

The Hortland

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Mr. J. E. Marrison Newing Tealogist Dept of Geology and Mineral Industries Greats Pass Oregon

Dea Mr Marrison

Your blue frest was of the Not Reuber

District Came and I looked it over and

gave it to Mr watson who then went to the

office of the Codastral Engineer and got

Certain information for you. He wrote

You today about it.

woh I had of the mt Reubens District, which I fromised you. I hope this will from to you.

We both though you for the information you gave us on the road from Grove Creek, up Reuben Creek to Wheeler Tunnel.

We left the can at the intersection of the two Creeks and was ked the 21/2 miles to Wheeler Tunnel. A sound sight of wheeler Tunnel. A sound sight of wreak we saw of buildings, Washing out dump.

Very truly yours

NOTES ON MT. REUBEN MINE.

> Josephine County Oregon

> > Grants Pass, Ore., November 6, 1926.

Mr. E. R. Wheeler, 416 Tacoma Bldg., Tacoma, Washington.

Dear Sir:

Pursuant to your request, the following notes relative to the Mt. Reuben Enterprise, are herewith submitted.

Briefly, the Mt. Reuben Adit is being driven for the purpose of developing the California and associated Veins, but Mainly the California Vein. This vein has been prospected on the surface some 2200 feet above the elevation of the adit. By test-pits and trenches it has been proven for a length of something over 3000 feet. It has not, however, been sampled thoroughly sampled on the surface, but it is known to contain good values along certain sections.

The vein is developed to a depth of about 240 feet below its outcrop. A shaft has been sunk to a depth of 112 feet on the vein. Samples taken at various points along the vein assayed from \$40.00 to \$60.00 per ton. At some time later an adit was driven into the hill about 240 feet vertically below the apex. This adit intersected the California Vein and also cut another vein about 410 feet east of the California, namely the "Oversight" Vein. A raise was then put up to connect with the bottom of the shaft. This raise is vertical and is not on the vein.

At the point where the Adit intersected the California Vein, although strong and persistent, the quartz is narrow and contains little value, but drifting north some 50 feet exposed an ore shoot in the Vein. Samples taken along this shoot ran as high as \$160.00 per ton and were of such value as to indicate and average of about \$40.00 per ton. The condition of the stopes then, some six years ago, was such that accurate sampling could not be done, and the stopes are entirely inaccessible at this time.

Assuming that the ore shoot is there, in the California Vein 240 feet below the outcrop, and there is every reason to justify the assumption; it is a question then whether or not this vein and the ore shoots continue in depth.

It must be remembered that the veins and the ore shoots contained therein were formed long before the development of the present topography; so that the positions of the ore shoots relative to vertical distances below the present outcrop bear no relation to the present surface. Just where these ore shoots will occur along the srtike or in depth is a mere matter of conjecture. That veins in this immediate vicinity do contain ore shoots and gold values at elevations as low as, or even lower than, that of the Main Adit level is evidenced by the the

fact that at the Argo Mine, situated on the banks of the Rogue River, at an elevation 700 feet below that of the Adit, ore has been taken out that will assay several hundred dollars per ton. This is only one instance.

Several small quartz veins have been encountered along the Adit. These small quartz veins are all associated with strong well developed shear zones, characterized by good gouge walls. The presence of these veins leaves no doubt but what the veins are persistent in depth. These veins with their pervailing strikes and dips are all shown on the accompanying section and plan of the Main Adit Level.

GEOLOGY.

copper.

It was thought that a closer predication as to where to expect the California Vein might be made by studying the sufface and underground geology and correlating the two. It was found, however, that the rocks are monotonously alike from portal to face, being mostly andesite and and fine grained, hard diorite. These rocks are locally termed "Greenstone".

In some places concentrated forces and consequent shearing have developed a slaty structure in the rock, but the altered rocks are essentially of the same composition. Along and near the veins intense shearing and pressure have altered the diorite to a schistose rock made up mostly of seriote and chlorite with residual silica. The rocks within these zones have also been altered by the later invasion of silicious solutions accompanying the quartz veins.

It is rather an outstanding fact that all these small quartz veins are found associated with these shear zones and further, that in every case the quartz lies next to the west wall of the shear zone regardless of whether or not that west wall is the hanging or the foot wall. Study of the California Vein at and near the surface discloses the fact that in this vein the quartz lies on the east wall of the shear zone; that wall being the foot wall. The veins further on to the west beyond the California show the same relative position of the quartz, e.g., on the east wall of the shear zone. These facts are of no special significance except that they will be an aid in the correlation of the various veins from adit level to surface.

A few feet east of the Calfornia Vein near the surface a distinctive rock occurs, namely a medium grained quartz-diorite porphyry. There has been no such rock encountered so far in the adit, but when it is, the California Vein should not be far beyond.

On the accompanying sketch is shown an estimated zone withing which the California Vein may be expected. The limits of this zone are rather wide but they are so close as can be judged at this time. If the vein holds its indicated dip it could not be expected before about the 6000 foot point.

There is no doubt but what the veins are persistent in depth. All the veins cut are well developed shear zones and all have marked gouge walls, especially on the west wall. Further, there is no doubt but what the veins are mineral bearing as many of them, **EXXEIXXN** especially from No 6 Vein on, show sulphides; mainly pyrite with small amounts of chalcopyrite. Samples taken from the veins up to No. 6 show very low values, e.g. \$0.60 to \$1.20, but the samples prove the quartz to carry some values. No. 8 Vein, on which some work has been done, shows fair values. One sample across the quartz assayed \$1.80 in gold, 1.5 oz silver and 6.0%

The most promising vein so far is the so called No. 11 Vein. This vein is about seven feet wide where cut by the adit. It is made up of an intensely sheared zone with well defined gouge walls with a great deal of quartz and a considerable amount of calcite. It has every appearance of a true fissure vein and should certainly be prospected along its strike, but, not until the Main Adit has reached its objective. This vein dips from 75-80 degrees to the west as does the California on the surface.

Considerable amounts of water have been encountered in small slips and water courses to the west of No. 11 Vein. Water is still coming from the California Vein in the short adit near the surface. To allow the free passage of water it must have channels through which to pass. This certainly indicates a fractured condition of the ground ahead and above; a good indication.

The California Vein is the objective, and until this vein is cut and prospected along its strike there is no reason to expect anything except what has developed. Surface indications give no indication encouragement of finding anything worth while until the California Vein is encountered, with the exception of the "Oversight" Vein. This is not as strong or as well defined as the California Vein. Its dip is irregular and where it has been cut in the upper adit has more the appearance of the numerous veins and shear zones cut by the main adit.

CONCLUSIONS.

The following facts establish the enterprise as something far from a mere gamble:

- 1. The California Vein is known to persist in length for at least 3000 feet. It has good walls and has every appearance of continuation in depth.
 - 2. That there are ore shoots within the vein has been proven.
- 3. That the veins do persist in depth has been proven by the presence of the many shear zones and veins encountered. These veins have the same general characteristics as they do at or near the surface.
- 4. That high grade ore has been found at elevations the same as or lower than the adit level has been proven.
- 5. That development so far has disclosed nothing to discourage the continuation of the work is an essential fact. The development so far indicates an improvement in conditions as the objective is approached. No 11 Vein, the last to be cut, is by far the best looking vein so far encountered.

Regardless of anyone's opinion of the enterprise one way or another and considering the money already invested, this would be a most foolish time to do anything but continue on to the California Vein. With an additional amount, small in comparison with the amount already expended, the adit can be driven on to the Vein. The exact amount, of course, is dependent on the location of the Vein, but calculating in accord with the predictions on the accompanying sketch it should not be over \$17,000.00 at \$25.00 per linear foot. If water power becomes available in the near future, which it will, this will reduce the cost to about \$20.00 per foot or \$13,500.00. Allowing an additional \$10,000.00 for 400 feet of drifting along the vein after it is encountered, a total of between \$27,000.00 and \$23,500.00, say \$25,000.00, will be necessary to finish the development

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When something over \$250,000.00 has already been expended on the project and when indications are as good as they are it would not seem logical not to speculate the necessary \$25,000.00 to complete the work.

Anyone may rest assured that any capital put into the enterprise will be expended judiciously and will be in the hands of capable men.

Respectfully submitted,

A. B. Yates.

FRANK WHALLEY WATSON Engineer of Mines Portland, Oregon. 2250 N. E. Flanders.

27-May-1938.

J. E. Morrison, Mining Geologist, Dept. of Geology & Mineral Industries, Grants Pass-Oregon.

Dear Morrison: -

Mr. Ward received the print showing Wheeler Tunnel and adjacent Claims in T. 33 S., R. 7 W., and wishes you to have his thanks. We visited the California Mine on Reuben Creek last week.

Yesterday at the office of the Cadastral Engineer here, I ran down the tie-lines between Mt. Reuben U. S. L. M., No. 351 and the subdivision corners in T. 33 S., R. 7 and 8 W. for you.

- (1) S. E. Corner, No. 1, of Oversight Claim bears S 46° 49' 19" E., from Mt. Reuben U.S.L.M. no. 351: -1,238.29 feet.

 Whence, west ½ sec. cor. sec. 30, T. 33 S., R. 7 W., bears North 82° 06' 33" East, 4,486.46 feet.
- (2) From a point 2.47 links North, on the section line, of the \(\frac{1}{4}\) sec. corbetween secs. 25 & 26, T. 33 S., R. 8 W., U.S.L.M. 351 bears S. 86 W., 248 links. The East \(\frac{1}{4}\) corner of sec. 25, R. 8 W., is distant 0.46 chains, true south from the west \(\frac{1}{4}\) sec. cor. of Sec. 30, R. 7 W.

These data are from official revised Township Plats. It is interesting to note that original patent surveys date back to 1857.

I hope the information will be helpful to you.

Very truly tyous,

(signed) F. Whalley Watson.

F. Whalley Watson - E. M.