See Maps in Prop. File
92B, C, F
Gunnex Ltd.
E & N Land Grant

-82
STORM

007067

MINERAL OCCURRENCE #11

(Hunting's Survey #5; Muller's #4)

"Havilah Gold Mines"

EN. 143

GENERAL INFORMATION:

Location and Access:

These old workings are some 11½ miles SE of Port Alberni, in King Solomon Basin at headwaters of McQuillan Creek, a tributary of China Creek. It is over a mile NE of Thistle mine, on the northern slope of Mount McQuillan.

The more extensive lower workings are between 3,400' and 3,611' elevations, on the west side and near the mouth of a northerly trending cirque (on "Gillespie" vein).

The less extensive upper workings are between 4,200' and 4,370' (in 1944 report, different from map in 1936 report) elevations, and are 1,700' southerly by trail up the cirque-basin from the lowest adit on lower workings (on "Alberni" and "McQuillan" veins).

The access is via China Creek road (Port Alberni water-shed area, medical permission needed), passing through a locked gate near city intake, driving 12½ miles to McQuillan Creek; thence up steep hill, but on fairly good road up McQuillan Creek. It is 2½ miles up this creek to the old base camp at 2,400' elevation; upper half of road is now undrivable.

From base camp it is some 3/4 miles by old packhorse trail to mine camp, elevation 3,400' (a climb of 1,000'). The lowest workings are at this elevation.

All trails, road, camps and workings are now in disrepair and overgrown, except for good logging road at lower elevations.

List of Reports and References:

B.C.Minister of Mines: (Refer to "King Solomon"):
1) Annual Report, 1893, page 1080.
2) Annual Report, 1894, page 773.
3) Annual Report, 1895, page 652.
(Refer to "Havilah")
4) Annual Report, 1936, pages F30-33 (by J.S.Stevenson).
5) Annual Report, 1939, pages A40, 88.
6) Annual Report, 1944, pages G153-A154 (by J.S.Stevenson).

CPOG Report: The Mineral Resources of the E & N Land Grant, pages 69-72 (by Matthews).

Gunnex Reports: Weekly report on E & N Land Grant, August 24-30, 1964, page 1, by T. F. Schorn.

Work done by Gunnex, 1963/64:

Our samplers - prospectors worked last fall in the McQuillan Creek watershed area, doing silt sampling on the main stream and the tributaries. The following is from Schorn's report:

> "Much mineral was noted in the McQuillan Creek area (King Solomon Basin). The mineralization is mainly Cu-Pb-Zn in quartz and probably was coming from the showings of Havilah Gold Mines. Some of the material was in place as narrow quartz veins but most of it was talus. An outcrop of jasper with veinlets of hematite was found on the west side of McQukllan Creek road; minor chalcopyrite and Cu stain was noted in jasper; all mineralized areas that were found were sampled."

The men were camping one mile up creek, near end of the good logging road. This camp and the area below it was visited by Mr. Schorn and myself, but we did not get to the showings.

Standing:

According to Stevenson, 1944, the property consisted of "storm" number 1 to 4 claims, held by Havilah Gold Mines Limited, in the name of Herbert F. Hewitt, liquadator, under the "Free Miner's Exemption Act". The present status of the property is not known; on latest claim map (January, 1965) this ground is shown as open, with no claims of any kind.

It was first staked in 1895 as "King Solomon" claim, with subsequent stakings in 1934, and 1936 by Walter Harris.

GEOLOGY:

General Geology:

The area was first mapped by Stevenson (1936 and 1944 reports) with the map of upper workings in 1936 report (see copy here) and the general geology map in 1944 report. In 1962 Jones of Hunting's Survey did some field work in the area, but did not visit the workings.

Stevenson has the country rock mapped as China Creek andesite (older volcanics), in contact with diorite just east of the showings, with hornblende-feldspar (diapase) and quartz-feldspar-porphyry (Tertiary?) dykes at the showings and elsewhere.

However, Jones (Hunting's) mapped all the area as Vancouver volcanics, presumably also correcting Stevenson's work on the basis of aeromagnetic interpretation.

Muller, in turn, (G.S.C.,1963) has mapped all the area as Sicker volcanics.

The finding of jasper in McQuillan Creek area in 1964 tends to point to the presence of Sicker volcanics in the area. Most likely the geology is far more complex than indicated by any of the aforementioned surveys.

Geology on workings:

(For geology of upper workings see map included)

At lower workings the "Gillespie" vein has an attitude of N8°E/65°-80°E. The vein consists of ribbon-quartz separated by thin laminae of sheared rock which is commonly replaced by sulphides. The ribboning of quartz is more striking due to the tendency of the vein to "slab-off" along the partings of sheared rock. Carbonatized, angular fragments of wall rock are replaced by sulphides, etc, in places. Veinlets of later comb-quartz cut ribbon-quartz in places. Major sulphide is pyrite, with minor arsenopyrite, galena and sphalerite.

Wall rock consists of andesitic lava, massive, fine-grained and amygdaloidal in places.

The geology of upper workings is more complex. "Old greenstones" mostly andesitic, but also shattered tuffs, contain irregular and lenticular feldspar dykes, highly altered. These include light coloured hornblende-feldspar dykes and a conspicuous, coarse-grained quartz-feldspar porphyry dyke which has the same attitude as veins.

All these rocks have been intruded to the east by a large body of coarse-grained hybrid diorite.

Half a mile north, across basin in "rusty" bluffs, the porphyry dyke is cut and partly replaced by a large area of fresh, dense diabase, which, in turn, is cut by strong, tabular quartz vein.

No acid intrusives that could be correlated in appearance with typical coast range granodiorite were found; the veins probably being the only representatives.

Two veins, "Alberni" and "McQuillan", are exposed in upper workings, in a short adit, and in the open cuts above it, respectively. Their details will be discussed more fully under "workings" (see sketch).

SUMMARY OF WORK:

Production:

In 1936: 7 tons, containing 7 oz. of gold and 6 oz. of silver.
In 1939: 1039 tons, containing 244 oz. of gold and 1328 oz. of silver.

History:

It was first explored in 1890's, with first claim staked in at this time. An open cut was made by 1895 (on McQuillan vein?).

Most of the work was done since 1936 staking, and suspended by 1940. During this period of mining a high-line tram for ore and supplies was operated between base camp and mine camp.

The work on upper showings was done in 1936, while on lower showings most of the work was done between 1938 and 1939.

Lower Workings:

The main workings are here, on "Gillespie" vein, consisting of 3 drift-adits: "800", "900" and "1000" adit.

(1) The "800" adit:

This is at 3,600 feet elevation (highest of three) and is driven S2°W for 275' as a drift. From portal to 180' the vein ranges from 4 to 16 inches wide, with average width of 11 inches. At 180' vein is cut by a diagonal fault, displacement unknown. Beyond this to 220' no vein has been found. From 220' to face, a 2-inch quartz-pyrite vein (not main vein?) is found in the back of the drift. This vein contrasts with main vein, being narrower and lacking the characteristic ribboning; also vertical instead of dipping east as the main vein.

(2) The "900" adit:

This is at 3,500 feet elevation and is driven S8°W for 540' as a drift. At 160' from portal a raise has been driven to surface. From portal to 125' from face the vein ranges from 4 to 38 inches, with arithmetical average of 15 inches. At 125' from face the vein is faulted and displaced an unknown distance. As in "800" adit, only a 1-inch quartz-pyrite stringer is found in the back, from the fault to the face, not thought to be the main vein. The vein splits 90' from portal, with 4-14 inch branch leading south and going into east wall at 130'. At 160' from portal a parallel vein comes into east wall and follows it to 300', turning into wall again, and ranging from 2 to 4 inches, being ribbon-quartz with minor sulphides.

(3) The "1000" adit:

It is at 3,400 feet elevation (lowest) and is driven S8°W for 860'. At 90' from portal a crosscut is driven westerly for 30'. At 550' a raise is driven to the two upper adits. Here the vein ranges from 2 to 24 inches, with an arithmetical average of 9 inches. At 190' from face is a vein-shear, coincident with appearing of purple amygdaloidal lava west of the drift and the usual green lava still to the east.

Stevenson reports (1944)13 samples being taken from different places along vein in the three adits. Assays ranged from 0.02 to 0.4 oz. of gold per ton over width from 6 to 33 inches. The "Gillespie" vein dips on the average, between the three adits, 75°E. In 1936 report (before adits) Stevenson also reports five (?) cross-trenches.

(4) Trenches:

At 3,500 feet elevation (100' west from cabin) a combined cut and stripping exposed the main vein for a strike length of 20 feet, the vein being tabular at N5°E/70°E, ranging from 15 to 20 inches. It consists of

quartz with abundant sulphides bands, mostly pyrite, galena and sphalerite, with minor arsenopyrite and chalcopyrite. Sampling this cut resulted in the following assays:

width	Gold oz./ton	Silver oz/ton	Lead %	Zinc %
19"	0.20	2.2	0.4	0.23
19"	0.28	0.9	-	-
63"	0.06	0.4	Tr.	0.28
4"	0.26	1.0	Tr.	0.30
60"	0.02	Tr.	-	-

The vein is exposed in two of other trenches south from this trench and cut. In next one, 3-inch quartz vein can be correlated with main vein. In another out or trench, 75' higher than the main cut, the vein is exposed for a strike length of 40 feet, averaging 1 foot wide and containing abundant sulphides. Three samples, taken across 12 inches of the oxidized base of the exposure assayed (including fourth sample taken 12 inches across the vein at top of exposure):

Gold oz/ton	Silver oz/ton
7.0	3
1.9	1.7
1.68	2.8
2.22	0.2

Another trench, 130' S20°W and 100' higher from last one, failed to intersect vein. The vein may have pinched; greenstone indicates shattering.

North from main cut near cabin two other trenches cross the extension of vein. The first, 370' N12°E and 200' lower in elevation is a 30' cut, exposing 2 12-inch shearings 12 feet apart, with rusty, blocky greenstone and narrow quartz veinlets. Samples across these zones assayed:

Gold oz/ton	Silver oz/ton
0.08	1.0
0.12	Tr.

The second trench here, 45' N12°E and 30' lower in elevation from last one, is a 12' cut, north-south, and exposes 8-inch oxidized zone of decomposed rock, with 1-inch ribbon quartz. A sample assayed: Gold 0.02 oz.per ton; silver, trace.

The probable contribution of "Gillespie" VEIN NORTHWARD IS EXPOSED IN THE BED OF McQuillan Creek about 150' N15°E from this last trench, where it occurs as three 1-2 inch tight quartz veinlets in hard massive andesite.

Upper workings:

Two veins are exposed here: "McQuillan" in short adit and "Alberni" in open-cuts above it (see sketch).

(1) The adit:

The adit is at 4,100' elevation, 1,900' S7°W and 600' higher from main cut in lower workings, driven 36' as open cut and 21' as an adit S15°W. From face a short crosscut driven 8' west.

Over 16 feet on face of open cut, above back of portal and 10' up, are three shears at N5°E/70°E. The east shear is 20 inches including 3 inches of quartz and sulphides on foot wall. The middle shear is narrower, with 1-8 inch quartz lens. The west shear is a 3-foot layer of sheared andesite intervening between the quartz porphyry and the feldspar porphyry west therefrom; it contains a short lens of quartz up to 8 inches thick. The shear material and quartz here assayed, respectively:

Gold oz/ton	Silver oz/ton
0.08	0.6
1.0	0.4

Underground the east shear tightens to only a slip in the back, and in the face as a 4-inch width of silicified porphyry with abundant pyrite which assayed: Gold 0.2 oz/ton; Silver, trace.

Centre shear become 8-inch sulphide-quartz vein southward, but end northwards against a slip. Vein assayed: Gold 0.14 oz/ton; Silver, trace.

Centre shear and contained quartz vein is called "McQuillan"; the other two unnamed.

(2) First open cut:

The "Alberni" vein is a zone of intensively sheared greenstone, averaging 10' wide, containing 1 to 3 lenticular quartz veins with heavy sulphides (pyrite, sphalerite, galena, with minor chalcopyrite and areseno-pyrite). Lenses vary from 4 to 24 inches, at N20°-25°E/65°-70°NE.

The first cut exposes 5' shear zone with abundant sulphides in hanging wall of quartz-porphyry. A 4-inch quartz lens pinches south. Several small shears, averaging 4 inches are westward in the trench; sulphides are scarce.

(3) Second open cut:

This is the main showing on "Alberni" vein, consisting of 15 feet imperfectly sheared rock with 3 ribs of quartz, 4,4 and 24 inches. The ribs are lenticular. For assays of vein matter see plan. Foot wall is marked by quartz-porphyry, hanging wall by greenstone; bounded east by hybrid diorite.

(4) Third open cut:

This is a long and narrow trench, crossing the projection of shear zone in badly shattered greenstone with some rust but no quartz. 46' above this is a small showing of quartz.

A strong quartz vein, N25°E (65°NE, occurs in some high diabase bluffs on east side of basin. The interveining ground is a talus-slope and

bottom of basin. The vein, 1-2 feet wide, is banded by sulphides including pyrite and galena. An oxidized 2-foot sample assayed: Gold 0.16 oz/ton; Silver 0.6 oz/ton.

The immediate wall rock is dense diabase with disseminated pyrite, not related to mineralization. 10' northward this diabase includes portions of a quartz-porphyry dyke similar to, and projectable to, that of findings in upper workings (Stevenson makes an important note of this). Tongues of diabase cut across the dyke, indicating diabase being later; vein, however, is uninterupted by diabase and is therefore later.

The diabase in bluffs extends about 200' north and south of vein, on both sides being bounded by definitely older andesite grading into hybrid diorite on the east wall of cirque.

(The above descriptions were compiled from two reports by Stevenson, 1936 and 1944, the material broken down under different headings for easy reference).

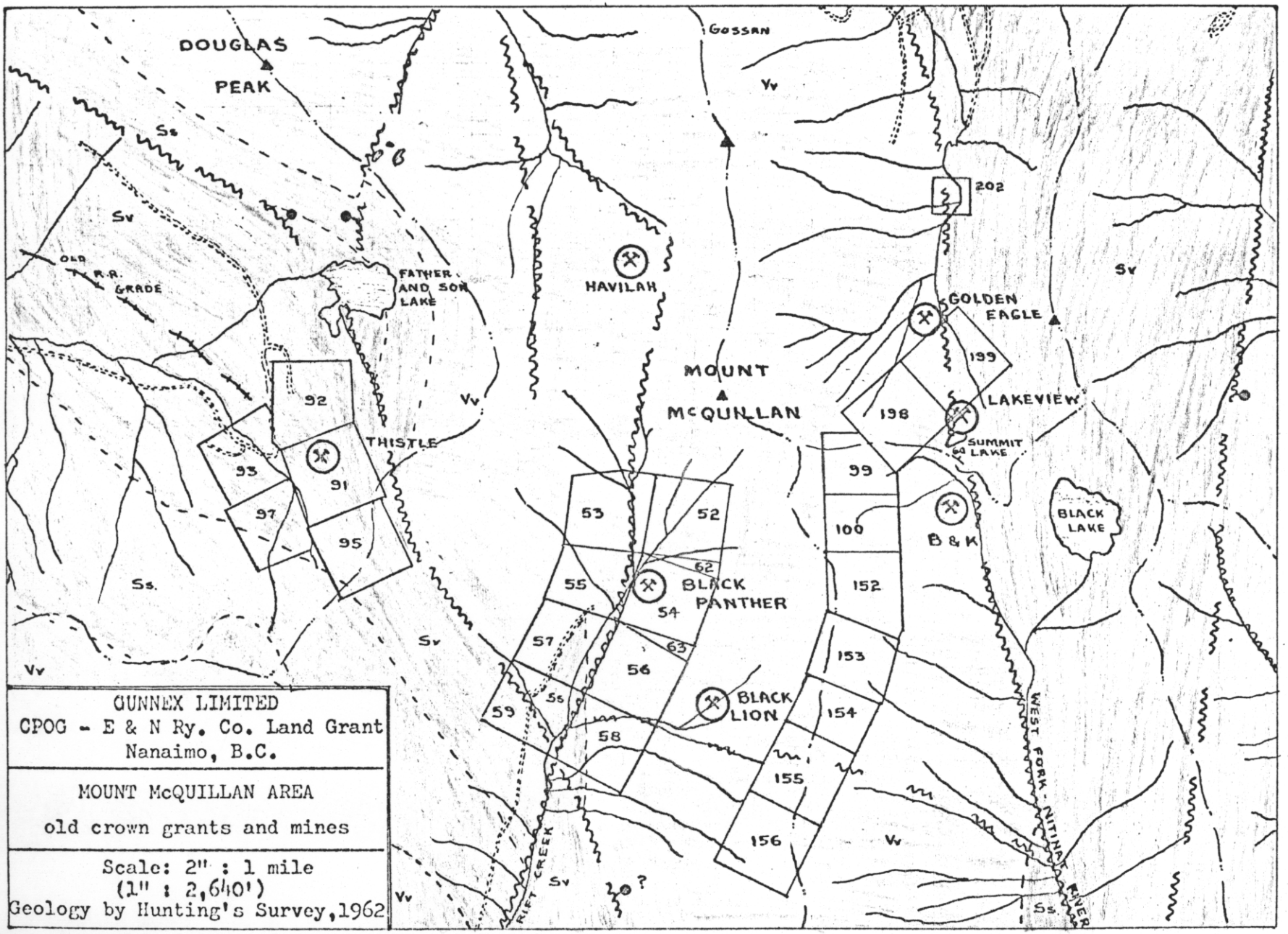
Last fall, while silt sampling in McQuillan Creek drainage, the following rock samples were collected from mineralized areas and assayed:

Tag #	Description	Au	Ag	Cu	Pb	Zn
1149	Tuff with pyrite; elevation 3700'	0.02	0.1	0.05	0.2	0.65
1150	E side McQuillan Creek, 173½° magnetic to upper Havilah production adit; elev.3500'	Tr.	Tr.	0.18	Tr.	0.4
1151	West side of McQ.Cr.	Tr.	Tr.			
1152	Rock slide area; E side of McQukllan Creek	Tr.	0.4	0.09	0.54	1.34
1153	Slide area, E side of basin	Tr.	Tr.	0.06		
1154	West side, large canyon	0.01	Tr.	0.03		
1155	East slope-rusty volcanic. Talus. Much pyrite	0.01	Tr.	0.02		

COMMENTS: See same on "Thistle" No. 10.

H. Laanela
February, 1965

HL:s


DOUGLAS PEAK
Ss
Sv
OLD R.R. GRADE
FATHER AND SON LAKE
THISTLE
92
93
91
97
95
Ss.
Vv
Sv
Vv
GOSSAN
Vv
HAVILAH
MOUNT McQUILLAN
202
Sv
GOLDEN EAGLE
199
198
LAKEVIEW
SUMMIT LAKE
99
100
B & K
BLACK LAKE
152
153
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62
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BLACK PANTHER
57
63
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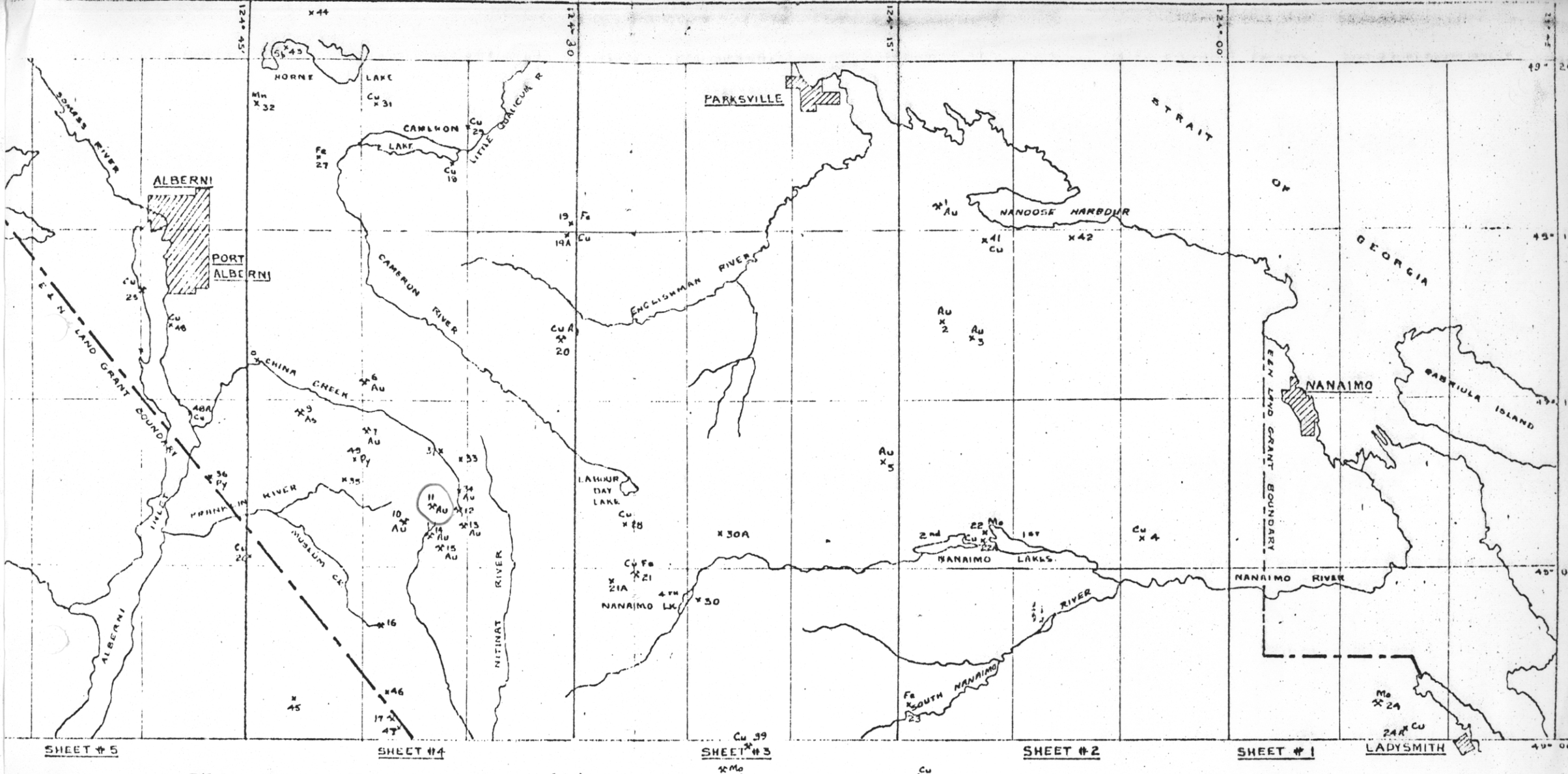
59
Ss
58
BLACK LION
Sv
Vv
RIFT CREEK
Vv
WEST FORK - NITINAT RIVER
Ss.
GUNNEX LIMITED
CPOG - E & N Ry. Co. Land Grant
Nanaimo, B.C.
MOUNT McQUILLAN AREA
old crown grants and mines
Scale: 2" : 1 mile
(1" : 2,640')
Geology by Hunting's Survey, 1962



THE FOLLOWING CONSIST OF 2 LOCATIONS: 19 (19A), 21 (21A), 22 (22A), 24 (24A), 30 (30A), 48 (48A)

LEGEND:

× MINOR OR UNEXPLORED MINERAL SHOWING

⚒ MINE OR MAJOR SHOWINGS

EN. 143

GUNNEX LIMITED

INDEX MAP FOR MINERAL OCCURRENCES

ALBERNI - NANAIMO MAP - AREA

E. & N. LAND GRANT

4 MI. 0 4 MI. 8 MI.