

MAP NO. ASSESSMENT REPORT X
PROSPECTUS
CONFIDENTIAL X
OPEN FILE

I.S.N. 134632
DOCUMENT NO.: 091708
MINING DISTRICT: WATSON LAKE
TYPE OF WORK: DRILL LOGS

95 D 12

REPORT FILED UNDER: Noranda Exploration Co. Ltd.

DATE PERFORMED: May 6 - June 4, 1977

DATE FILED: November 7, 1977

LOCATION: LAT.: 60°31'N

AREA: *Quartz Lake* South Nahanni

LONG.: 127°56'W

VALUE \$:

CLAIM NAME & NO.: SOUTH NAHANNI 22 57563
SOUTH NAHANNI 34 60056

WORK DONE BY: B. Fairbank

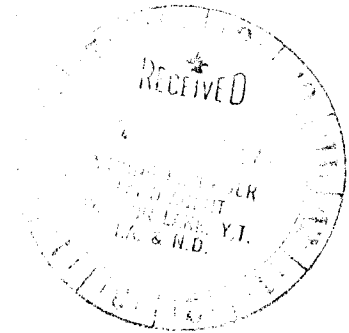
WORK DONE FOR: Noranda Exploration Company Limited

DATE TO GOOD STANDING | REMARKS: #3 MACMILLAN

091708

ASSESSMENT REPORT ON
DIAMOND DRILLING ON THE
SOUTH NAHANNI 22 AND SOUTH NAHANNI 34
MINERAL CLAIMS
(QUARTZ LAKE PROPERTY)

95D/12
60°31'N 127°56'W



NORANDA EXPLORATION COMPANY, LIMITED
(NO PERSONAL LIABILITY)

B. Fairbank

May 6 - June 4, 1977

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ASSESSMENT REPORT on
DIAMOND DRILLING on the
SOUTH NAHANNI 22 and SOUTH NAHANNI 34
MINERAL CLAIMS
(QUARTZ LAKE PROPERTY)

09 17 08

INTRODUCTION

The claims referred to in this report are registered in the name of Liard River Mining Company Limited and are under option to Noranda Exploration Company, Limited (No Personal Liability). Diamond drilling was done on the following two claims:

<u>CLAIM NAME</u>	<u>GRANT NUMBER</u>
South Nahanni 22	57563
South Nahanni 34	60056

The South Nahanni 22 and South Nahanni 34 claims are part of the South Nahanni, Dorothy, M. QTZ, Strat, W.H.1.3 Fr. and Pic 1 - 3 Fr. claim block known as the McMillan Option or Quartz Lake Property. The property is located approximately 45 miles NE of Watson Lake and immediately south and west of Quartz Lake. Access is by helicopter or fixed wing from Watson Lake. Elevations range from 3000 - 5500 feet a.s.l.

A diamond drill program was initiated May 6, 1977 to investigate gravity anomalies obtained in earlier surveys. A total of 870 feet was drilled in 2 vertical holes. Core size was BQ. Costs were high partly due to remote location, poor drilling conditions, breakdowns in equipment and extremely poor weather conditions. The program was terminated on June 4 due to excessive costs.

Core is stored in rocks located at approximately 32N, 04E on the South Nahanni 5 mineral claim.

DRILL LOGS

The following drill logs summarize the results of the program. Check samples were assayed of selected pyritic sections.

Submitted by



B. Fairbank
Geologist

October 19, 1977



South Nahanni, Dorothy,
M, QTZ, Strat etc Group

LOCATION MAP
 South Nahanni, Dorothy,
 M, QTZ, Strat etc Group
 (Quartz Lake Property)

9SD/12 1" = 4 mi.
 FIG. 1

Handwritten signature

NORANDA EXPLORATION COMPANY, LIMITED

Collared May 13/77	Completed May 23/77	Core Size BQ	Property McMillan Option	Project No 912	NTS No. 95D/12
FIELD COORDINATES			SURVEYED COORDINATES		
Lat. 40+00N	Elev. 3400'	Dip -90°	Lat.	Elev.	Dip
Dep. 35+20E	Depth 672'	Bearing	Dep.	Depth	Bearing
					Sheet 1 of 4
					Hole No. 121

Footage	Rec'y	Graphic Log	Description	% Sulp.	Est. Grade	Sample No.	Lt.				
0-100			Overburden								
100-110	90%		100 - light to medium grey, massive, fine grained granular Limestone, locally partly silicified. Minor banded light grey quartzite (104.5 - 108)								
110-120	95%		Short pieces of fragmented green argillite occur at 101, 105, 109 - 109.6, 113 are possibly at faults								
120-130	55%		120 - Grey massive Quartzite and grey and greenish Argillite 126 core angle = 45°								
130-140	25%		128 - 131 slightly limey light grey banded Quartzite 131 - 140 as above core recovery very poor, core fragmented								
140-150	95%		140 - As above (120): Quartzite and Argillite core extremely fragmented with gouge section								
150-160	90%		152 core angle = 70 - 80°								
160-170	80%										
170-180	50%		170 - 182 gougey - fault zone								
180-190	75%										
190-200	65%		194 - Medium grey argillite with occasional phyllitic partings. Gougey broken core								
200-210	70%		203 - core angle = 80° (variable) 203, 215 small scale faulting								
210-220	75%		216 - light green and light grey Argillite with sections of light green mylonized Quartzite (217, 219)								
220-230	95%		and minor grey banded Quartzite								

B. Fairbank

NORANDA EXPLORATION COMPANY, LIMITED

Collared	Completed	Core Size	Property	McMillan Option	Project No	912	NTS No.	
FIELD COORDINATES			SURVEYED COORDINATES			Sheet 2 of 4		
Lat.	40+00N	Elev.	Dip	-90°	Lat.	Elev.	Dip	
Dep.	35+20E	Depth	Bearing		Dep.	Depth	Bearing	
							Hole No.	121

Footage	Rec'y	Graphic Log	Description	% Sulp.	Est. Grade	Sample No.	Lt.				
30-240	85%		as above								
40-250	75%		240 - grey to dark grey argillite interbedded with subordinate pale green argillite and minor grey <u>quartzite</u>								
50-260	50%		- extremely fragmented core, 249-257 mud & chips 257-261 chips								
60-270	90%		267 mainly grey to pale-green quartzite - fragmented core 263 core angle approx. 50°								
70-280	85%										
80-290	95%		285 grey <u>quartzite</u> and grey <u>argillite</u> chips								
90-300	80%		299 grey <u>argillite</u> , minor pale green <u>argillite</u>								
00-310	85%		306 limestone and limestone breccia: dark grey near top								
10-320	95%		of section grading through light grey to silicified cream coloured limestone near bottom of section								
20-330	85%		320 pale green <u>argillite</u>								
30-340	90%		333 core angle (colour banding) = 50°								
40-350	70%		340-355 fragmented sections								
50-360	75%		355 pale green and medium grey <u>argillite</u> interbanded								
60-370	95%		362 core angle (banding) = uniform 55°								
70-380											

B. Fairbank

DATE May 16/77

LOGGED BY B. Fairbank

NORANDA EXPLORATION COMPANY, LIMITED

Collared		Completed		Core Size BQ		Property McMillan Option			Project No 912		NTS No. 95D/12			
FIELD COORDINATES						SURVEYED COORDINATES						Sheet 3 of 4		
Lat. 40+00N		Elev.		Dip -90		Lat.		Elev.		Dip		Hole No. 121		
Dep. 35+20E		Depth		Bearing		Dep.		Depth		Bearing				
Footage	Rec'y	Graphic Log	Description				% Sulp.	Est. Grade	Sample No.	Lt.	%Pb	%Zn	⁰³ / _T Ag	⁰³ / _T Au
80-390	99%		as above - width of colour bands variable (0.1-18m)											
90-400	100%		- small scale faulting (0.25 in displacement, 0.25 in spacing)											
00-410	97%		↓											
10-420	95%		412 mainly pale green grey argillite, minor grey argillite layers - fragmented core - soft sheared sections											
20-430	95%		↓ - 426 - trace pyrite											
30-440	80%		433 light green talcose <u>argillite</u> - soft sheared sections trace pyrite											
40-450	95%		440-443 weak pink colouration 445 sheared graphitic rock with quartzite fragments											
50-460	97%		↓ ("Black Thrust") - trace pyrite throughout											
60-470	97%		↓											
70-480	100%		474 dark green slightly altered <u>diabase</u> sill - massive											
80-490	97%		↓ - post argillite, post shear (?)											
90-500			492 sheared graphitic rock with <u>quartzite</u> fragments pyrite throughout up to 25% massive pyrite blebs elongated parallel to foliation and quartzite fragment orientations						P5801 (492-497)	5'	<0.04	0.02	0.08	<0.001
00-510			↓											
0-520			501.5 dark green <u>Diabase</u> sill (relative fresh)						P5803 (511.5- 517.5)	5'	<0.04	0.02	0.06	<0.001
0-530			511.5 Diabase in distinct amydules of green and white zeolite cont'd											

NORANDA EXPLORATION COMPANY, LIMITED

Coiled		Completed		Core Size		Property			Project No		NTS No.			
FIELD COORDINATES						SURVEYED COORDINATES						Sheet 4 of 4		
Lat.		Elev.		Dip		Lat.		Elev.		Dip		Hole No.		
Dep.		Depth		Bearing		Dep.		Depth		Bearing		121		
Footage	Rec'y	Graphic Log	Description				% Sulp.	Est. Grade	Sample No.	Lt.	%Pb	%Zn	03/t Ag	03/t
520-530			sheared graphitic rock with quartzite fragments. Minor short quartzite sections pyrite				10%							
530-540	97%		as above sheared graphitic rock with ragged quartzite fragments elongated parallel to foliation in the graphitic ground mass. Pyrite seams parallel and soils _{sub} parallel to foliation.				15%		P5805 535-540	5'	<0.04	0.02	0.06	<0.0
540-550	97%		546 - 562 includes quartzite breccia -core angle (foliation) = 70°-90°				10%							
550-560	97%		-pyrite up to 40% over 1-2 in section				7%							
560-570	97%		512.5 black argillite with short sections of brecciated quartzite (574-575) and sheared graphitic quartzite (580-581.6)				10%							
570-580	97%		587 sheared graphitic rock with quartzite wedges and fragments elongated parallel to foliation. Includes				5%							
580-590	97%		minor short sections of graphitic argillite and quartzite (shattered)				10%		P5807 595-600	5'	<0.04	0.02	0.04	<0.0
590-600	97%		(598-599, 603-604). Gougey sections common fine grained granular pyrite in seams parallel to foliation				15%		P5809 605-610	5'	<0.04	0.02	0.04	<0.0
600-610	97%		and in cross cutting silerite (?) veinlets				10%		P5811 615-620	5'	<0.04	0.02	0.04	<0.0
610-620	97%						10%							
620-630	95%						7%							
630-640	100%		632-640 mainly quartzite (brecciated) pyrite disseminated and on fractures				5%							
640-650	95%		648.5 - 650 mainly dirty quartzite				5%		P5813 655-660	5'	<0.04	0.02	0.06	<0.0
650-660	97%						10%		P5815 655-670	5'	<0.04	0.02	0.04	<0.0
660-670	97%													
670-672			672 End Of Hole											

DATE _____

LOGGED BY _____

B. Fairbank *B. Fairbank*

NORANDA EXPLORATION COMPANY, LIMITED

Collared	May 27/77	Completed	June 1/77	Core Size	BQ	Property	McMillan Option	Project No	912	NTS No.	95D/12	
FIELD COORDINATES						SURVEYED COORDINATES					Sheet 1 of 1	
Lat.	20+25N	Elev.	3600'	Dip	-90°	Lat.		Elev.		Dip		
Dep.	32+00E	Depth	195'	Bearing	-	Dep.		Depth		Bearing		
											Hole No.	122

Footage	Rec'y	Graphic Log	Description	% Sulp.	Est. Grade	Sample No.	Lt.				
0- 110			Overburden								
110-120	65°		Purple Argillite with subordinate (10%), thin (2-3mm) emerald green sericitic bands. Some green bands have								
120-130	70°		light purple envelopes - elsewhere colour banding is light purple/medium purple. Slippage evident (slickensides,								
130-140	80°		granulation) along some green horizons).								
140-150	55°		core angles 125° = 0-15° 140 = 15°								
150-160	80°		qtz. veining 144 - 0.5" qtz. vein contains purple arg. frags.								
160-170	70°		154 = 30° 161 = 5°								
170-180	65°		174 2 in. green section with abrupt core angle change to 60° (bounded both sides by core angle's approx. 20°								
180-190	35°		171 = 30° 181.5-2in. vein								
190-198	80°		195 - 198 no core								
			190 = 15° 195 = 20°								
			192 - small scale faults infilled with qtz. stringers								
			198 End of Hole								

NOTE:
Drilling extremely difficult and slow due to core angle to bedding and granulation of friable green layers. Hole cemented at 182 - abandoned at 195

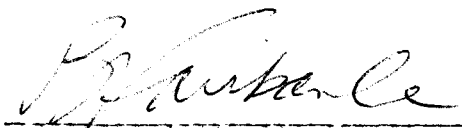
B. Fairbank

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Brian D. Fairbank of the city of Burnaby, Province of British Columbia, do certify that:

1. I have been an employee of Noranda Exploration Company, Limited since, May 1973.
2. I have held the position of geologist for Noranda Exploration Company, Limited since May 1973.
3. I am a graduate of the University of British Columbia with a Bachelor of Applied Science Degree in Geology.
4. I am a member of the Canadian Institute of Mining and Metallurgy.
5. I am an associate member of the Geological Association of Canada.



B. Fairbank
Geologist
Noranda Exploration Company, Limited
(No Personal Liability)

STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT: Quartz Lake

TYPE OF REPORT: Diamond Drilling

(a) Employees:

Number of days: 163

Dates worked: Between Apr. 11 and June 7, 1977

(b) Average cost per day \$ 50.02

Total cost \$50.02 X 163 \$ 8,153.26

(c) Cost of food & accomodation

\$ 4,141.49

(d) Cost of transportation

i. During work period

type: truck and ground

cost: 1,804.73

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

cost: 1,804.73

(e) Cost of aircraft

i. Fixed wing: 4,779.90

ii. Helicopter: 8,780.00 13,559.90

(f) Cost of instruments

i. Rental:

ii. Supplies

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

(h) Cost of report preparation: 181.79

(i) Other: Camp & food supplies 555.13
Expitor C. Sande 500.00
H. Allen Diamond Drilling 24,910.69
Miscellaneous 104.26

Supervision: R.C. Heim PhD, P.Eng.
& G.E. Dirom P. Eng. 744.00 26,814.08

TOTAL

54,655.25



TO ACCOMPANY DIAMOND DRILLING ASSESSMENT REPORT ON
 SOUTH NAHANNI 22 & SOUTH NAHANNI 34 MINERAL CLAIMS
 (QUARTZ LAKE PROPERTY) BY S. FAIRBANK

DATED: OCT 19, 1977
B. Fairbank

REVISED NOV., 1975	QUARTZ LAKE PROJECT
	LOCATION MAP
	CLAIMS, DRILL SITES, CORE STORAGE
PROJ. No. 912	SURVEY BY: BRIAN FAIRBANK DATE: OCT 19, 1977
N.T.S. 95 D/12	DRAWN BY: JAN VAN VOORST SCALE: 1" = 1000'
DWG. No.	NORANDA EXPLORATION
	OFFICE: VANCOUVER