

UTAH MINES LTD.
ISLAND COPPER MINE
P.O. BOX 370
PORT HARDY, B.C. V0N 2P0
TELEPHONE (604) 949-6326

6056

October 26th, 1976.

Department of Mines & Petroleum Resources,
Douglas Building,
Government Street,
VICTORIA.

SUN
924/11W

Sirs,

Assessment Report - Sun Group

This report, in duplicate, is being submitted in compliance with the Regulations Governing Assessment Work under the Mineral Act, revised to June 30th, 1976.

A credit is requested for diamond drilling performed between the 11th and 23rd of September, 1976.

The report covers one only group of mineral claims, known as the Sun group.

Yours truly,

John Lamb

John Lamb, P. Eng.,
Project Geologist.

JL:ebh
att:

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
No. <u>6056</u>

#1 Claim map

IN
BACK
POCKET

13 pages DIAMOND DRILL HOLE LOGS

UTAH MINES LIMITED

ISLAND COPPER MINES

PORT HARDY, B.C.

WORK PERFORMED

- 1] Diamond drilling one hole between September 11th and September 23rd, 1976. The hole is located on the edge of the MacMillan Bloedel mainline logging road near the head of Rupert Inlet and approximately one quarter mile south of the crossing over Waukwaas Creek.
- 2] Particulars of the hole are:
 - Number - R-6
 - Location - On M & B road, 356 feet at N 6^oE from claim corner IN, 5W on the Sun M.C. (record No. 64)
 - Collar Elevation - 17.0 feet
 - Inclination - 90^o
 - Length - 948 feet.
- 3] Drill core is stored at the Island Copper Mine. Drill core logs are included with the report. Logging was done by John Lamb, P.Eng., B.A.Sc., M.A.Sc., University of B.C.
- 4] An itemized cost statement is included. Because of the great difficulty in penetrating about 221 feet of sand, and gravel overburden above the rock, the cost of drilling the hole was approximately 50% higher than normal.
- 5] A copy is included, of a contract between Utah Mines Ltd., and Connors Drilling Ltd. Hole R 6 was drilled under terms of this contract and with certain changes which are explained in the three attached letters.
- 6] An index map and a detailed claim map are attached to the report and indicate the location of the drill hole.

John Lamb
John Lamb, P. Eng.,
Project Geologist,
Utah Mines Limited.

STATEMENT OF COSTS

FOR

DIAMOND DRILLING ON THE SUN GROUP

OF

MINERAL CLAIMS

A] Contractors Charges

Overburden

0 - 50 ft. @ \$13.25	- \$	662.50	
50 -125 ft. @ 13.75	-	1,031.25	
125 -210 ft. @ field cost			
210 -228 ft. @ 13.25	-	238.50	
			\$1,932.25

Field cost 125-210 ft.	<u>Man Hrs.</u>	<u>Drill Hrs.</u>
tri-cone 125-193	10	5
reaming casing	20	10
casing	20	10
ream, case & clean hole	20	10
tri-cone 0-190	20	10
clean hole & tri-cone		
193-211	20	10
N.W. casing 0-210	16	8
Ream & case 210-212	8	4
	134	67

134 man hrs. @ \$15.00	-	2,010.00	
67 drill hrs. @ 12.00	-	804.00	
			\$2,814.00

Rock

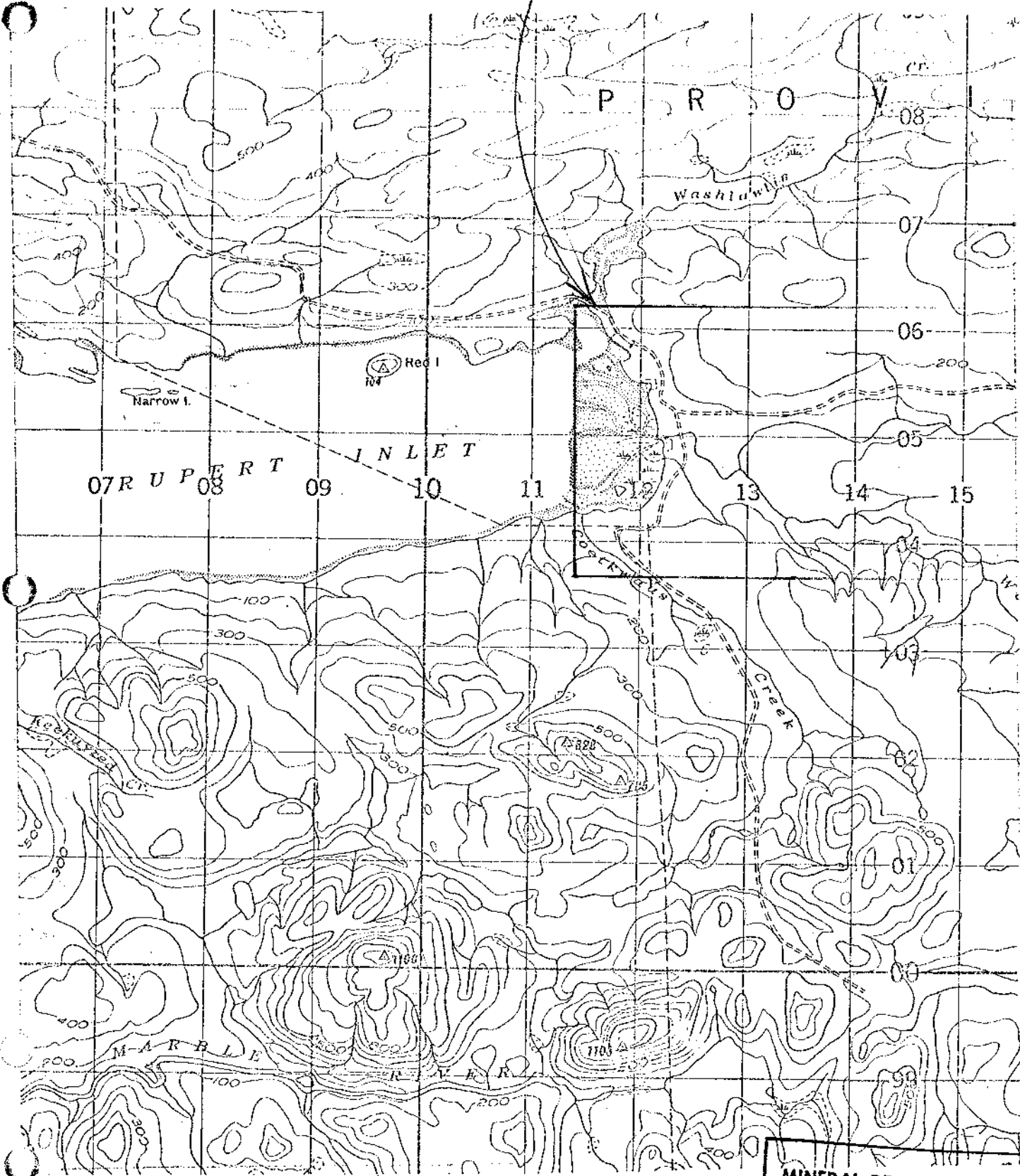
228-500 @ \$13.25	-	3,604.00	
500-948 @ 14.25	-	6,384.00	
			\$9,988.00

Field cost

62 man hrs. @ \$15.00	-	930.00	
26 drill hrs. @ \$12.00	-	312.00	
			\$1,242.00

contd...

AREA COVERED BY
1000 SCALE CLAIM MAP



INDEX MAP
SHEET 92 4/11 W N.T.S.
Scale $\frac{1}{50000}$

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6056

A G R E E M E N T

This A G R E E M E N T made this 14th day of May 1976.

BETWEEN: UTAH MINES LTD.
ISLAND COPPER MINES
P.O. BOX 370
PORT HARDY, B.C.

(hereinafter referred to as the "COMPANY")

AND: CONNORS DRILLING LTD.
205, 1201 WEST PENDER STREET
VANCOUVER, B.C. V6E 2V2

(hereinafter referred to as the "CONTRACTOR")

WHEREAS the COMPANY hereby requests that the CONTRACTOR carry out certain surface diamond drilling and other services, on the COMPANY'S property at the Island Copper Mine at Port Hardy, B.C.

AND WHEREAS the CONTRACTOR hereby agrees to perform said diamond drilling and other services requested, under the terms and conditions hereinafter contained.

1. SCOPE OF WORK

The work is to consist of a series of drill holes, drilled at locations specified by the COMPANY. A total minimum footage of approximately 2,200 feet shall be drilled, but total footage may be extended beyond that amount, by mutual consent. Holes shall be drilled with NQ tools producing approximately 1 7/8" diameter core, as far as is reasonably practical. Maximum depth of holes shall be around 1000 feet deep. Inclination of holes shall be from minus 60 to minus 90 degrees. Total cost of program is estimated to be \$25,000.00.

2. COMMENCEMENT AND EXECUTION OF WORK

Work shall be commenced: During the month of June, 1976. Work will be carried out with shifts operating seven days a week or as near that schedule as can reasonably be maintained.

3. THE CONTRACTOR HEREBY COVENANTS AND AGREES:

- (a) To provide all of the required drilling machinery and associated tools including, but not limited to: One skid mounted drill rig, pumps, rods, casing, diamond set items, ~~oil~~ oil and grease, service truck, water line, etc.

- (b) That drilling crews will follow good drilling practice and shall use due care and diligence as shall enable them to recover as high a percentage of core as the nature of the ground being drilled shall permit. All cores shall be delivered to the COMPANY, in boxes provided by the COMPANY at the drill sites.
- (c) That it shall be responsible for, and will pay promptly all costs and charges, incurred by itself for labor, machinery, tools, and supplies used in completing the work hereunder so that no lien or other such charge relative to the CONTRACTOR, may be registered against the COMPANY or the property. The CONTRACTOR shall be responsible for the payment of all assessments for Workmen's Compensation, Holiday Pay, Canada Pension, Unemployment Insurance, Sales Taxes, or other such applicable charges relative to its own labor and supplies purchased.
- (d) The CONTRACTOR shall, at all times enforce strict discipline and maintain good order among its employees and shall not retain on the work any unfit person or anyone not skilled in the work assigned to him. Any employee who is objectionable or unsatisfactory to the COMPANY shall be removed from the work and replaced by an employee satisfactory to the COMPANY.
- (e) The CONTRACTOR shall keep his camp and drill sites free from waste and rubbish, and at the completion of his work he shall leave the camp area and all drill sites in a clean condition.
- (f) The CONTRACTOR or its personnel shall not divulge any information concerning drilling results or permit access to, or examination of the drill core by any person not specifically authorized by the COMPANY.

4. THE COMPANY HEREBY AGREES:

- (a) Should cavities, loose or caving ground or excessive water flows be encountered in a hole so that further drilling in that hole is deemed impracticable, that hole may by mutual consent, be abandoned, and the CONTRACTOR be paid at rates so specified herein for all footage completed in that hole. However, should the COMPANY request that further work be carried out in the hole beyond this point, then the CONTRACTOR shall continue work in the hole but such continuing work shall be at FIELD COST Rates.
- (b) That it will provide access roads to as near all drill sites as is practical.
- (c) The COMPANY shall provide, at no cost to the CONTRACTOR, all rights of way of ingress and egress to all lands that may be required to enable the CONTRACTOR to carry out the work as specified.

5. THE COMPANY HEREBY AGREES to pay the CONTRACTOR for footage drilled and other services performed as follows:
- (a) Mobilization and demobilization, for equipment and supplies from Vancouver to Island Copper Mine, via water transport, for the COMPANY'S account. The cost of getting personnel to and from job site shall be for the CONTRACTOR'S account.
 - (b) Drilling:

	<u>NO</u>	
0 - 500 feet	\$10.75	a foot
500 - 1000 feet	11.75	a foot
 - (c) Overburden penetration:

0 - 50 feet,	at \$10.75	a foot
50 - 125 feet,	at \$11.25	a foot
Beyond 125 feet, at Field Cost, if the cost of penetration is greater than \$11.25 a foot.		
 - (d) Reaming hole in rock for casing, if required, at Field Cost.
 - (e) Casing of hole in rock, if required, at Field Cost.
 - (f) Standby, dip-testing, or delay time, or other time during which the CONTRACTOR'S crews are performing services, for the COMPANY not otherwise covered herein, at Field Cost.
 - (g) Cementing of drill holes, and redrilling of cemented section of hole, at Field Cost.
 - (h) Water supply: CONTRACTOR will supply 1,000 feet of water line and pump for a maximum vertical lift of 300 feet. The cost of hauling water, if required, shall be for the COMPANY'S account.
 - (i) Moving of drill and equipment from site to site: The cost of labor shall be for the CONTRACTOR'S account.
 - (j) Drilling mud and additives, if required, shall be at Cost.
 - (k) Truck rental: The CONTRACTOR shall provide service trucks at no cost to the COMPANY.
 - (l) Tractor: To move skid mounted drill rigs, if required, shall be provided by the COMPANY.
 - (m) Camp: The COMPANY will provide housing and board for the CONTRACTOR'S personnel at no cost to the CONTRACTOR.

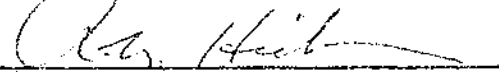
- (n) Field Cost, where applicable, shall be: Labor at \$11.50 a man hour (including supervision), equipment rental at \$10.00 a drill shift hour, and all the "down the hole" tools and supplies lost or consumed during the Field Cost portion of the work at Cost plus ten percent.
- (o) Record Keeping: Invoices for footage drilled and other services performed shall be made up from daily log sheets submitted to the COMPANY by the CONTRACTOR'S foreman in charge.
- (p) Geotechnical operations rate: For the installation of piezometers, water pressure testing etc., shall be at \$42.00 per shift hour.

6. INSURANCE AND GENERAL

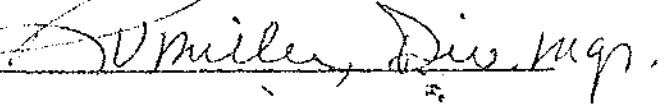
- (a) The CONTRACTOR, at its own cost, shall maintain insurance to the following limits; Liability and Property Damage \$2,000,000.00, Automobile Insurance coverage \$1,000,000.00.
- (b) The CONTRACTOR shall not be held liable for any loss or damage suffered by reason of any cause beyond its active control such as riots, strikes, lockouts, Acts of God, or failure of transportation.
- (c) Under the foregoing terms and conditions the CONTRACTOR does not guarantee to drill any hole to any specified depth. The CONTRACTOR will however, expend every reasonable effort to complete all holes to the satisfaction of the COMPANY.
- (d) The CONTRACTOR shall invoice the COMPANY semi-monthly for footage drilled and other services performed. Such invoices shall be due and payable within 30 days of invoice date.

IN WITNESS WHEREOF THE COMPANY and the CONTRACTOR
set their hands this day of , 19 .

UTAH MINES LTD.



CONNORS DRILLING LTD.



September 10th, 1976.

Mr. R. Miller,
Connors Drilling Ltd.,
#205, 1201 W. Pender,
Vancouver, B.C.
V6E 2V2

Dear Rudy:


Re: Present Drilling Program

As per our verbal agreement made today we are accepting your request for certain rate increases in charges for our current program, as they are outlined in the letter to me from Phil Edwards, dated 30 August, 1976.

Also as agreed between us verbally we will accept moving costs for labor from the pit to hole M5, then to hole R5 and back to the pit again. Such long distance moves were not spelled out in our contract and as they are not ordinary pit moves we'll bear the cost as mentioned.

Trusting this is satisfactory, I remain,

Yours truly,


John Lamb,
Project Geologist

JL:jh



Suite 205 - 1201 West Pender Street, Vancouver, B.C. V6E 2V2 (604) 683-2222

August 30, 1976

Mr. John Lamb
Island Copper Mine Ltd.
Port Hardy, B.C.

Dear John:

We have examined the financial status of our drill program for you and despite the fact that field operations are going well, we have lost a considerable amount on this work. We have obtained 6.5 feet per drilling hour, average penetration, which is good for drilling in and around the pit, with 95% availability of equipment. We have a top crew there and we have been without personnel problems. The simple fact is that our price does not allow us to recover costs. To the end of July we show a loss of almost \$4,000.00 for this job, after completing 2,846 feet of drilling. The results for August will be even worse.

To reverse this situation and to have any hope of turning a small profit by the end of the program we need a substantial increase in rates. Our fixed costs have averaged \$41.22 per shift hour, and we have recovered much less than this on Field Cost, and only just recovered it on the geotechnical rate. Therefore, we request an increase in our Field Cost rate to this amount based on \$15.00 per man hour for two men per shift, and \$12.00 per shift hour for the equipment.

For the footage rates, our base cost has averaged \$11.45 a foot, while footage revenue has averaged \$10.54 a foot. To partially offset the loss already on the books, and, hopefully, to allow us a small profit on the balance of the program, we request a general increase of \$2.50 a foot in the base drilling rates. We also request that these rates apply from August 15, after completion of 3,962 feet. The extra charges for hard ground quoted in Rudy's letter of August 18 will still apply whenever these conditions are encountered.

Mr. John Lamb
August 30, 1976
Page 2

I trust that you will approve our request so that the drill program will be a success for us both.

Please give this matter your immediate attention.

Yours very truly,

CONNORS DRILLING LTD.



Phil Edwards
Assistant Division Manager

PE:itm



Connors Drilling Ltd.

Subsidiary of
Bow Valley Industries Ltd.

Suite 205 - 1201 West Pender Street, Vancouver, B.C. V6E 2V2 (604) 683-2222

August 18, 1976

Mr. J. Lamb
Utah Mines Ltd.
Island Copper Mine
P.O. Box 370
Port Hardy, B.C.

Re: Drilling Extra Hard Rock in Pit Area.

Dear Mr. Lamb:

Further to our discussion of August 13th regarding charges for the above, my proposal as follows:

Effective: August 12th to include hole #D-26, to recover extra bit costs.

0 - 500 feet	\$ 7.50 a foot
500 - 1000 feet	\$ 9.00 a foot
1000 - 1500 feet	\$10.50 a foot

Plus, the cost of casing shoes used on Hole #D-26 and on any other holes that may be collared in extra hard rock.

The above listed footage rates would be additional charges for extra hard ground encountered when drilling production is lower than 3 feet per shift hour and bit footage is less than 40 feet per bit used.

Extra cost charges will have to be approved by Utah Mines Ltd. before they can be invoiced.

I trust you will find this acceptable.

Yours very truly,

CONNORS DRILLING LTD.

R.V. Miller
Division Manager

RVM:itm

cc F. Tagami
Z. Kluczewski

HOLE NO. RC

PROJECT:

PAGE NO: 4 OF 13

CASING COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY:

SECTION	ALTERATION			FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT	ESTIMATED
330															
390							<p><u>376-399</u> - Dark gray green fine f'g'tl tuff. w. wispy streaks of calc. Non mag'te</p> <p>$\frac{1}{4}$" slip</p>			330	91				
400							<p><u>399-435</u> - Dark green to slightly brownish frag'tl tuff. Frags to 2mm. Laced w. wisps & streaks fine white to pinky calc. Non mag'te. Last 15' is reddy-brown w. hematite alt'n.</p>			399	94				
420															
430															
440							<p><u>435-</u> See P 5</p>			435					

HOLE NO. RC

PROJECT:

PAGE NO: 7 OF 13

CASING COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY:

SECTION	ALTERATION			FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
560							DESCRIPTIVE GEOLOGY			560					
							542-588 See p 6				91				
570															
580							1' show ground			588					
590							588-622 - Much broken + rubble tuff w. poor recovery Rock is dark gray green frag'l. tuff w white fine frags. Some calc + a few pink f'spar veins. Non magte.								
600							6" core								
610							3" of rubble 3" missing				25				
620							about 10" of core			620					

HOLE NO. *RC*

CASING COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT:

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH:

PAGE NO: *9* OF *13*

REF. TO CLAIM CORNER:

SCALE:

LOGGED BY:

SECTION	ALTERATION			FRACTURING	MINERAL GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT	ESTI-MATED
680						<i>663-706 - see P 3 Minor streaks hematite</i>								
690						<i>1/4" slip w calc</i>				<i>92</i>				
700														
710						<i>706-740 - Massive dark gray fgtl. tuff w. sparse dark thin fgmts Non magite. Some hematite all'n of frags. Vague dark streaky dendritic star patterns in places. A few calc & pink f' spar veins. Very minor epid spotting.</i>			<i>706</i>					
720						<i>2" calc breccia</i>				<i>95</i>				
730						<i>1/4" calc-f' spar</i>								
740									<i>740</i>					

HOLE NO. *R6*

GASING COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT:

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH:

PAGE NO: *11* OF *13*

REF. TO CLAIM CORNER:

SCALE:

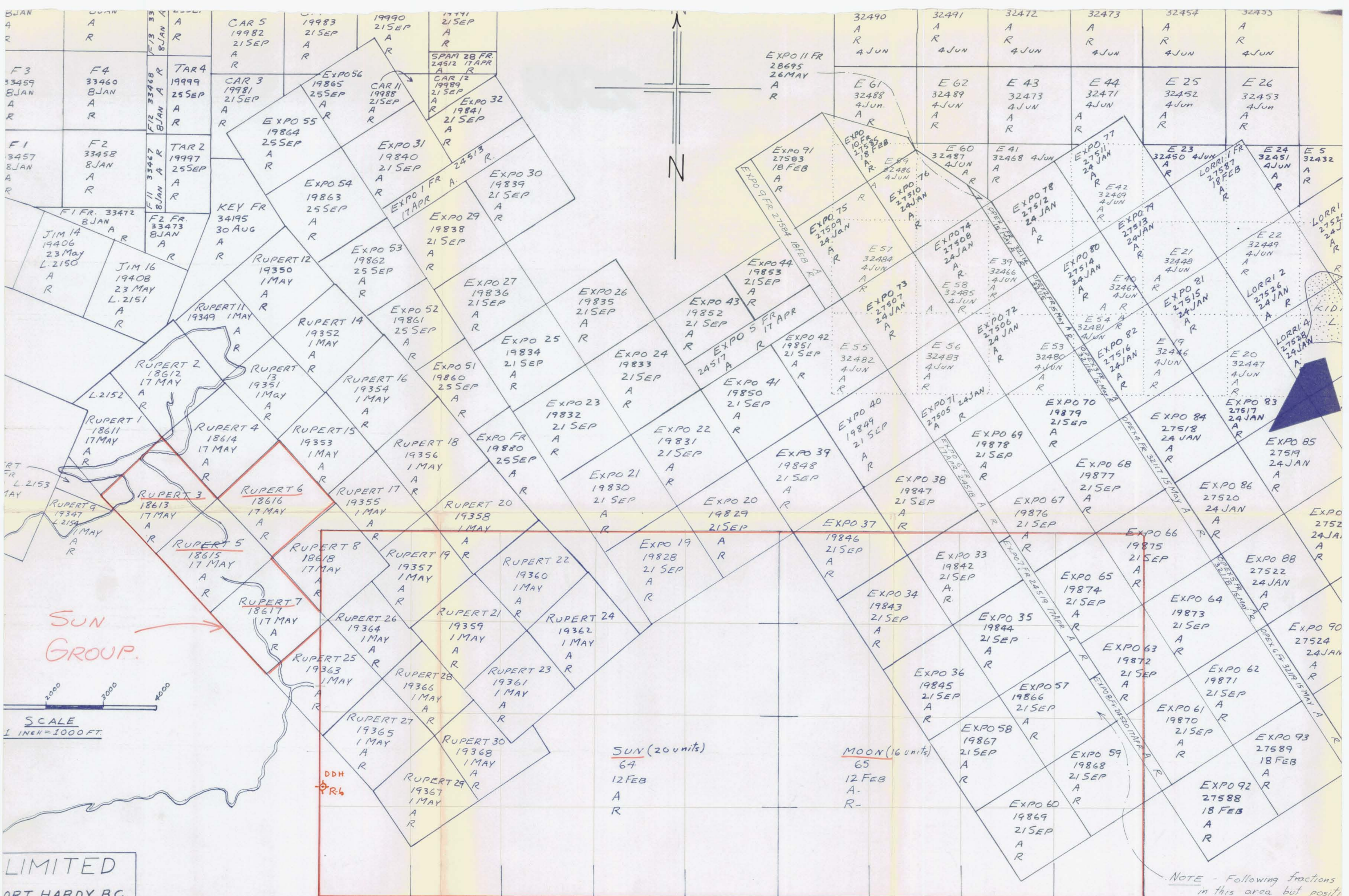
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SECTION	ALTERATION			FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT	ESTI-MATED
300							<i>715-724 S. 1st</i>								
310															
320							<i>1/2 ft tuff chip</i>								
330							<i>823-860 - Coarse volcanic tuff b'ks A lot rounded pieces of f'g'tl tuff in a f'g'tl tuff matrix. Cut by narrow veins of calc & pink f'spar Mn hem. alt'n Spotty epid alt'n, especially in volcanic fragments</i>								
340															
350															

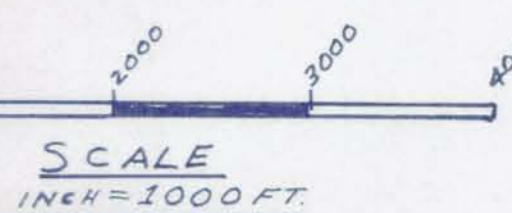
72

722

94



SUN GROUP



NOTE:

- ① A = ASSESSMENT TO --
R = RENTAL TO --
- ② LAKE & RUBY MC's - located by M.G.S. staking, June '75.
- ③ SUN & MOON MC's - located by M.G.S. Feb '76

Note: to accompany assessment report by J. Lamb - Oct. 1976

6056

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6056**
#1
MAP NO.

UTAH MINES LTD.
NANAIMO M.D. PORT HARDY
showing location of Diamond Drill Hole # R-6
Scale 1" = 1000'

NOTE - Following fractions in this area but positive

Expo 12 FR	28696
" 13 "	97
" 14 "	98
" 15 "	99
" 16 "	28700