ARIS SUMMARY SHEET

District Geologist, Prince George Off Confidential: 89.03.22

ASSESSMENT REPORT 17463 MINING DIVISION: Omineca

PROPERTY: Cripple Lake
LOCATION: LAT 54 50 00 LONG 124 07 00
UTM 10 6076601 428271
NTS 093K16E
CLAIM(S): CL 1-2
OPERATOR(S): Noranda Ex.
AUTHOR(S): Maxwell, G.
REPORT YEAR: 1988, 12 Pages
COMMODITIES
SEARCHED FOR: Copper,Gold,Lead,Silver
GEOLOGICAL
SUMMARY: The Cripple Lake property is underlain by Upper Triassic to Lower Jurassic Takla Group sediments and volcanics, which appear to have been intruded by a series of diorite stocks and dykes. No mineralization has been located to date.
WORK
DONE: Geochemical
LINE 19.5 km
SOIL 293 sample(s) ;AU,AG,CU,PB,ZN
Map(s) - 3; Scale(s) - 1:5000

GEOCHEMICAL REPORT

ON THE

CRIPPLE LAKE PROPERTY

N.T.S. 93 K/16

OMINECA MINING DIVISION

SITUATED AT COORDINATES:
54 DEG 50 MIN N
124 DEG 07 MIN W

NORANDA EXPLORATION COMPANY, LIMITED
(NO PERSONAL LIABILITY)

BY: GORDON MAXWELL

JUNE, 1988

TABLE OF CONTENTS

LIST OF FIGURES

IN POCKET AT REAR OF REPORT

SUMMARY:

The CL claims were staked to cover potential gold targets in the Cripple Lake area, in light of the recent gold discovery on the TAS property. During the spring of 1987, a total of 293 "B" horizon soil samples were collected over a recon grid at 50 meters intervals and 500 meter line spacing. None of the base metal geochemistry warrants further follow-up at the present time, but the four gold anomalies require further fill-in lines and closer spaced sampling to confirm gold bearing horizons.

INTRODUCTION:

The CL claims were staked to cover potential gold targets in the Cripple Lake area. The recent gold discovery on the TAS property has spurred exploration and staking in the immediate area. The CL claims were staked by Noranda Exploration personnel between February 26 and April 3 of 1987. During the spring of 1987, a total of 293 B horizon soil samples were collected over a recon grid at 50 meter intervals and 500 meter line spacing. All work was performed under the supervision of Gord Maxwell.

This report describes the results of the soil geochem survey.

LOCATION & ACCESS:

The CL property is situated approximately 50 kilometers due north of the town of Fort St. James. The CL claims straddle Tezzeron Creek immediately south of Cripple Lake.

The claims are directly accessible from the Germanson Road which cuts across the northwest half of the property. Numerous logging roads and clear-cut provide more local access.

The claims are found on NTS map 93 K/16 centered at 54 degrees 50 minutes North and 124 degrees 07 minutes West.

CLAIM STATISTICS:

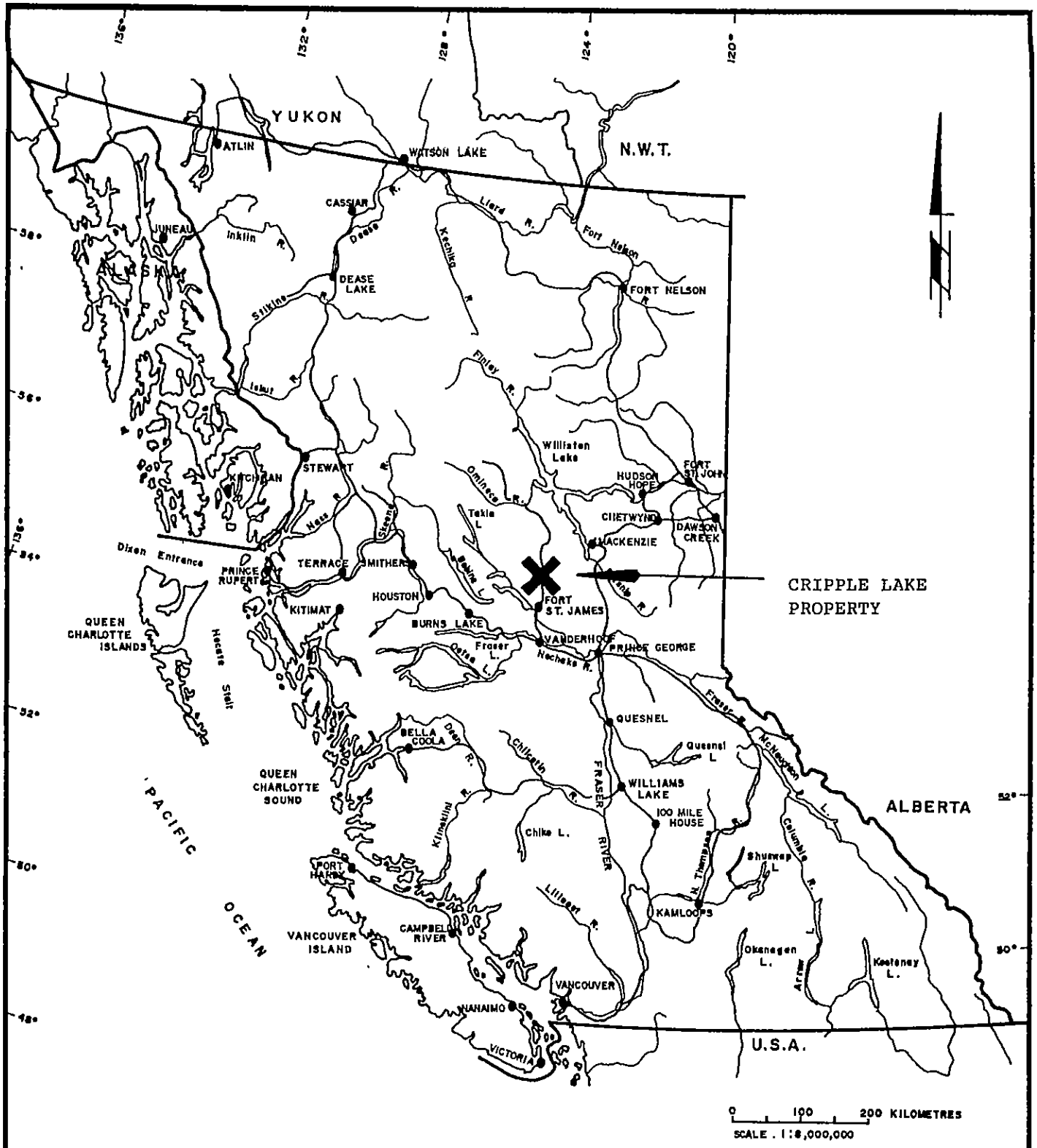
The CL claims are all modified grid type claims found on claim map 93 K/16 East, in the Omineca Mining Division.

CLAIM NAME	# UNITS	RECORD #	RECORD DATE	GROUP
CL 1	20	8246	Mar 24	Cripple Lake
CL 2	12	8364	April 22	Cripple Lake
CL 3	14	8365	April 22	Cripple Lake
CL 4	18	8366	April 22	Cripple Lake

TOPOGRAPHY & VEGETATION:

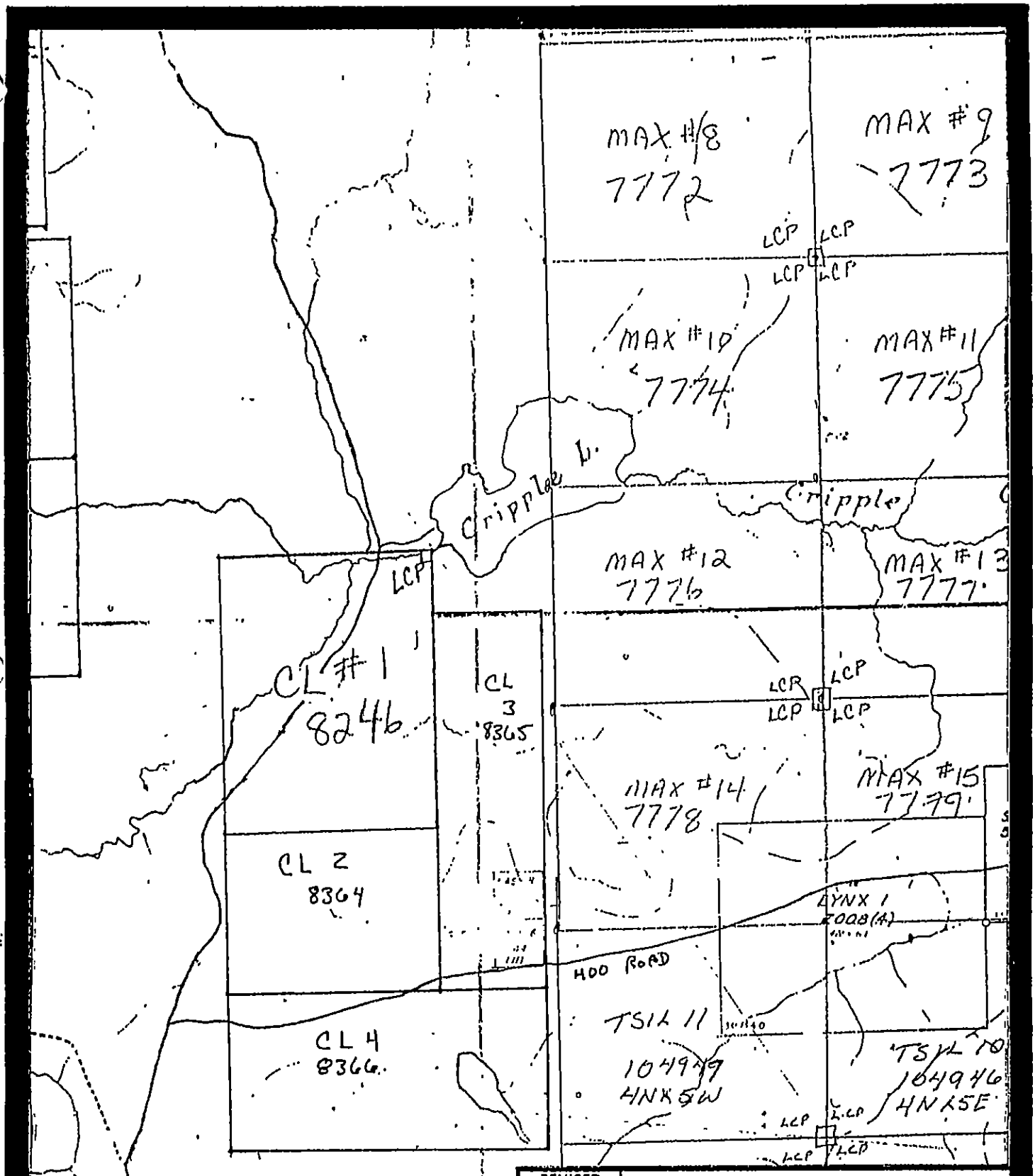
The area is characterized by pine flats, lower swampy areas and outcrop knolls. The pine flat areas generally consist of stratified till, gravel and sand plains and small eskers. The swampy areas are usually low lying ground around Tezzeron and Cripple Creek. The outcrop knolls appear to be areas of more resistant rock producing a hummocky terrain.

Vegetation consists of mature stands of spruce, pine and fir, which is presently being logged off in some areas. Undergrowth is mainly alder with some devils' club.



REVISED	Cripple Lake
	Location Map
PROJ No. 283	SURVEY BY: G. Maxwell DATE: June 1988
N.T.S. 93K16	DRAWN BY: S.K.B. SCALE: 1:8,000,000
DWG. No. 1	NORANDA EXPLORATION
	OFFICE: PRINCE GEORGE, B.C.

VANCAL 11827


MAX #8
7772
MAX #9
7773
LCP
MAX #10
7774
MAX #11
7775
Cripple L.
Cripple
MAX #12
7776
MAX #13
7777
CL #1
8246
CL 3
8365
MAX #14
7778
MAX #15
7779
CL 2
8364
LYNX 1
KOOB(A)
HOO ROAD
TSL 11
CL 4
8366
TSL 10
104946
4N 15E
REVISED
CRIPPLE LAKE
CLAIM MAP
PROJ No. 283
N.T.S. 93K16
DWG. No. 2
SURVEY BY: G. Maxwell
DRAWN BY: G. Maxwell
DATE: June 1988
SCALE: 1:50,000
NORANDA EXPLORATION
OFFICE: Prince George

REGIONAL GEOLOGY:

The area has most recently been described by J.E. Armstrong in G.S.C. Memoir 252, Fort St. James Map-Area in 1949. The area has also been covered on G.S.C. Map 971A by H.M.A. Rice in 1949 (Geology of Smithers-Fort St. James Area).

The CL claims lies in a broad northwest trending package of rocks knows as the Quesnel Trough. These include Upper Triassic to Lower Jurassic Takla Group volcanics and sediments which have been intruded by a series of felsic to ultramafic stocks and batholiths, ranging in age from Upper Triassic to Lower Cretaceous.

The area is cut by numerous fault structures usually trending northwest, parallel to the Pinchi Fault. These may be sub-parallel splay faults with tensional or transverse structures trending east-west.

GEOCHEMISTRY:

METHOD

A total of 293 "B" horizon soil samples were collected during winter and spring months using soil augers. Samples were collected under 1 to 2 meters of snow, from holes ranging in depth from 15 to 35 cm in soil depth. Progress was very slow due to the deep snow conditions. The samples were placed in Kraft wet-strength paper bags, dried, then shipped to Noranda Labs in Vancouver, B.C., for analysis (for analytical procedure, see Appendix III). Samples were analyzed for copper, zinc, lead, silver and gold; results are plotted on 1:5,000 scale maps in rear pockets.

OBSERVATIONS

Copper - Copper values range from 12 to 120 ppm with background in the range of 25 to 30 ppm and anomalies greater than 100 ppm. Single sample anomalies occur at:

L 9000E/10500N	120 ppm Cu
L10000E/8700N	100 ppm Cu
L10500E/7900N	110 ppm Cu

Zinc - Zinc values range from 42 to 250 ppm, with background around 70-75 ppm and anomalies greater than 200 ppm. Single sample anomalies occur at:

L 9000E/10500N	220 ppm Zn
L10000E/7600N	230 ppm Zn
L10000E/10500N	250 ppm Zn
L11000E/8750N	230 ppm Zn
L11000E/8900N	240 ppm Zn

Lead - Lead values range from 1 to 4 ppm, no samples are considered anomalous.

Silver - Silver values range from 0.2 to 1.2 ppm, values greater than 1.0 ppm are considered anomalous. Single sample anomalies occur at:

L 9000E/10500N	1.2 ppm Ag
L11000E/7900N	1.2 ppm Ag

Gold - Gold values range from 10 to 350 ppb with background around 10-20 ppb. Values greater than 50 ppb are considered anomalous. Single station anomalies occur at:

L 9000E/10200N	350 ppb Au
L 9500E/10300N	320 ppb Au
L 9500E/10850N	110 ppb Au
L11000E/10150N	220 ppb Au

CONCLUSIONS & RECOMMENDATIONS

Although there are some scattered base metal geochem anomalies, it is believed that these are not significant enough to warrant further follow-up at the present time. The most significant targets are the four gold anomalies, all of which lie in the north west portion of the grid. These samples were taken at a 50 meter station interval and a 500 meter line spacing, therefore, further fill in lines and closer spaced sampling is required.

APPENDIX I

STATEMENT OF COSTS

GEOCHEMICAL REPORT
CRIPPLE LAKE PROPERTY

1. WAGES:

Linecutting-10 md @ $100	$ 1,000.00
Soil Sampling-10 md @ $100	$ 1,000.00

2. FOOD, ACCOMMODATIONS & TRANSPORTATION:

20 md @ $50	$ 1,000.00

3. ANALYSIS:

293 samples @ $11.50 per sample Cu, Zn, Pb, Ag & Au plus sample prep	$ 3,369.50

4. COST OF REPORT PREPARATION:

Author	$150	
Drafting	$100	
Typing	$ 50	$ 300.00
		$ 6.669.50

COST BREAKDOWN

LINECUTTING:

a.	Wages - 10 md @ $100/day	$ 1,000.00
b.	Food, Accommodation & Transportation	$ 500.00
		$ 1,500.00

GEOCHEMISTRY:

a.	Wages - 10 md @ $100/day	$ 1,000.00
b.	Food, Accommodation & Transportation	$ 500.00
c.	Analysis	$ 3,369.50
d.	Cost of Report Preparation	$ 300.00
		$ 5,169.50

APPENDIX II

STATEMENT OF QUALIFICATIONS

I, Gordon Maxwell of Prince George, Province of British Columbia, do hereby certify that:

1. I am a Geologist residing at 5905 Rideau Street, Prince George, British Columbia.

2. I am a graduate of the University of Manitoba with an Hons. B. Sc. (geology).

3. I am a member in good standing of the Canadian Institute of Mining and the Prospector's and Developer's Association.

4. I presently hold the position of Project Geologist with Noranda Exploration Company, Limited and have been in their employ since 1980.

Gordon Maxwell

G. Maxwell

APPENDIX III

ANALYTICAL PROCEDURES

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver. (March, 1984).

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 analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples) 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 weighted out at 0.2 g or less depending on the matrix of the rock, and twice as much acid is used for decomposition that that is used for silt or soil.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn (all the group A elements of the fee schedule) can be determined directly from the digest (dissolution) with an atomic absorption spectrometer (AA). 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 attached with 3.3 ml of 6% tartaric aid, 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 acid solution with an AA-475, equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.4 g sample is digested with 1.5 ml of 70% perchloric acid and 0.5 ml of conc. nitric acid. A Varian AA-475 equipped with an As-EDL measures the arsenic concentration of the digest.

Barium - Ba: 0.1 g sample is decomposed with conc. perchloric, nitric and hydrofluoric acid. 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 into the flame of the AA instrument c/w EDL.

Gold - Au: 10.0 g sample sample (Pan-concentrates see below) is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with Methyl iso-Butyl ketone (MIBK) from tje aqueous solution. Gold is determined from the MIBK solution with flame AA.

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 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, taken from a perchloric-nitric (3:1) decomposition, usually from the multi-element digestion, is diluted with water and a phosphate buffer. This solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01 (10 ppb)
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	

CRIPPLE LAKE

9000E 9500E 10000E 10500E 11000E

124° 09'

TO MANSON CREEK 180 KM

CL 1 L.C.P.

CL 3 L.C.P.

CL 2 L.C.P.

CL 4 L.C.P.

CREEK

TEZZERON

BASELINE 90°

3000

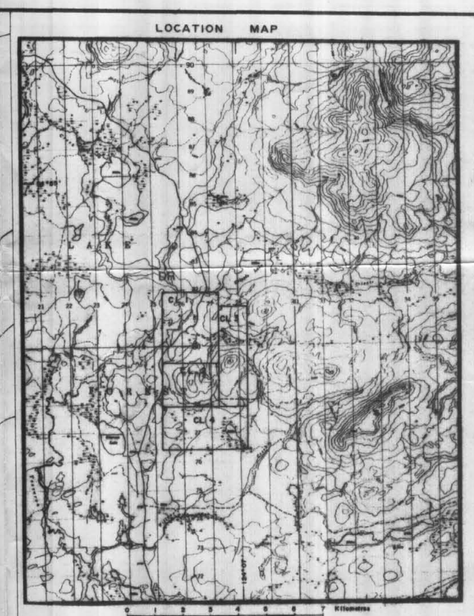
I.S.

To Fort St. James 57 km

54° 51'

124° 08'

LOCATION MAP



0 1 2 3 4 5 6 7 Kilometres

SCALE 1 : 100,000

N

LEGEND

0.2 Soil Geochem Survey Ag (ppm)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,463

0 100 200 300 400 500 metres

SCALE 1 : 5,000

REVISED	STUART LAKE GOLD
	CL CLAIMS
	SOIL GEOCHEM SURVEY
	Ag (ppm)
PROJ. No. 283	SURVEY BY: DATE:
N.T.S. 93K/16	DRAWN BY: S.K.B. SCALE: 1:5,000
DWG. No. FIG. 5	NORANDA EXPLORATION
	OFFICE: PRINCE GEORGE, B.C.

CRIPPLE LAKE

9000E 9500E 10000E 10500E 11000E

To Manson Creek 120 km

CL 1 CL 3 CL 2 CL 4

CREEK

TEZZERON

BASELINE 90°

3000

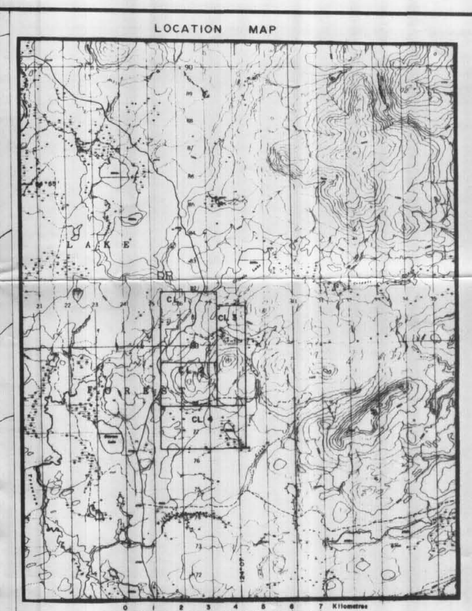
3500

54° 51'

To Fort St James 57 km

124° 09'

LOCATION MAP



LEGEND

1/60 Soil Geochem Survey Pb / Zn (ppm)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,463

0 100 200 300 400 500 metres
SCALE 1 : 5,000

REVISED	STUART LAKE GOLD
	CL CLAIMS
	SOIL GEOCHEM SURVEY
	Pb / Zn (ppm)
PROJ. No. 283	SURVEY BY: DATE:
N.T.S. 93K/16	DRAWN BY: S.K.B. SCALE: 1 : 5,000
DWG. No. FIG. 4	NORANDA EXPLORATION
	OFFICE: PRINCE GEORGE, B.C.

CRIPPLE LAKE

9000E 9500E 10000E 10500E 11000E

CL 1 CL 3 CL 2 CL 4

L.C.P.

CREEK

TEZZERON

BASELINE 90°

3000

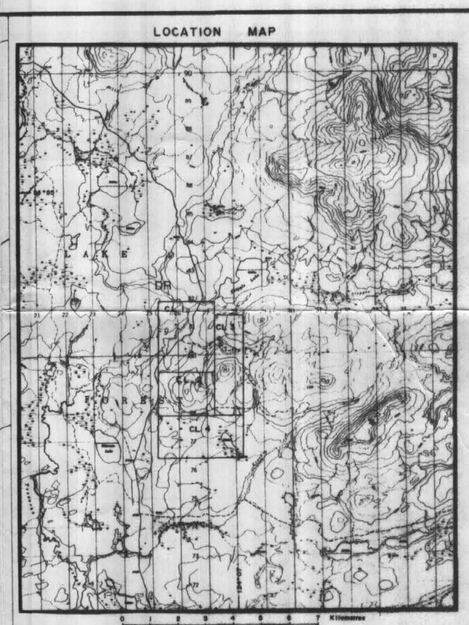
L.S./L.S.

To Fort St James 57 km

54° 51'

124° 09'

LOCATION MAP



LEGEND

20/10 Soil Geochem Survey Cu(ppm) , Au(ppb)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,463

0 100 200 300 400 500 metres
SCALE 1 : 5,000

REVISED	STUART LAKE GOLD
	CL CLAIMS
	SOIL GEOCHEM SURVEY
	Cu(ppm) ; Au(ppb)
PROJ. No. 283	SURVEY BY: DATE:
N.T.S. 93K/16	DRAWN BY: S.K.B SCALE: 1:5,000
DWG. No. FIG. 3	NORANDA EXPLORATION
	OFFICE: PRINCE GEORGE, B.C.