

87-594-16256  
7/88

GEOLOGICAL AND DRILLING  
REPORT

on the

BUD CLAIM GROUP

PRINCETON AREA  
SIMILKAMEEN MINING DIVISION

Latitude 49 degrees 25 minutes N. 30"  
Longitude 120 degrees 26 minutes W. 48"

92H/BW

on behalf of

Owner: Gordon Webster  
Operator: G&V Explorations Ltd.

by

James W. McLeod, B.Sc.

Vancouver, British Columbia  
September 28, 1987

SUB-RECORDER  
RECEIVED  
SEP 30 1987  
M.R. # ..... \$ .....  
VANCOUVER, B.C.

FILMED

## TABLE OF CONTENTS

	PAGE
SUMMARY	1
INTRODUCTION	3
LOCATION AND ACCESS	3
PROPERTY AND OWNERSHIP	3
TOPOGRAPHICAL AND PHYSICAL ENVIRONMENT	5
HISTORY	5
REGIONAL GEOLOGY	6
LOCAL GEOLOGY	7
PRESENT WORK PROGRAM	7
METHOD OF SURVEY AND ANALYSES	9
RESULTS	9
CONCLUSIONS AND RECOMMENDATIONS	10
ESTIMATED COST OF PROGRAM	16
COST OF PRESENT PROGRAM	18
REFERENCES	19
CERTIFICATE	20

## FIGURES

FIGURE 1 - PROPERTY LOCATION PLAN	2
FIGURE 2 - CLAIM PLAN	4
FIGURE 3 - GEOLOGY MAP	8
FIGURE 4 - GEOCHEMICAL ANOMALOUS AREAS COPPER > 40 PPM	11
FIGURE 5 - GEOCHEMICAL ANOMALOUS AREAS LEAD > 7 PPM	12
FIGURE 6 - GEOCHEMICAL ANOMALOUS AREAS ZINC > 100 PPM	13
FIGURE 7 - GEOCHEMICAL ANOMALOUS AREAS SILVER > 5 PPM + ANOMALOUS GOLD	14
FIGURE 8 - GEOLOGY AND DRILL PLAN OF SOUTH ZONE	15

## APPENDICES

APPENDIX I - BUD DDH-87 DRILL LOGS	21
APPENDIX II - ANALYSES	24
APPENDIX III - VLF-EM DATA	32

## SUMMARY

The Bud mineral claim group situated approximately 4 kilometres southeast of the Village of Princeton, British Columbia has undergone partial geochemical soil surveys, some prospecting, limited hand and bulldozer trenching, limited geological mapping and three diamond core drill holes.

A number of anomalous areas of interest have been indicated and in one case ie. South Zone bulldozer trenches have encountered bedrock copper sulphide mineralization with values ranging up to 1.5% copper, 0.01 oz/ton gold and 15.9 oz/ton silver. A diamond core drill hole was collared to test below this weathered zone of surface mineralization (DDH-1-87) but, the hole did not reach its' projected depth because of the broken nature of the ground. DDH - 2 and 3 were collared further downhill from the principal area of interest. DDH-2-87 was drilled at -45 degrees but, was lost because of broken ground. DDH-3-87 was drilled from the same location as DDH-2-87 but, at -60 degrees and reached a total depth of 159.2 metres (522 feet). An anomalous section from 85.4 metres (280 feet) to 96.0 metres (315 feet) averaged 0.18% copper, 0.25 oz/T silver and 0.01 oz/T gold.

Considering that the primary drill target was not achieved, that much of the property has yet to undergo initial exploration and that exploration results acquired to date are very positive, leads the writer to recommend that further exploration work be undertaken on this ground.

The recommended program should include geological mapping, further geochemical soil surveying and bulldozer and hand trenching, double-tube reverse circulation percussion drilling and NQ-size diamond core drilling.

The recommended program is expected to take 3 months to complete at an estimated cost of \$250,000.00.

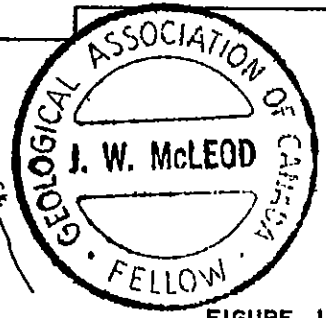
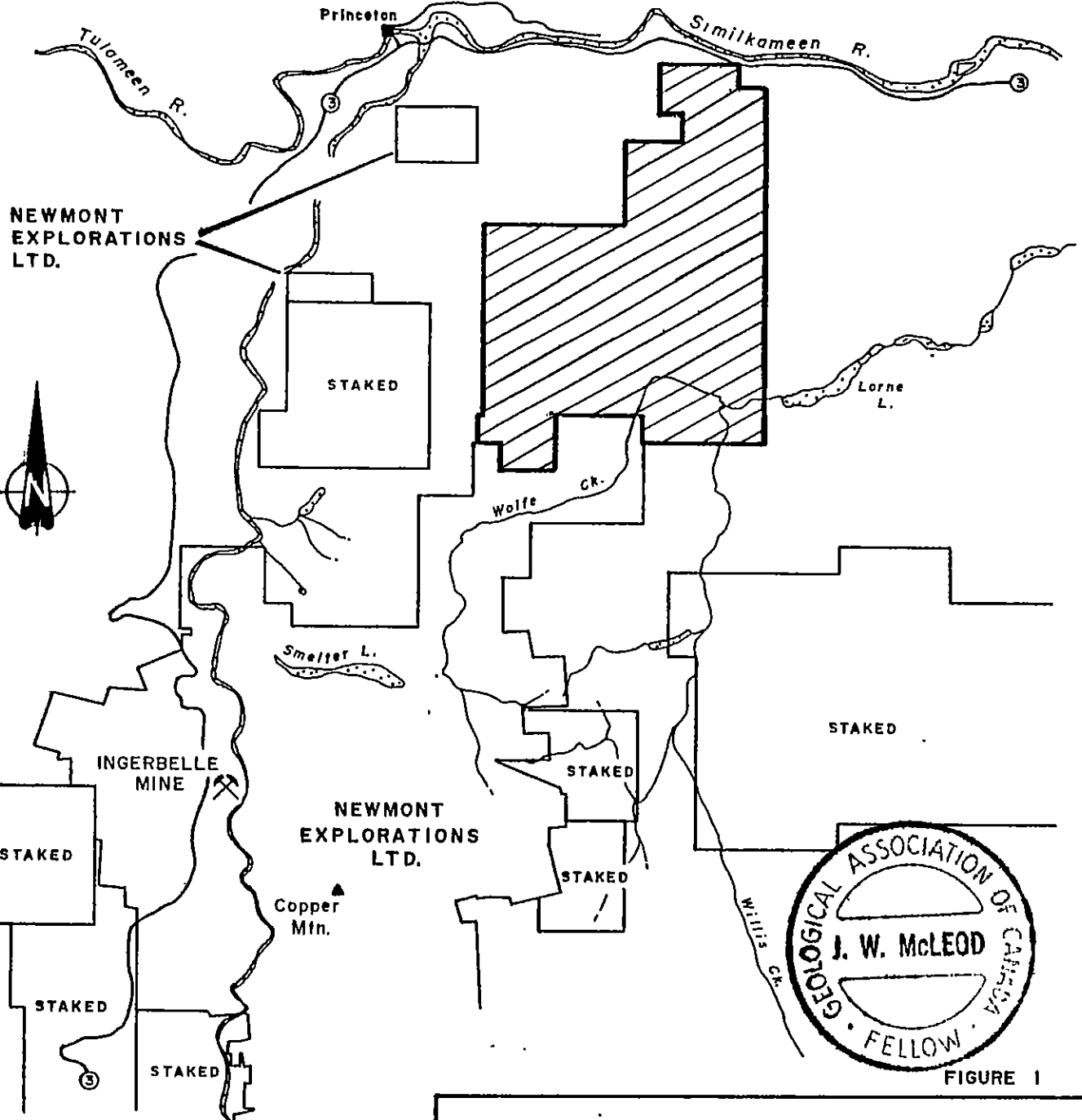


FIGURE 1



<b>GORDON WEBSTER</b>		
<b>BUD CLAIMS</b>		
PRINCETON AREA		
SIMILKAMEEN M. D.		
<b>PROPERTY LOCATION PLAN</b>		
SCALE:	DATE:	DRAWN BY:
1 : 110,000	SEPT 87	B. D. S.

## INTRODUCTION

During November 1986 and the period June 23 - July 19, 1987 the writer conducted field examinations of the Bud mineral claim group which included some geological mapping, sampling and a limited VLF-EM survey over a mineralized showing on the Bud 527 mineral claim. Subsequently the writer directed the drilling of three diamond core drill holes, logged the drill core and sampled selective sections of core and/or sludge for analyses (see Appendices I-III incl.).

This report is being prepared at the request Mr. Gordon Webster of Vancouver, British Columbia.

## LOCATION AND ACCESS

The property is located on the southside of the Similkameen River on the western flank of the Darcy Mountains. The claim group is approximately centered about August Lake. The northeastern corner of the claims lies within four kilometres of the Village of Princeton, British Columbia.

The claims may be located on NTS map 92 H/8W at latitude 49 degrees 25 minutes N. and longitude 120 degrees 25 minutes W.

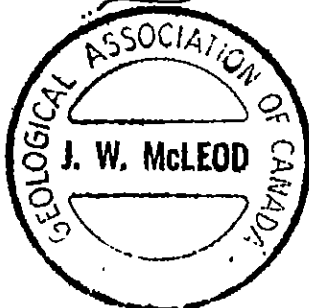
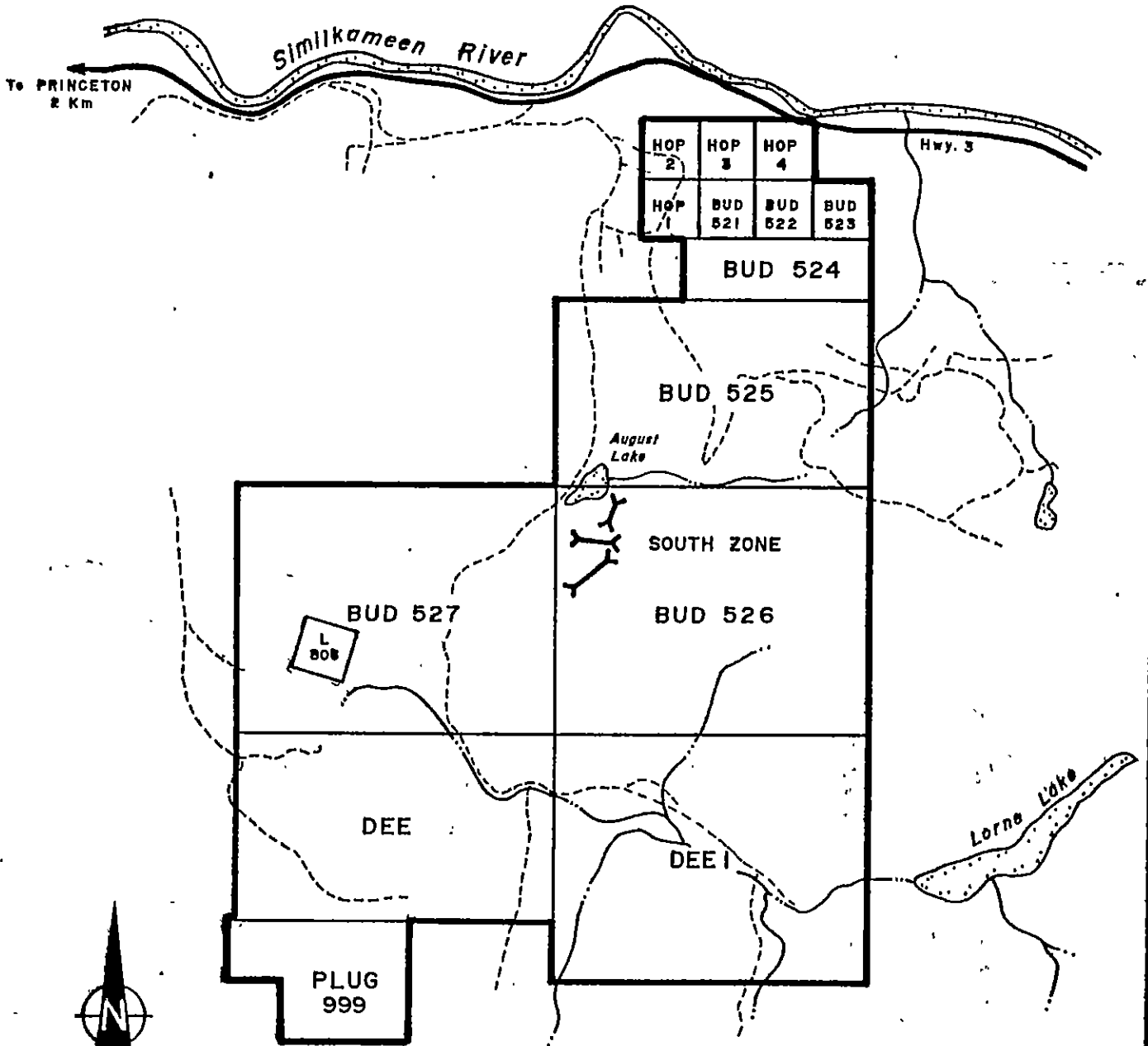
Access to the property is gained by travelling 4 kilometres east of Princeton, B.C. on Highway #3 (to the Golf Course cut-off) and then southerly for another 4 kilometres on the good, allweather August Lake road.

Excellent access is provided throughout the property by ranching, mining and logging roads.

## PROPERTY AND OWNERSHIP

The property consists of 11 contiguous mineral claims comprising a total of 65 units which are listed as follows:

<u>Claim Name</u>	<u>Record Number</u>	<u>Number of Units</u>	<u>Anniversary Date</u>
Hop 1	1756	1	October 28
Hop 2	1757	1	October 28
Hop 3	1758	1	October 28
Hop 4	1759	1	October 28
Bud 521	1689	1	August 16



GORDON WEBSTER  
CLAIM PLAN

FIGURE 2

Bud 522	1690	1	August 16
Bud 523	1691	1	August 16
Bud 524	1688	3	August 16
Bud 525	1679	15	July 20
Bud 526	1676	20	July 20
Bud 527	1677	20	July 20

The Bud claims are owned by Mr. Gordon Webster of Suite 44 - 1243 Thurlow Street, Vancouver, British Columbia.

TOPOGRAPHICAL AND PHYSICAL ENVIRONMENT

The claims lie in gently rolling to rounded mountainous terrain at elevations of 700 metres (2300 feet) to 1100 metres (3600 feet) mean sea level. The deeply incised valley of the Similkameen River on the northern boundary of the property exhibits the greatest relief, while the remainder of the property is characterized by open rangeland at lower elevations and conifer covered slopes and hilltop plateaux in the highest parts of the property.

The claim area receives low to moderate precipitation of which only a relatively small amount occurs as snow. The seasons favour a long and often hot summer and a much shorter, drier but occasionally cold winter which may be explained by the areas' location on the lee side of the Cascade Mountains.

HISTORY

The earliest recorded mining interest in the general area dates from the 1860's with the discovery of placer gold on the Tulameen and Similkameen Rivers. Lode gold was discovered in the Hedley area to the east of Princeton, B.C. in 1894 and by 1904 the Nickel Plate Mine was producing and in 1936 production started at the Hedley Mascot Mine. Note: A large tonnage gold mining operation has recently commenced in the Hedley area by Mascot Gold Mines Limited of Vancouver, British Columbia.

The large porphyry copper deposits of the Copper Mountain area were first discovered in 1884, but not staked until 1892 and did not reach actual production until 1925. The mines operated between 1925 and 1930 and between 1937 and 1957 by the Granby Consolidated Mining, Smelting and Power Company and milled a total of 31,552,000 metric tons grading better than 1% copper with recoverable values of both gold and silver. The Newmont Mining Corporation of Canada put the large Ingerbelle copper deposit to the west of the Copper Mountain deposits into production in 1972 and presently produces from both

## Ingerbelle and Copper Mountain.

The modern work history of the claim area dates from 1980 when a soil geochemical survey revealed a number of anomalous copper zones which were subsequently bulldozer trenched, revealing bedrock copper-silver mineralization. In 1983-84 and 1986 further soil geochemistry was carried out and a number of anomalous zones were revealed.

The cost of the old hand trenches discovered to date can only be guess-timated, but modern costs (those since 1980) are in the neighbourhood of \$65,000.00 including those of the present program. The total historical cost of mineral exploration work performed to date on the claims and not including such costs as claim staking or road rehabilitation work is estimated to be in the range of \$70,000.00 to \$75,000.00.

## REGIONAL GEOLOGY

The oldest and most abundant rocks in the general area are the Upper Triassic Nicola Group of volcanic flows and minor sediments. The Nicola Group is characterized by greenish andesites, augite diorite and tuffaceous lavas with isolated occurrences of limestone and minor argillites. The Nicola Group is an elongate belt of eugeosynclinal rocks which occur from near the 49th parallel and trend northward for over 150 kilometres. The width of the belt approaches 50 kilometres in places and is sometimes bound on its' east-west margin by older Paleozoic (often Permian) rocks.

The next oldest rocks in the general area are the Copper Mountain Intrusives which have been assigned a post Upper Triassic age and are characterized by the intermediate (relative percentage of silica ie. low percentage or absence of quartz or feldspathoids) group of intrusives which vary in composition from syenite through gabbro and pyroxenite. This differentiated suite is intruded into the older Nicola rocks.

Enveloping the Triassic rocks are the Middle to Upper Jurassic Coast Range batholithic or plutonic rock complexes.

The next oldest rocks observed in the general area are the more acidic intrusive type which vary in composition from granite through quartz diorite and have been assigned an Upper Cretaceous or Lower Tertiary age.

The youngest rocks observed in the immediate area are those of the Princeton Group assigned a Tertiary age and comprised of a lower volcanic unit of andesite or basalt and an upper sedimentary unit composed of shale, sandstone and conglomerate and sometimes found to contain economic occurrences of coal. The lower Princeton group of volcanics has been observed in places to lie unconformably over portions of the Copper Mountain intrusions.

The Nicola belt is found in many places to be cut by small stocks and



dykes of ages varying from late Triassic into the Tertiary.

The general area has also undergone widespread faulting as evidenced by older east-west and northwesterly trending faults which have been cut by younger northerly trending faults. In the vicinity of the Copper Mountain-Ingerbelle Mines the western boundary of the Copper Mountain Stock is truncated by the north trending, west dipping "Boundary Fault". East of the "Boundary Fault" faulting is dominantly east-west, northwesterly and northeasterly. These faults are thought to effect ore control.

Within the major southeastern lobe of the Nicola Group some 39 kilometres east-southeast of Princeton, B.C. occurs the famous lode gold occurrences of the Hedley area. These deposits are found to occur within metamorphosed limestone units (skarns) of the Nicola Group near diorite-gabbro intrusive contacts.

### LOCAL GEOLOGY

The geology of a portion of the claim group has been described as being underlain by Upper Triassic Nicola Group volcanics and related sediments which have been intruded by slightly younger Copper Mountain-type stocks and rocks of the Coast Plutonic Complex. Some of the igneous rock occurrences in the area may be small stocks or dykes of one or more later intrusive events.

During the field examination of the property, the writer observed a number of occurrences of fine grained, greenish fragmental volcanic rocks (tuffs) which may belong to the Upper Triassic Nicola Group. These rocks were found in several places to contact with medium to coarse grained, pinkish-buff, crystalline, porphyritic intrusive rocks thought to belong to the Lost Horse intrusives of late Upper Triassic age.

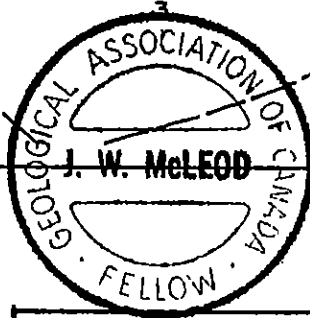
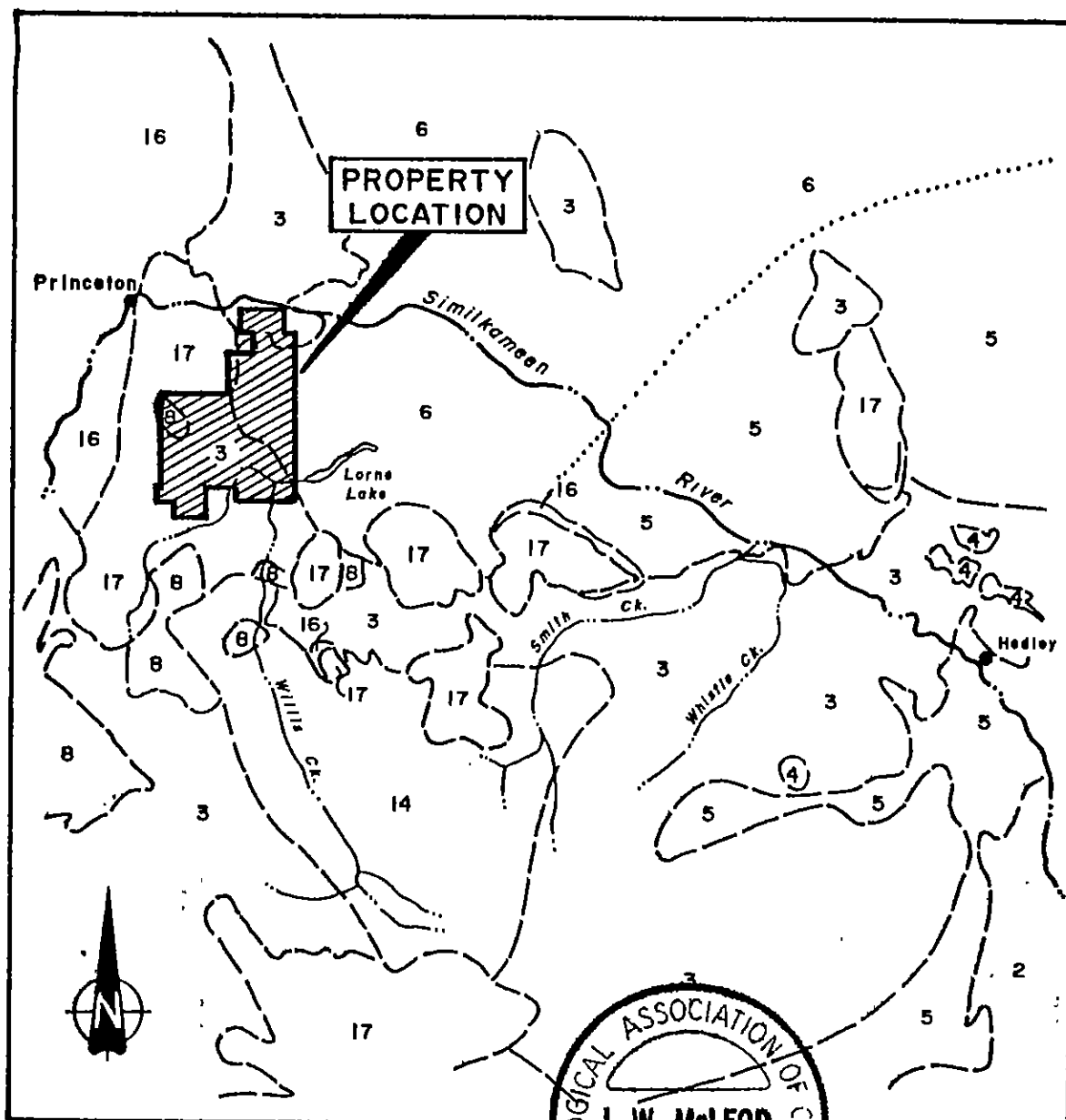
Most of the mineralization discovered to date on the property occurs in finer grained crystalline or fragmental volcanic rocks which are often in close proximity to the coarser grained intrusive rocks.

Alteration products observed near the mineralized zones or anomalous areas are quartz-carbonate (ankerite), epidote, magnetite, biotite, malachite-chrysocolla and probably secondary potassium feldspar.

Mineralization noted in order of decreasing abundance consists mainly of pyrite, limonite, malachite-chrysocolla, chalcopryrite, chalcocite, bornite and bismuthinite with some accompanying silver and gold values.

### PRESENT WORK PROGRAM

The present work program was begun by the writer in November, 1986. The first work was as reconnaissance geological mapping and rock sampling. This work was followed by more detailed geological mapping,



**LEGEND**

- 2 BRADSHAW GROUP
- 3 NICOLA GROUP
- 4 PERIDOTITE, PYROXENITE, GABBRO
- 5,6 COAST INTRUSIVES
- 8 COPPER MTN. INTRUSIONS
- 14 OTTER INTRUSIONS
- 16,17 PRINCETON GROUP

..... CONTACT, LOCATED, INFERRED



FIGURE 3

<b>GORDON WEBSTER</b>			
<b>BUD CLAIMS</b>			
PRINCETON AREA			
SIMILKAMEEN M.D., B.C.			
<b>GEOLOGY MAP</b>			
SCALE: 1:253,440	DATE: SEPT. 87	N.T.S. 92 H/8	DRAFTED BY: B. D.S.

rock sampling and a limited VLF-EM grid survey about some of the South Zone bulldozer trenches (see Figure 8) and subsequently three diamond core, AQ-wireline drill holes were completed in the summer of 1987. The holes were drilled to a total depth of; DDH-1-87 - 29.88 metres (98 feet), DDH-2-87 - 23.17 metres (76 feet), DDH-3-87 - 159.15 metres (522 feet), respectively. The core is stored in A. Webster's garage in Princeton, B.C.

#### METHOD OF SURVEY AND ANALYSES

The geological mapping was performed at a scale of 1: 2500 (see Figure 8).

A limited grid with the dimensions 400m x 250m was installed about a portion of the South Zone; the VLF-EM station interval along the lines was at 25 metres utilizing a Geotronics, model G-28 receiver, serial no. V-102, receiving the Seattle, Washington, USA. transmitter signal of 24.8 Khz. The dip angle and field strength data are reported directly in Appendix III.

Three diamond core drill holes were completed using a skid-mounted Longyear 24 wireline drill. The drilling was performed by Grizzly Diamond Drilling of Princeton, B.C.

Analyses of various rock samples, drill core and/or drill sludge samples was performed by Acme Analytical Laboratories Ltd. of Vancouver, B.C. The various samples underwent multi-element analyses by the induction coupled plasma (ICP) method and the atomic absorption method for gold followed by assays for copper, gold, silver, platinum and palladium on selected samples (see Appendix II).

#### RESULTS

Reconnaissance soil geochemistry, from past surveys, over portions of the property indicate two large anomalous zones to date; the North Zone and the South Zone. Work during the present program was confined mainly to a bulldozer trenched area within the South Zone.

The South Zone area appears to be mainly underlain by (as determined by hand specimens) interspersed fine to medium grained crystalline tuffs, agglomerates and possibly minor limey sediments which are often altered to garnet bearing skarns or possibly carbonitization of some of the older intrusive rocks. These apparently older? volcano-sediments and intrusives have in turn been intruded by a variety of texturally and compositionally different intrusive rocks. The intrusives are seen to vary in grain size from fine to coarse grained and often with an intergranular porphyritic texture. Compositionally the intrusive rocks observed in the South Zone appear to be generally acidic and very often leucocratic in appearance with greater than 10% quartz and the alkali feldspar generally more abundant than plagioclase feldspars. Some mafic, coarse grained rocks were observed in the area. Several occurrences of intrusive rocks with a pegmatitic appearance were observed in the South Zone area.

The South Zone volcano-sediments are highly fractured in places and evidence of shearing or faulting (slickenside surfaces) have been observed. These areas appear to be most effected by rock alteration mainly as: calcite, chlorite, quartz, sericite, epidote, secondary potassium feldspar, secondary biotite? and secondary magnetite?.

The area of strongest sulphide and copper carbonate mineralization encountered to date, on the northeast side of the South Zone, at sample locations 7871 - 7872 (see Figure 8) exhibits pyrite, malachite-azurite, chalcopyrite, sphalerite (dark), galena, bornite? and bismuthinite?, in order of decreasing abundance. This particular mineralized area exhibits evidence of a limonitic "boxwork" quartz vein and possibly secondary potassium feldspar alteration, as well as, anomalous silver and gold values.

### CONCLUSIONS AND RECOMMENDATIONS

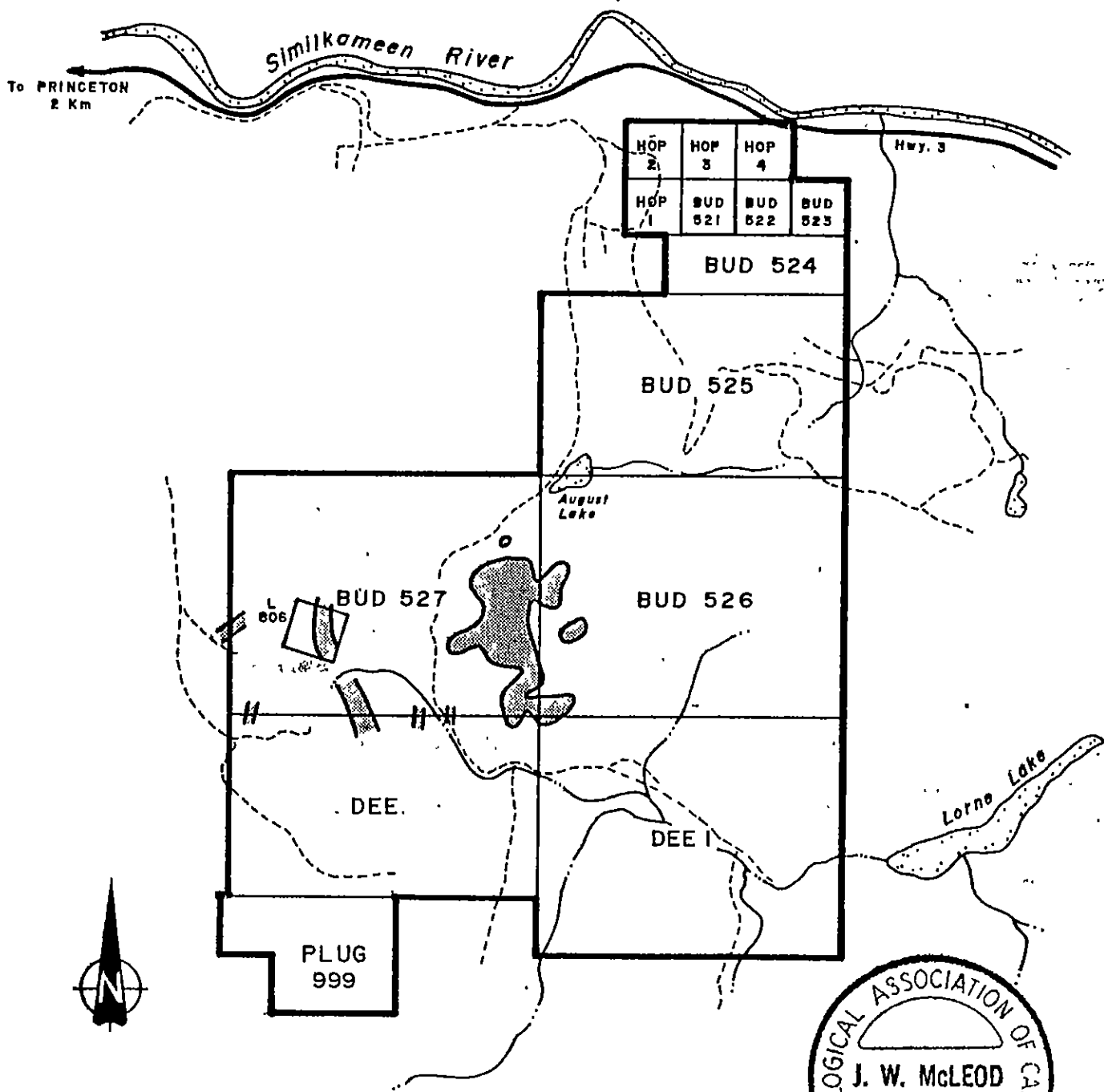
The Bud mineral claim group has undergone some primary exploration investigations comprised mainly of grid-controlled geochemical soil surveys and hand and bulldozer trenching and the just completed three diamond drill holes, of which, DDH-1-87 the hole of first choice of the writer, could not be successfully completed because of very broken ground. This hole was collared to try and test for the down-dip presence of the upper mineralized zone.

A number of zones anomalous in copper, lead, zinc, silver and gold have been discovered throughout the property by the reconnaissance soil and rock sampling performed to date (see Figures 4-7 incl.). Subsequent trenching confirmed the occurrence of bedrock iron and copper sulphide mineralization containing significant silver and gold values. Reference is made to surface sample No. 7872, which was taken by the writer, from the upper area of the South Zone bulldozer trenches: this sample was found to be anomalous in molybdenum, copper (greater than 0.5%), lead, zinc, silver (approximately 13 oz/T), bismuth and gold (approximately 0.05 oz/T).

The drilling to date, although not in the primary chosen place, has rendered sections anomalous in molybdenum, copper, silver, tungsten and gold (see Appendix II).

In a more general vain some positive features of the property are listed as follows:

- 1) The claim area is in close proximity and of a similar geological setting to two large and distinct mineralized areas of which both have very profitable periods of production. On the south is the Copper Mountain-Ingerbelle copper (with recoverable gold values) deposits and on the east the Hedley Gold Camp.
- 2) Initial indications of copper, silver and gold mineralization have been discovered.



GORDON WEBSTER

GEOCHEMICAL ANOMALOUS AREAS

COPPER > 40 ppm

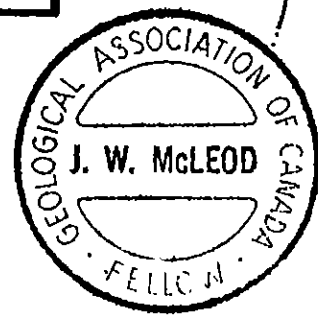
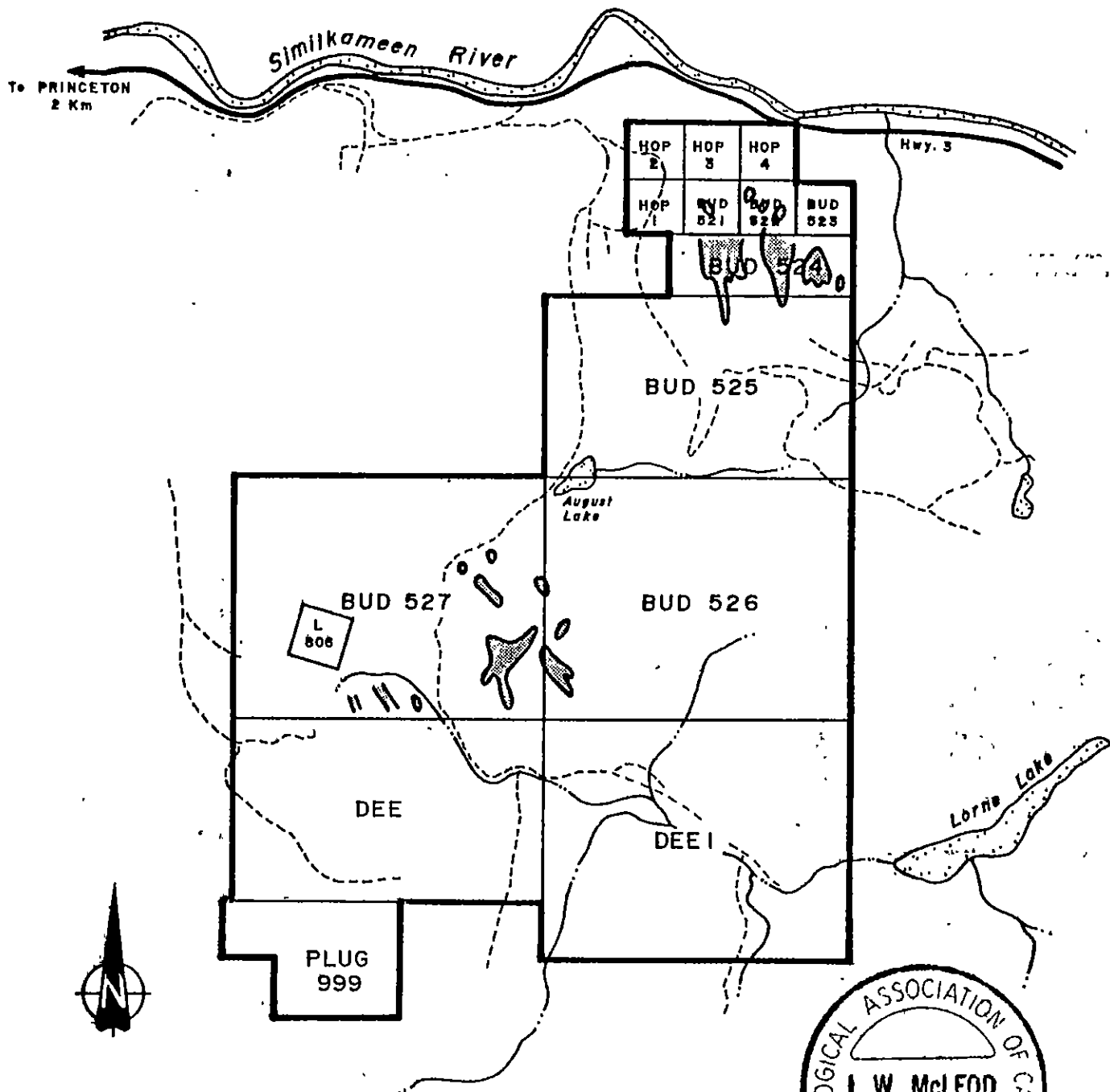
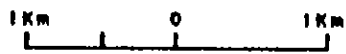
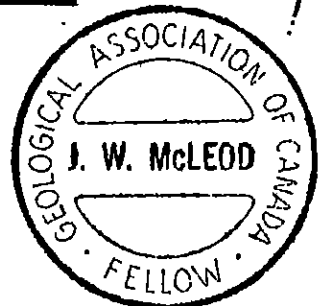


FIGURE 4



### GORDON WEBSTER

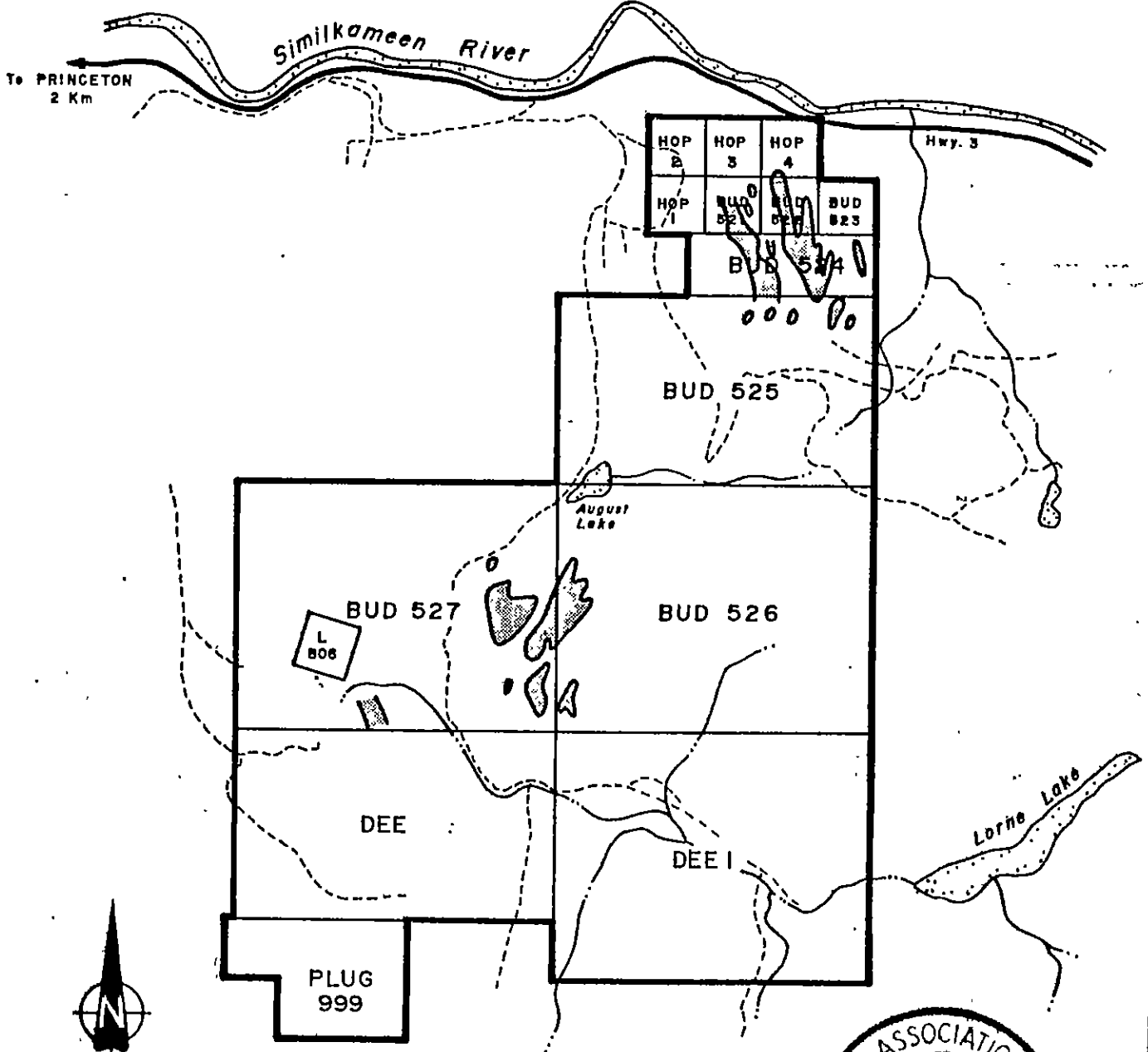
### GEOCHEMICAL ANOMALOUS AREAS



LEAD > 7 ppm



FIGURE 5



### GORDON WEBSTER

### GEOCHEMICAL ANOMALOUS AREAS

ZINC > 100 ppm

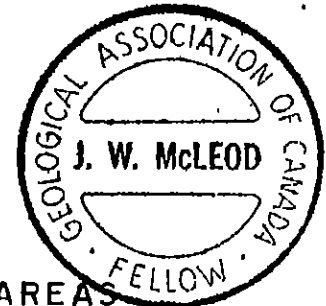
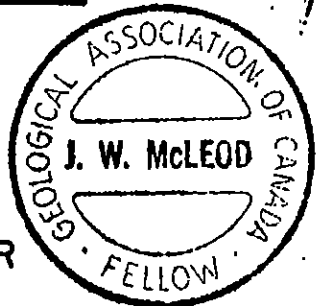
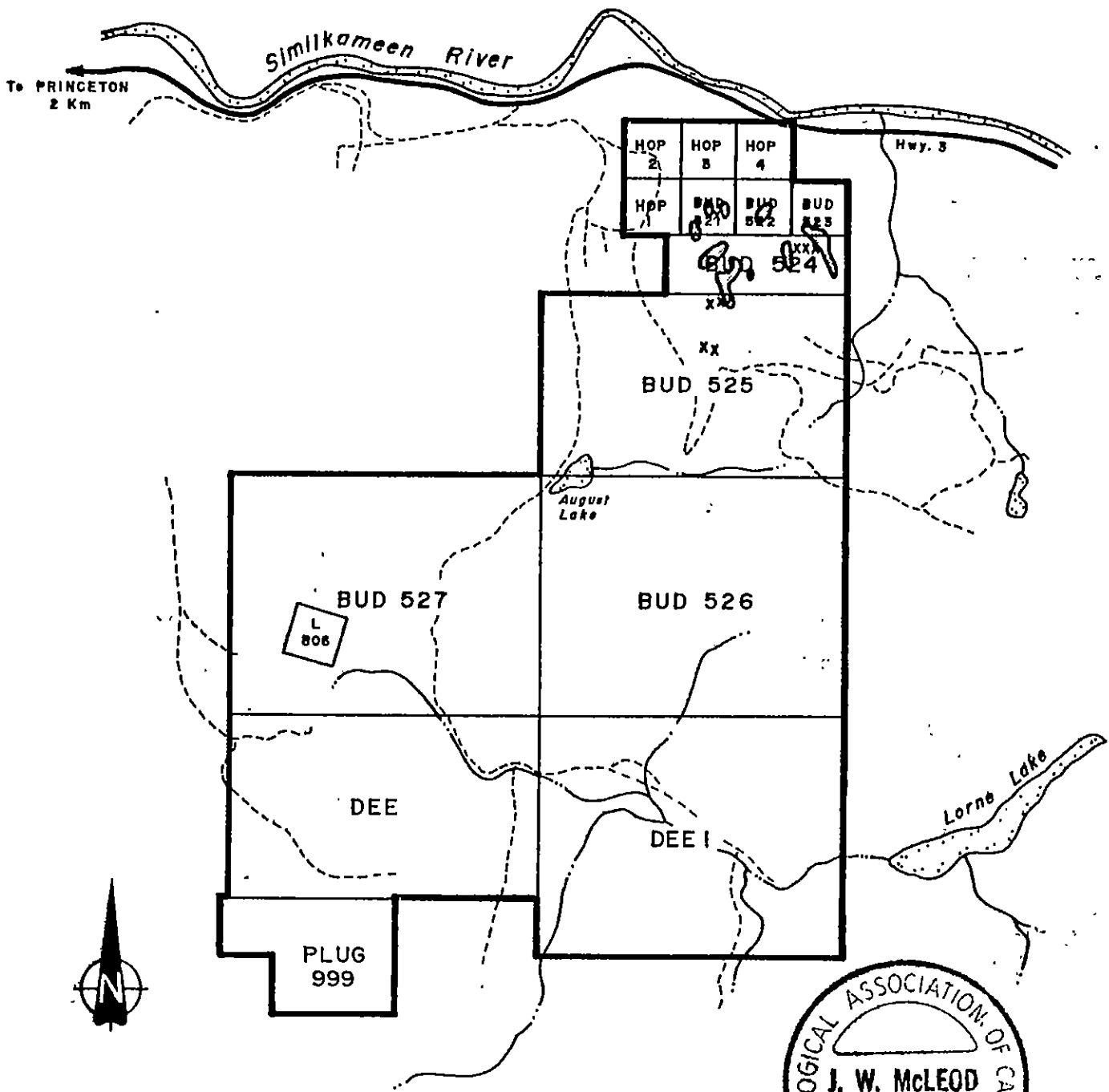



FIGURE 6



### GORDON WEBSTER

#### GEOCHEMICAL ANOMALOUS AREAS

SILVER > 5 ppm 

GOLD 

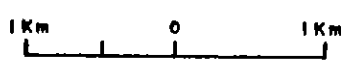
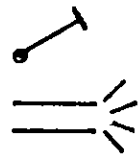
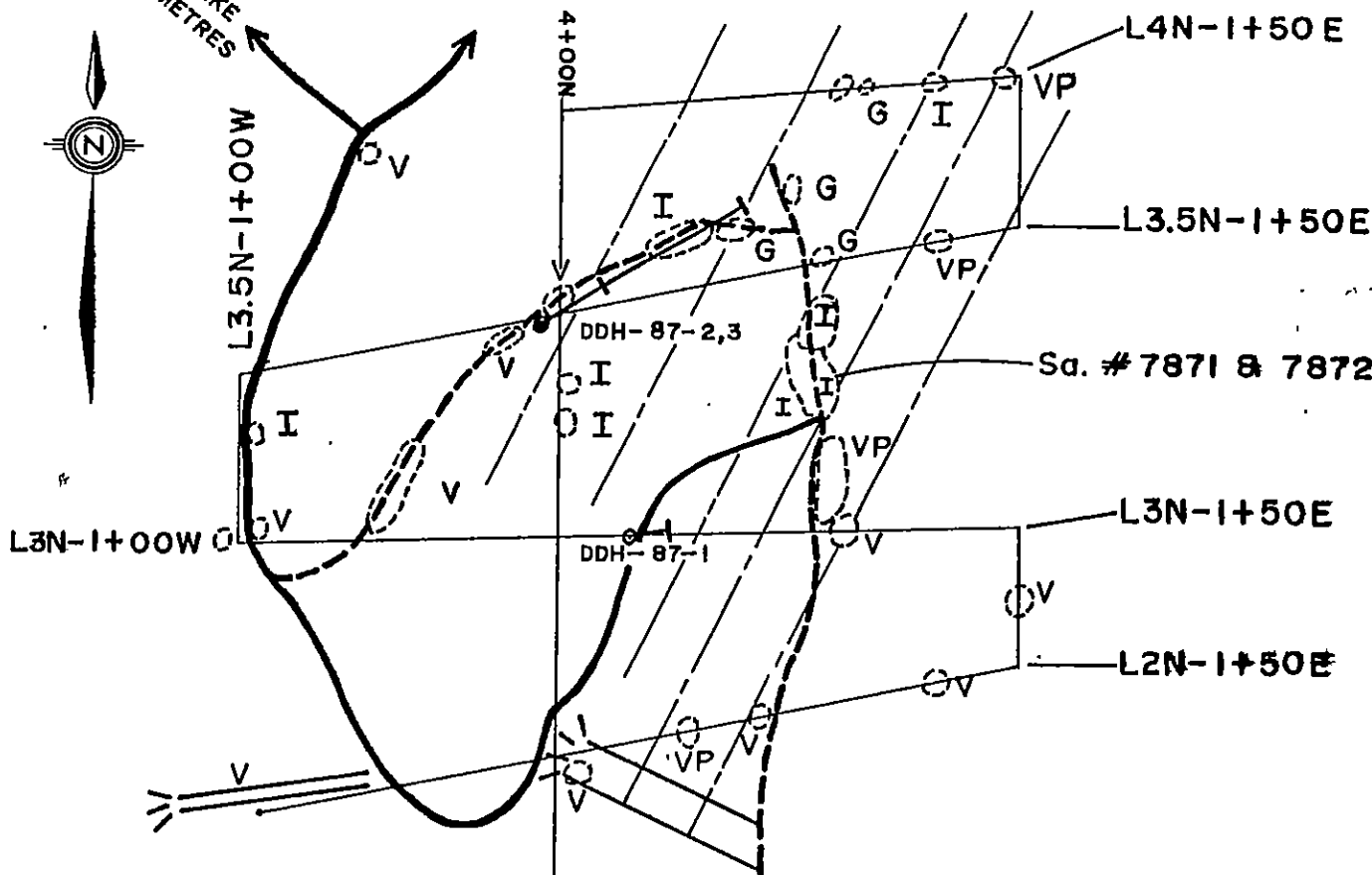


FIGURE 7



TO AUGUST LAKE  
ROAD 700 METRES

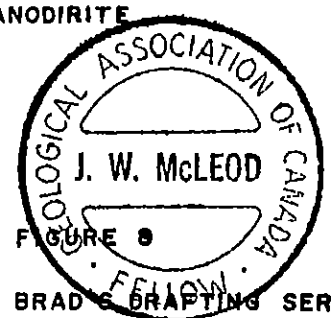


DDH COLLAR (87-#)  
 BULLDOZER TRENCH  
 BASELINE & GRID LINES  
 APPROXIMATE CONTACT  
 ROAD ——— ROAD TRENCH

**V** - FINE GRAINED VOLCANICS;  
TUFFS AND/OR AGGLOMERATES  
**VP** - VOLCANIC PORPHYRY  
(FELDSPAR AND/OR QUARTZ)  
**G** - GRANITIC INTRUSIVE FROM  
FINE - COARSE GRAINED  
**I** - TONALITE OR  
GRANODIRITE

**GEOLOGY & DRILL  
 PLAN OF SOUTH ZONE**

**GORDON WEBSTER**



- 3) Excellent access is available to and throughout the property.
- 4) Relatively low cost to determine the viability of further major exploration expenditures.

The writer recommends that the following exploration program be undertaken on the Bud claim group:

The entire property should first be geologically mapped and prospected and recorded at a scale of 1:5000. This will establish those parts of the property that are overburden covered and those areas of outcrop. Rock types and any bedrock mineralization and/or mineralized float-trains will be noted. Further, the limits of the geochemical soil surveys already completed will be noted and areas requiring initial soil surveying will be completed.

Mineralized and/or anomalous areas should undergo testing by double-tube reverse circulation percussion drilling to obtain a continuous assay section of the holes drilled. 500 metres of NQ-size diamond core drilling should be performed to obtain further geological and assay data.

Note: This program is expected to take three months to complete.

#### ESTIMATED COST OF PROGRAM

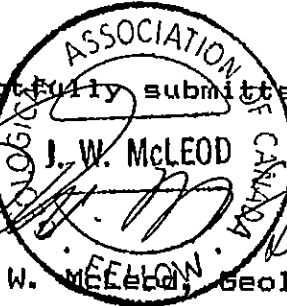
Geological mapping and supervision	\$20 000.00
Three field assistants for 3 months	27,000.00
Fill-in magnetometer and VLF-EM surveys over mineralized and/or anomalous soil areas	20,000.00
Sample analyses: 2500 @ \$5/sample	12,500.00
Check assays 300 samples @ \$10/sample	3,000.00
Room and board for 360 mandays @ \$40/day	14,400.00
Transportation - truck rentals, fuel, etc.	13,500.00
Equipment rental	4,100.00
D6 bulldozer rental for 80hr., all inclusive	6,000.00
Equipment and supplies	2,500.00
1800 metres of double-tube reverse circulation percussion drilling @ \$30/metre	54,000.00

500 metres of NQ-size diamond core drilling @ \$70/metre	35,000.00
Logging, splitting and assaying drill core	9,000.00
Compiling reports and draughting	4,000.00
Administration, insurance, Workers compensation, etc.	10,000.00
Contingency	15,000.00
<b>TOTAL</b>	<b>\$250,000.00</b>

Respectfully submitted,

J. W. McLEOD

James W. McLeod, Geologist



COST OF PRESENT PROGRAM

Drilling charges for 212 metres (696') of AQ-size wireline diamond core drilling	\$9,000.00
Analyses and assays of rock, core and sludge.	767.50
Accommodation and meals	512.84
Transportation	711.60
Labour	1,500.00
Geological mapping, core logging and supervision	3,500.00
Report and maps	508.06
<b>TOTAL</b>	<b>\$16,500.00</b>

## REFERENCES

Camsell, Charles, 1910. Memoir No. 2; Geology, and Ore Deposits of The Hedley Mining District, British Columbia. Geological Survey Branch, Canada. Department of Mines.

Rice, H.M.A., 1947. Memoir 243; Geology and Mineral Deposits of the Princeton Map Area, British Columbia. Mines and Geology Branch, Canada. Department of Mines and Resources.

Montgomery, Joseph Hilton, 1967. Petrology, Structure and Origin of the Copper Mountain Intrusions Near Princeton, British Columbia. PhD. Thesis, University of British Columbia.

Preto, V.A., 1972. Geology of Copper Mountain. Bulletin 59, British Columbia Department of Mines and Petroleum Resources.

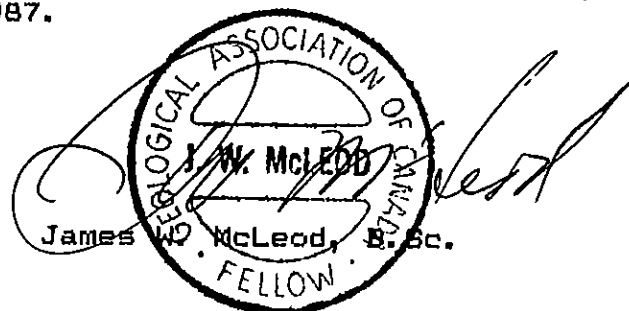
Hopper, D., 1984. Geochemical Prospecting Report on the Bud Claims Princeton, B.C.

## CERTIFICATE

I, JAMES W. McLEOD, of the Village of Ladner, Province of British Columbia, hereby certify as follows:

- 1) I am a Consulting Geologist with an office at 5303 River Road, Delta, B.C., V4K 1S8.
- 2) I am a Fellow of the Geological Association of Canada.
- 3) I graduated with a degree of Bachelor of Science, Major Geology, from the University of British Columbia in 1969.
- 4) I have practised my profession since 1969.
- 5) I do not own any direct interest, nor do I expect to receive any interest in the Bud mineral claims or related properties.
- 6) The above report is based on personal field experience gained on the property during November, 1986 and during the period from June 23 to July 19, 1987, as well as from government and private reports and from personal communications with other parties familiar with the property and the general area.

DATED at Ladner, Province of British Columbia, this 28th day of September, 1987.



## APPENDIX\_I

## BUD DDH-87 DRILL LOGS

Hole No.	Interval	Description
87-1	0-2.4 (metres)	Azimuth N080/-55. Casing.
	2.4-14.3	Greyish fine grained quartz-feldspar porphyry with some sericite. 25% recovery.
	14.3-29.9	Highly fractured, fine grained, pinkish-brown coloured quartz-feld. porphyry. 25% recovery. End-of-Hole.
87-2	0-2.4m.	Azimuth N060/-45. Casing.
	2.4-23.2	Highly weathered, very fine grained, grey volcanic or intrusive containing pyrite. 25% recovery. End-of-Hole.
87-3	0-3.0	Azimuth N060/-60. Casing.
	3.0-44.2	Fine grained, grey coloured, sericitized intrusive or volcanic containing approximately 5% pyrite and minor calcite and/or quartz stringers. Recovery good except for 22.3-35.1m. which is approx. 50%.
	44.2-45.4	Medium to coarse grained "salt and pepper" intrusive with minor epidote, calcite, chlorite, sericite and pyrite. Sericite appears after feldspars. Good core recovery.
	45.4-54.3	Fine grained intrusive. Colour Index = 40. Greater than 10% quartz. Propylitic altered feldspars which constitutes approx. 45% of the rock. Pyrite present in approx. 1-2%. Calcite welded fractures. May be a tonalite.

- 54.3-60.4 Medium grain "salt and pepper" intrusive with a CI = 25%. Greater than 10% quartz. Approx. 60% white feldspars which are relatively unaltered. Mafics are made-up of approx. 75% med. grained pyroxene and 25% f. grained hornblende. The rock is responsive to a hand magnet. This rock may be a tonalite or granodiorite. Good recovery.
- 60.4-82.3 Minor sericitic alteration of grey coloured intrusive with pyrite and magnetite. The rock varies back and forth from fine to medium grain sized. Fractures which are not all that abundant are calcite welded. Good recovery.
- 82.3-85.4 Relatively strong sericitic and calcite alteration of the same intrusive? 75% recovery.
- 85.4-97.0 Intercalated f. gr., light green volcanic and unaltered f-m gr. intrusive with quartz stringers, calcite welded fractures, some hematite? welded fractures and pyrite.
- 97.0-106.1 Relatively unaltered m. gr. "salt and pepper" intrusive.
- 106.1-124.1 Same intrusive with stronger alterations: chlorite, epidote, pyrite, secondary (pink) potassium feldspar, quartz stringers with minor chalcopyrite and minor pyrrhotite. At 109.4m. alteration is still strong with magnetite (secondary?) and some blebs of molybdenite. At 115.8-119.5m. "pink" feldspars more abundant with accompanying chalcopyrite. Recovery is good.



Note: The intrusive that occurs in the interval 97.0-124.1m. is a "salt and pepper", f-m gr. rock with a CI=35, approx. 15-20% quartz, 30% pyroxene and 5% magnetite and hornblende. 45% of the rock is feldspar of which approx. 75% is as plagioclase. The rock appears to be either a tonalite or granodiorite or intermediate between the two.

124.1-129.0 Brecciated volcanic dyke, not mineralized.

129.0- 159.2 Fine grained green crystalline volcanic  
(metres) with minor pyrite and the odd 2.5-3.0 centimetre section of magnetite and radiating clusters of slightly chloritized hornblende and calcite. Alteration is pervasive as chloritic, minor epidote, sericite, calcite and secondary potassium feldspar. Very minor cross-core axis shearing (slickensides) are evident. Core recovery is good. End-of-Hole.

CERTIFICATE OF ASSAY

Date: November 28, 1986<sup>24</sup>

File: 8611-2152



**SGS SUPERVISION SERVICES INC.**

*General Testing Laboratories Division*

1001 East Pender Street,  
Vancouver, B.C., Canada V6A 1W2  
Telephone: (604) 254-1647  
Telex: 04-507514

TO: MR. JIM MCLEOD  
5303 River Road  
Delta, B.C.  
V4K 1S8

We hereby certify that the following are the results of assays on: Ore

MARKED	GOLD	SILVER	XXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
	oz/st	oz/st						
3.5 E 0+0	0.002	0.02						
42.9	0.002	0.02						

NOTE: REJECTS RETAINED ONE MONTH PULPS RETAINED THREE MONTHS ON REQUEST PULPS AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR

REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS PUBLICATION OF STATEMENTS CONCLUSION OR EXTRACTS FROM OR REGARDING OUR REPORTS IN NOT PERMITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED

L. Wong

PROVINCIAL ASSAYER

*Analytical and Consulting Chemists, Bulk Cargo Specialists, Surveyors, Inspectors, Samplers, Weighers*

MEMBER: American Society For Testing Materials • The American Oil Chemists Society • Canadian Testing Association  
REFEREE AND OR OFFICIAL CHEMISTS FOR: National Institute of Oilseed Products • The American Oil Chemists' Society  
OFFICIAL WEIGHMASTERS FOR: Vancouver Board Of Trade

ACME ANALYTICAL LABORATORIES  
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 4 1987

DATE REPORT MAILED: *July 9/87...*

**GEOCHEMICAL ICP-MS ANALYSIS**

10 GRAM SAMPLE FIRE ASSAY AND ANALYSIS BY ICP MASS SPECTROMETER.

- SAMPLE TYPE: Pul

ASSAYER: *D. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

T & S ENTERPRISES File # 87-1969

SAMPLE#	Pt PPB	Pd PPB
7852	2	4
7853	4	16
7867	2	5
7872	2	6
11051	4	6
DET. LIMIT	2	2

GEOCHEMICAL ICP ANALYSIS

.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 CA P LA CR HG BA TI B W AND LIMITED FOR NA AND K. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: Rock Chips AU ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: JULY 19 1987 DATE REPORT MAILED: *July 23/87* ASSAYER: *A. S. J. ...* DEAN TOYE. CERTIFIED B.C. ASSAYER

JAMES W. MCLEOD File # 87-2538

SAMPLE#	MO	CU	PB	ZN	AG	HI	CO	MN	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	HG	BA	TI	B	AL	NA	K	W	AUX
	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	%	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH	PPH
49 LOWER	2	480	3	60	.6	15	17	1346	5.71	12	7	ND	3	158	1	5	2	70	10.45	.087	7	18	1.36	28	.05	2	1.83	.20	.09	5	1
38	5	491	7	24	.9	3	1	471	.49	2	5	ND	1	34	1	2	3	3	4.00	.013	4	1	.03	11	.01	2	.08	.01	.06	2	1
BL 0+17N	4	39	2	9	.1	3	3	110	1.15	5	5	ND	2	12	1	2	4	30	.45	.044	6	1	.16	63	.10	2	.32	.05	.10	1	1
BL 0+50N	2	59	5	20	.1	19	11	182	1.44	7	5	ND	3	75	1	2	3	40	3.01	.128	12	12	.27	22	.15	5	1.34	.24	.07	1	2

ACME ANALYTICAL LABORATORIES LTD.  
 852 E. HASTINGS, VANCOUVER B.C.  
 PH: (604)253-3158 COMPUTER LINE:251-1011

DATE RECEIVED JULY 31 1987

DATE REPORTS MAILED *Aug 6/87*

## GEOCHEMICAL ASSAY CERTIFICATE

SAMPLE TYPE : CORE - CRUSHED AND PULVERIZED TO -100 MESH.  
 Au# - 10 GR. IGHITED, HOT AQUA REGIA LEACHED, MIBK EXTRACTION, AA ANALYSIS.

ASSAYER *D. Toye* DEAN TOYE . CERTIFIED B.C. ASSAYER

JIM McLEOD PROJECT BUD FILE# 87-2877

PAGE# 1

SAMPLE	Au*
All samples DDH-1-87	ppb
DDH-87 115-120 (Feet)	3
DDH-87 120-125	2
DDH-87 125-130	4
DDH-87 130-135	3
DDH-87 135-140	6
DDH-87 140-145	5
DDH-87 145-150	1
DDH-87 150-155	78
DDH-87 155-160	12
DDH-87 160-165	1
DDH-87 165-170	3
DDH-87 170-175	6
DDH-87 175-180	12
DDH-87 180-185	5
DDH-87 185-190	4
DDH-87 190-195	3
DDH-87 195-200	5
DDH-87 200-205	3

GEOCHEMICAL ICP ANALYSIS

.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 NH FE CA P LA CR MG BA TI B V AND LIMITED FOR NA AND K. AU DETECTION LIMIT BY ICP IS 3 PPM. - SAMPLE TYPE: P1-SLUDGE P2-ROCK AIR ANALYSIS BY AIR FROM 10 GRAM SAMPLE.

DATE RECEIVED: AUG 23 1987 DATE REPORT MAILED: Sept 1/87 ASSAYER: A. Joffe. DEAN TOYE, CERTIFIED B.C. ASSAYER

JAMES W. MCLEOD PROJECT-G.K. (E-RD) File # 87-3583

Page 1

SAMPLEN (Reet)

Table with columns for elements (NO, CU, PB, ZN, AS, U, AU, TH, SR, CD, SB, BI, V, CA, P, LA, CR, MG, BA, TI, B, AL, NA, K, W) and rows for various sample IDs (DDH-3-87 80-85, DDH-3-87 85-90, etc.) showing PPM values and detection limits.

SAMPLE#	NO	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	M	AUX
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
6669	3	188	25	40	1.5	39	16	226	4.58	9	5	ND	2	27	3	5	2	40	1.15	.061	6	34	.34	60	.23	7	.86	.19	.09	1	7
6670	4	44	3	13	.4	49	14	199	3.15	5	5	ND	2	16	1	4	2	28	.91	.063	5	27	.33	41	.20	3	.47	.09	.05	1	1

GEOCHEMICAL ICP ANALYSIS

.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 CA P LA CR HG BA TI B AL NA K W AUHS PTH PD\*\* - SAMPLE TYPE: Core AU\*\* PTH\*\* PPM BY FA-HS.

DATE RECEIVED: AUG 28 1987 DATE REPORT MAILED: *Sept 3/87* ASSAYER: *A. Jager*...DEAN TOYE, CERTIFIED B.C. ASSAYER

JAMES W. MCLEOD PROJECT-BUD File # 87-3536

SAMPLER	NO	CU	PB	ZN	AG	NI	CO	MN	FE	AS	U	AU	TH	SR	CD	SB	BI	V	CA	P	LA	CR	HG	BA	TI	B	AL	NA	K	W	AUHS	PTH	PD**
11076	12	30	2	22	.2	14	10	410	4.31	8	5	ND	3	90	1	2	2	157	3.55	.205	7	27	.66	17	.14	2	1.12	.10	.03	1	13	2	3
11077	5	902	2	47	1.0	6	9	897	3.51	10	5	ND	2	84	:	2	2	116	9.29	.108	8	17	1.07	88	.11	2	1.25	.09	.15	2	10	3	27



ACME ANALYTICAL LABORATORIES  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158

DATE RECEIVED: SEPT 3 1987

DATA LINE 251-1011 DATE REPORT MAILED:

*Sept. 13/87..*

**ASSAY CERTIFICATE**

- SAMPLE TYPE: Pulp AU\*\* AND AG\*\* BY FIRE ASSAY.

ASSAYER: *D. Toye* DEAN TOYE, CERTIFIED B.C. ASSAYER

JAMES W. MCLEOD PROJECT-G.K. (E-RD) File # 87-3583 R

SAMPLE#		CU %	AG** OZ/T	AU** OZ/T
	(Feet)			
DDH-3-87	270-275	.15	.12	.012
DDH-3-87	280-285	.11	.10	.006
DDH-3-87	285-290	.47	.99	.025
DDH-3-87	290-295	.19	.16	.007
DDH-3-87	295-300	.14	.16	.005
DDH-3-87	300-305	.10	.10	.009
DDH-3-87	305-310	.11	.12	.006
DDH-3-87	310-315	.17	.15	.009

## APPENDIX III

## VLF-EM DATA

Line	Station	Dip Angle	Field Strength
BL	0+00N (metres)	+11	23
BL	0+25N	+ 8	12
BL	0+50N	+ 5	13
BL	0+75N	+ 5	8
BL	1+00N	+ 7	7
BL	1+25N	+ 9	6
BL	1+50N	+ 9	6
BL	1+75N	+10	8
BL	2+00N	+ 9	14
BL	2+25N	+ 7	12
BL	2+50N	+12	12
BL	2+75N	+15	9
BL	3+00N	+15	8
BL	3+25N	+17	8
BL	3+50N	+19	9
BL	3+75N	+21	8
BL	4+00N	+23	8
4N	0+25E	+22	7
4N	0+50E	+23	10
4N	0+75E	+17	13

4N	1+00E	+16	13
4N	1+25E	+15	12
4N	1+50E	+18	12
3+75N	1+50E	+20	12
3.5N	1+50E	+24	19
3.5N	1+25E	+22	13
3.5N	1+00E	+20	11
3.5N	0+75E	+18	10
3.5N	0+50E	+18	9
3.5N	0+25E	+19	12
3.5N	0+25W	+17	7
3.5N	0+50W	+20	7
3.5N	0+75W	+16	9
3.5N	1+00W	+12	14
3N	1+00W	+17	23
3N	0+75W	+18	29
3N	0+50W	+11	17
3N	0+25W	+11	18
3N	0+25E	+16	30
3N	0+50E	+15	37

3N	0+75E	+17	39
3N	1+00E	+17	37
3N	1+25E	+19	37
3N	1+50E	+19	32
2.5N	1+50E	+15	28
2N	1+50E	+14	39
2N	1+25E	+15	42
2N	1+00E	+14	37
2N	0+75E	+14	41
2N	0+50E	+16	37
2N	0+25E	+14	28
2N	0+25W	+ 8	14
2N	0+50W	+21	34
2N	0+75W	+19	27
2N	1+00W	+18	42