminary Report on Some Uranium Deposits Along the West Side  
of the San Rafael Swell, Emery Co., Utah  
USAEC RMO-673, 32 p., 1950

---

## Lone Tree group -

Location - Sec. 23, T20S, R11E

Owners - Russel Palmer, Huntington, Utah

Douglas Harrison, Orangeville, Utah and Louis G. Albrechtson,

Lonel Jonis, Theo Ungerman - Castle Dale, Utah

Workings - Adit 18 ft. long - 8-10 ft. wide

Minerals: Autunite, asphaltite

Grade - a 1 inch zone has 3-4%  $U_3O_8$

## Hard Pan Group -

Location - Sec. 23, T20S, R11E SW of Lone Tree group

Owners - same as Lone Tree with addition of L. T. Hunter, Owen McCallahan,

Charles Magnuson - all of Castle Dale, Utah

One sample assayed @ .06%  $U_3O_8$  and Tr.  $V_2O_5$

## Dalton Group -

Location Sec. 32, T20S, R11E

Owners - Dalton Brothers, Cleveland, Utah

Workings - 18 ft. adit plus small cuts

About 20 cement sacks of "ore" stockpiled  
near adits

Minerals: autunite, asphaltite

Ore grade - .05%  $U_3O_8$

## Dexter Group -

Location: Sec. 5, T21S, R11E

Owners: Nolan Olsen, Harold Olsen, Leonard Wilson--all of Wattis, Utah

Workings - Adit - 33 ft., 15 ft. size drift

Sample grades - .06%  $U_3O_8$  and .01%  $V_2O_5$  .36%  $U_3O_8$

## Clifford Smith claim -

Owner - Clifford Smith, Wattis, Utah

Location - Sec. 31, T20S, R11E

Workings - Adit - 10 ft.

## Wickiup Group -

Location - Sec. 21 and 22, T22S, R11E

Owners - Charles Pettitti, Huntington, Utah

Byron Nelson, Ferron, Utah

Russell Snow, Castle Dale, Utah

John J. Pettitti, Ben Nolen, T.N. Jensen -- all of Price, Utah

Workings: Adit 27 ft., Bulldozer cut 150 ft. long

## Gardell Snow's claim -

Location: Sec. 32, T23S, R10E  
 Owner - Gardell Snow, Ferron, Utah  
 Workings - Adit - 10 Ft. long  
 Sample Assay - .04%  $U_3O_8$

## Dolly Group -

Location: Sec. 31, T23S, R10E  
 Owners - Lyman Staker, Howard Staker, Mark Cullum, Wallace Jensen,  
 all of Lawrence, Utah

## South Fork Group -

Location: Sec. 6, T24S, R10E  
 Owners - Elden Byran, Foster Nelson, Ervin Olsen, Thomas Worthen--  
 all of Ferron, Utah; Frank Blackburn, Clawson, Utah;  
 Lyman Staker, Lawrence, Utah

## Hertz No. 1 claim -

Location: SE-1/4, Sec. 30, T23S, R10E  
 Owners - Lyman Staker, Howard Staker, Mark Cullum, Wallace Jensen--  
 all of Lawrence, Utah  
 Workings - cut 12 ft. long and 4 ft. deep  
 Sample grade - average .70%  $U_3O_8$

## Pay Day Claim, Green Vein group, Brown throne group

Location: Sec. 19, 20, 29, 30, T23S, R10E  
 Owners: Pay Day Claim - Eldon Bryan, Foster Nelson, Ferron, Utah  
 Green Vein and Brown Throne - Elden Bryan, Foster Nelson,  
 Ervin Olsen, Thomas Worthen--all of Ferron, Utah  
 Frank Blackburn, Clawson, Utah; Lyman Staker, Lawrence, Utah

## Pay Day Claim -

Development - cut 40 ft. long and 2 adits 5 ft. deep  
 Sample assay - .35%  $U_3O_8$ , .04%  $V_2O_5$ , .71% Cu., .60 oz. Ag., 31.8%  $CaCO_3$

## Green Vein #3 Group -

Location: 800 ft. east of the Pay Day Claim  
 Workings - cut 48 ft. long, cut 14 ft. long  
 Mineral: metatorbernite, malachite, azurite  
 Sample assays - .88%  $U_3O_8$  and .04%  $V_2O_5$   
                   .03%  $U_3O_8$   
                   .59%  $U_3O_8$  and .02%  $V_2O_5$

## Green Vein #4 Claim -

Workings - 3 small cuts  
 Single assays - 1.18%  $U_3O_8$  tr.  $V_2O_5$   
                   .02%  $U_3O_8$   
                   .21%  $U_3O_8$

## Dirty Devil Group -

Location: Sec. 26 and 35, T24S, R8E

Owners - William J. Hannert, Orangeville, Utah; John Tomsich, Columbia, Utah;  
Rex Bunderson, Emery, Utah

## Dirty Devil #2 Claim -

Workings - Adit, 18 ft. long x 15 ft. wide

Sample assays - .73%  $U_3O_8$  and .40%  $V_2O_5$ 

## Dirty Devil #4 Claim -

Workings - adit 92 ft. long 14 ft. wide

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Kerr, P.F. and Others

Preliminary Memorandum, Marysvale, Utah

USAEC RMO 797, 1/23/1951

---

## Bullion Monarch -

Workings - open cuts on contact between Belknap rhyolite and the  
quartz monzonite

## Freedom Prospect -

Hydrothermal alteration and uranium mineralization in quartz monzonite

## Prospector -

Workings - incline and two levels

Argillic alteration near uranium mineralized areas

Minerals: uraninite, fluorite, pyrite

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Brophy, G.P., Kerr, P.F.

Preliminary memorandum, Papsy's Hope Prospect

Marysvale, Utah

USAEC RMO 833, 11 p., 1951

---

## Papsy's Hope Prospect -

Location Center Sec. 25, T26S, R4W, SLM, Piute Co., Utah

4-1/2 miles NE of Marysvale

Elevation - 7,200 ft.

Host rock is tertiary

Faults N. 10°E. and N. 30-45° W. associated with alteration and mineralization

Minerals: autunite

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Dahl, H. M., Kerr, P. F.

Preliminary Memorandum of a Portion of the "Benny K" Claims,  
Piute County, Utah

USAEC RMO 831, 13 p., 1951

---

"Benny K" Claim -

Location: SW-1/4 Sec. 25, T26S, R4W

.6 miles SW of Papsy's Hope Claim

Workings - Bulldozer cuts, Incline 116 ft., adit 32 ft.

Mineralization - fault controlled

Dip of Faults - Vertical

Host Rocks - tertiary

---

Green, J., Kerr, P. F.

Preliminary Memorandum, East Slope Area, Marysvale, Utah

USAEC RMO 832, 20 p., 1951

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East Slope Claims -

Location: 1 mile west of Bullion Monarch Mine in Sec. 6, T27S, R3W SLM  
Piute County, Utah

Fault strike N to N20E Dip 74-85° E. related to mineralization

Host is Quartz Monzonite

Mine Workings - Adit

J. L. Alunite Claims -

Location 1000 ft. NE of East Slope Claims

Sec. 6? - T27S, R3W, Piute County, Utah

Drilling - 1,026 ft.

Workings - Adit

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Taylor, A. O. and Others

Geology and Uranium Deposits of Marysvale, Utah

USAEC RMO 896

---

Minerals common to all mines in Marysvale area - autunite, torbernite,  
schroeckingerite

Prospector mine -

Vertical range of mineralization 8000 ft.

Minerals - Ilsemennite, Jordisite, pitchblende, fluorite, marcasite, autunite,  
torbernite, uranophanel?)

Owners - 1/2 by Vanadium Corp., 1/3 by Rex Smith, 1/6 by Len Anderson

Workings - incline with 1500 ft. of drift on four levels; 1200 ft. in two inclines  
and two winzes

Host is Tertiary Quartz Monzonite

Ore related faults #(1) strike NE #(3) strike NW #(1) dip 85-90° SE;  
#(3) dip 55-60° SW

Host ore at intersection of faults



## Freedom #9 Mine -

Minerals - Ilseennite, Jordisite, adularia, uranophane, (autunite, uranophane, schroeckingerite, torbernite--in order of importance.)

Most important producer of secondary uranium ore at Marysvale

Workings - Shaft elevation 6880 ft., 1750 ft. drift, 100 ft. cross-cuts, 120 ft. raises, 161 ft. incline winze, 140 ft. incline shaft

Operated by Vanadium Corp. of America

Ore veins - #1 strike N80°E dip 75°N, #9 strike N54°E  
dip vertical

Host is quartz monzonite

## Freedom #1 (Seegmiller Mine)

Ilsemennite, Jordisite, autunite, torbernite, schroeckingerite, pitchblends (autunite most abundant)

Workings - inclinal shaft 98 ft., cross-cut 198 ft.

Host is quartz monzonite

ore veins - (J) strike N53°E. dip 90°

Slight to intense alteration

## Bullion Monarch Mine -

Minerals - Ilsemennite, Jordisite, pitchblende, autunite, torbernite, metatorbernite, uranophane, schroeckingerite

Workings - open pit and 1300 ft. of underground workings

Host rocks - quartz monzonite, granite, red rhyolite vitrophyre and alteration is argillic

#1 ore vein - strike N60°-65°W., dip 45-55° SW  
open pit mineralization - strike N60°E

#2 ore vein - strike N40°W dip 65° SW

#3 ore vein - strike N70°E dip 80°NW

## Buddy Mine -

Minerals - Ilsemennite, Jordisite, pitchblende, fluorite, adularia, autunite

Workings - 400 ft. of inclines, 800 ft. of levels

Host is quartz monzonite

Ore vein - strike 570° E, dip 85° SW

## Yellow Canary Prospect -

Owners - Howell Mining Co.

Location - Utah State Land Coordinate liws: 665,500 - 666,500 N.,  
1,796,000-1,797,000 E.

Workings - two vertical shafts 20 ft. deep

Host rock quartz monzonite with argillic alteration

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Woolard, L. E., Kerr, P. F.

Preliminary Memorandum on the Dark Horse and Saturday Areas,  
Marysvale, Utah

USAEC RMO 860, 15 p., 1951

---

## Dark Horse Claims -

Location: intersection Sec. 8, 9, 16, 17, T27S, R3W, 1.7 miles NE of Marysvale  
 Host is quartz monzonite  
 Workings - 130' adit, bulldozer cuts  
 Mineralization along faults: strikes N75-80°E. and N30°E, dips of 60°N and NW  
 Mineral: autunite

## Saturday Claims -

Location: intersection Sec. 8, 9, 16, 17, T27S, R3W  
 .4 miles SE of Dark Horse claims  
 Normal Fault Strike N30°E

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Kerr, P. F. and Others

A Geologic Guide to the Marysvale Area  
 USAEC RMO 924, 57 p., 1952

---

## Prospector Mine -

Host ore monzonite  
 Ore veins: #1 strike N65°E, #3 N45°W  
 #1 dip 90°, #3 dip 45°W  
 Minerals - uraninite, autunite, Jordisite, ilsemennite

## Buddy Mine -

Host - quartz monzonite

## Freedom No. 1 (Seegmiller)

Host is quartz monzonite

## Bullion Monarch -

Host is quartz monzonite  
 Minerals - uraninite, autunite, jordisite, ilsemennite

## Freedom No. 2

Host is quartz monzonite  
 2 ore veins - strikes: N65°E and N60°W  
 Minerals - autunite, uranophane

## Papsy's Hope Prospect -

Minerals - uranophane, autunite

## Trinity Mine -

Minerals: uraniferous opal

## J. L. Arunite Mine -

Mineral: uraniferous opal, alunite

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Brophy, G.P., Kerr, P.F.

Preliminary Memorandum on the Flat Tire Prospect, Marysvale, Utah  
USAEC RMO-863, 11 p., 1951

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Flat Tire Prospect -

Location: NE Sec. 25, T26S, R4W, SLM, Sevier County, Utah, 5 miles NE  
of Marysvale

Elevation 6,800 ft.

Workings - 1 small and 2 large bulldozer cuts (600 ft. and 70 ft. long)  
adit 12 ft. long

Host is Bullion Canyon Formation (Tertiary)

Hydrothermal alteration present

Minerals - autunite, torbernite, metatorbernite

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Hinckley, D.M., Volgaman, J.H., Potter, W.J.

Drilling at Dripping Springs, Emery County, Utah

USAEC RME 75 (Pt. 1), 24 p., 1955

---

Dripping Springs Area -

Location: T25S, R10E, Emery County, Utah  
about 10<sup>air</sup> miles SW of Temple Mtn. and 15 air miles  
south of Green Vein Mesa

Host rock - Shinarump, dip 4-8°SE

Minerals - autunite, metatorbernite, zippeite, cyanotrichite, malachite,  
azurite, gypsum

Drilling in the area - total 14,472.9 ft. Average depth 68.3 ft.

Wild Horse Point - 9 areas of ore grade mineralization located by drillings

Little Erma Claim - Chute Canyon

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Kaiser, E.P.

USGS Tem. 145A, 10 p., 1952

---

Papsy's Hope Prospect -

Location: 1-1/2 miles NE of the main mining area, middle, sec. 25, T26S,  
R4W

Workings - Two shallow cuts, incline shaft 41 ft.

Elevation - 7,200 ft.

Host is a feldspar porphyry of the Bullion Canyon series

Some argillic alteration

Mineral: autunite

Grab Sample Grade - .026% U<sub>3</sub>O<sub>8</sub>

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Staatz, M. H., Baner, H. L., Jr.

A Preliminary Report on Radioactive Fluorite Deposits  
 Thomas Range, Juab County, Utah  
 USGS TEM 167A, 11 p., 1951

---

Properties Located in Sec. 10 and 11, T13S, R12W

Bell Hill Claims -

Owner - Donald Searle, Delbert Searle, T. E. Searle, Harold Ruthiford  
 all of Delta, Utah

Leased to G. P. Spor, Delta, Utah

Mine Workings - Open pit methods - 2 pits - (1) 160 x 45 ft, (2) 105 x 20 ft.

Production - (23) 55 ton shipments of ore in two months

Grade - 70% fluorite, .4%  $U_3O_8$

Production Average 55 ton/day

Host is Limestone

Minerals: fluorite, uranophane(?)

Chip sample assay - .07%  $U_3O_8$

Harrisite claims -

Owners - E. D. Harris, E. T. Harris - Delta, Utah

Mining Method - open pit 43 x 4 ft.

Ore grade - 60-65% fluorite, .25%  $U_3O_8$

Host is Limestone

Size of ore body 40 x 160 ft.

Minerals: fluorite, uranophane(?)

Channel sample assay - .084%  $U_3O_8$

Fluorite Group - (Original Spor)

Owner - G. P. Spor of Delta, Utah

Production 1943-1948 - 197 carloads shipped

Grade - 75-80% fluorite

Workings - cylindrical stope 40 ft. diameter and 85 ft. deep,

340 ft. hanloge level to surface

Host is fluorite plug on a fault between limestone and quartzite

Composit chip sample assay - .016%  $U_3O_8$

---

Puftett, W. P., Weir, G. W.

USGS TEI 752, p. 13-18, 1959

---

North Alice Incline -

Host is Chinle

Divide Incline Mine -  
Host is Chinle

Continental No. 1 Incline Mine -  
Host is Chinle

Standard Mine  
Host is Chinle

Bordon Shaft  
Little Beaver Mine Host is Cutler Fm.

---

Rosenzweig, A.  
USAEC RME 3094, p. 33-37, 1954

---

Dexter #7 claim -  
Location - Calf Mesa, San Rafael Swell, Utah  
Host is Shinarump  
Workings - trench cut in Shinarump  
Minerals - Goldichite, coquimbite, halotrichite, copiapite, alunogen,  
asphaltite, fibroferrite, butlerite, parabutlerite, voltaite, chalcantite

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Noble, E.A.  
Recon. for Uranium in the Uinta Basin of Colo. and Utah  
USAEC RME - 94, 221, 1975

---

Jensen Draw Claim - N.E. of Vernal in Sec. 6, T3S, R23E  
Host is Morrison Fm.  
Mineral: autunite?  
Grade - .25%  $U_3O_8$   
Vanadium - Uranium ratio 1:4 to 3:1

Rim Rock Near Vernal  
Host - Mesa Verde Fm.  
2 channel sample grades - .087%  $U_3O_8$  and .044%  $U_3O_8$   
Minerals - carnotite, autunite, phosphuranylite

South of Myton, Utah  
Production from 1949-53 - 140 tons  
No claim in the area produced more than 50 tons  
Host is Uinta Fm.

Tokay #9 claim - Sec. 34, T10S, R22E

Hat Shot  
The ~~Peak~~ Peaks Channel  
Silver + Blue Jay?  
Silver Falls  
Yellow Jacket

Crest Cliff  
"  
"  
"  
"



Surface Mining:

(11)

Mining method \_\_\_\_\_ [a] Average cover thickness \_\_\_\_\_

Cover Hardness: Cover 1 \_\_\_\_\_ [b] Percent \_\_\_\_\_

Cover 2 \_\_\_\_\_ Percent \_\_\_\_\_

Cover 3 \_\_\_\_\_ Percent \_\_\_\_\_

Ore body hardness [b] \_\_\_\_\_ Surface area \_\_\_\_\_

Bench Height \_\_\_\_\_ Maximum Pit Slope (degrees) \_\_\_\_\_

Estimated Preproduction stripping volume \_\_\_\_\_

Beneficiation:

(12)

Principal product recovery in percent \_\_\_\_\_ PP

Associated product recovery, percent \_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

Beneficiation Method [c]

1. \_\_\_\_\_ % of ore handled \_\_\_\_\_ % Distr. of PP \_\_\_\_\_

2. \_\_\_\_\_ \_\_\_\_\_

3. \_\_\_\_\_ \_\_\_\_\_

4. \_\_\_\_\_ \_\_\_\_\_

Percent millfeed shipped as concentrates \_\_\_\_\_

Est. Plant Capacity / day \_\_\_\_\_ Est. Unit production cost \_\_\_\_\_

Est. Capital cost \_\_\_\_\_

Transportation: Stage [d] \_\_\_\_\_ shipped by [e] \_\_\_\_\_ distance \_\_\_\_\_

(13)

\_\_\_\_\_  
\_\_\_\_\_

Bell Claim

Blue Lizard

Fry 4

Happy Jack

Hedemont

Tomac

Maybe

North Point.

Notch 5

Posey

Scotter.

White Canyon 1

Wardenshoe

East Wardenshoe

White Canyon  
Jones

No. \_\_\_\_\_

Page 4 of \_\_\_\_\_ pages

Surface Mining:

(11)

Mining method \_\_\_\_\_ [a] Average cover thickness \_\_\_\_\_

Cover Hardness: Cover 1 \_\_\_\_\_ [b] Percent \_\_\_\_\_

Cover 2 \_\_\_\_\_ Percent \_\_\_\_\_

Cover 3 \_\_\_\_\_ Percent \_\_\_\_\_

Ore body hardness [b] \_\_\_\_\_ Surface area \_\_\_\_\_

Bench Height \_\_\_\_\_ Maximum Pit Slope (degrees) \_\_\_\_\_

Estimated Preproduction stripping volume \_\_\_\_\_

Beneficiation:

(12)

Principal product recovery in percent \_\_\_\_\_ PP

Associated product recovery, percent \_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

Beneficiation Method [c]

1. \_\_\_\_\_ % of ore handled \_\_\_\_\_ % Distr. of PP \_\_\_\_\_

2. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

3. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

4. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Percent millfeed shipped as concentrates \_\_\_\_\_

Est. Plant Capacity / day \_\_\_\_\_ Est. Unit production cost \_\_\_\_\_

Est. Capital cost \_\_\_\_\_

Transportation: Stage [d] \_\_\_\_\_ shipped by [e] \_\_\_\_\_ distance \_\_\_\_\_

(13)

\_\_\_\_\_  
\_\_\_\_\_

## Sage Plain Area

### Sage Plain Area, Utah & Colorado

by L. R. Huff and F. G. Lesure

Nearly all mines confined to large sandstone lens in Salt Wash member of the Morrison formation. Maximum exposed thickness 110 ft. and length of 13,000 ft.

Ore deposits zoned into three geochemically defined zones: Ore zone, brown zone, and gray zone. (Roll body)

Ore zone: is a shell impregnated with uranium-vanadium minerals: simplotite, metarossite, carnotite.

Brown zone: is inside the shell and is iron-stained porous sandstone with abundant carbonaceous material.

Gray zone: is on the outside of the ore zone and is a light gray sandstone tightly cemented with carbonate and commonly freckled with limonitic specks.

Sharp reduction of ore minerals in both brown and gray zones.

Ore bearing logs outside roll surface, but close.

The gray zone is barren but both the ore zone and brown zones contain abundant iron, cobalt, nickel, molybdenum, magnesium.

Size and shape of ore zone: 20-40 ft. long, 10-20 ft. width, 4-10 ft. thick.

Roll type. Ore layers .3-2 ft. thick.

Dip in the area commonly less than 1°.

Hatch and Happy Canyons

Little Rockies District

USAEC Report RME-77, 18 p., 1955

by R. C. Gerhard

Mossback channels.

Logs and trash.

Ore minerals: meta-torbernite, asphaltite.

Associated minerals: pyrite, galena, marcasite, limonite, jarosite, gypsum, copper oxides.



Green River District

U.S.A.E.C., G.B., Uranium Deposits of Western U.S.

USAEC, Oct. 1959

Coffinite most abundant uranium mineral; also uraninite, tyuyamunite, uranopilite.

Vanadium in montroseite.

Ore minerals: fine grained, occur as coatings on sandstone grains and as replacement of carbonaceous material.

Room and pillar method is used in all mines.

Mining costs range from \$14.00-\$16.00 a ton.

Anomaly B-8-5 Property (Kolob Mine)

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Tyuyamunite.

Moenkopi formation.

Washington County.

Basin Claim

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Cottonwood Canyon district. 37S-21E.

Short adit.

25 tons at 1.75-2.0%  $V_2O_5$ .

Bell Claim

U.S.G.S. TEI 540, p. 47-48, 1955

A. F. Trites, Jr.      Vol. VIII

White Canyon area.

Principal uranium mineral, uraninite.

Other minerals: pyrite, chalcopyrite, bornite, sphalerite, marcasite.

Oxides include: chalcocite, covellite, chalcantite, brochantite, malachite.

Big Hole Mine

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Cottonwood Canyon district. 37S-21E

First openings were adits.

Operated by Blanding Mines Co., owned by Vanadium Corp. of America.

10,000 tons ore at 2% V<sub>2</sub>O<sub>5</sub>.



Birthday Claim

USBM Report of Investigation 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Cottonwood Canyon district. 37S-21E.

Owned and operated by Vanadium Corp. of America.

Blue Bird Area

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Owned by Vanadium Corp. of America.  
Several adits and 1 open cut.  
500 tons 1.75%  $V_2O_5$ .  
(Cottonwood Canyon district, 37S-21E)

Blue Knolls 28 Claim  
& White Rock 11 Claim

U.G.M.S. GB #21, p. 109-128, 1967  
M. D. Dasch

Uintah Basin.  
Green River formation.

Blue Lizard Mine

U.S.G.S. TEI 540, p. 47-48, 1955  
A. F. Trites, Jr. Vol. VIII

Principal uranium mineral, uraninite.

Other minerals; pyrite, chalcopyrite, bornite, sphalerite, marcasite.

Oxides include: chalcocite, covellite, chalcantite, brochantite, malachite.

White Canyon area.

(formerly Blanca)  
Brenda (Blanca) Claims  
& Tokay Claim

U.G.M.S. GB #21, p. 109-128, 1967  
M. D. Dasch

Vein deposit.  
Uintah formation.

31-105-22E  
Uintah Co.



Buena #1 Property

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Juab County.

Vein deposit. Uranium bearing veins of opal, calcite, minor fluorite.

Tertiary Rhyolite is host rock.

Bullock Claims

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

1950-1954 ore shipped.

Western Kane County.

Vanadiferous uranium ore.

Carmel formation.

Uranium minerals: carnotite, tyuyamunite, autunite, uraninite.

Calyx Holes

U.S.G.S. TEI 390, p. 27-28, 1953

R. C. Robeck

AEC Calyx holes No. 4,5,6,8,9.  
Principal mineral, coffinite.

Conrad Claims

Geologic Report on the Conrad, Cross Bow, and Hill Top Claims, Emery County, Utah  
Terra West Corp. Uranium Claims Report

C. E. Felix

7-24S-9E

Ore shipped: 10,000 tons. 35,000 tons reserve.

Ore zone outlined by drilling, size about 200 ft. wide.

Elevation 5,700-6,400 ft.

Mining, adit (400 ft.)

Ore zone, 300 by 50-150 ft. wide.

Conrad, Cross Bow, Hill Top Claims - General Information

Geologic Report on the Conrad, Cross Bow, and Hill Top Claims, Emery County, Utah

Terra West Corp. Uranium Claims Report

C. E. Felix

Climate: Semi arid. Winter months, snow drifts from one to several feet deep.

Vegetation: native grasses, sage brush, juniper and pinon pine.

Roads: From Green River 64 miles paved, 32 miles graded dirt.

Average dip of beds 5° W.

Principal uranium mineral uraninite.

Other minerals: pyrite, chalcopyrite, galena, sphalerite.

Host rock: Moss Back member of Chinle.

Corvusite #1, 2, 3 Claims

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

On east slope of La Sal Mtns. Near Utah-Colorado border.  
2,200 tons, 2%  $V_2O_5$ .  
Dip  $4^\circ$  NE.



Crossbow Claims

Geologic Report on the Conrad, Cross Bow, and Hill Top Claims, Emery County, Utah  
Terra West Corp. Uranium Claims Report  
C. E. Felix

7-24S-9E

Ore shipped: 1954-1965 1,744 tons at .215%  $U_3O_8$  and .04-.10%  $V_2O_5$ .

Reserves: 25,000 tons.

Elevation 5,700-6,400 ft.

Mining: Adit (500 ft.)

*Trail*  
(New) Deer Creek Trial Mine

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Piute County. 12-28S-4W.

Pitchblende and secondary uranium minerals in a chloritized zone in paleozoic limestone.

Delta Mine (Pick's Mine)

UGMS GB #21, p. 1-11, 1967

W. L. Stokes

San Rafael district and Cedar Mtn. area.  
More than 100,000 tons in size at average grade .40%  $U_3O_8$ .  
Containing unit is Monitor Butte.

U.G.M.S. GB #21, p. 150-194

H. H. Doelling, R. E. Cohenour

Temple Mtn. San Rafael district.  
Host rock is Moss Back member of Chinle.

Dirty Devil No. 6

USAEC Report RMO 66, 1952

G. W. Bain

West side San Rafael Swell.

Host rock - Shinarump formation.

Mining - Adit type opening. Ore body trends S 50° W.

Minerals: pyrite, galena, marcasite, chalcopyrite, carnotite, tyuyamunite.

Eagle Nest Claims

U.G.M.S. GB #21, p. 109-128, 1967  
M. D. Dasch

South side of the Uintahs.  
Host formation, Chinle.

*15-55-24E*  
*Uintah Co.*

Elva M. Mine

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Polar Mesa District. In the Polar Mesa district beds dip 2-8° N.  
2 shafts, 1 adit.  
Modified room and pillar mining method.  
Exploratory drilling, 1,762 ft.



Firefly Mine

U.G.M.S. GB #21, p. 150-194

H. H. Doelling and R. E. Cohenour

La Sal Creek Mining District.  
Elevation 6,244'.  
10 miles from La Sal, Utah.

Flat Top No. 1 Claim

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Thompson district.

Ore body trends East-NE.

Roll type ore body 1000 ft. long.

Exploratory drilling done (1943) 110 ft.

Frisco Group

U.S.G.S. TEI 490, p. 33-34, 1954  
G. W. Weir                      Vol. VIII

Lisbon Valley area.  
Host is Salt Wash.  
Ore body trends NE.

Fry No. 4 Mine

U.S.G.S. TEI 540, p. 47-48, 1955

A. F. Trites, Jr.      Vol. VIII

Principal uranium mineral: uraninite.

Other minerals: pyrite, chalcopyrite, bornite, sphalerite, marcasite.

Oxides include: chalcocite, covellite, chacanthite, brochantite, malachite.

*White Canyon area.*

Great Western Mine

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Piute County.  
Host rock Glen Canyon group (quartzite).  
Triassic and Jurassic.  
Minute grains of pitchblende.

Happy Jack Mine

U.S.G.S. Circ. 217, 1952

W. E. Benson and others

Bornite, chalcopyrite, covellite, pitchblende fill small fractures;  
uraninite, schoepite-becquerelite, johannite, torbernite, phosphuranylite,  
uranophane, zippeite, some gold and silver.

Uranium Mag., V. 3, No. 3, p. 17-19, March 1956

G. R. Grandbonche Vol. XIII

Sold in 1941 for \$1100.

Flourescent uranium mineral - uranopilite.

U.S.G.S. TEI 540, p. 47-48, 1955

A. F. Trites, Jr. Vol. VIII

Principal uranium mineral, uraninite.

Other minerals: pyrite, chalcopyrite, bornite, sphalerite, marcasite.

Oxides include: chalcocite, covellite, chalcantite, brochantite, malachite.

White Canyon area

U.G.M.S. GB #21, p. 150-194

H. H. Doelling, R. E. Cohenour

Elevation 5,200 ft.

Produced about 1 million tons at .25%  $U_3O_8$  and 1% copper.

Shinarump is host.

Uranium minerals: uraninite, betazippeite, johannite, uranopilite.

Copper minerals: covellite, bornite, chacopyrite, pyrite.



Hideout Claim

U.S.G.S. Circ. 217, 1952

W. E. Benson and others

Mineralization in fractures, pitchblende, uraninite, schoepite-becquerelite, johannite, torbernite, phosphuranylite, uranophane, zippeite.

Hill Top Claims

Geologic Report on the Conrad, Cross Bow, and Hill Top Claims, Emery County, Utah

Terra West Corp. Uranium Claims Report

C. E. Felix

7-24S-9E

Elevation 5700-6400 ft.

Hot Shot Mine

USAEC RMO 982 (Rev.), 59 p., 1952

G. W. Bain

1 mile south of Yellow Jacket mine.

Principal minerals: yellow uranyl sulphates.

Iron Queen Mine  
Stage Claims

U.G.M.S. GB #21, p. 109-128, 1967  
M. D. Dasch

Radioactive iron-rich material near contact between rhyolite and carbonate rocks.  
Location, Beaver County, Utah.

Jomac Mine

U.S.G.S. TEI 390, p. <sup>23-24</sup>~~20-29~~, 1953  
A. F. Trites Vol. VIII

Host rock - Shinarump.  
Minerals - torbernite, autunite.

Kolob Mine

U.G.M.S. GB #21, p. 109-128, 1967  
M. D. Dasch

1954 ore shipped.



Maybe Claim

U.S.G.S. TEI 540, p. 47-48, 1955

A. F. Trites, Jr.            Vol. VIII

White Canyon area.

Principal uranium mineral, uraninite.

Other minerals: pyrite, chalcopyrite, bornite, sphalerite, marcasite.

Oxides include: chalcocite, covellite, chalcantite, brochantite, malachite.

Mi Vida

USBM Report of Invest. 6550, 40 p., 1964

G. S. Koch, Jr. Vol. VII

Grade of uranium .51%  $U_3O_8$ .  
Grade of vanadium 1.22%  $V_2O_5$ .  
Lime content 4.99% CaO

Topography: semi desert, Colorado Plateau. Steep walled canyons and mesas.  
Vegetation: scrub pine, pinon, sage brush.  
Temperature: 100° F to below freezing.  
Snow usually less than 6 inches, may reach 2 ft.

UGMS GB #21, p. 1-11, 1967

W. L. Stokes

Monticello district.  
Vanadium:uranium ratio, 2 to 1.

U.G.M.S. GB #21, p. 150-194

H. H. Doelling, R. E. Cohenour

Moss Back member.  
6,200-6,600 ft. elevation.  
Bedding dips 9° SW.  
Ore contains about 12% calcite.  
Main ore body: 3,000 ft. by 800 ft.  
Average grade .34%  $U_3O_8$ .

North Alice Mine

U.G.M.S. GB #21, p. 150-194

H. H. Doelling, R. E. Cohenour

Near Rattlesnake mine.  
Owner Homestake Mining Co.

North Mesa No. 9 Mine

U.G.M.S. GB #21, p. 150-194

H. H. Doelling, R. E. Cohenour

3-24S-11E

Owned by Union Carbide Nuclear Co.

Asphaltite ore.

Host rock is Moss Back.

Size of ore bodies: 100-1000 ft. long. 10-50 ft. wide, 1-8 ft. thick.

300-50,000 tons.

Trend of ore bodies NW.

Minerals: uraninite main mineral, corvusite, vauvite.

Accessory minerals: ferroselite, cobaltomentite.

North Point No. 6 & Horn Channels

USAEC RME 63, 1954, 33 p.

D. R. Kelley      Vol. VII

White Canyon area.

Total footage drilled, 6,101 ft.

Strike of beds N 19° W, dip 1° 47'.

Minerals:

Uranium minerals

cuproklodowskite

uranophane

johannite

Copper minerals

brochantite

cyanotrichite (?)

chalcantite (?)

antlerite (?)

chalcocite

azurite

malachite

cuprite

The North Point No. 6 & Horn Channels are considered barren of an ore body of more than minor size.

Notch No. 5 Claim

U.S.G.S. TEI 390, p. 26-29, 1953  
R. Q. Lewis, Sr., Vol. VIII

40 ft. below Shinarump cont act in Moenkopi.

Nuclear No. 1 (Autunite #8)

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Vein deposit.

Uraniferous opal.

Tertiary porphyritic rhyolite.



Oljeto Mesa West

USAEC RMO 982, (Rev.), 59 p., 1952

G. W. Bain

1 mile east of Oljeto Trading Post.

Owners: Minerals Exploration.

Ore channel trend S 60° W.

Minerals: schroekingerite, uranophane, autunite, torbernite and oxidized copper minerals.

Mine workings: adit driven in 25 ft.

The Peaks Channel

USAEC RME 982, (Rev.), 59 p., 1952

G. W. Bain

Circle Cliffs.

Barney Brothers prospect.

Claims staked by Barney Brothers.

Ore body 12 ft. long and 1 ft. thick.

Mineralization due to ground water.

Polar #2 and Polar #3

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Polar Mesa district.

Polar #2: very little drilling done. No good ore hit.

Polar #3: roll type ore bodies trending northward.

Posey Mine

U.S.G.S. Circ. 217, 1952

W. E. Benson and others

Pitchblende, uraninite, schoepite-becquerelite, johannite, torbernite, phosphuranylite, uranophane, zippeite.

Profit No. 1 Mine

U.S.G.S. TEI 490, p. 33-34, 1954  
G. W. Weir            Vol. VIII

Lisbon Valley area.  
Host is Salt Wash.  
Ore body trends NE.

Rattlesnake Mine

U.G.M.S. GB #21, p. 150-194

H. H. Doelling, R. E. Cohenour

Elevation 6,600 ft.

Big Indian district.

Host is Salt Wash member of Morrison formation.

Ore minerals coat sand grains.

Minerals: carnotite.

Ore bodies in elongate 100 ft. by 30 ft.; thickness ranges from 1-20 ft.

Trend of ore bodies northeastward.

Ore bodies discovered at outcrop and outlined by drilling.

Owner: Continental Materials Corp.

Mining: 2.5 million cubic yards removed from open pit mine.

70,000 tons of ore removed. Stripping ratio 78:1.

Open pit extraction cost: \$17.21/ ton of ore.

Value of ore, \$23.25/ ton.

Random room and pillar method used later.

Red Rock #1 Claim

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Castle Peak Draw area.  
Uintah formation.

Red Vanadium Group

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Thompson district.  
Roll type ore bodies.  
Strike N 85° W.  
Exploratory drilling, 1,620 ft.



Rex Mine No. 1

U.S.G.S. TEI 390, p. 27-28, 1953

R. C. Robeck

Principal mineral, coffinite.

Ridge No. 1 & 2 Claims

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

3,900 tons ore at 2%  $V_2O_5$ .

Dip 2-5° E.

Mineralized area, 600' long, 300' wide, 6' thick.

(Cottonwood Canyon district, 37S-21E)

Rim Rock Mine

U.S.G.S. TEI 540, p. 52-54, 1955  
L. C. Huff                      Vol. VIII

Sage Plain area.  
27-34S-24E

Rim Rock and Rim Rock #2

USBM Report of Invest. 3930, Sept. 1946  
W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Polar Mesa district.  
Discovery by drilling.  
Ore encountered, grade .85-1.14%  $V_2O_5$ .  
600 tons shipped, average grade 1.7%  $V_2O_5$ .

Scotty Claim

U.S.G.S. TEI 540, p. 47-48, 1955

A. F. Trites, Jr.      Vol. VIII

White Canyon area.

Principal uranium mineral, uraninite.

Other minerals: pyrite, chalcopyrite, bornite, sphalerite, marcasite.

Oxides include: chalcocite, covellite, chalcantite, brochantite, malachite.

Sevier & Blue Jay Deposits

USAEC RMO 982 (Rev.), 59 p., 1952

G. W. Bain

1 mile south of Hot Shot mine.

Sevier adit has pitchblende and uranyl sulfate.

Blue Jay adit has johannite, zippeite, uranophane, and various copper minerals.

Sevier adit extends 130 ft.

Extend of mineralization: 25 ft. wide and  $\frac{1}{2}$  mile long.

Shamrock Mine

U.G.M.S. GB #21, p. 109-128, 1967  
M. D. Dasch

Piute County. 5-28S-4W.  
Meta-autunite disseminated in fractures.

Silver Falls Deposit

USAEC RMO 982 (Rev.), 59 p., 1952

G. W. Bain

Circle Cliffs

Silver King Claims - Silver King No. 1

USAEC RME 2035 (Rev.), March 1956

R. L. Hillier

Tooele County. 7-10S-6W.

Owner Earl J. Clinger.

Climate: Hot and dry summers. Annual precip. less than 6 inches.

Vegetation: Sagebrush and junipers. Some scrub oak.

Uranium minerals occur in veins.

Strike N 60° NW and dip to the west.

Range from a few to 6 ft. in width.

Uranium mineral is uraninite.

Other minerals: pyrite, barite, sericite, opalite, biotite, microcline, albite, quartz.

Copper mineral, chalcopyrite.

Silver also present.

Flourite.

Exploration: Bulldozer cuts made, 4,350 ft.

Diamond drilling 1,062 ft.

Elevation at portal of the adit 6,630 ft.

Length of crosscut 756 ft.



Skyline Mine

USAEC RMO 982 (Rev.), 59 p., 1952

G. W. Bain

3 miles due west from Goulding's Trading Post, Utah.  
Trend of ore body N 60° W.  
Principal uranium minerals: autunite, torbernite.  
Ore body 600 ft. long.

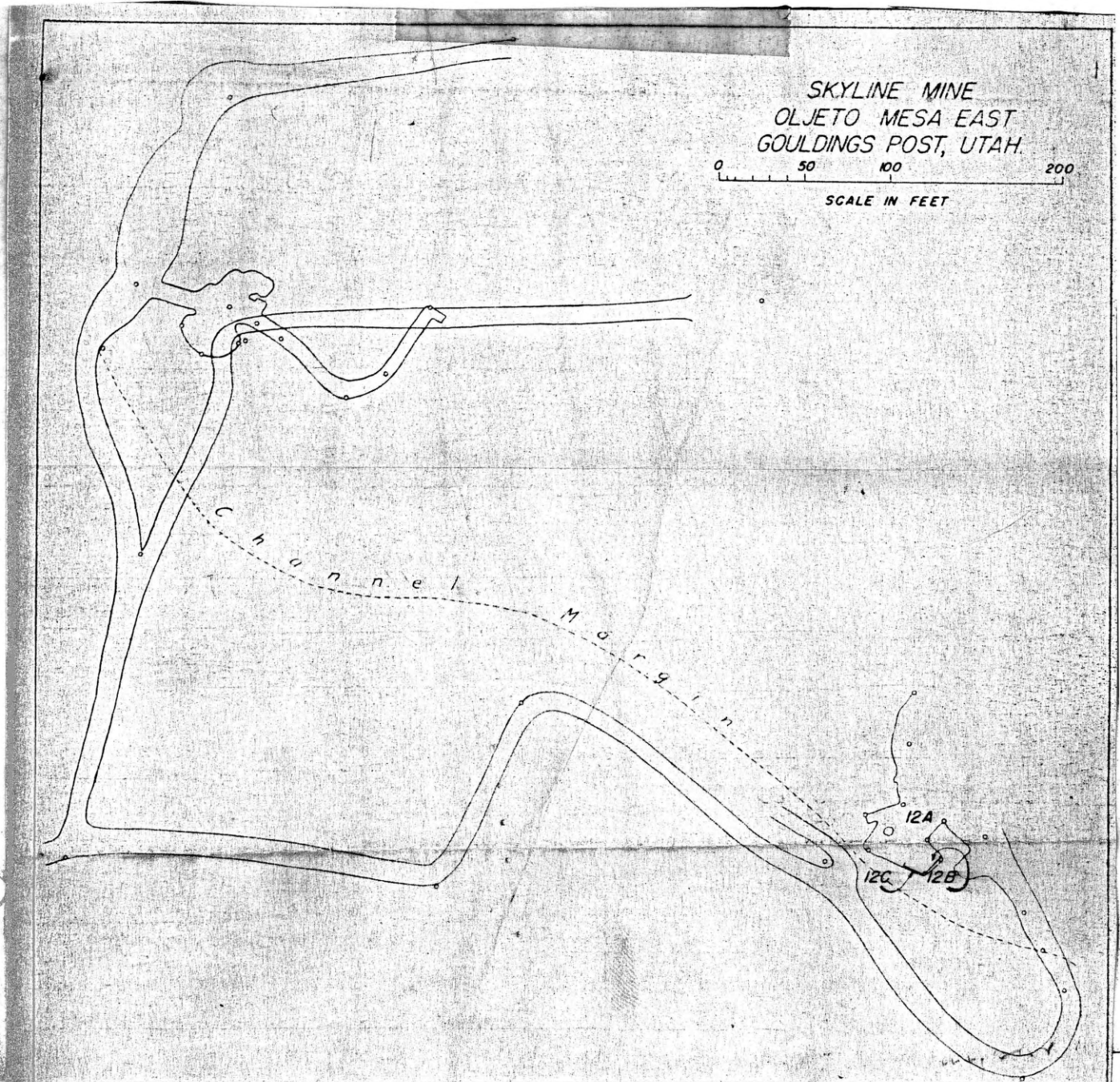


Figure 11. Map of the Skyline Mine. USAEC RMO 982

Snow Claim, Bonnie Bell Claim, Susie Bell Claim

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Mesaverde formation.

Autunite, carnotite.

NE Utah

Staats Fluorspar (Eureka-Monarch) Mine

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Beaver County.

Uraninite occurs in pipelike ore shoots in Tertiary rhyolite.

Sunset Mine

U.S.G.S. TEI 490, p. 33-34, 1954  
G. W. Weir, Vol. VIII

Lisbon Valley area.  
Host rock is Salt Wash.  
Ore body trends NE.

Waterfall Group

U.S.G.S. TEI 490, p. 33-34, 1954

G. W. Weir

Vol. VIII

Lisbon Valley area.

Trend SE, host is Salt Wash.

Whirlwind Mine

USAEC RMO 982 (Rev.), 59 p., 1952

G. W. Bain

NW corner of quad. 12. Navajo Indian Reservation. SE angle between  
Copper Canyon and the San Juan River.

Ore deposit trends N 60° W.

Principal mineral pop corn-like schroekingerite.

Mine workings: 120 ft. in from portal (adit entrance).

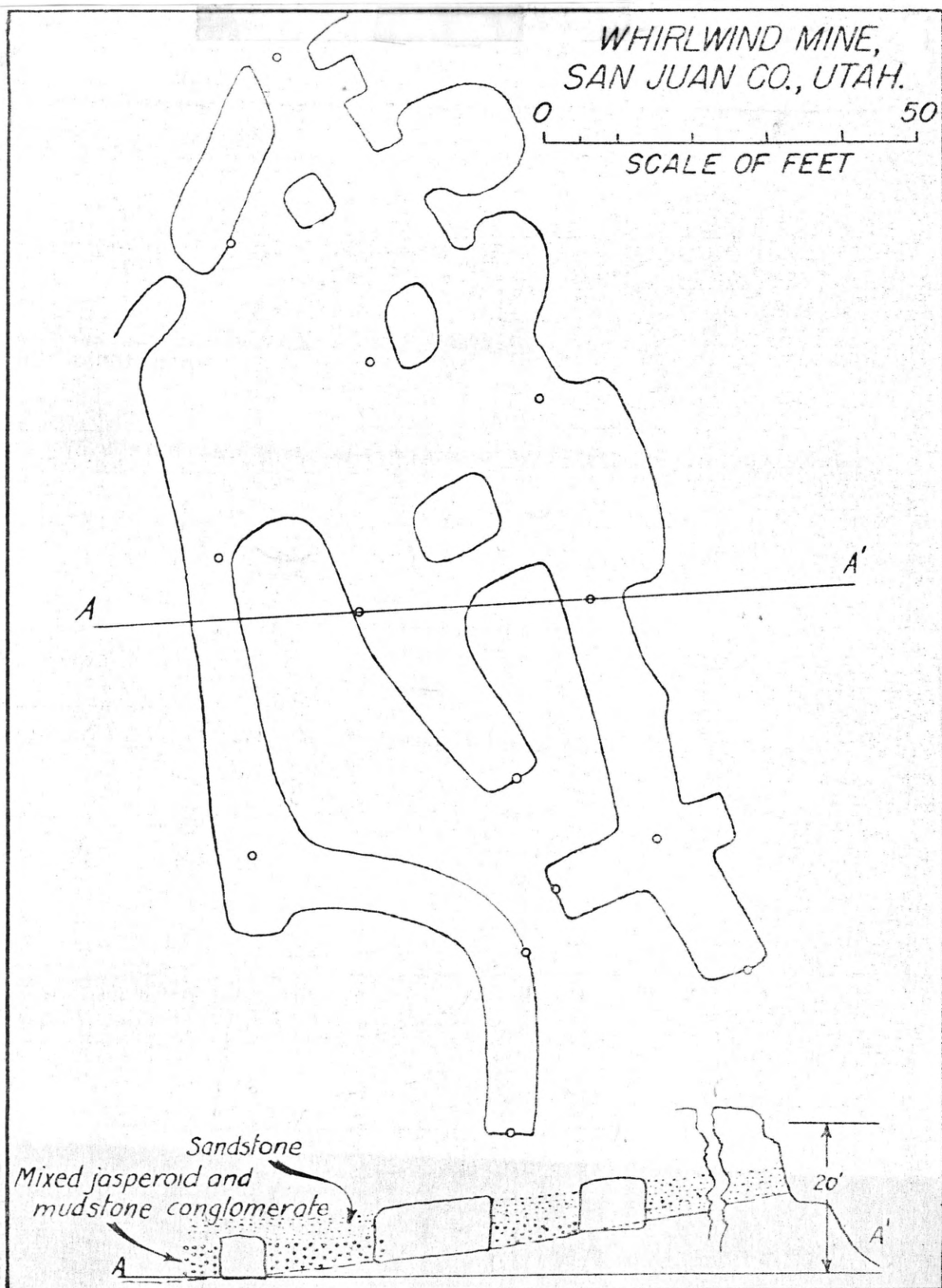


Figure 13. Map of the Whirlwind Mine.

Whirlwind Mine

USAEC RMO 982 (Rev.), 59 p., 1952

G. W. Bain

NW corner of quad. 12. Navajo Indian Reservation. SE angle between  
Copper Canyon and the San Juan River.

Ore deposit trends N 60° W.

Principal mineral pop corn-like schroeckingerite.

Mine workings: 120 ft. in from portal (adit entrance).

↙ Uranium Mag., V. 3. No. 3, p. 17-19, March 1956

G. R. Grandbonche

Vol. XIII

Whirlwind mine reportedly produced over 1000 tons of uranium ore.

White Canyon No. 1 Mine

U.S.G.S. TEI 540, p. 47-48, 1955

A. F. Trites, Jr. Vol. VIII

Principal uranium mineral, uraninite.

Other minerals: pyrite, chalcopyrite, bornite, sphalerite, marcasite.

Oxides include: chalcocite, covellite, chalcantite, brochantite, malachite.



Willow Creek (Bartholomew) Claim

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Uranium mineral schroekingerite coats fracture surfaces and bedding planes. Uintah formation is host.

Wilson Mine

U.S.G.S. TEI 490, p. 33-34, 1954  
G. W. Weir, Vol. VIII

Lisbon Valley area.  
Trend SE, host is Salt Wash.

Woodenshoe

U.S.G.S. Circ. 217, 1952

W. E. Benson and others

Minerals in fractures.

East Woodenshoe

U.S.G.S. TEI 390, p. <sup>26</sup>~~20~~-29, 1953

R. Q. Lewis, Sr.

Vol. VIII

Occurs in the Chinle formation 30 ft. above the Shinarump.

Yellow Canary No. 1 & 2 Claims

U.S.G.S. Circ. 312, 1953

V. B. Wilmarth

Mining development: 1 adit, 190 ft. 3 open cuts. Seven hundred ft. of bulldozer trenches.

No uranium ore produced from this deposit.

Minerals found: tyuyamunite, carnotite, volborthite, iron oxides, azurite, malachite, brochantite, hyalite.

Owners: C. E. Green and William Allen filed claims July 10, 1948.

F. W. Bailey, J. R. McDermott bought part interest in 1950.

Canary Mining Co. incorporated 1950, F. W. Bailey president.

Location: 4,5-2N-24E.

Roads generally open year round.

70 miles to Rock Springs, Wyo. 62 miles to Sunbeam, Colo.

Richest uranium mineralization is in NW trending fracture zone.

Uranium in the Red Creek quartzite. Pre Cambrian.

Grade: highest grade sample .57%  $U_3O_8$ . But range is from .000-.57%.

U.G.M.S. GB #21, p. 109-128, 1967

M. D. Dasch

Daggett County.

Veins.

Tyuyamunite, carnotite and copper and vanadium minerals.

Host: Precambrian Red Creek quartzite.

Yellow Chief Mine

UGMS GB #21, p. 109-128, 1967

M. D. Dasch

100,000 tons ore estimated at 23%  $U_3O_8$ .

White Faun and Yellow Circle Claims

USBM Report of Invest. 3930, Sept. 1946

W. P. Huleatt, S. W. Hazen, W. M. Traver, Jr.

Location, 20 miles SE of Moab.

Production 1943 - 1,624 at 1.65%  $V_2O_5$ .

Yellow Jacket Mine

USAEC RMO 982 (Rev.), 59 p., 1952

G. W. Bain

Circle Cliffs.

Principal minerals: uraninite, johannite.

Selenium Content  
Map of Circle Cliffs Area  
Blue Jay  
Hot Shot  
Yellow Jacket  
Sevier.

Hatch & Happy Canyons  
Henry Mtns District  
Poison Spring Canyon

Circle Cliffs.  
(Beir)

Orange Cliffs.  
E. Henry Mtns.  
Orange Cliffs.



List of additional or minor minerals \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_ (7)

Methods of Exploration: \_\_\_\_\_ (8)  
Method [a] Extent [b] Year of Work

	Method [a]	Extent [b]	Year of Work
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

MINING -- For both underground and surface mining (10 and/or 11)

Avg. Credibility, pgs. 10 and 11: \_\_\_\_\_ [c] In situ rock density \_\_\_\_\_

Swell Factor \_\_\_\_\_ % waste rock \_\_\_\_\_

Estimated Daily Mine Capacity \_\_\_\_\_ Avg. Grade \_\_\_\_\_

Est. Unit Production costs \_\_\_\_\_ Est. Capital cost \_\_\_\_\_

Est. Production period \_\_\_\_\_ Date of Estimates \_\_\_\_\_

Underground Mining: \_\_\_\_\_ (10)

Mining method \_\_\_\_\_ [d] Rock Hardness & Water Conditions \_\_\_\_\_ [e]

Class of Rock Masses \_\_\_\_\_ [f] Support characteristics \_\_\_\_\_ [g]

Entry description (length or depth): \_\_\_\_\_ Type \_\_\_\_\_ °

Condition of workings \_\_\_\_\_ [h]

Total length, depth of shafts, adits, inclines, crosscuts, etc. \_\_\_\_\_

Claims  
Map 1. (all Ouzg Cliffs.)

- 6- Fiddlers Butte claims
- 9- Little Ronnie claims (Ounsight Butte)
- 9- Mokie claims (Big Ridge)
- 11 Sunday claims
- 13 Old Crow claims
- 14 Jim Dandy claims
- 17. Pay day claims
- 17. Lollypop claims
- 18. K.C. Jay claims
- 20 Queen Sheba claims

Kimberly, Minnie Pearl. Map

Kimberly 1-4  
Minnie Pearl 1

all in Sec. 33-T325-R.7E  
Circle Cliffs.

Modock and Majestic Claims

Modock 1-5 8

maj. 1-2. 17

~~17~~

Sec 12, T 335, R. (12E?) (Range not given)

Claim Maps of Hansen Uranium Co. with

151 claims

Gyp 1-4

Oak Creek 1-2

Birthday

Happy

Lion

Prickly Pear

Twin Sisters

Junction 1-5

Bear Canyon 1-2

Arch 1-4

Dry Fork 1-2

Carol

Junction Station

Valley View

Bald Head

Are Feet etc.

Maybe Notom

Quad

No. \_\_\_\_\_

Page 2 of \_\_\_\_\_ pages

	1st	2nd	3rd (Order of importance)	
Type of ore body	_____	_____	_____	[A](5)
Mode of origin	_____	_____	_____	[B](5)
Shape	_____	_____	_____	[C](5)
Ore controls	_____	_____	_____	[D](5)
Wall alteration	_____	_____	_____	[E](5)
Degree of Wallrock alteration	_____ [F]			Depth to ore zone _____ (5)
Depth of unconsolidated material	_____ (5)			Avg. strike length _____ (5)
Avg. dip length of ore zone	_____ (5)			Avg. thickness _____ (5)
Strike and dip of ore zone	_____			(5)
Host Formation Name	_____			(6)

Age of Host \_\_\_\_\_ Deformation of Host \_\_\_\_\_ [G](6)

Relationship of mineralization to deformation \_\_\_\_\_ [H] Age of Def. \_\_\_\_\_ (6)

Rock descriptions: \_\_\_\_\_ (6)

	Name [I]	Relationship to Ore [J]		
Rock type 1	_____	_____	_____	_____
Rock type 2	_____	_____	_____	_____
Rock type 3	_____	_____	_____	_____
Rock type 4	_____	_____	_____	_____
Rock type 5	_____	_____	_____	_____

Mineralogy: Geol. age of mineralization \_\_\_\_\_ (7)

Overall grain size \_\_\_\_\_ [K] Depth of Invest. \_\_\_\_\_ [L](7)

Mineral [M]	Grain Size [N]	Amount in Volume Percent [O](7)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

*URANIUM MINE*

Rose Ann Claims. near Mt. Hillers.  
S. Henry Mtn. 2-21

---

E. Henry Mtns.

Navajo 1  
Yellow Cat 1, 2, 3, 4, 5, 6, 8  
31 + 30, T32S R. 12E  
Congress 46 + 45  
Trachyte 11 + 14  
Eagle 4

---

Lucky Devil 31S-16E  
near Teapot Rock Orange Cliffs.

---

Brent 31S-R16E  
near Teapot Rock in Orange Cliffs.

---

Moki 31S-R15E Orange Cliffs.

---

Sunday 31S-R15E Orange Cliffs.

---

Claim Map sec 12, 13, 24 T. 31S, R. 6E  
Ace in the Hole 1-4 11, 12, 13, -31S-6E.  
Joker Jack 1-3 12-31S-6E  
Dirty Shame 1-8 12, 13-31S-6E  
Sunny Sight 1-6 13-31S-6E  
Sinbad 1-3 13-31S-6E  
Knob Hill 1-3 24-31S-6E



		Average Grade				
		G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	G <sub>4</sub>	G <sub>5</sub>
Probability	P <sub>1</sub> 90%					
	P <sub>2</sub> 75%					
	P <sub>3</sub> 50%					
	P <sub>4</sub> 25%					
	P <sub>5</sub> 10%					

**Average Grades - Associated Products**

Product 1  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 2  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 3  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 4  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 5  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Jim Dandy	31S-15E	Orange Cliffs
K.C. Jay	31S-15E	Orange Cliffs
Old Crow	31S-14E	Orange Cliffs
Fiddlers Butte	32S-15E	" "
Pay Day	31S 14E	" "
Queen of Sheba	31S-15E	" "
Lolly Pop	31S-15E	" "
Little Ronie	31S-16E	" "

Orange Cliffs Tie In map for all preceding claims

Claim Map sec 36, T32S-R11E  
sec 31, T32S-R12E

G.T.H. 1-13  
Lucky 1-5  
Slate Creek 1-6  
Trachyte 9, 10, 20  
Crow 1, 3, 4  
Daisy May  
Congress 45, 46  
Navajo 1

Claim Group map

Kathy Karen 9  
DAMFINO 2  
Canyon 7  
Martha May 5

Betty Jack 7  
Bonnie Carl 3  
Hard Luck 3  
Barbara Carol 7  
Cornel Beck 7  
Blue Bell 3

T. 35S, R8-9E.

Surface Mining:

(11)

Mining method \_\_\_\_\_ [a] Average cover thickness \_\_\_\_\_

Cover Hardness: Cover 1 \_\_\_\_\_ [b] Percent \_\_\_\_\_

Cover 2 \_\_\_\_\_ Percent \_\_\_\_\_

Cover 3 \_\_\_\_\_ Percent \_\_\_\_\_

Ore body hardness [b] \_\_\_\_\_ Surface area \_\_\_\_\_

Bench Height \_\_\_\_\_ Maximum Pit Slope (degrees) \_\_\_\_\_

Estimated Preproduction stripping volume \_\_\_\_\_

Beneficiation:

(12)

Principal product recovery in percent \_\_\_\_\_ PP

Associated product recovery, percent \_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

Beneficiation Method [c]

1. \_\_\_\_\_ % of ore handled \_\_\_\_\_ % Distr. of PP \_\_\_\_\_

2. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

3. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

4. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Percent millfeed shipped as concentrates \_\_\_\_\_

Est. Plant Capacity / day \_\_\_\_\_ Est. Unit production cost \_\_\_\_\_

Est. Capital cost \_\_\_\_\_

Transportation: Stage [d] \_\_\_\_\_ shipped by [e] \_\_\_\_\_ distance \_\_\_\_\_

(13)

\_\_\_\_\_

\_\_\_\_\_

Joe A. King Claim Group.

Sec, 2, 3, 10, 11, 14, 15, T355, R11E.

Canyon	Holmes
Jeddy	Sylvia
Bert	Creech
David	Quigo
Warren	Rats nest
Gnat	Iru Ann
Jerry	Del Monte
	Carbon
	Oil seep.

---

Claim Map

Shooting Creek Mining Corp.  
EKKER + Roberts.

Hidden	Nellie Bligh
Deep Canyon	Lone Eagle
Wild Bill	Carbon
Agate	Oil seep



List of additional or minor minerals \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_ (7)

Methods of Exploration: \_\_\_\_\_ (8)

	Method [a]	Extent [b]	Year of Work
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

MINING -- For both underground and surface mining (10 and/or 11)

Avg. Credibility, pgs. 10 and 11: \_\_\_\_\_ [c] In situ rock density \_\_\_\_\_

Swell Factor \_\_\_\_\_ % waste rock \_\_\_\_\_

Estimated Daily Mine Capacity \_\_\_\_\_ Avg. Grade \_\_\_\_\_

Est. Unit Production costs \_\_\_\_\_ Est. Capital cost \_\_\_\_\_

Est. Production period \_\_\_\_\_ Date of Estimates \_\_\_\_\_

Underground Mining: (10)

Mining method \_\_\_\_\_ [d] Rock Hardness & Water Conditions \_\_\_\_\_ [e]

Class of Rock Masses \_\_\_\_\_ [f] Support characteristics \_\_\_\_\_ [g]

Entry description (length or depth): \_\_\_\_\_ Type \_\_\_\_\_ °

Condition of workings \_\_\_\_\_ [h]

Total length, depth of shafts, adits, inclines, crosscuts, etc. \_\_\_\_\_

p. 11	Black Widow	Circle Clip
	Mesa	" "
	Yellow Jacket	" "
	Hot Shot	" "
	Sneaky - Silver Falls	" "
	Duke	" "
	Sam Dog	" "
	Betty Jack	" "
	Rummy Day	" "

p. 12.	Rocky Mountain Prospects	" "
	Copper Head	" "
	Hope	" "
	Zelda	" "
	Three Partners	" "
	Dodie	" "
	Mogui	" "
	Olympic	" "
	Dream	" "
	Salitude	" "

p. 29	Oak Creek Claim	Fremont
-------	-----------------	---------

p. 37	<del>Transfer Area</del> 32-30/	Fremont
	High background radiation	(W/2 5-315-7E
	" " "	7,18-315-7E

		Average Grade				
		G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	G <sub>4</sub>	G <sub>5</sub>
Probability	P <sub>1</sub> 90%					
	P <sub>2</sub> 75%					
	P <sub>3</sub> 50%					
	P <sub>4</sub> 25%					
	P <sub>5</sub> 10%					

**Average Grades - Associated Products**

Product 1  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 2  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 3  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 4  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 5  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

p. 38. Prospect Adit 18-315-7E  
~~Schiffert~~

Fremont

No. \_\_\_\_\_

Surface Mining:

(11)

Mining method \_\_\_\_\_ [a] Average cover thickness \_\_\_\_\_

Cover Hardness: Cover 1 \_\_\_\_\_ [b] Percent \_\_\_\_\_

Cover 2 \_\_\_\_\_ Percent \_\_\_\_\_

Cover 3 \_\_\_\_\_ Percent \_\_\_\_\_

Ore body hardness [b] \_\_\_\_\_ Surface area \_\_\_\_\_

Bench Height \_\_\_\_\_ Maximum Pit Slope (degrees) \_\_\_\_\_

Estimated Preproduction stripping volume \_\_\_\_\_

Beneficiation:

(12)

Principal product recovery in percent \_\_\_\_\_ PP

Associated product recovery, percent \_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

Beneficiation Method [c]

1. \_\_\_\_\_ % of ore handled \_\_\_\_\_ % Distr. of PP \_\_\_\_\_

2. \_\_\_\_\_ \_\_\_\_\_

3. \_\_\_\_\_ \_\_\_\_\_

4. \_\_\_\_\_ \_\_\_\_\_

Percent millfeed shipped as concentrates \_\_\_\_\_

Est. Plant Capacity / day \_\_\_\_\_ Est. Unit production cost \_\_\_\_\_

Est. Capital cost \_\_\_\_\_

Transportation: Stage [d] \_\_\_\_\_ shipped by [e] \_\_\_\_\_ distance \_\_\_\_\_

(13)

\_\_\_\_\_

\_\_\_\_\_

p. 2 continued.

Red Head - Lamp Stand	Circle Cliff
Rocky Mtn Uranium Corp.	" "
Horse Head Prospect	" "

p. 3.

Trachyte 1-20	E. Henry Mtns
Blitz 1-7	"
June Bell 1-4	"
Straight Creek	"
Mynnie Pearl 1+2 (Famers Knot & John Hill)	"

p. 9.

Rainy Day	Circle Cliff
Buff	" "
Red Cliff	"
Cool	"

p. 10-

Midas	"
Centipede	"
Horsehead	"
Blue Goose	"
Horse Canyon	"
Stud Horse	"
Glen Rae	"
Blue Bird	"
Lone B	"



List of additional or minor minerals \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_ (7)

Methods of Exploration: \_\_\_\_\_ (8)

	Method [a]	Extent [b]	Year of Work
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

MINING -- For both underground and surface mining (10 and/or 11)

Avg. Credibility, pges. 10 and 11: \_\_\_\_\_ [c] In situ rock density \_\_\_\_\_

Swell Factor \_\_\_\_\_ % waste rock \_\_\_\_\_

Estimated Daily Mine Capacity \_\_\_\_\_ Avg. Grade \_\_\_\_\_

Est. Unit Production costs \_\_\_\_\_ Est. Capital cost \_\_\_\_\_

Est. Production period \_\_\_\_\_ Date of Estimates \_\_\_\_\_

Underground Mining: \_\_\_\_\_ (10)

Mining method \_\_\_\_\_ [d] Rock Hardness & Water Conditions \_\_\_\_\_ [e]

Class of Rock Masses \_\_\_\_\_ [f] Support characteristics \_\_\_\_\_ [g]

Entry description (length or depth): \_\_\_\_\_ Type \_\_\_\_\_ °

Condition of workings \_\_\_\_\_ [h]

Total length, depth of shafts, adits, inclines, crosscuts, etc. \_\_\_\_\_

P. 1 = GARFIELD COUNTY.

John Hill	E. Henry Mtns.
Minnie Pearl	"
Delmonte	S " "
Lucky Shuke	S. " "
Agate	S " "
Yellow Paint	S. " "
June Bell	E " "
Rainy Day	Circle Cliffs
Blue Goose	"
Lone B	"
Black Widow	"
Yellow Jacket	"
Hot Shot	"

p. 2. Oasis	Circle Cliffs
Eppers	Orange Cliff
Yellow Bird	<del>Orange</del> Fremont
Spotted Dog	"
Brown Mule	"
Poison Spgs Canyon	Orange Cliffs
Unknown	" " 21-31-14
Cedar Pt Group	" "
Unknown	" " 27-33-13
Blue Bird	Circle Cliffs
Zelda	" "
Sneaky-Silver Falls.	" "
Duke	" "



No. \_\_\_\_\_

Surface Mining:

(11)

Mining method \_\_\_\_\_ [a] Average cover thickness \_\_\_\_\_

Cover Hardness: Cover 1 \_\_\_\_\_ [b] Percent \_\_\_\_\_

Cover 2 \_\_\_\_\_ Percent \_\_\_\_\_

Cover 3 \_\_\_\_\_ Percent \_\_\_\_\_

Ore body hardness [b] \_\_\_\_\_ Surface area \_\_\_\_\_

Bench Height \_\_\_\_\_ Maximum Pit Slope (degrees) \_\_\_\_\_

Estimated Preproduction stripping volume \_\_\_\_\_

Beneficiation:

(12)

Principal product recovery in percent \_\_\_\_\_ PP

Associated product recovery, percent \_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

Beneficiation Method [c]

1. \_\_\_\_\_ % of ore handled \_\_\_\_\_ % Distr. of PP \_\_\_\_\_

2. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

3. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

4. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Percent millfeed shipped as concentrates \_\_\_\_\_

Est. Plant Capacity / day \_\_\_\_\_ Est. Unit production cost \_\_\_\_\_

Est. Capital cost \_\_\_\_\_

Transportation: Stage [d] \_\_\_\_\_ shipped by [e] \_\_\_\_\_ distance \_\_\_\_\_

(13)

\_\_\_\_\_

\_\_\_\_\_

# White Canyon Dudes.

Happy Jack or Dally, Varden or Blue Duke, or Fambles.  
and ~~Happy~~ Hideout and North Point = p. 3

Pasey	p. 4
Joe Bishop	p. 4
Yellow John	p. 4
Tomac	p. 4
Jerry	p. 4
White Canyon 1	p. 4
Bell	p. 4
Fry 4	p. 4
Scenic 4	p. 4
Blue Lizard	p. 4
Conaway	p. 4
Maybe	p. 4
Gizmo	p. 4
Spork	p. 4
Happy Jack	p. 4
Walt	p. 4
Markey	p. 4
North Pt.	p. 4
Ears.	p. 4

p. 5

Fry 4  
Happy Jack  
Tomac  
Pasey

White Canyon #1



p. 6

Hideout

w. n.

Happy Jack

p. 14

Happy Jack

p. 15

Tomac

p. 22

North Point

p. 24

Hideout

p. 26

Happy Jack

Fry 4

Merkey

p. 27

Hideout

p. 40

Happy Jack

List of additional or minor minerals \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_ (7)

Methods of Exploration: \_\_\_\_\_ (8)  
Method [a] Extent [b] Year of Work

	Method [a]	Extent [b]	Year of Work
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

MINING -- For both underground and surface mining (10 and/or 11)

Avg. Credibility, pgs. 10 and 11: \_\_\_\_\_ [c] In situ rock density \_\_\_\_\_

Swell Factor \_\_\_\_\_ % waste rock \_\_\_\_\_

Estimated Daily Mine Capacity \_\_\_\_\_ Avg. Grade \_\_\_\_\_

Est. Unit Production costs \_\_\_\_\_ Est. Capital cost \_\_\_\_\_

Est. Production period \_\_\_\_\_ Date of Estimates \_\_\_\_\_

Underground Mining: \_\_\_\_\_ (10)

Mining method \_\_\_\_\_ [d] Rock Hardness & Water Conditions \_\_\_\_\_ [e]

Class of Rock Masses \_\_\_\_\_ [f] Support characteristics \_\_\_\_\_ [g]

Entry description (length or depth): \_\_\_\_\_ Type \_\_\_\_\_ °

Condition of workings \_\_\_\_\_ [h]

Total length, depth of shafts, adits, inclines, crosscuts, etc. \_\_\_\_\_

THOMPSON Quad.

BLACKSTONE 0. 36

LITTLE EVA 0. 36

LITTLE PITTSBURGH 0. 37

TELLURINE H 3 0. 37

Surface Mining:

(11)

Mining method \_\_\_\_\_ [a] Average cover thickness \_\_\_\_\_

Cover Hardness: Cover 1 \_\_\_\_\_ [b] Percent \_\_\_\_\_

Cover 2 \_\_\_\_\_ Percent \_\_\_\_\_

Cover 3 \_\_\_\_\_ Percent \_\_\_\_\_

Ore body hardness [b] \_\_\_\_\_ Surface area \_\_\_\_\_

Bench Height \_\_\_\_\_ Maximum Pit Slope (degrees) \_\_\_\_\_

Estimated Preproduction stripping volume \_\_\_\_\_

Beneficiation:

(12)

Principal product recovery in percent \_\_\_\_\_ PP

Associated product recovery, percent \_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

Beneficiation Method [c]

1. \_\_\_\_\_ % of ore handled \_\_\_\_\_ % Distr. of PP \_\_\_\_\_

2. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

3. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

4. \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Percent millfeed shipped as concentrates \_\_\_\_\_

Est. Plant Capacity / day \_\_\_\_\_ Est. Unit production cost \_\_\_\_\_

Est. Capital cost \_\_\_\_\_

Transportation: Stage [d] \_\_\_\_\_ shipped by [e] \_\_\_\_\_ distance \_\_\_\_\_

(13)

\_\_\_\_\_  
\_\_\_\_\_

~~FABLE MINE~~

~~PAY DAY MINE~~

~~P-34~~

BANDING

5 Strawberry Mine	P-34
5 Lumm	P-34
cottonwood-	P-35
Lucky Boy	P-35
Vegeture (ROCK)	P-35
Dixie #1 (Sunny Boy - (cloudy day))	P-36
Bratford #5	P-36





MONUMENT CANYON

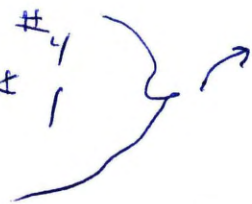
HORSE HEAD mine

P-34.

YELLOW CAKE #4

LAST CHANCE #1

TITUS #3



P-34 (HORSE HEAD CANYON)

WEST CLIFF HOUSE

#8

P-35

DIXIE NO. 1 (BLANKING)

P-36

PURE LUCK mine

P-36

		Average Grade				
		G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	G <sub>4</sub>	G <sub>5</sub>
Probability	P <sub>1</sub> 90%					
	P <sub>2</sub> 75%					
	P <sub>3</sub> 50%					
	P <sub>4</sub> 25%					
	P <sub>5</sub> 10%					

**Average Grades - Associated Products**

Product 1  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 2  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 3  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 4  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 5  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					



~~Whitwind~~ p. 31

LASAL Junction

Far west mine. p. 27

NORTH ALICE. p. 28

Rio Algom p. 28

NORTH ALICE Incline. p. 48

HATCH ROCK

Happy Jack

BIG BUCK (STANDARD) p. 7, 14, 27, 49

Wilson - p. 7.

M. Vida p. 9, 14, 15, 27

Small Fry. p. 14

LITTLE BEAR	}	p. 27
LASAL		
TEXWOOD		
IKE-NIXON		
CORD.		
SOUTH ALMONY		
RADON		



LISBON Valley

Louise	p. 27
Costanza	p. 28
Divide	p. 28, p. 49
Service Berry	p. 28
(continental)	p. 28, p. 49

		Average Grade				
		G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	G <sub>4</sub>	G <sub>5</sub>
Probability	P <sub>1</sub> 90%					
	P <sub>2</sub> 75%					
	P <sub>3</sub> 50%					
	P <sub>4</sub> 25%					
	P <sub>5</sub> 10%					

**Average Grades - Associated Products**

Product 1  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 2  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 3  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 4  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 5  
 Commodity     
 Class    
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					



SAN RAFAEL KNOB

Lucky Strike	P. 30
Green Vein #4	P. 42
Pay Day	P. 49
Dolly	P. 49
HERTZ #1	P. 49

TEMPLE MTN,

Camp bird	P. 8
Calyx #3	P. 8, P. 32, P. 38,
Eagle Nest	P. 8, P. 39
CALYX 3, 6, 9	P. 8, P. 32, P. 38
NORTH MESA #9	P. 8, P. 33
Calyx #8	P. 9, P. 32, P. 33
Vauxium King	P. 9, P. 32, P. 38
Camp Bird #13	P. 24, P. 38
AEC #4, 5, 8, 9	P. 25
North Mesa #2	P. 32
Calyx #12	P. 32
Vagabond.	P. 32, P. 33
Migliaccio	P. 32, P. 33
young prospect	P. 32

Surface Mining:

(11)

Mining method \_\_\_\_\_ [a] Average cover thickness \_\_\_\_\_

Cover Hardness: Cover 1 \_\_\_\_\_ [b] Percent \_\_\_\_\_

Cover 2 \_\_\_\_\_ Percent \_\_\_\_\_

Cover 3 \_\_\_\_\_ Percent \_\_\_\_\_

Ore body hardness [b] \_\_\_\_\_ Surface area \_\_\_\_\_

Bench Height \_\_\_\_\_ Maximum Pit Slope (degrees) \_\_\_\_\_

Estimated Preproduction stripping volume \_\_\_\_\_

Beneficiation:

(12)

Principal product recovery in percent \_\_\_\_\_ PP

Associated product recovery, percent \_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

\_\_\_\_\_ AP

Beneficiation Method [c]

1. \_\_\_\_\_ % of ore handled \_\_\_\_\_ % Distr. of PP \_\_\_\_\_

2. \_\_\_\_\_ \_\_\_\_\_

3. \_\_\_\_\_ \_\_\_\_\_

4. \_\_\_\_\_ \_\_\_\_\_

Percent millfeed shipped as concentrates \_\_\_\_\_

Est. Plant Capacity / day \_\_\_\_\_ Est. Unit production cost \_\_\_\_\_

Est. Capital cost \_\_\_\_\_

Transportation: Stage [d] \_\_\_\_\_ shipped by [e] \_\_\_\_\_ distance \_\_\_\_\_

(13)

\_\_\_\_\_  
\_\_\_\_\_

Temple mtwy / (cont)

Fumerol	p. 33
camp bird # 17	p. 33, p. 38
Vanadium King #5	p. 33
camp bird # 19	p. 33
north nest 1, 2, 5	p. 33
camp bird # 12	p. 33
camp bird # 17	p. 33
Marchbank Incline	p. 38



# WILD HORSE

DELTA

P. 6, 14, 20, 30, 8

Dirty Devil Group.

P. 43



MARYSVALE Quail.

FARMER JOHN (Bullion monarch)

P. 7., 16, 17, 28, 40, 43  
45,

Prospector.

P. 7., 17, 28, 39, 43, 44, 46

Freedom #2 & 1

P. 7., 16, 29, 40, 43, 45  
46,

EAST SLOPE

P. 9., 18, 44

Prospector #4

P. 17

DARK HORSE

P. 18, 46

SATURDAY

P. 46

Sunnyside

P. 16

List of additional or minor minerals \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_ (7)

Methods of Exploration: (8)  
Method [a] Extent [b] Year of Work

	Method [a]	Extent [b]	Year of Work
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

MINING -- For both underground and surface mining (10 and/or 11)

Avg. Credibility, pgs. 10 and 11: \_\_\_\_\_ [c] In situ rock density \_\_\_\_\_

Swell Factor \_\_\_\_\_ % waste rock \_\_\_\_\_

Estimated Daily Mine Capacity \_\_\_\_\_ Avg. Grade \_\_\_\_\_

Est. Unit Production costs \_\_\_\_\_ Est. Capital cost \_\_\_\_\_

Est. Production period \_\_\_\_\_ Date of Estimates \_\_\_\_\_

Underground Mining: (10)

Mining method \_\_\_\_\_ [d] Rock Hardness & Water Conditions \_\_\_\_\_ [e]

Class of Rock Masses \_\_\_\_\_ [f] Support characteristics \_\_\_\_\_ [g]

Entry description (length or depth): \_\_\_\_\_ Type \_\_\_\_\_ °

Condition of workings \_\_\_\_\_ [h]

Total length, depth of shafts, adits, inclines, crosscuts, etc. \_\_\_\_\_



TOPAZ MTN.

Good Will Uranium mine.

Bell Hill mine.

Harrisite

P. 20

P. 20, 48

P. 48

		Average Grade				
		G <sub>1</sub>	G <sub>2</sub>	G <sub>3</sub>	G <sub>4</sub>	G <sub>5</sub>
Probability	P <sub>1</sub> 90%					
	P <sub>2</sub> 75%					
	P <sub>3</sub> 50%					
	P <sub>4</sub> 25%					
	P <sub>5</sub> 10%					

**Average Grades - Associated Products**

Product 1  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 2  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 3  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 4  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					

Product 5  
 Commodity     
 Class     
 Grade Units

P <sub>1</sub>					
P <sub>2</sub>					
P <sub>3</sub>					
P <sub>4</sub>					
P <sub>5</sub>					