83-#878 - 11802

GALLANT GOLD MINES LTD.

GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS

REPORT ON THE

PERRY CREEK PROPERTY

FORT STEELE MINING DIVISION

BRITISH COLUMBIA

NTS 82 F/8E, 9E

January 1984

J.C. Ridley, B.Sc.
A.G. Troup, P.Eng.

CLAIMS WORKED

CLAIMS	RECORDS	ANNIVERSARIES
PETRA 9-15	799-905	19 OCT
LINDA 2,4,6,8	810,812,814,816	5 NOV
PETER ROCK	397	16 NOV
TANIS	149	4 FEB
RUNNING WOLF	597	MAR
ELK HORN	598	MAR
ECLIPSE	343	7 NOV
ANNA	344	7 NOV
STANDARD	345	7 NOV
AGNES	346	7 NOV
PIONEER	347	7 NOV
OYSTER	348	7 NOV
EVENING STAR	349	7 NOV
BIRDIE LOAD	395	16 NOV
ARIADNA 1-6	1057-1062	10 SEP

Location: 49°29'/116°6'
Owners: Gallant Gold Mines Ltd. and John Wolfe
Operator: Gallant Gold Mines Ltd.
Consultant: A.G.Troup of Archean Engineering Ltd.
Project Geologist: J.C. Ridley of Mark Management Ltd.

GALLANT GOLD MINES LTD.
GEOLOGICAL, GEOPHISCAL AND GEOCHEMICAL SURVEYS
PERRY CREEK PROPERTY
TRAIL CREEK MINING DIVISION
NTS 82F/8,9

SUMMARY

The Perry Creek gold prospect is located 23 kilometres west of Cranbrook in southeastern B.C. The property consists of 96 units in several non-contiguous claim blocks paralleling Perry Creek in the Moyie Range of the Purcell Mountains. This area has been prospected for both placer and lode gold since the mid 1800's.

The property is underlain predominantly by sedimentary rocks of the Creston and Kitchener Formations. Moyie microdiorite/andesite occur as dykes, flows and stocks in these sediments, all of which belong to the Purcell Supergroup.

During the 1983 field programme, geological, geochemical and geophysical surveys were carried out over areas highlighted by previous surveys.

Results of the work completed to date suggests that lode gold mineralization in the Perry Creek area is associated with extrusive and intrusive bodies of andesite and metadiorite in the vicinity of shear zones. Future exploration programmes should focus on these zones.

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1. INTRODUCTION

The Perry Creek property is a gold prospect comprised of several claim blocks located along the west side of Perry Creek, 23km southeast of Kimberley, B.C. In 1983, an exploration programme was carried out to search for the source of placer gold found in Perry Creek. Geological, geochemical and geophysical work was carried out by a Mark Management crew of two during the period July 16 - 30. A base camp was set up beside Perry Creek at kilometre 15 on the main logging road. The programme was supervised by Mark Management project geologist J.C. Ridley under the direction of Archean Engineering consulting geologist A.G. Troup.

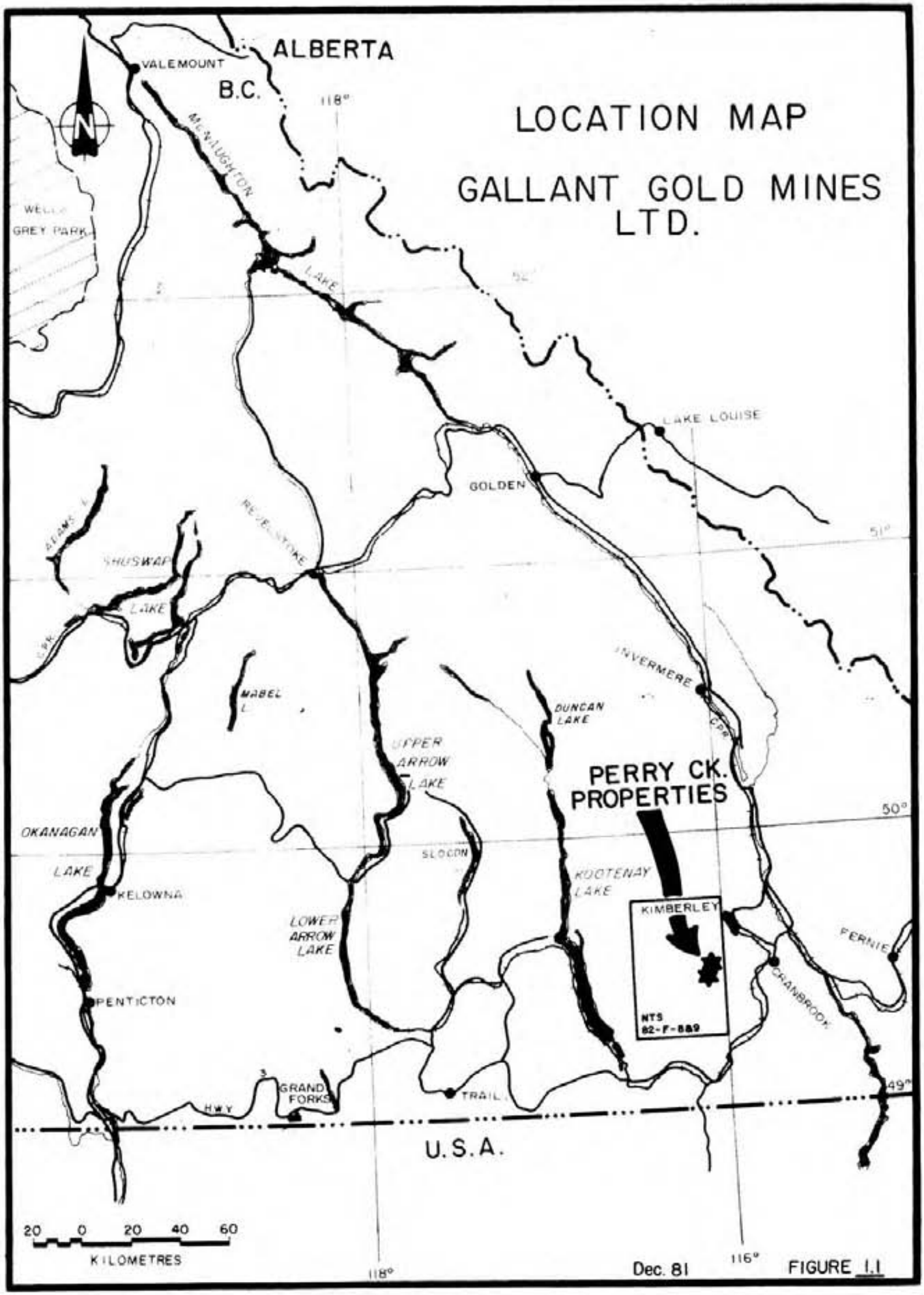
1.1 Location and Access

The property is situated on the west side of Perry Creek approximately 20km south-southwest of Kimberley and approximately 23km west-southwest of Cranbrook. It centers on latitude 49°29'N and longitude 116°6'W (Figure 1.1).

Access to the property is provided by a good, active logging road which leaves the Kimberley-Cranbrook highway at Wycliffe. Numerous new side-haulage roads and old pack trails provide good access to many of the areas of interest.

1.2 Physiography

The property is situated in the Moyie Range of the Purcell Mountains. Maximum relief is approximately 3000 feet (914m) ranging from 4000 feet (1219m) to 7000 feet (2133m). The highest elevation in the immediate area is Grassy Mountain at 8174 feet (2491m). The major portion of the property is drained by northeasterly flowing Perry Creek and its associated east-southeasterly flowing side drainages. Lakes are scarce on the property, although small lakes reminiscent of tarns occur at higher elevations just outside of the property boundary.


LOCATION MAP
GALLANT GOLD MINES LTD.
ALBERTA
B.C.
VALEMOUNT
N
MCLEUGHTON
WELLS GREY PARK
LAKE
118°
52°
LAKE LOUISE
GOLDEN
ADAMS L.
SHUSWAP
LAKE
REVELSTOKE
CPR
51°
MABEL L.
INVERMERE
DUNCAN LAKE
UPPER ARROW LAKE
PERRY CK. PROPERTIES
50°
OKANAGAN
LAKE
KELOWNA
SLOCAN
KOOTENAY LAKE
KIMBERLEY
LOWER ARROW LAKE
FERNIE
PENTICTON
GRANBROOK
NTS 82-F-8&9
GRAND FORKS
TRAIL
HWY
49°
U.S.A.
20 0 20 40 60
KILOMETRES
118°
116°
Dec. 81
FIGURE 1.1

Precipation is high, from 16" to 72" (41 to 183cm). A moderate snow cover falls during winters which are severe. The mean daily temperature is 16° to 18° in July and -5° to -10° in January.

The claim area is well timbered with Engelmann spruce, alpine fir, lodgepole pine, white bark pine, alpine larch, limber pine, Douglas fir, western white pine and contains thinly dispersed growths of underbrush in the creek bottoms. Generally, travel by foot is pleasant and quick except in the steeper terrain.

The area has been glaciated and is covered by glacial material of variable thickness. Small drumlin-like features striking north-northeast are present in some areas, but no direction of ice movement can be discerned from these.

1.3 Claim Information

The claims on which work was conducted this year are listed on the title page of this report. The property consists of eleven modified grid mineral claims, 29 two-post claims and nine crown grants (Map 1.3) all within the Fort Steel Mining Division. Pertinent claim information including record numbers and expiry dates are given in Table 1.3

TABLE 1.3

Claim Status

Claim Name	Units	Record No.	Expiry Date
Petra 9 - 15	7	799-805	Oct. 19, 1984
Linda 1 - 8	8	809-816	Nov. 5, 1984
Carol 1 - 8	8	817-824	Nov. 5, 1984
Eclipse (L10223)	1	343	Nov. 7, 1984
Anna (L10224)	1	344	Nov. 7, 1984
Standard (L10225)	1	345	Nov. 7, 1984
Agnes (L10226)	1	346	Nov. 7, 1984
Pioneer (L10227)	1	347	Nov. 7, 1984
Oyster (L10228)	1	348	Nov. 7, 1984
Evening Star (L10229)	1	349	Nov. 7, 1984
Mark	6	136	Nov. 24, 1984
Luke	9	137	Nov. 24, 1984
John	4	138	Nov. 24, 1984
Janet	1	86	Oct. 22, 1987
Janet 1	4	87	Oct. 22, 1987
Gold	10	148	Feb. 4, 1988
Azlin	6	394	Nov. 16, 1987
Birdie Load	1	395	Nov. 16, 1987
Golden Wolfe	4	396	Nov. 16, 1987
Ariadna 1 - 6	6	1057-62	Sept. 10, 1988
Tanis	4	149	Feb. 4, 1986
Peter Rock	9	397	Nov. 16, 1985
Lone Eagle (L14951)	1	97	Nov. 4, 1986
Quartz Creek (L14952)	1	98	Nov. 4, 1986

1.4 History

The Perry Creek area has been prospected for placer and lode gold since the mid 1800's. Most of the placer activity took place at Old Town, with only minor work done upstream. At present, the placer rights to Perry Creek are held by several different miners, most of whom work their claims seasonally. Mr. Zimmerman of Cranbrook, B.C. has the largest operation in progress. His placer claims overlap with Gallant's JOHN, MARK and BIRDIE LOAD mineral claims. In searching for lode gold, prospectors of the past explored quartz veins and ledges by putting in adits, shafts and hand trenches. Some of the veins carried gold and although no major deposit was discovered, several small ore shipments are reported.

Research of old literature and the discovery of old workings prompted Gallant Gold Mines Ltd. to restake the area. Since then, Gallant Gold Mines Ltd. has carried out programmes of prospecting, soil sampling, VLF-electromagnetic surveys, geologic mapping, bulldozer trenching, heavy mineral concentrate sampling and a fluxgate magnetometer survey.

1.5 Work Done by Gallant Gold Mines in 1983

In 1983, field work was conducted by Gallant Gold Mines Ltd. from July 16 to 30. During this period the following surveys were completed:

1) Detailed silt and heavy mineral concentrate sampling was carried out over areas where anomalous copper, lead, zinc, silver and gold values were found in 1981.

2) Detailed geological mapping and rock chip sampling was completed over old workings and sections of the property that had been overlooked by previous Gallant Gold surveys.

3) A detailed VLF-electromagnetometer survey was run over the Petra claims in an attempt to delineate potential mineralization along the suspected Perry Creek shear zone.

LEGEND

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

12 Till, gravel, sand, silt, alluvium

MESOZOIC (MAY BE CENOZOIC)

11 Granodiorite, quartz monzonite, pegmatite

PALAEOZOIC

CAMBRIAN
LOWER CAMBRIAN

10 EAGER FORMATION: dark argillite, grey argillite; grey limy argillite, brown weathering sandy limestone

9 CRANBROOK FORMATION: siliceous quartzite, grit, and conglomerate

PROTEROZOIC

PURCELL OR (?) LATER

8 MOYIE INTRUSIONS: meta-diorite and meta-quartz diorite

PURCELL

7 DUTCH CREEK FORMATION: laminated black argillite, green argillite; quartzite, dolomite

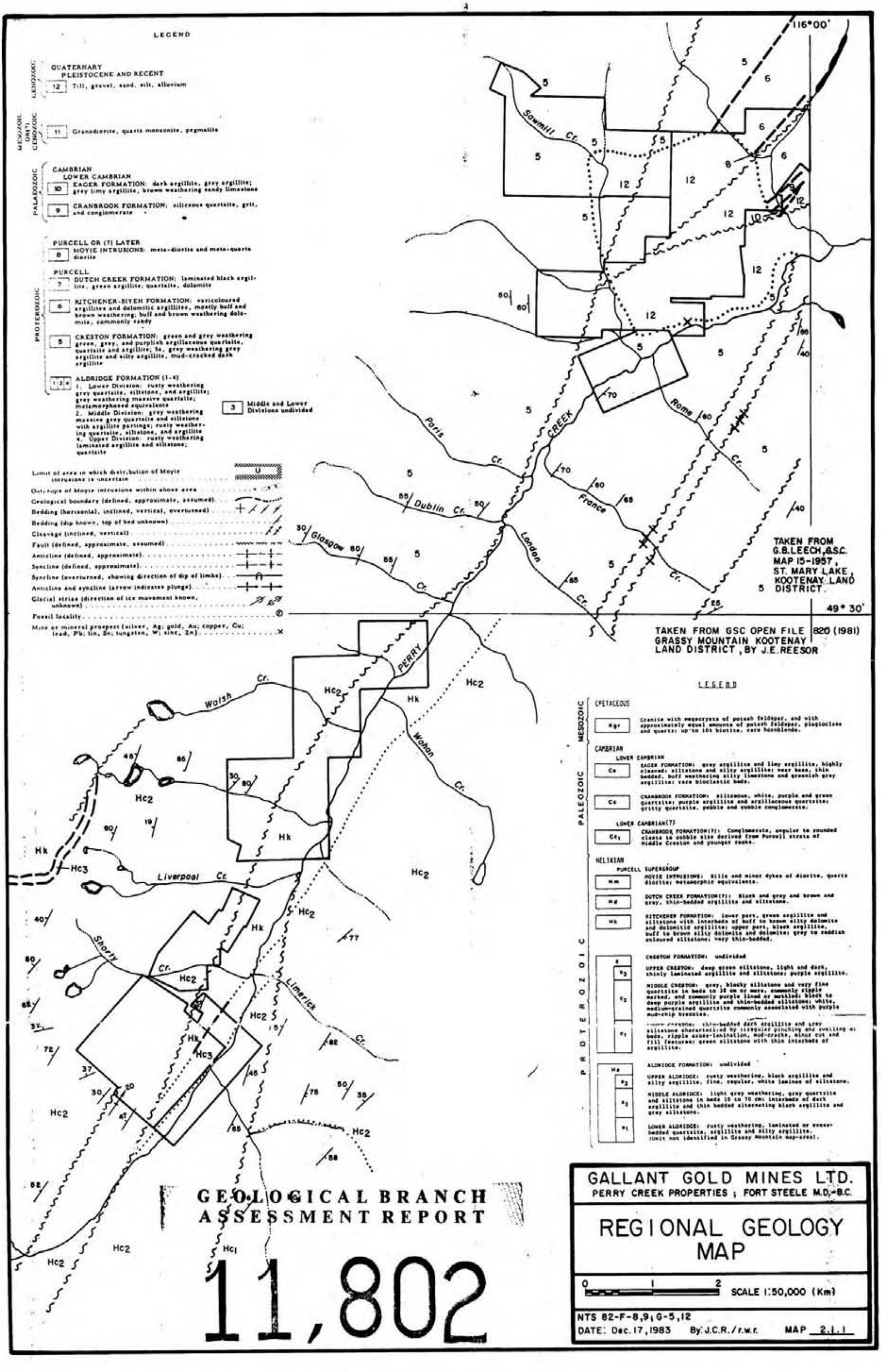
6 KITCHENER-SIYEH FORMATION: varicoloured argillites and dolomitic argillites, mostly buff and brown weathering; buff and brown weathering dolomite, commonly sandy

5 CRESTON FORMATION: green and grey weathering green, grey, and purplish argillaceous quartzite, quartzite and argillite; 5a, grey weathering grey argillite and silty argillite, mud-cracked dark argillite

1 2 4 ALDRIDGE FORMATION (1-4)
1. Lower Division: rusty weathering grey quartzite, siltstone, and argillite; grey weathering massive quartzite; metamorphosed equivalents
2. Middle Division: grey weathering massive grey quartzite and siltstone with argillite partings; rusty weathering quartzite, siltstone, and argillite
4. Upper Division: rusty weathering laminated argillite and siltstone; quartzite

3 Middle and Lower Divisions undivided

Limit of area in which distribution of Moyie intrusions is uncertain ..... U
Outcrops of Moyie intrusions within above area
Geological boundary (defined, approximate, assumed)
Bedding (horizontal, inclined, vertical, overturned)
Bedding (dip known, top of bed unknown)
Cleavage (inclined, vertical)
Fault (defined, approximate, assumed)
Anticline (defined, approximate)
Syncline (defined, approximate)
Syncline (overturned, showing direction of dip of limbs)
Anticline and syncline (arrow indicates plunge)
Glacial striae (direction of ice movement known, unknown)
Fossil locality
Mine or mineral prospect (silver, Ag; gold, Au; copper, Cu; lead, Pb; tin, Sn; tungsten, W; zinc, Zn)



TAKEN FROM G.B.LEECH, G.S.C. MAP 15-1957, ST. MARY LAKE, KOOTENAY LAND 5 DISTRICT.

TAKEN FROM GSC OPEN FILE 820 (1981) GRASSY MOUNTAIN KOOTENAY LAND DISTRICT, BY J.E.REESOR

LEGEND

MESOZOIC

CRETACEOUS

Kgr Granite with megacrysts of potash feldspar, and with approximately equal amounts of potash feldspar, plagioclase and quartz; up to 10% biotite, rare hornblende.

PALEOZOIC

CAMBRIAN
LOWER CAMBRIAN

Ce EAGER FORMATION: grey argillite and limy argillite, highly cleaved; siltstone and silty argillite; near base, thin bedded, buff weathering silty limestone and greenish grey argillite; rare bioclastic beds.

Cc CRANBROOK FORMATION: siliceous, white, purple and green quartzite; purple argillite and argillaceous quartzite; gritty quartzite, pebble and cobble conglomerate.

LOWER CAMBRIAN(?)

Cc1 CRANBROOK FORMATION(?): Conglomerate, angular to rounded clasts to cobble size derived from Purcell strata of Middle Creston and younger rocks.

PROTEROZOIC

HELIKIAN
PURCELL SUPERGROUP

Hm MOYIE INTRUSIONS: Sills and minor dykes of diorite, quartz diorite; metamorphic equivalents.

Hd DUTCH CREEK FORMATION(?): Black and grey and brown and grey, thin-bedded argillite and siltstone.

Hk KITCHENER FORMATION: lower part, green argillite and siltstone with interbeds of buff to brown silty dolomite and dolomitic argillite; upper part, black argillite, buff to brown silty dolomite and dolomite; grey to reddish coloured siltstone; very thin-bedded.

Hc CRESTON FORMATION: undivided

Hc3 UPPER CRESTON: deep green siltstone, light and dark, thinly laminated argillite and siltstone; purple argillite.

Hc2 MIDDLE CRESTON: grey, blocky siltstone and very fine quartzite in beds to 30 cm or more, commonly ripple marked, and commonly purple lined or mottled; black to deep purple argillite and thin-bedded siltstone; white, medium-grained quartzite commonly associated with purple mud-chip breccias.

Hc1 LOWER CRESTON: thin-bedded dark argillite and grey siltstone characterized by irregular pinching and swelling of beds, ripple cross-lamination, mud-cracks, minor cut and fill features; green siltstone with thin interbeds of argillite.

Ha ALDRIDGE FORMATION: undivided

Ha3 UPPER ALDRIDGE: rusty weathering, black argillite and silty argillite, fine, regular, white laminae of siltstone.

Ha2 MIDDLE ALDRIDGE: light grey weathering, grey quartzite and siltstone in beds 10 to 70 cm; interbeds of dark argillite and thin bedded alternating black argillite and grey siltstone.

Ha1 LOWER ALDRIDGE: rusty weathering, laminated or cross-bedded quartzite, argillite and silty argillite. (Unit not identified in Grassy Mountain map-area).

GALLANT GOLD MINES LTD.
PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

REGIONAL GEOLOGY MAP

0 1 2 SCALE 1:50,000 (Km)

NTS 82-F-8,9; G-5,12
DATE: Dec. 17, 1983 By: J.C.R./r.w.r. MAP 2.1.1

2. GEOLOGY

2.1 General Geology

The regional geology of the Perry Creek area north of 44°30' was mapped (1 inch = 1 mile scale) by G.B. Leech, of the Geological Survey of Canada, from 1950 to 52. This data is compiled on Map 15 - 1957, St. Mary Lake. The geology south of 44°30' was mapped (1:50,000 scale) by J.E.Reesor also of the Geological Survey of Canada in 1980 and 1981. This is found in Open File 820 (1981). See Map 2.1.1.

The property is underlain predominantly by Proterozoic age rocks of the Purcell Supergroup. The Moyie microdiorite/andesite flows, dykes and stocks occur within argillite, siltstones and quartzites of the Creston and Kitchener Formation. In the northeast corner of the property sediments belonging to the Lower Cambrian Cranbrook and Eager Formations lie unconformably on the Kitchener Formation sediments. The following paragraphs describing these units have been taken from the G.S.C. publications.

The Creston Formation has been subdivided into three units, provisionally called Lower (Hc_1), Middle (Hc_2) and Upper Creston (Hc_3). The Lower Creston is dominated by thin-bedded alternating argillite and siltstone, with a total thickness of about 1000 metres. Bedding varies in thickness from millimetres to centimetres and individual beds commonly vary rapidly in thickness from a few millimetres to 1 or 2 cm. Primary features are abundant with mudcracks, pull-apart structures, small cut and fill features, ripple cross-laminations being the most common. Rocks are commonly green to greenish-grey weathering often with a brown limonitic stain on joint faces. The contact with the underlying Upper Alderidge is placed at the horizon where the red rusty, even bedded, black, white lined argillite grades into very uneven, pinching and swelling beds of green to greenish grey argillite and siltstone, commonly characterized by mudcracks and other shallow water features.

None of these features exists in the Upper Aldridge in this map area, although a few units 5 to 10 metres thick of the black argillite typical of Upper Aldridge are found above the Lower Creston contact as mapped.

Upwards in the section of Lower Creston beds of green argillaceous siltstone 10-15cm thick become increasingly common even though much of the section remains typically thin bedded. The upper part of the Lower Creston at higher elevations can be cliff forming not so much the result of increasing competence of silty layers but because it breaks readily along vertical to near vertical joint faces.

The contact with the overlying Middle Creston is drawn at the beginning of members of thicker bedded grey argillaceous siltstone commonly with thin bedded interspersed units of deep purple to almost black argillite. The grey siltstone is characteristically marked with purple laminae or irregular purple mottling. There is a characteristic blocky fracture of the relatively competent, cliff-forming succession. Dip slopes and slabs commonly show extremely well-preserved symmetrical wave ripples. Thicker successions of black to deep purple argillite may show mud cracks, and thin beds or lenses of medium-grained white quartzite are commonly topped with purple mudchip breccias. The Middle Creston is about 1000 metres thick.

The transition to the Upper Creston is marked by deep green siltstone or very fine quartzite interbedded with green argillite sometimes purple argillite and sometimes light and dark green argillite and silty argillite. Although the deep green siltstone beds can be up to 20cm in thickness most beds vary from a few millimetres to at most 2 or 3 centimetres. This unit is at most 300 metres thick.

The contact between the Upper Creston and Kitchener Formation (Hk) is transitional over several tens of metres. The contact is mapped solely on the basis of the increasing proportion of carbonate-bearing rocks, dolomitic siltstone or silty dolomite. Where these rocks become characteristic (10 per cent?) they are included in the Kitchener Formation. If there are difficulties of lack of exposure or faulting this is a difficult contact to pinpoint.

The lower part of the Kitchener Formation contains much green weathering argillite and siltstone characteristic of the Creston. From a distance it is typically very thin bedded and green and buff or brown weathering. In outcrop it consists of very thin beds of green argillite, grey-green calcareous argillite, green siltstone and brown or buff weathering dolomitic siltstone. The upper part of the Kitchener Formation found in Grassy Mountain area is a black and grey and brown or buff weathering thin bedded succession of black argillite and silty dolomite or dolomitic siltstone.

The Kitchener is commonly exposed in thin fault slices or beneath the Lower Cambrian unconformity so that over most of the area only partial sections have been preserved.

Moyie Intrusions (Hm) are found in all units of the Purcell Supergroup in Grassy Mountain area with the exception of the Dutch Creek (?) Formation. They consist mainly of sills that range in thickness up to at least 100 metres, and are most common in the Middle Aldridge. Sills occur most generally in groups of several individuals and consist of metadiorite and metaquartz diorite, though in some localities original diabase interlocking textures may be found. In these zones the enclosing sediments show contact metamorphism with development of biotite up to 2mm and in places garnet up to 1mm.

Lower Cambrian strata are preserved along several fault slices in the region. These strata rest with profound unconformity on Purcell Supergroup rocks as far down as Middle Creston. The Cambrian rocks are subdivided into two units, Cranbrook (Cc) and Eager Formations (Ce).

The Cranbrook Formation in its eastern exposures typically consist of white, rarely pink or green, medium- to fine-grained, locally crossbedded quartzite in beds up to 1 metre thick. Near the base, are found some hematite-rich quartzite beds as well as purple or olive green argillite. Translucent purple coloured quartz grains up to 4mm in size are dispersed in some beds. In places lenses or thin beds of pebble conglomerate occur near the base of the Cranbrook Formation, with angular to rounded clasts of quartzite, argillaceous siltstone, white milky quartz and argillite. Rarely worm tracks can be found on shaley interbeds between quartzite beds and vertical worm burrows can be found in some quartzite beds.

In addition to much white quartzite, western exposures include purple, medium- to fine-grained quartzite, purple argillite and conglomerate. Conclomerate consists of angular to rounded pebbles, cobbles and boulders of argillite, siltstone and fine-grained quartzite commonly purple lined or purple mottled and clearly derived from Middle Creston strata. Such conglomerate beds are found within a succession of purple quartzite, purple argillite and other rocks lithologically very similar to some horizons of the Middle Creston. In isolated outcrops or in cursory examination these beds could readily be confused with Creston. The occurrence of the coarse conglomerate and fossiliferous Lower Cambrian Eager Formation immediately overlying lead to the interpretation that these rocks are Cranbrook Formation. It is thus evident that not only is the Cranbrook Formation much thicker in its western exposures (a mapped thickness of 750 M in the west vs. about 500 M in the east) but it also contains very much coarser conglomeratic material. The coarse conglomerates are found near or not far east of the St. Mary - Hall Lake Fault.

The Cranbrook Formation rests with profound unconformity, well down in the Kitchener Formation in its eastern exposures, but cuts into Middle Creston in its western exposures.

A few isolated exposures of conglomerate tentatively mapped as Cranbrook Formation are found east of Goat River southward from the main occurrences of the Lower Cambrian strata. Angular, sub-rounded and rounded clasts up to 10 centimetres or more have been derived from Purcell strata down to Middle Creston. This conglomerate is lithologically similar to the westernmost occurrences of Lower Cambrian conglomerates and shows, if they are indeed of Lower Cambrian age, that Cranbrook Formation there rested on Purcell strata well below the Kitchener Formation just as it does in its western exposures.

The Lower Cambrian Eager Formation conformably overlies Cranbrook quartzite. It consists of thin bedded grey to olive grey argillite and grey siltstone with, near the base, silty limestone, carbonate bearing argillite and rate, thin, bioclastic units and argillaceous limestone. These contain Olenellus (GSC Loc. 98008) and other fossil fragments of Early Cambrian age. A fossiliferous horizon has been found in each of the fault slices west of Mallandaine Creek and upper Goat River.

Thickness of Eager Formation is difficult to estimate because the rocks are highly cleaved, folded and probably faulted. It is certainly not less than 1000 metres.

2.2 Economic Geology

A review of previous work on the property and the 1983 programme suggests that the more significant mineral deposits are associated with a few major shear zones in the sediments along which a metadiorite has intruded (or andesite has extruded). These zones run parallel to Perry Creek on the west side.

The shear zones are often filled by veins, irregular lenses and stringers of quartz containing boxwork, limonite, goethite, martite pseudomorphs after pyrite and occasionally gold, silver, galena, sphalerite and chalcopyrite. Hydrothermal alteration occurs in the wall rocks as chlorite, sericite and talc schists. Contact metasomatism may occur marginal to metadiorites.

These shear zones occur in areas of topographic lows between resistant ledges of siliceous sediments. This is explained by the easily erodable breccia, gouge and hydrothermally altered material found in and marginal to these shears. For this reason it is possible that much of the mineralization associated with these shear zones is yet to be uncovered.

2.3 Prospect Geology

Geological mapping was carried out on Rome Creek and along Perry Creek (just above Rome Creek) over the suspected source of a copper, lead, zinc, silver anomaly discovered by heavy mineral concentrate samples taken in 1981. The creek is underlain by massive grey quartzites probably of the Creston Formation. A quartz vein striking 040° and dipping vertically bordered by talc schist alteration was found in the quartzite. Pyrite mineralization occurs in both the quartz and talc schist but neither of these showed any copper, lead, zinc or gold values in the assays. Silver assayed 0.04 oz/ton over the 0.38 metre vein width.

Very weak signs of carbonatization in the form of fine grained mariposite and weak carbonates were mapped in two areas. One was on the France Creek road in the green and purple quartzites striking 040° and dipping 045° east. The other was in the massive and thinly bedded grey quartzites in the Shorty Creek area.

A new road cut near the Homestake workings, between Manchester and Liverpool Creeks, exposed an andesite flow or microdiorite dyke between green phyllite beds. There was not enought exposure to determine whether this was a flow or dyke but it appeared to nearly parallel bedding in the surrounding sediments.

Geological mapping was carried out over the VLF grid on the PETRA claims. Only one outcrop was found in the southeast corner of the grid so the conductors were not identified. However, the outcrop found was a silicified quartzite with quartz veining which indicates hydrothermal activity in the area. (See Map 2.2.1.)

Two areas with old mine workings were examined in detail. The first was the Running Wolf on the south slope of Frances Creek at approximately 5750 feet elevation, the second was just north of Shorty Creek, also around 5750 feet elevation.

On the Running Wolf claim, the main adit is caved at the entrance so only surface workings could be examined (See Map 2.2.2). This area is underlain by massive grey quartzites in which two quartz veins striking northeast are exposed in two series of trenches. One has a vertical shaft sunk into it and the other has been stoped to surface from underground workings. The vein quartz exposed in outcrop is milky with hematite staining, boxwork structures and pyrite. They occur in a grey quartzite which, marginal to the veins, is silicified and contains some pyrite and boxwork. Vein widths were not well exposed but in a single trench exposure one vein was seen to be 2.65 metres wide. Maximum values of .004 oz/ton gold and .03 oz/ton silver were obtained. These veins do not appear to have significant value.

The Shorty Creek area is underlain by massive and thinly bedded grey quartzites and argillites. The workings here are less extensive. A quartz vein striking 030° is 4 metres (27 feet) to 15 metres (49 feet) wide. The grey quartzite wallrock contains quartz, chlorite and sericite stockwork. Most of the quartz is milky with hematite and goethite staining. Pyrite and occasionally galena were found in dump samples. Workings consisting of one adit (closed by a rock slab at its mouth) and a series of trenches, follow the vein for 70 metres (230 feet). Mapping of float and large boulders traced the vein for 484 metres (1587 feet), but it was not evident in outcrop in Shorty Creek at 607 metres. Chip samples from the outcropping vein were barren but a grab sample from the adit dump ran 0.030 oz/ton gold (See Maps 2.2.3 and 2.2.4 and Table 2.2 for assay values, locations and description of samples.)

TABLE 2.2
Locations, Assay Values and Descriptions of Rock Samples

Sample Number	Location	Cu %	Pb %	Zn %	Ag FA oz/T	Au FA oz/T	Description	Width in Metres
47141	France Creek Rd.	0.03	0.01	0.01	0.02	L0.003	Quartz vein	4.1
47142	CG10226	0.01	0.06	0.01	0.01	0.030	Quartz in dump	Grab
47143	"	0.01	0.02	0.01	0.01	L0.003	Quartz vein	9.0
47144	"	0.01	0.02	0.01	0.08	0.003	Quartz vein	9.0
47145	Rome Creek	0.01	0.01	0.01	0.04	L0.003	Quartz vein	0.38
47146	"	0.01	0.01	0.01	0.04	0.003	Wall rock, Talc schist	0.30
47147	Running Wolf Mine	0.01	0.01	0.01	0.01	L0.003	Quartz in trench	Grab
47148	"	0.01	0.01	0.01	0.01	L0.003	Quartz with pyrite	Grab
47149	"	0.01	0.01	0.01	0.01	L0.003	Altered diorite	Grab
47150	"	0.01	0.01	0.01	0.02	L0.003	Quartz	4.0
83101	"	0.01	0.01	0.01	0.01	L0.003	Quartz from dump	Grab
83102	"	0.01	0.02	0.01	0.02	0.008	Quartz from trench	Grab
83103	"	0.01	0.01	0.01	0.03	0.004	Quartz vein	2.65
83104	CG10226	0.01	0.02	0.01	0.01	0.003	Quartz	Grab
83105	"	0.01	0.01	0.01	0.01	0.003	Quartz from dump	Grab
83106	"	0.01	0.01	0.01	0.01	L0.003	Quartz	Grab
83107	Petra VLF grid	0.01	0.01	0.01	0.01	L0.003	Quartz veinlet in quartzite	Grab
83108	Birdie load	0.01	0.02	0.01	0.01	0.010	Quartz vein	0.14
83109	"	0.01	0.63	0.01	0.82	0.384	Quartz from dump	Grab
83110	"	0.01	0.02	0.01	0.02	0.016	Quartz vein	0.04
83111	"	0.01	0.06	0.01	0.02	0.020	Quartz vein	0.14

3. GEOCHEMISTRY

3.1 Heavy Mineral Concentrate Sampling

3.1.1 Sampling, Sample Preparation and Analytical Procedures

A total of 13 heavy mineral concentrate samples were collected from Perry Creek and its tributaries (Map 3.1). Samples were taken at 500 metre intervals on Perry Creek and at sites slightly upstream of the confluence of its tributaries. On Shorty and Rome Creeks samples were taken at 250 and 200 metre intervals for 1150 and 650 metres upstream respectively. To ensure truly representative results, 50 - 100kg samples were taken at each site. These samples were then sieved to minus ten mesh, the coarse fraction discarded and the remaining fine fraction panned down to approximately 0.5kg. The pan concentrates were analyzed by Chemex Labs Ltd. of North Vancouver.

Chemex further concentrated the samples by heavy liquid separation and magnetic mineral separation. Finally, the resulting concentrates were analyzed for copper, lead, zinc, silver, gold, arsenic, tin and tungsten by atomic absorption.

3.1.2 Treatment, Presentation and Discussion of Results

A statistical study of the results was done to differentiate anomalous from background values for each of the eight elements analyzed. Threshold values are defined as the mean plus two standard deviations (x+2s) and anomalous values as the mean plus three standard deviations (x+3s). The results of this statistical study are shown in Table 3.1.1 and 3.1.2. Sample results are plotted on Maps 3.1.1 to 3.1.9.

TABLE 3.1.1

Mean, Threshold and Anomalous Values
in Heavy Mineral concentrate samples.

Element	No. of Samples	Mean (x)	Threshold (x+2s)	Anomalous (x+3s)
Cu	47	70 ppm	120 ppm	160 ppm
Pb	47	125 ppm	190 ppm	240 ppm
Zn	47	70 ppm	112 ppm	140 ppm
Ag	47	0.86 ppm	1.6 ppm	2.2 ppm
As	47	58 ppm	190 ppm	340 ppm
* Au	35	135 ppb	1320 ppb	4000 ppb
W	45	17 ppm	68 ppm	140 ppm
* Sn	35	3.3 ppm	9.5 ppm	15 ppm

* Sample populations are too small to be considered statistically significant.

Table 3.1.2
Correlation Matrix

VARIABLES:	CU	PB	ZN	AG	AS	AU	W	SN
CU	1.000							
PB	0.434	1.000						
ZN	0.503	0.982	1.000					
AG	0.173	0.225	0.175	1.000				
AS	0.527	-0.004	0.078	0.010	1.000			
AU	-0.024	0.442	0.359	0.256	-0.018	1.000		
W	0.123	0.025	-0.058	0.414	-0.039	0.307	1.000	
SN	-0.010	0.031	-0.043	0.196	-0.050	0.218	0.286	1.000

Lead and zinc show a high correlation coefficient as is common in base metal deposits. Gold shows an association with lead, zinc and silver in the H.M.C. samples. Rock chip samples confirm the association with lead. (Table 2.2).

Copper-lead-zinc-silver anomalies occur on Perry Creek just above Rome Creek, with tungsten on Shorty Creek and with arsenic on France Creek. Other multi-element anomalies include tin-tungsten-gold-silver-lead just above Lisbon on Perry Creek; lead-zinc-gold on Rome Creek; copper-lead on Sawmill Creek; lead-tungsten on Perry Creek below Rome Creek; and copper-arsenic on Walsh and its tributary to the south. Single element anomalies include: copper on Glasgow and Paris Creek; zinc on most tributaries draining the western slope of Perry Creek; and tin on Waverly and on Perry Creek just below Paris Creek.

Applying the primary metallogenic zoning pattern to this data a copper centre extends from the headwaters of Sawmill Creek southward along Perry Creek. Lead, zinc and silver occurs peripheral to the copper. This can be seen on the small scale, on Shorty Creek and at the confluence of Rome and Perry Creeks. Lead, tin and tungsten occur predominantly peripheral to the zinc and silver, downstream of Lisbon Creek on Perry Creek.

4. GEOPHYSICS

4.1 VLF-EM Survey

4.1.1 Instrument and Survey Techniques

A detailed VLF-EM survey was conducted over Perry Creek on the LINDA claims (Figure 4.1). A total of 3.2 line kilometres was surveyed with a Geonics EM-16 instrument.

Using the submarine transmitting station (NLK, 18.6 kHz) in Seattle, Washington, readings were taken at 20m intervals along lines trending 300°, perpendicular to the regional northeast structural trend. The declination used was 20° east. Survey lines were laid out and marked with orange flagging. At each station, in-phase and quadrature readings were taken in a northerly direction (353°) to ensure that south dips were indicated as negative readings by the instrument. In-phase readings were later reduced by use of the Fraser Filtering Technique (Fraser, 1969) and the results were contoured.

4.1.2 Presentation and Discussion of Results

Results of the survey are shown on Map 4.1.2. In-phase and filtered in-phase readings are shown with the filtered in-phase readings contoured at 10% contour intervals.

The purpose of the VLF survey was to delineate the Perry Creek fault zone which was suspected to be the source of much of the placer gold.

The strongest conductor outlined gave Fraser filter values of up to +36. It parallels the creek along the eastern bank following a 025° trend for a distance greater than 200 but less than 400 metres. A second conductor to the northeast parallels the first and extends for at least 200 metres. These are the only conductors which appear to be significant. To the north a third weak conductor, +19 Fraser filter,

parallels the others and extends for at least 200 metres. Three other zones with greater than +10 Fraser filter values have been outlined. These are not considered to be true conductors because the quadrature profile parallels the in-phase profile suggesting a topographic effect.

Due to the lack of outcrop in the area of this survey it was not possible to determine whether or not the conductors are outlining a shear zone.

5. CONCLUSIONS

The results of the present programme may be summarized as follows:

1) Geological and geochemical evidence suggest that although gold and lead mineralization is found in several quartz veins and "ledges", the more significant discoveries are in areas where an andesite/microdiorite has been extruded onto or intrudes the sediments. The quartz "ledges" are often found peripheral to these flows/dykes suggesting that they are part of the same mineralizing event.

2) Although the heavy mineral concentrate sampling programme suggests a primary metallogenic zoning pattern, more samples are required to confirm this.

3) The VLF survey outlined a few weak conductors parallel to the suspected Perry Creek shear zone. Unfortunately there is no outcrop in the vicinity of the conductors.

6. RECOMMENDATIONS

Results of the present programme suggest further work be carried out to outline the andesite/microdiorite bodies and search for associated mineralization. The following exploration tools should be used:

1) Reconnaissance geological mapping over the entire property.

2) A magnetometer survey over areas with no outcrop.

3) Heavy mineral concentrate sampling every 250 metres to follow-up anomalies found on all tributaries of Perry Creek.

Respectfully submitted,

J.C. Ridley, B.Sc.

A.G. Troup, P.Eng.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
A. G. TROUP

REFERENCES

Fraser, D.C., 1969, Contouring of VLF-EM Data: Geopphysics, V.34, No. 6, p. 958-967.

Holcapek, F., 1982, Preliminary Geology and Evaluation Report on the Perry Creek Gold Property: Engineer's Report.

Madeisky, H.E., 1981, Geophysical and Geochemical Report on the JANET, JANET 1, BIRDIE LOAD, GOLDEN WOLFE, GOLD, TANIS, PETER ROCK, QUARTZ CREEK, LUKE, JOHN and PETRA Mineral Claims and Reverted Crown-Grants: Engineer's Report.

Symonds, D.F., 1980, Geophysical, Geochemical and Prospecting Report on the JANET, JANET 1, BIRDIE LOAD, GOLDEN WOLFE, GOLD, AZLIN, TANIS, PETER ROCK, LONE EAGLE, QUARTZ CREEK, LUKE, MARK, JOHN, ECLIPSE, ANNA, STANDARD, AGNES, PIONEER, OYSTER, EVENING STAR, PETRA, CAROL, LINDA Mineral Claims and Reverted Crown-Grants: Engineer's Report.

Wong, C. and Troup, A.G., 1981, Geochemistry and Geophysics Report on the Perry Creek Gold Property: Engineer's Report.

STATEMENT OF QUALIFICATIONS

A.G. TROUP, P.ENG.

ACADEMIC

1967	B.Sc. Geology	McMaster University, Ontario
1969	M.Sc. Geochemistry	McMaster University, Ontario

PRACTICAL

1981 -	3605 Creery Ave. West Vancouver, B.C	Consulting Geologist with Archean Engineering Ltd.
1977 - 1980	Geological Survey of Malaysia	Project Manager on a CIDA supported mineral exploration survey over peninsular Malaysia.
1969 - 1977	Rio Tinto Canadian Exploration Ltd. Vancouver, B.C.	Geologist involved in all aspects of mineral exploration in B.C., the Yukon and N.W.T.
1968	McMaster University Dept. of Geology Hamilton, Ontario	M.Sc. thesis work. Reconnaissance mapping and geochemical study, Lake Shubenicadia area, Nova Scotia.
1967 (summer)	Canex Aerial Exploration Ltd. Toronto, Ontario	Geologist in charge of detailed mapping and reconnaissance geochemical program in Gaspe, Quebec
1966 (summer)	Mcmaster University Dept. of Geology Hamilton, Ontario	Detailed and reconnaissance mapping in Northern Ontario.
1965 (summer)	International Nickel Co. of Canada Thompson, Manitoba	Detailed mapping in the Thompson area, Manitoba.
1964 (summer)	Geological Survey of Canada Ottawa, Ontario	Regional geochemical survey in the Keno Hill area, Yukon.

STATEMENT OF QUALIFICATIONS

J.C. RIDLEY, B.SC.

Academic

1978	B.A. Geography	University of Western Ontario
1981	B.Sc. Geology	University of British Columbia

Practical

1981 - Present	Mark Management Ltd. Vancouver, B.C.	Project Geologist. Involved with geological, geochemical and geophysical aspects of precious metals exploration in B.C.
1980 - 1981	Utah Mines Vancouver, B.C.	Temporary Summer and part-time Winter Geologist in Charge of mapping and diamond drilling of a coal property in N.E. B.C. logging of rotary drilling chip samples on another coal property in N.E. B.C.
1979	Utah Mines Vancouver, B.C.	Temporary Summer. Reconnaissance and detailed mapping, logging of diamond drill core on coal properties in N.E. B.C.

COSTS STATEMENT
GALLANT GOLD MINES LTD.
PERRY CREEK PROPERTY
GEOLOGY, GEOPHYSICS, and GEOCHEMISTRY SURVEYS
15 July - 4 August 1983

FOOD AND ACCOMMODATION		
2 Pers, 34 man days @ $16.32		$ 554.88
SUPPLIES		470.91
SHIPPING & POSTAGE		81.32
RENTALS		
Mark 4wd Bronco, 15-31 Jul, 17 days @ $43	$ 731.00	
2052km @ $0.16	328.32	
Mark 4wd Blazer, 25-29 Jul, 5 days @ $43	215.00	
1903km @ $0.16	304.48	
Gabriel/Ezekiel Camp Equipment		
34 man days @ $6	204.00	1,782.80
FIELD TELEPHONE SERVICE		35.00
REPAIRS		371.07
CONSULTANT FEES		
Archean Engineering		1,125.00
REPORT PREPARATION		2,786.50
TOTAL GENERAL COSTS		$7,207.50

GEOLOGY SURVEY COSTS

SALARIES & WAGES	
2 Pers, 20 man days @ $84.50	$1,690.00
BENEFITS @ 20%	338.00
GENERAL COSTS	
20/34 X $7,207.50	4,239.69
TOTAL GEOLOGY SURVEY COSTS	$6,267.69

GEOPHYSICS SURVEY COSTS

SALARIES & WAGES		
2 Pers, 6 man days @ $84.50		$ 507.00
BENEFITS @ 20%		101.40
RENTALS		
Gallant EM-16, 17 days @ $27	$ 459.00	
Gabriel EM-16, 17 days @ $27	459.00	918.00
GENERAL COSTS		
6/34 X $7,207.48		1,271.82
TOTAL GEOPHYSICS SURVEY COSTS		$2,798.22

GEOCHEMISTRY SURVEY COSTS

SALARIES & WAGES		
2 Pers, 8 man days @ $84.50		$ 676.00
BENEFITS @ 20%		135.20
ASSAYS & ANALYSES - Chemex Labs		
21 Rock Assays CU,PB,ZN,AG,AU @ $30	$630.00	
1 Rock Assay AU @ $11	11.00	
13 HMC Analyses CU,PB,ZN,AG,AS,AU,W,SN @ $28.01	364.13	
14 Silt Analyses CU,PB,ZN,AG @ $6.60	92.40	1,097.53
GENERAL COSTS		
8/34 X $7,207.48		1,695.88
TOTAL GEOCHEMISTRY SURVEY COSTS		$3,604.61

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : GALLANT GOLD MINES LIMITED

1500-675 WEST HASTINGS STREET
VANCOUVER, B.C.
V6B 1N2

ATTN: J.C. RIDLEY

CERT. # : A8313354-001-B
INVOICE # : I8313354
DATE : 16-AUG-83
P.O. # : NONE
PERRY CREEK

Sample description	Prep code	W ppm	Sn ppm				
PC-83-001	213	17	N.S.S.	--	--	--	--
PC-83-002	213	17	N.S.S.	--	--	--	--
PC-83-003	213	18	44	--	--	--	--
PC-83-004	213	38	N.S.S.	--	--	--	--
PC-83-005	213	55	N.S.S.	--	--	--	--
PC-83-006	213	N.S.S.	N.S.S.	--	--	--	--
PC-83-007	213	N.S.S.	N.S.S.	--	--	--	--
PC-83-008	213	400	N.S.S.	--	--	--	--
PC-83-009	213	100	N.S.S.	--	--	--	--
PC-83-010	213	15	8	--	--	--	--
PC-83-011	213	16	N.S.S.	--	--	--	--
PC-83-012	213	N.S.S.	N.S.S.	--	--	--	--
PC-83-013	213	18	N.S.S.	--	--	--	--

Certified by .....

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

TO : GALLANT GOLD MINES LIMITED

1500-675 WEST HASTINGS STREET
VANCOUVER, B.C.
V6B 1N2

ATTN: JOEY RIDLEY

CERT. # : A8313356-001-A
INVOICE # : I8313356
DATE : 9-AUG-83
P.O. # : NONE
PERRY CREEK

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm		
PC-83-050	204	25	26	42	0.2	--	--
PC-83-051	204	27	25	51	0.1	--	--
PC-83-053	204	15	12	39	0.2	--	--
PC-83-054	204	11	6	33	0.1	--	--
PC-83-055	204	10	8	32	0.1	--	--
PC-83-056	204	9	5	32	0.2	--	--
PC-83-057	204	11	34	54	0.1	--	--
PC-83-058	204	8	9	42	0.2	--	--
PC-83-059	204	11	27	37	0.2	--	--
PC-83-060	204	17	16	35	0.1	--	--
PC-83-061	204	28	23	53	0.1	--	--
PC-83-062	204	19	11	40	0.1	--	--
PC-83-063	204	16	3	33	0.1	--	--
PC-83-064	204	17	6	37	0.1	--	--

Certified by Hartt Bichler

CHEMEX LABS LTD.

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CANADA V7J 2C1

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CERTIFICATE OF ANALYSIS

TO : GALLANT GOLD MINES LIMITED

1500-675 WEST HASTINGS STREET
VANCOUVER, B.C.
V6B 1N2

ATTN: J.C. RIDLEY

CERT. # : A8313354-001-A
INVOICE # : I8313354
DATE : 16-AUG-83
P.O. # : NONE
PERRY CREEK

Sample description	Prep code	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	AU-AA ppb
PC-83-001	213	70	160	84	0.6	24	260
PC-83-002	213	100	206	124	0.6	30	N.S.S.
PC-83-003	213	90	106	76	0.1	142	6500
PC-83-004	213	72	58	94	0.1	48	1900
PC-83-005	213	82	92	88	0.6	70	40
PC-83-006	213	68	152	114	1.6	54	N.S.S.
PC-83-007	213	85	713	178	1.3	55	N.S.S.
PC-83-008	213	260	116	112	1.4	64	N.S.S.
PC-83-009	213	80	112	130	1.2	86	N.S.S.
PC-83-010	213	328	600	226	1.6	290	280
PC-83-011	213	146	160	100	2.2	122	N.S.S.
PC-83-012	213	84	72	56	0.6	66	<10
PC-83-013	213	316	190	120	1.0	184	1420

Certified by Hart Bichler

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : GALLANT GOLD MINES LIMITED

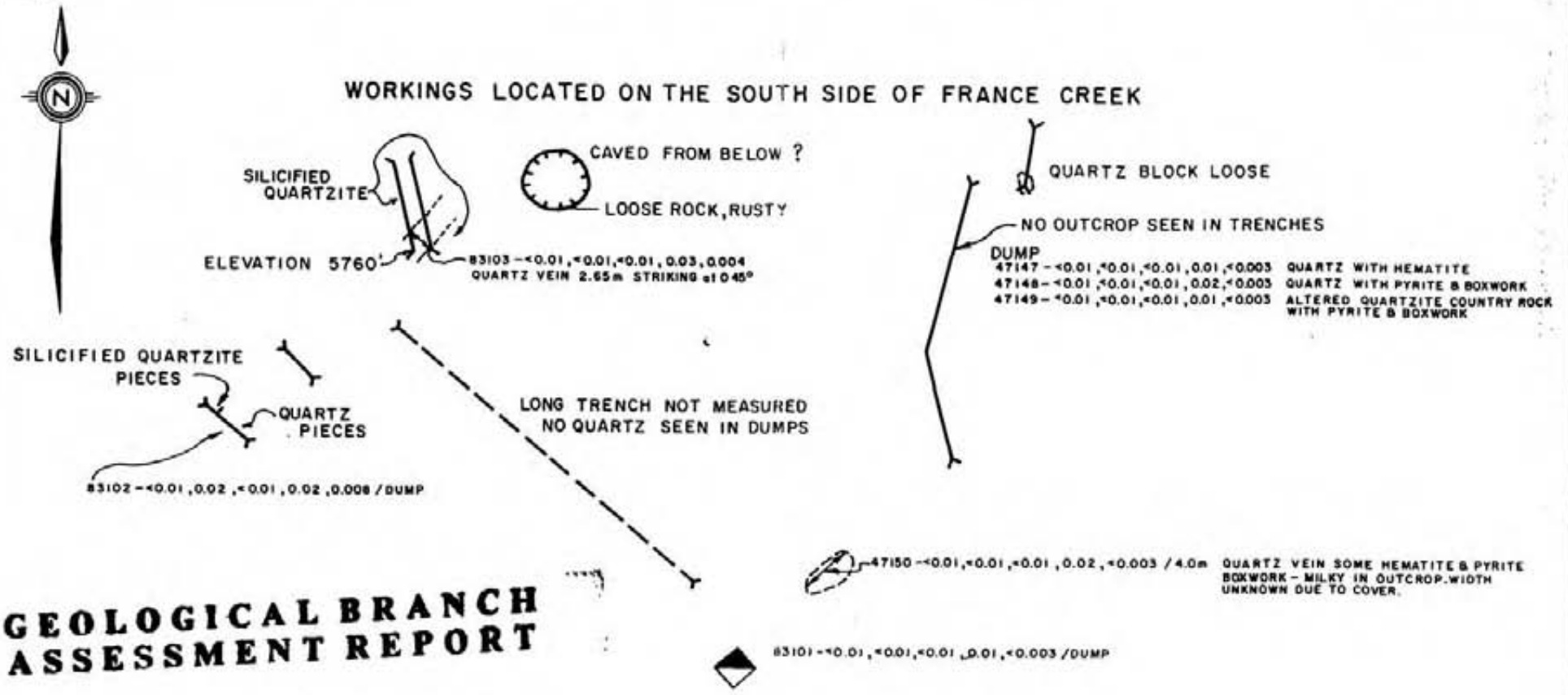
1500-675 WEST HASTINGS STREET
VANCOUVER, B.C.
V6B 1N2

ATTN: JOEY RIDLEY

CERT. # : A8313355-001-A
INVOICE # : I8313355
DATE : 17-AUG-83
P.O. # : NONE
PERRY CREEK

Sample description	Prep code	Cu %	Pb %	Zn %	Ag FA oz/T	Au FA oz/T	
47141	207	0.03	<0.01	<0.01	0.02	<0.003	--
47142	207	<0.01	0.06	<0.01	0.01	0.030	--
47143	207	<0.01	0.02	<0.01	0.01	<0.003	--
47144	207	<0.01	0.02	<0.01	0.08	0.003	--
47145	207	<0.01	<0.01	<0.01	0.04	<0.003	--
47146	207	<0.01	<0.01	<0.01	0.04	0.003	--
47147	207	<0.01	<0.01	<0.01	0.01	<0.003	--
47148	207	0.01	<0.01	<0.01	0.02	<0.003	--
47149	207	<0.01	<0.01	<0.01	0.01	<0.003	--
47150	207	<0.01	<0.01	<0.01	0.02	<0.003	--
83101	207	<0.01	<0.01	<0.01	0.01	<0.003	--
83102	207	<0.01	0.02	<0.01	0.02	0.008	--
83103	207	<0.01	<0.01	<0.01	0.03	0.004	--
83104	207	<0.01	0.02	<0.01	0.01	0.003	--
83105	207	<0.01	<0.01	<0.01	0.01	0.003	--
83106	207	<0.01	<0.01	<0.01	0.01	<0.003	--
83107	207	<0.01	<0.01	<0.01	0.01	<0.003	--
83108	207	<0.01	0.02	<0.01	0.01	0.010	--
83109	207	<0.01	0.63	<0.01	0.82	0.384	--
83110	207	<0.01	0.02	<0.01	0.02	0.016	--
83111	207	<0.01	0.06	<0.01	0.02	0.020	--

Registered Assayer, Province of British Columbia



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LEGEND:

SAMPLE Nº – % Cu, % Pb, % Zn, oz./t. Ag, oz./t. Au

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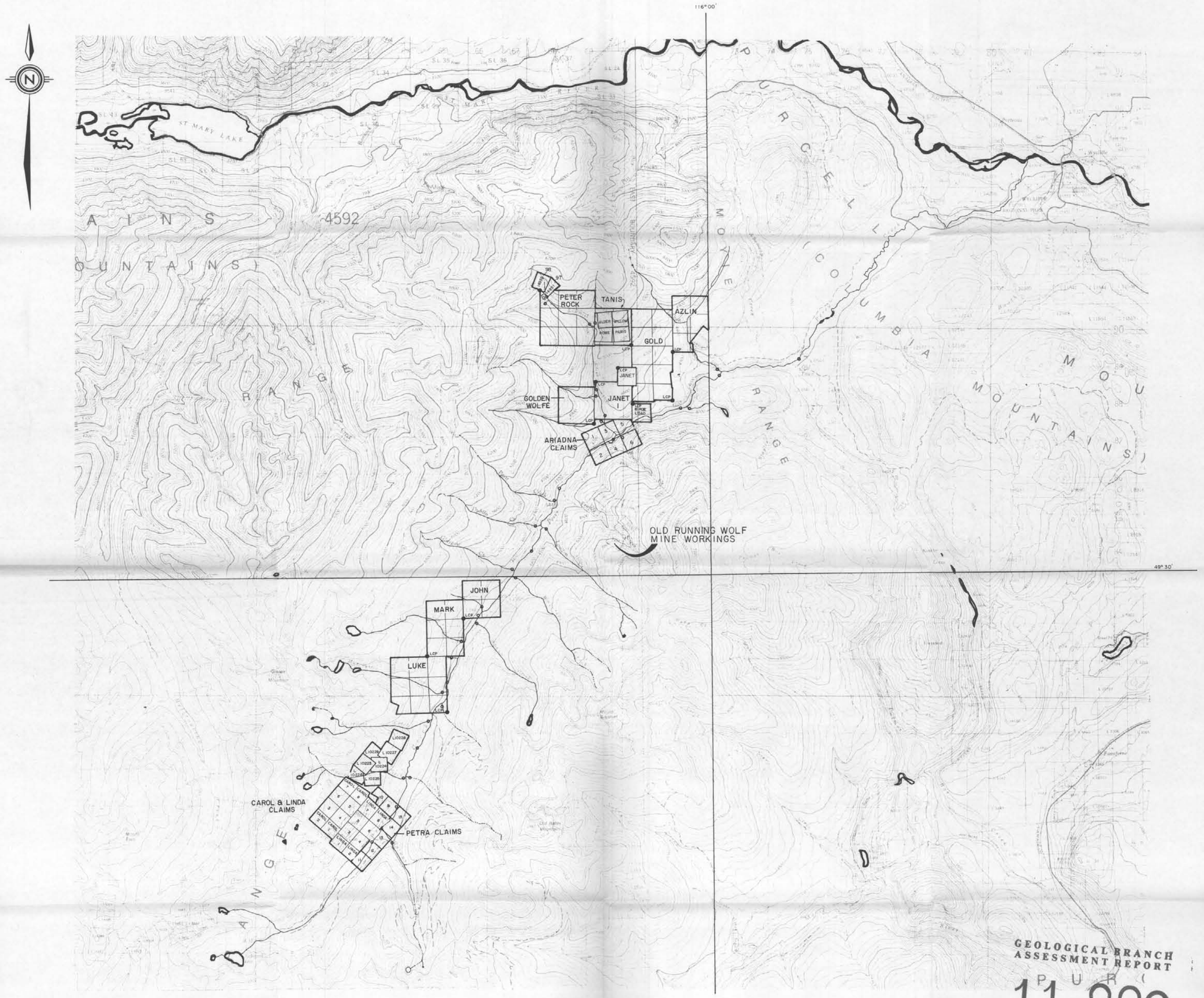
PERRY CREEK PROPERTIES ; FORT STEEL M.D. – B.C.

RUNNING WOLF MINE – ABANDONED WORKINGS

0 10 20 SCALE 1:500 metres

BY: J.C.R. / r.w.r. DEC. 13, 1983 MAP 2.2.2



GEOLOGICAL BRANCH
ASSESSMENT REPORT

PUR (

11,802

GALLANT GOLD MINES LTD.

PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

CLAIM MAP

0 1000 2000 3000 4000 5000

1: 50,000

NTS 82-F-8,9,G-5,12

DATE: Dec. 4 /81 By: C.W. /r.w.r. Figure 1.3

116°00'

49°30'

ST MARY LAKE

ST MARY RIVER

PURCELL MOUNTAINS

COLUMBIA MOUNTAINS

RANGE

4592

4592 FIRST BOUNDARY

MOYIE

83108, -, 0.02, -, 0.01, 0.010 / 0.14m
83109, -, 0.83, -, 0.32, 0.389 / DUMP
83111, -, 0.06, -, 0.02, 0.020 / 0.14m

Grey to green quartzite massive & thin beds, thin beds altered to weak chlorite schist with disseminated pyrite, quartz veinlet 1cm.

CAMP

Grey quartzite

BIROIE LOAD - Quartz vein 070/25 NW stringers at 085/43SE & 158/80 W.

QUARTZ VEINLET - 4 cm at 030/87 NW
83110, -, 0.02, -, 0.02, 0.016 / 0.04 m

QUARTZ VEIN - 0.38 m pyritic talc schist alteration in both walls.
47145, -, -, -, 0.04, - / 0.38 m
47146, -, -, -, 0.04, 0.003 / 0.30 m

RUNNING WOLF (ABANDONED MINE WORKINGS)
(SEE DETAIL MAP 3.2.4)

Grey quartzite
2 quartz veins with several old trenches, adits & shafts

47147, -, -, -, 0.01, - / GRAB
47148, 0.01, -, -, 0.02, - / GRAB
47149, -, -, -, 0.01, - / GRAB
47150, -, -, -, 0.02, - / 4.0m
83101, -, -, -, 0.01, - / GRAB
83102, -, -, -, 0.02, 0.008 / GRAB
83103, -, -, -, 0.03, 0.004 / 2.65m

47141, 0.03, -, -, 0.02, - / 4.1m
Quartz vein in green & purple quartzite

Quartzite & Argillite

Quartzite, massive grey argillite.

Grey quartzite with argillite interbedded. To east green phyllite & microdiorite.

Rusty green phyllite with pyrite.

Microdiorite dyke 030/90?

(SEE DETAIL MAP 3.2.3)

47142, -, 0.06, -, 0.01, 0.030 / DUMP
47143, -, 0.02, -, 0.01, -, - / 9.0 m
47144, -, 0.02, -, 0.08, 0.003 / 9.0 m
83104, -, 0.02, -, 0.01, 0.003 / GRAB
83105, -, -, -, 0.01, 0.003 / DUMP
83106, -, -, -, 0.01, -, - / GRAB

Quartz ledge / vein 5m wide in quartzite & argillite with quartz, sericite, chlorite stockwork alteration.

Diorite float

Recrystallized quartzite with quartz stringers.
83107, -, -, -, 0.01, - / GRAB

Old Baldy Mountain

Green Mountain

Mount Baldy

Passforme

GEOLOGICAL BRANCH
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CLAIM OUTLINE

H.M.C. SAMPLE SITE

47143, -, 002, -, 008, 0.003 / 90m | SAMPLE Nº., Cu%, Pb%, Zn%, Ag oz./t, Au oz./t / WIDTH OF SAMPLE

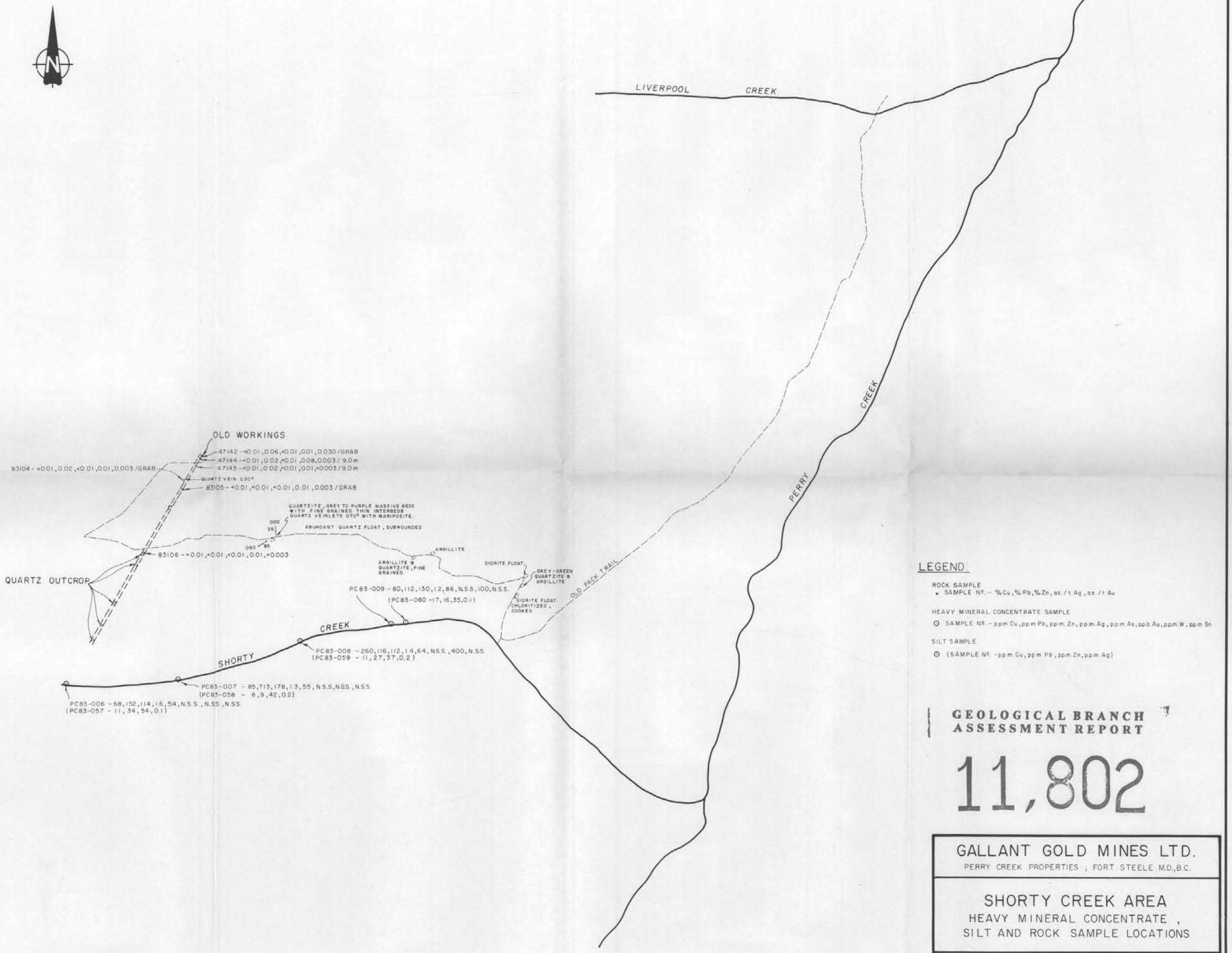
, -, BELOW DETECTION LIMIT

GALLANT GOLD MINES LTD.
PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

DETAIL GEOLOGY,
ROCK CHIP SAMPLE LOCATION MAP
AND ASSAYS

0 1000 2000 3000 4000 5000
1:50,000

NTS 82-F-8,9;G-5,12
DATE: Dec.23/83 By: J.C.R./r.w.r. Map 2.2.1



LEGEND:

ROCK SAMPLE
• SAMPLE Nº. - %Cu, %Pb, %Zn, oz./t Ag, oz./t Au

HEAVY MINERAL CONCENTRATE SAMPLE
⊙ SAMPLE Nº. - ppm Cu, ppm Pb, ppm Zn, ppm Ag, ppm As, ppb Au, ppm W, ppm Sn

SILT SAMPLE
⊙ (SAMPLE Nº. - ppm Cu, ppm Pb, ppm Zn, ppm Ag)

GEOLOGICAL BRANCH ASSESSMENT REPORT

11,802

GALLANT GOLD MINES LTD.
PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

SHORTY CREEK AREA
HEAVY MINERAL CONCENTRATE ,
SILT AND ROCK SAMPLE LOCATIONS

100 0 100 200 300 400
SCALE 1:5000 Metres

NTS 82-F-8,9;G-5,12
DATE: Dec. 14/83 By: J.C.R./r.w.r. Map 2.2.3

ADIT BLOCKED OFF

DUMP

47144 - <0.01, 0.02, <0.01, 0.08, 0.003 / 9.0 m

47142 - <0.01, 0.06, <0.01, 0.01, 0.030 / GRAB

GREY QUARTZITE

QUARTZ, SERICITE & CHLORITE STOCKWORK ALTERATION

QUARTZ

47143 - <0.01, 0.02, <0.01, 0.01, <0.003 / 9.0 m

TRENCH

DUMP 83105 - <0.01, <0.01, <0.01, 0.01, 0.003 / GRAB
(~50' x 20' x 5' = 1500 Tons)

DUMP

83104 - <0.01, 0.02, <0.01, 0.01, 0.003 / GRAB
(~25' x 25' x 5' = 312 Tons)

TRENCH

DUMP - VERY LITTLE QUARTZ
(~12' x 15' x 5' = 90 Tons)

QUARTZ OUTCROP

QUARTZ OUTCROP

83106 - <0.01, <0.01, <0.01, 001, 0.003 / GRAB
QUARTZ VEIN - CLOSE TO OUTCROP
HEMATITE & GOETHITE STAIN, SLIGHT v.f.g. GALENA
SCREE SLOPE OF QUARTZITE & ARGILLITE ABOVE & BELOW QUARTZ.

010 / 45 ARGILLITE & QUARTZITE FINE GRAINED

LEGEND

SAMPLE Nº. - % Cu, % Pb, % Zn, oz./t. Ag, oz./t. Au

GALLANT GOLD MINES LTD.

PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

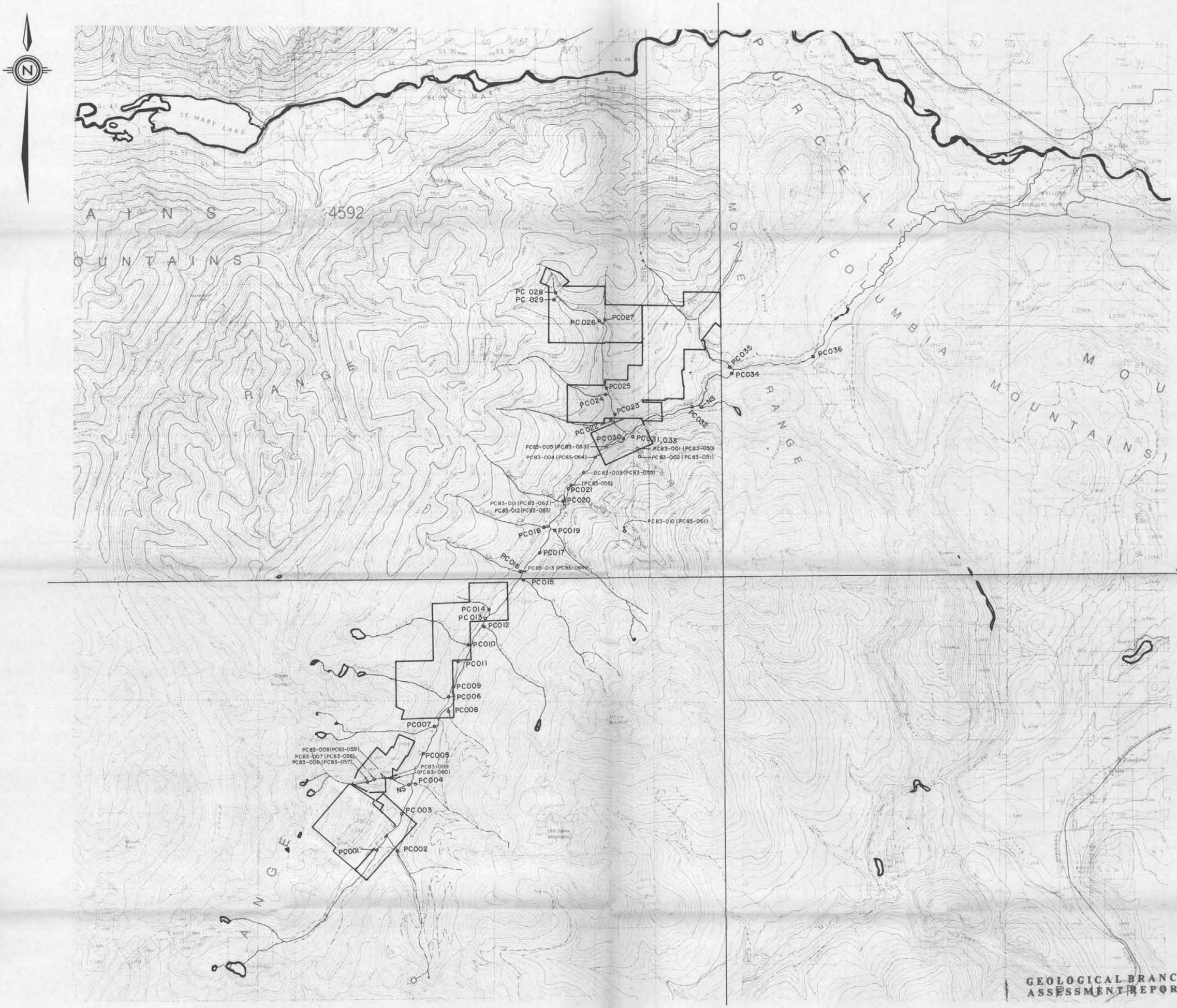
QUARTZ VEIN & WORKINGS ON CROWN GRANT 10223

0 10 20 30 40 50m

1:500

NTS 82-F-8,9;G-5,12

DATE: Dec. 12 / 83 By: J.C.R. / r.w.r Map 2.2.4



LEGEND:

- CLAIM OUTLINE
- PC001 — H.M.C. SAMPLE SITE & NUMBER
- N.S. — NO SAMPLE
- PC83-008 (PC83-059) — 1983 H.M.C. SAMPLE (CONVENTIONAL SILT SAMPLE) SITE

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GALLANT GOLD MINES LTD.

PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

HEAVY MINERAL CONCENTRATE SAMPLING

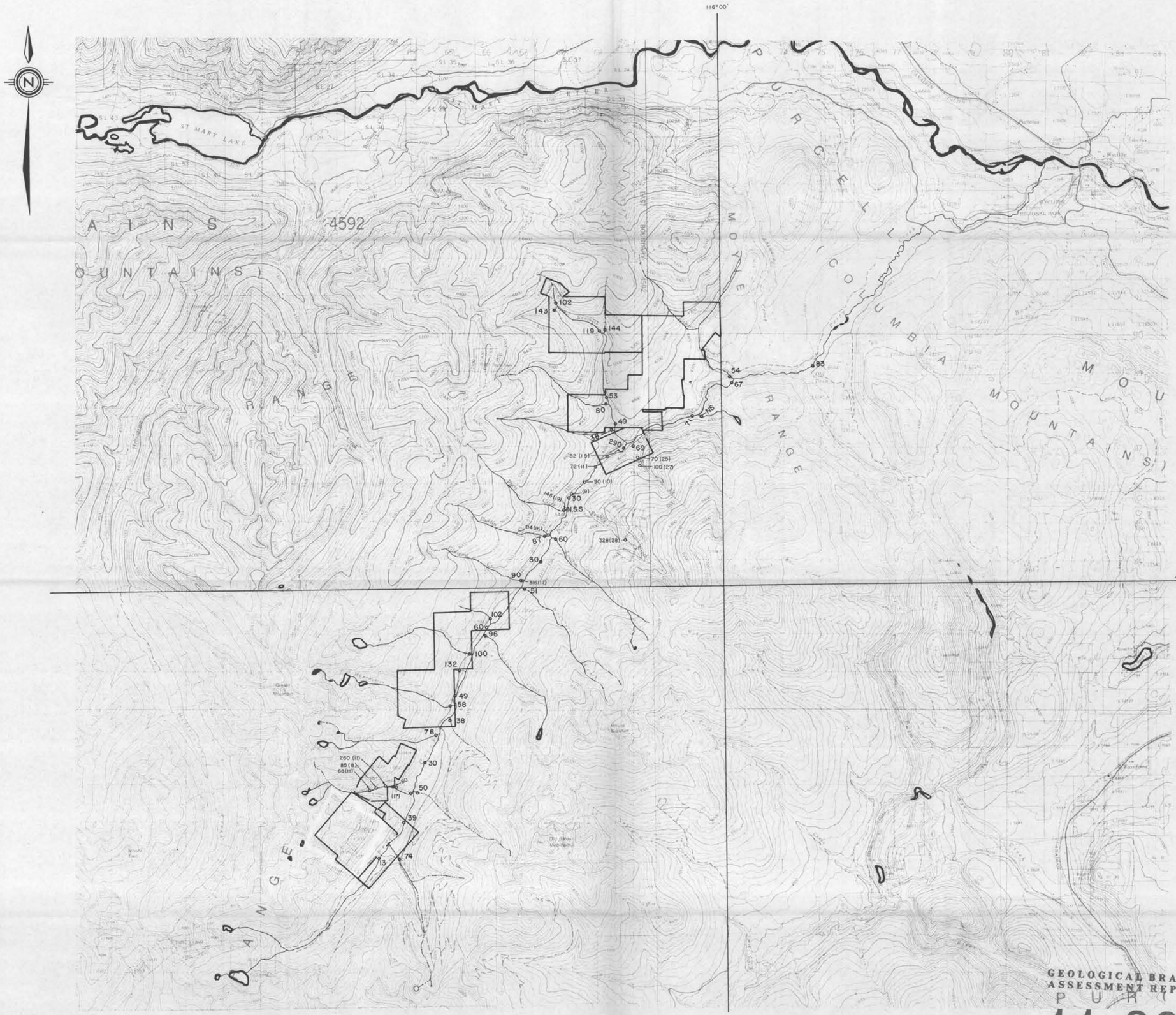
SAMPLE LOCATION MAP

0 1000 2000 3000 4000 5000

1: 50,000

NTS 82-F-8,9;G-5,12

DATE: Dec. 5 /81 By J.C.R. /r.w.r. Map 3.1.1



LEGEND:

- CLAIM OUTLINE
- ○ H.M.C. SAMPLE SITE
- ○13 Cu VALUE IN p.p.m.
- N.S. NO SAMPLE
- N.S.S. NOT SUFFICIENT SAMPLE
- 260(11)○ 1983 HMC SAMPLE (CONVENTIONAL SILT SAMPLE) RESULTS

Rev. Dec. 11, 1983

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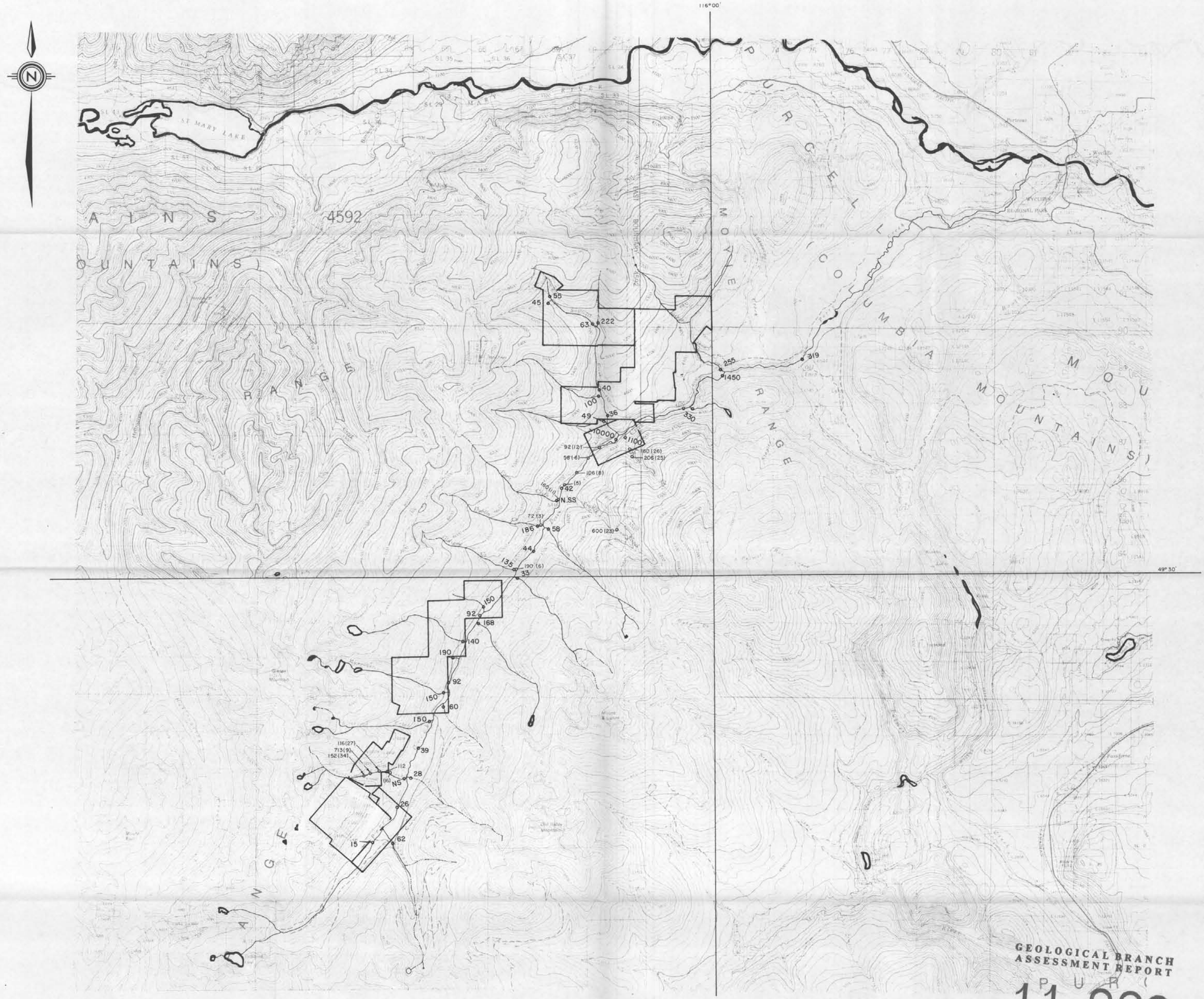
GALLANT GOLD MINES LTD.
PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

HEAVY MINERAL CONCENTRATE SAMPLING

COPPER RESULTS in p.p.m.

0 1000 2000 3000 4000 5000
1:50,000

NTS 82-F-8,9;G-5,12
DATE: Dec. 5 /81 By: J.C.R./r.w.r Map 3.1.2


116°00'
49°30'
ST MARY LAKE
ST MARY RIVER
PURCELL MOUNTAINS
COLUMBIA MOUNTAINS
RANGE
4592
45
55
63
222
40
100
49
36
10000
1100
330
255
1450
319
92(12)
56(6)
106(8)
160(26)
206(25)
42
(5)
N.SS
72(13)
186
58
600(23)
44
135
190(6)
33
150
92
168
140
190
92
150
60
150
116(27)
713(9)
152(34)
112
39
28
(16)
NS
26
15
62
LEGEND:
CLAIM OUTLINE
H.M.C. SAMPLE SITE
62 Pb VALUE IN p.p.m.
N.S. NO SAMPLE
N.S.S. NOT SUFFICIENT SAMPLE
116(27) 1983 H.M.C. SAMPLE (CONVENTIONAL SILT SAMPLE) RESULTS
GEOLOGICAL BRANCH
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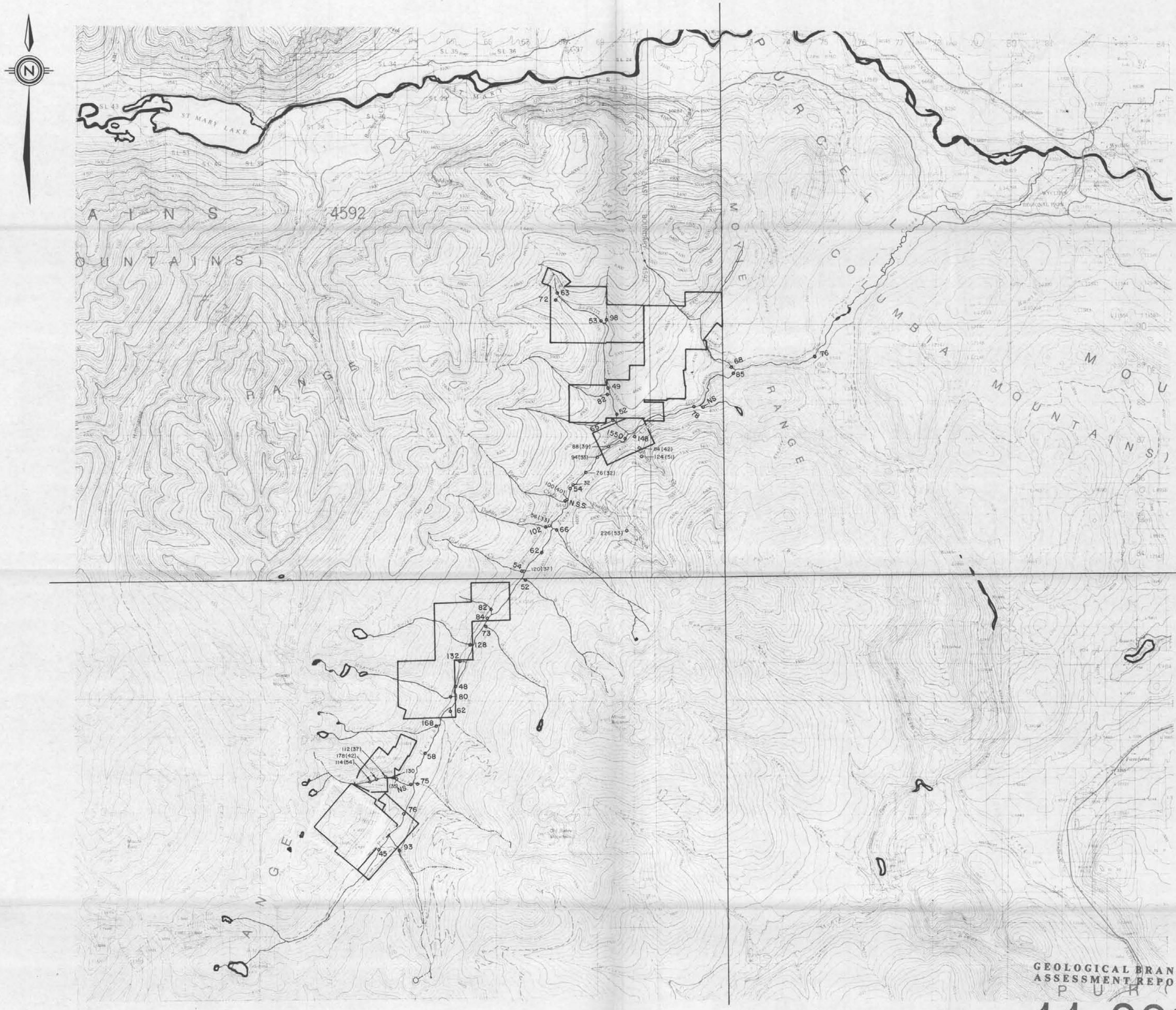
GALLANT GOLD MINES LTD.
PERRY CREEK PROPERTIES ; FORT STEELE M.D.,B.C.
HEAVY MINERAL CONCENTRATE SAMPLING
LEAD RESULTS in p.p.m.
0 1000 2000 3000 4000 5000
1:50,000
NTS 82-F-8,9;G-5,12
DATE: Dec. 5/81 By:J.C.R./r.w.r. Map 3.1.3
Rev. Dec. 11, 1983



LEGEND:

- CLAIM OUTLINE
- ° H.M.C. SAMPLE SITE
- °45 Zn VALUE IN p.p.m.
- N.S. NO SAMPLE
- N.S.S. NOT SUFFICIENT SAMPLE
- °112(37) 1983 H.M.C. SAMPLE (CONVENTIONAL SILT SAMPLE) RESULTS

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GALLANT GOLD MINES LTD.

PERRY CREEK PROPERTIES ; FORT STEELE M.D.,B.C.

HEAVY MINERAL CONCENTRATE SAMPLING

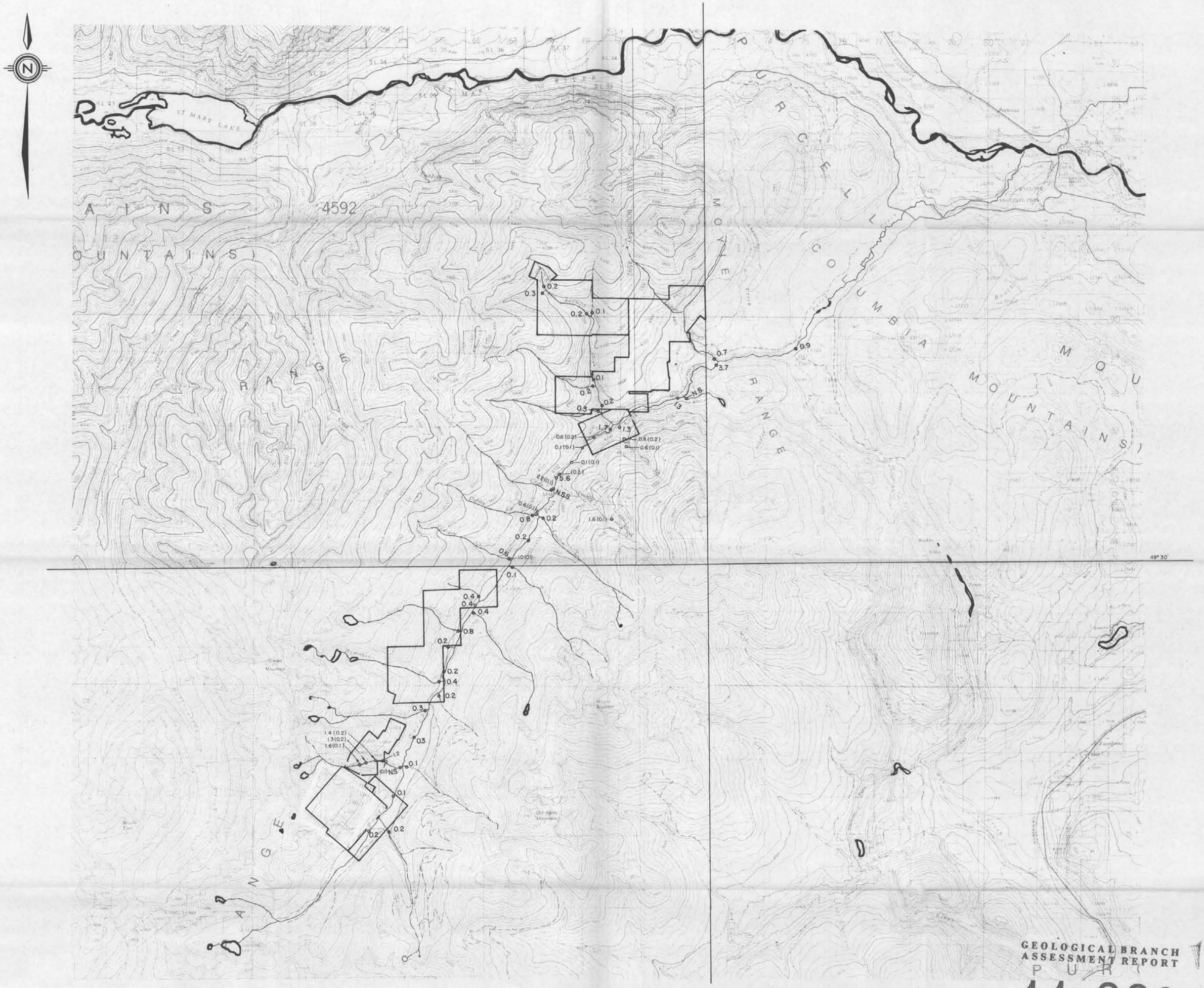
ZINC RESULTS in p.p.m.

0 1000 2000 3000 4000 5000

1:50,000

NTS 82-F-8,9;G-5,12

DATE: Dec. 5 /81 By J.C.R./r.w.r. Map 3.1.4



LEGEND:

- CLAIM OUTLINE
- o H.M.C. SAMPLE SITE
- $_{o}0.2$ Ag VALUE IN p.p.m.
- N.S. NO SAMPLE
- N.S.S. NOT SUFFICIENT SAMPLE
- $^{1.4(0.2)}{}_{o}$ 1983 H.M.C. SAMPLE (CONVENTIONAL SILT SAMPLE) RESULT

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GALLANT GOLD MINES LTD.

PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

HEAVY MINERAL CONCENTRATE SAMPLING

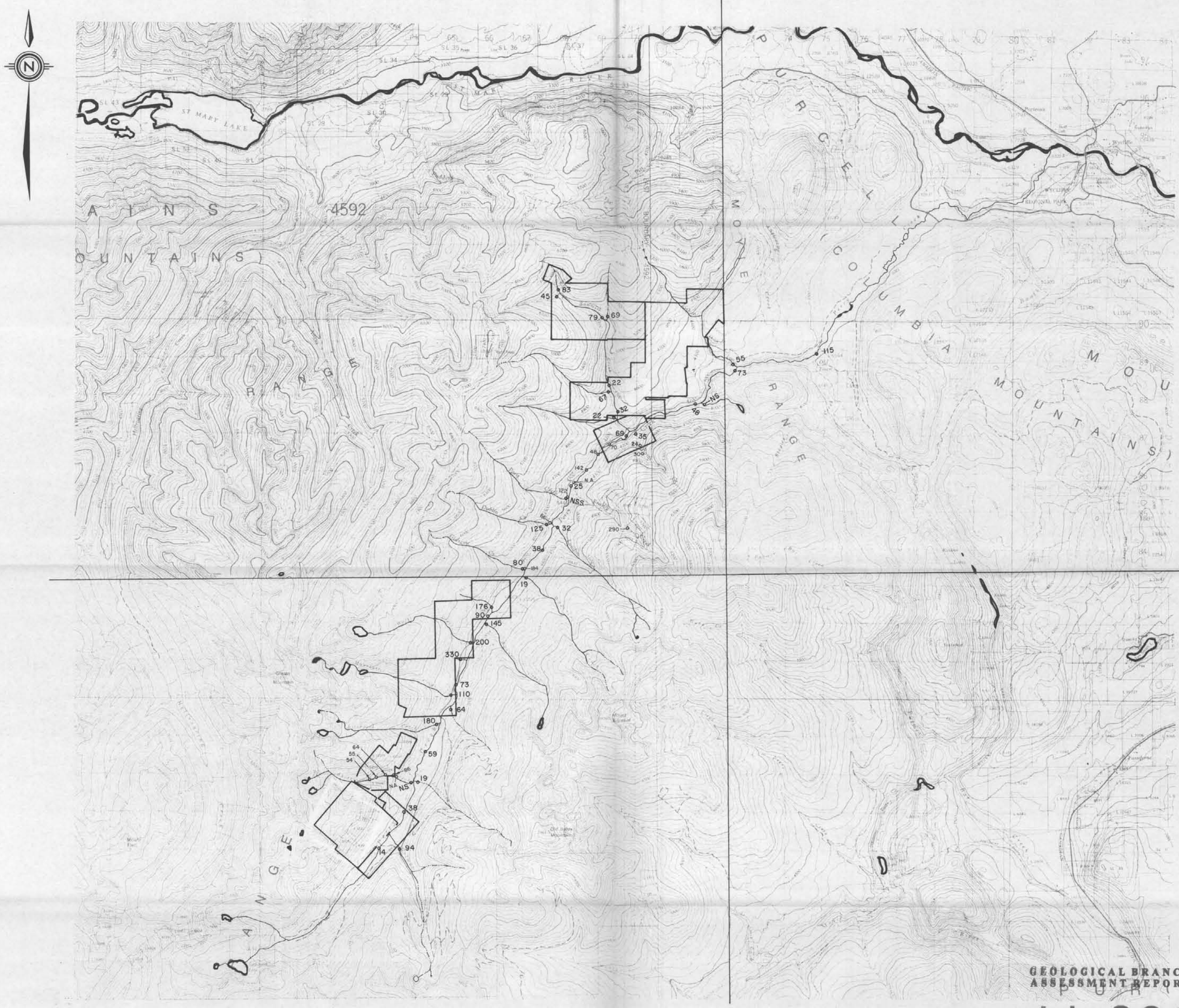
SILVER RESULTS in p.p.m.

0 1000 2000 3000 4000 5000

1: 50,000

NTS 82-F-8,9;G-5,12

DATE: Dec. 5 /81 By J.C.R./r.w.r. Map 3.1.5



LEGEND:

- CLAIM OUTLINE
- o H.M.C. SAMPLE SITE
- $_{o}^{14}$ As VALUE IN p.p.m.
- N.S. NO SAMPLE
- N.A. NOT ASSAYED
- N.S.S. NOT SUFFICIENT SAMPLE
- $_{o}^{64}$ 1983 H.M.C. SAMPLE RESULT

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GALLANT GOLD MINES LTD.

PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

HEAVY MINERAL CONCENTRATE SAMPLING

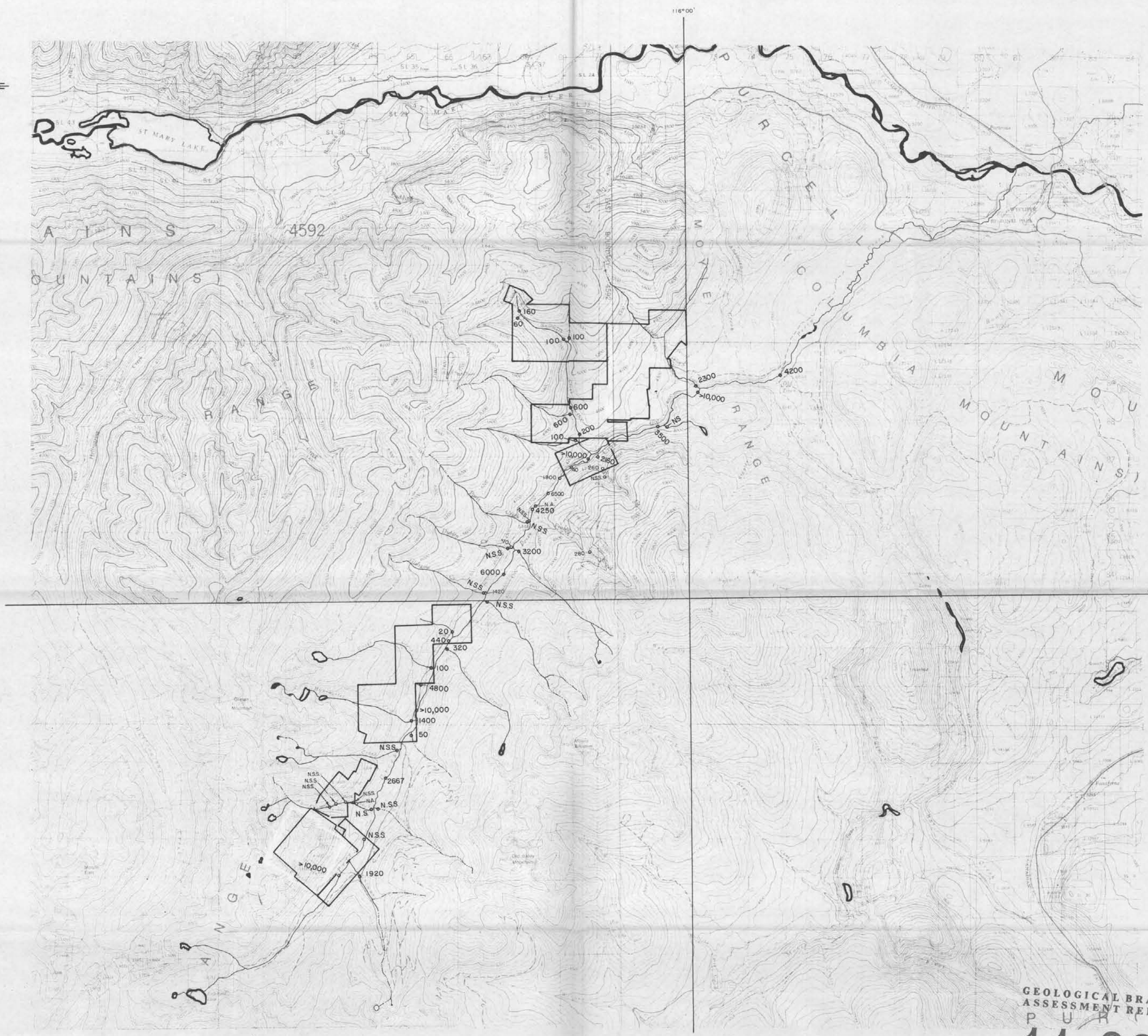
ARSENIC RESULTS in p.p.m.

0 1000 2000 3000 4000 5000

1: 50,000

NTS 82-F-8,9;G-5,12

DATE: Dec. 5/81 By J.C.R./r.w.r Map 3.1.6



LEGEND

- CLAIM OUTLINE
- o H.M.C. SAMPLE SITE
- o1920 Ag VALUE IN p.p.b.
- N.S. NO SAMPLE
- N.A. NOT ASSAYED
- N.S.S. NOT SUFFICIENT SAMPLE
- 40o 1983 H.M.C. SAMPLE RESULT

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PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

HEAVY MINERAL CONCENTRATE SAMPLING

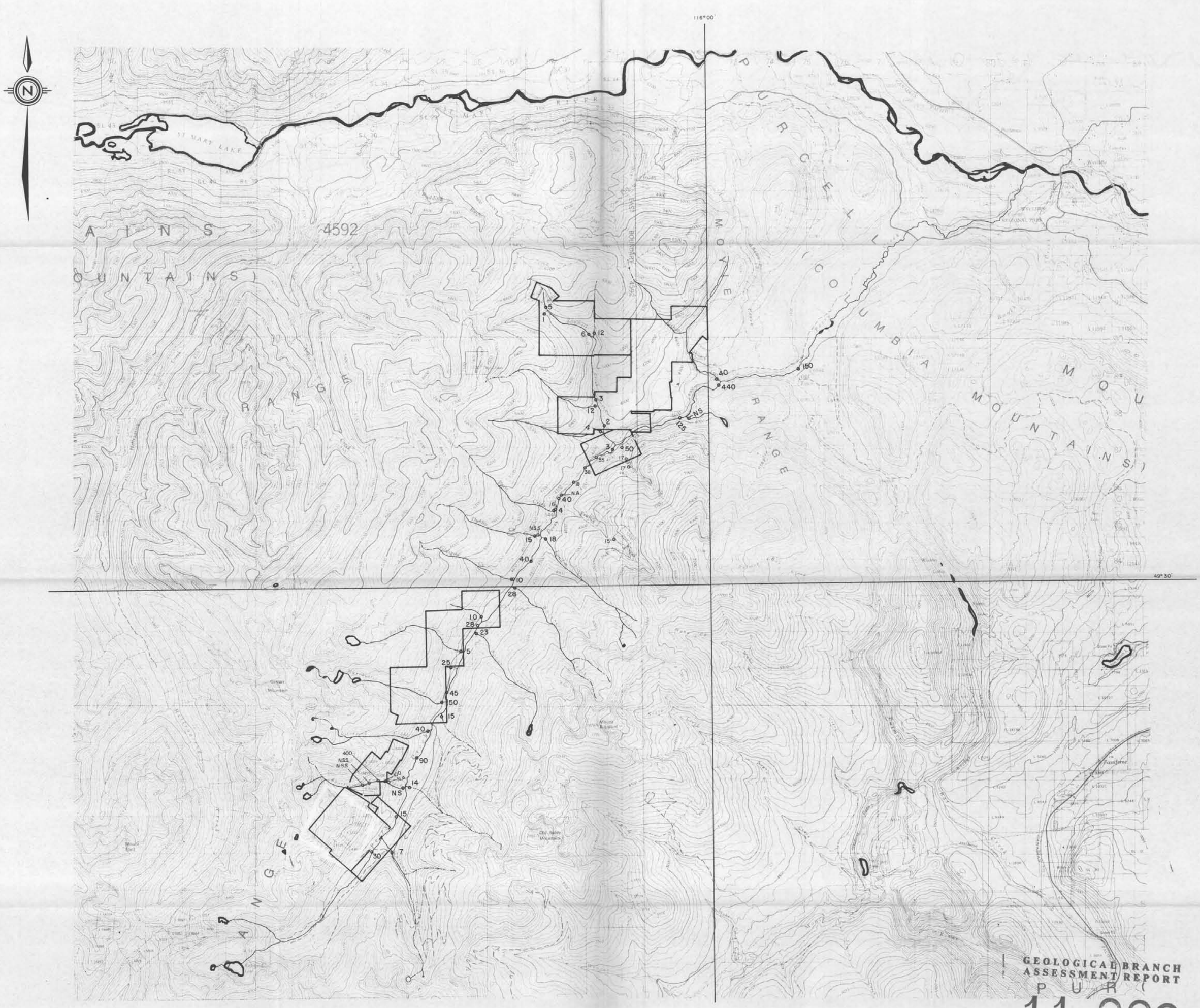
GOLD RESULTS in p.p.b.

0 1000 2000 3000 4000 5000

1:50,000

NTS 82-F-8,9;G-5,12

DATE: Dec. 5/81 By J.C.R./r.w.r. Map 3.1.7



LEGEND:

- CLAIM OUTLINE
- o H.M.C. SAMPLE SITE
- o30 W VALUE IN p.p.m.
- NS NO SAMPLE
- N.S.S. NOT SUFFICIENT SAMPLE
- N.A. NOT ASSAYED
- 400 o 1983 H.M.C. SAMPLE RESULT

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GALLANT GOLD MINES LTD.

PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

HEAVY MINERAL CONCENTRATE SAMPLING

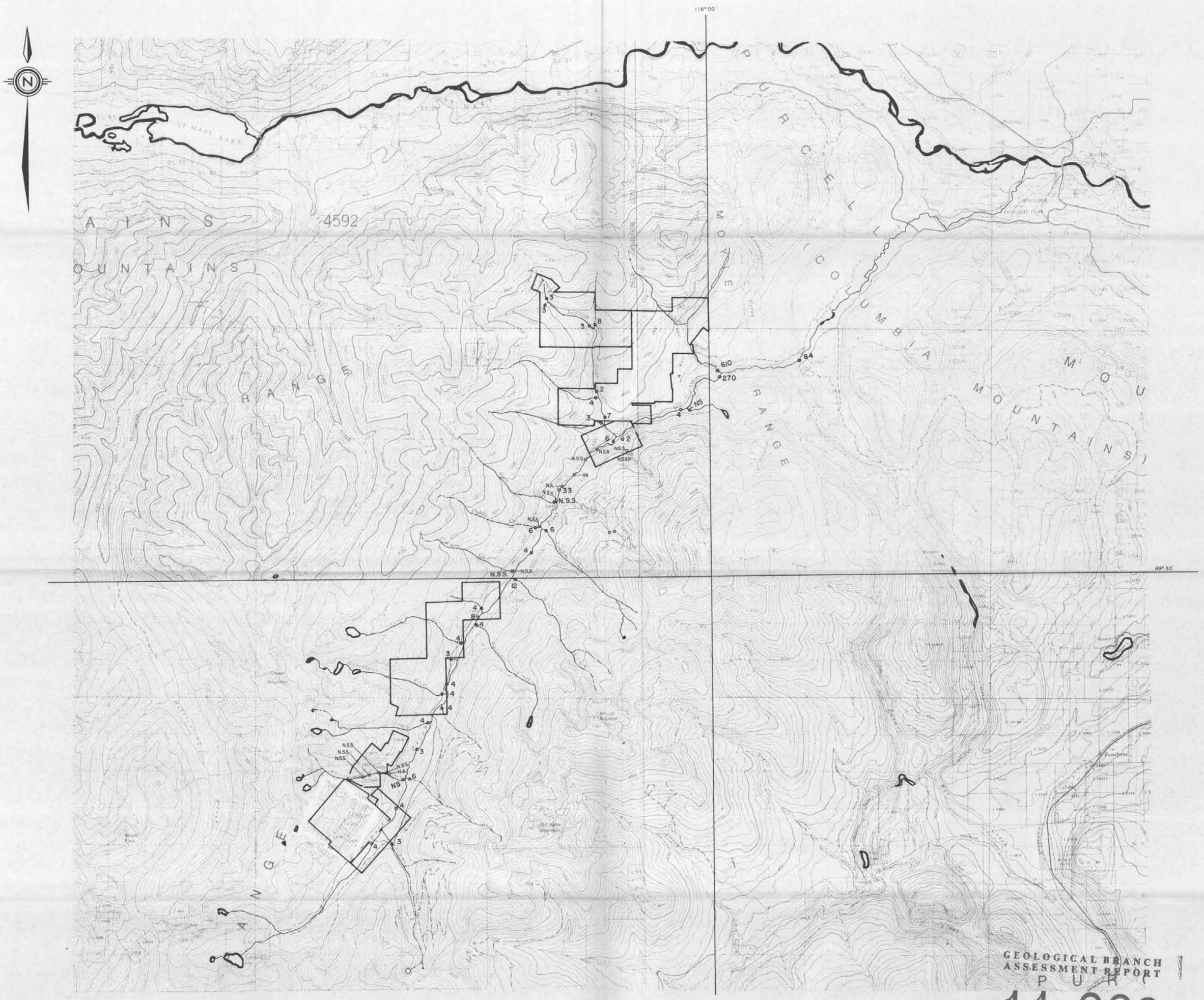
TUNGSTEN RESULTS in p.p.m.

0 1000 2000 3000 4000 5000

1:50,000

NTS 82-F-8,9;G-5,12

DATE: Dec. 8 /81 By J.C.R./r.w.r. Map 3.1.8



LEGEND:

- CLAIM OUTLINE
- ∘ H.M.C. SAMPLE SITE
- ∘4 Sn VALUE IN p.p.m.
- NS NO SAMPLE
- N.A. NOT ASSAYED
- N.S.S. NOT SUFFICIENT SAMPLE
- 44∘ 1983 H.M.C. SAMPLE RESULT

GALLANT GOLD MINES LTD.

PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

HEAVY MINERAL CONCENTRATE SAMPLING

TIN RESULTS in p.p.m.

0 1000 2000 3000 4000 5000

1:50,000

NTS 82-F-8,9;G-5,12

DATE: Dec. 8 /81 By: J.C.R. /r.w.r. Map 3.1.9

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LINDA 4

LINDA 6

LINDA 8

LINDA 9

LINDA 12

LINDA 13

LINDA 14

LINDA 15

L7+50NE

L6+50NE

L8+50NE

L10+50NE

L12+50 NE

L14+50 NE

L16+50 NE

L4+50NE

Trench

PERRY CREEK

GALWAY LK.

Road

LEGEND:

Inphase Reading

Fraser Filter Result (%)

Instrument: Geonics EM-16

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GALLANT GOLD MINES LTD.
PERRY CREEK PROPERTIES ; FORT STEELE M.D., B.C.

VLF-EM 16 SURVEY
FRASER FILTER CONTOURS (%)

50 0 50 100 150 200

SCALE 1:2500 Metres

NTS 82-F-8,9;G-5,12

DATE: Dec. 12/83 By: J.C.R./r.w.r. Map 4.1