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GEOLOGICAL and GEOCHEMICAL
REPORT
on the
FOSS CLAIM GROUP
Alberni Mining Division, B.C.

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for

SUB-RECORDER RECEIVED

SEP 20 1990

 SIMPLON RESOURCES INC. 7910 Burnsfield Crescent Burnaby, B.C. V5E 2B9

by

CL.

Peter D. Leriche, B.Sc., F.G.A.C.

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13 September 1990



Reliance Geological Services Inc.

SUMMARY

The Foss Claim Group, situated in the Alberni Mining Division 6 kilometers southwest of Port Alberni, B.C., consists of two mineral claims totalling 22 units. The property is underlain by a sequence of north-west trending, Triassic to Jurassic volcanic and sedimentary rocks, which have been intruded by Jurassic granodiorite.

Previous work has delineated a mineralized zone of skarn-type replacement mineralization at or near the contact of the Karmutsen andesite and Quatsino limestone. Semi-massive to massive sulphides consist of pyrite-pyrrhotite-chalcopyrite-bornite-magnetite. Assay values from rocks are up to 1650 ppb (0.48 opt) gold, 27.5 ppm silver, and over 10% copper. Geochemical soil sampling has outlined two anomalous areas. The first is a large copper anomaly, coincident with the areas of mineralization. The second is a cluster of gold values up to 430 ppb. The VLF-EM geophysical survey outlined nine conductors, four of which are coincident with copper soil anomalies.

The 1990 program defined further skarn mineralization within Quatsino Limestone and Karmutsen Volcanics. Results from rock sampling include copper values up to 4.45% and gold values up to 260 ppb.

A further exploration program has been recommended, consisting of grid re-establishment, detailed geological mapping, rock sampling, backhoe trenching and hand blasting. The estimated cost is \$52,000.

TAB	LE OF CONTENTS Page No.
SII	MMARY
1.	INTRODUCTION
2.	LOCATION, TERRAIN AND ACCESS
3.	PROPERTY STATUS
4.	REGIONAL GEOLOGY 6
5.	HISTORY AND PREVIOUS WORK
6.0	1989-1990 EXPLORATION PROGRAM
6.	
6.	
6.	
7.	CONCLUSIONS
8.	RECOMMENDATIONS
9.	PROPOSED BUDGET
,	REFERENCES
	CERTIFICATE
	Itemized Cost Statement
LIS	Figure 1: General Location Map Figure 2: Claim Location Map Figure 3: Regional Geology Figure 4: Compilation Map Figure 5: 1990 Geology and Rock Sample Locations in pocket
LI	ST OF APPENDICES:
	A: Rock Sample Descriptions
	B: Analytical Results and Techniques

1. INTRODUCTION

This report was prepared at the request of Simplon Resources, Inc., to describe and evaluate the results of a geological-geochemical survey performed by Reliance Geological Services Inc. during June 1989 and 1990 on the Foss Claim Group, Port Alberni area, Vancouver Island, B.C. The report also describes the geology, mineralization, previous exploration and outlines a further exploration program.

The writer, who has been involved in geological work in the Port Alberni area since 1979, examined the subject claims from April 25 to 28, 1988, and on June 24, 1989.

2. LOCATION, TERRAIN AND ACCESS (Figures 1 and 2)

The area covered by the Foss Group claims is situated between Cous Creek and Sproat Lake, west of Alberni Inlet, within six to 11 kilometers west-southwest of the town of Port Alberni, on Vancouver Island, B.C. Map Sheet reference is NTS 92F/2NW quadrant.

The elevations on the property range from over 680 metres on the Foss 2 claim to 440 metres at Fosselli Creek on the north central portion of the Foss 1 claim. Total relief is therefore about 240 metres or approximately 787 feet. The higher central part, where most of the known mineralization occurrences are located, is characterized by rolling hills interspersed by several small lakes or ponds and swampy valleys. Headwaters of numerous streams radiate in all directions from this area.

Vegetation consists of second growth Douglas fir, hemlock, cedar, salal and alder.

The chief access route is by a main logging road across the Somass River northwest of Port Alberni, then branching southwest into numerous secondary logging roads. There is a network of old logging roads and logging railway grades on the property. Most of these tend to be overgrown and are not shown on maps. 4-wheel drive vehicles are recommended to negotiate deeper grades and washouts.

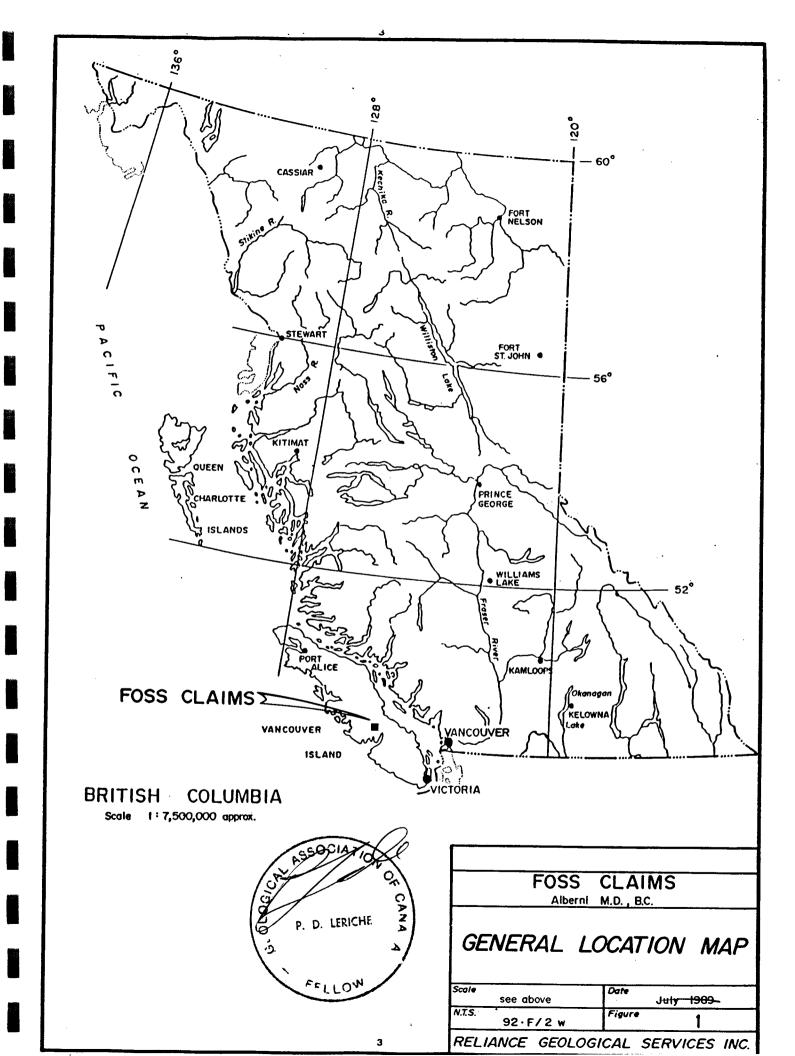
3. PROPERTY STATUS

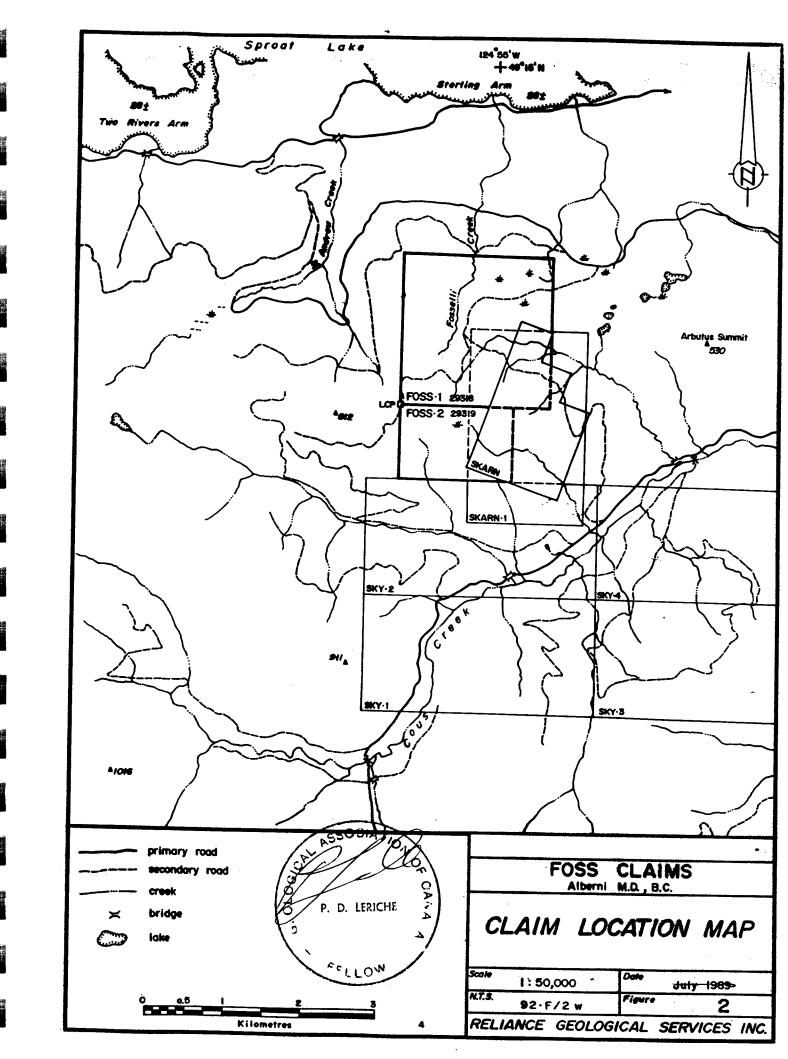
The Foss Claim Group consists of two contiguous mineral claims (22 units) in the Alberni Mining Division. The claims are wholly owned by Simplon Resources Inc., Burnaby, B.C.

Pertinent claim data is:

<u>Name</u>	Record #	<u>Units</u>	Record Date
Foss 1	3851	16	23 Jun 1989
Foss 2	3852	6	23 Jun 1989
Total		22	

The total area correcting for overlap is 450 hectares (1111 acres).





4. REGIONAL GEOLOGY (Figure 3)

(Compiled by H. Laanela, F.G.A.C. 1987)

The Foss Claim Group area is underlain by a sequence of Mesozoic volcanic, sedimentary and intrusive rocks, which have a NNW regional strike and dip westward.

The oldest rocks, found in the central part of the claims and striking NNW, are the upper Triassic or older Karmutsen Formation volcanics of the Vancouver Group. They consist of massive basaltic flows, pillow basalt and breccia, and minor tuff volcanic breccia.

Toward west, these volcanics are overlain by a belt of Quatsino Formation, mainly massive the thick bedded limestone, which in turn is succeeded by Parsons Bay Formation shale and argillite. These two formations are Upper Triassic in age and form the uppermost part of the Vancouver Group.

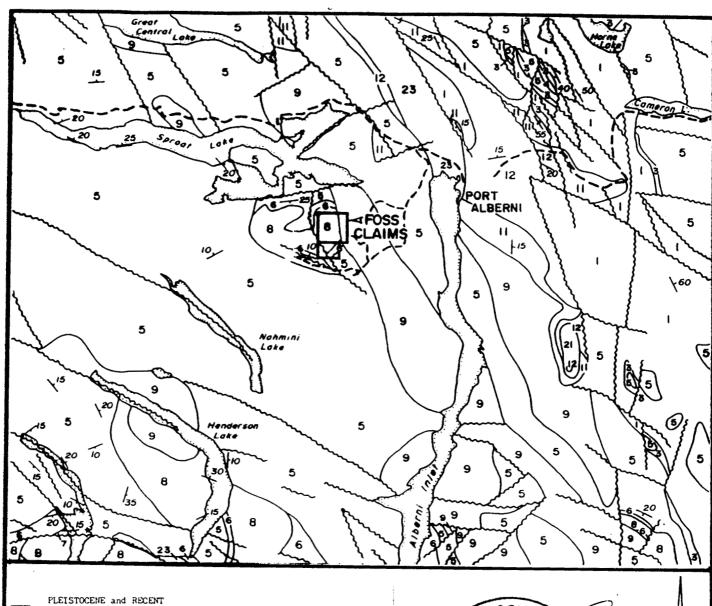
Farther toward west, the Vancouver Group rocks are disconformably overlain by Lower Jurassic Bonanza Group, consisting of andesitic to dacitic volcanic rocks, including breccia, porphyry and tuffs, and minor intercalated beds of argillite and greywacke.

Toward east, the Vancouver Group rocks, mainly the Karmutsen Formation here, are intruded by batholithic Island Intrusions of Jurassic age, ranging from granite to granodiorite to quartz diorite. Where limestone is present such as on the property, calc-silicate "skarn" rocks have been formed by the intrusives introducing large amounts of Si, Al, Mg and Fe into the limestone. Often these skarn deposits contain ore grade amounts of copper, along with iron deposits (magnetite) and minor other metals; they also tend to be erratic, irregular and hence hard to follow.

Some mineralized skarn occurrences are found on the Alder 2 and Otter Claims (now Foss 1 and 2 claims).

The Sicker Group rocks, oldest on the island, are not known to occur in the property area, although they are quite common east of the Alberni Inlet.

The youngest rocks on the area are the dacitic "feldspar porphyry" dykes, intruding any of the older rocks. These "later intrusives" are generally taken to be as Tertiary in age (related to Sooke and/or Catface intrusions elsewhere on the island).



23 Glacial and alluvial deposits

UPPER CRETACEOUS

12 Haslam Formation:shale,siltstone,fine sandstone

[| Comox Formation:sandstone.conglomerate.shale.coal

MIDDLE to UPPER JURASSIC

9 Island Intrusions: biotite-hormblende granodiorite, quartz diorite

LOWER JURASSIC (?) Vancouver Group (5-8) Bonarza Subgroup (7.8)

8 Volcanic Division:andesitic to latitic breccia.tuff and lava; greywacke.argillite and siltstone

UPPER TRIASSIC

Guatsino Formation: limestone, mainly massive to thick bedded, minor thin bedded limestone

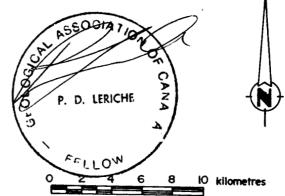
UPPER TRIASSIC and OLDER

5 Karmutsen Formation:pillow-basalt and pillow-breccia, massive basalt flows;minor tuff volcanic breccia.

Jamperoid tuff, breccia and conglomerate at base

PENNSYLVANIAN and OLDER

Volcanic breccia.tuff.argillite;greenstone.greenschist;dykes and sills of andesite-porphyry



FOSS CLAIMS Alberni M.D., B.C.

REGIONAL GEOLOGY

Scale	1: 250,000	Date	July	1989
N.T.S.	92·F/2 w	Figure		3

RELIANCE GEOLOGICAL SERVICES INC.

The main structural feature is a series of major NW to NNW trending faults or fault zones affecting mainly the Vancorver Group rocks here. These faults were probably formed during the late Triassic time.

The Vancouver Group rocks, particularly the Karmutsen volcanics, are known to host several mineralized occurrences in the Alberni Inlet area. Aside from the mineralized skarn occurrences on the property, already mentioned above, the following showings have been reported in the Cous Creek-Alberni Inlet area:

- 1. Cous Creek Showings, on the present "Skarn" Claim (formerly "A" claim), which is surrounded by the Foss Group Claims, are closest to the property. Massive sulphide lenses and pods occur in volcanics near the diorite contact; later dykes are also present in the area (B.C.A.R. #6956, 1977, and #6393, 1977, et al).
- 2. Kola Showing, about 1 km south and outside of Alder 1 claim (2 km SW of Foss 2): 1985 exploration discovered mineralization consisting of massive pods and lenses of pyrite chalcopyrite associated with andesites of Karmutsen Formation; also, siliceous shear zone and sulphides associated with dacites were evident. Assays were reported to range up to 0.328 opt Au, 4.71 opt Ag and 29.2% Cu (Sookochoff, 1985; B.C.A.R. #10,288, 1982, and #9313, 1981).
- 3. Rex Showing, at headwaters of Cous Creek, about 4 km SSE of Kola showing. Cu and Mo is reported (B.C.A.R. 1591, 1968; B.C.M.M., 1967, p.77, et al).
- 4. Raven Prospect, near west shore of Alberni Inlet, opposite the town of Port Alberni and about 4 km east of Otter claims: Mineralization (Cu, Au) occurs in a 4 foot wide vein with a 6-8 inch width of solid chalcopyrite (B.C.M.M., 1989, 1901).
- 5. <u>Dauntless Prospect</u>, (Crown Grant 258G), west side of Alberni Inlet near Stamp Narrows, about 4 km east of Foss Claims: Sparse chalcopyrite occurs within one of the two series of shear zones 200 feet apart. The mineralized shear contains a 6 feet wide strongly pyritic quartz vein, along with a 2 feet wide body of massive pyrrhotite and chalcopyrite. (Laanela, 1965; B.C.A.R. 447, 1962; B.C.M.M. 1927, p. C341, and 1928, p. 366, etc).
- 6. B and K Prospect, (Crown Grant 136G), about 4 km ESE of Foss Claims: A north-trending, steeply dipping, 5 feet wide shear contains Cu mineralization with the reported estimated grade of 1%. This showing is also known as the Cous Creek Copper Showing (Laanela, et al, 1966).

7. <u>Hayes Mine</u>, a number of Crown Grants, some 18 km south of Foss Claims, west side of Alberni Inlet. Historically, it was the most productive property in the area. An intraformational limestone horizon hosts skarn-type mineralized zones up to 28 feet wide which contain magnetite, pyrite and chalcopyrite. There are no intrusive outcrops related to the skarn mineralization. It is also known as the Nahmint Mine (B.C.M.M., 1898, pp.1131; 1901, p.1095; 1906, p.H193). (Laanela, 1987)

5. HISTORY AND PREVIOUS WORK (from Laanela, 1987)

According to old B.C. Minister of Mines (B.C.M.M.) reports dating back to late 1800's much mining exploration and shipping of small amount of ore has been carried out in the Alberni Inlet area since 1898. Some of the highlights, concerning the properties already mentioned in the previous chapter, are:

- The Hayes (Nahmint) Mine, some 18 km to south, reportedly shipped 2180 tons of ore during 1898 1902, yielding 328,245 lbs of Cu, 62 ozs Au and 2917 ozs Ag. It was closed in 1902.
- The Dauntless, 4 km to east, was explored between 1918 1929 by numerous open cuts, several short adits (up to 100 feet long) and at least one shaft 27 feet deep.
- The Raven, also 4 km to east of Otter Property and north of Dauntless, was worked around the turn of the century; a 50' adit was completed in 1901.
- The original Cous Creek property, then known as the "A" claim, and now as the "Skarn" claim within the area of Foss Group of claims, was discovered in 1972 and explored by Craigmont Mines in 1976 and Bethlehem Copper in 1977.

Some of the skarn type showings that were originally part of the known mineralized area covered by these A claims, are now part of the Otter and Alder 1 (now Foss 1 and 2) claims on the property.

Several previous surveys by various mining and exploration companies have also covered parts of the present Otter (Foss) Claim Group property. Some examples are:

1) The writer (Laanela), while employed by Gunnex Limited in the mid-1960's, mapped the NE part of the present Foss Group property. A small skarn-type copper occurrence was noted on the present Otter (Foss) claim, at the headwaters of Fosselli Creek, along with some magnetite near a limestone-diorite contact. A regional geochemical survey carried out by Gunnex Limited at that time also

indicated a Total Heavy Metal (THM) anomaly extending southward from the upper Fosselli Creek area, toward Cous Creek, more or less coinciding with the limestone belt. However, no follow-up work was done here by Gunnex (Laanela, 1965-66).

- 2) More prospecting took place in the area result in the original four "A" claims, in the centre of the present property area, being staked in 1972. Additional claims These claims were owned by Mr. were added in 1974. Lawrence Wezina of Victoria. During 1976, Craigmont Mines carried out a program of geochemical sampling and magnetic surveys on these claims that yielded limited results. The correlation between magnetic and geochemical anomalies then prompted Bethlehem Copper Corporation, in 1977, to take an option on these claims and to carry out a program of geological mapping and VLF-EM surveying (Anderson, The results of this program were sufficiently encouraging to warrant planning additional work by Bethlehem, including a pulse electromagnetic survey by Glen E. White and percussion drilling program during September, 1977. At that time the property (A Claim) was owned by Cous Creek Copper Mines Ltd., and it covered the area now occupied by the present Skarn claim and eastern parts of the Otter and Alder 1 (Foss 1 and 2) claims. Bethlehem's option agreement with Cous Creek Copper Mines Limited was terminated in September 1977, apparently because of lack of significant mineralization in two percussion drill holes (Nethery, 1977).
- An airborne geophysical survey (VLF-EM and magnetometer) was flown by Columbia Geophysical Services on behalf of Pacific Seadrift Resources Ltd. over their Kola Creek Group of claims during the winter of 1980-81. This survey also covered all of the Foss Group area. A number of airborne EM conductors and magnetic anomalies were found on the Foss Claim Group (see Map in report by W.G. Timmins Exploration and Development Limited, June 1981/B.C.A.R. #9313). There is no information that any of these airborne anomalies identified on the property have been "followed-up".
- 4) In addition to the airborne survey on the Kola property, a geochemical and geological exploration program was carried out over the Kola claims during August, 1981. A strong anomalous area was identified near the "Kola vein", on Kola 3 (Larry 1) claim, about one km south of present Alder 1 claim (2 km SW of Foss 2 claim) (Wing and Timmins, 1982/B.C.A.R. #10,288). (Laanela, 1987)

In 1987, Ashworth Explorations Ltd conducted a program of geological mapping, geochemical rock and soil sampling and magnetometer geophysics. Three trenches were located near a limestone-volcanic contact which revealed massive sulphide and skarn type mineralization. Some rock samples taken from these trenches were anomalous in copper (>10%) and silver (up to 16.8 ppm). Gold values in rocks ranged up to 1645 ppb from a silicified volcanic rock. The soil survey revealed significant anomalous trends in gold, silver, copper, lead, zinc and arsenic. The magnetic survey outlined a strong high along the limestone-volcanic mineralized contact (Laanela, 1987).

In 1988, a program of geological mapping, rock sampling, soil sampling, magnetometer and VLF-EM geophysics was performed on the Otter Claim Group. The Foss Claim Group was staked to cover the main mineralized showings delineated from the 1988 work. Figure 4 (in pocket) is a compilation map showing significant results from previous work.

Geological mapping delineated a sequence of north-south trending, Triassic to Jurassic volcanic and sedimentary rocks, which have been intruded by Jurassic granodiorite plutonic rocks.

The Triassic Karmutsen Formation forms a strip 600 metres wide through the central part of the claims and consists of aphanitic to porphyritic, dark green-gray andesite flows. Conformably overlying the Karmutsen Formation to the west is the Quatsino Formation, which is a fine-grained dark gray limestone. The Parsons Bay Formation, shale and argillite, overlies the limestone in isolated outcrops on the property. Occurring in the west part of the property and trending north-south is the Jurassic Bonanza Group, consisting of maroon-green andesite lapilli tuff and medium to dark gray andesite feldspar-augite porphyry flow rocks. Intruding the above package of rocks east of the claims are diorite to granodiorite plutons.

"Skarn-type" replacement mineralization occurs on the property at or near the contact of the Karmutsen volcanics and Quatsino limestone. Semi-massive to massive sulphides consist of pyritepyrrhotite-chalcopyrite-bornite-magnetite.

The writer hypothesized (1988) that the emplacement of the Jurassic intrusive rocks resulted in hot solution movement through fissures and fractures in the Karmutsen volcanics and caused replacement skarn mineralization within the Quatsino limestone. Iron-copper-gold skarn deposits occur on Texada Island, the Zeballos Area, and the Old Sport Mine near Port McNeill, which are all in the same geological setting as the Foss Claims.

Six previously excavated trenches were located and sampled (Figure 4).

Significant results are as follows:

Trench	<u>Sample</u> <u>Number</u>	<u>Sample</u> <u>Type</u>	Width (m)	<u>Assays</u>
1	R27	Select		86,452 ppm Cu
	R27A	Chip	0.90	90 ppb Au >10% Cu
	R27D	Chip	1.50	9,484 ppm Cu
	R27E	Select		13,282 ppm Cu
2	R26	Select	***	53,777 ppm Cu
5	R223	Select		536 ppm Cu
6	R219	Select		54,313 ppm Cu 25.2 ppm Ag
	R220	Select		>10% Cu 27.5 ppm Ag
	R221	Select		24,584 ppm Cu

Trench	<u>Sample</u> <u>Number</u>	Sample Type	Width (m)	<u>Assays</u>
6	R222	Select		54,392 ppm Cu 23.7 ppm Ag
	R238	Chip	1.20	48,373 ppm Cu 24.5 ppm Ag

Geochemical soil sampling outlined two anomalous areas on the Foss claims. The first is a large copper anomaly which is coincident with the main area of skarn mineralization. The second is a cluster of gold values up to 430 ppb.

The VLF-EM survey outlined nine conductors, four of which correlated with the copper soil anomaly and were thought to reflect further metallic mineralization. The magnetometer survey helped define lithological contacts and three magnetic highs which probably reflect the presence of magnetite-pyrrhotite.

6.0 1989-1990 EXPLORATION PROGRAM

6.1 Methods and Procedures

During June 1989 and 1990, a field crew consisting of a geologist (the writer) and a prospector completed a program of geologic mapping and geochemical rock sampling.

Parts of the 1987-88 grid were re-established and used for control for mapping and rock sampling. Thirteen rock samples were collected and analyzed for gold and multi-element ICP by International Plasma Laboratory Ltd. Five samples with high copper results (ICP) were re-run by alternate assay techniques. See Appendix A for rock sample descriptions and Appendix B for analytical results and techniques.

6.2 Property Geology (Figure 5)

Previous work has outlined a mineralized area centred around 2+50S, 3+00E. Trenching the exposed replacement style skarn mineralization within the Quatsino Limestone and adjacent Karmutsen volcanics, the 1989-1990 exploration program located more limestone outcrop and confirmed the presence of skarn mineralization, with 30% to 50% pyrite, up to 5% chalcopyrite, lesser pyrrhotite and trace bornite. The mineralization is associated with strong chlorite alteration.

The second area investigated is between L4+00N and 7+00N, 3+00E to 6+00E. Outcrop consists of Karmutsen volcanics in contact with granodiorite intrusives to the east. Isolated outcrops of grey limestone are found west of the volcanics. Mineralization at the contact consists of semi-massive and disseminated pyrite (1-3%) within argillically altered intrusives and volcanics.

Copper mineralization was found at L7+00N, 11+00E along the Fosselli Creek Road. A 30 cm wide shear zone, 220/80NW, hosts semi-massive pyrite and chalcopyrite (3%).

6.3 Rock Geochemistry (Figure 5)

The following results from rock sampling are considered significant. Full descriptions for all rock samples are included in Appendix A.

Sample #	Sample <u>Type</u>	<u>Results</u>	Grid Coordinates Location
PLF89-R1	Select	1.4% Cu 260 ppb Au	7+00N, 11+70E
Description:	Semi massive s		cm wide.
VWF90-R4	Select	3.61% Cu 35 ppb Au	2+50N, 2+90E
Description:		aphanitic Karm halcopyrite, py	utsen volcanics with rrhotite.

Sample Sample Grid Coordinates

Type Results Location

VWF90-R5 Select 0.74% Cu 3+15S, 4+75E, 125 ppb Au Trench 5

Description: Angular skarn float of altered limestone with 30%

pyrite, chalcopyrite.

VWF90-R6 Select 4.45% Cu 2+90S, 3+05E

30 ppb Au Trench 1

Description: Skarn altered limestone with >50% pyrite,

pyrrhotite, chalcopyrite, bornite.

VWF90-R8 Select 0.26% Cu 5+00N, 5+00E

15 ppb Au

Description: Altered Karmutsen volcanics as subcrop or creek

float with 5% pyrite, chalcopyrite, azurite.

6.4 Target Areas

The 1989-1990 exploration program has delineated target areas, specifically:

- 1) The area between L1S to L4S, 1+00E to 5+00E, where soil geochemistry has outlined anomalous gold, copper, lead and zinc concentrations. This area coincides with 2 moderate VLF-EM conductors, magnetic highs and known areas of massive pyrite, chalcopyrite and pyrrhotite mineralization.
- 2) The area between L3N to L7N and 3+00E to 6+00E hosts pyrite, trace chalcopyrite and azurite mineralization at a contact between intrusives and volcanics. This area is coincident with a VLF conductor.

7. CONCLUSIONS

The writer concludes that the Foss Claim Group has potential for hosting economic copper mineralization with associated gold and silver for the following reasons:

- The geological environment (volcanic rocks in contact with limestone with a nearby intrusive pluton) is favourable for hosting a "skarn-type" base-precious metal deposit, similar to those found elsewhere on Vancouver Island.
- 2) Economic grade copper mineralization has been found on the property. Geochemical soil sampling and geophysics indicates that the known mineralization extends further than previously thought, and that previously undiscovered mineralized areas may be present on the property.

For these reasons, further exploration work is warranted and recommended.

8. RECOMMENDATIONS

- 1) Re-establish the 1988 survey grid.
- 2) Backhoe-trench and handblast along strike from mineralized areas. Trench across any coincident soil anomalies and VLF-EM conductors.
- Perform detailed geological mapping and rock sampling over the favourable contact zone and any geochemical-geophysical anomalies.

9.

PROPOSED BUDGET

(Two Geologists, One Blaster, One Geotechnician - 15 Field Days)

Project Preparation	\$	1,000
Mobilization/Demobilization	\$	1,600
Field Crew	\$	15,900
Field Costs	\$	7,725
Backhoe	\$	5,600
Lab Analysis	\$	·
Supervision and Report	•	5,400
Sub-Total		44,925
Administration, incl Overhead and Profit		6,739
Total		51,664
	٧_	J1,004

(Say \$<u>52,000</u>)

Respectfully submitted.

ASSOCIATION

O P. D. LERICHE

Peter D. Leriche B.Sc., F.G.A.C.

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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 a Fellow in good standing with the Geological Association of Canada.
- I have actively pursued my career as a geologist for eleven years in British Columbia, Ontario, Yukon and Northwest Territories, Arizona, Nevada and California.
- The information, opinions, and recommendations in this report are based on fieldwork carried out under my direction, and on published and unpublished literature. I was present on the subject property from April 25 to 28, 1988, and June 22, 23, 24, 1989.
- 5. I have no interest, direct or indirect, in the subject claims or the securities of Simplon Resources Ltd.
- 6. I consent to the use of this report in a Prospectus or Statement of Material Facts for the purpose of private or public financing.

or public financing.

RELIANCE GEOLOGICAL GERVICES INC.

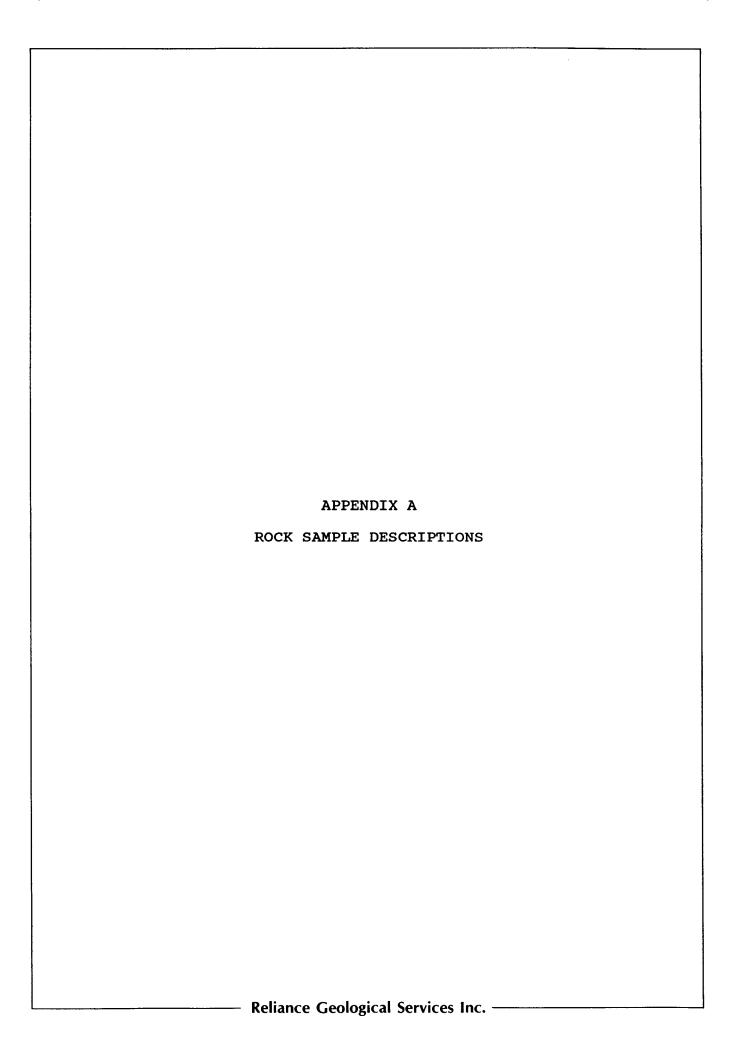
Peter D. Leriche, B. Sc., F.G.A.C.

Dated at North Vancouver, B.C., the 13th day of September 1990.

ITEMIZED COST STATEMENT Job # 639 - FOSS PROJECT for SIMPLON RESOURCES INC.

Project preparation	\$	50.
Mobilization/demobilization, includes wages, transportation, ferries	\$	440.
(June 24, 1989)	325. 500. \$	825.
Field Costs: Communications \$ 5/day x 3 mandays \$ Food & accommodation \$70/day x 3 mandays \$ Supplies \$15/day x 3 mandays \$ Vehicle \$110/day x 3 days \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	210. 45.	600.
Fire Assay/AA for Au, multi ICP	221. 30. \$	251.
Report writing and editing \$	150. 175. <u>50.</u> \$	<u>375.</u>
Sub-total	\$	2,541.
Administration, including Overhead and Profit	\$	254.
Total	\$	2,795.

- Reliance Geological Services Inc. -



SAMPLE NO.	DESCRIPTION WID	TH (cm)
PLF-89-R1	Select chip, semi massive sulphide band 30 cm wide, oriented Az 220°/80°NW L7+00N, 11+70E.	30
PLF-89-R2	Chip from float of highly mineralized Karmutsen Formation volcanics. Greater than 50% pyrite. Chalcopyrite, calcite alteration present. L4+25N, 5+00E.	
PLF-89-R3	Select chip from dark gray to black Karmutsen volcanics in east wall of trench. Intrusive (unknown lithology) in west trench wall. 3% disseminate pyrite, trace chalcopyrite. Weak chlorite alteration. L4+45N, 5+00E.	
PLF-89-R4	Select chip from highly altered Island intrusive (?) 1-2% pyrite, chalcopyrite mineralization in opposite trench wall, 1.5 m from PLF-89-R-3. L4+45N, 5+00E.	
PLF-89-R5	Select chip from altered Island intrusive exhibiting trace pyrite mineralization. Same pit as PLF-89-R3, R4.	
VWF-90-R1	Select chip of Karmutsen Volcanics. Mid to dark gray colour, aphanitic, trace pyrite, chalcopyrite, calcite, quartz. L1+20S, 2+80E.	
VWF-90-R2 .	Select chip from subcrop of slightly altered granodiorite. Trace disseminate pyrite with rare veinlets of pyrite, chalcopyrite and calcite. 5 m from VWF-90-R1. L1+25S, 2+80E.	
VWF-90-R3	Select chip from dark gray to black aphanitic Karmutsen Formation volcanics. 5% pyrite, chalcopyrite and trace bornite, quartz infilling small fractures. L2+50S, 3+30E. Trenches 3 & 4.	

Reliance Geological Services Inc. -

SAMPLE	NO.
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DESCRIPTION

WIDTH (cm)

VWF-90-R4

Select chip from gray to black aphanitic Karmutsen Formation volcanics. 50% or greater pyrite, chalcopyrite, pyrrhotite and trace bornite, calcite present in old trench. 2+50S, 2+90E.

VWF-90-R5

Chip from angular float of limestone altered by skarn style mineralization associated with volcanics. 30% pyrite, chalcopyrite and trace calcite and chlorite mineralization. L3+15S, 4+75E near trench 5.

VWF-90-R6

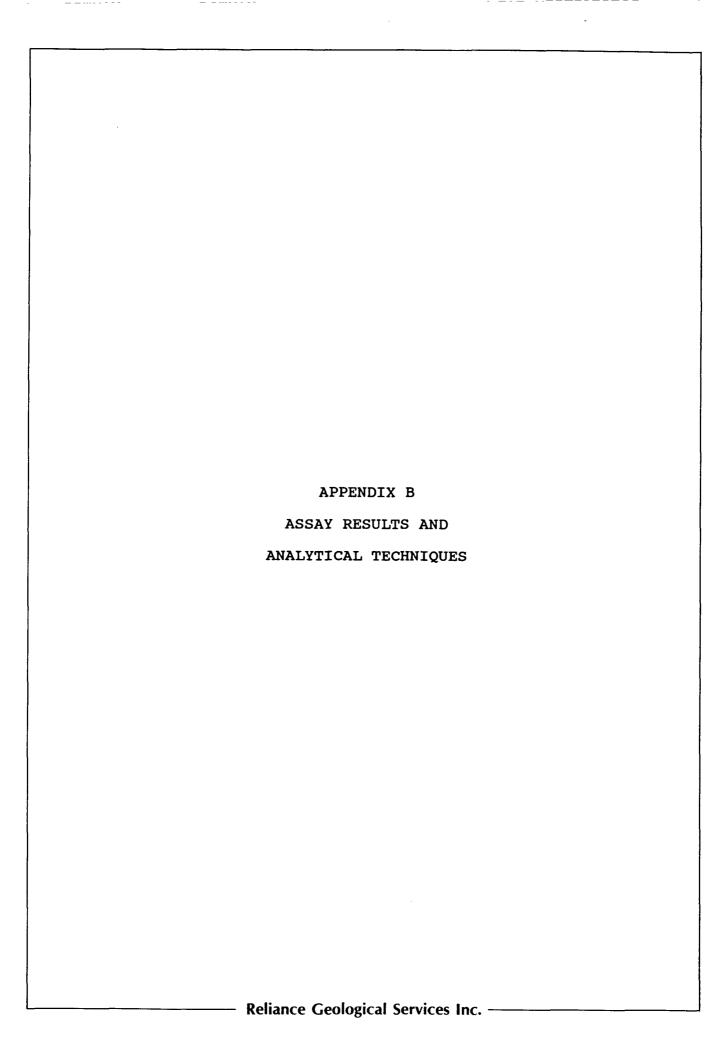
Chip from dump of trench 1. Skarn altered limestone displaying 50% semi-massive pyrite, pyrrhotite, chalcopyrite and epidote, bornite mineralization. L2+90S, 3+05E.

VWF-90-R7

Select chip from altered Karmutsen Formation volcanics. Massive pyrite mineralization along west side Fosselli Creek. L4+00N, 4+00E.

VWF-90-R8

Select chip from subcrop or large angular boulder of Karmutsen Formation volcanics. 5% pyrite, chalcopyrite, azurite with minor calcite, quartz alteration. L5+00N, 5+00E.





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REPORT SU	M M A R Y	Report:[90	00465 R]
	ANALYTICAL R	E P O R T	
Origin	Inc	eption Date:[Ju	n 20, 1990]
Client:[Contact:[Project:[Amount/Type:[200 Reliance Geologic Mr. Peter Leriche 0 639 13 Rock -Rock R -Soil R]
Analytical Requis	ition		
Geochemical:[Assay:[Comments:[None Au Assay Au >500 ppb, Cu >		CP:[30]
Delivery Informat	ion Rep	orting Date:[Ju	ı 1 02, 1990]
Principal Destina	tion (Hardcopy,Fascimile	,Invoice)	
Address:[City/Province:[Country/Postal:[Attention:[Reliance Geological Ser 241 East 1st Street North Vancouver, B.C. V7L 1B4 Mr. Peter Leriche (604)986-6150	vices Ltd.]]]]]
Secondary Destina	tion (Hardcopy)		
Company:[Address:[City/Province:[Country/Postal:[Attention:[Facsimile:[n]]]]]

Approved by:

1 data pages in this report.

B.C. Certified Assayers

IPL CODE: 900702-18:05:16

Report: 9000465 R	Reliance Geologica	Servic	es Ltd.		Pro,	ject: 63	39				Page	1 of	1	Section	1 of	2
Sample Name	Туре	Cu %	Au ppb	Ag ppm	A1 %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Со ррт	Cr ppm	Cu ppm	Fe %	Hg ppm	K %
PLF 89-R 1	Rock	1.40	260	1.3	2.39	273	<2	<2	0.31	0.8	163	51	13020	>5.00	<3	<0.01
PLF 89-R 2	Rock		20	0.2	1.33	12	<2	<2	0.94	<0.1	23	41	70	>5.00	<3	0.08
PLF 89-R 3	Rock		5	0.2	2.34	12	40	<2	1.62	<0.1	20	43	25	4.25	<3	0.09
PLF 89-R 4	Rock		10	0.2	1.74	13	94	<2	0.67	<0.1	16	27	14	4.33	<3	0.07
PLF 89-R 5	Rock		5	0.2	1.39	8	19	<2	3.00	<0.1	18	31	34	3.92	<3	0.12
VWF 90-R 1	Rock		10	0.1	0.60	5	<2	<2	7.26	<0.1	42	48	38	>5.00	<3	0.10
VWF 90-R 2	Rock		5	0.2	1.71	9	241	<2	2.56	<0.1	19	25	40	3.94	<3	0.12
VWF 90-R 3	Rock		<5	0.1	2.10	17	<2	4	0.76	<0.1	49	133	102	>5.00	<3	0.03
VWF 90-R 4	Rock	3.61	35	8.3	0.30	18	<2	<2	>10.00	<0.1	39	16	>20000	>5.00	<3	<0.01
VWF 90-R 5	Rock	0.74	125	1.8	0.47	1941	<2	<2	9.56	0.7	71	131	7325	>5.00	176	0.09
VWF 90-R 6	Rock	4.45	30	9.7	0.28	34	<2	<2	8.76	1.7	77	44	>20000	>5.00	<3	<0.01
VWF 90-R 7	Rock		40	0.4	0.12	18	<2	<2	0.48	<0.1	76	119	110	>5.00	<3	<0.01
VWF 90-R 8	Rock	0.26	15	0.7	0.48	430	<2	<2	4.99	0.4	10	27	2630	2.59	140	0.12

0.01 Minimum Detection 0.01 0.1 0.01 2 0.01 0.1 0.01 100.00 10000 100.0 10.00 10000.0 10000 10000 20000 5.00 10.00 Maximum Detection 5.00 10000 10000 10000 10000 Method Assay FA/AAS ICP -- = Not Analysed unr = Not Requested ins = Insufficient Sample

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Report: 9000465 R	Reliance Geold	Project: 639							Page	1 of 1	Section 2 of 2						
Sample Name	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %	V ppm	W ppm	Zn ppm	Zr ppm
PLF 89-R 1 PLF 89-R 2	<2 4	1.73 1.59	524 388	8 4	<0.01 0.01	74 9	0.12 0.07	14 2	<5 <5	10	6	35	0.15	130	< 5	146	3
PLF 89-R 3	6	1.88	713	1	0.13	8	0.10	3	<5	14	74	<10 <10	<0.01 0.01	63 129	<5 <5	28 23	<1 <1
PLF 89-R 4 PLF 89-R 5	3 9	1.72 1.64	623 690	2 1	0.05 0.06	9 8	0.11 0.09	<2 2	<5 <5	10 11	28 66	<10 <10	0.03 <0.01	139 99	<5 <5	14 30	1 <1
VWF 90-R 1	<2	3.11	1812	3	<0.01	97	0.04	3	< 5	21	156	<10	<0.01	108	<5	128	<1
VWF 90-R 2	6	1.69	583	5	0.08	7	0.09	<2	<5 <5	13	63	<10	0.02	125	<5	27	1
VWF 90-R 3 VWF 90-R 4	<2 <2	3.15 0.24	557 3564	2 4	0.05 <0.01	91 17	0.07 0.11	<2 3	7 < 5	8 1	12 136	10 <10	0.35 <0.01	223 7	<5 <5	53 82	1 <1
VWF 90-R 5	<2	4.54	1240	4	<0.01	255	0.05	5	>1000	19	203	<10	<0.01	95	<5	650	<1
VWF 90-R 6	<2	0.32	3237	3	<0.01	34	0.16	<2	14	<1	45	10	<0.01	8	<5	86	<1
VWF 90-R 7 VWF 90-R 8	<2 3	0.14 1.65	156 527	2 3	<0.01 <0.01	12 7	0.03 0.10	4 2	6 438	<1 12	6 103	24 <10	<0.01 <0.01	25 64	<5 <5	27 343	<1 <1

Minimum Detection 0.01 0.01 0.01 10 0.01 5 10.00 1000 20000 10000 Maximum Detection 10000 10000 1000 5.00 10000 5.00 20000 1000 10000 10000 1.00 1000 10000 ICP ICP Method ICP -- = Not Analysed unr = Not Requested ins = Insufficient Sample



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Method of ICP Multi-element Analyses

- (a) 0.50 grams of sample is digested with diluted aqua regia solution by heating in a hot water bath for 90 minutes, then cooled, bulked up to a fixed volume with demineralized water, and thoroughly mixed.
- (b) The specific elements are determined using an Inductively Coupled Argon Plasma spectrophotometer. All elements are corrected for inter-element interference. All data are subsequently stored onto computer diskette.
- * Aqua regia leaching is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

QUALITY CONTROL

The machine is calibrated using six known standards and a blank. Another blank, which was digested with the samples, and a standard are tested before any samples to confirm the calibration. A maximum of 20 samples are analysed, and then a standard, also digested with the samples, is run. A known standard with characteristics best matching the samples is chosen and tested. Another 20 samples are analysed, with the last one being a random reweigh of one of the samples. The standard used at the beginning is rerun. This procedure is repeated for all of the samples.

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Method of Gold analysis by Fire Assay / AAS

- (a) 20.0 to 30.0 grams of sample is mixed with a combination of fluxes in a fusion pot. The sample is then fused at high temperature to form a lead "button".
- (b) The precious metals are extracted by cupellation. Any Silver is dissolved by nitric acid and decanted. The gold bead is then dissolved in boiling concentrated aqua regia solution heated by a hot water bath.
- (c) The gold in solution is determined with an Atomic Absorption Spectrometer. The gold value, in parts per billion, is calculated by comparision with a set of known gold standards.

QUALITY CONTROL

Every fusion of 24 pots contains 22 samples, one internal standard or blank, and a random reweigh of one of the samples. Samples with anomalous gold values greater than 500 ppb are automatically checked by Fire Assay/AA methods. Samples with gold values greater than 10000 ppb are automatically checked by Fire Assay/Gravimetric methods.

