

## RECORD IDENTIFICATION

RECORD NO..... M015598  
 RECORD TYPE..... X1B  
 COUNTRY/ORGANIZATION. USGS  
 DEPOSIT NO..... DDGM1 93-91  
 MAP CODE NO. OF REC..

## REPORTER

NAME..... BRADLEY, ROBIN; WALKER, GEORGE W.  
 DATE..... 79 03  
 UPDATED..... 81 04  
 BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

## NAME AND LOCATION

DEPOSIT NAME..... SMITH RIVER

COUNTRY CODE..... JS  
 COUNTRY NAME: UNITED STATES

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

COUNTY..... CURRY  
 DRAINAGE AREA..... 18010101 CALIFORNIA  
 PHYSIOGRAPHIC PRDV..... 13 KLAMATH MOUNTAINS  
 LAND CLASSIFICATION..... 41

QUAD SCALE            QUAD NO OR NAME  
 1: 62500            CHETCO PEAK ( 1954 )

LATITUDE            LONGITUDE  
 42-00-53N            123-58-36W

UTM NORTHING        UTM EASTING        UTM ZONE NO  
 4651650.            419125.            +10

TWP..... 041S  
 RANGE..... 011W  
 SECTION.. 03 04 09 10 11 14  
 MERIDIAN. WILLAMETTE

## COMMODITY INFORMATION

COMMODITIES PRESENT..... I    CD    CR    LAT

MAIN COMMOD..... NI  
 MINOR COMMOD..... CR    CD

EXPLORATION AND DEVELOPMENT  
STATUS OF EXPLOR. OR DEV. 2

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:  
LATERITES  
FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA  
SIZE OF DEPOSIT..... SMALL  
MAX THICKNESS..... 20 FT

COMMENTS(DESCRIPTION OF DEPOSIT):  
AVERAGE ROCK CONTENT OF SOIL ABOUT 40 %

PRODUCTION  
UNDETERMINED

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... JUR  
HOST ROCK TYPES..... LATERITES  
IGNEOUS ROCK TYPES..... SMALL DIABASE DIKES AND YOUNGER RHYOLITE OR DACITE PORPHYRY DIKES

LOCAL GEOLOGY

NAMES/AGE OF FORMATIONS, UNITS, OR ROCK TYPES  
1) NAME: JOSEPHINE PERIDOTITE  
AGE: JUR

SIGNIFICANT LOCAL STRUCTURES:  
SHEAR ZONE

SIGNIFICANT ALTERATION:  
SYNCLINE STRUCTURE, SERPENTINE

COMMENTS (GEOLOGY AND MINERALOGY):  
AREA LIES ON SYNCLINAL NOSE OF THRUST SHEET OF ULTRAMAFIC ROCK OVER OOTHAN FORMATION MARINE SEDIMENTS.  
ULTRAMAFICS CONSIST OF HARZBURGITE.

GENERAL COMMENTS

EXPLORATION HAS CONSISTED OF AERIAL PHOTO RECONNAISSANCE MAPPING USING 1973 COLOR INFRARED PHOTOGRAPHS, SURFACE RECONNAISSANCE MAPPING, AND HAND AUGER SAMPLING.

GENERAL REFERENCES

- 1) RAMP, LEN, 1978 , INVESTIGATIONS OF NICKEL IN OREGON: ODGMI MISC. PAPER NO. 20 , P. 39 - 40
- 2) RAMP, L. AND OTHERS, 1977, GEOLOGY, MINERAL RESOURCES AND ROCK MATERIAL OF CURRY COUNTY, OREGON; ODGMI BULL. 93

*Chater*  
Name: Smith River Area Laterite

Ownership: No claims were present on the area examined north of Cedar Creek.

The Pine Flat deposit is owned by Hanna Mining Company.

Location: Sections 3, 10 and 15, T. 41 S., R. 11 W., between 442 and 760 meters elevation. The area may be reached by the Wimer road and Sourdough mine road to Sourdough Forest Camp on North Fork Smith River; then by trail which fords the river just above the mouth of Baldface Creek. An alternate route is by a logging road which ends about  $1\frac{1}{2}$  kilometers north of the area. This road is an extension of the road up Winchuck River and goes around the north side of Packsaddle Mountain. Another alternate route is via the Wimer Road to Pine Flat Mountain nickel deposit; then north on an unimproved bulldozer trail which ends near the center of sec. 15. The distance from U.S. Hwy 101 on the coast via Winchuck road is about 34 kilometers and from U. S. 199 at O'Brien on U.S. 199 is about 42 kilometers. The distance to electrical power is about 20 kilometers and adequate water is near by.

Geology: The area lies on the <sup>synclinal</sup> nose of a thrust sheet of ultramafic rock over Dothan Formation <sup>marine sediments</sup>. Ultramafics consist of peridotite (harzburgite) that varies from fresh, unaltered rock to complete serpentization. The serpentinite is more or less sheared and devoid of soil cover. A number of small dikes are found intruding the ultramafics. The most common variety appears to be diabase. A few younger rhyolite or dacite porphyry dikes are present and also intrude the Dothan Formation as at Fall Creek and on North Fork Smith River, near the south edge of sec. 2.

Area: Four small patches of lateritic soil in sec. 10; the SE $\frac{1}{4}$  sec. 3, and extending southward into the NE $\frac{1}{4}$  sec. 15, all north of Cedar Creek. Aggregate about 48 hectares. About 20 hectares of what appears to be mostly thin soil cover extends northward a short distance into Curry County, Oregon from the Pine Flat Mountain deposit of Del Norte County, Calif.

Description of deposits: The deposits north of Cedar Creek are for the most part quite thin residual patches of soil overlying peridotite. The deposits on the ridge appear to be weathered in place. Those on the flanks and benches down slope from the ridge appear to be at least in part transported material. Slumping or sliding has apparently occurred in the area of the two small patches to the northeast. The long narrow patch should possibly not be mapped as a continuous body since it appears to consist of a series of small benches on the southwest side of the ridge that are separated by steep rocky areas with very little soil. The best looking of the northern areas is the <sup>25-acre</sup> (10-hectare) body in the east  $\frac{1}{4}$  of sec. 10 in the vicinity of sample #4 where the soil may well be about 4 meters deep in the central part of the area. It is estimated, however, that there is about 70 percent rock mixed with the soil. The grade of the soil (nickel content) in the area is disappointing. Deep~~er~~ samples may show a slightly higher nickel content.

Depth: Maximum depth of the four small patches north of Cedar Creek is probably no more than 6 meters. Estimated average depth over the 48 hectares is about 2 meters. The portion of the Pine Flat Mountain deposit which extends into Oregon is probably no more than 5 meters deep and the average depth of the 20 hectare area in Oregon is estimated to be about 2 meters.

Soil-rock ratio: Visual estimation of soil to rock in the four patches north of Cedar Creek range from 45 to 90 percent rock and will average about 70 percent. The Pine Flat deposit extension was not visited.

Tonnage estimations: Gross tonnage (rock and soil) in the patches north of Cedar Creek, based on 1.9 mt/cu m = 1,824,000 metric tons. Net tonnage for the areas north of Cedar Creek (excluding 70 percent rock) = about 547,000 metric tons of lateritic soil and saprolite. The northern extension of Pine Flat deposits in Oregon may contain 760,000 metric tons of rock and soil and if the material contains 60 percent rock the net tonnage would be 304,000 metric tons of soil and saprolite.

Grade: Weighted averages of assays of 6 hand-auger samples of soil taken in the patches north of Cedar Creek is 0.73 percent Ni, 0.07 percent Co and 1.76 percent Cr<sub>2</sub>O<sub>3</sub>.  
(Assays below by both Department and USBM Laboratory, Albany)

<u>Map No.</u>	<u>Assay No.</u>	<u>Depth</u>	<u>%Ni</u>	<u>%Co</u>	<u>%Cr<sub>2</sub>O<sub>3</sub></u>
1.	AJG-105	3.2 ft.	0.52	---	---
2.	" -106	3.5 ft.	0.62	0.03	.67
3.	" -107	6.0 ft.	0.83	0.05	1.99
4.	" -108	8.0 ft.	0.66	0.12	---
5.	" -109	7.1 ft.	0.90	0.05	1.53
6.	" -110	5.5 ft.	0.72	0.06	2.48
7.	U.S. F.S. assay	grab	0.53	0.07	---

Assays published in USBM R. I. #6206 (W. T. Benson, 1963) indicate that the northern portion of the Pine Flat Mountain deposit soil and saprolite contains about 1 percent Ni, .08 percent Co and 1.16 percent Cr<sub>2</sub>O<sub>3</sub>.

Grade of the gross tonnage north of Cedar Creek is estimated to be about 0.42 percent Ni.

Grade of the gross tonnage in the northern (Oregon extension) of the Pine Flat Mountain deposit is guesstimated to be about 0.50 percent Ni; but the basis for this estimation is lacking.

Total Gross = 3,584,000 @ 0.44% Ni  
 " Net = 851,000 @ 0.83% Ni

References:

- Benson, W. T., 1963, Pine Flat and Diamond Flat nickel-bearing laterite deposits, Del Norte County, Calif. U.S. Bu. Mines R. I. 6206
- Cater, F. W. Jr., and Wells, F. G., 1953, Geology and Mineral Resources of the Gasquet quadrangle, California - Oregon, U. S. Geol. Survey Bull. 995-C.
- Hotz, P. E., 1964, Nickeliferous laterites in southwestern Oregon and northwestern California, Econ. Geol. vol. 59, No. 3, p. 355-396.
- Wells, F. G., Hotz, P. E., and Cater, F. W., Jr., Preliminary description of the geology of the Kerby quadrangle, Oregon, Ore. Dept. Geol. and Mineral Indus. Bull. 40.

Report by: Len Ramp 10-17-75

Telephone 363-3302

Hand Sample Serial 23288

ASSAY REPORT  
**UNION ASSAY OFFICE, Inc.**

Mine US Forest Service  
PO Box 520  
Medford, OR

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RESULTS PER TON OF 2000 POUNDS  
**Dec 9, 1977**

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. Per Ton	LEAD Per Cent	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
										Ni	Co
										0.534	0.066

Remarks P.O. #40-04N7-3-122

Charges \$ 24.00

