GEOLOGICAL AND GEOCHEMICAL REPORT

on the

PL PROPERTY

Galore Creek Area, Liard Mining Division

British Columbia, Canada

Latitude: 57° 02' 56" North Longitude: 131° 36' 36" West

N.T.S. 104 G / 4 East

Claim Name	Record Number	Units	Record Date	Expiry Year
PL 7	5410	20	Oct. 15, 1988	1997
PL 8	5411	20	Oct. 15, 1988	1998
PL 9	5412	20	Oct. 15, 1988	2000
PL 10	5413	20	Oct. 15, 1988	2000
PL 11	5414	20	Oct. 15, 1988	2000
PL 12	6799	18	Feb. 24, 1990	2001
PL 13	6785	18	Feb. 24, 1990	1999
PL 14	8054	20	Mar. 12, 1991	1995
PL 15	8055	3	Mar. 12, 1991	1995
PL 16	8056	8	Mar. 12, 1991	1995
PL 17	8057	6	Mar. 12, 1991	1995

Owner:
PASS LAKE RESOURCES LTD.
11th Floor, 808 West Hastings Street
Vancouver, British Columbia V6C 2X4
(604) 687-7463

Operator:
ROYCE INDUSTRIES INC.
Suite 650 - 999 Canada Place
Vancouver, British Columbia V6C 3E1
(604) 689-1659

Consultant:
SUMMIT GEOLOGICAL
P.O. Box 2865
Invermere, British Columbia V0A 1K0
(604) 342-0051

December 12, 1991

Steven F. Coombes, F.G.A.C.
Consulting Geologist

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SUMMARY

Royce Industries Inc. of Vancouver, British Columbia is the operator of the **PL** property which is situated in the Galore Creek area of the Liard Mining Division in northwestern British Columbia, Canada. The property is owned by Pass Lake Resources Ltd. of Vancouver, British Columbia; subject to the terms of an Option to Joint Venture agreement with Royce Industries Inc.

At the request of the directors of Royce Industries Inc. the writer has prepared this report to document the geological and geochemical surveys and hand trenching that were carried out on the subject property during the 1991 field season by Minorex Consulting Ltd., a geological consulting and exploration management company. The writer conducted and supervised the field program from July 31 to August 21, 1991, and wrote this report following the receipt of all analytical results.

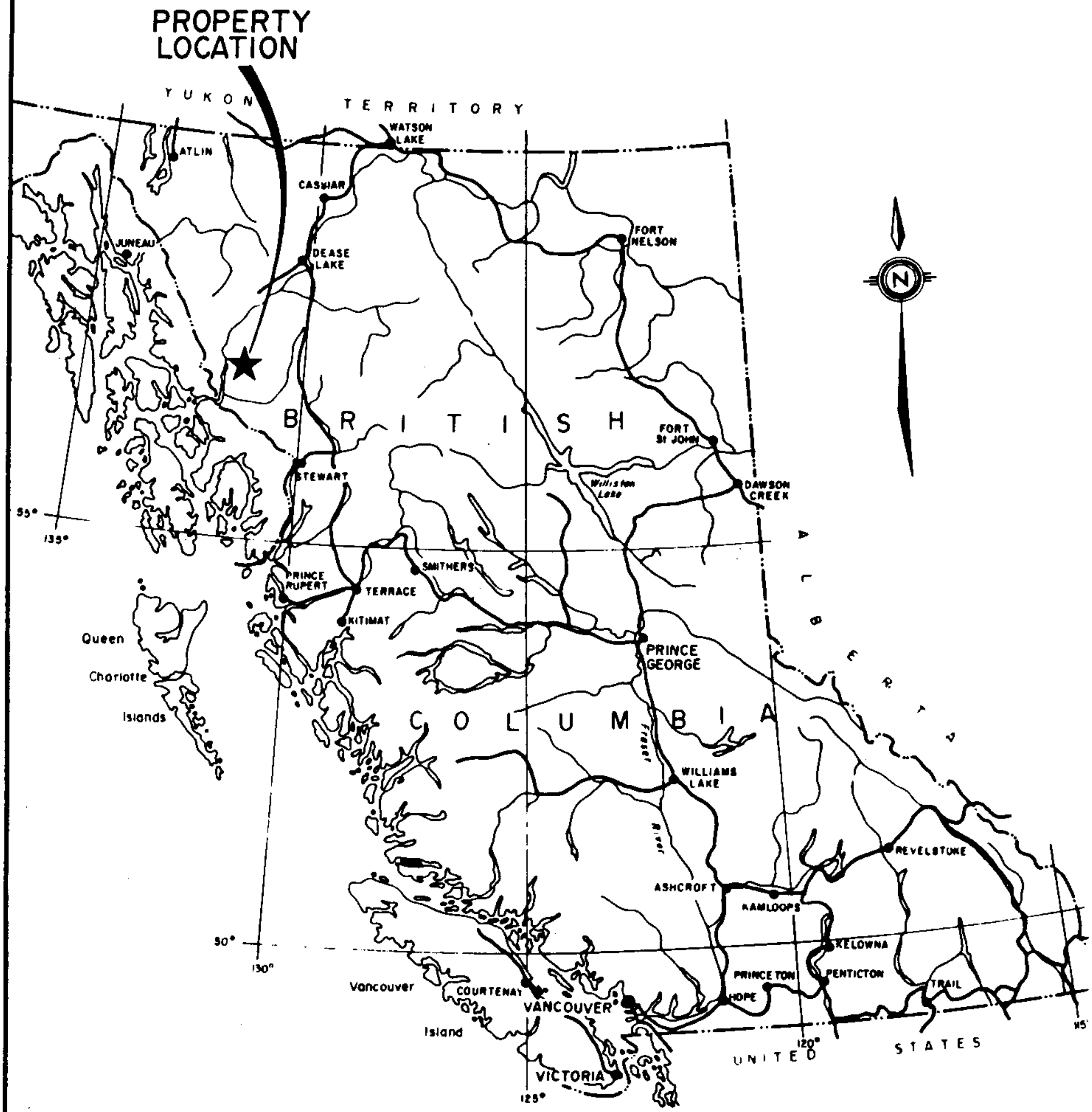
The claim holdings are situated at geographic coordinates 57° 02' 56" North latitude by 131° 36' 36" East longitude; within N.T.S. 104 G/4 (east half). Alternatively, they are situated approximately 160 kilometres northwest of the city of Stewart or 100 kilometres south-southwest of the town of Telegraph Creek.

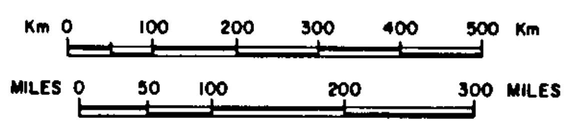
Direct access is possible by helicopter from the commercial gravel airstrip at Bob Quinn Lake, on the Cassiar Highway (Highway 37); a direct distance of approximately 80 kilometres east to the property. Alternatively, one may fly by fixed wing from the city of Smithers, Bronson River, or Bob Quinn airstrips to the Porcupine River gravel airstrip which is located about two kilometres south of the property and then by helicopter to the claim holdings.

The subject property is comprised of eleven contiguous four-post mineral claims, totalling 173 units. These claims are situated within the Boundary Ranges of the Coast Mountains, and extend northeasterly from the Porcupine River; approximately three kilometres east of its confluence with the Stikine River. Local elevations range from 90 metres A.M.S.L. in the Porcupine River valley to about 2,000 metres A.M.S.L. on the southern summit of Mount Scotsimpson. The terrain is rugged glaciated alpine uplands, steep glacial-carved valleys and flat glacial outwash plains in the broad river valleys; although, most of the property is situated below treeline which is at an elevation of approximately 1,100 metres A.M.S.L. The lower slopes are covered by a dense growth of hemlock and spruce with an undergrowth of devil's club and huckleberry. Steeper open slopes are covered with dense slide alder, ferns, grasses and scattered groves of spruce.

Annual precipitation ranges from 190 to 380 centimetres with snow accumulations reaching three metres or more. Temperatures are moderate, from -10°C during the winter to about 20°C during the summer. The field season may commence at lower elevations and on southern slopes in late May but higher elevations often remain snowbound until early August. The field season usually terminates in mid-October because of poor weather and early snowfalls.

The Galore Creek district was explored extensively for its copper, molybdenum and precious metal potential throughout the 1960's. This work followed the discovery in 1955 of the Central Zone of the Galore Creek copper-gold porphyry deposit which is located approximately ten kilometres northeast of the subject property. This zone has reported reserves of 125 million tonnes grading 1.06 percent copper and 400 ppb gold (Allen et al, 1976). In 1957, the Copper Canyon copper-gold porphyry deposit was discovered eight kilometres east of the Central Zone. It has estimated reserves of 27 million tonnes at a grade of 0.72 percent copper and 0.43 grams per tonne gold (Spencer and Dobell, 1958).





To accompany report by S. F. Coombes

SUMMIT GEOLOGICAL
INVERMERE, B.C.

ROYCE INDUSTRIES INC.
VANCOUVER, B.C.

LOCATION MAP

PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104G/4E

DATE: November, 1991	SCALE: As Shown
DRAWN BY: D. Miller	FIGURE NO.: 1

In 1989, Royce Industries Inc. acquired operation of the PL 7 to 11 claims and carried out property-wide mapping and prospecting. Gold mineralization was discovered in three zones, namely North Creek, Split Ridge and Split Creek canyon. The PL 12 and 13 claims were staked by the joint partners in February, 1990 to cover the drainages that yielded anomalous samples on the north side of North Creek and the projected trend of gold-zinc mineralization northwest of Split Creek canyon. During the 1990 field season, Royce Industries Inc. extended geological and geochemical coverage and evaluated the known showings. The results of this work downgraded the exploration potential of the Scotsimpson area and enhanced the Split Ridge showings. Hand trenching discovered lode gold mineralization at the "JEFE" zone on Split Ridge and a float sample containing 769.2 grams per tonne gold was discovered 400 metres north of the Jefe zone that led to the recognition of the "ROLLS ROYCE" zone. Further exploration was recommended to test the fracture-related lode gold mineralization at Split Ridge and to explore for volcanogenic massive sulphide (VMS) mineralization hosted by pre-Permian lithologies south and west of Split Creek. In March, 1991 the PL 14, 15, 16 and 17 claims were staked to cover adjacent open ground along Split Creek and along the geologic trend of the Paleozoic stratigraphy, northwest of the Split Creek canyon.

The subject property is situated within the Intermontane tectonic belt, a geological and physiographical province of the Canadian Cordillera; immediately east of the Coast Plutonic Complex. It is dominantly underlain by Upper Triassic Stuhini Group andesitic volcanic flows, pyroclastics and volcanically-derived sediments which lie in fault contact with Mississippian or older metasediments and metavolcanics to the west. A large Jurassic to Tertiary age granodioritic to dioritic intrusion crops out to the north and numerous other monzonitic to lamprophyric stocks, plugs and dykes, ranging in age from Triassic to Tertiary in age, occur throughout the claim holdings.

Four fracture sets are common on the property. A major lineament which strikes approximately 310° defines the contact between pre-Permian rocks to the west and Triassic rocks to the east. A second fracture set of faults strikes from 055° to 060°; parallel to Split Creek, Sphaler Creek and North Creek. There is also an east-west mylonite zone transecting the middle of the PL 7 and 9 claims with locally intense shearing. The fourth fracture set is a north-south oriented system which are cut off or displaced by the east-northeasterly and northwesterly trending faults providing a relative paragenesis.

Hydrothermal alteration has been superimposed on a pervasive lower greenschist facies grade of regional metamorphism. Localized carbonate±silica alteration zones parallel a fault structure south of Mount Scotsimpson trending 060°. This zone parallels a fault traced for more than five kilometres. Sericite-clay-silica-pyrite alteration zones with a north-northwesterly trend occur on Split Ridge and appear to be related to a major north-south trending fault structure located east of the eastern PL 11 claim boundary.

Precious metal-bearing sulphide mineralization has been discovered within the Split Ridge, Split Creek canyon and Scotsimpson Ridge areas. All of the known mineralization appears to be mesogenetic to epigenetic, fracture-controlled sulphide-rich (± precious metal values) quartz-carbonate veins and fracture fillings. Pyrite, pyrrhotite and minor chalcopyrite, galena, sphalerite and arsenopyrite are the common sulphide mineralization. Gold and silver values are most often spatially and probably genetically associated with copper-, lead-, zinc- and arsenic-rich sulphide mineralization. The mineralization is generally quite narrow (< 10 cm. true thickness) with occasional wider sections up to several metres which contain erratic gold values. These wider sections appear to occur where cross faulting has shattered the rock and formed dilatant zones.

The 1991 exploration program included: hand trenching and blasting (68.9 linear metres, 60 cubic metres); reconnaissance geological mapping at a scale of 1:5,000 (approximately 6 kilometres); detailed trench geological mapping at a scale of 1:50 (76.3 linear metres); silt (41 samples), soil (10 samples) and rock geochemical sampling (52 channel and 11 grab samples); and report preparation and reproduction. The total cost of the program, including report preparation, is $ 53,173.00.

The reconnaissance geological mapping results indicate the PL 13, 14, 16 and 17 claims are underlain by volcanic, volcaniclastic and sedimentary rocks of the Paleozoic Stikine assemblage. The northeastern portion of the claims is underlain primarily by volcanic tuffs and tuffaceous siltstones (units 4A and 4B) while the southwestern portion is underlain by argillites, siltstones and wackes (unit 4C and 4D). The rock units strike northwesterly and dip moderately southwestward. The trend of the stratigraphy is cut by faulting and fracturing at 045°. Pyrite and pyrrhotite occur as disseminations and fracture fillings proximal to limonitic northwesterly trending shears which are also locally infilled with minor quartz veining.

The results of detailed geological mapping at the Jefe and Rolls Royce zones on Split Ridge show the Jefe zone to be underlain by massive, grey, aphanitic, andesitic crystal tuff (unit 8E) hosting minor pyrite ± pyrrhotite disseminations. The tuff is variably fractured and sheared with limonite fracture infillings. It strikes south-southeasterly with a moderate to steep southwesterly dip. All quartz veins are structurally controlled and are recessively weathered. The shears hosting significant quartz veining trend at 150° to 165° with steep southwesterly dips. These tend to diverge southeastward, and become narrower and less mineralized.

The Rolls Royce zone is dominantly underlain by altered and sheared, grey to brown, medium-grained andesitic tuff (unit 8E?) with pyrite and lesser pyrrhotite mineralization which is concentrated along shears and fractures. The andesitic tuff is highly fractured and completely altered to clay in many places due both to deep surface weathering and hydrothermal alteration. The dominant fracturing and shearing strikes from 135° to 150° with a moderate to steep southwesterly dips. A second fracture set, probably conjugate to the first, strikes from 215° to 235° and dips moderately northwestward. Secondary quartz and pyrite occur as pods within the larger shear zones and as thin stringers along narrow shears and fractures. The quartz is often glassy in the narrow stringers and vuggy in the wider shear zones with goethite filling vugs. Pyrite (± pyrrhotite) occurs as small blebs within the quartz stringers, generally near the margins of the vein.

Lesser dark grey to black, fine-grained tuffaceous mudstone and siltstone (unit 8A?) with minor bands and clasts of andesitic tuff also underlie the zone. The tuff bands have very irregular contacts with the siltstone and mudstone beds, and the tuff clasts are randomly-oriented. Magnetic pyrrhotite and lesser pyrite occur as disseminations, and as wispy bands within the mudstone and siltstone. Pyrite and pyrrhotite also coat shear and fracture surfaces.

Reconnaissance silt geochemical sampling within the PL 13, 14, 16 and 17 claims did not define a discrete volcanogenic massive sulphide target for future exploration. One sample (no. 8256) returned 270 ppb gold but it did not have anomalous base metal values. Three other samples are weakly anomalous in gold (less than 40 ppb) but without coincident base metal values. It is probable that the gold in all cases is derived from narrow shears similar to those tested elsewhere on the property.

The analytical results of detailed lithogeochemical sampling at the Jefe zone extended the gold mineralization southerly for approximately 70 metres. The highest gold values, such as those returned from samples 9103-38 (13.10 gpt or 0.382 opt gold in trench Tr 91-100) and 9103-42 (10.23 gpt or 0.298 opt gold in trench Tr 91-06) are associated with sulphide-rich quartz veining with gold values generally diminishing with the vein widths. This work also indicates that gold values are higher in frothy, goethitic quartz veins than in glassy quartz veins. High gold values correlate with elevated values of copper, zinc, silver and arsenic. Lead values are erratic and antimony values are consistently low.

Only one sample from the Rolls Royce zone, sample number 9103-05 from trench Tr 91-01, contained over 1000 ppb gold. It returned an analysis of 2.76 gpt gold and 0.81 gpt silver across 1.0 metre from sheared, limonitic andesitic tuff with pods of vuggy quartz with pyrite. Several other samples were weakly anomalous in gold; all from sheared, limonitic tuff with minor quartz veining and pyrite. Elevated gold values coincide with zinc and silver values while arsenic, copper and lead values are more erratic. Antimony values are either 1 or 2 ppb in all samples.

RECOMMENDATIONS

Since 1989 one reconnaissance and two detailed exploration programs have been conducted over the Split Ridge and Mount Scotsimpson areas. The results of this work indicate that the majority of the gold-bearing mineralization in the eastern portion of the property are associated with mesogenetic to epigenetic, structurally-controlled sulphide-rich quartz-carbonate veins and fracture fillings. These known mineralized structures are predominantly quite narrow, generally less than 10 cm., and quite discontinuous over relatively short strike lengths. In addition, their gold values are erratic at even a very local scale. All of these results diminish the economic potential of these two area. Thus, it is the writer's opinion that these mineralized structures are not worthy of further exploration; especially given their remote location and high exploration cost requirements.

The 1991 reconnaissance geological mapping and geochemical sampling on the PL 13, 14, 16 and 17 claims failed to define a volcanogenic massive sulphide exploration; however, much of this work was localized along readily accessible drainages. Previous exploration work to the southeast, on the PL 8 and 13 claims, has indicated elevated base metal values in soil samples that may be indicative of volcanogenic massive sulphide mineralization. Thus, future work is warranted on the PL 8, 13, 14, 16 and 17 claims, particularly in the area of soil geochemical anomalies near Split Creek canyon.

Further exploration in the western portion of the subject property will be quite expensive because, firstly, the exploration target requires extensive helicopter support from either a field camp on the property or near the Porcupine River airstrip and, secondly, any further detailed geological, geochemical and/or geophysical surveying will require a cut control grid in a densely forested area.

INTRODUCTION

Royce Industries Inc. of Suite 650 - 999 Canada Place, Vancouver, British Columbia, Canada is the operator of the contiguous **PL 7 to 17** four-post mineral claims that are situated in the Galore Creek area of the Liard Mining Division in northwestern British Columbia, Canada. These claims comprise the **PL** property and are owned by Pass Lake Resources Ltd. ("Pass Lake Resources") of Vancouver, British Columbia, subject to the terms of an Option to Joint Venture agreement with Royce Industries Inc.

At the request of the directors of Royce Industries Inc. ("Royce Industries"), the writer prepared this report to document geological and geochemical surveys and surface trenching that were carried out on the subject property during the 1991 field season by Minorex Consulting Ltd. ("Minorex"), a geological consulting and exploration management company. The writer conducted and supervised the field program on behalf of Minorex from July 31 to August 21, 1991; after which this report was prepared for Royce Industries Inc. to document the results of the exploration work.

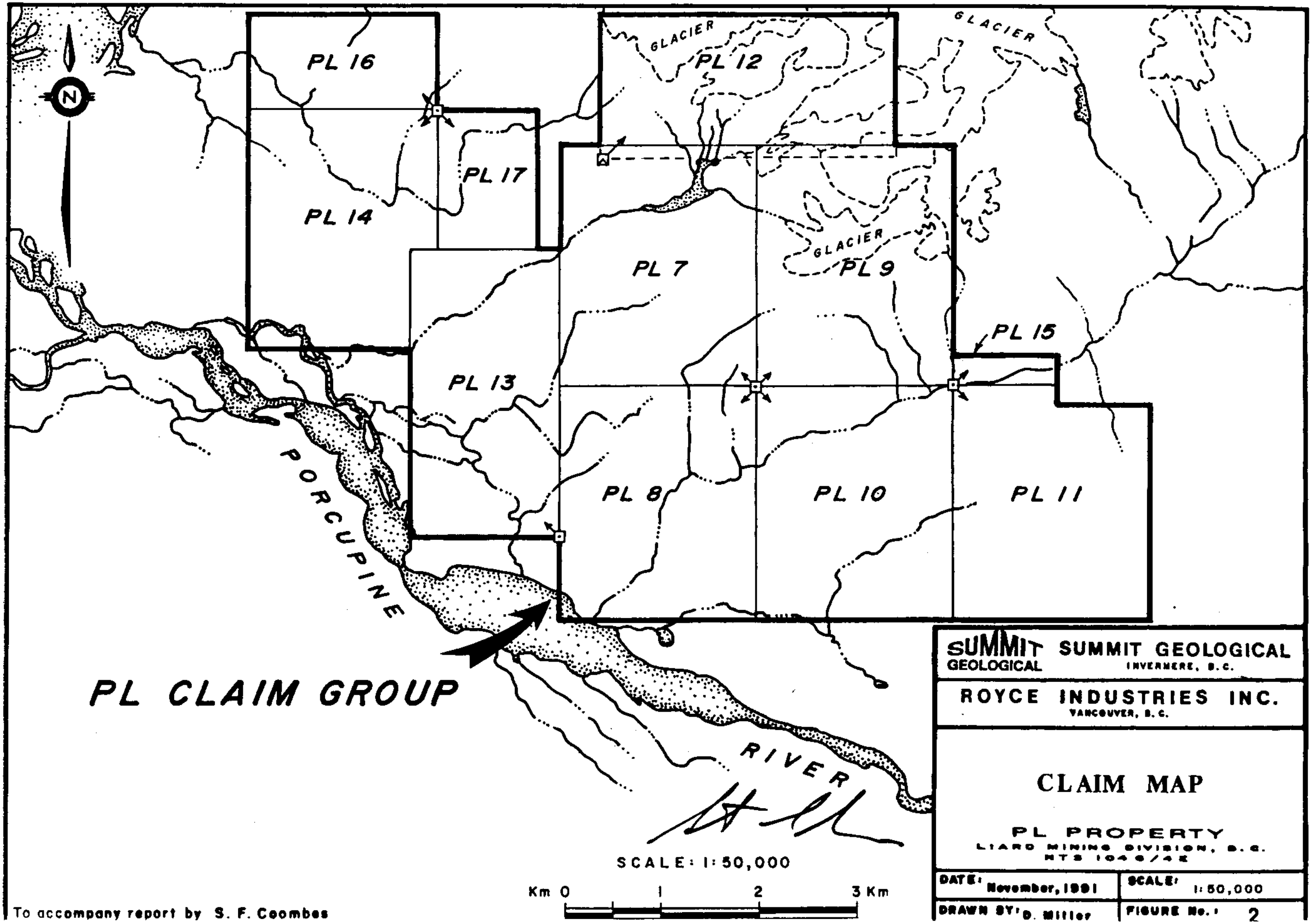
GENERAL DESCRIPTION

Location and Access

The **PL** property is situated within the Galore Creek area; northeast of the confluence of the Porcupine and Stikine Rivers in northwestern British Columbia. The centre of the property is at geographic coordinates 57° 02' 56" North latitude by 131° 36' 36" East longitude; within N.T.S. 104 G/4 (east half). The claim holdings form a block approximately 6.5 kilometres north-south by 9.5 kilometres east-west. Alternatively, they are situated approximately 160 kilometres northwest of Stewart, or 100 kilometres south-southwest of Telegraph Creek within the Boundary Ranges of the Coast Mountains. The "Flood Glacier" 1:50,000 map sheet provides topographic control of the immediate area. See Figures 1 and 2 of this report for the location and configuration of the located mineral claims.

Access to the subject property is by helicopter. The 1991 field program was conducted from a field camp on Split Ridge at an elevation of 1,230 metres A.M.S.L. This camp was established with helicopter support from the road-accessible airstrip at Bob Quinn Lake, on the Cassiar Highway (Highway 37), which is situated approximately 80 kilometres to the east. The previous exploration programs were supported from a base camp near the Porcupine River airstrip which is located about two kilometres south of the property at an elevation of 91 metres A.M.S.L. A camp here has the advantage of fixed wing support but relies on daily helicopter support for field work. In the 1960's, Julian Mining Company Ltd. built a cat road up Split Creek from the Porcupine River to their ANN/SU copper porphyry prospect. This road requires reconstruction but it could provide future ground access to the southern portion of the subject property.

The cities of Wrangell, Alaska, situated about 100 kilometres to the southwest, and Stewart, British Columbia, situated about 160 kilometres to the southeast, are the nearest full service communities. Both cities provide a full range of supplies and services, including commercial airports. The Stikine River is navigable by barge to Telegraph Creek and provides a means of transporting heavy equipment and fuel to within two kilometres of the property.


N
PL 16
PL 17
PL 14
PL 12
GLACIER
GLACIER
GLACIER
PL 7
PL 9
PL 15
PL 13
PL 8
PL 10
PL 11
PORCUPINE
RIVER
PL CLAIM GROUP
SCALE: 1:50,000
Km 0 1 2 3 Km
To accompany report by S. F. Coombes
SUMMIT GEOLOGICAL
SUMMIT GEOLOGICAL
INVERMERE, B.C.
ROYCE INDUSTRIES INC.
VANCOUVER, B.C.
CLAIM MAP
PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104G/4E
DATE: November, 1991
SCALE: 1:50,000
DRAWN BY: D. Miller
FIGURE No.: 2

Property Ownership

The PL property consists of eleven contiguous four-post mineral claims, totalling 173 units, that are located in the Liard Mining Division of British Columbia (see Table I). All of the mineral claims are owned by Pass Lake Resources Ltd. and operated by Royce Industries Inc. under the terms of an the Option to Joint Venture agreement.

The PL 14 to 17 claims were staked during March, 1991 by Pass Lake Resources and Royce Industries to cover adjacent open ground to the original seven located mineral claims. Several posts were examined in the field and are located as shown on the accompanying claim map (see Figure 2).

TABLE I: Mineral Claim Data

Claim Name	Record Number	No. of Units	Record Date	Expiry Year*
PL 7	5410	20	Oct. 15, 1988	1997
PL 8	5411	20	Oct. 15, 1988	1998
PL 9	5412	20	Oct. 15, 1988	2000
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PL 15	8055	3	Mar. 12, 1991	1995
PL 16	8056	8	Mar. 12, 1991	1995
PL 17	8057	6	Mar. 12, 1991	1995
		173		

* subject to approval of assessment work filed in October, 1991

Physiography

The subject property is situated within the Boundary Ranges of the Coast Mountains. It extends northeasterly from the Porcupine River, approximately three kilometres east its confluence with the Stikine River (see Figure 2). The claim holdings are divided by the steep southwesterly valley of Split Creek. On the northwest side of Split Creek, the PL 7, 8, 9, 12, 13, 14, 15, 16 and 17 claims cover the southern and western slopes of Mount Scotsimpson down to the Porcupine River. The ridge between Split Creek and "North Creek," which drains the west side of Mount Scotsimpson, is called "Scotsimpson Ridge." Elevations range from 90 metres A.M.S.L. in the Porcupine River valley to about 2,000 metres A.M.S.L. on the southern summit of Mount Scotsimpson. Southeast of Split Creek, the PL 8, 10 and 11 claims cover the lower part of east-west trending "Split

Ridge", between Split and Sphaler Creeks, with elevations ranging up to 1,336 metres A.M.S.L.

The terrain is typical of the Boundary Ranges with rugged glaciated alpine uplands, steep glacial-carved valleys and flat glacial outwash plains in the broad river valleys. Within the PL 13, 14, 16 and 17 claims, the terrain is characterized by a series of northwesterly trending steep-sided benches and shallow valleys that are cut by the lower canyon of North Creek. This canyon ranges from 40 to 100 metres in depth and is extremely difficult to cross between the western PL 7 claim boundary and the Porcupine River valley. The lowest glacier is at the head of North Creek where it descends to about 1,200 metres A.M.S.L.

Most the property is situated below treeline which is at an elevation of approximately 1,100 metres A.M.S.L. The lower slopes are covered by a dense growth of hemlock and spruce with an undergrowth of devil's club and huckleberry. Steeper open slopes are covered with dense slide alder, ferns, grasses and scattered groves of spruce. Alpine vegetation of white and pink mountain heather and alpine grasses cover the slopes above treeline. Five percent of the property is covered by glaciers and permanent snowfields; mainly above 1,350 metres A.M.S.L. on the PL 9 and 12 claims.

The annual precipitation ranges from 190 to 380 centimetres (Kerr, 1948). Except during July, August and September, precipitation on the mountains is mainly snow with accumulations reaching three metres or more. Temperatures are moderate, ranging from -10°C in the winter to around 20°C during the summer. Field work at lower elevations and on southern slopes can usually begin by late May while the higher elevations often remain snowbound into early August. The field season usually terminates around the mid-October due to accumulations of early snow.

History

The Galore Creek district was explored extensively for its copper, molybdenum and precious metal potential throughout the 1960's; following the discovery in 1955 of the Galore Creek copper-gold porphyry deposit (Figure 3). This deposit, with a Central Zone hosting reported reserves of 125 million tonnes grading 1.06 percent copper and 400 ppb gold (Allen et al, 1976), is located approximately ten kilometres northeast of the subject property. Following its discovery, several major mining companies conducted regional mapping and silt sampling programs over the entire Galore Creek area. In 1957, the Copper Canyon copper-gold porphyry deposit was discovered eight kilometres east of the Central Zone. The Copper Canyon deposit is estimated by Spencer and Dobell (1958) to contain 27 million tonnes at a grade of 0.72 percent copper and 0.43 grams per tonne gold. During 1990 and 1991 some of the peripheral zones on the Galore Creek property were tested by diamond drilling to evaluate their lode gold potential.

In the mid-1950's, prospecting crews for K.J. Springer noted abundant low-grade chalcopyrite mineralization on the north side of Split Creek, approximately two kilometres northeast of the subject property (see Figure 3). In 1964 and 1965, Julian Mining Company Ltd. conducted geological mapping, induced polarization surveys, bulldozer trenching and 2,190 metres of diamond drilling on these showings, called the ANN or SU prospect. They intersected extensive mineralization grading 0.1 percent to 0.2 percent copper. Limited bulldozer trenching and diamond drilling was conducted on the south side of Split Creek to test magnetic anomalies that extend southerly across the creek (B.C.D.M., 1966). Throughout the 1960's and 1970's, the ANN/SU prospect was evaluated by several other operators for its porphyry copper potential. In 1981, Teck Corp. staked the ANN/SU prospect and conducted a reconnaissance silt sampling program for base and precious metals over the immediate area. Detailed follow-up work over the resulting geochemical anomalies led to the discovery of the PAYDIRT gold deposit which is situated approximately one kilometres northeast of the central ANN/SU copper porphyry deposit. Soil and rock geochemical sampling, trenching and 760 metres of diamond drilling on the Paydirt deposit have delineated 185,000 tonnes of possible reserves grading 4.11 grams gold per tonne (Holtby, 1985).

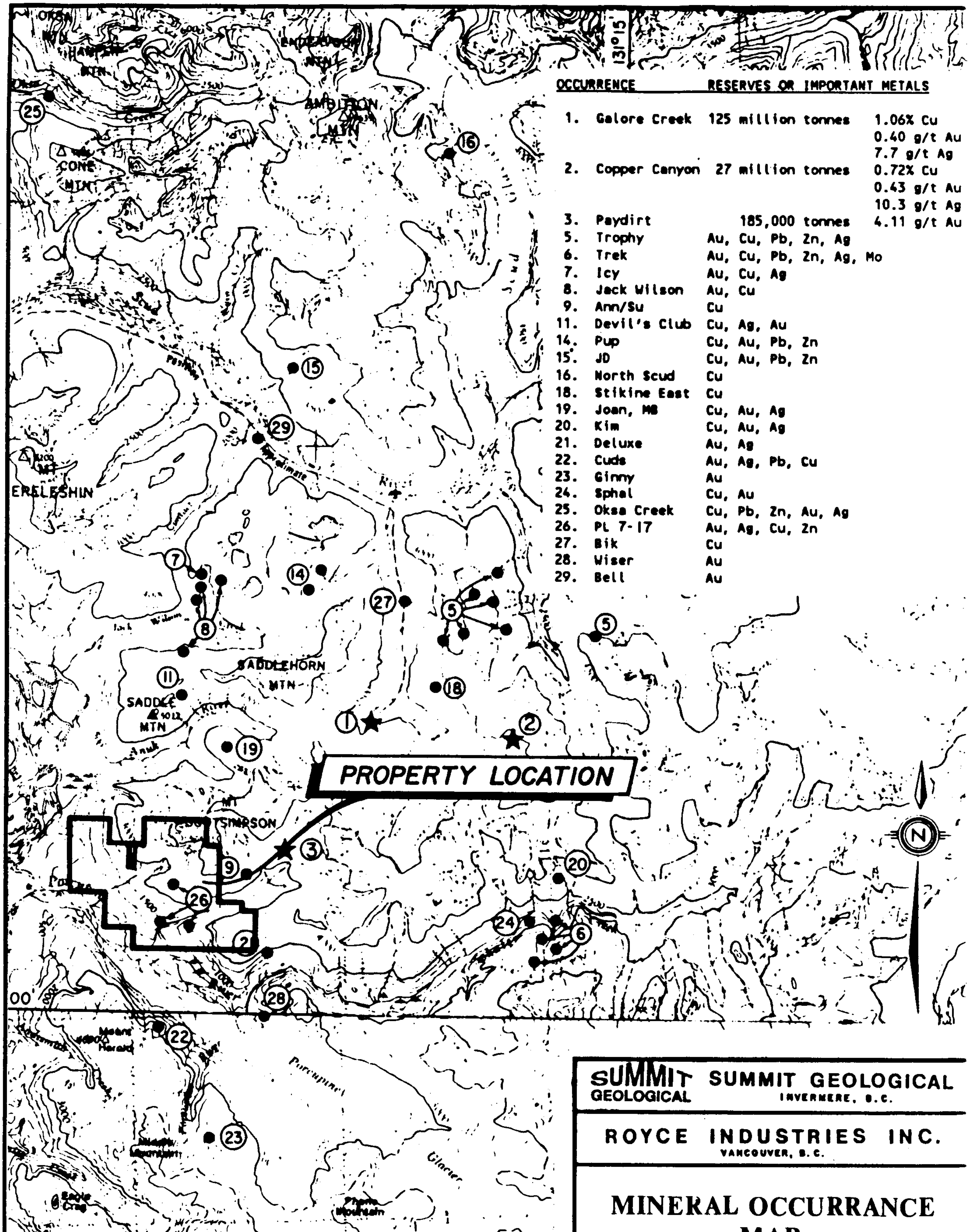
Immediately east of the PL 11 claim, Consolidated Goldwest Resources Ltd. has discovered significant gold-silver mineralization in the Deluxe Zone on the Wiser IV claim in 1989. Grab samples from silicified and pyritic bands within a broader sericitized alteration zone assay up to 10.5 grams per tonne (0.306 opt) gold. One float sample of quartz-sulphide vein material is reported to assay 282 grams per tonne (8.25 opt) gold and 704 grams per tonne (20.5 opt) silver (Kasper, 1989).

In 1989, Royce Industries Inc. acquired the PL 7 to 11 located mineral claims and carried out property-wide geological mapping and prospecting. Gold-bearing mineralization was discovered in three zones, namely North Creek, Split Ridge and Split Creek canyon. Near the headwaters of North Creek, several gold bearing samples were collected from narrow quartz veins with associated poddy and lens-shaped sulphides. Grab samples returned assays up to 75.4 grams per tonne (2.20 opt) gold; although, a nugget effect within the highest sample was demonstrated by a check-assay (3.22 grams per tonne) of its reject. On Split Ridge, quartz vein float returned an assay of 38.2 grams per tonne (1.114 opt) gold. In Split Creek canyon, several gold and zinc-rich samples were collected from pre-Permian metamorphic rocks with separate samples returning assays ranging up to 18.4 grams per tonne (0.536 opt) gold and 6.24 percent zinc (Caulfield and Kasper, 1989).

Sixty-one silt samples were collected from the property during the 1989 field program with twenty-four exceeding an anomalous level of 30 ppb gold. Anomalous silt geochemical samples were collected from streams draining the north slope of Split Ridge, the southern flank of Mount Scotsimpson, North Creek and lower elevations near Split Creek canyon. Four contour soil lines were established in areas of poor bedrock exposure and encouraging results were returned from two of these lines. Soil line Hig 3, on the southern slope of Split Ridge, has seven sample sites exceeding 50 ppb gold associated with elevated arsenic and lead values. Soil line PLH, on the west side of Split Creek canyon, returned several anomalous gold and zinc values (Caulfield and Kasper, 1989).

The PL 12 and 13 claims were staked by the joint partners in February, 1990 to cover the drainages that yielded anomalous samples on the north side of North Creek and the projected trend of gold-zinc mineralization northwest of Split Creek canyon.

In 1990, Royce Industries Inc. continued exploration of the PL 7 to 13 claims by extending geological and geochemical coverage. This work concentrated on Split Ridge and the southern slopes of Mount Scotsimpson. Two survey control grids were established within these areas prior to prospecting, geological mapping, geochemical sampling, geophysical surveying, and later hand trenching. During the program, three silt samples, 1,043 soil samples and 158 rock samples were collected, and detailed mapping was conducted at scales of 1:5,000 and 1:2,500.



SCALE 1:250,000

Km 0 5 10 15 Km

To accompany report by S. F. Coombes

SUMMIT GEOLOGICAL
INVERMERE, B.C.

ROYCE INDUSTRIES INC.
VANCOUVER, B.C.

MINERAL OCCURRANCE MAP

PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104 G/4E

DATE: November, 1991	SCALE: 1:250,000
DRAWN BY: D. Miller	FIGURE NO.: 3

The results of the 1990 exploration work downgraded the exploration potential of the Scotsimpson area and enhanced the Split Ridge area showings. Hand trenching discovered lode gold mineralization at the "JEFE" zone on Split Ridge. A float sample which contains 769.2 grams per tonne gold was discovered 400 metres north of the Jefe Zone and led to the recognition of the "ROLLS ROYCE" zone. In their 1990 summary report, Yamamura and Awmack (1990) recommended further exploration to test the fracture-related lode gold-bearing mineralization at Split Ridge and to explore for volcanogenic massive sulphide (VMS) mineralization hosted by pre-Permian lithologies south and west of Split Creek.

In March, 1991 the PL 14, 15, 16 and 17 claims were staked to cover adjacent open ground along Split Creek and along trend of the pre-Permian stratigraphy, northwest of the Split Creek canyon. This staking was largely based upon the discovery of volcanogenic massive sulphide mineralization within similar pre-Permian metasedimentary rocks at the ROCK AND ROLL property in the Iskut River district.

GEOLOGICAL SETTING

Most of the following discussions of the regional and property geology is derived directly from the 1990 report on the subject property by B.K. Yamamura and H.J. Awmack (1990), two consulting geologists employed by Equity Engineering Ltd.

Regional Geology

The first geological investigations of the Stikine River region began over a century ago when Russian geologists came to Russian North America to assess its mineral potential (Brown and Gunning, 1989a). G.M. Dawson and R. McConnell studied the region for the Geological Survey of Canada in 1887. Since then, several generations of geologists have studied the Stikine area; including: Kerr (1948), Operation Stikine (G.S.C., 1957), Panteleyev (1976), Souther (1972), Souther and Symons (1974), Monger (1977), and Anderson (1989). Recently, the British Columbia Geological Survey Branch has completed regional mapping of the area at a scale of 1:50,000 (Brown and Gunning, 1989a,b and Logan and Koyanagi, 1989a,b).

The Galore Creek camp is situated within the Intermontane tectonic belt of the Canadian Cordillera; immediately east of the Coast Plutonic Complex (see Figure 4). At Galore Creek, the northwesterly trending Intermontane Belt is cut discordantly by the northeasterly trending Stikine Arch which became an important tectonic terrane during Mesozoic time. It influenced sedimentation into the Bowser Successor Basin, to the southeast, and into the Whitehorse Trough, to the northwest (Souther et al, 1974).

Stikinian stratigraphy ranges from possibly Devonian to Jurassic age. These strata were subsequently intruded by granitic plutons of upper Triassic to Eocene age. The oldest strata of the Galore Creek district are Mississippian or older mafic to intermediate volcanic flows and pyroclastic rocks (units 4A and 4B) with associated clastic sediments (units 4C, 4D, 4G and 4J) and carbonate lenses (unit 4E). These are overlain by over 700 metres of Mississippian limestone with a diverse fossil fauna (unit 4E). It appears from the fossil evidence that all of the Pennsylvanian stratigraphy is missing; representing an angular unconformity and lacuna of 30 million years. Field relationships are, however, complicated by faulting (Monger, 1977; Logan and Koyanagi, 1989a). Permian limestone (units

6A, 6B and 6C), also approximately 700 metres thick, overlies the Mississippian limestone and is succeeded by a second lacuna of about 20 million years from the Upper Permian to the upper Lower Triassic.

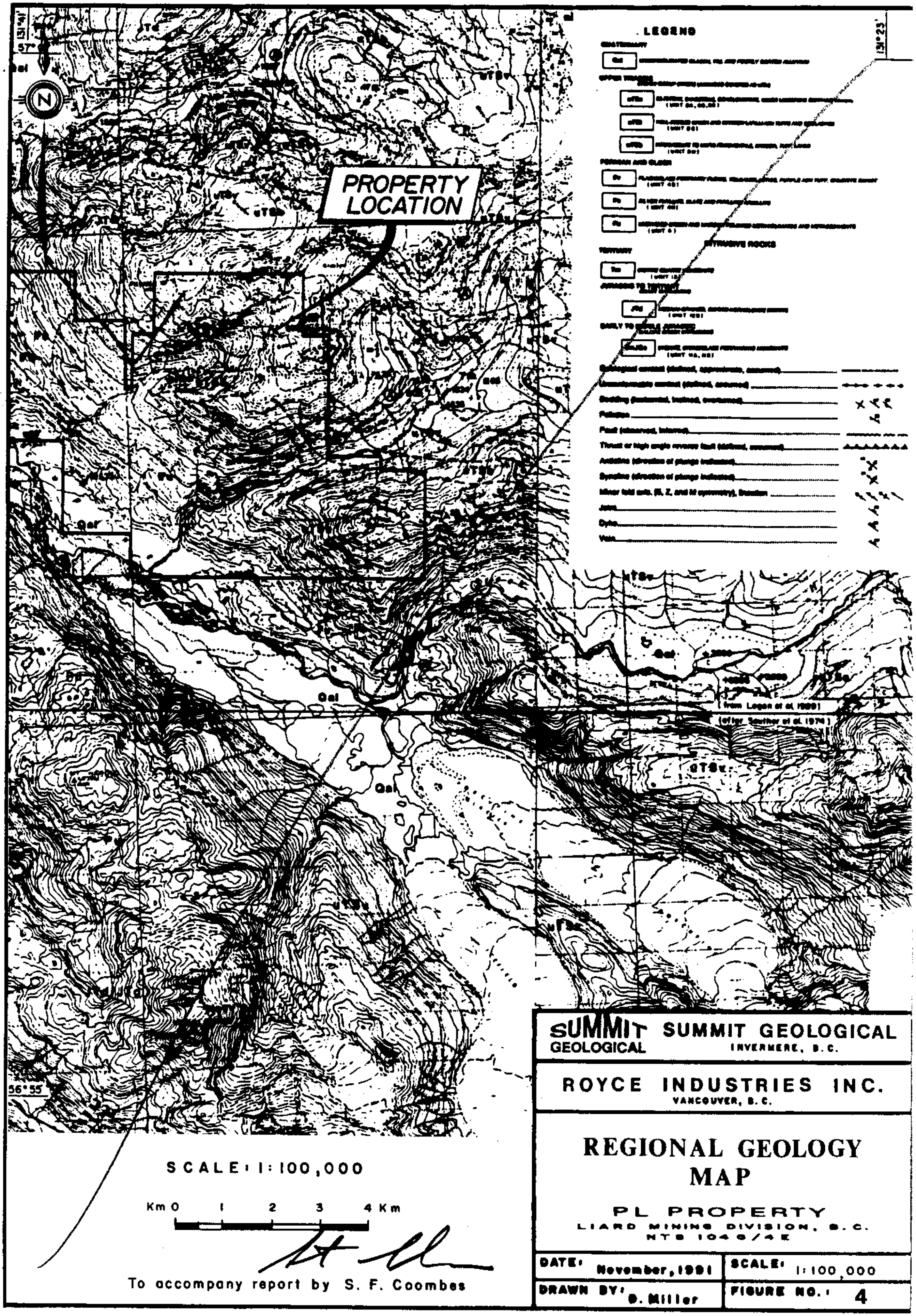
Middle and Upper Triassic siliciclastic and volcanic rocks (unit 7) are overlain by Upper Triassic Stuhini Group siliciclastic (units 8A and B) and mafic to intermediate pyroclastic and lesser flow volcanic rocks (units 8D, 8E, 8H and 8I). The Galore Creek porphyry copper deposit appears to mark the edifice of an eroded volcanic centre with numerous subvolcanic plutons of syenitic composition. Jurassic Bowser Basin strata onlap the Stuhini Group strata to the southeast of the Iskut River but, because of erosion and non-deposition, are virtually absent in the Galore Creek area.

The plutonic rocks are subdivided into three age relationships. Middle Jurassic to Late Jurassic syenitic and broadly granodioritic intrusions are partly coeval and cogenetic with the Stuhini Group volcanics, and include the composite Hickman batholith (unit 9) and the syenites of the Galore Creek complex (unit 11). Jura-Cretaceous Coast Plutonic Complex (unit 12) occur on the west side of the Galore Creek camp, along the Stikine River, with the youngest of these intrusions occupying more axial positions along the trend of the Coast Plutonic Complex which are flanked by older intrusions. The youngest intrusions in the Galore Creek camp are Eocene (quartz-) monzonitic plugs (unit 13), felsic and mafic sills and dykes (unit 14), and biotite lamprophyre (minette) dykes (unit 14C).

The dominant styles of deformation in the Galore Creek area are upright northerly trending, open to tight folds and northwesterly trending, southwesterly converging folding and reverse faulting with the greenschist facies of regional metamorphism. Localized contact metamorphism grades up to pyroxene hornfels grade, and metasomatism occurs proximal to intrusions. Upright folding may be an early manifestation of a progressive deformation which later resulted in southwesterly converging structures. Southwesterly converging deformation involves the marginal phases of the Hickman batholith and so it is, at least in part, no older than Late Triassic.

Steeply dipping faults which strike northward, northwestward, northeastward and eastward have brecciated the area into a faulted mosaic. Northerly striking faults are vertical to steeply eastward dipping. They parallel the Mess Creek fault (Souther, 1972) which was active from Early Jurassic to Recent times (Souther and Symons, 1974). Northwesterly striking faults are probably coeval with the northerly striking faults, but locally predate them. East-west striking faults are vertical or steeply dipping to the north and display north side down dip slip kinematics, whereas northeasterly striking faults are the loci of sinistral, strike-slip motion (Brown and Gunning, 1989a).

Numerous varieties of mineralization have been recognized in the Galore Creek camp, including: porphyry copper (± molybdenum and/or gold), structurally-controlled precious metal, skarn, and breccia occurrences (see Figure 3). Porphyry copper deposits of this area include both the alkalic Galore Creek copper-gold and calc-alkalic Schaft Creek copper-molybdenum deposits. Galore Creek, which is associated with syenitic stocks and dykes rather than a quartz-feldspar porphyry, is further contrasted from the calc-alkalic Schaft Creek host in that molybdenite is rare, magnetite is common and gold and silver are important associated metals. The mineralization is clearly coeval and cogenetic with the spatially associated intrusive bodies.



LEGEND
PROPERTY LOCATION
INTRUSIVE ROCKS
Qal
uTSv
from Logan et al. 1989
after Souther et al. 1974
56°55'
57°
131°23'
SCALE: 1:100,000
Km 0 1 2 3 4 Km
To accompany report by S. F. Coombes
SUMMIT GEOLOGICAL
SUMMIT GEOLOGICAL
INVERMERE, B.C.
ROYCE INDUSTRIES INC.
VANCOUVER, B.C.
REGIONAL GEOLOGY MAP
PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104G/4E
DATE: November, 1991
SCALE: 1:100,000
DRAWN BY: D. Miller
FIGURE NO.: 4

The ANN/SU porphyry copper mineralization, centred approximately 1,500 metres east of the PL 9 claim and 1,500 metres north of the PL 11 claim, is disseminated pyrite and chalcopyrite that are hosted by Stuhini Group andesitic tuffs, flows and subvolcanic diorite. Diamond drilling and bulldozer trenching were carried out over a one kilometre area. The best drill hole intersected 0.10 percent to 0.20 percent copper over its entire 230 metre length (B.C.D.M., 1966). Other porphyry copper occurrences in the area include: the Copper Canyon, Sphal, and Jack Wilson Creek showings.

Structurally-controlled gold-silver occurrences have been the target for most of the recent exploration activity. The vein/shear occurrences are similar throughout the Galore Creek camp in that they are often mesothermal in nature and contain base metal sulphides with strong silica veining and alteration. However, it appears that the intrusive bodies associated with this mineralization fall into two types, based upon age and composition. These types are reflected in different style of structures, sulphide mineralogy and associated alteration products. The intrusive types are: 1) Lower Jurassic alkaline "Galore Creek" stocks; and 2) Eocene quartz monzonite to porphyritic granodiorite intrusions. Lead isotope data from the Stewart mining camp further supports the proposition that separate Jurassic and Tertiary mineralizing events were "brief regional-scale phenomena" (Alldrick et al, 1987).

Structures associated with the Lower Jurassic syenites are typically narrow (i.e. less than 2.0 metres) quartz-chlorite veins that are mineralized predominantly with pyrite, chalcopyrite and magnetite. Examples of these structures in the Galore Creek camp include many of the discrete zones peripheral to the Galore Creek deposit and the gold-rich veins near Jack Wilson Creek.

The Tertiary-age mineralization comprises discrete quartz veins and larger shear zones characterized by pervasive silicification and sericitization, and minor pyritization. Quartz veins contain a larger variety of sulphide minerals including: pyrite, chalcopyrite, pyrrhotite, arsenopyrite,galena and sphalerite. Unlike the Jurassic mineralization, silver grades may be very high. The most fully-explored example of the Tertiary mineralization type is the PAYDIRT gold deposit which is located three kilometres east of the PL 9 claim. Here, there is a zone of silicification, sericitization and pyritization hosted by andesitic volcaniclastics (Holtby, 1985). The zone is exposed on surface over an area of 100 metres by 25 metres. It strikes northerly and dips moderately westward. Gold mineralization occurs preferentially in intensely silicified and heavily pyritized material rather than with more sericitic alteration. The best diamond drill intercept averages 5.86 grams gold per tonne over 12.0 metres in hole 85-1 and 10.59 grams gold per tonne over 4.95 metres in hole 85-4 (Holtby, 1985).

Skarns represent a minor percentage of the precious metal-bearing occurrences in the Galore Creek camp. The mineralogy of these deposits is influenced by the composition of the intrusion from which the hydrothermal fluids were derived. In deposits associated with alkalic intrusions, the skarn assemblage is commonly dominated by magnetite and chalcopyrite; as at the Galore Creek deposit and the Hummingbird skarn situated on the east side of the South Scud River.

The precious metal-bearing, breccia-hosted mineralization of the Galore Creek camp appears to be unique in style and composition. Three occurrences have been located in the camp, namely: 1) the zinc-silver-gold PTARMIGAN zone in the South Scud River area, 2) the copper-molybdenum-gold-silver breccia at the TREK property on Sphaler Creek, and 3) the copper-bearing and magnetite breccias of the complex GALORE CREEK deposit. They are all located along fault structures which may represent the main conduit for mineralizing fluids.

Kuroko-type volcanogenic massive sulphide (VMS) mineralization has yet to be discovered in the Galore Creek area but significant deposits occur in similar stratigraphy to the northwest and southeast. Volcanogenic massive sulphide deposits that are hosted by felsic and sedimentary rocks of a Paleozoic island arc complex are known in the Tulsequah area (Nelson and Payne, 1984). This island arc complex appears to correlate with the pre-Permian metamorphic rocks of the Galore Creek district. The Tulsequah Chief deposit which is located 200 kilometres northwest of the subject property has reported reserves of 4.7 million tonnes grading 1.6 percent copper, 1.3 percent lead, 7 percent zinc, 2.7 grams per tonne gold and 101 grams per tonne silver (Northern Miner, Dec. 10, 1990). At the ROCK AND ROLL property, located 45 kilometres southwest of the subject property, Thios Resources Ltd. has drill tested volcanogenic massive sulphide mineralization with values ranging up to 881 grams per tonne silver, 5.35 percent zinc, 2.07 percent lead, 2.74 grams per tonne gold and 0.58 percent copper over lengths of 9.7 metres (Thios, 1990). This discovery is hosted by pre-Permian metasedimentary rocks equivalent to those underlying the western portion of the subject property.

Property Geology

1) Lithology

The subject property is dominantly underlain by Upper Triassic andesitic volcanic flows, pyroclastics and volcanically-derived sediments of the Stuhini Group which occur in faulted contact with Mississippian or older metasediments and metavolcanics to the west. A large Jurassic- to Tertiary-age granodioritic to dioritic intrusion crops out to the north and numerous other monzonitic to lamprophyric stocks, plugs and dykes, ranging in age from Triassic to Tertiary in age, occur throughout the claim holdings.

The Mississippian or older metamorphic rocks dominate the western claim holdings. They have been interpreted to be the oldest lithology, overlain by a metavolcanic to metavolcaniclastic assemblage (Logan and Koyanagi, 1989). These rocks are two distinctly different lithologies. The first, probably derived from a semi-pelitic lithology, is biotite-rich in composition (unit 4C). These light to dark grey rocks are commonly fine-grained, and display a moderate to well-developed foliation which usually strikes 310° and dips steeply to moderately southwestward. Some medium-grained, more felsic horizons are thought to represent arenaceous horizons (unit 4D). Included in this unit are well-foliated chlorite-feldspar-quartz±sericite schists and gneisses which may be of sedimentary or volcanic origin (unit 4I).

The overlying Mississippian or older metavolcanics tend to be medium-grained, fairly siliceous and locally sericitized (unit 4A). The occurrence of minor, small xenoliths or clasts suggests the presence of some volcaniclastic horizons. The north-northwesterly trending contact between the metasediments and metavolcanics differs slightly from the west-northwesterly orientation indicated by Logan and Koyanagi (1989). This discrepancy may reflect local faulting.

The Upper Triassic Stuhini Group volcanics and volcaniclastics (unit 8) underlie the PL 9 claim and most of the PL 7, 10 and 11 claims. These rocks comprise lapilli tuffs to agglomerates (unit 8H), andesitic flows and crystal ash tuffs (unit 8E), pyroxene porphyry flows and subvolcanic intrusions (unit 8D) and their dioritic intrusive equivalents (unit 8F). Volcanic conglomerates (unit 8I) and a sequence of sandstone, siltstone and argillite (unit 8A) comprise the sedimentary component of the Stuhini Group rocks.

The lapilli tuffs and agglomerates of unit 8H are dark green, and characterized by the presence of subrounded to subangular dioritic to andesitic clasts up to approximately twenty-five centimetres in length. Most fragments are five to ten centimetres in length, and locally comprise up to 25 percent of the rock. The matrix is characterized by small (less than or equal to 1 mm.), euhedral to subhedral plagioclase and pyroxene crystals within an aphanitic, tuffaceous groundmass. The compositional similarity between the fragments and host makes this unit difficult to distinguish from the andesitic flows of unit 8E (Logan and Koyanagi, 1989). The entire sequence has a basal section of coarse volcaniclastic material which grades upward and northeasterly into interbedded volcanic flows, minor tuffs and sediments.

Andesitic flows and crystal tuffs of unit 8E are commonly characterized by abundant feldspars and a lack of pyroxene phenocrysts. The tuffaceous rocks included in this sequence are dominant but uncharacteristically contain approximately equal proportions (5 to 10%) of fine euhedral to subhedral plagioclase and pyroxene crystals in a locally calcareous and magnetite-bearing, fine-grained groundmass. This unit commonly exhibits an irregular, open-space texture which resemble large vesicles. These are thought to represent tensional structures, perhaps modified by carbonate dissolution. As well, irregular pock-marked or knobbly-weathering textures are common that are probably indicative of the presence of lapilli. These tuffs are present over the Split Ridge area, within PL 11 claim, and cover much of the south side of Scotsimpson Ridge, underlying the PL 7 and 8 claims. In the Scotsimpson Ridge area, these volcanics have been strongly sheared and metamorphosed close to the fault contact which juxtaposes them against the Paleozoic metamorphic rocks. These deformation effects create some difficulty in distinguishing the Triassic metavolcanics from the Paleozoic units. A band of crystal tuff was also mapped north of Scotsimpson Ridge within the lapilli tuff-agglomerate sequence. This horizon is distinct from other crystal tuffs because of its dark grey to black colour.

Pyroxene porphyry flows and subvolcanic intrusions (unit 8D) are sparsely exposed over the claim area with outcrops observed along Split Ridge, within the PL 11 claim, and the south side of Scotsimpson Ridge, within the PL 7 claim. These rocks are characterized by coarse augite phenocrysts, up to three or four millimetres long, in a fine-grained groundmass. The flows are medium to dark green of colour due to weak to moderate chloritization. Outcrops on the south side of Scotsimpson Ridge also contain abundant irregular epidote±quartz veinlets.

The Stuhini Group sequence includes small dioritic dykes and plugs (unit 8F) that are thought to be intrusive equivalents of the volcanic and pyroclastic rocks. These medium-grained, light to medium grey coloured rocks generally display a more equigranular, hypidiomorphic texture which distinguishes them from the comparable extrusive rocks. They have been mapped on Split Ridge and in a stream draining the southern slope of Scotsimpson Ridge.

A sedimentary unit comprised of thinly interbedded medium grey to black argillites and siltstones (unit 8A) is in contact with the volcanic assemblage on Split Ridge. These fine-grained rocks commonly host minor pyrite and pyrrhotite, and have general east-west strikes with shallow northerly dips. The western contact of these sediments with a monzonitic intrusion is locally well exposed, whereas the contact with the volcanics and pyroclastics to the east is poorly exposed and locally marked by a slightly recessive zone, probably representing a fault. Poor exposure has not permitted examination of the northern and southern contacts of the sediments with the adjacent igneous rocks.

An orthoclase porphyry (unit 11B), of assumed Early to Middle Jurassic age, crops out as small plugs and dykes on Split Ridge. This medium-grained monzonite is largely equigranular but characterized by the presence of sparse orthoclase phenocrysts up to two centimetres long. It is generally quite fresh, but mineralization in the JEFE zone occurs proximal to an orthoclase porphyry dyke.

The southern portion of a granodioritic to dioritic batholith (unit 12B) underlies most of the PL 12 claim and the northwestern portion of the PL 7 claim. This batholith is of Jurassic to Tertiary age, and forms part of the Coast Plutonic Complex. It has local gneissic textures, due to east-west shearing along a zone roughly coincident with North Creek, and contains rounded xenoliths of biotite lamprophyre. Biotite lamprophyre dykes (unit 14C) occur within the PL 7 and 9 claims and locally bound intrusive outcrops; suggesting that they are of similar age. The lamprophyric dykes generally strike 025° to 088°.

A subcircular, medium-grained and equigranular biotite monzonite stock (unit 13A) crops out over a large portion of the western end of Split Ridge. Subhedral biotite comprises approximately 10 to 15 percent of the rock. Associated with this unit are biotite-deficient monzonite dykes (unit 13B) which cut crystal tuffs exposed along the western margin of the stock. Pegmatite phases of this intrusion were identified on its western border. An Eocene age is inferred for this monzonite by comparing it with a compositionally and texturally equivalent intrusion on Sphaler Creek. It has been dated at 53.5 ±1.6 Ma (Panteleyev, 1975). A smaller monzonite plug occurs within 200 metres of the legal corner post of the PL 7 to 10 claims. Narrow quartz veins containing molybdenite are spatially related to this monzonitic intrusion.

Narrow dykes of varying composition are scattered throughout the claim holdings and are generally inferred to be of Tertiary age. A tan-coloured, rhyolitic dyke (unit 14E) crops out in a creek on the south side of Scotsimpson Ridge and for several hundred metres north of Scotsimpson Ridge. It is characterized by bipyramidal quartz±feldspar phenocrysts hosted in an aphanitic, siliceous groundmass. Feldspar-phyric dykes of andesitic composition (unit 14A) intrude the argillites and siltstones on Split Ridge and a small basaltic plug or dyke (unit 14B) cuts the crystal tuffs.

2) **Structure**

Four fracture sets are common on the property. A major lineament which defines the contact between pre-Permian rocks to the west and Triassic rocks to the east is interpreted to be a major fault. This fault strikes approximately 310°. A monzonite intrusive occupies this lineament at one point along its trend.

A second fracture set, defined by drainage patterns and microfractures, comprises east-northeasterly faults that strike from 055° to 060°. Split Creek, Sphaler Creek and North Creek are all parallel to this east-northeasterly trend. This fracturing is reflected by a carbonate-altered zone located south of Mount

Scotsimpson which corresponds to a lineament that has been traced southwestward for over five kilometres.

There is an east-west mylonite zone transecting the middle of the PL 7 and 9 claims. Locally intense shearing has occurred, but it is thought that the fracturing is related to smaller west-northwesterly trending faults associated with the major east-northeasterly structures.

The fourth fracture set is a north-south oriented system within all claims. Strike lengths of up to three kilometres are common. These faults are cut off or displaced by the east-northeasterly structures and the 310° trending systems; providing a relative age to these fault patterns. A north-south fault in a deep creek cut in the south central portion of the PL 11 claim divides Stuhini Group sediments on the west from Stuhini Group volcanics on the east.

3) Alteration

There are three types of hydrothermal alteration on the property that have been superimposed on a the pervasive regional metamorphism of lower greenschist facies grade. There also appears to be a distinct variation in the intensity of the regional metamorphism throughout the claim holdings. The agglomerate exposed on the northern portion of the PL 7 and 9 claims hosts more intense epidotic alteration with fragments commonly having indistinct epidote-altered margins or an intensely altered matrix. The alteration associated with intrusions is commonly local biotite hornfelsing which is most evident affecting the fine-grained sedimentary sequence adjacent to the biotite monzonite stock on Split Ridge. In this area, the argillite exhibits an intense rusty gossan; although, this oxidation is locally pervasive throughout the Stuhini Group sediments.

Local carbonate±silica alteration zones parallel some fault structures. Directly south of Mount Scotsimpson, at approximately 1,600 metres elevation, a large iron-carbonate and silica-altered zone trends 060°. This zone parallels a fault traced for more than five kilometres. Within the alteration zone, brecciated quartz and carbonate zones parallel the long axis of the alteration zone; possibly infilling a major fault.

Sericite-clay-silica-pyrite alteration zones occur on Split Ridge and appear to be related to a major north-south trending fault structure located east of the eastern PL 11 claim boundary. These altered outcrops display an approximate north-northwesterly trend. A similar alteration zone occurs on the south side of Scotsimpson Ridge at an elevation of 1,300 metres on the PL 9 claim; it also displays a general north-northwesterly orientation.

4) Mineralization

Precious metal-bearing sulphide mineralization has been discovered in the Split Ridge, Split Creek canyon and Scotsimpson Ridge areas. All of the known mineralization appears to be mesogenetic to epigenetic, fracture-controlled sulphide-rich (± precious metal values) quartz-carbonate veins and fracture fillings. Pyrite, pyrrhotite and minor chalcopyrite, galena, sphalerite and arsenopyrite are the common sulphide mineralization. Their oxidation products, such as: limonite, goethite, hematite, malachite, anglesite and hydrozincite often coat and infill exposed and near surface fractures and joint surfaces where their derivative sulphide mineralization was present. Minor sulphides also occur as disseminations within the alteration envelopes immediately adjacent to the infilled sulphide-rich fractures. Pyrite and, to a lesser degree, pyrrhotite fracture fillings and fracture-related disseminations are quite pervasive throughout the property; especially proximal to shears, faults and intrusive contacts.

Gold and silver values are often spatially and probably genetically associated with copper-, lead-, zinc- and arsenic-rich sulphide mineralization. The precious metal-bearing mineralization is generally quite narrow (< 10 cm. true thickness) with occasional wider sections up to several metres which contain erratic gold values. These wider sections appear to occur where cross faulting has shattered the rock and formed dilatant zones. Previous work by Equity Engineering indicates that, with the possible exception of the Split Creek canyon showings, mineralization elsewhere on the property is of a similar nature.

1991 EXPLORATION PROGRAM

The purpose of the 1991 exploration program was to carry out the recommendations of Yamamura and Awmack (1990) which included: evaluating the gold-bearing mineralization at the JEFE and ROLLS ROYCE zones, and investigating the volcanogenic massive sulphide exploration potential of the property.

Prior to the field season, Royce Industries Inc. contracted Minorex Consulting Ltd., a geological and exploration management company based in Vancouver, to conduct the proposed exploration program. Minorex Consulting Ltd. subcontracted the writer of Summit Geological, based in Invermere, B.C., to supervise the field work and conduct the various geological and geochemical surveys of the program. In addition, Mr. John Devlin, an experienced prospector and geochemical sampler employed by Abbas Consulting, and Mr. Grant Kitzman, an employee of Minorex Consulting Ltd., were subcontracted to assist the writer with the proposed hand trenching and geochemical sampling at the Rolls Royce and Jefe zones and to assist with the reconnaissance geochemical sampling. Mr. J. Douglas Blanchflower, an experienced and qualified geologist, employee of Minorex Consulting Ltd. and certified blaster, was contracted to manage the field program, supervise and conduct the blasting of the hand trenches and assist with the reconnaissance geological mapping and geochemical sampling.

Upon completion of the field work, Royce Industries Inc. contracted the writer to prepare this report which documents the results of the exploration program. A Statement of Qualifications for the writer accompanies this report.

During early July, 1991 the field personnel met in Vancouver to arrange the project logistics. Later, all of the field equipment and supplies were shipped to Bob Quinn Lake and stored at the airstrip prior to mobilization. The field crew then mobilized to Smithers on July 31 from their respective bases. In Smithers, the field crew purchased the perishable field supplies and arranged logistical support for the program. On August 3rd, Messrs. Steven Coombes, John Devlin and Grant Kitzman drove to Bob Quinn Lake airstrip, flew to the property by helicopter and set up the camp. The camp was located on Split Ridge at an elevation of 1,240 metres A.M.S.L.; beside a seasonal tarn at survey control grid coordinates 50+50 N.by 75+00 E.

The field work commenced on August 4th, and during the next nine days (27 man-days) the field crew excavated 10 hand trenches at the Rolls Royce and Jefe zones on Split Ridge; four at the Rolls Royce zone and six at the Jefe zone. The total length of these trenches is 65.9 metres; 31.9 metres at the Rolls Royce zone and 34.0 metres at the Jefe zone. In addition, the previously-excavated Equity Engineering trench Tr 90-02 at the Jefe zone was extended 3.0 metres to the east.

Mr. D. Blanchflower mobilized to the site on August 12, and during the next four days (August 13 to 16, 16 man/days) the field crew drilled, blasted, mucked out, geologically mapped and sampled the hand trenches. A total of 54 rock samples were collected from the trenches; 22 from the Rolls Royce zone and 32 from the Jefe zone. Two of these were grab samples and the other fifty-two were channel samples. In addition, one grab sample was collected from a quartz vein on the north side of the ridge, west of the survey control grid.

The remainder of the field program (August 17 and 18, 8 man/days) was spent investigating the volcanogenic massive sulphide (VMS) exploration target on the PL 13, 14, 16 and 17 claims. A total of 10 soil samples, 41 silt samples and 8 rock samples were collected from this area. The bedrock exposure here is poor and tall, dense timber makes helicopter access very restricted and difficult.

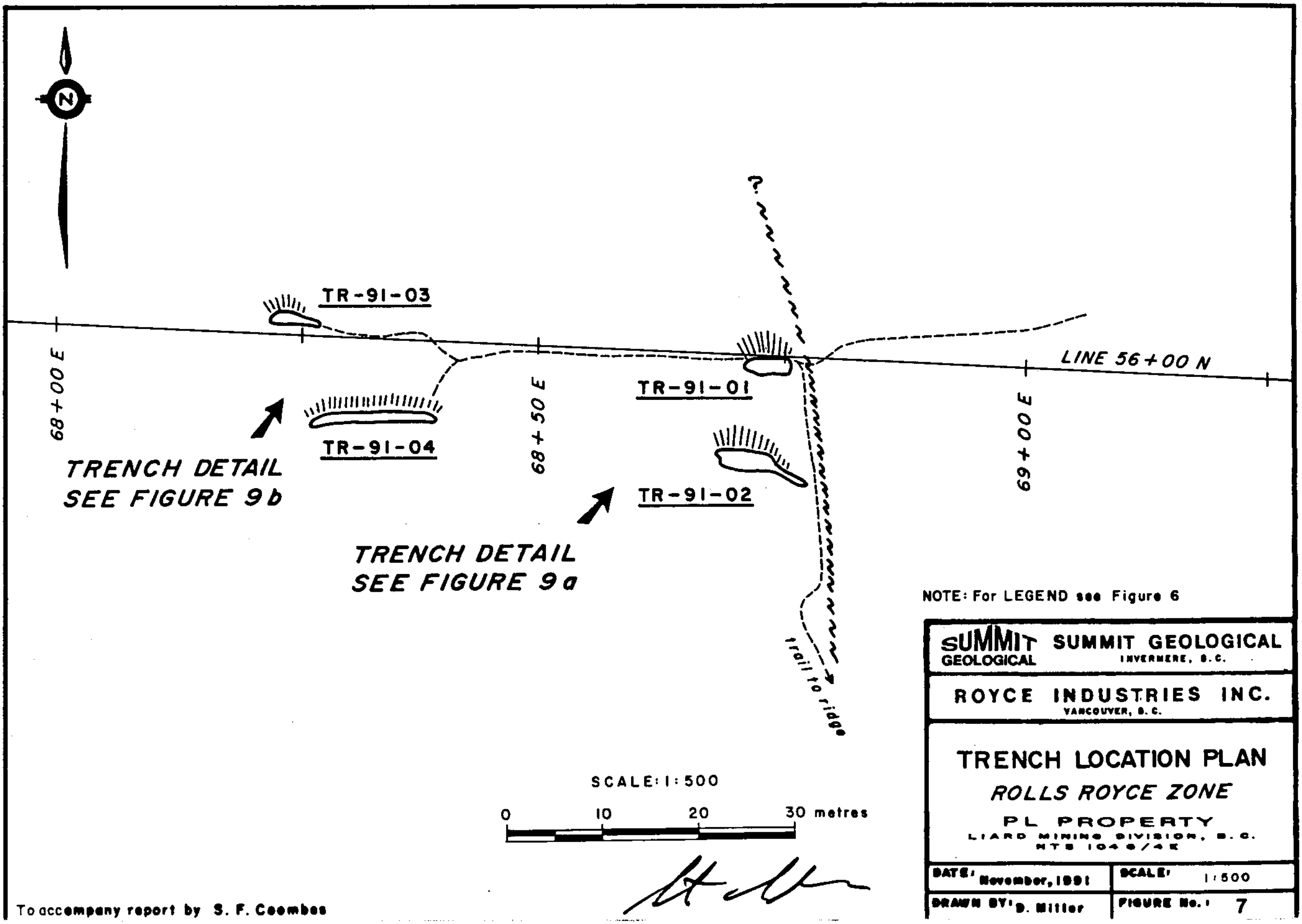
The field camp was packed up and the camp site was cleaned up on August 19 prior to demobilizing to Smithers, via Bob Quinn Lake airstrip. The demobilization was completed on August 21 with Mr. S. Coombes driving to Invermere, B.C., Messrs. G. Kitzman and J. Devlin driving to Vernon, B.C. and Vancouver, B.C. respectively, and Mr. D. Blanchflower flying to Vancouver, B.C.

The program included: hand trenching and blasting (68.9 linear metres, 60 cubic metres); reconnaissance geological mapping at a scale of 1:5,000 (approximately 6 kilometres); detailed trench geological mapping at a scale of 1:50 (76.3 linear metres); silt (41 samples), soil (10 samples) and rock geochemical sampling (52 channel and 11 grab samples); and report preparation and reproduction. The total cost of the program, including report preparation, is $ 53,173.00.

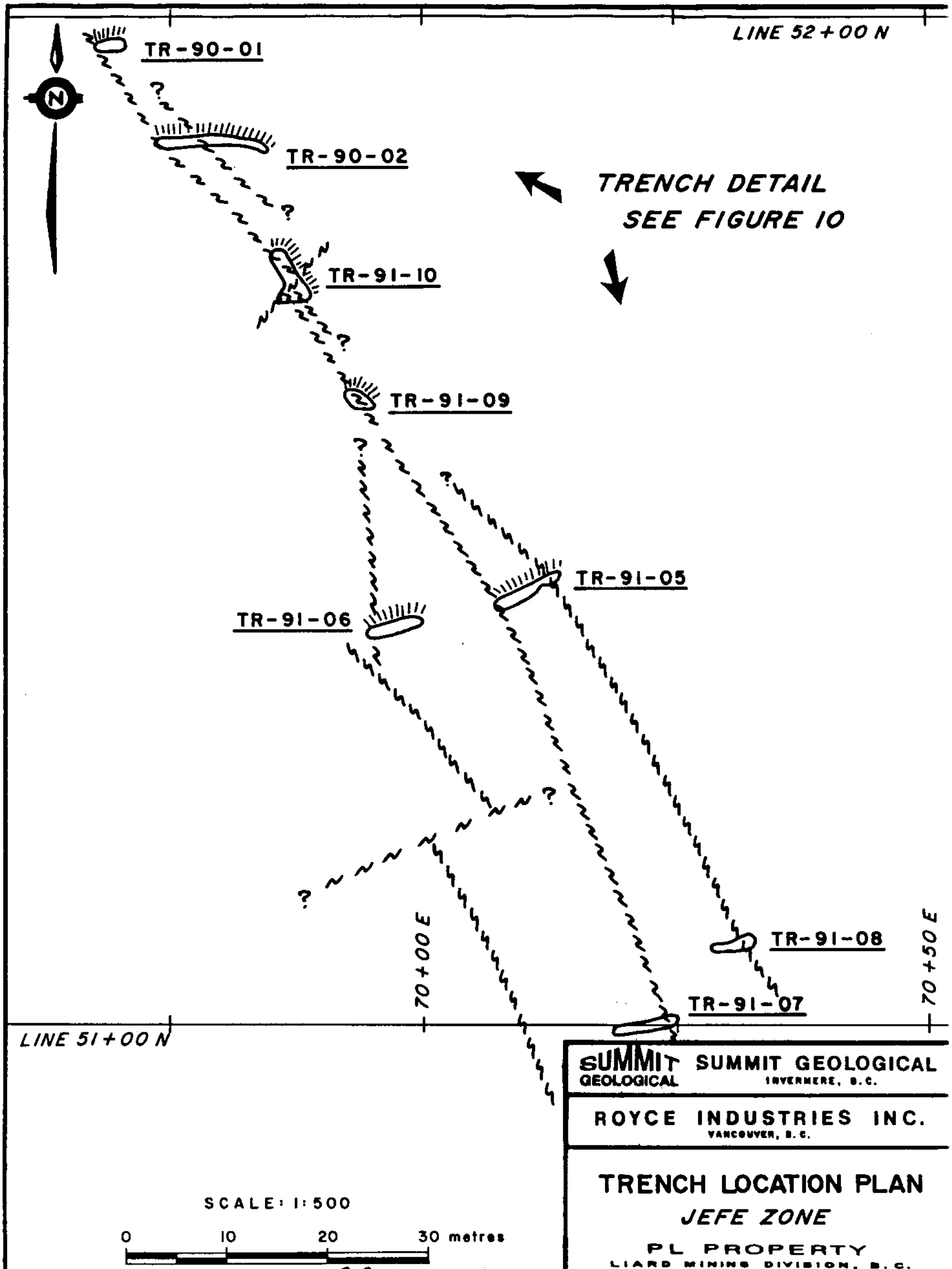
Trenching

Four hand trenches, totalling 31.9 linear metres, were excavated in the Rolls Royce zone (see Figure 7). Two trenches, namely Tr 91-01 and Tr 91-02, were designed to locate the bedrock source of 1990 float sample 465602 which returned 769.2 grams per tonne (gpt) gold and 498.9 grams per tonne (gpt) silver. This sample was collected from a soil sample pit at line 56+00 N. by 68+75 E. The soil sample from the pit contained 355 ppb gold. The other two trenches, namely Tr 91-03 and Tr 91-04, which are located fifty metres west of the first two, were excavated to expose bedrock in the area of a soil sample that was collected at line 56+00 N. by 68+25 E. and which returned 390 ppb gold.

Six hand trenches, totalling 34.0 linear metres, were excavated at the Jefe zone (see Figure 8). The purpose of these trenches was to expose and sample the bedrock along southeastern strike from the mineralization that was exposed in trenches Tr 90-01 and Tr 90-02. The trench locations were based upon anomalous soil sample results from previous work and topographic depressions indicative of recessive weathering shear zones. In addition to this new trenching, the 1990 trench Tr 90-02 was extended three metres to the east to better expose a mineralized shear zone, and the entire trench was then remapped and sampled.



N
TR-91-03
TR-91-04
TR-91-01
TR-91-02
?
68+00 E
68+50 E
69+00 E
LINE 56+00 N
TRENCH DETAIL
SEE FIGURE 9b
TRENCH DETAIL
SEE FIGURE 9a
trail to ridge
NOTE: For LEGEND see Figure 6
SCALE: 1:500
0
10
20
30 metres
SUMMIT GEOLOGICAL
SUMMIT GEOLOGICAL
INVERMERE, B.C.
ROYCE INDUSTRIES INC.
VANCOUVER, B.C.
TRENCH LOCATION PLAN
ROLLS ROYCE ZONE
PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104 B/4E
DATE: November, 1991
SCALE: 1:500
DRAWN BY: D. Miller
FIGURE No.: 7
To accompany report by S. F. Coombes



To accompany report by S. F. Coombes

SUMMIT GEOLOGICAL
INVERMERE, B.C.

ROYCE INDUSTRIES INC.
VANCOUVER, B.C.

TRENCH LOCATION PLAN

JEFE ZONE

PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104G/4E

DATE: November, 1991	SCALE: 1:500
DRAWN BY: D. Miller	FIGURE NO.: 8

Geological Mapping Surveys

1) Reconnaissance Geological Mapping Survey of the PL 13, 14, 16 and 17 Claims

Prior to conducting reconnaissance geological mapping survey Messrs. S. Coombes and D. Blanchflower carried out an aerial reconnaissance of the region to determine the most accessible drop-off and pickup sites for helicopter support. The most continuous outcrop within the PL 13 claim is along an east-west canyon within the North Creek drainage. This canyon is from 30 to 60 metres deep with subvertical walls. High flood waters at the time made a traverse of the canyon impossible below an elevation of 550 metres A.M.S.L. but selective mapping of the canyon walls could be conducted by rappelling down ropes tied to the trees above. The other creeks within the PL 14 and 16 claims have numerous waterfalls but it was possible to traverse their canyons.

The geological mapping survey was conducted by Messrs. S. Coombes and D. Blanchflower over a two-day period from August 17th to 18th. It was conducted at a scale of 1:5,000. The lithology of the bedrock exposures was identified and structural, alteration and mineralization data were recorded. All structural attitudes were recorded and are reported using the "right-hand" rule (i.e. the dip plane is always right of recorded strike direction). The locations of the outcrops and their geological information were later plotted at a scale of 1:5,000 on photographic enlargements of the 1:50,000 topographic map for N.T.S. 104 G/4 (see Figure 5).

2) Detailed Geological Mapping Survey of the Jefe and Rolls Royce Zones

The detailed geological mapping and sampling in the Split Ridge survey control grid area were concentrated within the Rolls Royce and Jefe zones; however, approximately two man-days were spent evaluating anomalous rock sample sites from previous work elsewhere on the grid (see Figure 6). In many cases, particularly on the south side of the ridge, neither sample flags or prospective outcrops could be located in the field at the plotted grid coordinates. In addition, some sample flags that were located were misplotted by up to 200 metres. The site of the 1990 rock sample no. 484596 was of particular interest because it represented the highest gold value (3.22 gpt gold) obtained at surface on Split Ridge, beyond the Rolls Royce and Jefe zones. The sample site was located on the north side of Split Ridge, as shown on existing maps, and a grab sample was collected upslope on the same mineralized shear system (Sample 9103-02).

Detailed trench geological mapping and rock geochemical sampling was carried out on eleven trenches during the 1991 work program; four in the Rolls Royce zone and seven in the Jefe zone. Trench locations were determined relative to each other by slope-corrected hipchain and compass traverses, and were then surveyed to existing grid stations and plotted at 1:500 (see Figures 7 and 8). The mapping survey was conducted at a scale of 1:50 using a fibreglass tape for determining distances and measuring sample intervals (see Figures 9a, 9b and 10).

Geochemical Sampling Surveys

1) Reconnaissance Geochemical Sampling Survey of the PL 13, 14, 16 and 17 Claims

Ten soil, forty-one silt and eight rock geochemical samples were collected by the field crew from within the PL 13, 14, 16 and 17 claims during a two-day period.

The locations of the geochemical sampling traverses were largely determined by the major drainages in the area where there were drop-off and pickup sites for helicopter support. Reconnaissance silt geochemical samples were collected along the major drainages and at the junctions of major tributaries. In addition, a contour soil sampling traverse was conducted at an elevation of approximately 150 metres A.M.S.L. along the northeastern side of the Porcupine River in a northwesterly direction from North Creek. The eight lithogeochemical samples were collected and described by the two geologists while carrying out their reconnaissance geological mapping work.

Silt geochemical samples were usually collected at 200- to 250-metre intervals along the drainages and/or 50 metres upstream from the confluences of tributaries. The sample material was scooped by hand from the silt sediment in the mid stream. Soil geochemical samples were collected using a grub hoe or geology pick at 100-metre intervals along the traverse route. All of the silt and soil geochemical samples were described on site using printed soil/silt geochemical sample description booklets. Silt and soil sample locations were marked in the field by writing the sample number on a length of orange flagging tape which was then tied to a nearby tree or bush. Rock sample locations were marked with flagging tape and an aluminum tag inscribed with the sample number.

Each soil sample description included: its location, origin (i.e. residual, colluvial, alluvial, or glacial), horizon, colour, texture (i.e. organic, clay, silt, sand or gravel), depth, topographic features (i.e. slope and relief), drainage (i.e. active, dry, moist, or swamp), precipitates, local vegetation, and whether there were any potential contaminants nearby (i.e. mine dump, trench, camp site, etc.). The 'B' soil horizon was sought for the survey, but occasionally the samplers had to collect 'A' or 'C' horizon material in areas of poor soil development. All of the samples were placed in gusset kraft paper envelopes, labelled with indelible felt marker, and field dried.

The silt geochemical sample descriptions included: the sample location, colour, texture (i.e. organic, clay, silt, sand or gravel), depth of water, topographic features (i.e. slope and relief), drainage characteristics (i.e. low, medium or high water conditions), precipitates, local vegetation, and whether there were any potential contaminants nearby (i.e. mine dump, trench, camp site, etc.). All of the samples were placed in gusset kraft paper envelopes, labelled with indelible felt marker, and field dried prior to shipping.

The silt, soil and rock samples were subsequently delivered to the sample preparation facilities of MIN-EN Laboratories in Smithers, B.C. There, each soil or silt sample dried and sieved to -80 mesh. The +80 mesh fraction was discarded and the -80 mesh fraction was bagged for analysis. Each rock sample was crushed and pulverized to approximately -120 mesh, and split into sample pulps and rejects. The sample rejects were stored for 30 days pending re-analysis. All of the sample pulps were then shipped to the assaying facilities of MIN-EN Laboratories in North Vancouver, British Columbia.

The silt and soil sample pulps were analyzed for gold (Au) plus 31 elements, including: silver (Ag), aluminum (Al), arsenic (As), boron (B), barium (Ba), bismuth (Bi), calcium (Ca), cadmium (Cd), cobalt (Co), copper (Cu), iron (Fe), potassium (K), lithium (Li), magnesium (Mg), manganese (Mn), molybdenum (Mo), sodium (Na), nickel (Ni), phosphorus (P), lead (Pb), antimony (Sb), strontium (Sr), thallium (Th), titanium (Ti), vanadium (V), zinc (Zn), gallium (Ga), tin (Sn), tungsten (W), and chrome (Cr). These analyses were conducted by professional assayers utilizing accepted inductively coupled argon plasma (ICP) analytical techniques for the 31-element analyses, and fire assay preparation and atomic absorption procedures for the gold analyses.

The eight rock sample pulps were analyzed for: gold (Au), silver (Ag), arsenic (As), antimony (Sb), copper (Cu), lead (Pb) and zinc (Zn). All of the elements, except gold, were analyzed by professional assayers using accepted inductively coupled argon plasma (ICP) methods. Fire assay and atomic absorption analytical methods were employed for the gold analyses. Those analytical results exceeding 1,000 ppb gold, 20 ppm silver, and 4,000 ppm copper, lead, zinc, arsenic, or antimony were later check-assayed using fire assay-gravimetric methods.

The sample locations and lithogeochemical results have been plotted with the geological results on Figure 5 of this report. The lithogeochemical samples have been described in detail and these descriptions accompany this report as Appendix I. The Certificates of Analysis for the analytical results and analytical procedures accompany this report as Appendix II.

2) **Detailed Lithogeochemical Sampling Survey of the Jefe and Rolls Royce Zones**

A total of fifty-four rock samples were collected from the trenches; twenty-two from the Rolls Royce zone and thirty-two from the Jefe zone. Two of the Rolls Royce area samples were grabs and the other 20 were channel samples. All of the Jefe zone samples were channel samples. In addition, one lithogeochemical grab sample (Sample 9103-02) was collected upslope from the site of the 1990 rock sample no. 484596; beyond the boundaries of each of the known zones.

All of the lithogeochemical samples were collected, described, bagged and labelled by the two geologists working on the project. Rock sample locations were marked in the field with fluorescent orange spray paint and an aluminum tag inscribed with the sample number was attached to the sample site. The samples were subsequently delivered to the sample preparation facilities of MIN-EN Laboratories in Smithers, B.C. There, each sample was crushed and pulverized to approximately -120 mesh, and split into sample pulps and rejects. The sample rejects were stored for 30 days pending re-analysis, and the sample pulps were then shipped to the assaying facilities of MIN-EN Laboratories in North Vancouver, British Columbia.

The fifty-five rock samples were analyzed for: gold (Au), silver (Ag), arsenic (As), antimony (Sb), copper (Cu), lead (Pb) and zinc (Zn). All of the elements, except gold, were analyzed by professional assayers using accepted inductively coupled argon plasma (ICP) methods. Fire assay and atomic absorption analytical methods were employed for the gold analyses. Those analytical results exceeding 1,000 ppb gold, 20 ppm silver, and 4,000 ppm copper, lead, zinc, arsenic, or antimony were later check-assayed using fire assay-gravimetric methods.

The trench sample locations and lithogeochemical results have been plotted with the trench geology on Figures 9a, 9b and 10 of this report. The location and analytical results for sample 9103-02 are shown on Figure 6 of this report with the previous sampling results from programs conducted by Equity Engineering Ltd. during the 1989 and 1990 field seasons. In addition, the lithogeochemical samples have been described in detail and these descriptions accompany this report as Appendix I. The Certificates of Analysis for the analytical results and analytical procedures accompany this report as Appendix II.

DISCUSSION OF EXPLORATION RESULTS

Geological Survey Results

1) Reconnaissance Geological Survey Results for the PL 13, 14, 16 and 17 Claims

The PL 13, 14, 16 and 17 claims are underlain by a slightly metamorphosed sequence of volcanic, volcaniclastic and sedimentary rocks of the Paleozoic Stikine assemblage. The northeastern portion of the claims is underlain primarily by volcanic tuffs and tuffaceous siltstones (units 4A and 4B) while the southwestern portion is underlain by argillites, siltstones and wackes (unit 4C and 4D). The gradational contact area is approximately parallel to the northwesterly flowing creek in the centre of the claim holdings (see Figure 5).

The rock units appear to strike northwest-southeast at approximately 135° and dip moderately southwestward. The foliation is subparallel to the bedding. Topographic lineations and measured foliations indicate an overall northwesterly trend with conjugate fracturing at 045°. The lower canyon of North Creek and parallel topographic features are probably controlled by this northeasterly fracturing. The rocks near North Creek canyon are more schistose than those observed elsewhere; perhaps because of more intense local fracturing.

Pyrite and pyrrhotite are the only sulphide minerals that were observed within this portion of the property. They occur as disseminations and fracture fillings proximal to limonitic northwesterly trending shears. Minor quartz veining is also associated with many of these shear structures.

2) Detailed Geological Survey Results for the Jefe and Rolls Royce Zones

a) Jefe Zone

All of the hand trenches are underlain by a massive, grey, aphanitic, andesite crystal tuff (unit 8E) hosting minor pyrite ± pyrrhotite disseminations. The tuff is variably fractured and sheared with limonite fracture infillings. The orthoclase porphyritic monzonite (unit 11B) which was mapped by Equity Engineering in 1990 could not be verified in the field and may be a coarser-grained variation of unit 8E. Two attitudes of banding within the tuff near trench Tr 91-10 indicate a variable south-southeasterly strike with a moderate to steep southwesterly dip.

The hand trenching exposed numerous shears and fractures. Shears are characterized by limonitic clay, deep surface weathering, and relic quartz and pyrite veining in the larger structures. Pyrite ± pyrrhotite occurs as disseminations, fracture coatings, and associated with quartz in the larger shears. Iron sulphides also infill narrow shears; prior to total oxidation to limonite.

Three structural trends are apparent from stereonet plots of shear and fracture attitudes. The most prominent set strikes from 150° to 165° and dips steeply southwestward. The second strikes from 060° to 075° with a vertical to steep southeasterly dip, and is probably conjugate to the first. The third strikes from 305° to 325° and dips vertically to steeply northeastward. These trends were determined from only 31 structural measurements so they are somewhat speculative.

Two types of quartz veining were mapped in the Jefe zone. The first is highly oxidized, frothy, vuggy quartz with abundant goethite and relic pyrite. This style of veining is seen in trenches Tr 90-02, Tr 91-05, Tr 91-06 and Tr 91-10, and is typically from 5 to 10 centimetres wide. The second type of quartz veining is glassy and more massive with minor pyrite filling vugs and a hackly fracture. The glassy quartz veins were mapped in trenches Tr 90-02 and Tr 91-05, and are typically from 5 millimetres to 10 centimetres wide. All quartz veins are within shear zones and are recessively weathered. The shears hosting significant quartz veining trend at 150° to 165° with steep southwesterly dips in trench Tr 90-02. At trench Tr 91-10, the trends range from 135° to 165° with a moderate southwesterly dip. At trenches Tr 91-05 and Tr 91-06, forty metres to the southeast, the trend ranges from 305° to 345° with steep southeastwardly dips. Mapping and sampling indicates that the individual shears tend to diverge southeastward, and become narrower and less mineralized.

In trench Tr 91-10, the mineralized shears show a right-lateral offset along a northwesterly dipping dilatant structure which strikes 245°. The mineralized shear on the north side of this structure is at 135°/-66° while on the south side it splits into two distinct shears at 165°/-62°. It is noteworthy that gold values are consistently high in the mineralized shears on both sides of this structure.

b) **Rolls Royce Zone**

Trenches Tr 91-01 and Tr 91-02 (see Figure 9a) exposed an altered and sheared, grey to brown, medium-grained andesitic tuff (unit 8E?) with pyrite and lesser pyrrhotite mineralization which is concentrated along shears and fractures, as well as being disseminated throughout the host rocks. The andesitic tuff is highly fractured and completely altered to clay in many places due both to deep surface weathering and hydrothermal alteration. This deep weathering, along with deep overburden, prevented the exposure of fresh rock even when the upslope wall of the trenches exceeded 2.5 meters. The presence of disseminated pyrite and/or pyrrhotite gives a rusty weathered surface, and the fractures and shears are primarily filled with orange limonite-stained clay.

Secondary quartz and pyrite occur as pods within the larger shear zones and as thin stringers along narrow shears and fractures. The quartz is often glassy in the narrow stringers and vuggy in the wider shear zones with goethite filling vugs. Pyrite (± pyrrhotite) occurs as small blebs within the quartz stringers, generally at or near the margins of the vein.

Trenches Tr 91-03 and Tr 91-04 (see Figure 9b) exposed a dark grey to black, fine-grained tuffaceous mudstone and siltstone (unit 8A?) with minor bands and clasts of andesitic tuff. The tuff bands have very irregular contacts with the siltstone and mudstone beds, and the tuff clasts are randomly-oriented indicating an active depositional environment. Magnetic pyrrhotite and lesser pyrite occur as disseminations, and as wispy bands within the mudstone and siltstone. Pyrite and pyrrhotite also coat shear and fracture surfaces; although, surface weathering has almost completely altered the sulphides to limonite.

The dominant fracture and shear orientation in the Rolls Royce area is from 135° to 150° with a moderate to steep southwesterly dip. A second fracture set, probably conjugate to the first, strikes from 215° to 235° and dips moderately northwestward. A prominent gulley immediately east of trenches Tr 91-01 and Tr 91-02 is sub-parallel to the 135° to 150° trend, and may represent a fault.

Geochemical Survey Results

1) Reconnaissance Geochemical Survey Results for the PL 13, 14, 16 and 17 Claims

Reconnaissance silt geochemical sampling within the PL 13, 14, 16 and 17 claims did not help define a discrete volcanogenic massive sulphide target for future exploration. One sample (no. 8256) returned 270 ppb gold. This sample did not have anomalous base metal values. It was collected high on the slope on the east side of PL 17, near the intrusive contact, upslope from the stratigraphy that would be likely to host volcanogenic massive sulphide mineralization. Three other samples were weakly anomalous in gold (less than 40 ppb) but without coincident base metal values. It is probable that the gold in all cases is derived from narrow shears similar to the ones tested elsewhere on the property.

The limited soil sampling also was inconclusive in defining a volcanogenic massive sulphide target. One soil sample (no. 8274), adjacent to silt sample site no. 8273, returned somewhat anomalous values in chromium, nickel, magnesium and tungsten indicating a possible area of interest in the southwest corner of the PL 14 claim. This again is probably related to vein-type mineralization.

The rock samples returned generally low values. The only weakly anomalous sample was number 9103-62 which returned 237 ppm zinc, 315 ppm arsenic and 19 ppb gold. The sample was collected from siliceous, limonitic, finely-laminated tuff with minor argillite and siltstone laminae hosting fine-grained pyrite (± pyrrhotite) disseminations and fracture fillings. The foliation attitude at the sample site is 170°/-45° W.

2) Detailed Lithogeochemical Survey Results for the Jefe and Rolls Royce Zones

The majority of lithogeochemical sampling work within the Split Grid area was conducted at the Rolls Royce and Jefe zones and is described below. The followup sampling work on 1989 and 1990 anomalous rock sample sites elsewhere within the grid discovered that known mineralization on Split Ridge is confined to narrow limonitic shear zones, occasionally with minor quartz veining. The 1990 rock sample 484596 (3.22 gpt gold) is from one of the shear zones which coincides with a narrow gulley on the steep north side of the ridge. Following this gulley along strike and upslope discovered that the shear structure pinches immediately south of the sample location. A grab sample (sample no. 9103-02) which was collected from a quartz vein on what appears to be the same structure some 170 metres to the south returned only 9 ppb gold (see Figure 6).

a) Jefe Zone

The first three of these samples are from the 1990 trench Tr 90-02 and represent resampling of known mineralization. The remaining samples, 9103-38, 39, 42 and 44 are from trenches along strike, upslope and to the south of the 1990 trenches. The 1991 trenching extended the gold mineralization along strike for approximately 70 metres from trench Tr 90-01 on the north end to trench Tr 91-06 on the south end.

The eight samples from the Jefe zone that returned greater than 1000 ppb gold are as follows:

Sample	Location	Width metres	Au gpt	Au opt	Ag gpt	Ag opt
9103-31	Tr90-02	1.0	3.30	0.096		
9103-32	Tr90-02	1.2	2.60	0.076		
9103-35	Tr90-02	0.8	3.41	0.099	25.7	.75
9103-37	Tr91-10	0.8	1.38	0.040		
9103-38	Tr91-10	1.0	13.10	0.382	27.6	.81
9103-39	Tr91-10	1.0	2.46	0.072		
9103-42	Tr91-06	1.0	10.23	0.298		
9103-44	Tr91-05	0.5	3.02	0.088		

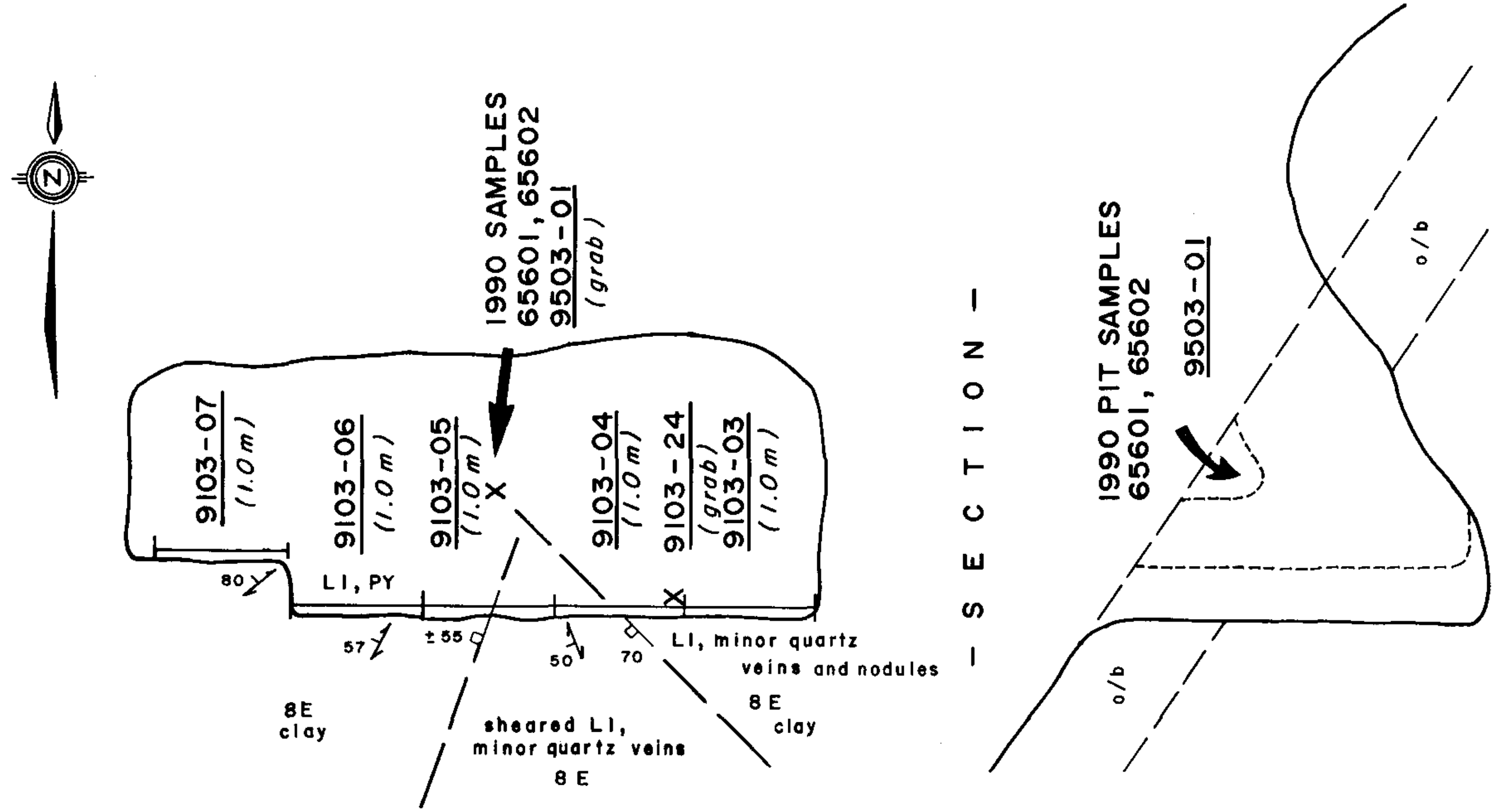
The highest gold values are always associated with sulphide-rich quartz veining with gold values generally diminishing with the vein width. Jefe zone work also indicates that gold values are higher in the frothy, goethitic quartz veins than in the glassy veins.

High gold values correlate approximately with elevated values in copper, zinc, silver and arsenic while lead values are erratic and antimony values are consistently low.

b) **Rolls Royce Zone**

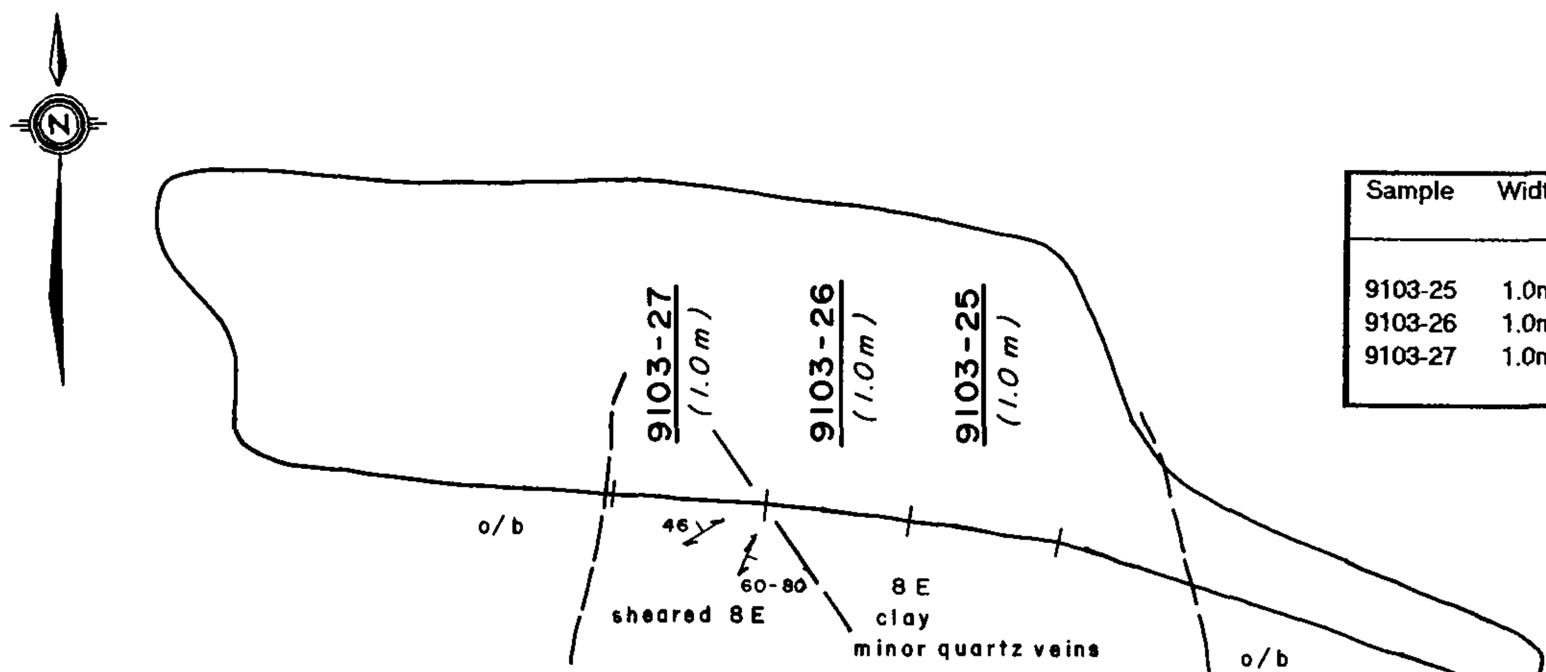
Twenty two samples were collected from the Rolls Royce zone during 1991, comprising two grab samples and twenty channel samples. The only sample that contained over 1000 ppb gold was number 9103-05 which was collected from trench Tr 91-01. It returned an analysis of 2.76 gpt gold and 0.81 gpt silver across 1.0 metre. It was a sample of sheared, limonitic andesitic tuff with pods of vuggy quartz with pyrite. Several other samples were weakly anomalous in gold; all from sheared, limonitic tuff with minor quartz veining and pyrite.

Elevated gold values appear to coincide with zinc and silver values while arsenic, copper and lead values are more erratic. Antimony values are either 1 or 2 ppb in all samples.



TR-91-01

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb	Au (check assay) g/tonne	o.p.t.
9103-01	grab	3.2	186	1174	134	1	88	475		
9103-03	1.0m	1.2	8	87	11	1	74	2		
9103-04	1.0m	4.8	11	107	55	1	139	767		
9103-05	1.0m	10	39	397	78	1	110	2970	2.76	0.081
9103-06	1.0m	2.8	24	110	19	1	102	479		
9103-07	1.0m	2.7	3	112	59	1	340	132		
9103-24	grab	1.5	3	70	12	1	98	6		



TR-91-02

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb
9103-25	1.0m	2.2	35	350	28	1	195	70
9103-26	1.0m	2	27	216	11	1	100	106
9103-27	1.0m	0.9	66	131	17	1	107	38

TRENCH DEPTH
AT SOUTH FACE ±1.8 m

NOTE: For LEGEND see figure 6

SCALE: 1:50

0 1 2 3 4 metres

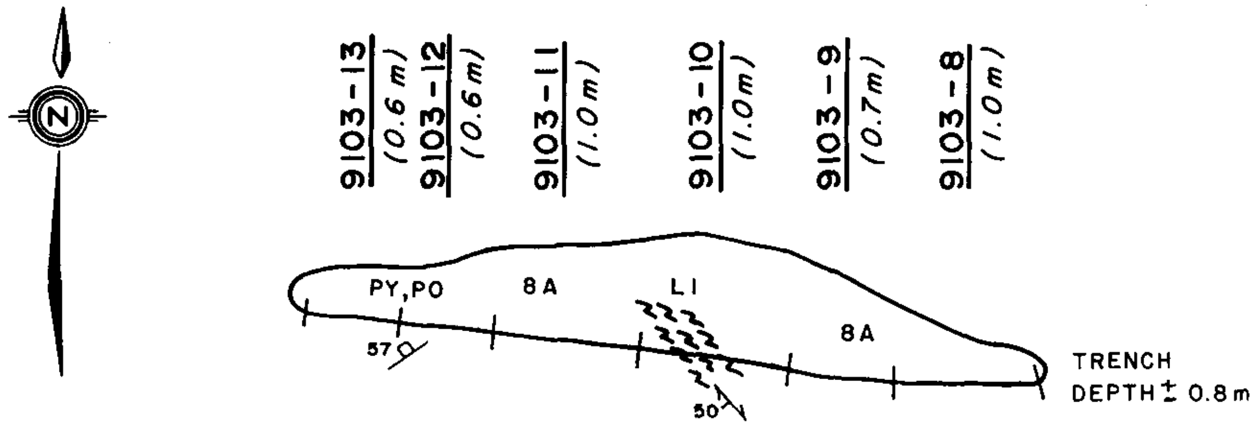
To accompany report by S. F. Coombes

SUMMIT GEOLOGICAL
SUMMIT GEOLOGICAL INVERMERE, B.C.

ROYCE INDUSTRIES INC.
VANCOUVER, B.C.

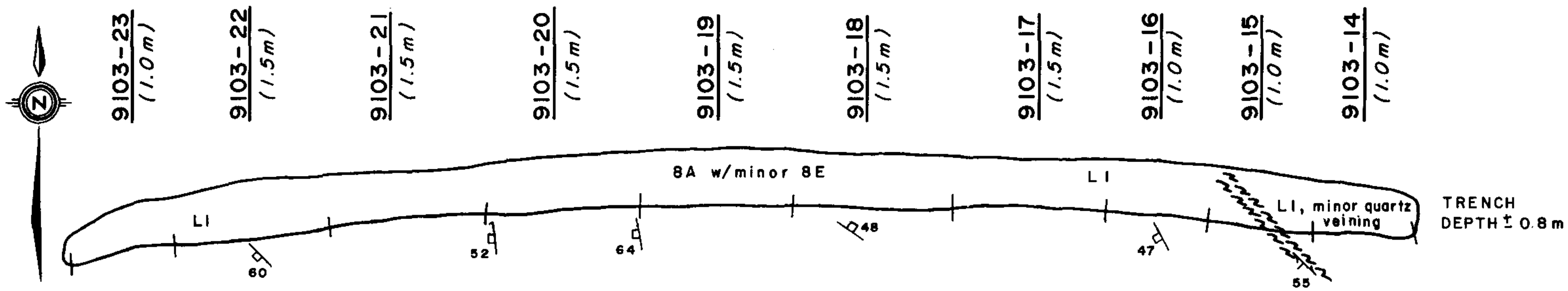
TRENCH PLANS
ROLLS ROYCE ZONE
TR-91-01 & TR-91-02
PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104 G/4 E

DATE: November, 1991	SCALE: 1:50
DRAWN BY: D. Miller	FIGURE No.: 9a



TR-91-03

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb
9103-08	1.0m	1.6	38	66	46	1	292	261
9103-09	0.7m	0.9	13	70	23	1	121	29
9103-10	1.0m	0.7	32	76	17	1	85	4
9103-11	1.0m	0.7	24	49	19	1	47	23
9103-12	0.6m	0.6	12	78	15	1	50	28
9103-13	0.6m	0.3	33	75	21	2	57	2



TR-91-04

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb
9103-14	1.0m	0.5	41	57	17	1	87	10
9103-15	1.0m	1.3	9	87	19	1	130	191
9103-16	1.0m	1.6	12	61	10	1	60	116
9103-17	1.5m	0.9	17	49	20	1	58	19
9103-18	1.5m	1.2	78	64	63	1	109	17
9103-19	1.5m	0.5	20	31	18	1	59	10
9103-20	1.5m	1.3	15	135	26	1	80	18
9103-21	1.5m	0.9	38	111	18	1	49	12
9103-22	1.5m	0.7	22	87	23	1	130	41
9103-23	1.0m	0.9	15	68	12	1	81	19

NOTE: For LEGEND see figure 6

SCALE: 1:50

0 1 2 3 4 metres

To accompany report by S. F. Coombes

SUMMIT GEOLOGICAL
SUMMIT GEOLOGICAL INVERMERE, B.C.

ROYCE INDUSTRIES INC.
VANCOUVER, B.C.

TRENCH PLANS
ROLLS ROYCE ZONE
TR-91-03 & TR-91-04
PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104G/4E

DATE: November, 1991	SCALE: 1:50
DRAWN BY: D. Miller	FIGURE No.: 9b

CONCLUSIONS

The known gold mineralization on the subject property is spatially and probably genetically related to mesogenetic to epigenetic, structurally-controlled, sulphide-rich quartz veins hosted by a sequence of andesitic volcanic flows and pyroclastics. Gold values are associated with silver-, arsenic-, zinc-, copper- and minor lead-bearing sulphide mineralization. This mineralization is generally quite narrow, less than 10 cm, with occasional wider sections up to several metres. These wider sections appear to occur where cross faulting has shattered the rock and formed dilatant zones.

The hand trenching at the Rolls Royce zone revealed several narrow mineralized shears characterized by oxidized sulphides and minor quartz veining hosted by highly sheared fine- to medium-grained tuffs and fine-grained tuffaceous mudstone and siltstone. The lithogeochemical sampling results failed to substantiate the value obtained from grab sample 465602 (769.2 gpt gold), but based on the 1990 rock sample description, it appears likely that it came from one of these shears.

The hand trenching at the Jefe zone revealed similar narrow limonitic shear zones that host sulphide-rich quartz veining within a grey, medium-grained crystal tuff (unit 8E). The trenching extended the gold mineralization over a north-south strike length of 70 metres from trench Tr 90-01 southwardly to trenches Tr 91-05 and Tr 91-06. The shear structure which hosts the gold-bearing mineralization splays into several branches north of trenches Tr 91-05 and Tr 91-06. It continues southwardly for another 50 metres to trenches Tr 91-07 and Tr 91-08, but here it hosts much lower gold values.

The generally narrow mineralized vein and/or shear structures, their erratic gold values and their discontinuity over relatively short strike distances are all negative features that discount the economic potential of the Split Ridge area. It is the writer's opinion that these mineralized structures are not worthy of further exploration; especially given their remote location and high exploration expenditures.

The 1991 reconnaissance geological mapping and geochemical sampling on the PL 13, 14, 16 and 17 claims failed to define a volcanogenic massive sulphide exploration target worthy of further evaluation. Previous exploration work to the southeast, on the PL 8 and 13 claims, has indicated elevated base metal values in soil samples that may be indicative of volcanogenic massive sulphide mineralization, thus, further exploratory work is warranted in this area.

Submitted by,

SUMMIT GEOLOGICAL

GEOLOGICAL ASSOCIATION OF CANADA
S. F. COOMBES

December 12, 1991

Steven F. Coombes, F.G.A.C.
Consulting Geologist

STATEMENT OF COSTS

The following expenses have been subdivided for assessment credit purposes into: expenses incurred prior to October 7, 1991 on either the **PL "A"** or **PL "B"** claim groups, and those expenses incurred for both claim groups after October 7, 1991.

The entire 1991 exploration program included: hand trenching and blasting (68.9 linear m.(60 cubic metres)); reconnaissance (approximately 6 km.) and detailed geological mapping (76.3 m.); silt (41 samples), soil (10 samples) and rock geochemical sampling (52 channel and 11 grab samples), mobilization and demobilization expenses, and report preparation and reproduction. The pre-program logistical expenses, mobilization/demobilization and camp expenses were split proportionately between the PL "A" and "B" claim group at 80:20, respectively, based upon their individual field exploration periods.

STATEMENT OF COSTS for PL "A" CLAIM GROUP

The following expenses were incurred for assessment credit on the PL "A" claim group to October 7, 1991, and were filed as Statement of Work No. 3007362):

1) **Pre-Program Logistical Planning, Program Permitting, and Field Equipment Assembly and Shipping** (split proportionately with PL "B" claim group)

Personnel expenses:

S. Coombes (Summit Geological), 5 days @ $275.00/day	$ 1,375.00
J. Devlin (Abbas Consulting), 1.8 days @ $250.00/day	450.00
Truck rental: 2.5 days @ $50.00/day (Summit Geological)	125.00
Gas expenses: Summit Geological	110.55
Telephone expenses to July 29/91:	
Summit Geological	15.50
Minorex Consulting Ltd.	20.26

2) **Mobilization and Demobilization Expenses** (split proportionately with PL "B" claim group)

Personnel expenses:

D. Blanchflower (Minorex Consulting) - 2.4 day @ $350.00/day	840.00
S. Coombes (Summit Geological) - 5.6 days @ $275.00/day	1,540.00
J. Devlin (Abbas Consulting) - 5.6 days @ $250.00/day	1,400.00
G. Kitzman (Minorex Consulting) - 4.8 days @ $225.00/day	1,080.00

Transportation expenses:

Airfare expenses (Van.>ppty return for D. Blanchflower)	606.85
Truck rental and gas expenses (Summit Geological)	507.64
Car rental and gas expenses (Abbas Consulting)	296.57
Helicopter expenses (Bob Quinn airstrip to property and return)	4,714.05

Shipping charges (field equipment and supplies from Vancouver to Smithers to Bob Quinn, and return)	$ 794.28
Lodging expenses	296.99
Board expenses	233.98

3) **Personnel Expenses**

D. Blanchflower (Minorex Consulting) - project management, and trench drilling and blasting - 3.5 day @ $350.00/day	1,225.00
S. Coombes (Summit Geological) - project field supervision, hand trenching, and detailed geological mapping and rock geochemical sampling - 12.5 days @ $275.00/day	3,437.50
J. Devlin (Abbas Consulting) - hand trenching and drilling, rock geochemical sampling - 13 days @ $250.00/day	3,250.00
G. Kitzman (Minorex Consulting) - hand trenching and drilling rock geochemical sampling - 13 days @ $225.00/day	2,925.00

4) **Helicopter Support Expenses**

Aug. 12 - Northern Mtn. NMG (500D) 0.2 hour @ $685.80/hour	137.16

5) **Camp Food Expenses**

Groceries for field crew	1,196.46

6) **Field Equipment Rental** (divided proportionately with PL "B" claim group)

Camp equipment rental - July 25 to Aug. 25	2,499.69
Punjar drill rental (Rollins Machinery) - July 25 to Aug. 25	1,414.50

7) **Expendable Field Supply Expenses**

Plywood, hardware and paint for explosive magazine	254.75
Explosives for trenching (Ace Explosives)	320.77
Camp fuel, lumber, sample bags, flagging, etc.	1,156.85

8) **Expediting Services**

Tundra Expediting	510.80

9) **Analytical Expenses** (MIN-EN Laboratories)

Rock geochemical sample preparations and analyses for Au, Ag, Cu, Pb, Zn, As and Sb - 55 samples @ $15.50/sample	852.50
9 check-assays for gold	76.50
2 check-assays for silver	13.00

10) **Office Expenses**

D. Blanchflower - document filing, 1 day @ $350.00/day	$	350.00
S. Coombes - filing of S. of C., reporting, 1 day @ $275.00/day		275.00
Telephone charges:		
Summit Geological to Oct. 7/91		89.93
Minorex Consulting to Oct. 7/91		81.94

11) **Report Preparation and Reproduction** (divided proportionately with PL "B" claim group)

S. Coombes - report writing, 8 days @ $275.00/day	2,200.00
Drafting and report master plan reproduction	200.00

12) **Management Fees** (divided proportionately with PL "B" claim group)

Minorex Consulting - 10 percent of contractual and "out of pocket" expenses	3,125.98
Total Expenses Applicable For PL "A" Group Assessment Credit	**$ 40,000.00**

STATEMENT OF COSTS for PL "B" CLAIM GROUP

The following expenses were incurred for assessment credit on the PL "B" claim group to October 7, 1991, and were filed as Statement of Work No. 3007365:

1) **Pre-Program Logistical Planning, Program Permitting, and Field Equipment Assembly and Shipping** (split proportionately with PL "A" claim group)

Personnel expenses:		
S. Coombes (Summit Geological), 1 days @ $275.00/day	$	275.00
J. Devlin (Abbas Consulting), 0.2 day @ $250.00/day		50.00
Truck rental: 0.5 days @ $50.00/day (Summit Geological)		25.00
Gas expenses: Summit Geological		27.64
Telephone expenses to July 29/91:		
Summit Geological		3.88
Minorex Consulting Ltd.		5.07

2) **Mobilization and Demobilization Expenses** (split proportionately with PL "A" claim group)

Personnel expenses:	
D. Blanchflower (Minorex Consulting) - 0.6 day @ $350.00/day	210.00
S. Coombes (Summit Geological) - 1.4 days @ $275.00/day	385.00
J. Devlin (Abbas Consulting) - 1.4 days @ $250.00/day	350.00
G. Kitzman (Minorex Consulting) - 1.2 days @ $225.00/day	270.00

Transportation expenses:

Airfare expenses (Van.>ppty return for D. Blanchflower)	$ 151.72
Truck rental and gas expenses (Summit Geological)	126.91
Car rental and gas expenses (Abbas Consulting)	74.14
Helicopter expenses (Bob Quinn airstrip to property and return)	1,178.51
Shipping charges (field equipment and supplies from Vancouver to Smithers to Bob Quinn, and return)	167.44
Lodging expenses	74.25
Board expenses	58.50

3) **Personnel Expenses**

D. Blanchflower (Minorex Consulting) - project management, and recce geological mapping and silt/soil sampling 2.5 day @ $350.00/day	875.00
S. Coombes (Summit Geological) - project field supervision, recce geological mapping and rock/silt sampling 2.5 days @ $275.00/day	687.50
J. Devlin (Abbas Consulting) - recce silt/soil sampling 2 days @ $250.00/day	500.00
G. Kitzman (Minorex Consulting) - recce silt/soil sampling 2 days @ $225.00/day	450.00

4) **Helicopter Support Expenses**

Aug. 16 - Northern Mtn. NMG (500D) 0.6 hour @ $685.80/hour	411.48
Aug. 17 - Northern Mtn. NMG (500D) 0.8 hour @ $685.80/hour	548.64
Aug. 18 - Northern Mtn. NMG (500D) 0.8 hour @ $685.80/hour	548.64

5) **Camp Food Expenses**

Groceries for field crew	299.11

6) **Field Equipment Rental** (costs divided proportionately)

Camp equipment rental - July 25 to Aug. 25	624.92

7) **Expendable Field Supply Expenses**

Camp fuel, lumber, sample bags, flagging, etc.	49.66

8) **Analytical Expenses** (MIN-EN Laboratories)

Rock geochemical sample preparations and analyses for gold, silver, copper, lead, zinc, arsenic and antimony - 8 samples @ $15.50/sample	124.00

Soil and silt sample preparations and analyses for gold (F.A./A.A.) plus 31-element I.C.P. 51 samples @ $14.50/sample	$ 739.50
9) Report Preparation and Reproduction	
S. Coombes - report writing, 2 days @ $275.00/day	550.00
Drafting and report master plan reproduction	50.00
10) Management Fees	
Minorex Consulting - 10 percent of contractual and "out of pocket" expenses	781.49
Total Expenses Applicable For PL "B" Group Assessment Credit	**$ 10,673.00**

STATEMENT OF COSTS INCURRED AFTER OCTOBER 7, 1991
for the PL "A" and "B" CLAIM GROUPS

1) Report Preparation and Reproduction	
S. Coombes - report writing, 2 days @ $275.00/day	$ 550.00
Drafting and report master plan reproduction	1,300.00
Report reproduction and photocopying	385.00
Office expenses - telephone/fax charges, paper, mylar	70.00
Management fees on "out of pocket" expenses	195.00
Total Expenses Not Applied For Assessment Credit	**$ 2,500.00**

TOTAL COST OF THE 1991 EXPLORATION PROGRAM	**$ 53,173.00**

STATEMENT OF QUALIFICATIONS

I, **Steven F. Coombes**, of the Village of Invermere, Province of British Columbia, DO HEREBY CERTIFY THAT:

1) I am a Consulting Geologist with a business office at 1402 - 10A Avenue, Invermere, British Columbia, and a mailing address of P.O. Box 2865, Invermere, British Columbia, V0A 1K0; and I am the proprietor of **Summit Geological**.

2) I am a graduate in Geology with a Bachelor of Science degree from the University of British Columbia in 1983.

3) I am a Fellow of the Geological Association of Canada.

4) I have practised my profession as a geologist for the past eight years.

   Pre-Graduate field experience in Geology, Geochemistry and Geophysics (1979 to 1982).

   Two years as Exploration Geologist with Rhyolite Resources Inc. (1983 to 1985).

   Five years as Exploration Geologist with Searchlight Consultants Inc. (1985 to 1990).

   One year as Consulting Geologist and proprietor of Summit Geological (1990 to 1991).

5) I own no direct, indirect or contingent interest in the subject claims, nor shares in or securities of **ROYCE INDUSTRIES INC.**

6) I examined the subject property between July 31 and August 21, 1991; conducted the geological mapping and lithogeochemical sampling; and wrote this report which documents the results of this work.

GEOLOGICAL ASSOCIATION OF CANADA
S. F. COOMBES
FELLOW

Steven F. Coombes, F.G.A.C.
Consulting Geologist

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APPENDIX I

Lithogeochemical Sample Descriptions

Sample Number	Sample Description
9103-01	Grab - Tr 91-01 site; highly oxidized, limonitic, fractured tuff (8E?) with abundant goethite, jarosite and Mn staining and sheared quartz veining containing pods of pyrite and pyrrhotite. Sample was taken from bottom of hand pit dug in 1990 from which sample 465602 (769.2 gpt Au) was collected.
9103-02	Grab; 20 cm wide quartz vein with oxidized cubic pyrite at approx. 250°/-25°. Wall rock is silicified and pyritized. Collected from Split Grid coordinates 53+30N, 66+25E (projected).
9103-03	1.0 m channel - Tr 91-01 (0 to 1.0 m); brown, limonitic tuff (8E?). Completely altered to clay with limonitic partings. Contains silicified tuff nodules up to 30 cm with 4 mm quartz veinlets, pyrite disseminations and fracture fillings (see sample 9103-24).
9103-04	1.0 m channel - Tr 91-01 (1.0 to 2.0 m); brown, limonitic tuff (8E?). Partially altered to clay with limonitic partings. Minor glassy quartz veining up to 1 cm with pyrite ± pyrrhotite fracture fillings.
9103-05	1.0 m channel - Tr 91-01 (2.0 to 3.0 m); brown, limonitic tuff (8E?). Partially altered to clay with limonitic partings. Pyrite ± pyrrhotite disseminations and fracture fillings, minor goethite.
9103-06	1.0 m channel - Tr 91-01 (3.0 to 4.0 m); brown, limonitic tuff (8E?). Completely altered to clay with limonitic partings.
9103-07	1.0 m channel - Tr 91-01 (4.0 to 5.0 m); brown, limonitic tuff (8E?). Completely altered to clay with limonitic partings.
9103-08	1.0 m channel - Tr 91-03 (0 to 1.0 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Quartz stringers up to 3 mm containing goethite and pyrite ± pyrrhotite. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands. Limonite staining throughout.
9103-09	0.7 m channel - Tr 91-03 (1.0 to 1.7 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Occasional quartz stringers up to 3 mm containing goethite and pyrite ± pyrrhotite. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands. Limonite staining throughout.
9103-10	1.0 m channel - Tr 91-03 (1.7 to 2.7 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands. Limonite staining throughout. 0.5 m limonitic clay shear at 140°/-50° with narrow (<20 cm) wall rock silicification.
9103-11	1.0 m channel - Tr 91-03 (2.7 to 3.7 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands. Limonite staining common on fracture surfaces.

Sample Number	Sample Description
9103-12	0.6 m channel - Tr 91-03 (3.7 to 4.3 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures.
9103-13	0.6 m channel - Tr 91-03 (4.3 to 4.9 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures.
9103-14	1.0 m channel - Tr 91-04 (0 to 1.0 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures. Limonitic.
9103-15	1.0 m channel - Tr 91-04 (1.0 to 2.0 m); dark grey to black, fine grained tuffaceous mudstone/siltstone with a 0.4 m wide med. grained tuff bed containing minor quartz and goethite veining. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures. Limonitic.
9103-16	1.0 m channel - Tr 91-04 (2.0 to 3.0 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures. Limonitic.
9103-17	1.5 m channel - Tr 91-04 (3.0 to 4.5 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures. Limonitic.
9103-18	1.5 m channel - Tr 91-04 (4.5 to 6.0 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures.
9103-19	1.5 m channel - Tr 91-04 (6.0 to 7.5 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures.
9103-20	1.5 m channel - Tr 91-04 (7.5 to 9.0 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures.
9103-21	1.5 m channel - Tr 91-04 (9.0 to 10.5 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures.

Sample Number	Sample Description
9103-22	1.5 m channel - Tr 91-04 (10.5 to 12.0 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Contains 0.4 m brecciated quartz vein with pyrite and goethite in vugs. Wall rocks silicified 0.5 m on either side. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures.
9103-23	1.0 m channel - Tr 91-04 (12.0 to 13.0 m); dark grey to black, fine grained tuffaceous mudstone/siltstone. Pyrrhotite ± pyrite occurs as disseminations and concentrated in wispy bands as well as coating fractures.
9103-24	Grab - Tr 91-01 ; hard silicified recrystallized tuff nodule from within limonitic shear. Contains quartz stringers and pyrite disseminations and blebs.
9103-25	1.0 m channel - Tr 91-02 (3.5 to 4.5 m); brown, limonitic tuff (8E?). Completely altered to clay with limonitic partings.
9103-26	1.0 m channel - Tr 91-02 (4.5 to 5.5 m); brown, limonitic tuff (8E?). Completely altered to clay with limonitic partings.
9103-27	1.0 m channel - Tr 91-02 (5.5 to 6.5 m); brown, limonitic tuff (8E?). Mostly altered to clay with limonitic partings. Contains minor limonitic shearing.
9103-28	1.5 m channel - Tr 90-02 (0 to 1.5 m); medium grained, grey, andesite tuff (8E). Minor random quartz stringers. Minor pyrite/pyrrhotite disseminations and fracture fillings.
9103-29	1.5 m channel - Tr 90-02 (1.5 to 3.0 m); medium grained, grey, andesite tuff (8E). Minor random quartz stringers. Minor pyrite/pyrrhotite disseminations and fracture fillings increasing towards end of section.
9103-30	1.0 m channel - Tr 90-02 (3.0 to 4.0 m); medium grained, grey, andesite tuff (8E). Highly sheared and limonitic. Mainly altered to brown clay.
9103-31	1.0 m channel - Tr 90-02 (4.0 to 5.0 m); medium grained, grey, andesite tuff (8E). Highly sheared and limonitic. Mainly altered to brown clay. Contains limonitic shear at 130°/-78° with silicified nodules of up to 70% sulphides (py/po).
9103-32	1.2 m channel - Tr 90-02 (5.0 to 6.2 m); medium grained, grey, andesite tuff (8E). Highly sheared and limonitic. Mainly altered to brown clay. Contains a major shear zone with abundant limonite and relic frothy quartz veining with goethite.
9103-33	1.5 m channel - Tr 90-02 (6.2 to 7.7 m); medium grained, grey, andesite tuff (8E). Minor random quartz stringers. 10 cm limonitic shear at 154°/-71°.

Sample Number	Sample Description
9103-34	1.0 m channel - Tr 90-02 (7.7 to 8.7 m); medium grained, grey, andesite tuff (8E). Minor random quartz stringers. Minor pyrite/pyrrhotite disseminations and fracture fillings.
9103-35	0.8 m channel - Tr 90-02 (8.7 to 9.5 m); medium grained, grey, andesite tuff (8E). Minor random quartz stringers. Minor pyrite/pyrrhotite disseminations and fracture fillings. 10 cm limonitic shear with quartz veining at 156°/-62°.
9103-36	0.9 m channel - Tr 90-02 (9.5 to 10.4 m); medium grained, grey, andesite tuff (8E). Minor random quartz stringers. Minor pyrite/pyrrhotite disseminations and fracture fillings. 20 cm limonitic shear with quartz veining at 162°/-48°.
9103-37	0.8 m channel - Tr 91-10; medium grained, grey, andesite tuff (8E). 40 cm limonitic shear zone at 165°/-62° with minor quartz veining.
9103-38	1.0 m channel - Tr 91-10; medium grained, grey, andesite tuff (8E). 30 cm limonitic zone with minor quartz veining.
9103-39	1.0 m channel - Tr 91-10; medium grained, grey, andesite tuff (8E). 50 cm limonitic shear zone at 135°/-66° with minor quartz veining.
9103-40	1.0 m channel - Tr 91-09; medium grained, grey, andesite tuff (8E). 60 cm limonitic shear zone at 158°/-44°.
9103-41	Grab - Tr 91-09; from 5 cm limonitic clay seam at 018°/-90°.
9103-42	1.0 m channel - Tr 91-06; medium grained, grey, andesite tuff (8E). 80 cm limonitic shear zone with frothy quartz veining containing pyrite and goethite.
9103-43	1.0 m channel - Tr 91-05 (0.8 to 1.8 m); medium grained, grey, andesite tuff (8E). 50 cm limonitic shear zone at 304°/-81°.
9103-44	0.5 m channel - Tr 91-05 (1.8 to 2.3 m); medium grained, grey, andesite tuff (8E). 40 cm limonitic shear zone at 320°/-78° with frothy quartz veining.
9103-45	1.0 m channel - Tr 91-05 (2.3 to 3.3 m); medium grained, grey, andesite tuff (8E). 10 cm limonitic shear zone at 313°/-77°.
9103-46	1.5 m channel - Tr 91-05 (3.3 to 4.8 m); medium grained, grey, andesite tuff (8E). Limonite coating minor fractures.
9103-47	1.5 m channel - Tr 91-05 (4.8 to 6.3 m); medium grained, grey, andesite tuff (8E). Limonite coating minor fractures.
9103-48	1.5 m channel - Tr 91-05 (6.3 to 7.8 m); medium grained, grey, andesite tuff (8E). Limonite coating minor fractures.

Sample Number	Sample Description
9103-49	1.0 m channel - Tr 91-05 (7.8 to 8.8 m); medium grained, grey, andesite tuff (8E). Limonite coating minor fractures. 30 cm limonitic shear with glassy quartz veining.
9103-50	Grab - Tr 91-05 (@8.8 m); glassy quartz vein with minor limonitic tuff and pyrite.
9103-51	1.5 m channel - Tr 91-07 (1.0 to 2.5 m); medium grained, grey, andesite tuff (8E). Limonitic shear at 075°/-78°.
9103-52	2.0 m channel - Tr 91-07 (2.5 to 4.5 m); medium grained, grey, andesite tuff (8E). Minor limonite coating minor fractures.
9103-53	1.0 m channel - Tr 91-07 (4.5 to 5.5 m); medium grained, grey, andesite tuff (8E). Limonite coating minor fractures, mainly at 060°/-80°.
9103-54	1.0 m channel - Tr 91-07 (5.5 to 6.5 m); medium grained, grey, andesite tuff (8E). 30 cm limonitic shear at 342°/-80°.
9103-55	1.0 m channel - Tr 91-08; medium grained, grey, andesite tuff (8E). 40 cm limonitic shear at 155°/-54°.
9103-56	Grab - from North Creek canyon at 1380 ft. A.S.L.; schistose, siliceous, limonitic tuff with minor argillite and pyrrhotite fracture fillings. Foliation is 100°/-70°.
9103-57	Grab - from North Creek canyon at 680 ft. A.S.L.; laminated, siliceous, limonitic siltstone and grey/black argillite. Foliation is 110°/-80°.
9103-58	Grab - from North Creek canyon at 1100 ft. A.S.L.; massive grey to white sandstone (quartzite) with minor disseminated sulphides (py/po?). In 6 to 10 metre thick bed at 170°/-60°.
9103-59	Grab - from North Creek canyon at 1100 ft. A.S.L., 70 m west of 9103-58; laminated, siliceous, limonitic tuff and grey chert with 1% to 4% pyrite. Very rusty weathering. Bedding is 127°/-55°.
9103-60	Grab - at creek junction where 8353 and 54 were collected; silicified, limonitic, finely laminated argillaceous tuff with quartz veining and associated pyrite (up to 3%) along 134°/-75° shearing. Cross fracturing at 042°/-85°.
9103-61	Grab - near sample 8355; silicified, limonitic, finely laminated argillaceous siltstone with minor tuffaceous laminae. Local, widely spaced quartz fracture filling (up to 2 mm wide) with fine grained disseminated pyrite. Bedding or foliation at 141°/-48°.
9103-62	Grab - 15 m northwest of 8359; siliceous, limonitic, finely laminated tuff with minor argillite, siltstone laminae with fine grained pyrite diss'ns and fracture fillings. Foliation is 170°/-45°.

Sample Number	Sample Description
9103-63	Grab - near samples 8254 and 55; limonitic, schistose, interbedded argillite, siltstone and tuff with very fine grained grey sulphide disseminations (Py?) parallel to laminae. Foliation is 062°/-60°.

* Note: All structural attitudes quoted using "right-hand" rule (i.e. dip plane to the right of strike direction).

APPENDIX II

MIN-EN Laboratories

Certificates of Analysis and Assay

for the

Lithogeochemical, Silt and Soil Geochemical Samples

COMP: MINOREX CONSULTING
PROJ: P.L. P.O. 91-03
ATTN: D. BLANCHFLOWER

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1S-0509-SJ1+2
DATE: 91/08/26
* SILTS & SOILS * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU-FIRE PPB
8251	.9	18710	5	2	131	.1	9	12030	.1	20	43	44150	2840	7	10130	1134	3	140	1	1310	13	1	68	1	2162	122.8	118	3	2	3	20	6
8252	1.4	27180	6	1	103	.6	7	13160	.1	14	50	22370	1260	12	9500	361	14	420	11	1770	17	1	65	1	1508	75.8	184	4	2	3	28	2
8253	1.0	23570	9	1	124	.2	7	11440	.1	18	41	29160	1960	8	8160	1379	5	750	4	1240	16	1	59	1	1411	80.9	177	4	2	2	18	7
8254	.9	21640	2	1	91	.1	8	7000	.1	14	36	33630	2220	4	7930	442	1	670	1	640	11	1	39	1	1834	87.1	45	3	2	2	11	2
8255	.6	21340	4	1	191	.3	6	8500	.1	17	52	30060	2260	6	9090	1208	1	570	4	1350	13	1	35	1	1327	76.9	109	3	2	2	13	1
8256	.8	19880	4	1	135	.3	6	6810	.1	13	33	28350	1670	6	6890	1166	1	480	2	1190	15	1	26	1	1236	71.6	134	3	2	2	14	270
8257	1.6	26090	18	1	128	1.2	2	15140	.1	5	37	6110	240	1	990	870	4	80	7	2520	16	1	79	5	99	13.8	103	5	1	1	12	6
8258	.8	18240	2	1	291	.1	8	8750	.1	18	47	35880	3970	6	12560	992	1	450	8	1740	14	1	45	1	1661	86.1	127	3	2	2	28	18
8259	.8	16980	5	1	317	.1	8	9090	.1	15	44	31350	3950	6	12630	925	1	490	13	1600	12	1	41	1	1585	74.0	163	3	2	3	36	2
8260	.7	18090	2	1	305	.1	7	8710	.1	17	45	35580	4130	6	12330	1327	2	720	12	1380	14	1	40	1	1627	74.3	167	2	2	3	32	4
8261	.8	17740	6	1	195	.1	6	10270	.1	15	50	30780	2280	6	8320	1404	4	190	14	1430	21	1	40	1	1310	75.5	176	3	1	2	18	1
8262	1.2	6640	2	1	34	.1	8	3730	.1	5	9	12570	370	1	780	89	1	420	1	250	8	1	19	1	1751	72.7	20	4	2	2	12	3
8263	1.2	9050	3	1	81	.2	5	6670	.1	6	13	17110	710	3	1060	379	1	760	1	800	9	1	18	1	996	43.4	18	3	1	1	12	1
8264	1.2	21370	46	1	217	.1	10	5240	.1	16	67	38010	1480	7	17320	283	1	820	34	1070	8	1	14	1	2092	139.4	59	4	2	6	95	2
8265	1.0	22070	56	1	486	.1	9	10220	.1	22	92	38860	5030	11	21660	653	1	450	65	1520	5	1	21	1	1979	133.8	66	3	2	6	115	4
8266	1.0	28650	1	1	166	.1	11	3460	.1	13	60	43520	1150	9	8920	228	2	520	1	1070	8	1	12	1	2505	107.7	39	5	3	3	26	2
8267	1.0	13100	1	1	106	.1	9	3930	.1	10	14	25460	2460	3	7490	340	1	840	3	830	10	1	11	1	2094	74.8	31	6	2	3	36	1
8268	1.3	23840	1	1	134	.1	15	9520	.1	23	65	65290	1320	7	8690	422	3	270	1	1980	3	1	24	1	3820	186.3	41	3	3	3	24	1
8269	.7	19630	13	1	148	.1	8	11770	.1	23	79	46760	2270	11	20560	833	1	120	59	1980	6	1	45	1	1856	135.4	73	1	2	7	137	1
8270	.9	20260	4	1	77	.1	9	9060	.1	17	36	40240	750	13	13400	1078	1	390	3	1200	8	1	37	1	1878	118.3	90	3	2	3	28	2
8271	.4	27280	11	1	44	.2	7	3650	.1	15	39	52450	310	12	12220	267	1	50	21	710	12	1	11	1	1536	162.9	63	4	2	7	122	1
8272	.6	13520	29	1	92	.1	5	10640	.1	14	41	30450	780	11	13130	953	1	80	41	1480	11	1	48	1	884	77.4	69	4	1	4	70	40
8273	.5	34120	25	1	110	.3	6	9570	.1	35	94	50870	2680	17	56480	1071	1	40	269	1410	1	1	42	1	1185	158.8	86	1	3	19	537	4
8274	.8	37070	30	1	37	.3	9	3830	.1	30	53	53070	840	16	47580	704	1	60	182	730	1	1	9	1	1578	158.0	83	1	2	18	497	2
8275	.2	18340	76	1	66	.2	4	4340	.1	37	30	45090	430	5	3180	4772	2	530	8	2200	24	1	14	1	552	76.5	34	2	1	2	27	4
8301	.9	17330	5	1	130	.1	7	9890	.1	14	45	30050	2690	8	11690	764	1	320	6	1470	13	1	53	2	1436	86.7	139	4	1	2	24	26
8302	.9	20060	2	1	164	.1	8	11510	.1	16	59	34890	2750	7	10160	1189	1	160	2	1740	17	1	67	1	1695	101.0	153	3	2	2	18	15
8303	1.3	17730	5	1	151	.1	12	16350	.1	23	88	46770	3530	4	13180	659	1	180	2	2890	7	1	99	1	2813	138.1	50	3	2	3	27	2
8351	1.0	17750	3	1	153	.1	8	10930	.1	16	52	34670	2190	7	10750	912	1	230	4	1640	13	1	55	1	1627	99.9	133	3	2	3	24	60
8352	.9	17260	8	1	152	.1	8	10540	.1	15	50	33330	2140	7	10330	852	2	200	6	1700	12	1	47	1	1480	93.7	123	4	2	3	24	2
8353	.7	17210	5	1	143	.1	6	10090	.1	14	52	30780	2100	7	10010	871	1	430	5	1580	15	1	43	1	1341	86.2	126	2	1	3	22	6
8354	2.0	19260	1	1	231	.1	7	9110	.1	21	52	38170	3920	8	14340	908	1	620	21	1310	18	1	37	1	1596	92.8	146	2	1	3	51	38
8355	.5	17610	1	1	200	.1	6	8860	.1	17	55	36220	3250	7	12760	899	1	490	17	1370	14	1	37	1	1456	93.4	149	2	1	3	42	7
8356	.6	20050	1	1	198	.1	7	10180	.1	18	54	39370	3110	8	13730	1004	1	320	13	1520	13	1	41	1	1603	103.9	145	2	1	3	44	3
8357	.5	16900	10	1	148	.1	4	10150	.1	13	37	30590	1480	11	11210	912	1	290	20	1340	7	1	27	1	1051	85.8	88	2	1	3	50	9
8358	.7	19090	5	1	200	.1	6	9140	.1	17	51	34530	2960	8	13140	1033	1	290	16	1370	12	1	35	1	1347	88.9	142	3	1	3	45	16
8359	.9	24670	8	1	280	.1	8	9910	.1	22	92	39900	5230	10	21290	832	1	280	74	1580	7	1	31	1	1907	118.7	113	2	1	7	164	2
8360	.6	19650	9	1	174	.1	6	9270	.1	20	65	32330	2940	8	21180	585	1	230	95	1550	3	1	23	1	1426	93.2	70	2	1	9	213	4
8361	.8	20770	9	1	214	.1	7	9030	.1	20	74	34600	3600	9	18750	767	1	540	68	1440	11	1	27	1	1515	99.4	102	2	1	7	150	41
8362	.6	20000	8	1	218	.1	6	8880	.1	18	67	35940	3550	9	16250	799	1	260	49	1510	12	1	27	1	1467	98.6	110	2	1	6	113	19
8363	.6	20980	1	1	211	.1	6	8990	.1	19	60	36090	4640	9	14810	929	1	690	19	1210	11	1	33	1	1400	89.6	146	2	1	3	50	17
8364	.7	18690	6	1	188	.1	5	8440	.1	19	53	36120	3440	8	15100	825	1	390	33	1220	12	1	29	1	1379	93.3	130	3	1	4	77	8
8365	.5	18030	5	1	184	.1	5	8360	.1	21	59	38250	3680	8	15290	730	1	370	36	1440	10	1	29	1	1289	92.8	138	2	1	4	80	21
8366	.8	22790	4	1	142	.1	6	10010	.1	24	99	37950	2870	13	29710	705	1	450	170	1430	2	1	27	1	1385	106.0	100	1	1	12	309	3
8367	.6	16640	10	1	168	.1	5	7890	.1	18	57	33120	3250	8	13800	731	1	600	35	1310	20	1	25	1	1103	81.3	117	3	1	4	73	16
8368	.8	23110	5	1	215	.1	8	9970	.1	21	72	40690	4040	10	19110	844	1	500	54	1470	10	1	35	1	1757	111.3	130	2	1	6	118	19
8369	.7	18980	8	1	170	.1	6	9610	.1	18	68	35220	3050	8	15840	697	1	410	47	1390	10	1	32	1	1491	96.4	105	2	1	5	100	17
8370	.5	16830	9	1	148	.1	4	7490	.1	16	61	30880	3020	8	15620	673	1	310	48	1180	14	1	25	1	1110	81.5	112	3	1	4	95	9
8371	.7	17790	12	1	162	.1	5	8030	.1	17	77	32360	3210	8	16690	679	1	320	54	1230	12	1	25	1	1214	87.7	100	3	1	5	113	12
8372	.6	20570	22	1	168	.1	6	8280	.1	20	79	35410	2980	9	22530	728	1	280	84	1330	10	1	27	1	1275	98.6	105	2	1	7	173	18
8373	.7	23370	22	1	140	.1	5	8720	.1	29	85	39110	2490	11	34240	806	1	60	176	1570	9	1	33	1	1047	108.9	84	1	1	13	348	3

COMP: MINOREX CONSULTING
PROJ: P.L. P.O. 91-03
ATTN: D. BLANCHFLOWER

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1S-0509-RJ1+2
DATE: 91/08/26
* ROCK * (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU-FIRE PPB
9103-01	3.2	186	1174	134	1	88	475
9103-02	.5	18	141	20	1	16	9
9103-03	1.2	8	87	11	1	74	2
9103-04	4.8	11	107	55	1	139	767
9103-05	10.0	39	397	78	1	110	2970
9103-06	2.8	24	110	19	1	102	479
9103-07	2.7	3	112	59	1	340	132
9103-08	1.6	38	66	46	1	292	261
9103-09	.9	13	70	23	1	121	29
9103-10	.7	32	76	17	1	85	4
9103-11	.7	24	49	19	1	47	23
9103-12	.6	12	78	15	1	50	28
9103-13	.3	33	75	21	2	57	2
9103-14	.5	41	57	17	1	87	10
9103-15	1.3	9	87	19	1	130	191
9103-16	1.6	12	61	10	1	60	116
9103-17	.9	17	49	20	1	58	19
9103-18	1.2	78	64	63	1	109	17
9103-19	.5	20	31	18	1	59	10
9103-20	1.3	15	135	26	1	80	18
9103-21	.9	38	111	18	1	49	12
9103-22	.7	22	87	23	1	130	41
9103-23	.9	15	68	12	1	81	19
9103-24	1.5	3	70	12	1	98	6
9103-25	2.2	35	350	28	1	195	70
9103-26	2.0	27	216	11	1	100	106
9103-27	.9	66	131	17	1	107	38
9103-28	1.5	7	81	6	1	71	21
9103-29	1.3	4	44	3	1	78	19
9103-30	2.4	44	230	3	1	109	595
9103-31	6.5	16	305	8	1	223	2690
9103-32	19.2	125	423	27	1	365	2100
9103-33	4.9	56	179	11	1	187	488
9103-34	2.2	103	115	9	1	201	199
9103-35	23.2	126	334	18	1	975	2810
9103-36	3.3	25	284	2	1	1605	102
9103-37	4.2	226	143	48	1	193	1250
9103-38	21.8	146	181	37	1	289	8350
9103-39	8.5	122	330	30	1	3068	2500
9103-40	2.2	106	95	33	1	453	245
9103-41	3.3	49	134	21	1	745	202
9103-42	16.0	35	61	10	1	169	7850
9103-43	1.4	1	65	2	1	202	40
9103-44	11.7	404	227	51	1	419	2470
9103-45	3.9	10	191	5	1	950	838
9103-46	2.4	14	84	10	1	320	355
9103-47	1.5	14	133	6	1	85	53
9103-48	2.8	20	199	9	1	109	42
9103-49	2.0	13	123	7	1	180	18
9103-50	1.6	34	69	7	3	30	18
9103-51	1.6	10	95	11	1	116	4
9103-52	1.5	22	76	11	1	161	18
9103-53	8.0	405	83	32	1	345	29
9103-54	3.1	598	130	48	1	137	385
9103-55	.1	23	152	18	1	121	34
9103-56	1.0	108	90	15	3	67	5
9103-57	1.1	22	35	11	2	72	2
9103-58	1.2	17	33	9	2	27	1
9103-59	.8	26	37	17	2	102	2
9103-60	1.0	18	42	13	2	39	1

COMP: MINOREX CONSULTING
PROJ: P.L. P.O. 91-03
ATTN: D. BLANCHFLOWER

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1S-0509-RJ3
DATE: 91/08/26
* ROCK * (ACT:F31)

SAMPLE NUMBER	AG PPM	AS PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU-FIRE PPB
9103-61	.2	1	62	7	1	52	4
9103-62	.3	315	87	22	1	237	19
9103-63	.5	17	235	6	1	12	2

MIN • EN LABORATORIES
(DIVISION OF ASSAYERS CORP.)
SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate 1S-0509-RA1

Company: MINOREX CONSULTING Date: AUG-26-91
Project: P.L. P.O. 91-03 Copy 1. MINOREX CONSULTING, DELTA, B.C.
Attn: D. BLANCHFLOWER 2. SUMMIT GEOLOGICAL, INVERMERE, B.C.

We hereby certify the following Assay of 9 ROCK samples submitted AUG-20-91 by D.BLANCHFLOWER.

Sample Number	AU g/tonne	AU oz/ton	AG g/tonne	AG oz/ton
9103-05	2.76	.081		
9103-31	3.30	.096		
9103-32	2.60	.076		
9103-35	3.41	.099	25.7	.75
9103-37	1.38	.040		
9103-38	13.10	.382	27.6	.81
9103-39	2.46	.072		
9103-42	10.23	.298		
9103-44	3.02	.088		

Certified by ______________________
MIN-EN LABORATORIES

MINERAL
• ENVIRONMENTS
LABORATORIES

Division of Assayers Corp. Ltd.

AG, CU, PB, ZN, NI, AND CO ASSAY PROCEDURE

Samples are dried @ 95 C and when dry are crushed on a jaw crusher. The -1/4 inch output of the jaw crusher is put through a secondary roll crusher to reduce it to -1/8 inch. The whole sample is then riffled on a Jones Riffle down to a statistically representative 300-400 gram sub-sample (in accordance with Gy's statistical rules.) This sub-sample is then pulverized in a ring pulverizer to 95% minus 120 mesh, rolled and bagged for analysis. The remaining reject from the Jones Riffle is bagged and stored.

A sub-sample is weighed from the pulp bag for analysis, usually 0.200 to 2.000 gram, depending upon estimated range. Each batch of 70 assays has a natural standard and a reagent blank included. The assays are digested using a HNO3 - KCLO4 mixture and when reaction subsides, HCL is added to assay before it is placed on a hotplate to digest. After digestion is complete the assays are cooled, diluted to volume and mixed.

The assays are analyzed on atomic absorption spectrometers using the appropriate standard sets. The natural standard digested along with this set must be within 2 standard deviations of its known or the whole set is re-assayed. If any of the assays are >1% they are re-assayed at a lower weight.

OFFICE AND LABORATORIES:
705 WEST FIFTEENTH STREET, NORTH VANCOUVER, B.C.
CANADA V7M 1T2

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TELEX: VIA USA 7601067
FAX: (604) 980-9621

MINERAL
• ENVIRONMENTS
LABORATORIES

Division of Assayers Corp. Ltd.

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK

PROCEDURE FOR AU, PT OR PD FIRE GEOCHEM

Geochemical samples for Au Pt Pd are processed by Min-En Laboratories, at 705 West 15th St., North Vancouver, B.C., laboratory employing the following procedures:

After drying the samples at 95 C, soil and stream sediment Samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer or ring mill pulverizer.

A suitable sample weight; 15.00 or 30.00 grams is fire assay preconcentrated. The precious metal beads are taken into solution with aqua regia and made to volume.

For Au only, samples are aspirated on an atomic absorption spectrometer with a suitable set of standard solutions. If samples are for Au plus Pt or Pd, the sample solution is analyzed in an inductively coupled plasma spectrometer with reference to a suitable standard set.

OFFICE AND LABORATORIES:
705 WEST FIFTEENTH STREET, NORTH VANCOUVER, B.C.
CANADA V7M 1T2

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TELEX: VIA USA 7601067
FAX: (604) 980-9621

MINERAL
• ENVIRONMENTS
LABORATORIES

Division of Assayers Corp. Ltd.

GOLD ASSAY PROCEDURE:

Samples are dried @ 95 C and when dry are crushed on a jaw crusher. The 1/4 inch output of the jaw crusher is put through a secondary roll crusher to reduce it to - 15 mesh. The whole sample is then riffled on a Jones Riffle down to a statistically representative 500 gram sub-sample (in accordance with Gy's statistical rules.) This sub-sample is then pulverized on a ring pulverizer to 95% minus 120 mesh, rolled and bagged for analysis. The remaining reject from the Jones Riffle is bagged and stored.

Samples are fire assayed using one assay ton sample weight. The samples are fluxed, a silver inquart added and mixed. The assays are fused in batches of 24 assays along with a natural standard and a blank. This batch of 26 assays is carried through the whole procedure as a set. After cupellation the precious metal beads are transferred into new glassware, dissolved, diluted to volume and mixed.

These aqua regia solutions are analyzed on an atomic absorption spectrometer using a suitable standard set. The natural standard fused along with this set must be within 2 standard deviations of its known or the whole set is re-assayed. Likewise the blank must be less than 0.015 g/tonne.

The top 10% of all assays per page are rechecked and reported in duplicate along with the standard and blank.

OFFICE AND LABORATORIES:
705 WEST FIFTEENTH STREET, NORTH VANCOUVER, B.C.
CANADA V7M 1T2

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TELEX: VIA USA 7601067
FAX: (604) 980-9621

MINERAL
• ENVIRONMENTS
LABORATORIES

Division of Assayers Corp. Ltd.

ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR 31 ELEMENT TRACE ICP

Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cu,
Fe, K, Li, Mg, Mn, Mo, Na, Ni P, Pb, Sb,
Sr, Th, Ti, V, Zn Ga, Sn, W, Cr

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer or ring mill pulverizer.

0.5 gram of the sample is digested for 2 hours with an aqua regia mixture.

After cooling samples are diluted to standard volume. The solutions are analysed by computer operated Jarrall Ash 9000 ICAP or Jobin Yvon 70 Type II Inductively Coupled Plasma Spectrometers. Reports are formatted and printed using a dot-matrix printer.

OFFICE AND LABORATORIES:
705 WEST FIFTEENTH STREET, NORTH VANCOUVER, B.C.
CANADA V7M 1T2

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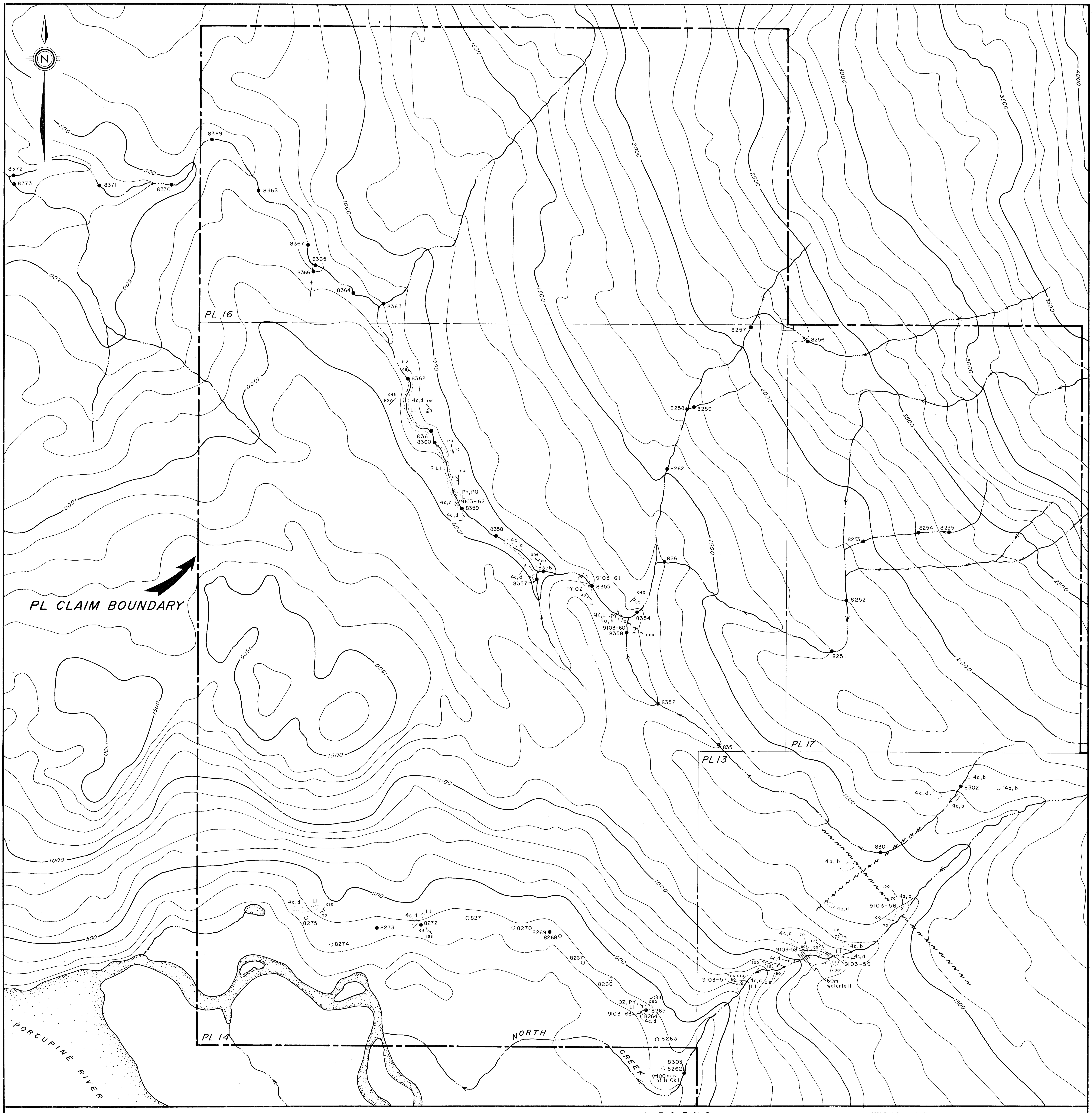


1991 Silt Sample Analyses

Sample	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm	Co ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm	Na ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti ppm	V ppm	Zn ppm	Ga ppm	Sn ppm	W ppm	Cr ppm	Au-fire ppb
8251	0.9	18710	5	2	131	0.1	9	12030	0.1	20	43	44150	2840	7	10130	1134	3	140	1	1310	13	1	68	1	2162	122.8	118	3	2	3	20	6
8252	1.4	27180	6	1	103	0.6	7	13160	0.1	14	50	22370	1260	12	9500	361	14	420	11	1770	17	1	65	1	1508	75.8	184	4	2	3	28	2
8253	1.0	23570	9	1	124	0.2	7	11440	0.1	18	41	29160	1960	8	8160	1379	5	750	4	1240	16	1	59	1	1411	80.9	177	4	2	2	18	7
8254	0.9	21640	2	1	91	0.1	8	7000	0.1	14	36	33630	2220	4	7930	442	1	670	1	640	11	1	39	1	1834	87.1	45	3	2	2	11	2
8255	0.6	21340	4	1	191	0.3	6	8500	0.1	17	52	30060	2260	6	9090	1208	1	570	4	1350	13	1	35	1	1327	76.9	109	3	2	2	13	1
8256	0.8	19880	4	1	135	0.3	6	6810	0.1	13	33	28350	1670	6	6890	1166	1	480	2	1190	15	1	26	1	1236	71.6	134	3	2	2	14	270
8257	1.6	26090	18	1	128	1.2	2	15140	0.1	5	37	6110	240	1	990	870	4	80	7	2520	16	1	79	5	99	13.8	103	5	1	1	12	6
8258	0.8	18240	2	1	291	0.1	8	8750	0.1	18	47	35880	3970	6	12560	992	1	450	8	1740	14	1	45	1	1661	86.1	127	3	2	2	28	18
8259	0.8	16980	5	1	317	0.1	8	9090	0.1	15	44	31350	3950	6	12630	925	1	490	13	1600	12	1	41	1	1585	74.0	163	3	2	3	36	2
8260	0.7	18090	2	1	305	0.1	7	8710	0.1	17	45	35580	4130	6	12330	1327	2	720	12	1380	14	1	40	1	1627	74.3	167	2	2	3	32	4
8261	0.8	17740	6	1	195	0.1	6	10270	0.1	15	50	30780	2280	6	8320	1404	4	190	14	1430	21	1	40	1	1310	75.5	176	3	1	2	18	1
8265	1.0	22070	56	1	486	0.1	9	10220	0.1	22	92	38860	5030	11	21660	653	1	450	65	1520	5	1	21	1	1979	133.8	66	3	2	6	115	4
8269	0.7	19630	13	1	148	0.1	8	11770	0.1	23	79	46760	2270	11	20560	833	1	120	59	1980	6	1	45	1	1856	135.4	73	1	2	7	137	1
8272	0.6	13520	29	1	92	0.1	5	10640	0.1	14	41	30450	780	11	13130	953	1	80	41	1480	11	1	48	1	884	77.4	69	4	1	4	70	40
8273	0.5	34120	25	1	110	0.3	6	9570	0.1	35	94	50870	2680	17	56480	1071	1	40	269	1410	1	1	42	1	1185	158.8	86	1	3	19	537	4
8301	0.9	17330	5	1	130	0.1	7	9890	0.1	14	45	30050	2690	8	11690	764	1	320	6	1470	13	1	53	2	1436	86.7	139	4	1	2	24	26
8302	0.9	20060	2	1	164	0.1	8	11510	0.1	16	59	34890	2750	7	10160	1189	1	160	2	1740	17	1	67	1	1695	101.0	153	3	2	2	18	15
8303	1.3	17730	5	1	151	0.1	12	16350	0.1	23	88	46770	3530	4	13180	659	1	180	2	2890	7	1	99	1	2813	138.1	50	3	2	3	27	2
8351	1.0	17750	3	1	153	0.1	8	10930	0.1	16	52	34670	2190	7	10750	912	1	230	4	1640	13	1	55	1	1627	99.9	133	3	2	3	24	60
8352	0.9	17260	8	1	152	0.1	8	10540	0.1	15	50	33330	2140	7	10330	852	2	200	6	1700	12	1	47	1	1480	93.7	123	4	2	3	24	2
8353	0.7	17210	5	1	143	0.1	6	10090	0.1	14	52	30780	2100	7	10010	871	1	430	5	1580	15	1	43	1	1341	86.2	126	2	1	3	22	6
8354	2.0	19260	1	1	231	0.1	7	9110	0.1	21	52	38170	3920	8	14340	908	1	620	21	1310	18	1	37	1	1596	92.8	146	2	1	3	51	38
8355	0.5	17610	1	1	200	0.1	6	8860	0.1	17	55	36220	3250	7	12760	899	1	490	17	1370	14	1	37	1	1456	93.4	149	2	1	3	42	7
8356	0.6	20050	1	1	198	0.1	7	10180	0.1	18	54	39370	3110	8	13730	1004	1	320	13	1520	13	1	41	1	1603	103.9	145	2	1	3	44	3
8357	0.5	16900	10	1	148	0.1	4	10150	0.1	13	37	30590	1480	11	11210	912	1	290	20	1340	7	1	27	1	1051	85.8	88	2	1	3	50	9
8358	0.7	19090	5	1	200	0.1	6	9140	0.1	17	51	34530	2960	8	13140	1033	1	290	16	1370	12	1	35	1	1347	88.9	142	3	1	3	45	16
8359	0.9	24670	8	1	280	0.1	8	9910	0.1	22	92	39900	5230	10	21290	832	1	280	74	1580	7	1	31	1	1907	118.7	113	2	1	7	164	2
8360	0.6	19650	9	1	174	0.1	6	9270	0.1	20	65	32330	2940	8	21180	585	1	230	95	1550	3	1	23	1	1426	93.2	70	2	1	9	213	4
8361	0.8	20770	9	1	214	0.1	7	9030	0.1	20	74	34600	3600	9	18750	767	1	540	68	1440	11	1	27	1	1515	99.4	102	2	1	7	150	41
8362	0.6	20000	8	1	218	0.1	6	8880	0.1	18	67	35940	3550	9	16250	799	1	260	49	1510	12	1	27	1	1467	98.6	110	2	1	6	113	19
8363	0.6	20980	1	1	211	0.1	6	8990	0.1	19	60	36090	4640	9	14810	923	1	690	19	1210	11	1	33	1	1400	89.6	146	2	1	3	50	17
8364	0.7	18690	6	1	188	0.1	5	8440	0.1	19	53	36120	3440	8	15100	825	1	390	33	1220	12	1	29	1	1379	93.3	130	3	1	4	77	8
8365	0.5	18030	5	1	184	0.1	5	8360	0.1	21	59	38250	3680	8	15290	730	1	370	36	1440	10	1	29	1	1289	92.8	138	2	1	4	80	21
8366	0.8	22790	4	1	142	0.1	6	10010	0.1	24	99	37950	2870	13	29710	705	1	450	170	1430	2	1	27	1	1385	106.0	100	1	1	12	309	3
8367	0.6	16640	10	1	168	0.1	5	7890	0.1	18	57	33120	3250	8	13800	731	1	600	35	1310	20	1	25	1	1103	81.3	117	3	1	4	73	16
8368	0.8	23110	5	1	215	0.1	8	9970	0.1	21	72	40690	4040	10	19110	844	1	500	54	1470	10	1	35	1	1757	111.3	130	2	1	6	118	19
8369	0.7	18980	8	1	170	0.1	6	9610	0.1	18	68	35220	3050	8	15840	697	1	410	47	1390	10	1	32	1	1491	96.4	105	2	1	5	100	17
8370	0.5	16830	9	1	148	0.1	4	7490	0.1	16	61	30880	3020	8	15620	673	1	310	48	1180	14	1	25	1	1110	81.5	112	3	1	4	95	9
8371	0.7	17790	12	1	162	0.1	5	8030	0.1	17	77	32360	3210	8	16690	679	1	320	54	1230	12	1	25	1	1214	87.7	100	3	1	5	113	12
8372	0.6	20570	22	1	168	0.1	6	8280	0.1	20	79	35410	2980	9	22530	728	1	280	84	1330	10	1	27	1	1275	98.6	105	2	1	7	173	18
8373	0.7	23370	22	1	140	0.1	5	8720	0.1	29	85	39110	2490	11	34240	806	1	60	176	1570	9	1	33	1	1047	108.9	84	1	1	13	348	3

1991 Soil Sample Analyses

Sample	Ag ppm	Al ppm	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm	Co ppm	Cu ppm	Fe ppm	K ppm	Li ppm	Mg ppm	Mn ppm	Mo ppm	Na ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	Th ppm	Ti ppm	V ppm	Zn ppm	Ga ppm	Sn ppm	W ppm	Cr ppm	Au-fire ppb
8262	1.2	6640	2	1	34	0.1	8	3730	0.1	5	9	12570	370	1	780	89	1	420	1	250	8	1	19	1	1751	72.7	20	4	2	2	12	3
8263	1.2	9050	3	1	81	0.2	5	6670	0.1	6	13	17110	710	3	1060	379	1	760	1	800	9	1	18	1	996	43.4	18	3	1	1	12	1
8264	1.2	21370	46	1	217	0.1	10	5240	0.1	16	67	38010	1480	7	17320	283	1	820	34	1070	8	1	14	1	2092	139.4	59	4	2	6	95	2
8266	1.0	28650	1	1	166	0.1	11	3460	0.1	13	60	43520	1150	9	8920	228	2	520	1	1070	8	1	12	1	2505	107.7	39	5	3	3	26	2
8267	1.0	13100	1	1	106	0.1	9	3930	0.1	10	14	25460	2460	3	7490	340	1	840	3	830	10	1	11	1	2094	74.8	31	6	2	3	36	1
8268	1.3	23840	1	1	134	0.1	15	9520	0.1	23	65	65290	1320	7	8690	422	3	270	1	1980	3	1	24	1	3820	186.3	41	3	3	3	24	1
8270	0.9	20260	4	1	77	0.1	9	9060	0.1	17	36	40240	750	13	13400	1078	1	390	3	1200	8	1	37	1	1878	118.3	90	3	2	3	28	2
8271	0.4	27280	11	1	44	0.2	7	3650	0.1	15	39	52450	310	12	12220	267	1	50	21	710	12	1	11	1	1536	162.9	63	4	2	7	122	1
8274	0.8	37070	30	1	37	0.3	9	3830	0.1	30	53	53070	840	16	47580	704	1	60	182	730	1	1	9	1	1578	158.0	83	1	2	18	497	2
8275	0.2	18340	76	1	66	0.2	4	4340	0.1	37	30	45090	430	5	3180	4772	2	530	8	2200	24	1	14	1	552	76.5	34	2	1	2	27	4

— L E G E N D —

LITHOLOGIES

MISSISSIPPIAN AND OLDER

4 Undivided metavolcanics and metasediments.
4A Tuff unit: consists of ash tuff, lapilli tuff and tuffaceous siltstone.
4B Intermediate flows: feldspar-hornblende porphyry andesites, pyroxene-plagioclase porphyritic flows.
4C Argillites and siltstones: usually strongly laminated, siltstone.
4D Greywacke: fine- to medium-grained; thick sequences found within unit 4C.
4I Chlorite-feldspar-quartz schist: may be gneissic in places.

MINERALS AND ALTERATION TYPES

AS	arsenopyrite	AZ	azurite	BO	bornite
CA	calcite	CB	Fe-carbonate	CL	chlorite
CP	chalcopyrite	CY	clay	EP	epidote
GL	galena	GE	goethite	JA	jarosite
MC	malachite	MG	magnetite	MO	molybdenite
MS	sericite	PO	pyrrhotite	PY	pyrite
SI	silica	SP	sphalerite	LI	limonite
		QZ	quartzite		

SYMBOLS

Rock Outcrop
Geological Contact (approximate)
75 Fault - approximate (inclined, horizontal movement)
75 Bedding with Dip
75 Foliation, Schistosity (inclined, vertical)
75 90 Joint (inclined, vertical)
5 Lineation (inclined)
Dyke
(0.2) (0.2) (0.2) Vein with Dip (inclined, vertical, unknown) and true width in metres
X Rock Sample - Grab from Outcrop
Δ Rock Sample - Float
• Silt sample
o Soil sample

1991 Rock Sample Analyses

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb
9103-56	grab	1	108	90	15	3	67	5
9103-57	grab	1.1	22	35	11	2	72	2
9103-58	grab	1.2	17	33	9	2	27	1
9103-59	grab	0.8	26	37	17	2	102	2
9103-60	grab	1	18	42	13	2	39	1
9103-61	grab	0.2	1	62	7	1	52	4
9103-62	grab	0.3	315	87	22	1	237	19
9103-63	grab	0.5	17	235	6	1	12	2

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,928

Note: Contour interval: 100 feet

SCALE: 1:5000

metres 0 100 200 300 400 500 metres

SUMMIT GEOLOGICAL
INVERMERE, B.C.

ROYCE INDUSTRIES INC.
VANCOUVER, B.C.

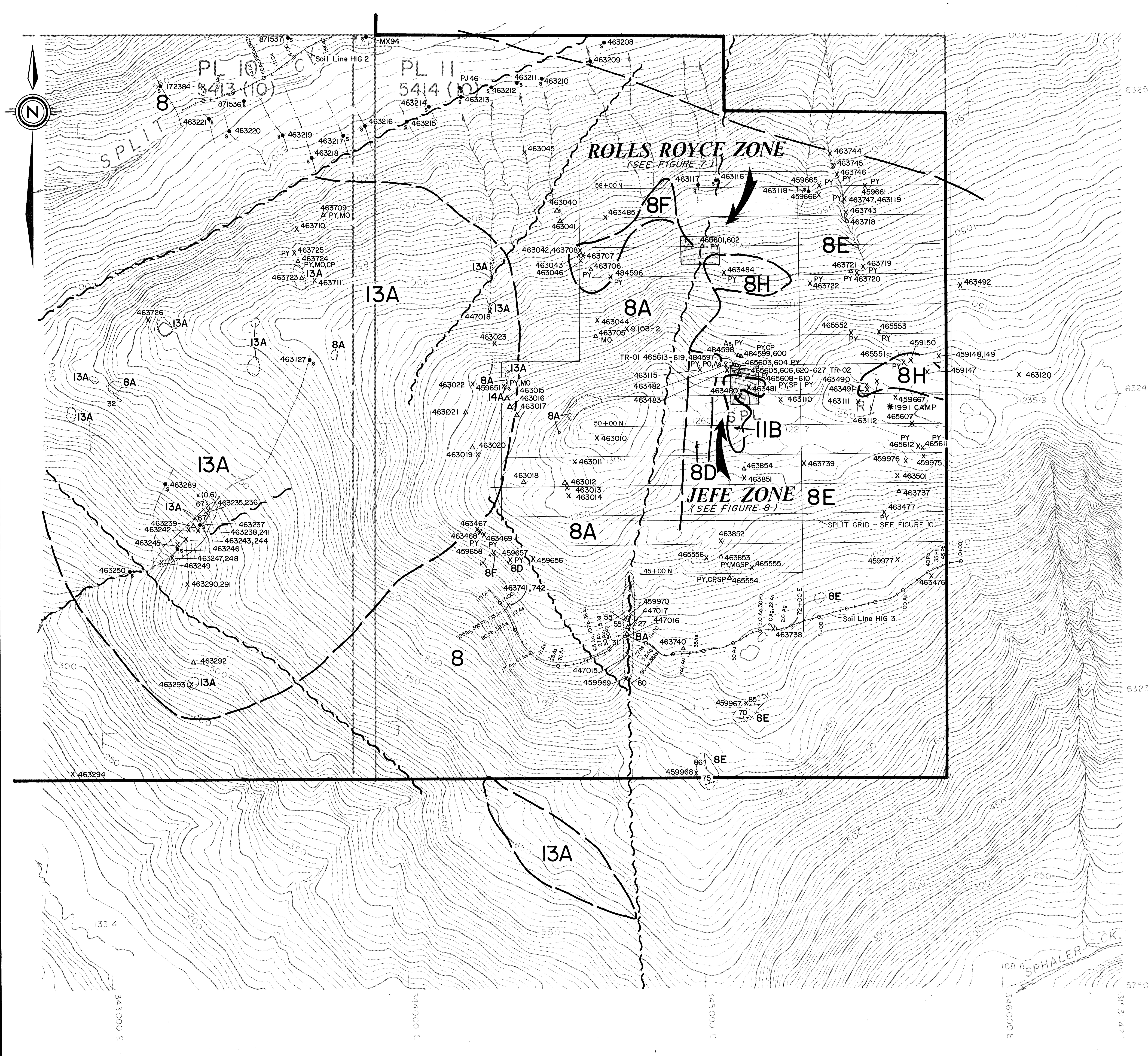
GEOLOGICAL AND SAMPLE LOCATION PLAN

PL 13, 14, 16, & 17 CLAIMS

PL PROPERTY

LIARD MINING DIVISION, B.C.
NTS 104 G/4E

Technical work by: S. F. Coombes	
Drawn by: D. Miller	Scale: 1:5000
Date: November, 1991	Figure No.: 5



1990 ROCK SAMPLE ANALYSES

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
459651	15	10.2	60	230	70	220
459656	5	0.3	48	4	50	16
459657	<5	0.4	58	2	22	7
459658	20	0.7	100	2	38	8
459661	30	0.5	50	6	77	15
459665	10	2.8	18	6	25	15
459666	10	1.9	36	230	105	23
459667	75	3.1	30	32	57	10
463467	435	1.2	760	12	79	0
463468	100	1.3	220	4	30	2
463469	15	0.4	80	10	31	1
463476	15	<0.2	60	28	88	13
463477	10	0.4	50	70	96	32
463480	<5	0.2	36	12	38	1
463481	<5	0.3	110	6	24	0
463482	<5	<0.2	18	6	55	2
463483	400	3.2	310	450	.57%	28
463484	30	0.6	180	16	186	8
463485	<5	<0.2	46	10	63	2
463490	<5	<0.2	54	8	58	11
463491	<5	7	74	290	40	118
463492	15	0.4	40	42	52	8
463705	820	4.6	30	330	104	1
463706	60	0.6	86	8	40	6
463707	10	0.6	210	<2	30	5
463708	5	0.5	205	2	66	5
463709	<5	<0.2	40	<2	4	4
463710	<5	<0.2	14	<2	6	6
463711	40	0.5	310	<2	6	21
463718	5	1.1	24	30	60	23
463719	5	1.4	84	30	80	32
463720	<5	1.8	74	50	240	38
463721	5	2	30	40	26	18
463722	5	0.4	64	2	68	8
463723	<5	0.2	4	2	50	2
463724	<5	0.2	38	2	6	6
463725	20	0.5	164	<2	6	10
463726	35	6.4	570	700	310	10
463737	20	2.9	60	200	510	29
463738	<5	0.5	250	22	58	2
463739	25	3	52	330	1200	23
463740	5	0.2	118	4	70	3
463741	820	6.7	56	1400	1100	350
463742	400	1.7	66	140	670	490
463743	140	27.1g/t	0.44%	4	28	19
463744	45	1	70	6	20	15
463745	445	0.7	30	4	40	15
463746	50	1.4	190	4	88	8
463747	40	0.7	20	6	82	10
463851	130	1.6	245	123	290	7
463852	80	0.8	48	64	130	40
463853	130	2.7	245	156	3200	66
463854	30	0.5	22	40	100	7
465551	10	1.4	70	122	800	88
465552	<5	1	255	33	194	15
465553	<5	1.7	70	330	0.44%	40
465554	50	1.9	250	66	3000	24
465555	50	9.3	132	1300	2300	5
465556	<5	0.3	14	40	84	2
465601	920	1.1	62	32	86	15
465602	769.2g/t	498.9g/t	270	1550	152	21
465603	11.14g/t	15.8g/t	225	204	200	2550
465604	3.09g/t	2.9	35	17	100	52
465605	4.94g/t	49.7g/t	100	34	220	296
465606	290	2.5	17	6	70	14
465607	270	8.6	1700	30	128	30
465608	43.52g/t	107.7g/t	76	64	174	460
465609	3.12g/t	21.9g/t	380	110	2200	140
465610	400	2.8	138	20	450	36
465611	495	2.7	60	188	335	60
465612	135	1	56	30	120	38
465613	1.71g/t	4.9	200	14	940	34
465614	530	10.2	790	23	670	220
465615	3.15g/t	9.8	260	32	2900	120
465616	545	2.7	146	21	160	2900
465617	30	0.7	96	12	190	21
465618	20	0.8	84	9	170	18
465619	55	0.4	86	9	148	22
465620	60	0 9	158	7	146	34
465621	135	1.8	164	14	1800	60
465622	25	0.6	108	2	210	9
465623	155	3.5	255	7	184	23
465624	2.95g/t	14.7	410	25	1500	130
465625	455	1.8	128	11	330	180
465626	3.81g/t	5.1	170	6	184	92
465627	105	0.4	96	24	190	15
484596	3.22g/t	3	460	10	24	18
484597	1.44g/t	9	330	30	90	10000
484598	4.3g/t	16.8	150	42	72	10000
484599	53.00g/t	254.4g/t	1000	140	620	2320
484600	3.02g/t	17.8	270	15	1200	590

1989 ROCK SAMPLE ANALYSES

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
447015	90	0.4	111	40	222	35
447016	40	0.2	175	6	80	150
447017	50	0.6	71	18	28	70
447018	10	1.2	6	26	12	45
459147	<5	1.2	64	76	26	40
459148	<5	<0.2	6	4	22	<5
459149	5	<0.2	41	52	1175	35
459150	<5	1.8	29	72	90	45
459967	<5	<0.2	27	4	46	<5
459968	<5	<0.2	95	4	42	5
459969	45	<0.2	110	<2	82	<5
459970	20	0.4	249	<2	50	30
459975	10	0.4	45	22	50	30
459976	10	0.6	144	20	340	15
459977	<5	<0.2	127	16	196	<5
463010	90	<0.2	23	<2	660	175
463011	<5	<0.2	44	<2	100	55
463012	<5	3.2	265	352	2690	110
463013	25	0.8	340	24	102	55
463014	30	2.6	347	80	38	35
463015	20	<0.2	6	4	20	15
463016	10	1.6	127	10	12	95
463017	20	0.8	5	18	12	10
463018	10	1.8	29	14	14	130
463019	<5	0.2	36	4	18	<5
463020	<5	0.4	16	4	6	5
463021	<5	0.4	5	<2	4	<5
463022	<5	1.6	53	4	10	<5
463023	25	0.4	4	<2	<2	<5
463040	<5	0.2	188	<2	16	5
463041	39.19g/t	153.9g/t	9240	236	126	15
463042	780	0.8	113	6	72	<5
463043	40	0.8	402	<2	26	20
463044	160	1.4	299	2	32	15
463045	380	3.6	17	18	28	25
463046	15	<0.2	214	2	62	<5
463110	310	25.8	2.09%	<2	134	<5
463111	<5	<0.2	330	10	220	<5
463112	130	3.0	103	24	28	20
463115	160	<0.2	18	<2	48	<5
463119	5	2.4	79	124	100	20
463120	35	2.6	95	106	128	55
463235	<5	<0.2	152	<2	70	25
463236	<5	<0.2	23	2	10	<5
463238	<5	<0.2	50	<2	38	15
463239	<5	<0.2	92	6	52	25
463241	<5	0.2	89	<2	38	<5
463242	<5	<0.2	47	12	146	25
463243	115	0.2	258	<2	28	10
463244	30	<0.2	69	<2	18	<5
463245	<5	<0.2	15	<2	14	<5
463247	10	<0.2	263	<2	42	<5
463248	<5	<0.2	35	8	30	<5
463249	<5	<0.2	217	<2	58	<5
463290	<5	0.2	22	8	14	10
463291	<5	<0.2	37	<2	38	<5
463292	<5	<0.2	18	<2	34	5
463293	<5	<0.2	13	2	10	<5
463294	<5	<0.2	76	2	76	<5
463501	<5	<0.2	84	6	52	20

1989 SILT SAMPLE ANALYSES

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
172384	<5	0.8	89	20	92	5
463116	<5	<0.2	119	12	160	20
463117	55	<0.2	96	20	158	60
463118	25	<0.2	152	62	518	35
463127	10	<0.2	59	4	120	10
463208	95	<0.2	106	6	118	20
463209	150	<0.2	87	<2	150	20
463210	60	<0.2	84	<2	152	<5
463211	30	<0.2	156	2	178	10
463212	<5	<0.2	64	4	88	<5
463213	35	<0.2	119	10	148	20
463214	40	<0.2	85	10	106	5
463215	25	<0.2	103	16	136	<5
463216	<5	<0.2	104	8	158	5
463217	<5	<0.2	68	12	88	20
463218	30	<0.2	47	8	108	5
463219	<5	<0.2	60	4	110	5
463220	780	<0.2	38	<2	110	10
463221	<5	<0.2	48	8	116	15
463237	20	<0.2	128	4	140	15
463246	15	<0.2	95	2	118	60
463250	35	<0.2	98	<2	118	5
463289	20	<0.2	69	6	188	<5

GOVERNMENT REGIONAL GEOCHEMICAL SAMPLES

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
871536	23	0.2	99	5	36	4
871537	55	0.4	137	8	115	4

1982 TECK SILT SAMPLES

Sample	Au(ppb)	Ag(ppm)	Cu(ppm)	Pb(ppm)	Zn(ppm)	As(ppm)
PJ46	110	0.2	121	-	-	-
MX94	45	0.3	248	-	-	-

LEGEND

LITHOLOGIES

TERTIARY
Dykes and sills
14A Andesite.
14B Basalt (gabbro).
14C Lamprophyre (biotite minette).
14E Rhyolite.

EOCENE
13A Biotite quartz monzonite to monzonite: may range to a granodiorite phase; usually equigranular, medium-grained and leucocratic.
13C Quartz monzonite to quartz syenite stocks and dykes: similiar to 13A but biotite is not common.

JURA-CRETACEOUS AND TERTIARY
Coast Plutonic Complex
12B Biotite hornblende diorite to granodiorite (and tonalite).

MIDDLE TRIASSIC TO MIDDLE JURASSIC
Galore Creek Intrusives
11B Orthoclase-porphyritic monzonite: coarse- to medium-grained.

UPPER TRIASSIC
Stuhini Group
8 Undivided Stuhini Group volcanics, volcaniclastics and sedimentary rocks.
8A Interbedded wackes, siltstone and argillites.
8D Augite porphyry: includes pyroxene-phyric flows.
8E Andesite ± andesite crystal tuffs: may have associated flow breccias.
8F Microdiorite: intrusive variety of units 8D and 8E.
8H Lapilli tuffs, pyroclastic breccia and agglomerate: matrix of crystal to ash tuff.
8I Volcanic conglomerate: contains an abundance of volcanic clasts.

Stikine Assemblage

PERMIAN
5 Rusty argillite: pyrite-pyrrhotite bearing.

MISSISSIPPIAN AND OLDER
4 Undivided metavolcanics and metasediments.
4A Tuff unit: consists of ash tuff, lapilli tuff and tuffaceous siltstone.
4B Intermediate flows: feldspar-hornblende porphyry andesites, pyroxene-plagioclase porphyritic flows.
4C Argillites and siltstones: usually strongly laminated, siltstone.
4D Greywacke: fine- to medium-grained; thick sequences found within unit 4C.
4I Chlorite-feldspar-quartz schist: may be gneissic in places.

MINERALS AND ALTERATION TYPES

AS	arsenopyrite	AZ	azurite	BO	bornite
CA	calcite	CB	Fe-carbonate	CL	chlorite
CP	chalcopyrite	CY	clay	EP	epidote
GL	galena	GE	goethite	JA	jarosite
MC	malachite	MG	magnetite	MO	molybdenite
MS	sericite	PO	pyrrhotite	PY	pyrite
SI	silica	SP	sphalerite	LI	limonite
		QZ	quartzite		

SYMBOLS

Rock Outcrop
Geological Contact (approximate)
75 Fault - approximate (inclined, horizontal movement)
75 Bedding with Dip
75 Foliation, Schistosity (inclined, vertical)
75 90 Joint (inclined, vertical)
5 Lineation (inclined)
Dyke
V. V. V. (0.2) (0.2) (0.2) Vein with Dip (inclined, vertical, unknown) and true width in metres
X Rock Sample - Grab from Outcrop
Δ Rock Sample - Float
S Silt sample
O Soil sample
Soil sample line with 25 metre and 100 metre stations. Results shown for Au >36 ppb, Cu >110 ppm, Ag >0.9 ppm, Pb >26 ppm, Zn >155 ppm and As >21 ppm.
Trench
Legal Corner Post (Located, Approximate)

Geology for Paydirt property after Holtby (1985). Additional geology from Caulfield and Kasper (1989), and Yamamura and Awmack (1990).

1991 Rock Sample Analyses

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb
9103-02	grab	0.5	18	141	20	1	16	9

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,928

Note: Contour interval: 10 metres

SCALE: 1:5000

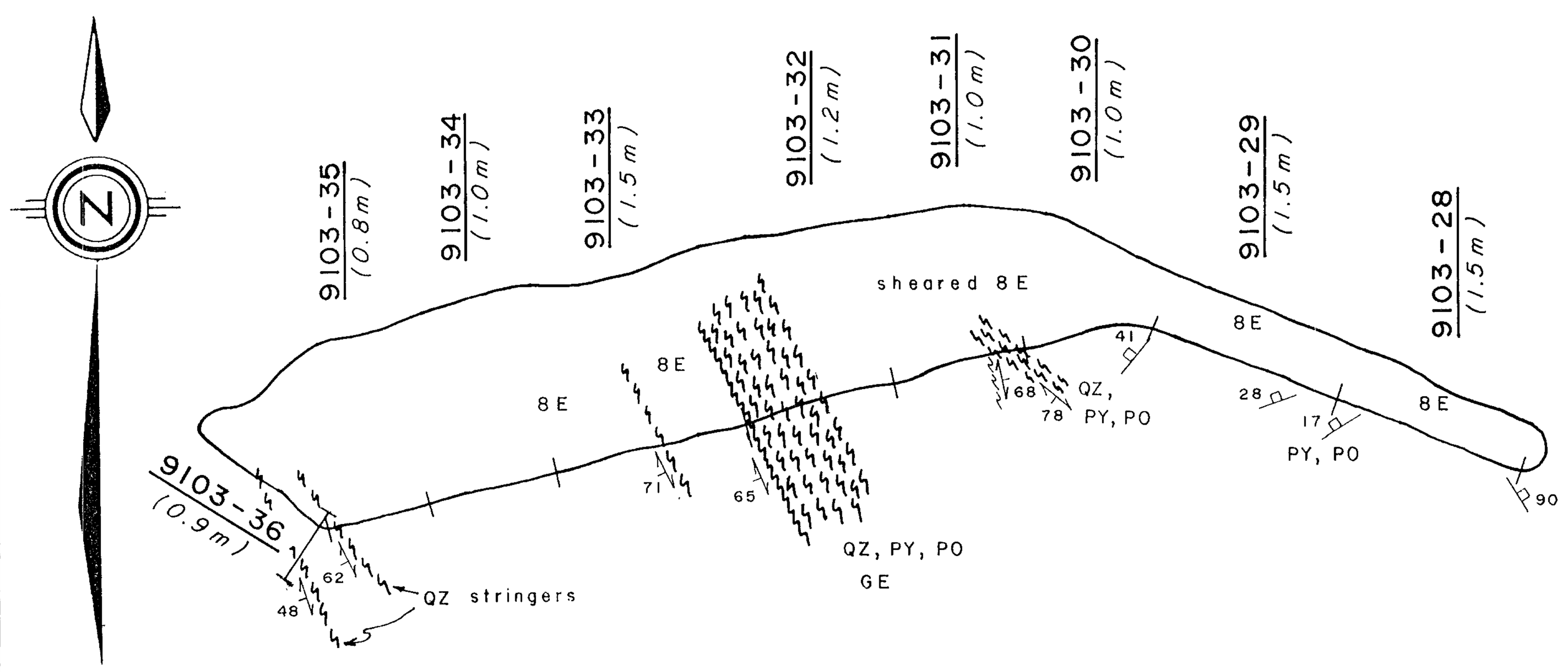
metres 0 100 200 300 400 500 metres

SUMMIT GEOLOGICAL
SUMMIT GEOLOGICAL
INVERMERE, B.C.

ROYCE INDUSTRIES INC.
VANCOUVER, B.C.

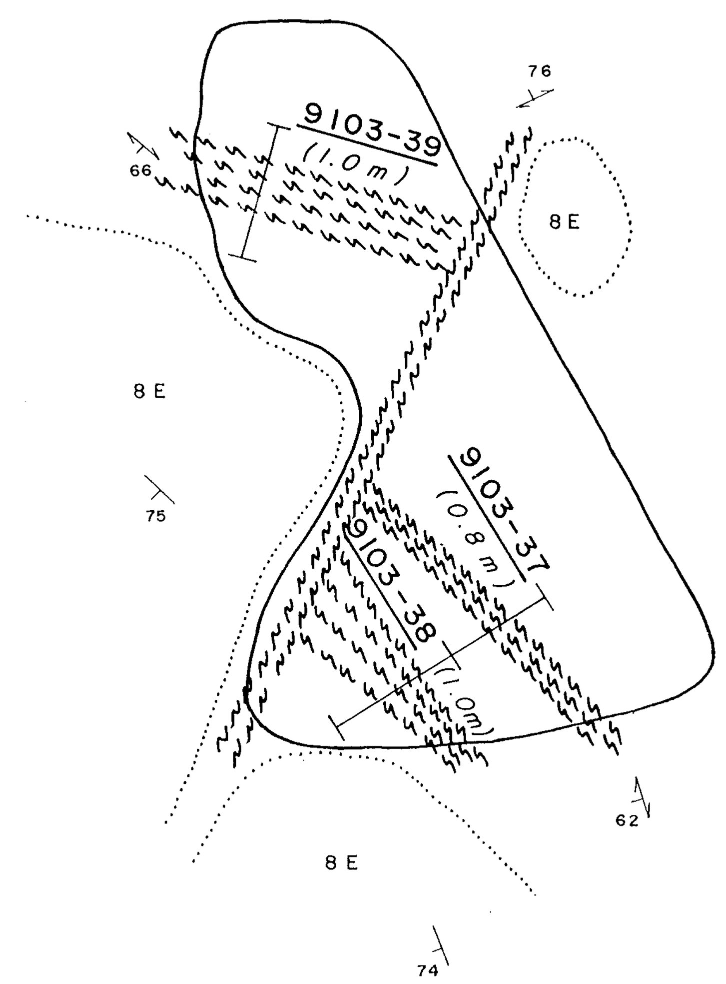
GEOLOGICAL AND SAMPLE LOCATION PLAN
SPLIT GRID AREA
PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104G/4E

Technical work by:	S. F. Coombes		
Drawn by:	D. Miller	Scale:	1:5000
Date:	November, 1991	Figure No.:	6



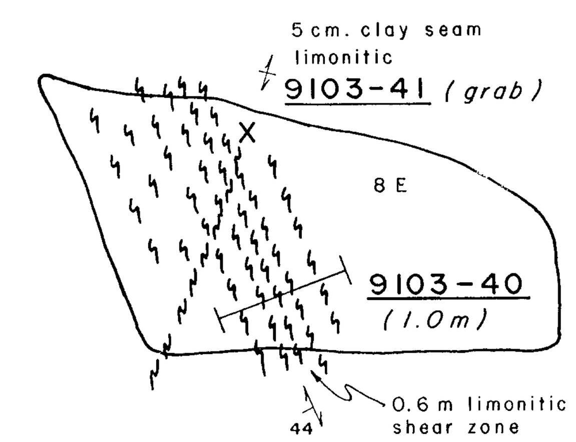
TR-90-02

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb	Au (check assay) g/tonne	Au (check assay) o.p.t.	Ag (check assay) g/tonne	Ag (check assay) o.p.t.
9103-28	1.5m	1.5	7	81	6	1	71	21				
9103-29	1.5m	1.3	4	44	3	1	78	19				
9103-30	1.0m	2.4	44	230	3	1	109	595				
9103-31	1.0m	6.5	16	305	8	1	223	2690	3.3	0.096		
9103-32	1.2m	19.2	125	423	27	1	365	2100	2.6	0.076		
9103-33	1.5m	4.9	56	179	11	1	187	488				
9103-34	1.0m	2.2	103	115	9	1	201	199				
9103-35	0.8m	23.2	126	334	18	1	975	2810	3.41	0.099	25.7	0.75
9103-36	0.9m	3.3	25	284	2	1	1605	102				



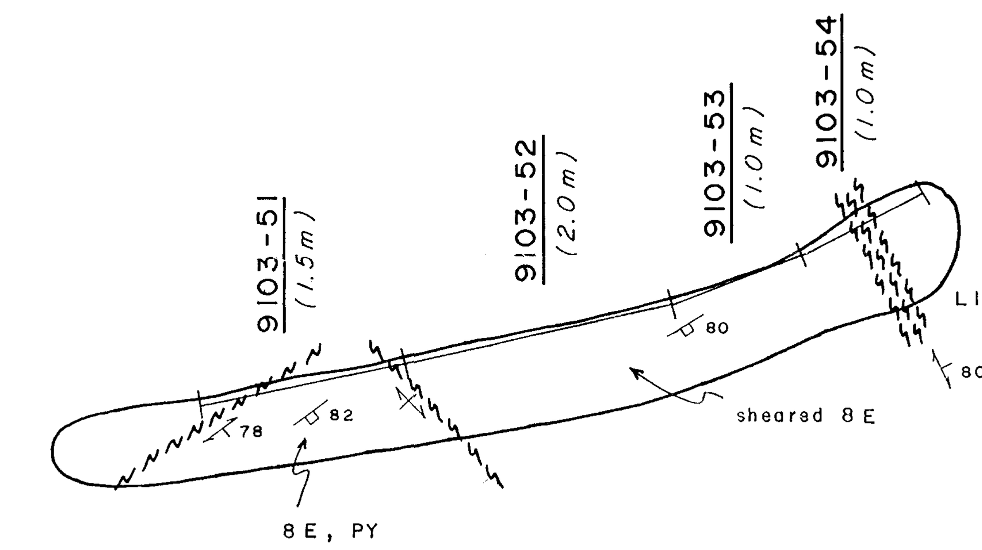
TR-91-10

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb	Au (check assay) g/tonne	Au (check assay) o.p.t.	Ag (check assay) g/tonne	Ag (check assay) o.p.t.
9103-37	0.8m	4.2	226	143	48	1	193	1250	1.38	0.040		
9103-38	1.0m	21.8	146	181	37	1	289	8350	13.1	0.382	27.6	0.81
9103-39	1.0m	8.5	122	330	30	1	3068	2500	2.46	0.072		



TR-91-09

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb
9103-40	1.0m	2.2	106	95	33	1	453	245
9103-41	grab	3.3	49	134	21	1	745	202



GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,928

TR-91-07

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb
9103-51	1.5m	1.6	10	95	11	1	116	4
9103-52	2.0m	1.5	22	76	11	1	161	18
9103-53	1.0m	8	405	83	32	1	345	29
9103-54	1.0m	3.1	598	130	48	1	137	385

— LEGEND —

LITHOLOGIES

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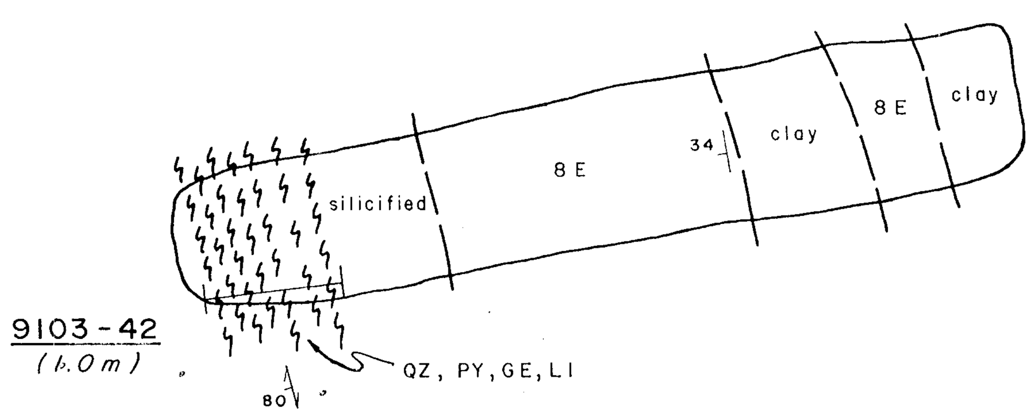
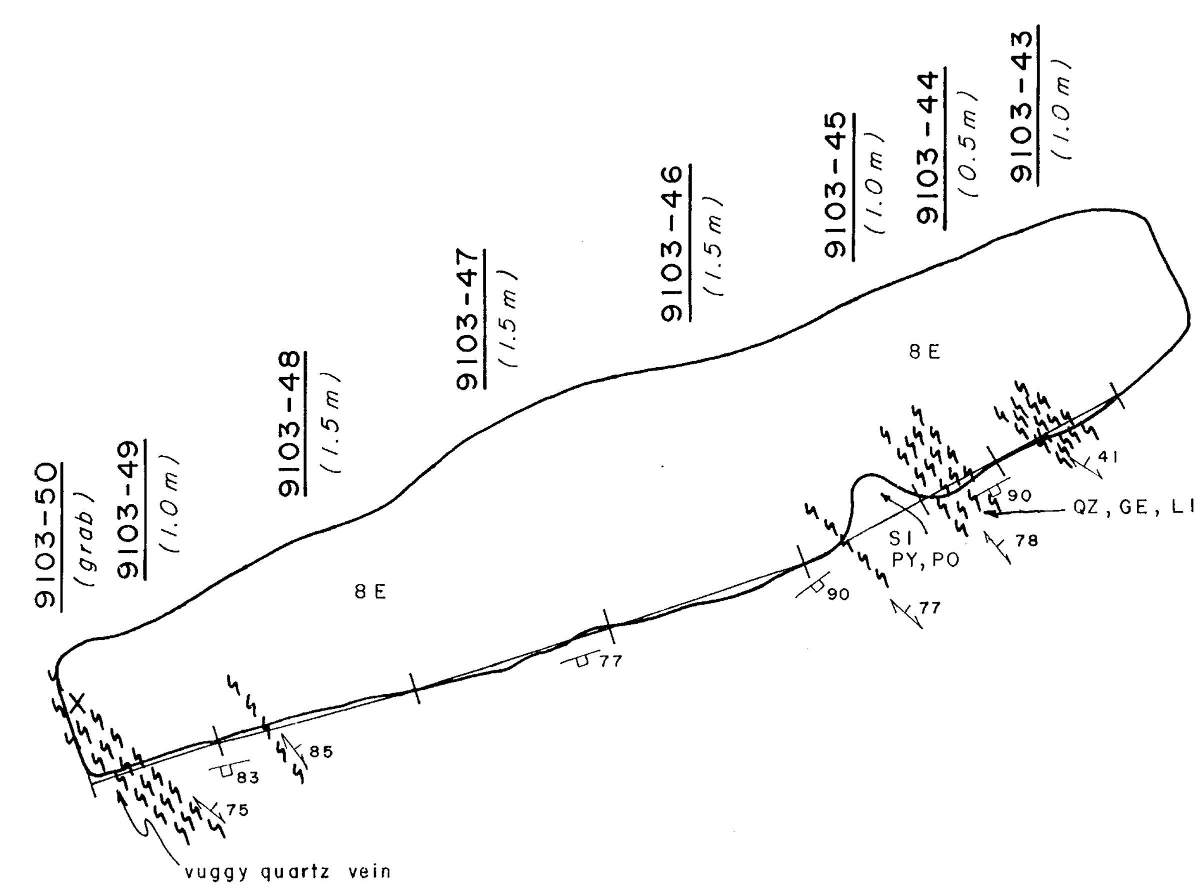
- 75 90 Joint (inclined, vertical)

SCALE: 1:50
0 1 2 3 4 metres



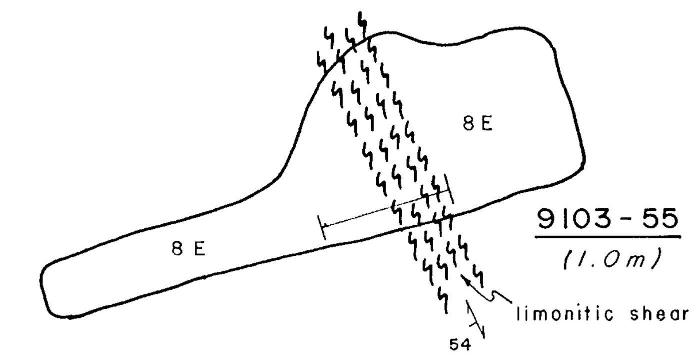
TR-91-06

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb	Au (check assay) g/tonne	Au (check assay) o.p.t.
9103-42	1.0m	16	35	61	10	1	169	7850	10.23	0.298



TR-91-05

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb	Au (check assay) g/tonne	Au (check assay) o.p.t.
9103-43	1.0m	1.4	1	65	2	1	202	40		
9103-44	0.5m	11.7	404	227	51	1	419	2470	3.02	0.088
9103-45	1.0m	3.9	10	191	5	1	950	838		
9103-46	1.5m	2.4	14	84	10	1	320	355		
9103-47	1.5m	1.5	14	133	6	1	85	53		
9103-48	1.5m	2.8	20	199	9	1	109	42		
9103-49	1.0m	2	13	123	7	1	180	18		
9103-50	grab	1.6	34	69	7	3	30	18		



TR-91-08

Sample	Width	Ag ppm	As ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au - fire ppb
9103-55	1.0m	0.1	23	162	18	1	121	34

SUMMIT GEOLOGICAL — SUMMIT GEOLOGICAL
INVERMERE, B.C.

ROYCE INDUSTRIES INC.
VANCOUVER, B.C.

TRENCH PLANS
JEFE ZONE
TR-90-02, TR-91-05 TO TR-91-10
PL PROPERTY
LIARD MINING DIVISION, B.C.
NTS 104 G/4 E

Technical work by:	S. F. Coombes		
Drawn by:	D. Miller	Scale:	1:50
Date:	November, 1991	Figure No.:	10