

CAYENNE & HIXONTERRY

GROUPS

Of Mineral Claims,

CARIBOO DISTRICT, B.C.

PROPERTY FILE

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PRELIMINARY MINING REPORT

by

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VANCOUVER, B. C.

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CANADA.

"CAYENNE" & "HIXON TERRY" GROUP OF MINING CLAIMS

HIXON CREEK

CARIBOO GOLD DISTRICT, B.C. CANADA.

TITLES:

Titles are in good standing. In the case of the Cayenne and Hixon Terry groups they are held by annual assessment work. In the old "Washburn" group six claims are Crown Granted and the rest held by assessment work.

AREA:

The seventeen claims comprising the Cayenne and Hixon Terry Groups contain approximately 800 acres --- The Washburn of about 18 claims contains a little less area.

HISTORICAL:

Hixon Creek was first worked for its gold in the early "boom" days in the Cariboo gold rush. It is said that more than \$4,000,000 came from it. Some work was afterwards done on the quartz veins they were uncovered during placer operations. About the year 1878 a small Stamp mill was erected. During the next twenty years or more, three shafts were put down on the old Washburn property, on the North and South sides of the creek and several more or less crooked tunnels were run into the hill - on the North side. The shafts are full of water and one of the tunnels blocked. The deepest shaft is down 200 feet, it made very little water as a three quarter inch suction pipe was used to keep it down. It was evident that the old miners were looking for larger veins than those first encountered, and it is said that they cut a payable six-foot lead in a drift towards the contact from the bottom of the 200 foot shaft, but no one seems to have paid any attention - or seemed to realize that the shales or schists were themselves gold bearing, and it is this fact that is interesting. Several placer shafts have been sunk on various claims, and a tunnel put in on the South side of late years - on Cayenne No. 2.

SITUATION:

The mine is forty miles north of Quesnel, the present terminus of the P.G.E. railway, forty-one miles south of Prince George, and five miles from the main road. When the P.G.E. is extended to Prince George it will pass within three miles of the property. An auto can be taken over the five mile road to the mine.

The Cariboo extends from Lat. 52 degrees to Lat. 60 degrees and Lon. 120 to 124 degrees, with a S.E. Extension to Long. 118 degrees containing nearly one hundred thousand square miles.

TOPOGRAPHY:

The country in general consists of low rising hills of even and gentle slope. In the Hixon Creek those hills rise four or five hundred feet on either side of the Canyon.

GEOLOGY:

In the Annual Report of the Minister of Mines for the year ended Dec. 31 at 1897 on page 469, we find some notes on the "Barkerville" region which are applicable to Hixon creek as well. Under this heading may be described in short the very important area of the "Cariboo schists" in which the famous gold creeks of the district have been carved out, and which carry the many, but as yet - unproductive quartz veins. Dr. Dawson, Mr. Amos Bowman and others believe these gold schists to be source of the gold in the great placer deposits. Mr. Bowman has stated that these gold schists occupying a belt of sixteen miles (northerly extension since discovered) with a probable depth of 5,000 feet, consist of very highly altered sediment clays and sandstones, with occasional bands of limestone and calcareous shales, comprising the well known and characteristic "slate" rock that varies from black to bluish shale, to a more or less foliated grey or green chloritic or talcose schist, which to a great extent has been metamorphosed to the typical mica schist - the most characteristic and widely distributed of the "Cariboo" slates. The rocks to a great extent are highly crystalline, thus distinguishing them from later formations and conform in strike to the general N.W. trend, and being much foliated incline to angles varying from horizontal to vertical. In this excessive folding from the lateral pressure that has caused this great schistosity - have occurred many fissures or fractures conforming in most part in the strike with that of the enclosing rocks in which a large number of quartz veins have been found, more particularly on the summits than in the valleys and low-lying portions. In the Hixon Creek area of the Cariboo, the gold schists are probably more than 5,000 feet wide. The lower contact has never been definitely defined. The upper contact is Gabbro. Above the gabbro no placer gold was discovered.

ORE DEPOSITS:

The ore deposits of Hixon Creek are in the "gold schists" on which so far no ore has been blocked out or developed. (See Annual Report to the Minister of Mines for the year ending 31st December, 1897, page 472): the following are the chief conditions characteristic of nearly all the veins.

(a) These veins to a great extent conform to the strike, but not to the veins of the enclosing schists, but this rule is not general, some veins cutting across the schists.

(b) The gangue is almost invariably lustreless, barren, milky white quartz (the same as found attached to the gold nugget of the pacers) often hackly or easily crumbled.

(c) Much of the quartz (as in the large masses) is perfectly free of sulphides but as a general rule it carries a small percentage of coarsely crystalline iron pyrites, usually along or close to the walls but also in bunches throughout the mass. A little galena is sometimes present, but seldom zinc blende or copper pyrites. The amount of sulphides in some veins is from three to six per cent of the whole.

(d) The values of these sulphides when concentrated in gold and silver, is often found to be good but not high.

(e) So far it has been found that (a) the schists enclosing these veins carry some gold values, also (b) that a band or zone of the schists as well as a reticulating system of very small veins or quartz stringers carry gold and sulphides very similar to the "Homestake" mine in Dakota. Some work has been done on one of these zones.

"The above are extracts from the early Report mentioned."

In the Hixon creek section the above conditions are more or less in evidence. No veins of quartz wider than two feet have been cut in the underground workings - except the rumoured one of six feet in the 200 foot shaft on the old Washburn property. The slates and schists are very silicious in places and carry better values than those quoted above.

TRANSPORTATION:

President transportation is by rail to Quesnel, then by truck a distance of about forty miles to the mine. It is expected that the P.G. and E. Rly. will be completed to Prince George (about forty miles also from the mine North) in the very near future, as arrangements are practically completed to that end by the Government of B.C. The railway line will then pass within three miles of the property.

TAXES:

Taxes under the British Columbia mining laws are as follows in keeping up title: \$100.00 worth of work on each claim a year as Annual Assessment work (eight claims can be grouped and this work done on all or any of them on unsurveyed claims - and 25 cents per acre per year on all Crown-Granted (patented) claims, but the latter case no Annual Assessment work.

ROADS:

The main road that now passes within five miles of the mine is very good, and can be used for autos or trucks all the year round. The five-mile branch road to the mine has no heavy grades and as stated autos can be used over it.

TIMBER:

Ample timber for all needs is available. There are from 200,000 to 250,000 feet of logs newly cut piled on the flat on claim No. 3 of the Cayenne Group.

WATER POWER:

Approximately two miles below the property there is a "fall" of about 200 feet; this would give up to 500 H.P. in the dry season.

MAPS AND PLANS:

In the rough plan accompanying this report, are shown the claims of the Cayenne and Vancouver groups (also a portion of the Washburn ground) and detail of tunnel sampling. A general map of Central B.C. is included.

LABOUR:

Mining labour in B.C. is good, approx. costs. Miners \$5.00 per day gross. Common surface labour \$4.00 to \$4.25. Special labour would be a little higher. Laborers plentiful.

COSTS:

Owing to the quality of the schists, mining costs should be low. Contractors are now prepared to undertake tunnel work on this ground for \$10.00 per lineal foot and find everything.

CLIMATE:

The climate of the Cariboo is about the best in B.C. and whilst cold at times in the winter for short spells, is dry and healthy with the summer season very fine. At the particularly property snow never reaches two feet in depth. The roads are always open.

DEVELOPMENT:

There has been no development work done on the Cayenne and Vancouver groups outside of one tunnel driven obliquely across the schists about 172 feet in length, with a short crosscut of 27 feet (this is where my sampling was done - no surface samples being taken.)

SAMPLING:

With this class of ore, no ^{two} samplings agree, partly because of the erratic distribution of values from time to time but chiefly because no two samplings have been taken over exactly the same area. Average values agree fairly well. The result of my sampling and that of Harris are shown on the plan accompanying this report. On the Washburn group adjoining, a well known American mining engineer recently established values of roughly \$5.00 to \$6.00 per ton across a width of roughly one

hundred feet, but segregated sections of the width carry much higher gold more erratic I think than the Cayenne but of somewhat similar occurrence.

SUMMARY:

The titles to the property are in order.
 The area is sufficient to make a big mine.
 The situation of the property from an economical standpoint is excellent.
 The Geology of the schist belt is considered by eminent engineers to be similar to that of the famous Homestake mine in Dakota and it has been proven that the placer gold of the Cariboo came from these gold-bearing schists.
 Transportation problems will be very easy in the near future as the P.G. and E. Rly. will soon be completed, passing close to the property.
 There is ample timber for all mining purposes.
 Water power could be conserved and developed - outside of that on Hixon creek - within fifteen miles of the claims.

The gold is not so much associated with the larger quartz veins as it is with the silicious slates and schists and small veinlets,

of the Cariboo. The more silicious the slates and schists, the better the values. Most of the gold is in a free state but an appreciable amount is coated with iron. Fine grinding and cyaniding should give a recovery of 95% or better.

In a patch of gravel below the Gabbro contact, nearly all of the gold now being taken out is of a jagged nature, and has quartz adhering to it. The hill above contains therefore very interesting possibilities, and should be thoroughly prospected.

On the Cayenne claim is an outcrop of quartz about 50 feet in width, no work done. I did not sample this but understand that it runs \$2.00 a ton average. The walls or sections of this might be proven to carry pay values that could be mined at a profit.

Summary continued:

An excellent mill site could be constructed at the "falls" two miles below the old workings on the Washburn claims. As Hixon creek has very little grade to that point, a tram could easily be constructed.

With so little work done and no attention paid to gold values in the siliceous slates and schists (now proven to be there) - with areas of this character of tremendous extent in this section, sampling showing

good economic values on the groups, taken in a conservative manner, together with the favourable situation to mine and mill, leads me to think that there is a first class mining opportunity for a good company to thoroughly investigate this property.

Although the Cariboo is an old and famous gold district, little attention has been paid to gold quartz, however the main fact is that whilst quartz has been investigated to some extent, the gold-bearing value of the schists and slates themselves seems to have been entirely overlooked, and whilst probably low in grade on the whole, may well be where the real mines of this district will be opened up. Certainly in my opinion the property dealt with here is most promising and as those belts of schist run for miles, there may be opportunities of finding other areas along them of similar character to the Homestake, particularly since some \$60,000,000 in placer gold has been taken from creeks cutting these schists.

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Vancouver, B.C.
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