GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

MAR-1, MAR-2, MAR-3, and MAR-4

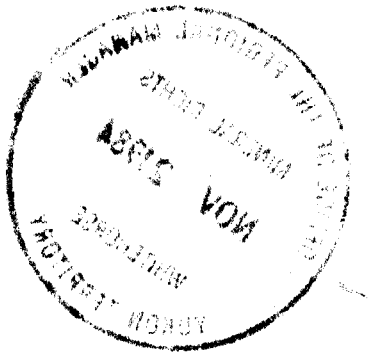
MINERAL CLAIMS

Whitehorse Mining District

N.T.S. 115 G/5
Lat. 61°25' N
Long. 139°54' W

M. Savell

October 1984.



This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 3,373.97 .

D Q Emond

for Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

091578

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
YUKON QUARTZ MINING ACT
FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

RECEIVED 1 AUG 1984 MINING RECORDERS OFFICE WHITEHORSE, Y.T.

OFFICE DATE STAMP

(This form required in duplicate with sketch showing location of work.)

I (Name) MICHAEL SAVELL Occupation GEOLOGIST

(Postal Address) #203-107 Main St. Whitehorse, Yukon

MAKE OATH AND SAY, THAT:

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.
2. I have done, or caused to be done, work on the following mineral claim(s):

(Here list claims on which work was actually done by number and name)

MAR-1	YA 78101
MAR-2	YA 78102
MAR-3	YA 78103
MAR-4	YA 78104

situated at Cement Creek Claim Sheet No. 115 G/5

in the Whitehorse Mining District, to the value of at least 800.00

dollars, since the 1 day of July 19 84,

to represent the following mineral claims under the authority of Grouping Certificate No. ———

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

MAR-1	YA 78101	2 yrs
MAR-2	YA 78102	"
MAR-3	YA 78103	"
MAR-4	YA 78104	"

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

July 1 – 8, 1984. – 30 mandays

Detailed prospecting, geological mapping (1:2500 scale), stream sediment, soil and rock sampling.

Sworn before me at Whitehorse

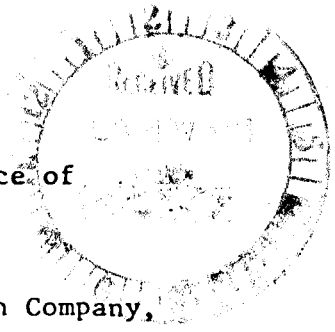
this 1 day of August 1984

Notary Public

Applicant

091578

STATEMENT OF QUALIFICATIONS



I, Michael Savell of the City of Vancouver, Province of British Columbia, do cerify that:

1. I have been an employee of Noranda Exploration Company, Limited since May 1980.
2. I am a graduate of Dalhousie University with a Bachelor of Science degree in geology.
3. I am a member of the Geological Association of Canada, the Canadian Institute of Mining and Metallurgy, the Prospctor's and Developers Association and the B.C.- Yukon Cahmaber of Mines.

Michael Savell

Project Geologist

Noranda Exploration Company, Limited
(No Personal Liability)

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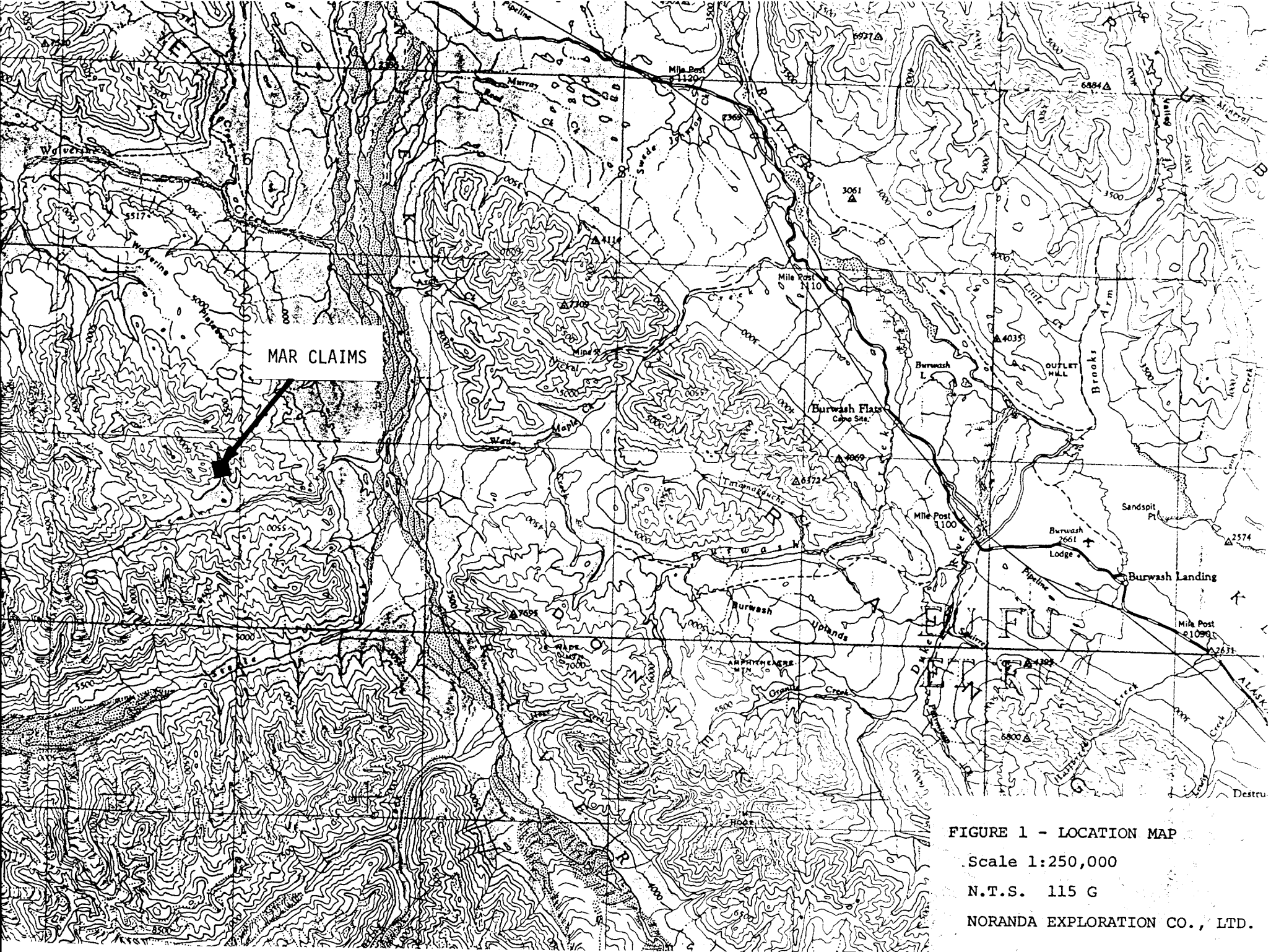

FIGURE 1 - LOCATION MAP

Scale 1:250,000

N.T.S. 115 G

NORANDA EXPLORATION CO., LTD.

INTRODUCTION

This report describes the results of a geological and geochemical survey carried out from July 2 to July 5, 1984 on the MAR 1-4 mineral claims (Cement Creek Property), Whitehorse Mining District, Yukon Territory.

The claims were staked by Mr. George Friebergs of 1401 Holly Street, Whitehorse, Y.T. in August 1983 to secure ground on which zones of silicification and argillic alteration were found. These rocks are commonly associated with certain types of Au deposits. The property was optioned to Noranda Exploration Company, Limited on May 1, 1984. The work described in this report was carried out by employees of Noranda.

LOCATION AND ACCESS

The claims are located within claim sheet number 115 G/5, approximately 30 miles west of Burwash Landing on the Alaska Highway.

Access to the property was made by helicopter. Gravel roads on Burwash and Quill Creeks come to within 12 miles of the area. A lake forming behind a large earth and rock slide, which occurred in the summer of 1984, may provide float plane access to Cement Creek in the future.

CLAIMS AND OWNERSHIP

The property consists of the following claims:

CLAIM	TAG#	RECORD DATE	OWNER
MAR 1	YA 78101	8 August 1983	Noranda Exploration Co., Ltd. (No Personal Liability)
MAR 2	YA 78102	8 August 1983	Noranda Exploration Co., Ltd. (No Personal Liability)
MAR 3	YA 78103	8 August 1983	Noranda Exploration Co., Ltd. (No Personal Liability)
MAR 4	YA 78104	8 August 1983	Noranda Exploration Co., Ltd. (No Personal Liability)

TOPOGRAPHY AND VEGETATION

The area lies within the Kluane Ranges of the St. Elias Mountains, between the Shakwak Valley and the Duke Depression. Elevation on the property range from about 4600 to 5700 feet. The claims are cut by a north-northwestly trending steep canyon which empties into Cement Creek to the south. Much of the eastern side of the canyon is made inaccessable by steep cliffs and pillars (hoodoos).

The relatively gentle and stable slopes on the property are covered by typical alpine shrubs, mosses, and grasses. Parts of the lower canyon are covered by dwarf birch and stunted black spruce.

PREVIOUS EXPLORATION

There is no public record of any systematic exploration having been done in the area of the claims. Placer claims are held on Cement Creek a few miles to the south. Prospecting in the area of the MAR claims by Mr. G. Friebergs in the summer of 1983 led to staking later that summer.

REGIONAL GEOLOGY

The area was worked during the 1970's by the G.S.C. under "Operation Saint Elias", and a compilation of that work is available as openfile map #829. Earlier work by J.E. Muller, 1967, was published as G.S.C. Memoir 340.

In general, the G.S.C. have divided the area into a number of distinct, possibly allochthonous geologic terranes, separated by major, northwesterly trending fault systems. The MAR claims occur within the "Wrangellia (W2) Terrane", which is bounded by the Denali Fault System to the north and the Duke River Fault to the south. In the vicinity of the MAR claims the prominent lithologies are massive volcanic greenstones of the Pennsylvanian to Permian Station Creek Formation, which are unconformably overlain by Tertiary nonmarine conglomerates, sandstones and coal of the Amphitheatre Formation which is separated by a minor unconformity from the basaltic andesite flows and pillow lavas, ash flows, basaltic flows, and volcanic

conglomerates of the Wrangell Lavas. These rocks are intruded by sub-volcanic domes, dykes, and sills of porphyritic rhyolite, dacite, and felsite (Wrangell Intrusions).

PROPERTY GEOLOGY

The property was mapped at a scale of 1:1250 and the results have been plotted on Figure 3. For control purposes, a hip-chain and compass controlled base line was run from the MAR 3 and 4 number 2 posts to the MAR 1 and 2 number 1 posts. The starting point was designated 100+00S, 100+00W and a line run at 150°. Stations were marked every 25 metres with fluorescent tape. The line was offset to 100+50W at 104+50S and to 101+50W at 106+75S (see Figure 3). Outcrop, sample, and claim post locations were tied into the line.

Mapping was concentrated on the exposures along the walls of the canyon which cuts through the claim group. Much of the exposure on the east half of the claims is inaccessable and would require technical climbing methods.

1. LITHOLOGIES

Unit #5 - This is a dark green, lamprophyric sill observed at only one location. It consists of medium grained pyroxene in a dark aphanitic groundmass. The sill is weakly chloritized and rusty weathered. It could be traced only for a few metres before being obscured by talus.

Unit #4 - This consists of a resistant, hard, orange-buff coloured aphanitic felsite, which occasionally shows fine phenocrysts of quartz and feldspar. In a few places lenticular, calcite-filled amygdules were observed. The felsite usually occurs as sills, from one to four metres thick, which are conformable to the host sediments. In a few places the felsite occurs as dykes which crosscut the sediments. At one location (sample #72019), the felsite was observed to be brecciated with a pyrite matrix.

Unit #3 - This is a grey, rhyolite or dacite porphyry observed at only one location. It occurs as a 15 metre thick sill which is conformable to the sediments. It closely resembles the dome like intrusions which occur immediately to the west of the MAR claims.

Unit #2 - This is a unit of the Amphitheatre formation observed near or at contacts with the sills of unit #4. It consists of a dark olive green grit or sandstone with a matrix of carbonaceous material. It is apparently a coaly bed of sediment that has been thermally metamorphosed by the felsite.

Unit #1 - This is undivided nonmarine sediments of the Amphitheatre Formation. On the property it consists of well bedded, poorly sorted, interfingering beds of light brown sandstone, grit, and pebble conglomerate. The conglomerate consists of well rounded pebbles of mainly quartz, argillite and mafic volcanics. The cement is a white, calcite, and clay mixture. In the vicinity of the property the Amphitheatre Formation is seen to grade from a green, very coarse cobble conglomerate at the base, to the pebble conglomerates, grits, and sandstones described above, to a sequence of interbedded pale brown sandstones and black, fossiliferous coaly shale seams in the order of ½ to 2 metres thick. Total thickness is estimated at about 350 metres. The formation was deposited in a system of braided and meandering streams in an environment very similar to the nearby Donjek River.

TABLE OF FORMATIONS

AGE	FORMATION	UNIT #	LITHOLOGY
Miocene	Wrangell Intrusions	5	Dk green, lamprophyric sill
		4	Orange-buff, aphanitic felsite sills, dykes
		3	Grey, rhyolite to dacite porphyritic sills
Oligocene	Amphitheatre Formation	2	Green, carbonaceous grit
		1	Pale brown conglomerate, sandstone

2. STRUCTURE

The rocks of the Amphitheatre Formation have been compressed into a series of northwesterly trending, gentle folds. On the MAR claims, an anticlinal axis was observed near the south end of the claims. Deformation of clasts in the conglomerate was not observed. North of the claims, where basement rocks are exposed, the folding becomes somewhat more intense and erratic.

A number of faults paralleling the main trend of the creek cutting the MAR claims were observed near the centre of the property. These were evidenced by linear, grey clayey gouge filled depressions in altered sediments. The amount of displacement was not determined, but it is believed to have been mainly vertical, probably from the doming effects of the intrusives to the west. The dykes and sills were not observed to be displaced by the faults. It is assumed that these faults or fault zone provided a less resistant zone into which the creek has cut. The faults are observed only where the resistant sills and dykes have rerouted the creek thus exposing the fault zone.

3. ALTERATION

Altered rocks of the Amphitheatre Formation were observed in and near the fault zone. Close to the fault zone, the sandstones and grits are bleached to a dull grey-white, and haloes of limonite had developed around irregular, hair-line fractures. Conglomerates are commonly much harder and moderately silicified, especially near the felsite sills. Within and close to the fault zone the sediments are pervasively altered to a soft, pale clayey rock that still retains the original texture, but is very soft and poorly consolidated. Matrix and clasts are equally altered. The sills and dykes cut through this zone unaltered.

It is thought that the fault zone resulting from the doming of the intrusive to the west provided the porous medium through which hydrothermal solutions emanating from the intrusive could circulate. The hydrothermal alteration was most intense within the fault zone. Later stage sills and dykes cut the zone and silicified sediments at the contacts.

4. MINERALIZATION

The only sulphide mineralization observed was pyrite in brecciated felsite, rare disseminated pyrite in silicified conglomerate, and a few small pyritic concretions in sandstone. Analyses for gold were negative. None of the 42 rocks analysed contain any appreciable gold or base metals.

GEOCHEMISTRY

In addition to the geological mapping, a geochemical survey was undertaken. A total of 42 rocks, 15 silts, 50 soils, 18 talus fines, and 2 panned concentrates were collected and analysed.

1. Stream Sediments, Soils, Talus Fines

Sampling Method - The standard method of collection for silts and soils was used. The talus fines were collected where fine detritus accumulates at the base of steep slopes or cliffs. The panned concentrates were heavy mineral concentrates panned from 9 litre samples of stream gravels. Sample sites were marked with fluorescent ribbon on which the sample number was marked. The locations have been plotted on Figure 3.

The samples were later analysed for Cu, Zn, Pb, Mo, As, Ag, and Au in the geochem lab of Noranda Exploration Company, Ltd. at 1050 Davie Street, Vancouver, B.C.

Analytical Method - The samples are first dried in a drying cabinet for a period of 24 to 48 hours. They are then screened and sifted to obtain a -80 mesh fraction.

To determine the amount of total extractable As, Ag, Cu, Zn, Pb, and Mo in each sample, the following procedure is employed:

A small amount of the -80 mesh material, 0.200 grams, is digested in 2 ml of $HClO_5$ and 0.5 ml HNO_3 for approximately four hours. Following digestion, each sample is diluted to 5 ml with demineralized H_2O. A Varian Techtron Model AA-5 atomic absorption spectrophotometer is used to ascertain the content, in parts per million, of each element.

To determine the amount of total extractable Au in each sample, the following procedure is employed:

Ten grams of the -80 mesh material (or less if 10 grams not available) is roasted at 580°C for 1.5 hours and then digested with aqua regia. Au is ascertained by diluting this solution to 200 ml with demineralized H_2O and extracting the Au with 10 ml of MIBK. An aliquot of this solution is then read on a Varian Techtron Model AA-5 atomic absorption spectrophotometer and a value in ppb is obtained. (Note that with the panned concentrates, the entire concentrate is digested.)

Results - These have been listed in appendices 3-(i), (ii), and (iii). In general, results were disappointing. Only two samples had values of interest, silt #71792 (300 ppb Au) and panned concentrate #71895 (4300 ppb Au). The source areas of these have already been prospected without success, thus are given a low priority.

2. Rocks

Sampling method - A total of 42 rock chip samples were collected and analysed, primarily as a check for precious metal values. They were samples of rocks thought most likely to be Au-bearing, and weighed between 1 and 4 kilograms. Locations were marked as with other samples and plotted on Figure 3. Sample descriptions are listed in Appendix 4.

Analytical Methods - The samples were shipped to the geochem labs of Rossbacher Laboratory Ltd., Burnaby, B.C. or Bondarr-Clegg, North Vancouver, B.C. Here they are crushed, pulverized, and analysed with the standard methods of the industry.

Results - Certificates of analysis are provided in Appendix 3(iv). As can be seen, results are disappointing, with all Au values being very near or below the detectable limits.

CONCLUSIONS AND RECOMMENDATIONS

Results of the present survey indicate that the potential for the hydrothermal system exposed on the MAR claims hosting Au mineralization is low. Any further work in the area should be restricted to detailed sampling in the watershed of the anomalous pan concentrate sample #71895.

APPENDIX I

PERSONNEL

PERSONNEL - MAR CLAIMS

Period - July 2 to July 5, 1984.

1.	Michael Savell #203-107 Main Street Whitehorse, Y.T.	Project Geologist
2.	Carl Glaser 11159 Braeside Dr. S.W. Calgary, Alberta	Assistant Geologist
3.	Craig Ritchie 2130 Notre Dame Ave. Winnipeg, Manitoba	Helper

APPENDIX II

STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

PROJECT:		Mar 1-4	
TYPE OF REPORT		Geological and Geochemical Survey	
a)	Wages:		
	No. of Days	5	
	Rate per Day	$112.936	
	Dates From:	July 2 - 5, 1984	
	Total Wages	5 x $112.936	564.68
b)	Food and Accommodation:		
	No. of Days	5	
	Rate per Day	$65.00	
	Total Cost	5 x $65.00	325.00
c)	Transportation:		
	No. of Days	5	
	Rate per day	$ 250.00	
	Total Cost	5 x $250.00	1,250.00
d)	Instrument Rental:	None	
f)	Analysis		
	(See attached schedule)		1,197.00
g)	Cost of preparation of Report		337.29
		TOTAL COST	$3,373.97

NORANDA EXPLORATION COMPANY, LIMITED

WESTERN DIVISION

DETAILS OF ANALYSES COSTS

PROJECT Mar 1-4

ELEMENT	NO. OF DETERMINATIONS	COST PER DETERMINATION	TOTAL
Au	82	1.60	131.20
Zn	82	.60	49.20
Pb	82	.60	49.20
Ag	82	.60	49.20
Mo	82	.60	49.20
Ag	82	1.50	123.00
Au	82	3.50	287.00
	82 Sample Prep	.50	41.00
Au	38	1.60	60.80
An	38	.60	22.80
Pb	38	.60	22.80
Ag	38	.60	22.80
Mo	38	.60	22.80
Au	38	3.50	133.00
As	38	1.50	57.00
	38 Rock Sample Prpe	2.00	76.00
		TOTAL	$1,197.00

APPENDIX III

GEOCHEM RESULTS

NORANDA GEOCHEM LABORATORY

LOCATION CEMENT CR. PROJECT 96 COLLECTOR _____ DATE RECEIVED July / 16 / 84 CODE 8407-049 SHEET 1

MATERIAL SILT, TALUS FINES DATE ANALYSED July / 27 / 84 ANALYST R.T.

REMARKS Cu, Zn, Pb, Ag, Mo, As in ppm. Au in ppb.

0.2 g / 2 mL $HClO_4$: HNO_3 → 5 mL 10 g / Aqua-Regia : MIBK / AM.

SAMPLE NO.		ppm Cu	ppm Zn	ppm Pb	ppm Ag	ppm Mo	ppm As	ppb Au						
71781		22	82	10	0.2	< 2	2	10	(3.9)					
71782		22	74	10	0.2	< 2	2	10	(2.9)					
71783		24	66	8	0.2	< 2	4	10						
71784		22	78	4	0.2	< 2	< 2	10						
71785		24	80	2	0.2	< 2	< 2	10						
71786		16	70	10	0.2	< 2	< 2	10						
71787		10	50	12	0.2	< 2	4	10						
71788		12	52	16	0.2	< 2	4	10						
71789		14	66	10	0.2	< 2	2	10						
71790		14	70	10	0.2	< 2	2	20						
71791		24	68	8	0.2	< 2	12	20						
71792		46	78	4	0.2	< 2	4	300						
71793		66	82	6	0.2	< 2	< 2	10						
71794		44	84	6	0.2	< 2	6	10						
71933		44	80	8	0.2	< 2	< 2	10						
71934		52	90	8	0.2	< 2	< 2	10						
71935		44	70	6	0.2	< 2	< 2	10						
71936		82	130	6	0.2	< 2	6	10						
71937		38	80	8	0.2	< 2	6	10						
71938		22	64	8	0.2	< 2	8	10	(4.6)					
71939		28	70	10	0.2	< 2	16	10	(5.0)					
71940		26	56	16	0.2	< 2	12	10						
71941		30	72	4	0.2	< 2	16	10						
71942		16	72	2	0.2	< 2	< 2	10	(5.0)					

NORANDA GEOCHEM LABORATORY

LOCATION CEMENT CR PROJECT 96 COLLECTOR _____ DATE RECEIVED July/16/84 CODE 8407-049 SHEET 2

MATERIAL SILT, TALUS FINES DATE ANALYSED July/24/84 ANALYST R.F.

REMARKS Cu. Zn. Pb. Ag. Mo. As in ppm. Au in ppb.

0.2 g/2 mL $HClO_4$. HNO_3 → 5 mL 10 g/Aqua-Regia: MIBK/A.A.

SAMPLE NO.		ppm Cu	ppm Zn	ppm Pb	ppm Ag	ppm Mo	ppm As	ppb Au						
71943		14	70	2	0.2	< 2	< 2	10						
71944		26	84	6	0.2	< 2	< 2	10						
71945		22	72	2	0.2	< 2	< 2	10						
71946		74	84	6	0.2	< 2	< 2	10						
71947		36	56	8	0.2	< 2	< 2	10	(5.0)					
71948		70	76	8	0.2	< 2	2	10						
71949		40	68	8	0.2	< 2	2	10	(5.0)					
71950		58	78	6	0.2	< 2	< 2	10						

NORANDA GEOCHEM LABORATORY

LOCATION CEMENT CR. PROJECT 96 COLLECTOR MS DATE RECEIVED AUG/13/84 CODE 8408-063 SHEET 1

MATERIAL PAN (ENTIRE SAMPLE ANALYSED) DATE ANALYSED SEPT/28/84 ANALYST RF

REMARKS Au in ppb Cu Zn Pb Ag in ppm

2.0g / AQUA REGIA - MIBK / A.A. 1.0 ml aliquot → 10 ml (HClO4 30%)

T.T. NO.	SAMPLE NO.		SAMPLE WEIGHT (g)		Au ppb		Cu ppm	Zn ppm	Pb ppm	Ag ppm					
	71895		25.7		4300		60	160	8	0.6					
	71896		9.0		10		28	160	8	0.2					

NORANDA GEOCHEM LABORATORY

LOCATION CEMENT CR. PROJECT 96 COLLECTOR _____ DATE RECEIVED July / 16 / 84 CODE 840-043 SHEET 3

MATERIAL Soil DATE ANALYSED July / 24 / 84 ANALYST R.F.

REMARKS Cu Zn Pb Ag Mo As in ppm Au in ppb.

0.2 g/2 ml HCl-HNO3 → Soil 10 g/Aqua-Regia MIBK/Aq.

SAMPLE NO.		ppm Cu	ppm Zn	ppm Pb	ppm Ag	ppm Mo	ppm As	ppb Au						
71795		72	110	8	0.2	< 2	2	10						
71796		28	92	10	0.2	< 2	< 2	10						
71797		26	100	10	0.2	< 2	< 2	10						
71798		34	98	12	0.2	< 2	< 2	10						
71799		28	92	6	0.2	< 2	< 2	10						
71800		28	110	8	0.2	< 2	2	10						
71801		24	100	8	0.2	< 2	< 2	10						
71802		24	100	8	0.2	< 2	2	10						
71803		28	98	8	0.2	< 2	2	10						
71804		30	92	6	0.2	< 2	< 2	10						
71805		24	100	10	0.2	< 2	< 2	10						
71806		26	86	6	0.2	2	10	10						
71807		18	86	6	0.2	< 2	< 2	10						
71810		14	88	10	0.2	< 2	< 2	10						
71811		26	70	8	0.2	< 2	< 2	10						
71812		34	88	6	0.2	2	6	10						
71813		28	80	8	0.2	2	< 2	10						
71814		42	180	6	0.2	2	6	10						
71815		24	150	8	0.2	2	2	10						
71816		36	96	6	0.2	< 2	6	10						
71817		28	78	6	0.2	< 2	< 2		10					

NORANDA GEOCHEM LABORATORY

LOCATION CEMENT C.F. PROJECT 96 COLLECTOR _____ DATE RECEIVED July / 16 / 84 CODE 84-0219 SHEET 4

MATERIAL Soil DATE ANALYSED July / 24 / 84 ANALYST P.F

REMARKS Cu, Zn, Pb, Ag, Mo, As in ppm. Au in ppb.

0.5 g / 2 ml. HCl-HNO3-HClO4 → 5 ml 10 g / Aqua-Regia MIBK / Au

SAMPLE NO.		ppm Cu	ppm Zn	ppm Pb	ppm Ag	ppm Mo	ppm As	ppb Au							
71818		28	110	6	0.2	< 2	4	10							
71819		32	86	6	0.2	< 2	10	10							
71821		26	76	6	0.2	< 2	4	10							
71820		24	94	4	0.2	< 2	2	10							
71822		22	92	6	0.2	< 2	< 2	10							
71823		36	76	4	0.2	< 2	< 2	10							
71824		22	74	4	0.2	< 2	4	10							
71825		18	82	4	0.2	< 2	< 2	10							
71826		20	88	4	0.2	< 2	2	10							
71827		22	100	6	0.2	< 2	< 2	10							
71828		22	94	4	0.2	< 2	< 2	10							
71829		26	96	6	0.2	< 2	< 2	10							
71830		28	100	6	0.2	< 2	< 2	10							
71831		28	92	8	0.2	< 2	6	10							
71832		26	92	6	0.2	2	6	10							
71833		28	80	8	0.2	2	10	10							
71834		32	90	6	0.2	2	8	10							
71835		38	130	4	0.2	< 2	4	10	(2.4)						
71836		30	78	6	0.2	< 2	8		10						
71837		26	76	6	0.2	< 2	6		10						
71838		38	58	8	0.2	< 2	< 2		10						
71839		32	74	6	0.2	< 2	4		10						

NORANDA GEOCHEM LABORATORY

LOCATION CEMENT CR PROJECT 96 COLLECTOR _____ DATE RECEIVED July / 16 / 84 CODE 8407-049 SHEET 5

MATERIAL Soil DATE ANALYSED July / 24 / 84 ANALYST RF

REMARKS Cu Zn Pb Ag Mo As in ppm Au in ppb

SAMPLE NO.		ppm Cu	ppm Zn	ppm Pb	ppm Ag	ppm Mo	ppm As	ppb Au						
71840		64	72	2	0.2	< 2	< 2	10	(1.5)					
71841		30	72	6	0.2	< 2	6	10	(5.0)					
71842		40	66	6	0.2	< 2	6	10						
71843		36	68	8	0.2	< 2	< 2	10						
71844		30	64	8	0.2	< 2	8	10						
71845		40	66	4	0.2	< 2	< 2	10	(5.0)					
71846		44	68	8	0.2	< 2	< 2	10						

REVISED

ROSSBACHER LABORATORY LTD.

2225 SOUTH SPRINGER AVEN
BURNABY, B.C. V5B 3N1
TEL: (604) 299-6910

CERTIFICATE OF ANALYSIS

TO: NORANDA EXPLORATION LTD.
1050 DAVIE STREET
VANCOUVER B.C.

CERTIFICATE NO. :84258- 1

INVOICE NO. :4270

PROJECT: 96 8407-54 CEMENT CR. DATE ANALYSED :JULY 26 1984

	SAMPLE#	PPM Mo	PPM Cu	PPM Ag	PPM Zn	PPM Pb	PPB Au	PPM As
A								
A								
A								
A	72004	1	26	0.8	50	6	10	10
A	72005	1	26	0.4	54	10	10	8
A								
A	72007	1	36	0.6	56	12	10	14
A	72008	1	40	0.4	54	14	10	20
A	72009	1	24	0.2	46	14	20	20
A	72010	1	16	0.2	64	12	10	20
A	72011	2	20	0.4	82	14	10	24
A	72012	2	16	0.4	38	12	10	24
A	72013	1	16	0.4	46	10	10	20
A	72015	1	18	0.4	40	8	10	20
A	72016	1	18	0.4	56	4	10	12
A	72017	1	16	0.2	76	2	10	14
A	72018	1	16	0.4	42	4	10	26
A	72019	1	14	0.4	84	12	10	56
A	72020	1	14	0.2	58	8	10	46
A	72021	1	22	0.2	50	8	10	28
A	72022	1	24	0.4	70	10	10	26
A	72023	1	8	0.4	66	8	10	12
A	72024	1	10	0.2	96	14	10	12
A	72025	1	12	0.2	70	14	10	28
A	72026	1	10	0.2	86	12	10	12
A	72027	1	10	0.2	90	14	10	12
A	72028	1	12	0.4	82	18	10	34
A	72029	4	14	0.2	98	12	10	30
A	72030	1	30	0.2	74	12	10	24
A	72031	2	36	0.4	72	10	10	24
A	72032	1	12	0.2	54	10	10	16
A	72033	1	6	0.2	70	12	10	12
A	72035	1	14	0.2	68	14	10	26
A	72036	1	16	0.2	62	2	10	12
A	72051	1	10	0.2	88	12	10	12
A	72052	1	10	0.4	60	12	10	14
A	72053	1	14	0.2	104	12	10	6
A								
A								
A								

10/8/84

CERTIFIED BY : J. Rossbach

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BONDAR-CLEGG

Geochem
Lab Re

CEMENT CR. M-5

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ag PPM	As PPM	Au PPB	NOTE
R 84-96 65576		35	4	102	2	0.3	7	5	
R 84-96 72143		29	12	65	4	<0.2	41	<5	
R 84-96 72144		18	6	77	1	0.2	3	<5	
R 84-96 72145		17	7	65	1	<0.2	6	<5	
R 84-96 72146		43	5	103	2	<0.2	15	<5	
R 84-96 72147		41	7	75	1	<0.2	12	20	
R 84-96 72148		10	2	11	1	<0.2	2	<5	
R 84-96 72149		44	6	107	3	<0.2	22	<5	
R 84-96 72150		18	3	74	1	<0.2	2	<5	

APPENDIX IV

ROCK SAMPLE DESCRIPTIONS

MAR CLAIMS - ROCK SAMPLE DESCRIPTIONS

SAMPLE #	TYPE	WIDTH	DESCRIPTION
72004	Chip	2 m	Moderately silicified, very rusty conglomerate (cgl) and grit, very minor diss. pyr.
72005	"	2 m	As for 72004.
72007	"	2 m	Moderately silicified cgl and grit below fault.
72008	"	3 m	Poorly lithified, mildly clay alt. cgl above fault.
72009	"	3 m	Weakly clay altered cgl.
72010	"	4 m	As for 72009.
72011	"	5 m	Strongly clay altered cgl.
72012	"	5 m	As for 72011.
72013	"	4 m	Weakly silicified cgl.
72015	"	5 m	As for 72009.
72016	"	5 m	As for 72011.
72017	"	5 m	As for 72013.
72018	"	2 m	Unaltered cgl.
72019	"	2 m	Mechanically brecciated felsite, with pyrite matrix.
72020	"	2 m	As for 72013.
72021	"	2 m	Fault gouge and breccia, grey siliceous fragments in clay matrix.
72022	"	5 m	Rusty, clay altered cgl with some carbonaceous material.
72023	"	5 m	Clay altered sandstone (sstn) and grit.
72024	"	5 m	As for 72023.
72025	"	5 m	As for 72023.
72026	"	5 m	As for 72023, with some carbonaceous material.
72027	"	5 m	As for 72023.
72028	"	5 m	As for 72023.
72029	"	3 m	Mildly altered, rusty cgl.
72030	"	3 m	Grey bleached sstn.
72031	"	3 m	Rusty weathered cgl.
72032	"	2 m	Bleached sstn, directly below felsite sill.

SAMPLE #	TYPE	WIDTH	DESCRIPTION
72033	Chip	2 m	Buff weathered, felsite sill
72035	"	2 m	As for 72033.
72036	"	2 m	Weakly silicified cgl directly above felsite sill.
72051	"	3 m	Unaltered cgl.
72052	"	3 m	Mildly altered, rusty cgl.
72053	"	4 m	Soft, bleached sstn, with limonite haloes on fractures.
72143	"	2 m	Rusty weathered, mildly bleached cgl directly overlying felsite sill.
72144	"	2 m	Bleached sstn.
72145	"	1 m	Soft, bleached sstn.
72146	"	1.5 m	Porphyritic felsite sill.
72148	Grab	--	Qtz. pebbles chipped from cgl.
72149	"	--	Clayey, carbonaceous bed or shear zone.
72150	Chip	2 m	Green-brown altered felsite sill adjacent to lamprophyric sill.
65576	"	2 m	Bleached, friable felsite sill, cut by hematite and calcite or ankerite lined fractures, green mineral (mariposite?).

140°00'

139°55'

61°25'

N

NORTH C Claims

MAR Claims

Noranda
CEM 1-91 Claims

Cement Creek

7500 7000 6500 6000 5500 5000 4500 4000 3000

0 100 200 400 600 800 1000 metres

Fig. : 2

REVISED	CEMENT CREEK (CEM Claims)
	091578
	Claim Location Map
PROJ. No. 96	SURVEY BY DATE
N.T.S. 115 G 5	DRAWN BY AI SCALE 1:10,000 (approx.)
DWG. No.	NORANDA EXPLORATION
	OFFICE Whitehorse

— 102 00W — 101 00W — 100 00W — 99 00W

— 100 00S
— 101 00S
— 102 00S
— 103 00S
— 104 00S
— 105 00S
— 106 00S
— 107 00S
— 108 00S
— 109 00S

MAR 3
MAR 1
MAR 4
MAR 2

NS
NS

71795 71800 71805 71810 71783 71784 71815 71835 71830 71840 71825 71820 71845

71936 71934 71933 72004 71937 72005 25° 25° 65° 71938 71935 71939 72009 72008 72021 72007 72010 72019 72033 71950 71940 75° 30° 71941 71949 72016 72015 71942 71948 72017 71943 71947 72018 71944 71946 71793 72036 71785 71945 ACTUAL POST POSITION 72019 72035 72020 72034 45° 45° 65576 72149 72148 72150 5 72143 71792 72144 72146 72145 72147 72051 72052 72028 72027 72026 72025 72024 72023 72022 71782 71794 72032 72033 71786 72029 72030 72031 30° 71787 20° 71788 71789 5° 71790 30° 71781 71791 72053 59° 71796 71797

Approx.

Legend

INTRUSIVES

5 Dark green lamprophyric sill, rusty weathered.

4 Buff weathered, resistant felsic sills and dykes. Porphyritic in places, sometimes with calcite filled amygdules.

3 Grey feldspar-porphyry sills.

AMPHITHEATRE FORMATION

2 Dark olive green, carbonaceous grit and sandstone.

1 Undivided light brown sandstone, grit and pebble to cobble conglomerates.

Symbols

60° Altitude of bedding or sill

Outline of outcrop or area of abundant outcrop

Geological contact (defined, assumed)

Fault (defined, assumed)

Stream

Silicification

Argillic alteration

Claim post

Anticlinal axis showing plunge direction

Sample type (location and number)

x Rock
Silt
• Talus fine
△ Soil
○ Panned concentrate

0 50 100 meters
Scale 1:1250

Fig.: 3

REVISED	CEMENT CREEK (MAR Claims)
	091578
	Geology
PROJ. No. 96	SURVEY BY: MS DATE: OCT 84
N.T.S. 115 G 5	DRAWN BY: AI SCALE: 1:1250
DWG. No.	NORANDA EXPLORATION
	OFFICE: Whitehorse