

*Powers  
Coos Co*

Name:

Iron Mountain Area Nickel Prospects

Owner:

The outline of areas under claims has not been determined. One reported claimant is R. J. Nielson, Bandon, Oregon.

Location:

42°40'14" N. Lat.; 124°8'46" W. Long.

The larger patch of soil lies in parts of 3 sections. The SW $\frac{1}{4}$  sec. 33, T. 33 S., R. 12 W.; NW corner Sec. 4, T. 34 S., R. 12 W.; and the NE $\frac{1}{4}$  of the NE $\frac{1}{4}$  sec. 5, T. 34 S., R. 12 W. Other small and apparently unimportant soil patches occur to the north in secs. 10, 15, 21 and 28, T. 33 S., R. 12 W (see map) in both Coos and Curry counties. Elevations are from about 658 to 1,174 meters. The area may be reached via the Powers-Agness road or the Elk River road. The distance from Powers is about 47 kilometers and the distance from U.S. 101 via the Elk River road is also about 47 kilometers. The closest electrical power is about 24 kilometers distance at Agness. Water is available nearby in Rock Creek or tributaries of Lobster Creek or Elk River. All of the soil areas but the one near the center of sec. 15 are accessible by roads.

Climate and vegetation: The average annual precipitation is about 165 centimeters which may

occur in part as snow during the period of November through February. Average temperature in summer is about 12° C and winter about 5° C. Vegetative cover is a mixture of brush and scrub pine trees. Very little commercial timber occurs on the ultramafic rock. It is usually in the form of sugar pine and Port Orford cedar with occasional Douglas fir, hemlock, and spruce. The surrounding land is used mainly for timber production. The working season is 9 or 10 months.

History:

Date of discovery is uncertain; but the area was examined by Appling in 1954 (Appling, 1955) p. 16). Development work has been minimal and includes a few shallow excavations, "discovery cuts" and reconnaissance auger sampling, including that done by Appling and the present writer. The present examination of the area was made July 29-31, 1975.

General Geology: The Iron Mountain area is underlain by a body of partly serpentized harzburgite about 2 kilometers wide and 7 kilometers long which strikes in a N. 20° E. direction. These ultramafic rocks appear to be in fault contact with surrounding slaty siltstones of the Upper Jurassic Galice Formation. The high point of Iron Mountain on the line of secs. 32 and 33, T. 33 S., R. 12 W., is underlain by a small body of gabbro which apparently intrudes the ultramafic rocks. A slightly larger body of quartz diorite is exposed on the south end in sec. 5, T. 34 S., R. 12 W. Small erosional remnants of fossil-bearing Tertiary marine sediments are exposed overlying the Galice Formation near the east side of the ultramafic body and an old coal prospect with some caved underground development is found by the road junction near the township line between secs. 33 and 4. Other prospects in the immediate area include a copper prospect just above the road in NE $\frac{1}{4}$  sec. 5, T. 34 S., R. 12 W., and a chromite occurrence in the SW $\frac{1}{4}$  of the NE $\frac{1}{4}$ , Sec. 33, T. 33 S., R. 12 W., known as Rock Creek Chromite (Ramp, 1961, p. 111).

The north end of the Iron Mountain ultramafic body is cut off by a NE-trending high angle fault mapped by Baldwin (1973). Landsliding is fairly common in the area and some lateritic soil occurs in a slide area in the NW $\frac{1}{4}$  sec. 15 and SW $\frac{1}{4}$  sec. 10, T. 33 S., R. 12 W.

The origin of Mud Lake, by the  $\frac{1}{4}$  corner of secs. 21 and 22, is undetermined; but it may have been the result of Pleistocene alpine glaciation or perhaps a combination of faulting and slumping..

Description of Deposits: The main area of lateritic soil development is on the southeast slope of Iron Mountain in the SW $\frac{1}{4}$  sec. 33; the NW Corner sec. 4, and the NE $\frac{1}{4}$  sec. 5 as described above. The soil appears to be generally thin and rocky. The depth of soil varies from  $\frac{1}{2}$  meter to an estimated maximum of about 6 meters and should average about 2 meters. The estimated average rock content in the soil to this depth is about 70 percent. The main area (two patches) is about 30 hectares and will average about 200 meters wide and 1,500 meters long. A small area of very rocky soil, about 3 hectares, is situated in the S $\frac{1}{2}$  sec. 28 and two small bench areas of about 4 hectares each are near the section line of 21 and 28. The area just south of the center of sec. 15 (seen only from a distance and by aerial photos) also appears to be quite rocky and to contain at least 4 hectares. The slide area in the NW $\frac{1}{4}$  sec. 15 and extending into sec. 10 appears to have other than ultramafic rocks intermixed and is estimated to contain at least 7 hectares of poor quality, very rocky lateritic soil.

Tonnage and grade estimates: The main area gross tonnage of rock and soil is estimated to be about 1,140,000 tonnes (1.9 m.t./cu.m.). Net tonnage of soil and saprolite minus the 70 percent rock is estimated to be about 288,360 tonnes. By including the three other small bench deposits in sec. 28 one could add an estimated 418,000 gross tonnes of rock and soil and 70,488 net tonnes of soil and saprolite (80 percent rock) to the total. An average of 7 samples of soil and saprolite from the main area gives 0.76 percent Ni, 0.07 Co, 30 percent Fe, and 1.<sup>74</sup>~~46~~ percent Cr.

The calculated average grade of gross tonnage rock and soil is 0.37 percent Ni and 0.03 percent Co, 0.53 percent Cr, and 11.17 percent Fe. (Using average values of 0.25 percent Ni and 0.016 percent Co, 0.25 percent Cr and 5.84 percent Fe in harzburgite).

- References: Appling, R. N., A reconnaissance of Nickel Deposits of southwest Oregon and northwest California. An open file report 1955.
- Baldwin, E. m., and others, Geology and Mineral Resources of Coos County, State of Oregon Dept. Geol. and Min. Indus. Bull 80, 1973; p.61-62 and geologic map)
- Ramp, Len, Chromite in Southwestern Oregon, Oregon Dept. of Geol. and Min. Indus. Bull 52, 1961.

Report by: Len Ramp 11-6-75