

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

WILD DEER (iron)

Lower Applegate area

see also Carpathia Mining Company

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 Company 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 ₂	77.74
Ferric iron, Fe ₂ O ₃	11.16
Ferrous iron, FeO.....	0.96
Other oxides.....	10.14
	<hr/>
	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."

References: Winchell 14:235 (quoted)

XXXXXXXXXXXX
Grants Pass, Oregon

November 21, 1942

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. Hots in the company of Mr. A.E. Hepburn, owner.

DEPOSIT: Wild Deer iron deposit

LOCATION: SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 17, T 38 S, R 5 W, WM., Grants Pass quadrangle. 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'x12'x4' 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.

Character of ore: The ore occurs as fine-grained, steel gray hematite in bands from 1/8 of an inch to 1 inch wide alternating rhythmically with equally thick bands of dark gray to black, very fine-grained quartzite. In many places the rock is a breccia 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. *Rhodonite veinlets cut the ore in place.*

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 N30W 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 metavolcanic 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.

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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.

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 ~~involving~~ 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 ₂	25.6
Mn	12.87
CaO	5.0
P	0.63
S	0.6
Ti	0.0

~~XXXXXXXXXXXX~~

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.

Respectfully submitted 11-21-42

Preston E. Hotz
Junior Geologist

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION

RECORD NO..... M061537
 RECORD TYPE..... KIM
 COUNTRY/ORGANIZATION. USGS
 MAP CODE NO. OF REC..

REPORTER

NAME..... JOHNSON, MAUREEN G.
 UPDATED..... BI 04
 BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION

DEPOSIT NAME..... WILD DEER PROSPECT
 SYNONYM NAME..... CARPATHIA

MINING DISTRICT/AREA/SUBDIST. LOWER APPELATE

COUNTRY CODE..... US
 COUNTRY NAME: UNITED STATES

STATE CODE..... OR
 STATE NAME: OREGON

COUNTY..... JOSEPHINE
 DRAINAGE AREA..... 17100309 PACIFIC NORTHWEST
 PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
 LAND CLASSIFICATION..... 49

QUAD SCALE QUAD NO OR NAME
 1: 62500 GRANTS PASS

LATITUDE LONGITUDE
 42-16-12N 123-18-59W

UTM NORTHING UTM EASTING UTM ZONE NO
 4679600.0 473900.0 +10

TWP..... 38S
 RANGE..... 05W
 SECTION.. 17
 MERIDIAN. W.M.

COMMODITY INFORMATION

COMMODITIES PRESENT..... MN FE

CUMULATIVE PRODUCTION (UNITS IN 1000'S)

ITEM1:	ITEM2:	ITEM3:
AMT1:	AMT2:	AMT3:
UNIT1:	UNIT2:	UNIT3:
YEAR1:	YEAR2:	YEAR3:
ITEM4:	ITEM5:	ITEM6:
AMT4:	AMT5:	AMT6:
UNIT4:	UNIT5:	UNIT6:
YEAR4:	YEAR5:	YEAR6:

GENERAL COMMENTS:

REFERENCES:

APPLING, R.N., 1958, MANGANESE DEPOSITS OF SOUTHWESTERN OREGON;
USBM REPT. INV. 5369, P. 30

OREGON METAL MINES HANDBOOK, 1942, ODGMI BULL. 14-C, VOL. 2,
SEC. 1, P.210

RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES
OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100, 45P

SITE NAME: WILD DEER PROSPECT	COUNTY:	JOSEPHINE
SYNONYMS: CARPATHIA		
OWNER:		
LOCATION:		
MINING_DIS: LOWER APPLIGATE		
BLM_FS_DIS:		
QUAD1: GRANTS PASS	SCALE: 100000	TOWNSHIP: 038S
QUAD2: GRANTS PASS	SCALE: 62500	RANGE: 005W
RIVER BASIN: 17		SECTION: 17
PHYSIOG: 13 KLAMATH MOUNTAINS		SECT_FRACT:

USGS NUM: M061537	LAT: 42-16-12N
DOGAMI MLR:	LONG: 123-18-59W
REPORTER: JOHNSON, MAUREEN G.	UTM_N: 4679600
AFFILIATION: USGS	UTM_E: 473900
REP_DATE:	UTM_Z: +10
UPDATE BY: FERNS, MARK L.	ALTITUDE:
AFFILIATION: ODGMI	
UP DATE: 81 04	

YR_DISC:	STATUS: 2
PRODUCTION:NO	PRODUCTION SIZE:
COMMODITIES PRESENT: MN FE	
YR_1ST_PRO:	YR_LASTPRO:
COMMODITIES PRODUCED: MN	
ORE_MAT: MANGANESE OXIDES, RHODONITE, MAGNETITE, HEMATITE	
GANGUE: HEMATITE, MAGNETITE	
DEPOS_TYP: CHEMICAL SEDIMENT	