INDIAN and NORTHERN AFFAIRS

TRANSMITTAL FORM

M R File No _____
S.M.R File No _____
Date Fwd 30NOV81

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:

Office of the Regional Manager Mineral Rights
DEC 1 1981
WHITEHO
Yukon Territory

☐ DIAMOND DRILL LOGS.
Claims: Claim sheet no.

☒ QUARTZ ASSESSMENT REPORT
Claims: RENA 1-36. Claim sheet no. 105-H-14

Type of report: Geology Geochemistry

Submitted by: UNION CARBIDE

Cls. work performed on: RENA 1-36.

$ Req. for ren. application
~~$ 30,634.57~~
18,000.00

D M Good
Signature

REPLY ACTION Date Ret.

090889

Signature

GEOLOGY OF THE RENA CLAIM GROUP

WATSON LAKE MINING DIVISION

YUKON TERRITORY

NTS 105H/14

by

D. Archibald, Kingston, Ontario

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

October 1981

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1. INTRODUCTION

1.1 General

The RENA molybdenite-scheelite occurrences were discovered and staked by Welcome North Mines Ltd. in 1980. This report is based on field work on the RENA claim group (36 claims) undertaken for UCEX project 102 between 25 July and 7 August, 1981. In addition to geological mapping, a representative suite of slabbed samples was stained for K-feldspar. No petrographic work has been done.

About 25 percent of the property is covered by glaciers and permanent snow fields. Access is further limited by rugged and formidable terrain. However, the ten occurrences noted by Welcome North were examined and sampled in detail. These showings and additional occurrences are plotted on the accompanying geological map.

1.2 Geological Summary

The Rena quartz monzonite is an elliptical intrusion about 5 km long and about 3 km wide within the Mt. Billings batholith in the north-central part of the Frances Lake map sheet (105-H). The long axis of the intrusion and prominent joint and vein systems have a NW-SE orientation.

Field relations suggest the following geological history for this area:

1) Emplacement of the granodioritic Mt. Billings batholith into

Lower Palaeozoic and older sediments prior to mid-Cretaceous time resulting in the formation of small scheelite-bearing skarns.

II) At some unknown later time a series of events was initiated with the emplacement of a composite quartz monzonite pluton, apparently preceded by a melanocratic dyke swarm. The "polka dot breccia" is probably related to one of the earlier intrusive episodes, perhaps with the formation of the white weathering marginal phase and potassic flooding of the granodiorite in the contact area. This was followed by a period of cooling.

III) Emplacement of quartz porphyry, or quartz porphyries, probably accompanied by aplites and pegmatites. The grey-weathering aplites may have been precursors to the emplacement of the quartz porphyry suite.

IV) At about this time pervasive alteration, early silicification, brecciation, and development of chlorite stockwork occurred.

V) Formation of quartz-magnetite veins, with or without, molybdenite and minor scheelite. Some of these veins have K-spar rich margins.

VI) Formation of quartz-pyrite-sericite veins, with or without molybdenite and scheelite.

VII) Late stage movement characterized by jointing (cooling collapse) and left-lateral faulting.

2. MOUNT BILLINGS GRANODIORITE

In this area, the Mt. Billings granodiorite is a medium-

grained equigranular, white weathering rock composed of quartz, plagioclase and chloritized biotite. Staining slabs for K-feldspar reveals somewhat rounded quartz grains, and subhedral laths of plagioclase in a mesostasis of K-feldspar. The K-feldspar content of the granodiorite increases towards the contact with quartz monzonite - over a distance of several hundred metres.

Small melanocratic dykes cut the granodiorite with sharp contacts that are oriented roughly parallel to the margin of the quartz monzonite pluton. The dykes are dark, fine-grained, have an ophitic texture, and small phenocrysts of quartz and feldspar. These dykes predate shearing.

The contact between quartz monzonite and granodiorite varies from place to place and may be gradational, brecciated or sheared and faulted. Aplites concentrated in the contact zone are intrusive into both quartz monzonite and granodiorite. There is abundant chlorite smeared on joint and shear surfaces in this region. Chlorite and epidote veins are also prolific.

3. RENA QUARTZ MONZONITE

Most of the area of interest is underlain by medium- to coarse-grained, white to pink weathering quartz monzonite. Mineral composition is quartz, K-feldspar, plagioclase and biotite. Biotite content is variable throughout but is typically less than 5 percent. Quartz occurs as rounded to irregular grain aggregates. K-feldspar

is generally subhedral to anhedral in irregular aggregates, and is typically pink and pink weathering. Plagioclase is generally subhedral and varies from medium- to very coarse-grained distinct white weathering crystals. Some of the pink weathering feldspar appears to be plagioclase although typically it is K-feldspar.

In areas of intense quartz veining, the quartz grains are enlarged and rounded by overgrowths giving the rock the general appearance of a quartz porphyry. This type of rock is included with the quartz monzonite because the matrix is coarse-grained and equigranular.

The white weathering quartz monzonite is finer grained than the pink weathering quartz monzonite. It contains more biotite and may in fact be potassic-altered granodiorite in the vicinity of the contact in a zone that varies in width from zero to more than 200 m. The "potash-rich intrusive" outlined by Welcome North includes this unit.

On the outcrop scale, there is clear evidence for more than one intrusive episode involving quartz monzonite. Sharp intrusive contacts exist between the medium-grained and very coarse-grained equigranular quartz monzonites, as well as xenoliths of quartz diorite with ophitic texture and composition similar to the melanocratic dykes mentioned earlier. Outcrops of densely packed, well rounded xenoliths about 20-30 cm in diameter have been referred to as "polka dot breccia". It is found wherever there is coarse-grained equigranular quartz monzonite and is especially abundant in the northwestern part of the claim block where it forms an arcuate zone about 1 km long and 300 m wide.

4. QUARTZ PORPHYRY, APLITE AND PEGMATITE SUITE

Quartz porphyries, aplites and pegmatites commonly occur together or in close association with one another. Such a complex (<1.5 km diameter) underlies the central part of the area. Contacts within and marginal to the suite are often indistinct and commonly gradational. These areas are characterized by prolific manganese oxide staining, especially in the vicinity of showing 5.

The quartz porphyries are typically leucocratic with quartz and usually lesser amounts of feldspar phenocrysts. The quartz is well-rounded and up to 1 cm in diameter although a diameter of 2-4 mm is more common. Plagioclase phenocrysts are 2-4 mm in cross section. The matrix consists of quartz, K-feldspar, plagioclase and commonly biotite. The sucrosic matrix is fine- to medium-grained and is characteristically pink weathering.

The aplites are fine- to medium-grained and are typically finer grained than the porphyries but appear to be compositionally the same. Most are pink weathering.

Pegmatites have very coarse-grained pink K-feldspar, white quartz and muscovite (replacing K-feldspar). Some are asymmetrically zoned through coarse-grained quartz/K-feldspar to a quartz-rich core. They occur as large pods to small stringers usually surrounded by pink weathering aplite. Accessories are rare fluorite and wolframite(?).

A very fine-grained, grey-weathering aplite displays well

defined intrusive contacts and appears to be an earlier aplitic phase related to the porphyry suite. These dykes are typically less than 5 cm thick and not particularly common, and occur more frequently near the margins of the quartz monzonite intrusive.

5. VEINS AND MINERALIZATION

Molybdenum, scheelite, powellite, malachite and possibly wolframite occur on the RENA property. Very little disseminated molybdenum mineralization was noted. At the present level of erosion the mineralization is vein related. Basically the veins can be subdivided into five types:-

Type 1 a) Quartz

1 b) Quartz-pyrite-sericite $\pm$ molybdenite $\pm$ scheelite

1 c) Quartz-chlorite $\pm$ epidote (commonly brecciated or as ladder stockworks)

Type 11 a) Magnetite $\pm$ quartz (+ breccia and ladder stockworks)

11 b) Magnetite-quartz $\pm$ sericite $\pm$ molybdenite $\pm$ pyrite $\pm$ scheelite.

Type I a) Quartz

Occurring as thin veins, usually 1 cm thick with a maximum of probably 10 cm, these are accompanied by some quartz flooding particularly in the vicinity of closely spaced veinlets. Alteration is usually a weak development of sericite disseminated in the wall rock near the veins.

In many places two or more sets have been superimposed forming a quartz vein stockwork.

Type I b) Quartz-pyrite-sericite ± molybdenite ± scheelite

These veins are commonly zoned with a distinct rusty weathering selvage several cms thick of fine- to coarse-grained sericite. Sericite rosettes are associated with the coarser grained alteration which also frequently has some molybdenite. Molybdenite occurs along the margins of quartz veins whilst scheelite is generally restricted to the sericitic selvage. Some veins comprise massive quartz with pyrite, molybdenite and secondary ferrimolybdate. These may be up to 15 cm wide (float below showing 8). This type of vein characterizes showings 1, 2, 7, 8, 9 and 10.

Type I c) Quartz-chlorite ± epidote

These usually occur as breccias or ladder stockworks in the central part of the map area. The breccias are up to 1 m wide but are normally less than 10 cm. Chlorite breccias occur along the contact between white weathering and equigranular quartz monzonite. Towards the outer margins of the quartz monzonite they occur as veins or small breccia zones up to 2 cm wide. Epidote is a common accessory. Commonly these veins are related to late stage shearing. Chlorite

and epidote cover joint and fracture surfaces throughout the area.

Type II a) Magnetite ± quartz

Magnetite-quartz veins can be 15 cm thick, with magnetite in the vein up to 8 cm wide. The veins also occur as breccias and ladder stockworks, usually with chlorite and epidote. They also form small stringers commonly subparallel to jointing.

North of showing 5 in cirque 2, a microbreccia approximately 10 m wide extends up the cirque wall to the ridge top. The matrix consists of very fine-grained chlorite magnetite and pyrite.

Type II b) Magnetite-quartz ± sericite ± molybdenite ± pyrite ± scheelite

These veins occur throughout the area and are generally parallel to the long axis and in the central part of the quartz monzonite pluton. They are however, more commonly found with molybdenum showings. They are usually not very wide and are rarely closely spaced. Sericitic alteration is patchy, and erratic pyrite accompanied by limonite staining in the wall rock is common. Molybdenite, scheelite and powellite occur in these veins at showing 5. At showings 4

and 6, some veins are stained with malachite. Type II veins are most common at showings 3, 4, 5 and 6 and at occurrences south of showing 10 in cirque 3.

6. ALTERATION

Although there appear to be zones of pervasive alteration (potassic, silicic, sericitic) the zone boundaries were not detailed due to lack of time, extensive glacial cover and rugged terrain. The zone boundaries are locally definable but require more detailed mapping and laboratory research. Around the showings and in the central area the rocks are more potassic than near the margins of the area. Locally, magnetite-quartz veins have K-feldspar selvages. In quartz monzonite peripheral to the central quartz porphyry, intense quartz veining has resulted in quartz flooding of the host rock. Quartz grains and aggregates have been rounded and enlarged by this process. Sericitic zones up to 25 m wide were observed in cirque 7. Between closely spaced quartz-pyrite veins there is commonly pervasive sericitic alteration characterized by rusty weathering. This alteration appears to be late and may in fact overprint the potassic alteration within the central part of the quartz monzonite pluton.

7. STRUCTURE

The dominant joint systems trend 115 - 118° and 125 - 130° which approximately parallels the long axis of the quartz monzonite

pluton. An exception to this is found near the eastern contact with the granodiorite and in the northeastern corner of the claim group (near showings 3 and 4) where the joints and veins trend east-west. Generally the dominant vein orientation follows that of the jointing. The veins however are usually vertical whereas the joints often vary from the vertical.

Barren quartz veins have been noted at an angle to the regional trend. Quartz veins, chlorite breccias and ladder stockworks, and quartz-magnetite veins are often offset in a left-lateral sense by small mylonite shears.

Early NE-SW and N-S conjugate faults appear to be transected by late stage E-W regional faults having a left-lateral displacement. Small shears (bearing 050°) accompanied by intense wall rock jointing are probably conjugate to the regional E-W faults. Preferential weathering has formed gullies along these zones and this has contributed to the rugged terrain of southwest facing slopes particularly in cirques 6 and 7.

The porphyries and aplites appear to have been more susceptible to jointing and fracturing both of which may be a function of late stage intrusion followed by cooling shrinkage. The common occurrence of pyrite on the joint surfaces, and its subsequent oxidation, causes extensive limonite staining in this particular suite.

8. SUMMARY AND CONCLUSIONS

The Rena pluton, comprising equigranular quartz monzonite, and a quartz porphyry, aplite and pegmatite suite, was emplaced into the Mt. Billings batholith in post-mid-Cretaceous time. On the basis of geological mapping it is concluded that this small pluton has had a complex history involving several intrusive episodes. Of note is the association of molybdenite and scheelite with a late quartz porphyry and the attendant alteration.

Alteration types include 1) potassic 2) silicic and 3) sericitic. A zone of magnetite veining is broadly conformable to the area underlain by quartz porphyry, and encloses the known showings. Most showings are within rusty weathering quartz-pyrite veins with sericitic margins, and quartz-magnetite-pyrite veins. This mineralization may be the result of "leakage" from a deeper level of the porphyry that may prove to be of economic grade.

9. RECOMMENDATIONS

It is recommended that:

1) geological mapping be continued at the scale of 1:10,000 in order to outline the major rock units in the area of the RENA claim group;
2) detailed mapping be commenced in order to establish the extent of 1) the quartz porphyry complex, 2) the mineralization, and 3) the related alteration zones, and;

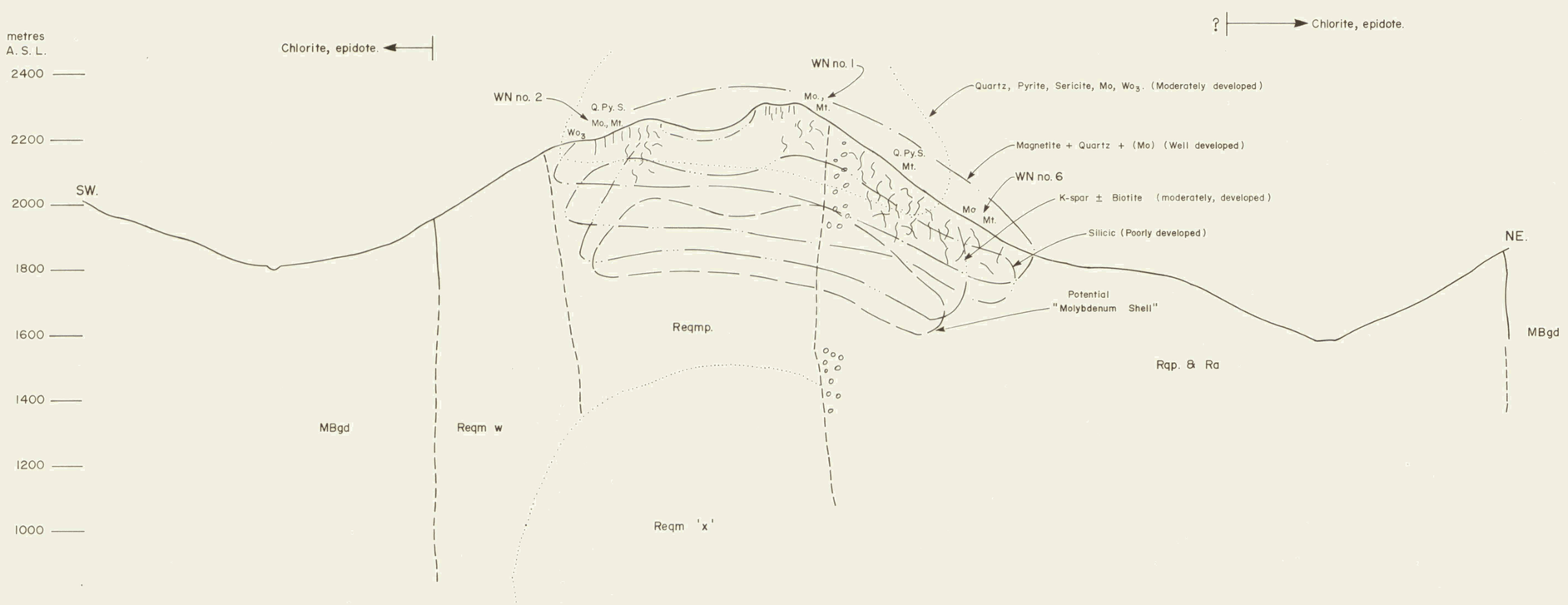
3) a petrographic study be done in order to establish the alteration assemblages and investigate the possibility of lateral and vertical zonation within the pluton.

STATEMENT OF EXPENDITURES

RENA CLAIMS - 105 H 14

Salaries:	Geologist @ $135/day x 26 man days		3,510	
	1 Jr. Geologist @ $80/day x 9 man/day		720	
	Students @ $55/day x 43 man/day		2,365	6,595.00
Consultants:	14 days @ $125/day			1,750.00
Room & Board:	$30/man day x 92 man/days			2,760.00
Helicopter Costs:	August 8th No. 5334	5.0 hrs @ $325		
	7th " 5333	5.9 "		
	6th " 5332	2.7 "		
	3rd " 5326	2.2 "		
	2nd " 5325	2.2 "		
	1st " 5324	2.5 "		
	July 31st" 5323	2.4 "		
	29th" 5321	2.9 "		
	28th" 5219	3.3 $350		
	27th" 5318	2.5 "		
	26th" 5315	4.0 "		
	25th" 5314	2.2 "		
	24th" 5313	1.2 "		
	23rd" 5312	1.5 "		
	20th" 5309	2.9 "		
	Total hours	43.4		
	25.8 hours @ $325/hr	8,333.4		
	17.6 " @ $350/hr	6,160.0		14,493.40
	43.4			
Geochemistry:	Bondar - Clegg Laboratories, Vancouver			
	Report 121 - 2313	549.37		
	121 - 2283	280.55		
	121 - 2472	346.94		
	121 - 2452	412.62		
	121 - 2262	446.65		2,036.13
Topographic Map:	Pacific Survey - 1:10,000 Scale			3,000.00
			TOTAL PROGRAM	$30,634.57

D. N. FORSTER



LEGEND

SYMBOLS

- -Quartz, sericite, pyrite ± Mo, Wo_3 halo
- -Magnetite shell
- -" Silica hood "
- -" Potassic zone "
- -Hypothetical molybdenite shell

Scale 0 200 500 1,000 Metres

UNION CARBIDE EXPLORATION CORPORATION

RENA
CROSS-SECTION

COMPILED BY CN Forster		MAP NO.
DRAFTED BY JP Paquet	DATE NOV. 1981	SCALE 1:10,000
DISPOSITION		N.T.S.
PROJECT NO.	REPORT NO.	

BEMA DRAFTING

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

A REPORT ON THE

GEOLOGY AND GEOCHEMISTRY

OF THE

RENA 1 - 36 CLAIM GROUP

NTS 105 H 14

FOR

UNION CARBIDE CANADA LTD.

RECEIVED
1981 NOV 27
MINING RECORDER
WATSON LAKE, Y.T.
I.A. & N.D.

090889

BY: C. N. FORSTER
DISTRICT GEOLOGIST

NOVEMBER, 1981

This report has been examined by the Geological Evaluation Unit under Section 53 of the Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 13,000.00.

Ruth Debicki

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

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APPENDIX: I - Geology of the Rena Claim Group by D. Archibald and D.H. James. Internal Company Progress Report.

II - Geochemical Reports - Bondar-Clegg and Company

Illustration - in Text

Figure 1 - Location Map	3
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Figure 4 - Geology of Rena Claim Group 1:10,000 scale	
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Figure 6 - Rock Geochemistry of the Rena Claim Group.

SUMMARY

The Rena claim block was staked in 1980 by Welcome North Mines Ltd. to acquire several molybdenum showings known since the 1960's. Subsequently, Union Carbide optioned the claims in December of 1980 and carried out a short 3 week evaluation program of geology and geochemistry in the summer of 1981.

The claims are underlain by a 5km x 3km, potash-rich multi-staged quartz monzonite stock intrusive into the Cretaceous aged Mt. Billings Batholith. At least five intrusive phases and several alteration and tectonic events are recognized in the "Rena Stock".

Molybdenite and traces of scheelite (wolframite) has been found in at least 13 showings and occurences. The mineralization occurs mostly in quartz, sericite, pyrite veins, occasionally along dry limonitic fracture surfaces and rarely as disseminations in the intrusive rocks. The concentrations of molybdenum observed to date does not indicate the presence of an exposed or near surface ore body. However, the nature of the alteration, the associated quartz, magnetite veining, and the intensely fractured, hypabyssal intrusive rocks suggest that an "ore zone" could exist at depth in the porphyry system.

A program of detailed geological mapping; petrographic studies of the intrusive rocks and alteration; airborne magnetics and finally deep diamond drilling will be necessary to fully evaluate the property.

Introduction

The Rena claims were staked in 1980 by prospectors for Welcome North Mines Limited to acquire molybdenum that had been found in the 1960's. Re-evaluation of the showings suggested that the mineralization was related to a large porphyry system and could therefore be economically significant. Union Carbide acquired the claims in conjunction with the Aurora, Woah and Tai prospects by an option agreement in December, 1980.

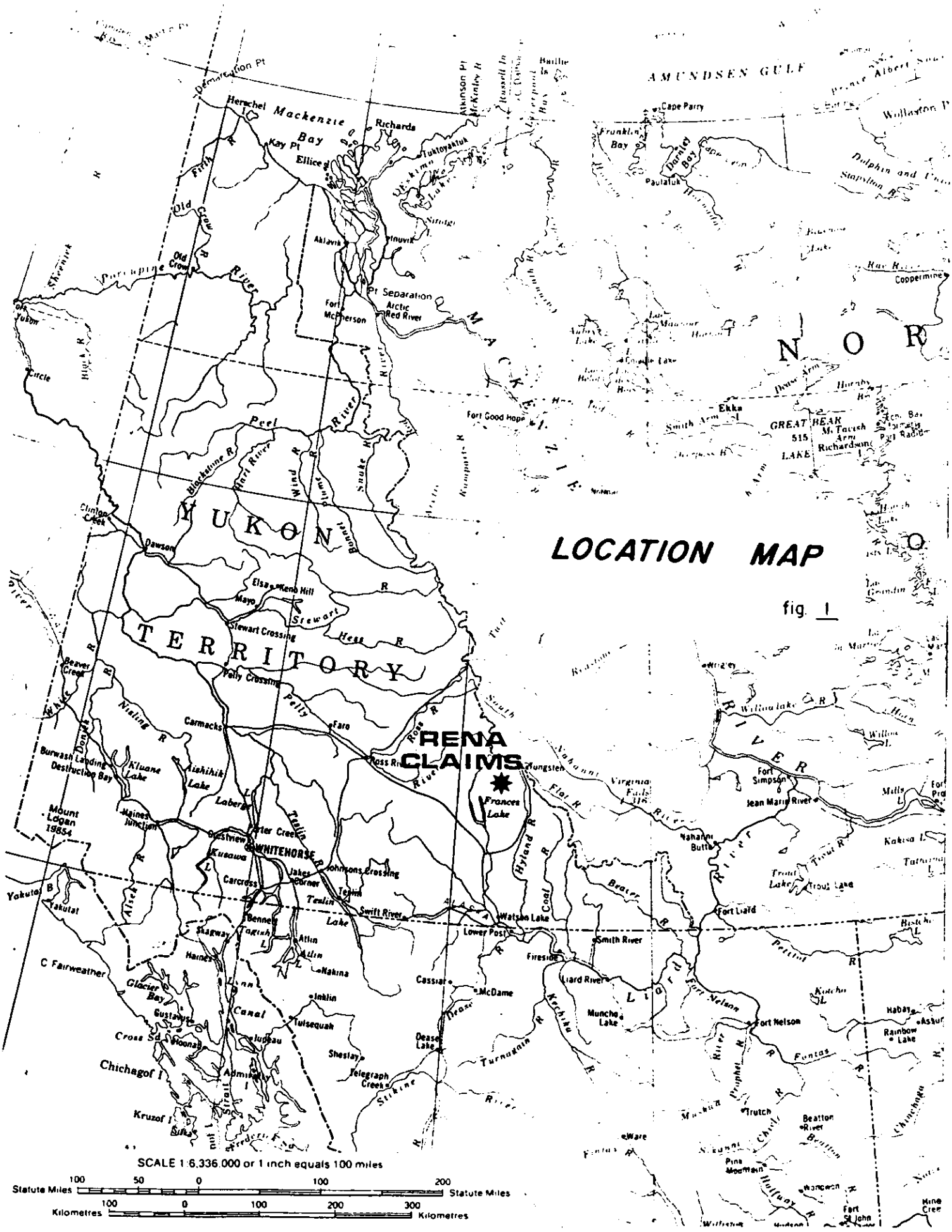
In 1981 as part of an evaluation program of these properties, Union Carbide crews spent from July 24th to August 7th camped on the property. During this period a program of geological mapping, and soil, silt and talus geochemical sampling was carried out.

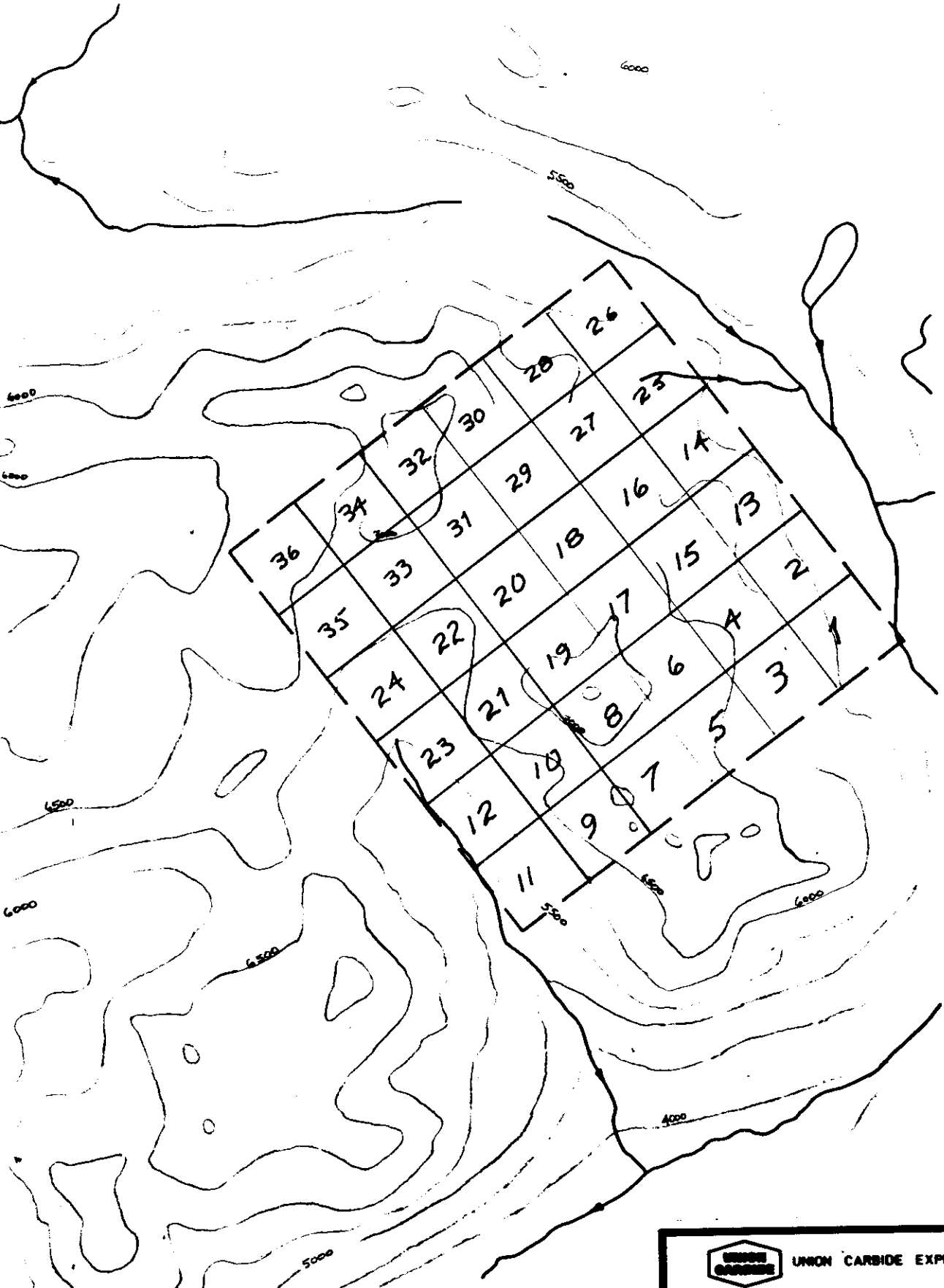
Location and Access

The Rena claims are located in the Watson Lake Mining District, 185km north of Watson Lake. The nearest point on a road lies 43km east on the Nahanni Range Road. Access to the property is by helicopter only. For the three week program the Union Carbide crews utilized the helicopter based at the Lened Property (Union Carbide) 55km north-northeast. Movement within the property required daily helicopter setouts and pickups from a base camp on the claim block.

Topography

The topographic relief on the property is extreme with approximately 70% of the area inaccessible due to cliffs and hanging glaciers. The highest point is 2,440 metres a.s.l. with the camp at 1,740 a.s.l. Severe avalanche hazards exist into mid-July as cornices and snowfields do not melt before this date.


LOCATION MAP
fig. 1
RENA CLAIMS
YUKON TERRITORY
AMUNDSEN GULF
Mackenzie Bay
Herschel I
Demarcation Pt
Kay Pt
Ellice R
Firth R
Old Crow
Old Crow R
Porcupine River
Arctic Red River
Fort McPherson
Fort Good Hope
Peel River
Blackstone R
Hart River
Wind R
Snake R
Bonnet
Clinton Creek
Dawson
Mayo
Elsa
Keno Hill
Stewart
Stewart Crossing
Hess R
Beaver Creek
White R
Donjek R
Nisling R
Carmacks
Pelly Crossing
Pelly
Faro
Ross River
Ross R
Tungsten
Burwash Landing
Destruction Bay
Kluane Lake
Aishihik Lake
Laberge
Mount Logan 19854
Haines Junction
Quiet Creek
Quiet
Whitehorse
Kusawa
Carcross
Jakes Corner
Johnsons Crossing
Teslin
Teslin Lake
Swift River
Watson Lake
Lower Post
Yakutat B
Yakutat
Alsek R
Skagway
Benneh
Tagish L
Atlin
Haines
Nakina
C Fairweather
Glacier Bay
Lynn Canal
Gustavus
Inklin
Tulsequah
Juneau
Cross Sd
Woonah
Chichagof I
Admiralty I
Kruzof I
Sitka
Frederick Sd
Cassiar
McDame
Dease Lake
Sheslay
Telegraph Creek
Stikine River
Frances Lake
Hyland R
Coal R
Fireside
Smith River
Liard River
Muncho Lake
Fort Nelson
Kechika R
Turnagain R
Prophet R
Fontas R
Trutch
Beatton River
Pine Mountain
Fort St John
Halfway R
Ware
Smith Arm
Ekka
GREAT BEAR LAKE
Mt Tarich 515
Richardson
Cape Parry
Franklin Bay
Darnley Bay
Paulatuk
Dolphin and Union Str
Wollaston P
Prince Albert Sound
Coppermine
Kugaluk R
Kendall R
Hornaday R
Dease Arm
Hurnby
Fort Radio
Ice Bay
Port Radio
Willow Lake R
Willow L
Fort Simpson
Jean Marie River
Nahanni Butte
Trout Lake
Fort Liard
Petitot R
Kakisa L
Tathlina L
Kotcho L
Habay
Assur
Rainbow Lake
Beatton
Ware
Pine Mountain
Wonowon
Hine Cree
Mills L
Fort Pro
Virginia Falls
Flat R
Nahanni
Liard
Beaver
Trout R
Kotcho R
Funtas
Muskwa R
Chinchaga
Petitot
Kechika
Prophet
Turnagain
Stikine
Taku R
Atlin L
Tagish L
Teslin Lake
Laberge
Aishihik Lake
Kluane Lake
Quiet
Ross River
Pelly
Nisling R
Donjek R
White R
Blackstone R
Hart River
Wind R
Snake R
Bonnet
Peel River
Porcupine River
Old Crow R
Firth R
Hess R
Stewart
Mayo
Keno Hill
Elsa
Dawson
Clinton Creek
Circle
Yukon R
Hodgson
Richards
Kay Pt
Ellice R
Demarcation Pt
Atkinson Pt
McKinley R
Russell In
Liverpool Bay
Baillie Is
Tuktoyaktuk
Inuvik
Aklavik
Pt Separation
Arctic Red River
Fort McPherson
Fort Good Hope



SCALE

1500 0 3000 6000 Ft.

UNION CARBIDE EXPLORATION CORPORATION

RENA CLAIMS

COMPILED BY: DHJ		MAP NO:
DRAFTED BY:	DATE: Aug, 81	SCALE:
DISPOSITION:		BY S: 105-H
PROJECT NO: 102	REPORT NO:	

Claim Data

Thirty-six mineral claims are presently held by Union Carbide Canada Limited under an option agreement with Welcome North Mines Ltd. These included:

Rena 1 - 36 inclusive; YA56706 - YA56741

Recorded September 23rd, 1981.

Located on N.T.S. Map 105 H-14, in the Watson Lake Mining District.

Work Done - 1981

A three week program of geological mapping and soil, silt and rock geochemistry was done on the claim block and its immediate vicinity. Three geologists and a variable number of student assistants (3-6 people) were involved.

The geological mapping was controlled and plotted on a 1:10,000 scale base map prepared by Pacific Survey Corporation in Vancouver with 20 metre contour intervals. Altimeter readings and careful inspection of the topographic features was sufficient for accurate plotting of the data. The geochemical samples are plotted on the same base maps utilizing altimeter and topolite measurements for locating sample points. A total of 78 rock samples and 242 silt, soil and talus samples were analysed by Bondar-Clegg Laboratories in Vancouver for Cu, Mo, Ag and W. Fifteen panned concentrate samples from active streams were taken and visually inspected for scheelite grains.

The crew members who worked on the property include:

C. Forster - District Geologist

P. Doyle - Project Geologist

D. James - Senior Geologist

D. Archibald-Consultant geologist

J. Toohey - Senior student assistant

C. Reist - Student

C. Copping - Student

J. Hornby - Student

J. Bronson - Student

P. Sargent - Student

A. Guichon - Student

R. Penner - Student

Geology

Introduction

The following geological description of the property is derived from an internal company report by D. James and D. Archibald appended to this report and from the writer's work on the Rena claims.

Regional

The Rena Claim Group lies within a large 80km x 15km NW-SE trending batholith that is part of the Cretaceous aged Mt. Billings intrusives. The Geological Survey of Canada has mapped these rocks as a relatively homogeneous mixture of quartz monzonite and granodiorite. The regional aeromagnetic surveys by the Canadian Government over the Frances Lake map sheet, however, indicate that the batholiths have a variable composition and are, therefore probably differentiated. Within the

immediate areas of the Rena Claim Group the batholith is medium-grained equigranular biotite granodiorite. Intrusive into the granodiorite is the Rena quartz monzonite stock.

Property Geology

The claim block and its immediate vicinity is underlain by a small, potash rich, elliptical quartz monzonite stock that trends NW-SE. The intrusive history of the 5km x 3km pluton is complex consisting of a number of intrusive stages and phases. These include: (from oldest to youngest)

1) a biotite rich, quartz, feldspar, porphyritic quartz monzonite;
2) a white weathering quartz monzonite,
3) a potash rich, pink weathering quartz monzonite,
4) aplite stocks and dykes and
5) aplitic, potash rich, quartz eye porphyries.

Sharp, intrusive contacts and gradational contacts have been observed between the various rock units. Overprinting these rocks is an equally complex system of alteration, fracturing, veining and brecciation.

Intrusive Rock Descriptions

Quartz Monzonite:

Two fairly distinct quartz monzonite intrusions are mappable on the property; a central pink quartz monzonite and an outer grey quartz monzonite (white weathering). The pink quartz monzonite (Reqmp.) is medium to coarse-grained, equigranular and mafic poor. Orthoclase and quartz each make up forty percent of the rock with pink plagioclase averaging about twenty

percent. Biotite is usually less than 1%. The quartz occurs as rounded to irregular aggregates with overgrowths in areas of intense secondary silicification. K-feldspar is generally subhedral to euhedral pink aggregates and often occurs interstitially to the quartz and plagioclase. The plagioclase is easily confused with K-feldspar until stained, due to its pinkish colour. The crystals are generally subhedral, medium to coarse-grained, and occasionally occuring as zoned phenocrysts. Biotite occurs as fresh, coarse-grained flakes in varying concentrations.

The "white weathering" quartz monzonite (Reqmw.) is finer grained, and more crystalline than the Reqmp. Biotite is more abundant with concentrations from 5% to 10%. Quartz occurs as coarse aggregates comprising up to 40%, plagioclase is medium to coarse-grained and with K-feldspar makes up an equal proportion of the rock - generally 30% to 35% each.

A third quartz monzonite intrusion is observed as rounded xenoliths in aplitic quartz porphyry. The xenoliths are generally well packed and form mappable zones. The xenoliths are dark grey with approximately 15-20% biotite, 15-20% quartz, 40% plagioclase and 20% K- feldspar. It is often porphyritic with rounded quartz eyes and subhedral plagioclase phenocrysts. The matrix of the rock is made up of fine euhedral plagioclase phenocrysts and diffuse clots of K-
occasionally have rims of the white weathering quartz monzonite suggesting that the unit is probably the earliest intrusive phase of the Rena Stock.

Quartz porphyries and aplites (Rqp, Ra.)

These rocks commonly occur together with both distinct and grad-

ational contacts. The aplites are fine-grained, granular quartz (40%) and K-feldspar (60%) with occasional phenocrysts of plagioclase and biotite. The porphyries are usually coarser grained with phenocrysts of quartz, plagioclase and K-spar. The rocks are generally pink due to the high K-spar content estimated between 50% and 60% that occurs interstially to quartz and plagioclase. The quartz eyes are generally agreggates of small rounded quartz grains.

Pegmatites are common in the aplites and contain very coarse-grained K-spar, quartz and white mica.

Tectonics

The Rena Stock has undergone a post intrusive period of facturing, jointing and brecciation. The dominant joint set trends 115^{o} - 118^{o} and 125^{o} - 130^{o} which approximately parallels the long axis of the pluton. In several areas the density of the jointing makes the rock cliffs extremely broken and dangerous to work below.

Microfracturing is very common displacing quartz veins and cleaving xenoliths into several parts. The fracturing can be so severe that "crack" and "ladder" breccias are developed in several areas. The development of secondary K-feldspar, chlorite, manganese, magnetite and silica in and peripheral to the breccias and fractures suggest that the brecciation was pre-mineral and possibly related to the degassing of the pluton and the circulation of mineral bearing solutions.

E-W faulting is well developed and must be late in the history of the pluton as altered members of the pluton are juxtaposed with unaltered

rock. An excellent example exists at the toe of the glacier in cirque 3 where the pink equigranular quartz monzonite is separated from white weathering quartz monzonite by a two foot band of mylonite. The fault is traceable for five kilometres.

Alteration, Veining and Mineralization

The alteration, veining and mineralization on the Rena claim block is typical of a large porphyry system. Potassic, phyllic, and propylitic alteration are the dominant stages with silicic and argillic alteration noted in localized areas. Due to the lack of field time the definition of specific zones was not possible. Overlapping of the alteration types is common and further complicates the picture.

The molybdenum showings are generally enveloped in potassic and phyllic alteration characterized by pervasive secondary K-feldspar and biotite and quartz, sericite, pyrite veining respectively. The central core of the claim group has undergone a moderate to intense,pervasive potassic metasomatism evidenced by the pink, K-monzonite and the pink quartz porphyries. Quartz, sericite, pyrite with molybdenite veining is generally more abundant in the northern, western, and southernmost cirques i.e. Cirques 9, 7 and 3 respectively and overprints silicic and potassic alteration. Chlorite, epidote and minor amounts of pyrite are common along the fringes of the Rena Stock as fracture fillings.

The molybdenum mineralization on the property is mostly vein related with very little disseminated material noted. The veins can be subdivided into five categories as follows:

Type 1 a) Quartz

1 b) Quartz-pyrite-sericite ± scheelite (?)

1 c) Quartz-chlorite ± epidote (commonly brecciated or ladder stockworks)

Type II a) Magnetite ± quartz (+ breccia and ladder stockworks)

II b) Magnetite-quartz ± sericite ± molybdenite ± pyrite

Type I a) Quartz

Occuring as thin veins, usually 1cm thick with a maximum of probably 10cm, these are accompanied by some quartz flooding particularly in the vicinity of close spaced veinlets. Alteration is usually a weak development of sericite disseminated in the wall rock near the veins.

In some places more than one set are superimposed and resemble a quartz vein stockwork.

Type I b) Quartz-pyrite-sericite ± molybdenite ± scheelite (?)

These veins are commonly zoned with a distinct rusty weathering selvage several cms thick of fine- to coarse-grained sericite. sericite rosettes are associated with the coarser grained alteration which also frequently has some molybdenite. Molybdenite occurs along the margins of quartz veins.

Some veins comprise massive quartz with pyrite, molybdenite and secondary ferrimolybdate. These may be up to 15cm wide (float below showing 8)

Type I c) Quartz-chlorite ± epidote

These usually occur as breccias or ladder stockworks in

the central area mapped. The breccias are up to 1m wide but are normally less than 10cm. Chlorite breccias occur along the contact between white weathering and equigranular quartz monzonite. At the outer margins they occur as veins or small breccia zones up to 2cm wide. Epidote is a common accessory. In the granodiorite these veins are associated with shearing. Chlorite and epidote cover joint and fracture surfaces throughout the whole area.

Type II a) Magnetite $\pm$ quartz

Magnetite-quartz veins can be 15cm thick, with magnetite in the vein up to 8cm wide. The veins occur as breccias and ladder stockworks, usually with chlorite and epidote. They also occur as small magnetite stringers often subparallel to jointing.

North of showing 5 in cirque 2 a microbreccia approximately 10m wide extends up the cirque wall to the ridge top. The matrix is very fine-grained chlorite-magnetite-pyrite.

Type II b) Magnetite-quartz $\pm$ sericite $\pm$ molybdenite $\pm$ pyrite

These occur throughout the area mapped, generally parallel to the long axis and in the central part of the quartz monzonite pluton. They are however, more commonly associated with molybdenum showings. They are usually not very wide and are rarely closed spaced. Sericitic alteration is patchy, and erratic pyrite accompanied by limonite staining

in the wall rock is common.

The mineral showings on the property do not have direct economic significance. However in conjunction with the porphyry alteration, fracturing, brecciation and hypabassal rock types a more significant concentration of molybdenum could exist at depth.

Specifically the quartz, sericite, pyrite, molybdenum mineralization occurs either in or nearby major fracture and shear zones and could be considered leakage from a lower molybdenum system. The magnetite veining might be an upper hood to a molybdenum hood as happens at the Henderson Mine in Colorado. The magnetite has both visible molybdenite and an anomalous molybdenum geochemical response which further suggests a relationship to a molybdenum system. The fracturing and brecciation of the rocks is multi-directional, closely spaced and multi-staged, thereby providing excellent porosity and permeability for transporting and hosting significant concentrations of mineralization.

The accompanying model illustrates a cross-section of the property and the theoretical position of a molybdenum "ore zone" at depth should the system be analogous to the Henderson Mine.

GEOCHEMISTRY

Seventy-eight rock samples and two hundred and ten silt, soil and talus samples were collected and analysed for Cu, Mo, Ag and W by Bondar-Clegg laboratories in Vancouver. The analytical methods were standard and similar to most laboratories in Vancouver. The detection limits, extraction methods, detection methods, sample size and type are listed

on the individual assay reports included in the appendix of this report.

The object of the rock sampling program was to define general zonation patterns and concentrations for the elements analysed. The majority of the analysis are from samples of quartz, pyrite, sericite ± molybdenite veins; from chlorite, magnetite veins and from highly altered rock. The sampling was purposely biased to those rocks that were obviously mineralized or altered (i.e. part of the mineralizing process).

The results for Mo do not define any specific zones but demonstrate that most of the veins and alteration sampled is enriched in Mo. Of the 78 rock samples analysed, 44 returned values greater than 21ppm Mo (up to a high of 8680ppm Mo) and of these twenty samples were greater than 100ppm Mo.

Anomalous tungsten results were equally scattered across the property with no specific zonal patterns recognizable. Twelve samples were greater than 50ppm W (3 greater than 2000ppm) indicating that tungsten mineralization exists and could provide an economic credit to a molybdenum deposit.

Copper values were generally low with only ten values greater than 100ppm (up to 2900ppm). Silver values are 0.2ppm except for six random samples that range from 1.5ppm to 9.4ppm.

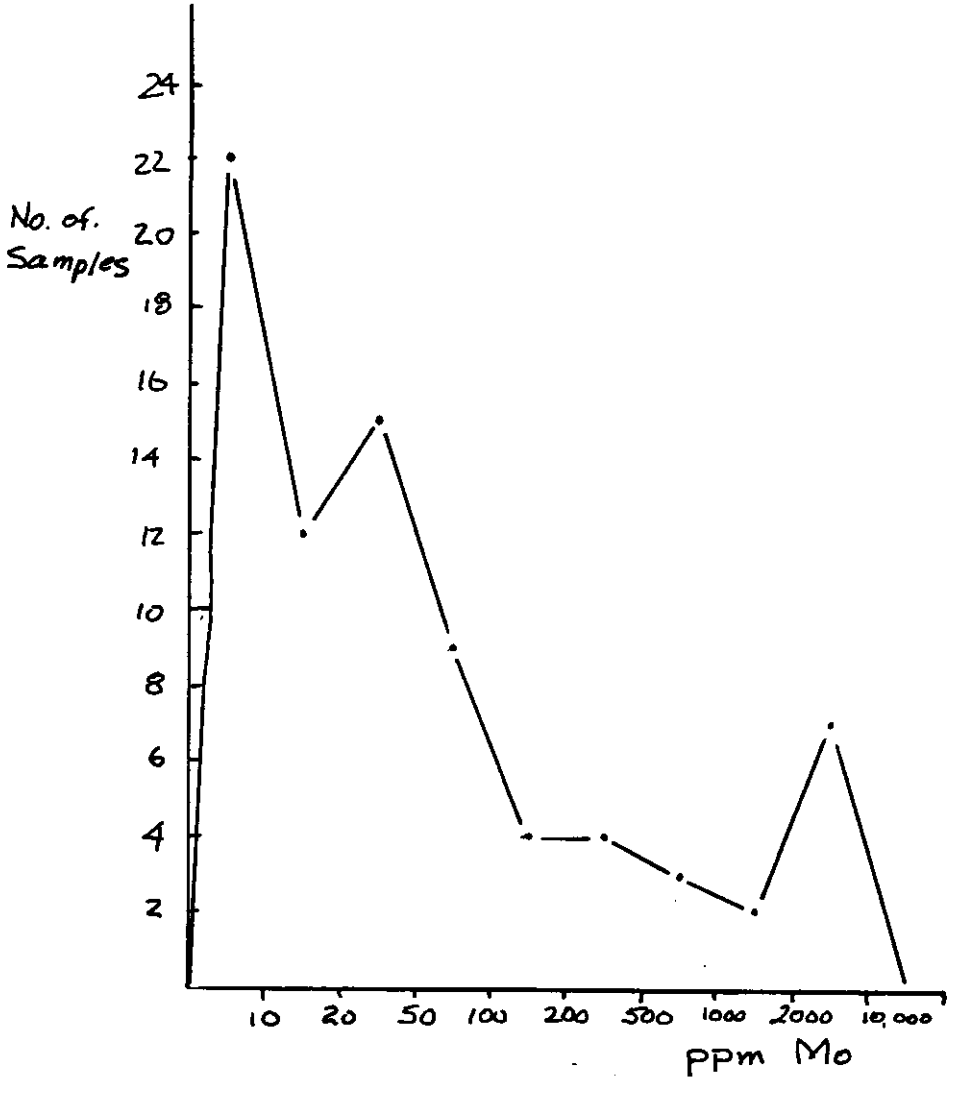
Soil, Stream and Talus Geochemistry

The sediment sampling was used for prospecting both the claims

and the area immediately adjacent for molybdenum, copper and tungsten mineralization. A histogram plotted for the molybdenum values shows the Mo background to be 1-15ppm, threshold as 16-30ppm and greater than 31ppm Mo to be anomalous. Samples taken several hundred metres downslope from known mineralization had values of from 100ppm Mo, to 1510ppm Mo.

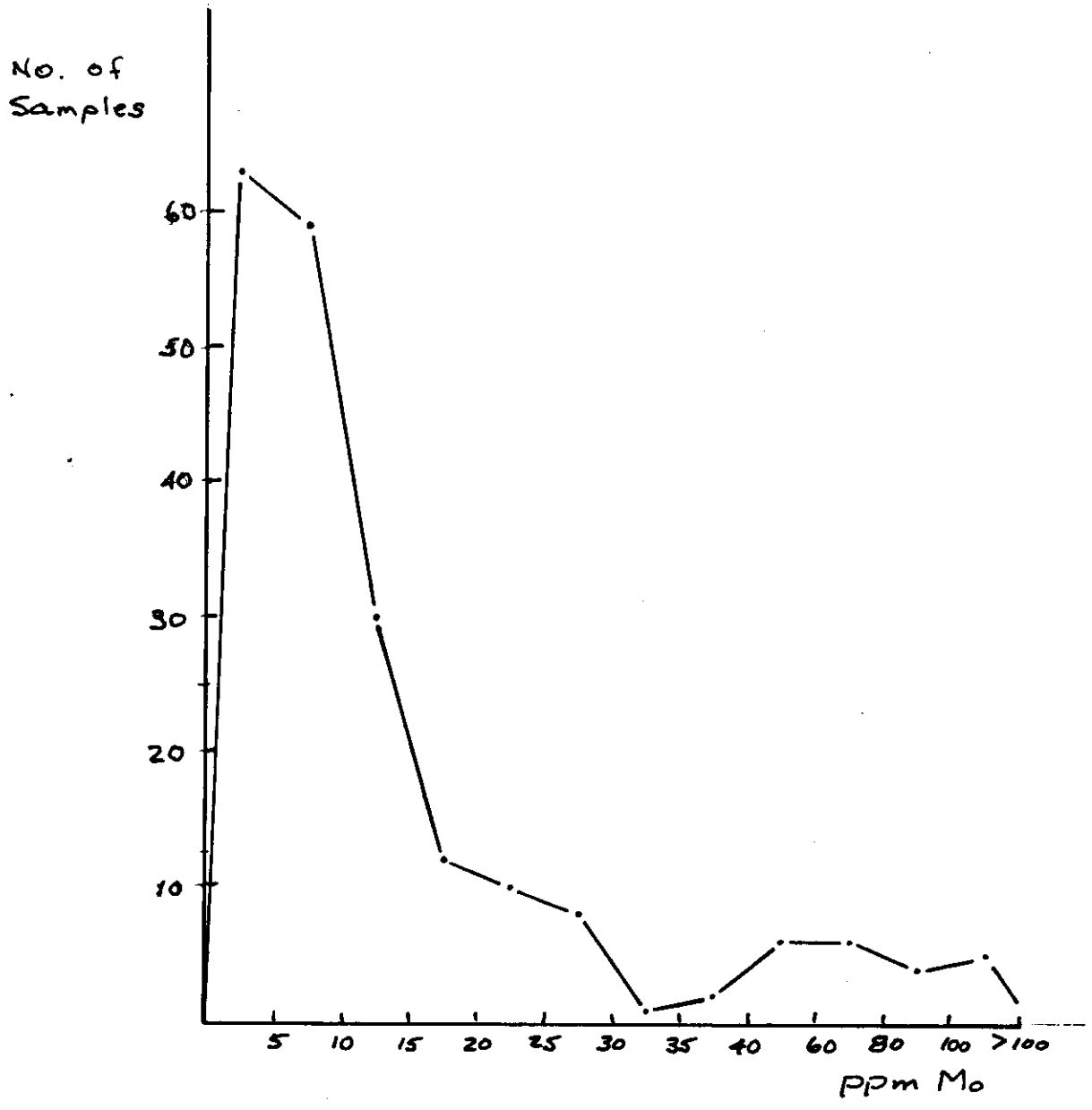
Histograms were not plotted for Cu and tungsten values but visual inspection of the data suggests that anomalous values for each would be 50ppm Cu and 25ppm W.

The results of the sampling confirm that with one exception the anomalous values are from known mineralized areas. That exception is a zone with Cu, Mo and W anomalies along a 1.2km traverse line on the southeast side of the Rena Claim block. The samples are from the Mt. Billings Granodiorite and not the Rena Quartz Monzonite and probably represent Cu, Mo and W mineralization in fractures similar to that found in the granodiorite on the northwestern edge of the stock. The values range to highs of 132ppm Cu, 91ppm Mo and 75ppm W. Economic grade mineralization is not indicated by these values but the area should be prospected.



RENA CLAIMS

Histogram for Mo in Rock.



RENA CLAIMS

Histogram for Mo in Sediments

STATEMENT OF QUALIFICATIONS

NAME: Charles N. Forster

Attended U.B.C. from 1966 to 1970 and again in 1973 - 1974.

B.Sc. granted in 1974.

WORK EXPERIENCE: I have worked as a geologist from:

1970 - 1973:	Texasgulf Co. in Canada and South Africa.
1974 - 1975:	Archer Cathro & Associates in the Yukon.
1975 - Present:	Union Carbide Exploration Corporation in Canada.

My present Position is District Geologist responsible for Tungsten exploration in Canada.

C. N. FORSTER

November, 198.

CNF:mw

BONDAR-CLEGG & COMPANY LTD.

130 PEMBERTON AVE., NORTH VANCOUVER, B.C. V7P 2R5 PHONE: (604) 985-0681 TELEX: 04-352667

Geochemical Lab Report

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	W PPM	NOTES
-R-0001		16	28	2	
0003		16	8	3	
0004		8	5	3	
0005		6	4	2	
0006		6	5	3	
0007		10	10	20	
0008		5	4	2	
0009		8	7	2	
0010		12	11	3	
0011		10	8	3	
1000		62	72	2	
1001		20	14	2	
1002		14	8	3	
1003		42	20	2	
1005		6	9	3	
1006		26	20	11	
1007		7	3	9	
1008		8	3	11	
1009		29	5	28	
9000		30	125	14	
9001		93	510	4	
9500		6	15	3	
9501		46	10	50	
-A- 01	K	4	2	2	
02		2	2	2	
03		6	2	3	
06		2	2	2	
08		28	11	60	
09		22	4	2	
10		3	1	8	
12		3	1	2	
13	K-T	6	1	2	
B1-A-A-23-1		2	3	5	
B1-A-B- 3-1		2	1	3	
B1-A-CJC-1	T	4	2	4	
2	T	240	1	3	
3	T	1120	18	4	
5		84	4	3	
8		34	2	4	
9	T	4	2	3	
10	T	30	3	3	
11	T	68	37	675	
13	T	6	4	4	
14	T	4	2	3	
15-1	T	4	14	10	
15-2	T	12	5	13	
15-3	T	38	25	3	
16	T	106	1	3	
17	T	36	3	470	
18	T	4	1	8	
19	T	4	2	450	
20	T	6	2	5	
21	T	16	2	3	
22	T	2	1	30	
23	T	2	1	9	
24	T	4	2	100	
25	T	2	20	> 2000	
27	T	4	2	33	
28	T	30	2	11	
29	T	2	1	6	

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Geochemical Lab Report

REPORT: 121-0100 SUBMITTED BY: C. DOYLE

ATE: 25-AUG-81 PROJECT: 102

ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
Cu	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-100	ROCKS	CRUSH,PULVERIZE -100
Mo	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-100		RETENTION OF REJECTS
W	2 PPM	CARBONATE SINTER	Colourimetric	-100		SEIVE -80
						RETENTION OF REJECTS

EPORT COPIES TO: J. J. ROYALL
P. J. DOYLE
C. FORSTER
BONDAR-CLEGG & COMPANY

INVOICE TO: J. J. ROYALL
P. J. DOYLE

EMARKS:

	CU/PPM	MO/PPM	W/PPM
81A-05K	2	3	2

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Geochemical Lab Report

REPORT: 131-2473

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	W PPM	NOTES
81-Q-2024	SOILS	53	46	65	
81-Q-2025		31	10	35	
81-Q-2026		103	12	75	
81-Q-2027		41	2	9	
81-Q-2028		21	18	12	
81-Q-2029		99	6	15	
81-Q-2030		88	76	35	
81-Q-2031		132	9	43	
81-Q-2033		53	8	25	
81-Q-2034		104	38	135	
81-Q-2035		32	7	2	
81-Q-2036		23	20	2	
81-Q-4004		18	27	2	
81-Q-4005		18	78	4	
81-Q-4006		15	7	5	
81-Q-4007		19	84	8	
81-Q-4008		6	10	9	
81-Q-4009		4	4	8	
81-Q-4010		4	5	4	
81-Q-4011		6	4	10	
81-Q-4012		6	1	2	
81-Q-4013		4	7	9	
81-Q-4014		6	8	6	
81-Q-4016		6	6	10	
81-Q-4017		9	5	15	
81-Q-4018		6	7	3	
81-Q-4019		4	1	2	
81-Q-5001		6	7	3	
81-Q-5002		20	3	4	
81-Q-5003		36	2	8	
81-Q-5004		35	3	5	
81-Q-5005		31	2	11	
81-Q-5006		5	ND	3	
81-Q-5007		20	9	5	
81-Q-5008		6	3	6	
81-Q-5009		9	6	8	
81-Q-5010		7	6	2	
81-Q-5013		9	3	3	
81-Q-5014		20	3	16	
81-Q-5015		19	6	6	
81-Q-5016		15	28	20	
81-Q-5017		60	81	28	
81-Q-5018		46	63	30	
81-Q-5019		15	12	3	
81-Q-5020		10	4	2	
81-Q-5021		28	25	10	
81-Q-5023		27	25	13	
81-Q-5024		25	23	14	
81-Q-5025		16	13	10	
81-Q-5026		18	21	12	
81-Q-5027		9	4	11	
81-Q-5028		12	11	12	
81-Q-5029					5*
81-Q-5030		14	13	15	
81-Q-9508		24	17	16	

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Geochemical Lab Report

REPORT: 121-0313

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	W PPM	NOTES
1-Q 0025	SOIL	4	11	28	
0026		6	11	48	
0027		5	14	16	
0028		5	11	40	
0029		17	8	5	
0030		3	7	9	
0031		5	11	14	
0033		6	5	5	
0034		8	11	60	
0035		6	8	3	
0036		4	9	3	
0037		3	10	21	
0038		4	7	3	
0039		4	7	9	
0040		41	20	6	
0042		5	16	270	
0043		12	11	5	
1038		10	16	4	
1039		26	29	3	
1040		13	20	3	
1041		16	11	3	
1042		18	14	3	
1043		8	7	3	
1044		25	7	4	
1045		7	5	3	
1046		12	10	3	
1047		12	3	3	
1048		8	7	2	
1049		16	10	3	
1050		9	6	3	
1051		38	16	3	
1053		26	4	3	
1054		12	2	3	
1055		22	27	3	
2034		43	15	3	
2037		30	10	5	
2039		39	91	3	
2040		30	22	6	
2041		12	5	5	
2042		50	6	5	
2043		49	10	4	
2044		22	6	5	
2045		37	14	4	
2046		58	13	2	
2047		8	5	3	
2048		13	8	9	
2049		8	3	4	
2050		12	6	4	
2051		10	4	3	
2052		11	23	4	
2053		12	17	4	
2054		22	14	3	
2055		20	39	13	
2056		19	22	16	
2057		17	18	5	
2058		54	46	40	
2059		34	101	30	
4000		170	322	135	
4001		73	171	60	
4002		62	146	30	

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Geochemical Lab Report

REPORT: 121-3313

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	W PPM	NOTES
4003		56	135	30	
9003		36	48	30	
9004		100	8	3	
9505		60	12	4	
9506		66	181	15	
9507		21	9	18	
9750		27	80	3	
9751		9	65	3	
9752		11	1510	33	
9753		13	840	38	
9754		5	26	10	
9755		3	5	5	
9756		7	13	13	
9757		2	3	5	

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Geochemical Lab Report

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	W PPM	NOTES
1-Q-0013	SOIL	10	10	3	
1-Q-0014		11	7	3	
1-Q-0015		10	11	4	
1-Q-0016		8	8	3	
1-Q-0017		3	8	4	
1-Q-0019		4	12	19	
1-Q-0020		4	12	50	
1-Q-0021		14	5	2	
1-Q-0022		4	11	16	
1-Q-0024		4	9	3	
1-Q-1010		9	2	4	
1-Q-1011		27	6	4	
1-Q-1013		6	1	3	
1-Q-1014		6	1	5	
1-Q-1015		9	11	21	
1-Q-1016		8	2	17	
1-Q-1017		20	2	3	
1-Q-1018		6	1	3	
1-Q-1019		64	6	28	
1-Q-1020		3	7	15	
1-Q-1021		4	10	22	
1-Q-1022		3	6	28	
1-Q-1023		4	5	2	
1-Q-1024		5	1	3	
1-Q-1025		6	2	3	
1-Q-1026		13	9	6	
1-Q-1027		1	1	2	
1-Q-1028		6	1	4	
1-Q-1029		6	2	2	
1-Q-1030		9	5	6	
81-Q-1032		6	2	3	
81-Q-1033		37	17	8	
81-Q-1034		17	11	3	
81-Q-1035		27	36	10	
81-Q-1036		21	4	2	
81-Q-1037		4	10	28	
81-Q-2001		23	24	3	
81-Q-2002		24	34	14	
81-Q-2003		20	27	4	
81-Q-2004		11	37	5	
81-Q-2005		35	51	11	
81-Q-2006		57	47	8	
81-Q-2007		25	19	6	
81-Q-2008		22	46	4	
81-Q-2009		15	11	3	
81-Q-2010		22	29	5	
81-Q-2011		8	7	5	
81-Q-2012		13	5	7	
81-Q-2013		7	3	4	
81-Q-2014		12	11	6	
81-Q-2015		7	2	3	
81-Q-2016		10	2	3	
81-Q-2017		5	1	3	
81-Q-2018		4	1	3	
81-Q-2019		5	1	3	
81-Q-2020		6	2	5	
81-Q-2021		9	1	3	
81-Q-2022		8	2	2	
81-Q-2023		6	4	3	
81-Q-9002		60	92	8	

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Geochemical Lab Report

REPORT: 121-2242

AMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	W PPM	NOTES
-Q-9502		27	8	14	
-Q-9503		36	45	35	
-Q-9504		50	23	11	
RA-10/11-1 RX		9	194	5	
RA-12-2		4	7	3	
RA-12-4		12	2000	5	
RH-1-1T		11	830	1750	
RH-2-1T		116	108	60	

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130 PEMBERTON AVE., NORTH VANCOUVER, B.C. V7P 2R5 PHONE: (604) 985-0681 TELEX: 04-352667

Geochemical Lab Report

REPORT: 12[illegible]-2452

ROM: UNION CARBIDE CORP. SUBMITTED BY: P.J. DOYLE

ATE: 04-SEP-81 PROJECT: 102

ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
Cu	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-100	ROCKS	CRUSH,PULVERIZE -100
Mo	1 PPM	HNO3-HCL HOT EXTR	Atomic Absorption	-100		RETENTION OF REJECTS
	2 PPM	CARBONATE SINTER	Colourimetric	-100		

PORT COPIES TO: J. J. ROYALL
P. J. DOYLE
C. FORSTER
BONDAR-CLEGG & COMPANY

INVOICE TO: J. J. ROYALL

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Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	W PPM	NOTES
-RA-13-2		4	4	2	
3/14-2		43	16	2	
3/14-3		20	55	790	
3/14-4		10	5	10	
4-1		210	35	11	
7-3T		10	13	3	
7-6T		6	3720	3	
8-2		2	37	2	
1-2		12	28	50	
1-3		10	995	2	
1/22-1T		14	3610	63	
2-4T		4	174	2	
4-6		26	54	2	
8-2		5	435	2	
-RF-6		4	142	50	
.1		2	17	3	
.3		2	18	3	
1		2	7	3	
3		1	6970	3	
5		2	313	2	
8.2		8	149	3	
0		250	87	2	
0.1		88	1845	2	
5		4	208	2	
0		3	8660	2	
1		38	280	> 2000	
2		22	66	3	
-RJ-14-3		7	720	900	
4/15-1T		2	14	3	
5/16-1		4	42	4	

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	W PPM	NOTES
17/18-1T		3	2510	15	
18-1		2	32	2	
18-2		8	18	75	
21/22-2		108	19	15	
25/26-2T		26	27	2	
26/27-1T		8	5	2	
34-1T		13	2240	2	
34-3T		660	3450	9	
34-4T		10	1750	180	
81-RT-15-1T		360	242	2	
16-1		108	32	3	
17-1		150	860	> 2000	
18-1		4	8	180	
20		520	46	> 2000	
22-1		7	6	3	
26-1		14	65	19	
29-1		85	44	5	

12.

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Geochemical Lab Report

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Mo PPM	As PPM	W PPM	NOTES
1-RA-2/3-9T	RX	490	17	0.3	3	
	-10T	2900	24	1.9	3	
	-11T	1660	38	0.2	4	
1-RA-4-1		30	10	2.5	2	
-5/6-1T		12	3	0.2	3	
-6-2		28	47	0.2	3	
-7-1		14	7	1.1	3	
-7-2		7	9	0.3	3	
-8-1		1	6	0.3	3	
-8-2		16	4	0.2	4	
-9-1		1	5	0.2	2	
-RJ-1-2		260	89	3.2	3	
-1-5		40	11	0.2	4	
-2-3		16	10	0.2	23	
-4/5-2		24	25	0.2	4	
-4/5-3		2	28	0.2	3	
-9-1		16	6	0.2	4	
-9-3		5	40	0.2	3	
-9-5		16	16	9.4	360	
-RT-3-1		2	2	0.2	2	
-4-1		2	5	0.2	2	
-4-2		2	66	0.2	3	
-4-3		1	2	0.2	2	
-5-1		6	77	1.6	3	
-6-1T		2	4	0.2	2	
-7-1		8	99	0.2	2	
-8-1		3	12	0.2	3	
-9-1		1	5	0.2	2	
-10-1		1	4	0.2	3	
-11-1		3	6	0.2	3	
-12-1		1	2	0.2	3	

LEGEND

SYMBOLS

GEOLOGICAL CONTACT
– – – – –assumed

FAULT
~~~~~ –assumed

JOINTING

VEINS

BRECCIAS

FRACTURING

XENOLITHS

GOSSANOUS ZONES

PERMANENT ICE FIELD

WN no 2
Welcome North showing

LITHOLOGY

MID CRETACEOUS or LATER

Rqp – Rena quartz porphyry- white to pink colored, fine grained, granular to sucrosic matrix with quartz eyes and plagioclase phenocrysts generally widely spaced.

Rq – Rena aplites- grey to white to pink colored, fine grained, sucrosic textured aplite. Often intermixed with Rqp and as cross-cutting dykes in Reqm

Reqm – Rena equigranular quartz monzonite which includes Reqm p- pink weathering, leucocratic potash rich equigranular quartz monzonite (locally granite) ; Reqm w- white weathering biotite equigranular quartz monzonite; Rqpmx - xenoliths of biotite rich, porphyritic, quartz monzonite.

MID CRETACEOUS or EARLIER

MBgd – Mount Billings granodiorite- equigranular, biotite, hornblende granodiorite.

ABBREVIATIONS

WO_3	–Tungsten mineralization (Scheelite & Wolframite)
Mo	–Molybdenite
Q	–Quartz vein
S	–Sericite
Mt	–Magnetite
Chl	–Chlorite
e	–Epidote
Py	–Pyrite
m	–Manganese

Scale 0 200 500 1,000 Metres

UNION CARBIDE EXPLORATION CORPORATION

RENA
GEOLOGY PROPERTY

COMPILED BY: CN Forster		MAP NO: 4
DRAFTED BY:	DATE: NOV. 1981	SCALE: 1:10,000
DISPOSITION:		N.T.S. 105-H-14
PROJECT NO. 102	REPORT NO.	

REMA DRAFTING DEPT.
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x SAMPLE LOCATION
PPm Cu, Mo, W

UNION CARBIDE EXPLORATION CORPORATION

RENA

SILT & TALUS GEOCHEMISTRY

COMPILED BY: GNF		MAP NO: 5	
DRAFTED BY: GNF	DATE: Nov 1981	SCALE: 1:10,000	
DISPOSITION:		NTS: 105 N 10	
PROJECT NO:	REPORT NO:		

N

Rock sample Location
ppm Cu, Mo, W, Ag

UNION CARBIDE — UNION CARBIDE EXPLORATION CORPORATION

RENA

ROCK GEOCHEMISTRY

COMPILED BY: CAF			MAP NO: 6
DRAFTED BY: CAF	DATE: NOV 1981		SCALE: 1"=10,000
DISPOSITION:			M.T.N. 105 of 14