

Dewey
White Swan

H.C. Carlisle papers, U. of Wyoming/Laramie
Report on Vanadium Mines.

1931

145, 4W
Sec. 26

Cutter, New Mexico

HISTORY AND LOCATION

The property consists of five (5) patented claims namely The White Swan, Dewey, Admiral, U.S.N. and Canary Bird (survey #1439) Situated in the Cabello Mt. Range, Pittsburg Mining District, Sierra Co. New Mexico in Sec. 26-25 and 35 T. 14 S. R. 4 W. A. T. and S.P.R.R. over an Auto road 14 miles distant- an Auto road also connects the property with Hot Springs- 24 miles distant.

The mine was originally owned by the Vanadium Mine Corporation. They spent a large amount of money- over a million dollars in the development of the property and in an attempt to treat the ores for which purpose they erected an acid plant at Cutter and a concentrating mill near the mine, but owing to lack of knowledge and experience in Metallurgy of Vanadic ores they could not save the values so they shut down, sold off and wrecked the machinery and buildings and left the country. This occurred in 1912. From that time until the present the mine has remained idle. The property came into the possession of the present owners in April of this year (1931) having obtained the title, deed and decree from the District Court of the County.

I have had their title examined by three New Mexico attorneys familiar with New Mexico Mining Law and Courts procedure. Their reports expresses their opinion that the title is good.

GEOLOGY AND ORE OCCURRENCE

The formation consists of a heavy bedded grey or blue upper Carboniferous limestone, with some intercalated shale. Much of the Limestone is Semi-crystalline and some of it contains black flinty or cherty nodules or inclusions. Resting rather unconformable on a bed of quartzite laid down on a medium grained reddish or brownish granite (age probably Cambrian). An exposure of upper Carboniferous Sandstone (Redbeds occurs about $\frac{1}{2}$ mile away).

The ore occurs in pipes chimneys and bedding planes along two well defined fault fractures. These two faults known as the east and west faults occupy horizontal 725 feet apart paralleling the mountain range striking N. 50°, 48°E. with a dip of about 30° toward the west, in a flour spar barate quartz gangue in calluar foliated and granular masses and as powder and detached crystals in caves and cavities some of immense size. 40% of this material will pass through a 40 mesh screen.. Lens of Caronite ore exposed showing a width of from 3" to 8" no attempt appears to have been made to explore the area occupied by this material beyond the limits of the side walls of drifts it was evidently not considered of any importance by the former owners. It however merits investigation.

MINERALS

The principal minerals in the order of their commercial importance are Endlichite, Carnotite, Vanadinite, Uraninite, Wulfenite, Galena, Cerussite, Copper and Manganese.

DEVELOPMENT WORK

Development consists of two, two compartment shafts. One the White Swan 500 ft. and the other (Dewey) 400 feet deep about 6500 ft. of lateral work in excess of 2000 ft. of raises and winzes in this preliminary examination no attempt has been made to ascertain exactly the amount of work done. It is only possible at the present time to explore the White Swan to a depth of 285 feet and the Dewey to a depth of 175. Some shaft timbers are broken out at the 300 foot level in White Swan Shaft and in the Dewey below the 100 foot level. The damage does not appear to be serious however. All the timber appears to be sound and in good shape and the ground solid with no evidence of caving. The damage to timbers appears to have resulted from the impact of large rocks hurled into shaft from off the levels.

All the working above the points mentioned in above paragraph are open and in good shape.

VALUE OF ORES

Only two samples were taken for analysis--

#1- a composite, sample reduced to assay size from 60 united cuts taken across ore bodies from 8 to 40 feet in width analysis by Abbot A. Hanks, San Francisco, California, gave Vanadium 1.48% Uranium oxide .19%

#2. High grade rock pieces representing such ore as can be easily hand picked and sorted representing considerable tonnage. Analysis by Columbia Chemical Works, Portland, Oregon, gave Vanadium 14% Uranium 4.85% Carnotite .35%. ?

As the principal mineral present appears to be Endlichite and as this is a Arsenical Vanadate containing if any but a small percentage of the Uranium content as indicated by analysis is in my opinion contained in the other Vanadates mentioned.

This is a very good ore for the production of Vanadic products. The treatment indicated is concentration at the mine ship the concentrates to a New Jersey plant there to be converted into a Lead Vanadate Sodium Matte all the valuable metals present then sold separated.

CONCLUSION

The mine is unquestionably a valuable property. It will be necessary to erect a new set of building head frames install hoisting machinery and repair broken timber in shaft. Work can then be resumed where the former owners left off. Erect a mill of proper capacity and design to treat the low grade ore of which there is broken and blocked out in mine in excess of 100,000 tons on the dumps. Water is available for all purposes. The question of power will be considered when a later and more complete examination and report is made July 1, 1931.

Respectfully submitted,

J. D. McDonald

THE CUSTOM ASSAY OFFICE
Critchett & Ferguson
105 S. Santa Fe. St.

El Paso, Texas, July 14, 1934.

This is to certify that the samples submitted to us
for assay by Mr. L. Chapman, Silver City, New Mexico, gave
the following results-

No	gold	Silver	lead	copper	silica	BaSO4	CaCO3	CaF2	WO3
1	trace	0.05	2.38	0.18	10.8	1.95	66.8	4.87	none

X Molybdenum V205

1	0.09	1.55	comp sample from white Suman 100 ft level						
2	0.14	3.67	same 200 sample from 100 ft level of Suman						
3	0.04	1.46	comp. sample from Suman 100 ft level						

Charges, \$20.00

Critchett & Ferguson

By: O. A. Critchett

Have checked this report
if correct sign right.
Shepley

ABBOT A. HANKS, INC.
ASSAYERS, CHEMISTS, ENGINEERS
ESTABLISHED 1866 — INCORPORATED 1924
624 SACRAMENTO STREET
SAN FRANCISCO

July 20, 1935

Mr. Cooper Shapley
Box #1
Deming, New Mexico

Dear Sir:

Complying with a request contained
in your letter of June 24th., we have made additional
determinations on the sample assayed for you last
May and have to advise you as follows:

Lab. No. 37703

Mark: Additional Analysis

Lead	67.10%
Copper	0.14
Phosphorus	None
Molybdenum	None
Uranium	None

63
20
1300
3
3900

40
20
60

Respectfully submitted

ABBOT A. HANKS INC.

Abbot A. Hanks.

AAH:VE

Vanadium Mines Co.

Cost Plant. 35 tons for dumps.

New 80 HP Diesel Eng. at Cullen. 3150.

Install " " 1000.

Ball Mill 700 + 500 Install 1200.

Line Slight and Pulleys 700.

Roof over plant 500.

Flotation Machinery 700.

Ore bin - coarse 500

Water tank 1000.

Installed Road repair 300.

Storage tank Ques. 300.

fine ore bin 500.

Conveyor belt 100.

Ret. elevator 250

Houses - Trunks 500.

Crusher 350

Supplies 500.

fuel oil. 500.

Reagents 400.

Branding House supplies 500.

Camp. Ins. deposits 100.

* 13050

if having grief. 4000.

Total. 17,000

Time restriction 2 months.



Scale 1:2500
Vanadium Mines Co
Eagle, New Mex.

Outcrop 800' N60E
Warren

Outcrop 2500'
Warren

400'
800'

750'

Blue limestone

800' DEWEY SHAFT
40' vert.

100' WHITE SWAN
SHAFT
500'

Dry creek.

Red limestone

500'

Well 111 to
900' to
1000' deep.

VANADIUM MINES CUTTER, N.M.

Estimated Profit on Dumps

Tonnage.	Dewey ore dump.	1100 tons	1.32 $\frac{1}{2}$ %
	Whiteswan " (small)	300 "	1.32 "
	" " (large)	1200 "	1.32 %
		<u>2600 "</u>	

Average 2600 tons @ 1.32 $\frac{1}{2}$ % $\frac{1}{2}$ 205.

Mill capacity 25 tons say 9.00 per ton.

Time operation 3 mo.

Crew 14 men cost 3000 per mo. for milling
and hauling to R.R. = 9000. = 3.50 ton.

Ratio conc. 12 to 1.

Costs. Mill \$ 3.50

Fgt. cost @ 20 2.50

Mill loss 10% 1.58

Prof. pay to R. 1.15 (1000 mo. 3 mo. then 500)

Cost \$ 8.73 per ton dump.

Value.

1.32 $\frac{1}{2}$ % $\frac{1}{2}$ 205 @ 60¢ pound = 15.84 ton

(= 264 lbs.)

15.84 - 8.73 = net 7.00 per ton dump

2600 x 7.00 = 18,000 op. profit on Dumps

2¢ gross 5.00 profit per ton or 13,000 total.

Pay back even on dumps.

Then 7000. expenditure to equip for
underground mining

VANADIUM MINE

Pro. + trunage in Mine

White Swan Shaft.

135 Level to Surface.

Av. Width $6\frac{1}{2} + 6 + 7\frac{1}{2} = 20 \div 3 = 6\frac{2}{3}'$

" length $100 + 82 + 90 = 272 \div 3 = 90'$

" Depth. 135'

$6\frac{2}{3} \times 90 \times 135 = 6500$

out in development. 1000

(Developed) left 5500 tons above 135 Lvl.

Pro 135 to 270 6500

" 270 " 405 6500

400 " 500 4500

Possible 23,000 tons

Duray Shaft.

width $4\frac{1}{2}'$ length 75' Depth 91'

$= 31712 \text{ cu ft} \div 12\frac{1}{2} \text{ less } 2,000 \text{ tons @ } 1.32\frac{1}{2}$

Pro. 91 to 400 8,000

Possible to 400. 10,000 tons @ "

Reas. Reas. sure

Possible to bottom shafts

Dumps 2600 tons

W. Swan 17,500 Tons

W.S. top. 5500 "

Duray 8,000 "

D. top. 2000 "

25,500. "

10,100 "

Total Reas. sure and Pro. = 35,000 tons.

VANADIUM MINE

Pos. Profit after Dumps.

Add mining cost * 3.50 to milling etc.

" prop. part $\frac{.50}{4.00}$ (of alt. 500 mo. part)

7.00 dump profit. Less 4.00 = \$3.00 ^{on} min. co

7500 tons res. dump

3

22500 less 7,000 cap. exp = 15,000
($\frac{1}{4}$ to Shipley $\frac{3}{4}$ to Cap.)

24 ore to bottom of shaft

25,000 tons more = 75,000 further profit.

75 + 15 = 90,000

22000 Shipley

68,000 to Cap.

Vanadium - Duty. No.
 No. of buyers.
 Amt. used.
 Main supply.

See purities. Paid C.
 1 boat or ~~total concentrate~~
 Dumps - And sampled & brought.
 Old report on property. No.

1 low sheet.
 Costy plant. Contract (?)
 Tests on treatment.
 Taylor offer. 2 hrs day
 Freight rates.

Price 65⁵⁰ - 5⁶⁰ lb. 1/205 w.v.
 Make cur for quotation E.M.T. Get purities.
 How much does E.M.T price differ from 1/100.

Power, Water, Ball mill, class. take & flat. creb.
 conditions, crusher, secondary crusher, tire. Drive w/pick.

Per ton.	1/100	1/100	1/100
300 (9000) 154	@ 50d	300 ⁺	150. per ton
" 360 (10800) "	@ 60	300 ⁺	180. " "
" 390 (11700) "	@ 65	300	195. " "

Dumps - 3000 tons = 300 days @ 30 tons.
 Contract deliver to mill - Port.