83-#907 B-
#11347

NTI GROUP REPORT #1

REPORT ON GEOCHEMICAL WORK FOR
ASSESSMENT PURPOSES

NTI MINERAL CLAIM
VICTORIA MINING DIVISION
RECORD NUMBER 706
NTS MAPSHEET 92C/16E
L.C.P. CO-ORDINATES: 48° 53' North Latitude
124° 04' East Longitude

AUTHOR: CRAIG STEWART, PROJECT GEOLOGIST
OWNER AND OPERATOR: NORANDA EXPLORATION COMPANY LIMITED
(NO PERSONAL LIABILITY)

DATE: JANUARY, 1984.

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I. ABSTRACT

The NTI claim covers the contact between a roof pendant of Paleozoic Sicker Group clastic sediments and Jurassic Island Intrusives. A stream draining this contact contained visible gold and copper geochemical anomalies within the sediments. Chalcopyrite and molybdenum occur with quartz veins in the intrusive while the sedimentary pendant is pervasively silicified, highly pyritic, and contains trace amounts of chalcopyrite mineralization. A mineralized intrusive-sedimentary interface represents the primary exploration target on the NTI claim. A detailed programme of geology and geochemical work will be carried out along the contact during 1984.

CHAPTER 1 INTRODUCTION

1.1 Introduction

The NTI mineral claim was staked in 1982 as a result of a regional geochemistry program from which pan samples containing visible gold were obtained. Twelve units cover the drainage area which lies along the contact of a Paleozoic meta-sedimentary roof pendant with Jurassic Island Intrusives. Field work to date has been restricted to soil, silt, and pan sampling with minor reconnaissance geological mapping. Geochemical results are low and sporadic however work to date has been minimal.

1.2 Location, Access and Physiography

The NTI claims are located on the southern half of Vancouver Island, British Columbia, immediately south of the Chemainus River, (NTS 92C/16E). The legal corner post is positioned at the junction of logging road C19 and Chemainus Mainline, a distance of approximately 28km on a bearing of 250° from the town of Ladysmith (Figure 1).

Access onto the claim group is excellent via Macmillan Bloedel Limited, Chemainus Woodland Division logging roads out of Copper Canyon. The Chemainus Mainline provides the primary access route from Highway 1, approximately 11km south of the Ladysmith townsite. The legal corner post is located at the C19-Chemainus Mainline junction, a distance of approximately 35.4 km from the highway. From off of the mainline, the South Road, S-2, S-4A, S-9A, S-11A, M-8, and M-11 auxillary roads provide various degrees of accessibility onto the claim, (Figure 1). Vehicular access is often limited due to erosion of the roads. If a detailed program is required, upgrading of the road system would be relatively easy and inexpensive.

Topographically, the claim covers a weakly mountainous area with elevations ranging from 440 to 820 meters. The north and west boundaries of the claim are marked by the Chemainius River and South Chemainus Creek respectively. Slopes varying in gradient from 30 to 70 degrees extend up from the drainage systems toward the southern half of the claim where they shallow into a gentle hilltop with slopes less than 15 degrees. The shape of the mountain and broadness of the Chemainus River valley indicates extensive glaciation although till developement is not significant. Outcrop is well exposed throughout

the claim.

Logging operations have removed the tree cover from 100% of the claim. Regeneration is restricted to very thick vines and bushes, especially in creek beds and other protected areas. Soils are poorly developed, consisting primarily of 'A' and 'C' horizons, both being relatively thin and greatly disturbed by the logging activity. Till horizons are moderately well developed in the Chemainus River valley. Prior to the 1984 geochemical surveys, detailed soil profiles for the claims will be sampled to enhance the validity of the field work.

1.3 Claim Description

i) NTI Claim

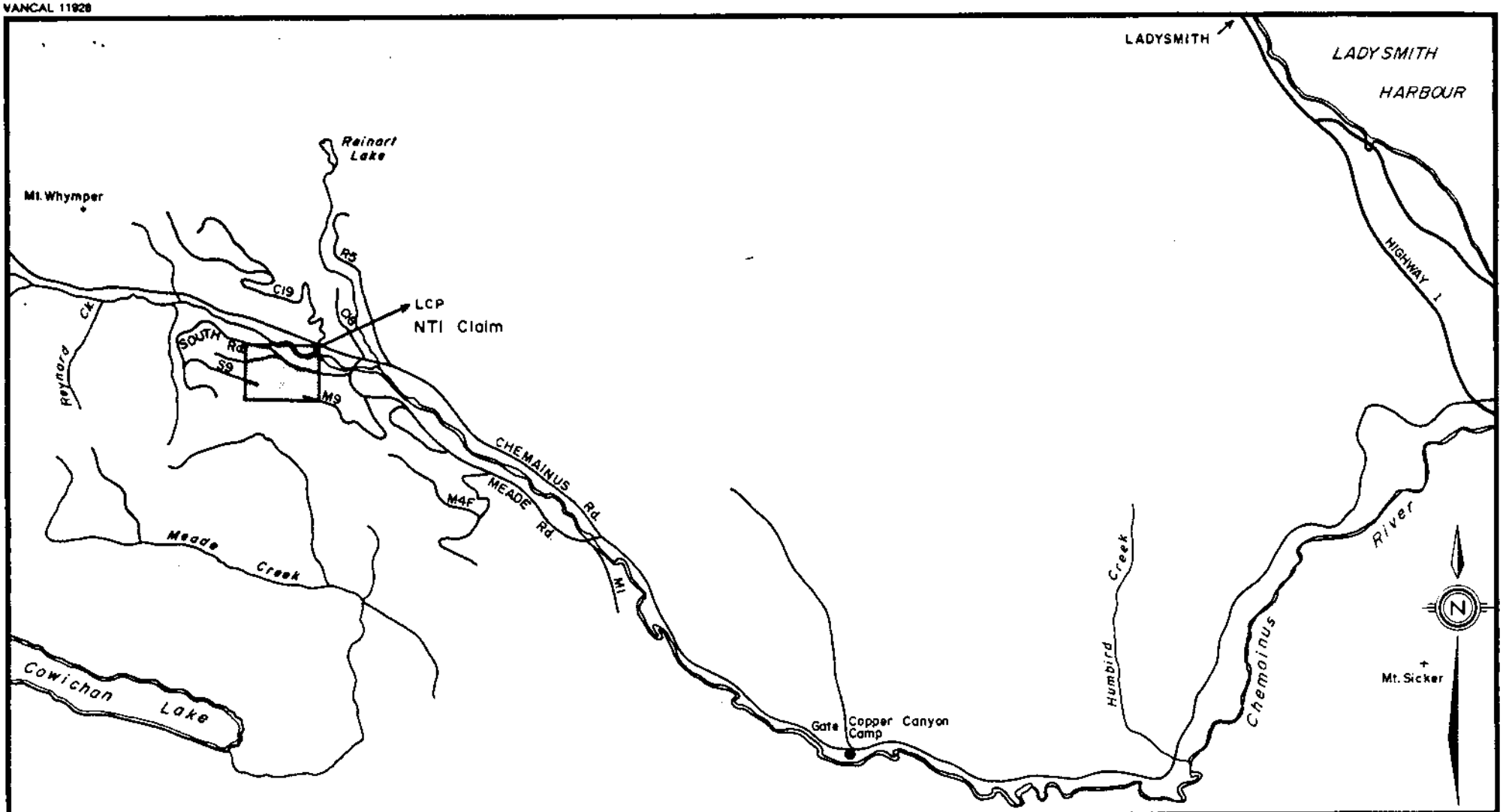
Record Number; 706

Claim Units; 3S X 4W, (Total of 12)

L.C.P. Co-ordinates; 48° 53' North Latitude
124° 04' East Longitude

Expiry Date; October 29, 1984.

VANCAL 11928



REVISED	NTI CLAIM
	LOCATION AND ACCESS
PROJ. No. 24-F2	SURVEY BY: C. Stewart DATE: 84-01-24
N.T.S. 92C16E	DRAWN BY: bks Lillie SCALE: 1:1.6
DWG. No. FIG. 1	NORANDA EXPLORATION
	OFFICE: Vancouver

CHAPTER 2 GEOCHEMISTRY

2.1 Analytical Techniques

Soil, silt and pan samples collected on the NTI mineral claim were analyzed for Cu, Zn, Pb, Ag, Mo, Fe, Mn, and Au by the Noranda geochemical laboratory in Vancouver.

Analysis for Cu, Zn, Pb, Ag, Mo, Mn, and Fe was accomplished utilizing a perchloric-nitric acid decomposition, ($HClO_4$-HNO_3). A 0.4 gram sample of -80 mesh material was digested in a solution containing 4ml of perchloric acid, (70%), plus nitric acid, (4+1), for 4 hours at reflux temperature. After digestion, each sample is diluted to 10ml with water; the resulting solution being analyzed on the Varian Techtron AA-475 atomic absorption machine.

For gold analysis, a 10.0 gram sample is digested with aqua regia from which gold is extracted into MIBK. Atomic absorption is used to determine gold values within a sensitivity of 10ppb.

2.2 Field Programme and Results

A total of 6 silt, 22 soil, 7 heavy mineral concentrates, and 3 rock samples were collected along the South Road and spur S-4A in the northern portion of the claim, (Figure 2, pouch). Analytical results are tabulated in Appendix 2, with anomalous values plotted on Figure 2.

Soil samples were collected at 100m intervals along the width of the claim. Relatively poor in quality, the soils were generally 'A/C' horizon samples with minor 'B' zones sporadically collected. As illustrated in Figure 2, the soil geochemical anomalies are restricted to low, sporadically occurring copper highs peaking at 140ppm. Gold anomalies were not found in soil samples. The lack of correlation between the soil and sediment samples in addition to the poor quality of the soils indicates that soil geochemistry may not be an effective tool for assessing the potential of the NTI claims.

The silt and pan samples collected from Ridgeway Creek were anomalous in gold and copper. Visible gold was obtained in a pan sample and two silt samples contained values of 10,000 ppb gold. Copper anomalies attained values of 240ppm. Since Ridgeway Creek drains the contact between the intrusive and

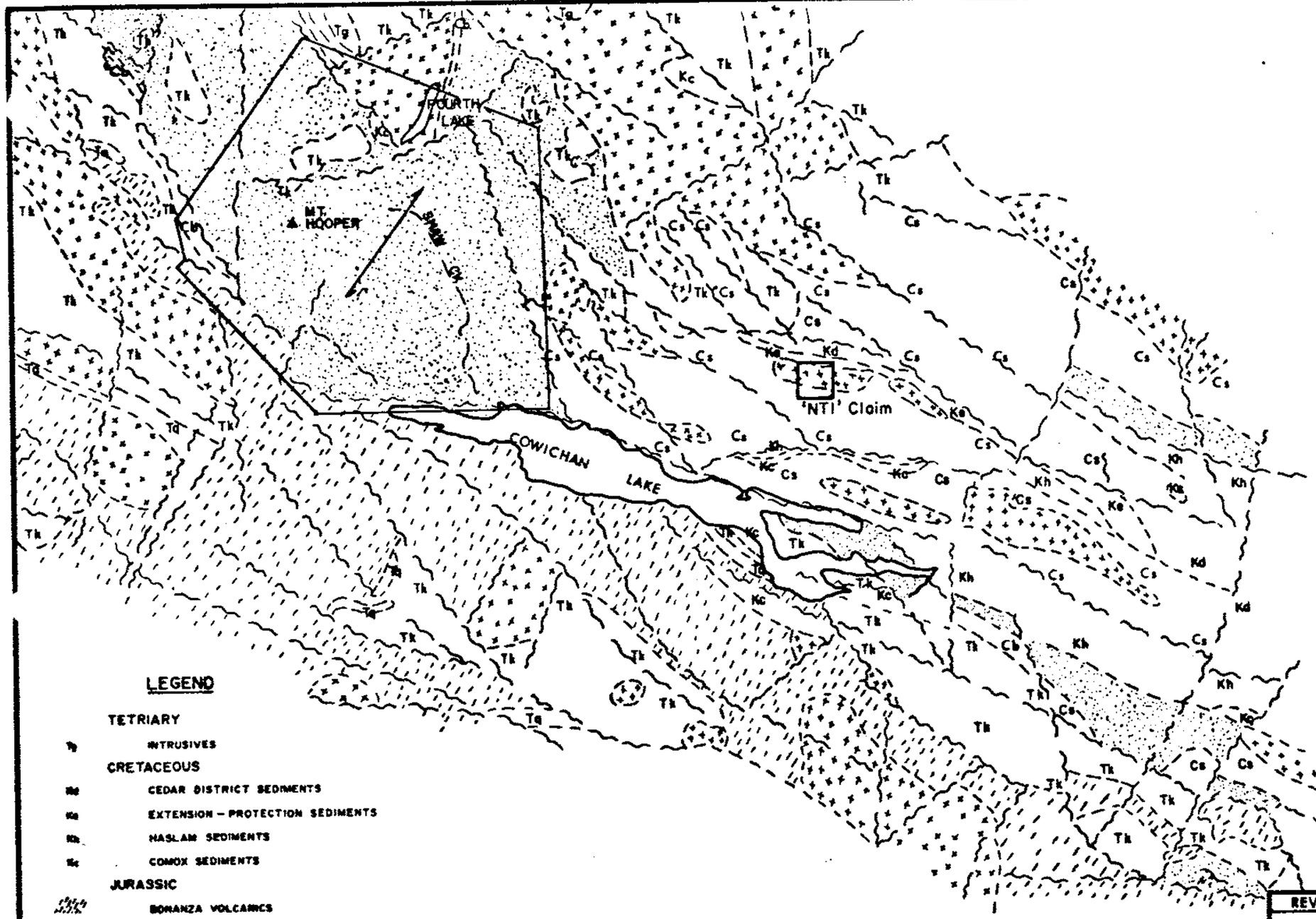
overlying meta-sediments, the anomalous geochemical values obtained from the sediments have greatly enhanced the potential for mineralization to exist along the geological contact.

CHAPTER 3 REGIONAL GEOLOGY

As mapped by J.E. Muller, (Open File #463, 1977), the NTI mineral claim lies along the contact of Jurassic Island Intrusives and Paleozoic Sicker Group sediments, (Figure 3). The Sicker sediments were descibed by Muller as, "... a greywacke-argillite sequence occurs in graded beds, a few millimeters to several centimeters thick, of argillite and siltstone, or in beds to several decimters thick of greywacke sandstone. The formation is commonly silicified and like the volcanic rocks, its structure varies from almost flat lying beds to isoclinal folds." Outcrops of the sedimentary sequence observed on the claim are similar to the description with the additional occurrance of coarse breccia units. Silicification and pyritization is intense throughout the sedimentary sequence.

The intrusive units are mapped as quartz diorites to diorite in compostion. On the property itself, the intrusives observed to date are quartz diorite to diorite , medium to coarse grained with blocky fracture and abundant quartz veins and veinlets.

To date, very little detailed geological mapping has been carried out on the claim however this will be emphasized during 1984.



LEGEND

TETRIARY

- Tg — INTRUSIVES

CRETACEOUS

- Kd — CEDAR DISTRICT SEDIMENTS
- Ke — EXTENSION – PROTECTION SEDIMENTS
- Kh — HASLAM SEDIMENTS
- Kc — COMOX SEDIMENTS

JURASSIC

- BONANZA VOLCANICS
- ISLAND INTRUSIONS

TRIASSIC

- Ts — QUATSINO LIMESTONE
- Tk — KARMUTSEN VOLCANICS

PALEOZOIC

- Cb — BUTTLE LAKE LIMESTONE
- Cs — SICKER SEDIMENTS
- SICKER VOLCANICS

SYMBOLS

- AIRBORNE SURVEY
- APPROXIMATE CONTACT
- APPROXIMATE FAULT

REVISED

PROJ. No. 1077
N.T.S. 92 C, F
DWG. No. 3

'NTI' CLAIM

REGIONAL GEOLOGY

(From MÖLLER, 1977)

SURVEY BY: _____ DATE: _____
DRAWN BY: _____ SCALE: 1:250,000

NORANDA EXPLORATION

OFFICE: VANCOUVER, B.C.

VANCAL - 8751

CHAPTER 4 CONCLUSIONS AND RECOMMENDATIONS

The primary target on the NTI claim is a mineralized contact between Paleozoic Sicker sediments and Island Intrusives. Anomalous Au-Cu values obtained from Ridgeway Creek, which drains this contact zone, has enhanced the potential of the target. Three other claims, (NTI 2, 3 and 4), were staked to increase coverage of the contact zone. Work on these claims has consisted of detailedgeochemical sampling and preliminary geological mapping.

To determine the significance of the contact zone, field work during 1984 will consist of;

i) Detailed geological mapping of the NTI, NTI 2, NTI 3, and NTI 4 claims as a whole and the contact zone in particular,

ii) Detailed geochemical sampling along the contact zone,

iii) Geophysical followup in response to the results of i) and ii).

APPENDIX 1

STATEMENT OF QUALIFICATIONS

CERTIFICATE OF QUALIFICATION

I, Craig Stewart, of the City of North Vancouver, Province of British Columbia do hereby certify that:

1. I am a geologist residing at #6, 1923 Purcell Way, North Vancouver.

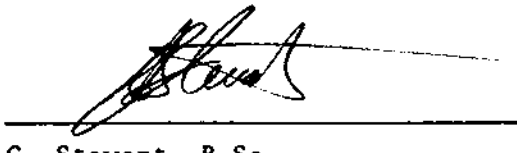
2. I am a graduate of the University of Alberta, Edmonton, with a B.Sc. (1980) in geology.

3. I have been practicing my profession since May, 1980 and am at present Project Geologist with Noranda Exploration Company, Limited.

4. I am a member of the Geological Association of Canada.

5. I am a member of the Canadian Institute of Mining and Metallurgy.

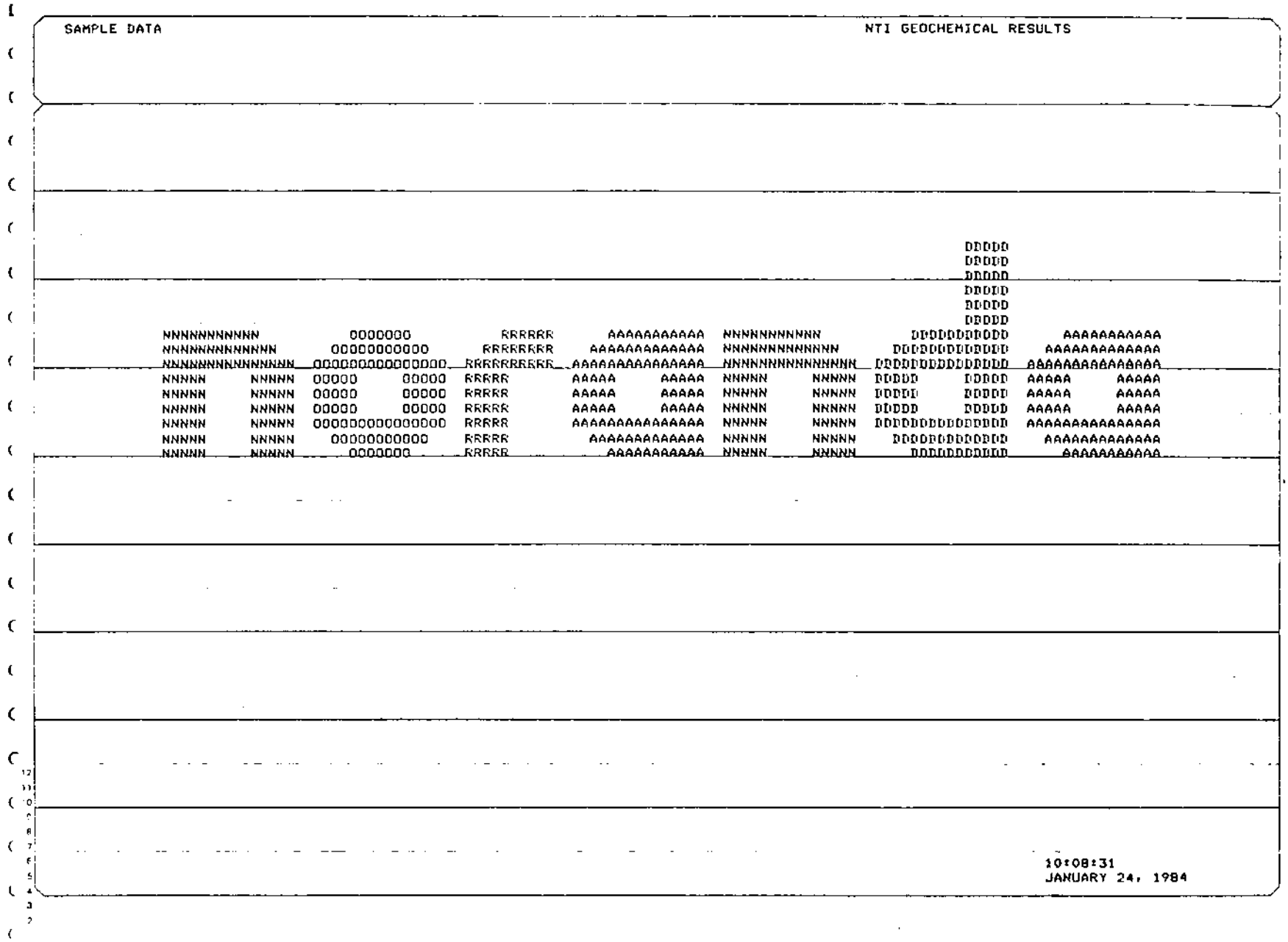
DATED: JANUARY 28, 1984



C. Stewart, B.Sc.

APPENDIX 2

NTI GEOCHEMICAL RESULTS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10:08:31
JANUARY 24, 1984

NTI GEOCHEMICAL RESULTS

JANUARY 24, 1984

NUMBER	TYPE	CU1A	ZN1A	PB1A	AG1A	MO1A	MN1A	FE1A
8220610	????	86	32	2	.2	12	310	4.2
8220611	????	40	52	2	.2	1	450	3.4
8220612	????	46	48	2	.2	1	320	4.2
8220613	????	66	50	2	.2	6	260	4.0
8220614	????	66	54	2	.2	4	590	3.5
8220615	????	60	46	2	.2	1	540	3.8
8220616	????	140	80	2	.2	1	450	4.8
8220617	????	90	76	2	.2	2	450	4.3
8220618	????	74	66	2	.2	1	360	4.0
8220619	????	76	52	2	.2	1	450	3.8
8220620	????	110	54	2	.2	1	370	4.4
8220621	????	36	38	2	.2	1	220	2.9
8220622	????	48	42	2	.2	1	320	3.2
8220623	????	64	56	2	.2	1	360	3.7
8220624	????	32	60	2	.2	1	350	3.5
8220625	????	78	70	6	.2	1	1200	3.5
8220626	????	70	68	10	.2	1	960	3.8
8220627	????	64	68	2	.2	1	430	4.0
8220628	????	62	60	2	.2	1	770	3.4
8220629	????	50	62	6	.2	1	1200	3.2
8220630	????	66	58	6	.2	4	1500	3.5
8220631	????	100	78	2	.2	1	710	4.2

NTI GEOCHEMICAL RESULTS

NUMBER	TYPE	CU1A	ZN1A	PB1A	MO1A	AG1A	AU9I	AU1E
8221911	SILT	210	86	16	22	.4	54	
8221912	SILT	66	48	2	1	.2	7	
8221913	SILT	48	50	4	2	.2	1	
8221914	SILT	64	36	2	2	.2	6	
8221915	ROCK	100	48	2	120	.2		10
8221916	ROCK	130	40	2	1	.2		10
8221917	PAN	68	54	4	2	.2		10
8221918	SILT	92	110	8	2	.2	10000	
8221919	ROCK	42	74	2	1	.4		10
8221920	ROCK	84	24	2	1	.4		10
8221921	SILT	68	58	2	2	.2	4	
8221922	ROCK	240	44	2	1	.2		10

TITLE UNKNOWN

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8218751	????	10000							
8218752	????	30							
8218753	????	10							
8218754	????	10							
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8222993	????	12	70	54	2	.2	1	550	4.2
8222994	????	7	66	50	2	.2	1	550	3.9
8222995	????	3	70	52	2	.2	1	520	3.9
8222996	????	16	78	56	2	.2	1	740	4.2
8222997	????	10	110	72	2	.2			
8222998	????	10	460	32	2	.2			
8222999	????	10	140	56	2	.2			

NTI GEOCHEMICAL RESULTS

JANUARY 24, 1984

NUMBER	TYPE	CU1A	ZN1A	PB1A	AG1A	MO1A	MN1A	FE1A	AU9I
8220606	SILT	110	64	10	.2	1	700	4.4	16
8220607	SILT	86	72	8	.2	1	850	4.0	1
8220608	SILT	88	78	8	.2	1	790	4.5	1
8220609	SILT	120	84	6	.2	1	1300	4.6	1
8220632	SILT	140	88	8	.2	1	930	4.4	
8220633	ROCK	140	30	2	.2	1	420	3.2	
8220634	SILT	100	100	12	.2	1	720	4.2	
8220635	SILT	86	160	28	.2	1	1000	4.6	4
8220636	SILT	120	78	10	.2	1	1100	4.8	13
8220637	SILT	120	72	6	.2	1	680	5.2	7
8220638	SILT	100	82	8	.2	1	940	5.0	6
8220639	SILT	84	78	4	.2	1	680	4.6	1
8220640	SILT	76	68	2	.2	1	680	4.8	1

APPENDIX 3

STATEMENT OF COSTS

NORANDA EXPLORATION COMPANY, LIMITED

STATEMENT OF COST

DATE October 1983

PROJECT - NTI CLAIMS
TYPE OF REPORT Geochem

a) **Wages:**

No. of Days -	10 mandays	
Rate per Day -	$96.36	
Dates From -	November 1 1982 - October 27,1983	
Total Wages	10 X $96.36	$963.55

b) **Food and Accommodation:**

No. of Days -	10	
Rate per Day -	$22.00	
Dates From -	November 1 1982 - October 27, 1983	
Total Cost -	10 X $22.00	$220.00

c) **Transportation:**

No. of Days -	10	
Rate per Day -	$45.00	
Dates From -	November 1, 1982 - October 27, 1983	
Total cost	10 X $45.00	$450.00

d) Analysis $349.60

e) **Cost of Preparation of Report:**

Author	$ 96.00
Drafting	$ 96.00
Typing	$ 96.00

e) Other:

Total Cost $2,271.15

UNIT COSTS

Unit Costs for Geochem

No. of Days -	10	
No. of Units -	38 Samples	
Unit Costs -	59.77 / Sample	
Total cost	38 X 59.77	$2,271.15

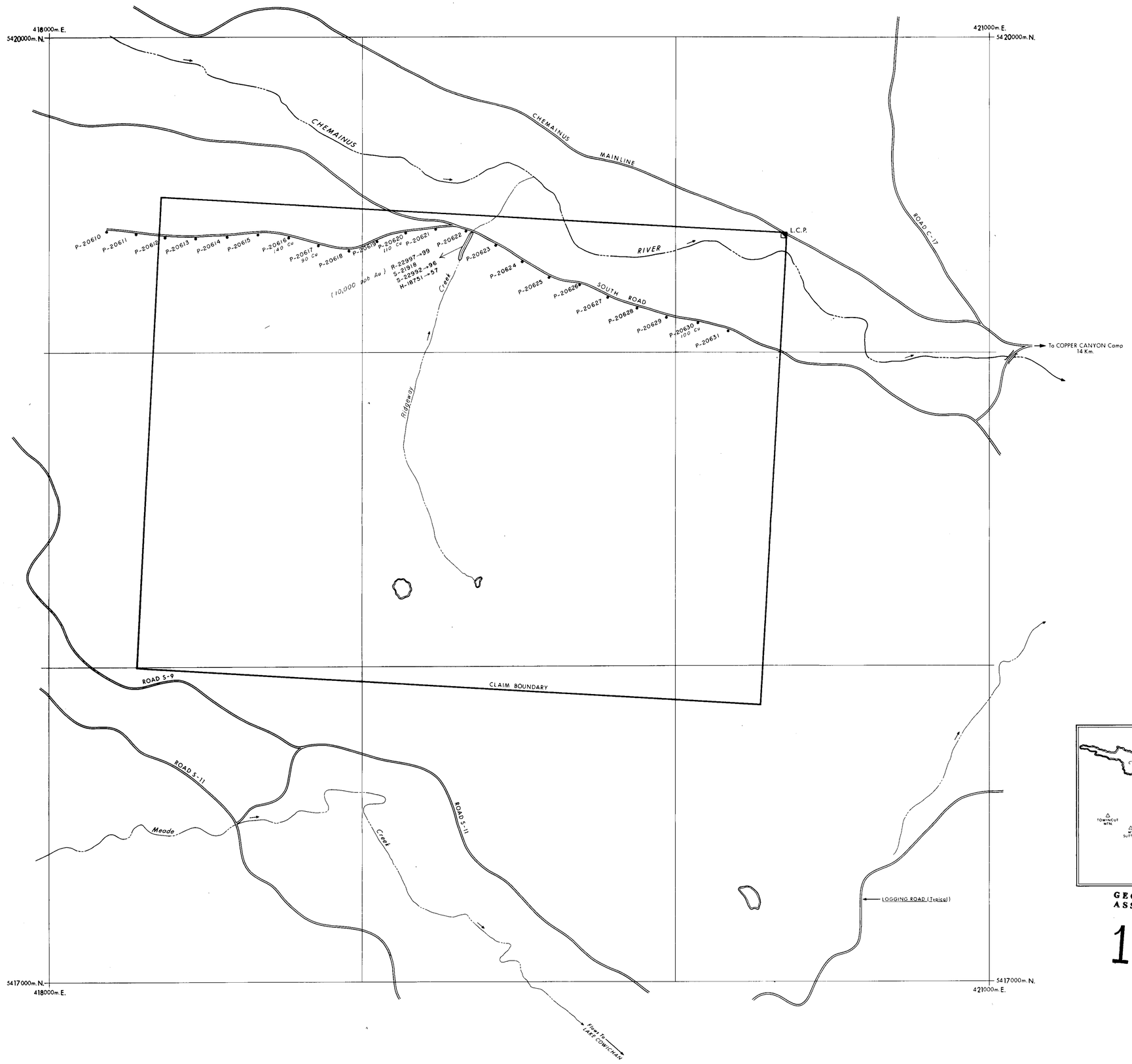
Total Cost $2,271.15

NORANDA EXPLORATION COMPANY, LIMITED

DETAILS OF ANALYSES COSTS

Project: NTI Claims

Element	No. of Determinations	Cost per Determination	Total
Cu	38	1.60	60.80
Zn	38	.60	60.80
Pb	38	.60	60.80
Mo	38	.60	60.80
Ag	38	.60	60.80
Fe	38	.60	60.80
Mn	38	.60	60.80
Au	38	4.00	152.00
Total			$349.60



INDEX MAP
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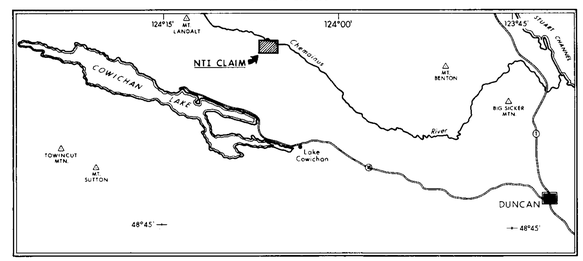

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,347

SCALE
1:5000
Metres 100 50 0 100 200 300 400 500 Metres

REVISED	'NTI' CLAIM
	SAMPLE LOCATIONS AND ANOMALOUS VALUES
PROJ. No.	SURVEY BY: DATE: Nov./82
N.T.S. 92C/16E	DRAWN BY: Jpothr SCALE: 1:5000
DWG. No. 2	NORANDA EXPLORATION
	OFFICE: Vancouver