

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

6027

October 19th, 1966

LAKE

92L/11W

The Mining Recorder,
Court House,
35 Front Street,
Nanaimo, V9R 5J1.

Attn: Mrs. J. Carr.

Assessment Report

My Assessment Report in duplicate is enclosed with this letter and covers the Joe's Lake Group. Copies of the affidavits (Form B) and the Notice to Group (Form I) have already been mailed to you.

Yours truly,

John Lamb

John Lamb, P. Eng.,
Proj. Geol.

JL:ebh
att:

MINERAL RESOURCES BRANCH ASSESSMENT REPORT No. <u>6027</u>
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#1

Claim Map

IN
BACK
POCKET

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

October 19th, 1976

Department of Mines and Petroleum Resources,
Douglas Building,
Government Street,
Victoria, B.C.

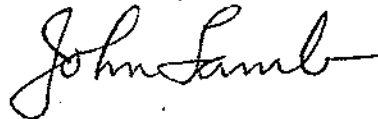
Sirs,

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

Assessment credits are requested for diamond drilling work, performed between 25th August and 3rd September, 1976.

The report covers one group of claims, known as the Joe's Lake Group.

Yours truly,



John Lamb, P. Eng.,
Project Geologist

JL:ebh
att:

UTAH MINES LIMITED

ISLAND COPPER MINE

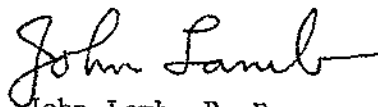
PORT HARDY, B.C.

WORK PERFORMED

1. Diamond drilling between 25th August and 3rd September, 1976, on the northern part of the Island Copper mineral holdings, about 10 miles south of Port Hardy.
2. One hole only was drilled on an old logging road, about one mile north of the Island Copper pit. Particulars are as follows: -
 - a] Core size - NQ.
 - b] Core is stored at the Island Copper mine of Utah Mines Ltd.
 - c]

<u>Hole No.</u>	<u>Collar Co-ordinates</u>	<u>True Collar Elev.</u>	<u>Inclin-ation</u>	<u>Length</u>
M5	[13165 N [27150 E	370'	-90°	1098 ft.
 - d] In relation to the claims, the hole is on the Lake mineral claim, approximately 330 ft. west-northwest of post 1 North, 0 West.
3. Drill core logs are included with the report.

Logging was done by: John Lamb, P.Eng., Project Geologist,
B.A.Sc., M.A.Sc., - University of B.C.
4. An itemized cost statement is included in the report.
5. A copy of the contract with Connors Drilling Ltd., is included. Hole M5 was drilled as a part of this contract. There are several later additions to the terms of the contract. See: a] letter to J. Lamb from R. Miller - 18th August, 1976.
b] letter to J. Lamb from P. Edwards - 30th August, 1976.
c] letter to R. Miller from J. Lamb - 10th September, 1976.
6. Both an index map and detailed claim map are enclosed, showing the location of the hole.


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

JL:ebh
att:

STATEMENT OF COSTS

FOR

DIAMOND DRILLING ON THE JOE'S LAKE GROUP

OF MINERAL CLAIMS

A. Drill Contractor's Charges

0 - 500 feet @ 10.75	-	\$ 5,375.00
500 -1000 feet @ 11.75	-	5,875.00
1000 -1098 feet @ 11.75	-	<u>1,151.50</u>

Increased footage rates (as per letter of Aug 30) 1098 feet @ \$2.50		<u>2,745.00</u>
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\$15,146.50

Extra Contract Charges

50 man hours @ \$15.00	-	750.00
15 drill hours @ \$12.00	-	180.00
Travel time - 26 man hours @ \$15.00	-	390.00
Hotel accommodation for crew - 8 days @ \$26.00	-	208.00
Casual Meals in Utah Camp, 4 men for 10 days, @ \$3.50 per meal	-	<u>350.00</u>

\$ 1,878.00

B. Utah Mines Ltd. - Costs

a) Core boxes and lids 66 @ \$3.55	-	234.30
b) Site preparation road clearing	-	300.00
c) Truck rental	-	150.00
d) Supplies and freight	-	175.00
e) Geologist's time	-	1000.00
f) Company overhead @ 25% of labor charges	-	250.00
g) Portion of mob-demob charges	-	250.00
h) Preparation of report	-	<u>300.00</u>

\$ 2,659.30

TOTAL DRILLING COSTS: -

\$19,683.80

contd...

STATEMENT OF COSTS FOR
DIAMOND DRILLING ON THE JOE'S LAKE GROUP
OF MINERAL CLAIMS
Page 2 contd...

Total Costs	-	\$19,683.80
Footage Drilled	-	1,098 feet
Drill Cost Per Foot	-	<u>\$17.92</u>

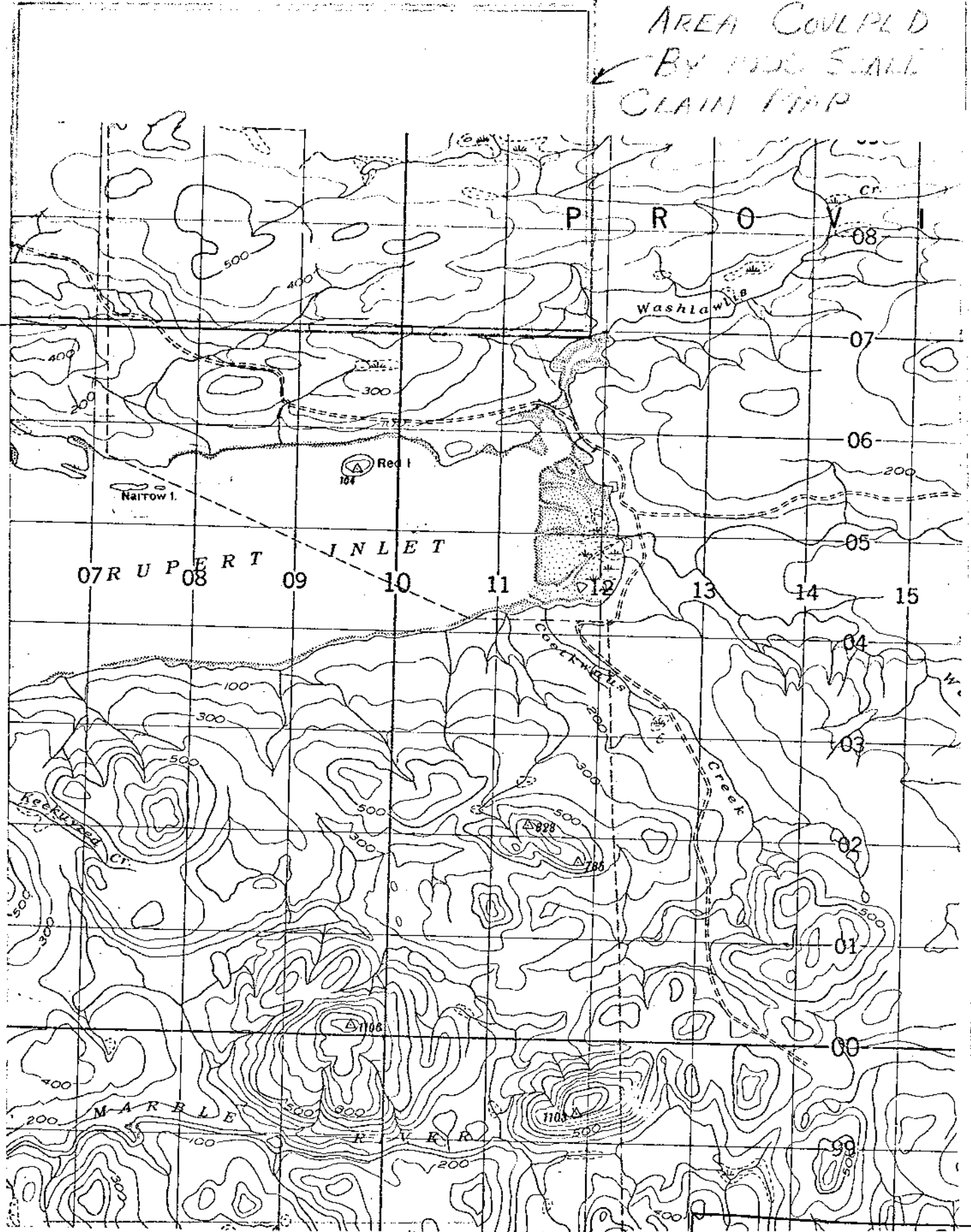
Note: -

At the time the affidavit was submitted, the best estimate of the cost was \$16.40 per foot. Actual cost was \$17.92 per foot as calculated above.

John Lamb

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

AREA COVERED
BY THIS SCALE
CLAIM MAP



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

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6027

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:

		NQ	
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.

[Signature]

CONNORS DRILLING LTD.

[Signature] Div. Mgr.

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.

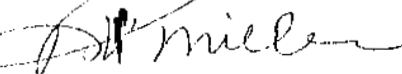
The above listed footage rates would be additional charges for extra hard ground encountered when drilling production is lower than 3 feet per shift hour and bit footage is less than 40 feet per bit used.

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



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

September 10th, 1976.

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

Dear Rudy:

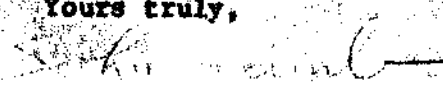
Re: Present Drilling Program

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 R6 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

HOLE NO. *M5*

PROJECT:

PAGE NO: *2* OF *18*

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
80															
90 100							<i>88-97 - Bl. n. striped limy arg. ss in previous run</i>			<i>88</i>	<i>95</i>				
100 110							<i>97-131 - Mixed gray f. tuff and breccia composed of argillite & tan tuff. Looks like a coarse tuff fall in argillite sediments. Core partly broken. Many soft calcite filled frac. Rock limen.</i>								
120															
130															
140							<i>131-142 - Buti-grey lapilli tuff mixed w. black argillite as in prev run. Many calc. frac. Veinlets py. & sec. sp.</i>			<i>131</i>	<i>95</i>				

HOLE NO. *M5*

PROJECT:

PAGE NO: 7 OF 18

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 SAMPL. INT.	ESTI-MATED	
330																
390							<p><u>380 - 436</u> - Some cherty tuff to 402 followed by t. bdd block + pale carb-cherty argillite. All limy. Strong brecciation in places. Rapid changes in bddy from parallel to 70° to core. Many minor bddy. displacements. Lacy calcite network through rock. Fine cherty bds. have fine py. in them.</p>				90					
400																
410																
420																
430																
440																
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see PS.

HOLE NO. *M5*

PROJECT:

PAGE NO. *16* OF *18*

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	
920																
930							<p><i>923-950 - Mostly pale gray lms., massive w. no obvious bedding. At 929 lms gives way to a green-tan layer of weak skarn w abundant fine pyr & a little disseminated cpy.</i></p>			928						
940											90					
950							<p><i>950-956 - Tan skarn & breccia, well peppered w pyr & some fine cpy</i></p>			950			949		.4	0.58
960							<p><i>956-979 - To 961, streaky green to pink skarny volcanic rock, only slightly limy. From 961 dark gray volcanic w epidote in streaks & amygdules & numerous calcite veinlets. This is the <u>Karmutsen</u> formation.</i></p>						961		<.2	0.08
970							<p><i>1" gouge</i></p> <p><i>sheared & off brecciated & broken</i></p>									

Cu
Assay

UTAH MINES LTD.
 NANAIMO M.D. PORT HARDY
 showing location of
 DIAMOND DRILL HOLE M-5

NOTE
 To accompany assessment report
 by J. LAMB - OCTOBER 1976.

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 NO. **6027**
 MAP NO. **#1**

