

83-# 700 - 11744

A Report On

GEOLOGICAL AND GEOCHEMICAL EXPLORATION - 1983

on the

LAVA GROUP OF MINERAL CLAIMS

Comprising: Inca 3 Record No. 3178
 Inca 4 Record No. 3179
 Argonaut Record No. 3348
 Vent Record No. 3229
 Juli Record No. 2481
 Lava Record No. 3136
 Aura Record No. 3137

and the 11-84

APPOLO MINERAL CLAIM - Record No. 3138

in the

Slocan Mining Division
of
British Columbia

NTS 82K/4E

Latitude 50° 11' to 15'
Longitude 117° 39' to 47'

controlled and operated by

PRIMONT RESOURCES LTD.

P.O. Box 3064,
Kamloops, B.C. V2C 5N3

by

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Report No. C83-19

October 12, 1983

GEOLOGICAL REPORT
ASSESSMENT REPORT

11,744

TABLE OF CONTENTS

	<u>Page</u>
Introduction.....	1
Mineral Dispositions and Ownership.....	2
Location Access Transportation Power.....	3
Physiography.....	4
Mineral History of the Nakusp Area.....	5
District Geology and Mineralization.....	6
Table of Formations - Nakusp Area.....	8
Summary of Work Done.....	9
- Prospecting	
- Line Cutting	
- Geological Mapping	
- Geochemical Surveys.....	10
Discussion of Results	
Inca 3 & 4 Claims:	
- Geology.....	12
- Geochemical Results.....	14
Inca Grid - Lead in Humus.....	15
Lava & Juli Claims:	
- Geology.....	16
- Geochemical Results.....	18
Lava Grid - Lead in B-Soil.....	19
Lava Grid - Lead in Humus.....	20
Appolo Claim:	
- Geology	21
- Geochemical results.....	21
Summary & Conclusions:	
Inca 3 & 4	22
Lava - Juli.....	22
Argonaut, Vent, Aura.....	23
Appolo	23

TABLE OF CONTENTS (cont'd)

	<u>Page</u>
Recommendations :	
INCA 3 & 4.....	24
LAVA & JULI.....	24
ARGONAUT, VENT, AURA.....	24
APPOLO	25
List of References.....	26
Cost Statement.....	27
Certificate.....	28
(Qualifications of Author)	

LIST OF DRAWINGS

C83 - 19 - 1	Location Map	
2	Lava Group - Claim Maps & General Geology	- 1:20000
3	Geology - Inca 3 & 4 Mineral Claims	- 1:5000
4	Geochemical Soil Survey - Inca 3 & 4 Mineral Claims	- 1:5000
5	Geology - Lava & Juli Mineral Claims	- 1:5000
6	Geochemical Soil Survey - Lava & Juli Mineral Claims	- 1:5000
7	Claim Map - Appolo Mineral Claim	- 1:50000
8	Geochemical Survey - Appolo Mineral Claim	- 1:1000

INTRODUCTION

The LAVA Group of mineral claims controlled by Primont Resources Ltd. covers the mineral rights on a contiguous block of some 2425 hectares located within ten kilometres of the town of Nakusp in the southern interior of British Columbia.

A preliminary program of geological and geochemical exploration was carried out on the Inca 3, Inca 4, Lava and Juli claims in July and September of 1983. This report describes and interprets the results of this program.

Most of the geological observations were made personally by the writer. Prospecting, geochemical sampling and some reconnaissance geology was done by personnel of Pacific Northwest Geo. Tech. Ltd. under the general supervision of the writer.

The APPOLO mineral claim is located in the same general area, on Slewiskin Creek eight kilometres south of the Lava Group.

A preliminary geochemical survey was conducted there by Pacific Northwest Geo. Tech. Ltd.

MINERAL DISPOSITIONS AND OWNERSHIP

Claims within the contiguous block covered by this report are:

<u>NAME</u>	<u>RECORD NO.</u>	<u>DATE RECORDED</u>	<u>NO. OF UNITS</u>
Inca 3	3178	82.9.22	15
Inca 4	3179	82.9.22	15
Argonaut	3348	82.11.01	8
Vent	3229	82.10.07	18
Juli	2481	82.04	20
Lava	3136	82.09.27	20
Aura	3137	82.09.27	<u>1</u>
		Total	97
		or approximately 2425 hectares *	
		(9992 acres)	
"A"			
Appollo	3137	82.10.7	8 units *
			200 hectares (494 acres)

* Subject to reduction after precise location of possible prior overlapping claims.

All the mineral claims listed above are either owned outright or held under option by Primont Resources Ltd. ,
P.O. Box 3064, Kamloops, B.C. - V2C 5N3

LOCATION ACCESS TRANSPORTATION POWER

The properties are located in south-central British Columbia, southeast of the town of Nakusp.

The Lava Group is at latitude $50^{\circ} 11'$ to $15'$ and longitude $117^{\circ} 39'$ to $47'$.

The Appolo Claim is at $117^{\circ} 43'$; $50^{\circ} 06'$.

A paved highway (B.C. Highway No. 6) and a branch of the Canadian Pacific Railway pass through the central part of the Lava Group and parts of all claims in the group are accessible by means of numerous secondary public and forestry access roads.

The Appolo claim is accessible by means of a logging road along Slewiskin (McDonald) Creek which connects with B.C. Highway No. 6 at a point 12 kilometres due south of Nakusp.

The Nakusp district is connected via paved highway and ferry with Revelstoke on the Trans - Canada Highway 100 kilometres to the north or alternatively with Vernon, B. C. 110 kilometres to the west.

A major hydro power line passes along the west side of the property.

PHYSIOGRAPHY

The Nakusp area lies within the Selkirk Mountains which are part of a larger mountain belt known as the Columbia Mountains; it is on the east side of Upper Arrow Lake which is part of the Columbia River system.

Valleys in this area are relatively narrow and mountains rise steeply to 2800 metres above sea level, resulting in a local relief up to 2250 metres.

Mountain slopes are for the most part heavily treed except in the highest areas where bare rocky areas and alpine meadows may be interspersed with treed areas.

The Lava Group occupies the southerly slope Kuskanax Mountain (immediately northeast of Nakusp), the northern slope of Box Mountain and a portion of the relatively flat valley between. Elevations on the property range from 610 to 1768 metres above sea level. Mountain slopes range up to 80 percent (39°) but are nowhere impassable.

The Appolo Claim lies in the valley of Slewiskin (McDonald) Creek at an elevation of about 900 metres above sea level. Valley walls slope steeply (15° to 20°) up both north and south of the creek.

MINERAL HISTORY OF THE NAKUSP AREA

The area has been prospected intermittently since the late 1880's. It has not, to the writers knowledge, been extensively subjected to modern geophysical and geochemical techniques until the current surge of activity which was prompted by the discovery of important gold deposits on Tillicum Mountain, 27 kilometres south of Nakusp.

There are no current mining operations in the vicinity of Nakusp. The nearest recorded past operations were at the Millie Mack, Chiefton, Promestora and Hailstorm mines located some 22 to 27 kilometres south of Nakusp; gold and silver were the chief values recovered.

There is an unconfirmed report of an adit driven to test mineralization near the west end of the present Inca 3 claim; to date it has not been located.

DISTRICT GEOLOGY AND MINERALIZATION

The oldest known rocks in the area are metamorphics of late Precambrian age or early Paleozoic age which are commonly referred to as "Shuswap Terrane". They occur chiefly west of the Upper Arrow Lake - Columbia River Valley, separated from younger rocks to the east by an inferred major fault zone.

East of Upper Arrow Lake a variety of metamorphosed sedimentary and volcanic rocks, ranging in age from middle Paleozoic to Jurassic have been tightly folded and intruded by major granitic intrusions of both Cretaceous and Tertiary age. Felsic dike rocks are associated with both intrusive events.

The youngest consolidated rocks are mafic to intermediate composition lamprophyre dike of probably late Tertiary age.

A table of formations based in part on Hyndman's (2) mapping is shown on page 8.

The division of rocks into Milford, Kaslo, Slocan and Rossland groups is quite tenuous; in many areas rocks typical of more than one group tend to be conformable and interbedded.

At Tillicum Mountain 27 kilometres south of Naksup important gold deposits have been found along a contact between amphibolitic meta-volcanics on one side and interbedded calc-silicate sediments and dacitic volcanics on the other; these stratiform rocks lie close to the contact with a major mass of intruding Cretaceous granite.

At the Millie Mack Mine 22 kilometres south of Nakusp, base and precious metal values are associated with a gently dipping fault along which Slocan sediments have been thrust over Rossland Group meta-volcanics.

The numerous important silver and silver-lead-zinc deposits of the New Denver area, 45 kilometres southeast of Nakusp, occur in Slocan sediments near the contact with intruding Cretaceous granite.

TABLE OF FORMATIONS - NAKUSP AREA

<u>AGE</u>	<u>UNIT NAME</u>	<u>MAP NO.*</u>	<u>DESCRIPTION</u>
Tertiary		9	Lamprophyre dikes
Tertiary?	Box Mountain Stock	8	Aegirine augite syenite
?		7	Felsite Dikes
?		6	Quartz feldspar prophyry dikes and irregular masses
Cretaceous and/or Jurassic	Kuskanax Batholith	5	Aegirine-augite leuco granite
Lower Jurassic	Rossland Group	4	Meta-andesite/basalt (greenstone): plagioclase hornblend, quartz; greenstone 4a; schistose 4b
Lower Jurassic/ Triassic?	Slocan Group	3	Andesite to dacite, tuffs and flows
		3a	Phyllite and slate
		3b	meta-argillite
		3c	Meta-greywacke
		3d	Quartzite
		3e	Crystalline limestone
Triassic	Kaslo Group	2	Hornblend-rich meta volcanic rocks: Plagioclase, hornblend quartz; granulose 2a; schistose 2b
Pennsylvanian to Triassic	Milford Group	1	Pelitic schist and calc-silicate meta- sedimentary rocks

* On maps accompanying this report.

SUMMARY OF WORK DONE

Prospecting

Prospecting was carried out on claims Inca 3, Inca 4, Lava and Juli mineral claims, areas covered were essentially the same as for geological mapping as described below.

Line Cutting

All control lines were established by running a brushed, blazed and flagged line by compass and hip chain, making slope corrections where necessary. Station co-ordinates were marked on plastic flagging at 50 metre intervals.

Inca 3 & 4	- baseline	- 1.5 km.	
	- crossline	- <u>0.7 km.</u>	2.2 km.
Lava & Juli	- baseline	- 3.2 km.	
	- crossline	- 1.15 km.	
	- sub-baseline	- <u>0.5 km.</u>	4.85 km.
	Total	-	7.05 km.

Geological Mapping

All rock outcrops accessible from existing logging roads on the Lava and Juli claims and on the eastern two-thirds of the Inca 3 and 4 were mapped geologically by the writer; control was by means of hip-chaining from identifiable points on logging roads which are shown on forestry maps at scales of either 1:5000 or 1:20000. In addition, a reconnaissance traverse was made up Brown Creek to an elevation of about 1370 metres above sea level. Results are recorded on attached maps C83-19-3 & 5 on a scale of 1:5000.

Geochemical Surveys

Soil samples from the upper part of the B-Horizon were collected along all grid lines and black humus samples were collected from about two - thirds of the the B-Soil sample sites. Sampling interval was 50 metres except in the eastern part of the Lava grid baseline where it was reduced to 25 metres.

Humus Samples: Samples of black, rotted forest litter weighing approximately 30 grams were collected in kraft paper bags; care was taken to avoid unrotted leaves and twigs and silicate material.

Sample preparation and analyses were done by:

Acme Analytical Laboratories Ltd.,
852 East Hastings Street,
Vancouver, B.C.

Procedures were:

- samples ignited and ashed at low temperatures
- leaching with aqua regia
- solvent extraction with MIBT
- graphite AA analyses of gold and lead

B-Soil Samples: Samples weighing approximately 150 grams were collected in kraft paper bags; they consisted of brownish soil from the upper part of the B- Horizon which in this area is unually not more than 15 cm. in depth.

Samples were prepared and analysed by:

Acme Analytical Laboratories Ltd.
852 E. Hastings Street,
Vancouver, B.C.

Procedures were:

- samples pulverized

- Gold:
- fire assay concentration
 - silver leached off with nitric acid
 - aqua regia digestion
 - graphite AA analysis

- Lead:
- 0.5 h. sample digested with $\text{HCl}:\text{HNO}_3$
 - diluted to 10 ml.
 - AA analysis

Stream Sediments: eleven stream sediments samples, 5 soil samples and 1 bedrock sample were collected from Brown Creek and analysed geochemically for gold and silver.

DISCUSSION OF RESULTS

INCA 3 & 4 CLAIMSGeology

Within the area mapped by the writer in the central part of the block the geology was found to conform generally with that depicted by Hyndman (2) on G.S.C., map 1234A; that is, the southern two-thirds of the group is underlain by metamorphosed sediments of the Slocan Group and the northern one-third by amphibolitic schists believed to be metamorphosed andesitic to basaltic volcanics of Kaslo Group.

The contact between the two groups strikes 110° and conforms with bedding, gneissosity and schistosity of both groups; there is thus no obvious unconformity between. Dips observed by the writer vary from 74° N to vertical, suggesting a slight overturning to the south.

Leucogranite of the Kuskanax batholith intrudes rocks of both Kaslo and Slocan Groups and underlies the southeast corner of claim Inca 4.

Several small bodies of felsic intrusives probably related to the Kuskanax batholith were observed by the writer.

Specific works observed by the writer include:

Amphibole schist (26): a fine-grained, dark grey to black, distinctly schistose rock which consists of hornblende, quartz feldspar, biotite and garnet in decreasing order of abundance. In places it may contain up to 3% pyrite

as disseminated grains and veinlets, broken surfaces look mottled due to crinkles in planes of schistosity and colour variations.

"Sugary Quartzite" (20); a fine-grained quartzite which exhibits a texture resembling granulated sugar under the hand lens; it may have been an intravolcanic sandstone.

Phyllite metasediment (3a): Medium grey, fine-grained layers of slate to granulite are separated by thin schistose layers; the chief mineral constituents are quartz, feldspar, biotite and hornblende.

Bedded Limestone (3f): only one outcrop of this rock was observed north of point 17. It is composed almost entirely of calcite, is medium grained and exhibits thin banding (bedding) produced by layers of various shades of grey.

Quartz Feldspar Porphyry (6): pink-to-buff coloured, felsic rock occurring as cross-cutting dikes and irregular masses; medium grained phenocrysts of quartz and feldspar occur in a finer-grained ground mass; often contains small lenticular inclusions of hornblende-rich rock.

A rusty gossan is exposed in a small outcrop at survey point 17 (Baseline; 500W). A grab sample from a quartz vein cutting this outcrop assayed as follows:

Gold = 2440 ppb (0.07 ounces per ton)

In the vicinity of 500N; 500W stockworks of small quartz veins were observed cutting masses of quartz-feldspar porphyry and adjacent country rock (amphibolitic schist). A grab sample comprising small pieces from a number of veins assayed 1600 ppb (0.05 ounces per ton) in gold.

Geochemical Results

(see map C83 - 19 - 4)

45 B-Soil samples from the Inca grid were analysed for gold and lead. Two samples analysed 2 ppb Au and the remainder analysed at the detection limit of one ppb. Lead readings range from 6 to 29 ppm; readings above 20 ppm may be weakly anomalous within the area surveyed.

Humus samples were collected from 28 of the B- Soil sample sites. One sample analysed 3 ppb Au, another 2 ppb Au and the remainder at the detection limit of 1 ppb. Lead analyses range from 30 to 156 ppm; a cumulative percent frequency plot (Figure I) does not show a distinct sharp break in the curve, however, a threshold in the order of 110 ppm is suggested. Readings above this level are scattered.

No significant lead or gold anomalies are indicated on the Inca grid.

PRIMONT RESOURCES

LAVA GROUP

INCA GRID

LEAD IN HUMUS

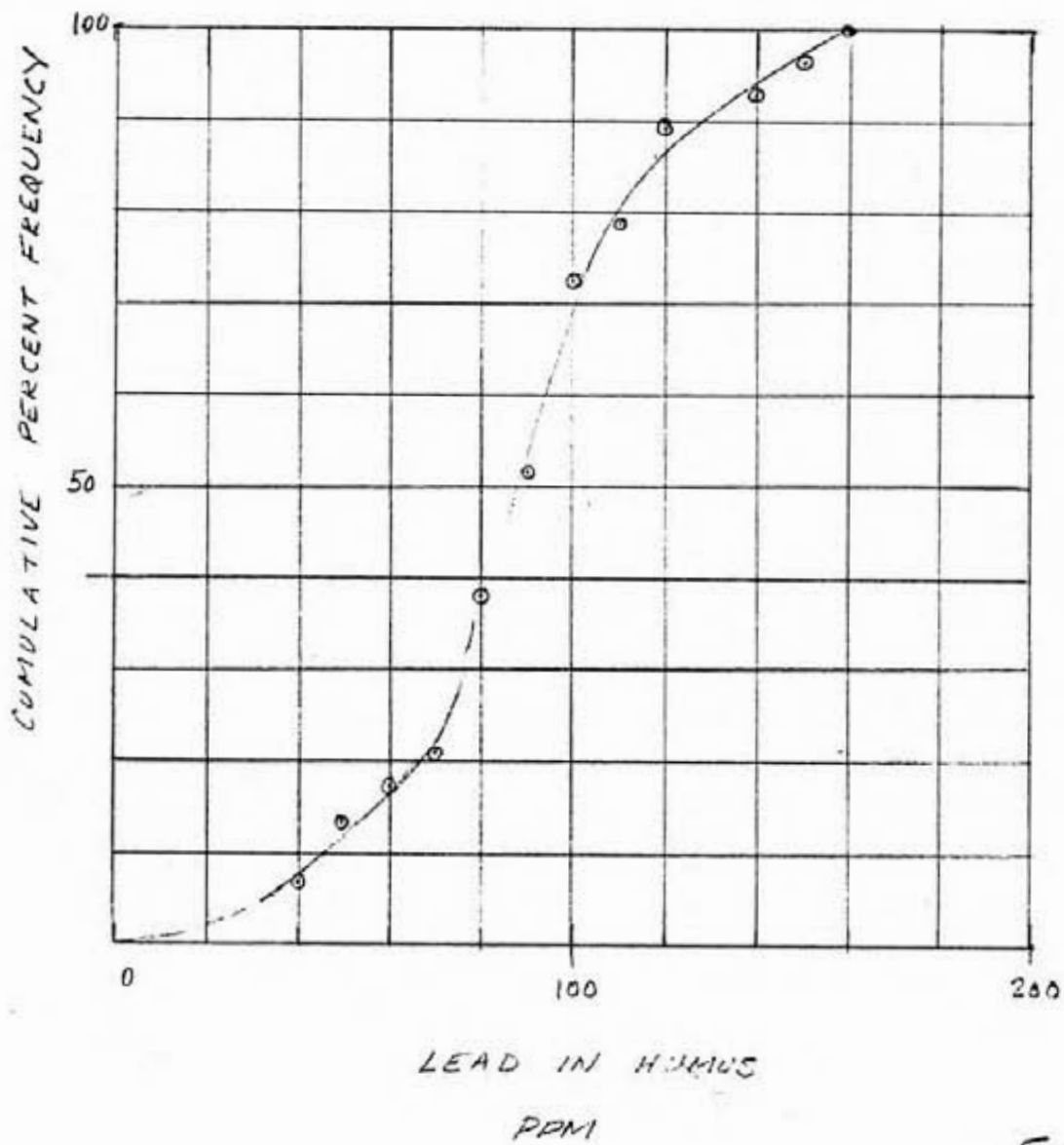


FIGURE 1

LAVA & JULI CLAIMSGeology

Geological observations by the writer are plotted on Map C83-19-5. Within the area covered meta-sedimentary rocks of the Slocan Group are in contact with intruding syenite of Box Mountain Stock, the contact trends between 90° and 125°.

East and west of the area mapped by the writer Hyndman (2) shows wedges of Rossland Group greenstones separating the sediments and intrusives.

Rock types specifically observed by the writer are described below:

Phyllite (3a): Beds of fine-grained slaty argillite are separated by thin micaceous layers.

Meta-argillite (3b): A fine-grained, dark grey to black indurated meta-sediment; tends to be thick-bedded and massive.

Quartzite (3d): A quartzose, dark grey, fine-grained, massive thick-bedded meta-sediment; sometimes has patches and lenses of calc-silicate minerals.

Crystalline limestone (3e): A pale greenish-grey, fine-grained, hard, crystalline rock; at least two beds, each a few metres thick occur within the map area; they are very distinctive marker horizons and are very different from the limestone (3f) observed on the Inca claims; the composition is roughly estimated at calcite 75%, silica 25% with the constituents evenly distributed.

Felsite Dikes (7): Fine-grained buff-to-brown coloured intrusive rocks occurring as dikes up to several metres wide cutting meta-sediments at, and east of, station 2.

Syenite (8): a medium-to-coarse-grained, equigranular to porphyritic, rock composed chiefly of potash feldspar with minor amounts of quartz and mafic minerals. Within the map area it varies from buff to grey in colour, sometimes reddish brown at the contact.

Several observations of limestone boulders within the area indicated as syenite, both in the grid area and on Brown Creek suggests that significant sedimentary inclusions occur within the Box Mountain Stock. Some of these boulders contained disseminated pyrite.

The "Brown Creek Showing" consists of disseminations of pyrite in an inclusion of meta-argillite within the syenite plug. A small mafic intrusive dike cuts the meta-argillite. Pyrite occurs in all three rock types.

Samples taken by the writer assayed as follows:

<u>Sample No.</u>		<u>Au</u>	<u>Ag</u>	<u>Pb</u>	<u>Zn</u>
		oz/ton	oz/ton	%	%
12006	Fine grained mafic with dissem.pyrite.	0.010			
12007	Siliceous material within fine-grained mafic, fine dissem. sulphides.	0.004	0.06	L0.01	L0.01
2008	Silicified syenite with L.001 disseminated pyrite	L.001			

L - Less than

Geochemical Results

(see map C83 - 19 - 6)

B-Horizon Soil: 113 samples were collected from the Lava Grid. The highest gold analyses was 3 ppb and most ran at the detection limit of 1 ppb; no anomalous gold is indicated.

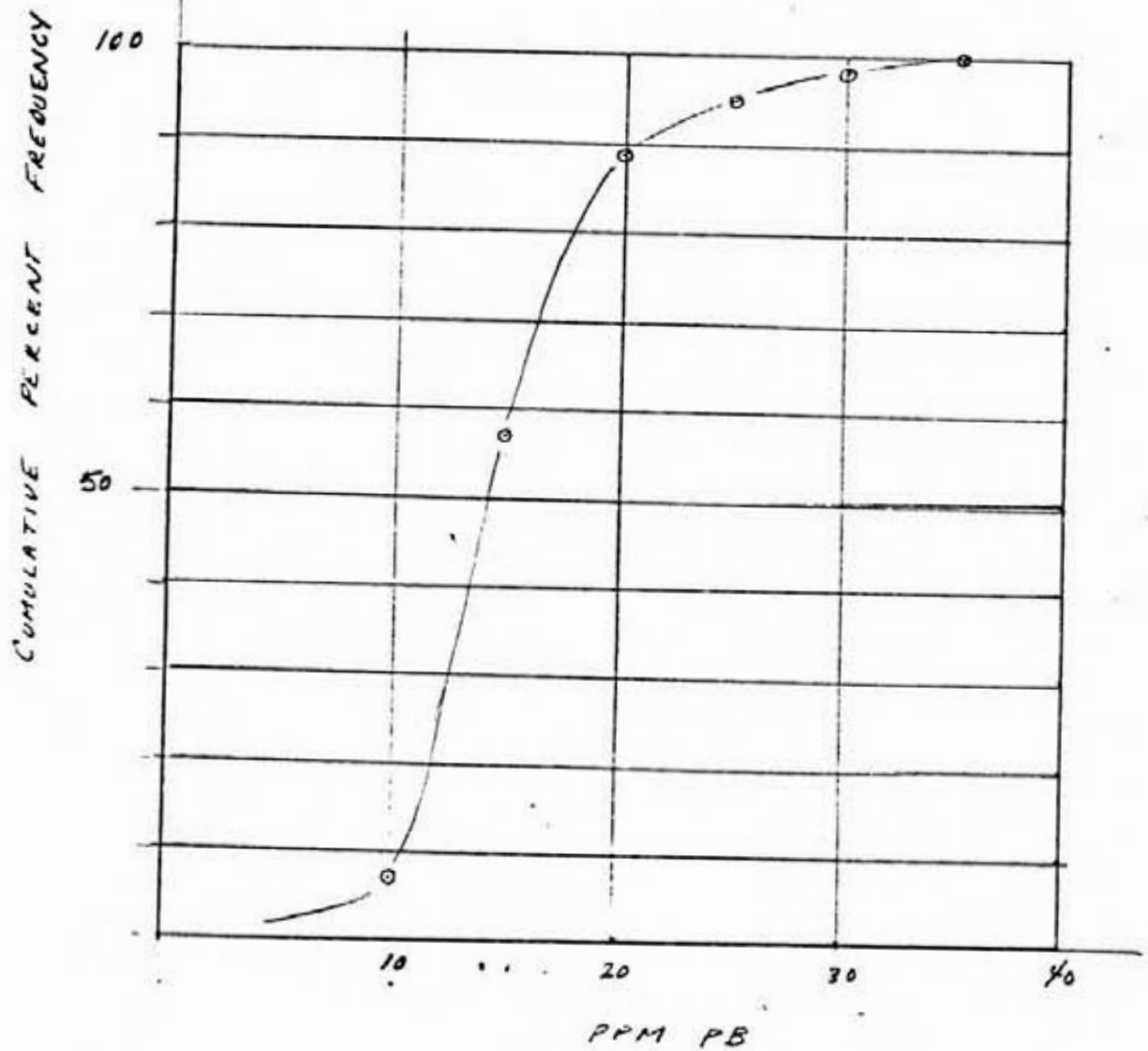
The lead analyses vary from 9 to 35 ppm; none are distinctly anomalous, however, a cumulative frequency plot (Figure 2) suggests a possible threshold at 20 ppm. Since the higher readings are scattered they are not considered significant.

Humus: Humus samples were collected from 81 of the B-soil sample sites. Again the highest gold analysis was 3 ppb on one sample; none can be considered anomalous.

Lead analyses vary from 6 to 246 ppm; a cumulative frequency plot (Figure 3) does not indicate a sharp break in curve but readings above, say, 190 may be weakly anomalous.

Stream sediment, soil and rock sample analyses from Brown Creek are shown on map #C83 - 19 - 6. No anomalously high analyses were recorded.

PRIMONT RESOURCES
LAVA GROUP
LAVA GRID
LEAD IN B-SOIL



CUMULATIVE FREQUENCY

FIGURE 2

PRIMONT RESOURCES

LAVA GROUP

LAVA GRID

LEAD IN HUMUS

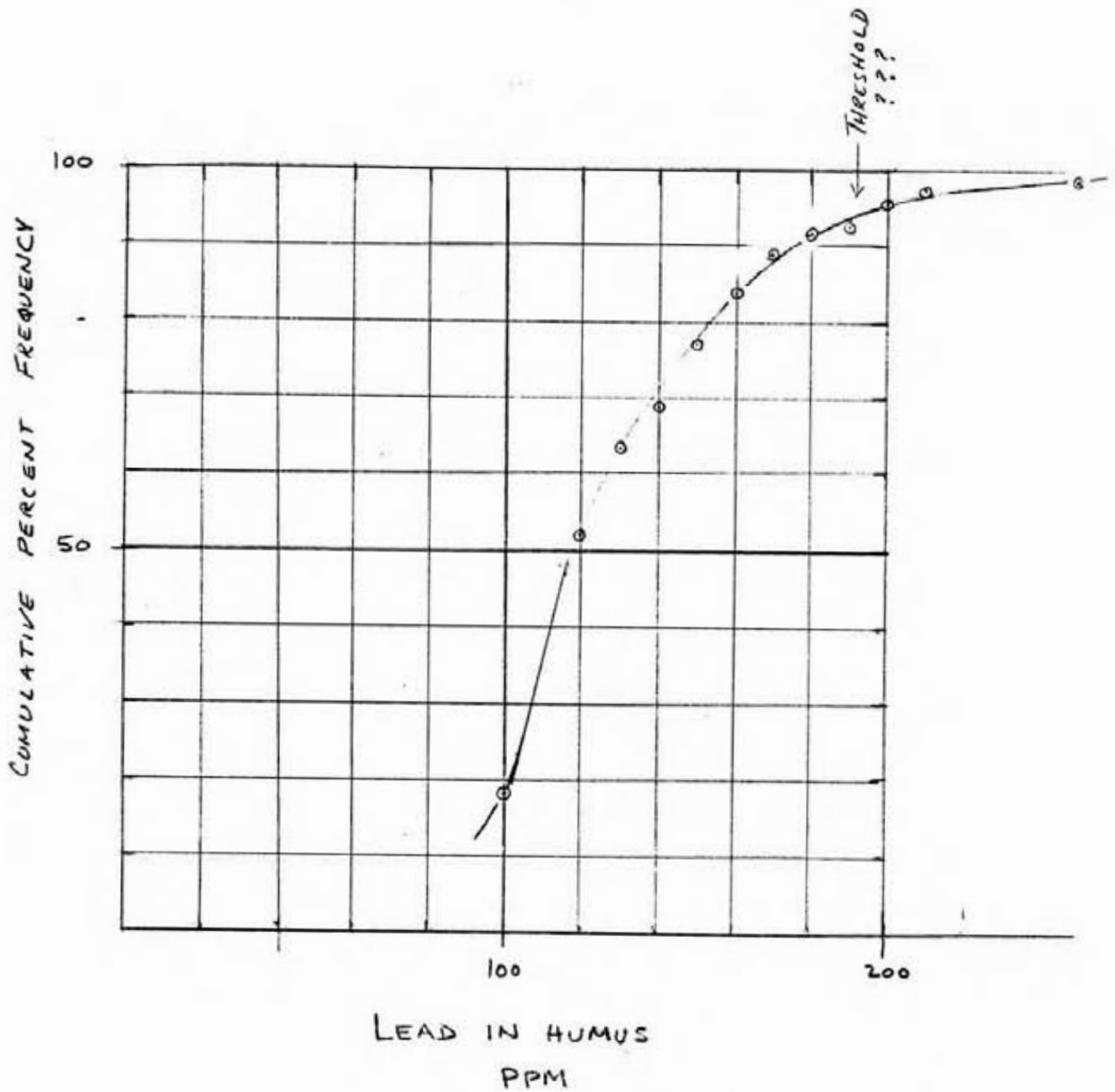


FIGURE 3

APPOLO CLAIM

Geology

Observations along Slewiskin Creek by the Pacific Northwest Geo. Tech. Ltd. personnel confirmed that most of the Appolo claim is underlain by argillaceous metasediments of the Slocan Group. Bedding strikes vary from 045° to 095° and dips from 20° to 60° south.

The sediments are in contact with dacitic volcanics of the upper Slocan Group along or near the south boundary of the claim (depending on possible overlap of prior adjacent claims).

The property lies five kilometres north of the Millie Mack mine (see page 7).

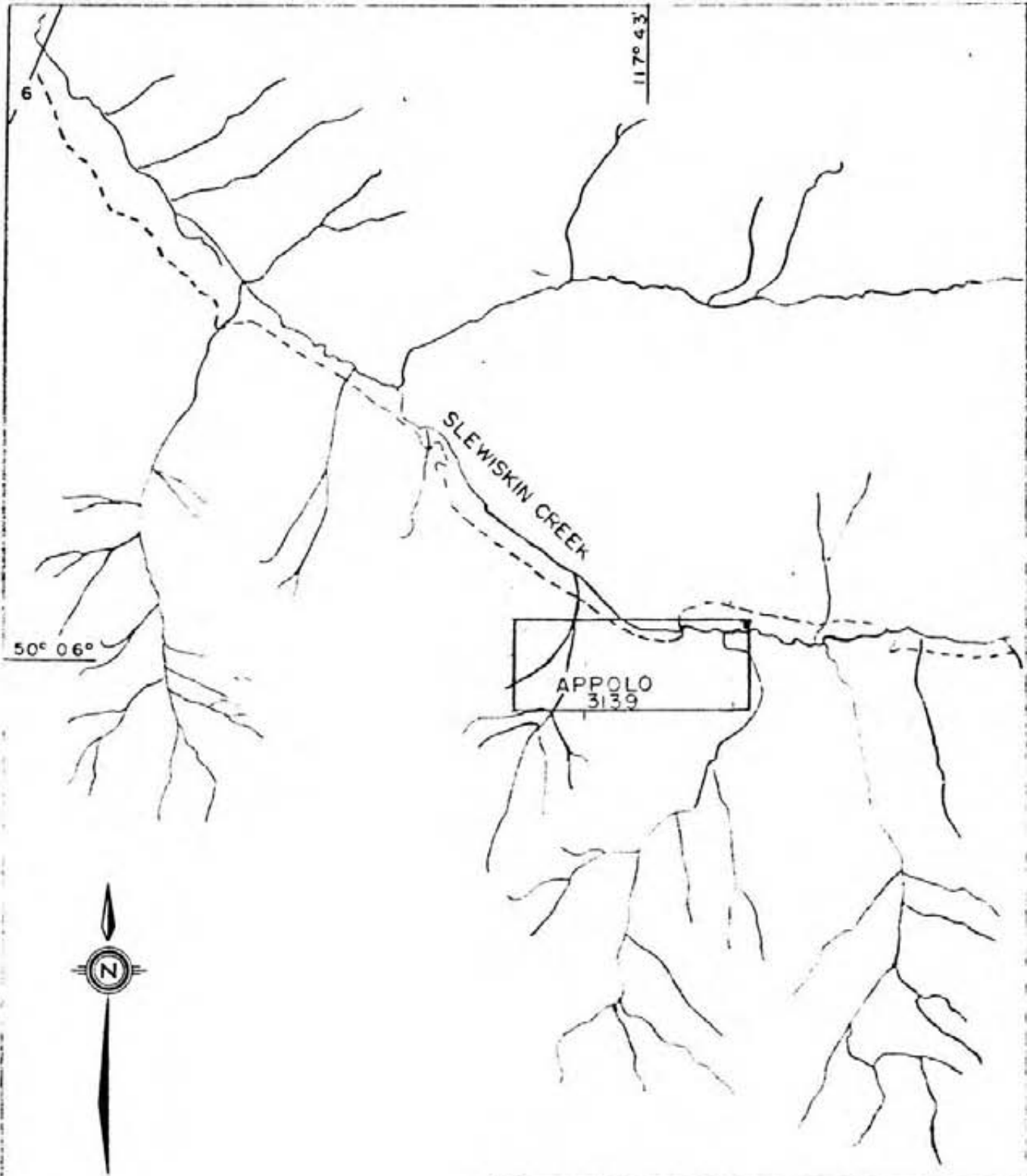
Geochemical Results

(see map C83-19-8)

B-Horizon Soils: 21 B-Horizon soil samples were analyzed for gold and lead.

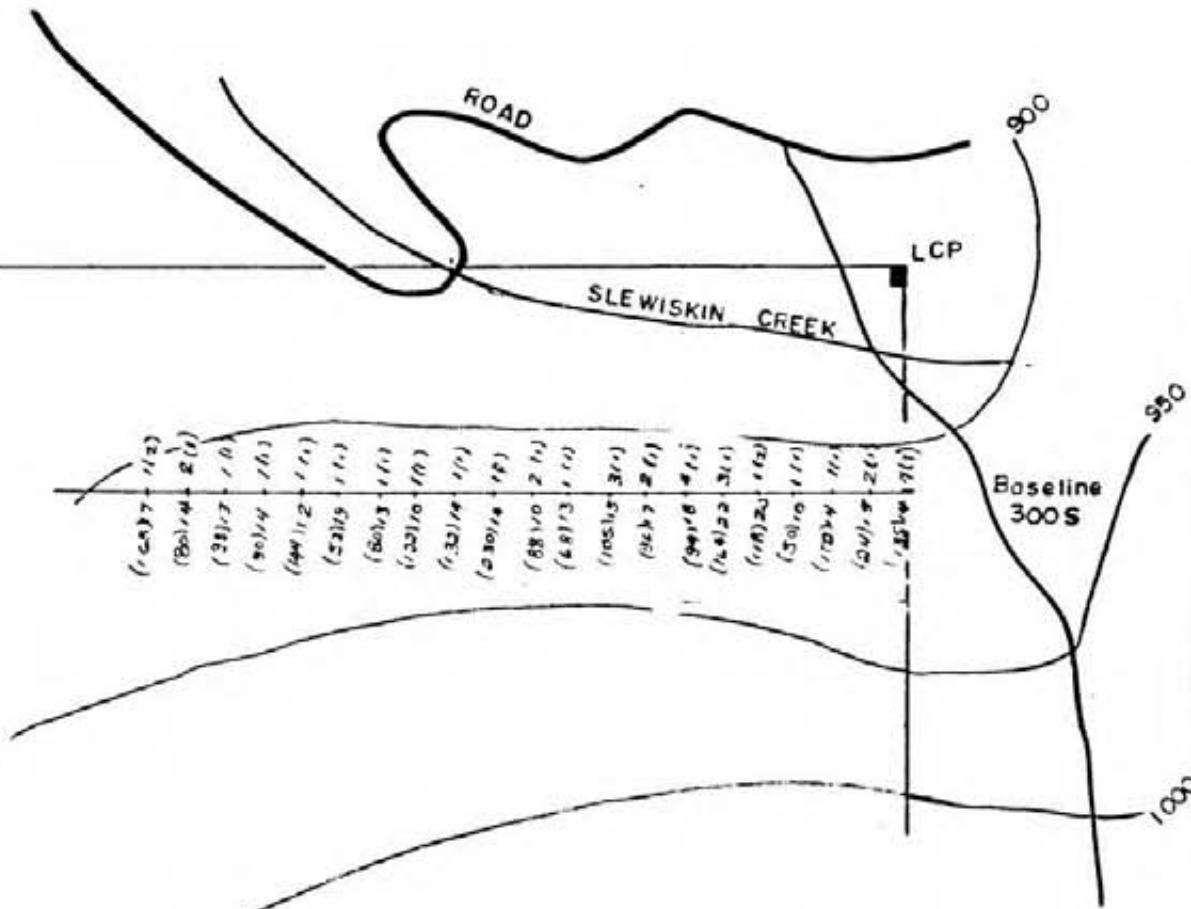
Gold analyses ranged from 1 to 4 ppb which represents a very low background.

Lead analyses range from 10 to 22 ppm which is probably background for the area.



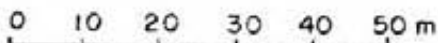
J.S. KERMEEN <small>M.Sc., P.Eng.</small> CONSULTING GEOLOGICAL ENGINEER		
CLIENT: PRIMONT RESOURCES LTD		
PROJECT/PROPERTY: APPOLO CLAIM		
TITLE: CLAIM MAP APPOLO MINERAL CLAIM		
PREP. BY:	NTS No: 82 K4	DATE DWN: 03/10/26
DWN BY:	AREA: NAKUSP	DATE REVISED:
SCALE: 1:50000		DRAWING NO: CE3-197

(21.1)



LEGEND

Pb (ppm) in B Soil | Au (ppt) in B Soil
 Sample analysis | Au (ppb) in Humus
 Pb (ppm) in Humus



J.S. KERMEEN M.Sc., P.Eng. CONSULTING GEOLOGICAL ENGINEER		
CLIENT: PRIMONT RESOURCES LTD		
PROJECT/PROPERTY: APPOLO CLAIM		
TITLE: GEOCHEMICAL SURVEY		
PREP. BY:	NTS No: 82 K4	DATE DWN: E3/10/28
DWN BY: P J M	AREA: NAKUSP, B.C	DATE REVISED:
SCALE: 1:40000		DRAWING NO: C83-19-B

SUMMARY AND CONCLUSIONS

INCA 3 & 4

Geological mapping confirmed a transition from argillitic to quartzitic metasediments to amphibolitic schists believed to be derived from mafic volcanics. Small bodies of quartz feldspar porphyry invade the mafic schists. Some of the mafic meta-volcanics contain disseminated pyrite up to 3%. Significant gold assays (0.05 & 0.07 ounces per ton) were returned from quartz occurring, respectively, in a stockwork associated with a quartz feldspar porphyry dike and cutting a rust gossan at the sedimentary - volcanic contact.

Geochemical results for gold and lead in soil did not detect anomalies.

Despite the negative soil sample results, geology and vein mineralization are considered sufficiently encouraging to warrant continued exploration of the group.

LAVA - JULI

Geological mapping within an area of bedrock exposures along existing logging roads confirms the presence of a sequence of argillaceous to quartzitic Slocan metasediments with at least two distinctive siliceous limestone marker horizons. The sediments are intruded by syenite of the Box Mountain Stock. Felsite dikes with numerous associated quartz veins cut Slocan meta-argillites near the syenite contact. East and west of the mapped area, Hyndman (2) indicates Slocan volcanics between the sediment and syenite.

Soil sampling failed to indicate anomalous gold. Some lead readings may be weakly anomalous.

Results on the Lava and Juli claims are not encouraging and present little incentive to continue exploration. However, the program to date has not covered the entire property and should the company decide to complete a preliminary phase over the remainder of the property. Some further work to this end is warranted.

ARGONAUT, VENT, AURA

These claims remain essentially unexplored; preliminary exploration is warranted.

APPOLO

Preliminary geochemical prospecting has not been encouraging but is not definitive; further exploration is warranted.

RECOMMENDATIONS

INCA 3 & 4 Claims

- (1). Complete detailed prospecting and geological mapping; include a thin-section study of typical rock types.
- (2) Trench overburden and drill and blast bedrock to obtain good samples in the vicinity of the gold anomalous gossan near survey point 17.
- (3) Analyses B-soil samples from the current for silver and zinc; depending on results consider expanding the survey, analysing for gold, silver, lead and zinc.
- (4) Sample any areas where quartz stockworks occur associated with quartz, feldspar, porphyry intrusives.

LAVA & JULI

- (1) Complete detailed prospecting and geological mapping east and west of the area mapped to date.
- (2) Analyse B-soil samples from the current program for silver and zinc. Depending on results consider expanding the grid of soil sampling.

ARGONAUT, VENT, AURA

Conduct detailed prospecting, geological mapping and reconnaissance geochemical soil sampling in those areas of the claims where surficial cover and/or activated land is not prohibitive (part of the area is cultivated farm lands where exploration is impractical).

APPOLO

- (1) Confirm legal boundaries by locating the legal corner posts of possibly overlapping adjacent prior claims.
- (2) Conduct detailed prospecting and geological mapping, concentrating on the metasediment/metavolcanic contact.
- (3) Analyse B-soil samples from the current program for silver and zinc. Depending on results consider expanding the geochemical soil survey.

LIST OF REFERENCES

- (1) BCDEMR Minfile 82KSW 128
- (2) Hyndman, D.W.: G.S.C. Bulletin 161,
Geology of the Nakusp Area, Map 1234A, 1968.
- (3) Smith, F.M.: Private Report entitled "Report
on the Lava, Appolo, Inca 3, Inca 4, Aura,
Vent and Argonaut Mineral Claims for Primont
Resources Ltd., 1983.

COST STATEMENT

J.S. Kermeen, P.Eng., Consulting Geological Engineer

Field Work:

July 30 and Sept. 20, 21	3 days
Travelling July 29, Sept.19	1 day

Office Work:

Research, interpretation of
data, report preparation
between August 2 and Oct.16

5 days

9 days @ \$350 = \$ 3,150.00

Expenses:

Travel - motel	163.49
meals	72.51
auto expenses	135.00
Assays	79.50
Typing	120.00
Drafting	<u>150.00</u>
	720.50

720.50

\$ 3,870.50

Pacific Northwest Geo Tech Ltd.
as per attached

9,593.00\$13,463.00

PACIFIC NORTHWEST GEO TECH LTD.

COPY

INVOICE

October 13, 1983

Invoice #1983 PRI-5

TO: Primont Resources Ltd.

Invoice re assessment work on the Lava Group of Claims
in the Nakusp area of the Slocan Mining District

September 1st to 21st inclusive

14 nights accommodation for 3	\$ 1,470.00
Meal Allowance 16 days x3x25	1,200.00
Transportation and travel costs	1,408.70
16x\$40 per day plus 768.70 (768.70+640)	
Taking of 10 stream sediment samples @ \$15	150.00
Taking of 150 humus soil samples @ \$7.50	1,125.00
Taking of 250 geochem soil samples @ \$7.50	1,875.00
8 man days in search of rock outcroppings @ \$150	1,200.00
Setting up grid and cutting lines	
8100 km @ \$100	600.00
Mobilization and demolitization	400.00
Preparing samples for shipment	125.00
Freight	40.00

Please pay this amount \$ 9,593.00

Geochem, Geophysics, E.M. Reports, Computer Graphics

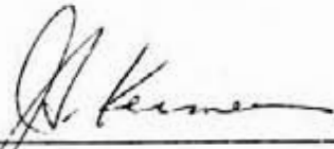
PO Box 3064 Kamloops, BC V2C 5N3 (604) 374-6437

CERTIFICATE

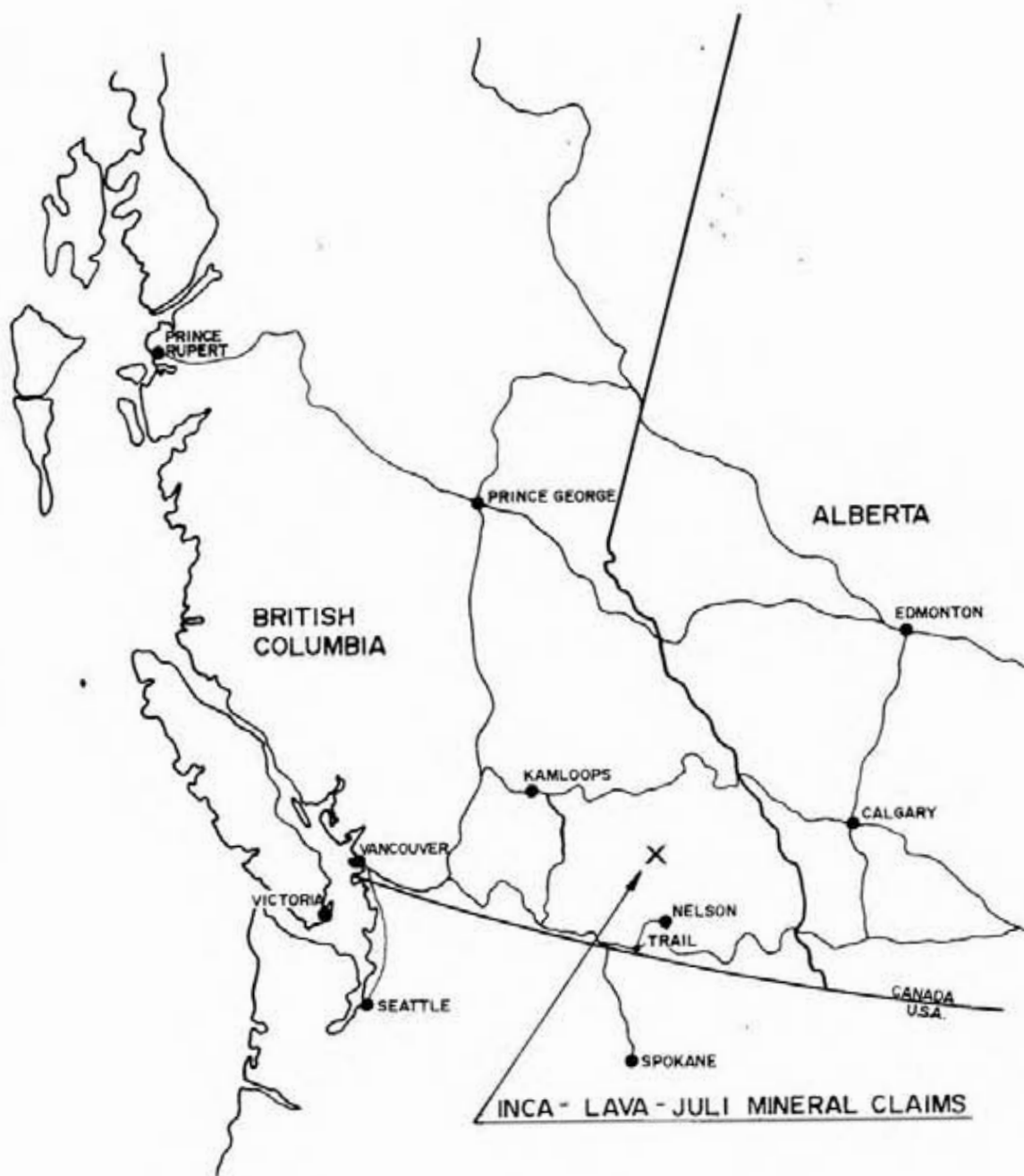
I, JAMES SEATON KERMEEN, do hereby certify:

- (1) That I am a Consulting Geological Engineer with offices at 55 Whiteshield Crescent, South, Kamloops, B.C. V2E 1P3
- (2) That I am a member in good standing of the Associations of Professional engineers of British Columbia and Saskatchewan.
- (3) That I hold the following degrees from the University of Saskatchewan:
 - Bachelor of Science, Geological Engineering, 1951
 - Master of Science, Geology, 1955
- (4) That I have practised my profession continuously for thirty years.
- (5) That the attached report on the Lava Group and Appolo Mineral Claims of PRIMONT RESOURCES LTD. is based on:
 - (a) Work done by the writer on visits made to the property on July 30 and September 20 & 21, 1983.
 - (b) Work carried out by Pacific Northwest Geo. Tech. Ltd. under the supervision of the writer.

Dated this day of October 12, 1983 in the City of Kamloops, British Columbia.



JAMES SEATON KERMEEN

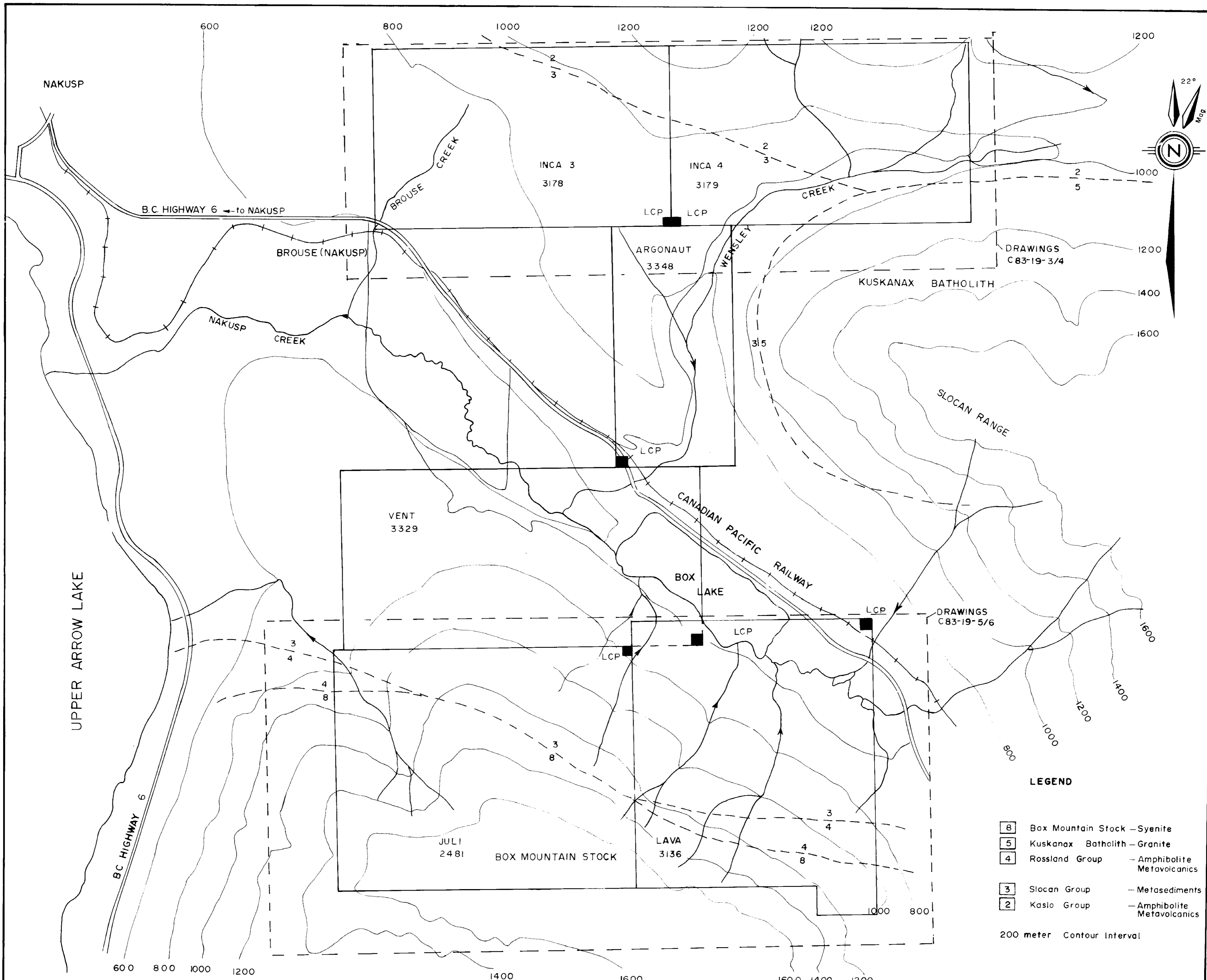


INCA - LAVA - JULI MINERAL CLAIMS

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,744

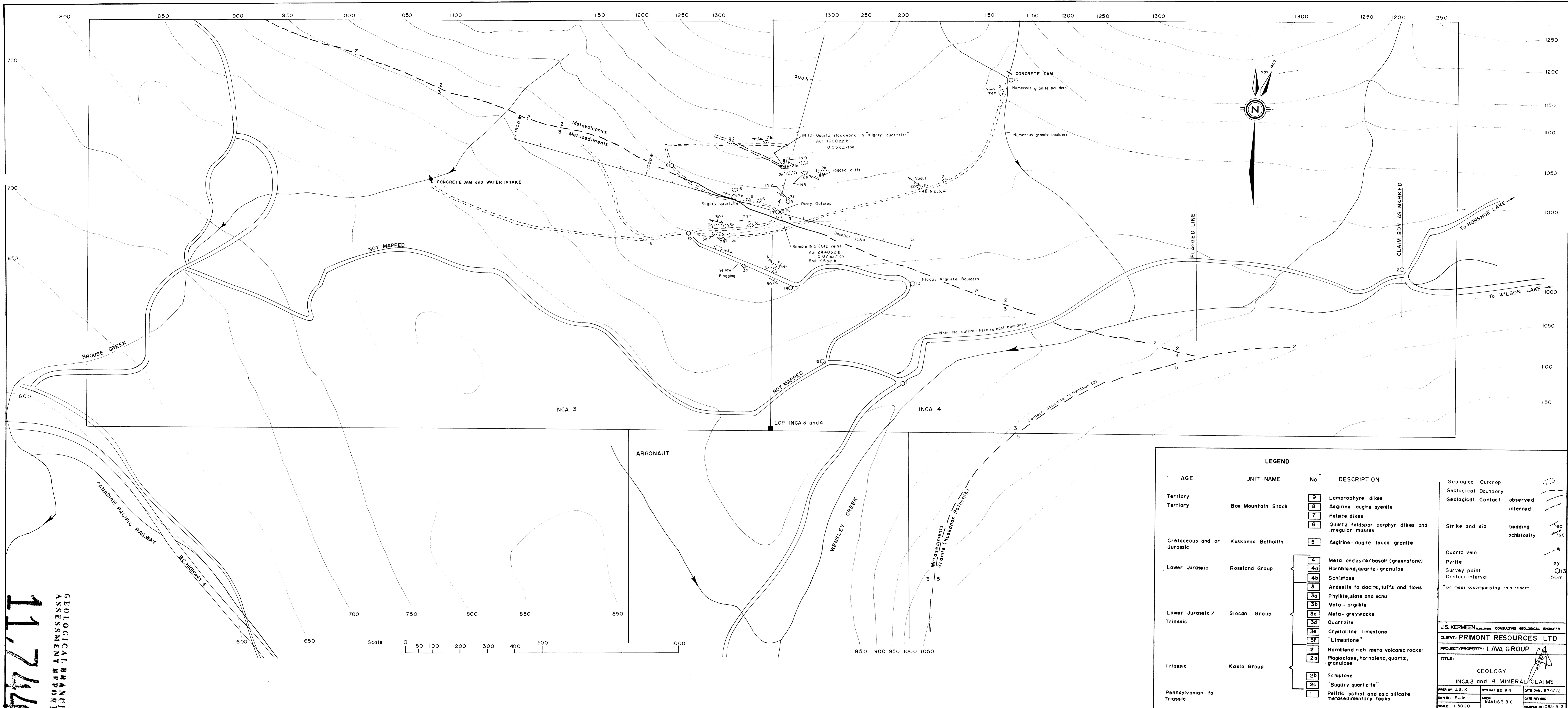
J.S. KERMEEN <small>M.Sc. P.Eng.</small> CONSULTING GEOLOGICAL ENGINEER		
CLIENT: PRIMONT RESOURCES LTD.		
PROJECT/PROPERTY: INCA - LAVA - JULI		
TITLE: LOCATION MAP		
PREP BY: J.S.K.	NTS NR: 82 K4	DATE DWN: 83/10/18
DWN BY: P.J.M.	AREA:	DATE REV'D:
SCALE:	NAKUSP, B.C.	DWG. NR: C83-19-1



GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,744

J.S. KERMEEN CONSULTING GEOLOGICAL ENGINEER		
CLIENT: PRIMONT RESOURCES LTD.		
PROJECT/PROPERTY: LAVA GROUP		
TITLE:		
CLAIM MAP and GENERAL GEOLOGY		
PREP BY: J.S.K.	NTS No.: 82 K4	DATE DWN: 83/10/21
DWN BY: P.J.M.	AREA: NAKUSP, B.C.	DATE REVISED:
SCALE: 1:20,000	DRAWING NO.: C83-19-2	



LEGEND

AGE	UNIT NAME	No.†	DESCRIPTION
Tertiary		9	Lamprophyre dikes
Tertiary	Box Mountain Stock	8	Aegirine augite syenite
		7	Felsite dikes
		6	Quartz feldspar porphyry dikes and irregular masses
Cretaceous and or Jurassic	Kuskanax Batholith	5	Aegirine-augite leuco granite
Lower Jurassic	Rosland Group	4	Meta andesite/basalt (greenstone)
		4a	Hornblend, quartz, granulos
		4b	Schistose
		3	Andesite to dacite, tuffs and flows
Lower Jurassic / Triassic	Slocan Group	3a	Phyllite, slate and schu
		3b	Meta-argillite
		3c	Meta-greywacke
		3d	Quartzite
		3e	Crystalline limestone
Triassic	Kaslo Group	2	Hornblend rich meta volcanic rocks: Plagioclase, hornblend, quartz, granulose
		2a	Schistose
Pennsylvanian to Triassic		2b	Schistose
		2c	"Sugary quartzite"
		1	Pelitic schist and calc silicate metasedimentary rocks

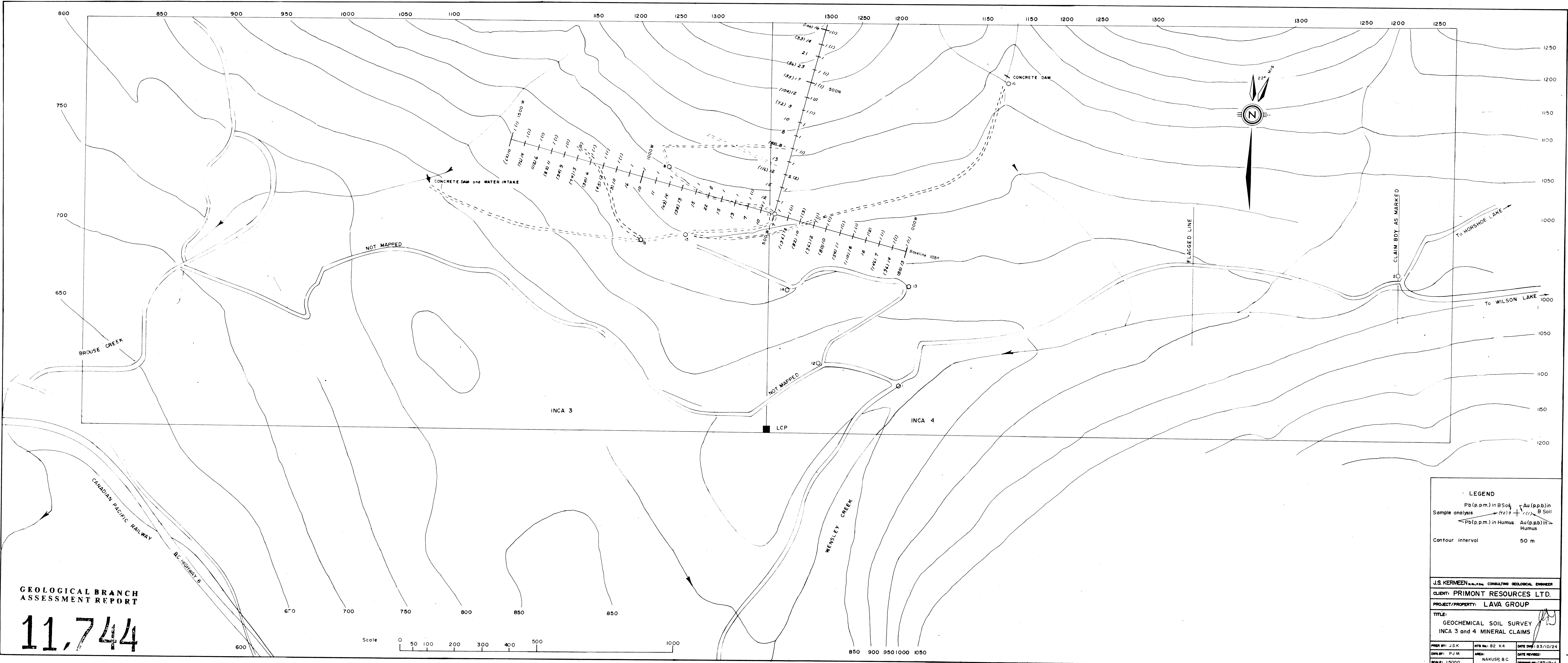
Geological Outcrop	
Geological Boundary	
Geological Contact	observed inferred
Strike and dip	bedding schistosity
Quartz vein	
Pyrite	py
Survey point	
Contour interval	50m

†On maps accompanying this report

J.S. KERMEEN Geological Engineer
 CLIENT: PRIMONT RESOURCES LTD
 PROJECT/PROPERTY: LAVA GROUP
 TITLE:
 GEOLOGY
 INCA 3 and 4 MINERAL CLAIMS

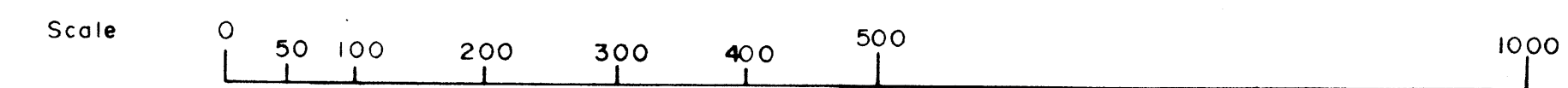
PREP BY: J.S.K.	INT. NO.: 82, K4	DATE DWN: 83/10/21
DWN BY: P.J.M.	AREA: NAKUSP, B.C.	DATE REVISED:
SCALE: 1:5000		DRAWING NO: C83-19-3

11,774
 GEOLOGICAL BRANCH
 ASSESSMENT REPORT



GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,744



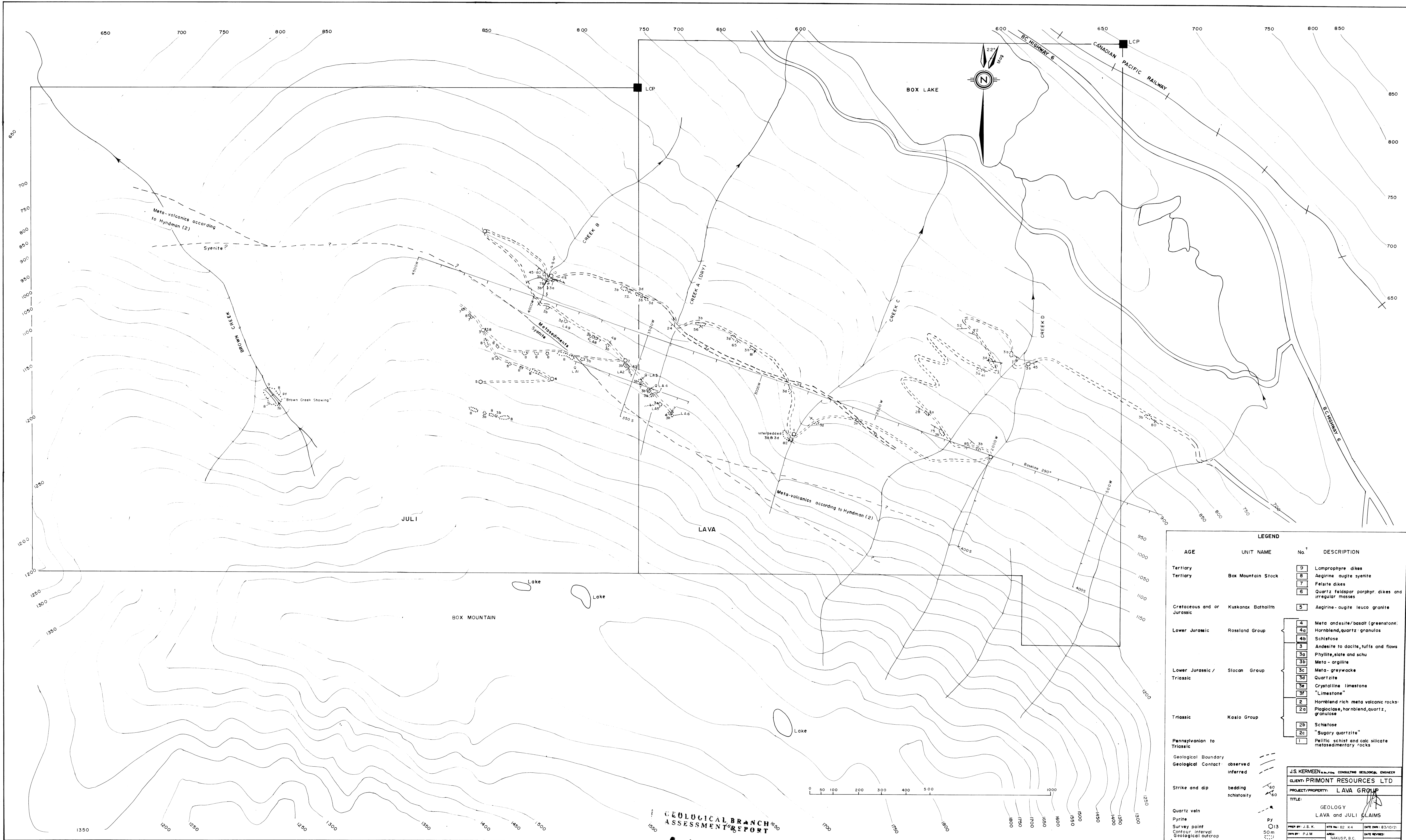
LEGEND

Pb (p.p.m.) in B Soil Au (p.p.b.) in B Soil
 Sample analysis (72) 9 (10) 1
 ← Pb (p.p.m.) in Humus Au (p.p.b.) in Humus

Contour interval 50 m

J.S. KERMEEN CONSULTING GEOLOGICAL ENGINEER
 CLIENT: PRIMONT RESOURCES LTD.
 PROJECT/PROPERTY: LAVA GROUP
 TITLE:
 GEOCHEMICAL SOIL SURVEY
 INCA 3 and 4 MINERAL CLAIMS

PREP BY: J.S.K.	HTS. NO.: 82, K4	DATE DWN: 83/10/24
DWN BY: P.J.M.	AREA: NAKUSP B.C.	DATE REVISED:
SCALE: 1:5000		SYMBOLS: C83-19-4



LEGEND

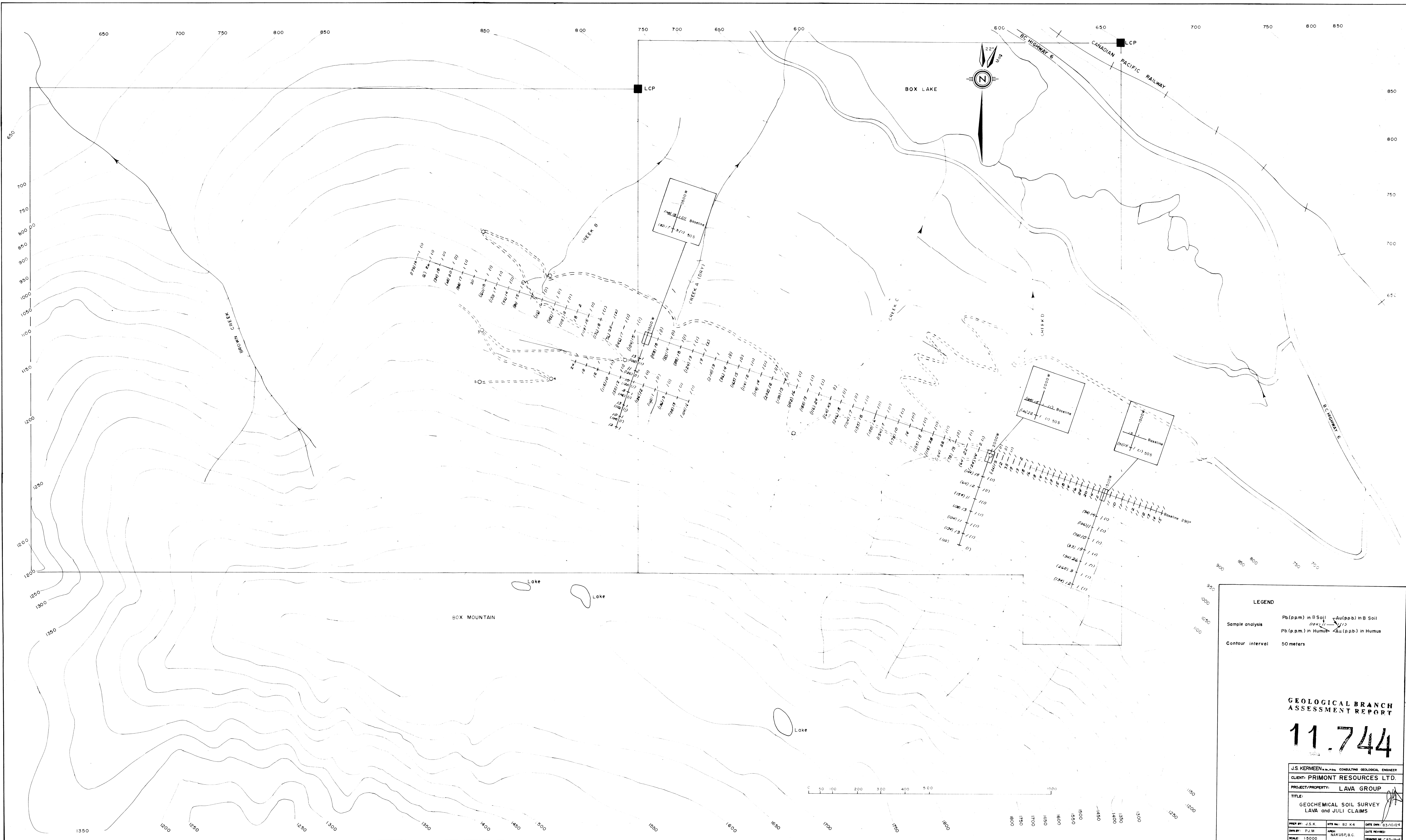
AGE	UNIT NAME	No. †	DESCRIPTION
Tertiary		9	Lamprophyre dikes
Tertiary	Box Mountain Stock	8	Aegirine augite syenite
		7	Felsite dikes
		6	Quartz feldspar porphyry dikes and irregular masses
Cretaceous and or Jurassic	Kuskanax Batholith	5	Aegirine-augite leuco granite
Lower Jurassic	Rosland Group	4	Meta andesite/basalt (greenstone)
		4a	Hornblend, quartz, granulos
		4b	Schistose
		3	Andesite to dacite, tuffs and flows
Lower Jurassic / Triassic	Slocan Group	3a	Phyllite, slate and schu
		3b	Meta - argillite
		3c	Meta - greywacke
		3d	Quartzite
Triassic	Kaslo Group	3e	Crystalline limestone
		3f	"Limestone"
		2	Hornblend rich meta volcanic rocks: Plagioclase, hornblend, quartz, granulos
Triassic	Kaslo Group	2a	Plagioclase, hornblend, quartz, granulos
		2b	Schistose
Pennsylvanian to Triassic		2c	"Sugary quartzite"
Pennsylvanian to Triassic		1	Pelitic schist and calc silicate metasedimentary rocks

Geological Boundary	observed	---
Geological Contact	inferred	---
Strike and dip	bedding	↖ 60
	schistosity	↖ 60
Quartz vein		—•—
Pyrite		py
Survey point		○ 13
Contour interval		50 m
Geological outcrop		---
† on maps accompanying this report		

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,744

J.S. KERMEEN CONSULTING GEOLOGICAL ENGINEER
CLIENT: PRIMONT RESOURCES LTD
PROJECT/PROPERTY: LAVA GROUP
TITLE: GEOLOGY LAVA and JULI CLAIMS
PREP BY: J.S.K. DATE: 83/07/2
DRAWN BY: P.J.M. DATE: 83/07/2
SCALE: 1:5000



LEGEND

Sample analysis	Pb (ppm) in B Soil	Au (ppb) in B Soil
	Pb (ppm) in Humus	Au (ppb) in Humus
Contour interval	50 meters	

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11.744

JS KERMEEN CONSULTING GEOLOGICAL ENGINEER		
CLIENT: PRIMONT RESOURCES LTD.		
PROJECT/PROPERTY: LAVA GROUP		
TITLE: GEOCHEMICAL SOIL SURVEY LAVA and JULI CLAIMS		
PREP BY: J.S.K.	DATE: 03/10/24	DATE REVISED:
DRAWN BY: F.J.M.	SCALE: 1:5000	DRAWING NO: C83-19-6