

## STEEP PROPERTY TABLE OF CONTENTS

## PAGE #

1.0	SUMMARY	1
2.0	<ul> <li>INTRODUCTION</li></ul>	2 2
3.0	EXPLORATION HISTORY 3.1 Regional History	
4.0	GEOLOGY 4.1 Property Geology 4.2 Lithologies	5
5.0	1996 EXPLORATION PROGRAM.         5.1 Geological Mapping         5.2 Geochemistry         5.2.1 Sampling Procedure         5.2.2 Rock Geochemistry         5.2.3 Stream Silt Geochemistry         5.2.4 Soil Geochemistry	7 7 7 8 8
5.0 6.0	<ul> <li>5.1 Geological Mapping</li></ul>	7 7 8 8 9
	<ul> <li>5.1 Geological Mapping</li> <li>5.2 Geochemistry</li> <li>5.2.1 Sampling Procedure</li> <li>5.2.2 Rock Geochemistry</li> <li>5.2.3 Stream Silt Geochemistry</li> <li>5.2.4 Soil Geochemistry</li> </ul>	7 7 8 8 9

()

## **STEEP PROPERTY**

## PAGE #

## LIST OF FIGURES:

1)	Location Map	3
2)	Property Claim Map	4

#### LIST OF TABLES:

1)	Property Claims Status	2
	Table of Formations	
	Lithogeochemical Analysis	
	Stream silt Geochemical Analysis	
	Soil Geochemical Analysis	

## LIST OF APPENDICES:

- I) Itemized Cost Statement
- II) Summary of Personnel
- III) Analytical Procedure
- IV) Geochemical Lab Reports
- V) Rock Sample Descriptions
- VI) Statement of Qualifications

## LIST OF MAPS:

- 1) Property Geology and Sample Locations 1:10,000 scale
- 2) Stream Silt Geochemistry 1:10,000 scale
- 3) Rock Geochemistry 1:10,000 scale
- 4) Soil Geochemistry 1:10,000 scale

## 1.0 SUMMARY

The Steep property comprises 26 units located approximately 125 kilometres southeast of Watson Lake, Yukon. Access to the property is via helicopter from Dease Lake or Watson Lake.

The property is located in the Cry Lake map area in north-central British Columbia and lies approximately 20 km. northeast of Blue Sheep Lake. The property covers an area of high relief with excellent bedrock exposure. The claim is underlain by marine, Silurian to Devonian carbonates and Devonian to Mississippian Earn Group shales. The Earn Group shales are believed to be the ore-bearing source rock and strike in a northwest direction.

A review of all available information indicates that the area has experienced little prospecting, probably due to the remoteness of the area. No large economic mineral occurrences are reported within the immediate area.

The 1996 exploration program consisted of helicopter supported reconnaissance prospecting, geological mapping, rock chip, stream silt and soil sampling with the objective of evaluating the property's potential for hosting economic base metal deposits. Reconnaissance prospecting and geochemical sampling indicated that the sulphide mineralization is restricted to the Earn Group shales. Geochemical analysis of rock chip, silt and soil samples yielded elevated to anomalous values for Zn, Ba, Pb and Cu. A rock grab sample at the shale-carbonate contact returned anomalous values for Zn (7,470 ppm) and Pb (463 ppm).

## 2.0 INTRODUCTION:

The Cry Lake Syndicate conducted a field exploration program on the Steep property located in the Cry Lake Map area of north-central British Columbia. Exploration was performed by a 2-man crew based out of Boulder City on the Tournagain River.

The objective of this program was to evaluate the property's economic potential through follow-up exploration on a geochemical anomaly delineated by the 1996 Cry Lake Regional Geochemical Survey, as well as to provide reconnaissance coverage throughout the property. The 1996 program was conducted during the period of August 25 to August 30 1996 and included detailed geological mapping, prospecting concurrent with rock, silt and soil sampling.

A total of 27 rock grab, float and chip samples, 25 soil samples and 26 silt samples were collected from the claim area. Geological and geochemical data were compiled on 1:10,000 scale contour maps.

All geochemical samples were shipped to Acme Analytical Labs in Vancouver for geochemical analysis, utilizing the 30 element ICP method. Analytical procedures are described in Appendix III and analytical results are presented in Appendix IV.

#### 2.1 Location and Access:

The Steep property is located in north-central British Columbia approximately 125 km southeast of Watson Lake, Yukon (Figure 1). The claims are situated within the NTS map sheet 104I/16E and centered about 58° 57' 30"N latitude and 128° 00' 30"W longitude. Access to the property is via helicopter from Dease Lake, B.C. or Watson Lake, Yukon.

#### 2.2 Physiography, Vegetation and Climate:

The Steep property is located within the Cassiar Mountains physiographic division which is characterized by moderate to steep mountainous ranges and broad forested valleys. The property lies along the Omineca Tectonic Belt within the Kechika range which has relief up to 750 metres. Excellent bedrock exposures exist within the claim area owing to the area being mostly above treeline.

Forests of spruce and balsam generally cover most of the region. Precipitation is moderate, averaging 50-60 cm. per annum with temperatures ranging between -35° C and 30° C. The climate is continental type with warm summers and long, cold winters characterized by moderate to heavy snowfall between 3-4 metres.

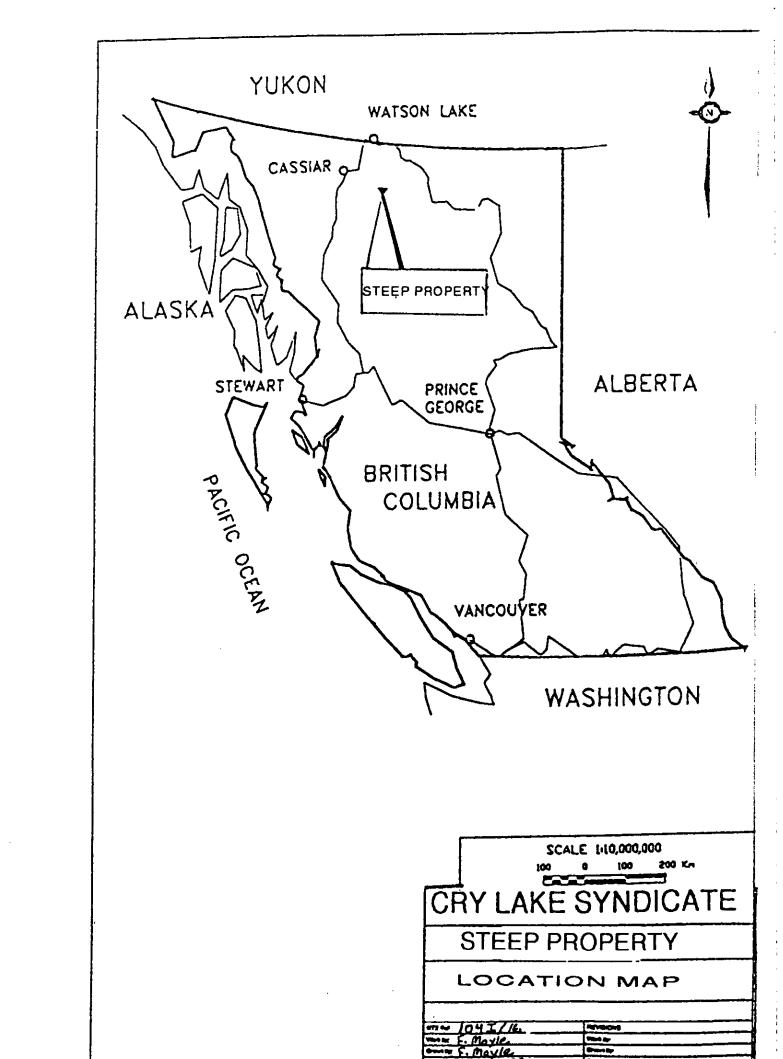
#### 2.3 Property Status and Ownership:

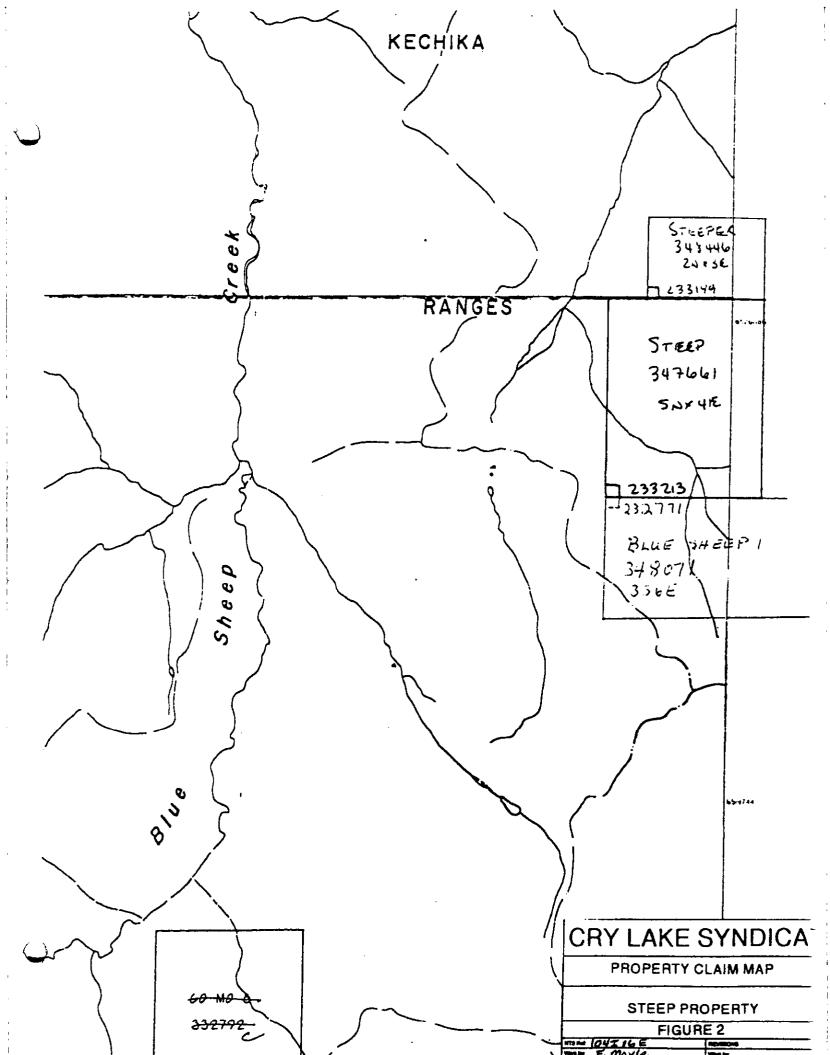
ł

The Steep property (Figure 2) consists of 2 claims totalling 26 units located within the Liard Mining Division. The claims were staked by Francis Moyle for Cusac Gold Mines Ltd. The property is owned by 3 separate companies, Cusac Gold Mines Ltd. (33.3%), Demand Gold Ltd. (33.3%) and Pacific Bay Minerals Ltd. (33.3%) which all form the Cry Lake Syndicate. Relevant claims data are tabulated in Table 1.

#### Table 1 - Steep Property Claim Status

<u>Claim Name</u>	<u>No. of Units</u>	<u>Tenure #</u>	<u>Recording Date</u>	Expiry Date
STEEP	20	347661	July 5, 1996	July 5, 2000
STEEPER	6	348446	July 16, 1996	July 16, 2000





## 3.0 EXPLORATION HISTORY:

### 3.1 Regional History:

The area has had limited prospecting and study in the past. Dr. H. Gabrielse has done some regional mapping of the area and contributed his accumulated work to the 1996 Cry Lake B.C. Government Geochemical Survey. Ten kilometres to the east of Blue Sheep Lake, a silver, copper and quartz vein outcrops within the Rosella limestones of the Atan Group on the Winco claim.

On the northeast end of Blue Sheep Lake, another silver, lead and zinc showing occurs within the Rosella limestones, 20 kilometres southwest of the Steep property. The remoteness of the area has led to little prospecting, however, the strong Zn and Ba signatures from the 1996 geochemical survey has drawn much attention to the area.

The Cirque deposit southeast of the Steep property, in the Gataga district, is a large SEDEX deposit hosted in Mid to Late Devonian Gunsteel Formation siliceous shales. This Zn-Pb-Ba-Ag deposit is similar to the style of deposition as that of the Steep property.

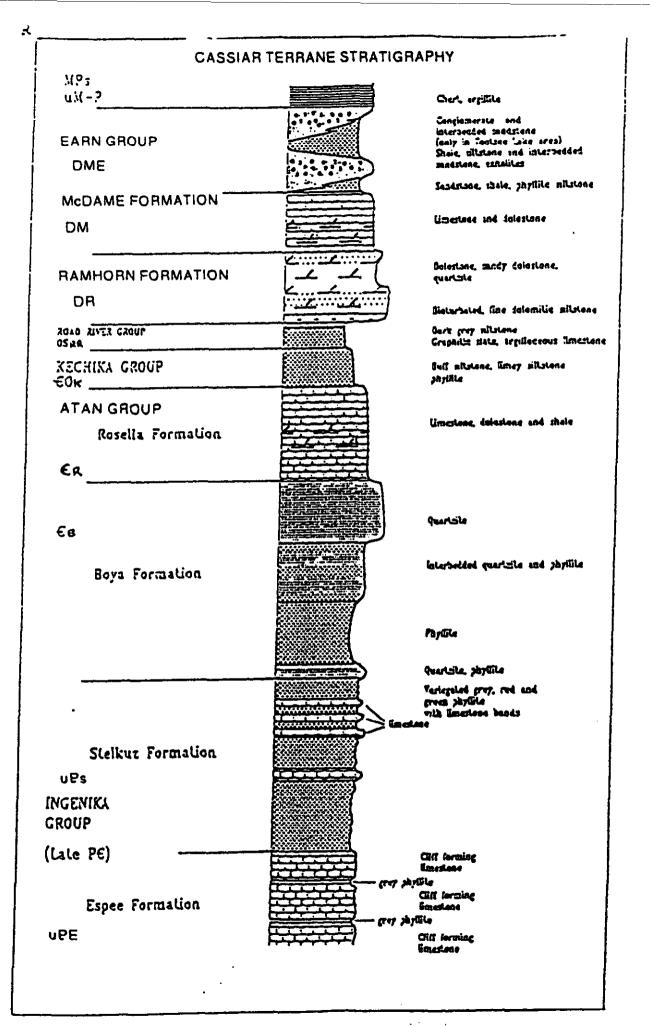
## 4.0 GEOLOGY:

#### 4.1 Property Geology:

The Steep property was geologically mapped and lithogeochemically sampled along with silt and soil samples by Cry Lake Syndicate personnel and these data were plotted on 1:10,000 scale contour maps. Approximately 80% of the property contains good outcrop exposures.

## 4.2 Lithologies:

Geological mapping on the Steep property has identified the primary lithologies underlying the claim as a package of Earn Group shales (DME) and undivided dolostones of the Sandpile, Ramhorn and McDame formations (SD), (Table 2). The Earn Group lithology at the Steep property includes black slate with siliciclastic components of gray to black chert and argillaceous chert. The black slates tend to have a greenish stain along cleavage faces. The Earn Group occurs within the Selwyn basin and its southerly extension, the Kechika Trough. Large economically important sedimentary exhalative (SEDEX) zinc-lead massive sulphide and bedded barite deposits occur in basinal clastic rocks of the Devono-Mississippian Earn Group within the northern Canadian Cordillera. Sedimentological and paleontological evidence indicates that the Earn Group deposits formed in tilted half-grabens along the rifted continental margin of ancestral North America.



.

•

<u>ر</u> ۲

The undivided Sandpile, Ramhorn and McDame formations consist of dolostone, dolomitic sandstone, limestone, shaly dolostone and minor siltstone and shale. Poorly preserved graptolites and crinoids are locally abundant. The McDame Group comprises middle to upper(?) Devonian reefal-lagoonal carbonates and is the host rock for the Midway manto deposit further north in the Tootsee lake map area.

The host rock for base metal SEDEX deposits in the Kechika Trough are typically carbonaceous cherty argillites and distal turbidites of the Lower Earn Group. The composition of these rocks indicates a starved, anoxic depositional environment. In the southern Kechika Trough, carbonate reefs developed along uplifted edges of tilted fault blocks. The onset of tectonic activity may have triggered exhalation of heated metaliferous brines and the development of growth faults. The timing of exhalative activity is roughly coincident with the end of starved basin sedimentation.

## 5.0 1996 EXPLORATION PROGRAM:

#### 5.1 Geological Mapping:

Approximately 80% of the property was evaluated by geological mapping, prospecting and random rock, silt and soil sampling.

## 5.2 Geochemistry:

#### 5.2.1 Sampling Procedure:

A total of 27 rock grab, float and chip samples, 25 soil samples and 26 silt samples were collected from the 1996 property evaluation program. Rock grab and chip samples were collected from outcrop exposures exhibiting favourable characteristics such as gossanous staining, sulphide content, shearing and alteration. Rock specimens were placed in marked plastic bags. All sample sites were marked with a fluorescent ribbon displaying the corresponding sample code.

Silt samples were collected every 30-50 metres along creeks flowing through the claim block. The silt samples were placed in marked plastic bags and the sample sites were marked with fluorescent ribbon displaying the corresponding sample code.

Page 7

Soil samples were randomly taken at locations exhibiting favourable characteristics such as gossanous staining, faulting, shearing and exposed lithological contacts. The majority of the soils collected appeared to have residual character and probably developed in situ. Glacial and glaciofluvial material is rare and bedrock generally occurs less than one metre from the surface. The soil samples were placed in marked paper soil bags and the sample sites were marked with fluorescent ribbon displaying the corresponding sample code. Analytical results are presented in Appendix IV and geochemical values are plotted on maps 2, 3 and 4. Ground control for mapping and sampling was provided by altimeter, compass, topo chain and the field crew was supplied with 1:10,000 scale topo maps for plotting data.

#### 5.2.2 Rock Geochemistry:

During the 1996 exploration program, 27 rock samples were collected. Analytical results are presented in Appendix IV and rock sample descriptions are recorded in Appendix V.

The majority of the rock samples were collected from areas of alteration, shearing, faulting and lithological contacts. Table 3 records anomalous values in Zn, Pb, and Ba.

## <u> Table 3 - Lithogeochemical Analysis (1996)</u>

Sample #	<u>Zn (ppm)</u>	<u>Pb (ppm)</u>	<u>Ba (%)</u>
FR 96-62	1,288	<3	11.84
TR 96-15	1,230	93	11.65
TR 96-34	4,937	1,028	0.06
TR 96-36	7,470	463	0.03

#### 5.2.3 Stream Silt Geochemistry:

During the 1996 exploration program, 26 stream silt samples were collected. Analytical results are presented in Appendix IV.

The stream silt samples were collected every 30-50 metres up streams flowing from the Steep property. Table 4 records anomalous values for Zn, Cu and Ba.

Page 8

## TABLE 4 - Stream Silt Geochemical Analysis (1996)

Sample #	<u>Zn (ppm)</u>	<u>Cu (ppm)</u>	<u>Ba (ppm)</u>
TW 96-19	1,660	70	1,220
TW 96-20	2,037	76	1,089
TW 96-22	1,638	410	278

#### 5.2.4 Soil Geochemistry:

During the 1996 exploration program, 25 soil samples were collected. Analytical results are presented in Appendix IV.

The soil samples were collected from areas of alteration, shearing, faulting and lithological contacts. Table 5 records anomalous values for Zn, Pb, and Ba.

### TABLE 5 - Soil Geochemical Analysis (1996)

Sample #	<u>Zn (ppm)</u>	<u>Cu (ppm)</u>	<u>Ba (ppm)</u>
TS 96-23	1,189	54	198
TS 96-37	1,587	29	631
TS 96-42	4,099	431	95
TS 96-44	3,431	303	96

## 6.0 CONCLUSIONS:

Prospecting, Geological mapping, lithogeochemical, soil and silt sampling were the focus of exploration activity on the Steep property during the 1996 reconnaissance program. Geological mapping has shown that the property covers an assemblage of northwest striking units of shale of the Devono-Mississippian Earn Group and carbonates of the undivided Sandpile, Ramhorn and McDame Formations.

The Earn Group shales formed within a half graben along the rifted continental margin of ancestral North America. With the onset of tectonic activity during the end of Frasnian-Famennian time, exhalation was triggered, forming heated metalliferous brines interbedded with slump breccias and the appearance of post ore sedimentary sequences. The timing of the exhalative event roughly corresponds with the end of starved basin sedimentation and the beginning of a major tectonic event that greatly modified the pattern of continental margin sedimentation in the northern Cordillera. The

۰.,

host rocks for the SEDEX deposits in the Kechika Trough area are generally carbonaceous cherty argillites and distal turbidites of the Lower Earn Group. The high zinc and barite values found in the rock and silt samples on the Steep property point toward a possible SEDEX vent source. The McDame carbonates on the Steep property is the same carbonate unit which hosts the manto-style deposits at the Midway property to the north. A similar style of manto deposit, accompanied with the probability of a SEDEX deposit is plausible on the Steep property and warrants further explorational study.

## 7.0 RECOMMENDATIONS:

Analytical results from the 1996 geochemical soil, rock and silt sampling program were excellent and point to the presence of a SEDEX-style base metal deposit of economic size and grade. Observations made during the program delineate two target areas with economic potential and warrant work comprised of the following:

- A follow-up soil sampling program should be initiated and comprised of 2 grids 500m x 500m over the soil and rock anomalous zones. The grids should cover the Earn group thrust contacts with samples taken at 25m intervals along 50m spaced grid lines.
- A ground geophysical program should be initiated following or concurrent with the geochemical survey. The geophysical program should involve VLF-EM and possibly I.P. surveys in order to outline any fault structures and associated mineralization.
- 3) Diamond drilling is recommended for a Phase II exploration program contingent upon positive results from the geochemical and geophysical surveys.

## **8.0 REFERENCES:**

Nelson, J.L., Bradford, J.A., 1993 Geology of the Midway-Cassiar Area, Northern British Columbia (104/0, 104/P). <u>Mineral Resources Division, Geological Survey Branch.</u>

Macintyre, D., Nelson, J.L., Devono-Mississippian SEDEX deposits of the northern Canadian Cordillera - a comparison of stratigraphic and structural settings. <u>British</u> <u>Columbia Ministry of Energy, Mines and Petroleum Resources.</u> Abstract (1994).

Page 10

# **APPENDIX I**

**Itemized Cost Statement** 

ī.

## **ITEMIZED COST STATEMENT**

## FIELD COSTS:

ł

<u>Salaries</u> F. Moyle T. Dunk	<u>Man Days</u> 6 days @ 6 days @	<u>Cost/Manday</u> \$190.00 \$135.00	\$ 1,140.00 8 810.00
		TOTAL	\$ 1,950.00
FIELD EXPENSES:			
Accommodation Meals Helicopter Time Helicopter Fuel Freight/Shipping Field Supplies & Material	<u>Man Days</u> 6 days @ 6 @ 3 hours @	<u>Cost/Manday</u> \$ 40.00 \$ 30.00 \$750.00/hour	<u>Total</u> \$ 240.00 \$ 180.00 \$2,250.00 \$ 210.00 \$ 110.00 \$ 100.00
		TOTAL	\$3,090.00
GEOCHEMICAL ANALY	<u>'SIS:</u>		
Rock Samples Soil Samples Silt/Pan Samples Pb/Zn/Ba Assay	<u>Samples</u> 27 @ 25 @ 26 @ 9 @	<u>Cost/Sample</u> \$17.12 \$14.07 \$15.20 \$19.15 TOTAL	<u>Total</u> \$ 462.24 \$ 351.75 \$ 395.20 <u>\$ 172.35</u> \$1,381.54
OFFICE COSTS:			
<u>Salaries</u> F. Moyle Autocad Digitizing	<u>Man Days</u> 6 days @ 14 hours @	<u>Cost/Manday</u> \$165.00 \$52.85/hour TOTAL	<u>Total</u> \$ 990.00 <u>\$ 740.00</u> \$1,730.00

TOTAL EXPENDITURES

<u>\$8,151.54</u>

# **APPENDIX II**

**Summary of Personnel** 

## SUMMARY OF PERSONNEL

÷

The following personnel are credited with the field work on the Steep Property during the 1996 field season:

Francis Moyle Tim Dunk

# **APENDIX III**

**Analytical Procedure** 

## ACME ANALYTICAL LABORATORIES LTD. Assaying and Trace Analysis 852 Hastings Street, Vancouver, BC V6A 1R6 Telephone: (604) 253-3158 Fax: (604) 253-1716

## METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 1D - 30 ELEMENT ICP BY AQUA REGIA

#### Sample Preparation:

Soils and sediments are dried (60°C) and sieved to -80 mesh (-177 microns), rocks and drill core are crushed and pulverized to -100 mesh (-150 microns). Plant samples are dried (60°C) and pulverized or dry ashed (550°C). Moss-mat samples are dried (60°C), pounded to loosen trapped sediment then sieved to -80 mesh. At the clients request, moss mats can be ashed at 550°C then sieved to -80 mesh although this can result in the potential loss by volatilization of Hg, As, Sb, Bi and Cr. A 0.5 g split from each sample is placed in a test tube. A duplicate split is taken from 1 sample in each batch of 34 samples for monitoring precision. A sample standard is added to each batch of samples to monitor accuracy.

#### Sample Digestion:

Aqua Regia is a 3:1:2 mixture of ACS grade conc. HCI, conc. HNO<sub>3</sub> and demineralized H<sub>2</sub>O. Aqua Regia is added to each sample and to the empty reagent blank test tube in each batch of samples. Sample solutions are heated for 1 hour in a boiling hot water bath (95°C).

#### Sample Analysis:

Sample solutions are aspirated into an ICP emission spectrograph (Jarrel Ash Atom Comp model 800 or 975) for the determination of 30 elements comprising: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

#### Data Evaluation:

Raw and final data from the ICP-ES undergoes a final verification by a British Columbia Certified Assayer who then signs the Analytical Report before it is released to the client. Chief Assayer is Clarence Leong, other certified assayers are Dean Toye and Jacky Wang. ACME ANALYTICAL LABORATORIES LTD. Assaying and Trace Analysis 852 Hastings Street, Vancouver, BC V6A 1R6 Telephone: (604) 253-3158 Fax: (604) 253-1716

## METHOD FOR WET GEOCHEM GOLD ANALYSIS

#### Sample Preparation:

Soils and sediments are dried (60°C) and sieve to -80 mesh.

Rocks and cores are crushed and pulverized to -100 mesh.

#### Sample Digestion

- 1. 10g samples in 250 ml beaker, ignite at 600°C for four hours.
- 2. Add 40 ml of 3:1:2 mixture HCL:HNO<sub>3</sub>:H<sub>2</sub>0.
- 3. Cover beaker with lids.
- 4. Boil in hot water bath for one hour.
- 5. Swirl samples 2 to 3 times within the hour.
- 6. Cool, add 60 ml of distilled water and settle.
- 7. Pour 50 ml of leached solution using a graduated cylinder into 100 ml volumetric flask.
- 8. Add 10 ml of MIBK and 25 ml of distilled water.
- 9. Shake 3 to 4 minutes in shaker.
- 10. Add additional 25 ml of distilled water to stripe out excess iron.
- 11. Shake each flask 10 times.
- 12. Pour MIBK into container for graphite AA finished.

# **APPENDIX IV**

**Geochemical Lab Reports** 

ACHE ANALYTICAL

SAMPLE#

FR96-62

TR96-15 TR96-16

TR96-17

TR96-18

TR96-19

TR96-20

1

1

8

<1

Cusac Gold Mines PROJECT STEEP FILE # 96-4254

ACHE ANALYTICAL Mo Cu Pb Zn Ag Ni Co Mn Fe As U Au Th Sr Cd Sb Bi V Ca P La Cr Mg Ba Ti B Al Na K WAu\* pom pom pom pom pom pom pom X ppm ppm ppm ppm ppm ppm ppm ppm X X X ppm ppb % % ppm ppm X ppm % ppm 2 9 <3 1288 <.3 106 28 773 2.31 <2 <5 <2 <2 80 5.1 <2 <2 11 18.16 .009</p> 1 4 .62 1980<.01 <3 .15<.01<.01 <2 <1 6 13 93 1230 .3 119 16 337 3.37 7 <5 <2 <2 303 5.8 <2 <2 12 20.51 .033 3 3 2.40 2384<.01 <3 .35 .01<.01 <2 <1 4 79 .7 5 115 240 .12 6 36 <2 6 2244 <.2 16 2 6 22.18 .003 5 <1 1.37 62292<.01 <3 .05 .01 .03 2 <1 1 12 48 595 471 .6 122 8 138 26.02 <2 <5 <2 2 59 .9 15 6 13 .29 .004 <1 10 .08 .362<.01 <3 .13<.01<.01 <2 <1 4 16 146 <.3 18 45 292 .93 3 <5 <2 <2 1103 .3 6 <2 20 11.40 .007 1 5 5.09 43527<.01 <3 .22 .01 .01 <2 <1 <3 438 <.3 192 28 449 3.37 4 <5 <2 <2 108 3.6 <2 2 7 29.81 .008 3 8 .35 2614<.01 <3 .09<.01 .02 <2 <1 8 <3 9 <.3 2 1 427 .11 3 <5 <2 <2 68 <.2 3 <2 3 38.65 .002 3 2 6.17 1285<.01 4 .04 .01 .01 2 <1 2 5 9 303 < 3 356 55 1362 7.40 5 <5 <2 <2 41 1.7 <2 <2 6 35.12 .005 3 7 .35 1296< 01 <3 .08< 01< 01 2 1

Page 2

		_	-	~			•			-	-	-	-			-					-	-	~	1002 101	-			-		
TR96-21	11	5	9	303	<.3	356	55	1362	7.40	5	<5	<2	<2	41	1.7	<2	<2	6	35.12	.005	3	7	.35	1296<.01	<3	.08<.	01<.01	2	1	
TR96-22	<1	1	<3	8	<.3	3	1	427	.05	2	<5	<2	<2	83	<.2	<2	<2	2	28.05	.003	3	2 '	13.73	521<.01	<3	.02	02<.01	2	<1	
TR96-23	4	7	6	326	<.3	48	10	408	1.41											.005	4	_		3228<.01	_	• •		_	-	
	•	•	-							•		-		200							•			3220		• 1 4 4			•	
TR96-24	1	3	<3	99	<.3	15	3	171	.29	4	<5	<2	<2	170	-4	<2	<2	8	42.07	.002	2	1	.31	2059<.01	<3	.08<	.01 .02	2	<1	
TR96-25	1	6	117	439	<.3	31	7	576	2.65											.006			11.32	81<.01	3		.01<.01	<2	<1	
RE 1R96-25	1	7	125	456	<.3	32	7	597	2.78														11.77	94<.01	र		.01<.01	<2	<1	
TR96-26	Ö	100	54	619	<.3	118	14																	1220<.01	-		.01<.01			
TR96-27	-	3							1.53	-				1060		<2				.002	4			2602<.01	-		.01<.01	-		
			÷							-				1000					33.33		-	-	1.06	2002	-	.02		٤.	•1	
TR96-28	7	6	4	1114	.3	313	56	1191	6.70	<2	<5	<2	<2	74	3.7	<2	<2	11	34.17	-002	4	3	1.10	1875<.01	<3	.09<	.01<.01	<2	<1	
TR96-29	4	8			<.3				4.86																		.01<.01		<1	
TR96-30	1	4	5			-	_	338																3194<.01	-		.01 .03		<1	
TR96-31	1	2	6		<.3			457	-		<5				<.2				-	.002			14.22				.03<.01	-	<1	
TR96-32	l ż	6						47						4			_			.004			.06		-		.01 .09	_	1	
1870 32	<b>_</b>			164							.,	10	~~		<b>~•</b> £	~6	~2	£.		.004		20	.00	2112.01	,		.01 .07	4	1	
TR96-33	<1	3	9	16	<.3	4	2	139	.30	6	<b>&lt;</b> 5	<2	<2	98	<.2	<2	<2	5	26.01	.008	4	4	13.69	81<.01	3	.08	.01 .04	0	<1	
TR96-34	l i	7	1028	4937	.3	27	<1		13.16	-	_	_	-												-	• • -	.01 .07	-		
TR96-35		-	85				-			8		<2								.059			6.02	296<.01	4		.01 .09	-	-	
TR96-36									14.84					-		-				.068					•		.01 .14	_	-	
1896-37			295						7.88																_			_		
1870-31	`'	2	273	1020		UC.	- 1	420	7.00	13	< <b>3</b>	<2	~2	78	0.4	~2	~2	13	40.90	.024	2	10	.28	88<.01	<2	.0/<	.01<.01	~2	51	
STANDARD CZ/AU-R	21	58	41	140	6.7	73	34	1173	3.90	39	20	7	36	52	19.9	21	18	72	.53	.108	41	64	.99	205.08	28	2.05	.06 .14	12	504	
 	Law weeks																				-									

Sample type: ROCK. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns. AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.

tt C

Cusac Gold Mines PROJECT STEEP FILE # 96-4254

ACRE ANALTITICAL											-					<u> </u>						- <u>-</u>		·					A(	HE ANALY	TICAL
SANPLE#	Ко ррт	Cu ppm	РЬ ррт	Zn ppm	Ag ppm	Ni ppm	Со ррп	Hn ppm	Fe X	As ppm	u ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca X	P X	La ppm	Сг ррт	Mg X	Ba ppm	ті <b>Х</b>	B ppm	AL X	Na X	K %	y ppm	Au* ppb
TP96-18	7	38	14	385	.3	45	6	206	1.95	7	<5	<2	6	110	1.3	3	<2	29	3.93	.057	14	8	1.54	855	< 01	6	.49	.02	. 15	<2	7
TP96-19	5	50	13	883	.8	90	14	402 2		5	<5	<2	5	43	3.2	<2	<2			.081	14		-			ž	.76	.01	.17	<2	Ś
TP96-20	4	52	11	987	.8	88	17	483	2.75	4	<5	<2	5	36	3.4	<2	<2	27		.076	15	16		1575		4	.75	.01	.14	<2	á
TP96-21	4	55	11	805	.7	72	9	331 8	2.53	3	<5	<2	5	34	3.1	<2	<2	30		.064	17	18		1473		6	.81	.01	.17	<2	i
TP96-22	9	143	18	714	.4	101	28	590	2.68	7	<5	<2	8	99	3.4	3	<2	33		.106	31	10	. 16	486		6	.98	.01	.22	<2	3
TP96-23	17	47	13	514	.4	69	10	625	2.56	17	<5	<2	5	31	1.7	<2	<2	30	.22	.069	17	21	.62	1780	<.01	6	.98	.01	.21	<2	3
TP96-24	10	53	14	461	1.1	61	8	408	2.13	6	<5	<2	5	68	2.6	5	<2	61	.65	.176	50	24	.45	1302	.01	10	.86	.02	.26	9	3
TP96-25	7	43	16	399	.8	50	7	299	2.00	5	<5	<2	5	58	2.3	3	<2	45	.46	. 150	18	19	.32	1327	.01	8	.69	.01	.20	<2	5
TP96-26	6	58	24	396	.4	58	11	1014	2.84	8	<5	<2	8	49	2.2	<2	<2	32	.23	.112	51	12	.21	1664	<.01	4	.61	.01	.14	4	5
TP96-27	3	30	14	228	.3	37	6	404	1.70	2	<5	<2	6	75	.7	<2	<2	21	2.92	.043	17	15	1.44	1398	.01	11	.60	.01	.14	<2	2
RE TP96-27	3	32	12	233	.3	38	6	435	1.76	2	<5	<2	6	79	.8	2	<2	22	3.03	.045	17	15	1.50	1414	.01	13	.63	.01	. 14	<2	1
TP96-28	3	40	9	396	.3	58	8	440	1.99	3	<5	<2	5	36	1.1	<2	<2	22	.27	.048	16	22	.47	2168	< 01	4	.79	.01	.13	<2	2
TP96-29	3	46	8	302	.5	52	8	543	2.15	<2	<5	<2	6	36	.8	<2	<2	24	.15	.046	16	27		2294		5	.89	.01	. 15	<2	2
TP96-30	6	53	25	446	.3	56	9	299		8	<5	<2	8	53	2.4	<2	<2	40	.71	.087	42	11		1337		5	.72	.01	.22	<2	Ž
STANDARD C2/AU-R	20	- 57	41	137	6.9	70	- 34	1119	3.77	35	16	7	35	51	20.0	18	17	72	.53	.107	42	62	.97	187	.08	26	1.98	.06	. 14	12	460

C

- .... --- - . .

Page 3

Sample type: PAN CONC.. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

ACHE ANNUTTER

Cusac Gold Mines PROJECT STEEP FILE # 96-4254

ACHE ANALYTICAL SAMPLE# Mo Cu Zn Ag Ni Co Pb Mn Fe As U Au Th Sr Cd Sb Bi V Ca P La Cr Hg Ba Ti В Al Na κ W Au\* Inde inde inde inde inde X ppm ppm mqq ppm ppm ppm ppm ppm. mag mag mag mag ۲, % DOM DOM X DDM % ppm X X % pom pob TS96-21 <5 12 192 43 700 1.8 313 68 24806 5.75 49 <2 3 210 .8 <2 <2 50 .86 .150 32 54 1.06 1849<.01 <3 1.24<.01 .05 <2 32 TS96-22 9 49 27 161 .7 35 5 269 2.29 <5 <2 10 2 124 .6 6 <2 37 .33 .108 14 13 .12 804<.01 6 .60 .02 .18 <2 3 TS96-23 25 164 54 1189 1.4 220 41 757 12.25 44 <5 <2 11 108 5.2 8 <2 38 .25 .315 11 9 .15 198<.01 <3 .78 .01 .14 7 <2 TS96-24 4 17 29 428 .3 62 11 748 2.12 5 <5 <2 2 126 5.8 21 14.61 .040 <2 <2 8 9 8.32 1693 .01 5 .57 .02 .05 <2 <1 23 68 446 .5 123 22 371 2.98 24 <5 TS96-25 26 <2 6 123 2.4 8 <2 54 4.34 .108 15 12 1.94 757<.01 6 .63 .02 .12 <2 2 TS96-26 9 82 31 270 .8 45 8 112 3.42 11 <5 <2 2 185 .7 6 <2 35 .05 .196 16 11 .07 577<.01 4 1.00 .05 .13 <2 2 9 15 95 .3 17 447 2.80 <2 <5 2 11 1596-27 2 4 <2 .6 <2 <2 40 .79 .059 22 26 .66 155 .09 <3 1.82 .01 .06 <2 <1 .94 <5 1\$96-28 4 30 < 3 11 2 374 S 4 <.2 <2 <2 9 2 6 <2 16 .06 .008 20 10 .12 140 .02 3 .46 .01 .05 <2 1 5 79 <.3 285 <5 <2 6 .06 .014 18 22 TS96-29 2 11 21 4 2.50 <2 12 .2 <2 <2 29 .26 167 .10 3 1.55 .01 .07 <2 2 2.16 TS96-30 3 7 62 <.3 18 251 3 < 5 <2 10 4 12 11 <.2 <2 2 28 .04 .022 23 22 .30 110 .07 <3 1.30 .01 .07 <2 1 TS96-31 5 15 11 230 .4 36 7 314 3.02 6 <5 <2 11 14 3.7 3 <2 46 .15 .146 21 33 .47 118 .11 <3 1.88 .01 .12 <2 <1 TS96-32 16 115 <.3 32 459 1.44 <5 5 11 6 3 <2 7 38 .4 <2 <2 17 5.55 .033 16 12 2.55 1426 .02 5 .66 .01 .06 <2 <1 TS96-33 610 .3 103 15 641 2.73 <5 5 33 <2 9 146 5.1 <2 <2 26 8.39 .071 15 16 3.28 2271 .02 40 6 4 1.52 .01 .08 <2 1 TS96-34 4 26 1066 5 <5 <2 8 11 9.32 1771 .01 5 .97 .01 .04 <2 <1 21 370 .3 100 14 2.39 2 214 1.7 <2 <2 26 16.42 .076 RE TS96-34 4 27 25 390 .3 106 15 1124 2.52 6 <5 <2 <2 227 1.8 <2 3 27 17.14 .079 8 12 9.77 1833 .01 4 1.01 .02 .03 <2 <1 TS96-35 7 17 17 709 <.3 164 29 908 3.66 5 < 5 < 2 2 34 2.3 <2 <2 25 9.60 .068 13 13 2.57 1275 .01 5 .82 .01 .07 <2 <1 TS96-36 5 14 26 249 <.3 80 16 797 1.92 <5 3 38 4 <2 .4 <2 2 20 8.80 .040 14 11 4.42 1564 .01 4 .69 .01 .08 <2 <1 TS96-37 1 21 29 1587 <.3 275 54 4408 3.98 21 <5 <2 3 27 6.7 <2 2 13 7.57 .050 12 6 4.48 631<.01 <3 .18<.01 .05 <2 <1 TS96-38 1 12 45 459 <.3 69 17 1349 2.01 <5 <2 3 2 14 17.45 .027 11 63 1.0 <2 9 5 10.59 203<.01 4 .26 .02 .10 <2 <1 TS96-39 12 311 <.3 51 503 2 58 <1 - 5 8 1.67 9 <5 <2 1.4 <2 <2 9 18.81 .018 5 4 11.33 60<.01 6 .13 .01 .05 <2 1 T\$96-40 9 23 475 <.3 80 12 605 2.01 8 <5 <2 2 46 1.2 <2 <2 11 14.36 .025 -1 7 5 8.71 114<.01 .20 .01 .07 <2 4 - 1 TS96-41 <1 17 38 1473 <.3 281 48 813 4.60 21 <5 <2 3 20 2.9 <2 <2 13 6.37 .058 14 4 3.79 57<.01 <3 .24<.01 .05 <2 1 T\$96~42 <1 8 431 4099 <.3 32 2 284 5.29 7 <5 <2 3 14 1.7 <2 2 23 1.52 .172 11 16 .62 95<.01 <3 .32<.01 .07 <2 <1 TS96-43 1 10 199 1146 <.3 19 4 487 2.57 8 <5 <2 2 114 .9 <2 2 9 17.37 .043 10 11 9.49 5 89<.01 .22 .01 .06 <2 1 TS96-44 1 16 303 3431 <.3 36 2 307 7.45 21 <5 <2 4 58 1.6 <2 <2 15 13.56 .080 19 38 8.07 96.01 3 .81 .01 .16 <2 1 TS96-45 5 40 1066 2112 .5 16 <1 348 30.05 77 11 <2 5 34 5.6 <2 <2 13 7.33 .015 6 19 4.75 55<.01 5 .22 .01 .07 <2 3 STANDARD C2/AU-S 21 59 36 140 6.7 72 35 1152 3.87 38 21 8 36 52 20.7 17 18 73 .53 .109 42 63 .99 198 .08 28 2.04 .06 .15 11 56

Page 4

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

ACHE ANALYTICA

. .. . . ... .. .. .

Cusac Gold Mines PROJECT STEEP FILE # 96-4254

	7								<u> </u>		···																		A(	HE ANALY	TICAL
SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Со ррт	Mn ppm	Fe X	As ppm	U mqq	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca X	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti X	8 ppm	Al X	Na %	K X	W ppm	Au* ppb
TW96-18	0	67		573	r	7/	0	204		10				4.7.7																	
	2	53	21			74	Y		2.42	10	<5	<2	· · · ·	127		- 4	<2				11	8	1.45	763	<.01	- 4	.52	.02	. 12	<2	1
TW96-19		70	16		1.0	170	- 24	762		7	<5	<2	- 3	62	7.3	<2	<2	28	4.22	.078	15	16	1.90	1220	<.01	5	.82	.01	.11	<2	2
TW96-20	7	76	14		1.0	188	37	1330 -		6	<5	<2	- 4	- 51	8.9	3	<2	- 29	.99	.094	18	18	.59	1089	<.01	8	.86	.01	.11	<2	ž
TW96-21	6	- 84	15	1402	1.4	- 147	17	796	2.85	5	<5	<2	3	52	7.3	2	<2	30	1.76	.097	17	19	.96	1005	< 01	5	.97	.01	11	<2	ī
TW96-22	18	410	29	1638	.8	200	59	1595	4.01	9	<5	<2	7	164	8.3	3	<2	44		. 192	18	16	.23		<.01	5		.02	.20	<2	Ž
TW96-23	32	71	73	952	1.1	118	14	1008	3.27	34	<5	<2	4	39	4.5	23	<2	28	.39	.094	20	21	.63	1326	.01		1.10	.01	. 13	2	,
TW96-24	19	75	17	830	2.0	95	10	453	2.30	9	<5	<2	Ś	51	5.6		<2	57		. 166	23	25		1303	.01	-	.97	.01	.20	-2	7
TW96-25	14	62	15	692	1.4	80	9	377		ó	<5	<2	Ā	47	4.2	6	<2	50	.66	.146	20	22		1713		0				<2	<u>*</u>
RE TW96-25	14	63	14	714	1.5	82	Ó	401		é	<5	<2	ž	47	4.3	5			.67						.01	0	.88	.01	. 19	<2	3
TW96-26	8	61	20			80	10				-	<2	2			,	<2	51		- 151	20	23		1481	.01	y Y	.92	.01	- 19	<2	- 4
1470 20	۳	01	20	660	.6	QU	10	400	2.33	0	<5	~2	2	59	3.8	4	<2	29	.38	.113	22	14	.30	1224	<.01	5	.81	<.01	. 12	<2	3
TW96-27	4	41	31	379	1.5	58	8	565	1.87	7	<5	<2	4	61	1.4	7	<2	20	4.10	.060	13	18	2.02	1635	<.01	6	.72	.01	. 10	<2	3
TW96-28	4	50	70	684	.6	77	10	1040	2.32	11	<5	<2	5	40	3.1	22	<2	21	.49	.061	17	23	.61	1801	<.01	7	.88	.01	.10	<2	ž
TW96-29	2	49	9	281	.6	58	9	760	2.11	<2	<5	<2	5	32	.8	<2	<2	21	.17	.050	15	26		2360		ż		<.01		~2	ž
TW96-30	6	38	20	364	.4	50	7	197	1.67	8	<5	<2	4	54	2.4	Ā	<2		2.04		13		1.17		<.01		.50	.01	.11	<2	
STANDARD C2/AU-S	20	57	41	137	6.9	70		1119		35	16	7	35		20.0	18	17	72		.107	42	62	.97	187	.08	26				-	17
						·····									<u></u>	10	17	12		. 107	42	02	.97	107	.08	20	1.98	.06	. 14	12	47

Page 5

Sample type: SILT. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

.

#### 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6

PHONE (604) 253-3158 FAX

J.D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

2.50

4) 253-1716

ASSAY CERTIFICATE

Cusac Gold Mines PROJECT STEEP File # 96-4254R 908 · 700 W. Pender St., Vancouver BC V6C 1G8

		<u></u>	· •	
SAMPLE#	Pb %	Zn %	Ba* %	
FR96-62 TR96-15 TR96-34 TR96-36 TR96-37	<.01 .01 .09 .04 .02	.12 .11 .46 .73 .26	11.84 11.65 .06 .03 .02	
TS96-42 TS96-43 TS96-44 TS96-45	.04 .02 .03 .11	.39 .10 .33 .23	.04 .03 .02 .01	

1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, DILUTE TO 100 ML, ANALYSIS BY ICP. BA\* BY LIBO2 FUSION, ANALYSIS BY ICP. - SAMPLE TYPE: PULP

SIGNED BY ...

DATE RECEIVED: SEP 19 1996 DATE REPORT MAILED:

	U			. :	ŧ.					GEO	CHE	EMIC	AL	ANA	LYS	SIS	CEF	TI	PIC/	ATE				604)	S. S. S.					R A
<b>tt</b>						<u>Cı</u>	Isac	Gç	<u>old</u>						<u>3TEE</u> t., V	<u>3P</u> ancou				5-42	254	Ē	age	ə 1						
and the second			****											_		<u> </u>														 <u></u>
AMPLE#	Mo ppm	Cu ppm	РЬ ppm	Zn ppm	Ag ppm	Ni ppri	Co ppm	Mn ppm	Fe X	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P X	La ppm	Cr ppm	Mg X	Ba ppm	ti X	B ppm	A1 %	Na X	K %	Au* ppb
							ppm		*	-	-				ppm		- •	V ppm 71	X	P X .051			Mg X .70	ppm		ppm	Al %	*	к х .17	
TR96-12		ppm				ppn	ppm 6	ppm	<b>x</b> 2.30	-	ppm	ppm		ppm 282	ppm		- •	V ppm 71 21	<b>%</b> 1.15	*	ppm	ррт 42	×	ppm 732	X	ppm	*	.05	к  .17 .08	
SAMPLE# TR96-12 TR96-13 TR96-14		ppm 30	ppm 7	ppm 51	ppm <.3	ррл 29	ppm 6	ррт 423	<b>x</b> 2.30	-	ppm <5	ppm <2		282 141	ppm <.2		ppm <2	71	<b>%</b> 1.15	.051 .141	ррт 12	ррт 42	.70 .44	ppm 732	- 14	ppm	<b>%</b> 1.93	.05 .01		

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: P1 TO P2 ROCK P3 PAN CONC. P4 SOIL/P5 SILT AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

## APPENDIX V

**Rock Sample Descriptions** 

## Steep RECCE TRAVERSE/SAMPLE RECORD

## PAGE 2 OF 2

C

TRAVERSE	NTS	AREA	SAMPLE #'s	COMMENTS/ROCK DESCRIPTION
Steep	104I16E	Contral Portion of claim block	TR96 27	sus from thrust contact in List crange/red/yellow List breccia u/ Biz Zn minizn oxidents in rex (grab) gessarens.
			TR9628	Rock chip Over Im of subcrop of brecewited List. Chip sample over 0.5m Subcrop - Frinkle
		[ 	TR9629	Citz-Carb Veining Win Lst W/ Bainvillan (grab)
			TR9630	(grab) Lot breezin - blowcut in Lot w/ winled B
	_	have a set and	TR9631	(grab) gossonous (worm takes) Q+2-carb injected Lst if concentrated trace fossils
stæper	104I16E	of claim block	TR9632	Altered Lat - gossumerus
		· 	TR9633	brecci uted Lst w/qt2-conto vering -rustratta - Ankerite chip sompled over (0.5m) Zh, Po mintan
			TR9634	brecciated Lst along Strike of Alwust fault
<u> </u>				on flirust critet - breeciated List - gossomous
				(grab)
			1476.37	breccinted 2 st aboy thrust cutct Pb Zu min124
			-	·
		-		
	Steep	Steep 104I16E	Steep 104I16E Contral Portion Steep 104I16E of claim block	Steep 104I16E Contral portion of claim block TR9627 TR9628 TR9629 TR9630 TR9630 TR9631 Stæper 104I16E hortheast portion of claim block TR9632 TR9633

NAME :

C

## Steep RECCE TRAVERSE/SAMPLE RECORD

NAME: F. Moyle

PAGE (

( OF 2

C

DATE	TRAVERSE	NTS	AREA	SAMPLE #'s	COMMENTS/ROCK DESCRIPTION
Aug 25	Steep	104I16	northwest portion of claim	TR96 12	Conglomerate float w/ +r py possibly Ba - heavy dense silicified - very rounded pebbles.
J				TR96 13	Silicified - very rounded pebbles. Decollement plane along bedding of gtaitic unit. Py in gtz veinlet Qtaitic unit - Rhyolike float
				TR9614	1
				TR9615	Float carb breacia n/Anterite - Very dense. along thrust contact. Bus/Zns?
				TR9616	along thrust contact. Bus/ Zns? along thrust contact. Bus/ Zns? atulcarb vein in Lst SD unit along thrust contact draining. locally py 1.0, n wide Jein
· · · · ·				TR9617	Friable Lst Float - very dense w/py - Setid
				TR9618	
				TR9619	Silicified brecciated LSt - very denser Ahkeritic subcrop flat well carb slip gauge - healed - Strongly limonitic tr py
				TR9620	LSt w/ recrystalized calcite veinlet-subcrip fbat
			     	TR9621	Slip gouge (breached) outerop w/rounded Arg/Lst per b
				FR9662	Slip gouge (breached) outerop w/rounded Arg/Lst performance calcite -float along thrust contact w/ mossive Bu/Zn breccia healed w/gtz-clarb
Aug 26	steep	104I16E		TR9622	Rock chip across subcrop (0.5m) of curb breecing gizcalestein
Aug 27	steep	104I16E	contral portion of claim	TR96 23.	In chip sample across breachided Lot 1/ to througe outer 300/30
J				TR9624	Boo/30 less breechated but minized ist w/durk red oxidation Chip sample over Im
				TR962.5	Chip sample over Im breechated LST - dense heavy on thrust contact
			<u> </u>	TR9626	brecciated LST - Jense, heavy on thrust contact Pink/orange/red/yellow LST breccia, posible Biz, Zn mintan colored axidants

C

# **APPENDIX VI**

# Statement of Qualifications

## STATEMENT OF QUALIFICATIONS

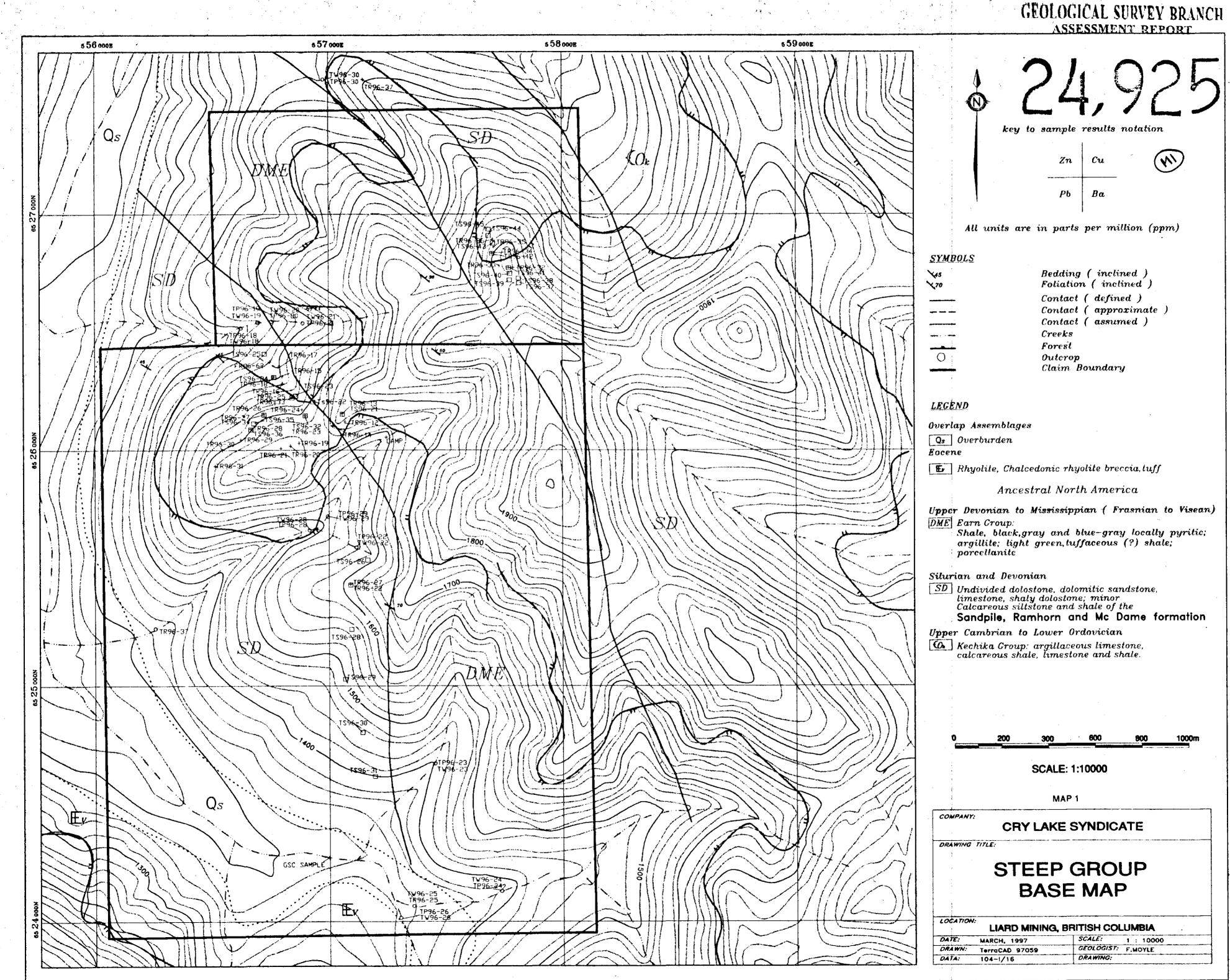
### I, Francis S. Moyle, of 928 Berkley Road in the municipality of North Vancouver, British Columbia, do hereby certify that:

- 1) I am an independent contract geologist currently employed under contract to Cusac Gold Mines Ltd., Pacific Bay Minerals Ltd., Demand Gold Ltd. and Dan Brett. The office is at #908-700 West Pender Street, Vancouver, B.C. V6C 1G8;
- 2) I am a graduate of the University of British Columbia (1994) with a B.Sc degree in geology and have had this profession continuously since graduation;
- 3) I have been employed in the mineral exploration industry since 1990, within Canada;
- 4) I am the author of a recent report dated October, 1996 entitled "Prospector's Report" on the Steep/Steeper claim, British Columbia;
- I have personally performed the work discussed in this report; 5)
- 6) I do not own or expect to receive any interest (direct, indirect or contingent) in the property described herein with respect of services in the preparation of this report.

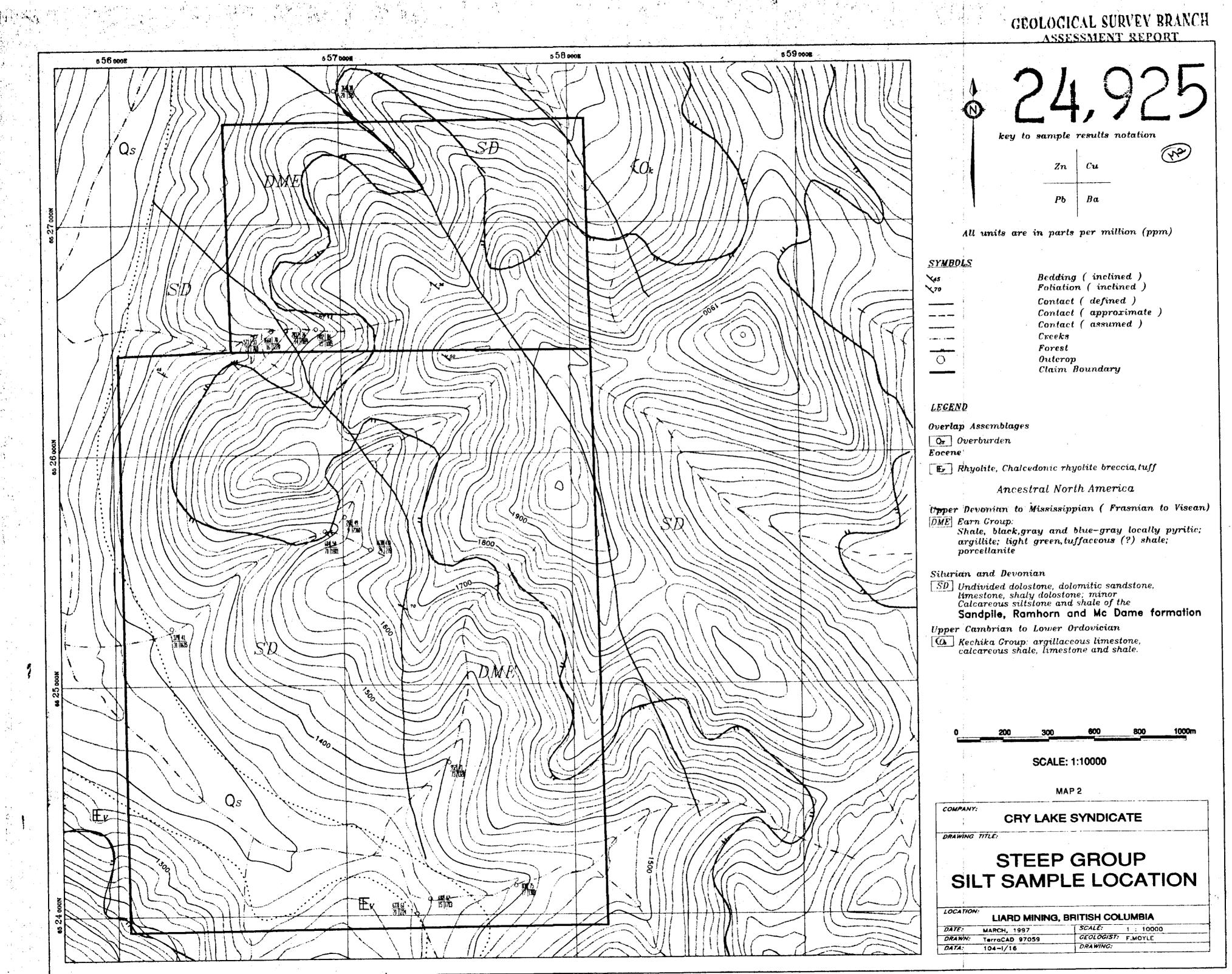
Dated at Vancouver, B.C. this <u>30</u> day of March, 1997.

**Respectfully submitted:** 

Francis S. Moyle, B.Sc.

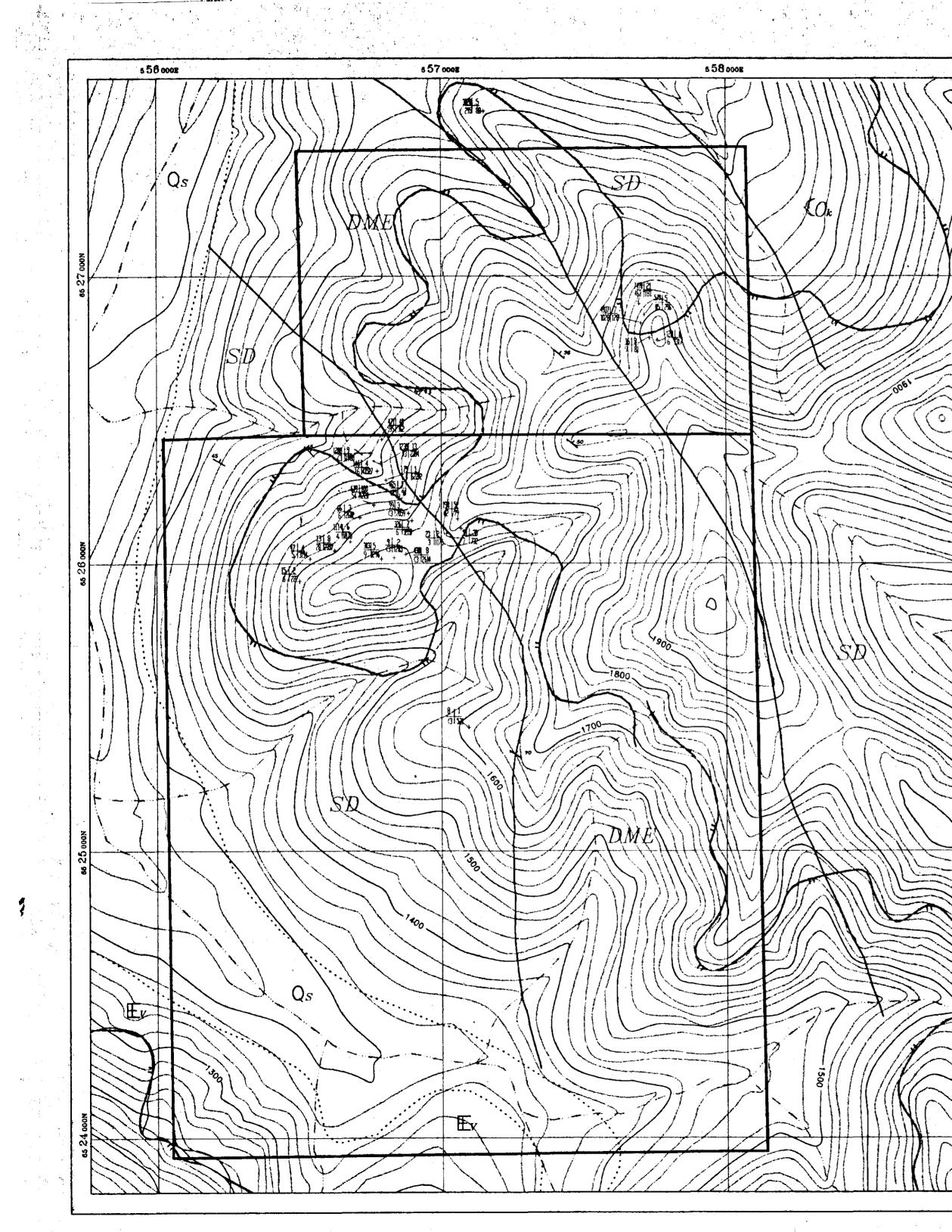


· • 

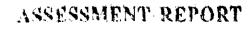


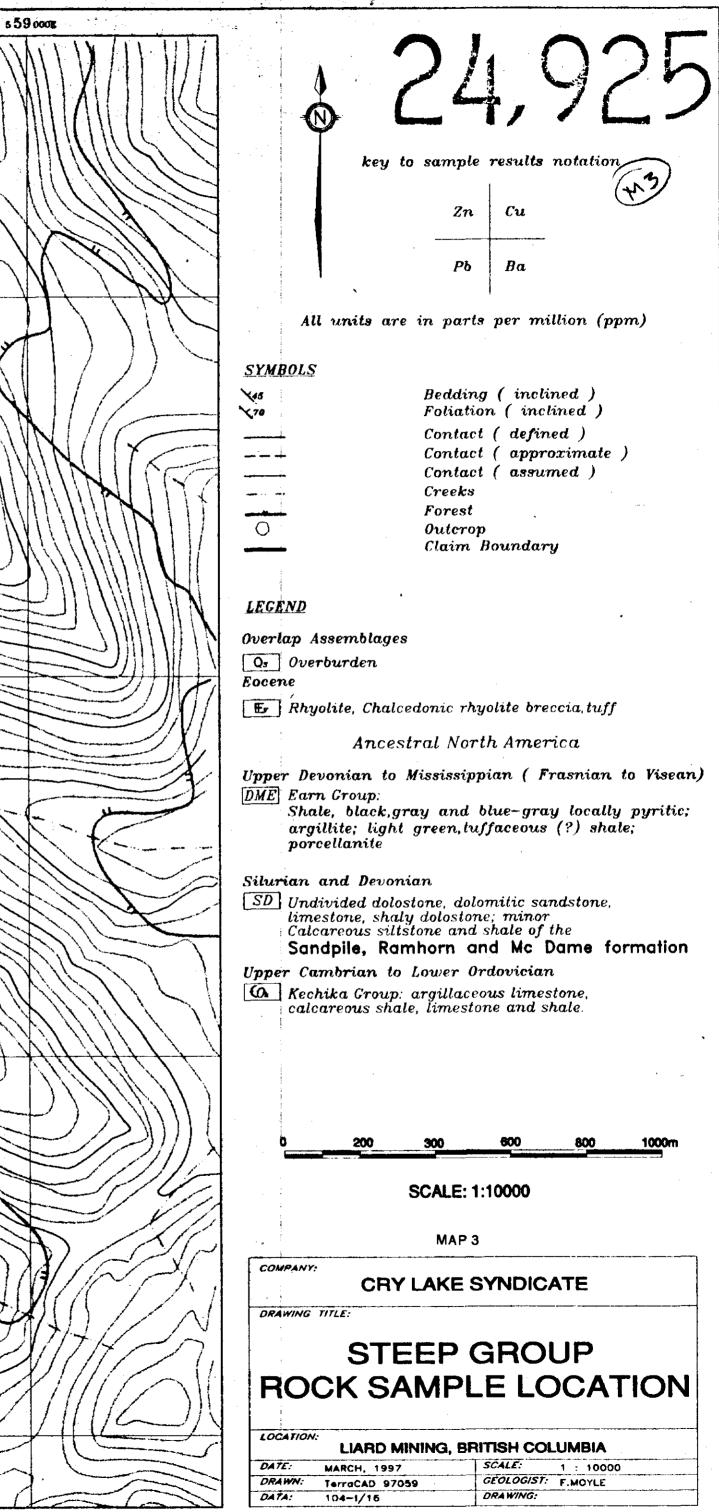
۰.,

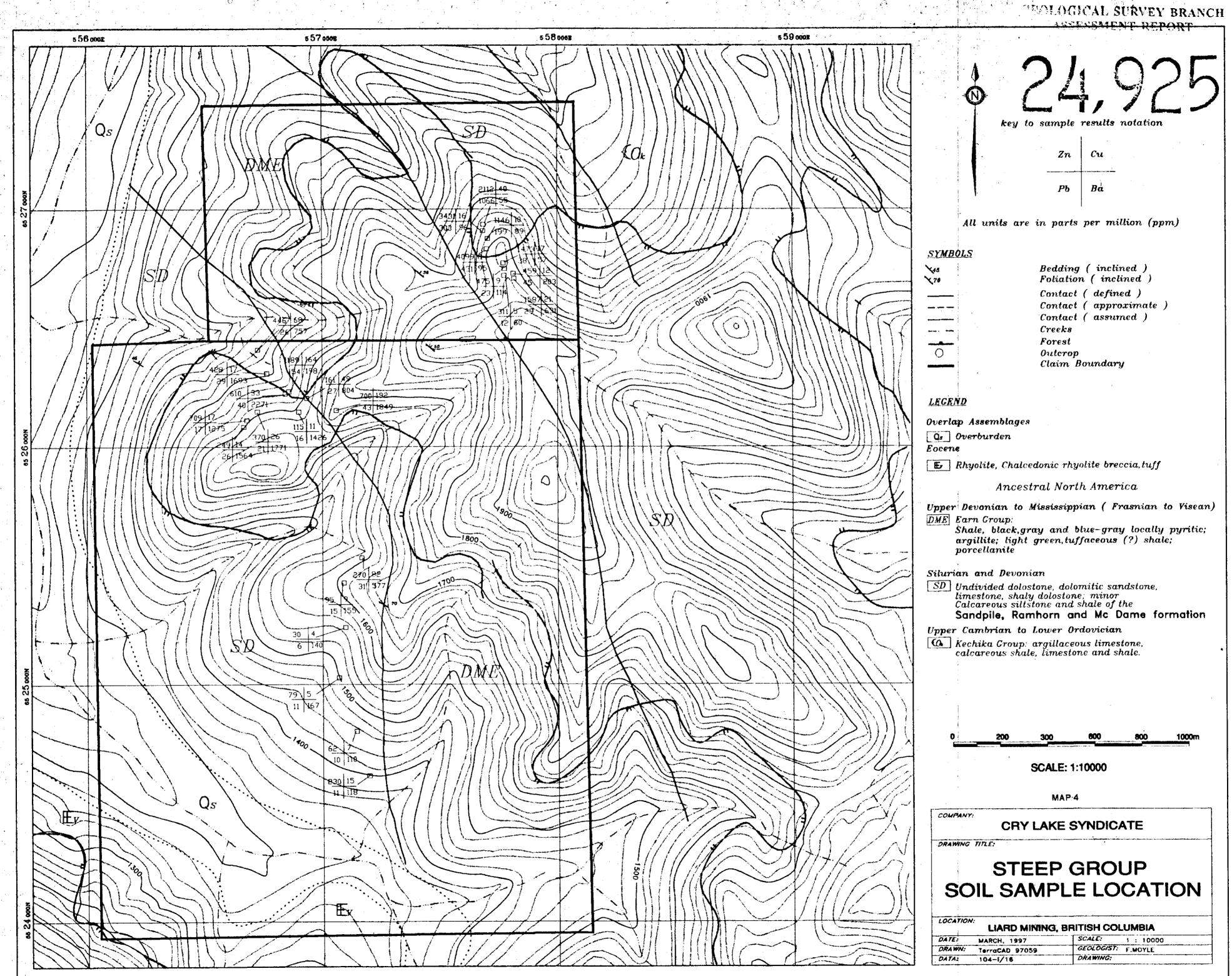
6



GEOLOGICAL SURVEY BRANCH







i