

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

RED HILL MANGANESE DEPOSIT

HARNEY COUNTY

This deposit was revisited July 15, 1942. A sketch map of the property was made and five samples were taken of the material containing manganese as follows:

- No. 1. High grade botryoidal float.
- No. 2. Fleat scraped from 1 square yard of surface on the south basin.
- No. 3. 6 feet of vertical sample weighing 40 pounds.
- No. 4. Banded veinlets of light weight manganese material in the white tuff.
- No. 5. 4 foot vertical sample weighing 30 pounds.

Analytical work on these samples gave the following results.

- No. 2. 14.7 pounds of material was scraped up from one square yard, thus giving 1.2 pounds to the square foot of material, weighing 28.5 grams.
- No. 3. Large portions of this sample were weighed and panned down carefully and the pannings of concentrate weighed. The material runs .5% concentrate.
- No. 5. The same treatment was given this sample which runs .26% concentrate.

Tonnage calculations of the float scattered over the surface at the deposit were made on the basis of No. 2 above, as follows:

North basin $150 \times 150 = 22500$ at 1.52 pounds per sq. ft. = $16\frac{1}{2}$ tons.

South basin $50 \times 50 = 25000$ at 1.52 pounds per sq. ft. = $1\frac{1}{2}$ tons.

Costs: Hauling 36 miles at 1¢ per pound = \$20.00 per ton

Total cost of ore at Seneca \$21.80, 5¢ per mile = \$1.80.

Visited: November 24, 1939
Nixon and Treasher

1. Name of property: RED HILL MANGANESE.
Operating company or individual: Being explored by Alma Davis for Senator Robert M. Duncan of Burns.
Location of property: About center of T. 20 S., R. 30 E. on a part of what is known locally as Red Hill. HARNEY CO.
Acreage of holdings: Group of new claims.
2. History of property: None.
3. History of production: No production.
4. Development: Two or three shallow pits and cuts.
5. No equipment. Topography: Hilly and rolling. Relief: 5000 feet.
Country rock: Altered tuffs, probably of rhyolitic variety for most part.
Elevation: Around 5,000 feet. Timber: None. Water: 2 or 3 local springs; Silvies River nearest permanent water. Climate and Snow fall: Same as at Burns. Foyer: None on property.
6. Geology -- general and local: Altered tuff, heavily iron-stained, apparently had some original manganese content. Manganese has been leached from the ore deposited in volcanic rocks of the area in nodular forms in the tuff. Weathering has eroded the tuff and concentrated the nodules in shallow washes and gulch bottoms. Evidence to support this contention is that of finding scattered manganese nodules on top of the low knolls. Nodules are all of botryoidal forms and of small size up to a maximum of 5 or 6 inches across. The mineral is probably psilomelane and wad--hydrated manganese oxide. Nodules as found on surface now are residual from weathering. No nodules were found in place nor were any found of amorphous massive structure or with thickness which might indicate a vein or deposit of commercial size. If manganese source material were sufficient in quantity, commercial deposits of manganese might be formed in basin or lagoon-like orebodies, but there is not encouragement for such a contention.
7. Metallurgy: Ore, if found in commercial quantities, would be manganese oxide, presumably of sufficient grade to justify direct shipment to a reduction plant.
8. Remarks: Probably not economic. We discouraged Senator Duncan from further exploration on the property.

Replaced by
Allen's Report.

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The following report was taken from page 61 bulletin #17--
Manganese in Oregon, State of Oregon Department of Geology
and Mineral Industries.

Harney County

(37)

RED HILL MANGANESE

Silvies Area

Owners: Lee Bryan, William and Robert Drinkwater.

Area: Property is on Drinkwater homestead entered in 1929.
Three unpatented lode claims and 11 claims have been
staked but not filed.

Location: On the south edge of sec. 8 and the north edge of
sec. 17, T. 20 S., R. 30 E.W.M.

History: Discovered in 1938 by Lee Bryan, Phil Smith, and
Alma Davis.

Development: Open cuts only.

Miscellaneous: Topography: rolling hills with mesa rim rock;
vegetation: sage brush, scrub juniper with
some pine timber half mile to the northeast of
the property. Water is available in the Silvies
River one mile to the west.

Geology: Red iron-stained tuff interbedded with white tuff
underlies rhyolite rim rock capping. The total thick-
ness of the red tuff is perhaps 50 feet and the rhyo-
lite rim rock is about the same. On the points of the Red Hill
where the rim rock has been completely eroded, high-grade
psilomelane (?) nodules have weathered out of the tuff to form
surface concentrations. They are from pinhead size up to a
maximum of 5 or 6 inches across the botryoidal and mamillary
structures. The tuff itself may contain from 2 - 5 percent of
these nodules, over an area five hundred feet square or more.

Geology: (continued)

Seams of manganese oxide are found at the base of the overlying rhyolite cap and suggest that the origin of the manganese is from mineralizing solutions which penetrated the tuff from below, and, due to the relatively impervious cap-rock, deposited their load in it.

Report by: Allen 6/8/41.