84-1346-13168

REPORT ON

DRILLING ON THE

CAD GROUP

CAD	4937 (11)	DIAL	5030 (11)
CAD 1	4938 (11)	CAD 2	4950 (11)
CAD 3	4951 (11)	CAD 4	4952 (11)
CAD 5	4953 (11)	CAD 6	4954 (11)
NBR 8	5944 (11)		

KAMLOOPS MINING DIVISION

N.T.S. 82M/5

51°18'N 119°52'W

Owner : J.D. Graham and Noranda Exploration Company, Limited

Operator: Noranda Exploration Company, Limited
(No Personal Liability)

Submitted By: R.G. Wilson
Project Geologist
December, 1984

Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)	TOTAL COST
REPORT ON DRILLING ON THE CAD CLAIMS	15,974.38

AUTHOR(S) R.G. Wilson SIGNATURE(S)

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED YEAR OF WORK 1984

PROPERTY NAME(S) CAD GROUP

COMMODITIES PRESENT Pb, Zn, Ag

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

MINING DIVISION Kamloops NTS 82M/5

LATITUDE 51°18'N LONGITUDE 119°52'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)]:

Cad 4937 (11) (12 Units) Dial 5030 (11) (15 Units)
Cad 1 4938 (11) (.1 Unit) NBR 8 5944 (11) (.8 Units)
Cad 2-6 4950-4954 (11) (5 Units)

OWNER(S)

(1) J.D. Graham (2) Noranda Exploration Company, Limited

MAILING ADDRESS

9411 Ferndale Road, Richmond, B.C. V6Y 1X4
Box 2380, Vancouver, B.C. V6B 3T5

OPERATOR(S) (that is, Company paying for the work)

(1) Noranda Exploration Co. Ltd. (2) Noranda Exploration Company, Limited

MAILING ADDRESS

Box 2380, Vancouver, B.C. V6B 3T5

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

Two diamond drill holes intersected intermediate volcanic and graphitic sedimentary rocks which are dipping steeply east. The volcanics consist of andesites while the majority of the sediments were graphitic mudstones and argillite. Narrow quartz carbonate veins within the sediments had minor quantities of galena and sphalerite.

REFERENCES TO PREVIOUS WORK Assessment Report #3350

(over)

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			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core	2 NQ DDH Holes	Cad 4937 (11)	15,974.38
Non-core	132.2 Total		
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	15,974.38

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report)				
Value of work approved				
Value claimed (from statement)				
Value credited to PAC account				
Value debited to PAC account				
Accepted ..... Date	Rept. No.			Information Class

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

Location and Access

The Cad Group, located 22 km NE of Barriere, B.C., is comprised of the following claims; DIAL 5030 (11), CAD 4937 (11), CAD 1 4938 (11), CAD 2 4950 (11), CAD 3 4951 (11), CAD 4 4952 (11), CAD 5 4953 (11), CAD 6 4954 (11), and NBR 8 5944 (11). The Cad 1-6 are 2-Post claims and the Dial, Cad and NBR are modified grid claims for a total of 41 units, (Figure 1).

The Cad Group is road accessible from Barriere by the East Barriere Lake and East Barriere Ridge Roads. One way driving time from Barriere is 30-45 minutes along both paved and good condition gravel roads.

Topography and Physiography

The Cad claim group is situated within the Shuswap Highland subdivision of the Interior Plateau section of the Southern Plateau and Mountain physiographic region.

The claims straddle a 2,500' high NE-SW trending ridge between North and East Barriere Lakes. The ridge, which reaches a maximum elevation of 4,500' ASL in the vicinity of the claims, is characterized by 1,500' high cliffs on the NW, SW and SE flanks and a rolling 1,000' high plateau-like ridge top.

The plateau is partly logged and consists of replanted second growth, and mature stands of spruce, balsam and pine. The forest underbrush is moderately open to thick and the clearcuts are moderately open.

Previous Work

Soil and silt sampling was completed in 1971 by Ducanex Resources within the present claim boundary on claims called C & G and Den. Extensive work along the ridge to the north was completed by K.E. Northcotte and Assoc., Westmin Resources, Craigmont Mines, Noranda Exploration, Rayrock Mines and Royal Canadian on claims called EBL and REM. This work was conducted from 1969 to the present and has consisted of geology, geochemistry, geophysics and trenching.

Two known showings to the west of the claims are called White Rock (MINFIL #082M 066) and Silver Mineral, (Silver Minnow) (MINFIL #082M 069). These two properties have been known and worked sporadically since the early 1920's.

N

LAT 51°18′

CAD CLAIM GROUP

LONG 119°52′

SCALE 1:3,168,000

REVISED
PROJ. No. 10
N.T.S. 82M/2E
DWG. No.

OBRIEN (J.V.)

CAD CLAIM GROUP

PROPERTY LOCATION

SURVEY BY: DATE:

DRAWN BY: G.S. SCALE: 1:50,000

NORANDA EXPLORATION

OFFICE: VANCOUVER

VANCAL 11925

P.J.A.

Owner - Operator

The CAD, DIAL and CAD 1-6 claims are on option from:

J.D. Graham,
9411 Ferndale Road,
Richmond, B.C.
V6Y 1X4

to: Noranda Exploration Company, Limited
(No Personal Liability)
P.O. Box 2380,
Vancouver, B.C.
V6B 3T5

The NBR 8 claim is 100% owned by Noranda Exploration Company, Limited.

The CAD Group, consisting of the CAD, DIAL, CAD 1-6 and NBR 8 claims are operated by Noranda Exploration Company, Limited.

Economic Potential

The economic potential of the group has not been assessed due to the limited extent of the drilling. The exploration potential of this ground is considered moderate due to the presence of limited quantities of sphalerite and galena in the drill core.

SUMMARY OF WORK DONE

Drilling

A total of 2 holes were drilled for 132.2 metres of NQ sized (47.6 mm diameter) diamond drill core.

Claim Worked

All drilling was completed on the CAD mineral claim in the centre of the claim group.

DETAILED TECHNICAL DATA AND INTERPRETATION

Airborne E.M. geophysical surveys and land geological, geochemical, geophysical surveys preceeded the present drill programme. The results of the airborne survey are reported on in an assessment report entitled "Report of Work, Geophysical Surveys in the North Barriere Area (O'Brien-Kiwi, O'Brien-Kiwi-Nex and Cad Groups) by L. Bradish, December 1984. Ground geological, geochemical, geophysical results are detailed in "in house" company reports.

Diamond drilling was used to test two geophysical conductors having semi-coincident geochemical anomalies. No outcrops are known in the vicinity of the drilling but the area was regionally mapped as a dark clastic phyllite. Two diamond drill holes, CAD 84-1 and CAD 84-2 were drilled grid west (250°) at -45° for 66.1 m each. CAD 84-1 tested a narrow moderate conductor 300 m long with soil geochemical values of 230-310 ppm Zn, 60-96 ppm Pb and 2.4-4.2 ppm Ag. The hole was collared at Line 110+00N, 145+15E and encountered 8.8 metres of overburden before hitting bedrock.

The first rock cored was a graphitic mudstone and argillite and is the probable source of the conductor. The mudstone/argillite is grey to dark grey and streaked with quartz-carbonate lenses and veins. The rock is moderately soft to hard and shows signs of soft sediment deformation. Graphite occurs along fracture slips and as short massive zones. These zones are moderately good to perfect conductors. Pyrite is present as fine grained disseminations averaging 2-3%.

At 23.9 m down hole an andesite flow was encountered which continued, interrupted only by a fracture zone, to the bottom of the hole at 66.1 m. The unit has a distinctive flow top which is paler in colour, finer grained and more fractured than the main body of the flow. The volcanic is light green, moderately soft, slightly foliate with 1-2 mm diameter oriented feldspar crystals and indistinct fine grained green mafics. Chlorite alteration is common and quartz-calcite veining is present though not extensive. Sulphides are generally absent from the unit with pyrite only present as rare fine grained disseminations.

Check samples were taken from the core which was sampled by split core procedures. The core was split in half along the core axis with one-half being collected for analysis and the other half returned to the core box. Sample lengths were dependent on lithological, mineralogical, and alteration boundaries (in that order), with a maximum sample width of 2.0 m.

A total of 6 samples were taken and sent to Rossbacher Geochemical Laboratory in Vancouver for rock geochemical analysis. All samples were analyzed for Au, Ag, Cu, Pb, Zn. Appendix 1 is an information sheet prepared by Rossbacher Laboratories Ltd. on their analytical techniques of analysis.

Only one sample returned anomalous values for some elements analyzed. The sample, taken from the andesite flow margin has values of .65% zinc and 2 grams silver. These results explain the soil geochemical anomalies for Zn and Ag but nor for Pb. It is possible with further sampling of the flow margin that anomalous Pb results could be obtained.

DDH CAD 84-2 tested a broad, poorly conductive zone 40 metres wide and 800 metres long with off-set soil geochemical values of 330-500 ppm Zn, 210 ppm Pb and 1.2 ppm Ag. The hole was collared at Line 112+00N, 134+58E and drilled azimuth 250° at -45° for 66.1 m. Acid dip tests taken at 30.5 and 66.1 m downhole indicated that the hole steepened by 8 degrees over the bottom 36 metres.

Four rock types are recognized in this hole, Andesite flow rock, (Silicified) Wacke, (Graphitic) Argillite and Siltstone and Graphitic Intraformational Breccia. The first rock encountered downhole is an andesite

flow similar to that seen in CAD 84-1 except that the present rock is more highly chlorite altered. This rock is also sulphide poor. The second rock encountered, a (silicified) wacke, is a fine grained brownish sediment with a chlorite and silica matrix. The rock shows minor folding and is slightly foliated. Pyrite is present as fine grained disseminations up to 1% locally.

Below the volcanics and sediments is a conductive package of sediments which are occasionally disrupted by fault zones. The upper conductive rock is a (graphitic) argillite and siltstone which has been cut by several quartz-carbonate veins containing minor galena and sphalerite. This unit is generally dark grey, fine grained, hard, with minor softer graphitic sections. Pyrite is present throughout the unit to 3% as fine grained disseminations and narrow, discontinuous layers parallel to bedding. Three narrow quartz-carbonate veins from .1 to .6 m wide are present with specs of sphalerite and galena to 1.5%.

These three veins produced the only anomalous results of the 11 check samples that were taken in this hole. The core was sampled as described for CAD 84-1 above. Values for the veins are 15.6, 4.6, 3.6 grams Ag; 12,000, 136, 500 ppm Zn; and 392, 1070, 1020 ppm Pb for .1, .1 and .6 m sample widths respectively. These results adequately explain the anomalous soil samples taken in the vicinity of the drill hole.

The lower conductive rock is a graphitic intraformational breccia consisting of fragments of (graphitic) mudstone, argillite, carbonate and quartz breccia. The fragments are elongated parallel to bedding and foliation and range in size from 5 mm to 2 cm.

The rock is moderately conductive and contains several highly conductive zones. The rock is also disrupted by several fault zones which has produced conductive gouge zones up to 4 m wide. The two conductive packages adequately explain the broad conductive zone identified by ground geophysics.

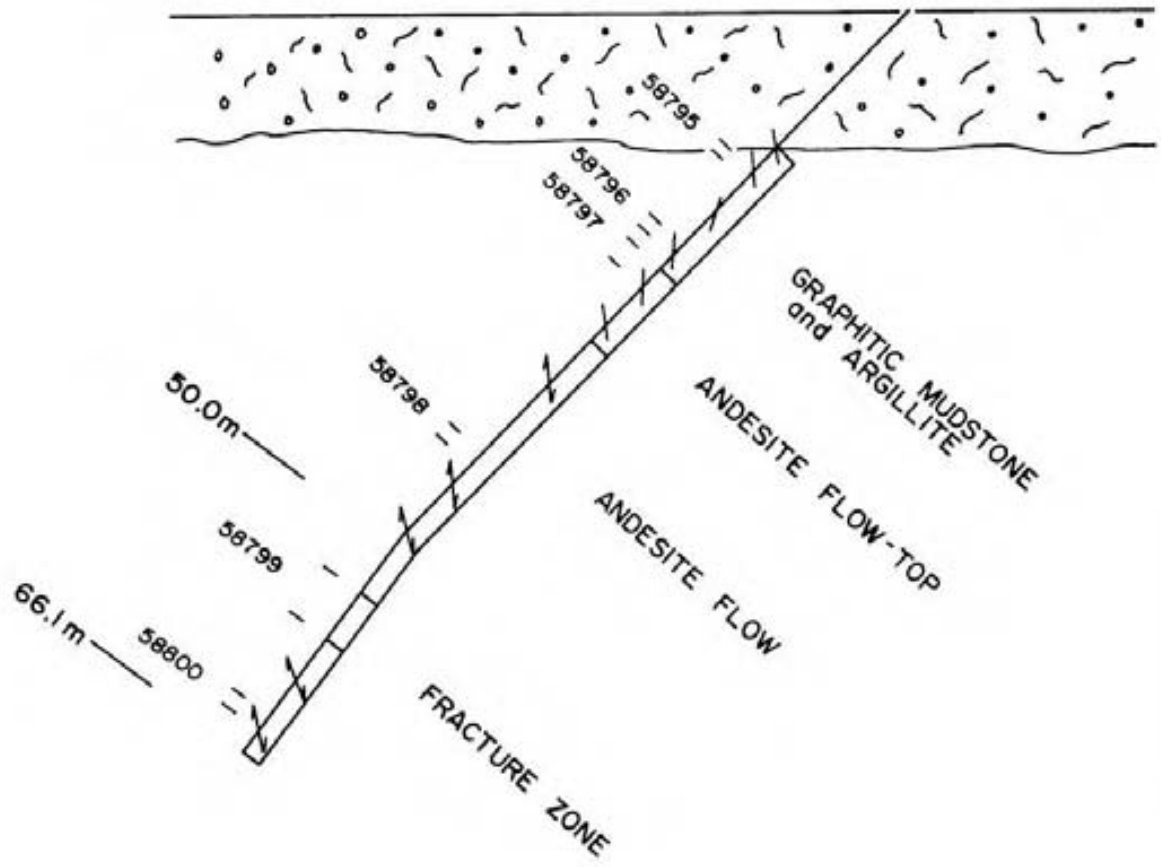
The core is presently stored at Noranda's Scotch Creek campsite near Shuswap Lake, B.C. and will be eventually returned to the property and stored in the bush near the drill holes.

W

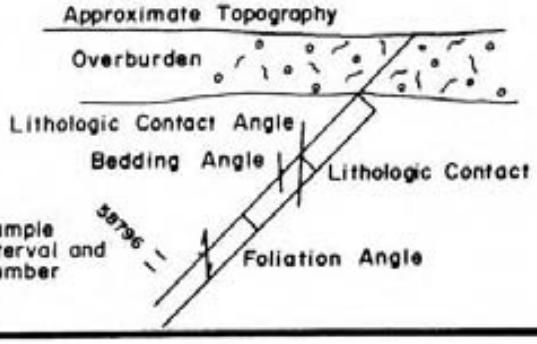
E

DDH
CAD 84-1
110+00N
145+15E

Az : 250°
Dip : -45°
T.D. : 66.1m



LEGEND



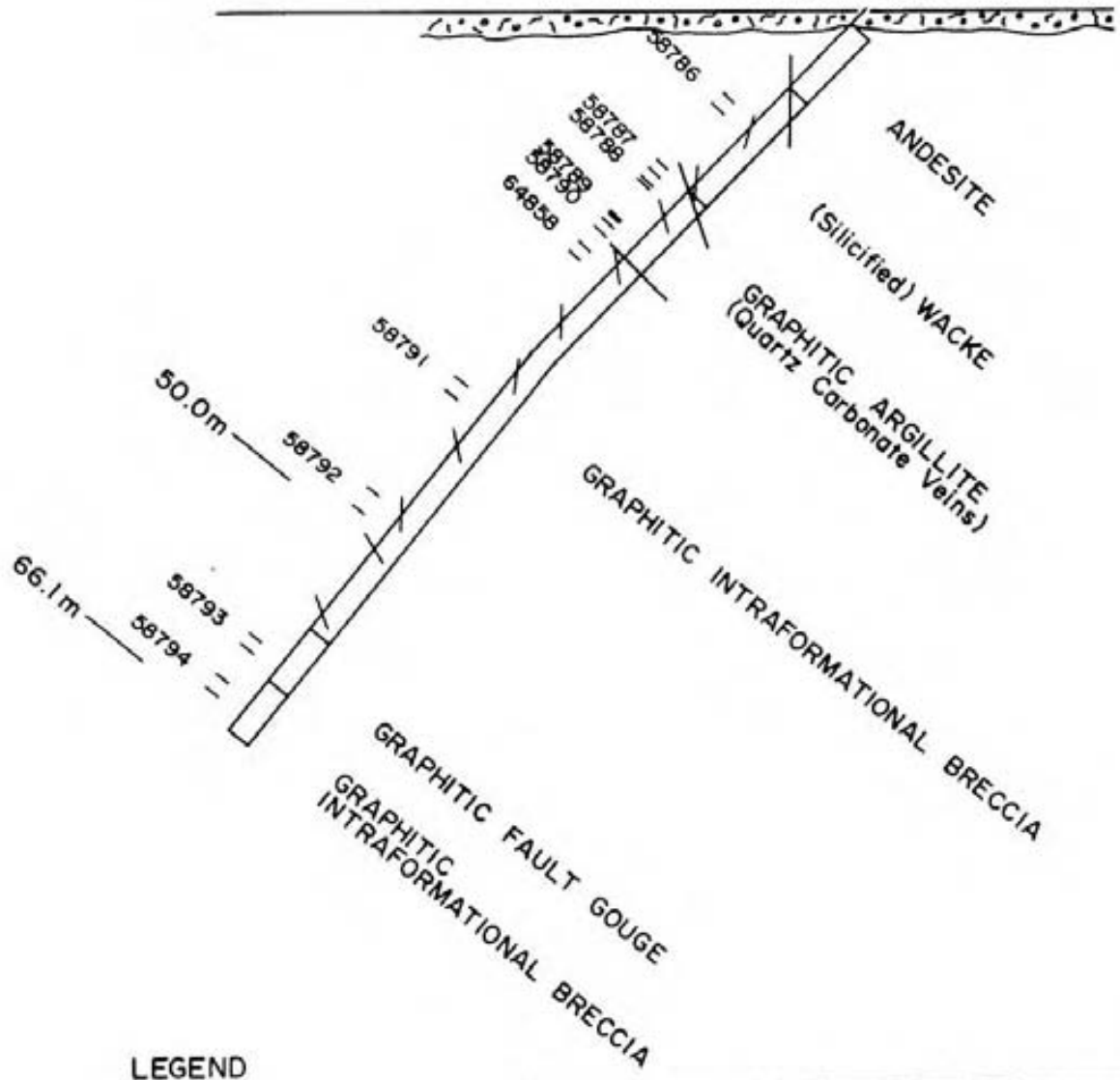
REVISED	O'BRIEN JOINT VENTURE
	CAD GROUP
	DDH CAD 84-1
PROJ. No. 10	SURVEY BY: R.G.W. DATE: Dec. 1984
N.T.S. 82M5	DRAWN BY: sks Lillie SCALE: 1:500
DWG. No.	NORANDA EXPLORATION
	OFFICE: Vancouver

VANCAL 11987

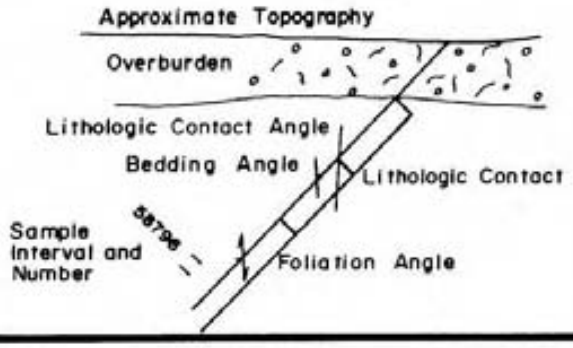
W

E

DDH
CAD 84-2
112+00N
134+58E
Az : 250°
Dip : -45°
T.D. : 66.1m



LEGEND



REVISED	O'BRIEN JOINT VENTURE
	CAD GROUP
	DDH CAD 84-2
PROJ. No. 10	SURVEY BY: R.G.W. DATE: Dec, 1984
N.T.S. 82M5	DRAWN BY: sksLillie SCALE: 1:500
DWG. No.	NORANDA EXPLORATION
	OFFICE: Vancouver

VANCAL 11927

CONCLUSIONS

- Two NQ sized diamond drill holes were drilled on the CAD Group of claims located on East Barriere Ridge, B.C.
- The drilling was completed following encouraging airborne and ground geophysics, geochemical, and geological studies.
- The holes are located at 110+00N, 145+15E and 112+00N, 134+58E and were drilled azimuth 250° at -45° for 66.1 m each.
- The holes intersected intermediate volcanics and graphitic sediments but only minor sulphides.
- Geophysical and geochemical anomalies in the vicinity of the drill holes are adequately explained by the results of the drilling.
- The drill core will eventually be stored on the property near the drill holes.

STATEMENT OF QUALIFICATIONS

AUTHORS QUALIFICATIONS

I Rob. G. Wilson of the City of Vancouver, Province of British Columbia, do hereby certify that:

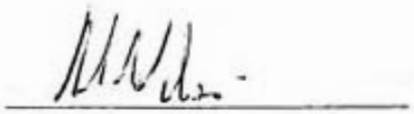
- I am a geologist residing at 3328 West 15th. Avenue, Vancouver B.C.

- I graduated from the University of British Columbia in 1976 with a BSc degree in Geology.

- I have worked in mineral exploration since 1973 and have practised my profession as a geologist since 1976.

- I am presently a Project Geologist with Noranda Exploration Company, Limited.

- I am a member of the Geological Association of Canada (Cordillera Division).



Rob Wilson

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

DATE NOVEMBER 1984

PROJECT - CAD CLAIMS
TYPE OF REPORT Drilling

a) **Wages:**

No. of Days -	21 mandays	
Rate per Day -	$144.70	
Dates From -	October 1 - November 15, 1984	
Total Wages	21 X $144.70	$3,038.70

b) **Food and Accommodation:**

No. of Days -	21	
Rate per Day -	$15.48	
Dates From -	October 1 - November 15, 1984	
Total Cost -	21 X $15.48	$ 325.00

c) **Transportation:**

No. of Days -	21	
Rate per Day -	$25.39	
Dates From -	October 1 - November 15, 1984	
Total cost	21 X $25.39	$ 533.29

d) Analysis

e) **Cost of Preparation of Report**

Author	$ 144.70
Drafting	$ 144.70
Typing	$ 144.70

f) **Other:**

Contractor	$11,643.29
Total Cost	$15,974.38

UNIT COSTS

Unit Costs for Drilling

No. of Days -	21	
No. of Units -	132.28 meters	
Unit Costs -	120.76 / Meter	
Total cost	21 X 120.76	$15,974.38

APPENDIX 1

ANALYTICAL METHOD DESCRIPTIONS FOR

GEOCHEMICAL ASSESSMENT REPORTS

Rossbacher Laboratory
GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
BURNABY, B.C.
CANADA
TELEPHONE: 299 6910
AREA CODE: 604

Jan. 1982

(1)

GEOCHEMICAL ANALYTICAL METHODS CURRENTLY IN USE AT ROSSBACHER LABORATORY LTD.

A. SAMPLE PREPARATION

1. Geochem. Soil and Silt: Samples are dried, and sifted to minus 80 Mesh, through stainless steel, or nylon screens.

2. Geochem. Rock: Samples are dried, crushed to minus ¼ inch, split, and pulverized to minus 100 mesh.

B. METHODS OF ANALYSIS

1. Multi element: (Mo, Cu, Ni, Co, Mn, Fe, Ag, Zn, Pb, Cd):
0.5 Gram sample is digested for four hours with a 15:85 mixture of Nitric-Perchloric acid.
The resulting extract is analyzed by Atomic Absorption spectroscopy, using Background Correction where appropriate.

2. Antimony: 0.50 Gram sample is fused with Ammonium Iodide and dissolved.
The resulting solution is extracted into TOPO/MIBK and analyzed by Atomic Absorption spectroscopy.

3. Arsenic: 0.25 Gram sample is digested with Nitric-Perchloric acid.
Arsenic from the solution is converted to arsine, which in turn reacts with silver D.D.C. The resulting solution is analyzed by colorimetry.

4. Barium: 0.50 Gram sample is repeatedly digested with $HClO_4$-HNO_3 and HF.
The solution is analyzed by Atomic Absorption spectroscopy.

5. Biogeochemical: Samples are dried, and ashed at 550°C. and the resulting ash analyzed as in #1, multielement analysis.

6. Bismuth: 0.50 Gram sample is digested with Nitric acid. The solution is analyzed by Atomic Absorption spectroscopy.

7. Chromium: 0.25 Gram sample is fused with Sodium Peroxide. The solution is analyzed by Atomic Absorption spectroscopy.

Rossbacher Laboratory
GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
BURNABY, B.C.
CANADA
TELEPHONE: 299-6910
AREA CODE: 604

METHOD OF ANALYSIS (CONT.)

8. *Fluorine:* 0.50 Gram sample is fused with a Carbonate Flux, and dissolved. The resulting solution is analyzed for Fluorine by use of an Ion Selective Electrode.

9. *Gold:* 10.0 Gram sample is roasted at 550°C. and dissolved in Aqua Regia. The resulting solution is subjected to a Methylisobutyl Ketone extraction, which extract is analyzed for Gold using Atomic Absorption spectroscopy.
0.5 g → L.R.V = 20 PPB 100 — 2000 ±40

10. *Mercury:* 1.00 Gram sample is digested with Nitric and Sulfuric acids. The solution is analyzed by Atomic Absorption spectroscopy, using a cold vapor generation technique.

11. *Partial Extraction and Fe/Mn oxides:* 0.50 Gram sample is extracted using one of the following: Hot or cold 0.5 N. HCL, 2.5% E.D.T.A., Ammonium Citrate, or other selected organic acids. The solution is analyzed by use of Atomic Absorption spectroscopy.

12. *pH:* An aqueous suspension of soil, or silt is prepared, and its pH is measured by use of a pH meter.

13. *Rapid Silicate Analysis:* 0.10 Gram sample is fused with Lithium Metaborate, and dissolved in HNO_3. The solution is analyzed by Atomic Absorption for SiO_2, Al_2O_3, Fe_2O_3, MgO, CaO, Na_2O, K_2O, TiO_2, P_2O_5, and MnO.

14. *Tin:* 0.50 Gram sample is sublimated by fusion with Ammonium Iodide, and dissolved. The resulting solution is extracted into TOPO/MIBK and analyzed by Atomic Absorption spectroscopy.

15. *Tungsten:* 1.00 Gram sample is sintered with a carbonate flux, and dissolved. The resulting extract is analyzed colorimetrically, after reduction with Stannous Chloride, by use of Potassium Thiocyanate.

APPENDIX 11

DIAMOND DRILL LOGS

CAD 84-1

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 18, 1984	OCT. 19, 1984	NQ						CAD-DIAL		10	82M/5
FIELD CO-ORDINATES			DEPTH	BEARING		ANGLE		SURVEYED CO-ORDINATES			Sheet 1 of 5
				RECORDED	CORRECTED	RECORDED	CORRECTED				
Lat. 110+00N	Elev.	Dip -45°	30.48m				45°	Lat.	Elev.	Dip	HOLE No.
Dep. 145+15E	Length 66.1m	Bearing 250°	66.14m				53°	Dep.	Length	Bearing	CAD 84-1

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width (metres)	ASSAYS Au(ppb)	Ag(ppm)	Cu (ppm) Pb	Zn(ppm)
0	12.5	0	CASING Boulders in overburden are quartz, intermediate porphyries and recrystallized ? volcanics.									
12.5	14.8	86%	GRAPHITIC MUDSTONE AND ARGILLITE Grey to dark grey and white streaked, moderately soft mudstone which is streaked with veinlets and irregular lenses of quartz and ? dolomite. Bedding is contorted, often wavy with soft sediment deformation. Graphite zones exist throughout unit as graphitic slips and more massive graphitic sections as at 16.8-17.7. Some harder argillite sections are seen. Pyrite occurs as disseminations from less than 1mm to 5mm crystals and as stringers parallel to bedding to 2mm thick. Pyrite content averages 2 - 3%. Core is moderately competent, with fractures along graphitic zones. Contact with below unit unknown, broken core at a 5cm siliceous zone.	BEDDING 56° CA @ 12.6 48° CA @ 14.9 24° CA @ 18.3 39° CA @ 20.4 40° CA @ 22.3									
14.8	15.8	95%	AS ABOVE Py 1%. Check sample.				58795	1m	10	0.4	78, 54	146
15.8	21.6	86%	AS ABOVE No sample									
21.6	22.6	95%	AS ABOVE Check sample. Pyrite 2%				58796	1m	10	0.4	56, 64	132

DRILL LOG - B1

Date OCTOBER 20,1984 Logged By R. G. WILSON

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 18, 1984	OCT. 19, 1984	NQ	DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	CAD-DIAL		10	82M/5
FIELD CO-ORDINATES								SURVEYED CO-ORDINATES			Sheet 2 of 5
Lat. 110+00N	Elev.	Dip -45°	30.48m				45°	Lat.	Elev.	Dip	HOLE No.
Dep. 145+15E	Length 66.1m	Bearing 250°	66.14m				53°	Dep.	Length	Bearing	CAD 84-1

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width (metres)	ASSAYS Au(ppb)	Ag(ppm)	Cu (ppm) Pb	Zn(ppm)
22.6	23.9	86%	AS ABOVE No sample				58797	1.7m				
23.9	25.6	80%	ANDESITE FLOW TOP Pale green to green, fine grained, moderately hard to moderately soft, with quartz and carbonate stringers (regular to irregular) to 5mm, average 2mm. The matrix is slightly carbonate. Minor alteration is seen occasionally along fractures. No sulphides seen. The unit is likely a flow margin for the below flow from 30.3 - 52.9m. Contact with below unit gradational over 10cm.						10	2.0	56, 80	6500
25.6	30.3	89%	AS ABOVE No sample.									
30.3	40.8	95%	ANDESITE FLOW Light green to green, medium grained, moderately soft, slightly foliate, with regular to irregular quartz carbonate veinlets, sometimes discontinuous.	FOLIATION ? 53° CA @ 30.8 50° CA @ 34.4 50° CA @ 40.2								

DRILL LOG - 81

Date October 20, 1984 Logged By R. G. Wilson

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 18, 1984	OCT. 19, 1984	NQ		BEARING		ANGLE		CAD-DIAL		10	82M/5
FIELD CO-ORDINATES			DEPTH	RECORDED	CORRECTED	RECORDED	CORRECTED	SURVEYED CO-ORDINATES			Sheet 3 of 5
Lat. 110+00N	Elev.	Dip -45°	30.48m				45°	Lat.	Elev.	Dip	HOLE No.
Dep. 145+15E	Length 66.1m	Bearing 250°	66.14m				53°	Dep.	Length	Bearing	CAD 84-1

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width (metres)	ASSAYS Au(ppb)	Ag(ppm)	Cu (ppm) Pb	Zn(ppm)
			1 - 2mm diameter feldspar ? crystals and chlorite along an oriented direction of moderate foliation. Foliation degree is variable, as is amount of chlorite. Minor darker green, elongate mafics seen over short distances.	48° CA @ 43.3 35° CA @ 46.0 57° CA @ 47.9 45° CA @ 51.2								
			Occasional specs of disseminated pyrite is seen but are rare. Quartz calcite veining is present but not common. Veins average 3-5mm wide. Contact with below is arbitrary but is taken to be at start of bleached zone above fault zone.									
40.8	41.8	95%	AS ABOVE Check sample.				58798	1m	10	0.2	24, 8	122
41.8	52.9	95%	AS ABOVE No sample									
52.9	56.7	47%	FRACTURE ZONE As 30.3 - 52.9 but highly fractured and some gouge especially 55.0 - 55.9. Core is highly broken and is paler green in color than above and below and appears to be bleached by fault fluids.				58799	3.8	10	0.6	40, 8	118
			52.9 - 53.9 - 10% core recovery. Pyrite is seen rarely as fine grained disseminations and is less than 1%. A bright green mineral is seen									

DRILL LOG - 81

Date October 20, 1984 Logged By R. W. Wilson

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size
Oct. 18, 1984	OCT. 19, 1984	NQ

FIELD CO-ORDINATES		
Lat. 110+00N	Elev.	Dip -45°
Dep. 145+15E	Length 66.1m	Bearing 250°

DIP TESTS					
DEPTH	BEARING RECORDED	BEARING CORRECTED	ANGLE RECORDED	ANGLE CORRECTED	
30.48m				45°	
66.14m				53°	

PROPERTY	PROJECT No.	N.T.S. No.
CAD-DIAL	10	82M/5

SURVEYED CO-ORDINATES			Sheet 4 of 5
Lat.	Elev.	Dip	HOLE No.
Dep.	Length	Bearing	CAD 84-1

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width (metres)	ASSAYS Au(ppb)	Ag(ppm)	Cu(ppm) Pb	Zn(ppm)
			associated with the fault zone and may be fuchite. Sample taken for petrographic analysis. Contact with below arbitrary, but is taken to be the limit of bleaching which is 20cm beyond the last sheared core.									
56.7	63.1	95%	ANDESITE FLOW As 30.3 to 52.9. Continuation of same flow as described previously and was interrupted by the fault zone described above.	FOLIATION 57° CA @ 60.3 49° CA @ 63.2 42° CA @ 64.3								
			Small gouge zone from 60.1 - 60.2m. From 62.8 to 63.8 a zone of bleaching is seen accompanied by bright green ? fuchite. This zone is partly silicified and has a quartz flood zone and two 5cm quartz veins.									
			This hole was stopped in this unit once it was determined that the conductor limit of error in plotting was passed.									
63.1	64.1	95%	AS ABOVE Check sample				58800	1m	10	0.2	40, 4	78
64.1	66.1	95%	AS ABOVE No sample									

DRILL LOG - 81

Date October 20, 1984 Logged By R. G. Wilson

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 18, 1984	OCT. 19, 1984	NQ						CAD-DIAL		10	82M/5
FIELD CO-ORDINATES			DEPTH	BEARING		ANGLE		SURVEYED CO-ORDINATES			Sheet 5 of 5
				RECORDED	CORRECTED	RECORDED	CORRECTED				
Lat. 110+00N	Elev.	Dip -45°	30.48m				45°	Lat.	Elev.	Dip	HOLE No.
Dep. 145+15E	Length 66.1m	Bearing 250°	66.14m				53°	Dep.	Length	Bearing	CAD 84-1

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width (metres)	ASSAYS Au(ppb)	Ag(ppm)	Cu (ppm) Pb	Zn(ppm)
66.1			END OF HOLE CASING PULLED Conductor is assumed to be the graphitic argillite intersected at the top of the hole.									

DRILL LOG - 81

Date October 20, 1984 Logged By R. G. Wilson

CAD 84-2

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 20, 1984	OCT. 21, 1984	NQ						CAD-DIAL		10	82M/5
FIELD CO-ORDINATES			DEPTH	BEARING		ANGLE		SURVEYED CO-ORDINATES			Sheet 1 of 6
				RECORDED	CORRECTED	RECORDED	CORRECTED				
Lat. 112+00N	Elev.	Dip -45°	66.1	350°	325°		51°	Lat.	Elev.	Dip	HOLE No. CAD 84-2
Dep. 134+58E	Length 66.1m	Bearing 250°						Dep.	Length	Bearing	

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width metres	ASSAYS Au(ppb)	Ag(ppm)	Cu(ppm) Pb	Zn(ppm)
0	1.5	0%	OVERBURDEN Casing to 3.0m									
1.5	4.0	83%	ANDESITE Green, fine to medium grained, foliated and altered. Feldspar phenocrysts to 2mm. Brown siliceous zones exist over 30cm. Pyrite is rare, occurring as fine	FOLIATION Variable 65-44 CA 65° CA @ 3.2								
			grained disseminations. Chlorite alteration is common and forms much matrix. Contact with below unit sharp at 43° CA	45° CA @ 3.7 15° CA @ 5.0to7.5 CONTACT 43° CA @ 7.6								
4.0	5.0	100%	As Above Within brown siliceous zone				58785	1.0m	10	0.2	38, 6	146
5.0	7.5	83%	As Above No Sample									
7.5	11.0	85%	(SILICIPIED) (WACKE) Grey-brown, fine grained, moderately soft to hard. Fine grained brownish sediment with chlorite and silica matrix. The rock is foliated and shows minor	BEDDING AND FOLIATION 34° CA @ 8.4 25° CA @ 11.3								
			folding locally. Pyrite occurs as fine grained disseminations to 1% locally. Fractures have rusty surfaces. Contact with below unit sharp at 63° CA	47° CA @ 13.4 38° CA @ 17.0 CONTACT 63° CA @ 17.3								

DRILL LOG - 81

Date OCT. 23/84 Logged By R. G. WILSON

NORANDA EXPLORATION COMPANY LTD.

Date Collored	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 20, 1984	OCT. 21, 1984	NQ		BEARING		ANGLE		CAD-DIAL		10	82M/5
FIELD CO-ORDINATES			DEPTH	RECORDED	CORRECTED	RECORDED	CORRECTED	SURVEYED CO-ORDINATES			Sheet 2 of 6
Lat. 112+00N	Elev.	Dip -45°	66.1	350°	325°		51°	Lat.	Elev.	Dip	HOLE No.
Dep. 134+58E	Length 66.1m	Bearing 250°						Dep.	Length	Bearing	CAD 84-2

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width metres	ASSAYS Au(ppb)	Ag(ppm)	Cu(ppm) Pb	Zn(ppm)
11.0	12.0	100%	AS ABOVE Minor silicified zones				58786	1m	10	0.2	24, 4	144
12.0	17.3	85%	AS ABOVE No Sample									
17.3	18.3	90%	(GRAPHITIC) ARGILLITE AND SILTSTONE Dark grey to black, fine grained, at times graphitic and has minor intraformational breccia. The rock is generally hard, softer over graphitic sections and	BEDDING 30° CA @ 18.5 58° CA @ 20.0	3%		58787	1m	40	0.6	44, 58	178
			contains up to 3% pyrite as fine grained disseminations and 1mm discontinuous layers parallel to bedding which is parallel to foliation. Short grey green, fine grained interbeds of a bedded	43° CA @ 22.0								
			sediment occur from 19.2-19.8 and 22.1-23.0 19.1-19.2 Quartz vein with specs of galena and sphalerite at times seen replacing pyrite crystals.	VEIN 20° CA @ 23.0	1%							
			22.4 5cm quartz vein with specs of galena. 23.0-23.6 Quartz carbonate vein with sphalerite and galena with pyrite. Contact with below unit sharp at 90° CA	VEIN 20° CA @ 22.4 CONTACT 90° CA @ 23.6	1%							
18.3	19.1	90%	AS ABOVE No Sample									

DRILL LOG - 81

Date OCT. 23/84 Logged By R. C. WILSON

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY	PROJECT No.	N.T.S. No.
OCT. 20, 1984	OCT. 21, 1984	NQ		BEARING		ANGLE		CAD-DIAL	10	82M/5
FIELD CO-ORDINATES			DEPTH	RECORDED	CORRECTED	RECORDED	CORRECTED	SURVEYED CO-ORDINATES		Sheet 3 of 6
Lat. 112+00N	Elev.	Dip -45°	66.1	350°	325°		51°	Lat.	Elev.	Dip	HOLE No.
Dep. 134+58E	Length 66.1m	Bearing 250°						Dep.	Length	Bearing	CAD 84-2

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width metres	ASSAYS Au(ppb)	Ag(ppm)	Cu(ppm) Pb	Zn(ppm)
19.1	19.2	100%	QUARTZ VEIN Specs of galena and sphalerite with pyrite		1%		58788	.1m	30	15.6	114, 392	12000
19.2	22.4	90%	GRAPHITIC ARGILLITE AND SILTSTONE No Sample									
22.4	22.5	100%	QUARTZ VEIN AND HOST Finely disseminated galena and sphalerite		1%		58789	.1m	10	4.6	26,1070	136
22.5	23.0	90%	GRAPHITIC ARGILLITE AND SILTSTONE No Sample									
23.0	23.6	100%	QUARTZ CARBONATE VEIN Disseminated galena and sphalerite seen replacing pyrite		2%		58790	.6m	10	3.6	32,1020	500
23.6	26.2	95%	GRAPHITIC INTRFORMATIONAL BRECCIA Similar to 6.5-17.4 of D84-3 Dark grey, black and white bands of soft to hard (graphitic) mudstone and argillite with carbonate and	BEDDING 54° CA @ 24.5 48° CA @ 27.2								
			quartz breccia fragments. The breccia fragments are elongate parallel to bedding and foliation and range in size from 5mm to 2cm. Bedding is generally regular with local warping.	42° CA @ 30.0 48° CA @ 32.0 30° CA @ 34.5 56° CA @ 38.0								

DRILL LOG - 81

Date OCT. 23/84 Logged By R. G. WILSON

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 20, 1984	OCT. 21, 1984	NQ						CAD-DIAL		10	82M/5
FIELD CO-ORDINATES			DEPTH	BEARING		ANGLE		SURVEYED CO-ORDINATES			Sheet 4 of 6
				RECORDED	CORRECTED	RECORDED	CORRECTED				
Lat. 112+00N	Elev.	Dip -45	66.1	350	325		51	Lat.	Elev.	Dip	HOLE No. CAD 84-2
Dep. 134+58E	Length 66.1m	Bearing 250						Dep.	Length	Bearing	

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width metres	ASSAYS Au(ppb)	Ag(ppm)	Cu(ppm) Pb	Zn(ppm)
			The rock is moderately conductive along the length of the unit with minor non conductive zones and several highly conductive zones. Carbonate quartz zones are fairly common, ranging in width from 5 - 30cm.	50 CA @ 41.0 72 CA @ 44.0 35 CA @ 47.0 69 CA @ 50.0								
			Pyrite is present as fine grained dissemination, and is about 1%. 35.4-36.0 GRAPHITIC FAULT GOUGE 47.3-48.8 GRAPHITIC FAULT GOUGE AND QUARTZ CARBONATE VEIN	38 CA @ 53.0 58 CA @ 56.0								
			Contact with below unit unknown between core runs.									
26.2	27.2	95%	As Above Minor graphite				64858	1m	10	0.4	62, 30	100
27.2	37.7	95%	As Above No Sample									
37.7	38.7	100%	As Above Graphitic with 3% Py.				58791	1m	10	0.4	38, 50	146
38.7	47.3	95%	As Above No Sample									
47.3	48.8	90%	GRAPHITIC FAULT GOUGE AND QUARTZ CARBONATE VEIN				58792	1.5m	10	0.6	66, 30	86

DRILL LOG - 81

Date OCT. 23,/84 Logged By R. G. WILSON

NORANDA EXPLORATION COMPANY LTD.

Date Collared	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 20, 1984	OCT. 21, 1984	NQ						CAD- DIAL		10	82M/5
FIELD CO-ORDINATES			DEPTH	BEARING		ANGLE		SURVEYED CO-ORDINATES			Sheet 5 of 6
				RECORDED	CORRECTED	RECORDED	CORRECTED				
Lat. 112+00N	Elev	Dip -45°	66.1	350°	325°		51°	Lat.	Elev.	Dip	HOLE No. CAD 84-2
Dep. 134+58E	Length 66.1m	Bearing 250°						Dep.	Length	Bearing	

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width metres	ASSAYS Au (ppb)	Ag (ppm)	Cu (ppm) Pb	Zn (ppm)
48.8	57.0	95%	GRAPHITIC INTRAFORMATIONAL BRECCIA As Above No Sample									
57.0	61.7		GRAPHITIC FAULT GOUGE Rock was 23.6-57.0 but has been sheared and is now mostly fault clay gouge. Fault is moderately conductive throughout. Contact with below unit unknown in broken core.									
57.0	60.0		As Above No Sample									
60.0	61.0		As Above Check Sample				58793	1.0m	10	0.2	58, 14	52
61.0	61.7		As Above No Sample									
61.7	63.7	95%	GRAPHITIC INTRAFORMATIONAL BRECCIA As 23.6-57.0									

DRILL LOG - 81

Date OCT. 23/84 Logged By R. G. WILSON

NORANDA EXPLORATION COMPANY LTD.

Date Collored	Date Completed	Core Size	DIP TESTS					PROPERTY		PROJECT No.	N.T.S. No.
OCT. 20, 1984	OCT. 21, 1984	NQ		BEARING		ANGLE		CAD-DIAL		10	82M/5
FIELD CO-ORDINATES			DEPTH	RECORDED	CORRECTED	RECORDED	CORRECTED	SURVEYED CO-ORDINATES			Sheet 6 of 6
Lat. 112+00N	Elev.	Dip -45°	66.1	350°	325°		51°	Lat.	Elev.	Dip	HOLE No.
Dep. 134+58E	Length 66.1m	Bearing 250°						Dep.	Length	Bearing	CAD 84-2

From metres	To metres	Recovery (%)	Description	Structure	% Sulph.	Est. Grade	SAMPLE No.	Width metres	ASSAYS Au(ppb)	Ag(ppm)	Cu(ppm) Pb	Zn(ppm)
63.7	64.7	90%	As Above Check Sample				58794	1m	10	0.2	78, 54	146
64.7	66.1		As Above No Sample									
66.1			END OF HOLE CASING PULLED Tropari test at 66.1 indicated a hole direction of 325° and may be due to local magnetics or a faulty reading.									

DRILL LOG - 81

Date _____ Logged By _____

APPENDIX 111

CORE SAMPLE GEOCHEMICAL ANALYSIS

NORANDA EXPLORATION COMPANY, LIMITED

N.T.S. 82M/5

PROPERTY DDH CAD 84 - 1

DATE NOV. 7/84

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	ASSAYS							SAMPLE BY
				Cu ppm	Ag ppm	Zn ppm	Pb ppm	Au ppb			
58795	14.8 - 15.8 m	CORE	1m	78	0.4	146	54	10			RGW
58796	21.6 - 22.6 m	CORE	1m	56	0.4	132	64	10			RGW
58797	23.9 - 25.6 m	CORE	1.7m	56	2.0	6500	80	10			RGW
58798	40.8 - 41.8 m	CORE	1m	24	0.2	122	8	10			RGW
58799	52.9 - 56.7 m	CORE	3.8m	40	0.6	118	8	10			RGW
58800	63.1 - 64.1 m	CORE	1m	40	0.2	78	4	10			RGW

NORANDA EXPLORATION COMPANY, LIMITED

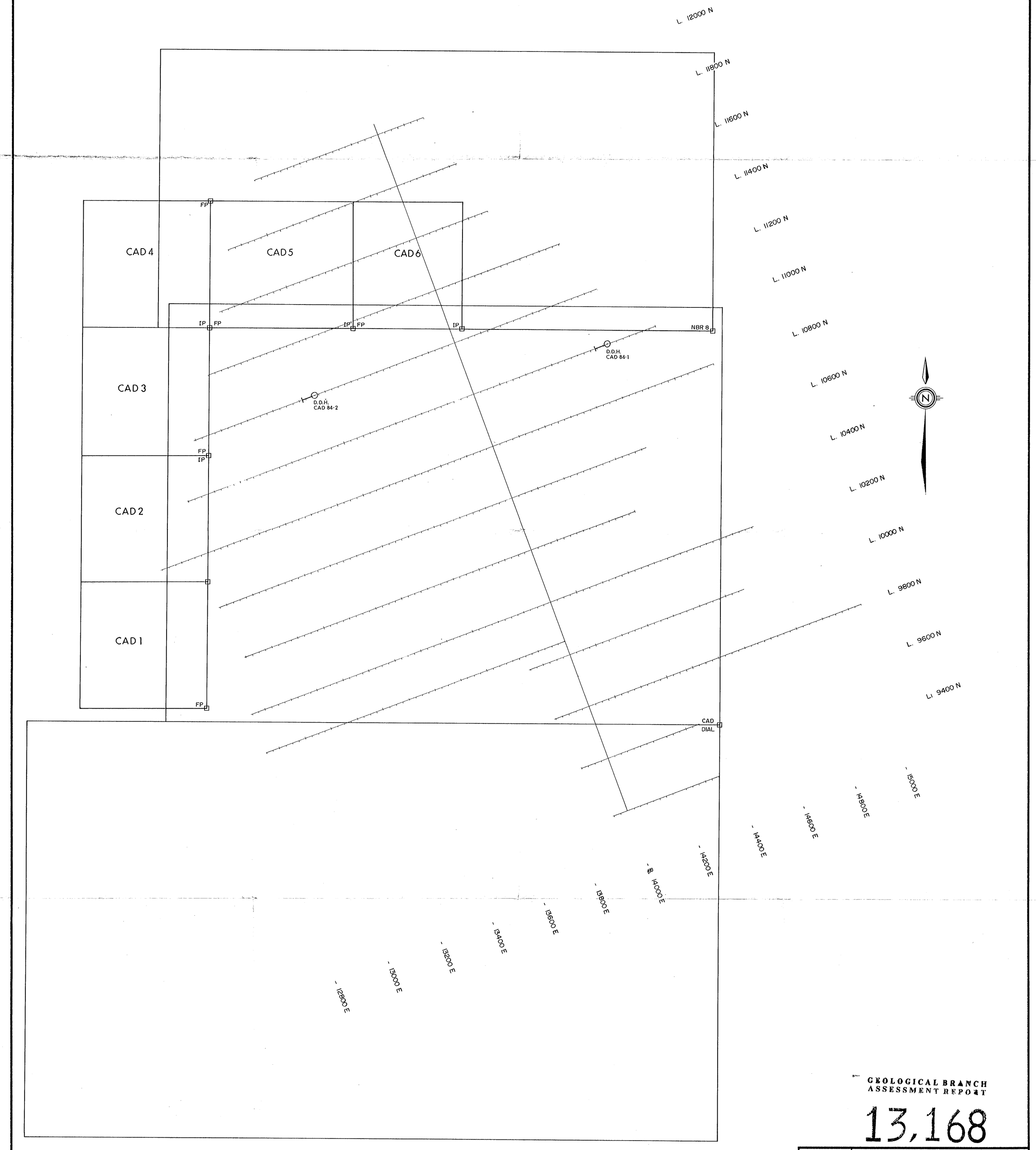
N.T.S. 82M/5

PROPERTY DDH CAD 84 - 2

DATE NOV. 7/84

SAMPLE REPORT

SAMPLE NO.	LOCATION & DESCRIPTION	TYPE	WIDTH	ASSAYS							SAMP BY
				Cu ppm	Ag ppm	Zn ppm	Pb ppm	Au ppb			
58785	4.0 - 5.0 m	CORE	1.0m	38	0.2	146	6	10			RGW
58786	11.0 - 12.0 m	CORE	1.0m	24	0.2	144	4	10			RGW
58787	17.3 - 18.3 m	CORE	1.0m	44	0.6	178	58	40			RGW
58788	19.1 - 19.2 m	CORE	.1m	114	15.6	12000	392	30			RGW
58789	22.4 - 22.5 m	CORE	.1m	26	4.6	136	1070	10			RGW
58790	23.0 - 23.6 m	CORE	.6m	32	3.6	500	1020	10			RGW
64858	26.2 - 27.2 m	CORE	1m	62	0.4	100	30	10			RGW
58791	37.7 - 38.7 m	CORE	1m	38	0.4	146	50	10			RGW
58792	47.3 - 48.8 m	CORE	1.5m	66	0.6	86	30	10			RGW
58793	60.0 - 61.0 m	CORE	1.0m	58	0.2	52	14	10			RGW
58794	63.7 - 64.7 m	CORE	1.0m	78	0.4	146	54	10			RGW



GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,168

REVISED	O'BRIEN J.V. (NBR)
	CAD GROUP
	D.D.H. CAD 84-1 & 2
	LOCATION MAP
PROJ. No. 10	SURVEY BY: R.G.W. DATE: Jan./84
N.T.S. 82M/4&5	DRAWN BY: P.J.A. & W.R. SCALE: 1:5000
DWG. No. 3	NORANDA EXPLORATION
	OFFICE: Vancouver