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REPORT
OF
PRELIMINARY EXAMINATION
OF THE
JEWEL - ETHEOPEA GROUP
GREENWOOD, B.C.

Later known as
Dentonia Mine



For E. A. Julian, Cons. Eng.
Goldfield Cons. Mines Expl. Co.

By Chas. C. Starr,
June 12, 1928.

LOCATION: The Jewel-Etheopea group is situated on the East side of Long Lake in the Greenwood Mining Division, eight miles northerly from Greenwood and five miles from Eholt.

PROPERTY: The property consists of the Jewel, Denoro, Enterprise (fraction), Ancor, Etheopea, Lakeside claims and a millsite. Most of these claims are Crown Granted. They are controlled by Mr. White of Greenwood and Mr. Fox of Nelson, partly through options and partly by ownership.

TOPOGRAPHY: The property lies on a northwesterly sloping hillside at an altitude of approximately 4000 feet, and several hundred feet above the lake. The slope of the hillsides are generally moderate.

TRANSPORTATION: The property is connected with Greenwood by a fair road of gentle grades eight miles long, and also with Eholt by a fair road five miles long. Both of these towns are on a branch of the Canadian Pacific railway.

TIMBER, POWER, & WATER: There is ample timber on the claims for mining purposes. Formerly, power was purchased and brought in over transmission lines, but for development purposes internal combustion engines would furnish the best available power. There is sufficient water for domestic use near the camp, but any considerable supply would have to be pumped from the lake.

HISTORY: The Jewel mine was operated for a number of years by an English company and shut down in 1916. During the early years of the mine two or three thousand tons of ore were shipped which are said to have netted about \$20 per ton (mostly gold). A mill was built in 1910 but was not satisfactory and was rebuilt in 1913. In the following two years it treated approximately 25,000 tons of ore from which a recovery of a little over \$9.00 per ton was made. Leasers operated the mine and mill for a short time at a reported profit. All machinery has now been removed.

Work on the other claims examined was mostly done during the operation of the Jewel mine.

The Enterprise shaft, said to be 90 feet deep and now full of water, is reported to have found some ore and this is borne out by the condition of the dump which appears to have been dug over and ore sorted from it.

More recently, Mr. White discovered a seam of ore a few inches wide on the north side of the White shaft about 25 feet from the surface. This widened out to the northward and produced nearly a carload of shipping ore from an underhand stope.

EQUIPMENT: At present there is no equipment on any of the claims except the buildings at the Jewel mine which are generally in a good state of repair, and the mill building from which the machinery has been removed.

DEVELOPMENT: The Jewel mine was developed to a depth of 540 feet by drifts on several levels. According to the records the most northerly drift lacked something over a hundred feet of reaching as far as the Rowe shaft. All the Jewel workings are inaccessible on account of water, and the mine is supposed to be worked out to the northerly limit of the shaft workings.

The Rowe shaft is about 900 feet north of the Jewel shaft; it is 150 feet deep, with a 200 foot drift at the bottom reported as running south; a 200ft drift to the north on the 100 foot level is said to show 2½ feet of vein. These workings are also under water.

Northward from the Rowe shaft five or six small cuts show a strong quartz vein, but apparently low grade, to the White shaft - 235 feet.

The White shaft is sunk on the vein and is about 70 feet deep. At a depth of 25 feet a 30 foot drift has been run to the northward and a little stoping done, both above and below the level. The water was bailed out so this work could be entered.

Between the White shaft and the north end line of the Jewel claim there are two shallow shafts or cuts which show six or eight feet of low grade quartz.

The Enterprise shaft is 140 feet north of the south line of the claim; it is said to be 90 feet deep, to have no drifting, and to show a six or eight foot vein.

A six foot shaft 100 feet north of the south end of the Ancor claim is said to show four inches of galena with high values, in a three foot vein. (This was caved, but was later cleaned out; I did not have time to go back and see it.) At about 200 feet further north a cut shows six feet of mixed vein matter of low grade.

Near the north line of the Ancor claim three small cuts show quartz, but they are apparently not all on the same vein.

Just north of the line, on the Etheopea claim, a 50 foot porphyry dike striking east and west and dipping about 40° south cuts the vein. Immediately north of this are four shafts from eight to 25 feet deep, with the vein between them stripped. A little ore has been shipped from these. A hundred feet or more to the westward a cut exposes a second similar vein.

A 300 foot tunnel has been run southeast at a depth of 80 feet underneath the four small shafts. A short drift was run on the first vein encountered, and a little drifting done on narrow poor quartz at about the position the main vein should have been encountered.

GEOLOGY: Of the Jewel mine, proper, Galloway states that the vein is near the contact of granodiorite and metamorphic rocks of sedimentary and igneous origin. Also that the quartz is solid in the granodiorite, but occurs as lenses in the metamorphic rocks, and that ore does not generally occur in the schists.

Northward from the Rowe shaft I did not note any granodiorite, although it might occur at various points underneath the soil. The wall rocks through this section appear in general to be fairly massive metamorphic rocks, and the vein to be solid quartz except in a few cuts where it occurs more in the form of lenses. The east-west dike at the south end of the Etheopea claim appears to be andesite and cuts through the vein. It is not clear which of the veins north of the dike is the continuation of the Jewel vein.

VEINS: The Jewel vein strikes approximately N 25° E and dips 45° eastward. It varies in width from two to ten feet, and probably averages a little over four feet. It has been definitely traced from the Denoro claim on to the Etheopea claim, a distance of more than a mile.

It appears to be weakening somewhat at the Etheopea workings. The vein filling is solid white quartz containing pyrite with rarely galena and pyrrhotite, and carrying gold with a little silver. The gold seems to follow the sulphide mineralization.

The vein outcrops strongly from the Kendel shaft on the Jewel claim to the southern part of the Ancor claim, and again on the south end of the Etheopea.

The eastern vein on this claim is strong on the surface. In the tunnel its proper position is marked by a narrow irregular band of pegmatitic quartz which is entirely barren, but which nevertheless probably represents the vein. The western vein shows in the tunnel about as on the surface.

ASSAYS: Eight milled samples were taken in connection with this examination and the assays and locations are shown on the sketch map accompanying this report.

The four samples taken in the bottom of the White stop average - 2.9 feet wide, \$12.02 in gold & silver and represent a length of 24 feet. Eleven samples taken by a representative of the owner and covering nearly the same length average - 2.2 feet wide, \$17.95 in gold and silver. This variation is not unreasonable considering the spotted gold values, and the difference in the widths sampled.

In the six foot shaft 100 feet north of the south line of the Ancor claim the owners samples show 3 feet of \$22.10 ore, and it is fair to assume that this value is correct.

MILL TAILINGS: Tailings from the mill have flowed through the brush and on to the lake beach. There are perhaps

4000 tons that are easily recoverable of which a very rough grab sample assayed .11 oz gold, 0.8 Oz silver, and 0.3% lead.

CONCLUSION: The Jewel mine has produced a considerable amount of profitable gold ore, although it is doubtful if it was, as a whole, a paying proposition.

There is over two thousand feet of the same vein which appears strong and which contains known ore at two or three points and has been very imperfectly developed. As the old Jewel workings are mostly beneath a considerable depth of soil, and are inaccessible, it is hard to say whether the geological conditions there and on the surface to the north are the same.

Some further work is justified on the two known ore exposures, - at the White Shaft and at the south cut on the Ancor -, but such work had better be done by the owners or a small operator, rather than by a large company, and I do not feel especially optimistic in regard to the probable results of such work.

I cannot recommend that you give this property any further consideration.

Respectfully submitted,

Chas. C. Starr

To GCM Co