

79-#318-#7427  
REPORT ON DIAMOND DRILLING SUBMITTED  
FOR ASSESSMENT WORK ON THE  
COVE GROUP  
OF MINERAL CLAIMS

Nanaimo M.D.

Aug. 1979

Utah Mines Ltd.

J. Lamb P. Eng.

50°36' 12" N 127° 31'

7427

UTAH MINES LTD.

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

August 31, 1979

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

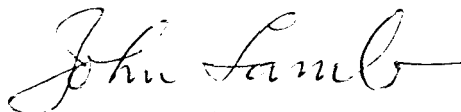
Sirs:

Assessment Report - Cove Group of Mineral Claims

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

Credit is requested for diamond drilling performed between July 4th and 23rd, 1979, on the Cove No. 17 M.C. (#18120).

Yours truly,



John Lamb, P. Eng.  
Project Geologist

JL/ns

enc.

7427

# UTAH MINES LTD.

ISLAND COPPER MINE

P.O. BOX 370

PORT HARDY, B.C. V0N 2P0

TELEPHONE (604)949-6326

## Work Performed

1. Two holes were diamond drilled between July 4th and 23rd, 1979. The holes are on local logging roads approximately 1500 feet northwest of Frances Lake, about one mile north of Rupert Inlet. They lie close to and east of Utah's paved access road to the mine and are just west of the boundary of L. 2145, which demises Mineral Lease M-34. Both holes were drilled on Cove No. 17 mineral claim (#18120).

2. Particulars of the holes are:

<u>Number</u>	<u>Inclination (degrees)</u>	<u>Length (ft)</u>	<u>Collar Elevation</u>	<u>Co-ordinates</u>
E-41	-90	755	198	N 11116.12 E 17757.76
E-42	-90	698	295	N 12164.0 E 17868.6

The co-ordinate positions of the hole collars belong to the co-ordinate grid used over the whole Island Copper property.

3. All drill core is in storage at the Island Copper mine. Logs of the holes are included in the report.

4. Core logging was performed by:

John Lamb, P. Eng.

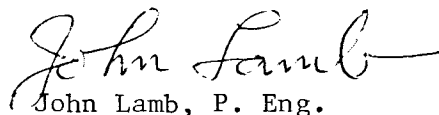
BASc, MASc - University of British Columbia

This person is on the geological staff at the Island Copper mine.

5. An itemized cost statement is included in the report.

6. A copy of the diamond drilling proposal is included. This proposal is from Thirty Two Albert Crescent Ltd., a member company of the Tonto Drilling Ltd. organization. Together with my letter of acceptance, it forms the agreement under which the work was done.

7. Both an index map and a detailed claim map are attached to this report, showing the drill hole locations and the extent of the Cove group of claims.



John Lamb, P. Eng.

Project Geologist

JL/ns

enc.

Statement of Costs  
For the  
Cove Group of Mineral Claims

A. Contractor's Charges:

Overburden

E-41 - 19 ft. @ \$14.25	\$ 270.75
E-42 - 90 ft. @ \$14.25	1,282.50

Rock

E-41 - 736 ft. @ \$14.25	10,488.20
E-42 - 608 ft. @ \$14.25	8,664.00

Field Costs (reaming, setting casing,  
conditioning, etc.)

E-41 -	2,043.50
E-42 -	1,745.75

Extra Charges (materials consumed)

E-41	3,851.32
E-42	1,829.29
Mud circulation products at 9.5% of total mud costs	1,894.68
Mobilization costs at 9.5% of total mobilization	364.80
Hard ground charge at 20% of total footage drilled	1,740.00

B. Utah Costs:

- Sampling and assaying 114 at \$3.07 per assay	349.98
- Core house labor	1,500.00
- Geological supervision	1,600.00
- Company overhead cost	775.00
- Core boxes 54 at \$3.95 each	213.20
- Room and board 4 men for 19 days at 15.72/day	1,194.72
- Tractor for towing drills and preparing drill sites - 16 hours at \$50/hour	800.00
- Preparation of report	400.00
- Survey of holes	200.00
- Vehicle operation - @ 30¢/mi. for 100 miles	30.00

TOTAL COST: \$41,237.69

Footage Drilled = 1453 . . . cost per foot = \$28.38

*John Lamb*  
J. Lamb

April 30th, 1979.

Mr. C. Croft,  
Tonto Drilling Limited,  
1215 W. 7th Avenue,  
Vancouver, B.C.  
V6H 1B7.

Dear Chuck,

This is to advise you that your bid for this summer's diamond drilling at Island Copper has been accepted with the following proviso's which you and I and John Fleming just discussed on the telephone:

- 1) That your quote will include a non-running foreman which will add approximately 75<sup>C</sup>/foot to the drilling footage rates.
- 2) That your crews will deliver the boxes of core to our shed in camp, when they come off shift.
- 3) That overburden drilling rates beyond 50 feet will increase \$1.00 per ft. to 100 feet of depth and \$2.00 per foot to 150 feet of depth.
- 4) That your definition of hard ground will be "when rate of penetration is less than 4 feet per hour and bit life is less than 60 feet".
- 5) That you will rent us a bombardier carrier for difficult access problems at a rate of approximately \$2,500/month.

You should try to meet a commencement date of May 22nd, just after the long Victoria day holiday weekend.

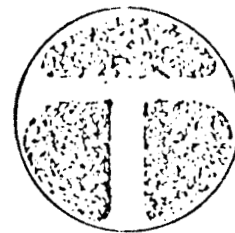
Wishing you the best and looking forward to working with you this summer, I remain,

yours truly,



John Lamb,  
Project Geologist.

JL:ebh



# thirty-two albert crescent limited

A MEMBER OF THE TONTO GROUP OF COMPANIES

UTAH MINES LTD.

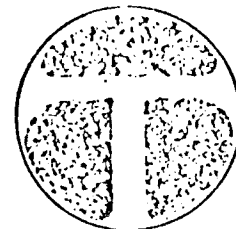
PROPOSAL FOR ISLAND COPPER MINE PROJECT

APRIL 30, 1979

2<sup>nd</sup> proposal

revised from that  
dated 25 April 79.

J.S.



# thirty-two albert crescent Limited

A MEMBER OF THE TONTO GROUP OF COMPANIES

April 30, 1979

Utah Mines Ltd.  
Island Copper Mine  
Port Hardy, B.C.

Attn: Mr. John Lamb

Dear Sir:

We are pleased to submit the following quotation on your project at the Island Copper Mine.

A. Scope of the Program

1. The program contemplates a minimum of 15,000 feet of NQ and BQ drilling.
2. The drilling will commence in mid May 1979.
3. The program contemplates holes ranging in depth from 500' to 1,000' with a capability of going to 1,600'. Holes will be inclined from minus 70 degrees to minus 90 degrees.

B. Union Certification

Our employees will be members of the Tunnel and Rock Workers Union, Local 168.

C. UTAH's Responsibilities

1. Drill roads and drill sites are to be constructed and maintained accessible to skid mounted drill rigs, supply trucks and pickups

...2

free of cost to Thirty-Two Albert. Any environmental responsibility relating to the construction, use or reclamation of same shall be the responsibility of Utah. Thirty-Two Albert will, however, remove all trash and loose materials, leaving drill sites in a clean and orderly condition.

2. All licences, land and water use permits, environmental reports, reports relating to hole plugging, etc. shall be the responsibility of Utah. Thirty-Two Albert shall cooperate with and give technical assistance if requested for compliance with these regulations.
3. Utah will hold Thirty-Two Albert harmless for any liability claims which may arise from normal activity related to this contract including pollution of ground water or surrounding land from discharge of drill water and wastes save if Thirty-Two Albert's employees act in an irresponsible manner.
4. Utah will provide locked storage space for Thirty-Two Albert's parts and supplies.
5. Utah will provide equipment to assist in moving Thirty-Two Albert's rigs from site to site.
6. Utah will either provide or be responsible for the following items at Thirty-Two Albert's list price plus 10%:
  - a) cement, drilling mud and additives and soluble oils
  - b) core boxes
  - c) any other special tools or drilling accessories which may be required for testing purposes or requested left in the hole.
7. Utah will provide room and board for Thirty-Two Alberts' crews at no cost to Thirty-Two Albert. It is understood crews will be accommodated in Utah's camp at the mine site.

D. THIRTY-TWO ALBERT's Responsibilities

1. Thirty-Two Albert will provide drill crews, drills and all other necessary equipment and materials to complete the program as outlined above.
  - a) The following equipment will be supplied:
    - 1 skid mounted Longyear Super 38 rig and 1 skid mounted Longyear 34 rig
    - all ancillary pumps, drill strings and other equipment
    - 2 3/4 ton trucks
    - mobile parts trailer and all spares
    - a Bombardier personnel carrier at industry rental rates of approximately \$2,500.00 per month



- b) All drill operators employed on this job will have a minimum of five years drilling experience.
2. Thirty-Two Albert will provide transportation for its personnel to and from the drill sites.
  3. Thirty-Two Albert will provide a full time foreman to supervise the drilling operations. The foreman will have a minimum of ten years experience in running and being responsible for diamond drill jobs.
  4. Thirty-Two Albert will transport the core from the drill site to Utah's core shed.
  5. Thirty-Two Albert will provide water to the drill site at no cost providing the horizontal distance does not exceed 1,500' and the lift 250'. Installation and maintenance are to Utah's account at quoted labour rates.

E. General

1. In the event that drill pipe and other equipment become broken or lost in the hole, Utah will be responsible for time and materials consumed to recover the materials. If they should end up being left in the hole, then they will be charged at their replacement value.
2. In the event that cavities or loose and caving materials are encountered of a nature as to prevent the completion of any hole, then Thirty-Two Albert does not, under these conditions, guarantee to drill to a predetermined depth and in the event that it becomes necessary to abandon the said hole, Thirty-Two Albert shall charge Utah for those holes abandoned, at the depth at which they were abandoned, at the footage rates specified. If required to continue on in the hole then Thirty-Two Albert has the option to revert to standby rate plus all materials, supplies and equipment needed at delivered cost, subsequent to Utah's approval.
3. It is agreed that hourly rates shall be interpreted here to mean the labour of a two-man crew, machine and equipment rental, plus pipe and casing lost or left in holes, diamond loss and setting charges, materials and supplies consumed in the work at Thirty-Two Albert's list price.

In the event extra labour over and above the regular two-man crew is required, Thirty-Two Albert agrees to supply such

additional labour at the rate of sixteen dollars and fifty cents (\$16.50) per man per hour.

F. Bid Prices

1. Moving time

- |  |                                  |
|--|----------------------------------|
| a) Move in charge including all equipment, supplies and personnel to the transport discharge point for each rig  | \$ 1900.00                       |
| b) Move from site to site and to and from the transport loading or discharge point including all equipment, supplies and personnel for the rigs. Four hours free time will be allowed for each move. | 16.50/man hr.<br>10.00/drill hr. |
| c) Move out charge including all equipment, supplies and personnel for each rig  | 1900.00                          |

2. Drilling Rates

	<u>BWL</u>	<u>NWL</u>
a) Overburden or Wastedumps		
0 - 50'	14.25	15.25
50 - 100'*	15.25	16.25
100 - 150'*	17.25	18.25

\*or hourly rate plus material whichever is greater.  
Casing shoes charged at cost plus 10%.

b) Core Drilling	<u>BQ</u>	<u>NQ</u>
0 - 1000'	14.25	15.25
1000 - 1500'	15.25	16.25
1500 - 2000'	17.25	18.25

Note: If siliceous magnetite breccia or similar hard material is encountered, an additional \$6.00 per foot will be charged for BQ drilling and \$7.00 per foot for NQ drilling. The hard material surcharge will apply anytime the penetration rate drops below four feet per hour and the footage drops below 60 feet per bit.

3. The following services will be performed at the designated hourly cost:

- |  |                                  |
|--|----------------------------------|
| a) Testing   |                                  |
| b) Standby at Utah's request or any other delays not caused by Thirty-Two Albert |                                  |
| c) Setting and pulling casing  |                                  |
| d) Regaining lost circulation and cementing including setting and drilling time  |                                  |
| e) Reaming, hole conditioning, drilling cave                                     | 16.50/man hr.<br>10.00/drill hr. |

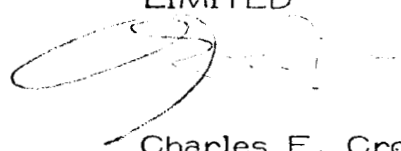
5.

4. Travel time in excess of one hour per man shift 16.50/man hr.

Thank you for permitting us to tender on your project. We look forward to working for you in the near future.

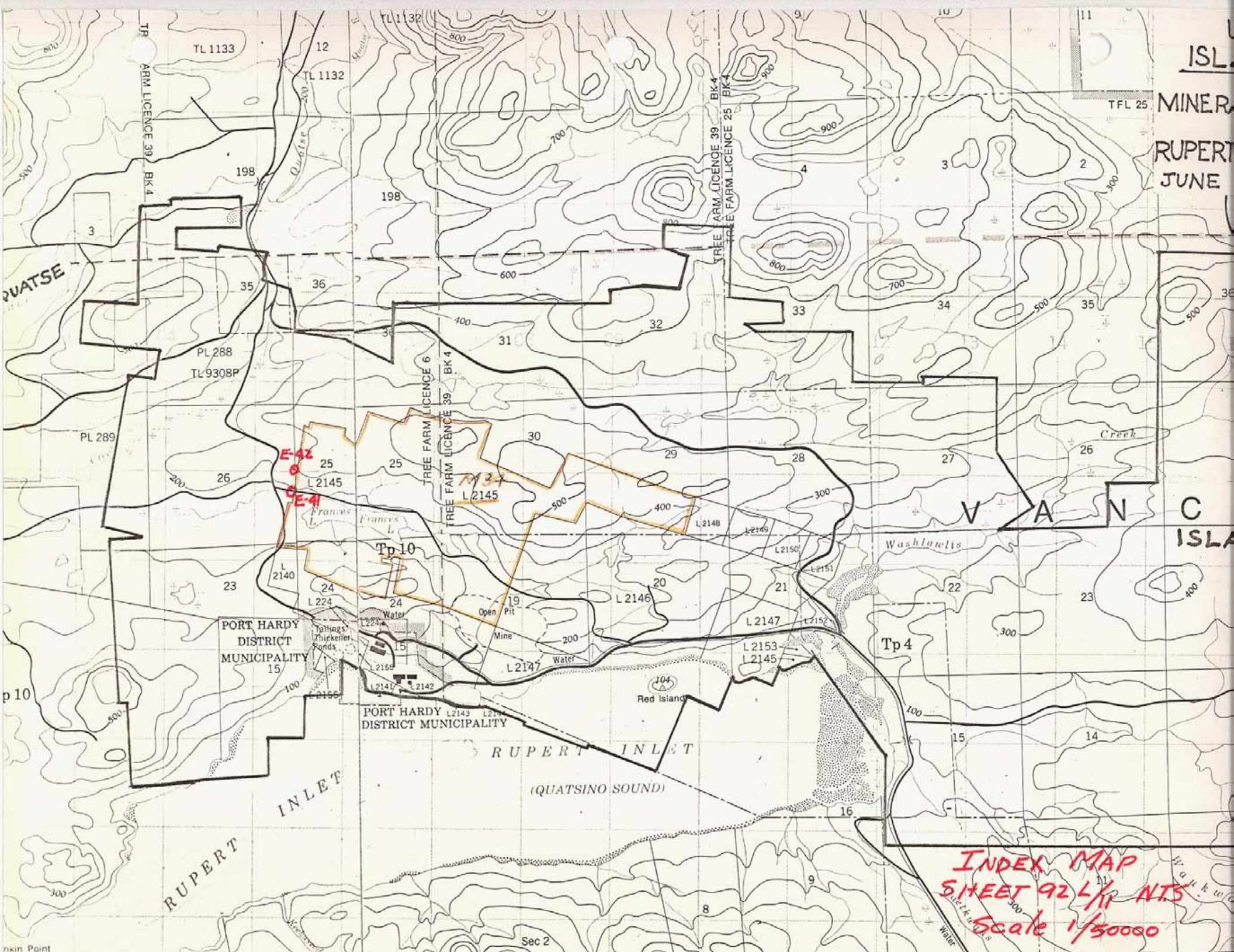
Yours very truly,

THIRTY-TWO ALBERT CRESCENT  
LIMITED

A handwritten signature in dark ink, appearing to read 'Charles E. Croft', is written over the typed name. The signature is fluid and cursive, with a large loop at the beginning.

Charles E. Croft

CEC:cm



ISL.

MINERA

RUPERT

JUNE

VAN C ISLA

PORT HARDY DISTRICT MUNICIPALITY 15

PORT HARDY DISTRICT MUNICIPALITY

RUPERT INLET

(QUATSINO SOUND)

INDEX MAP  
SHEET 92 L/11 NTS  
Scale 1/50000

TR ARM LICENCE 39 BK 4

TREE FARM LICENCE 39 BK 4

TREE FARM LICENCE 39 BK 4

TL 1133

TL 1132

PL 288 TL 9308P

PL 289

F-42  
E-41

Tp 10

Tp 4

Red Island

RUPERT INLET

Sec 2

skin Point

MOLE NO. E-41

CASING COLLAR ELEV.: 1190.35' GROUND ELEV.: 17757.76

COORDINATES: N. ~~4746.47~~ 11116.12 E. ~~17467.8~~

INCLINATION: -90° BEARING:

PROJECT:

DATE STARTED: 5 Jul '79

DATE FINISHED: 16 Jul '79

TOTAL DEPTH: 755 FT.

PAGE NO: 1 OF 13

REF. TO CLAIM CORNER:

SCALE:

LOGGED BY: J. Lamb

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
	Silica	Chlor	Mo												
20							Casing to 19' Rubbly to 28' w. some surface gravel. On old mainline road 500' E of Wobble City								
							DESCRIPTIVE GEOLOGY								
							No real bedrock in first 28'								
30	/	/	/				28-80 - Dark gray to black and. rock w. fine scott'd rock to 50'					BQ			
40	/	/	/				50-70 - gray-buff. lap. tuff w. occ patches of hem. A few narrow qtz. vns. Minor amts calc in vlt's								
50	/	/	/				70-80 - Dark green gray tuff. Some fine dissem py.								
60	/	/	/												
70	/	/	/												
80	/	/	/												

7427

HOLE NO. E-41

PROJECT:

PAGE NO: 2 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
	Silica	Chlor	Mag												
80	/	/	/				80-100 - Dark gray to black andesite w. occ. small round chlor spots. Occ. narrow vns gray qtz. Numerous seams wh. calc. Fine scatt'd py. Last 2' well shatt'd.				90				
90	/	/	/				- 3" pyritic gougy slip - some epid on calc sm. - shatt'd. slip @ 98' - gouge								
100	/	/	/				100-140 - Much broken shatt'd core Very few qtz veins. Num. irreg calc-lauum vns. Occ. streaks & patches epid.			100					
110	/	/	/				- gougy zone w. much clay - calc. - slip								
120	/	/	/								70				
130	/	/	/				- 3" qtz vn.								
140	/	/	/												

7427

140

HOLE NO. *E-41*

PROJECT:

PAGE NO: *3* 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
	Silica	Chlor	Mag.												
140							<u>140 — 200</u> Gray to dark green andesite tuff Py dissemin throughout. Some cpy @ 14 1/2 Sparse qtz veins. Num. strong calc-lam vms. Prom zone fine epid. Core broken into short lengths but not shatt'd.			140		BQ			
150															
160							3' pale clay-calc gouge slip.								
170															
180															
190							fine py slip @ 40° slips @ 40° to core								
200															

7427

200

HOLE NO. *E-41*

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.	ESTI-MATED
	Si/ico	Chlor	Mag.												
200	/	/	/				<i>200 - 260 - Much shatt'd core</i>			<i>200</i>					
210	/	/	/				<i>Med gray andesite</i>								
220	/	/	/				<i>clay slip</i>								
230	/	/	/				<i>1/2" narrow gouge seam</i>								
240	/	/	/				<i>much shearing + fract'g</i>				<i>84</i>				
250	/	/	/				<i>strongly fract'd pebbly core.</i>								
260	/	/	/												

*7427*



HOLE NO. E-41

PROJECT:

PAGE NO: 5 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
	Silica	Chl.	Mag.												
260	/	/	/				rubbly core			260		BQ			
270	/	/	/				260 - 303 - Much broken core w. strong shatting in last 10'. Some scatt'd mag throughout. Minor qtz vns. Many calc-laum sms. Minor streaks epid. Chlorite development. Spse dissem py.				79				
280	/	/	/												
290	/	/	/												
300	/	/	/				green gray gouge								
310	/	/	/				303 - 350 - Broken rubbly core. Light mag throughout. Partly flooded w. silica. Num irreg wh. calc-laum sms. Short runs brownish biot alt'n. Fine fract's w cpy & py. Partly dissem			303					
320	/	/	/				rubble. Some core missing. low rec.								

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HOLE NO. *E-41*

PROJECT:

PAGE NO: *6* 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
	Silica	Chlor	Mag.												
320	/	/	/				shearing w. vns calc-laum. <u>303-350</u> See P5			320		BQ			
330	/	/	/				cpy on frags.				75				
340	/	/	/												
350	/	/	/				qtz vns.			350					
360	/	/	/				qtz vn 1" calc-laum fine rubble	<u>350-421</u> Broken core. B'xtd gray to dark lap. tuff & tuff breccia. Fair no. of narrow qtz vns. Many irreg vns. calc-laum. Some fine dissem py. Cpy showing in some tiny hairline frags Fine scott'd mag through darker vns.							
370	/	/	/												
380	/	/	/				qtz vn + calc.								

**7427**

330

HOLE NO. E-41

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
	Silica	Chlor	Mag												
380	/	/	/				<p>sheared w. much calc gashes</p> <p><u>350 - 421</u></p> <p>See P 6.</p>			380		BQ			
390	/	/	/				<p>1/2" chl. gouge</p> <p>1" calc-lauv</p>								
400	/	/	/				<p>shearing w. calc.</p>								
410	/	/	/				<p>qtz vein &amp; ind. calc vn.</p>								
420	/	/	/				<p>421</p>								
430	/	/	/				<p><u>421 - 460</u> Dark andesite w. some scatt'd mag. Siliceous runs &amp; small vns. also many gashes calc-lauv. Several rubble zones &amp; lost core where noted. Fine dusting cpy on some frags</p>			421					
440	/	/	/				<p>3" ft gouge</p> <p>→ 1' chl. gouge</p> <p>2' rubble &amp; gougy</p>								

7427

490

HOLE NO. *E-41*

PROJECT:

PAGE NO: *8* 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
	Silica	Chlor	Mag.												
440										440					
450							<i>421-460 See P7</i>				80				
							<i>chlorite gougy w. much streaky calc</i>								
460							<i>2 1/2' core missing</i>			460					
470							<i>460 - 530 - As above dark mag. andesite w. both narrow qtz stringers &amp; wide vns Numerous calc-lauv stringers @ low angles to core. Some brownish alt'n, looks like bio. A few gashes w cpy &amp; fine dustings cpy on fracs.</i>				85				
480							<i>gray qtz vn.</i>								
490							<i>qtz vn.</i>								
500										500					

# 7427

HOLE NO.

PROJECT:

PAGE NO: 9 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	
	Silica	Chlor	Mag.													
500	/	/	/				calc-lauum in b'xtd rk									
510	/	/	/													
520	/	/	/				1' sheared rk				85					
530	/	/	/													
540	/	/	/				1" py.									
550	/	/	/													
560	/	/	/													

460 - 530 - See P8.

7421

530

530

530 - 600 - Weakly mag'tc gray-brown andesite (lap tuff & tuff b'xa) w. minor silic streaks & vns. laced w. calc-lauum gashes. Brown alt'n resembles biot. alt'n (as in the pit)  
Some fine py & faint vlt's & dustings of cpy.  
Core shattd & broken

81

HOLE NO. E-41

PROJECT:

PAGE NO: 10 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
	Silica	Chlor	Mag.												
560	/	/	/				<u>530 - 600</u> See Pg.			560					
570	/	/	/												
580	/	/	/				$\frac{1}{2}$ " gouge + calc in fault @ 40°				81				
590	/	/	/												
600	/	/	/							600					
610	/	/	/				<u>600 - 644</u> - Weakly mag'tc andesite w. some weak brown biot alt'n. Good firm core. Tiny vlt's epy & py. Vlt's calc-lauum.				90				
620	/	/	/												

7427

HOLE NO. *E-41*

PROJECT:

PAGE NO: *11* 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
	Silica	Chlor	Mag												
620	/	/	/				bleaching. - irreg blotch calc-lauv			620					
630	/	/	/				$\frac{1}{2}$ " calc @ 40°				91				
640	/	/	/				$\frac{1}{4}$ " calc @ 35°								
650	/	/	/				- shear w. calc. - $\frac{1}{2}$ " calc w py @ 30°			644					
660	/	/	/												
670	/	/	/												
680	/	/	/				calc.								

600 - 644 See P10

644 - 693 - Greenish to dk gray weakly magta andesite. A few calc lauv vns. but little silica of any kind. Brown biot. alt'n. Quite a few hairline opy vlt's. Core is smooth & firm w. a brownish tinge.

7427

HOLE NO. *E-41*

PROJECT:

PAGE NO: *12* OF *13*

CASING COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARINGS:

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
	Silica	Chlor	Mlag.												
680	/	/	/				<i>644 - 693 - See p11</i>			680	94				
690	/	/	/												
700	/	/	/				<i>693 - 744 - Weakly magnetic brownish tinged andesite (lap. tuff) w. fine py &amp; cpy vns. Practically no silica. Some calc-lawn vns. @ low angles.</i>			693					
710	/	/	/				<i>1" sheared. calc vn @ 30°</i>								
720	/	/	/				<i>1/2" slip w. calc.</i>								
730	/	/	/				<i>2" calc vn @ 35°</i>								
740	/	/	/				<i>sheared w. pods py &amp; cpy</i>								

*7427*



HOLE NO. *E-41*

PROJECT:

PAGE NO: *13* 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
	Silica	Chlor	Mag												
740	---	---	---				<i>693 - 744 - See p12</i>			<i>740</i>					
750	---	---	---				<i>744 - 755 - As above, brown tinted weakly magtc. andesite w. a little fgr. Py. + epy. looks like alt'd lap. tuff.</i>								
							<i>shearing</i>								
760							<i>755 END OF HOLE</i>			<i>755</i>					

*7427*

Co-ords - 11746.5N 17467.8E

HOLE E-41

Collar El. - 1194.4 FT.

P. 1

Inclination - 90°

Length. 755 FT.

Bearing. —

Sample Footage	Bench.	ASSAY <sup>2</sup>		Bench Grade <sup>4</sup>	
		% Cu	% Mo	% Cu	% Mo
✓ 1 40 - 50		.15	.007		
2 50 - 60		.12	.008		
3 60 - 70		.20	.010		
✓ 4 70 - 80		0.12	.012		
5 80 - 90		0.14	.007		
6					
✓ 7 90 - 100		.16	.008		
8 100 - 110		.14	.012		
9 110 - 120		.12	.007		
10 120 - 130		.05	.004		
✓ 11 130 - 140		.13	.009		
12 140 - 150		.08	.007		
13 150 - 160		.09	.012		
✓ 14 160 - 170		.12	.005		
15 170 - 180		.17	.005		
✓ 16 180 - 190		.12	.007		
17 190 - 200		.21	.013		
18 200 - 210		.12	.011		
19 210 - 220		.22	.006		
20 220 - 230		.14	.010		
21 230 - 240		.22	.016		
22 240 - 250		.07	.001		
23 250 - 260		.20	.011		
✓ 24 260 - 270		.20	.007		
25 270 - 280		.18	.007		
26 280 - 290		.11	.005		
27 290 - 300		.14	.009		
28 300 - 310		.23	.004		
29 310 - 320		.27	.010		
30 320 - 330		.43	.012		
31 330 - 340		.39	.013		
32 340 - 350		.37	.010		
33 350 - 360		.35	.011		
34 360 - 370		.24	.010		
35 370 - 380		.19	.011		
36 380 - 390		.41	.014		
37 390 - 400		.48	.014		
38 400 - 410		.15	.009		
39 410 - 420		.25	.007		
40 420 - 430		.13	.006		
41 430 - 440		.14	.013		
42 440 - 450		.14	.010		
43 450 - 460		.24	.005		
44 460 - 470		.12	.013		
45 470 - 480					

7427



Sample Footage	Bench	1 ASSAY 2		3 Bench Grade 4	
		% Cu	% Mo	% Cu	% Mo
1 480-490		.15	.019		
2 490-500		.32	.038		
3 500-510		.09	.006		
4 510-520		.11	.004		
5 520-530		.09	.007		
6 530-540		.42	.008		
7 540-550		.22	.009		
8 550-560		.13	.008		
9 560-570		.14	.014		
10 570-580		.16	.006		
11 580-590		.10	.004		
12 590-600		.26	.009		
13 600-610		.20	.020		
14 610-620		.30	.005		
15 620-630		.22	.006		
16 630-640		.12	.006		
17 640-650		.18	.005		
18 650-660		.31	.017		
19 660-670		.23	.008		
20 670-680		.18	.007		
21 680-690		.29	.009		
22 690-700		.09	.007		
23 700-710		.12	.009		
24 710-720		.11	.007		
25 720-730		.07	.005		
26 730-740		.07	.007		
27 740-750		.04	.006		
28 750-755		.07	.008		
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					

#  
71 samples @ 3.07 = 217.97

7427

HOLE NO. *E-42*CASING COLLAR ELEV.: *1295.1* GROUND ELEV.:

COORDINATES:

N. *12164.0* E. *17868.65*INCLINATION: *-90°*

BEARING:

PROJECT:

DATE STARTED: *16 Jul '79*DATE FINISHED: *23 Jul '79*TOTAL DEPTH: *698 FT*PAGE NO: *1* OF *11*

REF. TO CLAIM CORNER:

SCALE:

LOGGED BY: *J. Lamb*

SECTION	ALTERATION			FRACTURING	MINERAL	GEOLOGY	COMMENTS: <i>0-80' or to 94' overburden. No core. On hill above paved road N of Wobble City</i>	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI- MATED
	Silica	Chlor	Mag												
90	/	/	/												
100	/	/	/				<i>94-118 - Much broken core Grayish lap. tuff. w. a few short runs brownish alt'n. Finely dissem py &amp; minor cpy. Weakly magite in short runs Numerous irreg. white calc gashes &amp; vns. w. streaks gils.</i>			<i>94</i>		<i>BQ</i>			
110	/	/	/								<i>80</i>				
120	/	/	/				<i>118-132 - Weakly magite broken core Gray, spotted lap. tuff Network white calc vns w. minor streaks gils Sparse sulphide</i>			<i>118</i>					
130	/	/	/								<i>85</i>				
140	/	/	/				<i>132-159.5 - Mostly soft gouge, gray, w. sparse cpy &amp; py. Some patches &amp; streaks of calc Looks like a <u>strong fault zone</u></i>			<i>132</i>					
150															

*7427*

HOLE NO. E-42

PROJECT:

PAGE NO: 2 OF 11

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 RECY / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. SAMP. INT.	ESTI-MATED
	Silico	Chlor	Mag												
150							<u>132-159 1/2</u> - fault gouge See p.1.			150	31	BQ			
160							<u>159 1/2 - 180</u> - Dark gray green lap tuff. Partly mag'tc in dark runs Much py & minor cpy to 167. Some vlt's of calc.			159 1/2	85				
170							strong fault gouge								
180							sheared & gougy.			180					
190							5" sheared & gougy								
200							4" qtz								
210							2" qtz								
							<u>180-210</u> - Mod. mag'tc andesitic lap tuff, dark to mod. gray Bddg @ 206' at 80° to core. Faint brown alt'n. Fine hairline frac's w py & poss. cpy. A few narrow qtz vns Network calc. frac's. Core more solid & less broken				90				

7427

210

HOLE NO. **E-42**

PROJECT:

PAGE NO: **3** OF **11**

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
	Silica	Chlor	Mag												
210	/	/	/				<p>210 - 239 - Mod'tly mag'tc andesite w. fine lacing calc. frags. in lighter vns. Some tiny seams py &amp; spsc cpy.</p>			210		BQ			
220	/	/	/				<p>- 2" limy gouge @ 45°</p>								
230	/	/	/				<p>- 1/2' fit @ 45°</p>				91				
240	/	/	/				<p>- 1/4" milky gray cherty vns. cutting calc vns.</p>			239					
250	/	/	/				<p>239 - 295 - Blackish-green andesite &amp; tuff core, fairly firm. Mod. mag'tc. A few narrow qtz vns. Irreg. vns. &amp; streaky white to pink calc-lam. Fine hairline vns py &amp; minor cpy. Also dissem py.</p>								
260	/	/	/				<p>- calc in slip at 20°</p>								
270	/	/	/												

**7427**

HOLE NO. **E-42**

PROJECT:

PAGE NO: **4** OF **11**

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
	Silica	Chlor	Mag.												
270							<u>239-295</u> See P3			270					
280							1/2" gray gouge slip.								
290							gougy slip w. py & qtz.				88				
300							} fault zone			295					
310							} ser. green calc in slip at 10° soft gouge w green ser.			306					
320															
330							4" heavy py vn @ 45°								

**7427**

HOLE NO. *E-42*

PROJECT:

PAGE NO: *5* OF *11*

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
	Silica	Chlor	Mag.												
330							<u>330 - 390</u>			330					
340							Dark brown-green andesite, smooth, w. weak mag'tsm throughout. Very little qtz but freq. vns. of calc-lau. Hairline cracks of py & spse cpy. Some Mo on a frac.								
350							1/2' calc @ 25° } shearing @ 10° - qtz vn w. py & cpy.				93				
360							- ser gougy slip - clay alt'n on slip - } 2' green ser, pyr clay gouge								
370															
380							- 1' sheared.								
390							- 1/2' clay alt'd gougy @ 35°			390					

**7427**



HOLE NO. **E-42**

PROJECT:

PAGE NO: **6** OF **11**

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
	Silica	Chlor.	Mag.												
370	/	/	/				<p><u>390 - 435.5 -</u>                      1' sheared &amp; clay alt'd                      - 4" clay alt'n.                      - 5" gouge                      - 4" clay gouge                      - 4" clay gouge</p>			390		BQ			
400	/	/	/												
410	/	/	/												
420	/	/	/												
430	/	/	/				<p>fair cpy &amp; mo. ← clay alt'n.</p>								
440	/	/	/				<p><u>435.5 - 510</u>                      Dark green andes. tuff. Sparse mag.                      laced w. num. calc-lauum sms. but                      few gtz vns.                      Dissem &amp; hairline py w. some cpy.</p>			435.5					
450	/	/	/												

**7427**

HOLE NO. *E-42*

PROJECT:

PAGE NO: *7* OF *11*

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
	Silica	Chlor	Moq												
450							<u>435.5 - 510</u> See P 6.			450		BQ			
460							1' sheared & greenish								
470							1' sheared w. py & mo.								
480							6" green gouge slip								
490							30" sheared & bxt'd. w calc lacing				87				
500							chlor. gouge on vn. at 30								
510							1" shearing			510					

**7427**

HOLE NO. *E-42*

PROJECT:

PAGE NO: *8* OF *11*

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	
	Silica	Chlor	Mg													
510							<p><i>510 - 570 - Greenish to dark gray smooth andesitic tuff. Weakly mag'tc. Laced w. many calc-lauum seams. but sparse qtz. Quite a bit py. lacings &amp; dissems. Spse cpy.</i></p>			510						
520							<p><i>isheared</i></p> <p><i>6" qtz, calc clay gouge @ 35°</i></p> <p><i>gouge w. calc &amp; py.</i></p>									
530							<p><i>2" slip w. green gouge</i></p> <p><i>shearing w. moly. in gouge</i></p> <p><i>2' shearing w gouge.</i></p>				85					
540							<p><i>1" fault @ 35°</i></p>									
550							<p><i>1' fault @ 50° w green gouge</i></p>									
560																
570										570						

**7427**

HOLE NO. *E-42*

PROJECT:

PAGE NO: *9* OF *11*

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
	Silica	Chlor	Mag.												
570	/	/	/				<u>570 - 630</u> Greenish and. tuff. w light but patchy mag. Spse qtz but much calc-lam. Scatted vns dpy & minor cpy. Some moly slicks Some of the tuff spotted to $\frac{1}{4}$			570		BQ			
580	/	/	/												
590	/	/	/				$\frac{1}{4}$ " slip @ 45°								
600	/	/	/				$\frac{1}{8}$ " slip.								
610	/	/	/												
620	/	/	/				6" fault								
630	/	/	/				= shearing								

**7427**

HOLE NO. E-42

PROJECT:

PAGE NO: 10 OF 11

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	
	Silica	Chlor	Mag													
630	/	/	/				630 - 698 Greenish to gray andesitic tuff. Weakly magtc. Many calc-lauum fracs + vns but minor qtz vns. Dissem + vn. py. Some fair cpy + several vis. mo. slicks									
640	/	/	/													
650	/	/	/				- good dissem cpy									
660	/	/	/													
670	/	/	/													
680	/	/	/				shearing w qtz, calc + py + cpy									
690	/	/	/				- i'gougy									

7427

HOLE NO. E-42

PROJECT:

PAGE NO: // OF //

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
	Silica	Chlor	Mag.												
690	-	-	-				630-698 - See P10 6" gougy fault @ 45°								
700							698 END OF HOLE								

7427

Co-ords -  
 Collar Elev -  
 Inclination - -90°  
 Bearing -

Length 1695 feet.

HOLE E-42  
 P.1

Sample Footage	Bench	ASSAY		Bench Grade	
		% Cu	% Mo	% Cu	% Mo
1 100-110		.13	.008		
2					
3 120-130		.17	.014		
4					
5 160-170		.08	.006		
6 170-180		.08	.011		
7					
8 190-200		.05	.020		
9					
10 210-220		.06	.026		
11					
12 240-250		.06	.005		
13					
14 270-280		.04	.005		
15					
16 320-330		.06	.008		
17					
18 340-350		.09	.013		
19					
20 360-370		.04	.012		
21					
22 380-390		.06	.017		
23 390-400		.10	.005		
24 400-410		.04	.008		
25 410-420		.09	.007		
26 420-430		.11	.007		
27 430-440		.49	.022		
28 440-450		.14	.009		
29 450-460		.11	.010		
30 460-470		.19	.018		
31 470-480		.14	.018		
32 480-490		.28	.020	120	.017
33 490-500		.29	.026	.22	
34 500-510		.17	.016		
35 510-520		.22	.030		
36 520-530		.19	.005		
37 530-540		.25	.010		
38 540-550		.20	.015		
39 550-560		.07	.005		
40 560-570		.04	.009		
41 570-580		.12	.020		
42 580-590		.08	.009		
43 590-600		.15	.028		
600-610		.18	.014		

7427

Sample Footage	Bench	1 ASSAY 2		3 Bench Grade 4	
		% Cu	% Mo	% Cu	% Mo
1 610-620		.16	.009		
2 620-630		.17	.014		
3 630-640		.12	.012		
4 640-650		.13	.018		
5 650-660		1.29	.036	128'	.020
6 660-670		.10	.066	.24	
7 670-680		.17	.012		
8 680-690		.26	.013		
9 690-698		.15	.009		
10					
11					
12					
13					
14					
15					
16					
17					
18					
20					
21					
22					
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24					
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