

# State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland, Oregon

## WILD DEER MANGANESE

REPORT BY: E.A. Youngberg

DATE: October 4, 1944

~~Lower~~

~~Upper~~ Applegate Area  
Josephine County

Name: Wild Deer Prospect; manganese.

Owner: Howard Griffith, Provoit, Oregon.

Location: Township 38 S., Range 5 W., Section 17, NE $\frac{1}{4}$ , about 1000 feet north of Griffith's cabin on Upper Powell Creek Road.

Area: Three lode claims.

History: No ore has been shipped from the mine. An option was held on the property until about 1943 during which time a road was practically completed to the deposit and some ore was broken for shipment, but was never moved.

Development: Road built from Powell Creek Road to outcrop a length of  $\frac{1}{4}$  mile. About 50 tons of ore from outcrop broken and piled for shipment.

Geology: Area: The terrain is steep, country rocks outcrop occasionally forming bluffs. The country rocks are meta-sedimentary and meta-volcanics.

Deposit: The manganese occurred as a secondary manganese oxide in a steep dipping, chert or quartzite bed. The bed outcrops intermittently over a length of about 500 feet; the bed is 8'-10' in width and stand up 10'-15' above adjacent terrain. The ore also contained a large amount of hematite which was hard to distinguish because of staining by manganese. The freshly broken ore coming from a pit about 8 feet deep showed small streaks of rhodonite. Mr. Griffith said an assay from a 1000 lbs. sample which was quartered down to 50 lbs. ran 55% combined manganese and iron of which 30-35 % was manganese. No samples were submitted for assay.

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WILD DEER (Iron)  
(see also Carpathia Mining Co.)

Lower Applegate area.

Owner: A.E. Hepburn, P.O. Box 453, Grants Pass, Oregon

Location: SE $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 17, T. 38S., R. 5W.

History: Winchell (14:235) reported as follows:

"The Carpathia Mining Comapny controls claims on the upper part of Powell creek which contain some low grade iron ore. The northeast corner of the Carpathia group is at a small reservoir on the creek at an elevation of 2000 feet as measured by barometer. The east end line runs S. 15° W.: the ore outcrops about a quarter mile from the northeast corner near the east center at an elevation of about 2500 feet. For the most part the outcrop is a ferruginous quartzite; in places this varies to a low grade iron ore. There has been no development work whatever done, and it is impossible to state what would result from such work, though the conditions warrant a limited amount of development. A sample of the iron-bearing quartzite from this locality gave the following results on analysis:

Composition of Ferruginous Quartzite from Powell Creek  
(S. W. French, analyst.)

Silica, SiO <sub>2</sub> .....	77.74
Ferric iron, Fe <sub>2</sub> O <sub>3</sub> .....	11.16
Ferrous iron, FeO.....	0.96
Other oxides.....	10.14

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100.00

By elimination of silica this rock may grade into iron ore. A gradation to low grade iron ore is known to occur at this locality; higher grade ore may exist here.

The following report was prepared by P. E. Hotz, of the U.S. Geological Survey for E. F. Burchard of the U.S.G.S. The report should be treated as confidential.

The Wild Deer Iron Deposit, Josephine Co., Oregon

"This report is based on an inspection trip to the Wild Deer Iron Deposit. The investigation was made by Stanley E. Good and Preston E. Hotz in the company of Mr. A. E. Hepburn, owner.

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Deposit: Wild Deer iron deposit

Location: SE $\frac{1}{4}$  NE $\frac{1}{4}$  sec. 17 T. 38 S. R. 5 W. WN., Grants Pass quad. angle.  
The deposit is located at an elevation of from approximately 2000 to 2300 feet in a small ravine on the north side of Powell Creek.

Accessibility: 20 miles from Grants Pass via Provolt over macadam-bound highway and good graveled roads. The last 2.0 miles is a fair mountain road.

Owner: Mr. A. E. Hepburn, P.O. Box 453, Grants Pass, Oregon

Discovered: by a Mr. Hudson of Grants Pass in 1937 or 1938.

Development: There has been a small amount of development. The work has consisted chiefly of blasting the weathered surface rock to expose fresh rock. One 25' x 12' x 4' trench has been cut across the ore zone at the upper end of the deposit. The deposit has been grab-sampled by Mr. Hepburn and by Kaiser Co. geologists.

Dharacter of ore: The ore occurs as fine-grained, steel gray hematite in bands from 1/8 of an inch to 1 inch wide alternating rythically with equally thick bands of dark gray to black, very fine-grained quartzite. In many places the rock is a bencia with quartzite filling fractures in the hematite. In some specimens the hematite bands show well developed gash fractures which are filled with dark gray to black quartz like that of the fine-grained quartzite.

Geology: The ore zone as exposed is approximately 700 feet long and about 20-30 feet wide on the average.

The quartzite bearing the hematite is a bed of irregular thickness striking N 30 W and dipping steeply to the east (70° or more). In places the bedding is vertical. At the lower end of the deposit the quartzite dips at a lower angle (20-30 degrees) to the east. The quartzite bed is bounded on the east and west by Triassic meta-volcanic rocks. In places a small amount of serpentine is found along the east contact. The contacts are faults along which the metavolcanics and serpentine are strongly sheared. In the small trench the shear zones are seen to dip steeply to the east.

The ore generally occupies but a portion of the quartzite bed which may be as much as twice the thickness of the hematite rich zone. The bed pinches and swells along its strike. At the lower end the ore zone is 30 to 40 feet wide. Uphill from there the hematite-bearing rock pinches out and what appears to be barren quartzite continues for 200 to 300 feet. Following this barren zone is a second lenticular body of ore 150 feet long and a maximum of 60 feet wide. The quartzite bed can be followed for at least 1000 feet beyond the last showing of iron formation but it seems to be practically barren of hematite.

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Origin: The distinct bedding observed in the ore is a strong indication of the sedimentary origin of the iron formation. Rhythmically bedded chert with ferruginous shale partings was deposited during an interval of quiescence in the volcanic history of the region. Diastrophism accompanied by relative movement between the volcanic and sedimentary rocks resulted in shearing of the less competent greenstone and brecciation of the brittle chert. More or less simultaneous metamorphism resulted in recrystallization, of the chert to quartzite and the ferruginous layers to hematite. The recrystallizing quartz, seeking positions of lower pressure, filled the fractures in the hematite.

Analysis: An average sample (100 lbs) of the ore which Mr. Hepburn had analyzed gave the following results:

Fe	35.75
SiO <sub>2</sub>	25.6
Mn	12.87
CaO	5.0
P	0.63
S	0.6
Ti	0.0

Reserves: The deposit needs further development before an accurate estimate of the reserve can be made. A possible 175,000 tons of ore is indicated assuming the ore zone to be 700 feet long, an average of 25 feet wide and having a mineable depth of 100 feet.

Remarks: Mr. Hepburn claims that geologists for the Henry J. Kaiser Co., Mr. John Tillia, chief geologist, and Mr. Severer, assistant geologist, visited the property, were favorably impressed, and took 5 samples. Hepburn also claims that Columbia steel is interested.

Mr. Hepburn is a member of the AIME, seems to be honest but rather too optimistic as to the size and value of the property. His feelings about the interest of the Kaiser Co. in the deposit is probably prejudiced.

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## WILD DEER MANGANESE

REPORT BY: E.A. Youngberg

DATE: October 4, 1944

Upper Applegate Area, Jack. Cty.

The visit was made at the request of Mr. Griffith, owner; asked to aid in determining which was best showing of manganese to do prospecting and development work on.

There is possibly 1000 tons of ore in sight on the exposed outcrop. The depth to which the ore would go could not be determined, but it appeared that the enriched surface oxide ores would turn to rhodonite at a very shallow depth, with a resultant decline in manganese content.

The tonnage of ore available is too small to be of any great importance. If the manganese content of the outcrop is of the grade indicated by Mr. Griffith, (which appears to be within reason), perhaps a 1000 tons would be of such grade as to be acceptable for stockpiling by the Metals Reserve Company at Grants Pass. The distance from Grants Pass is approximately 23 miles via Pro-volt.