

LOG NO: Feb 19/91	RD.
ACTION:	
FILE NO:	

DIAMOND DRILLING REPORT  
ON THE SILVER CUP GROUP CLAIMS

Lat. 54°<sup>34</sup>~~32~~' N Long. 126°<sup>15</sup>~~13~~' W

Omenica M.D. 93 L 9

by

D. A. Davidson M.A.Sc. P.Eng.

for

L. Perry

December 31, 1990

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

20,948

## TABLE OF CONTENTS

	PAGE
INTRODUCTION	1
GENERAL GEOLOGY	1
DRILLING PROGRAM	1
CORE LOGGING AND SAMPLE DATA	4
CERTIFICATION	7

LIST OF ILLUSTRATIONS

		PAGE
FIGURE 1	TOPLEY PROJECT LOCATION	2
FIGURE 2	GENERAL GEOLOGIC PLAN	3
FIGURE 3	MAP SHOWING CLAIM GROUP AND LOCATION OF DRILLING ACTIVITY	5

## APPENDICES

- I LISTING OF MINERAL TITLES  
IN THE SILVER CUP GROUP
- II DRILL CORE LOGS
- III ASSAY RESULTS
- IV STATEMENT OF PROJECT COSTS

## INTRODUCTION

The Silver Cup Group of Mineral Claims is about 100 km southeast of Smithers, BC. The property is easily accessible by about 8 km of road from Topley, BC. (Figure 1)

Topography is moderate and elevations vary between 3200 and 3600 feet. The area of interest is on the south side of Richfield Creek. Outcroppings are sparse and forest cover is moderate.

The present drilling program was undertaken to extend mineralization encountered in previous drilling in 1981, 1982 and 1983.

## GENERAL GEOLOGY

The property is underlain by volcanic rocks of the Hazelton Group. These consist mostly of flows and fragmental tuffaceous rocks of andesitic composition. A large granitic stock of the Topley Intrusive complex is located about 4 km northeast of the property. (Figure 2)

Mineralization on the Silver Cup showings consists primarily of two gently dipping quartz veins that contain pyrite, chalcopyrite, sphalerite, galena, and tetrahedrite.

## DRILLING PROGRAM

Three short NQ holes totaling 635 feet were drilled in December 1990.

Because of snow cover, established survey stations could not be found. The three holes were located by tape and

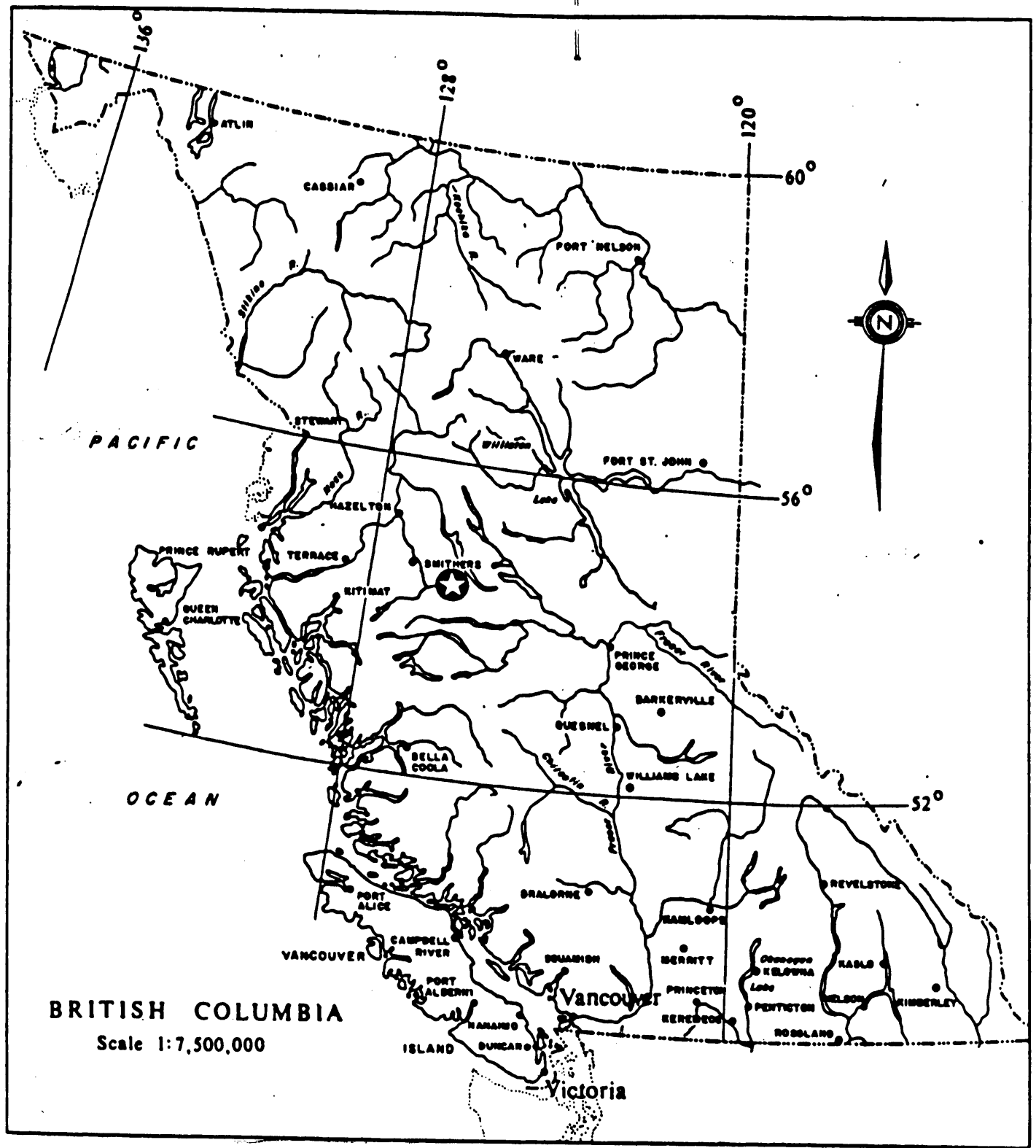
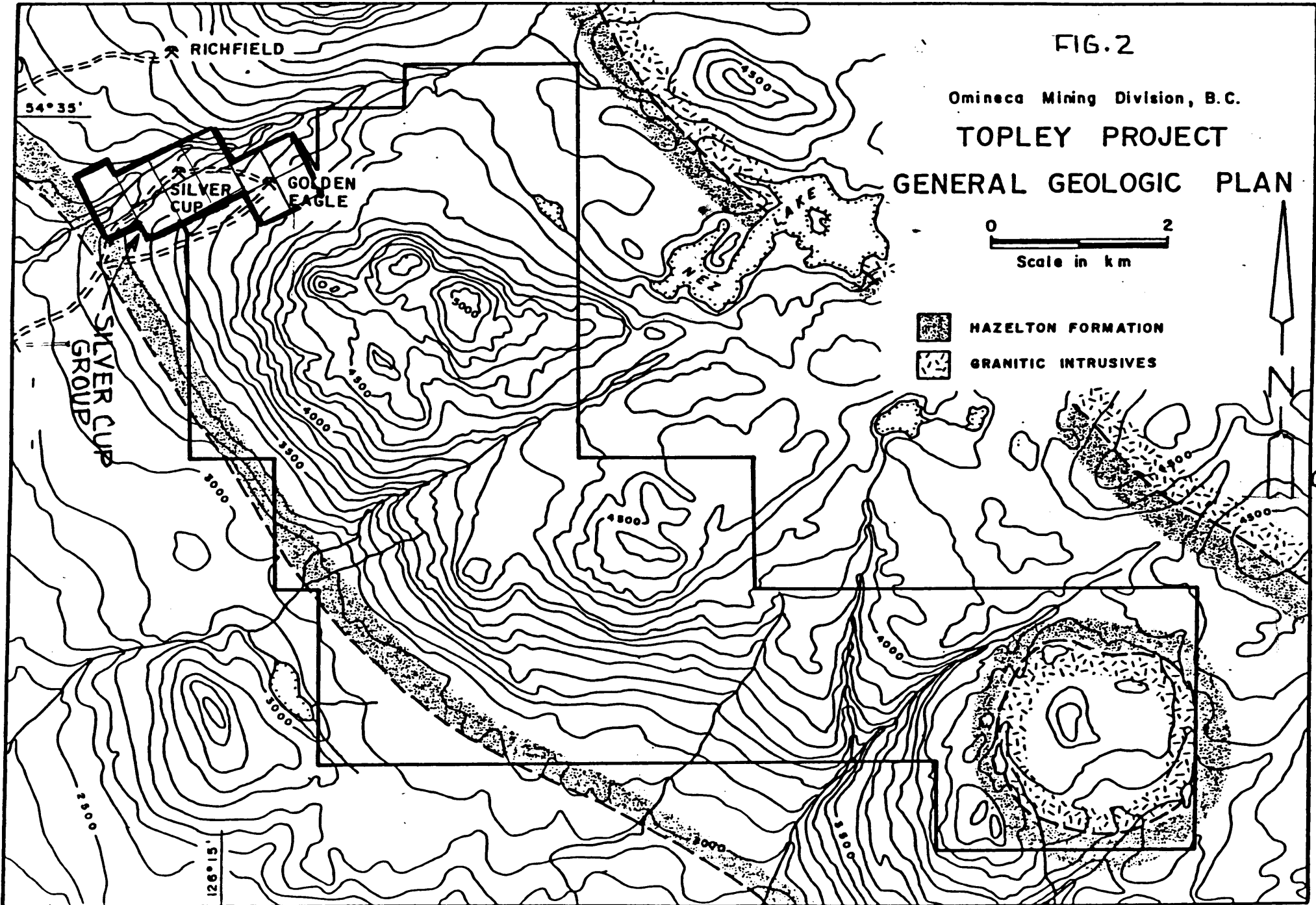


FIG. 1  
TOPLEY PROPERTY  
PROJECT LOCATION



compass relative to the surveyed collar of DDH 81-4. Elevations were taken with a Thorens pocket altimeter and are of questionable accuracy.

Approximate co-ordinate and elevations data is given below:

DDH	INCLINATION	LENGTH (ft)	COORDINATES		ELEV (m)
			N	(m) E	
81-4	--	--	51267.091	47979.325	1080.60
90-1	-90 °	225	51235.311	48041.695	1096.00
90-2	-90 °	210	51204.611	47997.245	1090.00
90-3	-90 °	200	51287.431	48025.005	1074.00

Drill hole location and the co-ordinate system is shown in Figure 3.

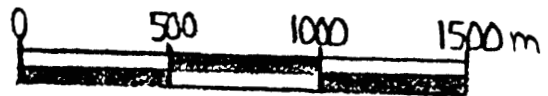
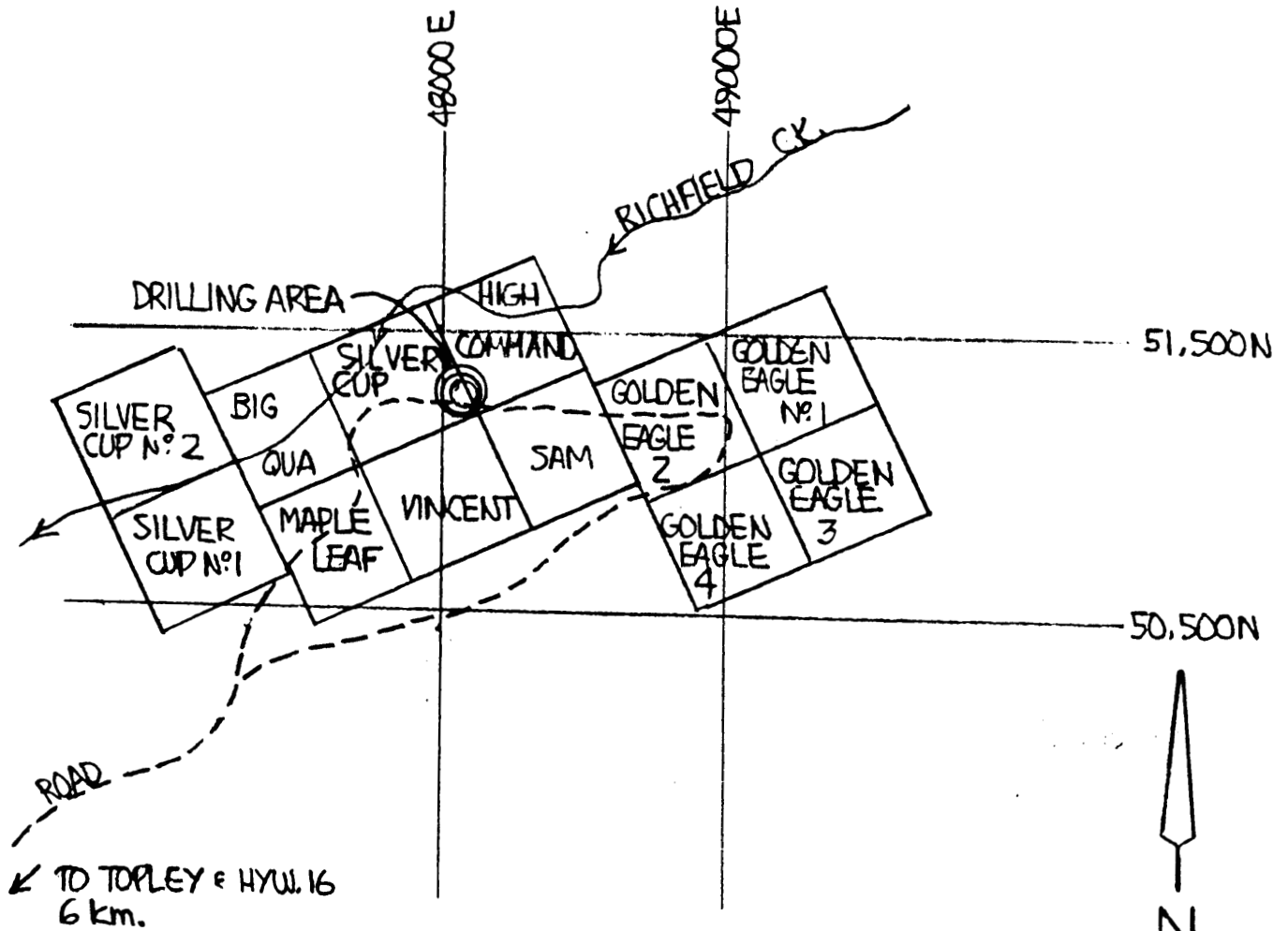
All holes are vertical and were drilled by Silverton Drilling Ltd.

#### CORE LOGGING AND SAMPLE DATA

The core logging was performed by the writer and certification is shown on page 7.

In summary, the rocks encountered in the three holes consisted mostly of dark grey, green grey fragmental rocks of andesitic composition. These have been classified as crystal-lapilli-lithic tuffs or tuff breccias. The mineralized zones are characterized by quartz-carbonate +/- feldspar veins containing variable amounts of one or more of





SCALE 1: 25000

FIGURE 3

MAP SHOWING CLAIM GROUP AND LOCATION OF DRILLING ACTIVITY

pyrite, galena, sphalerite, chalcopryrite, and an unidentified fine-grained grey metallic mineral ( possibly tetrahedrite).

All mineralized zones are accompanied by extensive bleaching of the adjacent volcanic host rocks. These altered zones are characteristically buff-green in colour and contain fine-grained disseminated pyrite.

Samples were taken of both the narrow veins and altered wall rocks. Analyses were performed by Min-En Laboratories in Vancouver, BC. (Appendix IV). Cu, Pb, Zn and Ag were determined by ICP. Fire assay was used for gold values. Data is given below:

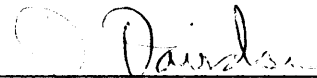
SAMPLE No.	DRILL HOLE	FOOTAGE (Feet)	Au ppb (oz/ton)	Ag ppb (oz/ton)	Cu ppm (%)	Pb ppm (%)	Zn ppm (%)
811	90-1	209.5/213.0	92 (.003)	41.1 (1.20)	385 (.040)	4840 (.484)	8000 (.800)
812	90-2	175.0/180.0	40 (.001)	24.2 (0.71)	247 (.025)	2750 (.275)	4800 (.480)
813	90-2	180.0/190.0	25 (.001)	25.5 (0.74)	26 (.003)	1200 (.120)	1140 (.114)
814	90-2	190.0/201.0	49 (.001)	7.0 (0.20)	52 (.005)	615 (.062)	910 (.091)
815	90-3	168.0/173.3	89 (.003)	4.1 (0.12)	21 (.002)	180 (.018)	250 (.025)
816	90-3	173.3/174.0	321 (.009)	78.4 (2.29)	1950 (.195)	57000 (5.70)	27000 (2.70)
817	90-3	174.0/176.6	103 (.003)	26.8 (.078)	237 (.024)	1270 (.127)	1700 (.170)

Core and assay rejects and pulps are stored at the home of L. Perry in Telkwa, BC.

CERTIFICATE

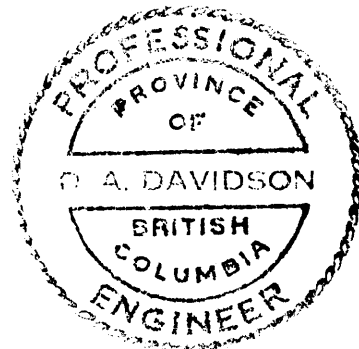
I, Donald A. Davidson of Smithers, BC do certify that:

1. I am a geological engineer.
2. I am a graduate of the University of British Columbia B.A.Sc. 1957, M.A.Sc. 1960.
3. I am a registered Professional Engineer in the Province of British Columbia.
4. From 1954 to the present I have been involved in mining and mining exploration activities.



---

D. A. Davidson  
B.A.Sc., M.A.Sc., P.Eng.



APPENDIX I

LISTING OF MINTERAL TITLES IN THE SILVER CUP GROUP

	RECORD NO.	DATE OF RECORD
High Command	2385	June 17, 1940
Big Qua	2386	June 17, 1940
Vincent	2387	June 17, 1940
Silver Cup	2388	June 17, 1941
Maple Leaf	4898	June 25, 1946
Sam	5537	June 28, 1947
Silver Cup No. 1	10495	August 3, 1956
Silver Cup No. 2	10496	August 3, 1956
Golden Eagle No. 1	132205	October 24, 1974
Golden Eagle No. 2	132206	October 24, 1974
Golden Eagle No. 3	132207	October 24, 1974
Golden Eagle No. 4	132208	October 24, 1974

APPENDIX II

DRILL CORE LOGS

HOLE 90-1

## DETAILED GEOLOGY

①

FOOTAGE		MAP UNIT	ROCK DESCRIPTION (COLOUR, TEXTURES, STRUCTURES, etc.)	ALTERATION (WALL RXS., VEINS)	MINERALIZATION (WALL RXS., VEINS) (See detailed vein data sheet)
FROM	TO				
0	23	GREEN-GRAY	OVERBURDEN		
23	43	ANDESITE BXA XAL-LITNIC TUFF.	GREEN-GRAY ANDESITE BXA ANGULAR FRAGMENTS TO 2". COLOUR TONE BECOMES GREYER FROM 39'.		NUMEROUS H.L. - 1/8" CARB VEINETS AT 35-50°/CA. SECONDARY SET @ 60-80° 1" CARB CEMENTED SHEAR @ 40°/CA @ 31'
43	43.1	~~~~	1" SHEAR ZONE. ROCK BLACKED.	ARGILLIC ALT.	1/4" CARB @ 40°/CA @ 32'
43.1	63.0		GRAY - GREEN GRAY ANDESITIC BXA POSSIBLE PRIMARY STRUCTURES (ORIENTATION OF ELONGATE FRAGS) @ 50° CA.	CARBONATE ALT @ 45'-46' SHOT Z SINDOUS BLABS CaCO <sub>3</sub> BLACKED AND CARB- ARG ALT ADJACENT TO SHEAR @ 48' @ 45° CA. HEMATITIC (RED) ALT IN ZONES @ 52' AND 56'	1/4" CARB @ 45° @ 48' ALTERED WALL RX 1/4" CARB @ 70° CA @ 49.5 NUMEROUS HL - 1/8" CARB AT VARIOUS XS. 60-80° AND 35°-50° STILL COMMON SETS
63.0	70.0	~~~~	AS ABOVE CORE BROKEN 1" CARB SHEAR @ 10-20°/CA @ 60.5 2" CARB " @ 20° @ 64	CARB ALT ADJACENT TO SHEARS. SOME HEMATITIC STAINING ON SLIP PLANES.	1" ZONE @ 10-20°/CA @ 60.5
70.0	107	AS ABOVE	SPECIAL GRAY XAL LITNIC TUFF FRAGS TO 2". FRAG. OF DK GRAY ANDESITE (SOME PORPHYRITIC) AND SMALLER NUMBER LIGHT GRAY PORPH. RYOLITE. ORIENTATION OF ELONGATE FRAGS SUGGESTS PRIMARY STRUCTURE 60°/CA @ 72.5. (CORE BROKEN, ALTERED 83-84.5) @ 70° CA @ 91	CARB ALT. ADJACENT TO CARB STRUCTURES. SOME HEMATITIC STAINING ON SLIP PLANES. CORE BROKEN 83-84.5 CARB-HEMATITE AS ABOVE PERUSSIVE EPIDOTE ALT NEAR 97.0	NUMEROUS HL - 1/8" GREENISH-CREAM COLOURED STRINGS (CARB-EPIDOTE) AT VARIOUS XS 1/4" CARB-HEMATITE SLIP @ 71.0 @ 20° CA 1/8" CARB @ 79.0 @ 20° CA 1/4" CARB @ 15° @ 103
107		FLOW BANDED RHYOLITE FINER	3/8" LIGHT GREENISH GRAY POSSIBLE FLOW BANDED RHYOLITE @ 80° CA.		1/8" CARB-EPID @ 30°/CA @ 109.0 (2) 1/8" " " @ 45°/CA @ 109.5
107	135	ANDESITIC RXS AS ABOVE.	GREEN GRAY XAL LITNIC TUFF AS ABOVE	109.5-110	

HOLE 90-1

## DETAILED GEOLOGY

②

FOOTAGE		MAP UNIT	ROCK DESCRIPTION (COLOUR, TEXTURES, STRUCTURES, etc.)	ALTERATION (WALL RXS., VEINS)	MINERALIZATION (WALL RXS., VEINS) (See detailed vein data sheet)
FROM	TO				
107	134	(CONT.)		PERVASIVE EPIDOTE NEAR 115, 117.5	$\frac{1}{6}$ " CARB. HEMATITE STAIN @ 60° @ 112' $\frac{1}{6}$ - $\frac{1}{4}$ " SINUOUS CARB @ 10°/CA @ 115' $\frac{1}{6}$ " CARB HEMATITE STAIN @ 15°/CA @ 117' $\frac{1}{6}$ - $\frac{1}{8}$ " " " " " @ 118' $\frac{1}{6}$ " CARB @ 45° @ 121.5 $\frac{1}{8}$ " CARB @ 35° @ 127.4 $1\frac{1}{2}$ " ZONE HEMATITIC ALT E UNITS CARBONATE "CRACKLED" DISCONTINUOUS STRINGERS, ZONE SHARP CONTACTS @ 65° CA (3) $\frac{1}{6}$ - $\frac{1}{8}$ " CARB @ 60° CA @ 125.0
134	138	ALTERED CARB- SERICITE. ANDESITIC RXS. WEAKLY MINERAL- IZED ZONE	FAIRLY SHARP CONTACT INTO LIGHTER GREENISH GREY ALTERED ANDESITIC ROCKS. FRAGMENTS STILL VISIBLE POSSIBLE PRIMARY STRUCTURES (FUMIGATION OF FROSS) @ 50° CA. CORE BROKEN - SOME F.G. PYRITE ON SLIP PLANE. ALSO THIN PATCHES OF GRAY METALLICS - POSSIBLY MILLED OUT SULPHIDES ON FRACTURES	PERVASIVE CARB-SERICITE.	$1$ " QTZ - SALMON PINK RHODOCHRO @ 30° CA. @ 136 $\frac{1}{8}$ "- $\frac{1}{4}$ " QB @ 35° CA @ 136.1 PYRITE, F.G. SPHAL, P.O.S. VERY F.G.
138	161	GRY, GREEN GRAY XOL LITHIC TUFF.	GRAY, GREEN GRAY XOL LITHIC ANDESITIC TUFF.	EPIDOTE ± HEMATITE STAINING @ 141.5, 142,	$\frac{3}{4}$ " CARB V. U @ 35° CA @ 141.5 NUMEROUS HL - $\frac{1}{6}$ " CARB ± EPIDOTE AT VARIOUS ATTITUDE W.R.T. CA. Common SETS @ 60-80, 30-40° CA. (2) $\frac{1}{16}$ " CARB @ 30° CA @ 162
161	162.5	DARK GRAY BRECCIA △△	DARK GRAY BRECCIA. FRAG. PHYLITIC HEMATITIC STAINING ON FRACTURES		
162.5	162.9	F.G. GREEN ANDESITE DIKE (?)	F.G. GREEN ANDESITE DIKE. APPARENT TO F.G. GROUNDMASS. SHARP CONTACTS @ 45-50° CA.		
162.9	169	GRAY-GREEN GRAY LITHIC TUFF.	GRAY-GREEN GRAY LITHIC TUFF. VERY F.G. FEW FRAGS FROM 165.5-167		

HOLE 90-1

## DETAILED GEOLOGY

(3)

FOOTAGE		MAP UNIT	ROCK DESCRIPTION (COLOUR, TEXTURES, STRUCTURES, etc.)	ALTERATION (WALL RXS., VEINS)	MINERALIZATION (WALL RXS., VEINS) (See detailed vein data sheet)
FROM	TO				
169	178.5	DK GRAY PORPH ANDESITE. POSSIBLY GREEN ANDESITE DIKE @ 171	DK GRAY PORPH. ANDESITE. POSSIBLY ANDESITE DIKE .3' WIDE @ 60°/CA @ 171. FELD. SUBMEDIAL PNEUMATO 1/4" φ. SOME BZA FRAGS BEDDING IN ANDESITIC TUFF @ 50° @ 177. TUFF BRECCIA 178.5-		
178.5	201	ANDESITE BZA	FRAGMENTS OF FINE GRD. DK GRAY TUFF, DK GRAY PORPH ANDESITE, GREEN PORPH ANDESITE. (FELD PNEUMOS).	CARB-SERICITE, BLEACHING OVER 12" @ 174 CORB BROKEN, SERIC. ALT ADJACENT TO SUP @ 185	1/2" IRREG QTZ @ 20-30° CUTS 1/4" QTZ @ 80° CA. @ 174 1/4" QTZ-FELD (WHITE) @ 40° WITH SLIP ON OFT CONTACT @ 174. 1/8-1/2" IRREG QTZ @ 35° CA @ 178 - NOT WALL ROCK ALT. 1/8-1/2" QTZ-CARB-FELD @ 10-20° @ 185
201	207	STRONG BLEACHING LIGHT TAN GREEN ALTERED. SOME MINERALIZATION	IRREG CONTACT INTO BLEACHED, ALTERED VOLCANICS. COLOUR TONE SUGGESTS PRESENCE OF VERY FINE GRD EPIDOTE REPLACING FELDSPARS.	BLEACHING. FINE DISSEM DYRITE IN SUBMEDIAL TO EUMEDIAL GRAINS. CORB BROKEN, ARGILLIZED 201.5-208	1/2" QTZ-SOME K-SPAR (FLASH COLOURED) FINE GRD. PDS, ZNS - MILLED OUT ON SLIP PLANE. USIN @ 15° CA @ 202 1/4" AS ABOVE @ 25° @ 204.5 WEAK BRAIDED HL-1/8" QTZ C F.G. PDS @ 15-25° CA @ 206 NUMEROUS HL-1/8" QTZ-CARB @ 40-60° CA. 206.5-208.
207	209.5	DK GRAY PORPH ANDESITE	DARK GRAY F.G. ANDESITE. WEAKLY PORPHYRITIC.	MINOR BLEACHING ADJACENT TO VEINS HL-1/8"	HL-1/8" QTZ ± FELD VEINING AT VARIOUS CA. MINOR BLEACHING ON WALLS 1/4" QTZ-FELD @ 55° CA @ 207.5
209.5	213	BLEACHED VOLCANICS SOME MINERALIZATION	IRREG CONTACTS INTO BLEACHED ALTERED VOLCANICS AS PER 201-207 SAMPLE N° A-811 209.5-213.0	AS PER 201-207 CORB BROKEN TO 211	1" QTZ-PDS - DARK ZNS @ 70° CA @ 211.5 1/2" QTZ-FELD-SOME F.G. SULPHIDES @ 90° CA @ 212





HOLE 90-2

## DETAILED GEOLOGY

①

FOOTAGE		MAP UNIT	ROCK DESCRIPTION (COLOUR, TEXTURES, STRUCTURES, etc.)	ALTERATION (WALL RXS., VEINS)	MINERALIZATION (WALL RXS., VEINS) (See detailed vein data sheet)
FROM	TO				
0	33	OVERBURDEN			
33	55	DK GREY ANDESITIC BXA	DK GREY ANDESITIC BXA. FRAGMENTAL COULD BE A CRYSTAL-LAPILLI-LITNIC TUFF - SOME HINTS OF ORIENTATION OF ELONGATE FRAGS. FRAGS OF VARIOUS COMPOSITION UP TO 1/2".	BLEACHING ADJACENT TO STRONG QTZ-CARB VEINING @60-80° CA @ 34, 40, 41 BROWN IRON STAINING ON FRACTURE PLANES	NUMEROUS HL - 1/16" CARB STRINGS. BEST CUTS @40-50, 20-30 AND 60-80/CA. 1 1/2" QTZ-CARB @ 65° CA @ 34 1 1/4" " " @ 60° CA @ 40 1 1/2" Banded QTZ-CARB FELD SPARRE PYR AND V.F.G. GREY METALLIC @ 75° @ 41
55	68	CARBONATIZED VOLCANICS AS ABOVE	BXA AS ABOVE. LACED WITH STOCKWORKS AND DISCONTINUOUS BLENDS OF CARBONATE SMALL SHEAR @ 45° @ 57.5 " " @ 50° @ 66 " " 50-70 @ 67	CARBONATE ALT. THROUGHOUT ARGILLIC ADJACENT TO SLIP @ 57.5 1 1/2" ARGILLIZED, BLEACHED WEAK SHEAR ZONE @ 66 4'-5" ZONE SHEARED ARGILLIZED CORE BROKEN 50-70° @ 67	1/8" CARB @ 75° @ 54 3/8" QTZ-CARB @ 70° @ 55.5 1/4" QTZ CARB @ 45 @ 56 1 1/2" ZONE SHEARED, 1/2" CARB & 1/8" QTZ-CARB IN BANDS @ 45° @ 57.5 5/8" QTZ CARB @ 70 @ 57.8 1/4" QTZ-CARB @ 80 @ 59 3/4" QTZ-CARB @ 70 @ 61.5 1" QTZ-CARB @ 80 @ 66.1
68	130	DK GREY <sup>GREEN GREY</sup> ANDESITIC BXA	DK GREY <sup>GREEN GREY</sup> ANDESITIC BXA. LACED WITH NUMEROUS HL EPIDOTIZED VEINLETS. POSSIBLE ELLIPTICAL "BOMB" (E2") @ 112	EPIDOTIZED FRACTURES; HL STRINGERS ± CARB HEMATITE ON FRACTURE PLANES.	1/4" CARB @ 20° @ 129.5 1/4" " @ 10° @ 130.5
130	149	DK GREY ANDESITIC BXA	DK GREY. EPIDOTIZATION IMPARTING GREENISH TONE IS DIMINISHED COLOR TONE BECOMES GREENER IN ALTERED AREAS ADJACENT TO VEINS 146-149	CARB. SERICITE ADJACENT TO VEINS 146-149	1/8" CARB @ 20° @ 138.5 1/4" CARB @ 0-10° @ 140.0 1/4" QTZ-CARB @ 146 @ 60°/CA 1/8" QTZ-CARB @ 70° @ 147
149	155	CORE BROKEN IRON STAINED FRACTURES 149-155(?) ~~~~~	CORE BROKEN, SOME IRON STAINED FRACTURES. MANY SMALL SLIPS @ 40-60° CA.	SOME ARGILLIC ALT IN BROKEN ZONE.	

HOLE 90-2

## DETAILED GEOLOGY

②

FOOTAGE		MAP UNIT	ROCK DESCRIPTION (COLOUR, TEXTURES, STRUCTURES, etc.)	ALTERATION (WALL RXS., VEINS)	MINERALIZATION (WALL RXS., VEINS) (See detailed vein data sheet)
FROM	TO				
155	160	DK GREY, PURPLISH GREY ANDESITIC BXA	DK GREY, PURPLISH GREY ANDESITIC BXA. REDDISH COLOUR TONES IMPARTED BY HEMATITE COATING ON AND ADJACENT TO SOME SMALL CARB SLIPS.		
160	174	DK GREY ANDESITIC BXA. SOME PALER GREEN BLEACHED ZONES. 2 SPACE MINERALIZATION @ 161	DK GREY ANDESITIC BXA. GET GREENISH BUFF BLEACHED ZONES ADJACENT TO SMALL CARB STRINGS.	BLEACHING ADJACENT TO CARB STRINGERS	1/8" CARB @ 25° @ 161 HL - 1/16" QTZ - E PYRITE FG. GREY METALLIC @ 40° @ 161.5 FG. DISSEM PYRITE IN BLEACHED ZONES 160.5 - 162.5 HL - 1/8" CARB WITH UNBLEACHED WALLS IN SEGS @ 30, 45 AND 70°/CA.
174	201	BLEACHED ZONES THROUGHOUT. RELATED TO SPACE MIN. THIS IS A WEAKLY MIN. ZONE @ 30-50% <sup>GREEN</sup>	DK GREY ANDESITIC BXA. EXTENSIVELY BLEACHED TO BUFF GREEN ADJACENT TO HL TO 1" VEINS WITH PYR, PBS, ZNS AND FG. GREY METALLIC MINERAL.	BLEACHING & FG. DISSEMINATED PYRITE.	HL - 1/16" QTZ & PYRITE, PBS, FG. GREY METALLICS @ 30-50°/CA. IN BLEACHED ZONES 3/4" QTZ - PYR. ZNS, PBS @ 45° @ 177 1" QTZ, ANK FELD, PYRITE, PBS, ZNS, FG. GREY METALLIC @ 30° CA @ 190 1/2" AS ABOVE @ 45° CA @ 199 1/4" QTZ, ANK FELD, PYRITE, PBS FG. GREY METALLIC @ 30° @ 201 1/4" AS ABOVE @ 40 @ 179.6
201	210	DK GREY <sup>GREEN</sup> ANDESITIC BXA.	DK GREY ANDESITIC BXA. GREENER COLOUR TONE NEAR 210.		
			SAMPLE A-812 175-180 A-813 180-190 A-814 190-201		



HOLE 90-3

## DETAILED GEOLOGY

②

FOOTAGE		MAP UNIT	ROCK DESCRIPTION (COLOUR, TEXTURES, STRUCTURES, etc.)	ALTERATION (WALL RXS., VEINS)	MINERALIZATION (WALL RXS., VEINS) (See detailed vein data sheet)
FROM	TO				
140.5	158	DK GREY TO PURPLISH GREY VOLCANICS	FRAGMENTAL VOLCANICS - XAL LAPILLI TUFF. FRAGMENTS LARGER NEAR ISS.	ARGILLIC ALT ADJACENT TO 1/4 SUP C. GABBS @ 143	1/2" QTZ VEIN @ 65° CA @ 141 1" QTZ-CARB-FELD (WHITE) @ 70° @ 146.5 3/8" " " " @ 35° @ 147.5
				WALL ROCKS BLEACHED, ARGILLIZED ADJACENT TO VEIN @ 151.5 & 146.5	1" ZONE CRYSTALLIZED QTZ @ VARIOUS $\theta$ 's @ 148 2 - 3/8" - 1/2" QTZ-CARB-FELD & SPARCE V.F.G. SULPHIDES (PYR, DK GREY METALLIC) @ 70-80° @ 151.5
158	160.3	GREEN GRAY ANDESITE DIKE(?)	SHARP BUT IRREG CONTACTS CHANGE IN COLOUR TONE. POSSIBLE INCLUSIONS OF PREVIOUS VOLCANICS IN "DIKE".		
160.3	168	DK GRAY FRAGMENTAL VOLCANICS.	DK GRAY FRAGMENTAL VOLCANICS. ROUNDED AND ANGULAR FRAGMENTS TO 2". LOCALLY HIGHLY CHARGED WITH FELDSPAR CRYSTALS. STILL INTERPRETED AS A CRYSTAL LITHIC TUFF OF ANDESITIC COMPOSITION.		SET NL - 1/8" QTZ-CARB @ 70° CA 3/8" QTZ-CARB @ 65° @ 164.5
168	176.6	ALTERED ZONE STRONG BLEACHING MINERALIZED ZONE		ROCK BLEACHED, ARGILLIZED NEAR SOME VAS. LOCALLY F.G. DISSEMINATED PYRITE.	UP TO 1" PINK FELD-QTZ & DISSEM PYRITE SUBPARALLEL STRINGS QTZ & PYRITE IN WAS. CUTS @ 25° CA @ 169 5/8" QTZ-FELD MINOR DIR. @ 70° @ 169-1
			SAMPLE N: A-915 168-173.3 A-916 173.3-174.0 A-917 174.0-176.6	STRONG ARGILLIC ALT. @ 173.5 ADJACENT TO MASSIVE SULPHIDES ABUNDANT F.G. DISSEMINATED PYRITE. W.B.K. STOCKWORKS OF NL FRACTURES & GREY METALLICS.	2" ZONE LACKED QTZ-FELD SOME CARB. F.G. PYRITE, F.G. DARK GREY METALLICS. 2" MASSIVE F.G. GALENA, PYRITE, SOME ZnS & CHALCOPYRITE. @ 173.5. WALL RXS ALTERED - MUCH DISSEM. PYRITE. SOME CORE POSSIBLY LOST. AT LEAST 2" ON H.W. HIGHLY ALTERED MUCH PYRITE & DISSEM Pbs etc. 1/4 - 3/8" QTZ @ 70-80° @ 173.7 3/8" QTZ & DISSEM GREY METALLICS SOME Pbs @ 30° @ 174.5

HOLE 90-3

## DETAILED GEOLOGY

①

FOOTAGE		MAP UNIT	ROCK DESCRIPTION (COLOUR, TEXTURES, STRUCTURES, etc.)	ALTERATION (WALL RXS., VEINS)	MINERALIZATION (WALL RXS., VEINS) (See detailed vein data sheet)
FROM	TO				
0	23'	OVERBURDEN			
23	108.5	DK GREEN GRAY - GRAY XAL LAPILLI ANDESITIC TUFF OR TUFF BXA	DK GREEN GRAY - GRAY XAL LAPILLI TUFF OR TUFF BRECCIA OF ANDESITIC COMPOSITION	NUMEROUS NL EPIDOTIZED BLEACHED FRACTURES RUSTY HEMATITIC COATINGS ON SLIPS.	NL - 1/8" CARB STRINGS. BEST SETS @ 60-80° CA AND 20-40° CA. 3/16" QTZ-CARB @ 30° CA @ 49 1/4" " " 80° CA @ 52 1/4" " " 30° CA @ 68 3/4" CARB @ 70° CA @ 92 3/4" QTZ-CARB @ 35° CA @ 102.5 3/8" " " @ 45° CA @ 103 1/8" " " @ 30° CA @ 105 3/4" " " FELD? @ 60° CA @ 106
108.5	109	ALTERED VOLCANICS ADJACENT TO VEIN.	VOLCANICS BLEACHED ARGILLIZED TO BUFF GRAY GREEN ADJACENT TO VEIN	BLEACHED, ARGILLIZED CORES BROKEN	2" QTZ-CARB-FELD @ 65-75° CA @ 109.
109	121	DK GREEN GRAY - GRAY VOLCANICS AS ABOVE		NUMEROUS CARB + HEMATITE SLIPS @ 20-30 CA.	1/8" QTZ-CARB @ 35° CA @ 110.5 1/4-3/8" QTZ-CARB-FELD @ 65° CA @ 115.5
121	123	FAULT @ 122 ~~~~~	FAULT SLIP 3/4" GOUGE @ 20-25° CA	ROCK BLEACHED, ARGILLIZED ADJACENT TO SLIP.	
123	137	DK GREEN VOLCANICS AS ABOVE		BLEACHING, ARGILLIC ALT. IN SLIP @ VEIN @ 131.5	1/4" QTZ @ 50° @ 129 1/4" GREENISH QTZ @ 60° CA @ 131 5/8" QTZ-FELD @ 60° @ 131.5 1/2" WHITE FELD, QTZ @ 25-30° CA @ 135
137	140.5	BLEACHED ALTERED VOLCANICS WV @ 139	VOLCANICS BLEACHED ALTERED. STRONG SLIP 5/8" GOUGE @ 20-25° CA @ 139	ROCK BLEACHED, SOME EPIDOTE. STRONG ARGILLIC ADJACENT TO SLIP @ 139	3/4" QTZ-FRESH COLOUR TO FELD. SPARSE DISSEM PYRITE @ 45° @ 137.5

APPENDIX III

ASSAY RESULTS



**MIN  
• EN  
LABORATORIES**  
(DIVISION OF ASSAYERS CORP)

**SPECIALISTS IN MINERAL ENVIRONMENTS**  
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

**VANCOUVER OFFICE:**  
705 WEST 15TH STREET  
NORTH VANCOUVER, B.C. CANADA V7M 1T2  
TELEPHONE (604) 980-5814 OR (604) 968-4524  
FAX (604) 980-9621

**THUNDER BAY LAB.:**  
TELEPHONE (807) 622-8958  
FAX (807) 623-5931

**SMITHERS LAB.:**  
TELEPHONE/FAX (604) 847-3004

Geochemical Analysis Certificate

OS-0755-RG1

Company: **LAWRENCE PERRY**  
Projects:  
Attn: **DON DAVIDSON**

Date: **JAN-25-91**  
Copy 1. L.PERRY, C/O D.DAVIDSON, SMITHERS, B.C.  
2. L.PERRY, C/O MIN-EN LABS., SMITHERS, BC

We hereby certify the following Geochemical Analysis of 7 CORE samples submitted JAN-21-91 by L.PERRY.

Sample Number	AU-FIRE PPB	AG PPM	CU PPM	PB PPM	ZN PPM
811	92	41.1	385	4840	8000
812	40	24.2	247	2750	4800
813	25	25.5	26	1200	1140
814	49	7.0	52	615	910
815	89	4.1	21	180	250
816	321	78.4	1950	57000	27000
817	103	26.8	237	1270	1700

Certified by \_\_\_\_\_

MIN-EN LABORATORIES



APPENDIX IV

STATEMENT OF PROJECT COSTS

DRILLING - Silverton Drilling Ltd.

Drilling 635 ft @ \$20/ft	\$ 12 700.00
Core Boxes & Lids 34 @ \$9.10	309.40
Cat Rental	2 000.00
Trucking, Mobilization and Demobilization	1 415.00

ANALYTICAL WORK - Min-En Labs.

7 Samples	129.20
-----------	--------

LABOUR - D. Davidson, P.Eng.

Hole layout, Core logging, Sample preparation, Report preparation. 5 days @ \$350/Day	1 750.00
--	----------

- L. Perry

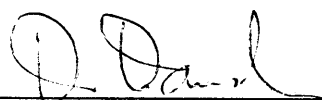
Supervision, Hole layout Dec 1/17 6 days @ \$200/Day	1 200.00
---	----------

MISCELLANEOUS

Truck Rental	\$ 200.00	
Fuel	64.60	
Photocopying	21.25	
Typing	<u>25.00</u>	<u>310.85</u>

TOTAL COSTS	\$ <u>19 814.45</u>
-------------	---------------------



  
D. Davidson M.A.Sc., P.Eng