83-#186 -#11236.

NEWMONT EXPLORATION OF CANADA LIMITED

NADINA PROJECT

REPORT ON NEWMONT GEOPHYSICAL SURVEYS

CU1-CU2-CU3-CU4 CLAIMS

by

H. Limion

126° 59' W 53° 57' N

NTS: 93E 15W/14E

OMINECA MINING DIVISION

CU1 owned by Mr.Frank Onucki

CU2,CU3,CU4 owned by Mr.Frank Onucki
and Mr. Donald K. Bragg

January 1983

TABLE OF CONTENTS

SUMMARY

Magnetic and induced polarization surveys on the Nadina project claims demonstrate patterns and trends which transgress the known geology. The causes for the IP and mag are not yet explained.

INTRODUCTION - Figures A,B

The CU1, CU2, CU3 and CU4 claims are located approximately 55km SSW of Houston, between Tagetochlain and Nadina Lakes. The claims can be reached by road, and a network of forest and drill roads permits good travel within the claims (See Map GP). Terrain is gentle, with a maximum of 1000' elevation difference on the property. The grid area is covered by mature trees.

Dacite and andesite are the two main rock types mapped. Outcrop is sparse, so it is not possible to trace specific lithologies and structures. Geological and geochemical work done by Newmont is detailed in the report by Visagie (1983).

Approximately 10km N of the property, UTAH Mines has the Poplar Lake deposit, a large tonnage, low grade Cu property. Field work there has included IP and mag.

Contours of IP chargeability and resistivity from a previous survey on the central portion of the Nadina project shows an increasing chargeability to the west. The survey specifications are not available, so further comment is not possible. Nineteen vertical holes are shown to have tested the area.

The property was thought to have potential for a large tonnage, low grade, porphyry copper type deposit.

Newmont optioned the claims from the owners, Mr. F. Onucki and Mr. D. Bragg. In 1982 Newmont read 51km of magnetic survey and 21km of induced polarization and resistivity survey over the four claims.

SURVEY COVERAGE AND DATA PRESENTATION - Maps MR,MC,IP,IPR,IPC

The grid has been surveyed over a total of 51.2km of line with magnetic readings. A Geometrics G 816 proton precession magnetometer was used to read the earth's magnetic field. Data at 1024 pts at 50m spacing are shown on Map MR. All data are corrected for diurnal drift by checking at stations that cross the E-W road just N of stations 00. Magnetic field values are contoured on Map MC.

Induced polarization and resistivity surveys are with the pole-dipole array with 50m electrode spacing. There were 427 readings at n = 1 and 424 readings at n = 2 covering 21.4 and 21.2km respectively. Receiver electrodes were always N of the moving current electrode. An Elliot Model 15A time domain IP transmitter operated on a basic 2-2-2-2 sec cycle. The Crone IP receiver measured the voltage and IP decay to the Newmont standard in msec. IP field data are on Map IP, with contoured chargeability and resistivity on Maps IPC and IPR.

GEOPHYSICAL INTERPRETATION - Map GP

Areas of higher or unique magnetic field pattern are identified from Map MC, and plotted on Map GP. Regions of higher IP chargeability are also identified and plotted on Map GP.

Map GP shows a high chargeability region crossing the central part of the project group in an E-W direction. When tested, pyrite has been found to explain the chargeability. In the southern portion, on Claim CU-2, two high chargeability areas occur.

A semi circular magnetic feature of approximately 2km in diameter and opening to the W is found in the west-central part of the claim group. A magnetic high sits at the origin of the semi circle. Another large mag feature sits centered on line 11W on the boundary between claims CU-1 and CU-3. A series of magnetic highs trend ESE from 00/19W.

The relation of geophysical patterns to each other, to geology, or to known mineralization is the test of the usefulness of the geophysical survey.

Resistivity data can map rock types. In this survey, resistivity shows a relation to topography, with the topographically lower and swampy regions as resistivity lows, and topographically high features being resistivity highs. One notable exception is the resistivity low ($< 100\ \Omega$ - m) on lines 22W and 19W near 200N.

The chargeability high in the central part of the grid transgresses dacite and rhyolite and magnetic features.

The semi-circular magnetic feature on the W could be related to the pyrited dacite, although outcrop exposure is too sparse for a proper correlation.

H. Limion

Heikki Limion
Chief Geophysicist

HL/gdn

January 1983

REFERENCES

Visagie, D. 1983: Geological and Geochemical Report: Nadina Project. Intercompany and assessment report. Newmont Exploration of Canada Limited, 750 West Pender St., Vancouver, B.C.

H. LIMION

STATEMENT OF QUALIFICATIONS

I, Heikki Limion, received my B.A.Sc degree in Engineering Science (Geophysics Option) from the University of Toronto in 1965.

I spent two summers in geophysical field work; one with Hudson's Bay Oil and Gas, and one with INCo Exploration.

In 1965-66 I worked for one year with Hudson's Bay Oil and Gas as a Junior Geophysicist in seismic field work.

From 1967-1976 I worked with INCo Exploration, on ground and airborne geophysical surveys, I supervised airborne geophysical operations for four years, and worked on research and development of airborne geophysical systems. I conducted ground geophysical surveys in Canada, U.S.A., and Brazil.

In 1977 and 1978 I was the head of the geophysics section in the Kenya Department of Mines and Geology. During this time, I was under contract to CIDA (the Canadian International Development Agency).

Since the beginning of 1979, I have held the position of Chief Geophysicist of Newmont Exploration of Canada Limited.

I am a member of the Society of Exploration Geophysicists, the Association of Professional Engineers of Ontario, the Prospectors and Developers Association, and the Canadian Institute of Mining and Metallurgy.

H. Limion

COST STATEMENT

1. PERSONNEL	Dates	Days	Rate	Wages
B. Lane	June 11-June 15	5	@ 70	$ 350
J. Dunkley	June 11-June 15	5	@ 73	365
D. Visagie	June 11-June 15	5	@ 78	390
D. Visagie	Sept 8-Sept 15	7	@152	1,064
B. Mowatt	Aug' 11-Sept 3	24	@ 78	1,872
A. Sera	Sept 3-Sept 15	13	@ 85	1,105
P. Dunn	Aug 11-Sept 15	36	@ 70	2,520
A. Sheldon	Aug 11-Sept 15	36	@ 65	2,340
M. Smith	Aug 11-Sept 15	36	@ 65	2,340
A. Tworo	Aug 11-Sept 3	24	@100	2,400
P. Rayment	Sept 1-Sept 15	15	@ 65	975
S. Todoruk	Aug 11-Aug 31	21	@ 77	1,617
H. Limion	Aug 13-Aug 20			
	Sept 1-Sept 3	10	@189	1,890
		237		19,228

2. TRUCK RENTAL, MAINTENANCE AND FUEL — 4,391

3. FOOD

19.60/manday x 237 mandays — 4,645

4. EQUIPMENT RENTAL

I.P. Transmitter and receiver @ 2500/mo	= 2916	
Magnetometer 41 days @ 15/day	= 615	
2 Reels and 2 pots 36 days @ 6.50/day	= 234	
2 Walkie-Talkies @ 36 days @ 5.00/day	= 180	3,945

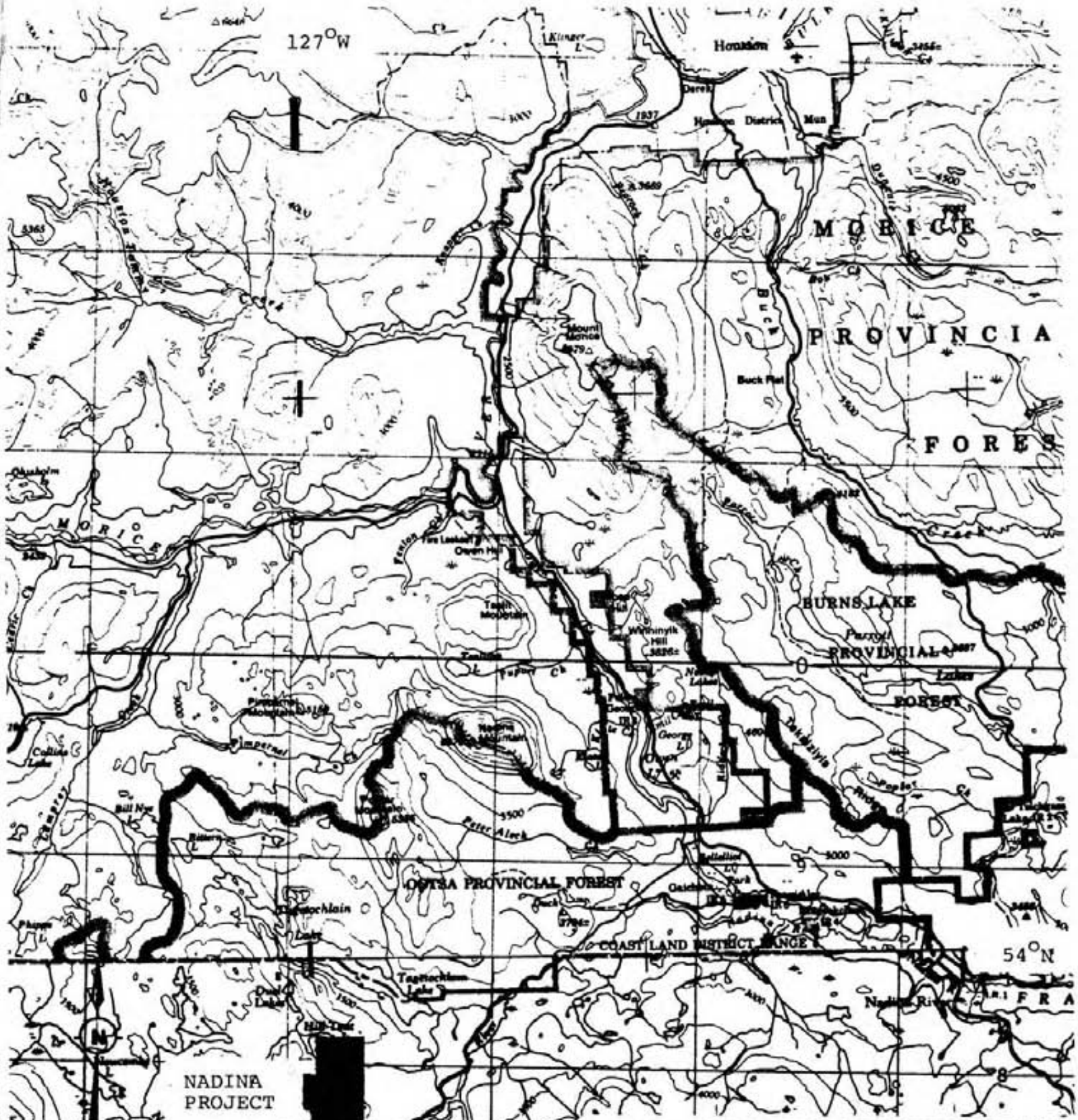
5. MOBILIZATION AND TRANSPORTATION OF CREW EQUIPMENT FROM VANCOUVER TO PROPERTY AND RETURN — 1,436

6. CAMP COSTS

1. Lumber and Propane	531	
2. Kerosene	199	
3. Camp Rental 1.4 mo's @ 1000/mo	1400	
4. Communications (includes 1.4 months rental @ 360/month	621	$2,751

7. REPORT PREPARATION — $2,000

TOTAL COSTS $ 38,396



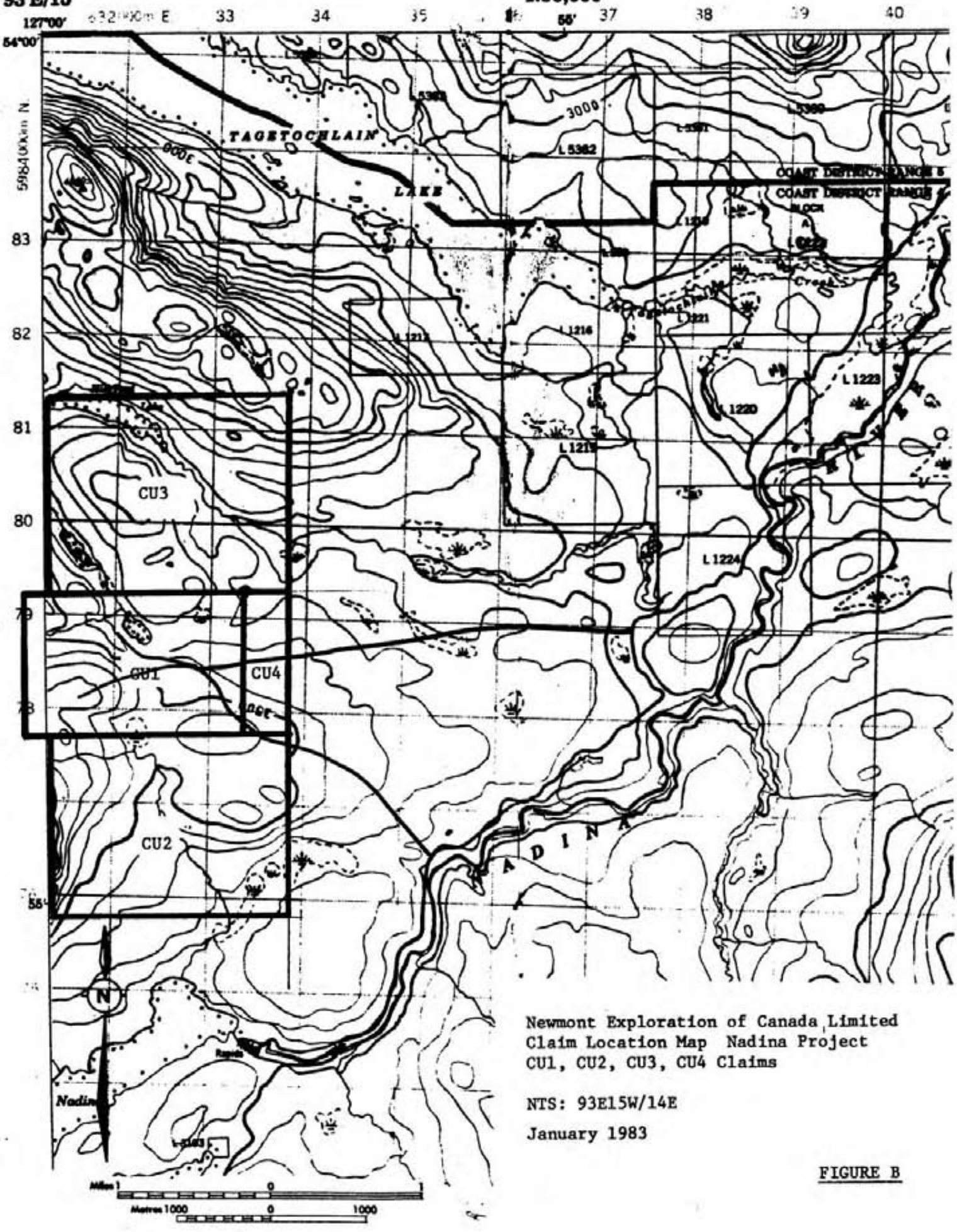
NEWMONT EXPLORATION OF CANADA LIMITED

LOCATION MAP NADINA PROJECT

NTS: 93E 15W/14E

JANUARY 1983

FIGURE A



Newmont Exploration of Canada Limited
Claim Location Map Nadina Project
CU1, CU2, CU3, CU4 Claims

NTS: 93E15W/14E

January 1983

FIGURE B

127°00'

CLAIM BOUNDARY

Hill - Tout Lake

CU-3

CU-1

CU-2

CU-4

CU 5

CU 6

L27+00 W | L25+25 W | L23+50 W | L22+00W | L20+50W | L19+00W | L17+50W | L16+00W | L14+50W | L13+00W | L12+00W | L11+00W | L9+50W | L8+00W | L6+00W | L5+00W | L3+50W | L2+00W | L1+00W | L0+00W

53° 55'

N

Magnetic North

26°

LEGEND

- Stream
- Lake
- ■ Legal claim post
- CU-2 Claim name
- Proton Precession Magnetometer: Geometrics G816
- Readings in gammas less 57,000 and corrected to base line

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,236

100 50 0 100 200 300 m

200 0 200 400 600 800 1000 ft

NEWMONT EXPLORATION OF CANADA LTD.

NADINA PROJECT

MAGNETIC READINGS

OMINECA MINING DIVISION

SCALE	LOCATION	DATE
1 : 5 000	NTS 93E/14E,15W	FEB. 1982
SURVEY BY	DRAWN BY	NUMBER
D. VISAGIE	R.W., E.C.	

MR

127°00'

CLAIM BOUNDARY

Hill - Tout Lake

CU-3

CU-1

CU-4

CU 5

CU 6

CU-2

L27+00 W | L25+25 W | L23+50 W | L22+00 W | L20+50 W | L19+00 W | L17+50 W | L16+00 W | L14+50 W | L13+00 W | L12+00 W | L11+00 W | L9+50 W | L8+00 W | L6+00 W | L5+00 W | L3+50 W | L2+00 W | L1+00 W | L0+00 W

53° 55'

N

Magnetic North

26°

LEGEND

- Stream
- Lake
- Legal claim post
- CU-2 Claim name
- Proton Precession Magnetometer: Geometrics G816
- Readings in gammas less 57,000 and corrected to base line
- 500 γ, 100 γ, 50 γ — Contour interval

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,236

-100 -50 0 100 200 300 m

-200 0 200 400 600 800 1000 ft

NEWMONT EXPLORATION OF CANADA LTD.

NADINA PROJECT

MAGNETOMETER SURVEY

OMINECA MINING DIVISION

SCALE	LOCATION	DATE
1 : 5 000	NTS 93E/14E,15W	FEB. 1982
SURVEY BY	DRAWN BY	NUMBER
D. VISAGIE	R.W., E.C.	

MC

127°00'

CLAIM BOUNDARY

Hill - Tout Lake

CU-3

CU-1

CU-2

CU-4

CU 5

CU 6

BASE LINE 0

L27+00 W | L25+25 W | L23+50 W | L22+00W | L20+50 W | L19+00W | L17+50 W | L16+00W | L14+50 W | L13+00 W | L12+00W | L11+00W | L9+50 W | L8+00W | L6+00W | L5+00W | L3+50W | L2+00W | L1+00W | L0+00W

53° 55'

LEGEND

- Stream
- Lake / Pond
- Legal corner post
- Elliot model 15A Transmitter
- Crone IP Receiver
- Chargeability in msec. in Newmont Standard
- Apparent Resistivity in Ohm-metres
- Pole Dipole Array A=50m, N=1, 2
- Plotting point halfway between moving current electrode and nearest potential electrode
- Potential electrodes north of current electrode

100 50 0 100 200 300 m

200 0 200 400 600 800 1000 ft

NEWMONT EXPLORATION OF CANADA LTD.

NADINA PROJECT

IP SURVEY

OMINECA MINING DIVISION

SCALE	LOCATION	DATE
1 : 5 000	NTS 93E/14E,15W	
SURVEY BY	DRAWN BY	NUMBER
D. VISAGIE	R.W., E.C.	

IP

N

Magnetic North

26°

127°00'

CLAIM BOUNDARY

Hill - Tout Lake

CU-3

CU-1

CU-4

CU 5

CU 6

CU-2

BASE LINE 0

L27+00 W
L25+25 W
L23+50 W
L22+00W
L20+50W
L19+00W
L17+50W
L16+00W
L14+50W
L13+00W
L12+00W
L11+00W
L9+50W
L8+00W
L6+00W
L5+00W
L3+50W
L2+00W
L1+00W
L0+00W

53° 55'

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,236

LEGEND

- Stream
- Lake / Pond
- Legal corner post
- Elliot model 15A Transmitter
- Crone IP Receiver
- Chargeability in msec. in Newmont Standard
- Apparent Resistivity in Ohm-metres
- Pole Dipole Array A=50m, N=1, 2
- Plotting point halfway between moving current electrode and nearest potential electrode
- Potential electrodes north of current electrode

Contour interval at 10 msec. for N=1

400 50 0 100 200 300 m

200 0 200 400 600 800 1000 ft

NEWMONT EXPLORATION OF CANADA LTD.

NADINA PROJECT

IP CHARGEABILITY CONTOURS

OMINECA MINING DIVISION

SCALE	LOCATION	DATE
1 : 5 000	NTS 93E/14E,15W	
SURVEY BY	DRAWN BY	NUMBER
D VISAGIE	R.W., E.C.	

IP C

Magnetic North

26°

127° 00'

CLAIM BOUNDARY

Hill - Tout Lake

CU-1

CU-2

CU-3

CU-4

CU 5

CU 6

BASE LINE 0

L27+00 W
L25+25 W
L23+50 W
L22+00W
L20+50 W
L19+00W
L17+50 W
L16+00W
L14+50 W
L13+00 W
L12+00W
L11+00W
L9+50 W
L8+00 W
L6+00W
L5+00W
L3+50W
L2+00W
L1+00W
L0+00W

53° 55'

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,236

LEGEND

- Stream
- Lake / Pond
- Legal corner post
- Elliot model 15A Transmitter
- Crone IP Receiver
- Chargeability in msec. in Newmont Standard
- Apparent Resistivity in Ohm-metres
- Pole Dipole Array A=50m, N=1, 2
- Plotting point halfway between moving current electrode and nearest potential electrode
- Potential electrodes north of current electrode

- Contour interval 1.8, 3.2, 5.6, 10, 18, 32, 56, 100, 180, 320, 560, 1000 etc. for N=1

100 50 0 100 200 300 m

200 0 200 400 600 800 1000 ft

NEWMONT EXPLORATION OF CANADA LTD.

NADINA PROJECT

RESISTIVITY CONTOURS

OMINECA MINING DIVISION

SCALE	LOCATION	DATE
1 : 5 000	NTS 93E/14E,15W	
SURVEY BY	DRAWN BY	NUMBER
D VISAGIE	R.W., E.C.	

IP R

N

Magnetic North

26°

127°00'

CLAIM BOUNDARY

Hill - Tout Lake

CU-3

CU-1

CU-4

CU 5

CU 6

CU-2

L27+00 W
L25+25 W
L23+50 W
L22+00W
L20+50W
L19+00W
L17+50 W
L16+00W
L14+50 W
L13+00 W
L12+00W
L11+00W
L9+50 W
L8+00W
L6+00W
L5+00W
L3+50W
L2+00W
L1+00W
L0+00W

53° 55'

N

LEGEND

- Stream
- Lake / pond
- Legal corner post
- Road
- Swamp
- Outline of IP Chargeability Area
- Magnetically distinct Area

IP Chargeability Anomaly

- Strong
- Moderate

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,236

100 50 0 100 200 300 m

200 0 200 400 600 800 1000 ft

NEWMONT EXPLORATION OF CANADA LTD.

NADINA PROJECT

GEOPHYSICAL COMPILATION AND INTERPRETATION

OMINECA MINING DIVISION

SCALE	LOCATION	DATE
1 : 5 000	NTS 93E/14E,15W	
SURVEY BY	DRAWN BY	NUMBER
D. VISAGIE		

GP