REPORT ON EIGHT DOLLAR MOUNTAIN AREA

JOSEPHINE COUNTY, OREGON

By

H. T. Schassberger
and
Fred H. Brooks

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INTRODUCTION

The Eight Dollar Mt. nickeliferous laterite was brought to the Company's attention in January, 1953 by Mr. D. L. Evans. Under Company authorization Mr. Evans examined the area in February and March, 1953. Concurrent with this examination and under the supervision of Mr. F. H. Brooks, Assistant Chief Engineer at Climax, 16 standard mining claims were staked on Eight Dollar Mt, and 4 on Free-and-Easy Mt. The claims on Eight Dollar Mt. comprise the Ferro group and those on Free-and-Easy Mt. comprise the alloy group. Mr. Evans sampled some of the location pits and submitted a report on the property on March 10, 1953.

As part of the program of evaluating the possible worth of other laterite areas in southern Oregon and northern California (see report), the Company claims in the Eight Dollar Mt. area were re-examined by the authors in July, 1953. The claims were remapped with the intent of delimiting the maximum area that could possibly be underlain by laterite of commercial grade and depth. Pits that were not completed at the time of Mr. Evans' examination were mapped and samples and all other pits were examined. A topographic map of the claim area was constructed by Brunton and pace methods. Other favorable areas on Eight Dollar Mt. were examined and samples cut from a small area of laterite discovered on the west shoulder of the mountain. The location pits on the Alloy group of claims on adjacent Free-and-Easy Mountain were similarly mapped and sampled.

General Considerations:

The Eight Dollar Mt. area is located in Josephine County, Oregon, approximately 23 miles by road southwest of Grants Pass (see fig. 1). Eight Dollar Mt. is a rounded summit that rises approximately 2,400 ft. above the surrounding river valleys and lies about 2½ miles southwest of the hamlet of Selma (see fig. 2).

The Ferro group lies on the southeast flank of the mountain in section 21 and 28, T. 38 S. Altitudes range from about 1,600 ft. on the lower claim to about 3,100 ft. on the upper claims. The 4 claims of the Alloy group lie on the west slope of Free-and-Easy Mt. approximately 2 miles southwest of the Ferro group.

Mr. Evans, in his report of March 10, 1953, ably covered the subject of access to the properties and the availability of power, fuel, water, and labor. However, one subject not mentioned is the rainy season experienced by this area during the winter months. From December through March, heavy rains turn soil areas into sticky gumbo. Travel on any but hard surfaced roads is impractical. Lumber operators in the vicinity make no attempt to cut timber during this part of the year.

GEOLOGY

Nickeliferous laterites of economic grade are found in New Caledonia, Cuba, and at Riddle, Oregon. These deposits are all similar in that they were formed by the decomposition of peridotite under conditions favoring the concentration of the contained nickel in the resultant soil. Evans, in his

report of March 10, 1953, gives a brief summary of the nickeliferous laterites in New Caledonia and the Nickel Mt. deposit at Riddle, Oregon. U.S.G.S. Bulletin 931-I, by Pecora and Hobbs is the best available description of the nickel deposit at Riddle.

Since the Riddle deposit is only ____ miles north of the Company's claims, a brief description of the typical laterite section, as described by Pecora and Hobbs, will be given. Typically, the top 2 to 3 ft. of the laterite section consists of brick red soil with pellets of iron oxide and chromite. This red soil grades downward into ochre soil with quartz-garnierite boxwork and residual boulders of incompletely rotted peridotite. The thickness of the boxwork zone is variable but it is locally known to be as thick as 100 ft. Below the boxwork layer is the root zone in which prongs of peridotite bedrock project irregularly upward into the boxwork zone. Where the laterite has been cut by erosion; lithologic types of the three zones as described, occur mixed, e.g., boxwork quartz float occurring in the top zone of red soil. Briefly stated according to Pecora and Hobbs, the nickel was derived from the peridotite during laterite weathering in late Tertiary time. This process formed limonite soil and nickel-poor garnierite. Weathering under recent climatic conditions has formed a boxwork of quartz and produced an enrichment of the garnierite.

Rock Types:

Eight Dollar Mt. and adjacent Free-and-Easy Mt., lie in the eastern part of a large north-northeast trending peridotite mass. To the east, sediments and flows of the Jurassic Galice formation constitute bedrock. The contact between the Galice and the peridotite lies along the west base of both Eight Dollar and Free-and-Easy Mts.

General Description of Laterite on Ferro Claims:

Bright red soil, with various amounts of fresh to rotted peridotite boulders and leached boxwork quartz covers a bench on the southeast slope of Eight Dollar Mt. The distribution of soil, boulders, and boxwork quartz float is erratic. As a whole, the red-soil area is bounded on the northwest by outcrop and talus, on the southwest by outcrop, and on the southeast and northeast by red and brown soil known to be thin. For convenience of reference, the ground covered by the Ferro group of claims has been divided into two areas, "A" and "B" (see fig. 3).

Basis of Delineation of Areas "A" and "B":

The two areas, "A" and "B" shown outlined on the map of the Ferro claims, represent areas which we think contain soil cover at least 10 feet thick. Information obtained by float mapping and examination of pits was used in conjunction with interpretation of topography to soil relations to delineate these areas. Although surface indications as to depth of soil are often misleading, as is shown by some pits, we feel that the areas as outlined are at a maximum. Further shaft sinking or drilling, would in our opinion, result only in a decrease of each of the areas outlined.

Area "A":

Area "A" is delimited on the southwest and northwest sides by outcrop of peridotite. Climax location pits on Ferro No. 15, 14, and 18, all encountered bedrock under 1 to 5 ft. of soil and the creek to the southwest

of these pits has cut through the laterite zone. Bedrock in these pits coupled with the fact that red soil along the creek bank represents only thin wash pretty well limits area "A" along the northeast side. Although float boxwork quartz is plentiful southeast of contour 1,500 (see fig. 3), the float pattern indicates that boxwork quartz in place cannot be expected southeast of this point. At the 1500 ft. contour there is a sharp change from small fragments of boxwork quartz float on the southeast to large pieces of quartz float on the northwest. This change in character of the boxwork float also corresponds with a change in slope of the terrain (see Sec. A-A).

That a zone of boxwork quartz can be expected to underlie at least the southwest side of area "A" is indicated by quartz in place in two pits and by boxwork quartz bedrock and "near bedrock" float along this side. Boxwork quartz forms approximately 40 to 60 percent of the walls in the pit on contour 1600. The remainder of the rock is peridotite seemingly in place. This pit is evidently near the base of the boxwork zone, or, as described by Pecora and Hobbs, in the root zone. The old Freeport location pit on Ferro No. 14 has boxwork float in the upper two feet of soil, and in the lower 4 ft. of the pit thin quartz ribs cut through the ochre soil. Boxwork quartz in place is also exposed by a pit between contours 2500 and 2600 just southwest of Ferro No. 15. To the west of this pit, the slope drops off abruptly and peridotite bedrock is exposed. Between this pit and the pit on contour 1600, large boxwork quartz float fragments are common. The large fragments of boxwork quartz float are reached as is the quartz where exposed in the above mentioned pits. Samples cut in these pits were low in nickel content.

The fact that the creek along the northeast side of area "A" has cut through the laterite and because bedrock is found along the northwest side indicates that no great thickness of soil can be expected under area "A". Most optomistically the soil area can be imagined as a slightly concave-downward body with a possible maximum local thickness of 50 to 75 ft. However, an average depth of 15 ft. is more probable for area "A" with the possibility that the average depth may be as much as 35 ft.

Area "B":

On the west side, area "B" is delimited by peridotite outcrop and heavy slide rock. Bedrock was reached by the Freeport location pit on Ferro No. 6, and the Climax location pit on Ferro No. 6 contains a large percentage of boulders near the bottom. A steep rise in slope to the northwest precludes any possibility of deep soil in this direction. Location pits on Ferro Nos. 12, 8, and 5, that encountered peridotite bedrock limit area "B" on the east side. Thinness of soil southwest of the Climax location pits on Ferro No. 3 and 4 limit area "B" on this side. On the northeast side, the soil area ends in a region deeply cut by stream action.

Boxwork quartz float is abundant only on Ferro No. 4 and 5, and on the southwest portion of Ferro No. 9. No quartz float was observed in that part of area "B" northeast of the creek, that cuts the area approximately in two. Also, no quartz either in place or as float was observed on any of the pit walls in this area. As a result, it is to be expected that only that portion of area "B" southwest of the creek may be underlain by a zone of boxwork

quartz. A 15-ft. shaft sunk by Freeport on Ferro No. 7, although appearing to be in soil all the way has, according to the dump material, a very high boulder content near the bottom. In fact, the rock on top of the dump is quite fresh and is probably bedrock.

As a mean average, based on topography and on depth of shafts sunk on Ferro No. 7 and 11, it is probable that area "B" has an average depth of 15 feet with a slight possibility that this may be as much as 35 feet.

Alloy Claims on Free-and-Easy Mt.:

A small red soil area on the east slope of Free-and-Easy Mt. constitutes the Company's alloy group of claims (see fig. 4). Boxwork quartz occurs only sparsely from the location pit on Alloy No. 4 southwestward to just past the location pit on Alloy No. 3. Red pelletized soil is widespread but much of it is very thin. The location pit on Alloy No. 4 went through 4 feet of soil and then hit serpentinized bedrock. At the northwest corner of Alloy No. 4, bedrock is exposed in the creek bank under 1 ft. of red soil. The soil is very thin along the dry creek bottom that flanks the north side of the claims and although the location pit on Alloy No. 1 was in soil all the way, the boulder content increased markedly toward the bottom of the hole so as to suggest bedrock. A shaft on Alloy No. 4 carried to a depth of approximately 25 ft. by Freeport, may possibly be in soil all the way. No means were available for getting lower in the shaft than 6 ft. from the collar. However, the top material on the dump is all rock and the bottom of the shaft, as seen from above, consists largely of boulders or slightly rotted bedrock. No boxwork quartz was found on the dump of this shaft.

It is anticipated that the average thickness of laterite as outlined on the Alloy Group will be 15 ft. with a possibility that it may be as thick as 35 ft.

POSSIBLE TONNAGE AND GRADE OF LATERITE

Although the thickness of nickeliferous laterite is not determinable with surety without drilling or shaft work, it is our opinion that a minimum average thickness of 15 ft. and a maximum average thickness of 35 ft. will bracket the actual depth of laterite to be found. A ton factor of 20 cu. ft. per ton, determined by Freeport in their work, was used to compute the following tonnages. Areas were determined by planimeter from the 500-scale maps and converted to tons per foot of depth.

Area	Tons per Foot of Depth	Tons	
		15 ft. Depth	35 ft. Depth
Ferro "A"	120,500	1,807,500	4,217,500
Ferro "B"	232,000	3,480,000	8,120,000
Alloy Group	69,000	1,035,000	2,415,000
	Totals	6,322,500	14,752,500

Thus a minimum of approximately 5,300,000 tons and a maximum of approximately 12,340,000 tons is indicated for the Ferro Group. From sample data gathered

to date, indications are that this material could possibly be expected to contain about 1 percent of nickel. Although higher grade at depth is indicated in some of the old Freeport assays, it is highly improbable that an overall content of 1.5 percent of nickel, the grade reported at M. A. Hanna's property at Nickel Mt., could be expected. The highest assay we have on record from the Ferro Group ran 1.37 percent of nickel.

Tonnage to be expected from the Alloy group, on Free-and-Easy Mt., would be between a 1,000,000 ton minimum and a 2,415,000 ton maximum. The grade to be expected would again be approximately 1.0 percent of nickel. This estimate of grade is again based on near surface sampling.

In regard to estimated grade in the case of both the Ferro and Alloy group, a few points relative to nickel content of garnierite might be mentioned. Of prime interest is the fact that an average of assays made of picked garnierite samples from Nickel Mt. came out to approximately 16 percent of nickel. Hence to obtain a grade of 2 percent of nickel in the enriched zone, which would be necessary to raise the overall grade to 1.5 percent, 11 percent of the total material in this zone must be garnierite. No evidence has been found in any of the pits or shafts to substantiate the presence of such an amount of garnierite, even locally.

MINING

Open pit excavation of the soil zones and quarrying the garnierite quartz zone, when encountered, would be the normal method of extracting the ore. This would be, of necessity, a seasonal operation for the most part the soil, when wet, would be impractical to handle.

The highly irregular subsurface would not lend itself to long range open pit planning without costly close drilling.

CONCLUSIONS

The Company claims on Eight Dollar Mt., the Ferro Group, may supply from 5,300,000 tons to 12,340,000 tons of nickeliferous laterite with an average grade of 1 percent of nickel. More probably the lower tonnage is the best estimate. To this possible tonnage can be added an estimated 1,000,000 to 2,415,000 tons of similar grade material from the Alloy Group on adjacent Free-and-Easy Mt. Adding the tonnage from these two groups of claims results in a minimum estimated tonnage of approximately 6,300,000 tons and a maximum tonnage of about 14,755,000 tons of material with a nickel content of approximately 1 percent.

On the assumption that 1.5 percent of contained nickel is necessary to constitute ore, and that the minimum tonnage required to set up an operation would be above the maximum estimated tonnage given above, then the Ferro and Alloy Group of claims are of no further interest. However, should it be possible to beneficiate economically silicate ore of slightly lower grade, then these claims would constitute a sizable reserve combined with several small areas of laterite on Woodcock Mt. and Rough-and-Ready Mt. to the south (see general report on laterite areas).

Recommendations:

If, in light of the above conclusions, the property is still of interest to the Company, there are two major undertakings. First, the metallurgy of lower grade recovery is to be solved and second, as prerequisite to mining, the property should be systematically drilled.

Fred H. Brooks

Herman T. Schassberger

PRELIMINARY REPORT ON OREGON-CALIFORNIA RED SOIL AREAS OTHER THAN COMPANY CLAIMS IN EIGHT DOLLAR MOUNTAIN AREA

By

Fred H. Brooks

and

Herman T. Schassberger

August 24, 1953

A reconnaissance of possible nickeliferous laterite areas in northwestern California and southwestern Oregon was made in July 1953. The purpose of this investigation was to determine whether or not there were any laterite areas in this region comparable to or better than the Company's property in the Eight Dollar Mt. area, Josephine County, Oregon. Five of these areas were suggested by Dr. Wells of the U. S. Geological Survey, one was suggested by Mr. Evans, and the others were picked in the field.

None of the areas examined during this investigation (see fig. 1) approach even the limited possibilities of the Eight Dollar property. Only three of the areas showed boxwork quartz, typical of the enriched zones of lateritic nickel deposits. They are the Woodcock Mt. deposit, the Rough-and Ready deposit, and the Low Plateau deposit. None of these, however, is large enough to be of commercial interest by itself, and only the former two would be of further interest should economic conditions make the Eight Dollar Mt. deposit commercial.

Since the nickeliferous laterites are confined to areas underlain by peridotite and closely related to a period of peneplanation in Miocene time, our investigation was confined to areas where these two loci were present. Besides the areas circled on the map, much country was checked in traveling to the various localities, and by inquiry of Forest Service personnel many areas were safely eliminated as not worthy of checking.

Because the areas investigated, with the exception of the Rough-and Ready and the Woodcock Mt. area, are of no further interest, only these two will be described at this time. As soon as possible, a report complete with maps, on all the areas will be prepared for filing.

Rough-and-Ready Area:

A northeast trending flat-topped mountain about 3 miles west of O'Brien Oregon (see fig. 7), has been termed by us Rough-and-Ready Mt. Access to the northeast base of the mountain is gained over 3.6 miles of dirt road from O'Brien. Rough-and-Ready Creek skirts the north side of the mountain and flows eastward into the Illinois River.

Brick-red soil covers much of the flat land northwest of O'Brien and the east slope and northern top of Rough-and-Ready Mt. However the material along the side slopes of the mountain is only thin wash, and the thickness of the soil in the flat land, at the base of the mountain is highly problematical. On the relatively flat part of the mountain, near the northern end occur two areas of bright red soil, one with boxwork quartz float as found on the Eight Dollar Mt. deposit. The southern of these two areas has an average width of 600 ft. and is about 2,000 ft. long in a northeasterly direction. Bright brick-red soil with varying amounts of peridotite boulders is characteristic. Boxwork quartz float occurs in the southern part of this area but although occasional fragments 2 ft. across were observed, the quartz float is nowhere plentiful. About 1,000 ft. to the northeast is a roughly circular area, approximately 1,000 ft. in diameter, covered by red soil. The boulder concentration is here probably less than 25% on the surface, but no boxwork quartz

was observed. Samples of these two soil areas from just under the surface ran approximately the same as similar samples from the Eight Dollar claims.

Woodcock Mt.:

Woodcock Mt. lies about 3 miles southwest of Cave Junction, Oregon (see fig. 1). The top of Woodcock Mt. is accessible by 5 miles of secondary road that comes into U. S. 199 4 miles north of O'Brien. All but the first 0.3 miles is dirt road, that on the mountain slope rather rough.

The Woodcock nickeliferous laterite has been known for some time. The Oregon Department of Geology and Mineral Industries did some reconnaissance work on the deposit in 1947 and in 1948, using hand augers, drilled the deposit. Seven of the holes averaged over 1 percent nickel with depths of from 5 to 15 ft. M. A. Hanna had claims on the area in 1950 but according to the best available information these were dropped. It is not known if any work, other than location work, was done by Hanna on the Woodcock deposit.

Drill hole data obtained by the Department and subsequent bulldozer cuts, probably put in by Hanna, indicate that the laterite is thin. The presence of a quartz boxwork zone of enrichment is, however, shown by the abundance of leached boxwork quartz float over much of the area and by quartz in place exposed in one pit. Samples cut from this pit all assayed over 1 percent of nickel. However, from all appearances this quartz zone is not very thick and is probably not too extensive. Much of the quartz float on the side slope of the mountain has been transported a long distance.

Conclusions and Recommendations:

If the Ferro and Alloy groups become commercial, then the Rough-and-Ready and the Woodcock Mt. deposits should be acquired. Although small in tonnage, these two deposits because of their proximity to the Eight Dollar area, would be able to furnish additional tonnage of approximately 1 percent material.

Fred H. Brooks

Herman T. Schassberger

REPORT ON CALIFORNIA-OREGON NICKEL INVESTIGATION

AREAS OTHER THAN EIGHT DOLLAR MT.

September 1953

R. T. Schassberger

F. H. Brooks

REPORT ON CALIFORNIA-OREGON NICKEL INVESTIGATION

AREAS OTHER THAN EIGHT DOLLAR MT.

Introduction:

In January 1953, Mr. D. L. Evans called to the Company's attention a nickeliferous laterite on Eight Dollar Mountain, Josephine County, Oregon. This property was subsequently staked by the Company. Since other laterite areas were known to exist in the California-Oregon peridotite belt, it was thought best to cover this area in a reconnaissance manner to determine if any other laterite areas as good as, or better than, the Company's Eight Dollar claims existed.

Mr. Evans submitted a list of 5 areas which had been recommended to him by Dr. F. G. Wells of the USGS as possible laterite areas.

Of the major areas examined, 7 are in Del Norte County, California, and one, Red Flat, is in Curry County, Oregon. The Del Norte areas examined are Red Mountain, Rattlesnake Mountain, Little Rattlesnake Mountain, Wonder Nickel prospect, High Plateau, Low Plateau, and Pine Flat Mountain (see fig. 1).

Field Work and Acknowledgments

The field examination was done in July 1953. Because of poor roads, access to many of the areas was difficult. Besides the major areas listed above, much of the peridotite mass in between was checked in traveling to these areas.

We were greatly aided in our work by the cooperation of many local organizations and individuals. Worthy of special mention is the help given us by Messrs. David White and Lenin Ramp of the Grants Pass Office of the Oregon Department of Geology and Mineral Industries, Mr. Salem Rice of the California Division of Mines, and Mr. T. Hatzimanolis of the Yurok Experimental Station of the U. S. Forest Service. Much helpful information was obtained from other Forest Service personnel regarding access roads and location of soil areas.

Conclusions:

The laterite areas examined in Del Norte County, California, and Curry County, Oregon are of small areal extent and shallow. None of these areas is worthy of further investigation.

In general, in going from north to south, the laterite areas have been more completely eroded. There is also the possibility that those to the

south were originally never as deep nor as well developed as the laterites to the north. The combined effect of these two factors indicates that no commercial nickeliferous laterites are to be expected in the Del Norte County portion of the peridotite mass.

DEL NORTE COUNTY, CALIFORNIA

Red Mountain:

Red Mountain is about 7 miles east of Klamath, California. A paved road goes from Klamath to the Arrow Mill on Turwar Creek from whence it is 8.6 miles over timber road to the north end of Red Mountain (see figs. 1 and 2).

Contrary to its name, Red Mt. is not very red. Although peridotite forms much of the mountain, only a small amount of thin red soil occurs locally.

A few small pieces of chromite float were found along the trail midway between the logging road and the lookout on the summit of Red Mountain. However, no large pieces of float were subsequently found and the areal distribution of the chromite found was small.

Little Rattlesnake Mountain:

Little Rattlesnake Mt. is 15 miles southeast of Crescent City and 12 miles northeast of Klamath, California. It is 14 miles by dirt road from Highway 199 near the junction of Smith River and the South Fork of Smith River about 11 miles west of Crescent City (see figs. 1 and 2).

The mountain is elongate in a north-northwest direction and reaches an altitude of 3244 ft. at its summit. Slopes are gentle from the top down to about the 2500-ft. contour. Here, the slopes steepen and only a few small shelves exist on the steeper slopes below. Peridotite forms the bedrock of Little Rattlesnake and as is usual in the peridotite country, slump masses and slide-scarp are common.

Although some red soil is found in many parts of the mountain, the only area worthy of more than perfunctory examination is a soil area on a relatively flat shelf on the northern end of the mountain. Prospect pits and roadcuts through the other areas show the soil to be less than 1 ft. thick.

Soil, from 1 to over 10 ft. thick, is developed on a north-trending inclined shelf that lies parallel to and is to the east of the north ridge-line of Little Rattlesnake Mt. The main area of soil is transected by the road, from the 13-mile post to a point about 1/3 mile to the north (see fig. 2). The soil profile in this area is characterized by a 1 to 4-ft. zone of red pelletized soil grading downward into ochre and greenish soil. At the base of the greenish soil is a zone composed largely of rotted peridotite grading in turn into relatively fresh peridotite bedrock. Although a small amount of garnierite was observed, no boxwork quartz was seen.

Samples of the soil ran from 0.36 percent of nickel to 0.66 percent of nickel. A picked sample of green fracture coating occurring on partially rotted boulders ran 1.66 percent nickel.

Exposures on the west side of the ridge, north of the main red soil area, indicate that the soil has been but little transported in recent time. Several knobs projecting toward the west are capped by red soil, little of which has been washed down the slope.

The Little Rattlesnake laterite is of no commercial interest because of the low grade and small indicated tonnage.

Rattlesnake Mountain:

The north end of Rattlesnake Mountain is about 1¼ miles south-southwest of the summit of Little Rattlesnake Mountain. A poor dirt road goes from Little Rattlesnake Mt. across a connecting saddle to Rattlesnake Mt. (see fig. 2).

No areas of deep soil were observed on Rattlesnake Mt. In a few areas, as in the saddle between Rattlesnake Mt. and Little Rattlesnake Mt., some soil is developed. However, it is only 1 ft. thick at the most, as exposed in several pits, and covers but a small area.

Wonder Nickel Prospect, Patrick Creek Area:

The Wonder nickel prospect is located on the west bank of Patrick Creek at an altitude of 2000 ft., about 1½ miles north-northwest of the Patrick Creek Tavern on Highway 199 near the intersection of Patrick Creek and Smith River (see figs. 1 and 2). From U. S. 199 it is 5 miles over a poor dirt road to the prospect.

Dunite forms the bedrock in the immediate vicinity of the prospect. Locally, as much as 6 ft. of soil has developed, but more probably the soil thickness would average 2 ft. over an area about 1000 ft. square. The soil is located on a bench that may possibly represent part of a former erosion level of Patrick Creek. In prospecting for chromite, the operators have bulldozed much of the soil area to bedrock. As a result, the soil thickness and its character are well exposed. Typically, the soil profile consists of a 6-inch layer of red pelletized soil on top grading downward into a 2 to 4-ft. section of ochre soil near the base of which are many rotted dunite boulders that grade downward into solid bedrock.

Because of the small amount of soil present no samples of it were taken. However, a sample of the dunite bedrock, slightly altered, ran 0.53 percent of nickel. This is slightly more than twice the nickel content of the average peridotite.

High Plateau:

High Plateau is, as the name implies, a rather flat-topped mountain.

It is about 5 miles north-northeast of Gasquet, California (see figs. 1 and 3). Access to High Plateau is most easily gained by following the Wymer road 14 miles from O'Brien,Oregon, to just east of Diamond Creek and then following the Diamond Creek road 7 miles to the divide between Low Plateau and High Plateau. From there, a 1½-mile trail leads to the abandoned lookout on the northeast end of High Plateau.

The surface of High Plateau is almost all rock. Locally, small patches of soil exist, but they are never large and only 1 to 3 ft. thick. Chromite prospect pits have penetrated the soil on the flanks of the mountain and in all cases the soil exposed is thin. No commercial concentration of nickeliferous laterite is to be expected on High Plateau.

Low Plateau:

Low Plateau lies about 2 miles to the northwest of High Plateau and is served by the same road as the latter (see fig. 3). From the divide between High and Low Plateau, two roads serve the chrome operations on Low Plateau.

Bright red soil occurs in a large area on the northwest side of Low Plateau and in a smaller area near the east side. Although the soil area on the west is large, the soil is not thick as exposed in several chromite workings. No boxwork quartz was observed in this area, and it is probable that the soil represents wash from a once more extensive and slightly higher area of laterite to the east. In the vicinity of the Bonanza mine, in the eastern part of Low Plateau, a small area is covered by bright red soil containing abundant boxwork quartz float. This area, about 1000 ft. square, is probably the root of a former laterite area. The soil is thin and tonnage would be correspondingly small.

Although Low Plateau was possibly once the site of a former nickeliferous laterite deposit, only a small area, possibly a root of the former deposit, is now extant. No commercial concentrations of nickel are to be expected on Low Plateau.

Pine Flat Mountain:

Pine Flat Mountain is a flat-topped, north-trending mountain about 10 miles north of Gasquet, California. The mountain is reached over the Wymer Road either from O'Brien, Oregon, 26 miles distant, or Smith River, California 13 miles to the west (see figs. 1 and 3).

Red pelletized soil covers a large part of the east slope of Pine Flat Mountain. However, road cuts show it to be shallow and nowhere was boxwork quartz observed on this slope. The upper portion of the mountain is quite rocky and where the slope drops off abruptly to the west and south, bedrock can be seen. A sample of red soil exposed in a roadcut on the east side of Pine Flat Mountain ran 0.69 percent of nickel. No commercial nickeliferous laterite is to be expected on Pine Flat Mountain.

CURRY COUNTY, OREGON

Red Flat:

Red Flat is 8 miles southeast of Gold Beach, Oregon (see fig. 1). Access may be gained via a dirt road that leaves the highway about 2 miles south of Gold Beach. From the highway it is about 11 miles to Red Flat.

Bright red pelletized soil covers a large portion of Red Flat and prompted the Oregon Department of Geology and Mineral Industries to do some geologic mapping and auger drilling in the area. The report of this investigation, conducted in 1947, is appended. Since 1947, bulldozer cuts have been made adjacent to some of the drill holes. These dozer cuts show the soil to be 11 ft. or less in thickness. Presumably the boulders mentioned in the Department report were not far above bedrock.

No boxwork quartz was seen in the Red Flat area and the indicated thickness of the soil justifies no further interest in the property.

Location	Feet From	Feet To	% Nickel	Remarks
A-Location Pit # 3 #14	1.0	6.0	0.54	Brown soil and quartz
	6.0	10.0	0.66	" " " "
D- " " Ferro #14	0.0	1.5	0.47	1.5' red laterite
D- " " Ferro #15	0.0	3.0	0.54	3' red laterite w/ boulders
C- " " Ferro #18	0.0	5.0	0.86	2' soil then bedrock with soil on some vert. jointing and some quartz seams
C-Pit on contour 1600	0.0	2.5	0.30	40 - 60% boxwork quartz,
	2.5	5.0	0.32	leached, rest peridotite
C-Pit between 2500 and 2600 contours, SW of Ferro #15	0.0	4.0	0.30	Boxwork quartz, leached
Evans Profile				
Profile A - A: 625' east of east line of NW ¼ 28	0.0	2.0	0.61	Red soil and quartz
	2.0	3.0	0.87	Ochre soil and quartz
Profile A - A, 225' east of east line of NW ¼ 28	0.5	2.5	0.71	Red soil and quartz
Profile A - A, 175' west of east line of NW ¼ 28	0.0	2.0	0.80	Red soil and quartz
Profile A - A, 575' west of east line of NW ¼ 28	0.0	1.0	0.81	Red soil
	1.0	3.0	0.73	Brown soil

Location	Feet From	Feet To	% Nickel	Remarks
C-Location Pit Ferro #7	0.0	6.0	0.62	10 - 20% boulders, red to ochre soil
D- " " Ferro #7	0.0	6.0	0.60	Laterite with peridotite boulders
F- " " S B #7	0.5	3.5	0.75	
	3.5	7.5	0.98	
	0.5	7.5	0.88	
C- " " Ferro #9	0.0	6.0	0.64	3' pelletized red soil grades down in ochre soil w/ rotted peridotite boulders. Possible bedrock in bottom of pit
D- " " Ferro #9	0.6	6.0	0.58	1.5' red laterite and 4.5' tan laterite w/ boulders
F- " " S B #9	0.5	3.5	1.03	
	3.5	7.5	0.97	
	0.5	7.5	1.00	
C- " " Ferro #10	0.0	6.0	0.89	1.5' red soil and 4.5' ochre soil. Less than 10% boulders
D- " " Ferro #10	0.0	6.0	0.76	2' red laterite and 4' tan laterite w/ boulders
F- " " and Auger	0.0	6.0	0.76	
S B #10	6.0	22.0	0.98	
	22.0	28.0	1.15	
	0.0	28.0	0.97	
D- " " Ferro # 11	0.0	2.0	0.57	Red laterite
	2.0	4.0	0.79	Tan laterite containing peridotite boulders
F- " " S B #11	0.0	7.0	1.10	This pit carried to 11' was collared in heavy boulders, but became all soil in 10'
	7.0	11.0	1.25	
	11.0	13.0	1.11	
	13.0	16.0	1.17	
	0.0	16.0	1.15	
F-Eight Dollar #11 Auger hole, 300' west of location pit #11	0.0	3.0	0.79	
	3.0	6.0	1.14	
	6.0	9.0	1.04	
	9.0	11.0	1.01	
	0.0	12.0	1.01	
C-Location Pit Ferro #12	0.00	6.0	1.03	Less than 2% boulders, 1.5' red soil on top of ochre soil

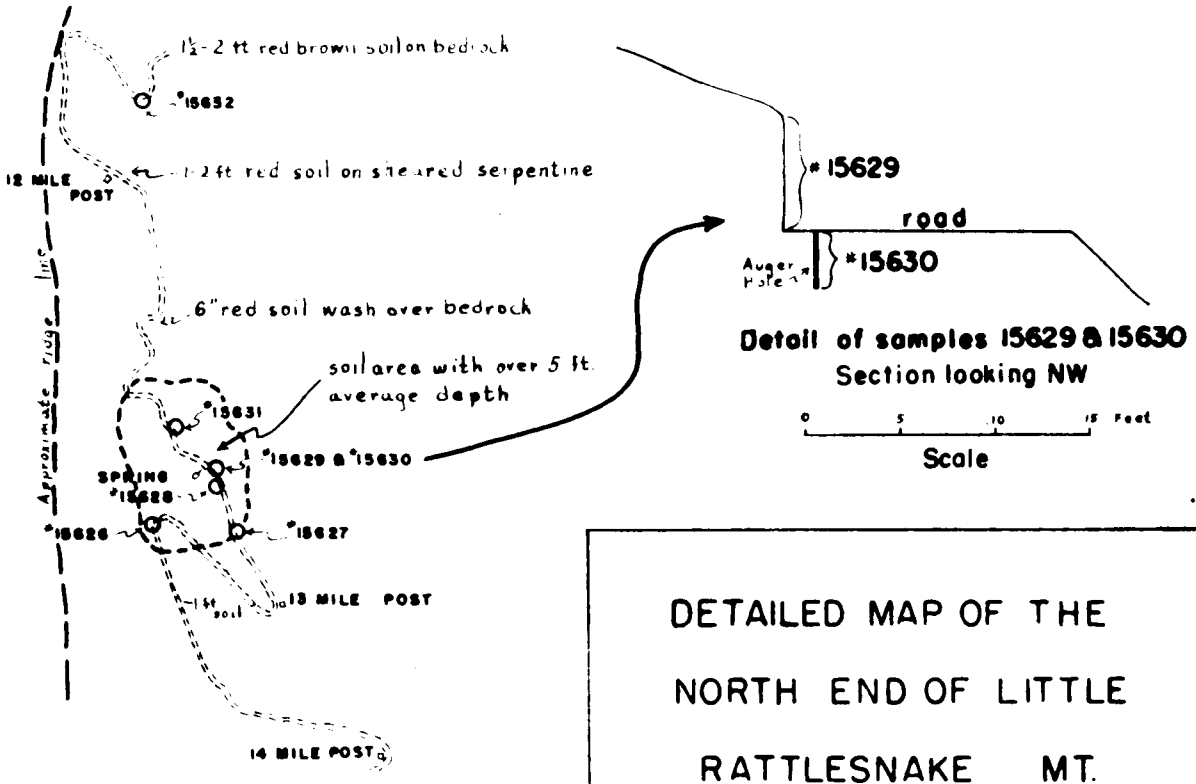
ASSAY DATA * FERRO GROUP

Location	Feet From	Feet To	% Nickel	Remarks
E-Location Pit Ferro #2	1.0	5.0	0.56	Ochre soil
D- " " Ferro #2	0.0	6.0	0.61	2' red laterite and 4' tan laterite w/ boulders
D- " " Ferro #3	0.0	6.5	0.71	3' red laterite and 3.5' tan laterite w/ boulders
F-- " " $ 8 #3	0.5	3.5	0.83	
	3.5	7.0	0.99	
	0.5	7.0	0.92	
E- " " Ferro #4	1.0	6.0	0.57	Ochre soil
D- " " Ferro #4	6.0	6.0	0.54	2' red laterite and 4' tan laterite w/ boulders
F- " " $ 8 #4	0.25	2.25	0.82	0 - 20' 80% soil
	2.25	5.25	1.15	20% boulders
	5.25	8.25	1.22	
	8.25	25.0	1.37	20 - 30' 50% soil
	25.0	30.0	1.15	50% peridotite
	0.25	30.0	1.25	no quartz
E- " " Ferro #5	0.0	3.0	0.68	Red soil
	3.0	8.0	0.53	Ochre soil
D- " " Ferro #5	0.0	4.5	0.62	2.5' red laterite and 2' tan laterite w/ boulders
C- " " Ferro #6	0.0	6.0	0.80	Close to bedrock. 1.5' red soil and 4.5 feet ochre soil
D- " " Ferro #6	0.0	6.0	0.85	2.5' red laterite and 3.5' tan laterite w/ boulders
F- " " $ 8 #6	0.5	3.5	0.88	
	3.5	6.5	0.85	
	6.5	7.5	1.20	
	0.5	7.5	0.91	

C - Sampled July 1953 H.T.S & F.H.B.
E - Sampled Feb. 1953 D.L.Evans
F - Sampled in 1942 (Freeport)
D - Sampled by D. White (Oregon Department of Geology and Mineral Industries)

Ferro #7 equals Climax location pit on claim.
$ 8 #7 equals old Freeport location pit.

Sample No.	% Ni	Description
15626	0.36	6-ft. channel; reddish-brown soil with large boulders, some boulders rotted.
15627	0.40	5-ft. channel; 1 ft. red pelletized soil grading down into reddish-brown soil with many boulders.
15628	0.44	Rotted peridotite boulder 6 ft. under soil surface.
15629	0.48	6-ft. channel; 4 ft. red pelletized soil on top.
15630	0.66	3-ft. auger cuttings; reddish brown soil grading downward into greenish soil.
15631	1.66	Picked sample of green amorphous material occurring on joint surfaces.
15632	0.46	10-ft. channel; 2 ft. red soil on top grading down through brown into gray.



DETAILED MAP OF THE NORTH END OF LITTLE RATTLESNAKE MT.

DEL NORTE COUNTY, CALIFORNIA

0 1000 2000 3000 4000 FEET

SCALE

1953

M.T.S. & G.S.

Spelling is the same as in the original copy.

REPORT OF EIGHT*DOLLAR MOUNTAIN

The following is a brieaf resume' on Eight-Dollar Mountain mining property known as the Karl Horstman Group. This group is made up Of thirty-six lods mining claims which are held by right of location, located near Kerby, Josephine County, Oregon, of which Grants Pass is the County Seat.

Developent: This property conciat of a sollid ore body. therefore the development are mainly numerous open cuts.

Accessibility: This property is located less than two miles from paved high-way and within ten miles of a railroad. A fair moubtain road crossing the property at the southern boundary, which is the most desirable point for camp and mill location. Sufficient level ground is available at this point for camp purposes and slope ground for gravity mill operation.

ORE BODY: The ore body is virtuasally a mountain of highly mineralised rock that I will call a dunite. This ore body rises from the road to a height of 1500 feet above the road. Exept for an occassional gold-bearing quarts seam cutting through the rock, this property could be termed a uniform, one-sample property containing comparatively no gang material as evidenced, by the following German Laboratory analysis;

Chrome	35%	Silica	6-½%
Iron	17½%	Nickle	3%
	Aluminum		35½%

No mention is made of the small gold content nor of the white metal which is extractableby wood fire and constitutes aproximately 1% of the rock. This white metal's characteristics are that of tin. This property present an open cut, quarry, or caveing-system plan of operation.

WATER AND TIMBER: Numerous springs of good water flow from the mountain side in sufficient volume to furnish water for a camp and 100-ton mill and to develope approximately 50-H.P. on a pelton wheel. Should more water be required it could be pumped from the Illinois River with a lift of 100 feet. This river forms the Southern boundary of this property.

An ample supply of ceder, pine and fir timber is available for all mining purposes. The ground slopes sufficiently for a gravity operation and tailing disposal.

There are no buildings on this property but hotel and housing accomodations are available within three miles.

SUMMARY OF OUTSTANDING ADVANTAGES

Amild climate;property is accessible during all seasons.
No reads to build;;within 10 miles of railroad,
Water supply for the possible development of a 50-H.P. plant
Unlimited water from the Illinois River.
Ample area for a gravity tailing disposal.
Level ground for camp.

Sloped ground for gravity mill operation.
Sufficient timber for camp and mining purposes.
Nearness to suply center.
Millions of tons of crumbled ore.
Cheap mining by open cut quarry or caving system.

A made-to-order property recomended to people interested in the metals quoted in the analysis. Operating recommendations are left in abeyance pending the operators decision on metal recovery.

Howe-ever, I suggest this ore to be given a fine grind to make a high-grade chrome and iron concentrate and a high-grade Aluminum concentrate.