

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

June 27th, 1980.

Ministry of Energy, Mines & Petroleum Resources,  
Douglas Building,  
VICTORIA, B.C.  
V8V 1X4.

Dear Sirs,

Re: ASSESSMENT REPORT - West Group of Mineral Claims

The accompanying report, in duplicate is being submitted in compliance with regulations governing assessment work under the Mineral Act, revised to January 1st, 1978.

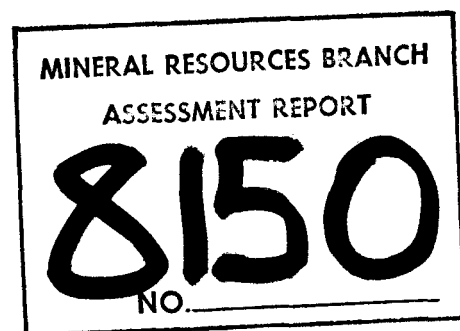
Credit is requested for diamond drilling performed between June 4th and June 11th, 1980.

Yours truly,

*John Lamb*  
John Lamb, P. Eng.,  
Project Geologist.

JL:ebh

attachments:



REPORT ON DIAMOND DRILLING SUBMITTED FOR  
ASSESSMENT WORK ON THE WEST GROUP OF  
MINERAL CLAIMS

Latitude    50<sup>o</sup>    37½'    N  
Longitude   127<sup>o</sup>    32'    W

Mining Division	-	Nanaimo
N.T.S. Location	-	Map 92 <sup>L</sup> / 12    1:50000
Detailed Location	-	About 9 Miles South of Port Hardy, close to the highway leading to Coal Harbor.
Owners	-	Utah Mines Ltd., and Gordon Milbourne.
Operator	-	Utah Mines Ltd.
Author	-	John Lamb, P. Eng.
Date Submitted	-	July 2nd, 1980.

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WORK PERFORMED	1
STATEMENT OF COSTS	2
RESULTS	3
CONCLUSIONS	3

Maps:

- (1) Claim map showing location of drill holes.
- (2) Index map, Sheet 92<sup>L</sup>/11 NTS.

Appendices:

- (1) Copy of drilling contract.
- (2) Copy of drill hole logs.

OBJECTIVE:

The holes were drilled near the west boundary of the Island Copper mineral claims. Located specifically on mineral claim Coir No. 4 (17850), they are approximately on strike and 4 km. westerly from the present open pit. Although rock outcrop is sparse in this area, the presence of one small knob of quartz-feldspar porphyry, offered some encouragement that related mineralization might be found nearby.

Work Performed:

- 1) Two holes were diamond drilled between the 4th and 11th of June, 1980. Both holes were drilled to NQ size.
- 2) Located on Coir 4 M.C. (17850), they are on a dormant logging road running parallel to and 213 meters south of the main highway leading to Coal Harbor, which is about 4.4 km to the south west.
- 3) Hole Particulars are:

<u>Hole</u>	<u>Inclination</u>	<u>Length</u>	<u>Collar Elev.</u>	<u>Collar Co-ordinates</u>
W-1	-90°	121.9 M	69.75 M	13900 N 11350 E
W-2	-90°	108.8 M	70.10 M	14250 N 12000 E

The survey co-ordinate positions of the holes are based on the system in use at the mine.

- 4) Drill core logs are attached to the report. Logging was done by J. Lamb, P.Eng., B.A.Sc., M.A.Sc., University of B.C., who is on the staff at the mine. The core is stored at the mine site.
- 5) An itemized cost statement is included in the report.
- 6) A copy of the drilling contract is included. Signed by both Utah Mines Ltd., and Connors Drilling Ltd., it forms the agreement under which the drilling was performed.
- 7) An index map (1:50000 NTS) and a detailed claim map (1:12000) form part of the report, showing the locations of the two holes and the extent of the West Group.

STATEMENT OF COSTSFOR THEWEST GROUP OF CLAIMSCONTRACTOR'S CHARGES:Overburden -

	(Feet)		=	
Hole W-1	0 - 32	@ \$19.35	=	\$ 619.20
Hole W-2	0 - 24	@ \$19.35	=	464.40

Rock -

	(Feet)		=	
Hole W-1	32 - 400	@ \$17.95	=	6,605.60
Hole W-2	24 - 357	@ \$17.95	=	5,977.35

Field Costs -

Setting up, reaming, water lines, etc. = 1,560.00

Extra Charges -

Mobilization cost @ 7.5% of total  
charges for whole contract = 600.00

UTAH COSTS:

1)	Core House Labour	=	400.00
2)	Geological Supervision	=	1,000.00
3)	Company Overhead @ 25% of Labour Plus Supervision	=	560.00
4)	Core Boxes 40 @ \$4.25	=	170.00
5)	Room and Board - 4 Men for 8 Days @ \$18.00/day	=	576.00
6)	Preparation of Report	=	450.00
7)	Survey of Holes	=	400.00
8)	Vehicle Op'n 100 mi @ 30 <sup>c</sup> /m	=	30.00

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\$19,412.55

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Total Footage Drilled W-1 - 400  
W-2 - 357  
757 feet

∴ Cost per foot drilled - \$25.64

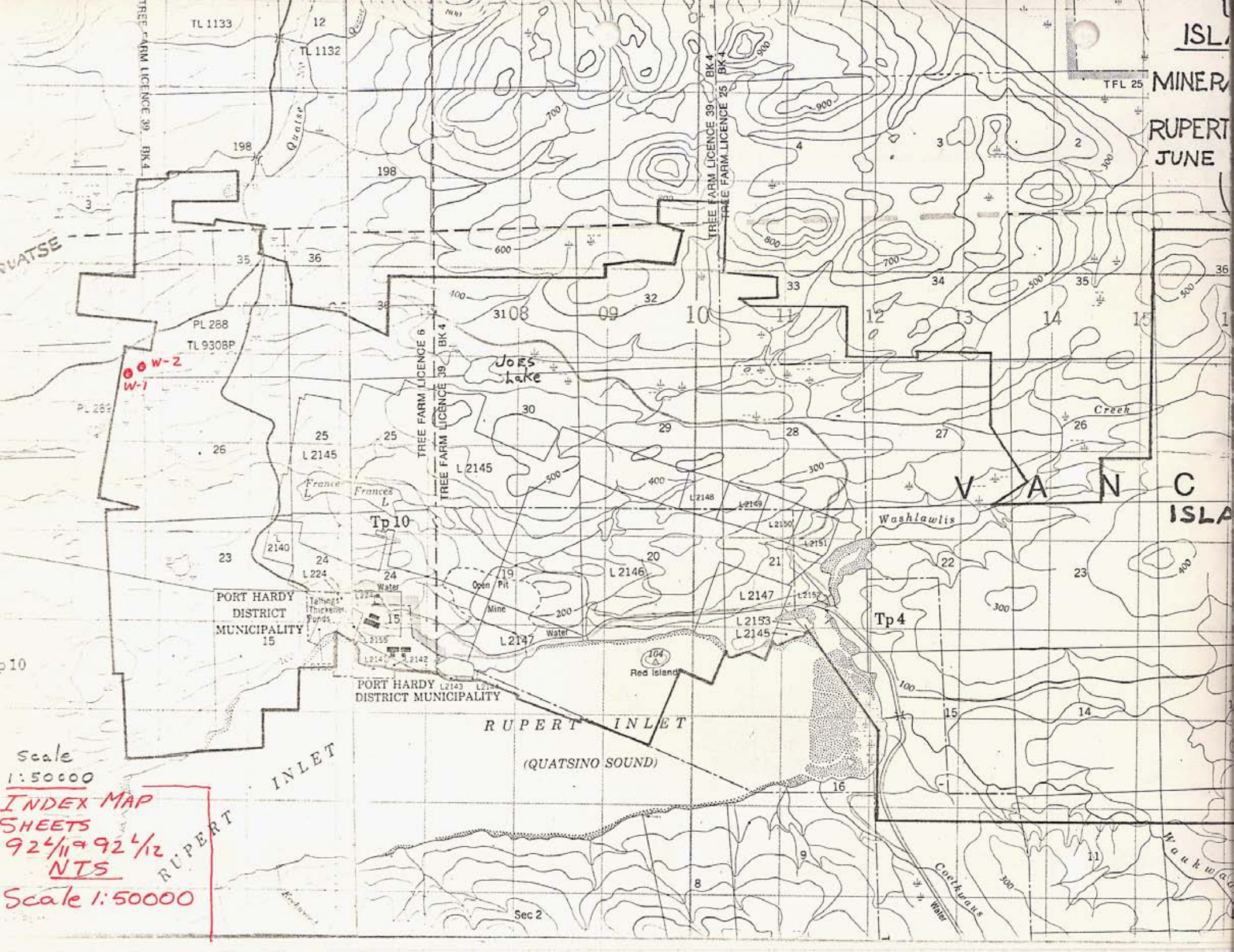
RESULTS:

Both holes penetrated essentially similar rock, which is a close packed dark blue-green lapilli tuff with occasional narrow interbedded fine sandy tuff. Many of the lapilli themselves are composed of earlier light colored rhyolite tuff which had been broken and re-worked by later explosive pyroclastic ejections. Except for a pervasive low grade chloritization and a few narrow calcite stringers, the rock is fresh in appearance.

CONCLUSION:

The absence of the type of rock alteration usually associated with copper mineralization, is an indication that the area around holes W-1 and W-2, doesn't have much promise in this respect.

*John Lamb P.Eng*



ISLA  
MINER  
RUPERT  
JUNE

VANCOUVER ISLAND

scale  
1:50000  
INDEX MAP  
SHEETS  
92 1/11 92 1/12  
NTS  
Scale 1:50000

RUPERT INLET

Sec 2



Connors Drilling

Division of  
Bow Valley Resource Services Ltd

Box 1657, Merritt, B.C. V0K 2B0

May 5, 1980

Utah Mines Ltd.,  
Box 370,  
Port Hardy,  
B.C.,  
VON 2P0

*Addendum to  
Contract following  
J.L*

Attention: John Lamb  
Island Copper Mine

Dear John;

This is further to the discussion with you and our Mr. Wayne Beaupre ...

- 1) NQ3 core drilling will be charged at 0.60 per foot more than the NQ prices, retro-active from the start of the 1980 drilling program.
- 2) Connors Drilling will supply a 25R drill mounted on a truck for your drilling where there will be long moves. These holes will be NQ size and drilled at minus 90 degrees.
- 3) Mob for the truck mount, from Connors base of operations to Island Copper will be a lump sum of \$2,000.00
- 4) De-mob from Island Copper to Connors base of operations will be a lump sum of \$2,000.00

Yours truly

*R Griffiths*  
R. Griffiths  
Regional Manager

Accepted

*R Griffiths*  
\_\_\_\_\_  
Connors Drilling

Accepted

*John Lamb*  
\_\_\_\_\_  
Island Copper Mine

c/c  
Bob Hindson  
Frank Tagami  
Joe Benard

RTG/mg





**Connors Drilling**

Division of  
Bow Valley Resource Services Ltd.

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

*Signed Contract  
attached  
J.L*

February 12, 1980

Utah Mines Ltd.  
Island Copper Mine  
P.O. Box 370  
Port Hardy, B.C.  
V0N 2P0

Attention: Mr. John Lamb

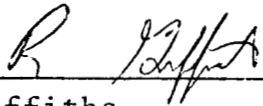
Dear John:

Please find enclosed three copies of our bid for your drilling job near Port Hardy, B.C.

If you have any questions, don't hesitate to phone myself or Joe Benard at 683-2222.

Yours truly,

CONNORS DRILLING

  
\_\_\_\_\_

R. Griffiths  
Division Manager

RTG/tvb

Enclosures

cc: F. Tagami  
R. Hindson  
J. Benard



# Connors Drilling

Division of  
Bow Valley Resource Services Ltd

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

MEMORANDUM OF AGREEMENT made this 11th day of February 1980.

BETWEEN: UTAH MINES LTD.  
Island Copper Mine  
P.O. Box 370  
Port Hardy, B.C.  
V0N 2P0

(hereinafter referred to as the "COMPANY")

AND: CONNORS DRILLING  
Division of Bow Valley Resource Services Ltd.  
205 - 1201 West Pender Street  
Vancouver, B.C.  
V6E 2V2

(hereinafter referred to as the "CONTRACTOR")

The CONTRACTOR agrees to perform diamond drilling on the lands of the COMPANY situated near Port Hardy, B.C. on the following terms and conditions, on 15 days acceptance.

## SPECIFICATIONS:

The CONTRACTOR agrees to sink by piping or to bore by diamond drilling ninety-two hundred (9,200) linear feet. And the COMPANY guarantees to the CONTRACTOR a minimum footage of ninety-two hundred (9,200) linear feet in approximately eleven (11) holes with a maximum length or depth of twenty-two hundred (2,200) feet at an angle no flatter than minus forty-five (-45) degrees from the horizontal.

It is agreed that the core from the holes shall be approximately 1 7/8 inches in diameter known as NQ in the trade, and that said core shall be kept in boxes provided by the COMPANY.

## COMMENCEMENT AND EXECUTION OF WORK:

Work shall be commenced on or around March 1, 1980 with two crews working ten hour shifts, seven days per week or as near that schedule as can be maintained.

Cont'd ....

PRICES:

a) Mobilization

From the CONTRACTOR'S base of operations to the truck off-loading point, for equipment and crew, at a lump sum of \$2,000.00.

b) Demobilization

From the truck loading point to the CONTRACTOR'S base of operations, for equipment and crew, at a lump sum of \$1,500.00.

c) For Drilling in Bedrock

<u>NQ Size</u>		<u>Price/Foot</u>
<u>From</u>	<u>To</u>	
0'	500'	\$17.95
501'	1,000'	\$19.35
1,001'	1,500'	\$20.90
1,501'	2,000'	\$22.60
2,001'	2,500'	\$24.40

d) Overburden

For piping and/or drilling in overburden at an angle no flatter than -45 degrees from the horizontal: from 0 to 50 feet at \$19.35 per foot.

If the depth of overburden exceeds 50 feet, and the cost exceeds the quoted price per foot, then the price for penetrating overburden for that hole will be at COST.

Prices do not include the COST of calcium chloride, drilling mud and/or drilling mud additives. If required, these will be invoiced to the COMPANY at COST.

The COMPANY will pay at COST for all materials left in holes, or will pay at COST for recovering such material.

e) Cementing and Reaming

It is agreed that if a hole required cementing, wedging, reaming, etc., to allow drilling to proceed, the COMPANY will pay the CONTRACTOR at COST.

f) Cost

Any reference to COST in this Agreement shall be interpreted as follows:

All labour provided by the CONTRACTOR up to 10 hours per man per day (70 hours per man per week), will be at the all-inclusive rate of \$23.00 per man hour.

Cont'd ....

All material, supplies or services provided by the CONTRACTOR will be charged for at their COST, plus transportation, sales tax and a nominal 15% for accounting, et cetera.

Where applicable such as in piping, reaming, cementing, wedging and testing, machine time will be charged at the rate of \$25.00 per hour, including fuel and oil.

g) Moves

It is agreed that the COMPANY will pay at COST for all moving between holes, over 20 man hours per move.

If the CONTRACTOR is required to move back on an old hole for any purpose, the COMPANY will pay the CONTRACTOR at COST for moving to and cleaning out the old hole.

The COMPANY will pay the CONTRACTOR at COST for moving on a hole when there is less than 500 feet of core drilling in that hole.

Moving shall be interpreted to include tearing down, dismantling machinery, moving, securing timber, transportation, site preparation, setting up and laying and dismantling waterlines.

h) Walking Time or Travelling Time

The COMPANY will pay for all travelling time over one-half hour per man per shift, at the rate of \$20.00 per man hour.

i) Water

The COMPANY agrees to pay at COST of supplying and maintaining water supply lines from an adequate source to the drill site when such distance exceeds 3,000 feet or lifts of 150 feet in the non-freezing season and 1,500 feet or lifts of 150 feet in the freezing season.

j) Delays

It is agreed that at the same time the COMPANY notifies the CONTRACTOR to cease drilling on a hole, the COMPANY will also inform the CONTRACTOR of the site of the new hole to be drilled. Should the COMPANY fail to locate sites or for any cause which is responsible for the delay of the operation of the drill, the COMPANY agrees to pay the CONTRACTOR at "standby rate" for the period that the operation of the drill has been delayed by such failure.

k) Standby

Standard rate will be \$70.00 per shift hour.

When the COMPANY requests equipment remain on location, the standby rental rate, non-operated will be as follows; drill including drilling equipment at \$3,000 per month, plus the cost of demobilizing and mobilizing drill crew.

Cont'd ....

1) Tests

The CONTRACTOR will furnish a clinometer, test tubes and hydro-fluoric acid and make tests for vertical angle only as required by the COMPANY for a charge of \$85.00 per test. Tropari tests will be made at COST.

m) Core Orientation Surveys

Core orientation surveys, if taken, at \$90.00 per shift hour, ~~plus \$7.00 per foot for the footage drilled while taking the surveys.~~ *qf.*

n) Core Boxes

The CONTRACTOR will supply, if requested, core boxes at COST, plus 15%.

o) Board and Lodging

The COMPANY will supply room and board for the CONTRACTOR'S crews at no cost to the CONTRACTOR.

p) Payments

Invoices will be rendered twice monthly, covering the preceding half month, and will be due and payable in full, in Canadian funds, within 30 days of issue. Interest will be charged on past due accounts at the rate of 18% per annum after 30 days of issue.

q) Machinery and Equipment

The CONTRACTOR will supply one unitized 44 drill complete with mud sloop, rod sloop, rods, core barrels, grease, diamond items, tools, etc.

q) Transportation

The CONTRACTOR will supply a 4x4 truck for it's crews use at no cost to the COMPANY. The COMPANY will supply a tractor to move the CONTRACTOR'S drill at no cost to the CONTRACTOR.

GENERAL:

- a) It is agreed that the CONTRACTOR shall pipe and drill on the site selected by the COMPANY'S Representative and will deliver at the drill site only to such person as the COMPANY may designate all cores taken from the holes drilled.
- b) The CONTRACTOR does not guarantee the direction of the hole beyond the collar.

Cont'd ....

- 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. The CONTRACTOR shall be permitted to cut and fell any timber on the COMPANY'S property as may be required in the course of the work hereunder, and the COMPANY shall indemnify and save harmless the CONTRACTOR from any assessment for stumpage or other charges of every kind and nature.
- d) Upon completion of the work herein contracted to be performed the CONTRACTOR shall have the right to remove within a reasonable length of time all temporary buildings and other fixtures including trade fixtures, machinery, equipment and appliances placed upon such lands.
- e) It is agreed that, should a cavity or loose and caving material be encountered at a depth which would prevent successful drilling, the CONTRACTOR does not guarantee to drill or sink a hole to any specified depth, but will drill or sink as is practical under existing overburden and rock conditions and the COMPANY will pay for every foot sunk and drilled.
- f) The CONTRACTOR agrees to carry and pay for all proper Workmen's Compensation to cover injuries to all employed by the CONTRACTOR on the property of the COMPANY.
- g) All COST resulting from the enforcement of government regulations or legislation concerning land use or pollution control measures which may be applied to the work will be borne by the COMPANY.
- h) This Agreement and any dispute arising hereunder shall be interpreted and determined in accordance with the laws of the Province of British Columbia.
- i) The CONTRACTOR shall not be held responsible for any delays in carrying out the obligations of this Agreement resulting from Acts of God, strikes, fires, casualties, or other causes beyond the CONTRACTOR'S control.
- j) All Government sales taxes and social benefits in force at time of signing this Contract are included in the quoted prices. All COST increases due to legislated tax or benefit increases which arise after signing of the Contract, will be chargeable to the COMPANY.

Cont'd ....

k) This Contract will not be binding upon the COMPANY until approved in writing by an officer thereof at its Head Office.

IN WITNESS WHEREOF the parties hereto have hereunder set their hands this \_\_\_\_\_ day of \_\_\_\_\_ 19 .

Signed and Delivered in the presence of:

UTAH MINES LTD.

\_\_\_\_\_  
Witness

Per J. Adams  
Title V.P. & Min. Manager

CONNORS DRILLING, Division of  
Bow Valley Resource Services Ltd.

\_\_\_\_\_  
Witness

Per R. Bennett  
Title \_\_\_\_\_



# Connors Drilling

Division of  
Bow Valley Resource Services Ltd

Box 1657, Merritt, B.C. V0K 2B0

February 29, 1980

Utah Mines Ltd.,  
Island Copper Mine,  
Box 370,  
Port Hardy,  
B.C.,  
V0N 2P0

Attention: Mr. John Lamb.

Dear John;

This is in regard to our telephone conversation on core orientation surveys.

It is my understanding that there will be no coring while taking core orientation surveys.

The Company will supply all special equipment to take the surveys.

Connors Drilling will supply the labour and drilling equipment needed at \$90.00 per shift hour.

Trusting this meets with your approval;

Yours truly,

R. Griffiths  
Regional Manager

c/c  
Joe Benard  
Frank Tagami  
Bob Hindson

RTG/mg



Appendix 2

DRILL HOLE LOGS

HOLES W-1 & W-2





HOLE NO. *W-1*

PROJECT:

PAGE NO: *3* OF *7*

CASING COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: *J.L.*

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
140	<i>CHZ</i>														
150							<i>140-200 - (42.67m - 60.96m) Alternating crude beds fine &amp; coarse gr. lap. tuff. Both pale &amp; dark frags, w. tiny black frags in them represent previously formed tuffs. Occasional sharp &amp; rounded frags to 2" size. A few frags red w. hematite. Some narrow white calc. vltts.</i>								
160															
170															
180															
190															
200															

*bddg  
70*

*bddg.  
70*

*NQ*

HOLE NO. W-1

PROJECT:

PAGE NO: 4 OF 7

CASING COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: J.L.

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	
200	CHL						<p>200 - 260 - Dark blue green (60.96m - 79.25m) fairly coarse lapilli tuff w. narrow beds f. gr. tuff. Occasional frags to 2" size. Some hematite coloration in certain frags. A few narrow vns white calc</p>									
210						bddg 90°										
220																
230																
240																
250																
260																

bddg 80°

} purplish color. hem.

NQ











HOLE NO. W-2

PROJECT:

PAGE NO: 2 OF 6

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	
	CHL															
80	/						80 - 143 - To 127 closely packed coarse lap tuff changing from dark to pale blue green. Most frags below 1/4", a few up to 3". Some hematite coloring a few frags									
90	/						From 127 - 143 - Fine grained grayish lithic tuff. Has dendritic streaks of manganese on occ. frags.									
100	/						Occ. thin calc vlt. At 134 a little epid. on a 1" calc vn.									
110	/						Some fract's coated w py									
120	/															
130	/															
140	/															

crude bddy @ 45°









# CLAIM MAP

showing

LOCATIONS of drill holes

W-1 & W-2

Scale 1:12000  
(1" = 1000')

SCALE 1:12000



UTAH MINE LTD.  
PORT HARDY



To accompany assessment report on WEST GROUP by J. Lamb, JULY 1980  
Location of drill holes W-1 & W-2

