INDIAN and NORTHERN AFFAIRS

TRANSMITTAL FORM

M R File No. _____
S.M.R File No. _____
Date Fwd. 30 NOV 81

FROM: Mining Recorder at WATSON LAKE

TO: Supervising Mining Recorder at Whitehorse, Y.T.

FOR ACTION ARE:

☐ NEW APPL'N for PLACER LEASE to PROSPECT: Name:

☐ RENEWAL APPL'N PLACER LEASE to PROSPECT: Name. Lease No.

☐ AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name Lease No.

☐ ASSIGNMENT of PLACER LEASE No.
From: To:

☐ GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.
Owner:

☐ DIAMOND DRILL LOGS
Claims: Claim sheet no.

☑ QUARTZ ASSESSMENT REPORT
Claims: Aurora 1-114 Claim sheet no. 105-H-15.
Type of report: Geology, Geochemical Submitted by: Union Carbide
Cls. work performed on: Aurora 1-114
$ Req. for ren. application $~~22,800.00~~ $~~23,662.08~~

Office of the Regional Manager Mineral Resources
DEC 1 1981
Yukon Territory

Signature

REPLY ACTION Date Ret.

090890

Signature

THE AURORA TUNGSTEN PROSPECT

1981 ASSESSMENT REPORT

090890

D. ARCHIBALD
D. JAMES
J. TOOHEY

COMPILED BY: P. J. DOYLE
NOVEMBER 1981

UNION CARBIDE EXPLORATION CORPORATION
VANCOUVER, B.C.

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 $ 22,800.00 .

Ruth Debicki

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

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LIST OF FIGURES

PLATES

SUMMARY

The Aurora claims located on the Frances Lake map sheet in the South-east Yukon Territory were staked by Welcome North Mines in the fall of 1980 to claim scheelite mineralization within granodiorite talus. In July 1981, a three week evaluation of the Aurora property was undertaken by Union Carbide Exploration. The program included rock, silt and soil geochemistry, ultraviolet prospecting of talus and outcrop as well as 1:10,000 scale geological mapping. One hundred and thirteen rock samples, one hundred and twenty soil and silt samples and fifty-nine pan concentrates were collected. Prospecting and sampling efforts focussed on the four zones of the talus mineralization outlined by Welcome North Mines during their initial work in September of 1980.

The intrusive rocks underlying the claims were found to be an undifferentiated, weakly chloritized granodiorite, typical of the Mount Billings Batholith. Outcrops above the talus mineralization contained only trace amounts of scheelite and molybdenite. This low-grade mineralization occurred along chloritized fracture surfaces and along vein margins. With the exception of two very localized and widely spaced microbreccia zones, no large scale stockwork or breccia pipe systems were evident in the outcrop or talus. Ultravoilet prospecting and geochemical sampling indicated the presence of minimal amounts of very low-grade mineralization.

Conclusion

Geological mapping and sampling on the Aurora claim group during 1981 failed to outline a tungsten porphyry target of sufficient grade and tonnage to warrant further exploration on the property by Union Carbide Exploration.

Recommendations

The author recommends no further exploration expenditures on the Aurora claim group.

ACKNOWLEDGEMENTS

This report is a final compilation of the data collected during the 1981 field season. The field crew consisted of D. Archibald, D. James, J. Toohey, K. Harrap, J. Bronson, J. Hornby, C. Riest, C. Copping and A. Guichon. Their efforts in both the collection and recording of data was much appreciated. The technical assistance of C. N. Forster, K. Gibson, K. Hampton and J. Wilkinson in completing the report was appreciated.

INTRODUCTION

During the fall of 1980 Union Carbide Exploration Corporation negotiated an option agreement with Welcome North Mines Limited which included the exploration and development rights to the Aurora property. A helicopter supported geological evaluation of the prospect was undertaken by Union Carbide personnel during the 1981 field season. The program consisted of 1:10,000 scale geological mapping, ultraviolet prospecting, as well as soil, silt and lithogeochemical sampling.

Location

The Aurora claim group (Latitude 61°52', Longitude 128°53') is located within the Watson Lake Mining District of the Yukon Territory approximately thirty-five kilometres west-southwest of Tungsten, Northwest Territories, and one hundred and ninety-five kilometres north of Watson Lake. (See Figure 1)

Topography

The property is bounded to the south by the Shannon Creek drainage and to the north by a series of high ridges. (See Plate 1). Topographic relief on the property varies from 1,600 metres to 2,570 metres above sea level. The topography of the claim block is dominated by three large parallel cirques that trend north-south. (See Figure 2) Several permanent snow fields cover much of the upper portions of the cirques. The cirque walls are relatively steep talus covered slopes while cirque floors consist of rubble piles and boulder fields. (See Plate 2)

Climate

The summer climate is extremely variable ranging from cool, wet

Plate 1: Aurora Property - View Looking North From Shannon Creek (September 1981)

UNION CARBIDE CANADA LIMITED		
LOCATION MAP		
AUTHOR: SCALE:	DRAFTED: C M R DATE: AUG 1981	Figure 1

conditions with occasional snowfalls, to warm, dry situations. Daily weather conditions can vary hourly primarily due to the high elevations and mountainous terrain. Winter snowfall normally exceeds three metres and annual temperatures will range from minus forty degrees celsius in January to plus twenty degrees celsius in July.

Access

Access to the property requires helicopter transport either directly from the Nahanni Range Road, which is located thirty five kilometres to the east at its closest point, or a twenty kilometre ferry trip from Tustles Lake which is accessible by fixed wing float plane from Watson Lake.

Logistics

All logistical support for the Aurora program originated from Union Carbide's Lened Camp located approximately fifty kilometres north-northwest of the Aurora property. (See Figure 1) An eight-man fly camp was established on the property in Cirque two from July 12th, 1981 to July 24, 1981. Most of the work done on the property required several daily ferry trips by the Lened based helicopter to the Aurora property for crew setouts and pickups. (See Figure 5)

Claims

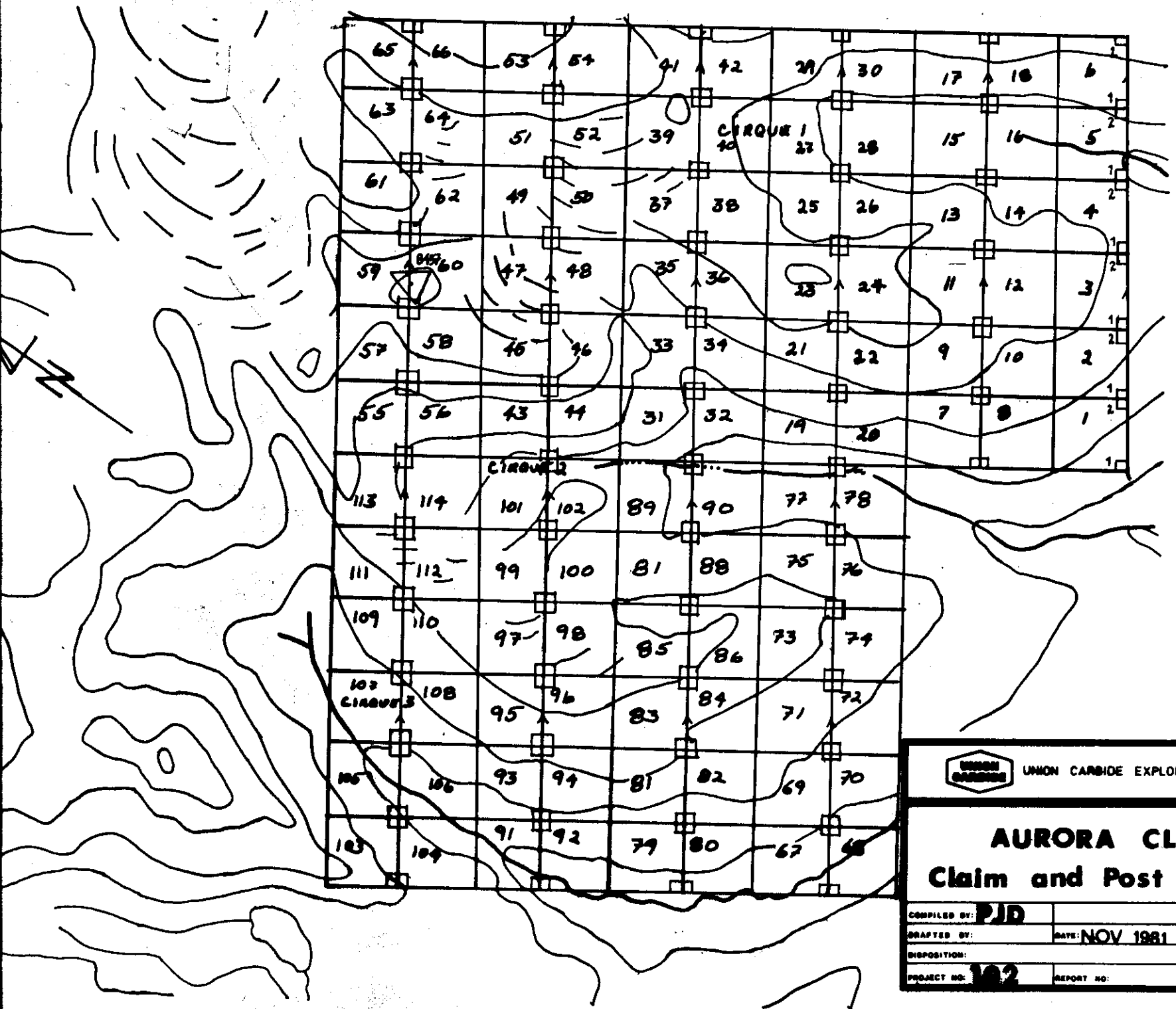
The Aurora property (Aurora Claims 1 - 114) was staked by Welcome North Mines Limited in September 1980, to claim scheelite mineralization discovered within granodiorite talus. (See Figure 2 for Claim Block Outline) The claim registration numbers are as follows:

Aurora 1 - YA56742

through to

AURORA 114 - YA56855 with an expiry date of September 23, 1981.

Plate 2: Aurora Property - Close Up View of Cirque 2.
Looking North From Shannon Creek
(Late June 1981)



UNION CARBIDE EXPLORATION CORPORATION

AURORA CLAIMS
Claim and Post Locations

COMPILED BY: PJD		MAP NO:
DRAFTED BY:	DATE: NOV 1981	SCALE:
DISPOSITION:		NTS: 105-H
PROJECT NO: 102	REPORT NO:	Figure 2

(6)

Union Carbide Exploration filed grouping certificates and certificates of work prior to the expiry date which along with this report should fulfil assessment requirements for two years. (See Appendix 1 for Statement of Expenditures)

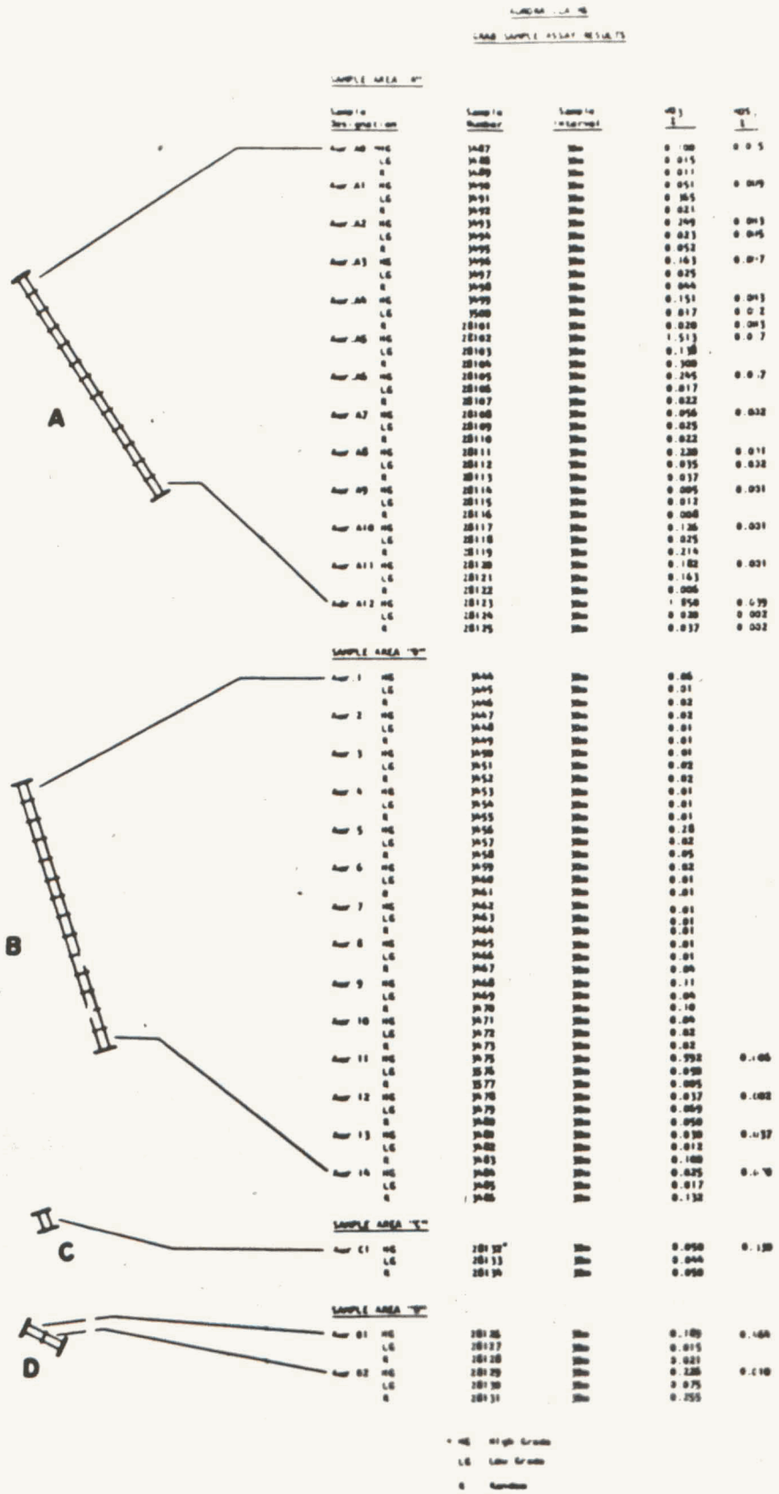
History

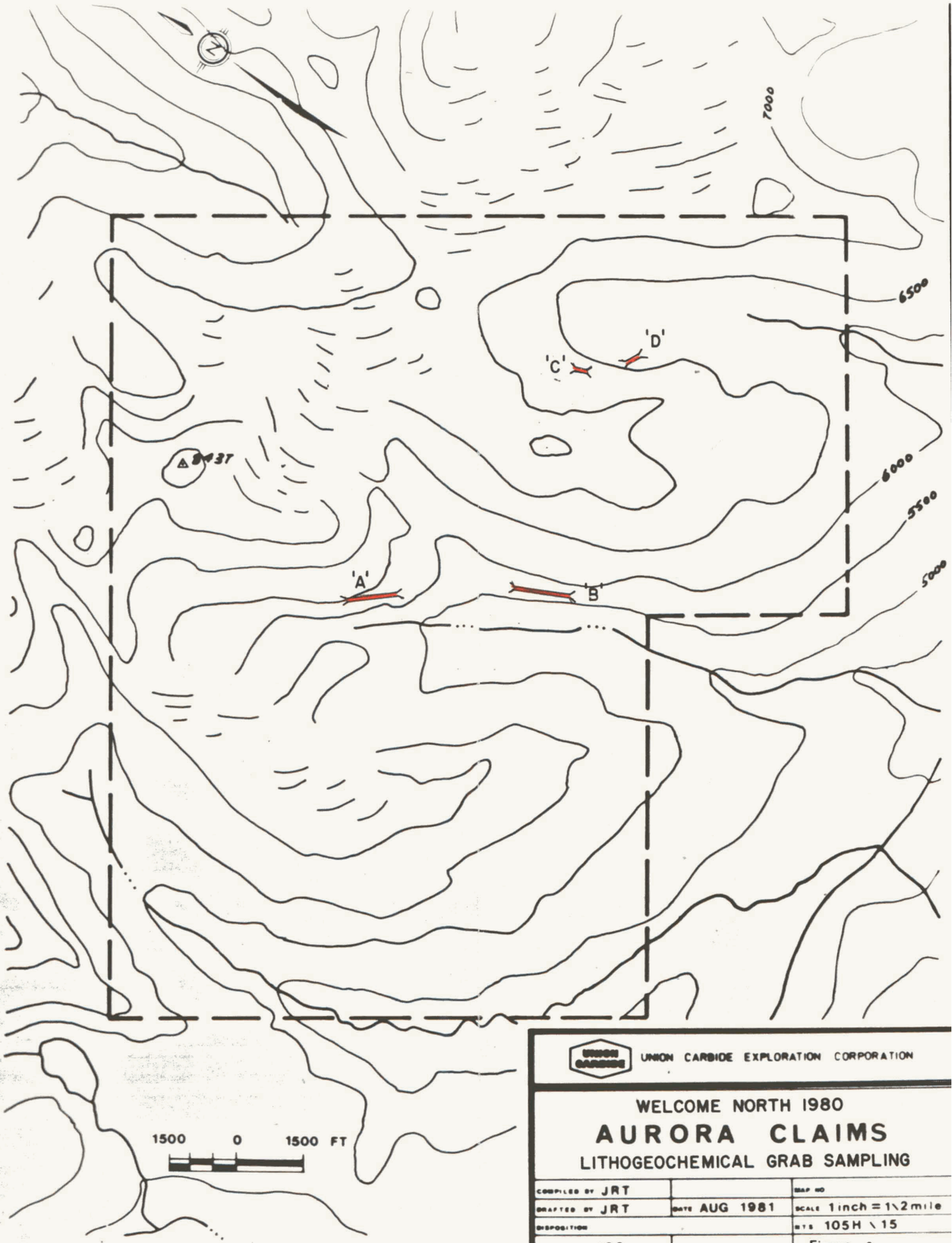
The Aurora Claim group was optioned from Welcome North Mines Limited by Union Carbide Exploration as part of an option package which included the Aurora, Woah and Rena properties. Previous to 1980 a portion of the present claim block was staked in 1967 as the Zeus Claims (Y19395). Spartan Exploration conducted a small mapping and sampling program around several small skarn bands known as the Chap showings which are developed along the intrusive contact. Noranda, in 1977, staked the Log claims located to the west of the present Aurora block, to cover several lead - zinc skarn occurrences. Welcome North Mines restaked the Zeus claims as the Zeut block in order to investigate the known skarn-type scheelite occurrence. Both the Log and Zeut claims were dropped after a limited amount of work.

The intrusive contact in the vicinity of the Aurora property was examined by Union Carbide reconnaissance crews in 1972 and 1976. Both programs were exploring the area for its skarn-type tungsten potential thus the Mount Billings intrusive units were not investigated in great detail.

Work Done 1980-1981

Subsequent to the property staking, Welcome North Mines conducted a small grab sampling program in September of 1980. In addition eleven grab samples from Cirque 2 were collected by a Union Carbide crew during the property examination. For results (See Appendix 3 and Figure 3).





UNION CARBIDE EXPLORATION CORPORATION

WELCOME NORTH 1980

AURORA CLAIMS

LITHOGEOCHEMICAL GRAB SAMPLING

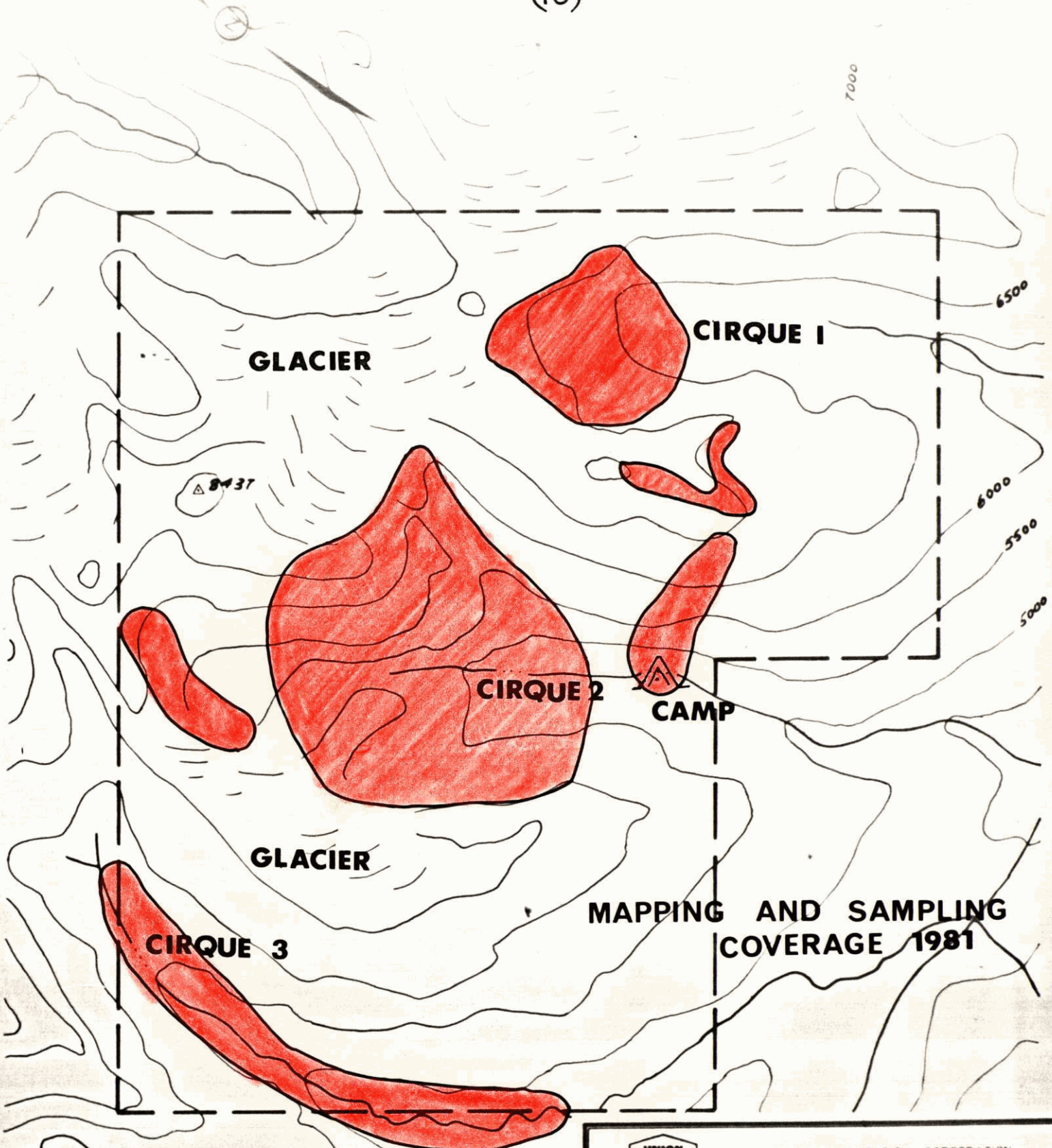
COMPILED BY JRT		MAP NO
DRAFTED BY JRT	DATE AUG 1981	SCALE 1 inch = 1\2 mile
DISPOSITION		NTS 105H \ 15
PROJECT NO 102	REPORT NO	Figure 3

A three week program consisting of geological mapping, soil, silt and rock geochemistry was carried out on the property during the 1981 field season. (See Figures 4 and 5) A crew of three geologists and four to five assistants were involved in the evaluation of the property. Crew size varied as per personnel requirements in the Lened base camp. The geological mapping was controlled and plotted on a 1:10,000 scale base map with twenty metre contour intervals which was prepared by Pacific Survey Corporation in Vancouver. This map in addition to altimeter readings and horizontal topolite measurements was sufficient for accurate plotting of all geological and sampling data.

In all one hundred and thirteen rock samples and one hundred and twenty silt, soil and talus samples were collected and analysed by Bondar-Clegg Laboratories Limited in Vancouver for copper, tungsten and molybdenum and some for silver. Fifty-nine pan concentrates were collected and the scheelite grain counts recorded. An ultraviolet prospecting program was also conducted in conjunction with the sampling program.

The crew members who took part in the work on the property were:

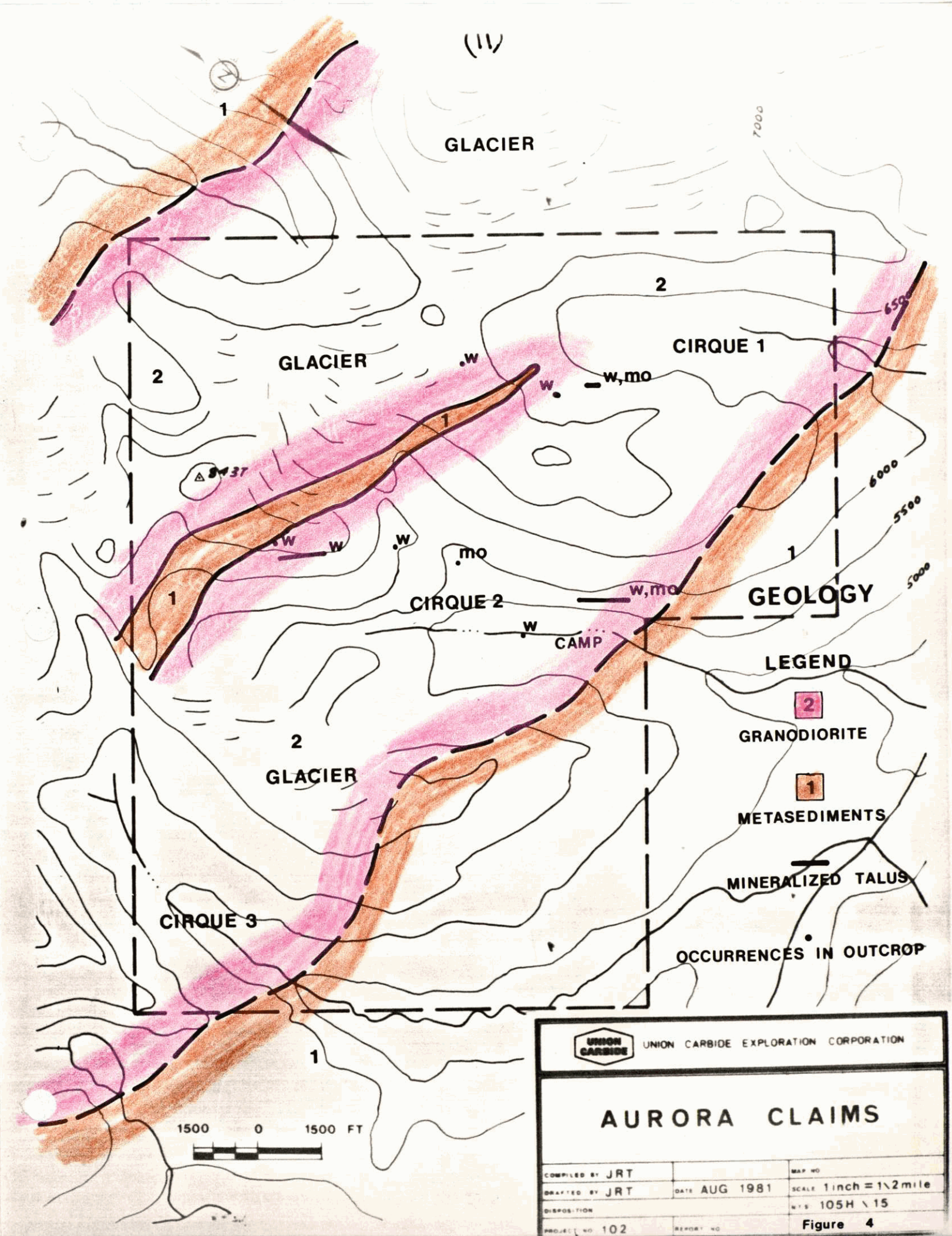
C. N. Forster	District Geologist
D. H. James	Senior "
P. J. Doyle	Project "
D. A. Archibald	Consultant
J. Toohey	Senior Assistant
C. Riest	Student
J. Bronson	"
J. Hornby	"
C. Copping	"
K. Harrap	"
A. Guichon	"



UNION CARBIDE EXPLORATION CORPORATION

AURORA CLAIMS

COMPILED BY JRT		MAP NO
DRAFTED BY JRT	DATE AUG 1981	SCALE 1 inch = 1\2 mile
DISPOSITION		NTS 105H \ 15
PROJECT NO 102	REPORT NO	Figure 5



UNION CARBIDE EXPLORATION CORPORATION

AURORA CLAIMS

COMPILED BY JRT		MAP NO
DRAFTED BY JRT	DATE AUG 1981	SCALE 1 inch = 1\2 mile
DISPOSITION		N.T.S 105H \ 15
PROJECT NO 102	REPORT NO	Figure 4

GEOLOGY

Regional Setting

The geology of the central and eastern portions of the Frances Lake Map Sheet (N.T.S. 105H) are dominated by the Cretaceous aged Mount Billings Batholith which is known locally as the Frances Lake Batholith. (See Figure 6) The intrusive rocks are fresh, fine to medium grained granitic rocks varying in composition from granodiorite to biotite-quartz monzonite. The country rocks into which the batholith has been emplaced consist of Hadrynian aged slates, phyllites, siltstones, minor limestones and fine grained quartzites. The central portion of the map sheet is referred to as the schist-gneiss belt. The country rock within this belt consists of a highly deformed sequence of quartz-feldspar-mica gneiss, granitoid gneiss, feldspathic-quartzite, biotite-schist and marble.

The sediment-intrusive contacts are generally very sharp, high angle contacts except in the schist-gneiss belt where the granitic rocks are bordered by complex zones up to one quarter mile wide in which intrusive rocks are interspersed with lit-par-lit migmatites and partly granitized inclusions.

Regional structures trend northwest except in the northern part of the map sheet where westerly trends predominate. The most complex regional structures are developed within the schist-gneiss belt.

Property Geology

The Aurora intrusive forms the most northwesterly portion of the Mount Billings Batholith. The stock has been dated at 94.7 (Ma)± 1.6 (Ma) by D. A. Archibald as part of his 1980 regional intrusive study. The K-Ar date

*Plate 3: Stained Rock Slabs

Top Left - A-111 Cirque Stock	(N.T.S. 105I)
Top Right -AC-4 Cream Stock	(N.T.S. 95E)
Bottom Left - UCA-4 Aurora Stock	(N.T.S. 105H-15)
Bottom Center - AC-3 "Unusual Stock"	(N.T.S. 95E)
Bottom Right - AC-5 Ivos Knob	(N.T.S. 95E)

*Taken from:

1981 Archibald, D.A., Preliminary Report on the K-Ar Geochronology and Petrography of Intrusive Rocks, Selwyn Basin, N.W.T. and Y.T., June 1981, Kingston, Ontario

is based on one sample supplied by Union Carbide. (See Plate 3) Archibald in his report states "this date is probably the minimum estimate of the time of emplacement and mineralization". The Aurora intrusive is a coarse to medium grained, equigranular granodiorite that is cut by several prominent shears and well developed mylonite zones. A northwest trending roof pendant of isoclinally folded sediments runs through the northern part of the claim block. (See Figure 5) Quartz veins, pegmatite dykes and aplite dykes also occur within the intrusive and are aligned with the shear induced foliation.

The foliation which is normaly defined by biotite and hornblende within the granodiorite parallels the regional trend. This coupled with the presence of schist-gneiss belt rocks immediately to the south of the property suggests we are looking at a relatively deep erosional level.

For a more detailed account of the property geology see Archibald and James' report Appendix 2 and Figure 10.

Economic Geology

Extensive follow-up work in the vicinity of Welcome North's four mineralized zones produced no significant tungsten mineralization in outcrop which suggests the property has no economic potential. Most of the mineralized samples collected during 1980 indicated the presence of tungsten mineralization along fracture surfaces and within quartz veins. Although the only alteration observed in the specimens collected appeared to be chlorite and/or epidote, it was proposed that further investigation could possibly outline a tungsten porphyry situation on the property. Unfortunately 1981 sampling and geological mapping failed to outline such a target. The mineralization observed during the 1981 program was of very low-grade and almost always in talus rather than outcrop. Low-grade tungsten mineralization occurred

as disseminated scheelite along quartz vein margins and along choritic surfaces within the granodiorite. Disseminated scheelite was also observed within narrow quartz-feldspar pegmatite veins. These types of mineralization were outlined in the vicinity of Welcome North's grab sample Zones "A" and "C".

Trace amount of molybdenite were observed within widely spaced quartz and K-feldspar veins in and around Welcome North's Zone "D" mineralization. Trace amounts of molydbenite in association with pyrite, chalcopyrite and scheelite were observed adjacent to and within a sheared leucocratic dyke zone which cuts across the eastern side of Cirque 2 above Welcome North's Zone "B" mineralization.

Trace amounts of disseminated pyrite and chalcopyrite were found in several locations within Cirques 1 and 2.

None of the mineralization observed was of sufficient grade and tonnage to warrant further exploration.

Geochemistry

One hundred and thirteen rock samples and one hundred and twenty silt, soil and talus samples were collected. All samples were analysed for copper, molybdenum and tungsten. In addition, many of the samples were analysed for silver. The analysis was done by Bondar-Clegg Laboratories in Vancouver using standard geochemical techniques. (See Appendix 5 for Analytical Parameters)

All samples were plotted on a 1:10,000 scale base map with the aid of altimeter readings and topolite measurements. Following discussions with G. Nelson and C. Goddard (Union Carbide) a random sampling pattern was decided upon with an obvious bias towards mineralized zones. All of the rock samples collected for analysis were lamped prior to shipment and sample selection was a function of the visual estimates.

Discussion of Results

Silt and Soil Geochemistry

Tungsten

In addition to the one hundred and twenty soil and silt samples collected, fifty-nine samples were collected for panning with the scheelite grain counts recorded from the panned concentrates. Two thirds of the samples analysed for tungsten resulted in values of 3 p.p.m. with only five values greater than this. The highest tungsten soil and silt tungsten values were concentrated in the area around Welcome North's Zone A of mineralized talus. (Up to a maxiumum of 225 p.p.m. WO_3) Similarly the best pan concentrate grain counts were from samples collected around Zone A. (Up to a maximum of 200 grains)

Molybdenum

Eighty-one of the one hundred and twenty samples analysed for molybdenum returned results of 5 p.p.m. or less. The remaining sample results ranged in value from 6 p.p.m. up to a maximum 22 p.p.m. The two areas of anomalous molybdenum results coincided with zones of mineralized talus as outlined by Welcome North. (Zones A, C, D) These anomalous molybdenum concentrates are attributable to erosion of molybdenum mineralization within narrow, widely spaced quartz vein in outcrop upslop of the sample sites.

Silver and Copper

With the exception of one value (1.1) from the south facing slope of Cirque 3 the silver results ranged from 0.2 p.p.m. - 0.5 p.p.m. which are background values for the area as determined by Union Carbide's regional sampling program. Copper values ranged from 6 p.p.m. to 138 p.p.m. The sporadic, spotty nature of the results is a function of trace amounts of disseminated chalcopyrite scattered throughout the intrusive. These trace concentrations in association with finely disseminated pyrite were noted during mapping and prospecting of the intrusive.

Lithogeochemistry

Most of the rock samples sent for analysis were known to be mineralized, thus an obvious bias was placed on the rock geochemistry. All of the samples analysed were random grab samples of mineralized talus or vein material from outcrop.

Tungsten

Tungsten values ranged from the lower detection limit of 2 p.p.m.

to values in excess of 2,000 p.p.m. which is the upper limit of Bondar-Clegg's geochemical analytical technique. All of the values in excess of 10 p.p.m. correspond to samples in which mineralization was observed under an ultraviolet lamp prior to shipment. The highest lithogeochemical tungsten values are located within Cirque 2 in the vicinity of Welcome North's Zone A of mineralized talus. All of the values are from talus sampling. No mineralization was found upslope in place.

Molybdenum

Twenty-six of the one hundred and twenty molybdenum values were in excess of 10 p.p.m. All of these were samples of mineralized quartz vein material. Two mineralized zones were outlined both containing widely spaced, narrow, mineralized quartz veins. The first zone of anomalous molybdenum results was centred around Welcome North's Zone A in Cirque 2 while the second was along the north facing slope of Cirque 1 in and around several small hanging cirques. The wide spaced, mineralized veins which are the source of the molybdenum anomalies do not warrant any further follow-up.

Copper and Silver

All three of the silver results that were in excess of 1 p.p.m. were associated with molybdenum bearing quartz veins from the two molybdenum zones previously outlined. The remainder of the lithogeochemical silver values were background values ranging from 0.2 p.p.m. to 0.5 p.p.m.

The copper values are a function of disseminated chalcopyrite

mineralization scattered throughout the intrusive. Chalcopyrite along fractures and vein margins within Cirque 2 around Zone A and on the north facing slope of Cirque 1 account for anomalous copper values in these areas.

Discussion

Mapping and sampling results indicate the granodiorite which hosts the scheelite - molybdenite mineralization on the Aurora property is part of the main body of the Mount Billings Batholith rather than a later phase of the intrusive body. The alignment of hornblende and biotite parallel to the foliation and the intensity of the foliation suggest we are looking at a deep erosional level. The existance of wide spaced, weakly mineralized quartz veins coupled with the presence of chlorite and epidote as the only alteration products tend to indicate the mineralization is associated with localized metal concentrations within the batholith rather than a prophyry system.

Submitted By:

P. J. Doyle
Project Geologist
Union Carbide Exploration Corp.
#930 - 800 W. Pender St.
Vancouver, B. C. V6C 2V6

November 18, 1981

TABLE OF ABBREVIATIONS

ppm	Parts Per Million
Ext.	Extraction
N.T.S.	National Topographic System
W.N.	Welcome North
W or WO_3	Tungsten
Cu	Copper
Ag	Silver
Mo	Molybdenum
HCL	Hydrochloric Acid
HNO_3	Nitric Acid
K-Ar	Potassium - Argon dating
Ma	Millions of year
Au	Gold
Bi	Bismuth
As	Arsenic

REFERENCES

Archibald, D.A., 1981
"Preliminary Report on the K-Ar Geochronology and Petrography of Intrusive Rocks Selwyn Basin N.W.T. and Y.T.", June 1981, Kingston, Ontario, Canada.

Archibald, D.A. and James, D.H., 1981
"Geology of the Aurora Claim Group Watson Lake Mining Division, Yukon Territories, N.T.S. 105H/15" October 1981, Kingston, Ontario and Vancouver, British Columbia, Canada.

Blusson, S.L., 1962 and 1965 et al
"Preliminary Geological Compilation Map Sheet Frances Lake Yukon Territory and District of Mackenzie, N.T.S. 105H, Map 6-1966" Geological Survey of Canada; 1966, Ottawa, Ontario, Canada.

Crawford, W.J.,
"Preliminary Report on the Aurora Claim Group N.T.S. 105H/15", Welcome North Mines Limited, September, 1981, Vancouver, British Columbia, Canada.

STATEMENT OF QUALIFICATIONS

Peter J. Doyle: Graduated from Laurentian University, Sudbury, Ontario with a B. Sc. in Geology in April, 1980

Experience

1978 (Summer) Geological Assistant - Union Carbide - B. P. Minerals, Hornby Bay Uranium Joint Venture Project

1979 (Summer) Geologist - Riocanex - Vulcan Pb - Zn Prospect N. T. S. 105I N. W. T. Geological mapping, supervision of geochemical sampling program, diamond drill supervision.

1980 - Present Project Geologist with Union Carbide working throughout Canada. Activities include diamond drill supervision, stratigraphic correlation, 1 : 2000 scale geological mapping, and supervision of geochemical sampling programs.

November 16, 1981

P. J. Doyle

Project Geologist

APPENDIX 1

APPENDIX 1

STATEMENT OF EXPENDITURES

AURORA 1 - 114 Claims
Watson Lake Mining Division - NTS 105 H 15

Salaries:	Geologist @ $135/man day x 27 man/day	3,645	
	1 Jr. Geologist @ $80/man day x 2 man/day	160	
	Students @ $55/man day x 38 man/day	2,090	5,395.00
Consultant:	D. Archibald @ $125/day x 10 days		1,250.00
Room & Board:	$30/man day x 67 man/day		2,010.00
Helicopter Costs:	August 10th No. 5336 2.5 hrs @ $325		
	3rd " 5326 2.2 "		
	July 24th " 5313 1.2 $350		
	23rd " 5312 1.5 "		
	19th " 5308 1.8 "		
	15th " 5303 2.7 "		
	14th " 5302 2.1 "		
	12th " 4606 3.0 "		
	28th " 4620 3.0 "		
	27th " 4622 1.8 "		
	21.8		
	4.7 hours @ $325/hr 1,527.50		
	17.10 " @ $350/hr 5,985.00		7,512.00
Fuel Costs:	21.8 hours @ $ 50/hr 1,090.00		1,090.00
Geochemistry:	Bondar - Clegg Laboratories, Vancouver		
	Report 121 2199 725.65		
	121 2145 354.01		
	121 2198 125.62		1,205.28
Topographic Map:	Pacific Survey - 1:10,000 Scale		4,700.00
		TOTAL PROGRAM	$23,662.08

C. N. FORSTER

APPENDIX 2

APPENDIX 2

GEOLOGY OF THE AURORA CLAIM GROUP

WATSON LAKE MINING DIVISION

YUKON TERRITORY

NTS 105H/15

by

D. Archibald, Kingston, Ontario

and

D. H. James, Vancouver, B. C.

October 1981

TABLE OF CONTENTS

1. INTRODUCTION

The Aurora claim group (114 claims) staked by Welcome North Mines Ltd. in 1980, was investigated as part of UCEX project 102 in 1981. The property is underlain by a medium- to coarse-grained equigranular granodiorite - the northernmost pluton of the Mt. Billings batholith, Frances Lake Map Sheet (105H). A northwest-trending roof pendant of isoclinally folded metasediments comprising quartzite, phyllite and hornfels, occurs in the pluton. A weak foliation in the granodiorite is cut at a low angle by prominent shears and mylonite zones. Aplitic dykes and some quartz veins and narrow pegmatites have been emplaced subparallel to the foliation.

2. MINERALIZATION SUMMARY

Welcome North outlined four areas of interest designated Zones A and B in Cirque 2 and Zones C and D in Cirque 1. Extensive mapping, prospecting (UV lamping) and sampling, concentrated specifically in the vicinity of Zone A, located no significant scheelite mineralization in outcrop. The results of this study severely restrict the area of potential mineralization on the Aurora property.

3. GEOLOGY

3.1 Aurora Stock

The granodiorite is medium- to coarse-grained, equigranular

and composed of plagioclase, hornblende, biotite, quartz and K-feldspar. The plagioclase is commonly broken or subhedral in outline. Rare euhedral, zoned crystals were seen in some cut specimens. Hornblende, as weakly aligned crystals up to 3-4 mm in length and biotite, are invariably altered to dark green chlorite. K-feldspar fills the interstices. Xenoliths vary in size but are usually well rounded and partly digested. They are often pyritic and rusty weathering.

In thin section, quartz in the granodiorite is very fractured, shows strong undulatory extinction and is outlined by sutured grain boundaries. Commonly, quartz includes plagioclase and forms microveins with sericite in plagioclase (andesine) and K-feldspar (microcline). Plagioclase is zoned and twin lamellae are offset or kinked. Sericite and epidote are present in the cores of plagioclase grains. Kinked biotite is mainly brown with green rims which have been partly replaced by chlorite and opaque minerals. Hornblende occurs in clots of secondary, fine, green biotite and epidote. Sphene, apatite, zircon and allanite are present in small amounts.

3.2 Dykes and Veins

The granodiorite is intruded by aplite dykes and minor quartz porphyries composed of quartz, plagioclase, and K-feldspar. Chloritized biotite is the only mafic mineral. In thin section, ragged strained quartz, microcline and plagioclase grains are set in a matrix

of fine sucrosic quartz and commonly microcline. Biotite is usually altered to chlorite or, chlorite and sericite. Plagioclase is commonly dusted with sericite and epidote. Apatite and opaque minerals including hematite, are the most common accessory minerals.

Some dykes show a brown alteration, especially those in contact with the metasediments. Dykes are usually <10 cm thick and are generally subparallel to the contact with the metasediments, and the structural fabric of the pluton.

Quartz veins occur as fracture fillings, joint-controlled fillings, irregular veinlets, or as anastamosing veins and veinlets in zones typically <1 m thick and widely spaced throughout the intrusion. Most are subparallel to the structural fabric. Contacts are sharp with little or no alteration, although in the vicinity of Welcome North Zone D one vein with 1 cm sericitic margins was found. As seen in thin section, biotite, chlorite and sericite commonly form stringers in the vein. In deformed veins, larger grains of microcline or perthitic K-spar, plagioclase and quartz occur as rounded augen in a matrix of quartz.

Molybdenite is smeared out in and along the margins of some veins (two occurrences only). No scheelite was found in outcrop in these quartz veins although numerous talus samples of scheelite-bearing quartz veins have been reported. A few grains of scheelite were seen in the granodiorite bordering the quartz veins especially near Welcome North Zone A in talus and outcrop.

Pegmatite veins in talus samples contain coarse-grained, subhedral to euhedral, white to tan, zoned scheelite-powellite. The pegmatite veins consisting of quartz-K-feldspar ± chlorite ± pyrite are less than 2 cm thick. None were found in outcrop. In Zone D, molybdenite occurs in coarse K-feldspar-quartz fracture fillings spaced a few metres apart.

Chlorite ± calcite and epidote ± calcite veins and veinlets are ubiquitous.

Narrow zones of quartz ± chlorite ± pyrite stockwork/breccias occur in the northern end of cirque 2. The zones are rarely wider than 0.5 m.

Ellipsoidal lenses of granodiorite microbreccia up to 50 m wide were seen in outcrop at the south contact of the roof pendant. Some of these are K-feldspar-rich whereas others are devoid of K-feldspar.

An altered, brecciated stockwork zone was mapped in cirque 1. The NE zone is approximately 10 m wide. No scheelite was noted at the outcrop. Small, white to buff, unidentified crystals line vugs in the stockwork veins. All breccias appear to have a similar matrix comprising chlorite, sericite, calcite, sphene and some opaque minerals.

Mineralization potential of the breccias and stockwork awaits further assay. Initial results are not encouraging.

3.3 Structure

Foliation, defined by biotite and hornblende, is subparallel

to the metasedimentary roof pendant throughout much of the intrusion. The foliation is cut at a low angle by aplitic dykes, shear and mylonite zones. The mylonite zones are typically <5 cm thick but may be up to several metres thick. These tend to be epidote-rich imparting a green colouration to the outcrop. They are often pyritic and rusty weathering. Typically, small augen of quartz and plagioclase are set in a matrix of quartz, biotite, chlorite, sericite, epidote and sphene. K-feldspar appears to have been removed from some of these zones. Some, but not all, quartz and quartz-K-feldspar veins are sheared and have chloritic margins.

Most joints and irregular fracture surfaces are coated with epidote and chlorite. In Zone A talus samples and some outcrop samples, chlorite covered joint surfaces are more common.

3.4 Mineralization

Mineralization includes:-

i) rare disseminated scheelite in the granodiorite bordering quartz veins

ii) scheelite on curved chloritic fracture surfaces in granodiorite

iii) scheelite in pegmatitic quartz-feldspar veins (in talus only).

The above types are characteristic of Welcome North Zones A and C.

iv) In Zone B, traces of molybdenite, chalcopyrite, pyrite and scheelite occur in and near a sheared leucocratic dyke zone cutting obliquely across the eastern side of cirque 2.

v) In the vicinity of Zone D molybdenite was found in outcrop in several widely-spaced quartz and K-feldspar veins and veinlets.

vi) Chalcopyrite and pyrite coat joint surfaces in the northern ends of cirques 1 and 2.

4. SUMMARY AND CONCLUSIONS

The Aurora stock is an equigranular biotite-hornblende granodiorite and the northernmost pluton of the Mt. Billings batholith. Scheelite, powellite, molybdenite and chalcopyrite occur in narrow, widely-spaced veins, fractures and shear zones within the pluton close to a roof pendant. Detailed mapping and prospecting in the vicinity of the four zones of mineralization outlined by Welcome North Mines Ltd., failed to locate more than trace amounts of these minerals in the zones. Intervening areas and the remainder of the pluton appear to be barren.

APPENDIX 3

APPENDIX 3A

AURORA PROPERTY
LITHOGEOCHEMICAL SAMPLING - ASSAYS
1980
(Union Carbide Exploration Sampling)

Note: 1. All analysis carried out using assay analytical techniques.
2. "G" indicates Greater Than
3. "L" indicates Less Than
4. All Samples talus grab samples

Sample Number	Au (Gold) Ounces Per Ton	Ag (Silver) Ounces Per Ton	Cu %	Mo %	Sn %	WO_3 %	Bi %
23001	L0.002	0.02	L0.01	0.002	L0.01	0.13	L0.01
23002	L0.002	L0.02	L0.01	0.001	L0.01	0.02	L0.01
23003	L0.002	L0.02	L0.01	0.002	L0.01	0.12	L0.01
23004	L0.002	0.02	L0.01	0.001	L0.01	0.04	L0.01
23005	L0.002	0.11	L0.01	0.002	L0.01	0.03	L0.01
23006	L0.002	0.02	L0.01	0.001	L0.01	0.02	L0.01
23007	L0.002	0.02	L0.01	0.002	L0.01	0.54	L0.01
23008	L0.002	0.02	L0.01	0.007	L0.01	0.02	L0.01
23009	L0.002	0.41	L0.01	0.007	L0.01	0.38	L0.01
23010	L0.002	0.05	L0.01	0.004	L0.01	0.10	L0.01
23011	L0.002	L0.02	L0.01	0.010	L0.01	0.02	L0.01

APPENDIX 3B

AURORA CLAIMS - WELCOME NORTH

GRAB SAMPLE ASSAY RESULTS

SAMPLE AREA "A"

Sample Designation		Sample Number	Sample Interval	WO_3 %	MOS_2 %
Aur.A0	*HG	3487	30m	0.100	0.025
	LG	3488	30m	0.015	
	R	3489	30m	0.011	
Aur.A1	HG	3490	30m	0.051	0.009
	LG	3491	30m	0.365	
	R	3492	30m	0.021	
Aur.A2	HG	3493	30m	0.249	0.003
	LG	3494	30m	0.023	0.005
	R	3495	30m	0.052	
Aur.A3	HG	3496	30m	0.163	0.007
	LG	3497	30m	0.025	
	R	3498	30m	0.044	
Aur.A4	HG	3499	30m	0.151	0.003
	LG	3500	30m	0.017	0.002
	R	28101	30m	0.020	0.003
Aur.A5	HG	28102	30m	1.513	0.027
	LG	28103	30m	0.138	
	R	28104	30m	0.300	
Aur.A6	HG	28105	30m	0.245	0.037
	LG	28106	30m	0.017	
	R	28107	30m	0.022	
Aur A7	HG	28108	30m	0.056	0.002
	LG	28109	30m	0.025	
	R	28110	30m	0.022	
Aur A8	HG	28111	30m	0.220	0.001
	LG	28112	30m	0.035	0.002
	R	28113	30m	0.037	
Aur A9	HG	28114	30m	0.005	0.001
	LG	28115	30m	0.012	
	R	28116	30m	0.008	
Aur A10	HG	28117	30m	0.126	0.001
	LG	28118	30m	0.025	
	R	28119	30m	0.214	
Aur A11	HG	28120	30m	0.182	0.001
	LG	28121	30m	0.163	
	R	28122	30m	0.006	
Aur A12	HG	28123	30m	1.850	0.039
	LG	28124	30m	0.020	0.002
	R	28125	30m	0.037	0.002

SAMPLE AREA "B"

Aur.1	HG	3444	30m	0.06	
	LG	3445	30m	0.01	
	R	3446	30m	0.02	
Aur 2	HG	3447	30m	0.02	
	LG	3448	30m	0.01	
	R	3449	30m	0.01	
Aur 3	HG	3450	30m	0.01	
	LG	3451	30m	0.02	
	R	3452	30m	0.02	
Aur 4	HG	3453	30m	0.01	
	LG	3454	30m	0.01	
	R	3455	30m	0.01	
Aur 5	HG	3456	30m	0.28	
	LG	3457	30m	0.02	
	R	3458	30m	0.05	
Aur 6	HG	3459	30m	0.02	
	LG	3460	30m	0.01	
	R	3461	30m	0.01	
Aur 7	HG	3462	30m	0.01	
	LG	3463	30m	0.01	
	R	3464	30m	0.01	
Aur 8	HG	3465	30m	0.01	
	LG	3466	30m	0.01	
	R	3467	30m	0.04	
Aur 9	HG	3468	30m	0.11	
	LG	3469	30m	0.04	
	R	3470	30m	0.10	
Aur 10	HG	3471	30m	0.04	
	LG	3472	30m	0.02	
	R	3473	30m	0.02	
Aur 11	HG	3475	30m	0.592	0.006
	LG	3576	30m	0.050	
	R	3577	30m	0.005	
Aur 12	HG	3478	30m	0.037	0.002
	LG	3479	30m	0.069	
	R	3480	30m	0.050	
Aur 13	HG	3481	30m	0.030	0.037
	LG	3482	30m	0.012	
	R	3483	30m	0.100	
Aur 14	HG	3484	30m	0.025	0.030
	LG	3485	30m	0.017	
	R	3486	30m	0.132	

SAMPLE AREA "C"

Aur C1	HG	28132	30m	0.050	0.330
	LG	28133	30m	0.044	
	R	28134	30m	0.050	

SAMPLE AREA 'D'

Aur B1	HG	28126	30m	0.189	0.464
	LG	28127	30m	0.015	
	R	28128	30m	0.021	
Aur B2	HG	28129	30m	0.226	0.010
	LG	28130	30m	0.075	
	R	28131	30m	0.255	

*HG High Grade

LG Low Grade

R Random

APPENDIX 4

AURORA PROPERTY
LITHOGEOCHEMICAL SAMPLING
1981

NOTE: 1. All Analysis carried out using geochemical analytical techniques.
2. "N.D." indicates No Determination.
3. "G" indicates Greater Than
4. "L" indicates Less Than

SAMPLE NUMBER	Cu (ppm)	Mo (ppm)	WO_3 (ppm)	Ag (ppm)	Au (ppb)	Bi (ppm)	As (ppm)
81A01K	4	2	2				
02K	2	2	2				
03K	6	2	3				
05K	2	3	2				
06K	2	2	2				
08K	28	11	60				
09K	22	4	2				
10K	3	1	8				
12KT	3	1	2				
13KT	6	1	2				
81AA2-4	87	3	48	0.4			
2-7	4	ND	2	0.2			
12-2	6	3	5	0.2			
15-1	3	1	4	0.2			
17-2	3	2	3	0.2			
17-4	32	ND	3	0.2			
18-IT	6	4	2	0.6			
20-2	48	ND	6	0.2			
21/22-IT	4	4	3	0.2			
21/22-3T	25	1	5	0.2			
22-1	10	244	6	0.2			
22-3	2	95	6	0.2			
22-4	2	90	4	0.2			
22-5	3	46	3	0.2			
22-11	5	4350	4	0.2			
23-1	2	3	5				
81AAC3-2	4	41	970	0.2			
3-3	3	16	90	0.2			
3-6	6	2	3	0.2			
81AB3-1	2	1	3				
81ACC-1	12	8	2	0.2			
-3	3	ND	2	0.2			
81ACG-1	4	26	3	0.2	5	ND	800
81ACJC-1T	4	2	4				
2T	240	1	3				
3T	1120	18	4				
5	84	4	3				

AURORA PROPERTY
LITHOGEOCHEMICAL SAMPLING
1981

SAMPLE NUMBER	Cu (ppm)	Mo (ppm)	WO_3 (ppm)	Ag (ppm)	Au (ppb)	Bi (ppm)	As (ppm)
81ACJC-8	34	2	4				
9T	4	2	3				
10T	30	3	3				
11T	68	37	675				
13T	6	4	4				
14T	4	2	3				
15T-1	4	14	10				
-2	12	5	13				
-3	38	25	3				
16T	6	1	3				
17T	36	3	470				
18T	4	1	8				
19T	4	2	450				
20T	6	2	5				
21T	16	2	3				
22T	2	1	30				
23T	2	1	9				
24T	4	2	100				
25T	2	20	G2000				
27T	4	2	38				
28T	30	2	11				
29T	2	1	6				
30T	6	2	3				
31T-1	20	9	450				
-2	30	27	30				
32T	4	8	G2000				
33T	172	20	G2000				
35T	9	2	6	0.2			
1 36T	218	3	130	0.4			
2 36T	38	3	14				
37T	4	8	1125				
38T	32	11	7				
81AD1-1T	5	1	3				
2T	5	2	5				
3T	40	1	63				
4T	70	3	450				
5T	10	1	11				
6T	6	2	5				
7T	61	27	21				
8T	5	1	5				
9T	560	2	360				

AURORA PROPERTY
LITHOGEOCHEMICAL SAMPLING
1981

SAMPLE NUMBER	Cu (ppm)	Mo (ppm)	WO_3 (ppm)	Ag (ppm)	Au (ppb)	Bi (ppm)	As (ppm)
81AD2-IT	5	ND	3				
2T	3	ND	3				
3T	ND	12	3				
4T	17	13	145				
5T	318	4	720				
6T	ND	1	4				
81AJ1-2	33	5	6	0.2			
2-2	12	1	2	0.2			
3-1	9	6	3	0.2			
-2	1	ND	4	0.2			
6-2	2	6	3	0.2			
8-2	4	1	2	0.2			
10-2	3	12	2	0.2			
14-2	11	1	3	0.2			
17-1	1	4	2	0.2			
-2	79	24	3	0.2			
21-1	4	5	4	0.5			
21-2	9	8	5	1.4			
81AJJR-1	695	2450	105	5.9			
2T	4	20	3	0.3			
3	560	2180	25	1.3			
81AM3-1	240	9	5				
4-1	50	1	3				
81AT1-1	8	3	40				
2-1	16	1	10				
3-1	116	2	20				
4-1	8	1	3				
6-IT	4	5	2				
8-1	8	4	5				
9-1	20	2	3				
10-IT	42	131	G2000				
11-1	130	21	13				
13-IT	2	8	450				
14-IT	98	7	540				
15-IT	6	1	180				

APPENDIX 4

AURORA PROPERTY
SOIL AND SILT GEOCHEMISTRY
1981

Note : 1. All Analysis carried out using geochemical analytical techniques
2. "G" indicates Greater Than
3. "L" indicates Less Than

Sample Number	Cu (ppm)	Mo (ppm)	WO_3 (ppm)	Ag (ppm)	Pan Count (grains scheelite)
81A0001	24	ND	2	-	-
02	20	ND	2	-	-
03	83	ND	3	-	-
04	20	ND	2	-	-
05	48	2	2	-	-
06	50	ND	2	-	-
07	36	ND	2	-	-
08	40	ND	2	-	-
09	40	ND	2	-	-
10	-	-	-	-	50
11	45	2	2	-	-
12					
13	38	ND	2	-	-
14	32	ND	3	-	-
15	38	ND	2	-	-
16	-	-	-	-	50
17	60	2	3	-	-
18	20	ND	2	-	-
19	39	ND	3	-	-
20	51	ND	3	-	-
21	41	ND	2	-	-
22	-	-	-	-	20
23	52	ND	3	-	-
24	40	1	2	-	-
25	40	ND	2	-	-
26	-	-	-	-	20
27	43	ND	3	-	-
28	40	ND	2	-	-
29	40	ND	2	-	-
30	-	-	-	-	10
31	34	ND	2	-	-
32	28	1	2	-	-
33	40	1	2	-	-

AURORA PROPERTY
SOIL AND SILT GEOCHEMISTRY
1981

Note : 1. All Analysis carried out using geochemical analytical techniques
2. "G" indicates Greater Than
3. "L" indicates Less Than

Sample Number	Cu (ppm)	Mo (ppm)	WO_3 (ppm)	Ag (ppm)	Pan Count (grains scheelite)
81D0034	14	1	3	-	-
35	25	1	4	-	-
36	22	2	4	-	-
37	28	2	4	-	-
38	30	2	5	-	-
39	8	3	4	-	-
40	35	4	2	-	-
41	35	7	5	-	-
42	22	11	6	-	-
43	28	8	2	-	-
44	71	14	3	-	-
45	65	18	3	-	-
46	45	12	2	-	-
47	26	9	3	-	-
48	138	16	3	-	-
49	34	2	3	-	-
50	55	6	3	-	-
51	38	9	3	-	-
52	40	11	3	-	-
53	40	7	3	-	-
54	68	3	3	-	-
55	24	2	3	-	-
56	60	15	3	-	-
57	55	12	3	-	-
58	50	8	2	-	-
59	20	2	3	-	-
60	64	9	2	-	-
61	15	1	3	-	-
62	38	5	3	-	-
63	10	ND	2	-	-
64	21	ND	2	-	-
65	38	3	2	-	-
66	20	4	2	-	-
67	46	3	2	-	-
81M0001	18	4	3	0.4	-
02	18	2	4	0.4	-
03	9	2	4	0.3	-
04	9	2	3	0.3	-
05	21	2	4	1.1	-
06	6	1	3	0.2	-

AURORA PROPERTY
SOIL AND SILT GEOCHEMISTRY
1981

Note : 1. All Analysis carried out using Geochemical analytical techniques
2. "G" indicates Greater Than
3. "L" indicates Less Than

Sample Number	Cu (ppm)	Mo (ppm)	WO_3 (ppm)	Ag (ppm)	Pan Count (grains scheelite)
81X0001	-	-	-	-	L5
02	16	4	9	0.4	-
03	-	-	-	-	L5
04	60	12	24	0.3	-
05	-	-	-	-	L5
06	-	-	-	-	5
07	11	2	5	0.2	-
08	-	-	-	-	L5
09	-	-	-	-	L5
10	-	-	-	-	L5
11	18	12	25	0.2	-
12	-	-	-	-	L5
13	7	1	2	0.2	-
14	-	-	-	-	L5
15	18	8	25	0.2	-
16	-	-	-	-	20
17	15	8	40	0.2	-
18	-	-	-	-	30
19	-	-	-	-	L10
20	11	5	6	0.2	-
21	-	-	-	-	2
22	24	13	55	0.2	-
23	-	-	-	-	4
24	30	5	160	0.2	-
25	-	-	-	-	100
26	22	8	200	0.2	-
27	-	-	-	-	30
28	14	5	190	0.2	-
29	-	-	-	-	70
30	29	15	225	0.2	-
31	-	-	-	-	100
32	12	8	55	0.2	-
33	-	-	-	-	50
34	-	-	-	-	6
35	-	-	-	-	20
36	-	-	-	-	20
37	-	-	-	-	20
38	29	10	40	0.2	-
39	-	-	-	-	50
40	38	6	30	0.2	-

AURORA PROPERTY
SOIL AND SILT GEOCHEMISTRY
1981

Note : 1. All Analysis carried out using geochemical analytical techniques
2. "G" indicates Greater Than
3. "L" indicates Less Than

Sample Number	Cu (ppm)	Mo (ppm)	WO_3 (ppm)	Ag (ppm)	Pan Count (grains scheelite)
81X004i	-	-	-	-	50
42	16	10	28	0.3	-
43	-	-	-	-	50
44	33	6	40	0.2	-
45	-	-	-	-	50
46	20	14	150	0.2	-
47	-	-	-	-	G200
48	21	20	45	0.2	-
49	-	-	-	-	100
50	17	8	48	0.2	-
51	-	-	-	-	75
52	Number Skipped				
53	-	-	-	-	L5
54	12	7	60	0.2	-
55	-	-	-	-	15
56	22	13	35	0.2	-
57	-	-	-	-	10
58	37	4	30	0.2	-
59	15	1	3	0.2	-
60	-	-	-	-	5
61	54	3	2	0.2	-
62	-	-	-	-	3
63	80	2	3	0.2	-
64	-	-	-	-	3
65	66	2	3	0.2	-
66	20	ND	5	0.2	-
67	-	-	-	-	15
68	125	5	6	0.2	-
69	-	-	-	-	20
70	107	5	5	0.2	-
71	-	-	-	-	5
72	22	9	21	0.2	-
73	23	4	14	0.3	-
74	-	-	-	-	20
75	25	5	4	0.2	-

AURORA PROPERTY
SOIL AND SILT GEOCHEMISTRY
1981

Note : 1. All Analysis carried out using geochemical analytical techniques
2. "G" indicates Greater Than
3. "L" indicates Less Than

Sample Number	Cu (ppm)	Mo (ppm)	WO_3 (ppm)	Ag (ppm)	Pan Count (grains scheelite)
81X0076	14	3	12	0.3	-
77	-	-	-	-	10
78	9	2	3	0.2	-
79	-	-	-	-	5
80	17	5	5	0.2	-
81	14	5	5	0.2	-
82	-	-	-	-	5
83	13	5	5	0.2	-
84	-	-	-	-	3
85	21	7	4	0.2	-
86	71	3	4	0.2	-
87	-	-	-	-	3
88	29	4	4	0.2	-
89	59	5	38	0.2	-
90	12	1	40	0.2	-
91	-	-	-	-	150
92	15	22	5	0.2	-
81Y0001	16	22	48	0.2	-
02	-	-	-	-	20
03	26	8	30	0.2	-
04	-	-	-	-	2
05	31	13	60	0.2	-
06	-	-	-	-	15
07	34	1	5	0.2	-
08	-	-	-	-	10
09	7	4	2	0.2	-
10	-	-	-	-	L5
11	9	ND	2	0.2	-
12	-	-	-	-	L5
13	9	1	3	0.2	-
14	-	-	-	-	L5
15	105	4	3	0.5	-
16	-	-	-	-	L5

A P P E N D I X 5

Geochemical Analytical Parameters:

Element	Lower Detection Limit	Extraction Agent	Method	Sample Fraction	Sample Preparation
Rock Samples					
W	2 ppm	Carbonate Sinter	Colourimetric	-100 mesh	Crush,Pulverize
Mo	1 ppm	HNO_3-HCL Hot Ext	Atomic Absorption	-100 mesh	" "
Cu	1ppm	HNO_3-HCL Hot Ext	Atomic Absorption	-100 mesh	" "
Ag	1 ppm	HNO_3-HCL Hot Ext	Atomic Absorption	-100 mesh	" "
Soil Silts					
W	2 ppm	Carbonate Sinter	Colourimetric	-80 mesh	Sieve to -80 mesh
Mo	1 ppm	HNO_3-HCL Hot Ext	Atomic Absorption	-	" "
Cu	1 ppm	HNO_3-HCL Hot Ext	Atomic Absorption	-	" "
Ag	1 ppm	HNO_3-HCL Hot Ext.	Atomic Absorption	-	" "

STATEMENT OF EXPENDITURES

AURORA 1 - 114 Claims
Watson Lake Mining Division - NTS 105 H 15

Salaries:	Geologist @ $135/man day x 27 man/day	3,645	
	1 Jr. Geologist @ $80/man day x 2 man/day	160	
	Students @ $55/man day x 38 man/day	2,090	5,395.00
Consultant:	D. Archibald @ $125/day x 10 days		1,250.00
Room & Board:	$30/man day x 67 man/day		2,010.00
Helicopter Costs:	August 10th No. 5336 2.5 hrs @ $325		
	3rd " 5326 2.2 "		
	July 24th " 5313 1.2 $350		
	23rd " 5312 1.5 "		
	19th " 5308 1.8 "		
	15th " 5303 2.7 "		
	14th " 5302 2.1 "		
	12th " 4606 3.0 "		
	28th " 4620 3.0 "		
	27th " 4622 1.8 "		
	21.8		
	4.7 hours @ $325/hr 1,527.50		
	17.10 " @ $350/hr 5,985.00		7,512.00
Fuel Costs:	21.8 hours @ $ 50/hr 1,090.00		1,090.00
Geochemistry:	Bondar - Clegg Laboratories, Vancouver		
	Report 121 2199 725.65		
	121 2145 354.01		
	121 2198 125.62		1,205.28
Topographic Map:	Pacific Survey - 1:10,000 Scale		4,700.00
		TOTAL PROGRAM	$23,662.08

090890

C. N. FORSTER

Distribution of Acid Intrusions

Yukon Territory

CANADA

Intrusive Outline

Aurora Intrusive And Surrounding Intrusives Have Been Shaded

Taken From: 1975

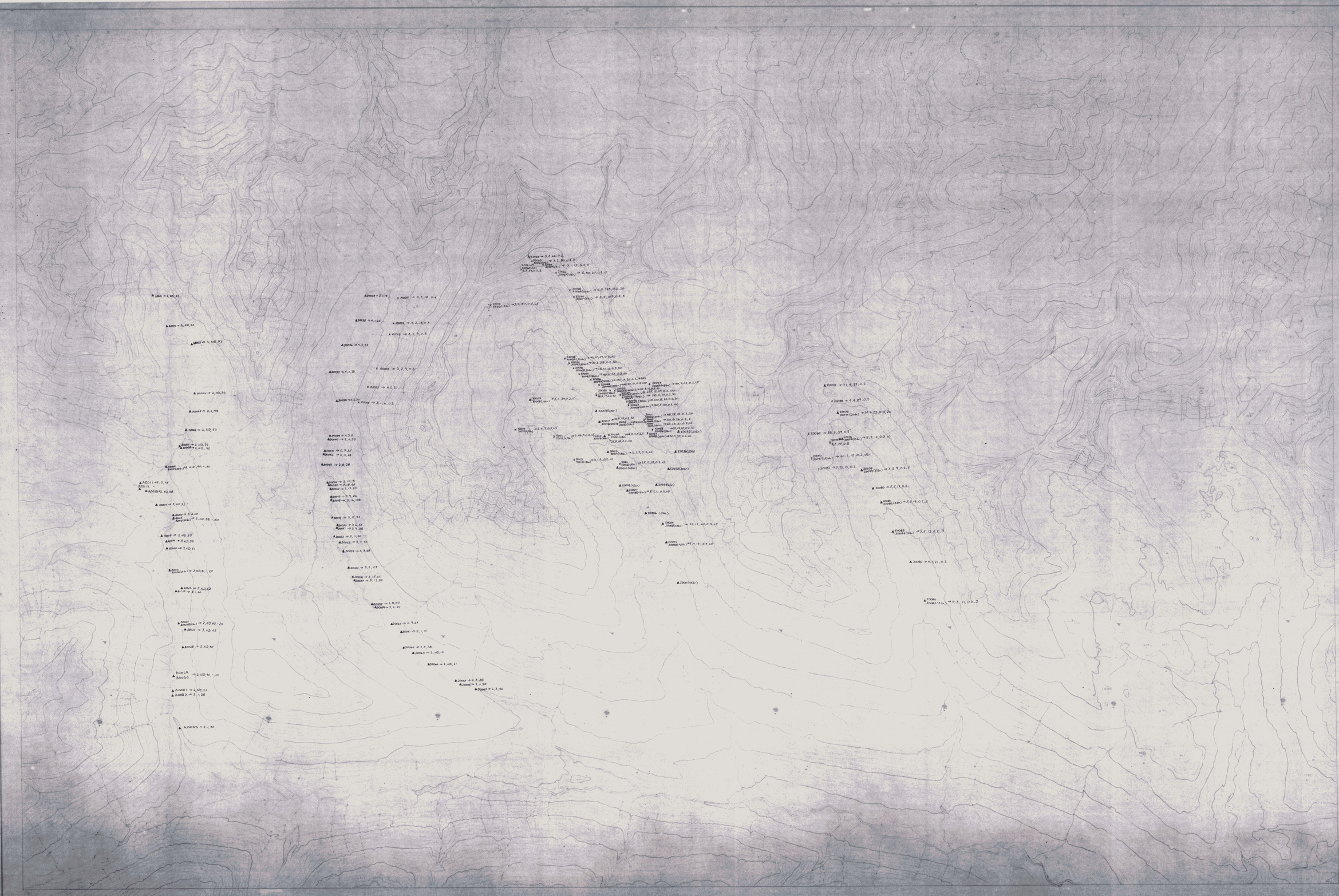
Union Carbide - Yukon Territory Report

090890

UNION CARBIDE EXPLORATION CORPORATION

REGIONAL GEOLOGY
AURORA PROJECT

COMPILED BY:		MAP NO:
DRAFTED BY:	DATE: NOV. 81	SCALE:
DISPOSITION:		NTS:
PROJECT NO:	REPORT NO:	Figure 6



Legend

x Soil Sample Site

▲ Stream Sediment and/or Pan Concentrate

Gr.	Grains of Scheelite
N.D.	No Determination
L	Less Than
G	Greater Than
W	Tungsten — Value in Parts per Million (PPM)
Mo	Molybdenum — Value in Parts per Million (PPM)
Cu	Copper — Value in Parts per Million (PPM)
Ag	Silver — Value in Parts per Million (PPM)
P.C.	Pan Concentrate

SAMPLE FORMAT

Symbol — Z - 0000 ⟶ W, Mo, Cu, Ag, P.C.

Series

Number

(5 Gr.) Pan Concentrate Grain Count

NOTE: Analysis done by standard Geochemical analytical techniques by Bondar-Clegg, Vancouver.

UNION CARBIDE — UNION CARBIDE EXPLORATION CORPORATION

Geochem-Silts + Soils
Aurora

COMPILED BY:		MAP NO: Eleven 7
DRAWN BY:	DATE: July, 1981	SCALE 1:10,000
APPROVED BY:		A.T.S. 8764-15
PROJECT NO. 102	REPORT NO.	

Legend

- □ Rock Sample Site
- ■ Rock Sample Site - Sample Sent for Analysis

N.D.	No Determination	
L	Less Than	
G	Greater Than	
W	Tungsten	Value in Parts per Million (PPM)
Mo	Molybdenum	Value in Parts per Million (PPM)
Cu	Copper	Value in Parts per Million (PPM)
Ag	Silver	Value in Parts per Million (PPM)
Au	Gold	Value in Parts per Billion (PPB)
Bi	Bismuth	Value in Parts per Million (PPM)

SAMPLE FORMAT

Symbol ■ 81 - A - A - 1 - 1 or (1 or 4T) → W, Mo, Cu, Ag, Au, Bi

(1981; Aurora Property; Sampler; Station #; Outcrop Sample #; Talus Sample; Results)

Samplers:

- A - D. Archibald
- B - J. Bronson
- CJC - C. Copping
- D - P. Doyle
- H - K. Harrap
- J - D. James
- M - C. Riest, A. Guichon
- AC - C. Copping, A. Guichon
- CC - C. Copping, C. Riest
- JJR - D. Archibald, D. H. James

NOTE: All analysis done by Bondar-Clegg Laboratories using standard Geochemical analytical techniques.

* SAMPLE RESULTS AS PER SQUARED PORTION OF MAP:

A - 05K	2, 3, 2
A - 06K	2, 2, 2
A - 08K	60,11,28
A - 09K	2, 4, 22
A - 10K	8, 1, 3
A - 12KT	2, 1, 3
A - 13KT	2, 1, 6

CJC - 9	3, 2, 4	CJC - 23	9, 1, 2
CJC - 10	3, 3, 30	CJC - 24	100, 2, 4
CJC - 11	675, 37, 68	CJC - 25	G2000, 20, 2
CJC - 13	4, 4, 6	CJC - 27	38, 2, 4
CJC - 14	3, 2, 4	CJC - 28	11, 2 30
CJC - 15-1	10, 14, 4	CJC - 29	6, 1, 2
CJC - 15-2	13, 5, 12	CJC - 30	3, 2, 6
CJC - 15-3	3, 25, 38	CJC - 31-1	450, 9, 20
CJC - 16	3, 1, 6	CJC - 31-2	30, 27, 30
CJC - 17	470, 3, 36	CJC - 32	G2000, 8, 4
CJC - 18	8, 1, 4	CJC - 33	G2000, 20, 172
CJC - 19	450, 2, 4	CJC - 35 2	14, 3, 38
CJC - 20	5, 2, 6	CJC - 37	1125, 8, 4
CJC - 21	3, 2, 16	CJC - 38	7, 11, 32
CJC - 22	30, 1, 2		

D - 2 - 4T	145, 13, 17
D - 2 - 5T	720, 4, 318

UNION CARBIDE

UNION CARBIDE EXPLORATION CORPORATION

Aurora
Rock Sample Locations & Results

COMPILED BY:		MAP NO: FIGURE 8
DRAFTED BY:	DATE: Nov. 1981	SCALE: 1:10,000
DISPOSITION:		NTS: 105H-15
PROJECT NO: 102	REPORT NO:	

LEGEND

Traverse Route	
Zone A	Welcome North Grab Sampling Zones (1980)
Snowfield Boundary	
Campsite	
Traverse Index	A-DA-5

A-DA-5: Aurora Property – Sampler – Traverse Number

UNION CARBIDE EXPLORATION CORPORATION

AURORA TRAVERSE MAP

COMPILED BY: PJD		MAP NO: FIGURE 9
DRAFTED BY:	DATE: NOV. 81	SCALE: 1:10,000
DISPOSITION:		NTS: 105-h/15
PROJECT NO: 102	REPORT NO:	

SNOWFIELD

CIRQUE no.3

CIRQUE no.2

CIRQUE no.1

Zone A

Zone B

Zone C

Zone D

FLY CAMP

LEGEND

SYMBOLS

SAMPLE STATION

SAMPLE STATION FORMAT:

1981	Outcrop / Sampler	Sample Number
81 - A - A -	I	- 1 - ST
	Aurora Property	District Number	Talus / Sample Number

SAMPLERS:
A-G.D. Archibald
B-C. Bresson
C-C. Clapping
H-K. Hannigs
J-J.P.N. Jones

(99.0) SCINTILLOMETER READING (C.P.S.) COUNTS PER SECOND

TRACE MOLYBDENITE, POWELLITE

TRACE SCHEELITE

Py PYRITE

RUSTY (GOSSAN) ZONE

35° BEDDING - STRIKE, DIP

45° FOLIATION

JOINTS

FAULT ZONE

Q - Quartz vein
A - Aplite
Bx - Breccia zone

AREA of GOOD OUTCROP EXPOSURE

SMALL OUTCROP

ZONES A, B, C, D - ZONES of WELCOME NORTH LITHOGEOCHEMICAL TALUS GRAB SAMPLING (1980)

ASSUMED GEOLOGICAL CONTACT

OBSERVED GEOLOGICAL CONTACT

SNOWFIELD BOUNDARY

GEOLOGICAL UNITS

Kgd BIOTITE-HORNBLENDE GRANODIORITE

Mkgd MICROBRECCIA WITHIN GRANODIORITE

METASEDIMENTS-QUARTZITES, PHYLLITES, HORNFELS

UNION CARBIDE — UNION CARBIDE EXPLORATION CORPORATION

AURORA PROPERTY GEOLOGY

COMPILED BY: D.H. J.DAUT		MAP NO: FIGURE 10	
DRAFTED BY: J.P.P.	DATE: JULY 1981	SCALE: 1:10,000	
DISPOSITION:		N.T.S.: 105 H 15	
PROJECT NO: 102	REPORT NO:		