

672838

FROST LAKE

DR. / E.W GROVE
~~FROST / GROVE~~

1985

BEAU PRE-EXPLORATIONS LTD.

VICTORIA, B.C.

GEOLOGY AND WORK PROPOSAL

ON THE

BEAU PRE EXPLORATIONS LTD.

FROST LAKE PROPERTY

VICTORIA M.D.

N.T.S. 92C/9E

(124°20'W; 48°45'N)

BY

EDWARD W. GROVE, Ph.D., P.Eng.

VICTORIA, B.C.

OCTOBER 25, 1985

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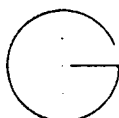
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SUMMARY

Beau Pre Explorations Ltd.'s Frost Lake property lies about 16 kilometers south of Cowichan Lake. The property includes two staked mineral claims comprising a total of 40 units. Access to the property is by logging road from Mesachie Lake near the east end of Cowichan Lake. Country rocks in the area include massive volcanic rocks with intercalated limestone overlain by thick extensive limestone/sedimentary units which together form part of the local Vancouver Group. These units have all been cut by stocklike dioritic intrusions and aplitic dikes. Significant porphyry, skarn and possibly vein type sulfide mineralization have been found in place north of Frost Lake. Some preliminary exploration of this material has taken place suggesting a potential for copper-gold deposits in the area. Preliminary prospecting of the general area has shown the presence of large massive high grade cupriferous sulfide float boulders to both the southwest and southeast.

Together, results showing highly anomalous gold in soils, gold in cupriferous sulfides, the presence of unexplored extensive skarn, and the presence of probably locally sourced sulfide float suggest the area should be explored carefully for potentially commercial copper-gold deposits. A basic exploration program expected to cost about \$55,000 is proposed.

RECOMMENDATIONS

An early incomplete soil geochemistry survey reported strongly anomalous gold and copper along the northeast boundary of an old Western Mines grid. New sampling has also shown the presence of a broad auriferous zone southeast of the old grid in unexplored ground east of Frost Lake. It is recommended



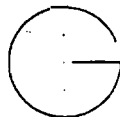
here that the soil geochemistry be extended south to include Frost Lake, the new skarn zone and the previously unmapped intrusive east of Frost Lake. The geology of the general area should be remapped, the anomalous gold areas examined in detail, sampled, and trenched if time permits. As part of this preliminary program the local streams should be panned and submitted for heavy metal analysis.

This program, including helicopter transportation, is expected to cost about \$55,000.

INTRODUCTION

The FRS #1 and HELGA #1 claims were purchased by Beau Pre Explorations Ltd. from Forston Shandler of Victoria in 1983. While prospecting along East Lens Creek, Mr. Shandler located auriferous copper rich sulfide float boulders. Further prospecting by Beau Pre showed the presence of similar material on West Lens Creek and north of Frost Lake. In 1977 Western Mines Limited examined part of the area north of Frost Lake where they concentrated on a dioritic stock which contained disseminated sulfide. The Western Mines survey noted a number of sulfide skarn zones which also contained significant copper-gold values. Work was not continued and the Conquest-Victor property was subsequently abandoned. Little or no work was performed on the area up to 1983.

The writer spent three days on the property in the Fall of 1985 examining the general area, some of the known showings, and mapped and sampled a new skarn zone. This report outlining the mineral potential of the claims and work proposal has been written at the request of Mr. Robert Beaupre, President, Beau Pre Explorations Ltd.



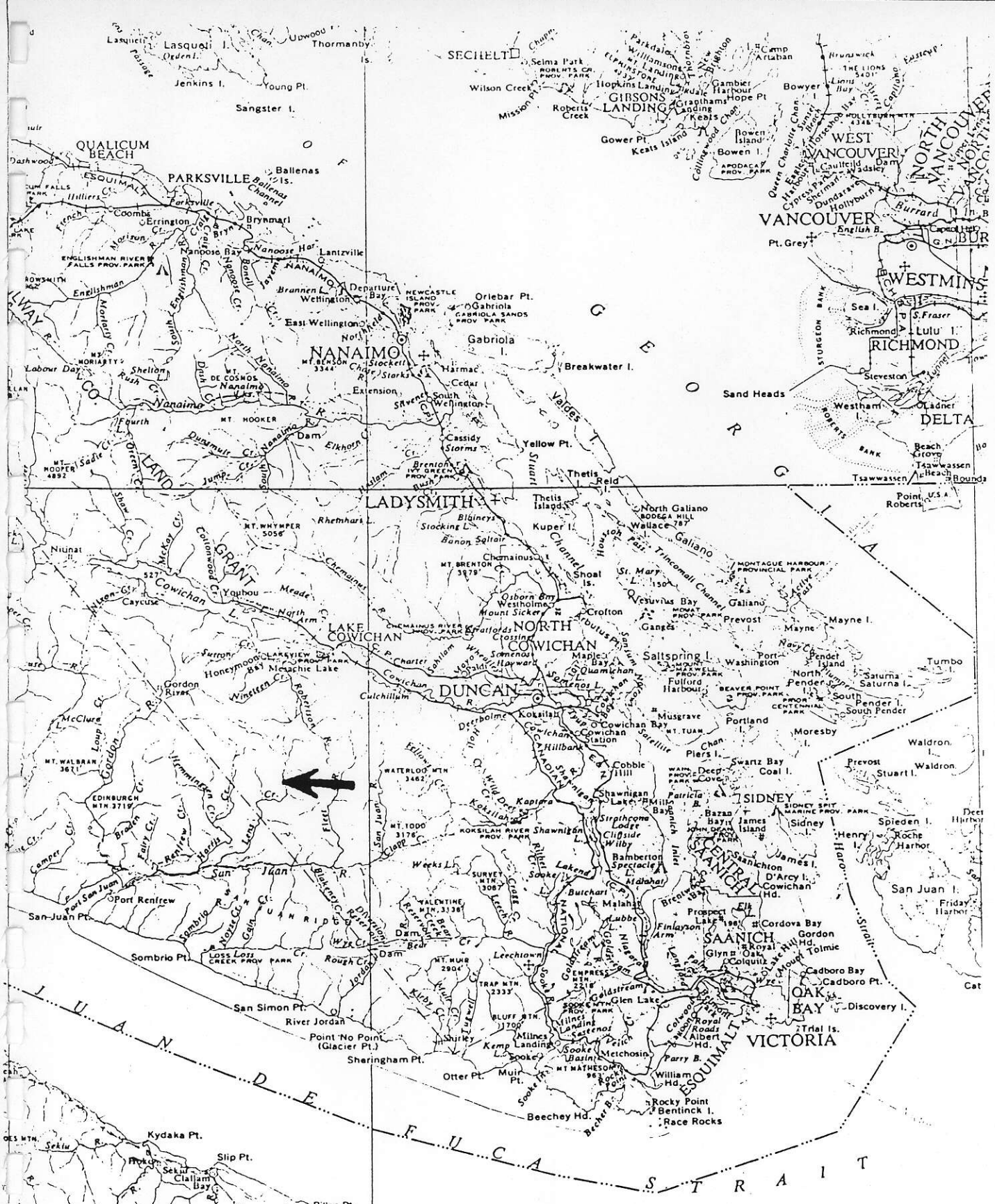
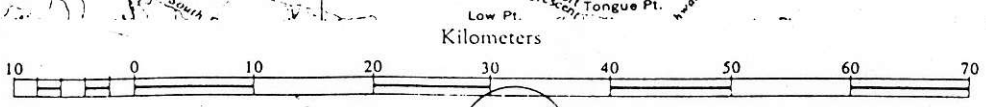


FIGURE 1 LOCATION MAP



Dungeness Spit
New Dungeness Bay
Dungeness
Jamestown
Port Williams

PHYSIOGRAPHY AND ACCESS

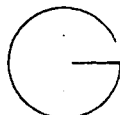
Beau Pre Explorations Ltd.'s Frost Lake claims are located about 16 kilometers south of Mesachie Lake, a resort near the east end of Cowichan Lake on southern Vancouver Island. From Victoria access to the area is by Highway No. 1, then west on the paved Cowichan Lake highway, then south on excellent logging roads to the claims area (Figure 1).

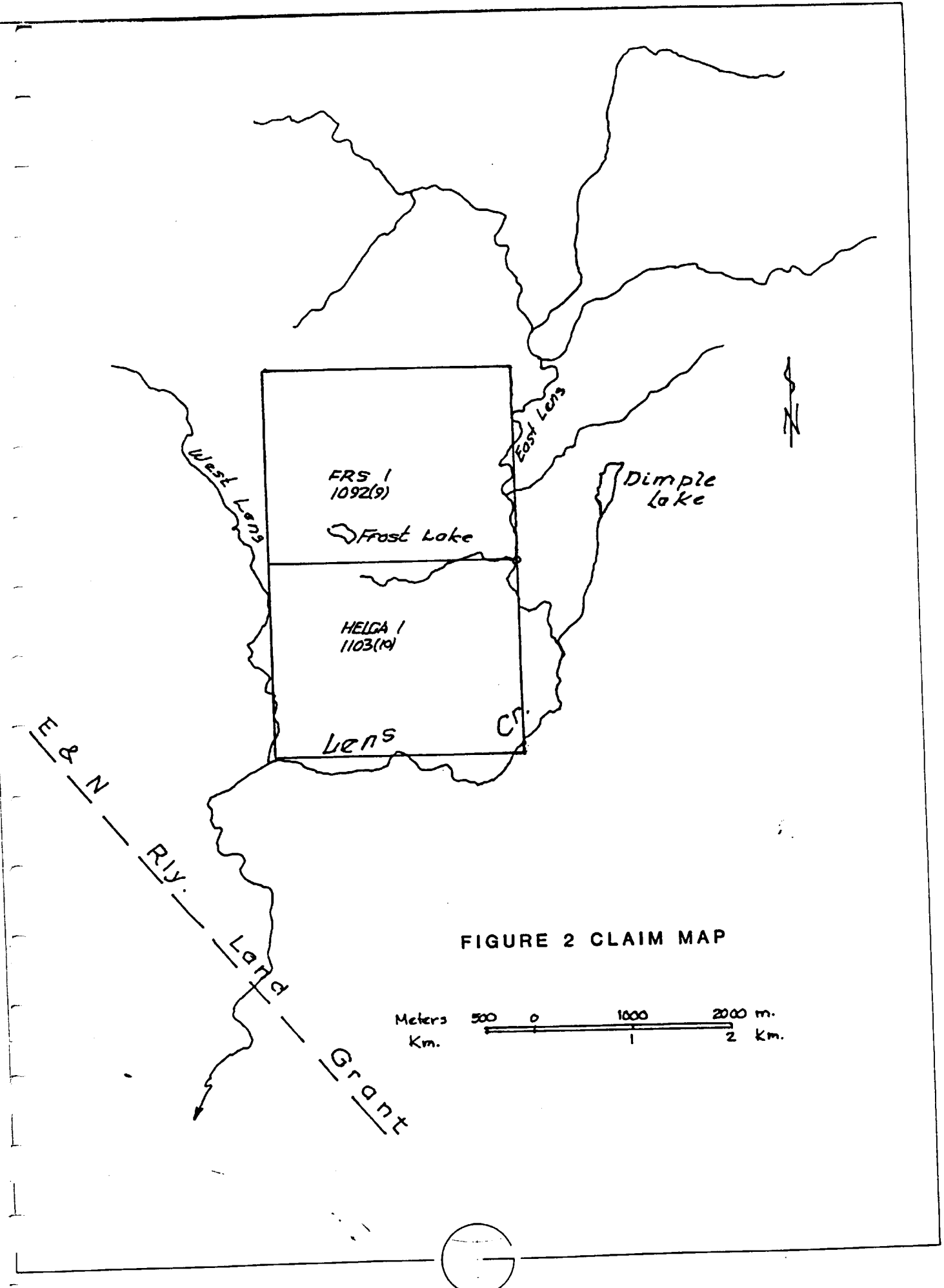
The two claims lie across an upland area lying between West Lens and East Lens creeks which flow southerly to join the San Juan River. On the claims the generally rounded topography rises from about 300 meters elevation along the lower creeks to about 900 meters just north of Frost Lake. Much of this area has been logged and is crossed by a large number of logging roads many of which show clean exposures in the extensive rock cuts. Until only two years ago the central Frost Lake part of the claims was still easily accessible by truck from several directions. Heavy winter rains have since washed out the shortest routes as well as a number of bridges. The quickest foot access is now about 3 kilometers from the TR8 West Lens Main junction. The lower part of TR8 has been washed out but could be repaired easily giving good quick access to the Frost Lake road system.

CLAIMS

Beau Pre Explorations Ltd.'s Frost Lake property includes two staked mineral claims comprising 40 units (Figure 2):

<u>Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Anniversary Date</u>
FRS #1	20	1092	September 29, 1986
HELGA #1	<u>20</u>	1103	October 14, 1986
	40		





FRS I
1092(9)

Frost Lake

HELGA I
1103(14)

Lens

CR.

West Lens

East Lens

Dimple
lake

E & N
Rly.
Land
Grant

FIGURE 2 CLAIM MAP

Meters 500 0 1000 2000 m.
Km. 1 2 Km.



HISTORY

A minor amount of work was done in 1971 near Frost Lake when the property was named the Red Dog. Work performed by Western Mines Limited in 1977 (Vanguard-Conquest property) represents the only known major attempt to study the sulfide mineral exposures just north of Frost Lake. This work included some regional mapping and silt sampling plus detailed mapping, magnetics, a soil survey, and rock sampling on a 200-foot grid established over a diorite stock north of Frost Lake.

In 1983 float sampling led prospector Forston Shandler and Beau Pre Explorations Ltd. into the Frost Lake showings. Staking and further prospecting in 1983 and 1984 followed.

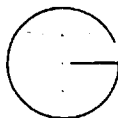
GEOLOGY

REGIONAL

Limited mapping by Western Mines Limited suggested that the general area is underlain by extensive massive Karmutsen Formation volcanic rocks, Quatsino Formation limestone, and possibly Bonanza Formation shale units. These country rocks have been cut by younger fine grained, stock-like diorite intrusives as well as a number of aplitic/dacitic dike swarms. Rock structure was described as complex (Saleken, 1977).

PROPERTY

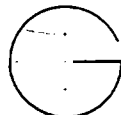
So far only the roads leading into Frost Lake and a relatively small area north of Frost Lake have been examined in any detail. The Western Mines mapping north of Frost Lake



suggests a northwesterly trending, steeply northeasterly dipping sequence of massive Karmutsen volcanics overlain by massive Quatsino limestone, cut by one small dioritic stock and by dacitic dike swarms. The apparent east-west faulting suggests repetition of the sequence in fault blocks (Saleken, 1977, Figure 4).

Detailed work by this writer has shown that in this area the massive fine grained andesitic volcanic sequence includes a large number of small to extensive grey crinoidal limestone lenses as intercalations. These are prominent at the west end of Frost Lake and along the roads northeast of this small lake. In addition a second dioritic intrusive has been partially outlined northeast of Frost Lake (Figure 3). Because of the possibility of further skarn and even porphyry-like mineralization such as has already been found, further detailed mapping and revision of the local geological framework is required. Crinoidal limestone samples have been collected for future conodont analysis in order to obtain a useful age for the limestone members and the involved volcanic units.

In addition to large scale faulting the volcanic and sedimentary rocks have been intensely deformed along the contact with the dioritic intrusives. Garnetite skarn is also a common feature of this contact relationship. Overall the generally massive, structureless andesitic volcanics show extensive low grade pumpellyite alteration while hornblende hornfels is typical of the contact zone. The massive grey, crinoidal limestone bands in the Frost Lake area display relatively minor recrystallization and bleaching as compared to the coarse white marbleized units found to the south near the junction of West Lens and Lens Creek. Contact skarns are also well developed in the intercalated volcanic-limestone sequence



GENERAL CLAIM GEOLOGY
FROST LAKE

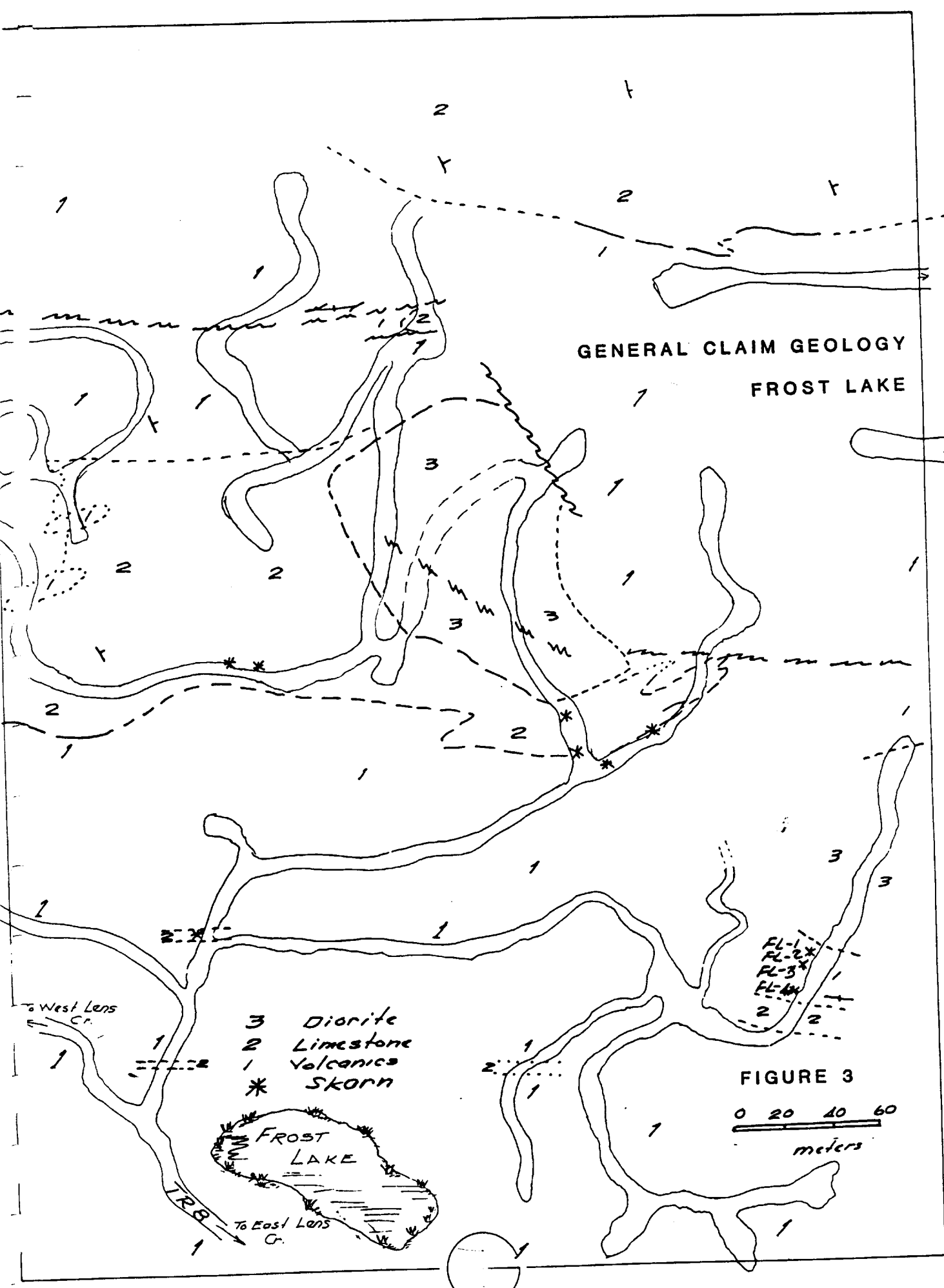


FIGURE 3

0 20 40 60
meters

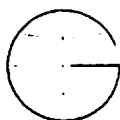
north of Frost Lake. These skarns vary in composition and extent but commonly include auriferous copper rich garnetite in zones from a few meters wide up to perhaps 80 meters wide. To date, skarnification appears to be most intense and widespread just northeast of Frost Lake.

MINERALIZATION

Massive sulfide float boulders found by prospectors in 1983 near the junction of TR8 and West Lens Main led to restaking the Frost Lake mineralizations. These boulders were massive pyrite and chalcopyrite which assayed from 0.74% Cu to 19.50% Cu, from 0.01 to 0.30 oz/T Ag, and 0.002 to 0.018 oz./T Au (Appendix I). Boulder tracing suggests that the above and other similar material form a crude train leading to the general Frost Lake area where Western Mines Limited examined porphyry-like and skarn mineralization in 1977. Because of restraints the writer has accepted Western Mines results and has added one major new skarn zone to the local inventory of gold-copper deposits. The various types of mineralization will be described here in brief.

PORPHYRY TYPE

A fine grained dioritic stock about 250 meters wide by 320 meters long has cut along an apparently northwest trending contact (or fault) between massive limestone and andesitic volcanics. The stock exhibits moderate pyritization (3%) with occasional chalcopyrite along close spaced joints and fractures. Twenty-three rock analyses by Western gave from 9 to 59 ppm Cu and from <5 to 20 ppb Au (Saleken, 1977).



SKARN TYPE

Sulfide, oxide, and various secondary iron and copper minerals have been developed in both the volcanic and limestone units near intrusive contacts and as contact skarns. In the volcanic rocks the skarn generally includes magnetite, chalcopryrite, pyrite, as well as hematite, goethite, covellite, malachite, and azurite. Pyroxene and epidote and quartz are typical of this assemblage. In the limestone, the minerals include pyrite, chalcopryrite, rare pyrrotite, covellite and goethite. Garnet, epidote, and some actinolite form this common assemblage in variable amounts ranging from dense massive garnetite to massive sulfide lenses. Contacts between these skarns and the enclosing limestone and volcanic rocks are generally irregular but very sharp.

Western Mines Limited sampled part of one skarn zone "200 feet wide by 600 feet long" formed at the southeast end of the diorite stock. Six samples, four of which were leached gossan, assayed from 0.149% Cu to 1.710% Cu, from 0.08 to 0.45 oz./T Ag, and from 0.001 to 0.01 oz./T Au over widths of from 2 to 7 feet (Saleken, 1977).

The writer sampled one new skarn zone found cut by a logging road northeast of Frost Lake (Figure 3). In this area the road cuts across an 80 meter wide zone in which contact skarns are strongly leached forming deep goethite rich caps over lenticular masses of massive sulfide and garnetite. Four samples were taken as follows (Appendix II):



<u>Sample Number</u>	<u>Width meters</u>	<u>Au opt</u>	<u>Ag opt</u>	<u>Cu %</u>	<u>Fe Tot %</u>
R2 FL-1	6	<0.002	0.02	0.03	14.52
R2 FL-2	4	<0.002	0.03	0.08	18.33
R2 FL-3	8	<0.002	0.07	0.23	20.33
R2 FL-4	5	<0.002	0.09	0.52	21.66

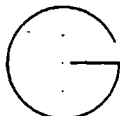
Of the four, only FL-4 represented relatively fresh massive sulfide.

GEOCHEMISTRY

In 1977 Western Mines Limited conducted a 200 foot by 400 foot grid soil sample survey on an area about 3200 feet by 3000 feet over the mineralized diorite stock and adjacent wall rocks. The samples were analysed for Cu, Au, Pb, Zn, and Ag. Contouring this data suggests crudely east-west trending anomalous zones roughly coincident with the intrusive/country rock contacts and parallel to the local country structure. The strongest gold soil anomalies (>15, 25, 170 ppb) lie east and southeast of the stock in the wide skarn zone. Plotting the other metals shows similar trends and orientations. These anomalous zones were apparently disregarded by the Western Mines crew.

CONCLUSIONS

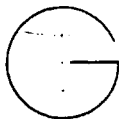
A brief examination of part of the Frost Lake claim area has suggested that the diorite stocks/plugs and occurrences of gold bearing copper skarn are much more extensive than previously recorded. Strongly anomalous soil gold results probably related to skarn have not yet been examined to



determine the source material. The overall results to date suggest more widespread auriferous/cupriferous skarn mineralization than known which may have future commercial potential.

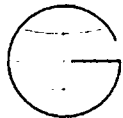
REFERENCES

Saleken, L.W. (1977): Conquest Project, Report on Geology, Geochemistry and Magnetics, Conquest-Victor Claims, for Western Mines Limited.



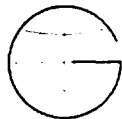
1985 EXPLORATION BUDGET - FROST LAKE PROPERTY

1.	Soil Geochemistry (Base Line - 30 x 50 meter grid)		
	600 samples @ \$15.00/sample	\$9,000	
	Silt samples	800	
	Rock samples	600	
	2 prospectors/samplers @ \$125/man/day	2,500	
	Field expenses (camp)	1,000	
	Sundries	<u>500</u>	
			\$14,400
2.	Transportation		
	Helicopter @ \$600/hour	1,600	
	Truck @ \$0.35/km	<u>400</u>	
			2,000
3.	Geological Mapping		
	1 Geologist & 1 assistant	4,000	
	Room & Board	600	
	Transportation	800	
	Samples	<u>400</u>	
			5,800
4.	Road Work (temporary access)		10,000
5.	Trenching (all found)	4,500	
	Samples	<u>800</u>	
			5,300
6.	Supervision (including compilations, reports)		5,500
7.	Management		<u>5,000</u>
		Sub-Total	48,000
	Contingencies @ 15% (rounded)		<u>7,000</u>
	Proposed Budget	Total	\$55,000



STATEMENT OF EXPENDITURE

<u>Field Personnel</u>	Date	
E.W. Grove, Ph.D., P.Eng. Consultant	September 1985 3 days @ \$450/day	\$1,350
J.P. Grove Helper	1 day @ \$75/day	75
<u>Field Travel</u>	September 1985 @ \$0.35/kilometer	150
<u>Assaying</u>		118
<u>Report Preparation</u>		
E. W. Grove	2 day @ \$450/day	900
Word processing		50
Printing & materials		<u>58</u>
	TOTAL	\$2,700 =====



CERTIFICATE

I, Edward W. Grove, of the Municipality of Central Saanich, do hereby certify that:

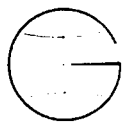
1. I am a consulting geologist with an office at 6751 Barbara Drive, Victoria, British Columbia.
2. I am a graduate of the University of British Columbia (1955) with a Master's degree, Honours Geology (M.Sc. Hon. Geol.) and a graduate of McGill University (1973) with a doctorate in Geological Sciences (Ph.D.).
3. I have practiced my profession continuously since graduation while being employed by such companies as the Consolidated Mining and Smelting Co. of Canada Ltd., British Yukon Exploration Ltd., the Quebec Dept. of Natural Resources, and the British Columbia Ministry of Energy, Mines and Petroleum Resources. I have been in corporate consulting practice since January 1981.
4. I have no direct, indirect or contingent interest in Beau Pre Explorations Ltd. or any of its claims nor do I expect to acquire any such interest.
5. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
6. I consent to the use of this report in a Prospectus or Statement of Material Facts.

October 25, 1985
Victoria, B.C.



Edward W. Grove, Ph.D., P.Eng.

APPENDIX I





CHEMEX LABS LTD.

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

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

ANALYTICAL CHEMISTS

GEOCHEMISTS

REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

SHANDLER, FORSTON R.

** CERT. # : A8315558-CC1-A
INVOICE # : 18315558
DATE : 20-CCT-83
P.O. # : NONE

042 HODGSON PLACE
ICTORIA, B.C.
V8X 2K5

sample description	Prep code	Cu %	Ag FA oz/T	Au FA oz/T	
SHANDLER #1	207	19.50	0.01	0.018	- <i>Switzerland</i> <i>level 10</i> --
SHANDLER #2	207	14.00	0.12	0.010	<i>Switzerland</i> --
SHANDLER #3	207	0.74	0.07	0.005	<i>Switzerland</i> <i>on West Body</i> --

Non Marini
.....
Registered Assayer, Province of British Columbia

MEMBER
CANADIAN TESTING
ASSOCIATION



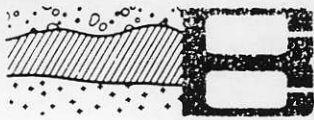
66 PROJECT: NONE GIVEN

PAGE 1

ELEMENT	Au	As	Cu	Pb	Zn	Sn	NOTES
U TS	OFT	OFT	PCT	PCT	PCT	PCT	
	<0.002	0.11	2.00				<i>Decker/Shoulder</i>
	0.011	0.28	17.40				
	0.005	0.30	9.91				
	<0.002						<i>BPEX¹⁰ Station 366 GRAB SAMPLES</i>
	<0.002						
	<0.002						<i>WALKER/CK COSSAN QUARRY 6" QUARTZ/Vein quartz Walker Creek</i>
	0.002	0.04	0.05	<0.01	<0.01	<0.01	
	0.002	0.02					

APPENDIX II





1922

1922

1922

1922

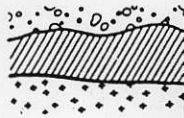
ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTIVE	METHOD
1	W. Gold - FIRE ASSAY	4	0.001 OPT		
2	A. Silver	4	0.01 OPT		
3	Cu. Copper	4	0.01 PCT		
4	Fe:st Iron (total)	4	0.01 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
2 ROCK OR BED ROCK	4	2 -150	4	ASSAY OVER	4

REPORT COPIES TO: DR. E. W. GROVE

INVOICE TO: DR. E. W. GROVE

ir-C g & Company Ltd.
mberton Ave.
Vancouver, B.C.
a V7P 2R5
(6 985-0681
04 1667



BONDAR-CLEGG

Certificate
of Analysis

T: 25-2815

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REMARKS	ELEMENT UNITS	Au OPT	Ag OPT	Cu PCT	FeTot PCT
-1		<0.002	0.02	0.03	14.52
-2		<0.002	0.03	0.08	18.33
-3		<0.002	0.07	0.23	20.33
-4		<0.002	0.09	0.52	21.66

Registered Assayer, Province of British Columbia