HISTORY OF THE
ROB--ROY--GROUP--OF--MINES

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THIS PROPERTY IS located in Hinsdale County, Colo.,
2½ miles above the Depot at Lake City, which is 351 miles S. W.
of Denver, Colo., on the Rio Grande Railroad.

PHYSICAL CONDITION.

There are two wagon roads and Lake Creek across this vein. The roads and creek trend is N. and S. and the vein E. and W. The road on the east side of the creek crosses the vein at about 100 feet above the creek, where the vein is uncovered and shows over 100 feet wide, from which it is an easy descent to the depot, so that a team of horses could haul 50 to 60 hundred weight of ore with all ease.

The property is susceptible of being worked, tunnels driven on the vein for at least 3 miles in an easterly direction and this obviating all dead work, as each foot driven will develop ore and gain a depth of 1500 feet within the boundaries of this territory, and much greater depth by continuing on the vein all of which is yet unoccupied territory.

GEOLOGY.

The country is an igneous formation--diorite or andesite--which is traversed by porphyry dykes, which constitute the fissure veins, which are from 80 to 150 feet wide.

DEVELOPMENT.

The first work on the east side of the creek is a shaft below the road, 58 feet deep, 4 by 15 feet., which is all in ore worth $35. per ton, the pay streak on the hanging wall, or the north side of the vein, thence, 150 feet south, on a level with this shaft, which is the foot wall of the vein, a tunnel has been driven 480 feet, the breast of which averages $8. per ton. The wagon is 100 feet, vertically, above these workings.

The next workings are 1200 feet easterly and 130 feet higher. Here at this point 105 feet deep was sunk apparently on the foot wall pay streak, where there is 15 to 20 inches of ore that contains $100. per ton, which extends the length of a 50-foot drift, driven from a point 60 feet down the shaft--the balance of the vein will go $25. per ton; vein 30 feet wide. At the top of the shaft, a 450 foot tunnel has been driven on the vein, and at 100 feet in the tunnel, an uprise has been made to the surface 85 feet beyond this uprise the vein has been cross-cut to the left-north-30 feet., and shows an average of $15. per ton, which continues to the breast of the tunnel.

From here the 60 foot uprise to the breast all the workings are too far north, and away from the foot wall, where the richer ores are found such as the $100. streak. This makes it safe to assume that the foot wall streak is 40 feet wide, and will average $25. per ton.

The next above, 150 feet higher, and 600 feet easterly, on the vein, is a shaft 60 feet deep on the main foot wall pay streak; this vein is 15 feet wide, and will average $20. per ton. One hundred feet further north, a tunnel 300 feet long has been driven on this vein all in ore worth $10. to $20 per ton.

At the entrance to the tunnel, which is caved in, the vein matter is very decomposed on account of a small stream of water flowing over it, which is a valuable asset, as this can be piped and the fall of fully 500 feet would develop at least 300 H. P. at the mill site. Twenty-five hundred feet beyond this point to the easterly end line, the mountain has a rise of 1000 feet.
DEVELOPED ORE.

Ore developed does not mean blocked out ore, but it does mean that sufficient ore is developed to warrant further investigation for the following values are in sight:—From the ROB ROY No. 2, to the upper tunnel is 3000 feet, which has an average depth of 300 feet, and pay streak averaging 10 feet wide, making 4,500,000 cubic feet, or 515,300 tons of ore that will average $12. per ton, which would be $6,760,000, this being a conservative estimate of the ore in sight.

In further proof of the values and quantity of ore, I refer to the showing made on the vein after it has crossed the creek to the west side where the mountain is more precipitous.

Three tunnels are driven on the vein, two of which are 1000 feet and are 500 feet apart, one on the foot wall and one on the hanging wall side. Directly above these, 400 feet higher, there is a tunnel 550 feet long. All these workings are in ore that contains 6% to 7%2000. per ton, the high grade being found in seams and bunches, but the mass is worth $10. per ton straight through, and will cost not to exceed two dollars for mining, transportation and milling and say 10% for losses. This will leave 87.00 per ton net or upwards of $80,000,00 net.

Considering the advantages of location, quantity of ore, values and cheapness of mining, it is a mystery why such a property is idle. The reason is that when the development was done, some 30 years ago, there was not sufficient rich ore to pay expenses and the owners left because of interests in other pursuits, many died, and no modern mills were built which to-day make that class of ore the most valuable. In those days they had to pack the ore 45 miles over the mountains by mule train on the backs of mules.

By driving the tunnel easterly on the ROB ROY GROUP to near the end line, then cross-cut to the right-south—say 600 feet, it would enter the 180 acres of placer territory at a depth of over 1000 feet, and thus become a cheap mode of mining and transporting to the mill, which in this case should be of at least 500 tons capacity and of the same method as is being used now at Cripple Creek, Homestake, Tredwell and other large mines, which is amalgamation and cyaniding.

REPORT OF THE GOLD QUARTZ PLACER.

This property is located on the easterly flank of Gold hill, just east and adjoining the ROB ROY GROUP.

AREA OF TERRITORY.

These claims consist of 180 acres of patented placer, and two lode claims each 300 feet wide by 1600 feet long, which cover 3000 lineal feet making in all 140-2/3 acres.

The placer was located and patented as a placer in order to cover the top of the mountain, which is all covered and underlaid with gold-bearing quartz, in order to save the expense of locating and patenting 12 claims, which, in territory the placer is equal to.

PERSONAL OBSERVATIONS.

For three years I have been familiar with the Gold Hill portion of the mountain, and visited it many times to familiarize myself with its interesting geological conditions. On account of the hill or mountain being out at a depth of from 100 to 400 feet, thick with a mass of gold-bearing material, porphyritic gold-bearing quartz, absolutely free of sulphides and all base metals, and therefore, free milling, but the gold being too fine to plate well, makes it an ideal cyaniding proposition, which shall should cyanide from 90 to 95% of the gold values.

GEOLOGY.
GEOLOGY.

The formation is diorite and andesite, a species of porphyry and quartz, the whole mass being gold-bearing, from an apparent crater in the immediate vicinity. I use the term overflow, because the physical conditions show it to be such. To illustrate: In the higher altitude the overflow of diorite is entirely eroded and the cretaceous rock protude, being cleaved with porphyry dykes, along which trend fissure veins which protude through the igneous overflow of diorite, thus establishing the fact that volcanic forces ejected the igneous overflow before the fissures were created.

PHYSICAL CONDITION.

At the easterly end of the mountain there is a stream of water sufficient to supply a 100 stamp mill. If a mill should be built here and a track built from the top of the mill to the quartz cliff, say 100 feet long, it would connect the mill and mine.

This quartz ledge passes easterly under the proposed mill location and the hillsides are heavily covered with timber, sufficient to meet all requirements pertaining to mining. Again, on the westerly flank of the mountain, about 5,000 feet distance, is Lake Fork Creek. At this point a 1,000 H. P. can be had, by running a pipe line possibly 6,000 or 7,000 feet.

By going down the stream 6 to 8 miles a 10,000 H. P. can be had, by running a pipe line on a grade of from 4 to 5% and transmit the hydro-electric power by wire, eight or ten miles. At the present time there is an electric power line withing a ¼ mile of the mine.

It is Fox Lake Creek that the big mill should be located, and by erecting a tramway from the mine, on a somewhat zig-zag route for a distance of about two miles to the creek, the mill would be only ½ miles from the railroad station at Lake City.

AREA.

The Gold Quartz Placer contains 120 acres, equal to 12 mining claims, patented. The Lone Jack, Morrison and Pride of the West consisting of about 25 acres, are not patented, but title is undisputed, and the Golden Wonder Group, consisting of the Gold Carbonate and Golden Mammoth, 20 acres, patented, adjoining the placer on the South.

ORE AVAILABLE ON THE PLACER.

To comprehend this, one would have to go over the property several times, on account of its great magnitude. The entire 120 acres is over laid with a great ledge of overflow or upheaval of a broken mass of quartz and porphyry, extending from the West End up to the western slope of Gold Hill, nearly 1,500 feet and on a rise from 25 to 35 degrees from horizontal, up to, and over the crest of the mountain and down the Northwestern slope for about 1,500 feet on an incline of about 15 degrees.

There is also a slope from the North or lower line toward the South side line of the property for a distance of about 3,500 feet on an average rise of about 15 degrees at the upper end of which there is a cliff of about 50 feet, vertical height, of solid quartz, thus giving an average of the vertical depth of the ore body of 250 to 300 ft.

At this time there was 11 sacks of ore 70 lbs. each, taken from an open cut on the placer, one sack being carefully sorted, assaying $29. per ton, and the other 10 sacks not so carefully sorted, assaying $16. per ton, assaying all done by Mr. Burlingame of Denver.

Since there are 14 claims, or about 140 acres and one claim of 10 acres at an average depth of 150 feet, at 20 cubic feet to the ton, there would be 3,250,000, tons; 14 claims would make 45,000,000 tons or more, in this block of ground and would net over $160,000,000. It would take a 5,000 ton mill about 26 years, or a 10,000-ton-a-day mill about 13 years to exhaust this ore body to a depth of 150 feet without the expense of sinking or hoisting ore or water as the property is one great quarry, and mining made easy.
This ore is available for bench quarrying and loading into
tram cars by steam shovels, and trammed to the mill, which would be
erected on Lake Fork Creek at a cost not to exceed 35 to 40¢ per ton,
and in being an ideal cyaniding proposition, should be mined and
milled, and operated on a large scale with hydro-electric power at
a cost not to exceed $1. to $1.25 per ton.

VALUE OF THE ORE.

This ore runs from $1. to $16. per ton, exclusive of the
rich pockets and it is conservative to say that the whole mass quarried
without sorting, that it will cyanide in large quantities from $3. to
$8. per ton, and it is safe to say that it will average $6. per ton.
This statement is made from my own personal knowledge and from the
following tests and facts:

A ten car lot was taken by driving the wagon over surface
of broken mass which has the appearance of a while on the placer and
throwing in from place to place the broken chunks without sort ng
(some of the chunks were so large that it took three men to get them
into the wagon) and shipped to a stamp mill at Idaho Springs, Colorado,
which recovered by amalgamation, $3.20 in gold per ton, and a small
amount of concentrates, possibly 2% which being left to the mill man,
were not weighed and which were saved on an old Gilpen County bumping
table which assayed 2 oz. in gold and 56 oz. silver per ton. The
tailings were not assayed.

Adjoining this to the Southwest, the first is, the Copper
King and the J. W. B. claims, where a 300-foot tunnel has been driven
on the Copper King and where an ore chute was cut in 1886 that had
values from $20. to $50. per ton; part of this tunnel has saved in.
About 150 feet, vertically higher, a 75 foot tunnel has tunnel has
been driven which is just entering the ore. Then about 100 feet
below this cutout, a 950 foot tunnel was driven which paralleled the
vein about 160 feet on the North side. A fine wagon road leads from
this place to the depot 2½ miles beyond.

The next above about 700 feet, is in the Gold Quartz Claim;
within 500 feet of the west line, a cross-cut tunnel 165 feet long
is driven that cuts the vein 86 feet deep and then driving along the
vein 75 feet, easterly into the mountain. The vein matter is over
25 feet wide. of quartz and copper sulphides; the copper goes 6 to
20%, 20 to 50 oz. silver, and 92. to 98. in gold, an average of $59.
per ton.

The next beyond is the Free Coinage, where only gold quartz
is shown in large quantities.

The next claim above the J. W. B. is the Juanita, where
a 150 foot tunnel cross-cut was driven from Dead Man's Gulch into
a vein that parallels the one above described. This vein was drifted
on, 100 feet, showing copper sulphides. The next above is the Burns
Claim, where a 350 foot tunnel is driven, and while it shown mineral
indications, it lies too far south to have intersected the vein, conse-
quently, it will require a cross-cut to the left, (north) about 50 feet.
to cut the vein.

Adjoining the Burns Claim on the North is the Golden
Wonder Claim. The croppings of this vein produced all the ore from
which the rich samples were taken--34 in number--(see below) and
where a shaft was sunk 50 feet, showing that the rich quartz continues
in the vein over 2 feet wide.

This shaft was full up, owing to a dispute between the
owners at that time. Then about 100 feet below this cutout, a 950
foot tunnel was driven which paralleled the vein about 160 feet on
the North side. About 400 feet from the mouth of the tunnel, a
175 foot cross-cut was driven South that crossed a vein; another
drift to the right, out of the hill, was driven 50 feet, intersecting
an ore chute from which 189 tons were shipped to a smelter, that
averaged $24. per ton in gold. Whether this is the same vein that
contained the rich ore on the surface, is yet to be proven.
LIST OF ASSAYS.

GOLD OZ.  SILVER OZ.  GOLD OZ.  SILVER OZ.
279.68  35.98  5.20  00000000
 8.00  0.00  21.00  "  "
 2.33  90.00  12.00  "  "
26.60  22.75  2.33  "  "
242.00  0.000  13.00  "  "
 2.33  1.73  55.00  "  "
 1.73  40.00  35.00  "  "
 44.60  44.60  6.99  "  "
 2.05  2.05  82.15  "  "
26.33  5.01  0.51  "  "
 5.01  275.00  25.00  "  "
18.02  2651.00  2.00  "  "
30.06  20.00  39.07  "  "
65.00  65.00  1.51  "  "
 0.75  0.75  1.75  "  "
 0.33  0.33  4.20  "  "

Average of $700. a ton.

I quote the above assays simply to show what grade of ore exists and may be found in quantity in the fissures that course through the territory. From the mouth of the 950 foot tunnel all the diorite, (country rock) to the top of the mountain, 400 feet with go $5. per ton in gold.

There is a dump of fully 2000 tons here that is worth $12. per ton. There is several other claims adjoining on the east that have but little work done on them.

Respectfully submitted.
Signed--W. J. H. Miller---M. E.

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