DRILLING REPORT

FOR THE

BE GROUPS A&B

LIARD MINING DIVISION

68 Kilometers South of Telegraph Creek, B.C.

57°15'N 130°53'W

NTS 104G/7W

Owned and Operated by Utah Mines Ltd.

by

G.L. Holland, Geologist

Utah Mines Ltd.

1600-1050 W. Pender Street

Vancouver, B.C.

September, 1982.

Work performed between

2nd August and 31st August, 1982.

TABLE OF CONTENTS

INTRODUCTION

A five (5) hole diamond drilling program was conducted on the Mess Creek (BE claims) prospect between the 2nd of August and the 31st of August, 1982. The claims upon which diamond drilling was specifically done include BE-3 and BE-4.

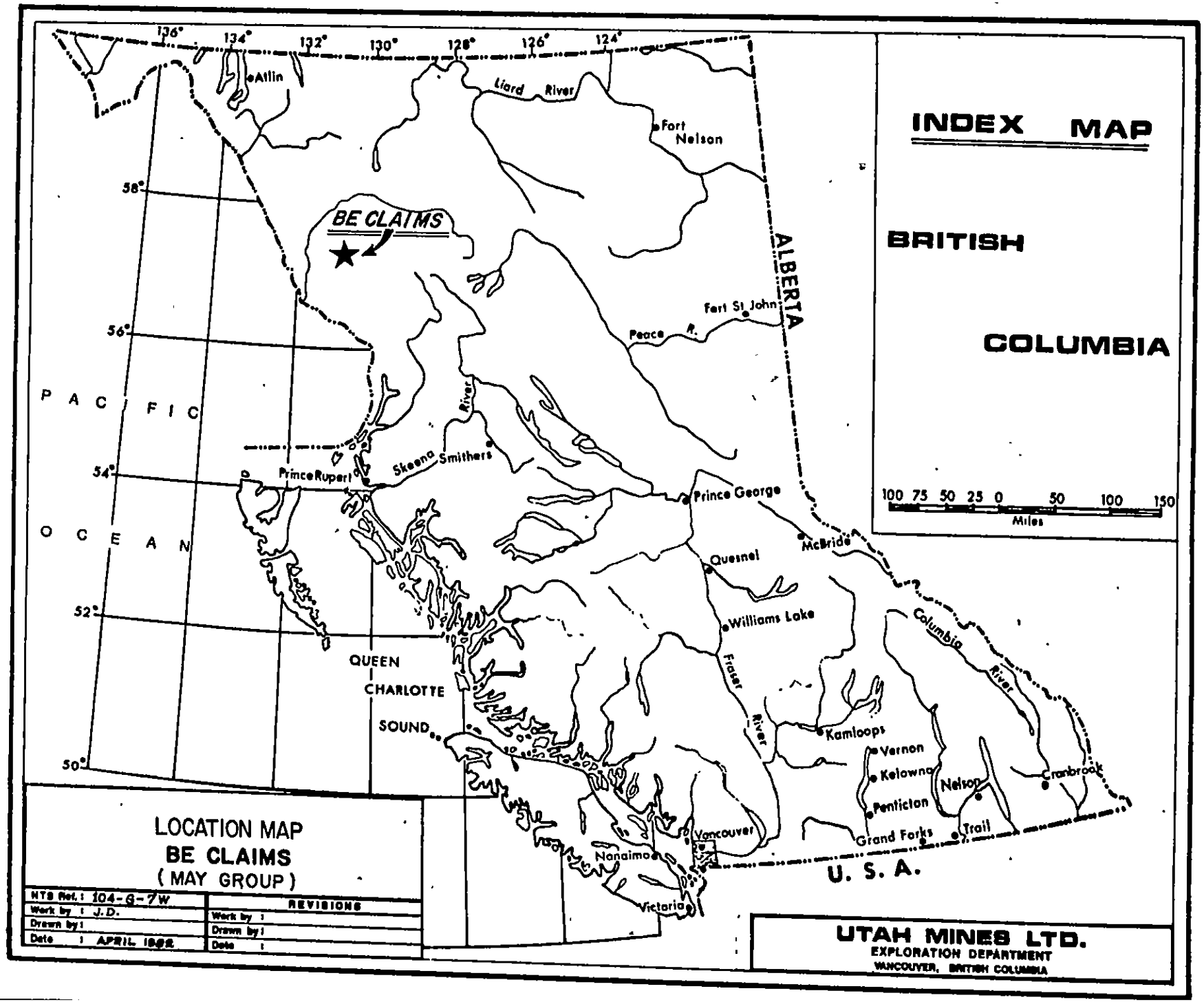
This report will claim as assessment work, the direct diamond drilling costs, necessary camp and support costs, assay costs, and geologic supervision charges related to the detailed logging of the core and the spotting and clearing of the drill-sites.

Location and Access:

The BE claim group is situated on Mess Creek, approximately sixteen (16) kilometers south of Mess Lake and sixty-eight (68) kilometers south of Telegraph Creek on the Stikine River. Access into the property is restricted to helicopter.

DIAMOND DRILLING PROGRAM

A contract was let to J.T. Thomas Drilling (1980) Ltd., in June, 1982, to perform the required diamond drilling. One (1) Longyear "Super 38" drill was used, equiped to drill NQ size core. Utah personnel and a contract Hughes 500D, from Quasar Helicopters Ltd., Abbotsford, began mobilization and camp construction on the 5th of August. Drillsites were located and cleared in preparation for the arrival of the drill. The drill arrived at the Burrage airstrip on the 14th of August and was flown onto the first drillsite by the helicopter. Actual drilling commenced on the 16th of August and continued through the 31st of August, 1982.


INDEX MAP
BRITISH COLUMBIA
BE CLAIMS
ALBERTA
136°
134°
132°
130°
128°
126°
124°
58°
56°
54°
52°
50°
Atlin
Liard River
Fort Nelson
Fort St John
Peace R.
PACIFIC OCEAN
Skeena River
Prince Rupert
Smithers
Prince George
McBride
Quesnel
Williams Lake
Fraser River
Columbia River
QUEEN CHARLOTTE SOUND
Kamloops
Vernon
Kelowna
Penticton
Nelson
Cranbrook
Grand Forks
Trail
Vancouver
Nanaimo
Victaria
U. S. A.
100 75 50 25 0 50 100 150
Miles
LOCATION MAP
BE CLAIMS
(MAY GROUP)
NTS Ref. : 104-G-7W
Work by : J.D.
Drawn by :
Date : APRIL 1982
REVISIONS
Work by :
Drawn by :
Date :
UTAH MINES LTD.
EXPLORATION DEPARTMENT
VANCOUVER, BRITISH COLUMBIA

The camp facilities and cook were provided and constructed by Utah Mines Ltd. personnel. Core-logging, drillsite preparation and supervision were provided by Utah Mines Ltd., and included the following personnel: G.L. Holland, Geologist; J.R. Deighton, Senior Geologist; J. Howe, Warehouseman; R. Schmidt, Field Assistant; and T. Sedun, Field Assistant. All core was logged in detail, by the staff geologist, then split in half, with one half sent for analysis to Chemex Labs Ltd. in North Vancouver, B.C. The remaining half is stored in an enclosed wood building in the campsite, on the property. All core is stored in wooden core trays and carefully labelled with hole number and meterage contained.

Total meterage drilled to August 31st, in this program, was 690.07 meters. This included drillholes BC-10 thru BC-14. A summary of these drillholes is given below.

Hole #	Azimuth/inclination	Depth (m)	Claim	Date Start	Date Finish
BC-10	090°/-60°	147.9	BE-4	Aug 15	Aug 18
BC-11	090°/-60°	145.4	BE-3	Aug 19	Aug 23
BC-12	090°/-45°	203.3	BE-3	Aug 23	Aug 27
BC-13	090°/-45°	154.5	BE-3	Aug 28	Aug 30
BC-14	090°/-60°	39.0	BE-3	Aug 30	Aug 31
		690.1			

(BC-14 not completed till Sept. 1, 1982)

Data accompanying this drill report consists of complete diamond drill logs and assays (Appendices A&B) and Diamond Drill Collar Location Plan (Plate No. 1) Statement of Qualifications and Statement of Costs are given in Appendices C and D respectively.

September 29, 1982.

G.L. Holland, Geologist

APPENDIX A

DRILL LOGS

COMPOSITE DRILL LOG

CORE SIZE : NQ Wireline | SCALE : 1:100 | PROJECT : May | HOLE No. : BE-10

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : August 15, 1982 | PAGE No. 1 OF 10

COORDINATES : N. E. | DATE FINISHED : August 18, 1982 | REF. TO CLAIM CORNER : BE-4

INCLINATION : -60° | AZIMUTH : 090° | TOTAL DEPTH : 147.9 m | LOGGED BY : G.L. Holland

DEPTH (M)	ALTERATION	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
0	sericite, clay, chlorite				0-0.31 Stick-Up								0		
5					0.31 - 9.1 Overburden										
9.1	moderate → weak → moderate → weak → moderate	weak	mag, py		9.1m FELDSPAR-HORNBLENDE MONZONITE PORPHYRY → 3cm gouge zone. - dark green color aphanitic matrix - strong, coarse grained porphyritic texture. - 65% phenos 50%-plag → clay ± sericite 15%-hbl → chlorite ± mag → 1cm qtz vnlts w/ hem staining - alteration - moderate - argillic to weak phyllic place - up to 3 or 4% disseminated Magnetite plus it may be an alt'n product of the hbl. - pyrite contained in or around fractures. - fitting weakly developed. - Veining is quartz ± carbonate		11.28		< 1%	< 0.05%	111028			0.03	< 0.001
10													12.0		
15					→ 2cm qtz vnlt. @ 12.2 - Alt'n increases to strong phyllic. - hbl → sericite. - plag → sericite ± clay → 60cm gouge zone * Limonite to a depth of 27m		14.32			< 0.05%	111030			0.01	< 0.001
					14.8 LITHOLOGIC CHANGE								15.0		

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : B-10
CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 2 OF 10
COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :
INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite | clay | chlorite | epidote | silica — FRACTURING — MINERALS — GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DEPTH (m)	Comments	Descriptive geology
15		MEDIUM-GRAINED MONZONITE PORPHYRY cont.
	1.5cm qtz vnlt	-plag phenos euhedral, hbl phenos - lathes -often obliterated in the strong alt'n zones
	1cm qtz vnlt.	- hematitic staining confined to fractures
	1.5cm qtz vnlt.	@ 16.1m Alt'n becomes v. strong - phenos very indistinct, rock pale green color pyrite instead of magnetite.
20	2cm gouge zone	- a lot of relic phenos present. -Qtz s/w mod. developed -phyllic phase alt'n. -traces MoS_2.
	1.5cm qtz-carb vnlt.	-Increase in micro-fracturing -phenos medium grained
		21.0-23.0 - Brx zone - Medium grained porphyry that has been shattered and rotated
		23.0 m
		FELDSPAR-HORNBLENDE MONZONITE PORPHYRY -alt'n strong phyllic -up to 10% epidote, 1% pyrite -phenos often obscured, minor relic hbl other sections of distinct plag phenos. plag → sericite hbl → mag + sericite. - Qtz s/w mod developed. -no hbl crystals found only relics.
	1cm qtz vnlt	
30	2cm qtz vnlt.	

Alteration (15–16 m): sericite mod; clay v wk. 16–30 m: sericite v. strong; epidote weak → moderate to strong (to ~23 m), strong (23–30 m); silica moderate to strong. Fracturing: strong; v. str. (21–23 m); mod to strong (23–30 m). Minerals: py - mag (21–23 m).

DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	ESTIMATED % Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (m)	% Cu	% Mo			
		<1%	<0.10%	11104C		15–18	<0.01	0.001			
		5-6%	<0.10%	11105C		18–21	<0.01	<0.001			
		5-6%	<0.10%	11106C		21–24	0.01	<0.001			
		1%	<0.10%	11107C		24–27	<0.01	<0.001			
		1%	<0.10%	11108C		27–30	<0.01	0.001			

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : B10

CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 3 OF 10

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, chlorite, epidote, silica

FRACTURING: strong

MINERALS: py - mag - MoS

GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL

% CORE RECOVERED

% SULPHIDES: 2-4 %

% ESTIMATED

SAMPLE No.

% SAMPLE RECOVERED

SAMPLE INTERVAL (M)

ASSAYS: % Cu, % Mo

DEPTH (M)	DESCRIPTIVE GEOLOGY	% ESTIMATED	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	% Cu	% Mo
30	2cm qtz vnlt. FELDSPAR-HORNBLENDE MONZONITE PORPH cont				30		
	* Numerous H/L py vnlts	<0.01%	11109C			<0.01	<0.001
	0.5cm carb vnlt				33		
	Contains sections of up to 45% epidote and 4% pyrite. -traces of mag & MoS_2						
	3cm gouge						
35	Alt'n degree changes over short distances - principly strong alt'n - phyllic grade.	<0.01%	11110C			<0.01	0.001
	Phases fuzzy to indistinct in large sections				36		
	1.5cm carb-qtz vnlt	<0.01%	11111C			<0.01	0.002
	Qtz s/w moderately developed often contains pyrite				39		
40	1cm gouge Minor MoS_2	<0.01%	11112C		1	<0.01	<0.001
					42		
	1cm qtz vnlt.	<0.01%	11113C			<0.01	0.001
45					45		

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJ. : May | HOLE No. : B-10

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 4 OF 10

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, chlorite, epidote, silica | FRACTURING | MINERALS | GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS: % Cu, % Mo

45

→2cm qtz-carb vnlt

HORNBLENDE-FELDSPAR MONZONITE PORPHYRY cont.

- qtz s/w moderate.

→3cm vuggy qtz-carb vnlt

Alot of frts have epidote around them.

- all the hbl has been altered w only minor relics

- 2-4% pyrite, traces cpy, magnetite, and MoS_2

Qtz-ser salvages of up to 1cm around frts and qtz s/w.

→1cm qtz vnlt.

→1cm qtz vnlt.

→1cm qtz vnlt.

sharp contact @ 82° to C.A.

52.2m

→3cm carb vnlt.

FELDSPAR-AUGITE? PORPHYRITIC ANDESITE

- this unit contains alot of brxx section

→2cm gouge zone

1= dark grey colored, siliceous aphanitic matrix.

→15cm gouge zone w qtz-carb vnlt

- contains up to 30% phenos
  - 20% plagioclase → sericite
  - 10% augite → ?

→4cm gouge zone

- phenos ? gm are moderately phyllic alt'd
- augite - tabular, prismatic crystals - up to 6mm in size - with dark grey color

w plagioclase - often very indistinct, up to 3mm in size

- frting moderate to strong
- qtz-carb vnlt - mod developed
- numerous stress and tension gaps or cracks that are filled w silica, carb
- minor sections of flow banding
- 2-3% finely diss. pyrite

→5cm gouge zone w carb-qtz vnlts

Brxx sections associated w faults are appear to be fragment rotation w no foreign frags.

→Hbl-Bio Porp.

Healed Brxx zone

* Periodic patches of 5-10% pyrite.

60

Sample No.	Sample Interval (M)	% Cu	% Mo	% Sulphides	% Estimated Cu
11114C	45–48	<0.01	0.001	2-4%	<0.01%
11115C	48–51	<0.01	0.001		<0.01%
11116C	51–54	<0.01	0.001		<0.01%
11117C	54–57	<0.01	0.001	2-3%	<0.01%
11118C	57–60	0.01	<0.001		<0.01%

COMPOSITE DRILL LOG

CORE SIZE :		SCALE :		PROJECT : May	HOLE No. : B 10
CASING COLLAR ELEV.:		GROUND ELEV.:		DATE STARTED :	PAGE No. 5 OF 10
COORDINATES :	N.	E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :		AZIMUTH :		TOTAL DEPTH : m	LOGGED BY :

ALTERATION: sericite, clay, chlorite, epidote, silica | FRACTURING | MINERALS | GEOLOGY | COMMENTS: | AVG. CORE REC'Y/HOLE | DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS

DESCRIPTIVE GEOLOGY

Depth 60–75 m

Alteration: sericite mod-str → moderate → weak; silica mod → moderate → strong; epidote moderate. Fracturing: mod-str → strong → intense → v. strong. Minerals: PY-cpy → PY-CPY → py-cpy-mag → PY-cpy.

Comments:
- →3cm carb unit.
- →weakly frtd
- →Faultzone w brx frags.
- →1cm qtz unit
- →2cm gouge zone
- contact brxx.
- →15cm gouge zone
- → 5cm gouge zone

FELDSPAR-AUGITE ANDESITE PORPHYRY cont.
- cse grained cpy at contact.

61.6-62.3 Fault zone @ contact -30° to C.A.

61.6m **PYROCLASTIC - LAPILLI TUFF**
- medium to coarse grained frags
  - up to 5mm in size
- roughly 70% phenos? frags in a dk grey aphanitic matrix. Fragments sub angular to sub rounded. Phenos up to 3mm in size
- frting strong
- moderate qtz (carb) s/w
- 4-5% fine-grained pyrite w-r cpy.

Phenos - 50% - 40% plag → ser
10% augite → ?

- alt'n moderately developed
  - phyllic phase

66-70.3 - Brxx zone - fragments derived from within the units. Contact Brxx w alot of silica + carbonate.

67.7m **GRADATIONAL CONTACT OF LAPILLI TUFF TO A TUFF**
- blk colored, aphanitic to v. fine grained matrix.
- 20-40% plagioclase phenos → sericite minor augite.
- phenos are roughly 2mm in size
- frting strong
- 6-7% finegrained diss. py w minor cpy
- minor magnetite assoc. w qtz s/w
- qtz-carb s/w mod developed.
- alt'n moderately developed
  - phyllic phase.
- dk green colored mineral in g.m could be mafic alt'n to epidote
- frts & tension cracks filled w qtz & carb.
- sections of 10-15% py.

@72.0m rock is a v. f. grained Tuff w no more phenos visible.

Sample Interval (m)	% Sulphides	% Estimated Cu	Sample No.	% Cu	% Mo
60–63	2-3% / 4-5%	0.15%	11119C	0.01	0.003
63–66	4-5%	0.10%	11120C	0.01	<0.001
66–69		0.10%	11121C	0.01	0.003
69–72	6-7%	0.10%	11122C	<0.01	0.002
72–75	6-7%	0.10%	11123C	0.01	0.003

COMPOSITE DRILL LOG

CORE SIZE : SCALE : PROJECT : May HOLE No. : B[illegible]0

CASING COLLAR ELEV.: GROUND ELEV.: DATE STARTED : PAGE No. 6 OF 10

COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :

INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

AVG. CORE REC'Y/HOLE

DEPTH (M)	ALTERATION (sericite, clay, chlorite, epidote, silica)	FRACTURING	MINERALS	GEOLOGY	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	ESTIMATED % Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	% Cu	% Mo
75	sericite: V. weak ??; chlorite: moderate ??; epidote: mod to strong, strong; silica	strong to intense; strong	PY - CPY - mag		BANDED Tuff cont. (close to intrusive contact)							75		
					* sulphides very fine grained -magnetite along frts & vnlts. -all frts are coated ā py.				0.10%	1124C			0.03	0.003
					→16cm gouge zone; →1cm qtz-carb vnlt; →Brxx zone; →2cm gouge zone									
					Grain size v. fine grained							78		
80					→1.5cm qtz-carb vnlt; →1cm gouge zone; 78.0 - 81.0 - Minor sections of intrusive in with brecciated tuff			10-15%	0.10%	1125C			0.01	0.001
					→1cm gouge zone. * Qtz-carb s/w mod developed							81		
					→1cm carb vnlt; 83.0 - frting decrease, amount of carb decreases. Start of good flow banding, decrease pyrite.				0.10%	1126C			0.01	0.001
					→1cm gouge zone * Accurate grade estimates are very difficult to make due to grain size									
					* Qtz s/w weakly developed							84		
85					Flow banding very strong -alternate bands of blk and pale green material. - looks similiar to sedimentary bedding; →1cm qtz-carb vnlt; →2cm gouge zone			3-5%	<0.10%	1127C			0.02	0.004
					Noting minor offsets of banding across frts. Bxx zone ā qtz carb							87		
					88.0 - 88.8 - Brxx'd Tuff				<0.10%	1128C			0.01	0.002
90					→1cm gouge zone							90		

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJ. : May | HOLE No. : B
CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 7 OF 10
COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :
INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, chlorite, epidote, silica | FRACTURING | MINERALS | GEOLOGY | COMMENTS: | AVG. CORE REC'Y/HOLE

Alteration (90–100 m): sericite weak; silica strong. Fracturing: strong. Minerals: pyrite.
Alteration (100–105 m): sericite weak to mod; silica strong. Fracturing: moderate. Minerals: pyrite.

DESCRIPTIVE GEOLOGY

- 90 — →2 cm gouge zone — BANDED TUFF cont
- Qtz S/W weakly developed.
- 91.6 – 92.2 – Intrusive
- 92.0 – 93.0 – contact brxx @ frags of tuff and Intrusive (wk breccia zone)
- →2cm gouge zone — pyrite largely confined to frts.
- →Minor brxx — Banding texture very strong.
- – lgt green and black bands.
- – varies from 45° to 90° to C.A.
- 95 — – lgt grn – fine-grained, bk – v. fine grained.
- →2cm qtz-carb vnlt w py. — Fracturing strong - healed @ qtz-carb vnlts.
- →10cm qtz-carb vnlt @ tuff frags
- →sharp contact @ 45° — 97.4 – 98.4 – Lgt green Intrusive
- →intrusive — * Alot more (5%) pyrite in the bk bands than in the light bands (2%)
- →sharp contact @ 90°
- Offset of banding by fracture sets
- 100 — →2cm qtz-carb vnlt. — 99.7 m.
- →1cm gouge zone. — APHANITIC INTRUSIVE
- – alt'n very strong – obliterates all textures and phenos. Impossible to place an original compositional name
- – alt'n – phyllic phase.
- – qtz s/w moderately developed.
- – contains numerous frags & section of the black tuff.
- 103.1 – 105.3 – Brecciated fault
- Brecciated fault zone. — – pyrite contained in frts.
- 105

Sampling and Assays

% Sulphides	% Cu Estimated	Sample No.	Sample Interval (m)	% Cu	% Mo
2-4%	<0.01%	11129C	90–93	0.02	0.003
2-4%	<0.01%	11130C	93–96	0.01	0.001
2-4%	<0.01%	11131C	96–99	0.08	<0.001
2%	<0.01%	11132C	99–102	0.01	<0.001
2%	<0.01%	11133C	102–105	0.01	<0.001

COMPOSITE DRILL LOG

CORE SI : SCALE : PROJ : MAY HOLE No. : B 10

CASING COLLAR ELEV.: GROUND ELEV.: DATE STARTED : PAGE No. 8 OF 10

COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :

INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

ALTERATION: sericite, clay, chlorite, ep.dote, silica

FRACTURING: weak, mod, strong

MINERALS: mod, strong, m-s, strong, strong

GEOLOGY: mod, strong, mod, strong, mod

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS % Cu | % Mo

105 — 105.3m APHANITIC INTRUSIVE

1053-108 BANDED TUFF

as before - banded texture

→ intrusive — py

→ 1cm gouge — 108.0m Fault contact @ 20° to c.a.

→ 1cm qtz vn/lt — py-aggregates — LAPILLI TUFF

- mod qtz s/w — sharp contact @ 80°

109.6m BANDED TUFF

→ 2cm gorge zone — py

as before.

→ intrusive

→ 10cm qtz-carb vn/lt — 111.30m Carbonate Bmy contact @ 30°

ANDESITE PORPHYRY

- fine-grained porph texture in a granular dk grn matrix. qtz s/w mod-str developed

112.60m — sharp contact @ 40°

BANDED TUFF

→ 1cm qtz vn/lt

- V. fine grained to aphanitic
- dk green to light grn bands.
- alot of qtz-carb vn/lts
- offset of bands common on fats.
- minor sections of intrusive present.

→ 1cm qtz-py vn/lt.

→ 2cm qtz vn/lt.

118.1m.

118.1 - 120.1 - LAPILLI TUFF

- 30% phenos < 2mm in size
- plag + augite + hbl
- hematitic staining of some phenos.

→ 1cm qtz vn/lt

120

DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	% Mo
		2%	<0.01%	11134C		105–108	0.02	0.001
		2%	<0.01%	11135C		108–111	0.02	<0.001
		4%	<0.01%	11136C		111–114	0.01	<0.001
		2%	<0.01%	11138C		114–117	0.01	<0.001
		1%	<0.01%	11139C		117–120	0.02	<0.001

COMPOSIT[E] DRILL LOG

CORE SIZE :	SCALE :	PROJECT : MAY	HOLE No. : B…O
CASING COLLAR ELEV. :	GROUND ELEV. :	DATE STARTED :	PAGE No. 9 OF 10
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

Descriptive Geology (Depth 120 – 135 m)

Depth (m)	Comments	Descriptive Geology
120.4		LAPILLI TUFF cont
	sharp contact @ 90	BANDED TUFF
		Perfect gradational contact from Dust Tuff - fine-grained Tuff - LAPILLI TUFF - samples
123.1 m	Gradational contact	LAPILLI TUFF
		- medium grained phenocrysts and fragments in a fine-grained matrix
	→ Tuff	- minor qtz-carb units.
	→ 30cm fault zone.	- minor bands of pyrite.
		- alt'n moderately developed.
	→ 10cm fault.	- phyllic phase
	→ 40cm fault zone	- frting moderate to weak
127.3 m		126.0-127.30 - Banded Tuff
		AUGITE-HORNBLENDE PORPHYRITIC ANDESITE
		- dk green colored matrix
		- 10% hbl phenos → sericite?
	→ 2cm gouge zones	- up to 6mm in size
		- 5% augite → ?? - up to 3mm in size
	→ 10cm fault zone	- frting mod - str, - often filled w qtz-carbonate.
	→ 1cm qtz vnlt.	
	→ 10cm fault zone	
		Qtz s/w mod. developed.

Alteration / Fracturing / Minerals

Interval (m)	sericite	clay	chlorite	epidote	silica	Fracturing	Minerals
120.4 – 123.1	weak			wk - mod	strong	mod	pyrite
123.1 – 127.3	strong			moderate	moderate	wk-mod	pyrite
127.3 – 135	weak to mod ??				weak	v. strong; mod - strong	pyrite

Sampling and Assays

Sample Interval (m)	% Sulphides	% Cu Estimated	Sample No.	% Cu	% Mo
120 – 123		<0.01%	11140C	0.02	<0.001
123 – 126	1%	<0.01%	11141C	0.01	<0.001
126 – 129		<0.01%	11142C	0.01	.0.001
129 – 132	1/2%	<0.01%	11143C	0.02	<0.001
132 – 135		<0.01%	11144C	0.02	<0.001

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJ : May | HOLE No. : BQ

CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 10 OF 10

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, chlorite, epidote, silica

FRACTURING | MINERALS | GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS: % Cu, % Mo

DEPTH (M)	DESCRIPTIVE GEOLOGY	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	SAMPLE INTERVAL (M)	% Cu	% Mo
135	AUGITE-HORNBLENDE PORPH. ANDESITE cont.				135		
	2x1.5 cm qtz-carb						
	Zone of gouge zones - a lot of qtz-carb						
	3 cm gouge zone.	1½%	<0.01%	111145C		0.01	<0.001
	138 - 140 B - chilled zone towards contact				138		
	1 cm gouge zone.						
140	2 cm gouge zone - 140.8 m Fault contact @ 30° to C.A						
	B HW @ contact BANDED TUFF		<0.01%	111146C		0.03	0.003
					141		
	2 cm gouge zone 142.7m FSP-HBL PORPHYRY:	2%	<0.01%	111147C		0.01	<0.001
	3 cm qtz vlt. c - pale green crystalline, - alt'n strong - fsp phenos completely alt'd - Hbl → sericite - fine grained phenos < 2mm - mod fring.				144		
145	4 cm fault zone						
	1 m fault zone.	1½%	<0.01%	111148C		0.01	<0.001
	146.3 - 147 - Banded tuff.						
	20 cm gouge zone.				147		
	147.82 E.O.H.		<0.01%	111149C		<0.01	<0.001

COMPOSITE DRILL LOG

CORE SIZE: NQ wireline	SCALE: 1:100	PROJECT: MAY		HOLE No.: E[illegible]-11	
CASING COLLAR ELEV.:	GROUND ELEV.:	DATE STARTED: August 19, 1982		PAGE No. 1 OF 10	
COORDINATES: N.	E.	DATE FINISHED: August 23, 1982		REF. TO CLAIM CORNER: BE-3	
INCLINATION: -60°	AZIMUTH: 090°	TOTAL DEPTH: 145.38 m		LOGGED BY: G.L. Holland	

AVG. CORE REC'Y/HOLE:

COMMENTS:

Alteration columns: sericite, clay, silica

DEPTH (m)	ALTERATION	FRACTURING	MINERALS	GEOLOGY	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (m)	ASSAYS % Cu	% Mo
0					0 – 0.31 Stick-Up							0		
					0.31 – 3.28 OVERBURDEN									
	very strong to intense (silica)	very strong	mag-py-cpy		3.28 m							3.3		
					SILICIFIED CONTACT ZONE of ANDESITE & MEDIUM GRAINED MONZONITE PORPHYRY									
5				→Brxx zone.				1–1½ %	<0.01 %	11150C			0.09	0.007
				→1cm gouge zone	- rock is extremely hard - rings when hit by hammer, can't cut w hacksaw							6		
					- contains sections of A - DK GREEN ANDESITE B - PINK COLORED, MEDIUM-GRAINED Porphyritic Monzonite									
					- both units extremely silicified				<0.01 %	11151C			0.05	0.005
					- numerous qtz-carb units									
					- frting very strong - healed w silica.									
					- limonite present on fcts							9		
				→Monzonite unit w andesite frags.	- up to 2% mag, 1% py, minor cpy									
10					10 – 11.3 - Monzonite Porphyry				<0.01 %	11152C			0.01	0.003
					Appears to be weak banding in the andesite							12		
				→Brxx zone	Intrusive has interfingered into the andesite, fractured it and silicified.				<0.01 %	11153C			0.02	0.007
15				→Brxx zone								15		

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : MAY | HOLE No. : B-11

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 2 OF 10

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

DEPTH (m)	ALTERATION: sericite / clay / silica	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (m)	ASSAYS % Cu	ASSAYS % Mo
15	very strong to intense	very strong	mag - pyrite - cpy		SILICIFIED CONTACT ZONE cont.					<0.01%	11154C		15	0.05	0.008
					Ecting very strong								18		
					Andesite still shows banding texture w/ veins of intrusive shot through it					<0.01%	11155C			0.01	0.002
20					30cm qtz-carbonate								21		
					Alot of magnetite.				1-1½%	<0.01%	11156C			0.03	0.003
					Boxx zone								24		
25										<0.01%	11157C			0.11	0.007
					27.3-28.0 - Medium Grained Monzonite Porphyry								27		
					30 cm fault zone.					<0.01%	11158C			0.08	0.016
30													30		

COMPOSITE DRILL LOG

CORE # : | SCALE : | PROJ : MAY | HOLE No. : B 11

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 3 OF 10

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, silica

FRACTURING: very strong to intense

MINERALS: very strong mag-py-cpy.

GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL

% CORE RECOVERED

% SULPHIDES: 1 - 1½%

% ESTIMATED Cu

SAMPLE No.

% SAMPLE RECOVERED

SAMPLE INTERVAL (m)

ASSAYS: % Cu, % Mo

DEPTH (m)	DESCRIPTIVE GEOLOGY	% ESTIMATED Cu	SAMPLE No.	SAMPLE INTERVAL (m)	% Cu	% Mo
30	SILICIFIED CONTACT ZONE cont.			30		
	1.5cm qtz-mag vnlt	<0.01%	11159C		0.13	0.005
	Numerous vnlts of intrusive through the andesite			33		
	Vuik brxx zone.	<0.01%	11160C		0.03	0.005
35	Strong banding to the andesite			36		
	Brxx zone	<0.01%	11161C		0.09	0.005
	38.2m SILICIFIED MONZONITE PORPH. (CONTACT ZONE)			39		
	3cm gouge zone. - mostly - 98% medium grained monzonite porphyry ± fragments and small sections of the andesite. - silicification still very strong, porph texture very rare.	<0.01%	11162C		0.02	0.003
	2cm gouge zone - up to 10% magnetite, usually in vnlts - fring very strong			42		
	1cm qtz-carb vnlt - rock has a strong pinkish cast - probably due to hematite,	<0.01%	11163C		0.03	0.004
	3cm mag vnlt. - limonite on frts.					
45	Brxx zone.			45		

COMPOSITE DRILL LOG

CORE SIZE:		SCALE:		PROJ.: May	HOLE No.: B…/
CASING COLLAR ELEV.:		GROUND ELEV.:		DATE STARTED:	PAGE No. 4 OF 10
COORDINATES:	N.		E.	DATE FINISHED:	REF. TO CLAIM CORNER:
INCLINATION:		AZIMUTH:		TOTAL DEPTH: m	LOGGED BY:

DEPTH (m): 45 – 60

ALTERATION (45–60 m): sericite – weak to moderate; clay – very weak; silica – very strong; epidote

FRACTURING: very strong

MINERALS: mag - py - cpy - (malacite)

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

SILICIFIED MONZONITE PORPHYRY
(CONTACT ZONE)

→ 2cm mag vnlt

46.5m
SILICIFIED ANDESITE
- still alot of monzonite throughout.
- strong banding texture in places.

→ 0.5cm carb vnlt

Alot of magnetite.

→ 2cm gouge zone.

→ 2cm mag vnlt. Minor malachite of weathered frts.
→ 1cm qtz-carb vnlt.

* These unit distinctions are very ambiguous - we appear to be following the contact down and there is much inter fingering and element exchange during silicification

→ 1cm gouge zone.

58.0m
SILICIFIED MONZONITE PORPH
- mostly monzonite - with sections of andesite
- alt'n obliterates med-grned texture in most places

→ 1.5 cm qtz vnlt.

SAMPLE INTERVAL (m)	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% Cu	% Mo
45 – 48		<0.01%	111G4C	0.08	0.004
48 – 51		<0.01%	111G5C	0.08	0.003
51 – 54	1%	<0.01%	111G6C	0.04	0.004
54 – 57		<0.01%	111G7C	0.03	0.002
57 – 60		<0.01%	111G8C	0.03	0.004

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : B-11

CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 5 OF 10

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, silica, epidote

FRACTURING: very strong

MINERALS: very strong mag-py

GEOLOGY

COMMENTS :

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

SILICIFIED MONZONITE PORPHYRY

(CONTACT ZONE)

weak (patches)

very strong

very strong mag-py

1cm qtz-carb vnlt

Numerous qtz-carb. vnlts.

1cm gauge zone.

brow zone

8cm qtz-carb vnlt.

73-74.6 - Brecciated zone - fault contact.

74.6 - Out of contact zone.

- brecciated contact.

5cm gauge zone

Less andesite found with depth.

- alt'n still very strong

DEPTH (M)	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
60							60		
				<0.01%	11169C			0.06	0.007
							63		
65				<0.01%	11170C			0.09	0.006
							66		
				<0.01%	11171C			0.03	0.002
			1 %				69		
70				<0.01%	11172C			0.04	0.005
							72		
				<0.01%	11173C			0.01	0.003
75							75		

COMPOSITE DRILL LOG

CORE SIZE :	SCALE :	PROJ : MAY	HOLE No. : E[illegible] 11
CASING COLLAR ELEV. :	GROUND ELEV. :	DATE STARTED :	PAGE No. 6 OF 10
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

ALTERATION: sericite, clay, silica — FRACTURING — MINERALS — GEOLOGY — COMMENTS: — AVG. CORE REC'Y/HOLE

Depth 75–90 m

Alteration (75–90): sericite: weak to moderate; clay/silica: strong
Fracturing: strong
Minerals: mag - py - (cpy)

DESCRIPTIVE GEOLOGY

SILICIFIED - MEDIUM GRAINED MONZONITE PORPHYRY

- frting has decreased - strong
- alt'n still strong w sericite now present. No as strongly silicified
- phenos most often distroyed.
- rock has a strong pinkish cast.
  - possibly hematite
- py found in frts.
- magnetite on frts

→ gouge zones

→ qtz-carb veins

A lot of magnetite.

→ 1 cm qtz-carb vein

Sample Interval (m)	% Sulphides	% Estimated Cu	Sample No.	Assays % Cu	Assays % Mo
75–78		<0.01%	11174C	0.01	0.002
78–81	1%	<0.01%	11175C	0.04	0.004
81–84		<0.01%	11176C	0.07	0.008
84–87		<0.01%	11177C	0.11	0.009
87–90		<0.01%	11178C	0.05	0.003

COMPOSITE DRILL LOG

CORE S[...] :
SCALE :
PRO[...] : May
HOLE No. : B[...]11
CASING COLLAR ELEV.:
GROUND ELEV.:
DATE STARTED :
PAGE No. 7 OF 10
COORDINATES : N. E.
DATE FINISHED :
REF. TO CLAIM CORNER :
INCLINATION :
AZIMUTH :
TOTAL DEPTH : m
LOGGED BY :

COMMENTS:

AVG. CORE REC'Y/HOLE

DEPTH (m)	ALTERATION: sericite	clay	silica	epidote	FRACTURING	MINERALS	DESCRIPTIVE GEOLOGY	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	SAMPLE INTERVAL (m)	% Cu	% Mo
90–96	weak to moderate		strong		strong	mag-py-(cpy)	SILICIFIED MEDIUM-GRAINED MONZONITE PORPHYRY cont. 91.0 – 92.5 – Cave zone ῶ limonite on frts → 1cm gouge zone	1%	<0.01%	11179C	90–93	0.03	0.002
									<0.01%	11180C	93–96	0.02	0.003
96–100.1			strong	wk to mod	strong	mag-py-cpy	→ 15cm fault, brx zone; 96.0m fault & brx contact Altered Andesite - alt'n very strong - strong color banding - pink → dk grn → light green - py & cpy on frts → 1cm qtz-carb vnlt	2%	0.01%	11181C	96–99	0.06	0.012
100.1–105	weak		strong		strong	mag-py-cpy	100.1m fault contact SILICIFIED MONZONITE PORPHYRY - pink to pale orange color - frting strong qtz-carb filled. - medium grained phenos found in sections - alt'n very strong - numerous magnetite vnlts - sulphides very fine grained - py + cpy	1½%	0.01%	11182C	99–102	0.07	0.006
									0.01%	11183C	102–105	0.07	0.004

Depth marks: 90, 95, 100, 105

COMPOSITE DRILL LOG

CORE SIZE : SCALE : PROJ. : May HOLE No. : B-11

CASING COLLAR ELEV. : GROUND ELEV. : DATE STARTED : PAGE No. 8 OF 10

COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :

INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

ALTERATION: sericite, clay, silica, epidote | FRACTURING | MINERALS | GEOLOGY | COMMENTS: | AVG. CORE REC'Y/HOLE

Alteration (105–112.7 m): sericite weak; silica strong; fracturing strong; minerals mag - py - cpy

Alteration (112.7–120 m): sericite moderate to strong; clay moderate; silica weak; fracturing strong; minerals mag - cpy - py

DESCRIPTIVE GEOLOGY

105 — SILICIFIED MEDIUM-GRAINED MONZONITE PORPHYRY cont

→ 1cm gouge zone

110 — → 1cm mag vnlt.

Brxx zone

Brecciated contact — 112.7m

ANDESITE PORPHYRY

→ 1.5cm carb vnlt.

- dk green color w/ minor hematite staining
- weak porphyritic texture
  - plagioclase → sericite.
- alt'n strong - phyllic phase
  - phenos fuzzy or ghosts or none.
- frting strong
- minor sections of strong banding
- sulphides & magnetite mostly contained along fractures

→ 2cm qtz-carb vnlt.

→ 3cm gouge zone

→ 2cm gouge zone

120 — → 1cm carb vnlt

Sample interval (m)	% Sulphides	% Estimated Cu	Sample No.	% Cu	% Mo
105–108	1%	<0.10%	11184C	0.03	0.003
108–111	1%	<0.10%	11185C	0.03	0.003
111–114	1% / 1 1/2%	0.15%	11186C	0.06	0.009
114–117	1 1/2%	0.15%	11187C	0.04	0.004
117–120	1 1/2%	<0.10%	11188C	0.04	0.003

COMPOSITE DRILL LOG

CORE SIZE : SCALE : PROJECT : May HOLE No. : [illegible]-11

CASING COLLAR ELEV.: GROUND ELEV.: DATE STARTED : PAGE No. 9 OF 10

COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :

INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

ALTERATION: sericite, clay, silica, epidote

FRACTURING: moderate to strong

MINERALS: moderate to weak to moderate

GEOLOGY: mag - cpy - py

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

ANDESITE PORPHYRY cont

→0.8cm mag-hem vnlt

122.8m - banding quite prominant.
- sharp increase in f.g. cpy

cpy quite visable in the qtz-carb vnlts

→alot of f mag.

→2cm gouge zone.

→2cm qtz-carb vnlt.

DEPTH (M)	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
120							120		
				< 0.10 %	11189C			0.04	0.002
							123		
125				0.30 %	11190C			0.10	0.006
			1-2 %				126		
				0.30 %	11191C			0.10	0.009
							129		
130				0.30 %	11192C			0.08	0.012
							132		
				0.30 %	11193C			0.06	0.011
135							135		

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COMPOSITE DRILL LOG

CORE SIZE :	SCALE :	PROJ. : May	HOLE No. : B[illegible]11
CASING COLLAR ELEV. :	GROUND ELEV. :	DATE STARTED :	PAGE No. 10 OF 10
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

COMMENTS :

AVG. CORE REC'Y/HOLE

ALTERATION (135–145.38 m): sericite — moderate to strong; clay — moderate; silica — weak to moderate; epidote

FRACTURING: moderate (135–~141); v. strong (~141–145.38)

MINERALS: mag-cpy-py

DESCRIPTIVE GEOLOGY

DEPTH (m)	DESCRIPTIVE GEOLOGY
135	ANDESITE PORPHYRY cont.
	→ 1cm qtz-carb vnlt
	alt'n strong - phyllic phase
140	140.9 - E.O.H. Fault zone
	140.9 - 143.3 - Healed.
145	145.38m E.O.H.
150	

DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (m)	% Cu	% Mo			
		1-2%	0.20%	11194C		135–138	0.09	0.007			
			0.30%	11195C		138–141	0.05	0.006			
			0.15%	11196C		141–144	0.04	0.013			
			0.15%	[illegible]		144–145.38	0.06	0.005			

ASSAYS

COMPOSITE DRILL LOG

CORE SIZE : NQ wireline | SCALE : 1:100 | PROJECT : MAY | HOLE No. : E-12

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : August 23, 1982 | PAGE No. 1 OF 14

COORDINATES : N. E. | DATE FINISHED : August 27, 1982 | REF. TO CLAIM CORNER : BE-3

INCLINATION : -45° | AZIMUTH : 090° | TOTAL DEPTH : 203.3 m | LOGGED BY : G.L. Holland

DEPTH (M)	ALTERATION (sericite, clay, silica, epidote)	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED au	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
0				0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6	0 - 0.93m Stick-up 0.93 - 24.4m Overburden										
5															
10															
15															

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJ : May | HOLE No. : B 12

CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 2 OF 14

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

DEPTH (M)	ALTERATION: sericite	clay	silica	epidote	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
15							0.	Overburden cont.										
								24.4m MEDIUM-GRAINED MONZONITE PORPHYRY										
25	moderate	weak			strong	pyrite		-very badly frt'd., lgt to dk green colored, minor sections of blk andesite, 2% py -alt'n moderately developed -phyllic phase -20% plag phenos ▷sericite.				2%	<0.10%	11197C		27	0.01	<0.001
		mod			strong	py		27.2m sharp irregular contact ANDESITE -blk color, fine-grained, minor flow banding -shattered throughout, py on frts -flow banding @ 70° to C.A				1%	<0.10%	11198C		30	0.05	<0.001
30								29.0m fault contact HORNBLENDE-FELDSPAR MONZONITE PORPHYRY										

COMPOSITE DRILL LOG

CORE : | SCALE : | PR : May | HOLE No. : D-12

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 3 OF 14

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, silica, epidote

FRACTURING: moderate to strong

MINERALS: moderate to strong Pyrite

GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

HORNBLENDE-FELDSPAR MONZONITE PORPHYRY

- pheno ⇒ 40-60% of rock ⇒ sericite.
- could be some hbl in the plag.
- phens range from 2mm to 6mm and largely subhedral, have white to pale green color.
- matrix is a creamy color, aphanitic
- fizzing strong

→ 1cm gouge zone

Rock is shattered to a depth of 38.4m

- < 1% sulphides - pyrite.

→ 1cm qtz-carb vnlt. - alt'n moderate - pervasive - phyllic phase.

→ 1cm qtz-carb vnlt.

- at about 38.4 the rock takes on a dk green color
- has a gritty looking, fine-grained matrix
- could be another unit but cannot see contact - gradational
- qtz s/w weakly developed.

→ 10cm gouge zone.

strong brec'd zone w silica + carbonate.

43.7 - 44.1 - Andesite

→ 1cm qtz-carb vnlt

→ 1cm qtz-carb vnlt.

DEPTH (M)	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
30							30		
				< 0.10 %	111990			0.03	< 0.001
33							33		
				< 0.10 %	112000			0.02	< 0.001
36							36		
			1%	< 0.10 %	112010			0.02	< 0.001
39							39		
				< 0.10 %	112020			0.03	< 0.001
42							42		
				< 0.10 %	112030			0.01	0.001
45							45		

COMPOSITE DRILL LOG

CORE : SCALE : PRO : may HOLE No. : 12

CASING COLLAR ELEV.: GROUND ELEV.: DATE STARTED : PAGE No. 4 OF 14

COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :

INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

ALTERATION: sericite, clay, silica, epidote

DEPTH (M) | FRACTURING | MINERALS | GEOLOGY | COMMENTS: | AVG. CORE REC'Y/HOLE | DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS % Cu | % Mo

DESCRIPTIVE GEOLOGY

HORNBLENDE-FELDSPAR MONZONITE PORPHYRY

45 — mod to strong sericite, moderate clay, weak to mod silica, moderate epidote

- 1cm carb-qtz vnlt.
- 1.5cm qtz-carb vnlt.

mod to strong pyrite

- Brnx zone
- 0.5cm qtz-carb vnlt becomes
- andesite
- 2cm qtz-carb vnlt
- 5cm qtz-carb vnlt
- andesite

- Nearer the contact the paler the rock - chilling.
- 50.2 – 52.7 - Contact zone.
- -interfingering of porphyry & andesite.

sharp irregular contact.

52.7m ANDESITE

- 1cm qtz-carb vnlt.

-fine grained
- strong banding - blk & olive green bands
- 2% pyrite
- frting moderate
- numerous qtz-carb vnlts

*strong banding with a wide range of flow directions

-alt'n moderate -phyllic phase

moderate pyrite-cpy

- intrusive
- 2cm qtz-carb vnlt
- Brnx zone.

-minor sections of intrusives

frts offset banding and are often filled with qtz-carb.

Minor cpy found.

DEPTH (M)	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	% Cu	% Mo
45	1-2%	<0.10%	112041		45	0.01	<0.001
48		<0.10%	112051		48	0.01	<0.001
51		<0.10%	112061		51	<0.01	<0.001
54	2-3%	<0.10%	112071		54	0.01	<0.001
57		<0.10%	112081		57	0.01	<0.001
60					60		

COMPOSITE DRILL LOG

CORE SIZE : SCALE : PROJ. : May HOLE No. : B 12
CASING COLLAR ELEV. : GROUND ELEV. : DATE STARTED : PAGE No. 5 OF 14
COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :
INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

Columns: DEPTH (M) | ALTERATION (sericite, clay, silica, epidote, chlorite) | FRACTURING | MINERALS | GEOLOGY | COMMENTS: | AVG. CORE REC'Y/HOLE | DESCRIPTIVE GEOLOGY | DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS % Cu, % Mo

Depth 60–75 m

Alteration: sericite – mod (60–63.1), moderate to strong (63.1–75); silica – mod (60–63.1), weak (63.1–75); epidote – weak to moderate (63.1–75)
Fracturing: mod (60–63.1), moderate (63.1–75)
Minerals: PY-CPY (60–63.1); PY-mag (63.1–75)

Comments:
- → Brx ῶ carb (60)
- → Brx zone ῶ carb.
- → 1.5cm qtz-carb vnlt.
- → Brx zone ῶ qtz carb. (70)
- → 2cm qtz-carb vnlt.
- → 2cm qtz-carb vnlt.

DESCRIPTIVE GEOLOGY

ANDESITE cont.

63.1 m — sharp contact @ 70° to c.A.

FEELDSPAR-HORNBLENDE PORPHYRY

- dark green, fine-grained matrix
- pale at contact
- feldspar phenos completely alt'd, often obliterated.
- Up to 10% mafic mineral (Hbl??) → ?? < 2mm in size
- alt'n strong - phyllite phase
- minor magnetite.
- minor <1% pyrite
- moderate frting, minor qtz-carb vnlt

Sample Interval (m)	% Sulphides	% Estimated Cu	Sample No.	% Cu	% Mo
60–63	2-3%	<0.10%	11209C	0.01	<0.001
63–66	<1%	<0.10%	11210C	0.01	<0.001
66–69	<1%	<0.10%	11211C	0.01	<0.001
69–72	<1%	<0.10%	11212C	0.01	<0.001
72–75	<1%	<0.10%	11213C	0.01	<0.001

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJ. : May | HOLE No. : B 12

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 6 OF 14

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

DEPTH (M)	ALTERATION: sericite	clay	silica	epidote	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
75								FELDSPAR-HORNBLENDE PORPHYRY								75		
	wk-s		wk	wk-mod	mod	py		76.0m Sharp Contact @ 45° to C.A										
	weak to mod.		moderate		moderate to strong Pyrite.			BANDED ANDESITE -dk green & lt grn bands that run roughly 60° to C.A. -frting mod to strong, often filled w qtz-carbonate. -frting disjoints banding. -sulphides (py) mainly on frts -alt'n moderately developed. -wk phyllic phase -fine-grained matrix -increase in py @ lower contact				1%	<0.10%	11214C		78	0.01	0.001
80								→1cm qtz-carb vnlt →2cm qtz-carb vnlt sharp contact @ 85° to C.A.										
	moderate		weak		moderate			82.1m HORNBLENDE-FELDSPAR MONZONITE PORPH. -olive green color, aphanitic g.m. -30% plag phenos, ⇒ sericite -alt'n strong to moderate - phenos often very fuzzy -phenos range up to 5mm in size. -frting moderate. -gm is gritty looking				3%	<0.10%	11215C		81	0.01	0.001
													<0.10%	11216C				
85												<1%				84	0.01	<0.001
	weak to mod		moderate		mod - strong Pyrite.			85.9m Sharp contact @ 85° to C.A. Banded Andesite. -as before Banding very strong					<0.10%	11217C			0.02	<0.001
												2%				87		
								→2cm qtz-carb vnlt frt'd contact 89.9m HBL-FSP ~, Monz Porph.					<0.10%	11218C			0.03	0.001
90																90		

COMPOSITE DRILL LOG

CORE :
CASING COLLAR ELEV. :
COORDINATES : N. E.
INCLINATION :

SCALE :
GROUND ELEV. :
AZIMUTH :

PR : May
DATE STARTED :
DATE FINISHED :
TOTAL DEPTH : m

HOLE No. : -12

REF. TO CLAIM CORNER :
LOGGED BY :

DEPTH (m)	ALTERATION: sericite / clay / silica / chlorite	FRACTURING	MINERALS	COMMENTS / DESCRIPTIVE GEOLOGY	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	SAMPLE INTERVAL (m)	% Cu	% Mo
90				**HORNBLENDE-FELDSPAR MONZONITE PORPHYRY**				90		
				→ 2cm qtz-carb vnlt.						
				- olive green matrix, dark green fsp phenos						
				- Up to 50% plag phenos - ranging from 2-8mm in size.						
				- alt'n weak to moderate. - primarily around frts.		<0.10%	11219C	90–93	0.02	<0.001
				- frting moderate						
				- Up to 3% magnetite						
				- matrix has a pale yellow gritty looking mineral in it.						
				- possibly hornblende pseudomorphs found.						
				- alot of qtz-carb in frts / cracks.				93		
				→ 9cm qtz vnlt w frags in it.						
95	weak / weak (frts)	moderate	mag-PY	→ 1cm gouge zone w 1cm qtz-carb — 95.0 - Alt'n strong around gouge zone	<1%	<0.10%	11220C	93–96	0.01	<0.001
				→ 1cm qtz-carb vnlt				96		
				→ 1cm gouge zone		<0.10%	11221C	96–99	0.02	<0.001
100				→ Brx zone w andesite.				99		
						<0.10%	11222C	99–102	0.02	<0.001
				101.9m — sharp contact @ 45° to C.A						
	str / wk-mod	str	PY-CPY	**BANDED ANDESITE** as before.	2%			102		
				103.2m — sharp contact @ 30° to C.A.						
	weak / weak	mod	mag-PY	**HORNBLENDE FELDSPAR MONZONITE PORPHYRY** as before	<1%	<0.10%	11223C	102–105	0.01	<0.001
105				- contains andesite frags throughout				105		

COMPOSITE DRILL LOG

CORE S[illegible] :
SCALE :
PRO[illegible] : May
HOLE No. : B[illegible]2
CASING COLLAR ELEV.:
GROUND ELEV.:
DATE STARTED :
PAGE No. 8 OF 14
COORDINATES : N. E.
DATE FINISHED :
REF. TO CLAIM CORNER :
INCLINATION :
AZIMUTH :
TOTAL DEPTH : m
LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite | FRACTURING | MINERALS | GEOLOGY | COMMENTS: | AVG. CORE REC'Y/HOLE | DESCRIPTIVE GEOLOGY | DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS

Depth 105–110 m
- Alteration: sericite — wk to mod; silica — moderate
- Fracturing: mod to str
- Minerals: py
- Geology comments: → 1cm qtz-carb vnlt.

HORNBLENDE-FELDSPAR MONZONITE PORPHYRY
105.7m Bckx contact
BANDED ANDESITE
- bands of blk and light green
- fine-grained
- frting mod to strong - qtz-carb filled
- alt'n moderate developed.
- frts offset banding
- py on frts.

110.1m sharp contact @ 60° to C.A.
HORNBLENDE-FELDSPAR MONZONITE PORPHYRY

as discribed on page 7

Depth 110–120 m
- Alteration: sericite — weak; silica — weak (fractures)
- Fracturing: moderate
- Minerals: mag-py
- Geology comments: → 1cm gouge zone; → 1.5cm qtz-carb vnlts.; → 1cm qtz vnlt.; → py rich zone.

~1% magnetite.

chlorite alt'n on vnlts and fractures increasing

Sample interval (m)	% Sulphides	% Estimated Cu	Sample No.	% Cu	% Mo
105–108	1½ %	<0.10%	11224C	0.02	0.001
108–111		<0.10%	11225C	0.03	0.002
111–114	1%	<0.10%	11226C	0.02	<0.001
114–117		<0.10%	11227C	0.02	<0.001
117–120		<0.10%	11228C	0.002	0.001

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : MAY | HOLE No. : E 12

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 9 OF 14

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

DEPTH (m)	ALTERATION: sericite	clay	silica	chlorite	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
120	weak				moderate	mag-py-cpy		1cm qtz carb vnlt HORNBLENDE FELDSPAR MONZONITE PORPHYRY								120		
								1cm qtz-carb vnlt										
								1cm qtz-carb vnlt									0.03	<0.001
								1cm qtz vnlt										
								124-124.3 - Banded Andesite								123		
								Banded andesite.										
								3cm qtz-carb vnlt									0.02	<0.001
125								125.4m irregular contact										
								brxr @ contact: BANDED ANDESITE										
	mod		weak		mod	py										126		
								128.0m irregular contact									0.02	0.001
								HORNBLENDE-FSP = MONZONITE PORPHYRY BRECCIA										
								1cm qtz-carb vnlt - large fragments of above in a										
								1cm qtz vnlt fine-grained matrix										
130								- qtz s/w moderately developed.										
								- alot of qtz-carbonate.									0.02	<0.001
								15cm qtz vnlt - fragments the same as before.										
								- dark green @ gritty matrix										
								- 40% plag phenos										
					intense	Pyrite		60cm fault zone - alt'n strong - phyllic phase								132		
								(Hornblende-Fsp Porphyry										
								2cm qtz vnlt									0.02	<0.001
								zone of qtz-carb										
135								1cm gouge zone								135		

COMPOSITE DRILL LOG

CORE: [illegible]
SCALE:
PROJECT: [illegible] May.
HOLE No.: [illegible]12
CASING COLLAR ELEV.:
GROUND ELEV.:
DATE STARTED:
PAGE No. 10 OF 14
COORDINATES: N. E.
DATE FINISHED:
REF. TO CLAIM CORNER:
INCLINATION:
AZIMUTH:
TOTAL DEPTH: m
LOGGED BY:

ALTERATION: sericite, clay, silica, chlorite | FRACTURING | MINERALS | GEOLOGY | COMMENTS | AVG. CORE REC'Y/HOLE | DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | ESTIMATED % Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (m) | ASSAYS

Alteration (135–147.3 m): sericite moderate to strong; chlorite moderate
Alteration (147.3–150 m): clay weak; silica weak
Fracturing: moderate to strong (135–147.3 m); moderate (147.3–150 m)
Minerals: mag - pyrite (135–147.3 m); PY (147.3–150 m)

DESCRIPTIVE GEOLOGY

135 m
- → 2cm qtz-carb. vnlt. ~~HORNBLENDE - FSP~~ MONZONITE PORPH BRECCIA
- Brxx texture ends @ 135.5m
- → 2cm qtz-carb vnlt
- → 1cm gouge zone
- → 1cm gouge zone. - dk green color, fine-grained
- → 2cm qtz-carb vnlt - alot of qtz-carb vnlt

140 m
- → Brxx zone.

145 m
- → 1cm fault zone
- 146.5 - 146.7 - coarse grained Monzonite Porphyry
- → 1cm qtz-carb vnlt

147.3m

COARSE - GRAINED MONZONITE PORPH. BRXX.

frags:
- light pink porphyritic
- coarse grained phenos → 90% plag → 10% mafics → chlorite.
- plag phenos white in color and up to 6mm in size.

- fragments up to 4cm in size, sub-rounded and contained in a white, silicious matrix

150 m

% Sulphides: <1% (135–147 m); <1% (147–150 m)

Sample Interval (m)	Estimated % Cu	Sample No.	Assay % Cu	Assay % Mo
135–138	<0.10%	11234C	0.03	<0.001
138–141	<0.10%	11235C	0.03	<0.001
141–144	<0.10%	11236C	0.02	<0.001
144–147	<0.10%	11237C	0.01	<0.001
147–150	<0.10%	11238C	<0.01	<0.001

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : -12

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 11 OF 14

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite | clay | silica | chlorite | epidote

FRACTURING | MINERALS | GEOLOGY

COMMENTS :

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | Cu % ESTIMATED | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS: % Cu | % Mo

150

COARSE-GRAINED MONZONITE PORPHYRY

BRECCIA.

2cm gouge zone 161.5m fault contact @ 25° to C.A.

HORNBLENDE-FELDSPAR PORPHYRY

- olive green matrix w dk grn fsp phenos
- 30% fsp phenos → sericite
- <5% hbl phenos → mag + epid
- hbl phenos all relic textures.
- numerous qtz-carb veins
- fring mod to strong
- matrix contains alot of yellowish mineral that gives it a gritty appearance (epidote??)

1.5cm gouge zone

- qtz s/w weakly developed
- 21% magnetite.

155

1cm qtz-carb vein

1cm qtz-carb vein

1cm gouge zone

1cm qtz-carb vein

160

2cm qtz-carb vein 160.9m contact @ 30° to C.A.

BANDED ANDESITE

- brecciated

162.0m sharp contact @ 20° to C.A.

COARSE-GRAINED MONZONITE PORPHYRY

sharp contact @ 40° to C.A.

163.7m BANDED ANDESITE

- banding strong

164.8m Brxy contact.

165

SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	% Cu	% Mo	Cu % ESTIMATED	% SULPHIDES	% CORE RECOVERED	DRILLING INTERVAL
11239C		150–153	<0.01	<0.001	<0.10%	<1%		
11240C		153–156	0.02	<0.001	<0.10%			
11241C		156–159	<0.01	<0.001	<0.10%	<1%		
11242C		159–162	<0.01	0.002	<0.10%	2%		
11243C		162–165	<0.01	0.001	<0.10%	1%		
						3%		

COMPOSITE DRILL LOG

CORE SI[illegible] :	SCALE :	PRO[illegible] : May	HOLE No. : E[illegible]12
CASING COLLAR ELEV. :	GROUND ELEV. :	DATE STARTED :	PAGE No. 12 OF 14
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

Depth (m): 165 – 180

Alteration (165–174.6): sericite – moderate; clay; silica – weak; chlorite – moderate; epidote; Fracturing – moderate; Minerals – mag PY - CPY

Alteration (174.6–180): sericite – strong; silica – moderate

HORNBLENDE - FELDSPAR - PORPHYRY

- dkgreen, fine-grained
- alot of qtz-carb vnlts
- alt'n moderate to strong
  - phenos often destroyed

→ 2cm gouge zone w qtz-carb.

→ 1cm qtz-carb vnlt

→ 1cm qtz-carb vnlt

→ 10 cm gouge zone

174.6 – 175.8 - Breccia zone ∴ fragments of andesite and coarse grained monzonite porphyry

Alt'n increases towards fault zone.

→ 10cm gouge zone

→ 15cm gouge zone

→ 2cm qtz-carb vnlt.

179.2 – Start of Major Fault zone – healed at top.

FLT

Drilling Interval	% Core Recovered	% Sulphides	% Estimated Cu	Sample No.	% Sample Recovered	Sample Interval (m)	Assays % Cu	Assays % Mo
			<0.10%	11244C		165 – 168	0.02	0.001
			<0.10%	11245C		168 – 171	0.02	<0.001
		1%	<0.10%	11246C		171 – 174	0.03	0.001
			<0.10%	11247C		174 – 177	0.01	0.002
			<0.10%	11248C		177 – 180	0.01	0.018

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : 12

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 13 OF 14

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite, epidote

FRACTURING: strong; intense

MINERALS

GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL

% CORE RECOVERED

% SULPHIDES

% ESTIMATED Cu

SAMPLE No.

% SAMPLE RECOVERED

SAMPLE INTERVAL (M)

ASSAYS: % Cu, % Mo

DEPTH (M)

180

HORNBLENDE-FELDSPAR PORPHYRY

→2cm qtz-carb unit in serpentine

FAULT ZONE

181.1m

SERPENTINITE

- fractured to the fault zone.
- dark green, very soft.
- brecciated!

→25cm gouge zone.

→15cm gouge zone

→3cm gouge zone.

185

→2cm qtz-carb unit

189.0' ± Fault becomes mostly gouge but partially cemented

190

194.15' EOH. - Total Gouge - no cementing

195

SAMPLE No.	SAMPLE INTERVAL (M)	% Cu	% Mo	% SULPHIDES	% ESTIMATED Cu
112490	180 – 183	<0.01	0.001	<1%	<0.10%
112500	183 – 186	<0.01	<0.001		<0.10%
112510	186 – 189	<0.01	<0.001		<0.10%
112520	189 – 192	<0.01	<0.001		<0.10%
112530	192 – 195	<0.01	<0.001		<0.10%

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJ. : May | HOLE No. : E 12

CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 14 OF 14

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

DEPTH (M)	ALTERATION (chlorite)	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
195					FAULT ZONE w SERPENTINE								195		
					End of core.						11254			0.01	0.001
					195.98 End of core								196		
					195.98 – 203.3 m – triconed – stayed in fault zone till end. Rods squeezing, had to abandon hole. – hole a mix of clay and serpentine										
200					No Core.								no core		
					203.30.										
205															

COMPOSITE DRILL LOG

CORE SIZE : NQ wireline
SCALE : 1:100
PROJE : May
HOLE No. : BE-3
CASING COLLAR ELEV.:
GROUND ELEV.:
DATE STARTED : August 28, 1982.
PAGE No. 1 OF 11
COORDINATES : N. E.
DATE FINISHED : August 30, 1982
REF. TO CLAIM CORNER : BE-3
INCLINATION : -045°
AZIMUTH : 090°
TOTAL DEPTH : 154.5 m
LOGGED BY : G.L. Holland

DEPTH (M)	ALTERATION	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	ESTIMATED	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS
0					0 - 0.62 stick-up									
					0.62 - 20.4m overburden.									
5														
10														
15														

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : B-13

CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 2 OF 11

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite, epidote | FRACTURING | MINERALS | GEOLOGY | COMMENTS: | AVG. CORE REC'Y/HOLE | DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS % Cu | % Mo

DESCRIPTIVE GEOLOGY

15

OVERBURDEN cont.

20

20.4-21.9 Casing in bedrock

21.9m

Fault Zone. 21.9-22.8m - Fault zone - gouge with Andesite chips in it.

Xenolithic COARSE-GRAINED MONZONITE PORPHYRY BRECCIA.

- 2cm gouge zone
- 1.5cm qtz-carb vnlt.
- rock is badly broken to a depth of 32m
- breccia texture often subtle
- contains fragments of coarse-grained monzonite porph.; hornfelsed andesite; minor fine-grained monz. porph.
- 1cm gouge zone
- 2cm carb-qtz vnlt.
- matrix is a pale-green medium grained monzonite porphyry
- 1cm gouge zone.
- frags are sub-rounded to rounded and up 10cm in size
- Fault Brxx
- fragments comprise about 80% of rock
- 10cm gouge zone
- frtng is very strong
- alt'n weak to mod
- 15cm gouge zone.
- clots of chlorite in frts
- clay confined to fsp planes
- 2cm gouge zone.
- Frag. ratio: c.g : f.g : and 10 : 3 : 1
- 1cm qtz-carb vnlt

25

weak — moderate (phenos) — moderate (fractures) — very strong — pyrite.

SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	% Cu	% Mo	% SULPHIDES	% ESTIMATED Cu
11255C		24	0.01	<0.001	1-2%	<0.10%
11256C		27	0.01	<0.001		<0.10%
11257C		30	0.01	<0.001		<0.10%

30

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJ. : MAY | HOLE No. : B-13

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 3 OF 11

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite, epidote

FRACTURING: strong

MINERALS: pyrite

GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

30

1cm qtz-carb vn/lt — Xenolithic coarse-grained Monzonite Porphyry Breccia

* Frags can reach sizes of 1.5m

1cm qtz-carb vn/lt

1cm gouge zone. Alt'n & sulphides mostly confined to matrix & frts.

1.30m py vn/lt

33.0 m - End of broken zone.

Fault broken zone

1cm qtz-carb vn/lt

Description: Coarse-grained Monz. Porph fragments
- pale pink colored, aphanitic matrix
- 40% fsp phenos - pale green to white
- up to 6mm in size
- qtz stw wkly developed
- alt'n weak - argillic phase
- fring moderate
- 1% py on frts
- Minor mafic mineral relics (hbl??)

35

1cm gouge zone

1.80m qtz-carb vn/t

1cm gouge zone

wk fault broken

2cm qtz-carb vn/lt

Alt'n - sericite alt'n is patchy
- some section moderate, others weak.
- clay alt'n confined to fsp phenos
- Argillic phase.

1cm gouge zone/lt.

1cm qtz-carb vn/lt.

Description - fine-grained Monzonite Porph.
- pale green matrix aphanitic to fine-grained
- 30% phenos - fsp & sericite ± chlorite
- up to 2mm in size

40

brow'd-qtz-carb zone

42.3 - 43.5 - Andesite fragment.
- qtz s/w strong, 3% py

Description - Andesite fragments
- color varies from dark green to tan
- tan color very silicious, not possitive if due to alt'n or poss. a chyolite fragment.
- dkgrn - gm - fine grained

Broken zone

2cm qtz-carb vn/lt.

45

DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (m)	ASSAYS % Cu	ASSAYS % Mo
		1-2%	<0.10%	112580		30-33	0.02	<0.001
			<0.10%	112590		33-36	0.03	0.001
			<0.10%	112600		36-39	<0.01	0.001
			<0.10%	112610		39-42	<0.01	0.002
			<0.10%	112620		42-45	0.02	0.002

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : B-13
CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 4 OF 11
COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :
INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION (45–53.6 m): sericite – weak; clay – weak (phenos); silica – moderate; chlorite – weak (fractures)
FRACTURING (45–53.6 m): strong
MINERALS (45–53.6 m): pyrite

ALTERATION (53.6–60 m): sericite – moderate; silica – moderate; chlorite – moderate
FRACTURING (53.6–60 m): moderate
MINERALS (53.6–60 m): mag – py – hem (cpy)

GEOLOGY (fracture annotations):
- 1cm py-qtz vnlt
- 1cm gouge zone
- 2cm qtz vnlt.
- 1cm qtz-py vnlt
- 1.5cm qtz-carb vnlt
- 1cm gouge zone
- 1.5cm qtz-carb vnlt.
- 3cm gouge zone.
- 1.5cm qtz-carb vnlt.
- 2cm gouge zone.
- 1cm qtz-carb vnlt
- 1.5cm gouge zone
- 1.2cm gouge zone
- 1cm qtz-carb vnlt
- 0.6cm qtz-carb vnlt

COMMENTS / DESCRIPTIVE GEOLOGY

XENOLITHIC COARSE-GRAINED MONZONITE PORPHYRY BRECCIA

Fragment ratio
c.g. monz porph : f.g monz porph : andesite
.5 : .5 : 1

52.5 – 53.2 – Badly broken up.

53.6m
HORNBLENDE-FELDSPAR PORPHYRY
- dark green, fine-grained to aphanitic matrix
- 30% phenos - plag → sericite
 - hbl → relic textures - epidote + magnetite
- phenos often obscured by strong alt'n and range up to 3mm in size.
- alt'n strong - phyllic phase.
- fracturing moderately developed
- disseminated magnetite throughout.
- hematite on frts

Alt'n strongest around frts and vnlts.

Sample Interval (m)	% Sulphides	% Estimated Cu	Sample No.	% Cu	% Mo
45–48	1-2%	<0.10%	11263C	0.01	0.002
48–51	1-2%	<0.10%	11264C	0.01	0.002
51–54	1-2%	<0.10%	11265C	<0.01	0.001
54–57	1%	<0.10%	11266C	<0.01	0.002
57–60	1%	<0.10%	11267C	0.01	0.001

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : B-13

CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 5. OF 11

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite, epidote | FRACTURING | MINERALS | GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS % Cu | % Mo

DEPTH (M)	ALTERATION	FRACTURING	MINERALS	GEOLOGY
60	sericite: mod; clay: —; silica: mod; chlorite: weak; epidote: mod	mod	mag-kspy	
65	sericite: strong; clay: —; silica: mod; chlorite: weak; epidote: —	strong	pyrite - cpy	
70	sericite: weak; clay: —; silica: strong; chlorite: weak; epidote: —			
75	sericite: weak; clay: —; silica: moderate; chlorite: —; epidote: —			

DESCRIPTIVE GEOLOGY

HORNBLENDE-FELDSPAR PORPHYRY

- chlorite on frtg near contact

61.5 m Sharp contact @ 40° to C.A.

XENOLITHIC COARSE GRAINED MONZONITE PORPHYRY BRECCIA

- fragments up to 2 meters in size. often difficult to determine if it is a brxn.

63-64.5 - Banded pale green Andes.

64.5-66.1 - Fine-grained Monz Porph w minor c.g monz porphyry.

66.1-69.9m - Coarse grained monzonite porphyry

* Brecciation at most major fragment contacts.

69.9-71.7 - Banded tan-colored andesite.

71.7-77.0 - Coarse-grained Monz Porph.

- contains a lot of minor tan colored andesite frags

60	1%	<0.10%	11268C		60	0.01	0.001		
63	3%	<0.10%	11269C		63	0.03	0.001		
66	5%	<0.10%	11270C		66	0.01	<0.001		
69	<1%	<0.10%	11271C		69	0.01	0.001		
72	3%	<0.10%	11272C		72	<0.01	0.001		
75	2½%	<0.10%			75				

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJ. : May | HOLE No. : E-13

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 6 OF 11

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite, epidote

FRACTURING | MINERALS | GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS: % Cu, % Mo

DEPTH (M)	DESCRIPTIVE GEOLOGY	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
75	XENOLITHIC COARSE-GRAINED MONZONITE PORPHYRY BRECCIA	<1%	<0.10%	11273C	75	0.01	<0.001
	2cm qtz-carb vnlt.						
	77.0 - 78.4 - Fine-grained Monzonite Porph. fragment						
	* Minor hematite on the frts.				78		
	Brecc zone. 78.4 - 79.6 - Andesite fragment w minor fg monz. frags within. Very frt'd within this fragment. Brecc within a brecc.	2%	<0.10%	11274C		0.02	0.001
	10.7cm gouge zone						
80	79.6 - 81.0 - Fine-grained Monz Porph fragment	3%	<0.10%	11275C	81	0.02	0.001
	* Chlorite alt'n present on all frts.						
	81.0 - 92.6 - Mixture of Andesite, e.g. monzporph and f.g. monz. porph. fragments - frags up to 30cm in size.						
	9cm qtz-carb vnlt						
	1cm qtz-carb vnlt.	1-2%	<0.10%	11276C	84	0.02	<0.001
85	2cm qtz-carb vnlt.						
	1cm qtz-carb vnlt						
			<0.10%	11277C	87	<0.01	<0.001
	5cm qtz vnlt.						
90					90		

COMPOSITE DRILL LOG

CORE : | SCALE : | PROJ : May | HOLE No. : 13

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 7 OF 11

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

COMMENTS: FRAGMENT DESIGNATIONS

△ → fragments ≥ 60cm

△△ → fragments 10cm > 60cm

△△△ → Fragments ≤ 10cm

AVG. CORE REC'Y/HOLE

ALTERATION: sericite, clay, silica, chlorite, epidote

FRACTURING: Strong to very strong

MINERALS: Py - hem - (cpy) - (MoS_2)

GEOLOGY

DESCRIPTIVE GEOLOGY

DEPTH (M)	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
90	Zone of qtz-carb vnlt Xenolithic Coarse-grained Monzonite Porphyry Breccia							90		
	- fragments of fine-coarse-grained monz porph - fine-grained monz porph - tan colored andesite.									
	2cm qtz vnlt in a medium to coarse grained monz porph matrix									
	92.6 - 94.0 - Coarse-grained Monz. Porph - pink matrix, mod qtz s/w				< 0.10%	112780			< 0.01	< 0.001
	- minor hematite on frts.							93		
	94.0 - 96.1 - Mixture of frags in a medium to coarse grained monz porph matrix. - frags up to 40cm in size.				< 0.10%	112779			< 0.01	< 0.001
95	1cm qtz vnlt.							96		
	Brxx 96.1 - 101.1m - Brxx zone w/ frags up to 10cm in size in a medium grained monzonite porphyry				< 0.10%	112780			< 0.01	< 0.001
	1cm gouge zone * Minor MoS_2 in qtz s/w.			1-2%				99		
	98.8 - Fly killed on core.									
	10cm frags									
100	* Within this unit are zones of different size fragments - frting increases in zones of smaller fragments.				< 0.10%	112781			0.01	< 0.001
	101.1 - 103.3 - Brxx - frags up to 30cm.							102		
	2cm qtz-carb vnlt.									
	4cm qtz vnlt 103.3 - 104 - Brxx - frags up to 10cm.				< 0.10%	112782			< 0.01	< 0.001
	104.0 - frags up to 50 or 60cm in size.									
105								105		

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : B-13
CASING COLLAR ELEV. : | GROUND ELEV. : | DATE STARTED : | PAGE No. 8 OF 11
COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :
INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

COMMENTS :

AVG. CORE REC'Y/HOLE

Alteration (depth, m):
- sericite: 105–108 wk to mod; 108–120 moderate
- clay: —
- silica: 105–108 mod; 108–120 moderate to strong
- chlorite: 105–108 mod (frts); 108–120 weak (fractures)
- epidote: 108–120 weak (fractures)

Fracturing: 105–108 str to v.str; 108–120 intense

Minerals: Py - (cpy) (MoS2)

DESCRIPTIVE GEOLOGY

XENOLITHIC COARSE-GRAINED MONZONITE PORPHYRY BRECCIA

→ 20cm gouge zone.

108.0 - 138.0 - Fault zone - Alot of gouge throughout. weak to moderately healed. The above unit is contained within the fault zone @ fragments up to 20cm in size.
(Fault Brxx containing frags of above unit)

→ 3cm qtz-carb vnlt

-alt'n increases in the fault zone

→ 15cm gouge zone

→ 4cm qtz vnlt.

Alot of qtz in the most badly gouged section

→ 10cm gouge zone.

Numerous patches of pyrite within the fault zone

→ 5cm qtz vnlt.

→ 20cm gouge zone.

Fragments found within the brxx
15%- coarse-grained monz. perph
50%- fine-grained monz. porph.
35%- tan-andesite.
-fragments comprise 80% of brxx

→ 40cm gouge zone.

Sample interval (m)	Drilling interval	% core recovered	% sulphides	% estimated Cu	Sample No.	% sample recovered	% Cu	% Mo
105–108			1-2%	<0.10%	11283C		<0.01	<0.001
108–111			2-4%	<0.10%	11284C		<0.01	<0.001
111–114			2-4%	<0.10%	11285C		<0.01	<0.001
114–117			2-4%	<0.10%	11286C		<0.01	<0.001
117–120			2-4%	<0.10%	11287C		<0.01	<0.001

COMPOSITE DRILL LOG

CORE SIZE :	SCALE :	PRO… : May	HOLE No. : -13
CASING COLLAR ELEV :	GROUND ELEV. :	DATE STARTED :	PAGE No. 9 OF 11
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

ALTERATION (120–135 m): sericite – moderate; clay, silica – moderate to strong; chlorite – weak; epidote – none recorded

FRACTURING (120–135 m): intense

MINERALS (120–135 m): pyrite – (cpy) – (MoS_2)

COMMENTS:

AVG. CORE REC'Y/HOLE:

DESCRIPTIVE GEOLOGY

Xenolithic Coarse-Grained Monzonite

Porphyry Breccia

→ 25cm gouge zone

Fault zone cont.

→ 10cm gouge zone

125.0 End of fault zone

→ 3cm gouge zone

* Fragment range up to 40cm in size

→ 10cm gouge zone 129.5 - 138.0 Fault zone.

→ 9cm gouge zone

→ 10cm qtz-carb

Depth (m)	% Sulphides	% Cu Estimated	Sample No.	Sample Interval (m)	% Cu	% Mo
120–123	2-4%	<0.10%	11288C	120–123	0.02	<0.001
123–126	2-4%	<0.10%	11289C	123–126	<0.01	<0.001
126–129	2-4%	<0.10%	11290C	126–129	<0.01	<0.001
129–132	2-4%	<0.10%	11291C	129–132	0.02	<0.001
132–135	2-4%	<0.10%	11292C	132–135	0.02	<0.001

COMPOSITE DRILL LOG

CORE SIZE : [illegible]	SCALE :	PROJECT : May	HOLE No. : [illegible]13
CASING COLLAR ELEV. :	GROUND ELEV. :	DATE STARTED :	PAGE No. 10 OF 11
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

COMMENTS :

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

Depth (m): 135 – 150

XENOLITHIC COARSE-GRAINED MONZONITE PORPHYRY BRECCIA

Fault zone cont

- 20cm gouge zone
- 10cm Gouge zone

138.0 m Fault contact

AUGITE-FELDSPAR (HORNBLENDE) PORPHYRY

- alt'n strong @ contact - grading out to weakly altered.
- dk green colored phenos in an olive green, gritty matrix
- 60% phenos ranging in size up to 6mm.
  - 45% plag → chlorite + clay
  - 15% augite → chlorite
  - traces hbl → chlorite
- qtz and qtz-carb s/w mod. developed
- py contained in Frts
- minor magnetite.
- alt'n envelopes developed around fractures and veinlets

148.5 - 149.0 - Fault w̄ carbonate-qtz

Vein notes (geology column):

- 1cm qtz-carb vnlt.
- 1cm qtz-carb vnlt.
- 1.2cm qtz vnlt
- 1cm qtz-carb vnlt
- 1.5cm qtz vnlt
- 2cm qtz vnlt
- 4.0cm qtz vnlt
- 1cm qtz-carb vnlt
- Qtz-carb filled fault zone

Alteration / Fracturing / Minerals

Interval (m)	Sericite	Clay	Silica	Chlorite	Epidote	Fracturing	Minerals
135 – 138	moderate		mod-str	weak		intense	pyrite
138 – 140	mod		mod		mod.		
140 – 150	weak (phenos)		weak	moderate		moderate	pyrite

Sampling and Assays

Sample interval (m)	% Sulphides	% Cu estimated	Sample No.	% Cu	% Mo
135 – 138	2-4%	<0.10%	11293C	0.03	<0.001
138 – 141	<1%	<0.10%	11294C	0.01	<0.001
141 – 144	<1%	<0.10%	11295C	0.01	<0.001
144 – 147	<1%	<0.10%	11296C	0.01	<0.001
147 – 150	3%	<0.10%	11297C	0.01	<0.001

COMPOSITE DRILL LOG

CORE SIZE : | SCALE : | PROJECT : May | HOLE No. : D-13

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 11 OF 11

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

DEPTH (m)	ALTERATION: sericite	clay	silica	chlorite	epidote	FRACTURING	MINERALS	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (m)	ASSAYS % Cu	ASSAYS % Mo
150	moderate		moderate	weak	weak	moderate	py - hem-mag		AUGITE-FELDSPAR PORPHYRY cont 5cm qtz-carb filled fault zone 150.3 Alt'n becomes strong again Alot of magnetite and hematite po frts. 1cm qtz-carb vnlt. 1.5cm qtz-vnlt				1%	<0.10%	11298C		150	0.01	<0.001
153														<0.10%	11299C		153	0.01	<0.001
154.5									154.5 End of Hole								154.5		
155																			

COMPOSITE DRILL LOG

CORE SIZE : NQ wireline | SCALE : 1:100 | PROJ. : May | HOLE No. : B-14

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : August 30, 1982 | PAGE No. 1 OF 11

COORDINATES : N. E. | DATE FINISHED : September 1, 1982 | REF. TO CLAIM CORNER : BE-3

INCLINATION : -60° | AZIMUTH : 090° | TOTAL DEPTH : 150.3 m | LOGGED BY : G.L. Holland

COMMENTS: Fragment size coding
△ – frags 2-7cm
△△ – frags 7cm and >30cm
△△△ – ≤ 2mm.

AVG. CORE REC'Y/HOLE

DEPTH (M)	ALTERATION: sericite	clay	silica	chlorite	epidote	FRACTURING	MINERALS	GEOLOGY	DESCRIPTIVE GEOLOGY	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
0									0-0.31 Stick-up									
									0.31 - 3.28 OVERBURDEN									
									3.28 m XENOLITHIC COARSE-GRAINED MONZONITE PORPHYRY BRECCIA - fragments of dk green andesite, fine-grained monzonite porphyry, coarse-grained monzonite porphyry in a dk colored coarse-grained monzonite porphyry. - fragments range up to 7-8cm in size, size of fragments is very patchy - alot of limonite and hemetite on fractures. Fracturing moderate.						3.28		
5	weak to moderate	moderate to strong	moderate	mag-hem-py					1cm qtz-carb vnlt 1cm qtz-carb vnlt			1-3%	<0.10%	113000		6	0.05	0.017
													<0.10%	113001		9	0.02	0.011
10									3.28-5.5m - Fragments up to 2cm in size 5.5-8.3 - Frags up to 7cm in size 8.3-10.9 - Frags up to .2cm in size				<0.10%	113002		12	0.05	0.012
									10.9-12.3 - Frags up to 5 cm in size * Up to 3-4% magnetite & diss. hemetite 12.3-15.5m - Frags up to 12cm				<0.10%	113003		15	0.03	0.010
15									Zone of qtz-carb vning									

COMPOSITE DRILL LOG

CORE :
SCALE :
PR[illegible] : May
HOLE No. : T[illegible]-14
CASING COLLAR ELEV. :
GROUND ELEV. :
DATE STARTED :
PAGE No. 2 OF 11
COORDINATES : N. E.
DATE FINISHED :
REF. TO CLAIM CORNER :
INCLINATION :
AZIMUTH :
TOTAL DEPTH : m
LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite, epidote | FRACTURING | MINERALS | GEOLOGY | COMMENTS: | AVG. CORE REC'Y/HOLE | DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS

DEPTH (M): 15 – 30

Alteration (15–30 m): sericite – weak to moderate; silica – moderate to strong
Fracturing (15–30 m): moderate
Minerals: mag – hem – py.

DESCRIPTIVE GEOLOGY

Comments (veins/breccias):
- → str. carb veinlet brxx (15.0)
- → carb brxx (15.5)
- → 1.5cm qtz-carb (19.5)
- → 1cm py-qtz vnlt (20.0)
- → 1cm carb vnlt (22.3)
- → 5cm qtz vnlt (23.5)
- → carb. brxx. (25.2)
- → carb brxx (26.0)

XENOLITHIC COARSE-GRAINED MONZONITE PORPHYRY BRECCIA.

15.5 – 26.1 – fragments up to 1m in size.

* Fragments are subrounded - indicating possible remelting

* More sulphides present in and around Andesite frags than any other

Fragment Discriptions :
- Andesite – dark green color; fine grained to aphanitic; minor fsp. phenos present; contains alot of magnetite and up to 5% sulphides; alt'n mod to str.
  - frags rarely exceed 3cm in size.
  - total rock portion – < 10%
- Coarse Grained Monzonite Porphyry – pinkish to lgt grn colored, aphanitic matrix; Up to 60% phenos (fsp) than range up to 8mm in size; contains < 1% sulphides, no magnetite; alt'n weak to moderate;
  - frag size ranges from 10cm to > 1m
  - total rock portion – 60-70%
- Fine-Grained Monzonite Porphyry – dark green to light green in color; aphanitic matrix; alt'n usually mod to strong; phenos < 2mm in size and often indistinct; Up to 2% pyrite w/ minor magnetite;
  - fragment range from 5cm to 60cm
  - total rock portion – 10%

Matrix
- comprises – 10% of rock
- contains alot of magnetite & hematite
- alt'n strong, often phenos not seen.

26.1 – 26.4 – frags up to 9cm in size.

26.4 – 31.2 – frags up to 15cm in size

% Sulphides (15–30 m): 1-3%

Sample Interval (m)	% Estimated Cu	Sample No.	% Cu	% Mo
15 – 18	0.10%	11304C	0.18	0.009
18 – 21	< 0.10%	11305C	0.09	0.008
21 – 24	< 0.10%	11306C	0.12	0.020
24 – 27	< 0.10%	11307C	0.06	0.006
27 – 30	< 0.10%	11308C	0.16	0.012

COMPOSITE DRILL LOG

CORE : | SCALE : | PR[illegible] : May | HOLE No. : [illegible]-14

CASING COLLAR ELEV.: | GROUND ELEV.: | DATE STARTED : | PAGE No. 3 OF 11

COORDINATES : N. E. | DATE FINISHED : | REF. TO CLAIM/CORNER :

INCLINATION : | AZIMUTH : | TOTAL DEPTH : m | LOGGED BY :

ALTERATION: wk-mod sericite, strong clay, mod-strong silica, moderate chlorite, moderate epidote.

FRACTURING: moderate to strong

MINERALS: mag-hem-py-cpy-(MoS2)

GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

XENOLITHIC COARSE-GRAINED, MONZONITE PORPHYRY BRECCIA

@ 31.0m - alt'n increases - strong

31.2-33m - fragments up to 2.1cm in size

→ Carb breccia

* sharp increase in cpy @ 31.0m, - minor MoS_2 in qtz veins

→ 1.5cm gouge zone

33.0-36.5 - fragments up to 6.1cm in size

→ 4cm qtz vnlt

36.5-37.9m - fragments up to 2cm

37.9-49.0m - fragments up to 7-8 cm

Alot of magnetite - 4%

→ 3cm qtz vnlt

→ 1cm qtz vnlt

DEPTH (M)	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
30			1-2%	0.15%	113090		30	0.17	0.021
33				<0.10%	113100		33	0.03	0.006
36				<0.10%	113110		36	0.02	0.019
39				<0.10%	113120		39	<0.01	0.004
42				<0.10%	113130		42	0.02	0.003
45							45		

COMPOSITE DRILL LOG

CORE S[illegible] : SCALE : PRO[illegible] : May HOLE No. : B[illegible]14

CASING COLLAR ELEV.: GROUND ELEV.: DATE STARTED : PAGE No. 4 OF 11

COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :

INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite, epidote | FRACTURING | MINERALS | GEOLOGY | DEPTH (M)

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

XENOLITHIC COARSE-GRAINED MONZONITE PORPHYRY BRECCIA

- moderate → moderate to strong
- moderate → moderate
- moderate-strong mag-hem-py-cpy
- moderate mag-hem-cpy-py

→ 1.5cm qtz vnlt

Zones of strong and moderate alt'n

→ 1cm qtz vnlt

* Minor MoS_2 in qtz vnlts

→ siliceous zone 49.0 m Siliceous contact zone.

FINE-MEDIUM GRAINED MONZONITE PORPHYRY

- pinkish colored, aphanitic matrix
- phenos generally ≤2mm but sections of up to 4mm are found
- fring moderately developed
- alot of magnetite and hemetite
- phenos - 30% all appear to be feldspars
- sharp increase in cpy from the breccia
- up to 5% mag & hem.

→ carb vnlt & frags.

cpy is very patchy and comes in clusters in qtz s/w.

→ qtz-carb brow & cpy.

→ 3cm qtz-carb vnlt

→ 1cm qtz-carb vnlt.

DEPTH (M)	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
45			1-2%	<0.10%	113140		45	0.02	0.003
48				0.10%	113150		48	0.04	0.004
51				0.20%	113160		51	0.20	0.018
54			2-3%	0.20%	113170		54	0.27	0.012
57				0.20%	113180		57	0.08	0.014
60							60		

COMPOSITE DRILL LOG

CORE	:	SCALE	:	PR[...] : MAY	HOLE No. : [...]-14
CASING COLLAR ELEV.:		GROUND ELEV.:		DATE STARTED :	PAGE No. 5 OF 11
COORDINATES :	N.		E.	DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :		AZIMUTH :		TOTAL DEPTH : m	LOGGED BY :

COMMENTS:

AVG. CORE REC'Y/HOLE

ALTERATION (columns: Sericite, clay, silica, chlorite, epidote); FRACTURING; MINERALS; GEOLOGY

Depth 60–75 m:

- Sericite: 60–~65.8 mod-str.; ~65.8–69 mod to str.; ~69–74 weak; 74–75 mod
- Silica: 60–~62.8 mod.; ~62.8–65.8 moderate; 65.8–69 strong; 69–74 moderate; 74–75 str
- Fracturing: moderate to strong
- Minerals: mag-hem-cpy-py-(MoS2)

DESCRIPTIVE GEOLOGY

FINE-GRAINED MONZONITE PORPHYRY

- → strong silicious zone — Alt'n intensity changes over short sections - strong alt'n w good cpy., mod alt'n - little cpy
- → 1cm carb vnlt
- Hem + mag in every fracture as well as disseminated throughout ~5%
- → 2cm qtz-carb vnlt
- → Qtz-healed fault zone
- 65.8 - 69.0 - strong alt'h w good sulfide content (6%) and cpy
- → 1.5cm qtz-carb
- → 1cm qtz-carb vnlt — Minor MoS_2 in qtz vnlts.
- → 1cm qtz-carb vnlt.
- → 1cm qtz vnlt
- → 1cm gouge zone — 74.0
- CONTACT ZONE - Banded Tuff and Fine-Grained Monz. Porph.

DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	% ESTIMATED Cu	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	% Cu	% Mo
		2-3%	0.20%	11319C		60–63	0.08	0.005
		1%	<0.10%	11320C		63–66	0.16	0.008
		6%	0.30%	11321C		66–69	0.13	0.008
		1%	<0.10%	11322C		69–72	0.04	0.007
			<0.10%	11323C		72–75	0.02	0.004

COMPOSITE DRILL LOG

CORE SIZE :	SCALE :	PROJECT : May	HOLE No. : B-14
CASING COLLAR ELEV.:	GROUND ELEV.:	DATE STARTED :	PAGE No. 6 OF 11
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

DEPTH (m): 75 – 90

ALTERATION: sericite – strong; clay; silica – strong; chlorite; epidote – weak

FRACTURING: very strong

MINERALS: Hem - mag - PY

COMMENTS: AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

CONTACT ZONE

- 1.6cm gouge zone.
- 1cm gouge zone
- 1cm qtz-carb vnlt
- 2cm gouge zone

Banded Tuff. - silicified
- strong banded texture of dk green and light grn bands.

Monz. Porph - strongly altered.
- dk green to pinkish color

- 1cm gouge zone.

Monzonite Porphyry is becoming less and less common.

- 1cm qtz-carb vnlt
- brxx zone.
- 1.3cm qtz-carb vnlt. Minor brecciation
- 1cm qtz-carb vnlt
- 1cm qtz-carb vnlt
- 1.5cm qtz-carb
- 2cm gouge zone
- 1cm mag vnlt.

% SULPHIDES ESTIMATED: 1%

SAMPLE INTERVAL (m)	ESTIMATED	SAMPLE No.	% Cu	% Mo
75–78	<0.10%	11324C	0.05	0.008
78–81	<0.10%	11325C	0.07	0.013
81–84	<0.10%	11326C	0.04	0.015
84–87	<0.10%	11327C	0.04	0.009
87–90	<0.10%	11328C	0.07	0.011

COMPOSITE DRILL LOG

CORE S[illegible]:	SCALE :	PROJ. : May	HOLE No. : [illegible]14
CASING COLLAR ELEV.:	GROUND ELEV.:	DATE STARTED :	PAGE No. 7 OF 11
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

Alteration (90–105 m):

Depth (m)	Sericite	Clay	Silica	Chlorite	Epidote	Fracturing	Minerals
90–96.4	strong		strong			very strong	mag-hem-py
96.4–101.3	moderate		moderate		moderate	moderate	mag-py
101.3–105	mod to str.		strong			very strong	py-hem-mag

Geology notes (graphic log):
- 1cm gouge zone
- brx zone.
- 2cm gouge zone
- 3cm gouge zone
- 10cm qtz-carb zone
- 2cm gouge zone.
- 6cm qtz-carb zone
- 2cm gouge zone
- 2cm qtz-carb unit.
- contact brx
- contact brx.
- 1cm qtz-carb unit.
- Large mag mass.

COMMENTS:

AVG. CORE REC'Y/HOLE:

DESCRIPTIVE GEOLOGY

CONTACT ZONE cont

91.0 - 96.4 - Very badly fractured

91.9-93.9 - Cave zone $\bar{w}$ alot of cave and minor gouge zones. often healed $\bar{w}$ qtz-carbonate.

- Mostly banded Tuff. $\bar{w}$ minor sections of fine-grained monzonite porphyry and Augite-feldspar porphyry.

96.4m Breccia Contact.

AUGITE-FELDSPAR PORPHYRY

- this is a dyke - intruding into the andesite.
- dark green color; fine grained matrix
- 60% phenos - 40-60% plag → sericite. 10-20% augite → epidote
- alt'n moderate to strong — phyllic phase
- phenos - up to 3mm in size
- qtz s/w moderate.
- Up to 2% magnetite.
- minor py on fcts

101.3m Breccia Contact.

SILICIFIED BANDED TUFF

- alot of hemetite staining
- Frcting very strong - weak crackle zone
- pale green to yellow bands
- aphanitic
- py on fcts

Drilling interval	% Core recovered	% Sulphides	% Estimated Cu	Sample No.	% Sample recovered	Sample interval (m)	% Cu	% Mo
		1%	<0.10%	11329C		90–93	0.04	0.005
			<0.10%	11330C		93–96	0.02	0.005
		<1%	<0.10%	11331C		96–99	0.04	0.004
			<0.10%	11332C		99–102	0.09	0.004
		2%	<0.10%	11333C		102–105	0.07	0.004

COMPOSI[illegible] DRILL LOG

CORE SI[illegible] :	SCALE :	PRO[illegible] : May	HOLE No. : B[illegible]14
CASING COLLAR ELEV.:	GROUND ELEV.:	DATE STARTED :	PAGE No. 8 OF 11
COORDINATES : N. E.		DATE FINISHED :	REF. TO CLAIM CORNER :
INCLINATION :	AZIMUTH :	TOTAL DEPTH : m	LOGGED BY :

ALTERATION (105.6 – 120 m): sericite – strong; clay – none logged; silica – moderate; chlorite – weak (fractures); epidote – moderate

FRACTURING: strong to moderate

MINERALS: mag-hem-py-cpy

COMMENTS:

AVG. CORE REC'Y/HOLE:

DESCRIPTIVE GEOLOGY

Geology column notes:
- → brxx'd contact
- → 1cm qtz-carb vnlt
- → 0.5cm qtz vnlt
- → brxx zone
- → 3cm qtz-carb vnlt
- → 4cm qtz-carb vnlt
- → 0.8cm qtz-carb vnlt.
- → 1cm qtz-carb vnlt.
- → healed fault zone.

SILICIFIED BANDED TUFF

105.6 m

FELDSPAR PORPHRITIC ANDESITE
- dark green, fine-grained matrix
- alt'n strong - phyllic phase
- frting moderate to strong
- up to 40 % plag phenos → sericite
  - up to 5mm in size
- mafics in g.m → epidote

107.5 – 108.4 – Coarse-grained Monzonite Porphyry
- pink aphanitic matrix w̄ phenos up to 6 mm
- intrudes into fractures within the andesite.

- porphritic texture often obscured by alteration

In some places the matrix takes on an olive green color w̄ dark green phenos. In other places it is dark green throughout. The latter has the best cpy.

Minor hemetite and magnetite on fractures.

- pyrite and cpy mainly contained in H/L frts but patches of disseminated sulphides are present.

Depth (m)	% Sulphides	% Cu (estimated)	Sample No.	Sample Interval (m)	% Cu	% Mo
105–108	2-3%	0.10%	11334C	105–108	0.07	0.004
108–111	2-3%	0.10%	11335C	108–111	0.05	0.004
111–114	2-3%	0.10%	11336C	111–114	0.12	0.008
114–117	2-3%	0.10%	11337C	114–117	0.08	0.006
117–120	2-3%	0.10%	11338C	117–120	0.09	0.007

COMPOSITE DRILL LOG

CORE [illegible] : SCALE : PRO[illegible] : May HOLE No. : E[illegible]14

CASING COLLAR ELEV.: GROUND ELEV.: DATE STARTED : PAGE No. 9 OF 11

COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :

INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

ALTERATION: sericite, clay, silica, chlorite, epidote | FRACTURING | MINERALS | GEOLOGY

COMMENTS:

AVG. CORE REC'Y/HOLE

DESCRIPTIVE GEOLOGY

DRILLING INTERVAL | % CORE RECOVERED | % SULPHIDES | % ESTIMATED Cu | SAMPLE No. | % SAMPLE RECOVERED | SAMPLE INTERVAL (M) | ASSAYS % Cu | % Mo

DEPTH (M)	DESCRIPTIVE GEOLOGY	% ESTIMATED Cu	SAMPLE No.	SAMPLE INTERVAL (M)	% Cu	% Mo
120	FELDSPAR PORPHYRITIC ANDESITE cont.			120		
	Moderate hem on frts.					
	1cm qtz-carb vnlt — Alt'n strong -phyllic phase	< 0.10%	11339C		0.05	0.004
	trace of c.g. mmz perpl.			123		
	1cm qtz-carb vnlt					
125	Qtz S/W moderately developed.	< 0.10%	11340C		0.03	0.003
	1.5cm qtz-carb vnlt			126		
		0.10%	11341C		0.07	0.016
	1/2cm qtz-carb vnlt			129		
130		< 0.10%	11342C		0.06	0.010
				132		
		0.10%	11343C		0.08	0.005
135				135		

1-2% SULPHIDES

weak to moderate sericite; moderate clay; moderate silica; very weak (fractures) chlorite; moderate epidote

moderate to strong fracturing

mag-hem-py-cpy minerals

COMPOSITE DRILL LOG

CORE SIZE :　　SCALE :　　PROJ. : MAY　　HOLE No. : B 14

CASING COLLAR ELEV. :　　GROUND ELEV. :　　DATE STARTED :　　PAGE No. 10 OF 11

COORDINATES : N. E.　　DATE FINISHED :　　REF. TO CLAIM CORNER :

INCLINATION :　　AZIMUTH :　　TOTAL DEPTH : m　　LOGGED BY :

DEPTH (M)	ALTERATION: sericite	clay	silica	chlorite	epidote	FRACTURING	MINERALS	DESCRIPTIVE GEOLOGY / COMMENTS	% SULPHIDES	% Cu ESTIMATED	SAMPLE No.	SAMPLE INTERVAL (M)	ASSAYS % Cu	% Mo
135–150	weak to moderate		moderate	weak (fracture)	moderate	moderate to strong	mag-hem-PY-CPY	FELDSPAR PORPHYRITIC ANDESITE cont.	1-2%					
135–138								Qtz s/w moderately developed		0.10%	11344C	135–138	0.11	0.029
138–141								→2cm qtz-carb vein		0.10%	11345C	138–141	0.10	0.038
141–144										< 0.10%	11346C	141–144	0.05	0.006
144–147								144.1 - 144.8 - Banded Andesite 144.8m PORPHYRITIC ANDESITE PYROCLASTICS - only difference to above is the presence of minor fragments within the andesite → qtz-carb mass.		0.10%	11347C	144–147	0.11	0.007
147–150								147 - starting to see minor white augite crystals weakly brxx'd zone. → 8cm qtz-carb - frags are up to 15mm in size and are subrounded.		0.10%	11348C	147–150	0.03	0.007

AVG. CORE REC'Y/HOLE

COMPOSITE DRILL LOG

CORE S : SCALE : PRO : May HOLE No. : 14

CASING COLLAR ELEV.: GROUND ELEV.: DATE STARTED : PAGE No. 11 OF 11

COORDINATES : N. E. DATE FINISHED : REF. TO CLAIM CORNER :

INCLINATION : AZIMUTH : TOTAL DEPTH : m LOGGED BY :

DEPTH (M)	ALTERATION: Sericite	clay	silica	chlorite	epidote	FRACTURING	MINERALS	GEOLOGY	COMMENTS:	AVG. CORE REC'Y/HOLE	DRILLING INTERVAL	% CORE RECOVERED	% SULPHIDES	ESTIMATED	SAMPLE No.	% SAMPLE RECOVERED	SAMPLE INTERVAL (M)	ASSAYS % Cu	ASSAYS % Mo
150									DESCRIPTIVE GEOLOGY: Porphyritic Andesite Pyroclastics										
									150.3 End of Hole								150.3		

APPENDIX B

DRILL ASSAYS

- contained in separate sealed folio. To be held in confidence for 5 year period, commencing September, 1982.

APPENDIX C

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

The field work for the report was done by the following persons whose qualifications are outlined below:

G. L. Holland, Geologist for Utah Mines Ltd., Vancouver, British Columbia. Completed B.Sc (Geology) at the University of British Columbia in 1978; employed as a temporary Geological Assistant during the summer field seasons in 1973, 1974 and 1975 by Noranda Exploration Co. Ltd.; employed as a temporary Geological Assistant during the summer field seasons of 1976 and 1977 by Utah Mines Ltd.; employed as a Geologist by Utah Mines Ltd. from May 1st, 1978 to date, under the supervision of A. J. Schmidt, P.Eng.

APPENDIX D
STATEMENT OF COSTS

STATEMENT OF COSTS

WAGES		
J. Deighton, Senior Geologist Aug. 5 to 16 - 12 days @ $175./day	= $	2,100.00
G. Holland, Geologist July 24 to Aug. 31 - 35 days @ $124/day	=	4.340.00
J. Howe, Warehouseman & Builder Aug. 1 to 18th - 18 days @ $107/day	=	1,925.00
R. Schmidt, Treefaller & helper Aug. 1 to 31 - 31 days @ $90/day	=	2,790.00
T. Sedun, Assistant & Coresplitter Aug. 5 to 31 - 27 days @ $1400/month	=	1,400.00
L. Van Sickle, Cook Aug. 5 to 31 - 27 days @ $1800/month	=	1,800.00
Total wages:	=	$14,355.00
TRANSPORTATION:		
Helicopter, Aug. 5 to 31- Contract Machine 75 hrs. @ $345/hr.	=	$25,875.00
Fixed Wing support	=	2,700.00
Trucking Fuel Aug. 6th	=	1,300.00
DRILLING CHARGES		
1764' Drilling & labour & extra charges	=	$50,687.00
Fuel	=	12,185.84
Groceries	=	2,700.00
Expediting Charges	=	500.00
Total Drilling & Support Costs	= $	95.947.84
Total Cost of Program	=	$110,302.34

APPLICATION OF PROGRAM COSTS

Total Cost of Program = $110,302.84

Total Footage Drilled (2264 feet)
(690.07 metres)

Group A (BE 4) (20 units)

Total Footage Drilled (487 feet)
(148.5 metres)

Proportionate cost of Program:

$\frac{487}{2264}$ times $110,302.84 = $ 23,726.68

30% of above P.A.C. withdrawal	($ 7,118.04)
but need only withdraw	$ 4,273.32
Total work applied to Group	$ 28,000.00

7 years @ $200/Unit to all claims in Group.

Group B (BE 1,2,3,5,6) (100 Units)

Total Footage drilled (1777 feet)
(541.6 metres)

Proportionate cost of Program:

$\frac{1777}{2264}$ times $110,302.84 = $ 86,576.03

30% of above P.A.C. withdrawall	($ 25,972.89)
but need only withdraw	$ 13,423.97
Total work applied to Group	$100,000.00

5 years at $200/Unit to all Claims in Group

JRD/vdv

LAVA CREEK

57°20'

BE 5

BE 6

MOOSE LAKE

BC-14

SHAKE CREEK

BE 3

BE 4

RAT LAKE

CAMP

BC-13

LOON LAKE

BC-11

BC-10

BC-12

BE 1

BE 2

MESS CREEK

130°55'

57°15'

130°50'

PLATE 1

LEGEND:

- Diamond drillhole collar and direction
- Lake
- Creek (showing flow)
- Claim Post

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
19682
NO.

UTAH MINES LTD.
EXPLORATION DEPARTMENT
VANCOUVER BRITISH COLUMBIA

MAY PROPERTY

DRILLHOLE LOCATIONS

Sept. 1982 | NTS : 104-G-7

500 0 500 1000
scale in meters