

ARIS SUMMARY SHEET

District Geologist, Nelson (OBSOLETE)

Off Confidential: 94.10.18

ASSESSMENT REPORT 23235

MINING DIVISION: Slocan

PROPERTY: Leif
LOCATION: LAT 50 07 00 LONG 117 16 00
UTM 11 5551417 480934
NTS 082K03W
CLAIM(S): Leif 5-8
OPERATOR(S): Black Tusk Ex.
AUTHOR(S): Leriche, B.D.; Augsten, B.E.K.
REPORT YEAR: 1994, 31 Pages
KEYWORDS: Permian, Kaslo Group, Ultramafics, Phyllites, Argillites, Pyrite
Tetrahedrite, Chalcopyrite

WORK
DONE: Prospecting
PROS 100.0 ha
Map(s) - 1; Scale(s) - 1:50 000

RELATED
REPORTS: 09067, 20939
MINFILE: 082KSW130

LOG NO: JAN 31 1994 RD.

ACTION:

NTS 82K / 3W
Lat 50° 07' N
Long 117° 16' W

FILE NO:

GEOLOGICAL REPORT
on the
LEIF PROPERTY
Slocan Mining Division

for

BLACK TUSK EXPLORATIONS LTD
241 East 1st Street
North Vancouver, B.C. V7L 1B4
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GEOLOGICAL BRANCH
ASSESSMENT REPORT

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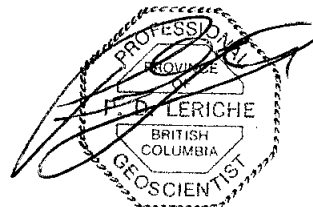
by

Bernhardt Augsten, P.Geo.
Peter D. Leriche, B.Sc., P.Geo.

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FILMED

8 January 1994



SUMMARY

At the request of Black Tusk Explorations Ltd, Reliance Geological Services carried out a field exploration program consisting of geological mapping on the Leif Property during October 1993.

The Leif Property comprises eight 2-post claims and two reverted crown grants in the Slocan Mining Division. The claims are situated 15 kilometers northeast of New Denver, B.C. and are road accessible.

The claims are situated in the Slocan Mining Camp, which has a silver-lead-zinc-gold production history dating back to the 1800's. Gold showings are concentrated primarily along the Goat Range Thrust Belt, which includes the Leif claim area.

Previous work has outlined an east-west trending quartz vein, with a 30 meter wide alteration envelope. Physical work in the early 1900's included approximately 35 meters of cross-cutting and drifting. A dump sample (1981) assayed 1.3 g/tonne Au and 1595.7 g/tonne Ag.

In 1990, a geological mapping and rock sampling program was carried out. Sampling yielded results up to 125 ppb gold, 14.8 ppm silver, 8039 ppm copper, and >1000 ppm antimony, and indicated a correlation between gold and arsenic as well as an association among copper, silver, and antimony.

The 1993 exploration program consisted of further geological mapping to cover the unmapped areas of the property.

The subject property is underlain by Lower Permian Whitewater diorite and serpentized ultramafic rocks of the Kaslo Group, in fault contact with phyllites and argillites of the Upper Triassic Slocan Group. Mineralization and alteration is related to the east-west trending thrust fault contact quartz vein between the Slocan and Kaslo Groups.

Mineralization consists of disseminated euhedral pyrite and local stibnite, tetrahedrite, chalcopyrite within quartz veins, and fractures. Rocks adjacent to the contact zone have been altered to sericite-carbonate-limonite. Ultramafic rocks are locally altered to listwanite.

The writers conclude that the Leif Property has potential to host a mesothermal gold vein deposit similar to the Bralorne, Rosslund, and Erickson gold camps in British Columbia.

A follow-up exploration program consisting of grid layout, geological mapping, rock sampling, trenching, magnetometer and VLF-EM geophysics has been recommended.

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1.0

INTRODUCTION

This report was prepared at the request of Black Tusk Explorations Ltd to describe and evaluate the results of a geological mapping program carried out by Reliance Geological Services on the Leif Property, Slocan Mining District, southeast British Columbia. The field work, which was undertaken to evaluate the mineral potential of the property, was carried out on October 7 and 8 by Bernhardt Augsten, P. Geo (geologist). The purpose of the program was to evaluate the precious metal potential of the property.

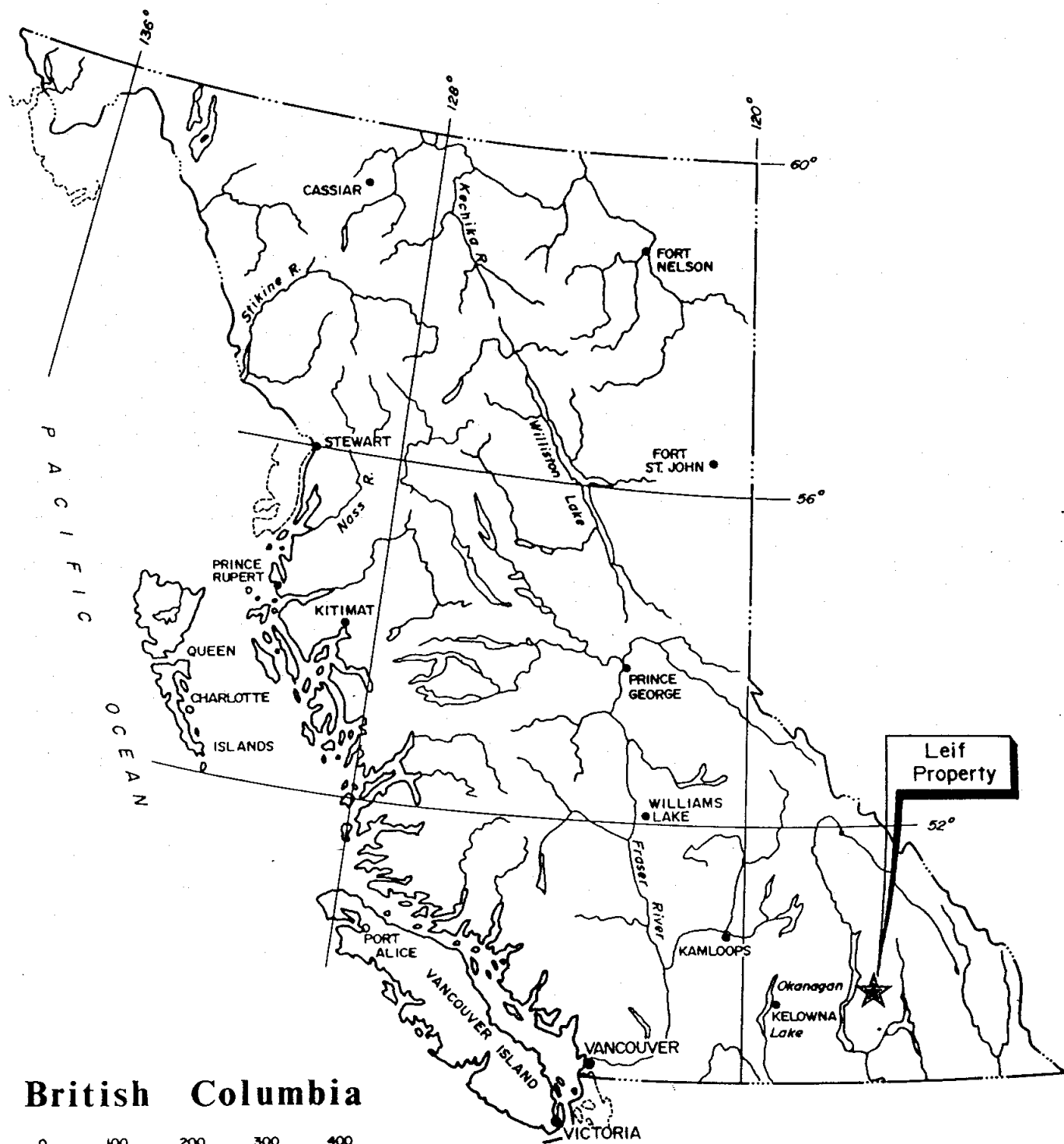
2.0 LOCATION, ACCESS AND PHYSIOGRAPHY

The Leif property is situated in the Slocan Mining Division in south-east British Columbia, approximately 15 kilometers northeast of New Denver, B.C. (Figures 1 and 2).

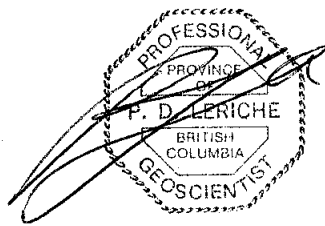
The claims lie within Map Sheet NTS 82K/3W, at latitude 50° 07' North, longitude 117°16' West, and between UTM 5,551,000m and 5,553,000m North and 478,000m and 481,000m East.

Road access is from New Denver, following Highway 6, northwest for 6 kilometers to the village of Rosebury. From Rosebury, follow the Wilson Creek logging road north for approximately 12 km to the Monitor Creek road, which leads to the Mt. Dolly Varden area and crosses the southwest corner of the claims. Four-wheel drive vehicles are recommended. Alternate access is via helicopter from the base at Nakusp.

Total relief is 710 meters, from 1859 m to 2569 m at the peak of Mt. Dolly Varden. Slopes are moderate to steep, dipping in all directions. The property is above treeline. Recommended field season is mid-May to mid-October.



British Columbia



BLACK TUSK EXPLORATIONS LTD.

LEIF PROPERTY

SLOCAN M.D., B.C.

General Location Map

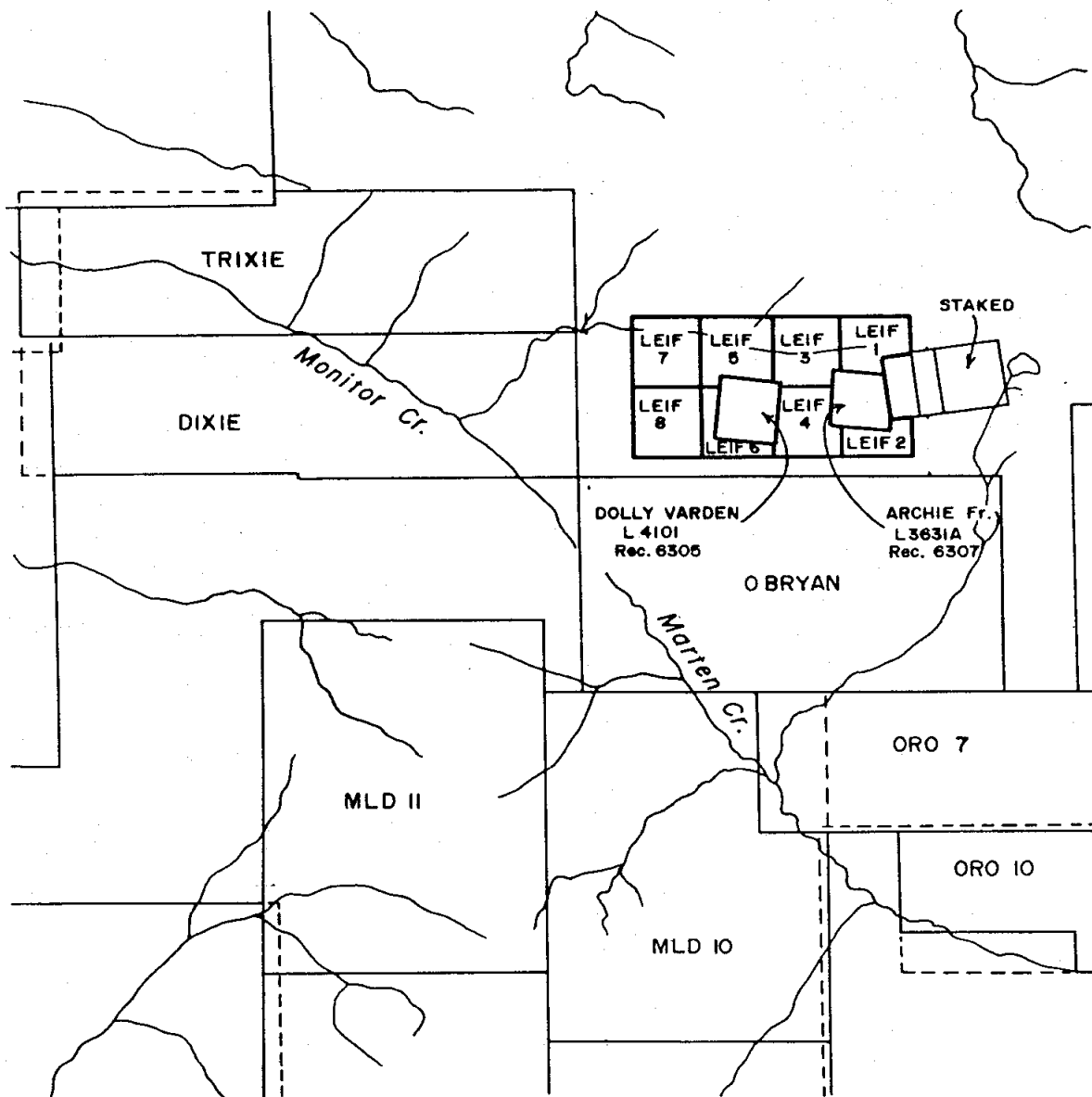
Scale: as shown

N.T.S.: 82K/5W

Date: SEPT. 1990

Figure: 1

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- LEIF 1 6153
- " 2 6154
- " 3 6155
- " 4 6156
- " 5 6157
- " 6 6158
- " 7 6159
- " 8 6160



BLACK TUSK EXPLORATIONS LTD.		
LEIF PROPERTY SLOCAN M.D., B.C.		
<i>Claim Location Map</i>		
Scale: 1:50,000	N.T.S. 82K/3 W	Drawn by:
Date: SEPT./90	Geologist:	Figure: 2
RELIANCE GEOLOGICAL SERVICES INC.		

3.0

PROPERTY STATUS (Figure 2)

The property consists of eight contiguous two post mineral claims surrounding and including two reverted Crown grants, covering an area of approximately 175 hectares, or 432 acres. The claims are 100% owned by Black Tusk Explorations Ltd.

<u>Claim</u>	<u>Record Number</u>	<u>Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
Leif 1	6153	1	16 Oct 1989	16 Oct 1995
Leif 2	6154	1	16 Oct 1989	16 Oct 1995
Leif 3	6155	1	16 Oct 1989	16 Oct 1995
Leif 4	6156	1	16 Oct 1989	16 Oct 1995
Leif 5	6157	1	16 Oct 1989	16 Oct 1995
Leif 6	6158	1	16 Oct 1989	16 Oct 1995
Leif 7	6159	1	16 Oct 1989	16 Oct 1995
Leif 8	6160	1	16 Oct 1989	16 Oct 1995
Archie Fraction	6307	1	15 Mar 1989	15 Mar 1995
Dolly Varden	6305	<u>1</u>	15 Mar 1989	15 Mar 1995
Total		10		

The area is part of the Goat Range wilderness study region, but is not subject to any particular problems regarding Indian land claims.

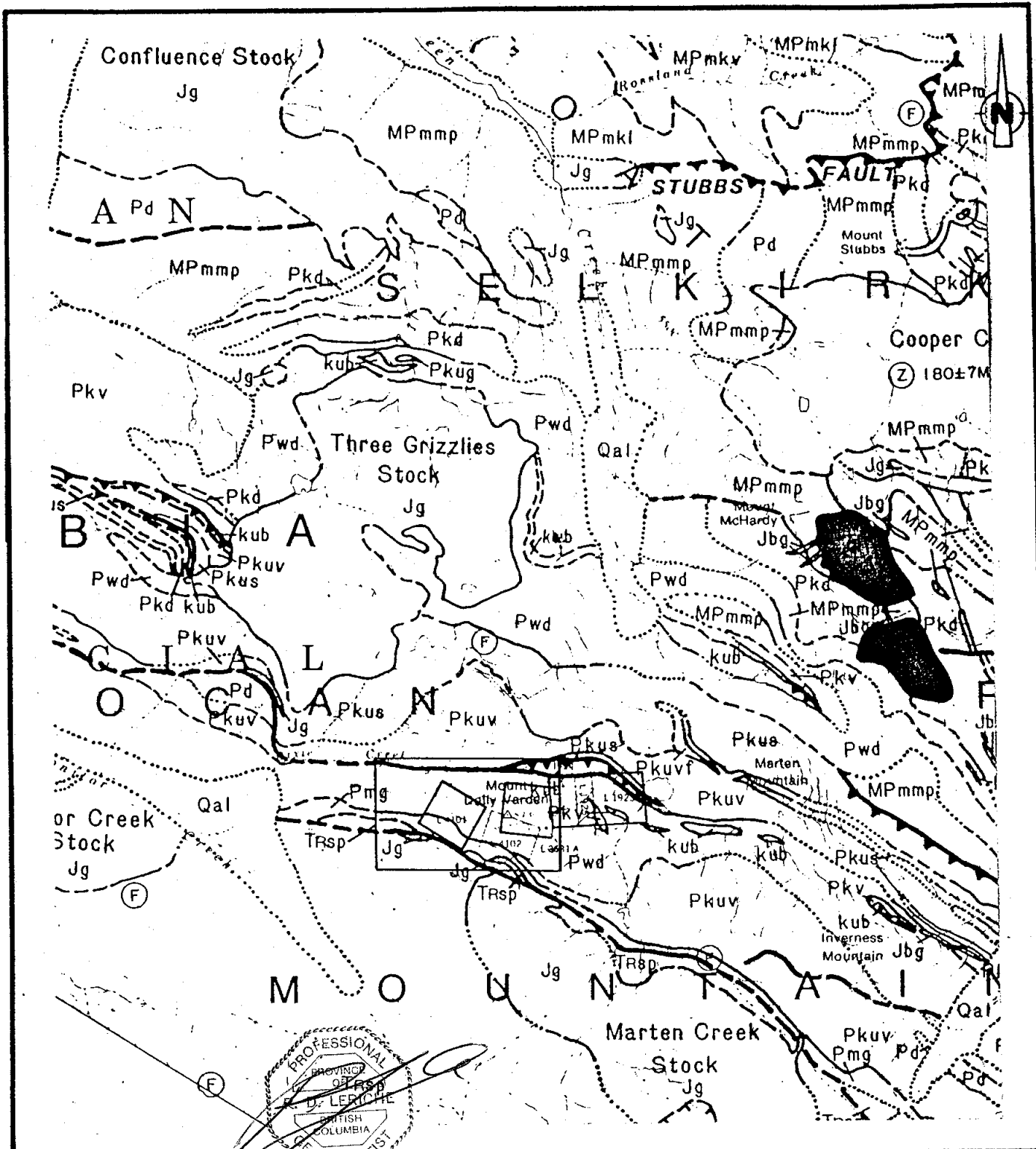
4.0 REGIONAL GEOLOGY (Figure 3)

The Goat Range has been mapped by D.W. Klepacki: (1982-84; G.S.C. Open File 1148).

The dominant structural features of the subject area are the northwest trending Whitewater and Stubbs thrust faults. The Permian Kaslo Group, consisting of tholeiitic porphyry flows, pillow lavas, tuff, argillite, phyllite and ultramafic serpentinite, have been overthrust upon each other. Thrusting occurred mainly along the ultramafic units. Serpentinization is likely associated with fault movement. Bedding dips gently to moderately to the southeast.

After Kaslo Group deposition and subsequent structural deformation, the area was overlain by Upper Triassic Slocan Group slates and phyllites. Exposures of the Slocan Group occur southeast of the thrust faults.

Intruding the above-described strata are the Kuskanax Intrusives which consist mainly of leucogranite and leucoquartz monzonite. Stocks and batholiths occur in the northern part of the belt, and have bent and deformed the thrust faults and Kaslo Group rocks. These intrusions could be the heat source for mineralizing hydrothermal solutions, which have also caused listwanite alteration in the serpentinites.



LEGEND

- contact (defined, approx, assumed)
- thrust fault (teeth on upper plate)

SEE FOLLOWING PAGE FOR LITHOLOGIES



BLACK TUSK EXPLORATIONS LTD.
LEIF PROPERTY
 SLOCAN M.D., B.C.

<i>Regional Geology</i>		
Scale: 1:50,000	N.T.S. 82K/3W	Drawn by:
Date: SEPT./90	Geologist:	Figure: 3

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LITHOLOGICAL LEGEND

QUATERNARY

- Qsc Landslides, rockslides
- Qms Tufa, rare travertine (mineral spring deposits)
- Qdl Glacial, fluvial, lacustrine sediments (gravels to clays)

JURASSIC

- Jbg Blue Ridge Intrusives: feldspar porphyry, biotite hornblende leucogranite
- Jg Kuskanax Intrusives: augite, leucogranite to quartz monzonite

TRIASSIC

- TRsp Slate & phyllite rhythmically bedded with sandstone/calcarenite

PERMIAN

- Pmg Marten Conglomerate: polymictic conglomerate with grey to green matrix. Rare serpentinite, locally calcareous and/or pyritic
- Pwd White Water Diorite: coarse grained hornblende diorite, locally intensely sheared
- Pkd Kane Creek Diorite: hornblende diorite, locally foliated with chlorite & sausserite alteration
- Pd Undifferentiated hornblende diorite

Whitewater Thrust Fault

- Pkuv Upper Plate Volcanic Member: tholeiitic pyroxene to plagioclase porphyry pillow basalt, greenstone, breccia
- Pkuvf Pink felsic tuff
- Pkus Upper plate Sedimentary Members: cherty tuff, wacke, volcanic conglomerate
- Pkug Volcanic conglomerate
- Pkub Ultramafic Member: serpentinite, talc schist, talc-chlorite schist, locally intensely brecciated and/or foliated

MISSISSIPPIAN TO PERMIAN

- MPmmv Siliceous Argillite Member: siliceous argillite & chert bedded grey calc-schist

5.0 **AREA HISTORY** (Figure 4)

The Whitewater-Retallack-Sandon areas (collectively known as the Slocan Mining Camp) have a long production history, from the late 1800's to the 1980's. Deposits are mainly silver-lead-zinc-gold within veins and as replacements within the Slocan Group sediments. Approaching the Goat Range thrust faults, the mineral occurrences are generally more enriched in gold.

Mineral occurrences specifically associated with the Goat Range Thrust Belt (from BCMEMPR Minfile), from the southeast (Mt. Jardine area) to the northwest (Mt. Dolly Varden area) include:

<u>Name</u>	<u>Minfile No.</u>	<u>Commodities</u>	<u>Geological Comments</u>
Empire	82KSW169	Ag, Pb, Zn, Au	32 tonnes mined in 1960 producing 31 g Au, 9330 g Ag, 4411 kg Pb, 4380 kg Zn.
Voyageur	82KSW048	Pb, Zn, Cu, Ag	Hosted by greenish coloured Kaslo Group volcanic rocks.
Emerald Hill	82KSW045	Ag, Pb, Zn, Cu	Shear zone in Kaslo Greenstone. Limited production, 1907, 1953, 1979.
Beaver	82KSW046	Ag, Pb, Cu	Mineralized fractures in Kaslo Greenstone.
Hecla	82KSW047	Pb, Ag	Fissure vein in Kaslo Greenstone.
Iron Crown Kenneth Mount Royal	82KSW149	Ag, Pb, Zn	No description available

<u>Name</u>	<u>Minfile No.</u>	<u>Commodities</u>	<u>Geological Comments</u>
Eureka	82KSW038	Ag, Pb, Au	Hosted by Kaslo Greenstones and basic Intrusives. Carbonate veins are anomalous in gold and copper. 273 tonnes mined, producing 311 g Au, 697080 g Ag, 166060 kg Pb.
JK Nico	82KSW101	Cu, Ni	Quartz veins, at the contact of volcanics and a serpentinitized peridotite, mineralized with galena, sphalerite and chalcopyrite. Pyrrhotite and pyrite are disseminated in the peridotite.
Highland Surprise	82KSW037	Au, Ag, Pb, Zn	Mineralized quartz veins and shear zones near contact with serpentinite. 1903 tonnes mined from 1938-42, producing 50947 g Au and 29645 g Ag.
Fletcher	82KSW143	Au	No description available.
Phoenix	82KSW144	Au, Talc	Large serpentinite body largely altered to talc and carbonate.
Ohio	82KSW036	Pb, Zn, Cu	Shear zone in sediments.
Charleston Keystone Colorado	82KSW031	Ag, Pb, Zn, Au, Cd	Hosted by Slocan Group slates and intruded by "green spotted" dykes. 2324 tonnes mined sporadically from 1898-1966, producing 155 g Au, 1038621 g Ag, 80871 kg Pb, 87445 kg Zn.

<u>Name</u>	<u>Minfile No.</u>	<u>Commodities</u>	<u>Geological Comments</u>
Gold Quartz	82KSW032	Au, Ag, Pb, Zn, Cu	Quartz veins and stringers, hosted by Kaslo greenstone contain disseminated sulphides.
White- water	82KSW033	Ag, Pb, Zn, Au, Cd, Cu	Vein and replacement deposit associated with faults in Slocan Group sediments. 436543 tonnes mined from 1892-1980 producing 52395 g Au, 106171566 g Ag plus Pb and Zn.
Sure Thing	82KSW085	Pb	Slocan Group slates and limestone host siderite and galena.
May- flower	82KSW078	Au, Ag, Pb, Zn, Cu	Quartz veins at Kaslo greenstone - Slocan slate contact host sulphide mineralization and free gold.
Garnet	82KSW076	Au, Ag, Pb, Zn, Cu	Same as Mayflower
Robin	82KSW077	Au, Ag, Pb, Zn, Cu	Same as Mayflower
Tom	82KSW139	Ab, Cu	Chrysotile in thin veinlets within a serpentinite.
Tom 3	82KSW069	Cu	Mineralization along fault between chlorite-biotite schist and ultramafics.
EK	82KSW066	Pb, Ag	Sulphide-carbonate vein in Slocan quartzites.

<u>Name</u>	<u>Minfile No.</u>	<u>Commodities</u>	<u>Geological Comments</u>
SB Betty Jo	82KSW064	Ni	Sulphides along shear zone in serpentinized peridotite.
SB Pam	82KSW68	Cu	Disseminated sulphides in fault zone within Kaslo ultramafics. Areas of intense shearing altering to picrolite and chrysotile.
Alp- Alturas (on east boundary of claims)	82KSW049	Sb, Au, Ag	Mineralization occurs in a shear and alteration zone in metamorphosed sedimentary and igneous rocks. 1916: over 14000 kg of antimony produced.
Dolly Varden (subject property)	82KSW130	Ag, Au	Quartz vein (0.60-3.66 m) striking for at least 1600 m and hosting pyrite, tetrahedrite and native Ag.

The following general observations are made from the above descriptions:

- (a) Almost all showings are associated with fault structures, usually at lithological contacts;
- (b) Mineralization is hosted by quartz veins and shear zones;
- (c) At least 7 occurrences are associated with ultramafic rocks.
- (d) Terms such as carbonate, talc, "green spotted rocks", chrysotile and asbestos imply that listwanite alteration occurs along the belt.
- (e) Thirteen out of twenty-six showings contain known gold values;
- (f) A variety of metals and minerals occur along the belt including gold, silver, copper, lead, zinc, antimony, nickel, cadmium, asbestos and talc.

6.0 PREVIOUS WORK

The Dolly Varden showing (on Dolly Varden claim, L4101) was discovered about 1900, and approximately 35 meters of cross-cutting and drifting was completed at that time.

No further work was reported until 1981 when geological mapping was performed for M. McCrory (Assessment Report 9067). Snell (1981) observed an east-west trending quartz vein (0.66 to 3.66 m wide) striking for at least 1600 meters at the fault contact of the Slocan sediments and Kaslo volcanics. A hydrothermal alteration envelope 30 meters wide occurs adjacent to the vein. One dump sample assayed 1.3 g/tonne (0.08 opt) gold and 1595.79 g/tonne (97.4 opt) silver (Assessment Report 9067).

The Alps-Alturas showing occurs on 3 Crown Grants at the eastern boundary of the Leif property. Over 14,000 kg antimony was produced in 1916, from a shear in highly metamorphosed rock.

During September 1990, a field crew of two geologists, a prospector, and a geotechnician performed a geological mapping and rock sampling program on the Leif property. The purpose of this program was to evaluate the precious metal potential of the claims (please refer to Assessment Report 20939).

The southern and eastern portions of the claims, covering approximately 50% of the property, were mapped. A continuous quartz vein averaging 1.0 meter width was identified along a 1500 meter strike length. The vein occurs at a contact between Whitewater diorite to the north and Slocan group shales and argillites to the south.

The vein is surrounded by a 20 to 30 meter wide alteration halo consisting of strong sericite-carbonate-limonite and minor chlorite alteration. Mineralization within the alteration zone consists of 2 - 3% euhedral pyrite and local stibnite within pods and fractures. Minor chalcopyrite and tetrahedrite with associated malachite and azurite was observed in dump material outside the Dolly Varden adits.

Significant gold results from chip sampling ranged from 55 to 125 ppb. Arsenic values greater than 200 ppm correlated with anomalous gold results. Two samples collected from quartz vein material mineralized with coarse-grained stibnite yielded results >1000 ppm Sb.

7.0 1993 EXPLORATION PROGRAM

On October 7 and 8, B. Augsten, P.Geo., conducted a geological mapping program over the unmapped areas of the property, representing approximately 40% of the area of the claims. The purpose of the program was to identify new mineralized or altered zones. Field notes are given in Appendix A.

7.1 Lithologies (Figure 5)

Five rock units were mapped over the western and northern areas of the property and are described as follows:

Unit 1: Ultramafics

Consists of a strongly magnetic, chloritized, serpentinized, dark green ultramafic rock located in a fault zone along Dixie Creek.

Unit 2: Monzonite-Diorite

A coarse-grained, equigranular intrusive, monzonite to diorite in composition. This unit is strongly sheared and exhibits local gneissic foliation. Along shears, the rock has been altered to a chlorite, sericite, or chlorite-sericite schist.

Unit 3: Argillite

Consists of slaty mudstone and black argillite exposed in the southwest area of the claims. Bedding at station B8 measured 77/39N.

Unit 4: Feldspar Porphyry

Consists of 30 - 40% euhedral plagioclase phenocrysts in a fine-grained iron-carbonate altered groundmass. Exposed in one large outcrop, this unit could be a dyke or sill-like feature.

Unit 5: Andesite

Consists of strongly foliated, medium green andesite flows, tuffs, and pillowed volcanics. Exposed north of Dixie Creek in the northern area of the claims. Chlorite alteration is pervasive. Foliation measurements average approximately 100/80S.

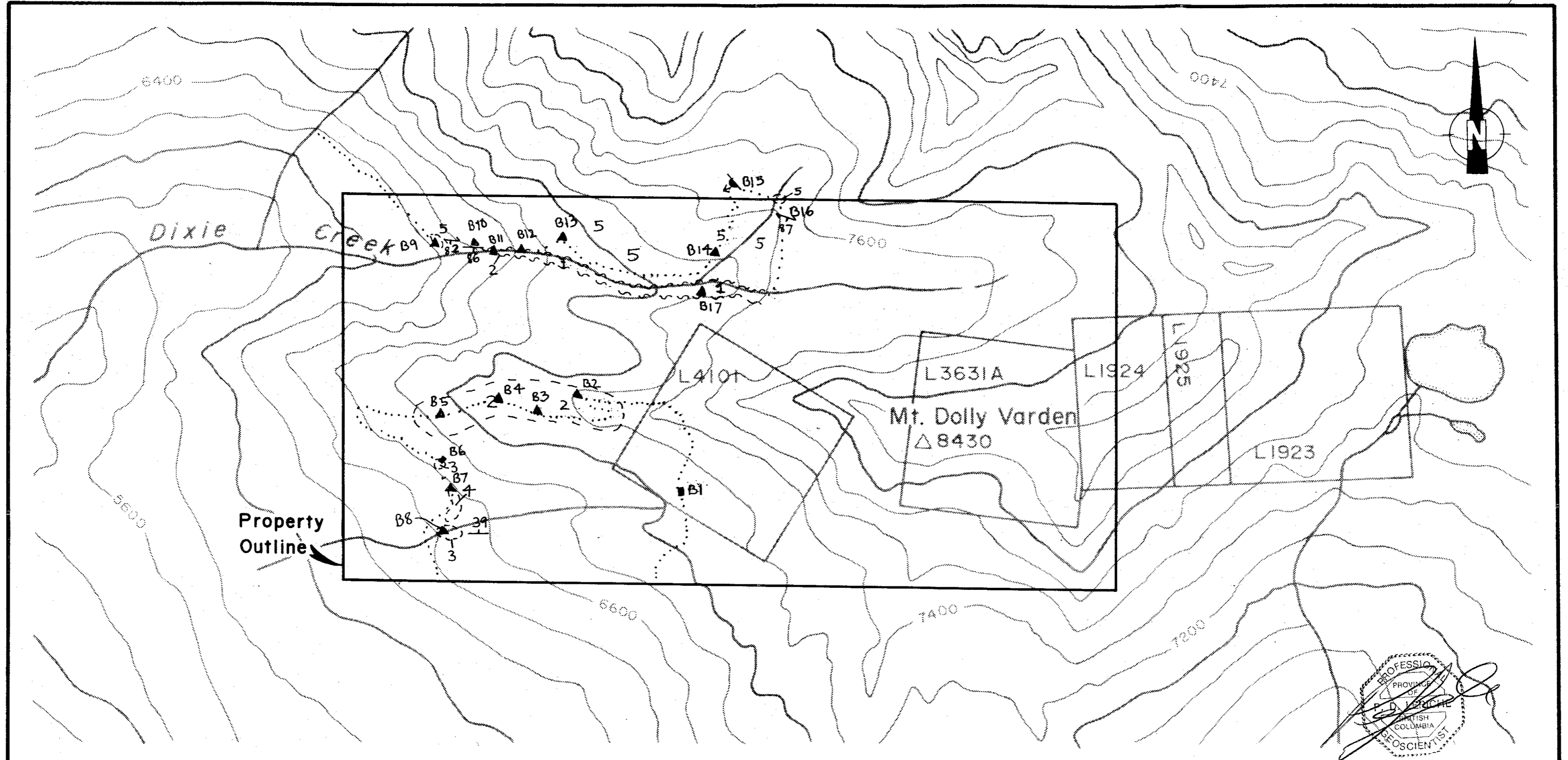
7.2 Structure

Units 1, 2, 3, and 5 are strongly sheared and locally infilled with narrow quartz and calcite veinlets. An east-west trending thrust(?) fault is located along Dixie Creek. The fault zone is infilled with serpentized ultramafic rocks.

7.3 Mineralization

Minor pyrite (0.5%) was observed in monzonite-diorite. Fracture controlled malachite was noted in hornfelsed andesite boulders in an area north of Dixie Creek.

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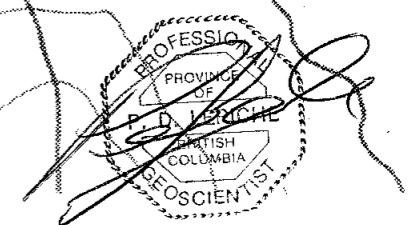
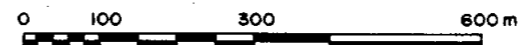


ROCK UNITS

- 1 ultramafics
- 2 monzonite-diorite
- 3 argillite
- 4 feldspar porphyry
- 5 andesite

SYMBOLS

- 30 bedding
- 30 foliation
- ▲ pillow
- ~ fault
- outcrop
- traverse line
- ▲ B1 station
- adit



BLACK TUSK EXPLORATIONS LTD.		
LEIF PROPERTY SLOCAN M.D., B.C.		
GEOLOGY MAP		
1993 MAPPING		
Scale: 1:10,000	N.T.S. 82K/3 W	Drawn by:
Date: SEPT./93	Geologist:	Figure: 6
RELIANCE GEOLOGICAL SERVICES INC.		

8.0 DISCUSSION

The target deposit on the Leif property is a mesothermal gold vein deposit similar to those found in the Bralorne, Rosslund, and Erickson camps in B.C. (over 7 million ounces gold mined with an average grade of 0.5 oz Au/ton) and the Mother Lode-Alleghany gold belt in California. Mining in each of these camps was from high grade quartz veins showing a distinct spatial relationship with listwanite altered ultramafic rocks (quartz-carbonate-talc-limonite-mariposite).

The 1990 exploration program on the Leif property identified a continuous quartz vein/alteration zone along a probable fault structure. Rock sampling yielded anomalous values in gold, arsenic, and antimony.

The 1993 program identified altered ultramafic rocks occurring along a thrust fault structure.

The Goat Range thrust belt, including the Leif property, is in a similar geological setting to the above camps. Gold mineralization along the belt is associated with fault structures, quartz veins, shear zones, and often with listwanite altered ultramafic rocks.

Although no economic grade mineralization has been identified to date on the Leif property during the geological mapping programs, the geology, mineralization, and alteration is judged favorable for hosting a mesothermal gold vein deposit at depth.

9.0 CONCLUSIONS

As the geological environment includes altered metasedimentary and metavolcanic rocks along structural zones, and

as the geological setting is very similar to the established Bralorne, Rossland, and Erickson gold camps, and

as the subject property lies close to the historically productive Whitewater-Retallack-Sandon mining camps, and

as recent exploration programs have outlined quartz vein alteration zones with anomalous values in gold, silver, copper, antimony, and arsenic, and

as these quartz vein alteration zones are associated with ultramafic rocks along fault structures,

the writers conclude that the Leif property has potential to host a mesothermal vein style deposit, and therefore recommend further exploration work.

10.0 RECOMMENDATIONS

- 1) Layout approximately 20 kilometers of gridline for survey control.
- 2) Geologically map and sample the whole property including underground chip sampling at the Dolly Varden showing.
- 3) Blast and sample trenches along the main contact-alteration zone.
- 4) Perform a magnetometer and VLF-EM survey on the grid line to outline further mineralized altered zones.

Contingent on drill targets being established, the follow-up phase would consist of diamond drilling to test the targets at depth.

CERTIFICATE

I, **PETER D. LERICHE**, of 3125 West 12th Avenue, Vancouver, B.C., V6K 2R6, do hereby state that:

1. I am a graduate of McMaster University, Hamilton, Ontario, with a Bachelor of Science Degree in Geology, 1980.
2. I am registered as a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
3. I am a Fellow in good standing with the Geological Association of Canada.
4. I have actively pursued my career as a geologist for fourteen years in British Columbia, Ontario, Saskatchewan, the Yukon and Northwest Territories, Montana, Oregon, Alaska, Arizona, Nevada, and California.
5. The information, opinions, and recommendations in this report are based on fieldwork carried out under my direction, and on published and unpublished literature. I have not visited the subject property.
6. I have no interest, direct or indirect, in the subject claims or the securities of Black Tusk Explorations Ltd.
7. I consent to the use of this report in a Prospectus or Statement of Material Facts for the purpose of private or public financing.

RELIANCE GEOLOGICAL SERVICES INC.


Peter D. Leriche, B.Sc., P.Geo.

Dated at North Vancouver, B.C., this 8th day of January 1994

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ITEMIZED COST STATEMENT
LEIF Project, Slocan Mining Division

Project Preparation			\$	100.
Mobilization & demobilization:				
(includes food & acc, transportation, wages)			\$	890.
<u>Field Crew:</u>				
Project Geologist	\$ 345/day x 2 days		\$	690.
(B. Augsten: Oct 7,8/93)				
<u>Field Costs:</u>				
Food & Accom	\$ 75/day x 2 days	\$	150	
Communications	\$ 10/day x 2 days	\$	20	
Supplies & eqpt	\$ 10/day x 2 days	\$	20	
Vehicle:	\$110/day x 2 days	\$	<u>220</u>	\$ 410.
<u>Report:</u>				
Drafting and map prep				
Report writing and editing				
Word processing, copying, binding			\$	950.
Administration, incl Overheads & Profit			\$	<u>304.</u>
Sub-total			\$	3,344.
7% G.S.T.			\$	<u>234.</u>
Sub-total - Direct Expenses			\$	3,578.
Withdrawal from Black Tusk PAC account			\$	<u>422.</u>
TOTAL			\$	4,000.

APPENDIX A

FIELD NOTES

B. AUGSTEN: OCT 93

LEIF CLAIMS

The following is a description of my stations and notes on the rocks.

STATION B1: Elevation: 7040' (near top of large talus slope south of saddle)

Old adit, mostly caved in, sunk on a quartz vein hosted by chlorite, sericite schists. Previously sampled by Reliance.

STATION B2: Elevation: 7200', top of a ESE trending ridge (108°)

Rock is an orange, rusty-weathering hornblende monzonite to monzodiorite; Variably affected by shearing; Where sheared the rock has

gone to either a chlorite-sericite schist or sericite schist depending on the strength of shear; Numerous anastomosing low to high-angle shears.
266\48,282\80

STATION B3: Elevation: 7130', 75-100m. @ 206° from ΔB2
Strong chlorite shear in intrusive monzonite- monzodiorite.
<1% euhedral pyrite; minor parallel qtz. veinlets 1-2cm.
Shearing 128\70S

STATION B4: Elevation: 7060',
Continuing foliated to gneissic? monzonite, mostly talus material.
Found claim post at this location.
Initial Post Leif 7
Initial Post Leif 8
Final Post Leif 5
Final Post Leif 6
NB, The slope immediately to the north of the claim post are too steep to traverse, especially with the snow, but probably even in dry weather.
Strong fracturing at 290\72N

STATION B5: Elevation: 6850', edge of treeline
Between here and ΔB4, large talus and outcrop of monzonite to monzodiorite.
Found another claim post at this location which is only about 200m. west of ΔB4.
Final Post Leif 7
Final Post Leif 8
Rock is strongly sheared at this location, essentially gone to a sericite-chlorite schist.
Foliation: 148\62S

STATION B6: Elevation: 6670' Location is approximately 40m below treeline.
Found a very old dump and caved in adit. From the depression over the adit, it looks like the adit trends at about 40°. Judging by the muck pile it may have gone in 20 to 30 feet. The dump is composed of

a very fissile dark grey to black argillite to slaty argillite. Within the dump material, rare <1cm qtz veinlets cutting these argillites. No visible sulphides within these veinlets. No obvious pile, so I'm not sure what they were pitting or trenching on.

STATION B7: Elevation: 6580'

Large outcrop of a crowded plagioclase-porphyrific monzonite with 30-40% equant to tabular euhedral plagioclase phenocrysts in a fine-grained groundmass locally partly altered to iron-carbonates. Also iron-carbonate-coated fractures. This rock may be a large dike or sill-like body. In between outcrops of this rock is rubble and talus of argillite.

STATION B8: Elevation: 6410' on creek.

Outcrop of well-laminated argillaceous to slaty mudstone

Bedding: 257\39N

NB. Stations B9 to B17 inclusive are from the traverse up Dixie Creek.

STATION B9: Elevation: 6240' Approximately 50m. NW of Dixie Creek.

Strongly foliated, light to medium green-coloured andesites. Probably sheared pillowed volcanics since to the northwest on talus see blocks of distinguishable pillows.

Strongly chloritized; minor fracture-controlled calcite; rare iron-carbonate veinlets; non-magnetic.

Foliation: 100\82S

STATION B10: Elevation: 6340', on Dixie creek, north bank.

Foliated andesites similar to B9 intruded by a 4-5m. wide feldspar porphyry dike. East contact sharp with little or no alteration effect. Contact at 023\70SE (dip variable around 90) West contact marked by up to 1m. iron-carbonate alteration within the andesites. Porphyry contains <0.5% euhedral pyrite.

Foliation: 093\80S

STATION B11: Elevation 6500', on Dixie creek

On the south bank of the creek is a large outcrop of what looks like dioritic to amphibolite gneisses. These do not look sheared per se, rather it is more of a metamorphic foliation.

Strong gneissosity at 096\53S.

On the north bank of the same creek are good exposures of foliated andesites as at ΔB9, B10.

This location in my traverse up this creek was the first indication to me that the creek may be some sort of fault zone.

Foliation: 248\81N

STATION B12: Elevation: 6630'

Large exposure of serpentinized ultramafic on north bank of Dixie Ck. Rock has a knobby appearance on weathered surface - probably due to some sort of fragmental character.

Rock is strongly magnetic.

Looks like this rock is in fault contact with andesites to the north.

The south bank of the creek at the same location is comprised of highly contorted chlorite, talc and serpentine schists.

STATION B13: Elevation: 6910'

Strongly foliated, chloritized, sericitized andesites, feldspar-phyric tuffs\flows,+ \- pillowed volcanics

2-3% fracture-controlled calcite

Foliation: 292\88N

STATION B14: Elevation: 7230', north side of the north branch of Dixie Creek, about 20m. from creek.

Found a few large 0.5 to 1.0m. boulders of a purple hornfelsed rock cut by diffuse qtz stringers. Rock has a sugary texture.

Most pieces have fracture-controlled malachite.

See samples #BL93-001, 93-002.

STATION B15: Elevation: 7500',

This location is actually off the claim block. I was trying to track down the source of these boulders at ΔB14. While still finding these boulders it appears that the source is somewhere to the north. However at this

location there is an excellent exposure of glacially polished pillowed volcanics. Pillow cusps indicate tops at 230°. Pillows are 0.5m. to 2.0m. long by around 30cm.

STATION B16: Elevation: 7400'

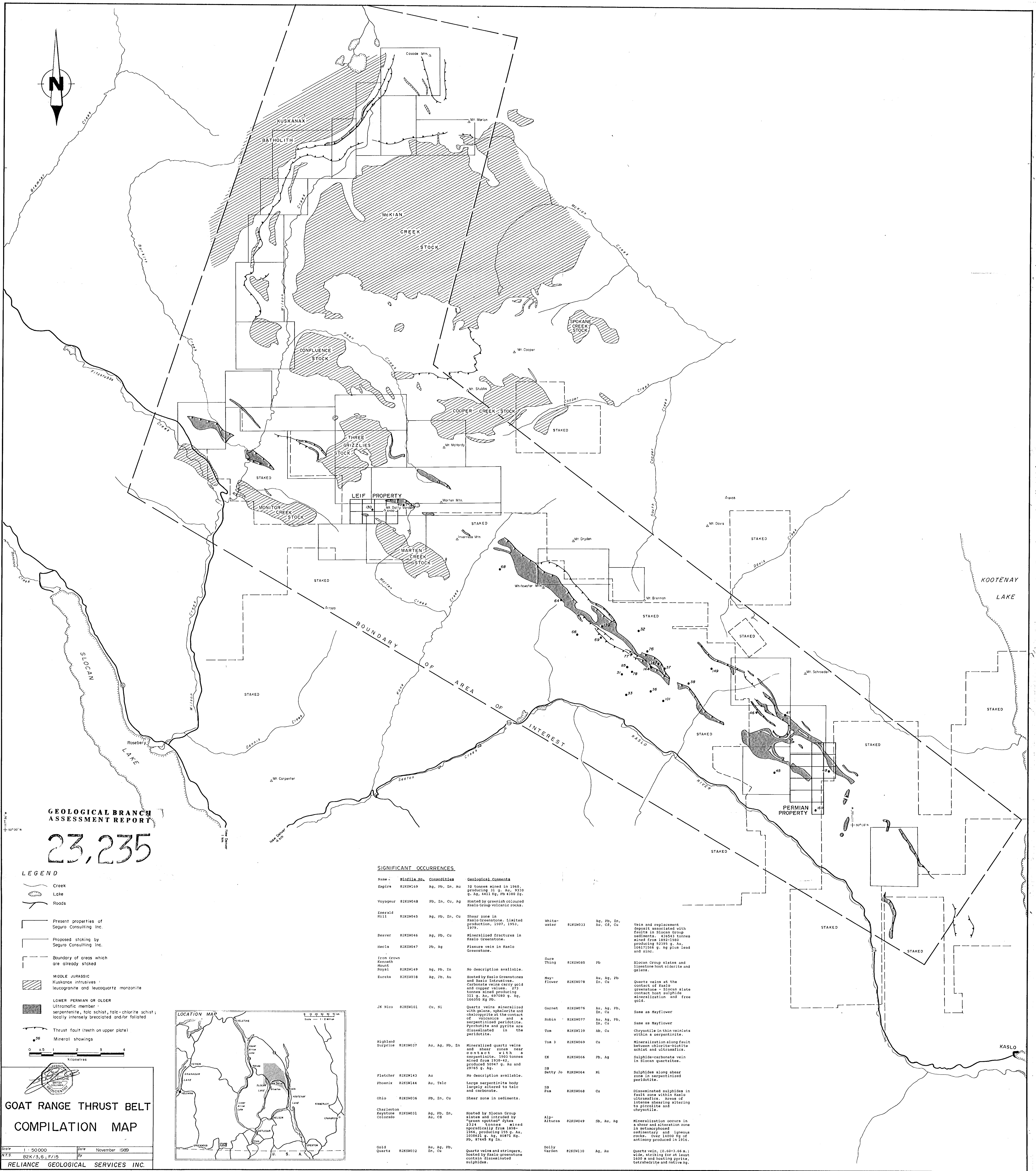
Strongly foliated chloritized and sericitized andesites.

Foliation: 110\87S

STATION B17: Elevation: 7180', south side of creek

Strongly chloritized,serpentinized ultramafics; very black rock on fresh surface; moderately magnetic.

This exposure indicates that the fault indicated further down on Dixie Creek continues to the east and in all likelihood continues further east.

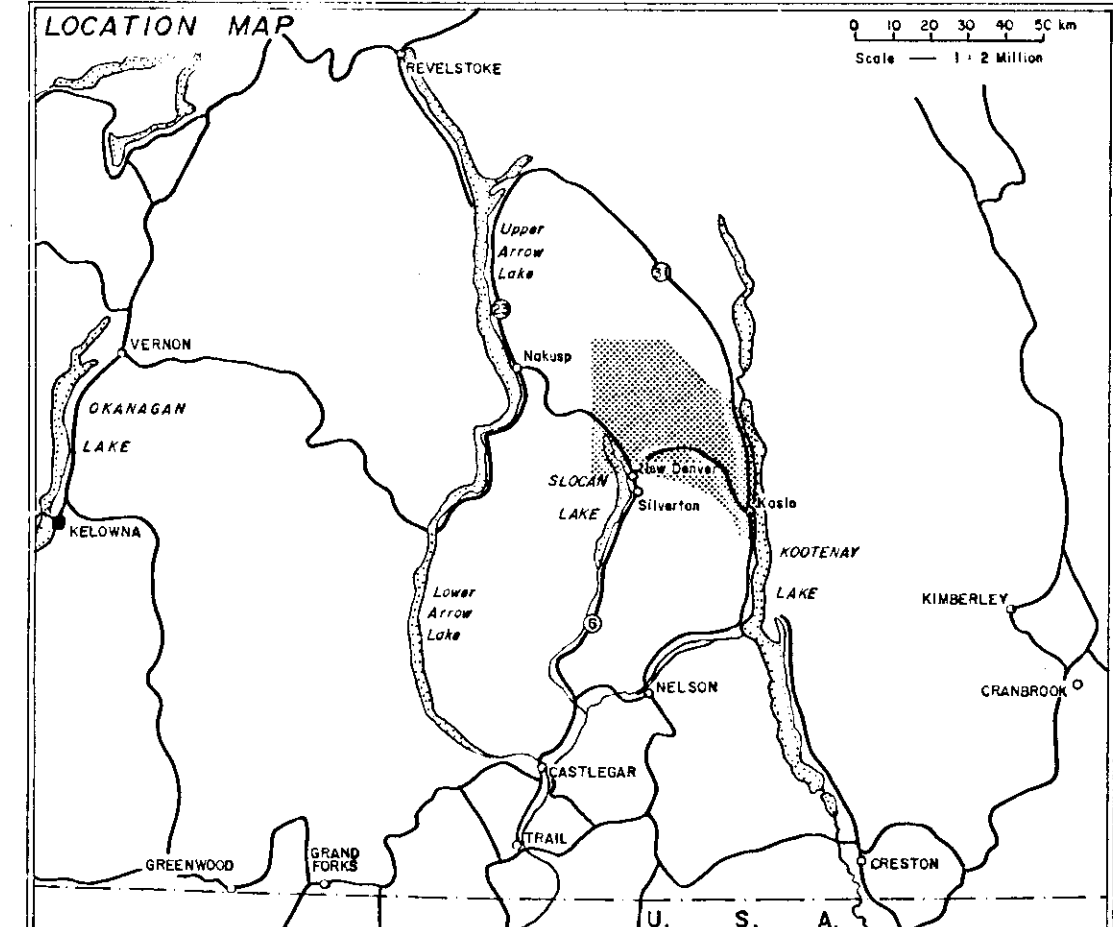


**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

23,235

LEGEND

- Creek
- Lake
- Roads
- Present properties of Seguro Consulting Inc.
- Proposed staking by Seguro Consulting Inc.
- Boundary of areas which are already staked
- MIDDLE JURASSIC Kuskonox intrusives, leucogranite and leucogranite monzonite
- LOWER PERMIAN OR OLDER Ultramafic member
- serpentine, talc schist, talc-chlorite schist, locally intensely brecciated and/or foliated
- Thrust fault (teeth on upper plate)
- Mineral showings



SIGNIFICANT OCCURRENCES

Name	Mineral No.	Commodities	Geological Comments
Empire	82KSW169	Ag, Pb, Zn, Au	22 tonnes mined in 1960 producing 31 g. Au, 9310 g. Ag, 4411 Kg. Pb 4380 Zg.
Voyageur	82KSW048	Pb, Zn, Cu, Ag	Hosted by greenish coloured Kaslo Group volcanic rocks.
Emerald Hill	82KSW045	Ag, Pb, Zn, Cu	Shear zone in Kaslo Greenstone. Limited production, 1907, 1953, 1979.
Beaver	82KSW046	Ag, Pb, Cu	Mineralized fractures in Kaslo Greenstone.
Hecla	82KSW047	Pb, Ag	Fissure vein in Kaslo Greenstone.
Iron Crown			
Renneth			
Mount Royal	82KSW149	Ag, Pb, Zn	No description available.
Eureka	82KSW038	Ag, Pb, Au	Hosted by Kaslo Greenstones and basic intrusives. Carbonate veins carry gold and copper values. 273 tonnes mined producing 131 g. Au, 627000 g. Ag, 16650 Kg Pb.
JK Nico	82KSW101	Cu, Ni	Quartz veins mineralized with galena, sphalerite and chalcocite at the contact of volcanic and a serpentinized peridotite. Pyrrhotite and pyrite are disseminated in the peridotite.
Highland Surprise	82KSW037	Au, Ag, Pb, Zn	Mineralized quartz veins and shear zones near contact with a serpentinized peridotite. 1993 tonnes mined from 1938-42, produced 3047 g. Au and 29765 g. Ag.
Fletcher	82KSW143	Au	No description available.
Phoenix	82KSW144	Au, Talc	Large serpentine body largely altered to talc and carbonate.
Ohio	82KSW026	Pb, Zn, Cu	Shear zone in sediments.
Charleston			
Keystone	82KSW031	Ag, Pb, Zn, Colorado	Hosted by Slokan Group slates and intruded by "open spotted" dykes. 232 tonnes mined sporadically from 1898-1964, producing 150 g. Au, 10161 g. Ag, 10371 Kg. Pb, 87445 Kg Zn.
Gold Quartz	82KSW032	Au, Ag, Pb, Zn, Cu	Quartz veins and stringers, hosted by Kaslo greenstone contain disseminated sulphides.
White-water	82KSW033	Ag, Pb, Zn, Au, Cd, Cu	Vein and replacement deposits associated with faults in Slokan Group sediments. 19943 tonnes mined from 1892-1980 producing 22395 g. Au, 106171566 g. Ag plus lead and zinc.
Sure Thing	82KSW085	Pb	Slokan Group slates and limestone host silvite and galena.
Mayflower	82KSW078	Au, Ag, Pb, Zn, Cu	Quartz veins at the contact of Kaslo greenstone - Slokan slate contact host sulphide mineralization and free gold.
Garnet	82KSW076	Au, Ag, Pb, Zn, Cu	Same as Mayflower
Robin	82KSW077	Au, Ag, Pb, Zn, Cu	Same as Mayflower
Tom	82KSW139	Ag, Cu	Chrysotile in thin veinlets within a serpentinite.
Tom 3	82KSW069	Cu	Mineralization along fault between ophiolite-schist and ultramafics.
IK	82KSW066	Pb, Ag	Sulphide-carbonate vein in Slokan quartzite.
SB Betty Jo	82KSW064	Ni	Sulphides along shear zone in serpentinized peridotite.
SB Pua	82KSW068	Cu	Disseminated sulphides in fault zone within Kaslo ultramafics. Areas of intense shearing altering to piccolite and chrysotile.
Alp-Alturas	82KSW049	Sb, Au, Ag	Mineralization occurs in a shear and alteration zone in metamorphosed sedimentary and igneous rocks. Over 1400 kg of antimony produced in 1916.
Dolly Varden	82KSW130	Ag, Au	Quartz vein, (0.60-3.66 m.) wide, striking for at least 1400 m and hosting prite, tetrahedrite and native Ag.

**GOAT RANGE THRUST BELT
COMPILATION MAP**