

# 5139

ASSESSMENT REPORT

DIAMOND RILLING

ON THE

93E/14W

SMOKE MOUNTAIN PROPERTY

127° 16'W, 53° 53'N

Omineca Mining Division

by

G. Belik

Noranda Exploration Company, Limited  
(No Personal Liability)

July 19 - August 26, 1974

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 5139	MAP

DIAMOND DRILLING  
ON THE  
SMOKE MOUNTAIN PROPERTY

INTRODUCTION

The Smoke Mountain property, consisting of 49 mineral claims, covers an area geologically similar to that of 'porphyry deposits' occurring within an area referred to as the Skeena Arch.

Diamond drilling was completed on certain of these claims to determine the cause of a induced polarization anomaly outlined during an earlier geophysical survey.

LOCATION AND ACCESSIBILITY

The Smoke Mountain mineral claims are located within the Whitesail Lake Map, British Columbia, on the south slope of Smoke Mountain. The town of Smithers is about 60 miles to the north.

Access to the property from Smithers is by helicopter. A gravel road, used mainly for access to the Berg copper-moly prospect, passes within 4 miles of the property.

CLAIMS AND OWNERSHIP

<u>Claim Name</u>	<u>Record Number</u>
Smoke 1 - 3	90042 - 90044
Smoke 1 Fr.	90045
CS 1 - 2	113581 -113582
NS 1 - 24	127058 -127081
NS 25 - 34	130086 -130095
NS 1 - 9 Fr.	127082 -127090

All mineral claims are owned by Noranda Exploration Company, Limited. Smoke 1-3, Smoke 1 Fr. and CS 1-2 are held by option from Norwich Resources Limited.

MAPS

#1 Location map

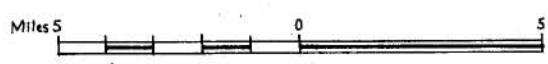
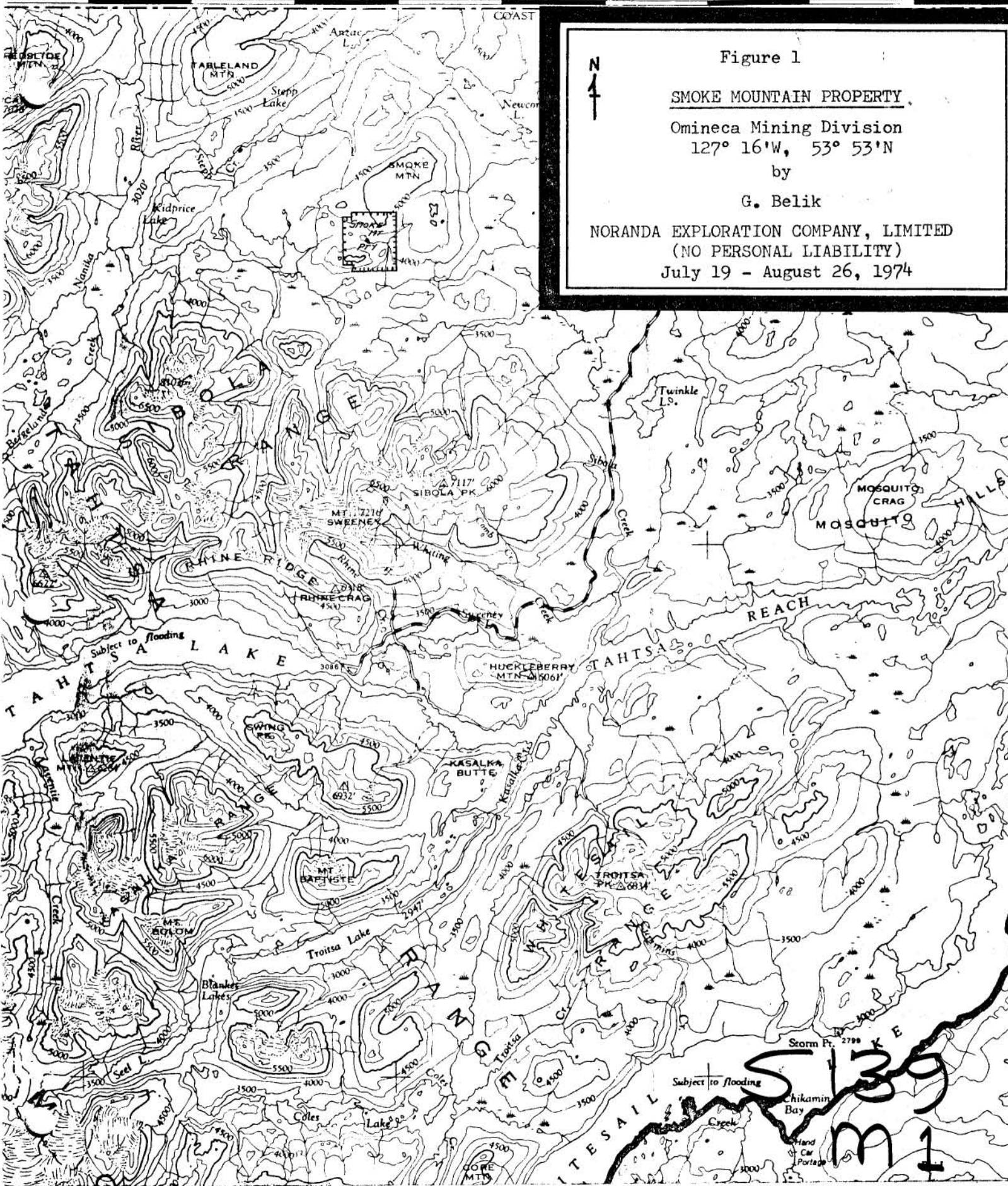
#2 Claims map

Figure 1

SMOKE MOUNTAIN PROPERTY

Omineca Mining Division  
 127° 16'W, 53° 53'N  
 by  
 G. Belik

NORANDA EXPLORATION COMPANY, LIMITED  
 (NO PERSONAL LIABILITY)  
 July 19 - August 26, 1974



139  
 M 1

*Jerry Bell*

DIAMOND DRILLING

Seven diamond drill holes, with a total footage of 2,121 feet, were completed on Cs 1, Cs 2, NS 2, NS 4, NS 20 and NS 1 Fr. during the period extending from July 19 to August 26, 1974. Drilling was under contract to H. Allen Diamond Drilling Limited, Box 1397, Merritt, British Columbia. A Longyear 38 drill rig with BQ wire-line equipment was used to bore the holes.

Drill core is stored in wooden boxes, placed in a rack at the Noranda campsite located on the CS 1 mineral claim.

  
G. Belik  
Geologist.



Table #1

SMOKE MOUNTAIN PROPERTYDIAMOND DRILL HOLE DATA


Hole No.	Latitude	Departure	Elevation	Claim	Dip	Bearing	Depth	Start	Finish
D.D.H. 74-1	100N	103+90E	4420'	CS 1	-48°	270°	302'	28/7/74	30/7/74
D.D.H. 74-2	92+79N	100E	4500'	NS 2	-45°	270°	398'	1/8/74	4/8/74
D.D.H. 74-3	112+41N	111+23E	4420'	CS 2	-49°	268°	347'	6/8/74	8/8/74
D.D.H. 74-4	111+54N	108E	4418'	NS 1 Fr.	-45°	180°	306'	9/8/74	11/8/74
D.D.H. 74-5	119+78N	113+92E	4520'	NS 20	-45°	270°	320'	17/8/74	19/8/74
D.D.H. 74-6	105+57N	115+07E	4435'	CS 2	-45°	90°	250'	20/8/74	21/8/74
D.D.H. 74-7	91+39N	116+38E	4460'	NS 4	-45°	360°	198'	23/8/74	26/8/74

*Ray Bell*

STATEMENT OF QUALIFICATION

I, Gary Belik of the Town of Smithers, Province of British Columbia do certify that:

1. I have been an employee of Noranda Exploration Company, Limited since May 1970.
2. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology and a Master of Science Degree in Geology.
3. I am an Associate Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.
4. I have held the position of Geologist for Noranda Exploration Company, Limited since May 1970.

  
\_\_\_\_\_  
Gary Belik  
Geologist  
NORANDA EXPLORATION COMPANY,  
LIMITED  
(No Personal Liability)

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn**

Sheet No. **1** Hole No. **DDH 74-1**

Project No. **23** N.T.S. **93 E/14W**

Core Size: **BQ**

Lat. **100N**

Elev. **4420**

Dip **-48°**

Collared **28/7/74**

Logged by: **G. Belik**

Dep. **103.9E**

Depth **302'**

Bearing **270°**

Completed **30/7/74**

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-45	0%	Overburden									
45-50	98	Pale green, porphyritic to fine-grained intrusive. Qtz-Se envelopes adjacent to mineralized fractures. Matrix altered to Se, Cl, Ep + Qtz.		Py as fracture fillings & disseminations. Disseminations of magnetite & hematite.	>1						
50-60	98	" "		Trace Cpy Thin carb & qtz-carb veins	1.5						
60-70	99	Progressively more siliceous.		" "	1						
70-77	99	Moderate qtz-Se alteration.		Stockwork of fractures. Mineralized with Py	3-4						
77-80	99	Dark brown, brecciated, biotite hornfels.		" "	3						
80-82	99	Medium green, biotite-quartz diorite. Minor K-spar veining.		Pyrite as fracture fillings & disseminations.	>1						
82-90	98	Pale grey, porphyritic to fine-grained intrusive. Moderate qtz-Se-carbonate alteration.		Stockwork of fractures mineralized with Py. Abundant dissem. Py, carbonate veining. Very fine hematite imparts a pink hue to some of the core.	>5						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn**

Sheet No. **1** Hole No. **DDH 74-1**

Project No. **23** N.T.S. **93 E/14W**

Core Size: **BQ**

Lat. **100N**

Elev. **4420**

Dip **-48°**

Collared **28/7/74**

Logged by: **G. Belik**

Dep. **103.9E**

Depth **302'**

Bearing **270°**

Completed **30/7/74**

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-45	0%	Overburden									
45-50	98	Pale green, porphyritic to fine-grained intrusive. Qtz-Se envelopes adjacent to mineralized fractures. Matrix altered to Se, Cl, Ep + Qtz.		Py as fracture fillings & disseminations. Disseminations of magnetite & hematite.	>1						
50-60	98	" "		Trace Cpy Thin carb & qtz-carb veins	1.5						
60-70	99	" " Progressively more siliceous.		" "	1						
70-77	99	" " Moderate qtz-Se alteration.		Stockwork of fractures. Mineralized with Py	3-4						
77-80	99	Dark brown, brecciated, biotite hornfels.		" "	3						
80-82	99	Medium green, biotite-quartz diorite. Minor K-spar veining.		Pyrite as fracture fillings & disseminations.	>1						
82-90	98	Pale grey, porphyritic to fine-grained intrusive. Moderate qtz-Se-carbonate alteration.		Stockwork of fractures mineralized with Py. Abundant dissem. Py, carbonate veining. Very fine hematite imparts a pink hue to some of the core.	>5						

NORANDA EXPLORATION CO. LTD.

Property Smoke Mtn.

Sheet No. 3 Hole No. DDH 74-1

Project No. 23 N.T.S. 93 E/14W

Core Size: BQ

Lat. Elev. Dip Collared

Logged by: G. Belik

Dep. Depth Bearing Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
160-170	99	" "		" " Very fine hematite imparts pink envelopes around some fractures.	2						
170-180	97	" " Progressive increase in matrix carbonate.		" "	>2						
180-190	97	Pale grey to pale green, altered intrusive. Carbonate-rich matrix & carbonate envelopes adjacent to mineralized fractures. Weak development of clay? Local brecciation with minor gouge.		Stockwork of thin, white, carbonate veins (>40/ft). Pyrite as fracture fillings & disseminations. Disseminations of magnetite & hematite.	>3						
190-197	99	" " Locally porphyritic.		" "	<3						
197-200	99	Pale brown to pale green, porphyritic intrusive. Carb-clay? Alteration weakly developed. Locally chloritic.		Stockwork of carbonate veins 0.1-5 mm thick (>10/ft). Pyrite present as fracture fillings & disseminations.	2						
200-210	99	" "		" "	2						
210-220	100	" " Sections with mod. Carb-clay? alteration.		" " Intense carbonate veining with local brecciation.	>4						

Lat.	Elev.	Dip	Collared	Logged by: <b>G. Belik</b>
Dep.	Depth	Bearing	Completed	ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
60-170	99	" "		Very fine hematite imparts pink envelopes around some fractures.	2						
70-180	97	Progressive increase in matrix carbonate.		" "	>2						
80-190	97	Pale grey to pale green, altered intrusive. Carbonate-rich matrix & carbonate envelopes adjacent to mineralized fractures. Weak development of clay? Local brecciation with minor gouge.		Stockwork of thin, white, carbonate veins (>40/ft). Pyrite as fracture fillings & disseminations. Disseminations of magnetite & hematite.	>3						
90-197	99	Locally porphyritic.		" "	<3						
97-200	99	Pale brown to pale green, porphyritic intrusive. Carb-clay? Alteration weakly developed. Locally chloritic.		Stockwork of carbonate veins 0.1-5 mm thick (>10/ft). Pyrite present as fracture fillings & disseminations.	2						
00-210	99	" "		" "	2						
10-220	100	Sections with mod. Carb-clay? alteration.		Intense carbonate veining with local brecciation.	>4						



NORANDA EXPLORATION CO. LTD.

Property Smoke Mtn.  
 Project No. 23 N.T.S. 93 E/14W

Sheet No. 4 Hole No. DDH 74-1

Core Size: BQ

Logged by: G. Belik

Lat.	Elev.	Dip	Collared	ASSAYS			
Dep.	Depth	Bearing	Completed				
Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.
0-230	100	" "		" " Disseminated hematite.	3		
0-240	100	" "		" " "	3		
0-250	100	" "		" " Most Py occurs disseminated.	4		
0-260	100	" "		" " Fractures & veins 30°/core a common orientation.	>3		
0-270	100	" " Decrease in carb down section.		" " "	>2		
0-280	100	" " Fine hematite imparts a pink hue to some of the core.		" " Decrease in carbonate veining.	<3		
0-290	100	" " "		" " Carb veining (5/ft). Pyrite as fracture fillings (30%) & disseminations (70%).	<2		
0-300	100	" "		" " "	2-3		



NORANDA EXPLORATION CO. LTD.

Property Smoke Mtn.

Sheet No. 1 Hole No. DDH 74-2

Project No. 23 N.T.S. 93 E/14W

Core Size: B<sub>Q</sub>

Lat. 92+79 N

Elev. 4500'

Dip -45°

Collared 1/8/74

Logged by: G. Belik

Dep. 100 E

Depth 398'

Bearing 270°

Completed 4/8/74

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-30	0%	Overburden									
30-40	98	Medium grained, qtz diorite/grano-diorite. 20%-40% mafics altered to Cl ± Se. Local secondary K-spar, 10% sulphide with thin qtz envelopes.		Pyrite as fracture fillings & disseminations. Traces of Cpy. Disseminated magnetite (0%-1%) & hematite. (0.2%-5%). Local carbonate veining.	1						
40-50	97	" "		" "	1.5						
50-60	98	" "		" "	2						
60-70	98	" "		" "	2.5						
70-75	99	Mafics altered to Se. Sulphide fractures with qtz envelopes more numerous.		Pyrite occurs as fracture fillings & dissemination. Minor moly. Traces Cpy	2						
75-87	95	Medium-grained qtz diorite/grano-diorite. Mafics altered to chlorite (locally sericite). Silicified vein walls locally developed. 80'-82' - gouge		Pyrite, minor Cpy. Disseminated hematite.	2						
87-90	100	Pre-mineral porphyritic dyke. HBD (10%) & Plag (20%) phenos within a dense matrix. HBD alt. to chlorite. Plag partly saussuritized. Dyke contact 45°/core.		Py, minor moly	2						

NORANDA EXPLORATION CO. LTD.

Property Smoke Mtn.

Sheet No. 2 Hole No. DDH 74-2

Project No. 23 N.T.S. 93 E/14W

Core Size: BQ

Lat.

Elev.

Dip

Collared

Logged by: G. Belik

Dep.

Depth

Bearing

Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
90-100	97	Cream colored intrusive, mafics altered to sericite. Silicification of matrix & vein walls. 99'-100' - porphyritic dyke.		Py, traces of Cpy & moly. Disseminated hematite.	4						
100-110	95	" " 104.5'-106' - porphyritic dyke.		Py, traces of Cpy. Disseminated Mag/hematite.	3						
110-120	99	" " 117'-118' - Porphyritic dyke 45°/core.		" "	3.5						
120-127	99	Medium-grained qtz diorite. Mafics (15%) altered to chlorite. Silicification adjacent to a few (5-10%) vein walls. 123'-123.5' - Porphyritic dyke.		" "	1.5						
127-137	100	Mafics altered to sericite. Increase in silicification. 128.5'-129' - Porphyritic dyke.		Pyrite occurs as fracture fillings & disseminations. traces of Cpy. Disseminated hematite.	2						
137-144	100	" " Mafics altered to Se + Cl. 30% sulphide fractures with qtz envelopes.		Pyrite (mostly dissem) Hematite	3						
144-150	100	Medium-grained qtz diorite with 30% mafics (HBD + Bi). Local chloritization (+ Se).		Pyrite, traces Cpy. Dissem. hematite. Minor carbonate veining.	1						
150-160	100	" " "		" " Some fractures with hematite.	0.5						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn.**

Sheet No. **1** Hole No. **DDH 74-2**

Project No. **23** N.T.S. **93 E/14W**

Core Size: **B<sub>4</sub>**

Lat. **92+79 N**

Elev. **4500'**

Dip **-45°**

Collared **1/8/74**

Logged by: **G. Belik**

Dep. **100 E**

Depth **398'**

Bearing **270°**

Completed **4/8/74**

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-30	0%	Overburden									
30-40	98	Medium grained, qtz diorite/grano-diorite. 20%-40% mafics altered to Cl ± Se. Local secondary K-spar, 10% sulphide with thin qtz envelopes.		Pyrite as fracture fillings & disseminations. Traces of Cpy. Disseminated magnetite (0%-1%) & hematite (0.2%-5%). Local carbonate veining.	1						
40-50	97	" "		" "	1.5						
50-60	98	" "		" "	2						
60-70	98	" "		" "	2.5						
70-75	99	Mafics altered to Se. Sulphide fractures with qtz envelopes more numerous.		Pyrite occurs as fracture fillings & dissemination. Minor moly. Traces Cpy	2						
75-87	95	Medium-grained qtz diorite/grano-diorite. Mafics altered to chlorite (locally sericite). Silicified vein walls locally developed. 80'-82' - gouge		Pyrite, minor Cpy. Disseminated hematite.	2						
87-90	100	Pre-mineral porphyritic dyke. HBD (10%) & Plag (20%) phenos within a dense matrix. HBD alt. to chlorite. Plag partly saussuritized. Dyke contact 45°/core.		Py, minor moly	2						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn.**  
 Project No. **23** N.T.S. **93 E/14W**

Sheet No. **3** Hole No. **DDH 74-2**

Core Size: **BQ**

Logged by: **G. Belik**

Lat.	Elev.	Dip	Collared
Dep.	Depth	Bearing	Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
160-165	100	" "		" "	>1						
165-170	100	Medium-grained qtz diorite. HBA + Bi partly altered to Cl + Se. Local, minor silicification.		Py, dissem. hematite. Minor carbonate veining (45°/core)	<1						
170-180	99	" "		" " Traces of Cpy	2						
180-190	100	" "		Minor Py, traces of Cpy	0.5						
190-200	98	" " Sections with saussuritized plag		Pyrite occurs as fracture fillings & disseminations. Traces of Cpy. Disseminated magnetite/hematite.	>1						
200-204	98	" " 203.7'-204' - gouge		" "	<0.5						
204-210	99	Dark, green-grey, porphyritic dyke. 20% plag phenos within a dark grey, fine-grained groundmass. Mafics altered to chlorite. Large sulphide fractures with qtz envelopes. Upper contact 45°/core.		Minor pyrite, traces Cpy. Disseminated mag/hem. Minor carbonate veining.	<0.5						
210-220	100	" "		" "	>0.5						



NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn.**

Sheet No. **4** Hole No. **DDH 74-2**

Project No. **23** N.T.S. **93 E/14W**

Core Size: **BQ**

Lat. \_\_\_\_\_ Elev. \_\_\_\_\_ Dip \_\_\_\_\_ Collared \_\_\_\_\_ Logged by: **G. Belik**

Dep. \_\_\_\_\_ Depth \_\_\_\_\_ Bearing \_\_\_\_\_ Completed \_\_\_\_\_ ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
220-225	99	" "		" "	0.5						
225-239.5	100	Medium-grained qtz diorite. Mafics altered to chlorite. Large sulphide fractures with qtz envelopes. 230'-231' - dark grey, porphyritic dyke 10°/core.		Minor amounts of pyrite and cpy. Trace of moly. Dissem. hematite.	0.5						
239.5-241	99	Dark grey porphyritic dyke. Upper contact 45°/core.		Minor Py, traces Cpy Disseminated magnetite/hematite.	>0.5						
244-253	100	Qtz diorite. Mafics (20%-40%) altered to chlorite.		" "	0.3						
253-262	100	" " Mafics altered to sericite + Cl. More qtz envelopes.		Abundant Py (mainly disseminated). Traces of Cpy & moly. Disseminated hematite.	3.5						
262-264	100	" "		Minor Py, traces Cpy. Disseminated magnetite/hematite.	0.5						
264-270	100	Light to dark grey porphyritic dyke. Upper contact 80°/core.		" "	0.5						
270-280	100	" "		" "	0.5-1						

NORANDA EXPLORATION CO. LTD.

Property Smoke Mtn.

Sheet No. 5 Hole No. DDH 74-2

Project No. 23 N.T.S. 93 E/14W

Core Size: BQ

Lat.	Elev.	Dip	Collared
Dep.	Depth	Bearing	Completed

Logged by: G. Belik

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
280-290	100	" "		" "	>1						
290-2925	100	Lower contact 30°/core.		" "	1						
285-285	100	Qtz diorite. Mafics altered to chlorite.		" "	>1						
285-295	100	Dark grey, porphyritic dyke.		" "	1						
295-310	100	Qtz diorite. 30%-40% mafics (Bi + HBD) locally altered to chlorite + sericite. Large sulphide veins have qtz envelopes.		" "	>0.5						
310-320	100	Porphyritic dyke with HBD (20%) & plag (15%) phenos within a grey groundmass. HBD altered to chlorite. Upper contact 40°/core.		Fy, traces Cpy. Dissem mag./hem.	0.5-1						
320-330	99	" "		" "	>1						
330-340	98	" "		" "	>1						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn.**  
 Project No. **23** N.T.S. **93 E/14W**

Sheet No. **6** Hole No. **DDH 74-2**

Core Size: **BQ**  
 Logged by: **G. Belik**

Lat. \_\_\_\_\_ Elev. \_\_\_\_\_ Dip \_\_\_\_\_ Collared \_\_\_\_\_  
 Dep. \_\_\_\_\_ Depth \_\_\_\_\_ Bearing \_\_\_\_\_ Completed \_\_\_\_\_

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
340-343	99	Qtz diorite, mafics altered to sericite + chlorite. Silicification of sulphide fracture walls.		Pyrite, traces Cpy. Disseminated hematite.	3						
343-344	99	Porphyritic dyke 45°/core.		Pyrite, traces Cpy	1.5						
344-350	99	Qtz diorite/granodiorite. Mafics altered to chlorite + sericite. Minor silicification.		Pyrite, minor Cpy & disseminated hematite. Minor K-spar veining.	> 1						
350-360	99	" "		" "	1.5						
360-370	100	" "		Hematite also occurs as fracture fillings.	> 0.5						
370-380	99	" "		Minor Py, traces Cpy. A few hematite veins.	< 0.5						
380-3855	99	" "		" "	> 0.5						
3855-391	98	Pre-mineral, porphyritic dyke. Fine grained with 20% chloritized HBD. Contact 25°/core.		Pyrite	3						



NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn.**

Sheet No. **1** Hole No. **DDH 74-3**

Project No. **23** N.T.S. **93 E/14W**

Core Size: **BQ**

Lat. **112+41 N**

Elev. **4420'**

Dip **-49°**

Collared **6/8/74**

Logged by: **G. Belik**

Dep. **111+23 E**

Depth **347'**

Bearing **268°**

Completed **8/8/74**

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-35	0	Overburden									
35-40	70	Grey, fine-grained diorite/qtz diorite. Intense stockwork of hairline fractures with envelopes of secondary biotite + sericite. Away from Bi envelopes mafics altered to chlorite. Locally unit contains secondary K-spar.		Biotite fractures contain pyrite plus small amounts of Cpy. Pyrite & Cpy also occur in fractures with epidote, within magnetite veinlets & in qtz veins. Unit contains disseminations of magnetite/hematite.	1.5						
40-50	75	" "		" "	3						
50-60	85	" "		" "	>3						
60-70	95	" " 20%-40% Secondary Bi Secondary K-spar more abundant.		" "	>4						
70-80	95	" "		" "	4						
80-90	90	" " Locally chloritic		" "	2						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn.**  
 Project No. **23** N.T.S. **93 E/14W**

Sheet No. **2** Hole No. **DDH 74-3**

Core Size: **BQ**

Lat. Elev. Dip Collared Logged by: **G. Belik**

Dep. Depth Bearing Completed ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
90-100	95	" "		" "	3						
100-110	99	" "		" "	4						
110-120	97	" "		" "	5						
120-130	99	" " Secondary biotite more abundant		" "	4						
130-140	99	" "		" "	4-5						
140-150	0 99	" " Biotite alteration not as prevalent		" " With a few gypsum veins	2						
150-160	100	" " Abundant secondary biotite		" " Numerous magnetite & K-spar veinlets	2						
160-164	100	" " Contact with underlying lithology 45°/core		" " Plus numerous fractures with bleached envelopes (sericite alteration)	3						



NORANDA EXPLORATION CO. LTD.

Property Smoke Mtn.

Sheet No. 3

Hole No. DDH 74-3

Project No. 23

N.T.S. 93 E/14W

Core Size: BQ

Lat.	Elev.	Dip	Collared	Logged by: <u>G. Belik</u>			
Dep.	Depth	Bearing	Completed	ASSAYS			
Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.
164-171	98	Light to medium green, qtz diorite/diorite. Mafics altered to chlorite and/or sericite. Plag partly to completely saussuritized. Abundant secondary K-spar flooding matrix & as envelopes around fractures. 169'-170' breccia		Pyrite & minor Cpy occur as vein & fracture fillings & as disseminations. Py & Cpy also occur in magnetite/hematite veinlets. Veins of gypsum & qtz, disseminated magnetite/hematite.	3		
171-176	99	Sheared, green, fine-grained intrusive. Mafics chloritized. Plag saussuritized. Fracture-controlled secondary biotite		Pyrite & Cpy as fracture fillings & disseminations. Abundant tension gashes filled with carbonate.	3		
176-188	99	As from 35'-164. 2 stages of alteration evident: 1) Early biotite alteration 2) Later Se alteration		Pyrite & Cpy developed during both stages of alteration	3		
188-190	100	Green, medium-grained diorite/qtz diorite. Mafics altered to chlorite and/or sericite. Plag partly to completely saussuritized. Secondary K-spar flooding matrix & as envelopes around fractures. Sections with fine, felted, secondary biotite.		Pyrite & minor Cpy as disseminations & fracture fillings. A few chlorite/gypsum-chlorite veins with accessory pyrite & Cpy.	4		
190-200	99	" "		" "	5		
200-210	99	" " 204'-205' as 171'-176'		" "	5		

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn.**  
 Project No. **23** N.T.S. **93 E/14W**

Sheet No. **4** Hole No. **DDH 74-3**

Core Size: **BQ**

Logged by: **G. Belik**

Lat.	Elev.	Dip	Collared
Dep.	Depth	Bearing	Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
210-220	100	" "		" "	3						
220-230	100	" "		" "	3						
230-240	98	" "		" "	3						
240-250	99	" "		" "	>3						
250-260	99	" "		" "	3						
260-270	98	" "		" "	1.5						
270-280	98	Increase in sericite content & degree of saussuritization of plag. No secondary biotite.		" "	2						
280-290	99	Light green, medium-grained diorite /qtz diorite. Abundant sericite in matrix. Plag saussuritized. K-spar flooding matrix & enveloping fractures. Some fractures with thin qtz-sericite envelopes (post-dates K-spar)		Pyrite & Cpy as fracture fillings & disseminations. Thin chlorite veins. A few hematite & hematite/magnetite veins with chlorite, pyrite & Cpy.	2						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mtn.**

Sheet No. **5** Hole No. **DDH 74-3**

Project No. **23** N.T.S. **93 E/14W**

Core Size: **BQ**

Lat.	Elev.	Dip	Collared	Logged by: <b>G. Belik</b>
Dep.	Depth	Bearing	Completed	ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
290-300	98	" " Plus fracture-controlled chlorite flooding matrix		" "	2						
300-305	97	" " "		" " Plus minor bornite	3						
305-310	80	Same intrusive as from 35'-164' but with less secondary biotite & more chlorite. K-spar flooding matrix & enveloping fractures. Secondary sericite.		Core broken with chloritic slip surfaces, Py, Cpy. Chloritic fractures. Hematite & hematite/magnetite veins with Py & Cpy	2						
310-320	90	" "		" "	3						
320-330	95	" " Fractures with thin, bleached, sericite envelopes.		" "	1.5						
330-336.5	95	" " Abundant secondary K-spar		" "	1.5						
336.5-347	95	Same intrusive evident from 188'-305'. Abundant secondary K-spar.		" "	2						

END OF HOLE ----- CASING LEFT IN HOLE

*Henry Belik*

NORANDA EXPLORATION CO. LTD.

Property Smoke Mt.  
 Project No. 23 N.T.S. 93 E/14W

Sheet No. 1 Hole No. DDH 74-4

Core Size: BQ

Lat. 111 + 54N

Elev. 4418'

Dip 45°

Collared 9/8/74

Logged by: Belik

Dep. 108 E

Depth 306'

Bearing 180°

Completed 11/8/74

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-61	0%	Overburden									
61-70	99	Medium-grained diorite/qtz diorite. 3 stages of alteration: 1) Primary biotite + HBD altered to chlorite + Se 2) Biotite - K-spar alteration 3) Late sulphide fractures with thin qtz-Se envelopes.		Pyrite as fracture fillings & disseminations. A few chlorite fractures. Disseminations & veins of hematite/magnetite.	>6						
70-80	99	" " Secondary Bi more abundant.		" "	3						
80-90	100	" " Locally, alignment of Bi imparts a foliation 45°/core. 87'-88' Pale green with plag saussuritized & mafics alt. to sericite.		" "	3						
90-100		" " Less secondary biotite 96'-97' as 87'-88' 97'-100' core soft & shattered		Trace of Cpy	2						
100-110	99	" "		" "	<2						
110-120	99	" " Abundant secondary K-spar flooding matrix. Less secondary Bi (more Cl)		" "	3						

NORANDA EXPLORATION CO. LTD.

Property Smoke Mt.

Sheet No. 2 Hole No. DDH 74-4

Project No. 23 N.T.S. 93 E/14W

Core Size: BQ

Lat.

Elev.

Dip

Collared

Logged by: G. Belik

Dep.

Depth

Bearing

Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
120-122	99	" "		" "	3						
122-130	99	Grey, fine-grained to porphyritic diorite/qtz diorite. Alteration: 1) biotite (+ minor K-spar) 2) sericite Foliation developed 60°/core.		Pyrite as fracture fillings & disseminations. Traces of Cpy. Disseminated mag/hem. Minor qtz-carb veining.	4						
130-137	96	" " Contact with underlying lithology 45°/core.		" "	4						
137-1425	99	Medium-grained diorite/qtz diorite. Alteration: 1) Primary mafics alt. to chlorite + Se 2) Bi - K-spar 3) Late sulphide fractures with thin qtz-Se envelopes.		Pyrite A few qtz-chlorite fractures.	2						
1425-155	99	Same as above lithology but with mafics altered to sericite. Plag saussuritized. Locally chloritic 143 <sup>1</sup> / <sub>2</sub> -144 <sup>1</sup> / <sub>2</sub> Gouge 149 <sup>1</sup> / <sub>2</sub> -150 <sup>1</sup> / <sub>2</sub> Breccia		" " Traces of Cpy	3						
155-164	99	Mafics altered to chlorite + Se. 2%-10% secondary Bi. K-spar flooding matrix & as envelopes around some fractures.		Pyrite, minor Cpy. Disseminated mag/hem.	3						
164-170	99	" " Primary mafics altered to Se + Cl. Minor secondary K-spar or biotite.		Pyrite, traces Cpy. Locally dusted with bright orange hematite. Minor carb veining & chlorite fractures.	2						

NORANDA EXPLORATION CO. LTD.

Property Smoke Mt.

Sheet No. 3 Hole No. DDH 74-4

Project No. 23 N.T.S. 93 E/14w

Core Size: BQ

Lat.	Elev.	Dip	Collared	Logged by: <u>G. Belik</u>
Dep.	Depth	Bearing	Completed	ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
170-180	97	" " Without secondary Bi or K-spar		" "	<2						
180-190	99	" "		Minor qtz veining. A few hematite fractures.	>2						
190-193	98	" "		" "	3						
193-200	98	" " 1% to 10% secondary Bi Minor K-spar. Sections of pale green sericitic rock.		Pyrite. A few carb veins with zeolite. Chlorite veining disseminated mag/hem.	3						
200-210	99	" "		" "	>2						
210-220	99	" " Increase in Bi towards bottom of section.		" " Traces of Cpy	2						
220-230	99	" " Decreased Bi content little K-spar		" " Trace Cpy	2						
230-236	98	" "		" " Traces Cpy	3						



NORANDA EXPLORATION CO. LTD.

Smoke Mt.

Sheet No. 4 Hole No. 74-4

Property

Project No. 23

N.T.S.

93 E/14W

Core Size: BQ

Logged by: G. Belik

Lat.

Elev.

Dip

Collared

Dep.

Depth

Bearing

Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
236-245	80	Grey, fine-grained to porphyritic diorite/qtz diorite. Early Bi alteration with later qtz-Se alteration. Qtz restricted to thin envelopes around a few fractures. Sericite occurs within qtz & in matrix between fractures. Well-defined foliation 20°-40°/core.		Core badly broken with many fracture surfaces. Py occurs as fracture fillings & disseminations. Minor Cpy. Disseminated mag/hem.	5						
245-250	99	No mafics. Complete sericite alteration. With a few qtz envelopes.		Pyrite, traces Cpy	5						
250-258	99	Contact with underlying lithology 45°/core. 255'-257' - 20% Bi		" "	4						
258-260	100	Medium-grained diorite/qtz diorite. Mafics altered to chlorite with 1%-5% secondary Bi. Sericitic sections.		Pyrite as fracture fillings & disseminations. A few gypsum veins Disseminated mag/hem.	2						
260-270	100	" "		Traces Cpy	2						
270-280	99	" "		Dustings of bright orange hematite.	3						
280-293	97	Minor Bi (more Se) Sections of gouge		" "	3						



NORANDA EXPLORATION CO. LTD.

Property **Smoke Mt.**

Sheet No. **1** Hole No. **DDH 74-5**

Project No. **23** N.T.S. **93 E/14W**

Core Size: **BQ**

Lat. **119+78 N**

Elev. **4520'**

Dip **-45°**

Collared **17/8/74**

Logged by: **G. Belik**

Dep. **113+92 E**

Depth **320'**

Bearing **270°**

Completed **19/8/74**

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-52	0	Overburden									
52-60	97	Light green, medium-grained qtz diorite. Mafics altered to chlorite. Plag partly saussuritized. Sections with qtz-Se alteration. Local gouge.		Pyrite as fracture fillings & disseminations. Minor Cpy. 10% disseminated hematite. A few qtz-carb veins with drusy cavities.	2						
60-70	99	" "		" " Plus a few slip surfaces.	3						
70-74	97	Pale green porphyritic intrusive with 25% Plag phenocrysts. Qtz is restricted to thin envelopes around some fractures. Sericite occurs with qtz, and in the matrix. 70'-70.5 Gouge		Pyrite, trace Cpy	2						
74-80	99	As 52'-60' Sections with 2%-5% K-spar		Pyrite as fracture fillings & disseminations. Disseminated hematite. A few drusy qtz-carb veins.	2						
80-90	99	" "		" "	1						
90-100	99	Same intrusive as above but with abundant sericite. Qtz occurs as alteration envelopes around fractures & in matrix. Plag partly saussuritized. Locally chloritic.		Pyrite, traces Cpy, dissem. hematite. A few qtz-carb veins & chlorite-lined fractures.	3						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mt.**Sheet No. **2**Hole No. **DDH 74-5**Project No. **23**N.T.S. **93 E/14W**Core Size: **BQ**

Lat.

Elev.

Dip

Collared

Logged by: **G. Belik**

Dep.

Depth

Bearing

Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
100-107	99	" "			3						
107-110	97	Dark grey, fine-grained diorite/ qtz diorite. Alteration: 1) Biotite alteration 2) Later qtz-Se alteration		Pyrite as fracture fillings & dis- seminations. Disseminated mag/ hem. A few qtz-carb veins & chlo- rite-lined fractures with sulphide.	2						
110-125	90	" "		" " A few hemitite veins.	3						
1215-132	99	Green, chloritic, medium-grained qtz diorite with minor secondary biotite. Plag weakly saussuritized. Qtz-Se alteration not evident.		Py, chlorite-lined fractures, disseminated hematite.	>1						
132-140	99	Same intrusive as above but pale green due to qtz-Se alteration. Plag saussuritized. Locally chloritic.		Py, trace Cpy. Disseminations of bright orange hematite.	2						
140-150		142'-143' " As 107'-121.5'. Contact 45°/core. 145'-146' chloritic.		" "	>3						
150-161	99	Green, medium-grained, qtz diorite. Mafics chloritized. Plag partly saussuritized. Sections with weak qtz-Se alteration. Some secondary K-spar.		Pyrite as fracture fillings & disseminations. Minor Cpy. Disseminated mag/hem.	3						
161-170	98	As 132'-150'		Py, minor Cpy, disseminated hematite. A few carb-zeolite veins.	>3						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mt.**  
 Project No. **23** N.T.S. **93 E/W**

Sheet No. **3** Hole No. **DDH 74-5**

Core Size: **BQ**

Lat. \_\_\_\_\_ Elev. \_\_\_\_\_ Dip \_\_\_\_\_ Collared \_\_\_\_\_

Logged by: **G. Belik**

Dep. \_\_\_\_\_ Depth \_\_\_\_\_ Bearing \_\_\_\_\_ Completed \_\_\_\_\_

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
170-180	98	" "		Sections with dustings of bright orange hematite.	3	██████████					
180-187	97	" "		" "	3	██████████					
187-190	95	Same intrusive as above but spotted with patches of hydrothermal chlorite & sericite.		Pyrite, minor Cpy & moly. Carbonate veining.	> 3	██████████					
190-198	97	Grey-green, fine-grained diorite. Alteration: 1) Early alteration of mafics to chlorite. 2) Later qtz-Se alteration.		Shattered with intense stockwork of hairline fractures mineralized with Py & Moly. Dissem. of Py, Cpy & Moly. Dolomitic veins & pods with Cpy & Py. Sections gouge & bx.	6	██████████					Est. 0.3 MoS <sub>2</sub> 0.2 Cu
198-202	95	Soft, sheared diorite/qtz diorite with a soft sericitic matrix. Gypsum in matrix and as vein fillings. Direction of shear 45°/core.		Pyrite as patches, disseminations & vein & fracture fillings. Black powdered sulphide present on slip surfaces.	5	██████████					
202-204	99	Undeformed, strongly sericitic qtz diorite.		Patches & disseminations of Py. Stockwork of gypsum veins.	8	██████████					
204-210	96	Green, saussuritized qtz diorite. 30%-40% of core sheared 45°/core (brittle shear yielding gouge). Patches of chlorite.		Py & minor Cpy as fract filling & dissem. 10%-25% dissem hem. Stockwork of thin gypsum & gypsum-carb vein (approx. 4/ft).	< 3	██████████					
210-220	97	" " 10% of core sheared.		" " Minor Moly.	3	██████████					

NORANDA EXPLORATION CO. LTD.

Property Smoke Mt.

Sheet No. 4 Hole No. DDH 74-5

Project No. 23 N.T.S. 93 E/W

Core Size: BQ

Lat. \_\_\_\_\_ Elev. \_\_\_\_\_ Dip \_\_\_\_\_

Collared

Logged by: G. Belik

Dep. \_\_\_\_\_ Depth \_\_\_\_\_ Bearing \_\_\_\_\_

Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
220-228	94	Locally sericitic. 60% sheared 226'-227' - silicified		" "	<3						
228-230	99	Pale grey to pale green sericitic intrusive, crackled but without intense shearing. Locally chloritic.		Patches, diss. , & fracture fillings of Py. Stockwork of gyp. & gyp.-carb veins (> 8/ft). Diss. of unidentified blk, metallic mineral.	5						
230-240	99	" "		" "	10						
240-250	99	" "		Increased gypsum content.	9						
250-260	99	Past 256' green hue due to sausuritization (less Se).		" "	9						
260-270	99	" "		Local dustings of orange hematite.	10						
270-280	100	Locally sheared 45°/core.		" "	7						
280-290	100	Decrease in alteration & gypsum content.		" "	8						



NORANDA EXPLORATION CO. LTD.

Property **Smoke Mt.**  
 Project No. **23** N.T.S. **93 E/W**

Sheet No. **5** Hole No. **DDH 74-5**

Core Size: **BQ**

Lat.

Elev.

Dip

Collared

Logged by: **G. Belik**

Dep.

Depth

Bearing

Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
290-300	99	" "		" "	6						
300-306	99	Light green, sericitized intrusive. Sections saussuritized. 304'-305' sheared 45°/core.		Pyrite Stockwork of gypsum & gypsum-carb veins (5/ft).	7						
306-320	100	Medium-grained, qtz diorite. Mafics chloritized. Plag saussuritized. Secondary biotite locally evident.		Py as patches, dissem, & fracture fillings. Gypsum & gypsum-carb veining (> 3/ft). Disseminated hematite.	7						
END OF HOLE ----- CASING PULLED											
<i>G. Belik</i>											



NORANDA EXPLORATION CO. LTD.

Property **Smoke Mt.**

Sheet No. **1** Hole No. **DDH 74-6**

Project No. **23** N.T.S. **93 E/1W**

Core Size: **BQ**

Lat. **105+57 N**

Elev. **4435**

Dip **-45°**

Collared **20/8/74**

Logged by: **G. Belik**

Dep. **115+07 E**

Depth **250'**

Bearing **90°**

Completed **21/8/74**

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-17	0	Overburden									
17-20	96	Grey, fine-grained to porphyritic diorite/qtz diorite. Mafics sericitized, Plag saursuritized. Fractures with bleached sericitic envelopes.		Pyrite as fracture fillings & disseminations. Abundant fine, disseminated magnetite.	2						
20-30	90	Green, medium-grained qtz diorite. Early chl with overprint of 1%-10% secondary bio. Locally ser. Sections with K-spar. 25'-27' - strongly sheared & chloritized.		Pyrite, minor Cpy. Disseminated mag/hem.	3						
30-40	97	" " 38'-39' Strongly sericitic. 39'-40' Gouge		" " Trace Moly.	3						< 0.05% Cu
40-51	95	" " Increase in biotite & K-spar content.		" "	1						
51-59	97	Dark grey, fine-grained, porphyritic diorite/qtz diorite. Alteration: 1) Biotite 2) Sericite (later than Bi)		Pyrite as fracture fillings & disseminations. Abundant fine, disseminated magnetite.	3						
59-71	99	Medium grained qtz diorite with 25% secondary bio > 2%-10% secondary K-spar. Plag saus. Locally a later sericitization evident.		Pyrite, minor Cpy. Disseminated mag/hem.	1						
71-80	98	Same intrusive as above but with pervasive qtz-Se alteration (qtz restricted to thin envelopes around fractures). Locally chl.		" " Minor Moly.	2						

NORANDA EXPLORATION CO. LTD.

Property Smoke Mt.

Sheet No. 2 Hole No. DDH 74-6

Project No. 23 N.T.S. 93 E/W

Core Size: BQ

Lat:

Elev.

Dip

Collared

Logged by: G. Belik

Dep.

Depth

Bearing

Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
80-95	95	Qtz diorite/granodiorite alteration: 1) Early Bi-Se alteration. 2) Later Se-Cl alteration.		Pyrite, minor Cpy. Disseminated mag/hem. A few hematite veins. Hydrothermal chlorite.	2						
95-104	98	Same intrusive as above lithology with a pervasive Qtz-Se alteration. Plag partly saussuritized.		Pyrite, traces of Cpy & Moly. Dustings of orange hematite. Chlorite-lined fractures.	2						
104-110	99	Medium grained Qtz diorite/G.D. Mafics chl. Secondary Bi adjacent to a few fractures. Some fractures with Se envelopes (later than Bi).		Pyrite, minor Cpy. Disseminated hem/mag. A few hem-mag veins. Hydrothermal epidote.	<2						
110-120	99	" "		" "	2						
120-130	99	" "		" "	2						
130-140	99	" "		" "	1						
140-150	100	Minor biotite.		" "	1						
150-160	100	" "		" "	<2						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mt.**

Sheet No. **3** Hole No. **DDH 74-6**

Project No. **23** N.T.S. **93 E/1W**

Core Size: **BQ**

Lat.	Elev.	Dip	Collared	Logged by: <b>G. Belik</b>
Dep.	Depth	Bearing	Completed	ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
160-170	99	" "		Minor Moly. A few K-spar veins.	>1						0.05 Cu 0.02 MoS <sub>2</sub>
170-180	100	" "		" "	1						
180-189	99	Sections with good secondary Bi. Increase in Se towards bottom of section.		" "	2						
189-200	98	Same as above lithology but a pale buff color due to pervasive Qtz-Se alteration. Qtz occurs as alteration envelopes around fractures (5/ft). Se within Qtz envelopes is hydrothermal. Se within matrix occurs as an alteration product.		Pyrite as fracture fillings & disseminations. Minor Cpy & Moly. Gypsum & Gypsum-carb veins (3/ft).	>2						
200-210	100	" "		" "	>2						
210-219	100	" "		A few mag-hem veins.	2						
219-230	100	Less intense alteration. Disseminations of chlorite.		Pyrite, traces Cpy. Hem-mag, gypsum & gypsum-carb veins.	>3						



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Property Smoke Mt.

Sheet No. 1 Hole No. DDH 74-7

Project No. 23 N.T.S. 93 E/14W

Core Size: BQ

Lat. 91+39 N

Elev. 4460'

Dip 45°

Collared 23/8/74

Logged by: G. Belik

Dep. 116+38 E

Depth 198'

Bearing 360°

Completed 26/8/74

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
0-47	0	Overburden									
47-50	70	Dark brown to grey, dense, biotite hornfels. Locally displays a spotted texture. 48'-49' Gouge		Fyrite as fracture fillings & disseminations. Biotite common along fractures. Local shearing 45°/core. Slip surface with chlorite & talc.	1						
50-60	90	" "		Carbonate in veins & tension gashes.	1						
60-70	96	" " Some fractures with "bleached", sericite-chlorite envelopes.		" "	> 1						
70-80	85	" "		Core broken with many fracture surfaces.	1.5						
80-90	97	" " A more uniform dark grey.		Thin, hem-py, mag fractures	2						
90-100	98	" "		Traces Cpy.	1.5						
100-102	70	" "		" "	2						

NORANDA EXPLORATION CO. LTD.

Property **Smoke Mt.**  
 Project No. **23** N.T.S. **93 E/14W**

Sheet No. **2** Hole No. **DDH 74-7**

Core Size: **BQ**

Logged by: **G. Belik**

Lat.	Elev.	Dip	Collared
Dep.	Depth	Bearing	Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
102-110	85	Uniform, grey-green, fine-grained, biotite hornfels. Fractures with sericite-chlorite envelopes. Sections with gouge.		Core broken with many fracture surfaces. Pyrite as fracture fillings & diss. Thin, hem-py-mag veins. Slip surfaces with chl.	3						
110-120	85	" "		" "	2						
120-130	85	" " Locally sheared (45°/core).		" "	> 3						
130-140	50	" " <del>135-138</del> No core-fault assumed.		" " Disseminated mag, traces Cpy.	4						
140-150	90	Dark grey to green, dense to fine-grained hornfels. A few fractures with "bleached", sericite-chlorite envelopes.		Pyrite, traces Cpy, abundant fine, diss. mag. Thin mag & mag-py veins. Core broken with many fracture surfaces. Numerous slip surfaces w. chl. A few carb veins.	3						
150-160	75	" "		" "	1						
160-170	80	" "		" "	> 1						
170-180	80	" " 172.5-177 Strongly sheared (45°/core) with numerous gash veins.		" "	2						



NORANDA EXPLORATION CO. LTD.

Property **Smoke Mt.**

Sheet No. **3**

Hole No. **DDH 74-7**

Project No. **23**

N.T.S. **93 E/14W**

Core Size: **BQ**

Lat.

Elev.

Dip

Collared

Logged by: **G. Belik**

Dep.

Depth

Bearing

Completed

ASSAYS

Footage	Rec'y	Rock Type/Alteration	Graphic Log	Mineralization/Structure	% Sulfides	Sample No.	Lt.				
180-190	70	" "		" "	2						
190-198	25	193-198 No core - fault assumed		" "	<1						
END OF HOLE ----- CASING PULLED											
<i>G. Belik</i>											



NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT: Smoke Mtn.

TYPE OF REPORT: Diamond Drilling

(a) Employees: G. Belik, J. Fraser, G. Holland, R. Holland, D. Kroeger

Number of days: 111

Dates worked: Between July 19 and August 26/74

(b) Average cost per day \$ 32.41

Total cost \$32.41 X 111

\$3,597.51

(c) Cost of food & accomodation

\$ 617.40

(d) Cost of transportation

i. During work period

type: truck

cost:

ii. To and from Claims from  
within B.C.

cost:

445.09

445.09

(e) Cost of aircraft

i. Fixed wing:

ii. Helicopter:

8,456.78

8,456.78

(f) Cost of instruments

i. Rental:

ii. Supplies

(g) Cost of geochem analysis  
(details attached ):

(h) Cost of report preparation:

150.00

(i) Other: H. Allen Diamond Drilling 24,146.80  
Fuel Oil, Naptha etc. 159.10  
Lumber & Hardware 190.28  
Core Boxes 267.12  
Radio Communication 12.95

24,776.25

TOTAL

38,043.03

Between: Noranda Explorations Co. Ltd.,  
1050 Davie Street,  
Vancouver 5, B.C.

(Hereinafter referred to as the  
"COMPANY" of the First Part.)

And: H. Allen Diamond Drilling Ltd.,  
Box 1397,  
Merritt, B.C.

(Hereinafter referred to as the  
"CONTRACTOR" of the Second Part.)

A. THE CONTRACTOR COVENANTS AND AGREES:

1. That all holes shall be drilled with BQ wireline equipment providing a core approximately 1 7/16" in diameter.
2. That the Contractor shall use his best endeavour to complete all holes according to the wishes of the Company, but should rock conditions prevent successful completion of the hole, the Contractor is not obliged to complete the same, but shall be paid for such incomplete holes at contract rates for the completed footage.
3. Contractor will supply water at his expense up to a distance of 2000 ft. or a vertical lift of 200 ft. Supplying water beyond these limits to be re-negotiated.

B. THE COMPANY COVENANTS AND AGREES:

1. That payment for the herein described work shall be \$10.00 per foot for core drilling and \$12.00 per foot for drilling overburden.
2. The Contractor will at his expense deliver the drilling equipment, and men to the take off point.
3. From the take off point and until the drill is set up the Contractor may charge wages for the crew to the Company at union rates plus 15%.
4. When moving the equipment from one location to another the Contractor will charge union rates plus 15%.
5. Should the drill crew become stranded or unable to work due to the shortage of helicopter transportation the Contractor may charge 8 hours per day/man standby time for the crew. The intension of this clause is to protect the Contractor against lost time resulting from weather conditions not permitting the operation of aircraft when such aircraft is required for moves or regular supply flights.
6. The Contractor will pay his crew standby time should there be a delay due to mechanical breakdown on the drill equipment. During such breakdowns there will be no charge to the Company for the standby time.

H. ALLEN DIAMOND DRILLING LTD.

TELEPHONE 378-4494

P.O. BOX 1397  
MERRITT, B.C.

-- 2 --

Contract - Smithers Area continued:

7. Upon completion of the work the Contractor will send in his trucks to pick up the equipment at his expense.
8. The Company will supply a camp and board for the drill crew at no cost to the Contractor.
9. Cost of air transportation charged to the Company.
10. Cementing drill holes will be charged to the Company at cost plus 10%. Cost of labour being union rates. Cost of equipment rental during cementing \$20.00 per day.
11. Casing which is non-recoverable will be charged to the Company.

IN WITNESS WHEREOF these presents have been executed by the parties hereto, this 23 day of May, A.D. 1974.

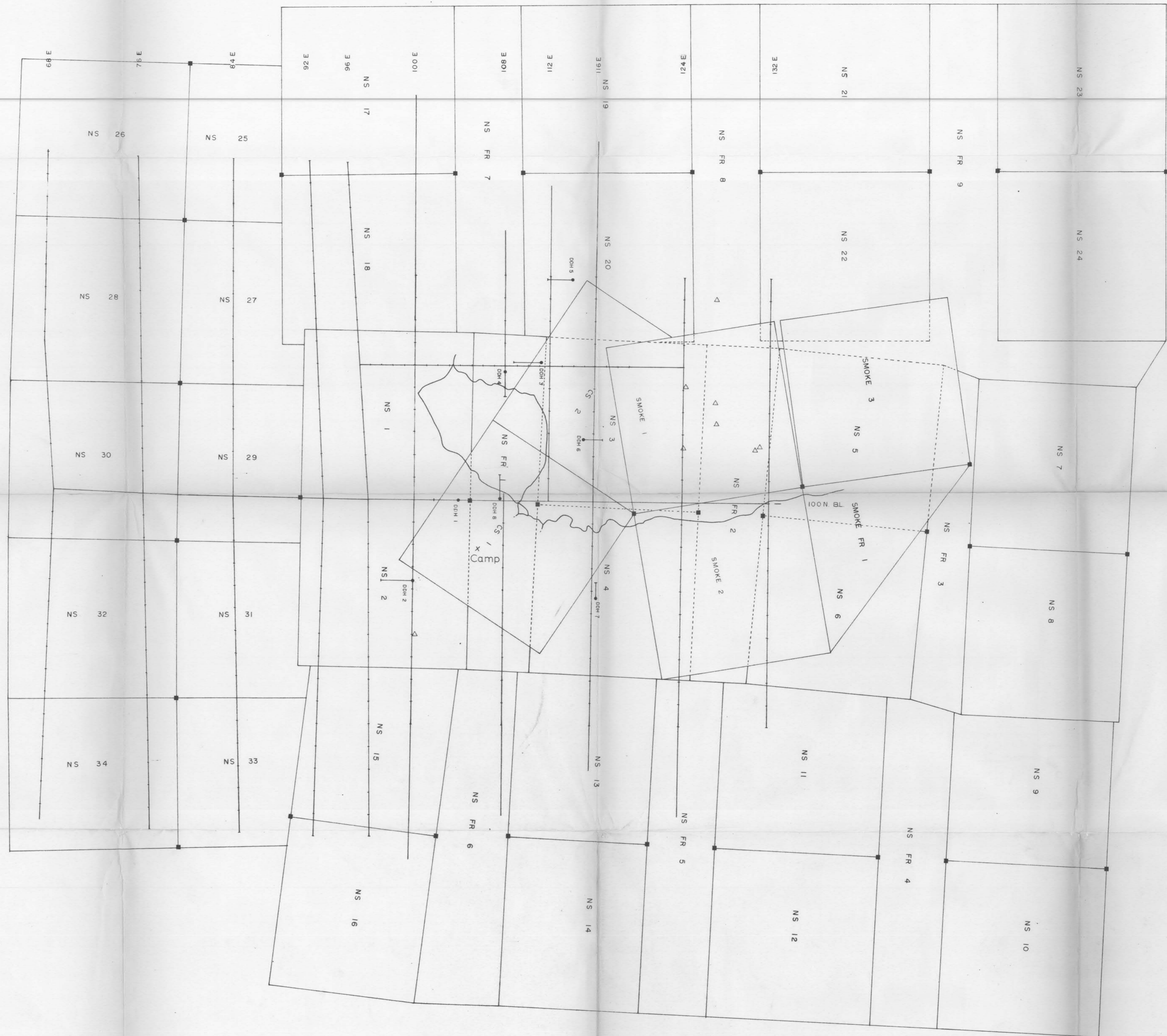
NORANDA EXPLORATIONS CO. LTD.

H. C. Samson

H. ALLEN DIAMOND DRILLING LTD.

Herb Allen





- Drill Hole
- Claim Post
- △ Test Pit

5139  
M2

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5139 MAP #2

To Accompany Diamond Drill Report By G. Belik

REVISED	SMOKE MTN.	
	Claim Map	
PROJ. No. 1023	SURVEY BY: G. Belik	DATE: 16/7/74
N.T.S. 93E/14W	DRAWN BY: L. Bradish	SCALE: 1:400'
DWG. No.	<b>NORANDA EXPLORATION</b>	
	OFFICE: SMITHERS	