

896128

92H/8E

(35)

Summary Report

GOLD MOUNTAIN MINES LIMITED.

92H/5E-46

The property is on the south side of Similkameen river two miles west of Hedley. The workings lie between the elevation of 2,500 and 3,250 feet on the west bank of Henri creek, and are between 2,000 and 3,000 feet south of the river.

Henri creek flows in a small narrow valley, on a small bench of which the camp is situated; the ground slopes at angles of 20 to 35 degrees to the valley rim which is just above the uppermost working. Timber is abundant, and water is sufficient for mine and camp use. An extensive flat on the river bank provides a site for mill and attendant camp.

An excessively steep switch back wagon road, a mile and a half in length, leads from the river flat to the mine. Supplies are at present hauled to the foot of this road by flat car from Sterling creek over the Great Northern Railway tracks, a distance of $2\frac{1}{4}$ miles.

Geology.

The property is underlain by a thick series of sediments that strike in general north-easterly and dip steeply to the south-east. The whole series appears to be locally contorted, although the general attitude in the vicinity of the workings is quite uniform. These rocks are predominantly argillaceous, but calcareous, and less

encountered on No. 4 level, consisted of massive arsenopyrite studded with free gold.

The Workings.

Four veins are known on the property, only one of which, the Maple Leaf, has received much attention.

The Pine Knot vein, which strikes north 25 to 30 degrees east and dips north-westerly at 50 to 65 degrees, is exposed by old workings which include an adit with 120 feet of drift, and by cuts, shafts and short adits over a length of 600 feet. This vein varies from a foot or so to 12 feet in width, the greater width when following an andesite dike. The only work done in recent years, and by the present company, is a 50 foot winze sunk from a 30 foot adit. Channel samples taken by the writer in the bottom of this winze returned:

- #4209-B 60" Horizontal, on hanging wall of vein; quartz and bleached rock and gouge, gold 0.02 oz. per ton; silver, 0.2 oz. per ton.
- 4210-B 45" Succeeding, to horse of waste, gold 0.03 oz. per ton; silver, 0.2 oz. per ton.
- 4211-B 30" Horizontal, on foot-wall below 58" horse of waste, gold, trace; silver, trace.

These values are of the same order as obtained by the company and by Major A. W. Davis. Other workings on this vein are reliably reported also to return low figures.

often cherty phases are encountered. The rocks are dark coloured and possess a blocky fracture, and metamorphism is not marked. Southerly from the workings about 1,000 feet, talus slopes and rare outcrops are of thin bedded slatey argillite.

Intrusive into the sediments is an irregular body of diorite, variable in character, but similar to the diorites near Hedley. This is a stock-like mass with a westerly and a southerly prolongation; in the angle between which lies the vein system.

The ore bodies are quartz filled shear zones in the sedimentary rocks. The dip is westerly to north-westerly, across the bedding of the country. These shears pass into the diorite body, but in that rock are not mineralized except near the contact. A subsidiary fracture system lies nearly flat; this system of quartz stringers is unimportant.

The quartz is watery, as a rule, and may be solid vein quartz proper or else a breccia filling or system of veinlets and lenses in country rock. Mineralization includes arsenopyrite, pyrite, sphalerite, and rarely chalcopyrite and galena. The mode of occurrence in the quartz is very irregular; as scattered grains, lenses or segregations, and also as seams parallel to the vein walls. Sphalerite is not abundant, and is apparently not indicative of value. Considerable of the gold is free (upon advise from Mr. Asselstine) and in an exceedingly fine state, rarely seen in hand specimen. An exceptionally rich pocket,

Two small and unimportant veins lie between the Pine Knot and Maple Leaf. These occurrences are similar to the others, but widths rarely attain $1\frac{1}{2}$ feet.

Maple Leaf Vein.

Two adits are driven on this vein. (See accompanying plan and section. Diamond drilling by the company from No. 1 level and by Consolidated from No. 2 level have been intentionally omitted.) The upper or No. 1 adit discloses a branching shear zone bearing lenticular masses of quartz and quartz-filled, brecciated and sheared sediments; the mineralization plays out within the diorite. A winze sunk 110 feet on the most promising section shows some good values. No. 2 adit discloses no valuable mineralization whatever; drifting on a strong shear zone, the same as that in No. 1 adit, shows the zone to be barren at the lower level, although narrow tight stringers, both flat and steep, are encountered in this drift.

A raise was driven this year to intersect the shear zone. This passes through the zone where mineral is very scanty, and doubles back over it to connect with the bottom of the winze from No. 1. A sublevel, known as No. 4 level, is driven from the raise midway between Nos. 1 and 2, and work is there concentrated at the present time. The accompanying map shows No. 4 level as at September 14th.

No. 1 adit partially develops a north-south shear zone for a length of 200 feet, and a north-easterly trending section is indicated to extend from collar of winze to near the southern portal, a distance of 60 feet. The accompanying plan is drawn accurately and to scale, and shows better than verbally the extent of mineralization. The manner of development of the zone, unfortunately, does not permit of a close estimate of average widths or minable sections.

No. 4 level develops the same zone 120 feet below No. 1 level for a distance of 200 feet. Mineralization is not as strong as in the upper level. Except for a vein-like section 120 feet long in the principal drift, the mineralization is chiefly breccia-filling and stringer-zones, more prominently so than No. 1. Calcite, although not plentiful, is a little more common also, and so are brown sphalerite and massive pyrite. The southernmost section is a highly altered zone in which there is replacement as well as breccia-filling.

The writer, in July last, sampled the bottom of the winze on the south side. Total horizontal width, 16 feet.

- #4204-B 42" horizontal, on hanging wall (quartz);
gold, 0.82 oz. per ton; silver, 0.2 oz. per ton.
- 4205-B Specimen sample of $1\frac{1}{2}$ - 3" seam of heavy sulphide
in same section;
gold, 4.84 oz. per ton; silver, 1.6 oz. per ton.
- 4206-B 50" horizontal, succeeding #4204 (mineralized rock
seamed with calcite and quartz);
gold, 0.09 oz. per ton; silver, 0.6 oz. per ton.

#4207-B 85" horizontal, (barely mineralized rock);
gold, 0.05 oz. per ton; silver, 0.2 oz. per ton.

4208-B 16" horizontal, on extreme foot-wall of zone
(quartz and rock);
gold, 0.015 oz. per ton; silver, 0.2 oz. per ton.

Samples taken at the same time in the initial
crosscutting of the zone on No. 4 level.

#4202-B 48" cut normal to a 36" flat dipping strand of
quartz 6 feet from hanging wall;
gold, 0.005 oz. per ton; silver, 0.2 oz. per ton.

4203-B 52" horizontal on hanging wall section of zone;
gold, 0.03 oz. per ton; silver, 0.2 oz. per ton.

On September 14th three other samples were taken,
whose locations are marked on the plan.

No. 4 level is probably close to the bottom of
mineralization, particularly at the north end, because no
mineral was encountered on No. 2 level below, and practically
none in the raise. The south end of No. 4 is at present
being driven, and the southward continuation of mineraliz-
ation is to be hoped for. Further exploration would then
be warranted on No. 2 level, as No. 1 is close to grass roots
at the south end. Mr. Dollemore at one time did some ground-
sluicing about 1,200 feet south and located heavy quartz nearly
in place, but due to the danger of working on an excessively
steep hillside, did no further work. This quartz is on line
of strike of the Maple Leaf vein.

The irregular nature of the shear zone, and the
pockety occurrence of mineralization points to the need for
very careful, close-interval sampling before any idea of

average values can be arrived at. This has not so far been done. High grade pockets undoubtedly occur, but size and importance of these are not known. Calculations of tonnage can of course be made only with results of thorough sampling in hand; the character of the ground is apt in many places to result in over-break and dilution, and the nature of occurrence of the mineralization may call for exploratory work during stoping operations. The writer estimates that some 15,000 tons of heavily mineralized material is available to mining, at a conservative figure; inclusion of sparsely mineralized portions of the zone would increase this figure.

Progress.

On September 14th the mine, under supervision of Mr. Frank Dollemore, was operating on two shifts daily on No. 4 level. It is the intention to extend the drift south to prove up more ground on this level and, if successful, to follow up with work on No. 2 level below.

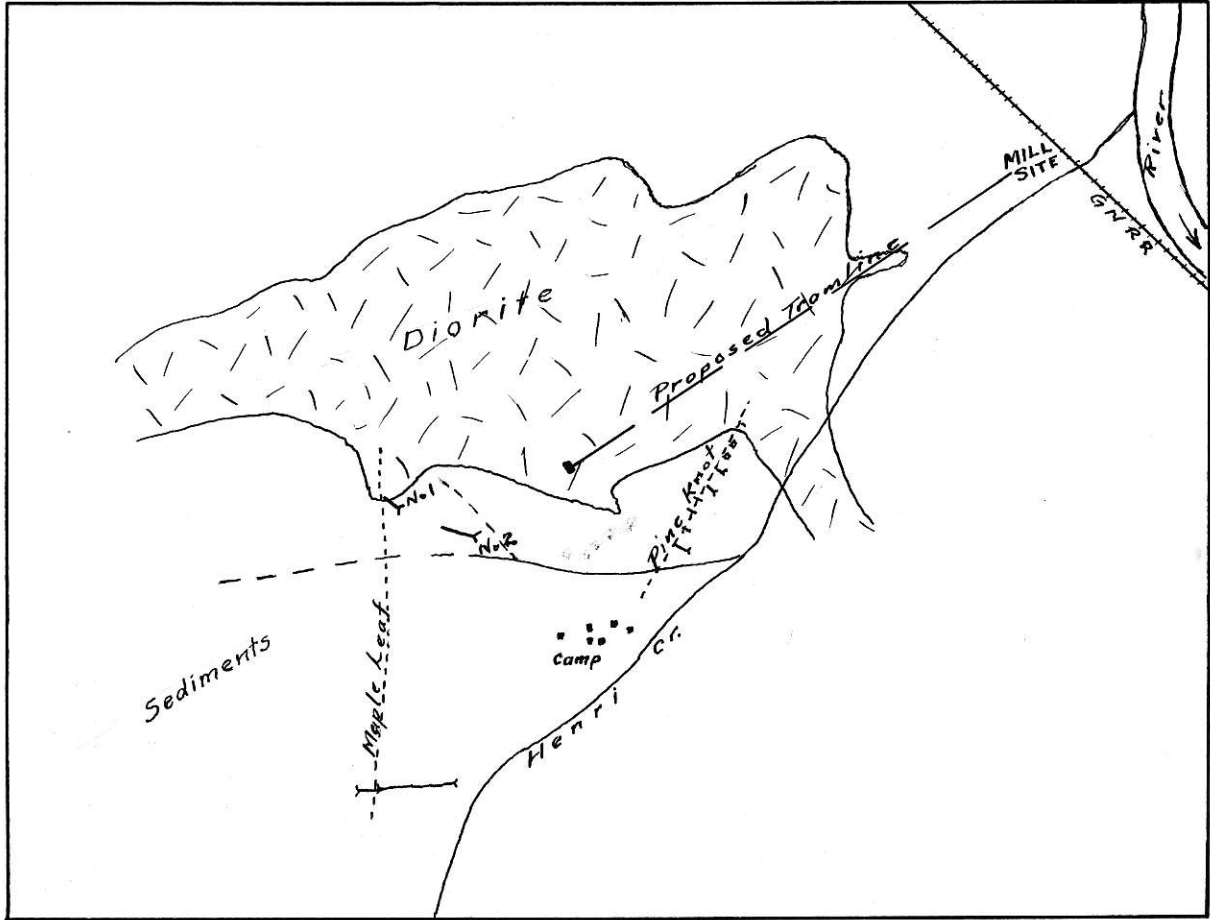
The power line was in course of construction and Mr. Asselstine was expected daily to superintend initial stages of mill construction. The projected tram line, to be constructed by Riblett's, will extend down from a shoulder 600 feet north of No. 2 adit portal and will be about 2,800 feet in length.

Respectfully submitted,

M. S. Hardy

Resident Mining Engineer

September 17th, 1936.



KEY MAP
Gold Mountain Mines, Ltd.
Scale - 1" = 800'