

85-429-13719

Geochemical Report

on the

DIVER LAKE OPTION
(DAG CLAIM)

Located at Coordinates: 55 deg. 42 min. N, 125 deg. 52 min. W
Omineca Mining Division, B.C.

by: Robert J. Baerg

NORANDA EXPLORATION COMPANY, LIMITED
(No Personal Liability)

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

N.T.S. 93 N/12

June, 1985

13,719



TYPE OF REPORT/SURVEY(S) <i>Geochemical</i>	TOTAL COST <i>3770.40</i>
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AUTHOR(S) *Robert J. Baerg* SIGNATURE(S) *Robert Baerg*

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED *May 16/85* YEAR OF WORK *1984*

PROPERTY NAME(S) *Dag*

COMMODITIES PRESENT *Cu, Zn*

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN

MINING DIVISION *Omineca* NTS *93N/12W*

LATITUDE *55° 41' N* LONGITUDE *125° 51' W*

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property [Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)]:

Dag 1 #6253 16 units

OWNER(S)
(1) *Art. Halleran* (2)

MAILING ADDRESS
*P.O. Box 2380
Vancouver, B.C. V6B 3T5*

OPERATOR(S) (that is, Company paying for the work)
(1) *Noranda Exploration Co. Ltd* (2)

MAILING ADDRESS
*P.O. Box 2380
Vancouver, B.C.
V6B 3T5*

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):
The property lies in the Sitlika Assemblage, felsic to basic volcanics of Triassic to Jurassic age. Mineralization consists of banded iron sulphides in a cherty rhyolite host rock. Surrounding felsic volcanics are strongly sericite altered.

REFERENCES TO PREVIOUS WORK

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)			
Ground
Photo
GEOPHYSICAL (line-kilometres)			
Ground
Magnetic
Electromagnetic
Induced Polarization
Radiometric
Seismic
Other
Airborne
GEOCHEMICAL (number of samples analysed for)			
✓ Soil	37 Cu, Zn, Pb, Ag, Mo, As, Au	Dag	3770.40
✓ Silt	1	Dag	
✓ Rock	4 Cu, Zn, Ag, Au	Dag	
Other
DRILLING (total metres; number of holes, size)			
Core
Non-core
RELATED TECHNICAL			
Sampling/assaying
Petrographic
Mineralogic
Metallurgic
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)
Topographic (scale, area)
Photogrammetric (scale, area)
Line/grid (kilometres)
Road, local access (kilometres)
Trench (metres)
Underground (metres)
			TOTAL COST 3770.40

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report) 3770.40				pretty brief report - base minimums but conforms to standards.
Value of work approved	NA			
Value claimed (from statement) 3000.00				
Value credited to PAC account				
Value debited to PAC account				
Accepted <i>[Signature]</i> Date 9 Jan 86	Rept. No. 85-429-13719			Information Class A

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SUMMARY

The property is located on the north side of Diver Lake which is located approximately 25 km northeast of Takla Landing. The property lies within a belt of basic to felsic marine volcanics of the Sitlika Assemblage.

During August 1984, a program of soil, rock and silt sampling was completed. This program was designed to evaluate the potential of a small showing of banded iron sulphides in a felsic volcanic host.

The claims are owned by Arthur Halleran and are currently under option to Noranda Exploration Company, Limited.

The geochem program detected several one sample zinc and/or copper in soil anomalies. There were no anomalous rock samples.

INTRODUCTION:

The Dag claim is owned by Art Halleran of Ft. St. James and is currently under option to Noranda Exploration Company, Limited. The work described here was carried out by Mr. Halleran and Noranda Personnel during 1984.

LOCATION AND ACCESS:

The property is located approximately 25 km north-northeast of Takla Landing, in north central British Columbia (Fig. 1).

Access to the property from Takla Landing is via the Hudson Bay Forest Road to kilometer "0" where the Fall River Forest Road branches off to the east and eventually leads on to the property.

CLAIM STATISTICS:

The Diver Lake property consists of one claim (Fig. 2), located in the Omineca Mining Division:

CLAIM NAME	UNITS	RECORD #	DATE
Dag	16	6253	May 31, 1984

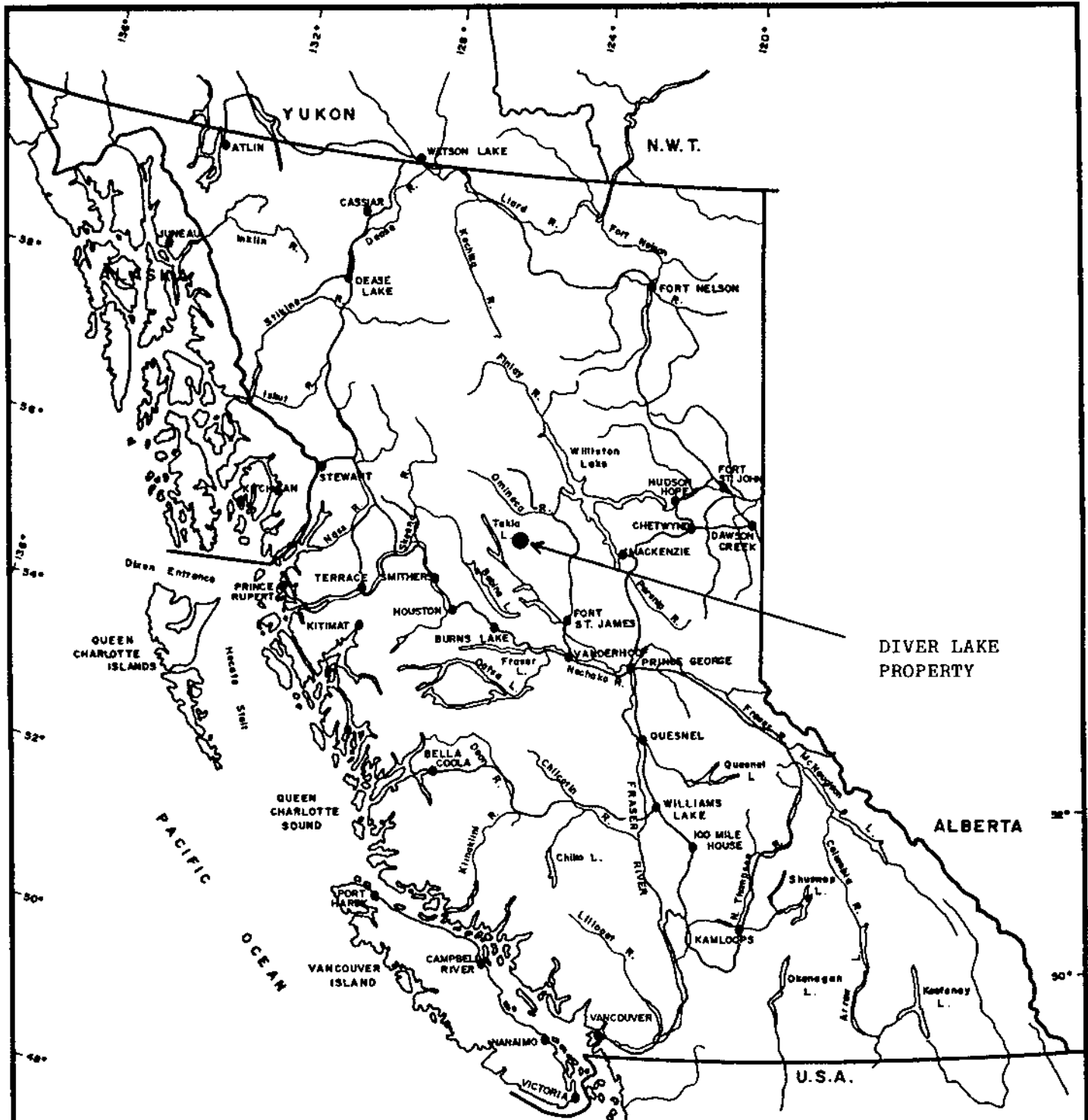
The Dag claim is owned by Art Halleran but is under option to Noranda Exploration Company, Limited.

PREVIOUS WORK:

No previous work has been done on the property itself. During 1977-1981, McIntyre Mines and Shell Canada Resources conducted an airborne EM survey and ground follow-up programs in the area.

REGIONAL GEOLOGY:

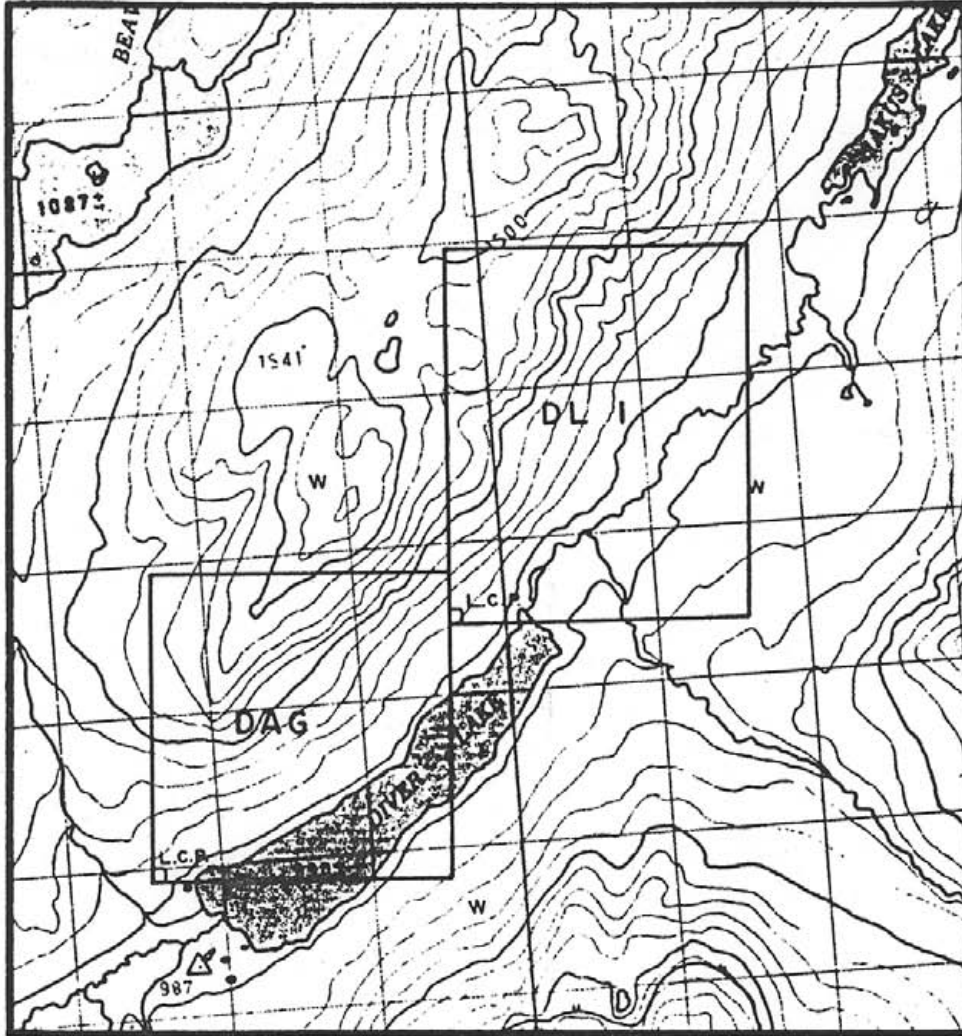
The area has been most recently mapped by Paterson (1974) (Fig. 3). The rocks have informally been named the Sitlika Assemblage which consists of three units whose dominant lithologies are argillite, volcanic rock and greywacke. The volcanic unit which is locally well exposed in the alpine areas and along road cuts, consists mainly of basic, locally pillowed volcanics with minor felsic volcanic flows and volcanoclastics. The Assemblage has a distinct NNW foliation direction and appears to be bounded by fault contacts.



0 100 200 KILOMETRES
SCALE: 1:8,000,000

REVISED	DIVER LAKE OPTION	
	Location Map	
PROJ. No. 248	SURVEY BY: H.B.	DATE: May 1985
N.T.S. 93N/12	DRAWN BY: S.H.B.	SCALE: 1:8,000,000
DWG. No. 1	NORANDA EXPLORATION	
	OFFICE: PRINCE GEORGE, B.C.	

VANCAL 11927



0 1 2 3 4 Kilometres
 SCALE 1:50,000

REVISED	DIVER LAKE OPTION	
	<u>Claim Map</u>	
PROJ.No. 248	SURVEY BY: R.R.	DATE: May 1985
N.T.S. 93N/12	DRAWN BY: S.K.B.	SCALE: 1:50,000
DWG.No. 2	NORANDA EXPLORATION OFFICE: Prince George, B.C.	

MINERALIZATION:

Mineralization consists of finely banded pyrite-pyrrhotite in a cherty rhyolite and disseminated pyrite-pyrrhotite in felsic and basic volcanic flows and tuffs.

1984 EXPLORATION PROGRAM:

Geochem Survey

Soil samples were collected from the "B" soil horizon, with the use of a grub hoe. The depth of the sample holes varied from 25 to 38 cm. The samples were placed in Kraft wet strength paper bags, dried and then shipped to Noranda Labs in Vancouver, B.C. for analysis. (For analytical procedure see Appendix III)

Soil samples were collected at 100 m intervals on a 775 m X 400 m grid as well as along the top of the road cut which angles across the property (Fig. 4). The grid lines were oriented at 40 degrees with the baseline at 310 degrees. A total of 44 soil samples were collected. One (1) silt sample was collected from a local creek and four (4) rock chip samples were taken from local mineralized outcrops.

A) SOIL GEOCHEM

The soil samples were analysed for Cu, Zn, Pb, Ag, As, Mo and Au. The geochem response is at best spotty. The only elements which returned local anomalous values were Cu, Zn, and As. Cu values range from 8 to 180 ppm, Zn from 32 to 600 ppm and As from <2 to 74 ppm. The higher As values appear to correlate with the main showing.

B) ROCK GEOCHEM

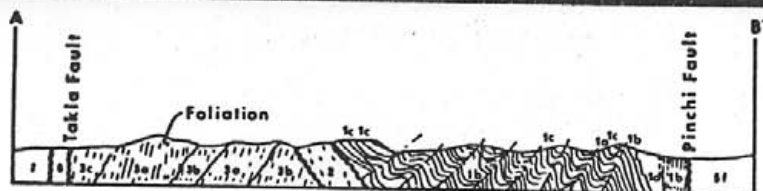
The four rock samples were assayed for Cu, Zn, Ag, and Au. Only trace amounts of these elements were detected.

C) SILT GEOCHEM

The silt sample was analysed for Cu, An, Pb, Ag, As, Mo and Au. It did not return any anomalous values.

CONCLUSIONS:

The property is located in a belt of basic to felsic volcanics which have potential for massive sulphide deposits. A limited geochemical program reported local weak to moderately anomalous copper, zinc and arsenic values locally coincident with a mineralized showing.



LEGEND

UPPER CRETACEOUS and PALEOCENE SUSIUT GROUP

1 conglomerate, shale, greywacke

JURASSIC

HAZELTON GROUP

6 tuff, volcanic breccia

UPPER TRIASSIC and JURASSIC

TAKLA GROUP (?)

4 (4a) chert pebble conglomerate;
(4b) greywacke, argillite

UPPER TRIASSIC (?), JURASSIC (?)

SITLIKA ASSEMBLAGE

3 (3a) tuff, volcanic breccia, rhyolite, feldspar porphyry
(3b) greywacke, siltstone
(3c) black phyllite or argillite

UPPER PALEOZOIC

CACHE CREEK GROUP

1 (1a) limestone; (1b) chert & phyllite;
(1c) greenstone; (1d) greywacke, laminated siltstone

INTRUSIVES

MESOZOIC or TERTIARY

5 (5a) syenite; (5b) granite; (5c) biotite,
hornblende feldspar porphyry; (5d) biotite,
granodiorite; (5e) felsite

JURASSIC (Mainly ?)

st granodiorite (Hogem Batholith)

PERMO-TRIASSIC

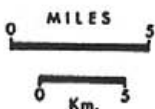
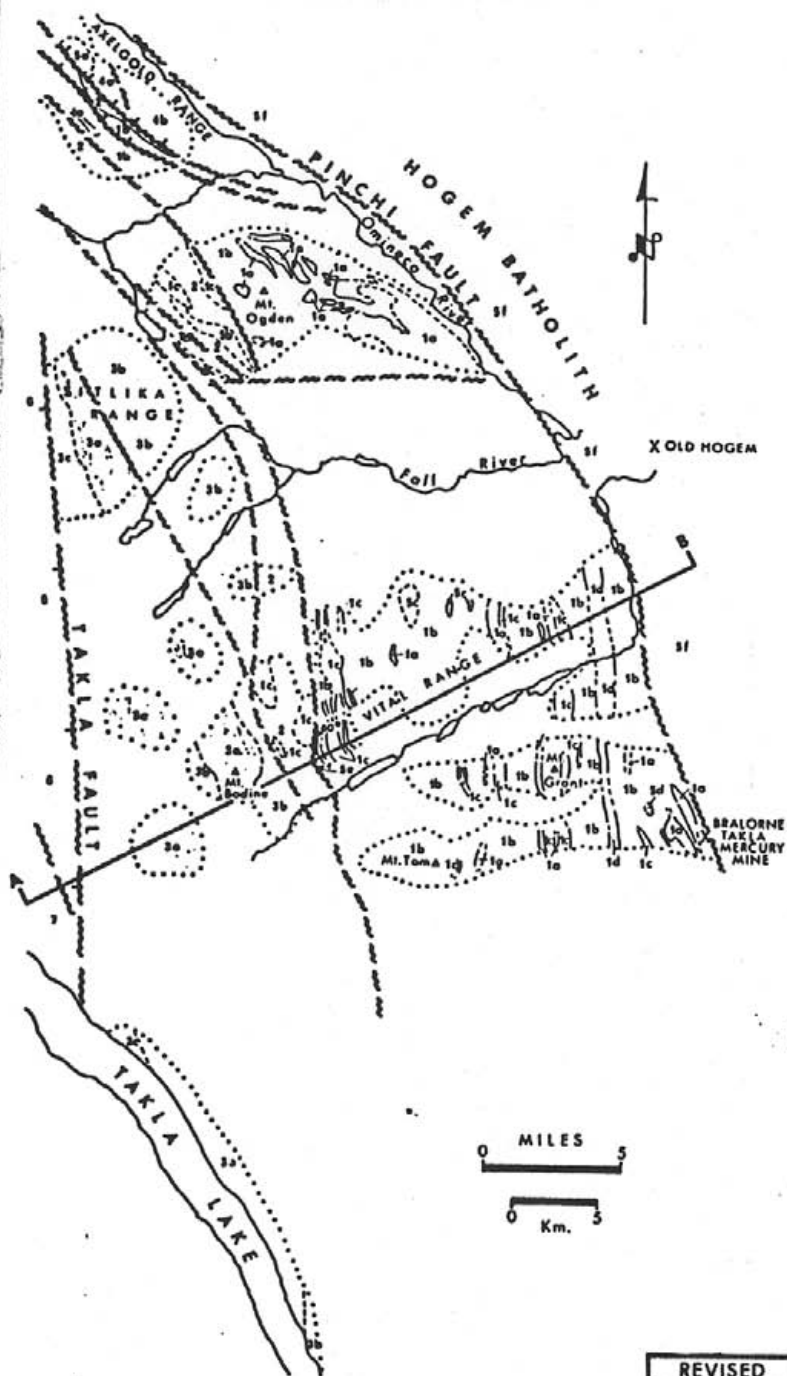
2 serpentinite, harzburgite

FAULT (defined, approximate, inferred).....

THRUST or high angle REVERSE FAULT.....

CONTACT (defined, approximate).....

LIMIT of MAPPING.....



REVISED	DIVER LAKE OPTION	
	<u>Regional Geology</u>	
PROJ. No. 248	SURVEY BY: R.B.	DATE: May 1985
N.T.S. 93N/12	DRAWN BY: R.B.	SCALE: 1:500,000
DWG. No. 3	NORANDA EXPLORATION	
	OFFICE: Prince George, B.C.	

RECOMMENDATIONS:

Establish a flag line grid for:

1. Geological Mapping - to determine the extent of the felsic volcanics and sulphides.
2. Soil and rock geochem survey.
3. HLEM and Magnetometer surveys.

REFERENCES:

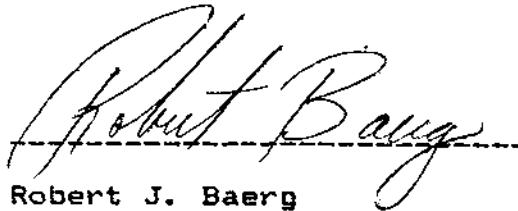
Paterson, I.A. Geology of Cache Creek Group and Mesozoic Rocks at the Northern end of the Stuart Lake Belt, Central B.C., Geol. Survey of Canada, Paper 74-1, Part B, 1974.

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, Robert J. Baerg of the City of Prince George, Province of British Columbia, do certify that:

1. I have been employed as a geologist by Noranda Exploration Company, Limited since May, 1984.
2. I am a graduate of the University of British Columbia with a Bachelor of Science (Honors) in Geology (1984).
3. I supervised and assisted with the work described in this report.

A handwritten signature in cursive script, reading "Robert Baerg", written over a horizontal dashed line.

Robert J. Baerg
Geologist
Noranda Exploration Company, Limited
(No Personal Liability)

APPENDIX II

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

DATE June, 1985

PROJECT - DIVER LAKE
 TYPE OF REPORT - Geochem

a) **Wages:**

No. of Days - 14
 Rate per Day - \$125.00
 Dates From - May 1984 - Nov. 1984
 Total Wages \$ 1,750.00

b) **Food and Accommodation:**

No. of Days - 14
 Rate per Day - \$20.00
 Dates From - May 1984 - Nov. 1984
 Total Cost \$ 280.00

c) **Transportation:**

No. of Days - 11
 Rate per Day - \$75.00
 Dates From - May 1984 - Nov. 1984
 Total Cost \$ 825.00

d) **Analysis:**

40 soil/silt samples for
 Cu, Zn, Pb, Ag, Mo, As, Au \$ 9.00/sample \$ 360.00
 4 rock assays for
 Cu, Zn, Ag, Au \$13.85/sample \$ 55.40

TOTAL \$ 415.40

e) **Cost of Preparation of Report:**

Author \$ 200.00
 Drafting 200.00
 Typing 100.00

f) **Other:**

Contractor

TOTAL COST \$ 3,770.40

APPENDIX III

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver.

Preparation of Samples

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for geochemical analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples * from constant volume), are analysed in its entirety, when it is to be determined for gold without further sample preparation.

Analysis of Samples

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighed out at 0.4 g and chemical quantities are doubled relative to the above noted method for digestion.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn can be determined directly from the digest (dissolution) with a conventional atomic absorption spectrometric procedure. A Varian-Techtron, Model AA-5 or Model AA-475 is used to measure elemental concentrations.

Elements Requiring Specific Decomposition Method:

Antimony - Sb: 0.2 g sample is attacked with 3.3 ml of 6% tartaric acid, 1.5 ml conc. hydrochloric acid and 0.5 ml of conc. nitric acid, then heated in a water bath for 3 hours at 95°C. Sb is determined directly from the dissolution with an AA-475 equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.3 g sample is digested with 1.5 ml of perchloric 70% and 0.5 ml of conc. nitric acid. A Varian AA-475 equipped with an As-EDL is used to ~~measure~~ arsenic content in the digest.

Barium - Ba: 0.1 g sample digested overnight with conc. perchloric, nitric and hydrofluoric acid; Potassium chloride added to prevent ionization. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 g - 0.3 g is digested with 2.0 ml of perchloric 70% and 1.0 ml of conc. nitric acid. Bismuth is determined directly from the digest with an AA-475 complete with EDL.

Gold - Au: 10.0 g sample is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with MIBK from the aqueous solution. AA is used to determine Au.

Magnesium - Mg: 0.05 - 0.10 g sample is digested with 4 ml perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the

range of atomic absorption. The AA-475 with the use of a nitrous oxide flame determines Mg from the aqueous solution.

Tungsten - W: 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

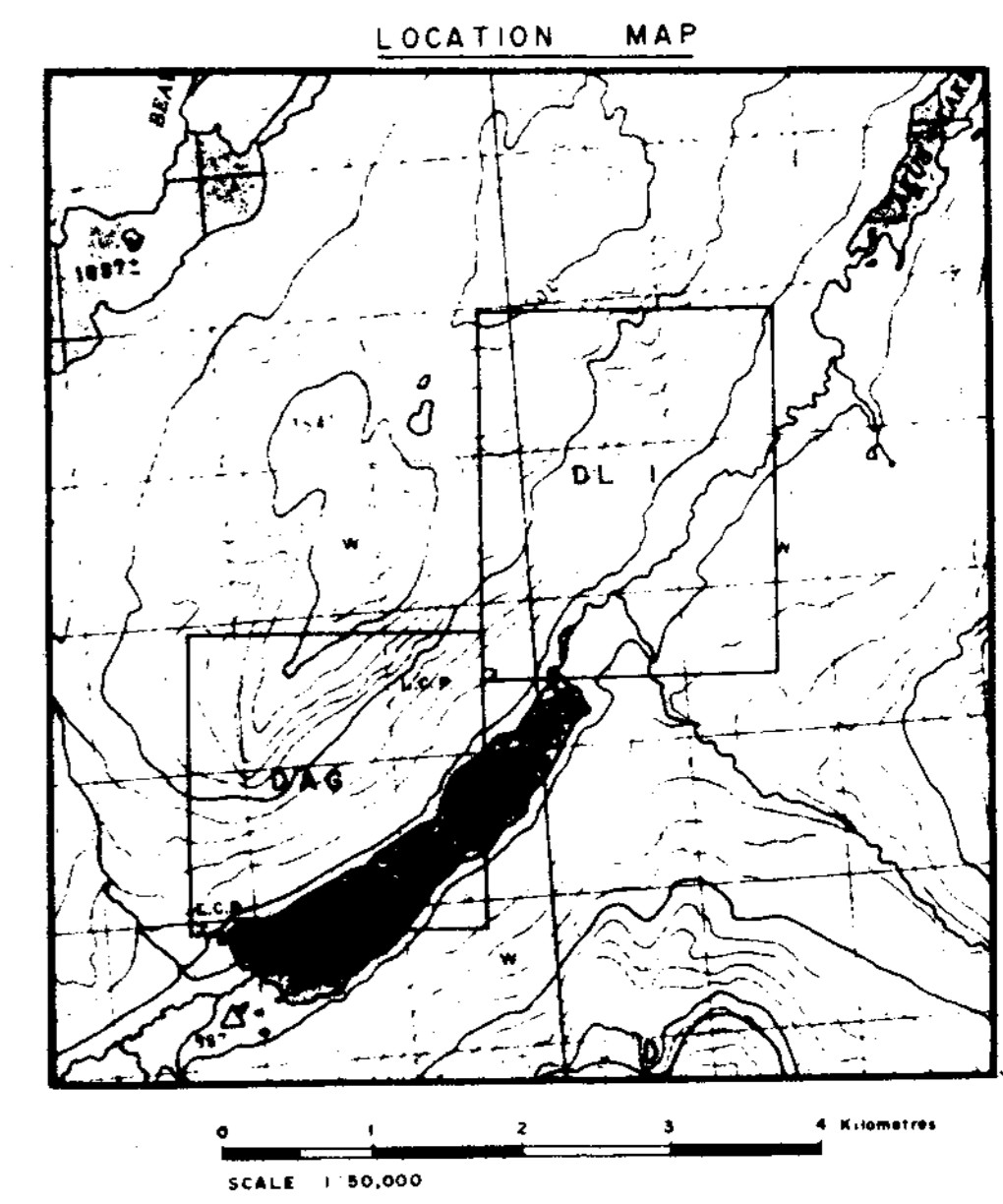
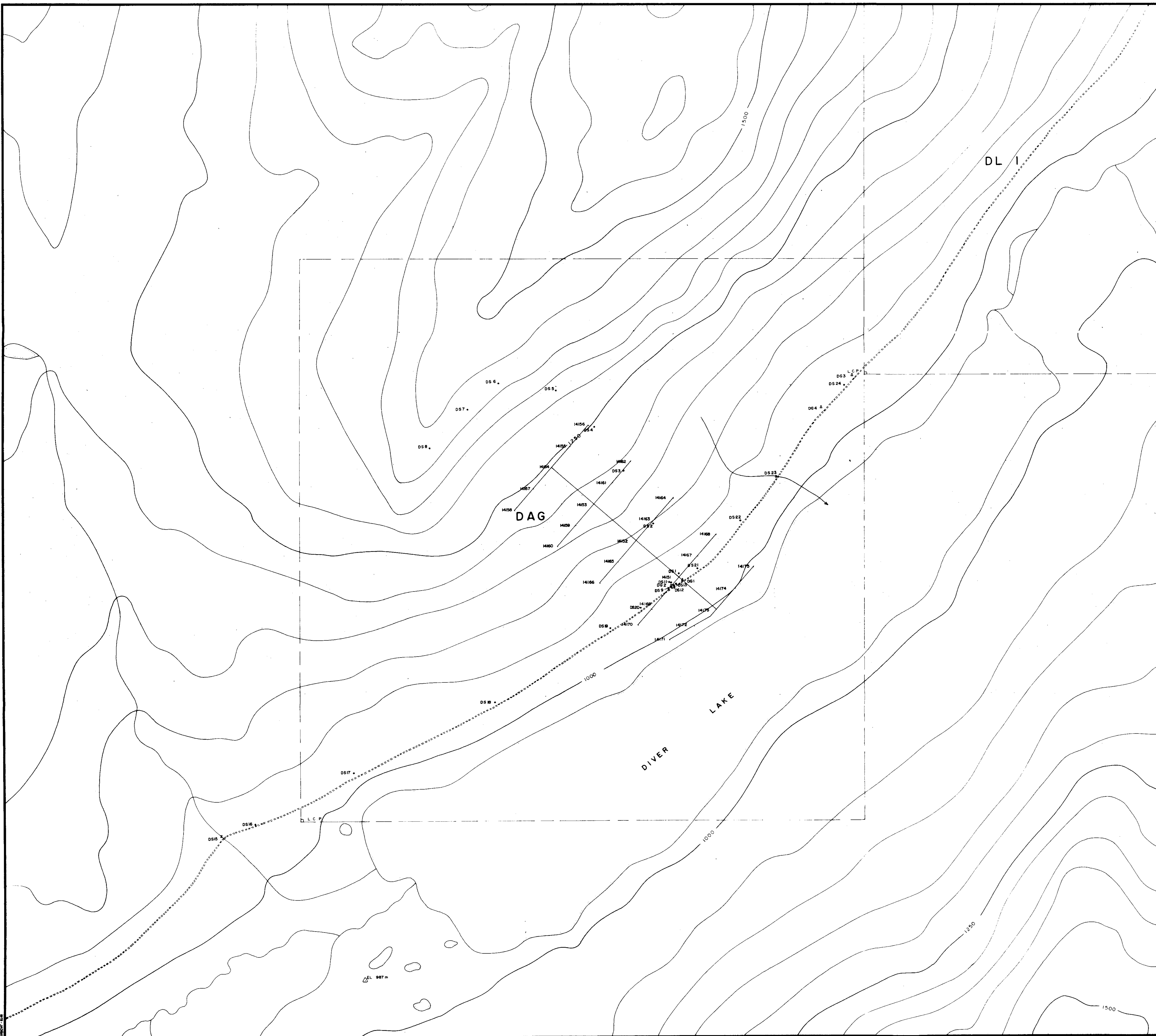
Uranium - U: An aliquot from a perchloric-nitric decomposition, usually from the multi-element digestion, is buffered. The aqueous solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

* N.B. If additional elemental determinations are required on panned samples, state this at the time of sample submission. Requests after gold determinations would be futile.

LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	

EJvL/ie
March 14, 1984



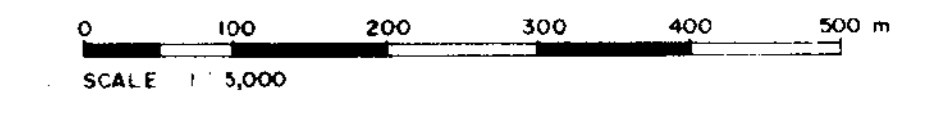
LEGEND

- DS 3 + 1454 Soil Geochem Sample
- DS 15 X Silt Sample
- DS 4 A Rock Sample

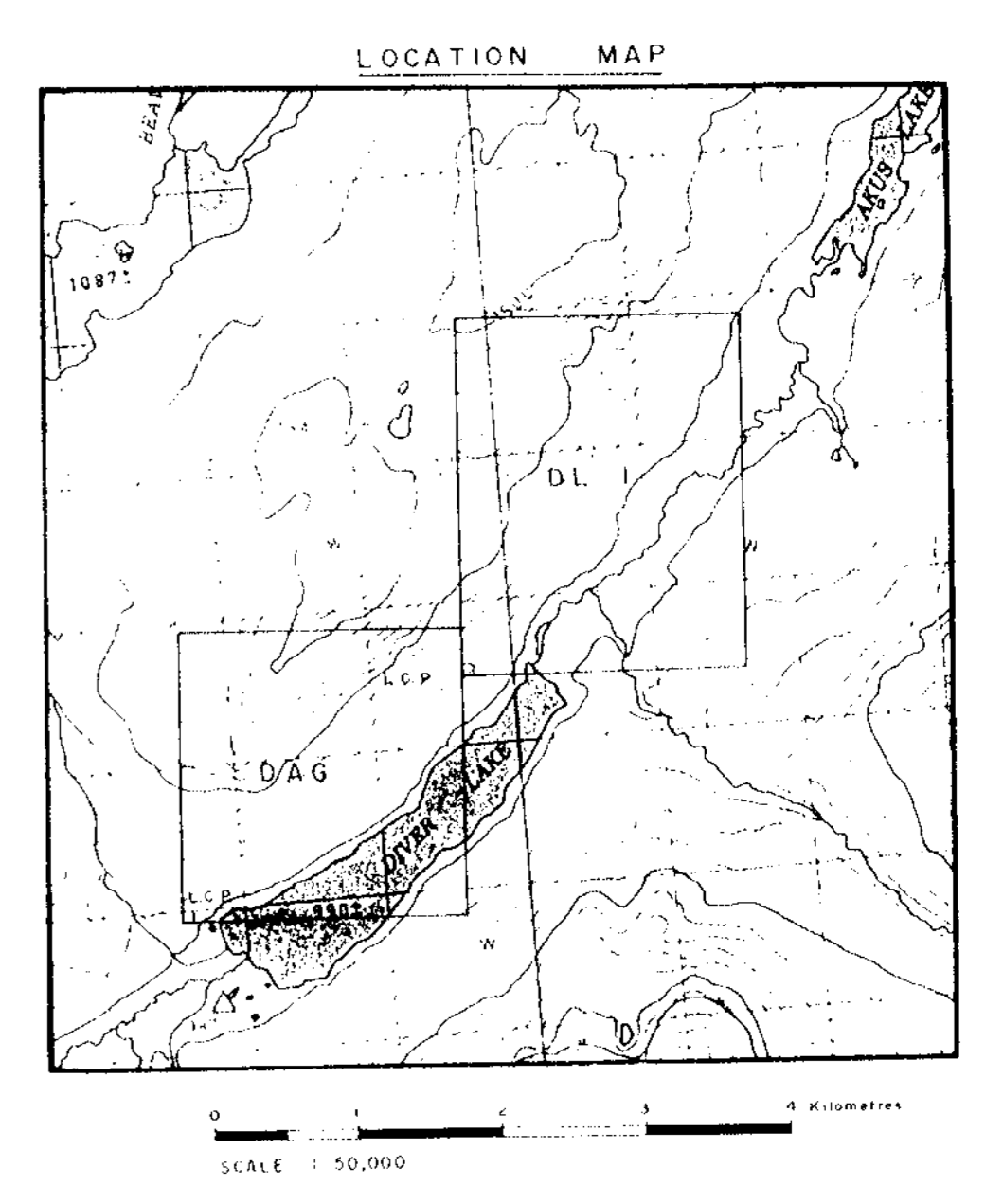
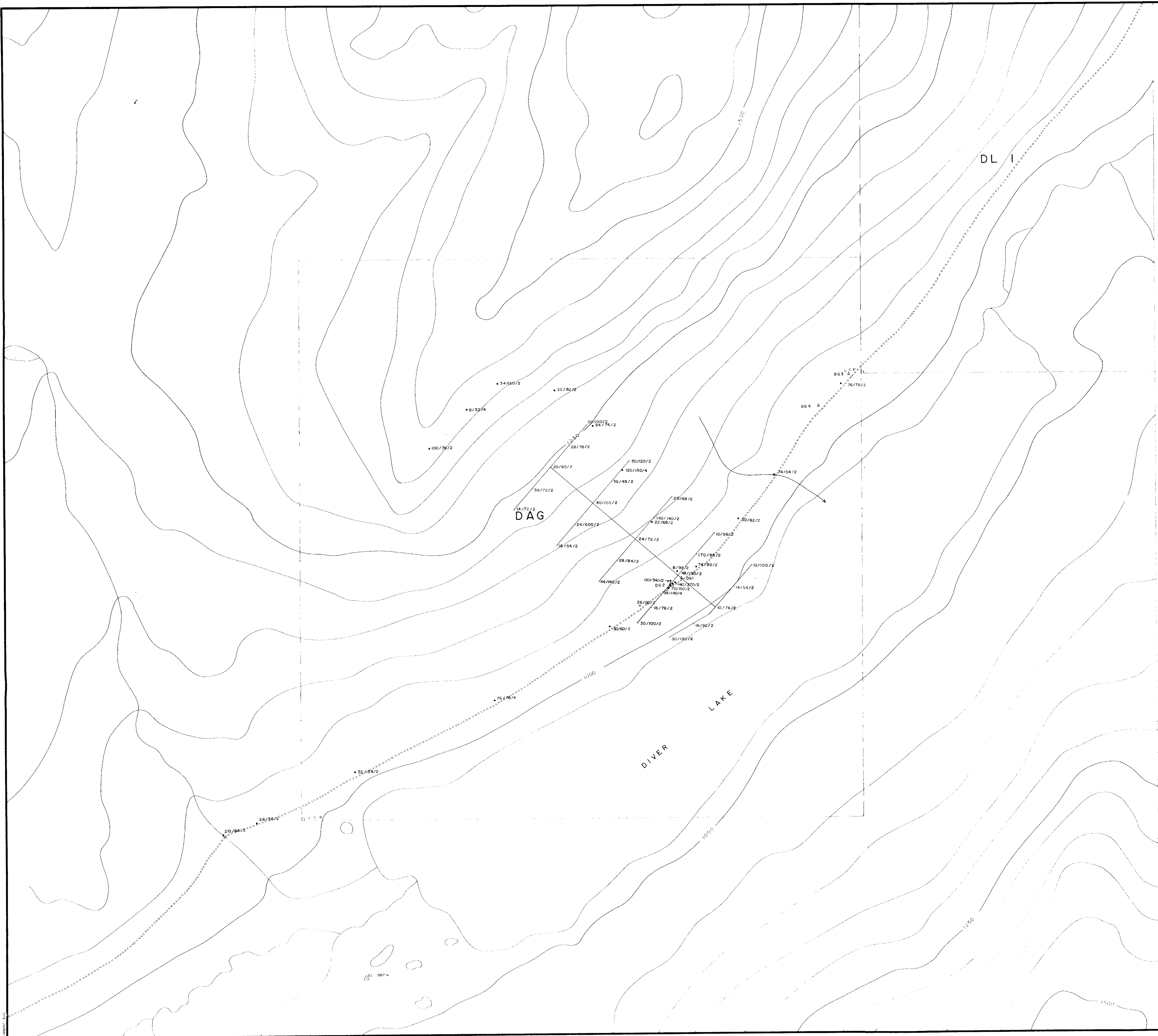
**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,719

Robert Bay
June 17/85



REVISED	DAG OPTION	
	SOIL, SILT AND ROCK SAMPLE LOCATIONS	
PROJ. No. 2-148	SURVEY BY: R. BARR	DATE: MAY 1985
N.T.S. 33 N/12	DRAWN BY: S.R.B.	SCALE: 1:5000
DWG. No.	NORANDA EXPLORATION	
FIG. 4	OFFICE: PRINCE GEORGE, B.C.	



LEGEND

- 30/45/2 Soil Geochem Cu/Zn/Pb (ppm)
- 32/40/2 Silt Sample Cu/Zn/Pb (ppm)
- DG 1 Rock Sample

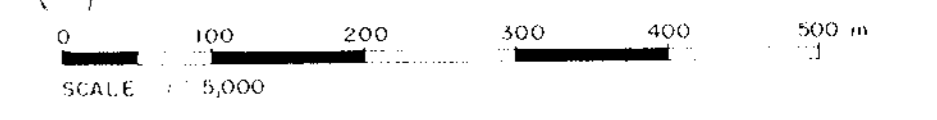
ROCK SAMPLE ASSAYS

SAMPLE NO.	TYPE	AU (OZ./T)	AG (OZ./T)	ZN (S)	CU (S)
DG 1	Rock	0.006	0.06	0.08	0.03
DG 2	"	.005	.06	.01	.02
DG 3	"	.002	.01	--	--
DG 4	"	.001	.01	.01	.03

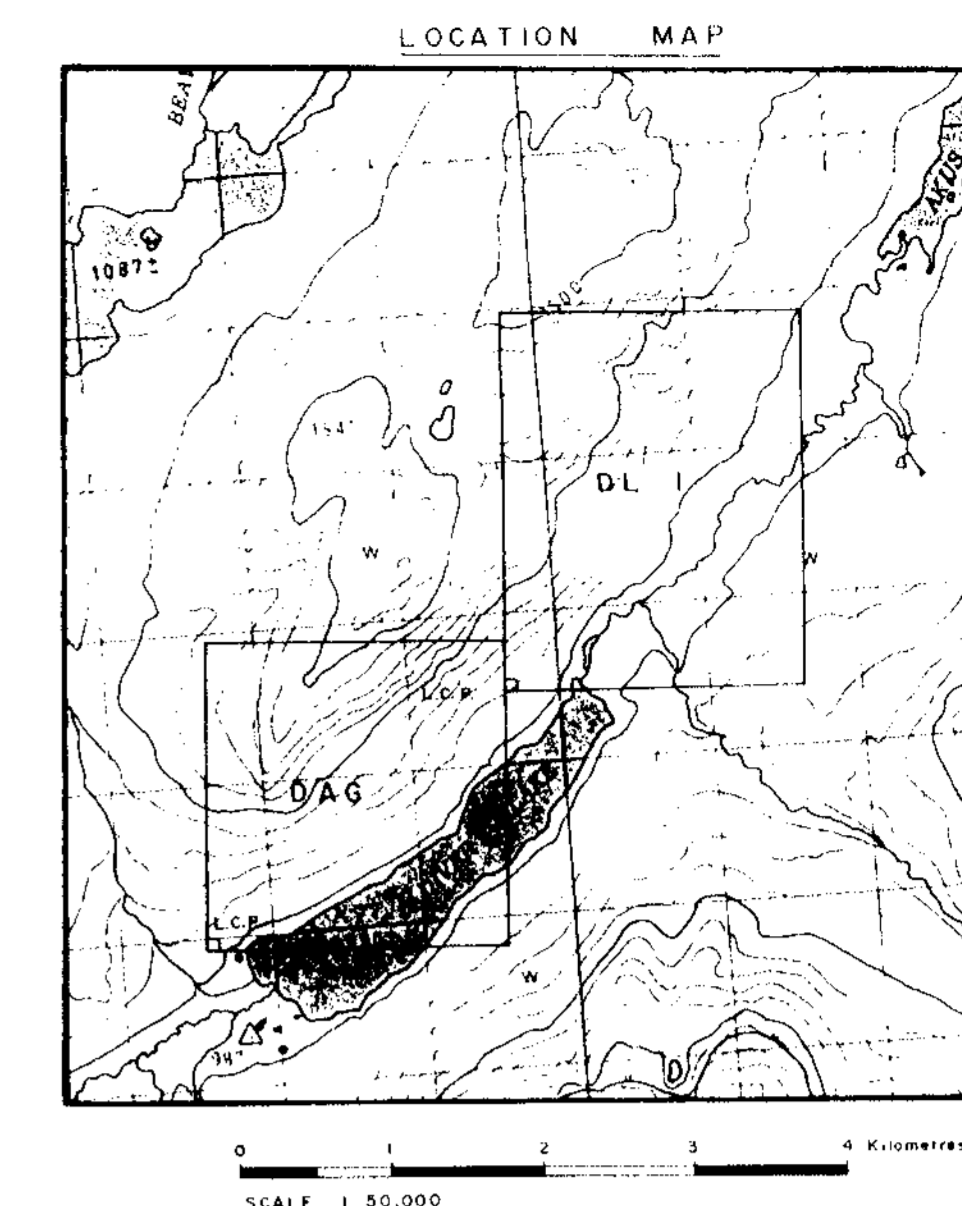
GEOLOGICAL BRANCH ASSESSMENT REPORT

13,719

Robert H. Baerg
June 17/85



REVISED	DAG OPTION	
	SOIL, SILT AND ROCK GEOCHEM RESULTS Cu/Zn/Pb (ppm)	
PROJ. No. 2-48	SURVEY BY R. BAERG	DATE MAY 1985
N.T.S. 93N/12	DRAWN BY S.K.R.	SCALE 1:5000
DWG No.	NORANDA EXPLORATION	
FIG. 5	OFFICE	PRINTED IN CANADA



LEGEND

- 0.2/2/2/20 Soil Geochem Ag/Mo/As(ppm); Au(ppb)
- x 0.2/4/2/10 Silt Sample Ag/Mo/As(ppm); Au(ppb)
- DG 4 a Rock Sample

ROCK SAMPLE ASSAYS

SAMPLE NO.	TYPE	AU (GGS./T)	AG (GGS./T)	ZN (\$)	CU (\$)
DG 1	Rock	0.006	0.06	0.08	0.03
DG 2	"	.008	.06	.01	.02
DG 3	"	.002	.01	--	--
DG 4	"	.001	.01	.01	.03

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,719

Robert Baird
June 17/85



REVISED	DAG OPTION	
	SOIL, SILT AND ROCK GEOCHEM RESULTS Ag/Mo/As (ppm); Au(ppb)	
PROJ. No 2-48	SURVEY BY: R. BAIRD	DATE: MAY 1985
N.T.S. 35N/12	DRAWN BY: S.K.B.	SCALE: 1:5000
DWG No	NORANDA EXPLORATION	
FIG. 6	OFFICE: PRINCE GEORGE, BC	

