

ADVANCE COPY FOR THE USE OF THE OWNER OF THE PROPERTY

Gold

(15° 122° S.E.) In May, 1948 Lawrence Frenier recorded 8 claims covering ground on the upper part of the western side of Porcupine Mountain<sup>1</sup>, at the head of the north fork of Lone Cabin Creek. These claims were staked 2 abreast with common location lines running east of north. Continuing southerly from these claims are eight claims, also 2 abreast, recorded by Norman Hillborn, West of the southern part of Frenier's ground 4 claims were recorded by W. G. Osborne of Bralorne. Osborne also recorded 2 claims east of Frenier's ground. A total of 32 claims on Porcupine Mountain were recorded by Walter Fenton, Henry Fenton, Mary J. Fenton, K.J.S. Chisholm and Hugh McLeod.

In the following notes statements relating to mineral claims are subject to the reservation that the boundaries of the claims have not been established by survey.

Rising from the plateau about 10 miles west of the Fraser River, the summit of the mountain is a conspicuous peak with an altitude of about 7,500 feet; locally the sharp dark peak is also called Black Dome. The area is uninhabited and is essentially unmapped. Porcupine Mountain may be reached from Big Bar Ferry by several routes involving travelling over 25 to 40 miles of trail. The local road from the Gang Ranch through Empire Valley suggests another route which would require building 10 to 15 miles to trail from the road to the claims.

by H. Sargent

<sup>1</sup>See Map 3K - Pre-Emptor's Series, British Columbia Department of Lands & Forests

The claims were visited in August, when Frenier and Osborne were on the ground. The northern and eastern slopes of Porcupine Mountain were not examined. The western and southern slopes of the mountain expose a thick accumulation, largely of greenish-grey fine porphyritic andesitic rocks with some tuffs and some brown platy rhyolites. Near the peak fine-grained greenish volcanic rock appears to intrude the andesites as thick, steeply dipping dykes. Flat lying lavas, with occasional brownish layers, probably of rhyolite are exposed on the north fork of Lone Cabin Creek, over a vertical range of about 2500 feet. Some folding is apparent south of an on the southern part of Hillborn's ground. A few granitic erratics are scattered on the upper slopes of the mountain. Much of the ground covered by the claims is open with grassy or talus-covered slopes.

Numerous leads, some of which contain visible gold, have been found on the claims. The leads are sheeted and brecciated zones in slightly altered volcanics. Some contain a little quartz in tiny lenses and veinlets. Drusy veins or lenses of quartz up to a foot or so thick occur in some leads, and quartz 2 or 3 feet thick occurs in a few of the leads. Locally, across widths of 3 to 8 feet, quartz makes up to 20 to 50 percent of a lead. A few masses of such material stand several feet above the weathered surface. Zones with little quartz are quit inconspicuous, some have widths of 10 to 15 feet. Scattered grains of pyrite are found in the quartz and in the altered volcanics within the leads. Loose material overlying the leads, on panning, yields a concentrate containing pink and dark garnets and some magnetite. Some pans yield gold as numerous fine "colours", a few of which are as much as a thirty-second of an inch across. Free gold, as nests of tiny grains in jasper, was exposed in one of the highest outs. Similar nests are seen in some of the quartz veinlet. Fine grains of gold were seen in numerous specimens of well crystalized quartz,

and at the edges of decomposed pyrite crystals. Visible gold has been found over a vertical range of about 500 feet, in which there is no apparent change in the character of the vein-matter.

The leads trend from 15 to 60 degrees east of north and dip steeply some to the north-west and others to the south-east.

Much of the material in the exposed leads is barren or very low grade. The assays of some samples, the gold that may be panned from soil at the outcrops of some of the leads, and the gold seen in some of the leads, indicate that parts of some leads may be of moderate grade, and some parts may be rich in gold. As the overburden is generally shallow it should be possible to gain much additional information on these leads in a short period of intensive work.

Frenier discovered gold bearing leads on Porcupine Mountain in 1947. He built a shelter on the western slope, near the head of a tributary of Churn Creek, arranged granitic boulders for crushing and grinding and worked on material from some of the veins. He also built a flume about at timberline on his Saddle claim, intending to sluice unconsolidated material at the outcrop of his No. 14 lead. In 1948 he built a small cabin at approximate altitude 6800 feet, near the south-western corner of the Saddle claim. By early August he had made more than a dozen trenches or open-cuts on several leads. Several other leads are resistant to weathering and stand above the surface, or are almost free of overburden and can be distinguished as slightly reddish bands, containing some quartz. He devoted a good deal of energy and ingenuity to attempts to recover gold from the leads single handed. At the cabine he set up boulders for crushing and contrived an ingenious amalgamator consisting of a granite boulder, chipped out to form a basin, in which another boulder properly shaped, is rotated by turning an iron crank. Gold recovered by such means is costly

in labour.

Only some of the leads found by Frenier are mentioned in the following notes. The leads will have to be opened up more completely before their possible value can be determined satisfactorily. Since visible gold is contained in some of the leads, and since gold can be panned from the soil on some outcrops, it may be necessary to take a decidedly large quantity of ledge matter uniformly across any section sampled. Samples mentioned in these notes were taken by the writer. Material panned was taken and panned by Frenier in the presence of the writer.

Between 400 and 500 feet from the northern end of Frenier's location line, at 6950 feet altitude, on the eastern side of a low rocky ridge, an altered zone containing some quartz stringers is exposed naturally. A chip sample across the width of 12 feet, toward the northern end of the exposure assayed a trace in gold. A pan of surface material from about 4 square feet near this sample yielded a few tiny colours. A second chip sample, across 12 feet, sixty feet south of the first, contained slightly more quartz, it assayed Gold, 0.01 oz. per ton.

About a quarter of a mile southerly from this exposure, weak sheeting is apparent in tuffs on the top of the low ridge, for a length of about 100 feet. Vuggy quartz veinlets cut the tuffs and near the veinlets the tuffs contain tiny grains of pyrite. This material was not sampled.

Some 200 yards north-easterly from the cabin tow trenches exposed a sheeted zone with numerous tiny drusy quartz veinlets. A pan from the western end of one trench yielded a few small colours. About 500 feet to the south, on the souther bank of a small easterly flowing creek, No. 13 lead has been exposed in a small cut.

It also is a sheeted zone containing tiny quartz veinlets, some pyrite and calcite. No colours were obtained from a pan of decomposed material on bedrock. About a hundred yards to the south-east a cut exposed No. 14 lead. The exposure consists of a rib of brecciated volcanic rock containing minute quartz veinlets, and on each side, at 3 feet below the surface the cut was still in loose rusty material. Frenier had attempted to bring water to this site for sluicing but had found it impracticable to bring enough water in a flume built of alpine timber. This lead strikes north 50 degrees east and dips 80 degrees to the north-west. A pan of rusty soil from the south east side yielded about 20 tiny colours and 3 flakes of gold about a thirty second of an inch across. A pan of decomposed material from the central part of the rib, yielded about a hundred tiny colours and two or three flakes a thirty second of an inch across. This lead should be prepared for sampling by shooting down to fresh material. The three leads just described are on the Saddle claim.

Near the location line, about 250 feet southerly from the northern boundary of the Whisky Jack and Pinon Pine claims, No. 12 lead stands up several feet above the slope on the south eastern side of a north easterly flowing creek. This lead consists of silicified volcanic rock cut by numerous quartz veins striking north 30 degrees east and standing about vertically. The width is at least 7 feet. The exposure has a length of about 40 feet. The width at the northern end was sampled in a 5 foot and a 2 foot sample, both assayed Nil in gold.

Cuts have been made on the Eldorado and Bonanza claims on several leads up the slope from No. 12 lead, only 2 of these leads will be described. Several cuts expose No. 4 lead, from which Frenier has tried to recover gold for revenue. The lead has been exposed on the steep slope over a length of about 100 feet. It is deeply weathered, strikes north 25 degrees east and stands vertically. At the higher end (altitude 7275 feet) there is some mineralization across 3 feet; at the lower end the fracture is only about 10 inches wide. Numerous specimens of free gold has been obtained from the lead. It was not sampled. No. 2 lead has been exposed near the location line at 7300 feet altitude in a cut, where a width of at least 5 feet is indicated. About 150 feet up the slope a lead, presumably the same one, is exposed in a trench. Here the writer took a sample across 2 feet of rusty decomposed andesite with crumbly quartz veinlets; It assayed, Gold 0.01 oz. per ton; silver, 0.12 oz. per ton. A pan of fine dirt from the part of the trench yielded a few small colours of gold.

This last trench is about 125 feet south-westerly from a group of 4 location posts - initial posts of the Ptarmigan and Black dome and final posts of the Eldorado and Bonanza claims. The peak of Porcupine Mountain is on the Ptarmigan claim. The 4 claim posts are in a little grassy saddle west of the peak on the Eldorada claim. About 100 yards north easterly from the posts a cut at about 7350 feet altitude exposes a lead containing a good deal of jasper cut by white quartz veinlets. The zone exposed is about 7 feet wide

and trends north 35 degrees east. The following assays are of 4 adjoining samples, successively from south-east to north-west, their combined width being that of the zone exposed.

Width Inches	Assay	
	Gold oz./ton	Silver oz./ton
42	0.11	nil
15	0.26	0.1
10	0.19	0.2
18	0.01	trace

Extending south-westerly from the central part of this cut a trench 15 feet long exposed jasper cut by quartz veinlets. In this trench several nests of tiny specks of gold were seen in the jasper.

Hillborn has built a small log cabin, near the north-eastern corner of his Silver Cup claim, at about 6800 feet altitude. He has prospected a lead traceable southerly down the slope from the boundary between his Dolly Varden Claim and frenier's Black Dome claim. Two long trenches following the contour cross this lead exposing altered andesite with some quartz. The lower trench (altitude about 7100 feet) exposed more quartz than is seen in many of the leads. A sample taken in this trench across a width of 3 feet, consisting largely of quartz with some altered andesite, assayed Gold, 0.34 oz. per ton, silver, 4.0 oz. per ton. Below this trench on the open slope veins or lenses of quartz up to 3 feet wide may be followed for quartz veins trend about north 20 degrees east, dip steeply, and are much stronger than the quartz veins in most of the leads seen. Exposures continue for 500 feet down the slope. Quartz of similar strike is exposed about 125 feet east of the southern part of these exposures about 30 feet

west of the location line. It is reported that similar quartz ribs outcrop some distance east of the location line on the Marilyn claim.

Toward the southern end of his ground ( on the Bedrock claim) Hillborn had made two trenches crosscutting a strong lead containing a good deal of quartz. The quartz, 6 feet wide in the southern and larger trench, narrows to the north. It strikes about north 30 degrees east and stands almost vertically. Two samples were cut in this trench, across a combined width of 7 feet consisting largely of quartz. The one sample assayed "Nil", and the other "Trace" in gold, both assayed "Nil" in silver. This trench extends about 60 feet westerly from the lead, exposing rusty andesite with some quartz stringers, and in the western part, northerly striking steeply dipping rhyolite.

On Osborne's Fearless No. 2 claim, at about 6700 feet altitude, a lead is exposed at the top of a steep slope to a small tributary of Churn Creek. This lead strikes about north 50 degrees east and dips 75 degrees northward. Reddish altered andesite 26 inches wide contains a fair amount of quartz in narrow stringers, one of which contained a nest of fine grains of gold. A sample taken across the 26 inch width, 2 feet from the nest of fine gold, assayed Gold, 0.02 oz. per ton, silver, nil. The adjoining 42 inches consisting of slightly altered andesite and of altered andesite containing yellow weathering quartz veinlets, was sampled as a 10 inch and a 32 inch sample. They assayed "Nil" and "Trace" in gold. About half a pan of material taken at this outcrop yielded a fragment of andesite and several fragments of quartz showing fine Gold, some of which was at the margins of partly decomposed pyrite grains. The pan also yielded several dozen fine "colours". The lead can be traced for some distance on the talus slope



below the outcrop.