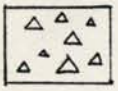
APPENDIX F

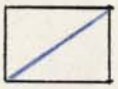
Explanation of symbols used in graphic log (geology) column of the diamond drill log.



Overburden



Fragments



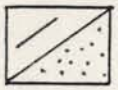
Shears, faults



Quartz vein, veinlet



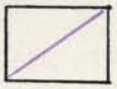
Sulphides- massive, veinlets, and disseminated Pyrite, if nothing written by graphic log; chalcopyrite always stated.



Magnetite- veinlets, and disseminated. Occasionally specular hematite, but latter always stated.



Zeolite veinlet



Gypsum veinlet

NOTE: Sample Interval column refers to sample number for assay purposes.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5262 MAP

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 1 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈ 1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER: EXPO 258

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: June 20/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 850' | LOGGED BY: UGM

COMMENTS: At 60' hot artesian water flowing at about 50 gal/hour; hole plugged and cemented

AVE CORE REC'Y / HOLE: 89.5%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								0-1 STICKUP 1-14 OVERBURDEN							
20	5%		60%	5%	Weak		qtz	14-28 ANDESITE LAPILLI TUFF light grey green matrix with dark green to black frags replaced by magnetite; silica as veins; at 21' pyr vnlt with 1" selvages of feld porph? at 18' Trace of bornite cpy all in frags; 10% magnetite some light green frags of chl-ser;	1%	2 / 2 / 1	50 / 104 / 133	NQWL	5201	88.4	
30	5%	10%	60%	5%			sil pyroph bx	28-29 SILICIFIED PYROPHYLLITE BRECCIA, v.f.g. light grey, silicified - perv and vns; pyr vnlts; tr. moly;	2% / 8% / 3%	5½ / 4 / 6	89 / 96 / 94		5202 / 5203	92.6 / 80.3	
40							qtz vn with pyr cpy and lap tuff	29-32 ANDESITE LAPILLI TUFF As 14-28; 5% magnetite	10%	6½	69		5204	72.5	
		30%	80%	80%	Moderate		sil pyroph bx	32-41 SIL. PYROPHYLLITE BRECCIA As 28-29; at 41' qtz vnlt with pyr and cpy.		5	68				
50	5%						highly fract'd w minor gouge	41-41½ ANDESITE LAPILLI TUFF As above; f.g.	8%	4 / 3½	79 / 52		5205	29.3	
60		60%	40%	20%			sil pyroph bx	41½-46 SIL. PYROPHYLLITE BRECCIA As 28-29							
								46-56 ANDESITE LAPILLI TUFF - as above	10%	6½	17				

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 2 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: June 20/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
60							qtz vnlt + pyr + cpy	56 – 65½ SIL. PYROPHYLLITE BRECCIA As above; at 62' minor 2" chloritized section; silica vns and perv	10%	5	63	NQ WL	5206	74.0	
70	5%		10%	30%	M		AND LAP TUFF 2" pyr vnlt at contact		8%	5	85				
			5%	75%	Weak			65½ – 68 ANDESITE LAPILLI TUFF As above but fragmental texture not as obvious; minute pyr vnlts X-cutting throughout; cpy dissem and as blobs ¼" diameter; silica vns and perv.	20%	9½	84		5207	83.6	
80															
							qtz vn - numerous pyr vnlts massive pyr vnlt	68 – 88½ SIL. PYROPHYLLITE BRECCIA As above. from 68-73 runs about 0.3% Cu' - numerous thin cpy vnlts; numerous 2" qtz vnlts throughout; at 88 – 88½ pinkish rhyolite-looking rock with fine qtz clasts; at 86', 6" of massive pyr.		7	75		5208	75.4	
90	5%		10%	60%			AND LAP TUFF		10%	9½	76		5209	82.0	
							SIL PYROPH BX								
							qtz vnlt with much pyr								
100								88½ – 93 ANDESITE LAPILLI TUFF As 65½ – 68; no obvious fragmental texture; silica perv and vns		9	91		5210	90.7	
				70%	Very weak				20%						
110	ZZ							93 – 207½ SIL PYROPHYLLITE BRECCIA As above, lt grey textureless cut by numerous qtz vnlts; sulphides dissem + as thin vnlts; at 103½ moly on fract. 109½ cpy vnlt with minor pyr; at 109, slightly chloritized		4½	89				
							cpy vnlt with minor pyr. qtz vein			10	103		5211	102.7	
120															

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 3 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

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INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

DESCRIPTIVE GEOLOGY

93-207½ SIL. PYROPHYLLITE BRECCIA
at 128½ high grade cpy section assoc'd with qtz vn
at 158½ small gouge zone; rock broken
Sulphide as unground x's
at 161 - cpy vnlt ¼" thick
from 162½ - 165, cg pyrophyllitized bx frags, white, corroded in H grey silicified matrix

~qtz vn

~qtz vn with cpy

~cpy vnlt ¼" thick

~pyrophyllitized frags

70%

90%

Weak

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120				NQ WL			
		10	96		5212	96.0	
130		10½	96		5213	96.0	
	20%	4	65		5214	84.2	
140		10½	97		5215	94.3	
150							
		10½	92		5216	94.5	
160	10%						
		10½	97		5217	91.8	
170		1½	50				
180	15%						

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 4 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

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INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTIMATED
180	15%	9	103	NQ WL	5218	101.1	
190		10	99		5219	99.0	
200	20%	9	99		5220	95.0	
210	5%	10½	91		5221	96.1	
220	15%	9½	103		5222	94.5	
230	8%	11	86		5223	85.6	
240	5%						
	20%						

93 - 207½ SIL. PYROPHYLLITE BRECCIA
at 195-196 white silicified bx frags, c-m.g., rounded to angular, forms a tail from a bx'd qtz vnlt; some pyr at 195 also resembles bx frags; pyr clasts? have some sharp boundaries and are rounded

~ white sil bx frags

207½ - 209 SHATTER BRECCIA
green, chloritized frags in light grey silicified matrix; texture partially obliterated by silicification; cut by numerous qtz vnlts; 3% magnetite; magnetite replaced frags from 208½-209; partially replaced by hematite; red hematite in qtz vn at 208½

~ qtz vn with pyr

~ shatter bx

209 - 215 SIL. PYROPHYLLITE BRECCIA
As 28-29; from 213½ - 214 white, sil. bx frags, appear to be pieces of a qtz vnlt that has broken up; ang frags

~ white sil bx frags.

215 - 215½ ANDESITE LAPILLI TUFF
may be shatter bx; green frags in light grey siliceous matrix broken up by irregular qtz vns and fault zones that are silica-pyrophyllite annealed

~ white sil bx frags

215½ - 231 SIL PYROPHYLLITE BRECCIA
at 222½ white sil bx frags; at 230 minor moly smears in fracts

~ pyrophyllite bx

231 - 232½ PYROPHYLLITE BRECCIA
pinkish pyrophyllite frags in sil. matrix with euhedral qtz eyes (vfg); cut by numerous qtz vnlts

~ pyrophyllite bx

~ shatter bx

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 5 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: June 20/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240								232½ - 233½ SIL PYROPHYLLITE BRECCIA	20%	10	85	NQWL	5224	89.0	
								233½ - 234 PYROPHYLLITE BRECCIA as 231 - 232½; tr. moly and cpy							
250				80%				234 - 238½ SIL. PYROPHYLLITE BRECCIA at 236 covellite on fract.; tr covellite, tr moly throughout	15%	10	95		5225	95.4	
								238½ - 239½ SHATTER BRECCIA? green frags in light grey silicified matrix; cut by numerous qtz vnlts	20%	6	96				
260	5%			75%				239½ - 245½ SIL. PYROPHYLLITE BRECCIA at 245 - 245½ gouge zone; rock and some pyr ground up; some pyr still as xls; qtz grains also present	5%				5226	99.2	
				90%					10%	10	100				
270					Weak			245½ - 256½ C.g. SILICEOUS BRECCIA white silicified frags, pinkish brown slightly pyrophyllitized frags, sub-rounded to angular, from >¼" to 2" diameter, occasionally in v.f.g. pyr. rich matrix; tr. cct? hem? minor cpy, tr. moly	20% 5%				5227	99.2	
				80%					15%	10	99				
280								256½ - 261 SIL PYROPHYLLITE BRECCIA tr moly		5	108		5228	98.1	
				65%				261 - 263 SHATTER BRECCIA? vague green frags in green-black matrix containing hematite (red); cut by qtz vns; 10% hematite	30%	4	81				
290				85%	Mod			263 - 267 SIL PYROPHYLLITE BRECCIA	10%	5	67		5229	66.8	
								267 - 267½ FELDSPAR PORPHYRY DYKE? white, f.g pyrophyllitized feld phenos? in red and black matrix of hematite		5	63				
300															

- shatter bx?
- Feld porph dyke?
- shatter bx?
- shatter bx?
- f.g pyr vnlt with bx'd qtz vn frags floating in pyr matrix
- ground sulphide shear zone

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 6 OF 15

CASING COLLAR ELEV.,: | GROUND ELEV.,: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

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INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

DESCRIPTIVE GEOLOGY

267 ½ - 268 SIL. PYROPHYLLITE BRECCIA

268 - 268 ½ SHATTER BRECCIA ?
black frags in red and black matrix of hematite; cut by numerous qtz vnlts

268 ½ - 269 SIL. PYROPHYLLITE BRECCIA

269 - 269 ½ SHATTER BRECCIA ?
As 268 - 268 ½; only 269 - 269 ½ contains white, angular, f.g. silicified frags.

269 ½ - 360 ½ SIL. PYROPHYLLITE BRECCIA
top 3" contains rounded frags of shatter bx?; one frag cut in two by f.g. pyrite filled fract.; from 277 - 285 a ½ % bornite - covellite, v.f.; minor cpy from 304 ½ - 306 f.g white, pyrophyllitized frags in rock. from 313 - 315 gouge zone composed of pyr x/s; clay and qtz grains; Sulphides unground; from 324 - 326 f.g. pyroph frags, white; 326 - 328 white f.g sil frags, 328 - 331 f.g white pyropl. frags 331 - 345 white, sil rounded bx frags in sil. lt grey matrix; some frags very obscure. at 345, 2" altered zone containing what appears to be skeletal qtz eyes filled with pyroph and f.g. qtz x/s 345 - 346 ½ white pyroph bx? frags. some have distinct feld shape; in lt grey sil matrix

302 - tr moly

white sil bx frags, ang

1" massive pyr vnlts

320 ½ tr moly

pyroph coated fract

bornite in qtz vn at 339

tr cov. at 351 ½

f.g white bx frags in pyr vnlt

Moderate

Weak

85%

90%

80%

90%

10%

20%

10%

NQ WL

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300		2	58				
		5	83		5230	76.0	
310		3	83				
		4	69		5231	73.9	
320		5½	76				
		5½	83		5232	86.7	
330		5	93				
		5	97		5233	96.6	
340		5	97				
		5	93		5234	95.0	
350		5	97				
		5	102		5235	89.5	
360		5	72				

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 7 OF 15

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INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 89.5%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
360				10%					10%						
	Tr.			80%	Weak			360½ - 361½ PYROPHYLLITE BRECCIA? White, irregular patches of pyroph in lt grey siliceous matrix; fine qtz xls grow from periphery of pyroph blob into it; possibly an altered dyke??	20%	5	100	NQWL	5236	91.2	
										5	85				
370				90%	Moderate			361½ - 366½ SIL PYROPHYLLITE BRECCIA vague white, sil frags, rounded and white corroded pyroph frags in lt grey sil matrix at 364½. a silicified shear zone with qtz grains as gouge; annealed	10%	5	95		5237	88.8	
380								366½ - 367 SHATTER BRECCIA? fg dark black mag replaced frags and frags composed of a light green mixture of chlorite sericite and qtz; cut by irregular qtz vnlts		5	82				
	5%			70%				367 - 383 SIL PYROPHYLLITE BRECCIA As 361½ - 366½; only pyroph frags minor; has darker grey spots from 378 very much resembling and lapilli frags; from 381-383 transitional zone to shatter bx; lt grey with hematite rich areas of black and red surrounded by sil pyroph bx; minor magnetite	5%	5	92		5238	94.2	
390										5	100				
	Tr.			75%	Weak			383 - 394 SHATTER BRECCIA. black mag replaced frags and minor light green; fg frags of sericite-chlorite? in a lt grey to green grey siliceous matrix; cut by numerous qtz vnlts; 10% magnetite; from 385-386 and 388-389 sil pyroph bx.; white siliceous frags also present; red hem on some fract	20%	5	102		5239	95.0	
400										5	85				
									15%	5	100		5240	93.3	
410										5	87				
								394 - 490 SIL PYROPHYLLITE BRECCIA transitional zone from shatter bx; occ. 6" zone of hem or chlorite rich area; sil pyroph textureless; shatter bx zones altered but still show black frags		5	95		5241	94.2	
420										5	95				

Sections: at 363 hem blobs (red) resembling lapilli tuff; shatter bx?; shatter bx; sil pyroph bx; shatter bx; sil pyroph bx; v. altered shatter bx; qtz vn with cpy + pyr; tr moly; shatter bx; white pyroph frags in lt grey sil matrix; pyr vnlt 1" thick

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 8 OF 15

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INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

DESCRIPTIVE GEOLOGY

394 - 490 SIL PYROPHYLLITE BRECCIA

at 422, 3" dyke? of white pyrophyllitized frags in a H grey siliceous matrix; partially broken up by a fg pyr vnlt; upper contact small gouge zone ¼" thick; sulphides as ungrouped xls; same rock at 423 (3"); only pyroph frags leached out and black hem coats vugs, at 424½, 1½' dyke as at 423 only black hem replaced by red hem; silica-pyroph vnlt (½") bx'd pyr; pyr clast floating in vnlt; dyke is also bx'd by fg pyr-rich vns some of which carry cpy

~dyke?

~moly on fract at 432½.

at 443½ - 444 dyke? containing white pyroph frags? in H grey siliceous groundmass broken up by pyr filled fract.

~dyke?

~dyke?

at 445 - 445½ dyke? as at 443½ - 444

from 450 - 455 Sil Pyroph Bx massively replaced by silica - textureless;

from 455 - 477½ bx consists of very pronounced white ang - sub-ang frags in a silica - pyr matrix; pyr v.fg and makes up 25% of total rock

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420	20%	5	101	NQ WL	5242	96.0	
430	10%	5	90				
	20%	5	90		5243	81.2	
440	10%	10	68		5244	73.6	
450	5%	9½	82		5245	91.9	
460	25%	9½	104		5246	102.9	
470		10	100		5247	102.0	
480	10%						

ALTERATION: PROPYLLITIC 75% | ARGILLIC 90% | SERICITIC 75% | SILICIC Weak

FRACTURING: Weak | Very Weak | Weak

MINERAL: M

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 9 OF 15

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INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480				90%	Weak			394 - 490 SIL. PYROPHYLLITE BRECCIA from 485 - 490 numerous cpy vnlts some ½" thick + disseminated throughout; very high grade	10%	10	105	NQWL	5248	88.2	
										6	63				
490				70%	Moderate			490 - 506 SILICIFIED ANDESITE LAPILLI TUFF black frags composed of mag and pyroph? or sericite in a white matrix of silica - pyroph?. 15% magnetite, cpy all asso'd with magnetite replaced frags; tr. hem (red) with magnetite; occ tr of chlorite along fracts + asso'd with mag. frags.; some bleaching along fracts - no mag remains; fragmental texture removed	2%	8	85		5249	80.6	
500										2	58				
										10	93		5250	86.0	
510				80%	Weak			506 - 631½ SIL PYROPHYLLITE BRECCIA lt grey with mottled texture from white pyroph specks, white sil bx frags that are rounded and darker areas of replaced rock above; occ 6" band of rock from 490 - 506 at 505 and 506; at 524½ - 525 and 526 - 526' 3" fingers of sil and lap tuff with black frags replaced by hem in lt grey sil matrix, some red hem. from 526 much pyroph coating fracts. moly present as smears, dissem and in vnlts from 510	5%	4	91		5251	93.0	
520										10	95		5252	94.2	
										4½	93				
530					Strong					4½	93		5253	95.0	
540					W					5	97				

- rock broken only, no gouge, sulph intact
- massive cpy vnlt at 486 - ½"
- sil and lap tuff
- moly smear on fract at 511
- sil and lap tuff zone - no mag only black hem frags

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 10 OF 15

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INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

DESCRIPTIVE GEOLOGY

506 - 631½ SIL PYROPHYLLITE BRECCIA

from 530 bx texture more obvious. White sil frags, rounded in ll grey silicified matrix; occ pyroph frag some that are coloured red by tr of hem;

pyroph gouge

pyroph replaced frags

gouge sandy qtz grains + clay

558, tr of black + red hem

558½ tr of bornite?

at 585 bx texture disappears; rock massive, very silicified, textureless

-2 qtz eyes noted at 599'9" in a pyroph filled fracture zone

frags irregular and corroded-looking

pyroph frags grey blue translucent looking

SECTION	FRACTURING	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
540	Weak		5½	91		5254	78.6	
	Strong		2	33				
550	Moderate		8½	88	NQ WL	5255	90.0	
560	Weak		8	93		5256	44.4	
570	Strong	2%	7	12				
			5	82		5257	74.1	
580	Moderate		3	75				
			7	94		5258	87.6	
590			6	78				
			2½	93		5259	88.9	
600			5½	91				

80%

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 11 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: June 20/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

DESCRIPTIVE GEOLOGY

506 - 631½ SIL PYROPHYLLITE BRECCIA

pyroph coated fracts

irregular ½" massive pyr vnlt

as at 585 - textureless

at 623, white, siliceous bx frags very obvious. Crowded bx text. frags sub rounded; minor pyrophyllitized frags

631½ - 632 QUARTZ - FELDSPAR PORPHYRY DYKE (?)

dyke?

white, fg, lath-shaped xls and about 5% qtz eyes in a buff matrix; lath-shaped xls resemble feld and are now pyrophyllitized; buff matrix appears pyrophyllitized also; at contacts, matrix grey

632 - 703 SIL PYROPHYLLITE BRECCIA

from 632 - 641, as at 629; gradually becoming more obscure at base

moly on fract in dyke

text very obscure

at 651, dyke? with fg - vfg qtz eyes in pyrophyllitized? buff matrix; moly on fracts in dyke; 3" thick

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
600		5½	92	NQ WL	5260	92.7	
		3½	100				
610	2%	6½	71		5261	80.9	
620		6½	93				
		7	82		5262	86.1	
630	10%	10	101		5263	99.2	
640		6½	83		5264	88.0	
650	5%	9	94		5265	86.3	
660		10½	80				

ALTERATION: PROPYLLITIC — Weak; ARGILLIC — Weak; SERICITIC — M; SILICIC — 90%

FRACTURING: Moderate | M | Weak

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 12 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: June 20/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
660								632-703 SIL. PYROPHYLLITE BRECCIA							
				90%	Weak			small gouge; frags of sil pyroph bx - annealed by silica	5%	10	62	NQ WL	5266	71.0	
670									10%				5267	73.0	
680								from 683 - 703 sil pyroph bx looks like a fossil fault zone that has been healed by silicification; most of the bx consists of c.g white siliceous bx frags in a pyr-rich siliceous matrix; from 689-690 a v.f.g zone containing pyrite clasts and minor finer grained white siliceous frags in a siliceous and ground sulphide matrix; pyrite clasts found throughout bx	5%	10	84		5268	79.5	
				70%				6" zone with 50% pyr in matrix; pyr clasts in bx some up to 2"	30%	11	75		5269	82.6	
690															
700				60%	Very Weak			703-708 TRANSITIONAL ZONE FROM SIL. PYROPH. BX - AND. LAP TUFF. H. grey sil porph bx with occ. white sil bx frag intermixed with small zones of and. lap tuff. lap frags obscure and mainly replaced by black hem and pyroph.	10%	10	94		5270	96.4	
710	5%		20%	50%				transitional zone							
								708-731 ANDESITE LAPILLI TUFF. black hem replaced frags and light green f.g frags composed of sericite, tr chlorite in H grey siliceous matrix; 20% hem. cut by minor qtz vns; occ zone of sil alteration - bleaching all or most of text. at 711½-713 and 718-720	4%	10	100		5271	101.2	
720															



HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 13 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: June 20/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 89.5%

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

DESCRIPTIVE GEOLOGY

SECTION	ALTERATION	FRACTURING	COMMENTS	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
720	PROPYLLITIC 5%	Very Weak	minor qtz eyes at 725	708 - 731 ANDESITE LAPILLI TUFF occ white pyrophyllitized ? frag that very much resembles a feld. lath; some light green frags also resemble feld laths; more bleached, silicified zones at 724½ (3") and 726½ - 728.	4%	10	103	NQ WL	5272	106.2	
730	SERICITIC 20% SILICIC 50%		frag of QFP?	tr. moly	10%	10	111		5273	108.2	
	SILICIC 80%		frag of QFP?	731 - 746 SIL PYROPHYLLITE BRECCIA Very mottled, light grey; small white pyrophyllitized frags that resemble feld. laths; occ frag of QFP? in various stages of alteration; one frag, the freshest consists of white pyrophyllite replaced laths of feld? in a buff, siliceous matrix; very minor qtz eyes; from QFP? frags very obscured by alteration; pyr. appears to replace feld. laths that were pyrophyllitized	20%	10	104		5274	100.4	
740			frag of QFP?								
	SILICIC 70%		small bx zone at upper contact white sil frags in hem-rich matrix		4%	10	95		5275	96.2	
750	PROPYLLITIC 2%				10%						
	SILICIC 80%		feld porph dyke (6")		tr.						
	SILICIC 20%		massive sulphide zone	746 - 756 FELDSPAR PORPHYRY yellow, pyrophyllitized feld laths, f.g., and f.g clots of magnetite in a lt. grey siliceous groundmass; chlorite scarce + disem. throughout rock; last 3' a transition zone between feld porph above and sil pyroph bx below; contains some white sil frags; feld dyke at base from 755½ - 756 consists of white pyrophyllitized feld laths in lt grey siliceous matrix	15%	10	98		5276	98.0	
760											
770	SILICIC 70%			756 - 769½ SIL PYROPHYLLITE BRECCIA lt. grey, mottled with white pyrophyllitized feld occ; may be incompletely replaced dyke		10	98		5277	98.8	
780											

over

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 14 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: June 20/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

DESCRIPTIVE GEOLOGY

756 - 769½ SIL PYROPHYLLITE BRECCIA

at 758 - 760, massive sulphide zone (60%) with large irregular pyrophyllite areas - buff and white; pyrophyllite appears to have bx'd some pyr; at base pyr stringers are swirled + contorted; purple fluorite? in pyrophyllite

769½ - 799½ FELDSPAR PORPHYRY

white pyrophyllitized feld laths in a H grey siliceous matrix; cut by numerous very fine pyr stringer, occ bx zone with white sil frags; feld porph occ bleached and text removed by silicification; very few and small qtz eyes

~ bx zone with feld porph frags in sil matrix

~ bx zone

799½ - 808 SILICIFIED BRECCIA

c.g - f.g frags of feld. porph, white siliceous frags + frags of qtz vns in vf.g groundmass composed of silica grains bound by pyroph. sulphides unground; frags unsorted, ang.

808 - 895 FELDSPAR PORPHYRY

As 769½ - 799½; cut by numerous qtz vnlts also; at 829 porph very altered to dark grey textureless rock; at 890 small white pyrophyllitized feld laths apparent again

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
780							
		10	100		5278	102.8	
790		10	107		5279	104.6	
	15%						
800		10	101	NQ WL	5280	100.6	
810		10	100		5281	95.2	
	10%						
820		10	88		5282	94.4	
830		10	104		5283	104.4	
840							

ALTERATION: 70% | 80%

FRACTURING: Weak | Very

HOLE NO. EC-100 | PROJECT: EXPO | PAGE NO: 15 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: June 12/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: June 20/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 850 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 89.5%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
840							
	10%	10	105	NQWL	5284	100.6	
850	20%	4	94				

808 - 845 FELDSPAR PORPHYRY

Very Weak

845 - 850 SILICIFIED BRECCIA
frags of feld porph, white sil bx frags and at 847½ a large 2" ang clast of vfg pyr-silica; frags sub-ang to subround; matrix siliceous with fg pyr.

T.D. 850

HOLE NO. EC-101 | PROJECT: EXPO | PAGE NO: 1 OF 3

CASING COLLAR ELEV.: | GROUND ELEV.: ≈980' | DATE STARTED: June 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,700 N. 235,000 E. | DATE FINISHED: June 18/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 198' | LOGGED BY: UGM

COMMENTS: Difficult hole – very low recovery; holed sanding from 140 – 170 pushed rods out of hole 10';

AVE CORE REC'Y / HOLE: 36.5%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								0 – 1 STICKUP 1 – 83 OVERBURDEN							
83				70%	Moderate			83 – 119 SILICIFIED PYROPHYLLITE BRECCIA H. grey, mottled with occ darker patch composed of pyr and pyroph. has vague appearance of lapilli tuff; also tan and white mottling – pyroph from 97–100 white pyroph frags that resemble feld laths (altered feld porph?) at 107½ bx zone – white sil bx frags and minor buff pyroph frags in siliceous –fg pyr matrix (3" thick) ~pyr vnlt ¼" with some cpy	5%	5	110	BQW	5285	96.9	
90										3	64				
100				80%						4	35		5286	37.9	
110										2	29				
										6	39				
										3	8		5287	36.5	
									20%	4	56				

HOLE NO. EC-101 | PROJECT: EXPO | PAGE NO: 2 OF 3

CASING COLLAR ELEV.: | GROUND ELEV.: ≈980 | DATE STARTED: June 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,700 N. 235,000 E. | DATE FINISHED: June 18/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 198' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC

COMMENTS:

AVE CORE REC'Y / HOLE 36.5%

DESCRIPTIVE GEOLOGY

83 - 119 SILICIFIED PYROPHYLLITE BRECCIA

119 - 143 QUARTZ FELDSPAR PORPHYRY
black clots of magnetite, white qtz eyes and dark green replaced feld in an epidote green matrix; 5% qtz eyes; 10% magnetite; upper contact bleached white; shear zone consists of qtz grains and occ sulphide xtls in clay gouge dark green feld epidotized ?; cut by qtz vns

sil pyroph bx - may be cave

143 - 152 SILICIFIED PYROPHYLLITE BRECCIA
H. grey with white pyroph specks no texture present

sil pyroph bx

Triconed - probably all only sand recovered

Sand - consists of 95% varying sized qtz grains with 5% green, small QFP frags and minor pyr.

sand collected by driller and analysed also

SECTION	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
110				5%	5	13	BQWL	5288	16.7	
120	Strong				6	17				
					3	83		5289	54.8	
					4	44				
130					3	53		5290	55.7	
					3	75				
				2%	3	56				
140					2	46				
					4	19		5291	13.8	
150					9	12				
160				TRICONED				5292		
170										

HOLE NO. EC-101 | PROJECT: EXPO | PAGE NO: 3 OF 3

CASING COLLAR ELEV.: | GROUND ELEV.: ≈ 980 | DATE STARTED: June 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,700 N. 235,000 E. | DATE FINISHED: June 18/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 198' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 36.5%

SECTION

DESCRIPTIVE GEOLOGY

170

170 – 183 SILICIFIED PYROPHYLLITE BRECCIA

As above

SILICIC 60%

FRACTURING Strong

180

183 – 198 QUARTZ FELDSPAR PORPHYRY

green epidotized feld xls in a lt grey siliceous groundmass bleached from 183½ – 185½; only vague outlines of feld left, 5% qtz eyes; at 185½ feld chloritized? different colour green; fault gouge from 188 – 198. just like sand at 152 – 170

PROPYLLITIC 5%

190

T.D. 198

Hole abandoned after total circulation lost – further drilling impossible

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
2%	5	37	BQWL	5293	32.6	
	1½	17				
	4½	33				
	1	25		5294	54.9	
	2	58				
	3	36				
	2	63				
	1	141				
	2	42		5295	19.8	
	6	19				

HOLE NO. EC-102 | PROJECT: EXPO | PAGE NO: 1 OF 6

CASING COLLAR ELEV.: | GROUND ELEV.: ≈980 | DATE STARTED: June 20/74 | REF. TO CLAIM CORNER: EXPO 260

COORDINATES: 245,700 N. 235,000 E. | DATE FINISHED: June 25/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 411' | LOGGED BY: UGM

COMMENTS: HOLE lost at 410 - Casing shoe, 3 ft of NQ rods and core barrel fell into hole when they broke off

AVE CORE REC'Y / HOLE 75.0%

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

SECTION

DESCRIPTIVE GEOLOGY

0-3 STICKUP

3-100 OVERBURDEN

TRICONED TO 106'

106-122 SILICIFIED PYROPHYLLITE BRECCIA

lt grey, mottled with white and beige areas of pyroph; no texture, cut by small pyr vnlts and a few qtz vnlts

122-154 ANDESITE LAPILLI TUFF

dark green to black frags composed of mag and/or chlorite-sericite in a mod green matrix of chlorite, sericite and silica; 15% magnetite; occ. bleached to light grey with no text left

and lap tuff

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
0							
100							
110				80%			
120					Moderate		
130	20%		20%	40%			
140							

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
10%	5	27	NQ WL	17001	27.0	
	2	100				
	4	23		17002	41.8	
	5	33				
2%	1	167		17003	44.3	
	4	31				
	3	22				
	4	50		17004	42.4	
	2	50				
	4	31				

HOLE NO. EC-102 | PROJECT: EXPO | PAGE NO: 2 OF 6

CASING COLLAR ELEV.: | GROUND ELEV.: ≈980 | DATE STARTED: June 20/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,700 N. 235,000 E. | DATE FINISHED: June 25/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 411' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 75.0%

DESCRIPTIVE GEOLOGY

PROPYLLITIC: 5% | 10%

SERICITIC: 40% | 40%

SILICIC: 60% | 90%

FRACTURING: Strong | Weak

122 – 154 ANDESITE LAPILLI TUFF from 140 and lap tuff consists of dark green frags of chlorite-sericite-magnetite; matrix lt grey siliceous from 148–151 lapilli text. removed by silica-pyrophyllite alteration; pyroph as beige streaks

- occ white sil bx frag
- only structure present here are pyr-coated fractures
- clay seam

154 – 185 SILICIFIED PYROPHYLLITE BRECCIA

lt grey, mottled by occ spots of white pyroph; textureless except for clots of pyr which give rock appearance of lapilli tuff

- no structures except pyr coated fracts

185 – 411 QUARTZ FELDSPAR PORPHYRY

upper portion bleached white with white qtz eyes and dark patches of fg pyr; under hand lens feld visible – very altered to sericite; matrix of QFP also altered to sericite. from 185–187½ QFP ground up – qtz grains and pyr xls in clay matrix; at 196½ QFP green with white qtz eyes and darker green – black feld-like xls composed of chlorite-sericite – occ mag also, 5% magnetite; bleaching along qtz veins – green till 203

- clay with sand grains + pyr xls



% SULPHIDES: 5% | 10% | 15% | 3%

DRILLING INTERVAL	% CORE RECOVERED
2	25
2	25
3	61
1	75
3	28
3	25
1½	39
2½	25
1	67
3½	55
3	44
4½	27
3½	17
2	46
4	13
4	13
2	54
4	104
3	89
5	102
5	95

CORE SIZE: NQ WL

SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
17005	41.4	
17006	36.1	
17007	37.2	
17008	18.3	
17009	65.2	
17010	97.3	

HOLE NO. EC-102 | PROJECT: EXPO | PAGE NO: 3 OF 6

CASING COLLAR ELEV.: | GROUND ELEV.: ≈980' | DATE STARTED: June 20/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,700 N. 235,000 E. | DATE FINISHED: June 25/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 411' | LOGGED BY: UGM

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
200	10%		40%	30%			
210				70%	Weak		
220				80%	Moderate		
230	10%		20%	30%	Weak		
240		30%		60%			
250	10%	40%		40%	Med		
260	5%						

COMMENTS:

AVE CORE REC'Y / HOLE 75.0%

DESCRIPTIVE GEOLOGY

185 - 411 QUARTZ FELDSPAR PORPHYRY

at 203 bleached grey again by pervasive silicification; mottled text. due to white pyrophyllitized? feld, white qtz eyes and occ clots of vfg pyr; tr moly from 203-210

bleached from 203 - 231

from 234½ - 249 bleached as from 203-210

from 251 - 260½ feld in QFP being leached out; vugs where feld phenos were; also when rock broken, white feld occur as individual loose grains. feld totally sericitized

from 253 - 308 partially bleached QFP; zones of chloritized QFP and vague greenish colours of matrix and frags occ. present

~ at 245 moly in qtz vn

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
3%	2	108	NQ WL	17011	94.3	
10%	5	92				
	5	77		17012	56-0	
	1	50				
	2	38				
	4	42				
	5	75		17013	80.5	
	5	97				
5%	5	107		17014	103.2	
	5	100				
	5	100		17015	100.0	
	5	100				
	5-½	95		17016	91.3	
	5	83				

HOLE NO. EC-102 | PROJECT: EXPO | PAGE NO: 4 OF 6

CASING COLLAR ELEV.: | GROUND ELEV.: ≈980' | DATE STARTED: June 20/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,700 N. 235,000 E. | DATE FINISHED: June 25/74 | SCALE: 1"=10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 411' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 75.0%

DESCRIPTIVE GEOLOGY

185 – 411 QUARTZ FELDSPAR PORPHYRY

at 304, siliceous matrix stained red from hematite?; only 6"

from 308 totally bleached light grey with white, totally sericitized feld; only vague very pale green to dark grey spots left of chloritized frags

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
260		5½	82		17017	79.2	
270		5	72		17018	80.9	
		5	88				
280		5	75		17019	84.1	
		5	83				
290		5	92		17020	98.0	
		5	107				
300		5	87		17021	96.9	
		5	102				
310		5	95		17022	87.1	
		5	93				
320		5	72				

ALTERATION: PROPYLLITIC 2%; SERICITIC 40%; SILICIC 50%

FRACTURING: Moderate

% SULPHIDES: 3%

CORE SIZE: NQWL

HOLE NO. EC-102 | PROJECT: EXPO | PAGE NO: 5. OF 6

CASING COLLAR ELEV.: | GROUND ELEV.: ≈980 | DATE STARTED: June 20/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,700 N. 235,000 E. | DATE FINISHED: June 25/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 411' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 75.0%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
320			40%	50%	M		
330			30%	60%	Weak		
340	2%						
350							
360							
370	5%						
380							

annealed gouge - partially silicified

DESCRIPTIVE GEOLOGY

185 - 411 QUARTZ FELDSPAR PORPHYRY

from 329 - 330 annealed bx - pervasively silicified med grey frags in dark grey siliceous matrix; dark coloration due to finely ground pyr

from 333 - 343 QFP pervasively silicified, bleached; white totally sericitized feld phenos and white, minor qtz eyes in dark grey siliceous matrix; also dark grey patches; coloration due to pyr in sericite; pyr dominantly located in these patches.

343 - 366 QFP partially chloritized with zones of bleaching; pyr vnlts all have bleached selvages; feld, white, still totally sericitized, minor qtz eyes; occ dark chloritized mafic?

366 - 410 QFP chloritized with zones of bleaching along shears and pyr vnlts. dark chloritized mafics? or frags? much more prevalent; matrix lt grey siliceous white sericitized feld phenos, minor qtz eyes; 5% magnetite in unbleached portions

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
3%	5	83	NQWL	17023	82.0	
	5	87				
5%	5	100		17024	98.9	
	5	105				
	5	107		17025	103.6	
	5	97				
	5	103		17026	98.5	
	5	92				
	5	105		17027	99.4	
	5	95				
	5	103		17028	101.4	
	5	103				

HOLE NO. EC-102 | CASING COLLAR ELEV.: | GROUND ELEV.: ≈980' | PROJECT: EXPO | DATE STARTED: June 20/74 | DATE FINISHED: June 25/74 | TOTAL DEPTH: 411' | PAGE NO: 6 OF 6 | REF. TO CLAIM CORNER: | SCALE: 1"=10' | LOGGED BY: UGM

COORDINATES: 245,700 N. 235,000 E. | INCLINATION: -45° | BEARING: 180°

AVE CORE REC'Y / HOLE: 75.0%

COMMENTS:

DESCRIPTIVE GEOLOGY

185-411 QUARTZ FELDSPAR PORPHYRY

from 410-411, very fresh feld porphyry white feld phenos and black chloritized mafics in dark grey siliceous matrix
5% magnetite

T.D. 411'

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
380	5%				Weak			5%	5	100	NQWL	17029	99.1	
390					Moderate				5	95				
									5	102		17030	98.5	
400									5	95				
									5	33		17031	41.8	
410	2%							3%	3	13				
									1	66				

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 1 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER: EXPO 237

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1"=10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

COMMENTS: 2 Dip tests taken at 500' and at 1103'. Hole started with H - had to reduce to N before bedrock reached

AVE CORE REC'Y / HOLE: 94.2%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								0-3 STICKUP							
								3-232 OVERBURDEN							
230															
	10%		30%	25%	Weak			232-403 ANDESITE LAPILLI TUFF dark green chloritized frags - some of which resemble pyroxene and white sericitized frags, both f.g. in a light green partially sericitized to light grey matrix - siliceous; sulphides very f.g.; cut fine qtz stringers and occ qtz vnlts up to 3" thick; 5% magnetite; cpy asso'd mainly with qtz vns and on fracts; silicification as qtz vns; this may be a SHATTER BRECCIA although not very many qtz vnlts	5%	5	83	NQWL	5296	89.4	
										4½	100				
240										5½	97		5297	91.8	
										4½	78				
250										10	101		5298	98.4	
260										4	96		5299	95.9	
270															

3" qtz vn

6" qtz vn

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 2 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
270	10%		30%	25%	Weak	M	
280							
290	2%			50%			
300	Tr	10%	30%	25%	Strong		
310			30%	25%			
320	10%	30%		40%	Moderate		
330							

232 - 403 ANDESITE LAPILLI TUFF

from 288 - 293½ fault zone; andesite lapilli tuff bleached and gougey; siliceous grains in clay matrix; most sulphides as grains but occ. ground up.

290 - 291½ broken up qtz vns in clay gouge, also at 293 - 293½; silica alteration all as veins

298½ - 309 gouge zone with broken qtz vn frags and minor green and lap tuff frags in clay gouge; sulphides not ground - occur as individual xls.

at 311 - 311½ white sil bx frags that look like bx'd qtz vn in green matrix of chlorite + silica; silica has grainy appearance; pyr. clasts also; frags ang.

from 317, and lap tuff increasingly altered by silica - before silica only as vns - now vns and pervasive - in matrix; frag size coarser; also coarser sized frags than above; frags black (mag/chlorite) and green (chlorite-sericite) in green to lt grey siliceous matrix; mag also dissem throughout; 15% magnetite; at 325 white sil bx frags appear - rounded to ang; look like bx'd qtz vn frags

moly smear on fract at 328

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	10½	94	5300	91.2	
	4½	87			
	1	67			
	3	102	5301	90.8	
	3½	86			
8%					
5%	10½	95	5302	95.5	
10%	10½	98	5303	96.4	
	7	82	5304	88.8	
3%	10	99	5305	93.8	
	6	86			

CORE SIZE: NQ WL

HOLE NO.: EC-103 | PROJECT: EXPO | PAGE NO: 3 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1"=10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
330								AVE CORE REC'Y / HOLE 94.2%							
								232 - 403 ANDESITE LAPILLI TUFF							
								as from 317 only white sil bx frags are now qtz eyes?; and lap tuff (shatter bx?) contaminated by QFP?		10	74		5306	76.4	
340								~3" qtz vn							
										10½	96		5307	91.6	
350										7	92		5308	92.9	
360	10%	30%	40%		Weak				3%	10½	90	NQ WL	5309	90.0	
370								~moly in qtz vn at 371½							
								from 378½ - 380 rock slightly bleached, fragmental text almost disappears; rock H. grey with white to pale green, totally sericitized feld-like frags; qtz eyes still present		10	98		5310	98.0	
380															
										10	99		5311	99.0	
390															

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 4 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
390	10%		30%	40%	Weak		
400							
410	5%			70%	Mod		
420	5%			80%			
430				70%	Weak		
440							
450							

232 - 403 ANDESITE LAPILLI TUFF

403 - 412 SILICIFIED ANDESITE LAPILLI TUFF

dk green frags of chlorite - sericite in white siliceous matrix; qtz eyes still vaguely discernible against white matrix; occ 6" zone where all chlorite removed. only dark grey mottling remains; no magnetite.

clay seam 1" thick

sil and lap tuff

412 - 419 SILICIFIED PYROPHYLLITE BRECCIA ? OR QUARTZ - FELDSPAR PORPHYRY?

lt grey, mottled with white, pyrophyllitized feld - like frags, occ frag of sil and lap tuff; cut by many qtz vns.

419 - 431½ SILICIFIED ANDESITE LAPILLI TUFF

as 403 - 412; from 425 - 431½ and lap tuff bleached grey; contains pyrophyllitized feld - white and translucent blue in buff matrix; occ zone of green sil and lap tuff; may be transitional zone to QFP.

431½ - 449 QUARTZ FELDSPAR PORPHYRY

white pyrophyllitized feld ? in a lt grey to buff, siliceous matrix; no qtz eyes noted; cut by qtz vnlts; occ zone that is contaminated by and lap tuff - green

over

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
3%	10	105	NQ WL	5312	105.0	
	3½	57		5313	86.3	
10%						
3%	6½	102		5314	94.0	
10%	10	94				
3%	10½	94		5315	94.0	
	10	102		5316	101.6	
8%						
	10	99		5317	99.2	

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 5 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: −65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 94.2%

DESCRIPTIVE GEOLOGY

431½ - 449 QUARTZ FELDSPAR PORPHYRY
green zones contain white sil bx frags, qtz eyes and white pyrophyllitized feld? in lt green grey siliceous matrix

449 - 480. ANDESITE LAPILLI TUFF.
dark green frags of chlorite and white round qtz eyes in a lt grey green siliceous matrix. Some of the dark green frags resemble amphiboles; cut by small qtz vnlts; most silica pervasive; 5% magnetite

at 463½ a paler green sericite-chlorite frag (feld?) appears as well; rock becomes denser, less fragmental looking

HYBRID
480 - 654 QUARTZ FELDSPAR PORPHYRY
Contaminated by and lap tuff; feld very distinct, pale green, mostly sericite, tr chlorite; also dark green, chloritized amphiboles? white qtz eyes in a grey-green siliceous matrix; 10% mag. many of the qtz eyes contain cpy - also qtz vns.

at 473½ qtz vnlt with cpy

SECTION	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.
	10	102	5318	101.9
	10	102	5319	102.0
	10½	96	5320	96.3
	10	97	5321	96.9
	9	89	5322	89.8
	10	99	5323	99.0

ALTERATION: PROPYLLITIC 15% | ARGILLIC | SERICITIC 10% | SILICIC 60%

FRACTURING: Weak

% SULPHIDES: 3%

CORE SIZE: NQ WL

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 6 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

480 - 654 QUARTZ FELDSPAR PORPHYRY

from 520 - 524 bleached zone; also from 525 - 526; this is probably a shear zone; bleached buff with occ. reddish patch; siliceous frags held together by sericite -clay? matrix with sulphide grains in matrix

520 - 524 bleached

from 550 - 622 bleached shear zone with occ unbleached chloritized QFP zone and occ bleached but unsheared zone.; in shear zones white and rarely green siliceous frags in clay gouge matrix; sulphides suffer very little grinding most as xls; occ tinge of pink to rock; minor pyrophyllite

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
510	15%		10%	60%	Moderate	3%	10	101	NQ WL	5324	101.0	
520	15%		40%	50%			10	101		5325	101.0	
530	15%		10%	50%			10	98		5326	98.0	
540	15%						10	108		5327	108.0	
550	Tr		20%	50%	Strong		9	85		5328	86.0	
560							8½	95		5329	96.0	
570												

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 7 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

480 - 654 QUARTZ FELDSPAR PORPHYRY

at 597 - 598 bx'd QFP frags, pink in med grey siliceous matrix - dark coloration of matrix due to fg pyr + cpy

qtz vns in fault gouge - unbroken - one vein cracked apart

QFP very red around these 2 shears

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
570			20%	50%	Strong			3%	7½	99	NQ WL	5330	98.0	
580									8	97		5331	101.2	
590									10	103		5332	100.2	
600									10	99		5333	100.4	
610									8½	101		5334	99.3	
620	1%	1%		60%	Weak				10½	99		5335	99.0	
630	15%								10½	99				

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 8 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1"=10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

480 - 654 QUARTZ FELDSPAR PORPHYRY

from 633 - 640 bleached mottled grey with white, totally sericitized feld frags; qtz eyes not very noticeable as rock has been silicified

640 - 645 green QFP

645 - 648½ bleached QFP as 633 - 640

654 - 804½ TRUE? QUARTZ FELDSPAR PORPHYRY

dark green, chloritized, euhedral - subhedral pyroxene x's and round white qtz eyes in green grey matrix; rock is denser looking than QFP above; also pale yellow green feld phenos altered to saussurite? with sericite?

from 665½ - 666½ sheared pink QFP

from 668 - 670 sheared pink QFP

from 671 - 671½ sheared pink QFP

from 683½ - 684½ bleached QFP

QFP reddened around shear zone

qtz vn with moly 1" wide

669½ moly in qtz vn

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
630								3%						
			20%	70%				5%	10	105		5336	103.5	
640	10%							3%						
			25%	60%				8%	10	104		5337	104.3	
650					Weak						NQ WL			
	10%							3%	10½	108		5338	107.0	
660			25%	60%										
									10	103		5339	104.5	
670	10%													
									11	92		5340	95.3	
680														
									10	103		5341	98.6	
690														

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 9 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

654 - 804½ TRUE? QUARTZ FELDSPAR PORPHYRY

✓ moly in qtz vn. at 690½

✓ trace moly in qtz veins

✓ moly in qtz vns at 721½

from 725, bleached light grey, most. text removed; occ qtz eye visible and occ. zones of totally sericitized white feld pyr as clots as replacement of mafics? and as numerous, fine vnlts; silica perv. and as vns carrying: occ moly; pyrophyllitized at 728 - 729 and 730 - 761½

✓ massive clots solid pyr, at 736½ - purple mineral on fract.

at 736½ strange purple mineral, no xlline shape, on fract. H = 6+, semi translucent.

from - 739 - 749 no text present as rock is very heavily pyritized and pyrophyllitized

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
690	10%		25%	60%	Weak			5%			NQ WL	5342	103.0	
700									10	103		5343	103.0	
710									10	103		5344	95.2	
720	10%								11	90		5345	91.0	
730			15%	70%				10% 20% 15%	10	92		5346	96.5	
740				50%				25%	9	101		5347	87.8	
750								10%	6½	79				

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 10 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1"=10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

654 - 804½ TRUE? QUARTZ FELDSPAR PORPHYRY

- moly in qtz vn at 752½

761½ - 765 chloritized QFP with qtz eyes, chloritized mafics, pale yellow green feld - chlorite - sericite? altered; matrix lt grey siliceous, also white sericitized feld.

at 800½ - 801 white ang sil bx frags in QFP

804½ - 806½ PYROPHYLLITIZED BRECCIA

lt grey, mottled with areas of white and tan pyrophyllite and white sil bx frags; at 806, 3" rounded bx frag; rock heavily pyritized. 3" frag partially broken up by pyr; occ qtz eye still visible

at 807 - large 3" ang white sil bx frag partially broken? into frags - or altered into frags in green chloritized QFP

- brass scrapings at 794
- cpy + moly in qtz vn at 797½
- white sil bx frags

806½ - 834½ QFP

dark green chloritized frags, pale green chlor - sericite frags, white round qtz eyes in lt grey siliceous matrix, 5-10% magnetite as clots assc'd with chloritized mafics

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
750		10	104	NQWL	5348	102.8	
760		10½	96		5349	96.4	
770		6½	100		5350	99.9	
780	5%	9½	101		5351	85.4	
790		6	49		5352	73.7	
		4	71				
800		7	102		5353	102.6	
810	20% 5%	10	103				

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 11 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 94.2%

DESCRIPTIVE GEOLOGY

806½ - 834½ QUARTZ FELDSPAR PORPHYRY

from 812 - 814 bleached QFP, H grey with white qtz eyes and darker grey patches now mainly pyr and pyroph

from 814 - 817 heavily pyrophyllitized zone; buff, textureless, dense.

817 - 823 chloritized QFP as at 806½ - 812

823 - 834½ mainly bleached QFP as at 812-14; zones and patches of chloritized QFP as at 806 - 812 throughout

834½ - 837½ BRECCIA ??
H grey with H grey sil frags in H grey matrix of silica + pyrophyllite; qtz eyes also present; tr. moly dissem throughout

837½ - 1103 QUARTZ FELDSPAR PORPHYRY

As above 806½ - 834½

SECTION	ALTERATION: PROPYLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
810	10%		20%	70%				5%						
820	2%		10%	70%	Weak			15%	10	97	NQ WL	5354	99.4	
830								1%				5355	100.0	
840								5%	10	102		5356	94.2	
850	2%		10%					2%	11	89		5357	91.5	
860	5%							5%	8	94		5358	100.3	
870									10	103		5359	99.5	
									10½	98				

HOLE NO: EC - 103 | PROJECT: EXPO | PAGE NO: 12 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

837½ - 1103 QUARTZ FELDSPAR PORPHYRY

from 909 - 920 also 5% magnetite in dark chloritized frags

~ at 911 red hem gouge

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
870	10%			70%	Weak			5%			NQ WL	5360	100.0	
880	10%								10	101		5361	96.5	
890	5%								10	94		5362	96.6	
900	2%								10½	98		5363	100.4	
910								1%	9	102		5364	102.0	
920	5%								10	102		5365	97.1	
930								3%	10½	95				
								5%						

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 13 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23, 1974 | REF. TO CLAIM CORNER:

COORDINATES: 246, 880.6 N. 233, 415.9 E. | DATE FINISHED: July 7 / 74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

837½ - 1103 QUARTZ FELDSPAR PORPHYRY

at 744, at top of shear 3" of 50% pyr gouge; pyr as loose unground x/s

from 960 - 962 5% magnetite in dark chlorite - pyroph? frags

from 975 - 977 white pyrophyllitized feld phenos leached out

iron stained pyroph vnlt - orange

red hem and mag. vnlt at 973

at 980½ red hem and mag. vnlt and at 984

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
930	5%			20%	moderate			5%	9½	105	NQ WL	5366	101.5	
940									10½	96		5367	98.7	
950	5%								10½	92		5368	93.4	
960									10	100		5369	96.8	
970	5%			70%					10	100		5370	100.0	
980	2%								10	98		5371	98.8	
990														

HOLE NO.: EC-103 | PROJECT: EXPO | PAGE NO: 14 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.2%

DESCRIPTIVE GEOLOGY

837½ - 1103 QUARTZ FELDSPAR PORPHYRY

994-995 - matrix pink, silica - pyroph.

pyroph. gouge

at 1020½ clot of cpy

from 1022 - 1066 QFP very heavily pyrophyllitized; rock med grey, greasy feeling with, translucent blue grey, lath-shaped x/s replaced by pyroph; very rarely dark green chlorite - pyroph and/or mag; also qtz eyes - hard to see because of bleaching

1039 bx'd qtz vn.

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
990							
	2%						
1000							
				60%	Moderate		
1010							
	2%						
1020							
1030							
1040	Tr						
	2%						
1050							

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	11	89	NQ WL	5372	92.6	
0.5%	3½	98		5373	93.4	
5%	8½	97		5374	97.9	
	10	100		5375	99.1	
3%	10	97		5376	98.2	
	10	101		5377	101.3	

HOLE NO. EC-103 | PROJECT: EXPO | PAGE NO: 15 OF 15

CASING COLLAR ELEV.: | GROUND ELEV.: 1123.3 | DATE STARTED: June 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,880.6 N. 233,415.9 E. | DATE FINISHED: July 7/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1103' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 94.2%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
1050	2%			60%	Moderate			837½ - 1103 QUARTZ FELDSPAR PORPHYRY	3%	10	102	NQWL	5378	101.4	
1060								at 1066, QFP has different appearance, very dense with dark green (10%) chloritized frags with some magnetite, occ white qtz eye (5%) and white and pale green feld-pyroph? in pink to pale green silica-pyroph? groundmass; 3% magnetite; pyr mainly on fracts and in dark green frags; pink zeolite vnlts		10	100		5379	99.1	
1070	5%							mag vnlt		10½	97		5380	97.3	
1080								from 1097, QFP bleached white, pyrophyllitized vague white lath shaped frags and qtz eyes still visible; med grey silica-pyrophyllite matrix		10	98		5381	97.8	
1090								bleached and groundup QFP		9½	97		5382	88.0	
1100								T.D. 1103'		6	67		5383	67.0	
1103															

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 1 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER: EXPO 504 Fr.

COORDINATES: 247,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

COMMENTS: Dip test at 500'.

AVE CORE REC'Y / HOLE 94.0%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0														
10														
20	5%		30%	60%	Moderate			5%	2	38	NQ WL	17032	82.8	
30									5	103				
									1	67				
									4	90		17033	98.2	
									3	108				
40									4	100				
									3	78		17034	85.4	
									5	85				
50									2	88				
									3	97		17035	97.5	
									5	98				
60									5	97				

DESCRIPTIVE GEOLOGY

0 − 1 STICKUP

1 − 20 OVERBURDEN

20 − 500 ANDESITE LAPILLI TUFF

f.g., dark green chloritized frags in light grey siliceous matrix. occ. vague white sericitized feld-like frag. epidote throughout on fracts, in feld? and as clots; yellow green; epidote gone after 40'; after 50' mdy dissem throughout lap tuff. 5% mag in chloritized frags + in vnlts

from 51½ - zeolite vning

lap. frags, c.g. from 51½ and v.c.g. from 65-66

from 50 − 67 much sericite? development; lap frags at least ½ sericite

tr. mdy at 35'

cpy on fract at 36½'

small bleached zone with mdy at 51

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 2 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 74.0%

DESCRIPTIVE GEOLOGY

20- 500 ANDESITE LAPILLI TUFF

at 68' qtz eyes

72-73 white, sil bx frags, ang and one large brown 1½" siliceous frag in green matrix of sericite-chlorite-silica

77-80 brass on core

lapilli frags becoming larger and more corroded from 72; corroded by perv silica

zeolite coated fract only structure

fault zone - bleached sulphides unground

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
60	5%		30%	60%	Moderate		
70							
80							
90							
100							
110			20%	70%	Strong		
120					Mod		

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	5	98	NQ WL	17036	93.0	
	5	82				
	5	100		17037	87.1	
	3	69				
	1	125				
	6	74		17038	86.0	
	5	97				
	5	103		17039	87.1	
	9	54		17040	63.6	
	5	78				
	5	98		17041	88.4	
	6	79				

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 3 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 297,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 94.0%

ALTERATION: PROPYLLITIC 5% | ARGILLIC | SERICITIC 20% | SILICIC 70%

FRACTURING: Weak | Med | Weak | Strong

MINERAL

GEOLOGY

COMMENTS:

DESCRIPTIVE GEOLOGY

20 - 500 ANDESITE LAPILLI TUFF

- at 121½ annealed shear zone
- pyr vnlt with cpy
- 1' qtz vn with sheared frags of and lap tuff
- at 143½' ½" pyr vnlt with cpy

at 121½ annealed shear zone - sulphides ground to black powder - broken zeolite and qtz vnlt - 3" thick, silicified.

at 122 rock has peculiar brownish cast of secondary biotite; none visible

lapilli frags becoming very ragged from alteration by perv silica

from 160 - and lap tuff becoming very dense looking; reduction in amount of lap frags, finer grained and most fairly vague

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120	5%			NQWL			
		5	102		17042	96.8	
130		5	100				
		5	97		17043	97.0	
140		5	95				
		5	97		17044	96.9	
150		5	98				
	8%	5	105		17045	99.7	
160		5	92				
		5	98		17046	90.5	
170		5	77				
		2	92		17047	80.0	
		3	69				
180		4	85				

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 4 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

20 - 500 ANDESITE LAPILLI TUFF

190 - 200 10% mag dissem, in lap frags and as vnlts

lapilli text more prominent from 200; frags coarser and more distinct, not obliterated by alteration

at 210, lapilli frags v.c.g - at 212, one frag 3" across, very rounded; the frags themselves contain frags of mag-chlorite-sericite, dark green; some frags broken up by perv silica of lt grey matrix; 10% mag as vnlts, fract coatings, and in lap frags; v.c.g till 222

from 222 - 240 lap tuff dense just as from 160 - 200

- rock very broken up - no structures except for occ mod coated fract + pyr coated fract.
- tr. moly at 210
- at 221 - gypsum? in zeolite vnlt
- from 230 - zeolite vnlts with gypsum?

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180				NQ WL			
	8%	5	100		17048	96.9	
		4	96				
190		2	88				
	5%	5	102		17049	99.5	
		3	103				
200		2	58				
	10%	2	79		17050	79.0	
		2	100				
		2	58				
210		4	100				
		5	105		17051	101.9	
	5%	5	98				
220		3	72		17052	90.2	
		5	98				
230		5	103		17053	105.1	
		2	121				
240		5	98				

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 5 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

20 - 500 ANDESITE LAPILLI TUFF

at 240, lap frags have almost disappeared, those that remain are fg and generally very vague; matrix of rock has a brownish hue due to vfg dissem mag; magnetite distributed irregularly and where none is present matrix pale grey green; 10% mag

purple indicates gypsum vnlts

at 260½ - 267 bleached, sheared zone; minor gouge, rock mainly cracked; occ. small zone of gouge with ground sulphides; lt grey

at 291½ - 292, white, semi-transparent gypsum vein

≈ 6' gypsum vnlt

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240	5%		20%	60%	Weak	5%	5	103	NQ WL	17054	97.2	
250							5	87				
							5	103		17055	75.9	
260					Strong	10%	5	90				
							5	67		17056	75.2	
270	2%		30%	50%	Weak	8%	4	79				
							5½	96		17057	94.7	
280							5½	97				
							5	103		17058	100.3	
290							5	98				
							5	107		17059	101.0	
300			50%	50%			5	93				

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 6 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1"=10'

INCLINATION: −45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 94.0%

DESCRIPTIVE GEOLOGY

20 - 500 ANDESITE LAPILLI TUFF

from 307 - 311 slightly sheared, gougey zone, slightly bleached with much pyr; some sulphides ground and appear as dark streaks in lt grey rock, very little clay gouge; cut by numerous gypsum vn lts; same as 313 - 314½ but bleached to 317½; may be tr pyrophyllite from 316-317 buff, soft mineral; no magnetite in sheared bleached zones

cg, vague lap frags at 328 - 328½ composed of mag - chlorite - sericite, black and grey green

tr moly at 337

from 330 - 340 tr. brown secondary biotite? faint brownish clots in rock - no biotite flakes visible.

large brownish circular areas at 347 of brown biotite

from 355½ - 356½ bleached sheared zone as like 307 - 311

from 356½ - 372 and lap tuff looks like it contains very altered frags of a feld porph; pale green to buff frags with white feld - sericitized and interstitial

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300	2%		20%	60%	Weak			8%	5	100	NQWL	17060	96.2	
310	2%		30%	50%				15%	5	92				
			30%	50%					5	103		17061	99.0	
320			30%	50%					5	97				
			50%	50%					5	98		17062	93.9	
330	2%		20%	60%	Weak			8%	5	85				
									5	103		17063	91.6	
340									5	77				
									5	102		17064	96.4	
350			30%	50%				15%	5	100				
	2%							8%	5	92		17065	93.6	
360														

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 7 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1"= 10'

INCLINATION: -45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

20 - 500 ANDESITE LAPILLI TUFF

green chlorite - sericite matics; also occ dark grey frag containing white, f.g. sericitized feld? at 364 with clots of magnetite; minor brown biotite? throughout

from 373 - 377 cg lap frags, very altered and vague; frags of sericite - chlorite, med green

from 377 - 433 and lap tuff dense looking again lap frags f.g., green and very faint; highly sericitized; rock has a brownish to pinkish cast due to vfg secondary brown biotite

411½ - 412 Shear zone, bleached, sulphides unground

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
360							
	2%	5	105		17066	100.0	
370	8%	5	97				
		4	106		17067	102.6	
380	15%	5	102				
		6	85		17068	89.7	
390		5	95				
		5	98	NQ WL	17069	98.0	
400	8%	5	100				
		5	105		17070	101.9	
410		5	98				
		5	100		17071	98.7	
420		5	97				

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 8 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

20 - 500 ANDESITE LAPILLI TUFF

from 433 - 462½ and lap tuff a pale yellow buff colour with most of green chloritized frags gone - only dark grey sericite - pyr spots remain - occ tr chlorite; also white sericitized feld? very noticeable, vfg - occ a deep yellow or pale green colour; this rock may be ordinary and lap tuff as from 377 - 433 only bleached by gypsum and pyr veins - occ. bleaching noticed above which produced text and coloration similar to this rock no secondary brown biotite; tr - 5% magnetite

v at 435, tr moly

from 454 - 455 lap frags very prominent also 10% magnetite

brown biotite from 452 - 460 - makes rock have brownish cast; irregular, splotchy coloration

462½ - 500 dark grey, dense with few, black mag - replaced lap frags; mag dissem throughout matrix also; occ bleached zone as like 433 - 462½ along pyr veins; minor brown biotite, 8% mag; small flakes of black biotite scattered throughout matrix also - occ appear to be forming from altered amphibole? ie lath shaped

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY
420	2%		30%	50%	Weak		
430							
440	Tr		40%	45%	Mod		
450							
460	2%		30%	50%	Weak		
470	Tr		20%	60%			
480							

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
8%	5	103	NQ WL	17072	96.4	
	5	85				
15%	5	103		17073	100.0	
	5	105				
8%	5	92		17074	97.9	
	5	103				
	5	105		17075	102.5	
	5	98				
5%	5	106		17076	102.0	
	5	98				
	5½	92		17077	92.5	
	4½	89				

HOLE NO. EC-104 | PROJECT: EXPO | PAGE NO: 9 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1070 | DATE STARTED: June 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,770 N. 229,860 E. | DATE FINISHED: July 6/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 0° | TOTAL DEPTH: 500' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 94.0%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480	Tr		20%	60%	Weak			20 - 500 ANDESITE LAPILLI TUFF	5%			NQWL			
								at 482, 3" of very heavily sericitized rock pale green, textureless		5	103		17078	98.4	
490								at 483, small qtz eyes? located along a small gypsum filled fract; 1/16" diameter		5	97				
								~ amphibole? in gyps vnlt at 494		5	100		17079	94.3	
500										3	83				

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 1 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER: EXPO 258

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 88.7%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								0-1 STICKUP							
10								1-12 OVERBURDEN							
20	5%		30%	50%	Strong			12-14½ F.G. ANDESITE LAPILLI TUFF dark green sericite-chlorite frags from 1mm - 0.5 cm in grey green sericitized matrix; 10% magnetite dissem throughout cut by minor cpy-bearing qtz vns; sulphides in rock all cpy; fractures all rusty from 12-20;	2%	3	64	NQWL	17501	76.0%	
										2	83				
										2	75				
										2	100				
									10%	6	72		17502	66.5	
30	5%		30%	50%				at 22½-27 bleached, lt. buff colour, pyrophyllitized and silicified; cut by minor qtz vnlts, pyr vnlts; no lap text left, occ piece mag; contact gradational with above, vague lap frags at top; may be silicified pyrophyllite bx? matrix of and lap tuff consists of qtz grains held together by sericite;	3%	2	33				
										2	67				
										4	25		17503	64.9	
										3	94				
										2	100				
40	5%		30%	60%						4	85		17504	66.1	
								from 43-50 bleached as at 22½-27; occ. small zone of chloritized and lap tuff	15%	3	31				
										4½	76				
50	5%		30%	50%					5%	3½	100		17505	90.9	
										5½	89				
60															

- very little core from 31-35
- pyr vnlt with bleached selvages
- 41½-43 qtz vn
- tr moly at 44'
- poor core recovery only structure some pyr coated fracts
- 57½ cpy-mag qtz vnlt

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 2 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.7%

DESCRIPTIVE GEOLOGY

12 - 149½ F.G ANDESITE LAPILLI TUFF

from 63½ - 78 bleached as 22½ - 27; occ zone of chloritized and lap tuff

94½ - 103 bleached as 22½ - 27; no buff pyrophyllite noted here - only milky white sericite

108 - 110½ as 22½ - 27

112 - 117 as 22½ - 27

118½ - 125½ as 22½ - 27

NQWL

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
60	5%		30%	50%	Strong			5%	3	75	NQWL	17506	81.4	
70				60%	Very Strong			10%	5½	88				
									4½	61		17507	64.8	
80	5%		30%	50%					5½	73				
									3½	31		17508	61.3	
90					Strong			5%	4	90				
									3½	50				
									6½	82		17509	81.3	
100	5%		10%	70%				20%	5	80				
								5%	8	73		17510	72.5	
110	5%	5%	10%	70%				20%						
	5%	5%	10%	70%				5%						
								20%	7½	33		17511	75.6	
120	5%	5%	10%	70%				5%						
								20%	5	75				

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 3 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 691' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 88.7%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120	20%	3	69	NQWL	17512	81.6	
	10%	4½	93				
130	20%	2½	80		17513	61.4	
	5%	6½	55				
140	20%	3½	64		17514	33.1	
	5%	5	18				
	20%	2	17				
150	5%	2	79		17515	96.7	
	20%	6	99				
160	10%	10	98		17516	97.4	
		10½	96		17517	95.0	
170	20%	4	92				
180							

0-149½ F.G. ANDESITE LAPILLI TUFF

118½ - 125½ as 22½ - 27

at 125½ ruggy, qtz vn with pyr cpy; 125½ - 126½ has white, sil bx frags - would appear to be broken qtz vn; qtz vns also brecciate and lap tuff; sil bx frags also at 129½ - 130½

128 - 129½ bleached as 22½ - 27

130½ - 134½ bleached as 22½ - 27

137 - 149½ bleached as 22½ - 27

149½ - 237 SILICIFIED PYROPHYLLITE BRECCIA

lt grey, very silicified; from 149½ - 152 lt grey, siliceous bx frags in pyr-rich siliceous matrix; from 152 - 200 bx text. disappears, rock massive with irregular to angular patches of pyrophyllite (white). pyr as irregular vnlts and clots; this rock itself appears bx'd due to massive pyr vnlts and. perv silica; immense amt of cpy

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 4 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.7%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180								149½ - 237 SILICIFIED PYROPHYLLITE BRECCIA	20%			NQWL			
				70%	Weak			at 200 - 202, silicified pyrophyllite breccia bx'd by massive sulphide which forms matrix to bx frags; frags ang, c.g	30%	10½	97		17518	96.3	
190								from 202 - 203 frags f.g - mostly pyr in this section (80%)	20%	10	102		17519	101.0	
200				20%				from 203 - pseudo-bx text of 152 - 200 disappears entirely due to heavy perv silicification; occ white pyroph frag still visible	60%						
				85%				from 218½ - 220 massive sulphide zone with f.g white pyroph frags and lt grey siliceous frags;	15%	10	98		17520	98.8	
210				90%				from 229½ - 237 f.g bx, lt grey f.g siliceous bx frags and white pyroph frags in lt grey siliceous; pyr-rich matrix	10%	8½	91		17521	92.4	
				20%					70%						
220				90%	Moderate			237 - 244½ QUARTZ FELDSPAR PORPHYRY ??	10%	10	90		17522	90.1	
230				75%				dark green chlorite-sericite frags and white qtz eyes in pale grey-green chlorite-silica matrix; some green frags completely altered to white, soft sericite; also occ mag in green frag; chloritized from 237-241; bleached QFP from 241-244½ highly sericitized with minor small qtz eyes; white feld? frags? completely altered to sericite	20%	6½	85		17523	86.5	
240	5%		30%	55%					5%						

Pyr rich zone, f.g. dissem

231, moly smear on fract

¼ mag clots in siliceous matrix

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 5 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390. N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.7%

DESCRIPTIVE GEOLOGY

237 - 244½ QUARTZ FELDSPAR PORPHYRY

244½ - 249 BRECCIA
rock dark grey with, semi-translucent, ? blue-grey; completely sericitized. frags? or feld? also contains some very irregularly shaped, buff, highly pyrophyllitized?, vfg QFP frags with small qtz eyes; matrix siliceous; dark coloration due to f.g pyr; one rounded pyr clast at 246; 248-249 is bleached QFP

249 - 264½ QUARTZ FELDSPAR PORPHYRY
dark green, sericite-chlorite frags, light green sericite-chlorite frags and white qtz eyes in lt grey siliceous matrix; chloritized to 252; contains 6x frags of sil. and lap tuff? - dark green chlorite-sericite frags in lt grey sil. matrix, buff sericite-silica frags; from 252 - 263½ QFP as BRECCIA at 244½ - 249 with, pyrophyllitized? feld?, buff QFP frags and much lt grey sil frags with white sericite replaced feld?; matrix highly pyritized, sil. occ zone of chloritized QFP; qtz eyes also present; BRECCIA above may also be bleached QFP; from 263½ - 264½ chloritized, QFP as 247 - 252 - no 6x frags though

clot ¼" of cpy 273½

264½ - 301 BRECCIA
frags consist of buff siliceous QFP with white, totally sericitized feld?, lt grey siliceous frags in pyr - silica matrix; at 290, buff pyroph 6x frags; also green, chloritized QFP frags as at 263½ - 264½; at 295, fg 6x in very highly pyritized matrix

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240	5%		30%	50%	Mod			5%	8	89	NQWL	17524	93.5	
250	5%		20%	60%	Weak			15%	10	98		17525	98.0	
	5%		20%	60%				10%	10	98		17526	87.5	
260	5%				Moderate			3%						
270	5%		30%	50%				10%	6½	77				
			10%	80%	Weak			5%	10½	96		17527	93.2	
280								20%						
								10%	10	96		17528	96.0	
290			20%	40%	Weak	Mod		40%	10½	91		17529	92.0	
300														

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 6 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.7%

DESCRIPTIVE GEOLOGY

301 – 315 QUARTZ FELDSPAR PORPHYRY
H grey, sil matrix with white totally sericitized feld and minor qtz eyes; at 304-305 chloritized with dark green sericite-chlorite frags, pale green-white sericite-chlorite frags (feld?) and white qtz eyes. 5% magnetite; matrix siliceous, H grey-green.

315 – 316 BRECCIA
H grey sil frags in pyr-silica matrix

315 – 641 QUARTZ FELDSPAR PORPHYRY

from 315 – 323 as 301 – 315

323 – 327 chloritized QFP; dark green, sericite-chlorite frags – occ lath shaped, f.g white sericitized feld? and white qtz eyes in a green siliceous matrix; 2% magnetite, cut by numerous qtz vnlts

327 – 330 bleached QFP H grey siliceous matrix with white, sericitized feld?; qtz eyes not noticeable; appears bx'd due to numerous qtz vnlts; med grey sil frag at 328½

330 – 348 chloritized QFP as 323-327; occ yellow sericitized, feld-like frag; 5% mag as vnlts and dissem.

348 – 354½ bleached QFP as 327-330

354½ – 369 chloritized QFP as 323-327 some bleaching along qtz vnlts

343½ tr moly in bleach zone of qtz vnlt

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300			20%	40%				40%						
310	5%		20%	70%	Weak			10%	10	94	NQWL	17530	93.3	
				50%				30%						
320			20%	75%	Med			15%	9½	102		17531	100.0	
	5%		30%	60%				5%						
330	5%		30%	55%	Weak			10%	10	103		17532	102.8	
								3%						
340			30%	55%					11	89		17533	91.8	
350			20%	70%				10%	9½	93		17534	91.8	
	5%							3%						
360			30%	55%					10½	92		17535	92.3	

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 7 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 88.7%

DESCRIPTIVE GEOLOGY

315 - 641 QUARTZ FELDSPHIR PORPHYRY

367 - 370½ - bleached QFP as 327-330

370½ - 384½ chloritized QFP as 323-327

384½ - 387 bleached QFP as 327-330

387 - 391 chloritized QFP as 323-327

391 - 399½ bleached QFP as 327-330

399½ - 425½ chloritized QFP as 323-327

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
360	5%		30%	55%				5%	10	100	NQ WL	17536	97.6	
370			20%	70%				10%						
	5%		30%	55%				3%	10	102		17537	101.4	
380					Weak									
	5%		30%	55%				10%	10	97		17538	98.5	
390			20%	70%				3%						
									10	80		17539	85.1	
400			20%	70%	M			10%						
	5%		30%	55%					6½	78		17540	79.4	
410					Weak			3%						
									10½	94		17541	94.0	
420														

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 8 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.7%

DESCRIPTIVE GEOLOGY

315 - 641 QUARTZ FELDSPAR PORPHYRY

425½ - 427½ bleached QFP as 327-330

427½ - 431½ chloritized QFP as 323-327

431½ - 437 bleached QFP as 327-330 at 436, 6" chloritized zone

437 - 440½ H grey, highly silicified QFP; white totally sericitized frags have disappeared, qtz eyes not noticeable with naked eye; silicification and pyr vnlg give rock a bx text; at contact with rock below a fg bx zone - siliceous, H grey frags in pyr-silica matrix

440½ - 446½ highly pyritized zone with H. grey, sil frags in silica-pyrite matrix

446½ - 451 H grey, silicified, with occ white sericitized feld?; occ qtz eye visible

451 - 466½ as 437 - 440½

466½ - 467½ bleached QFP as 327-330

467½ - 470½ chloritized QFP as 323-327 bleaching along some qtz vns; some qtz vns, dark grey - may be moly in them

470½ - 490 H grey silicified QFP as 437 - 440½; has bx text; qtz eyes noticeable; from 477 - 482 sericite areas pale yellow

~457, moly on fract

~465½ moly in qtz vns

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420	5%		30%	65%	Weak			3%	10	99	NQ WL	17542	99.0	
430	5%		30%	50%				3%						
			20%	70%				10%	9½	79		17543	79.0	
440			5%	80%				15%	4	79		17544	84.2	
			20½?	30%	Moderate			50%	7½	87				
450									6	90		17545	90.6	
				80%				20%						
460									10	93		17546	94.5	
	5%		30%	60%	Weak			10%						
470									10	98		17547	95.0	
480								5%						

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 9 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 296,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.7%

DESCRIPTIVE GEOLOGY

315 - 641 QUARTZ FELDSPHR PORPHYRY

490 - 499½ green chloritized QFP with white, qtz vn frags, black magnetite - cpy clasts, dark green chlorite - sericite/mag frags and white qtz eyes in H green grey siliceous matrix; may locally up to 20% of rock - dissem, as clasts and occ in vnlts; minor light yellow green frags of sericite also

499½ - 502½ bleached QFP; H grey to pink sericite - silica matrix with white sericite frags and white qtz eyes; occ sheared, sulphides not ground except in small shear zones

502½ - 641 mainly chloritized QFP as 490 - 499½ with numerous small bleached zones along pyr vnlts and shears

~515 moly, dissem in qtz vnlt

SECTION	PROPYLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480			50%	60%	Weak				10	88		17548	90.7	
490	5%								10	97		17549	97.6	
		20%	50%	50%	Moderate				10	99		17550	98.4	
500														
510			50%					5%	9½	97	NQWL	17551	98.0	
520	5%	80%		60%	Weak				10	102		17552	98.9	
530									10½	93		17553	95.1	
540														

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 10 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ~1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 88.7%

DESCRIPTIVE GEOLOGY

315 - 641 QUARTZ FELDSPAR PORPHYRY

from 540 - 541 intensely silicified zone, H grey (90% silicification), faint QFR text left, white, sericitized feld

from 570 - 595 shear zone; rock cracked with small gouge zones; clay holds rock frags together; not bleached, sulphides unground

599½ purple mineral like dumortierite

ALTERATION: PROPYLLITIC 5%; ARGILLIC; SERICITIC 20%; SILICIC 60%; 50%

FRACTURING: Weak; Moderate

MINERAL

GEOLOGY

NQWL

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
540	5%	10	100		17554	99.7	
550		10	99		17555	98.9	
		2	100				
560		10	96		17556	96.1	
570	3%	10½	97		17557	97.1	
580		10	99		17558	98.8	
590		10½	95		17559	95.0	
600							

HOLE NO. EC-105 | PROJECT: EXPO | PAGE NO: 11 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1050 | DATE STARTED: July 8/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,390 N. 233,800 E. | DATE FINISHED: July 12/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 641' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 88.7%

DESCRIPTIVE GEOLOGY

315 – 641 QUARTZ FELDSPHR PORPHYRY

PROPYLLITIC 5% | SERICITIC 50% | SILICIC 10% | FRACTURING Moderate

% SULPHIDES 3%

CORE SIZE NQWL

SECTION	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
600	10½	95	17560	95.0	
610	10½	93	17561	93.1	
620	10	103	17562	102.0	
630	10	101	17563	101.2	
640					

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 1 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER: EXPO 261

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 79.7%

DESCRIPTIVE GEOLOGY

0 – 1 STICKUP

1 – 44 OVERBURDEN

(overburden may be down to 102' – neither driller could agree whether they were in bedrock)

44 – 55 BASALT?

black, magnetic, hard with occ fg white feld visible – fresh; no structures rock very badly broken

55 – 111 ANDESITE?

from 55-71 rock dark with chlorite-mag-sericite areas, white qtz eyes? – very minor and fresh white feld; 10% magnetite no structures, rock very badly broken

71 – 102 TRICONED

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0														
40														
50	10%		20%		Very Strong			Tr	4	31	NQWL	77270	29.0	
									4	25				
60								1%	6	40		77271	39.0	
									3	50				
									3	58		77272	43.9	
70									3	53				
								5%	4	25				
80											TRICONE			

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 2 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 79.7%

DESCRIPTIVE GEOLOGY

55 - 111 ANDESITE?

from 102 - 111, rock pale green, with some buff pyrophyllite - pervasive. f.g. white, sericitized feld visible also former dark green areas now pale green and sericitized

111 - 138, PYROPHYLLITE BRECCIA

buff, and lt grey with white pyrophyllitized frags and at 113, grey, siliceous frags; pyrophyllite coats fractures; cc pyr veining makes rock look bx'd - buff pyroph frags in darker matrix.

138 - 140 ?

rock very gouge, green, textureless; there are some large, lt grey qtz frags, rounded, present, so may be a very small tongue of highly altered qtz feld spar porphyry; sulphides have suffered minimal grinding

- gouge zones almost entirely clay with some qtz grains + unground sulphides
- bx frags at 113, grey siliceous
- no attitude available, internal structure suggests 45°

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
80											TRICONED			
90														
100														
110	5%				Very Strong			3%	6	42		77273	47.8	
									6	65		77274	68.6	
120					Moderate			10%	4	75	NQWL			
					S.				8	63		77275	64.8	
130					M				2	92				
	5%				Very Strong			5%	10	43		77276	49.4	
									24	75				

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 3 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 79.7%

DESCRIPTIVE GEOLOGY

152 − 153 F.G QUARTZ FELDSPAR PORPHYRY

pale green, siliceous:- sericite matrix with white sericitized f.g felt; bleached white also; no qtz eyes visible

153 − 264 SILICIFIED PYROPHYLLITE BRECCIA

H grey, siliceous with buff pyrophyllite zones; contains f.g white to translucent blue-pyrophyllitized frags that very much resemble feld; from 153 − 157 gouge zone mostly clay, sulphides unground;

at 163 − 164, 1" wide annealed bx zone running up core axis; consists of white siliceous bx frags in a dark grey pyr-silica matrix; pyr ground

from 178 − 179½ bx zone as at 163 − 164; also contains frags of silicified pyroph bx; frags range from ¼" − 2" across.

~ bx'd zone at 163 − 164

~ 192½ cpy on fract

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
140				TRICONED		TRICONED					
150	2% PROPYLLITIC; 50% SERICITIC	V.S.			1%	5	48	NQ WL	77277	61.9	
160		Mod		~ bx'd zone at 163 − 164	5%	1	75				
170	60% SERICITIC	Weak → Strong			10%	10	90		77278	92.0	
180						8	100		77279	88.7	
190		Weak		~ 192½ cpy on fract	40%	3½	69				
200						4½	90		77280	88.8	
						4	83				
					10%	4	98		77281	91.6	
						12	90				

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 4 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 79.7%

DESCRIPTIVE GEOLOGY

153 - 264 SILICIFIED PYROPHYLLITE BRECCIA

from 213 - 214 covellite with minor cpy on fract; cpy occ by itself on fracts also.

from 220 - 226 sil. pyroph bx may actually be bleached, very altered qtz feld porph; rock contains white, soft feld-like frags in a buff to H grey siliceous matrix; qtz eyes not visible.

from 220 - 250 there some tiny blackish specks in rock which may be cct or cov;

~ at 226, tr cov in pyr. with

~ tr cov at 231

~ no core - tube didn't lock } 231 - 238

~ only structure present is pyr coated fracts

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
200				NQWL			
		4	102		77282	95.2	
210	10%	6	92		77283	97.2	
		4	102				
220	5%	10	98		77284	83.8	
230	10%	10	27		77285	40.4	
		3	94				
240		3	97		77286	73.5	
	10%	4	60				
250		3½	55				
		6½	12		77287	16.9	
260							

ALTERATION: SILICIC 60% | FRACTURING: Weak

ALTERATION: SILICIC 60% | FRACTURING: Strong

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 5 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 79.7%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
260				60%	Strong			153 - 264 SILICIFIED PYROPHYLLITE BRECCIA	10%	6	4	NQWL	77288	29.2	
								only structure is pyr coated fracts		4	50				
270								264 - 502 BLEACHED FELDSPAR PORPHYRY		4	38		77289	72.8	
								lt grey, siliceous with white, very altered (sericite? pyrophyllite?) feld phenos, f.g; also, translucent grey ser? - pyroph? pyr spots which resemble mafic frags in QFP.; at 286 white qtz eyes; tr moly; tr. cct? or cov? from 290 - 295		4	90				
										2	71				
280										2	75				
										3	75		77290	85.2	
										1	75				
					Weak			from 295 - 308 feld porph leached; matrix pale green with orange rust cast while frags vary from deep orange, green, white qtz eyes; some frags leached out; pyr partially removed and rusty		7	92				
290					Moderate					2	83		77291	100.4	
									5%	5	108				
300								308 - 312 heavily sericitized feld porph; lt grey with white feld phenos still visible							
									3%	8	103		77292	98.7	
								312 - 319 as 295 - 308; from 316 - 319, not very heavily leached; most frags pale green colour; matrix lt green grey, siliceous		3	97				
310			40%		Strong					3	78		77293	93.6	
				60%					5%	6	96				
320										4	102				

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 6 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 79.7%

DESCRIPTIVE GEOLOGY

264 - 502 BLEACHED FELDSPAR PORPHYRY

from 319 - 337 pale green, siliceous matrix with white to pale green, sericitized? feld phenos, buff pyrophyllite? frags and minor qtz eye's; at 322½ - 323½ slightly leached, feld phenos orange

337 - 357½ as above only lt grey matrix

357½ - 367 leached feld porph with orange cast to pale green matrix - siliceous; white feld have yellow colour; greenish frags orange. Bleaching along some pyr vnlts, pyr slightly corroded! at 364½ - 365 6" bx zone annealed containing f.g white siliceous frags, and a large buff siliceous frag (2") in a grey silica - pyr matrix, pyr has been ground up.

367 - 393 as 337 - 357½.

~ 364½ - 365

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
320	Tr	S			5%	7	94	NQ WL	77294	92.7	
330		W Moderate			3%	4	65		77295	90.4	
						3	131				
340						3	94		77296	54.7	
		strong				6	34				
350		M				2½	60		77297	71.3	
						2	104				
						3½	38				
360		Weak				1	50				
						3	125				
	60%				5%	10	58		77298	75.4	
370		Strong				4	116				
		M				2	200		77299	122.7	
380	Tr					5	105				

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 7 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 79.7%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
380	Tr			60%	Mod.			264 - 502 BLEACHED FELDSPAR PORPHYRY	5%	5	93	NQWL	77300	86.8	
								393 - 408 leached feld porph; as 357½-367 from 404-408 sericitized feld eaten out only empty holes left; bleaching along pyr vnlts		4	67				
390					S					3½	107				
								at 398½, 2" bx zone with siliceous frags in silica-pyr matrix, pyr also corroded here		2½	80		77301	87.0	
					Weak					11	88				
400								408 - 414 lt grey feld porph as 337-357½							
								414 - 431 leached feld porph; from 414 - 423 green with slight orange cast. green frags of ser - tr. chl and white to yellow feld - rare; most feld leached out; from 423 - 431 lt grey with most of white sericitized feld removed.		4	100		77302	95.6	
410					Strong					5	102		77303	67.7	
420								431 - lt grey feld porph with white sericitized feld phenos, clots of pyr and translucent blue grey elongate frags also sericitized; at 433½ - 434 f.g bx zone with fg white siliceous frags in silica-pyr matrix		15	53		77304	60.0	
430					Weak				8%	6	88		77305	95.8	
440										6	101				

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 8 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 79.7%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
440							
		6	99		77306	97.0	
450		4	94				
		3	69		77307	81.8	
		3	117				
		2	67				
460		5	63		77308	84.4	
		5	97				
470	8%	5	85	NQ WL	77309	90.6	
		5	97				
		1½	83				
480		3½	43		77310	52.7	
		1	25				
		2	113				
		4½	28				
490		5½	70		77311	69.1	
		5	88				
500							

264 - 502 BLEACHED FELDSPAR PORPHYRY

at 473 - 473½ 6x as at 433½ - 434

at 476, 2" 6x zone as above

from 473, occ, fg qtz eye visible with hand lens

at 480 qtz eyes just barely visible with naked eye; masked by perv silicification of matrix

488½ tr moly

60%

Weak | Moderate | Strong | Mod | Weak | Strong | Mod

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 9 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 79.7%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
500				60%	Moderate			264 - 502 BLEACHED FELDSPAR PORPHYRY	8%			NQWL			
									10%	5	105		77312	94.4	
510								502 - 543 ? buff to light grey, generally textureless rock no feld phenos visible, occ translucent grey patch with pyr; still silicified; rock has very greasy feel; pyrophyllitized feld porph? qtz eyes still visible occ.; also occ f.g. white sericitized? specks; sericite? coating on some fracts		7	81		77313	85.2	
520					Weak					8	88				
								543 - 651 QUARTZ FELDSPAR PORPHYRY pale green matrix with dark green sericite-chlorite frags and white qtz eyes and f.g. white feld laths - sericitized; bleached at upper contact; feld laths larger in bleached area and green frags are pale or none existant. occ bleaching along pyr vnlts, bleaching along shears, occ tr moly		6	88	BQWL	77314	85.8	
530					Moderate					4	77				
								at 553 - 553½ bx zone; white sil frags and one 2" frag of bleached QFP in a silica-pyr matrix		6½	109		77315	98.9	
540					Weak					9½	84		77316	87.0	
550	Tr 2%		30%		Moderate				5%	10	99		77317	100.2	
560	5%														

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 10 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

SECTION | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 79.7%

DESCRIPTIVE GEOLOGY

543 – 651 QUARTZ FELDSPAR PORPHYRY

~at 563½ tr moly on fract

from 563 – 564 bleached, lt grey, mottled with darker grey patches filled with sericite and pyr

bleaching asso'd with shears; no cpy in bleached zones but chloritized sections may go as high as 0.2%

from 587 – 588 small bx zone with white sil. frags in dark grey pyr-silica matrix

from 607½ – 610 magnetite zone; dark green to black, highly sericitized, 10% magnetite, no text left

~593 tr dissem moly

~cpy in qtz vnlt at 608.

~cpy in pyr vnlt

~unground qtz vn in shear zone

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
560	5%		30%	60%	Moderate		
570	5%						
580	Tr.						
590	5%		50%				
600	2%						
610	5%		40%		S		
620	2%		50%		Moderate		

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	6	107	BQWL	77318	101.0	
	6	97				
	8½	94		77319	93.1	
	8½	88		77320	91.6	
3%	10	100		77321	100.3	
	10	101		77322	98.9	
	10½	94		77323	95.8	

HOLE NO. EC-106 | PROJECT: EXPO | PAGE NO: 11 OF 11

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1250 | DATE STARTED: July 11/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,060 N. 235,780 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 651' | LOGGED BY: UGM

SECTION	ALTERATION: PROPYLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
620	2%		30%		Moderate			513 - 651 QUARTZ FELDSPAR PORPHYRY from 631 - 636 totally bleached; very little text discernible; some qtz eyes and vague translucent, sericitized feld phenos.; from 634½ - 636 white sericitized feld phenos very distinct	3%	6½	101	BQWL	77324	84.0	
630										4	58				
									5%	7	102		77325	94.5	
640	5%									5	87				
										5	95		77326	100.7	
										2	150				
651										4	83				

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 1 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER: EXPO 217

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: -70° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 13.1%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								0-1 STICKUP							
								1-20 OVERBURDEN							
10															
20	10%		35%	5%	Strong			20-53 F.G. ANDESITE LAPILLI TUFF dark green-grey rock with vague dark green, sericite-chlorite frags, black clots of magnetite; matrix med green grey. 10% magnetite dissem and vnlls; matrix to frags sericitized also, silica alteration only as vns; some sericite coatings on fracts.	0.5%	2½	40	NQWL	77051	73.3	
										4½	78				
										3	94				
30										7½	86		77052	81.7	
								53-61½ QUARTZ FELDSPAR PORPHYRY dark green sericite-chlorite-pyrite frags, white qtz eyes, occ. qtz vn. frag in H grey siliceous matrix. magnetite locally concentrated up to 10%, averaging 5%.		2	71				
40										5	60		77053	71.3	
										2½	57				
										3½	100				
50										4	77		77054	67.9	
	5%		35%	40%					3%	4½	53				
0										1½	28				

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 2 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

53 - 61½ QUARTZ FELDSPAR PORPHYRY

61½ - 89 F.G ANDESITE LAPILLI TUFF
as 20-53; tr moly disseminations 74-79½

89 - 350 C.G ANDESITE LAPILLI TUFF
cg dark green sericite-chlorite frags with mag in lt grey green to grey matrix also sericitized; frags have darker green frags within them, f.g.; bleached along some shears to buff colour - only vague lapilli text left; 5% magnetite; fract heavily sericite coated; cpy restricted to fract +

from 107½ occ. silicified and lap tuff; dark green sericite-chlorite-mag frags in lt grey silica-sericite matrix.

¼% qtz vn with mag clots

NQ WL

SECTION	ALTERATION: PROPYLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
60	5%		5%	4%				3%	3½	88				
70	10%		35%	5%				1%	3	58		77055	75.1	
									5	85				
									2	71		77056	87.1	
80									2	82				
									3½	93				
									3½	98		77057	92.7	
90	5%		30%	30%	Strong				6	90	NQ WL			
									8	93		77058	86.7	
100								5%	6	72				
												77059	80.3	
110	10%		35%	20%				1%	4½	81				
									3	89				
									3	81				
									1	100				
									2½	93		77060	89.2	
									1	82				
120									3½	90				

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 3 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

89-350 CG ANDESITE LAPILLI TUFF

at 131, and lap tuff f.g.; at 138 cg again, from 130-131, sericite development cg and occ yellow.

at 135, white sericitized qtz eyes? round, partially soft, 6" zone.

from 138-174 dark green frags chl-ser-mag in H grey ser-sil matrix; also f.g. clots of white ser.

myriads of tiny qtz veins sheeted through dark green-mag-rich sand lap tuff?

FRACTURING: NOW

SECTION	ALTERATION: PROPYLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120	10%			10%			3%	9½	85	NQW	77061	85.8	
130				5%				6	97		77062	91.6	
140								3½	83				
								4	94		77063	86.0	
150	5%		35%	20%				2	88				
								4½	76				
								2	88		77064	79.6	
								2	67				
160								3	81				
								1	92				
								3	75		77065	75.0	
								5½	70				
170								3½	86				
								4	81		77066	77.8	
	10%			10%				2½	70				
								1½	72				

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 4 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

89-350 CG ANDESITE LAPILLI TUFF

~rock ground, sulphides unground

from 205-218 as 138-174; no clots of sericite but sericite still on fracts

~208-½ bornite on fract

from 232 small zeolite veining very common, pink, irregular

NQ WL

SECTION	ALTERATION: PROPYLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180	10%		35%	10%	VS			3%	4	85		77067	94.0	
					Strong				6½	100				
190									2	70		77068	70.7	
					Very Strong				4	83				
200								5%	5	60		77069	87.6	
	5%	10%	30%	30%	Strong				4½	81				
									3	103				
210									3	86		77070	92.0	
									3½	90				
									4	96				
220	12%	35%	5%	5%	Very Strong			3%	3½	90		77071	86.2	
									4½	87				
230	10%	35%	5%	5%	VS Strong				4½	83		77072	82.3	
									8	81				
240														

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 5 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

89 - 350 CG ANDESITE LAPILLI TUFF

from 242½ - 270 as 138 - 174; sericite coating on fracts has disappeared, zeolite vning common; 5% mag; rock from 262 - 266 has a hornfels appearance. lap text almost removed, fg, dense-looking

from 270 - 279 rock slightly sheared and alt bleached to a lt grey colour, zeolite vning also sheared, sulphides unground

from 279 - 350, as 138-174 only slightly more siliceous; less lap frags, zeolite vning and tr magnetite; at 299½ and 300 some sericite assoc'd with 2 rare mag clots coloured epidote green - epidote? in with sericite?

~ 241, tr mag in qtz vnlt

~ mag clot with epidote?

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240							
		10½	92		77073	92.3	
250	3%	10	98		77074	97.5	
		10½	88	NQ WL	77075	88.0	
260	5%						
		10	92		77076	91.7	
270	3%	10½	94		77077	94.0	
280							
		10	100		77078	99.7	
290							
300							

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 6 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

89 - 350 CG ANDESITE LAPILLI TUFF

except for shear zone areas, rock resembles that from 262 - 266 - hornfels? dense, few frags; shear zones heavily sericitized, somewhat bleached;

occ speck of epidote - green mixed in with sericite - epidote ??

from 330 - 350 tr moly dissem

?

350 - 538 HORNFELS

dark grey, hard with very few dark green sericite - chlorite - magnetite frags; dark colour of rock due to dissem mag (at least 10%); zeolite vning; some bleaching along vning; matrix appears to be mainly silica, with some sericite and magnetite, mag dissem and in vnlts

moly dissem sparsely throughout

occ epidote green sericite assoc with fracts and remaining lap frags - epidote?

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
300	5%		20%	50%	M		
310					Weak		
320					Mod		
330	2%		40%		S		
340	5%		20%	40%	Weak		
350	2%		10%	50%			

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
3%	8½	102	NQ WL	77079	101.4	
	10	97		77080	96.9	
	7	96		77081	97.2	
5%	10½	99		77082	98.0	
	9½	96		77083	97.6	
	10	100		77084	98.0	
	7	95				

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 7 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

SECTION	ALTERATION: PHYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
									93.1%							

DESCRIPTIVE GEOLOGY

360

350 – 538 HORNFELS

at 379 - 461 matrix a pale green colour; lap frags more frequent

370

380

390

460

at 418 and 419 rock has brownish colour in with magnetite; may be secondary brown biotite? no flakes visible; moly also present in these zones

410

420

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.
5%	7	95	77085	95.0
	7	93	77086	95.7
3%	10	102	77087	100.2
5%	10	96	77088	97.2
3%	10	100	77089	98.5
8%	9	95	77090	98.6
5%				

ALTERATION: PHYLLITIC 2%; SERICITIC 10%; SILICIC 50%

FRACTURING: Weak

CORE SIZE: NQ WL

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 8 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420		10	104		77091	102.4	
430		7	100		77092	95.1	
440		11	93		77093	95.4	
450	5%	10	97	NQWL	77094	104.2	
460		10	109		77095	105.4	
470	3%	10	103		77096	102.4	
480		10	102				

350 – 538 HORNFELS

at 461, rock dark grey hornfels from dissem. mag. only rare lap frags present, at least 10% mag; epidote? with zeolite vning and as small clots in matrix; mag also as vnlts usually carrying cpy

big clot of MoS_2 in qtz vn

at 473½ – 478 zones of brown secondary biotite; much cpy assoc'd with biotite; mag dissem in matrix disappeared

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 9 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 93.1%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480	2%		10%	50%	Weak		much cpy + moly in shear zone	350 - 538 HORNFELS	5%			NQWL	77097	100.2	
490									3%	10	99		77098	103.2	
500								annealed shear zone? 6" of epidotized rock containing bx'd qtz vn frags and pyr-cpy clasts; matrix appears to be composed mainly of silica?, epidote		9	106		77099	98.3	
510	2%		10%	50%	Moderate			from 508 - 510, rock almost black due to 15% mag; rock appears bx'd due to irregular placement of mag	5%	10½	95		77100	99.3	
520	Tr				W		at 523½ zeol vnlt with bx frags	from 513 - 514 brown secondary biotite present; also epidote and much cpy		10	101		77251	99.7	
530	2%		10%	50%	Moderate			from 519 - 528 swirling mass of pink and white zeolite vnlts occ. with much mag	2%	10½	99				
								at 531. qtz eyes?, white siliceous, round							
540			10%					532 - 538 black mag rich rock with white unaltered feld and unaltered; fg hornblende	5%	4	94		77252	96.0	

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 10 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

538 - 552 ANDESITE

grey green to grey, salt and pepper texture; consists of f.g sericitized feld and occ green sericite - tr chlorite mafic? brown secondary biotite occurs throughout; magnetite only occurs as vnlts; zeolite vnlts

zone of swirled zeolites

552 - 565 FELDSPAR PORPHYRY

upper portion consists of swirled white and pink zeolites separated by dark grey gouge streaks; grades into a med green grey rock with white phenos of sericitized feld and occ dark green sericite - chl - pyr frag?; also occ dark green ser-chl, needle shaped mafic noted; tr mag

565 - 581 BLEACHED FELDSPAR PORPHYRY

lt grey with brownish tinges due to minor secondary brown biotite; feld still visible but appear to be less sericitized than above chloritized rock; occ rare dark green ser-chl frag still visible

581 - 706 ANDESITE?

resembles rock from 538 - 552 only feld phenos in this rock - sericitized slightly 5% mag or less; occ pyroxene xl visible; from 588 - 595 cut by numerous 3" very dark f.g dykes? containing feld phenos and pyroxene phenos; from 595 - 602 main alteration is brown biotite

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
540	5%	8½	95	NQ WL	77253	97.5	
550		10	102		77254	97.5	
560		9½	89		77255	93.0	
570		10	99		77256	100.2	
580	8%	10	102		77257	99.6	
590		10½	96		77258	98.1	
600							

PROPYLLITIC: 2% / 4% / Tr / Weak

ARGILLIC: 40% / 30% / 30% / 50%

SERICITIC: 40% / 30% / 30% / 50%

SILICIC: 50% / Weak

FRACTURING: Moderate

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 11 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

581 - 706 ANDESITE ?

from 602 - 607 bleached and silicified; feld phenos and occ dark green mafic still visible; salt and pepper text gone

607 - 620 also bleached and silicified but less intensely than above; mafics much more common and occ are crowded to give rock a rather diabasic text with felt.

from 620 - 637 brown biotite present; also rock has salt and pepper appearance again as at 538 - 552.

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
600	Tr		10%	60%	Weak			8%						
610			20%	50%	Moderate			5%	10	102	NQWL	77259	99.6	
620									10½	95		77260	97.1	
630								10%	10	102		77261	102.0	
640	Tr		10%	60%	Weak				10	102		77262	100.8	
650									10	98		77263	98.6	
									10	100		77264	97.6	

HOLE NO. EC-107 | PROJECT: EXPO | PAGE NO: 12 OF 12

CASING COLLAR ELEV.: | GROUND ELEV.: ≈1140 | DATE STARTED: July 14/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,620 N. 230,680 E. | DATE FINISHED: July 19 174 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 706' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 93.1%

DESCRIPTIVE GEOLOGY

581 – ANDESITE ?

salt and pepper andesite

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY
660	T		10%	60%			
670			20%		Weak		
680	T		10%	60%			
690					Moderate		
700			10%	60%			

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
10%	8	92	NQWL	77265	96.5	
	10	101		77266	102.0	
	10	103		77267	103.0	
	10	103		77268	97.5	
	11	92		77269	92.0	

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 1 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4 | DATE STARTED: July 23/74 | REF. TO CLAIM CORNER: DON 14 FR.

COORDINATES: 245,732.5 N. 234,642.9 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE 75.9%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0							OVERBURDEN	0-1 STICKUP 1-10 OVERBURDEN							
10	2%		10%	70%	Strong		SILICIFIED PYROPHYLLITE BRECCIA	10-26 SILICIFIED PYROPHYLLITE BRECCIA lt. grey, mottled with white, sericitized? (soft) spots that are vague and blend into siliceous matrix; at 12', 6" bx zone containing frags of silicified pyrophyllite bx in silica-sericite-pyr matrix; some buff pyroph.? frags also; minor buff swirls throughout rock from 10-26; at 13' dark spots in rock - may be cct? or moly? silica perv.	10%	3	81	NQWL	77384	32.7	
20										13	12				
30										4	31		77385	19.6	
40		30%					ANDESITE LAPILLI TUFF	26-53½ ANDESITE LAPILLI TUFF pale green grey with darker green chlorite-sericite frags that vary from m.g - f.g. and are rounded to needle-shaped; magnetite content variable, locally up to 10%, averaging 5%; occ. white, totally sericitized feld-like xl; some bleaching along pyr coated fracts; at 52½ tr moly; at 53½ bornite? on fract.	5%	7	20		77386	34.4	
50				70%				53½-65 SILICIFIED PYROPHYLLITE BRECCIA. buff, with lighter buff frags; occ. white siliceous bx frag; cut by zones of v f.g. pyr, dark grey which give rock appearance of bx; frags m.g - f.g.; at 56' may be tr bornite	15%	1	96				
										2	54				
										1	83				
										2	92		77387	85.0	
										4	73				
										6	97				
										3	81		77388	72.6	
60										7	48				

~ moly in qtz vn ⅓" thick

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 2 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4 | DATE STARTED: July 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,732.5 N. 234,692.9 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 75.9%

DESCRIPTIVE GEOLOGY

53½ - 65 SILICIFIED PYROPHYLLITE BRECCIA

from 60-65 gradational to andesite lapilli tuff; bx text gone, taking on a fragmental appearance with dark grey sericite spots.

~at 65' moly + bornite

~72' tr cov on fract

~79½' cov on fract

~83' vuggy pyr vnlt

65 - 199 ANDESITE LAPILLI TUFF

as 26-53½; very little magnetite, average only 1%; more pyr and more bleaching along pyr vnlts - bleached to a yellow colour; from 85-90 rock contains numerous white, siliceous bx frags as well as vfg. qtz. phenos, translucent blue-grey, sericitized feld? laths and one qtz eye also noted

at 82' bleached to buff colour around shear zone.

from 102-106 bleached to light grey and buff with yellow buff, sericitized frags, translucent blue grey sericitized feld? phenos. pyrophyllitized? as well?

from 106-127 as 65-102 only has a peculiar greenish colour due to oxidation of pyrite; orange cast to rock.

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
60	15%			NQ WL			
		3	98		77389	76.4	
70		3	83				
		4	77		77390	65.0	
		3	53				
		2	79				
80		4	46		77391	57.6	
		3	58				
	10%	5	66				
90		2½	66		77392	63.0	
		2½	90				
		3	66				
100		4	21				
		4	44		77393	54.1	
	5%	3	78				
110		3	89				
		4	35		77394	55.0	
120		5	58				

SECTION: PROPYLLITIC 2% | ARGILLIC | SERICITIC 30% | SILICIC 70% / 20% / 2% | FRACTURING Strong

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 3 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4 | DATE STARTED: July 29/74 | REF. TO CLAIM CORNER:

COORDINATES: 295,732.5 N. 234,642.9 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 75.9%

COMMENTS:

DESCRIPTIVE GEOLOGY

65 - 199 ANDESITE LAPILLI TUFF

some bleaching in vicinity of shears, sulphides unground; very little qtz present in gouge.

from 165 - 190, as 102 - 106, bleached sericite coating on fracts; occ zone with chloritized and lap tuff. at 176, 3" bx zone, annealed with white, siliceous ang bx frags in dark grey silica - pyr matrix

176, bx zone

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120	2%		30%		Strong			5%	6	40	NQWL	77395	45.2	
130									2	33				
									5	55		77396	64.9	
									3	78				
140									4	65		77397	75.8	
									10	77				
150									7	83		77398	81.8	
160									7	80		77399	77.0	
170	Tr.		40%	40%				10%	9	74		77400	68.6	
180														

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 4 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4 | DATE STARTED: July 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 245, 732.5 N. 234, 642.9 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE 75.9%

COMMENTS:

DESCRIPTIVE GEOLOGY

65 - 199 ANDESITE LAPILLI TUFF

from 190 - 199 dark green, with almost black lap frags composed of chlorite and mag; mag also dissem; 5% mag

199 - 201 SILICIFIED BRECCIA (C.G.)

H. grey, siliceous with white, sericitized very irregular spots and streaks containing a brownish core, almost looks like open spaces that have been filled in (vesicles?)

~ 199½, much moly on fract

201 - 242 F.G. SILICIFIED BRECCIA

lt grey to buff with, fg. white, sericitized, rounded frags; text not very obvious, rock heavily pyritized - vnlts and clots; from 208 - 219 rock black due to specular hematite; bleached along pyr. vnlts; no bx text visible; 30% of rock hematite; irregular qtz vnlts carry cpy occ, some cpy dissem in black hem matrix; tr moly noted.

219 - 224 as 201 - 208; 224 - 226 as 208-219 at 225, ½" bx zone, annealed with white sil bx frags in red - black matrix of hem - cpy - pyr - silica; 226 - 242 as 201-208;

from 229 - 242 rock has buff coloured zones, soft; also cut by numerous qtz vnlts.

~ 3" qtz vnlt

~ 6" qtz vnlt

NQWL

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180	Tf.		40%	40%	Moderate			10%	12	65	NQWL	77401	51.8	
190	5%		30%		Strong				7	32				
								3%	6	19		77402	30.6	
200			10%	70%	Mod			5%	2	96				
					Weak			20%	4	83		77403	89.8	
210		20%		20%				10%	10	94		77404	96.5	
220		10%	10%	70%		S		20%	10	99		77405	86.3	
		20%	20%					10%	3	72				
230	10%			70%	Moderate			20%	6	76		77406	76.0	
240								8%	6	76				

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 5 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4 | DATE STARTED: July 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,732.5 N. 234,642.9 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 75.9%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240			10%	70%	Moderate			201 - 242 F.G. SILICIFIED BRECCIA	8%	2	46	NQWL	77407	66.1	
								242 - 268½ CG SILICIFIED BRECCIA as 199 - 201; lt grey with white, irregular, sericitized frags, some with brownish core and soft buff frags - minor as well as brownish streaks; also occ. white siliceous frag; rare tr. of moly matrix siliceous.	5%	5	77				
										2	67				
250										2	50		77408	76.8	
										2	63				
										5	90				
260								268½ - 271 QUARTZ FELDSPAR PORPHYRY dark, blackish frags of magnetite-sericite and poorly developed white qtz eyes in a lt grey silica-sericite matrix; occ red hematite frag; 5% magnetite		4	71		77409	81.0	
										4	77				
270			30%	30%				271 - 280½ CG SILICIFIED BRECCIA as 242 - 268½ only white sericitized frags have no brownish core, more buff coloured frags - appears to be a stain on white frags and there are qtz eyes throughout; also some moly dissem and on fracts; from 276 - 279 black zone of dissem mag; a hybrid of QFP and bx; has dark frags, white sericitized frags and minor qtz eyes in lt grey sericitized matrix		10	90		77410	92.8	
			10%	70%	Weak					5	97				
280			20%												
			10%	70%						9	76		77411	78.1	
			30%	40%	Mod			280½ - 337 QUARTZ FELDSPAR PORPHYRY extremely altered and hybridized; varies from QFP with black mag frags with minor qtz eyes to lt grey bleached with buff to mod grey sericitized frags, minor qtz eyes at 287, 4" annealed bx zone with white siliceous frags in dark grey sericite-silica-pyr matrix, from 297-298 white siliceous ang frags in QFP	10%	8	88		77412	87.6	
290					Weak										
300															

4" bx zone at 287'

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 6 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4' | DATE STARTED: July 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,732.5 N. 234,642.9 E. | DATE FINISHED: July 29/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 75.9%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300			30%	40%	Weak			280½ - 337 QUARTZ FELDSPAR PORPHYRY in general, black and white nature of this rock makes it look like a diorite	10%	7	86	NQWL	77413	85.5	
								301-304, totally bleached, no magnetite left		7	85				
310								333-337 totally bleached	5%	5	102		77414	97.4	
320								337 - 368 CG SILICIFIED BRECCIA as 242-268½; frags very irregular in shape, white to buff; matrix lt grey, totally silicified; occ vague white siliceous frag - or qtz eye??; moly occ. on fract or dissem		10	98		77415	96.5	
330								red hem - black mag vnlt ½" at 330'		10	93		77416	95.1	
340			10%	70%					10%	6	100		77417	95.1	
										7	93				
350					Moderate					6	86		77418	86.2	
360										3½	86				

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 7 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4 | DATE STARTED: July 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,732.5 N. 234,642.9 E. | DATE FINISHED: July 29/74 | SCALE: 1"=10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 75.9%

DESCRIPTIVE GEOLOGY

337 – 368 C G SILICIFIED BRECCIA

~3" massive pyr vnlt at 366½.

368 – 482. ? VERY ALTERED QUARTZ FELDSPAR PORPHYRY

lt grey with white qtz eyes, orange-grey sericitized frags, occ pale green in a lt grey silica-sericite matrix; pyr corroded giving rock an orange cast; occ small zones of QFP with black hem-mag replaced frags; rock in general bleached and mag removed

from 394–399 QFP black sericite-mag frags, white qtz eyes in lt grey sericite-silica matrix; unbleached; occ pale green, sericitized feld-like frag

399–411 bleached QFP, some moly

411–422½ greenish QFP with black, chlorite-magnetite-sericite frags, pale green to med green chlorite-sericite frags and white qtz eyes. mag in frags, dissem and occ vnlts; av ± 10% in green sections; minor bleached zones and especially along pyr vnlts; minor moly on fracts. occ very rare white sericitized feld-like frag.

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY
360		Mod		
370	SERICITIC 10%			
380	SILICIC 70%	Weak		
390	SERICITIC 30%	Mod		
400	SILICIC 50%	Weak		
410		Moderate		
420	PROPYLLITIC 2%			

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
	4½	89	NQ WL	77419	92.4	
	4	92				
	10	100		77420	97.4	
10%	8	87		77421	87.8	
	6	89				
	9	80		77422	81.8	
	1½	83				
	7½	78		77423	79.0	
	4	85		77424	87.1	
5%	3	92				

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 8 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4' | DATE STARTED: July 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 245, 732.5 N. 234,642.9 E. | DATE FINISHED: July 29/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 75.9%

COMMENTS:

DESCRIPTIVE GEOLOGY

368 - 482 VERY ALTERED QUARTZ FELDSPAR PORPHYRY

422½ ½" bx zone annealed

from 422½ - 426, bleached

at 422½, ½" annealed bx zone with white siliceous bx frags in a dark grey silica-pyr matrix; matrix's dark colouration due to vfg pyr

426 - 431 as 411 - 422½

431 - 435 bleached, minor moly

435 - 445½ as 411 - 422½

445½ - 449 bleached, minor moly

450 - 1" hem-mag vnlt

449 - 453 as 411 - 422½

457 - brass scrapings on core

cpy in pyr vnlt at 456½

453 - 455½ bleached

455½ - 461½ as 411 - 422½

bleached along shear

461½ - 464 bleached

464 - 466 as 411 - 422½

466 - 474 bleached

474 - 475 as 411 - 422½

475 - 482 bleached.

NQ WL

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420	2%							5%						
								10%	9	85		77425	88.6	
430	5%							5%						
								10%	10	94		77426	93.6	
440	2%				Strong			5%	5	93				
									6	85		77427	87.6	
450	2%		30%	50%				10%						
								5%	10	91		77428	89.2	
460	5%				Moderate			10%						
								5%	10	85		77429	84.1	
470	2%	Tr						8%						
	5%				W			5%	8	82		77430	86.5	
	Tr							3%						
480								8%	3	97				

HOLE NO. EC-108 | PROJECT: EXPO | PAGE NO: 9 OF 9

CASING COLLAR ELEV.: | GROUND ELEV.: 1058.4 | DATE STARTED: July 23/74 | REF. TO CLAIM CORNER:

COORDINATES: 245,732.5 N. 234,642.9 E. | DATE FINISHED: July 29/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 522' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 75.9%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480	5%		30%	50%	W			8%	6	82	NQWL	77431	77.8	
									4	75				
490	5%			60%					2	75				
									8	75		77432	75.0	
500	5%			50%	Moderate			1%	8	75		77433	82.3	
									3	97				
510	5%								8	82		77434	82.0	
520	Tr								5	82				

COMMENTS:

DESCRIPTIVE GEOLOGY

368 - 482. VERY ALTERED QUARTZ FELDSPAR PORPHYRY

482 - 522 QUARTZ FELDSPAR PORPHYRY

dark green chlorite-sericite with occ mag in frags and white qtz eyes in lt grey to pale green grey, silica-sericite matrix; cut by qtz vnlts and mag vnlts; very minor bleaching along pyr vnlts.

from 491½ - 494 bleached zone surrounding a 8" dyke?; dyke? has white to orange (rust coated) feld? completely sericitized in a lt grey siliceous matrix; bleached QFP on either side of dyke? very rust stained

from 511½ - 513½ bleached with 8" dyke? as at 491½ - 494

from 518½ - 522 bleached; instead of dark green frags, now orange, sericitized; qtz eyes not visible.

HOLE NO. EC 109
CASING COLLAR ELEV.:
GROUND ELEV.: 1100'
COORDINATES: 247,270 N. 231,830 E.
INCLINATION: −90°
BEARING:

PROJECT: EXPO
DATE STARTED: July 24/74
DATE FINISHED: July 29/74
TOTAL DEPTH: 533'

PAGE NO: 1 OF 10
REF. TO CLAIM CORNER: EXPO 238
SCALE: 1" = 10'
LOGGED BY: BKB

COMMENTS:

AVE CORE REC'Y / HOLE 94.4%

SECTION	ALTERATION: Propylitic	Argillic	Sericitic	Silicic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								0-31 OVERBURDEN							
10															
20															
30															
40	Mod.							31-152.5 LAPILLI TUFF M. green coloured lapilli tuff. Predominantly mafic frags, minor felsic frags (ratio 2:1), 5-10 mm. size. Occasional quartz veins as parallel veinlets, but not stockwork. Mod. chl'n Minor ser'n.		37	8	NEWL		34	
										40.3	85				
										44.8	69			52	
										47.3	18				
50								39-56.6 Mostly mod. to strongly broken core, gouge + bx'n locally. Fault + shear zone.			49		50		
										51.1					
										56.6	76			79	
											92		60		

1/8" w. Tr. Py, Cpy.
1.0' strongly broken core. No attitude observed.

1" w. Py, Cpy along hairline Fr. 11 qtz vein attitude.

4" strong gouge + bx'n. Diss'd Py + Mt
8" strong gouge + bx'n. Minor fault
1/8" bull qtz. Minor Py

HOLE NO. EC 109 | PROJECT: EXPO | PAGE NO: 2 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100 | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588' | LOGGED BY: BKB

COMMENTS:

AVE CORE REC'Y / HOLE 94.4%

SECTION	ALTERATION: Propylitic	Argillic	Sericitic	Silicic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
								31-152.5 LAPILLI TUFF (as before)							
60	Mod.				M	Tr Py		½" qtz vein. Includes 1/16" Py veinlet.		61	92	NQWL	60	107.6	
								All minor faults. 2-4" strong gouge + bx'n.		67	115				
								Barren qtz veins, 1/16"-1/8"							
70								½" gouge.		73.5	98		70	104.5	
								4" broken core + minor gouge.							
								½" Tr Py, Cpy, Mt.							
								2" bx + minor gouge. Minor slip.			108				
								1/8" qtz. No sulphides.							
80					S			1" bx + gouge. Clays + chlorite. Minor diss'd Py. Non-magnetic.		80.0			80		
								6" strong gouge. Clays + chlorite. Py as FR coatings and diss'd.		87	29			39	
90								1/8" Py veinlet	1	93	61		90	86.9	
								? 6" bx + broken core							
					M			? 6" broken core. Minor gouge		98	92				
								½" Py							
100					S			½" qtz vein. Py FR.	1	106	113		100	104.3	
										109½	93		110		
110					M			2" bx'd qtz vein along FW contact fault zone. Tr. Py.			79				
								½" barren.	< 1	115				87	
								? 6" strongly broken core + minor gouge. Minor fault.							
								Zeolite coating on irregular FR			95		120		

101-110 FAULT ZONE. Strong bx'n + gouge throughout most of this section, although core relatively solid. Locally strong irregular FR stockwork, with soft, white mineral as coatings (gypsum?). Mt 3-4%, fault zone strongly magnetic.

110-116 Strongly FR'd (irregular) and broken core. Shearing of fw rock associated with above strong fault.

past 115 - noticeable appearance zeol coating on fractures.

HOLE NO. EC 107 | PROJECT: EXPO | PAGE NO: 3 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100 | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588' | LOGGED BY: BKB

COMMENTS:

AVE CORE REC'Y / HOLE 94.4%

SECTION	ALTERATION: Propylitic	Argillic	Sericitic	Silicic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120	MOD		WEAK		MOD.			1/8" qtz veinlet cut by 1/8" Py veinlet. 1.0' sheared l.tuff. Soft. Strong chl'n. 1" chloritic gouge Minor slip. 2.1/2" gouge Minor slip. 1/8" Py veinlet. (Cpy) 1/8" Py veinlet.	31-152.5 LAPILLI TUFF (as before) 120-122. Minor ser'n (light yellowish-green cast to core) associated with sheared, broken core. Py veinlets up to 1/8" wide	2	122	95	NPWL	120	100.6	
130			MOD.	WEAK-NIL				2 1/16" Fe veinlets Py. 2.0' strong bx'n + gouge. Core solid, but soft. Strong fault. 1/8" qtz. vein cut by 1/16" Py veinlet.	130- . Increase in ser'n to moderate intensity. Possibly associated with major fault from 144-	3	132 136/6	102 91		130	88	
140								4/6" Strong gouge			78		140		
								Intense gouge Clays + Chlorite	144-152.5 MAJOR FAULT. Mostly clays + chlorite forming matrix for bx'd tuff. frags. V. little sulphide content. Mt minor.	<1	143	94		150	89	
150									152.5-235 SHATTER BRECCIA. Zone of intense siliceous veining (dense stockwork) associated with intense chloritization (pervasive) which has locally obliterated the original lapilli tuff texture. Qtz veins mostly devoid of sulphides, opaque grayish white in colour. Sulphide content increases past 170', but restricted to veinlets (minor disseminations). Core recovery excellent. Rock strongly magnetic. Mt 2-3%, diss'd, up to 10% locally (associated with intense chloritization). Sulphide veinlets x-cut qtz stockwork.	<1	153/5 154	65		160	96	
160	STRONG		WEAK	STRONG				Schematic representation of siliceous stockwork. Occasional regular attitude on same qtz veins @ 10-40° CA, 50° CA.		1	164 169	98 100		170	99	
170								Hairline (<1/16") Py-Cpy veinlet. 170-180 Regular attitude qtz veins @ 30-40° CA. Py-(Cpy) <1/16" Py-(Cpy) 1/8"		2	177	98 99		180	98	
180															

HOLE NO. EC-109 | PROJECT: EXPO | PAGE NO: 4 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100 | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588' | LOGGED BY: BKB

COMMENTS:

AVE CORE REC'Y / HOLE: 94.4%

SECTION	ALTERATION: Prodylitic	Argillic	Sericitic	Silicic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180	Strong			Strong	MOD			152.5 - 235 SHATTER BRECCIA - (as before).				NQWL	180		
								1/8" Cpy - Chl veinlet. 1/16" sil. envelope associated.							
								1/8" Py veinlet (TR Cpy or tarnished Py?)			99				
								1/8" Py	1.2	187				99	
								Reg. attitude qtz veins, occ. @ 40-50° CA.							
								1/8" Py, Chl. 1/16" sil envelope.					190		
190								3/8" Py.							
								Py-Cpy. Poss. some tarnished Py.			100				
								1" bx'd qtz. vein	1.2	197				100	
													200		
200								1/32" Py veinlet. 1/16" sil envelope							
								3" bx'd qtz vein.			98				
								1/16" Py-Cpy.	<1	207				98	
								1/16" Py					210		
210								<1/16" Py (hairline Fr)			100				
								1/8" Py	1.2	217				100	
								1/2" Py, Mt.							
													220		
220								1/16" Py (Cpy)							
								1/8" Py, Cpy.			98				
								5 veins @ 30° in 1' section from 222.5-222.5 Widths 1/4"-1/2".							
								2 1/8" Cpy, Py.	2	227				98.9	
								1/2" bx'd qtz vein							
								1/4" Py, Cpy, qtz.					230		
230	Mod			Mod to Strong				1/8" Py, Cpy, Mt.			101				
								Cpy, Py 1/4".	3	237				100.4	
				Mod							99		240		
240															

222-235 Decrease in density of sil. stockwork veining. Accum. by return of recognizable lapilli tuff texture.

220-230 Abundant Cpy exposed upon hairline Fr. upon breakage.

232-235 Silica pervasive as well as in vein stockwork. Cpy diss'd and in sulphide veinlets.

HOLE NO. EC-109 | PROJECT: EXPO | PAGE NO: 5 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100 | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588' | LOGGED BY: BKB

AVE CORE REC'Y / HOLE: 94.4%

ALTERATION: Propylite, Argillic, Phyllic, Silicic | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240					240		
	2	247	99			99	
250					250		
	1	257	98			99.5	
260					260		
	1	267	103			100.9	
270					270		
	1	277	96			97.8	
280					280		
	1	287	102			101.1	
290					290		
	1	297	99			99	
300			100		300		

235-322 LAPILLI TUFF.

Past 250' no longer sil vein stockwork, only occasional qtz veinlet x-cutting

273-322 Lapilli tuff somewhat finer grained than previously. Rock has greyish green cast which grades into yellowish green cast @ 290 - possible increase in sericitization. Abs numerous felsic frags, rounded silicified, white in colour. Appearance of minor zeolite veining past 290. % sulphides < 1-2%, NM 5% v. f. gr'd disst'd and in clots 2-3 mm DIA.

240 ALTERED

1°, 1-2% sulphides, mostly Py Tr Cpy.

1/4", Py - (Tr Cpy)

1/4", Py..

3 veins, 1/4"-1", Tr Mt.

1/2" qtz vein, cut by Py veinlet (1/16")

1/8" hairline fr filling. Py-Cpy

1/8"

1/4"

1", 2 10% Py as irregular masses filling Fr. 4

1" brec Solid. Minor slip.

10' broken core - minor gouge. Minor slip 1° to Py.

1° Tr Py, Cpy.

2, 1 1/2", hairline, fr filling, zeolite

1/8" Cpy.

1/8" Cpy.

1/8", pale, yellowish white zeol.

2 1/16", white zeol filling hairline Fr.

Py

300

HOLE NO. EC-109 | PROJECT: EXPO | PAGE NO: 6 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100 | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588' | LOGGED BY: BKB

COMMENTS:

AVE CORE REC'Y / HOLE 94.4%

SECTION	ALTERATION: PROPYLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300	MOD. STRONG			MOD.	MOD. WK.			235-322 LAPILLI TUFF					300		
								Minor shear. Ser'n + increase in Py content of rock.			100			100.3	
								½" Py.	2	307					
								2" 5% Py.							
310								3, ⅛"					310		
								310-320 Py along numerous hairline Fr's.			101			100.4	
								2, ¼"	2	317					
								2, ¼"							
320								6" shearing + br'n. Core intact. Minor shear.					320		
								322-588 QUARTZ-FELDSPAR PORPHYRY.			99				
								½" gouge. Minor shear.	<1	327				99	
								M-C grained, crystalline. 10-15% rounded, cloudy off-white qtz eyes. Not conspicuously porphyritic in feldspar in places. Mafics up to 20% Chl'n generally moderate to strong, giving rock dk. greenish grey colour, ser'n. mod. locally.							
330													330		
											97	NQWL			
			WK - MOD.					½", Tr. Py, amphibole (?)	<1	337				98	
340								2"					340		
								¼" ½" gouge. Minor shear.			100				
								340-350. Minor zeolite along occasional Fr. Also soft light yellowish green, poss sericite, observed along occasional Fr.	<1	347				100	
								1", Tr. Py.							
								1½", Py, Chl.					350		
350								2, ¼"			99				
								2, ¼"	<1	357				99	
											98		360		
360															

HOLE NO. EC-109 | PROJECT: EXPO | PAGE NO: 7 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100 | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588 | LOGGED BY: BKB

COMMENTS:

AVE CORE REC'Y / HOLE 94.4%

SECTION	ALTERATION: Propylitic	Argillic	Sericitic	Silicic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
360	Mod - Strong		Mod - Wk	Wk	Mod.			322-588 QUARTZ FELDSPAR PORPHYRY				NQWL	360		
								2"			98			99.5	
								1", Minor shear	<1	367					
370								¼" gouge. Minor shear.					370		
								1½" sheared QFP. Clays + chlorite. Solid. Strong shear.			103			102.4	
								1", yellowish green sericite in transverse Fr's.	<1	377					
								3" strongly broken core. Slip.							
380								10" shear. Solid, bx'd, soft.					380		
											101			100.7	
									1	387					
								Cpy includ.							
390								½" Cpy, Ser					390		
								¼", Ser.			100				
								½" gouge. Minor shear.						100	
									<1	397					
								2, ¼" (Cpy)							
400								Orange zeol					400		
								½" gouge. Minor slips.			99				
									<1	407				99	
								¼", 2¼" zeol (orange) envelope.					410		
410	Mod.		Weak.		Mod - Strong.			¼".			100				
								2, 6" broken core. Minor shear.		415					
								2, ⅜" orange zeol sheared.		417	92			98	
								2, ⅜" Tr Chl., Py.			95		420		
420															

400-410 Minor white zeol as coatings on Fr's @ 40-60° CA

410-420 Minor zeol alteration of feldspars (pink and white) localized along minor shears and hairline Fr's. Also extremely f.gr'd diss'd Cpy locally, throughout run.

HOLE NO. EC-109 | PROJECT: EXPO | PAGE NO: 8 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100' | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588' | LOGGED BY: BKB

COMMENTS:

AVE CORE REC'Y / HOLE: 94.4%

SECTION	ALTERATION: Propylitic	Argillic	Sericitic	Silicic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420	WEAK		WEAK	WEAK TO MOD. PERVASIVE (?)	MOD.			322-588 QUARTZ FELDSPAR PORPHYRY -(CONT'D)					420		
								¼", orange zeol.		424	95	NQWL		104.0	
								¼" orange zeol. Also 6" broken core. Minor shear.	<1						
								2, 1/16" (hairline), orange zeol.			110				
430								¼", orange + white zeol.					430		
								¼" sheared, white zeol. Talcose w. shear surface.		432/6					
								⅓" gouge Chlorite + clays. Minor Py.		435	70			95.0	
								3" strong chlorite gouge. Also associated broken core from 431.5-435. Minor fault.	<1						
								⅓" Ser, Tr Cpy.							
440											100		440		
								Broken core @ 441 and 444. Minor shears?							
								440-450 Minor zeol. along irregular hairline Fr's.	<1	445				98	
											95		450		
450								⅓"		451					
								2, ⅛", orange zeol.							
								6" soft, brk, but solid core Shearing orange zeol.	<1		95			95	
460								1.0' broken core, 458.5-459.5. Shearing.		461			460		
								462-465 Core intact, but soft, gouged and brk. Shear zone.							
								⅓", Ser, Chl, (Tr Cpy)	<1		98			98	
								Tr Mt, Cpy in qtz veins.					470		
470								⅓", orange zeol.		471					
								2, ¼" orange zeol.			82				
									<1	475/6				80	
										478	63				
480											90		480		

HOLE NO. EC-109 | PROJECT: EXPO | PAGE NO: 9 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100 | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588 | LOGGED BY: BKB

COMMENTS:

AVE CORE REC'Y / HOLE 94.4%

SECTION	ALTERATION: Propylitic	Argillic	Sericitic	Silicic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480	MOD.		WK-MOD.	WK				322-588 QUARTZ FELDSPAR PORPHYRY					480		
								481.5-491.5 MAJOR FAULT - 10.0' intense gouge + bx'z. Chlorite + clays. Minor dis'd Py, Mt.	<1	487	90			93	
490								491.5 - UNALTERED QUARTZ FELDSPAR PORPHYRY.					490		
	WK-NIL		NIL	WK-NIL	MOD-WK			Light greyish tan in colour, distinctly porphyritic in feldspar and quartz. Fspar phenos up to 5 mm, anhedral to subhedral, 30-40%; quartz eyes, white opaque, 10%, chl'd mafics, 15%, set in aphanitic grey groundmass. Wk-mod. zeol. as veinlets and coatings on Fr's. Qtz veining virtually absent, sulphide content low (<1%) confined mainly to Fr's. No sulphide veining.	<1	497	100			94	
500								1B- Some colour shades of zeol. pink, and flesh	<1	507	96		500	99.0	
510													510		
									1	517	106	NQWL		103.6	
520								520-522.5 Intense flesh colored zeol. stockwork					520		
								528-530 Broken core. Minor shearing.	<1	527	98			98	
530								536.5-537.5 1.0' Broken core. Minor shear.	<1	537	97		530	96	
540											94		540		

1/4", orange zeol.

1/4", white zeol.

1/4", pink zeol.

1/4", white zeol.

2" sheared, soft core.

3/8", flesh zeol.

1/4" flesh zeol.

1/2" flesh and white zeol.

1/2" flesh zeol.

9" broken core + bx'z. Minor shear.

HOLE NO. EC-109 | PROJECT: EXPO | PAGE NO: 10 OF 10

CASING COLLAR ELEV.: | GROUND ELEV.: 1100 | DATE STARTED: July 24/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,270 N. 231,830 E. | DATE FINISHED: July 29/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 588 | LOGGED BY: BKB

AVE CORE REC'Y / HOLE: 94.4%

SECTION	ALTERATION: Propylitic	Argillic	Sericitic	Silicic	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
540								322-588 QUARTZ FELDSPAR PORPHYRY.					540		
								2, ⅛"							
								⅜", white 3gal. Shearing along contact.	1	547	94			97.0	
								⅛", milky white, opaque							
550								⅛", 3gal. "(qtz).					550		
								⅛", flesh 3gal.	1	557	104			102.2	
560													560		
								⅛". flesh 3gal.							
								⅜". flesh and white 3gal. Tr Py.	1	567	98			99.2	
								3, 1/16" flesh.							
570													570		
											102			95.7	
								Grey, opaque qtz vein. Tr Py, Cpy.	1	577					
580													580		
								1", white 3gal.			81			8	
									1	588					
								END OF HOLE @ 588'.					590		

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 1 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3' | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER: EXPO 237

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1"=10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

COMMENTS: 2 Dip tests taken at 500' and 1000'

AVE CORE REC'Y / HOLE 88.0%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								0-1 STICKUP							
								1-81 OVERBURDEN							
80															
81	2%	30%			Strong			81-211 HORNFELS hornfelsed f.g. and lap tuff, occ with an intrusive text - hybridized'? ; lap tuff consists of f.g. dark green, 'chlorite-sericite frags in a lt grey, siliceous? (hard) matrix, peppered with f.g. mag (8%) occ zone that has dioritic ? appearance ie white sericitized patches and occ white sericitized feld-like x's intermingled with sericitized chlorite (chl. turning to sericite); cut by numerous zeolite vnlts ; rock dark to med grey.	5%	5	100	HQ WL	77435	96.9	
90										6	93				
										5	98		77436	91.6	
100										5	80				
										3	103		77437	94.5	
110										3	100				
										4	88				
										5	92		77438	81.6	
120										5	60				

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 2 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1"=10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | SECTION

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

DESCRIPTIVE GEOLOGY

81- 211 HORNFELS

from 132- 133 bleached zone buff and lt grey; no texture left.

~ solid mud

from 133- 137 DIORITE? white sericitized feld- like x/s and shapes with interstitial pale green chlorite- sericite and occ mag areas; at 137 pink feld x/s noted in some white sericitized feld as a x/l core.

~ 1" x/line zeol vnlt

from 137- 182 hybridized and lap tuff dark frags still present but also white sericitized feld and fg chloritized lath- shaped mafics (hbde?); numerous zones and patches of dioritic- looking rock.

2% | 30% | strong | 2% | 5% | HGWL

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
	1	75		77439	55.3	
	2	83				
	3	42				
	4	33		77440	72.8	
	2	95				
	4	69				
	4	98		77441	89.4	
	1½	56				
	5	100				
	3½	76		77442	65.8	
	4	71				
	2	46				
	4	65		77443	65.8	
	4	88				
	4½	44				
	6	44		77444	32.5	
	5½	11				

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 3 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 88.0%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
180	2%		30%		Strong		
190							
200	2%		30%				
210	5%						
220	5%						
230	5%				Moderate		
240							

DESCRIPTIVE GEOLOGY

81 - 211 HORNFELS

from 182 - 192. fault gouge; mostly clay with pebbles of hybridized and lap tuff; sulphides unground; occ section of 3" unground rock

from 197½ - 198 bleached zone with buff coloured and white sericitized feld-like frags in lt grey matrix

at 200', 3" of bleached rock as at 197½ - 198; siliceous matrix

from 202 - 203, f.g. diorite, fresh; only the mafics (20%) are altered to chlorite and magnetite; feld visible; mafics interstitial to feld

solid clay; sulphides unground

* at 206½ QUARTZ FELDSPAR PORPHYRY (only one piece); white, siliceous with 5% chloritized mafics which are now partially altered to sericite; qtz eyes

at 216½ frag of QFP in gouge

QFP - 217½ - 218 vfg orange - hornfelsed?

QFP

at 207, piece of fresh diorite as at 202 - 203.

211 - 220 ANDESITE LAPILLI TUFF

dark green, chlorite - sericite and/or mag frags in lt. grey to lt green grey matrix; frags. f.g - m.g; mag dissem and in vnlts also (10%)

1" qtz vnlt, tr. cpy

230, brass scrapings on core

232

at 216½, 3" frag of QFP in fault gouge

220 - 221 QUARTZ FELDSPAR PORPHYRY

as frag at 206½, gradational to vcg porph of white feld, 5% mafics in pink groundmass

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	4	23	HQWL	77445	31.5	
	3	44				
	3	69		77446	51.2	
	2	46				
	3	19				
	1½	89				
	1½	61				
	4	40		77447	60.6	
	1	50				
	2	63				
	5	90				
1%	1	83		77448	73.9	
	5	72				
	3	58				
	4	77		77449	81.6	
	5½	90				
	1½	72		77450	94.7	
	2	88				
	5½	103				

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 4 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | SECTION

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

DESCRIPTIVE GEOLOGY

221 - 462 ANDESITE LAPILLI TUFF

as 211 - 220; only heavy sericite development on fracts; silica alteration all as vnlts; dark green frags have lath shape in some areas. also bluish sericitized lath shaped frags' acc.; some bleaching along minor pyr. vnlts to a buff, sericitized rock, also some bleaching with qtz vnlts.

- solid clay with 1' bleached lower ctc - textureless buff.
- solid clay

from 268½ - 269 vague white siliceous bx frags in lap tuff; also a bx'd qtz vnlt

- ¼" qtz vnlt with cpy at 268 and 269½
- 274½, unbx'd qtz vnlt. in fault gouge
- 279 bx'd qtz vnlt in fault gouge - lower ctc 6" of bleached rock
- 283, 3" qtz vnlt
- 289, 3" qtz vnlt

PROPYLLITIC 5% | SERICITIC 30% | SILICIC 5% | Weak

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	5	102	77451	96.5	
	5½	92			
	5	100	77452	93.0	
1%	6	86			
5%	5	103	77453	93.3	
1%	6	83			
	5	108	77454	99.1	
5%	5	95			
	10	101	77455	99.8	
	1	50			
1%	4	81	77456	87.3	

CORE SIZE: HQWL / NQWL

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 5 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,329.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

DESCRIPTIVE GEOLOGY

221 - 462 ANDESITE LAPILLI TUFF

fault gouge varies from total clay to clay with rock frags; sulphides; oxidized

from 312 - 313½ extremely heavy sericite coating on fracts.

from 330 - 347 heavy sericite coating on fractures as well as pervasive.; also from 348 - 351, 356 - 360

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300	5%		30%		Strong			1%	10	99	NQ WL	77457	95.7	
310								5%	9½	88		77458	85.7	
320			30%						2½	77				
									2	92				
									2	67				
									2	67		77459	70.0	
									2½	60				
330									3½	76				
								8%	3	94		77460	48.2	
									2	83				
									2	21				
									2	8				
340		40%							1	67				
									1½	67				
									3½	98		77461	86.4	
									3	83				
350				5%	Moderate				4½	103		77462	100.5	
									3½	107				
360														

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 6 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

DESCRIPTIVE GEOLOGY

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
360	5%		40%	5%	Strong			8%	10	90	NQ WL	77463	93.9	
370									10	103		77464	97.3	
380									10	84		77465	89.6	
390	5%	20%	40%					5%	3	86		77466	85.2	
400		30%	10%					15%	7	99				
410			70%					3%	3	53		77467	68.5	
420		20%	40%		Mod			.5%	3	53		77468	77.3	
									5	82				
									5	58				
									3	69				

221 - 462 ANDESITE LAPILLI TUFF

~ clay with pebbles of and lap tuff, sulphides underground

~ 370 1/2 moly + cpy in qtz vnlt 1/4" thick

~ 380 2" qtz vnlt with cpy

from 390 - 396 rock bleached, lt grey with fg white sericite patches; cut by numerous irregular qtz vnlts

from 400 - 406, andesite lapilli tuff resembles a very poorly developed shatter breccia; rock resembles and lap tuff as described previously only cut by qtz vnlts; all silica alteration as vnlts; most qtz vnlts carry some cpy

from 406 - 412 1/2 silica alteration pervasive rock bleached, textureless; occ vague lapilli texture left.

from 406 - 455 rock bleached buff yellow to lt grey, textureless except for coloration differences produced by highly irregular qtz vnlts and occ zone with disdem. v.fg pyr; silica alteration perv. and vns.; from 440 - 450 heavy pyr. is a later feature than the qtz vning as it has bx'd the qtz vns

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 7 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 88.0%

DESCRIPTIVE GEOLOGY

221 - 462. ANDESITE LAPILLI TUFF

from 420½ - 421, bx zone, annealed, with white sil bx frags in silica, v f.g pyr matrix

from 430, occ white completely sericitized frag visible;

from 455 - 462. rock contains so much pyr resembles a bx.

~ 434½, 3" qtz vnlt with pyr

462 - 614 BRECCIA ?

from 462 - 464 extremely altered section; med buff, very sericitized with translucent blue sericitized frags throughout; pyr entirely dissem, occ. grey zone that looks like gouge zone healed by sericite

from 464 - 470 as 406 - 455

from 470 - 487 as 462 - 464

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420													
			20%	50%	Moderate			15%	10	98	77469	97.6	
430									7½	97			
									7½	58	77470	71.7	
440			10%	60%	Strong				3½	74			
					Weak			Tr.			77471	74.6	
450			20%	50%	Mod			15%	8	78			
					Weak			20%	5½	94	77472	90.0	
460		40%						40%	9	94			
		30%		30%	S			25%			77473	77.9	
470		40%			Moderate				3	47			
								40%	5	93	77474	83.4	
480									3	69			
								30%	4	81			

NQ WL

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 8 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247, 324.2 N. 232, 673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1"=10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

DESCRIPTIVE GEOLOGY

462 - 614 BRECCIA ?

at 482½, bx zone, sericitized, translucent blue sericitized frags in white sericitized matrix

from 487 - 488, highly sericitized rock with white sericitized feld-like frags in a dark grey sericitized matrix

from 488 - 521 as 462 - 464, has a bx texture, translucent blue, sericitized frags, grey-buff sericitized frags, pyr clasts, white, vague sericitized frags in med grey buff sericitized matrix; pyr also dissem. throughout, occ. med. grey frag, some of which contain the translucent blue sericitized frags; very rare specks of moly

from 521 - 536½ altered zone lt. yellow buff with yellowish sericitized frags in silica sericite matrix; silica perv + as irregular qtz vnlts; a few narrow zones as at 488-521 near base; this rock type may actually be and lap tuff that is very altered

from 536½ - 537½ as 488 - 521

from 537½ - 539½ as 521 - 536½

from 539½ - 541 as 488 - 521

3" of gouge consisting of 50% sulphide slightly ground



SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480	10%			NQ WL			
	25%	2½	83		77475	90.8	
		2½	100				
490	20%	6	96		77476	89.0	
	10%	3½	76				
		4	96				
500	3%	3½	69		77477	59.9	
		3	36				
		3	67				
510	10%	3½	57		77478	51.9	
	3%	3½	45				
		4	54				
520	5% 20%	3½	93		77479	88.7	
		4½	96				
	20%	4	85				
530		6½	94		77480	91.4	
540							

FRACTURING: Mod | W | S | Mod | Strong | Mod

ALTERATION: 40% | 20% | 40% | 40%

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 9 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31 /74 | REF. TO CLAIM CORNER:

COORDINATES: 247, 324.2 N. 232, 673.6 E. | DATE FINISHED: Aug 18 /74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

DESCRIPTIVE GEOLOGY

462 - 614 BRECCIA?

from 541 - 546 as 521 - 536½.

from 546 - 548 as 488 - 521

from 548 - 553½ as 521 - 536½

from 553½ - 555 BRECCIA consists of frags of rock as from 521 - 536½; matrix siliceous and pyr-rich

from 555 - 614 as 521 - 536½; occ pinkish zone from finely dissem hem; from 582 - 584 rock has faint greenish tinge along with black and red hematite streaks and vnlts; still has same texture as 521 - 536½; rock may be a very altered, bleached shatter bx.

559, moly on fract.

3' qtz vnlt

pyr vnlt has bx'd country rock, 3" wide.

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
540	25%			NQWL			
	10%	7	96		77481	94.6	
550	5%	6½	92				
	25%				77482	90.6	
560	3%	8	90				
	20%	10½	93		77483	92.7	
570	10%	6½	100		77484	99.4	
		9	102		77485	97.2	
580	5%	6	86				
590	15%	6	103		77486	96.8	
600							

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 10 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1"=10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

SECTION | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

DESCRIPTIVE GEOLOGY

462 - 614 BRECCIA ?

614 - 618 ANDESITE LAPILLI TUFF
med green, chlorite - sericite frags, black to red hem frags, white sericitized frags and minor qtz eyes in pale green grey matrix; rock may actually be a shatter bx numerous qtz vnlts. lower contact becomes more bleached and eventually grades into breccia?; tr moly and cpy.

618 - 686 BRECCIA ?
lt grey with f.g - m.g white, sericitized ang. frags; matrix siliceous; cut by some qtz vnlts; occ pale green frag - very sericitized also.; at 623 - 624½ highly pyritized zone with 6" of v.f.g bx - frag? sulphides appear to be ground to v.f.g size also; occ qtz eyes - minor, white, rounded minor sericite coating on fractures'

qtz vnlt ½° with black hem

at 637', 10° massive pyr vnlt

643½, moly in stringer

648½ - 649.6' massive sulphide

NQWL

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	4	92	NQWL	77487	94.1	
10%	10½	95				
1%	7	94		77488	94.4	
5%						
15%	8	94		77489	94.5	
5%	6	97		77490	97.0	
60%	7½	97				
5%	7½	90		77491	91.8	
10%	7½	98		77492	94.1	
	5	85				

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 11 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247, 324.2 N. 232, 673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
660			30%	40%	Weak			618 – 686 BRECCIA ?	10%	10	98	NQWL	77493	95.4	
670								from 671½ – 686 massive sulphide zone, consists of 70% pyr, 30% sericite as translucent blue, lath shaped xls, white matrix to pyr and occ as fract coating; rare tr of cpy; pyr gives rock a fg bx text; from 682½ – 683 sericitized annealed bx zone, grey-buff with ground sulphides	70%	10	105		77494	103.6	
680								686 – 720 FELDSPAR PORPHYRY ?? white sericitized, lath to ang shaped feld-like frags and minor qtz eyes in lt grey, siliceous matrix; cut by numerous greyish qtz vnlts; may be very highly altered and lap tuff ??? from 690 – 710½ heavy pyr development has removed most of text; occ. zones of feld-like frags still remain; occ. pyr appears to replace these frags.	3%	9½	98		77495	99.4	
690									10%	10½	99		77496	98.9	
700								from 710½ – 714 massive pyr zone; also from 714½ – 715½; minor sericite and silica as matrix;		10	100		77497	99.8	
710			20%	20%					60%	10½	98		77498	98.4	
			30% 20%	40% 10%					10% 70%						
720			30%	40%					10%						

2" of massive pyr surround this 1" qtz vnlt, both sides

688, 2" massive pyr zone

697½, 2" massive pyr zone

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 12 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

SECTION: 720, 730, 740, 750, 760, 770, 780

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC

FRACTURING: Moderate, Weak, Moderate, W, M, Weak

MINERAL: 30%, 30%, 40%

GEOLOGY: 722, 3" pyr zone; 730½ moly on fract; 731, 4" qtz vn'lt

DESCRIPTIVE GEOLOGY

686 - 720 FELDSPAR PORPHYRY ??

720 - 805 ANDESITE LAPILLI TUFF

from 720 - 735 very highly altered, bleached; pale yellow green to yellowish feld-like frags in lt grey silica-sericite matrix; frags totally sericitized. at 723, 2" bx zone; frags of and lap tuff in dark grey pyr-sericite matrix; at 728, 3" of chloritized and lap tuff. dark green chlorite-sericite lath shaped frags in lt green grey, silica sericite matrix;

from 735 - 736½ chloritized. dark green chlorite-sericite frags, chlorite-magnetite frags and white qtz eyes (minor) in lt green grey siliceous matrix; 5% mag; cut by qtz vn'lts; red hem on a few fracts

736½ - 738 bleached as 720 - 735; at 738 bx as at 723, 3" wide.

738 - 746 as 735 - 736½; minor bleaching asso'd with shears.

746 - 757 similar to 735 - 736½ only bleaching fairly prominent; bleaching asso'd with shears and pyr vn'lts.

757 - 790 as 735 - 736½. minor bleaching asso'd with pyr vn'lts and shears; occ zone that looks like intrusive - probably partially bleached and lap tuff; matrix pink or white with dark green chlorite-sericite frags? still present and also qtz eyes; occ. in these intrusive looking zone the green frags? are replaced by dense clay-like sericite with only residual chlorite cores still left.

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
15%	9	92	NQWL	77499	93.5	
	3	78		77500	95.0	
5% 15% 5%	9½	105				
1%	8	104		25151	104.4	
5%	10	98		25152	99.2	
3%	10	100		25153	99.6	
5%	10	101		25154	100.8	
3%						

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 13 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: −65° | BEARING: 180° | TOTAL DEPTH: 1004' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 88.0%

ALTERATION: PROPYLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

DESCRIPTIVE GEOLOGY

720 − 805 ANDESITE LAPILLI TUFF

805 − 825 HYBRID INTRUSIVE ??

cg dark green matics? frags?, pale green and white ang sericitized feld? and minor white qtz eyes in lt green grey to white silica-sericite matrix; rock has a definite intrusive appearance but appears to be gradational from and lap tuff above; some heavy sericite coating on fracts; cut by small zeolite vnlts.

786 black hem. vnlt

rock very cracked up but only slightly

SECTION	PROPYLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
780	5%		30%	30%	Weak		
790				10%	Strong		
800							
810	2%		20%		M		
820					Strong		
830			30%				
840							

% SULPHIDES: 1%

NQ WL

DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
10½'	103	25155	102.6	
8	83	25156	88.0	
10	102	25157	101.1	
10½	98	25158	98.2	
10	95	25159	95.3	
5½	94	25160	94.1	

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 14 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
840	2%		30%		Strong			805 - 845 HYBRID INTRUSIVE ??	1%	10½	94	NQWL	25161	96.1	
850			20%					845 - 873 QUARTZ FELDSPAR PORPHYRY? MONZONITE ? dark green chlorite mafics, white fresh feld and qtz eyes in med grey matrix; tr. magnetite in mafics; cut by red zeolite vnlts which colour rock red also		7	101		25162	96.8	
860										9	94				
870								873 - 888 CROWDED FELDSPAR PORPHYRY cg white, fairly fresh feld, and very minor (5%) mafics (chloritized) in a lt grey glassy matrix. ≈ 40% of rock feld; towards lower contact zeolites bright red.		10	102		25163	99.6	
880	Tr		10%		Weak			888 - 908 HORNFELS dark greenish black, dense, textureless; mag dissem and rarely as vnlts; 10% mag; minor epidote; cut by numerous red and white zeolites		10½	97		25164	98.5	
890	5%									9½	96		25165	96.4	
900									Tr	10	100		25166	98.8	

~ no attitude available - internal struct. suggests 70-90°

~ sulphides unground

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 15 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18 /74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.0%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
900	5%				W / Mod		
910	Tr			15%			
920	2%		10%		Weak		
930							
940					Moderate		
950							
960							



912, 6" zone of qtz stringers

DESCRIPTIVE GEOLOGY

888 - 908 HORNFELS

908 - 911 MONZONITE?
dominantly pink with minor chloritized mafics, 5% magnetite, pink feld as well as pink matrix and qtz eyes

911 - 947½ HORNFELS
med green grey, dense, textureless, mag (10%) dissem and as vnlts; cut by numerous zeolite vnlts; upper contact gradational with monzonite?; lower contact consists of annealed, bx'd zeolite vn, 1' wide

947½ - 1004 MONZONITE?
as 845-873; contains frags of hornfels and zones of hornfels. the hornfels is dark grey with f.g spots of white which may be feld?; hornfels also contains ≈ 10% magnetite dissem through rock.; feld of monzonite pink to vivid pink where red zeolites cut rock.

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
Tr	8	99	NQWL	25167	99.3	
	10	98		25168	98.1	
	10	103		25169	102.5	
	6	88		25170	94.0	
	10	103		25171	103.9	
	9	106		25172	100.0	
	7	91				

HOLE NO. EC-110 | PROJECT: EXPO | PAGE NO: 16 OF 16

CASING COLLAR ELEV.: | GROUND ELEV.: 1102.3 | DATE STARTED: July 31/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,324.2 N. 232,673.6 E. | DATE FINISHED: Aug 18/74 | SCALE: 1" = 10'

INCLINATION: -65° | BEARING: 180° | TOTAL DEPTH: 1004 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 88.0%

DESCRIPTIVE GEOLOGY

947½ - 1004' MONZONITE?

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
960														
									4½	109		25173	99.9	
970									6	94				
	2%		10%		Strong			Tr	9	109		25174	103.8	
980									3½	100		25175	102.3	
990									10½	98		25176	99.2	
1000									7½	100		25177	100.0	

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 1 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER: EXPO 237

COORDINATES: 246, 260 N. 233, 440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								AVE CORE REC'Y / HOLE 90.7%							
0								0-1 STICKUP							
1								1-43 OVERBURDEN							
10															
20															
30															
40															
43		30%	50%					43 - 170½ SILICIFIED LAPILLI TUFF lt grey to pale buff, siliceous matrix with f.g., very irregular, white, sericitized frags; occ. pyr. and very rarely cpy replacing frags; silica perv; argillic alteration, perv from 43-46; from 43-44, buff soft zones, irregular - may be pyrophyllite?; fractures are all iron-stained till 123'; occ fracts are sericite coated	5%	3	72	NQWL	25178	83.4	
50		20%	70%	strong						4	92				
										2	88				
									1%	4	54		25179	66.0	
60										4	67				

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 2 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15 /74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

ALTERATION: PROPYLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

DESCRIPTIVE GEOLOGY

43 - 170½ SILICIFIED LAPILLI TUFF

from 60 - 61½ rock, 95% perv silica 5% v.f.g sulphides dissem throughout; rock dense, white textureless with v.f.g silica - almost like chill zone?

from 81 - 82 bx zone; f.g pyr vnlt has bx sil dap tuff

from 82 - 146 rock similar to 44 - 60; only much more crowded with f.g irregular, white, sericitized frags. occ translucent blue, ang, sericitized frags are also present; iron staining on fracts diminishing; sericite coating on fracts and as vnlts.

at 111, 115, 119½, 120½, f.g. silica has bx country rock giving appearance of siliceous bx

~108, tr. moly

SECTION	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
60	5%	6	96	NQWL	25180	68.4	
		4	27				
70	1%	4½	94		25181	88.5	
		2½	103				
80		5	68		25182	93.8	
	5%	6	103				
90		4	92				
		5	103		25183	96.3	
100	1%	5	88				
		4	71		25184	73.0	
		2	79				
110	5%	4	56				
		3½	38		25185	47.9	
120		5	52				

FRACTURING: Weak | S | Moderate | Weak | Mod. | Strong

20% | 70%

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 3 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 90.7%

COMMENTS:

DESCRIPTIVE GEOLOGY

43 - 170½ SILICIFIED LAPILLI TUFF

at 123, iron coating on fracts end.

at 127 - 128 bx zone containing frags of sil lap tuff in fg pyr - silica matrix that is almost black. pyr ≈ 40% in this section

at 132½, ¼" red hem vnlt

from 137 - 138, black to faintly red, textureless, hematite rock

from 146 - 160 lap tuff changes character; frags are cg, translucent blue, sericitized; still in lt grey siliceous matrix; much cpy, cov throughout; also minor moly

from 160 - 163 very siliceous, textureless, lt grey; pyr may be replacing lap frags as it partially forms in clots

from 163 - 170½ lap tuff with fg white, irregular frags, sericitized

170½ - 175 C.G. BRECCIA

contains frags of qtz vn, lap tuff as at 146-160, lap tuff as at 163-170½ as well as large patches of sericite, translucent blue; cpy + pyr in siliceous matrix

175 - 251 SILICIFIED LAPILLI TUFF

from 175 - 177½ as 163 - 170½;
from 177½ - 179½ mg white, irregular sericitized lap frags in sil matrix

from 126 - 130, heavy grease which contains moly

~145 heavy cov on fract

~147 tr cov and cpy and moly on fract

~149½ cov

~162½, moly vnlt

NQ WL

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120					Strong			5%	2½	77				
			20%	20%	Mod			1%	3	69		25186	75.6	
130					Strong			Tr	2	92				
			30%		Mod			5%	8	73		25187	82.6	
140			20%	70%	Strong			Tr	5	97				
					Mod			5%	3	36		25188	60.1	
150			30%	60%	Strong				2	32				
					Mod	W	W		5	83				
160			10%	80%	Mod			8%	5	97		25189	96.8	
					Weak				5	100				
170			20%	70%	Mod				6	74		25190	78.4	
									5	80				
180								10%	5	97		25191	90.0	
								5%	4	85				

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 4 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

DESCRIPTIVE GEOLOGY

175 - 251 . SILICIFIED LAPILLI TUFF

179½ - 199½ as 44-60

199½ - 210 as 146-160; at 204 6" bx zone with white qtz frags and yellow buff, siliceous frags in silica matrix; qtz frags contain much cov in fracts.

210 - 220 as 44-60;

220 - 251 very altered zone; only occ are any frags visible - f.g. white, irregular sericitized; rock mottled by buff, soft zones, irregular qtz vnlts, heavy perv. silicification and also heavy sericitization; rock has red colouration from 220-222; much moly from 220-224 on fract and dissem; copper as cpy only

~189, moly vnlt
~190½, moly vnlt
~192 moly on fract
~196, moly vnlt
~199, cov on fract
~202½ cov vnlt
~204, 6" bx
~211, cov. in qtz vnlt
~213½ moly on fract
from 220-224 coated with moly grease - also much moly on fract + dissem
~230, cov.

FRACTURING: Mod | Weak | Strong | Moderate | Weak

SECTION: 180 | 190 | 200 | 210 | 220 | 230 | 240

ALTERATION: SERICITIC 20% | 30% | 20%; SILICIC 70% | 70%

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	5	103	NQ WL	25192	100.0	
2%	5	100		25193	81.5	
	7	79				
5%	6	81		25194	85.2	
	6	88				
2%	5	100		25195	90.0	
	3	78				
10%	6	83		25196	84.2	
	6	85				
	4½	106		25197	98.3	
	5½	92				

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 5 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15 /74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

DESCRIPTIVE GEOLOGY

175 - 251. SILICIFIED LAPILLI TUFF

251 - 263 ALTERED LAPILLI TUFF
lap frags black to slightly red, composed of hem in translucent blue grey sericite; matrix white, siliceous; bleaching by pyr veinlets; white qtz eyes also; along some pyr vnlts, lap frags have been completely replaced by pyr

263 - 269 BLEACHED LAPILLI TUFF
gradational with unit above; lt grey with white qtz eyes still visible, occ translucent blue sericitized frags; most of lap frags have been replaced by pyr and occ cov; at 268½ cov forms heavy rings around pyr replaced frags

268½, cov.
270½ 1" clot of cpy

269 - 403 SILICIFIED LAPILLI TUFF
mottled lt grey, buff with white, irregular lap frags, translucent blue frags - all sericitized; matrix lt grey completely silicified; moly, cpy and cov present; qtz eyes occ visible

from 276 - 297 core broken into 2" pieces

from 281 - 333 rusty fractures

NQ WL

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
290			20%	70%	W Weak		10%	5½	92	25198	83.9	
					Strong			5½	74			
250			40%	30%	W Weak			5	100	25199	94.6	
								5	93			
260								5	93	25200	93.8	
					W Moderate		5%	5	95			
270								5	102	25201	97.7	
			20%	70%				5	93			
280								5	97	25202	89.0	
							2%	5	78			
290								5	82	25203	87.5	
								1	117			
300					W Moderate			5	90			

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 6 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 90.7%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
300			20%	70%	Weak		
310							
320					Mod		
					Weak		
330					Mod		
340					Weak		
350							
360							

DESCRIPTIVE GEOLOGY

269 - 403 SILICIFIED LAPILLI TUFF

from 297 - 362 consists of fg - mg white, irregular sericitized lap frags crowded into lt grey, siliceous matrix; contains cg - v.c.g pieces of bx'd qtz vns that are ang. and lt grey; cut by numerous white sericite - qtz vnlts; silica perv and as vnlts.; occ rock bx'd in small zones with brownish, dirty-looking material, vfg.; much moly, minor cov, rarely cpy

at 348 - 349, bx zone, with grey sil lap tuff frags, qtz vn frags in buff, mostly silica matrix; buff colouration due to vf.g buff clay? mineral

- 323, cov vnlt some cpy
- 338, cov on frac
- 339½, moly vnlt
- cov in qtz vns from 341½ - 342½
- 345½, cov vnlt
- 349, 2 cpy vnlts.
- 356½, clot of cpy

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
2%	5	92	NQWL	25204	94.6	
	5	102				
	5	98		25205	97.0	
	5	92				
	5	98		25206	95.3	
	5	93				
	5	82		25207	90.2	
	5	102				
5%	1	100		25208	101.6	
	5	107				
	5	93				
	5	103		25209	100.7	
	5	102				

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 7 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

ALTERATION: PROPYLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

SERICITIC: 20% 10%

SILICIC: 70% 80%

FRACTURING: Weak | Strong | Moderate | S

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

DESCRIPTIVE GEOLOGY

269 - 403 SILICIFIED LAPILLI TUFF

from 362 - 377 similar to 297-362. only qtz eyes are present; from 360-390 high grade moly zone in vnlts and dissem, most sulphides here are moly

at 366½ bx zone, white qtz frags, lt grey sil lap tuff frags, pyr clasts in black matrix of pyr and silica

~366, moly vnlt
~367½, moly vnlt
~368, moly vnlt
~ moly vnlts

377 - 403 as 297-362; bx at 377½ and at 378 - 379 by white sericite - silica vnlts, that also carry moly

~380, moly vnlt
~381, moly vnlt

at 397½, iron - staining on fract; stops at 405

403 - 407 BRECCIA

consists of cg - fg frags of sil lap tuff, and qtz vns in a buff, partially siliceous matrix; also white, irregular, sericitized lap frags in matrix; sulphides all pyr.

407 - 412 SILICIFIED LAPILLI TUFF

as 297-362; tr moly only; at 410', 3" bx zone containing sil lap tuff frags and qtz vn frags in a black pyr - silica matrix, pyr v.f.g; contains reddish brown zones of ?? (soft) - may be sericite

412 - 438 BRECCIA

from 412 - 416 gradational between sil lap tuff and bx; sil lap tuff containing qtz frags of varying size, ang; sil lap tuff cut by buff, soft zones bx'ing the lap tuff; from 416 - 418 true bx as at 403 - 407; moly more prevalent throughout

~ moly vnlt

% SULPHIDES: 2% | 5% | 1%

NQ WL

DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5	100	25210	99.8	
5	98			
5	98	25211	97.1	
5	95			
5	105	25212	100.3	
4	96			
5	107	25213	100.3	
5	93			
5	93	25214	90.2	
6	86			
1	100	25215	97.2	
5	100			

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 8 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

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INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

DESCRIPTIVE GEOLOGY

412 - 438 BRECCIA

from 420½ - 426½ bx as at 403 - 407

438 - 466½ SILICIFIED LAPILLI TUFF
med grey, due to pyr content with buff to yellowish patches, occ white sericitized lap frag - rare; rock generally textureless, silica perv; sericite coating on fractures

from 439½ - 440½ rock purple due to hematite content

466½ - 468½ BRECCIA
ang frags of qtz vns, sil lap. tuff in brown grey matrix of silica - sericite

468½ - 473½ SILICIFIED LAPILLI TUFF
lt grey siliceous with occ lap frag, white fg irregular, sericitized; cut by small sericite, white streaks; cov in fracts.

from 457 - 459 much cov on fracts.

473½ - 479 CG. BRECCIA
frags consist of sil lap tuff, qtz vns and buff, siliceous frags, also pyr clasts matrix consists of silica, pyr and minor sericite

479 - 499½ SILICIFIED LAPILLI TUFF
lt grey, siliceous matrix with white irregular, sericitized frags; cov occurs in fracts within rock; moly on fract surfaces

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
420			10%	80%	Mod		
430			20%	70%	Strong		
440							
450							
460			10%	80%			
470					Weak		
480							

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	5	100	NQWL	25216	87.6	
10%	5	90				
	5	63		25217	80.0	
	5	83				
	4	98		25218	73.1	
	5	80				
	5	45		25219	71.8	
	5	77				
	4½	81		25220	70.5	
	5	62				
	5	78		25221	90.3'	
	~~½~~	~~88~~				
	5	93				
	5	93				

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 9 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 90.7%

DESCRIPTIVE GEOLOGY

479 - 499½ SILICIFIED LAPILLI TUFF

sil lap tuff becoming increasingly more silicified; sericite coating on fracts.

~ 486½, moly in qtz vn

~ cov in fracts.

499½ - 505 QUARTZ VEIN

M grey with frags of sil lap tuff; very fractured with pyr filling;

505 - 808 SILICIFIED LAPILLI TUFF

M grey, siliceous matrix with white, very irregular lap frags - sericitized

Sulphides dominantly moly

from 507 - 524 fracts rusty; also from 531 - 533

~ cov in fracts

~ 503½, moly vnlt

~ 518½, brass scrapings on core

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480			10%	80%	Weak			10%	5	110	NQWL	25222	97.0	
490									6	78				
			5%	90%	Moderate			5%	1½	100		25223	94.6	
500									5	102				
									5	103		25224	104.7	
510			10%	80%				10%	4½	112				
									4	79		25225	64.3	
520								Tr	4	28				
									5	98				
					Weak				4	102		25226	98.0	
530			10%	90%					1	100				
									5	92				
									5	85		25227	91.5	
540									5	102				

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 10 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246, 260 N. 233, 440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

DESCRIPTIVE GEOLOGY

505 - 808 SILICIFIED LAPILLI TUFF

from 547 - 547½ bx, with lt. grey sil lap tuff frags, qtz vn frags in rusty sericite - silica matrix

548, 6" qtz vn barren

most sulphides moly except in sections where sulphide % = 10; rarely cov, no cpy

minor amts of cov with pyr and moly on irreg fracts

576½, moly

from 598 - 598½ bx f.g. sil frags, lt grey in dark matrix of pyr, silica and cov; 30% pyr in this 6" section

" at 597 rusty fract

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
540	SERICITIC 10%	Moderate			Tr.	5	97	NQ WL	25228	92.8	
550						5	83				
						5	102		25229	97.0	
560	SILICIC 90%	Strong			10%	5	98				
						5	95		25230	97.1	
570		Weak				5	100				
					5%	5	95		25231	92.7	
580		S W S				5	83				
						5	100		25232	96.6	
590	SERICITIC 10%	Weak			10%	5	100				
	SILICIC 60%				5%	5	97		25233	96.4	
600					10%	5	93				

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 11 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

SECTION: 600, 610, 620, 630, 640, 650, 660

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC

FRACTURING: S, M, Weak, M, S, Mod, Weak, M, W, Mod

MINERAL

GEOLOGY

DESCRIPTIVE GEOLOGY

505 - 808 SILICIFIED LAPILLI TUFF

from 602 - 608 rusty fracts.

~609½, moly vnlt

from 611 - 612 bx'd sil. lap tuff, matrix white sericite - silica; frags very large moly in matrix

~614½, moly vnlt

from 617 - 617½ bx with sil lap tuff frags in dark matrix of pyr - silica; some cov in matrix

~618, 6" qtz vn

from 610 - 640 high grade moly section, mainly on fract but occ. dissem also.

at 640, lap tuff heavily fractured; fracts all filled with cov giving rock very dark appearance; 6" piece at 640 has ≈ 5% cov

~633 moly in qtz vn lt

occ. rusty fract between 642 and 645.

~640, cov in minute fract

from 643 - 644 bx, with sil lap frags in buff silica - sericite matrix

at 648, 6" bx zone with sil lap frags in dark grey pyr - silica matrix

at 655, 6" bx zone as at 648

~653½, moly vnlt

% SULPHIDES: 10%, Tr, 5%, 3%, 5%, 3%, 5%, Tr, 5%, 3%

DRILLING INTERVAL: 5, 5, 5, 4, 5, 1, 5, 5, 1, 5, 5, 5, 5

% CORE RECOVERED: 102, 92, 100, 83, 95, 100, 100, 100, 100, 108, 107, 102, 93

CORE SIZE: NQWL

SAMPLE INTERVAL: 25234, 25235, 25236, 25237, 25238, 25239

% REC'Y. SAMP. INT.: 97.2, 93.3, 95.8, 101.6, 106.3, 96.5

ESTIMATED

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 12 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

DESCRIPTIVE GEOLOGY

505 - 808 SILICIFIED LAPILLI TUFF

numerous small fracts filled with cov r black spec hem?; minor moly, also

from 685 most of white sericitized irregular lapilli frags have disappeared rock massive, textureless

708½, moly + pyr vn lt

NQWL

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
660	5%	5	97	25240	94.4	
		5	93			
670	10%	6	94	25241	88.6	
		6	85			
680	5%	5	100	25242	102.5	
		5	105			
690		5	95	25243	95.1	
		4	96			
700	10%	3	92	25244	97.5	
		5	97			
710		5	102	25245	97.9	
		5	95			
720		5	100			

FRACTURING: Strong | M | Weak | Mod | Weak | Mod | W | Mod | Weak

SILICIC: 90% | 85% | 90% | 85%

SERICITIC: 5%

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 13 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,440 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 90.7%

DESCRIPTIVE GEOLOGY

505 - 808 SILICIFIED LAPILLI TUFF

737½, cpy-pyr vnlt, ¼" thick

740, moly vnlt

742, moly vnlt

7% cpy

tiny cov. coated fract, irregular, gives rock bx. appearance.

NQ WL

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
720			5%	85%	Strong	Moderate		10%						
									5	80		25246	89.1	
730				80%	Weak			5%	5	97				
				85%					5	97		25247	97.0	
				70%				10%						
740								15%	5	97		25248	97.9	
									5	97				
750									5	100		25249	95.6	
									5	90				
760				70% →	Weak	Mod		10%	5	102		25250	98.5	
					W	W			5	98				
770					M	M			5	97		25251	91.9	
					S	S		15%	5	88				
780					M	M			5	95				

HOLE NO. EC-111 | PROJECT: EXPO | PAGE NO: 14 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 2/74 | REF. TO CLAIM CORNER:

COORDINATES: 246,260 N. 233,940 E. | DATE FINISHED: Aug 15/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 832' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 90.7%

COMMENTS:

DESCRIPTIVE GEOLOGY

505 – 808 SILICIFIED LAPILLI TUFF

from 793½ – 796 sil lap tuff cut and bx'd by white silica-sericite vn lts which are very irregular

from 789 – 802 lap frags have different appearance from those above, ang to rounded, still white and sericitized

from 802 – 803 bx with lt grey, sil lap tuff frags, frags of qtz vn in dark grey pyr silica matrix

at 805, rounded patch of sil lap tuff with black spec hem in with the white lap frags

From 806 – 808 bx as 802-803 except for one frag of QFP? – no qtz eyes; consists of white, fairly irregular, sericitized feld ?? in buff matrix

← QFP frag? at 808

808 – 815½ ALTERED LAPILLI TUFF

black and red hem frags, occ still with white sericitized core in lt grey silica-sericite matrix. cut by numerous pyr vn lts; bleached around pyr vn lts; sulphides mainly restricted to vn lts; occ hem vn lt; some sericite on fracts

815½ – 832 SILICIFIED LAPILLI TUFF

as 789 – 802

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
780			5%	70%	M			15%						
				90%				5%						
				85%	W			10%	5	98		25252	95.6	
790			10%		Mod				5	92				
				90%				2%	5	100		25253	97.8	
					← Weak →				5	98				
800				75%					5	97		25254	96.0	
			20%		N				5	93				
				10%					5	103		25255	100.7	
810								15%			NQ WL			
			10%		← Weak →				5	102				
				75%					5	102		25256	97.8	
820														
				80%	Mod.			10%	5	88				
												25257	88.0	
830														

HOLE NO. EC-112 | PROJECT: EXPO | PAGE NO: 1 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 19/74 | REF. TO CLAIM CORNER: EXPO 259

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Aug 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 536' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 84.8%

DESCRIPTIVE GEOLOGY

0-2 STICKUP

2-102 OVERBURDEN.

102 - 140½ SERICITIZED BRECCIA

generally textureless, buff to light grey, highly sericitized with sericite coating on some fracts; bx text occ obvious - variety of frags - buff feld? porph? that is buff with very pale green to white lath shaped x/s? frags?, - may be v. altered lapilli tuff as not all frags lath shaped, some are irreg; lt grey siliceous frags with lt green to white sericitized x/s? frags? both lath-shaped and irreg.; frags vary from v.c.g. to m.g., ang - subrounded; matrix of sericite - silica

140½ - 173 F.G. MONZONITE

when fresh, monz a dark grey with pink feld, dark green to black chlorite - magnetite matics and white, glassy qtz eyes; 10% magnetite; when altered by shearing rock dominantly clay with white feld; matics stay the same; 10% magnetite matics lath shaped

fracts rusty from 145 - 172

occ minor amts. of epidote scattered throughout rock or rarely as vnlts

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
		7	32	NQ WL	25258	40.0	
		4	96				
		5	52		25259	71.4	
		3	83				
		2	88				
		5	37		25260	48.4	
	10%	5	20				
		5	37		25261	38.5	
		5	70				
		5	68		25262	73.4	

HOLE NO. EC-112 | PROJECT: EXPO | PAGE NO: 2 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 19/74 | REF. TO CLAIM CORNER: EXPO 259

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Aug 25/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 536' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 84.8%

DESCRIPTIVE GEOLOGY

140½ – 173 F.G MONZONITE

occ white, sericitized phenos of feld visible;

173 – 208 HYBRID QUARTZ FELDSPAR PORPHYRY

dark green with dark green to pale green chlorite - sericite mafics that grade from lath-shaped to irreg, occ with white sericite core, white sericitized feld and white qtz eyes, some with magnetite core in a lt grey to white sericite - silica matrix; rock bleached to pale green-grey at upper contact; rock has orange cast due to iron stain, occ frags leached out, silica all as vns; 3% mag in dark green section - none in lt grey

208 – 211½ SILICIFIED LAPILLI TUFF

irregularly shaped, m.g - v.cg dark green chlorite - magnetite - sericite frags, white, siliceous, ang m.g - v.c.g. frags in white silica - sericite matrix; silica perv; 10% magnetite; occ qtz eye visible

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
150								Tr	5	92	NQ WL	25263	77.5	
								10%	4	73				
160	2%								3	69				
									3	108		25264	87.9	
			40%					Tr	6	82				
170									4	63				
									6	19		25265	31.6	
180	5%							5%	4	13				
									1	67		25266	56.4	
									4	63				
190									3	103				
	2%								6	11		25267	31.0	
									3	47				
200				Tr					3	56				
	5%							10%	3	92		25268	76.9	
									1	58				
									1	33				
210	5%		30%	30%	Strong	M			2	117				

HOLE NO. EC-112 | PROJECT: EXPO | PAGE NO: 3 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 19/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Aug 25/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 536' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 84.8%

COMMENTS:

DESCRIPTIVE GEOLOGY

208 - 211½ SILICIFIED LAPILLI TUFF

211½ - 220 BLEACHED LAPILLI TUFF

M. grey, generally textureless with occ. remnant lap frags as sericitized, darker grey spots sometimes partially replaced with pyr; minor qtz eyes visible

this may be bleached QFP

220 - 290 QUARTZ FELDSPAR PORPHYRY

dark green chlorite - sericite - mag frags (minor), dark green to med green chlorite - sericite, lath-shaped mafics, occ white, sericitized feld, white qtz eyes in pale green grey, sericitized matrix. 5% mag; bleached at upper contact, along shears and by pyr vnlts

~ clay and pebbles
sulphides unground

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY
210	5%				M		
220	5%						
230	Tr.	3%	30%				
240	2%				Strong		
250							
260	2%						
270	5%						

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
10%	3	67	NQWL	25269	65.0	
	3	75				
	4	56				
5%	3	6		25270	63.4	
	2	88				
	2	96				
	2	96				
	4	56		25271	77.8	
	2	100				
	2	67				
	2	92				
	2	92				
	2	71		25272	82.8	
	1½	61				
	2½	93				
	1	83				
	4	94				
	5	97		25273	95.1	
	4	92				
	5	93		25274	94.9	
	4	100	BQWL			

HOLE NO. EC-112 | PROJECT: EXPO | PAGE NO: 4 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 19/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Aug 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 536 | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 84.8%

COMMENTS:

DESCRIPTIVE GEOLOGY

220 - 290 QUARTZ FELDSPAR PORPHYRY

from 273 - 290 matic phenos very well developed, rarely dark green, usually blue-green, med green or occ white with green core; qtz eyes very prominent at 290 gradational to cg monz?

290 - 480 MONZONITE?

identical in comp to 273 - 290, however there are less phenos and qtz eyes and rock has vague, blurred appearance - phenos not distinct; matrix has pinkish tinge

from 318 - 327 rock gradational between monz and QFP; matic frags irreg and becoming less intense towards base

BQWL

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
270	2%		40%	Tr.	Strong			10%	2	88				
280				5%					5	102		25275	98.2	
									5	98				
290									5	98		25276	96.8	
									2	92				
									3	92				
300									4	90		25277	93.0	
									1	100				
									3	97				
									2	88				
310								5%	3	103		25278	98.2	
									5	100				
									2	92				
									1	8		25279	88.4	
									2	92				
320				5%					5	102				
									5	102		25280	102.0	
330		20%			Moderate				5	102				

HOLE NO. EC-112 | PROJECT: EXPO | PAGE NO: 5 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 19/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Aug 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 536 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 84.8%

DESCRIPTIVE GEOLOGY

290 - 480 MONZONITE

bleached along shears from 351 - 354

minor magnetite in mafic frags and as vnlts

tr. epi with magnetite, occ some cpy

366 ½ moly on fract

PROPYLLITIC 2%

SERICITIC 20%

Tr.

Moderate — Weak — Moderate

% SULPHIDES: 5% / 3%

BQ WL

SECTION	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
330	5	102	25281	96.4	
340	6	88			
	5	107	25282	102.0	
350	5	103			
	5	90	25283	96.5	
360	5	103			
	5	98	25284	100.2	
370	5	102			
	5	98	25285	98.8	
380	4	98			
	4	106	25286	103.2	
390	5	102			

HOLE NO. EC-112 | PROJECT: EXPO | PAGE NO: 6 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 19/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Aug 25/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 536 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 84.8%

DESCRIPTIVE GEOLOGY

290 - 480. MONZONITE

~393½ ft moly in bleached zone

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
390	2%		20%	Tr	Moderate			3%	4	98	BQ WL	25287	96.7	
400								10%	5	95				
								3%	4	100		25288	104.1	
410					W S				5	103				
									2	113				
420					Moderate			5%	5	100		25289	97.5	
									5	95				
								3%	5	100		25290	97.5	
430									5	95				
								5%	5	95		25291	92.5	
440									5	90				
									5	103		25292	90.9	
450					Strong				3	78				

HOLE NO. EC-112 | PROJECT: EXPO | PAGE NO: 7 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 19/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Aug 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 536 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | SECTION

COMMENTS:

AVE CORE REC'Y / HOLE 84.8%

DESCRIPTIVE GEOLOGY

290 - 480 MONZONITE

from 458 - 480 much sericite coating on fracts

480 - 492 1/2 BASALTIC DYKE

black, v f.g, magnetic, fresh, generally textureless, occ with round black spots which occ. have a white core of zeolite? a few lath shaped, white xls visible; 10% mag dissem; both contacts sharp.

at 491 1/2, black spots with white infilling are vesicles - irregular, gassy-looking shape

492 1/2 - 536 MONZONITE

as 290 - 480, but pink zeolite vning present now.

dyke

BQWL

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	5	80	BQWL	25293	89.2	
	4	94				
	5	92				
	3	100		25294	100.5	
	3	111				
	4	94				
3%	3	86		25295	90.8	
	4	92				
Nil	4	94				
	1	75		25296	98.5	
	2	100				
	5	107				
3%	5	95		25297	99.0	
	5	102				
	4	102		25298	100.3	
	3 1/2	93				

HOLE NO. EC-112 | PROJECT: EXPO | PAGE NO: 8 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 19/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Aug 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 536 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | SECTION

COMMENTS:

AVE CORE REC'Y / HOLE 84.8%

DESCRIPTIVE GEOLOGY

492½ - 536 MONZONITE

minor bleaching of rock around shear at 533-534½; matrix greyish instead of pink

pebbles in clay, sulphides unground.

SECTION	FRACTURING	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
510	M	3%	5	100	BQWL	25299	89.0	
			3½	83				
520	Strong		3	83				
			5	92		25300	99.5	
			6	107				
530	Mod							
	S.		5	98		25301	99.5	

HOLE NO. EC- 113 | PROJECT: EXPO | PAGE NO: 1 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER: EXPO 238

COORDINATES: 247, 280 N. 231, 400 E. | DATE FINISHED: Sept 9 /74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 97.1%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0							
30							
40							
50							
60							
70							

0-2 STICKUP

2-30 OVERBURDEN

30 - 284 C.G. LAPILLI TUFF

dark green to black chlorite - sericite (with or without mag) very irreg frags in a lt green, sericitic matrix; 5% mag mainly in frags; minor bleaching near shears; silica all as veins

at 40, lap tuff has a lt grey, sericitic matrix; frags are extremely irreg in shape and consist almost entirely of fg mag; 15% mag, occ. as vnlts

at 60', lap frags are dark green chlorite - sericite; 10% mag; lt. grey sericitic matrix; sericite coating on fracts; occ white, sericitized feld-like frag.

at 72, v.cg. dark green, chlorite - sericite mag frags, very irregular in perv. silica, lt grey matrix; 6" thick

at 73, 6" of pale green grey hornfels, textureless, cut by mag vnlts; 10% mag

~ 30½, moly on fract

~ 70; 6" qtz vn

10%

40%

5%

Weak | M | Strong | Moderate | Weak | Mod | Strong

2%

5%

3%

DRILLING INTERVAL	% CORE RECOVERED
2	88
6	58
5	87
5	103
2	100
5	100
4	102
4	100
5	72
2	67
1½	150
5½	100
5	100

NQWL

SAMPLE INTERVAL	% REC'Y. SAMP. INT.
25345	69.8%
25346	97.6%
25347	100.8%
25348	79.4%
25349	107.5%

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 2 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9 /74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 97.1%

DESCRIPTIVE GEOLOGY

30 - 284 CG LAPILLI TUFF

from 84 - 88 bleached lt grey, very sericitized with pale green, sericitic remnants of former lap frags; no mag.; slightly sheared

~87½, 6" qtz vn

from 102 - 130½ rock has less chlorite in lap frags, dominantly sericite; mag 5%

from 130½ - 185½ lap frags dark green composed of chlorite - sericite - mag; 10% mag; occ zones containing numerous white, sericitized, f.g. feld-like frags? xls?; a few of the qtz vnlts carry small amts of cpy in the pyr minor bleaching along shears

~ clay, ground up rock, broken qtz vns, sulphides unground

~ as fault zone above

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
80	10%		40%		W									
					S				5	105		25350	104.0%	
90			50%		M				5	105				
					Weak				6	86		25351	93.0%	
100	5%							3%	5	102				
			40%						5	105		25352	100.1%	
110				5%					4½	85				
					Mod				5	98		25353	93.0%	
120								5%	5½	91	NQ WL			
					Strong				5	102		25354	89.5%	
130	5%								4	56				
	10%				M				5	97		25355	80.7%	
					W			3%	5	70				

HOLE NO. EC
CASING COLLAR ELEV.: GROUND ELEV.: 1125
COORDINATES: 247,280 N. 231,400 E.
INCLINATION: -90° BEARING:

PROJECT: EXPO
DATE STARTED: Aug 25/74
DATE FINISHED: Sept 9 174
TOTAL DEPTH: 756

PAGE NO: 3 OF 13
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: UGM

AVE CORE REC'Y / HOLE 97.1%

COMMENTS:

DESCRIPTIVE GEOLOGY

30 - 284 CG LAPILLI TUFF

from 185½ - 209 lap frags, v cg and very irregular, composed of chlorite-sericite-mag (dark green) in a lt grey sericitic matrix; 15% mag; sericite on fracts; silica alteration all as vns, some of which carry small amts of cpy (minor); rock resembles a weakly developed shatter bx

ALTERATION: PROPYLLITIC 10%; ARGILLIC; SERICITIC 40%; SILICIC 5% / 10% / 5%
FRACTURING: W strong; S Mod; W S Weak; M Strong
MINERAL
GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
140	3%	4	85	NQWL	25356	74.2%	
		3	67				
150		4	61		25357	88.7%	
	5%	5	100				
160	3%	5	102		25358	101.4%	
		5	100				
170		4	104		25359	104.3%	
	5%	5	107				
180		5	100		25360	97.6%	
		5	103				
190		5	87		25361	88.1%	
		4	81				
200		3	81				

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 4 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 97.1%

DESCRIPTIVE GEOLOGY

30 - 284 C.G. LAPILLI TUFF

from 208½ - 209½ red hem on fracts

from 209½ - 227 rock bleached to a lt grey, very sericitic, generally textureless but occ pale blue to green, sericitized lap frags still visible; at 220, 3 ang white sil frags; mag scattered unevenly and rarely throughout (2% av)

from 227 - 241 shear zone; consists of rock frags in clay gouge, broken qtz vns; sulphides unground, from 227 - 231, rock frags are bleached to a lt grey, very sericitic as above; from 231 - 241, rock frags are dark green with lap frags very visible and dark green; 5% mag in gouge

clay, rock frags, broken qtz vns, sulphides unground

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
200	10%		40%	10%	Weak	M		5%	5	100	NQ WL	25362	97.1%	
210	5%								5	95				
									4	96		25363	95.9%	
									5	97				
220									5	93		25364	96.4%	
									5	103				
230			50%	5%	Strong			1%	5	85		25365	88.6%	
									5	95				
240	5%								5	78		25366	47.0%	
									4	42				
									2	38				
250									4	92		25367	88.4%	
									4	92				
260								3%	5	80				

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 5 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 97.1%

DESCRIPTIVE GEOLOGY

30 - 284 C.G. LAPILLI TUFF

from 263 - 264½ hornfels?, dense, hard pale green, with only vague and very few lap frags remaining; lap frags dark green composed of chlorite-sericite-mag

~268½, tr moly

from 264½, grades back to lap tuff with dark green, irreg frags

from 278 - 280 partially bleached; matrix sericitic, lt grey with, partially erased lap frags, sericitized varying from dark green to translucent blue; mag (5%) still present

284 - 756 HORNFELS

H. grey, hard, dense with only a few, very ragged dark green, chlorite-sericite mag lapilli frags; 10-15% mag mainly vf.g. dissem throughout matrix, in lap frags and occ as vnlts which carry some cpy; silica alteration all as vhs, zeolite vning; from 303 - 328 sericite coating on fract; occ mag with tr epi on fracts.

~302½, cpy in pyr vnlts

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
260	5%		50%	5%	Strong	M	
270		2%	10%				
280	5%		50%	10%	Mod	Strong	
290			10%		Weak	S	
300					Weak		
310			20%		Mod	Weak	
320					Strong		
					Mod		

% SULPHIDES: 1%

DRILLING INTERVAL	% CORE RECOVERED
5	102
4	94
2	71
4½	85
5½	91
4	121
5½	64
3½	121
5	103
5	102
5	98
5½	94
5	97

CORE SIZE: NQ WL

SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
25368	95.2%	
25369	89.6%	
25370	94.9%	
25371	97.6%	
25372	100.5%	
25373	95.5%	

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 6 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 97.1%

DESCRIPTIVE GEOLOGY

284 - 756 HORNFELS

at 340½, qtz vn 3" thick cut by 4 pink zeol vnlts.

from 340½ - 341 bx zone, rock ground up; bx frags are white to pink zeol frags; sulphides unground

from 352½ - 355 rock lightly ground up but zeol vnlts are not broken; sulphides unground

~340½ - 341 bx zone

from 360 - 427 there are virtually no lap frags left, rock is a dark grey, very hard, dense with 15% mag dissem and as vnlts; cut by zeol vnlts and minor qtz vnlts

~352½ vuggy zeol vnlt

at 374 chlorite? very fibrous - almost looks like actinolite, matted and green like most actinolite

~372, 3" qtz vn.

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
320	5%		20%	10%	Strong			1%	5	102	NQWL	25374	100.6%	
330					Weak			10%	5	100				
									5½	95		25375	96.7%	
340			10%		Mod			1%	5	98				
									5½	105		25376	104.1%	
350					Weak			5%	5½	107				
									5	102		25377	102.7%	
360	2%		5%	5%	Mod			1%	5	98				
									5	103		25378	100.3%	
370					Weak			5%	5	97				
									5	105		25379	101.0%	
380														

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 7 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE 97.1%

SECTION | DESCRIPTIVE GEOLOGY | % SULPHIDES | DRILLING INTERVAL | % CORE RECOVERED | CORE SIZE | SAMPLE INTERVAL | % REC'Y. SAMP. INT. | ESTIMATED

284 - 756 HORNFELS

from 427 - 600 lap frags have a distinct xlline shape - pyroxene?. dark green, completely replaced by chlorite and mag; chlorite has fibrous texture still very few frags left. silica alterations all as vns; cut by zeol. vns; 15% mag, dissem and as vnlts.

at 431½, 2" bx zone with white zeol frags in gouge

~388 fract with much cpy

~420½, 6" epidote zone

~431½, bx zone

DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.
5	97	25380	99.5%
5	100		
5	102	25381	99.6%
5	100		
5	95	25382	98.1%
5	102		
5	93	25383	99.8%
5	107		
5	92	25384	99.7%
5	107		
5	93	25385	100.8%
5	107		

NQ WL

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 8 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | COMMENTS: | AVE CORE REC'Y / HOLE 97.1%

DESCRIPTIVE GEOLOGY

284 – 756 HORNFELS

cpy in with mag vnlts, zeol. vnlts and dissem in matrix; occ on fracts

sheared, zeol frags

sheared, zeol frags

FRACTURING: Weak | Mod | Weak | Mod | Weak

ALTERATION: PROPYLLITIC 2% | SERICITIC 5%

% SULPHIDES: 5% | 2%

NQ WL

SECTION	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
440	5	97			
	5	103	25386	99.6%	
450	5	95			
	5	103	25387	99.6%	
460	5	98			
	5	98	25388	96.4%	
470	5	90			
	5	102	25389	97.4%	
480	5	97			
	5	105	25390	100.2%	
490	5	93			
	5	105	25391	101.0%	
500					

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 9 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247, 280 N. 231, 400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1"=10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 97.1%

DESCRIPTIVE GEOLOGY

284 – 756 HORNFELS

505 – 506, almost solid. zeol, folded distorted

at 537, brown secondary biotite, vfg in horn'fels

from 547 – 548 zeol. vning has bx'd hnfls into vcg ang frags.

cpy in this section of hole very irregular high grade patches separated by much low grade to barren rock

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
500		5	103				
		5	85		25392	95.4%	
510		5	110				
		5	103		25393	103.5%	
520		5	95				
		5	78		25394	90.5%	
530	2%	5	115	NQ WL			
		5	88		25395	99.1%	
590		5	103				
		5	105		25396	103.0%	
550		5	98				
		5	103		25397	100.5%	
560							

PROPYLLITIC 2% | SERICITIC 5% | FRACTURING: Weak | SULPHIDES 2%

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 10 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 97.1%

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY | COMMENTS:

DESCRIPTIVE GEOLOGY

284 - 756 HORNFELS

from 565 - 575 much brown secondary biotite in hnfls

from 580 - 588 brown biotite patchy, occ very intense giving rock a deep brown colour

from 599 - 602 slightly sheared, zeol vnlts broken up into frags, separated by black gouge composed of clay, mag + possibly ground sulphides;

~ 573½, ¼" cpy vnlt.

~ 574, cpy vnlt ⅛" thick.

~ cpy vnlts ⅛" thick

~ ⅛" cpy vnlt at 590½

PROPYLLITIC 2%

SERICITIC 5%

FRACTURING: Weak | Mod | Weak | Mod

MINERAL: Mod

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
560	5%	5	98	NQ WL	25398	100.9%	
		5	103				
570		5	100		25399	97.0%	
		5	88				
580		5	115		25400	106.4%	
		5	103				
590		5	102		25401	102.2%	
	2%	5	102				
600		5	103		25402	103.5%	
	5%	5	102				
610		5	108		25403	102.5%	
		5	103				
620							

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 11 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 97.1%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
620	2%		5%		Mod			284 - 756 HORNFELS	5%	5	93	NQ WL	25404	76.5%	
								from 631 - 665 lapilli frags very noticeable, dark green, irregular composed of sericite - chlorite, with occ. mag and pyr; frequently lap frags are brown and replaced by brown secondary biotite; matrix lt grey, hard; rock still appears to be hnfelsed but alteration less intense than above; 2% mag, in lap frags; occ fract with specks of moly		5	62				
630					Strong			slightly sheared, no gouge		5	88		25405	101.0%	
	5%		20%		Moderate			638, moly on fract.		5	108				
640								641, moly on fract		5	103		25406	103.9%	
								from 665 - 713 green, vague lap frags composed of chlorite - sericite in hard lt. grey matrix; 2% mag; no brown secondary biotite		5	108				
650										5	95		25407	99.4%	
										5	105				
660					Strong			663½, moly on fract		5	92		25408	98.2%	
										5	98				
670					Mod					5	108		25409	108.9%	
					Weak					5	108				
680					M										

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 12 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247,280 N. 231,400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 97.1%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
680	5%	5	110	NQ WL	25410	102.0%	
690		5	110				
		5	105		25411	109.9%	
		5	112				
700		5	112		25412	108.7%	
		5	113				
710		5	93		25413	104.3%	
	3%	5	112				
720		5	102		25414	111.5%	
		5	117				
730		5	112		25415	96.3%	
		4	102				
740		4	73				

284 - 756 HORNFELS

from 713 - 756 dense, hard, textureless, pale green grey; no lap frags visible; 10% mag dissem throughout and on fracts; also moly on fracts; brown secondary biotite also dissem throughout. no biotite after 728; epidote with some zeolite vnlts; also as vnlts itself

~ 6x'd zcol vnlt

~ 685½ moly on fract

~ 702 moly on fract

~ 702½ cpy vnlt 1/8" thick

~ 710, large glob cpy

~ 714½-715 6x'd zcol. frags

FRACTURING: Moderate | W | Moderate | Strong

MINERAL: 5% | 20% | 2% | 5%

HOLE NO. EC-113 | PROJECT: EXPO | PAGE NO: 13 OF 13

CASING COLLAR ELEV.: | GROUND ELEV.: 1125 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 247, 280 N. 231, 400 E. | DATE FINISHED: Sept 9/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 756 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 97.1%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
740	2%		5%		Moderate			284- 756 HORNFELS	3%	5	110	NQWL	25416	105.5%	
750										5	108				
								slightly ground up zeol. vnlt		5	103		25417	103.8%	

HOLE NO. EC-114 | PROJECT: EXPO | PAGE NO: 1 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER: EXPO 259

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Sept 1/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 500' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 74.7%.

DESCRIPTIVE GEOLOGY

0-2 STICKUP

2-75 OVERBURDEN

75 - 104 BRECCIA.

totally silicified rock, lt grey, textureless, bx'd by white sericite-silica; fract. rust covered; silica totally perv.

104 - 111½ FAULT GOUGE

clay, with occ rock frag; sulphides are ground to almost black powder; at 108, pale green rock frag, textureless with mag dissem throughout

111½ - 121 SILICIFIED BRECCIA

lt grey with lt grey siliceous bx frags - all perv. silicified; occ soft, brown zone (pyrophyllite?) near 112 - 113;

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0														
70														
75			30%	60%	strong			10%	4	40	NQ WL	25302	32.0%	
80									2	0				
90									10	21		25303	18.9%	
100									5	27		25304	20.8%	
110	Tr.		20%	60%	Moderate			Tr	4	13				
									5	22		25305	22.9%	
									2	13				
									4	31				
								15%	5	80		25306	80.3%	
120									5	93				

HOLE NO. EC-114 | PROJECT: EXPO | PAGE NO: 2 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Sept 1/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 500' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 74.7%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
120			20%	60%	Mod.		
130							
140			35%	55%	Strong		
150							
160							
170							
180							

DESCRIPTIVE GEOLOGY

111 ½ - 121 SILICIFIED BRECCIA

at 135, lt green, siliceous, textureless frag as at 108

121 - 190 SILICIFIED LAPILLI TUFF

rock gradational from above to lt grey, perv silicified lap tuff with irreg sericitized patches of white, occ partially replaced by pyr; frags are also ang, sericitized, translucent blue-grey.

at 145 - CAVE? dark green, lap tuff heavily sericitized and chloritized

lap frags white, crowded from 156-170 sericitized, ang. f.g-mg

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
10%	5	45	NQWL	25307	45.8%	
	4	35				
	5	8		25308	29.1%	
	3	39				
	2	67				
	2	67		25309	28.7%	
	3	11				
	3	19				
	3	31				
	2	17		25310	30.5%	
	3	50				
	3	14				
	3½	38		25311	68.4%	
	2½	77				
	3	78				
	3	81				
	2	71		25312	41.7%	
	3	19				
	3½	36				

HOLE NO. EC-114 | PROJECT: EXPO | PAGE NO: 3 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Sept 1/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 500' | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 74.7%

DESCRIPTIVE GEOLOGY

121 - 190 SILICIFIED LAPILLI TUFF

190 - 266 BLEACHED HYBRID QUARTZ FELDSPAR PORPHYRY

dark grey sericite - pyr, subrounded frags, white, rounded sericite frags, fg white ang sericite frags, fg white qtz eyes in a lt grey, perv silicified matrix; rock bleached; gradational to above unit. qtz eyes minor, very small and obscure due to perv silica.

from 212 - 229 frags have a very pale green colour although totally sericitized

from 229 - 266 frags med green, still mostly sericite though; tr mag also; qtz eyes very noticeable now.

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
180			35%	55%	Strong	M	
190							
200							
210	T				Strong	S M	
220	2%		40%		M	S M	
230					M	S M	
240							

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
10%	3	22	NQWL	25313	17.7%	
	1	25				
	1½	28				
	1	25				
	5	15				
	2½	73		25314	96.6%	
	2½	37				
	4	44				
	2	33		25315	49.9%	
	2	79				
	2	71				
	5	32				
5%	3	56	BQWL	25316	69.9%	
	2	75				
	1	100				
	3	83				
	4	34		25317	53.8%	
	2	42				
	2	71				
	2	88				
3%	1	89				
	5	97		25318	96.1%	
	5	98				

HOLE NO. EC-114 | PROJECT: EXPO | PAGE NO: 4 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Sept. 1/74 | SCALE: 1" = 10'

INCLINATION: −45° | BEARING: 180° | TOTAL DEPTH: 500' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC 2% | ARGILLIC | SERICITIC 40% | SILICIC 50% | 5%

FRACTURING: Strong

MINERAL

GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 74.7%

DESCRIPTIVE GEOLOGY

190 - 266. BLEACHED SILICIFIED LAPILLI TUFF

fault gouge consists of pebbles of bleached sil lap. tuff in clay gouge. sulphides where present unground

266 - 500 QUARTZ FELDSPAR PORPHYRY

pink to white, sericitized feld-like frags? x/s?, white round qtz eyes and 5% dark green, sericite-chlorite mafics? frags? very irregular shape to lath shape (rare) and partially replaced by pyr in it grey silica-sericite matrix; QFP slightly bleached

from 296- QFP contains dark green chlorite-sericite, irreg to lath shaped frags (30%) and white qtz eyes only; slightly bleached along shears; 5% mag.

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
290	3%	4	77	BQ WL	25319	84.6%	
		4	85				
250		4	100		25320	98.8%	
		4	94				
		4	104				
260		5	75		25321	76.7%	
		2	67				
		2½	77				
270	5%	½	67		25322	73.2%	
		2	83				
		3	34				
		4½	98				
280		4½	107		25323	97.9%	
		4	85				
		3	108				
290	1%	5	103		25324	98.0%	
300		4	83				

HOLE NO. EC-114 | PROJECT: EXPO | PAGE NO: 5 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Sept 1/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 500' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 74.7%

DESCRIPTIVE GEOLOGY

266 - 500 QUARTZ FELDSPAR PORPHYRY

from 347 - 358 mafics are partially replaced by mag - 10% mag in this section; cpy ass'd with mag in mafics.

~ 331½, cpy-mag vnlt, hairline

PROPYLLITIC 5% | SERICITIC 10% | FRACTURING: Moderate | % SULPHIDES 5%

SECTION	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300	1	83	BQWL			
	6	56		25325	69.8%	
310	5	98		25326	94.9%	
	5	93				
320	5	95		25327	93.5%	
	5	80				
330	3	125		25328	99.3%	
	5	100				
	5	92				
340	5	103		25329	98.7%	
	5	95				
350	5	103		25330	102.2%	
360	5	103				

HOLE NO. EC-114 | PROJECT: EXPO | PAGE NO: 6 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Sept 1/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 500' | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 74.7%

DESCRIPTIVE GEOLOGY

266 - 500 QUARTZ FELDSPAR PORPHYRY

from 364 - 367, QFP contains v cg black to dark green, irregular lapilli frags that are composed of mag, chlorite and sericite,

at 382, 6" bleached zone with pseudo-bx text; QFP cut by sericite + pyr vnlts giving rock bx text; mafics are all bleached white, totally sericitized; bleached to a pink buff colour generally

occ bleaching along pyr vnlts and shears;

from 380, occ cg lapilli frag noted as at 364-367; in general mafics start to look more like frags than x/s - irregular shape

393, speck of moly

398, cpy in mag vnlt

siliceous, green pebbles in clay, sulphides unground

SECTION	FRACTURING	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
360	Weak	5%	5	100	BQWL	25331	100.7%	
370			5	101				
			5	97		25332	73.4%	
380	Mod		4½	37				
			4½	103		25333	100.7%	
390	Weak	40%	5	105				
			5	113		25334	108.0%	
400			5	103				
	Mod		5	101		25335	89.4%	
410	Weak		4	73				
			5	97		25336	95.5%	
420	Mod		5	78				

HOLE NO. EC-114 | PROJECT: EXPO | PAGE NO: 7 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Sept 1/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 500' | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 74.7%

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC

FRACTURING | MINERAL | GEOLOGY

COMMENTS:

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420	5%	6	97	BQWL	25337	101.0%	
430		5	105				
		5	103		25338	102.0%	
		5	101				
440		5	108		25339	106.5%	
		5	105				
450		6	90		25340	92.0%	
		5	95				
460		5	105		25341	100.0%	
		5	95				
470		5	98		25342	96.1%	
480		4	94				

266 - 500 QUARTZ FELDSPAR PORPHYRY

from 426 - 449 bleached lt grey with all dark green mafics sericitized and white, occ leached out; qtz eyes still present; white frags are irreg to ang in shape

from 449 - 461 QFP has pale green grey matrix; mafics still white, sericitized with general feld-like, lath shape; around 460 - 461 mafics have a very pale green colour; qtz eyes still present

from 461 - 500 QFP has both white, and pale green sericitized mafics as well as dark green, irregular to ang mafics and frags composed of chlorite - sericite - pyr; some of the white mafics have a dark green residual core

from 476 - 485 sericitized mafics leached out totally or partially

PROPYLLITIC 5% | ARGILLIC | SERICITIC 40% | SILICIC 3%

FRACTURING: Moderate | Weak | Mod | Weak

~468½' speck of moly

HOLE NO. EC-114 | PROJECT: EXPO | PAGE NO: 8 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1150 | DATE STARTED: Aug 25/74 | REF. TO CLAIM CORNER:

COORDINATES: 244,885 N. 235,390 E. | DATE FINISHED: Sept 1/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 180° | TOTAL DEPTH: 500' | LOGGED BY: UGM

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS: / DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480	3%		40%		Mod. ← Weak → M			266 – 500 QUARTZ FELDSPAR PORPHYRY	5%	5	106	BQ WL	25343	105.5%	
490										5	105				
										5	100		25344	102.5%	
500								~ 599½ brass scraping on core		5	105				

AVE CORE REC'Y / HOLE: 74.7%

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 1 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER: HEP 59

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1'=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE: 94.0%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0								0-3 STICKUP							
								3-13 OVERBURDEN							
10															
	10%		10%		Strong			13 - 33 LAPILLI TUFF green, with dark green to black lapilli frags composed of chlorite-magnetite-sericite; matrix pale green; 15% mag. dissem. in lap frags and in vnlts. core very badly broken up; fracts rusty till 106; minor epidote asso'd with with mag; also some zeol vning.	1%	5	35	NQWL	25418	53.6%	
										2	100				
20										1½	56		25419	50.6%	
										2½	63				
										3	42				
										4	46				
30								~ 31, brass scraping on core occ lap. frag that is very xlline in shape - pyroxene? altered to chlorite		1	33		25420	84.8%	
										2	117				
			5%					33 - 978 HORNFELS dense, hard, lt grey with occ, irreg dark green, chlorite-sericite-mag lap frags; 15% mag dissem and in vnlts		5	92				
40										1	75		25421	100.1%	
	5%									4	81				
			10%							2	138				
										2½	87				
50										1½	122				
										3	50		25422	73.7%	
										3	75				
										2	133				
60										4	48				

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 2 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

from 75-77 cg. lap frags, dark green composed of chlorite-sericite in lt grey matrix, hard.; lap frags very irregular

from 83½ - 140 hornfels dark grey, textureless from 20% mag, disem and in vnlts; occ lap frag still visible and some are v.cg. - mostly replaced by mag; silica alteration entirely as vns - minor; minor v.f.g. patches of brown secondary biotite; also minor flecks of moly; epidote asso'd with some mag vnlts

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
60	5%		10%	Tr	Mod	W	
70			5%		Strong		
80			10%		Strong	M	
90					Moderate		
100	2%		5%		Weak		
110					Mod		
120							

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
1%	4	94	NQ WL	25423	84.4%	
	5	93				
	1½	100		25424	97.5%	
	4½	100				
	5½	94		25425	108.6%	
	3	111				
	4½	715				
	3	78		25426	82.7%	
	5	73				
	3	114				
	2	96		25427	97.2%	
3%	5	98				
	5	88		25428	97.1%	
	5	97				
	3	111				

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 3 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 – 978 HORNFELS

from 140 – 156 hornfels with lap frags present – dark green composed of dominantly sericite with some chlorite and mag ; 5% mag ; occ qtz vns carry minor cpy ; specks of moly occ dissem in rock

from 156 – 178 hornfels with only occ. lap frag

from 178 – 182 hornfels with vcg, irreg lap frags

~148, 6" qtz vn

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120	2%		5%	5%	Moderate			1%	10	96	NQ WL	25429	97.5%	
130									5	95		25430	99.1%	
140			20%						5	105				
									2	79		25431	98.8%	
150					Weak			5%	5	107				
									5	95		25432	96.1%	
160									5	100				
								3%	5	88		25433	96.4%	
170									5	100				
									5	100		25434	97.1%	
180								1%	5	97				

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 4 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

from 182 - 190, swirled, textureless dark green rock; cut by numerous qtz and zeolite vnlts; no lap frags visible.

from 190 - 309 hornfels as 83½ - 140; tr moly; cpy as c.g. clots and v finely dissem throughout; silica all as vnlts, very irreg and shattered; much zeol vning; epidote asso'd with mag.; occ patches of brown secondary biotite

~ irreg qtz vn with pyr, tr cpy

~ qtz vn with pyr - cpy

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
-180	1%	5	93	NQWL	25435	107.9%	
	5%	5	102				
-190		5	145		25436	95.0%	
		5	75				
-200		5	70		25437	79.4%	
	3%	5	62				
-210		5	137		25438	113.0%	
		5	105				
-220		5	97		25439	99.1%	
	5%	5	102				
-230		5	95		25490	98.9%	
		5	100				
-240							

ALTERATION: PROPYLLITIC 2% | SERICITIC 20% → 5% | SILICIC 10% → Tr → 35% | FRACTURING Weak

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 5 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
240	5%	8	102	NQ WL	25441	93.4%	
		2	63				
250		10	98		25442	98.0%	
260		10	98		25443	97.2%	
270	3%	10	94		25444	92.2%	
280		6½	85		25445	89.7%	
		3½	91				
290		8	98		25446	96.4%	
300							

PROPYLLITIC: 2% | ARGILLIC: 5% | SERICITIC: Tr | SILICIC: 35% | FRACTURING: Weak — Moderate

33 - 978 HORNFELS

- qtz vn irreg with pyr - cpy
- at 293½ zeol has bx'd qtz vn
- from 280 - 285 frags left in dark grey hnfls are very xlline in shape - pyroxene? replaced by chlorite? - fibrous, needle-like actinolite?
- bx'd zeol vnlts

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 6 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33- 978 HORNFELS

from 300- 309 the acc lap. frag still present is completely replaced by mag

309 - hornfels as 83½ - 140

from 325½ - 326, white, vague, rounded sil bx frags in hnfls

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
300	2%		5%	Tr	Moderate			3%	9	94	NQWL	25447	97.0%	
									3	100				
310									6	100		25448	101.8%	
320								5%	10	103		25449	97.6%	
330					Weak			3%	10	94		25450	95.2%	
340								1%	11	96		25451	99.0%	
350									8	102		25452	90.9%	
360					W	M			5	83				

HOLE NO. EC-115
CASING COLLAR ELEV.:
GROUND ELEV.: 1350
COORDINATES: 248,050 N. 230,670 E.
INCLINATION: -90° BEARING:

PROJECT: EXPO
DATE STARTED: Sept 10/74
DATE FINISHED: Sept 25/74
TOTAL DEPTH: 978

PAGE NO: 7 OF 17
REF. TO CLAIM CORNER:
SCALE: 1" = 10'
LOGGED BY: UGM

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY
360	2%	5%	Tr.		Mod ← Weak		
370					← Moderate →		
380					Weak		
390					W Mod		
400					Mod ← Weak		
410							
420							

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

391½ ± cov with cpy

400½ 6" of ≈100% mag

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
1%	10	94	NQ WL	25453	95.0%	
	10	99		25454	100.4%	
	8	106		25455	102.4%	
	5	97				
	7	98		25456	97.9%	
3%	7	98		25457	99.1%	
	1	125				
	8	94		25458	96.4%	
	10	98				

HOLE NO. EC-115
CASING COLLAR ELEV.:
GROUND ELEV.,: 1350
COORDINATES: 248,050 N. 230,670 E.
INCLINATION: -90° BEARING:

PROJECT: EXPO
DATE STARTED: Sept 10/74
DATE FINISHED: Sept 25/74
TOTAL DEPTH: 978

PAGE NO: 8 OF 17
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

from 422 - 424, vein, pale green to white, mixture of mostly white zeolite with some epidote

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420	2%	5%	Tr.	Weak	Mod W			1/2%			NQWL	25459	99.3%	
430								5%	5	102				
									9	91		25460	92.2%	
440					Weak			3%	10	97		25461	97.2%	
450									10	98		25462	97.8%	
460					Mod			5%	10	97		25463	96.8%	
470					Weak				10	96		25464	97.4%	
480									3	103				

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 9 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

488' brass scrapings on core

ALTERATION: PROPYLLITIC 2% | ARGILLIC | SERICITIC 5% | SILICIC Tr

FRACTURING: Moderate | Weak | Moderate | Weak

MINERAL

GEOLOGY

SECTION: 480 | 490 | 500 | 510 | 520 | 530 | 540

% SULPHIDES: 5% | 1%

DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
7	93	25465	99.6%	
1	143			
5	100	25466	96.4%	
8	94			
10	98	25467	97.2%	
10	93	25468	94.0%	
10	98	25469	97.0%	
10	99	25470	98.8%	

CORE SIZE: NQ WL

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 10 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

ALTERATION: PROPYLLITIC 2% | ARGILLIC | SERICITIC 5% | SILICIC Tr

FRACTURING: Weak | Moderate | Weak | Mod | Weak

MINERAL

GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
540	1%			NQWL			
	5%	10	102		25471	101.4%	
550							
	3%	6	89		25472	93.6%	
560		10	99		25473	98.8%	
570		10	98		25474	98.4%	
580	5%						
	2%	10	100		25475	99.4%	
590							
	5%	10	97		25476	97.8%	
600							

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 11 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 10/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
600	3%	10	101	NQ WL	25477	100.6%	
610		10	99		25478	98.8%	
620		10	98		25479	98.4%	
630	5%	10	100		25480	99.0%	
640		10	95		25481	96.0%	
650		10	100		25482	99.8%	
660							

33 - 978 HORNFELS

occ very xlline looking frags, like pyroxene very ang, replaced by dark green chlorite. very rare and obscured by mag dissem throughout rock; rock dark grey; 20% mag; mag also as vnlts

from 648½ - 649½, rock has ≈ 10% cpy

PROPYLLITIC: 2%

SERICITIC: 5%

SILICIC: TR

FRACTURING: Weak | Mod | Weak | Mod | Weak

gouge zone with frags of broken qtz vn; much cpy

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 12 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

AVE CORE REC'Y / HOLE 94.0%

SECTION	ALTERATION: PROPYLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
660	2%		5%	Tr	Weak			33 - 978 HORNFELS ~663'6", 7" qtz vn	3%	10	99	NQ WL	25483	99.4%	
670										10	101		25484	100.2%	
680										10	97		25485	97.6%	
690					Mod					3½	100		25486	94.9%	
										4½	85				
700								~703, ⅛" cpy vn lt		7	104		25487	103.5%	
710					Weak			~714, 3" qtz vn		5	105				
										10	99		25488	97.6%	
720															

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 13 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY
720	2%		5%	Tr	Weak		
730							
740							
750							
760							
770							
780							

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
2%	10	92	NQWL	25489	93.8%	
3%	10	101		25490	100.8%	
	10	100		25491	100.2%	
1½%	8	101		25492	97.0%	
	7	91		25493	90.9%	
	1	100				
	4	83				
	4	102				
2%	6	93		25494	95.8%	

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 14 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

789, cpy vnlt

brass scrapings on core from 828 - 838

cpy vnlt, 1/16" thick

NQ WL

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
780	2%		5%	Tr	Weak	Moderate		2%	10	98	NQ WL	25495	98.4%	
790								5%	10	100		25496	99.0%	
800									10	95		25497	96.2%	
810								3%	10	101		25498	100.2%	
820					Weak				10	97		25499	83.6%	
830					Mod				10	30		25500	43.6%	
840														

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 15 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

~ 891½ specks of moly

at 877, hornfels changes from dark grey, 20% mag to a pale green grey with a max of 10% mag, av ~ 5%; nb texture. dense and very hard; some epidote asso'd with zeol vnlts and on fracts tr moly

~ 897½ specks of moly on fract

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
840	2%	5%	Tr		Weak			3%	10	98	NQ WL	25501	98.4%	
850								1%	9	100		25502	101.2%	
860								3%	10	104		25503	102.2%	
870					Moderate			5%	10	98		25504	94.7%	
880								3%	10	87		25505	88.8%	
890								1%	10	93		25506	94.2%	
900					S									

HOLE NO. EC-115 | PROJECT: EXPO | PAGE NO: 16 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

949½: brass scraping on core.

~ cpy vnlt, ⅛" thick

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
900	2%	5%		Weak	S			5%	10	97	NQ WL	25507	95.8%	
910					M			1%	7	93		25508	100.8%	
920					W				3	114		25509	93.2%	
930					Moderate			3%	10	98		25510	84.7%	
940									8	82		25511	95.8%	
950								5%	3	83		25512	86.8%	
960								10%	9	94				
								5%	3	100				
									8	84				

HOLE NO. EC - 115 | PROJECT: EXPO | PAGE NO: 17 OF 17

CASING COLLAR ELEV.: | GROUND ELEV.: 1350 | DATE STARTED: Sept 10/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,050 N. 230,670 E. | DATE FINISHED: Sept 25/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 978 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 94.0%

DESCRIPTIVE GEOLOGY

33 - 978 HORNFELS

from 461½ - 463 rock coloured brown by secondary biotite

between 967 - 977 occ. patch of brown secondary biotite; minor;

from 970 - 977 hornfels spotted with vague, roundish green spots - lap frags? Where biotite present spots are brown; matrix white, very hard rock;

from 977 - 978 · hornfels pale, green textureless as described above

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY
960	2%		5%		Weak		
970							
978							

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	10	98	NQWL	25513	98.2%	
10%						
8%	10	99		25514	99.0%	

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 1 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER: HEP 59

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

DESCRIPTIVE GEOLOGY

0 – 2 STICKUP

2 – 18 OVERBURDEN

18 – 32 TRICONED

32 – 382 CG LAPILLI TUFF

dark green to black, v.c.g – c.g, very irreg lapilli frags composed of sericite-chlorite and/or mag; 10% mag mainly in lapilli frags, occ as very thin vnlts; matrix lt grey, slightly sericitized; silica alteration all as vnlts; lap tuff appears to be somewhat hornfelsed, ie dense looking, hard

from 60 – 78, lapilli tuff hornfelsed; dense, dark grey due to 20% mag, dissem and as vnlts; only rare lap frags left; textureless.

~ 60 mag vnlt with cpy

2% | 20% | 5% | Tr. | Moderate | Weak | S | Mod | W | S | W

% SULPHIDES: 5% | 3%

DRILLING INTERVAL	% CORE RECOVERED
1	50
5	100
4	90
2	75
4	117
5	87
5	107
5	92
5	107

CORE SIZE: NQ WL

SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
26501	91.3%	
26502	97.2%	
26503	98.0%	
26504	101.1%	

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 2 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

AVE CORE REC'Y / HOLE: 98.7%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	COMMENTS: DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
70	2%	20%	5%	Tr.	W			32 - 382 CG LAPILLI TUFF	3%	5	100	NQ WL	26505	100.0%	
80					Mod.			from 78 - lapilli tuff as 32-60; lapilli frags not as cg.		5	100				
					W			~84½, tr moly specks.		5	100		26506	101.1%	
90					Mod					5	103				
					M					5	98		26507	95.5%	
100					W				5%	5	93				
					Weak			~104½, pyr vnlt with some cpy		5	98		26508	100.9%	
110					M					5	105				
					Weak			~111, pyr vnlt with some cpy		5	95		26509	97.5%	
120					Mod			from 129 - 130½ white, rounded to subrounded sil bx frags as well as dark green lap frags; sil bx frags vcg - cg.		5	100				
					Weak					5	95		26510	99.6%	
130										5	105				

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 3 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

32 - 382 CG LAPILLI TUFF

~ sheared, rock ground sulphides unground 1' of bleached rock on lower contact

from 144 - 145 much white sericite coating on fract.

~ shear zone with zeol vn/lt intact

from 148½ - 149½ white sil bx frags in bleached zone above shear; vague, sub-rounded c.g

from 130 - 180 moly specks in green lap frags

from 161 - 173 dark green, sericite-chlorite lapilli frags partially replaced by pyr, occ cpy and also rare specks of moly as well as sericite - chlorite

NQ WL

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
130	2%	5	93	26511	95.8%	
		5	97			
140		5	97	26512	96.7%	
		5	98			
150	3%	5	93	26513	100.4%	
		5	105			
160		5	100	26514	94.5%	
	10%	5	95			
170		5	85	26515	96.1%	
		5	100			
180	5%	5	103	26516	88.9%	
		5	98			
190	3%					

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 4 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

32 - 382 C.G. LAPILLI TUFF

from 236 - 256 as 161 - 173

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
190	2%		20%	TF	M			5%	5	45	NQWL	26517	85.6%	
					Weak				5	107				
200									5	93				
								3%	5	98		26518	95.5%	
210								1%	5	93				
									5	88		26519	89.5%	
220								3%	5	88				
									5	83		26520	85.9%	
230								10%	5	90				
								5%	5	150		26521	121.0%	
240					Weak	Mod			5	95				
								10%	5	102		26522	99.9%	
250														

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 5 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

32 - 382 C.G. LAPILLI TUFF

from 268, rock grading into hornfels; rock very hard, med grey; lap frags are vague, still green, becoming less abundant; 10% mag dissem mainly, occ. as vnlts; still zones of c.g. lap tuff

from 305 - 307 bleached due to very heavy sericitization; all texture removed; lt. grey; minor mag occ present

rock slightly ground, slightly bleached, quite sericitized - perv

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
250	2%		20%	Tr.	Weak	M		10%	5	102	NQ WL	26523	101.1%	
260								5%	5	103				
								10%	5	95		26524	94.5%	
270			10%						5	92				
									5	100		26525	102.9%	
280								5%	5	107				
									5	97		26526	101.6%	
290		20%	20%		Weak	M			5	103				
								10%	5	105		26527	99.1%	
									5	98				
300									5	93		26528	97.9%	
310	8%	10%	30%					5%	5	102				

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 6 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

32 - 382 C.G. LAPILLI TUFF

ALTERATION: PROPYLLITIC 2% | ARGILLIC | SERICITIC 10% | SILICIC TR

FRACTURING: Weak

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
310	5%	5	95	NQWL	26529	99.0%	
320		5	103				
		5	95		26530	98.5%	
330	3%	5	102				
		5	95		26531	101.4%	
340		5	107				
		5	97		26532	101.2%	
350		5	107				
		5	93		26533	101.3%	
360		5	108				
		5	97		26534	99.2%	
370		5	103				

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 7 OF 14

COLLAR ELEV: Gr El 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC | ARGILLIC | SERICITIC | SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

32 - 382 C G LAPILLI TUFF

382 - 405 HORNFELS

dense, very hard pale green, textureless; occ some dark green sericite - chlorite lapilli frags still left; 10% mag, dissem and as vnlts.

from 391 - 393, hornfels has brownish tinge (secondary biotite?) also has white, sericitized feld ?, org, lath shaped

405 - 418 C.G. LAPILLI TUFF

as 32 - 382.

418 - 798 HORNFELS

as 382 - 405, with occ small brown patches of brown, secondary biotite

from 425½ - 429½, hnfls brown due to secondary biotite. from 420 - 430, vague white feld laths throughout hnfls - andesite?

SECTION	ALTERATION	FRACTURING	MINERAL	GEOLOGY
370	PROPYLLITIC 2%	Weak		
380	SERICITIC 10%			
390	SILICIC Tr			
400	ARGILLIC 5%			
410	SERICITIC 5%			
420	SERICITIC 20%			
430	ARGILLIC 5%			

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
3%	5	93	NQWL	26535	96.5%	
	5	98				
	5	98		26536	99.0%	
5%	5	102				
10%	5	93		26537	95.8%	
	5	95				
	5	102		26538	100.7%	
5%	5	103				
	5	93		26539	96.5%	
	5	100				
	5	93		26540	99.4%	
	5	103				

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 8 OF 14

COLLAR ELEV: Gr El 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

418 - 798 HORNFELS

~pyr vnlt with some cpy

ALTERATION: PROPYLLITIC 2% | ARGILLIC 5% | SERICITIC 30% | SILICIC 5% Tr

FRACTURING: Weak | Weak | M | Weak

MINERAL

GEOLOGY

SECTION	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
430	3%	5	100	NQWL	26541	100.5%	
440		5	103				
		5	95		26542	93.0%	
450		5	87				
		5	105		26543	99.7%	
460		5	98				
		10	96		26544	96.2%	
470		10	97		26545	97.8%	
480		10	101		26546	101.0%	
490							

HOLE NO. EC-116
CASING COLLAR ELEV.:
GROUND ELEV.: 1300
COORDINATES: 248,035 N. 230,200 E.
INCLINATION: −90° BEARING:

PROJECT: EXPO
DATE STARTED: Sept 15/74
DATE FINISHED: Sept 20/74
TOTAL DEPTH: 798

PAGE NO: 9 OF 14
REF. TO CLAIM CORNER:
SCALE: 1" = 10'
LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

418 – 798 HORNFELS

from 508 – 510½ rock greasy, pale yellow green, heavily sericitized; lap frags visible occ extremely vague; where present dark green chlorite-sericite, partially replaced by pyr to med green, sericite, tr chl.; tr moly

from 539½ – 536½ bx zone, white zeol. frags in dark grey matrix

at 543, 3" bx zone. bx frags consist of ang. zeol vnlt frags; matrix dark grey.

from 548 – 553 black and pale yellow green hornfels; 20% mag with epidote? occ zones and patches containing small white ang-lath shaped x/s – feld? zeol?

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
490	2%		5%	Tr	Weak			3%	10	101	NQ WL	26547	100.8%	
500			30%					5%						
								3%	10	100		26548	100.4%	
510			5%					5%	10	102		26549	101.2%	
520								1%						
								3%	10	98		26550	98.8%	
530														
								1%	10	102		26551	99.4%	
540														
									10	89		26552	91.8%	
550														

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 10 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: −90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

418 - 798 HORNFELS

from 553 - 625 hornfels dark grey to almost black due to 20% dissem vfg. mag; contains white, ang feld-like x/s throughout; mag also as vnlts; occ. small brownish patches of brown secondary biotite

−pyr-cpy vnlt

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
550	2%	5%			Weak			1%	10	103	NQWL	26553	102.8%	
560									10	102		26554	101.2%	
570								5%						
								1%	10	98		26555	99.0%	
580								Tr						
								3%	10	103		26556	102.4%	
590								5%	10	100		26557	99.8%	
600								1%	10	99		26558	99.2%	
610														

HOLE NO. EC-116
CASING COLLAR ELEV.: GROUND ELEV.: 1300
COORDINATES: 248,035 N. 230,200 E.
INCLINATION: -90° BEARING:

PROJECT: EXPO
DATE STARTED: Sept 15/74
DATE FINISHED: Sept 20/74
TOTAL DEPTH: 798

PAGE NO: 11 OF 14
REF. TO CLAIM CORNER:
SCALE: 1"=10'
LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

418 - 798 HORNFELS

from 625 - hornfels grey green dense, textureless. occ brown patch of brown secondary biotite. white feld-like xls rare but still present; specks of moly occ visible.

~698, mos2 flakes

~668, moly in hnfls.

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
610	2%		5%	Tr	Weak			1%	10	100	NQWL	26559	100.0%	
620									10	100		26560	100.4%	
630									10	102		26561	102.2%	
640								5%	10	103		26562	101.6%	
650									10	96		26563	97.4%	
660									10	103		26564	102.0%	
670														

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 12 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: VGM

ALTERATION: PROPYLLITIC, ARGILLIC, SERICITIC, SILICIC | FRACTURING | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

418 - 798 HORNFELS

687' v thin discontinous cpy vnlt

pyr-cpy-moly vnlt

mag-cpy vnlt

SECTION	PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
670	2%		5%	Tr	Weak			10%	10	98	NQWL	26565	96.0%	
680								5%	10	88		26566	90.4%	
690								3%	10	100		26567	99.6%	
700					Mod.				10	98		26568	97.8%	
710					Weak			5%	10	97		26569	97.2%	
720					Mod				10	98		26570	98.6%	
730														

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 13 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 248,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1" = 10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

418 - 798 HORNFELS

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
730	2%		5%		Weak			5%	10	101	NQ WL	26571	100.6%	
740									10	99		26572	98.8%	
750									10	98		26573	98.6%	
760								10%	10	101		26574	100.8%	
770									10	100		26575	95.0%	
780									4	75				
790								5%	10	100		26576	95.0%	

HOLE NO. EC-116 | PROJECT: EXPO | PAGE NO: 14 OF 14

CASING COLLAR ELEV.: | GROUND ELEV.: 1300 | DATE STARTED: Sept 15/74 | REF. TO CLAIM CORNER:

COORDINATES: 298,035 N. 230,200 E. | DATE FINISHED: Sept 20/74 | SCALE: 1"=10'

INCLINATION: -90° | BEARING: | TOTAL DEPTH: 798 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 98.7%

DESCRIPTIVE GEOLOGY

SECTION	ALTERATION: PROPYLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
790	2%		5%		Weak			10%	6	131	NQWL	26577	123.2%	
798														

418 - 798 HORNFELS

from 792 - 798 hornfels brown from secondary biotite; white ang feld-lite xls throughout; 10% mag dissem

HOLE NO. 74-1 (EC-119) | PROJECT: EXPO | PAGE NO: 1 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1475 | DATE STARTED: Sept 30/74 | REF. TO CLAIM CORNER: HEP 98

COORDINATES: 218,400 N. 212,910 E. | DATE FINISHED: Oct 5/74 | SCALE: 1" = 10'

INCLINATION: -45° | BEARING: 225° | TOTAL DEPTH: 516 | LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.9%

DESCRIPTIVE GEOLOGY

0-2 STICKUP

2-71. OVERBURDEN

71 - 94 OVERBURDEN ?

coring started at 55', variety of boulders, very altered intrusive, highly sericitized, with white feld, brown secondary biotite - black mag basalt?, with no text and very little (tr.) sulphide - fresh diorite

from 71-94 appears to be over burden also. the small amount retrieved in coring contains fresh diorite, black basalt from 77-81, pebbles are in sandy clay; pebbles of bleached, silicified lapilli tuff? and dark, volc - basalt? - textureless; also a peculiar dyke? consisting of green, chlorite filled amygdules, small and round and large ½" zeol, white, filled amygdules in a med green matrix; 2% sulphides

94 - 100 BRECCIA

buff, siliceous. frags, 11 grey, very altered feld porph? frags with white, ang, sericitized feld-like spots, perv. sil; grades into gouge with pebbles of above, sulphides unground; silica perv.

100 - 252 BLEACHED LAPILLI TUFF

see next page for description

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
0							0:0							
71							0:0							
									6	21		26578	36.3%	
80									4	67				
									2	17		26579	15.7%	
90									10	8				
									7	88	NQ WL	26580	64.0%	
100	Tr	30%	60%	5%	Strong	Msd		10%	4	67				
									5	80		26581	73.3%	
110			30%	80%?					4	65				
									3	58		26582	70.1%	
120									6	83				

HOLE NO. 74-1 (EC-119)
CASING COLLAR ELEV.:
GROUND ELEV.: 1475
COORDINATES: 218,400 N. 212,910 E.
INCLINATION: -45°
BEARING: 225°

PROJECT: EXPO
DATE STARTED: Sept 30/74
DATE FINISHED: Oct 5/74
TOTAL DEPTH: 516

PAGE NO: 2 OF 8
REF. TO CLAIM CORNER:
SCALE: 1" = 10'
LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.9%

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
120			5%	80%?	M			100 - 252 BLEACHED LAPILLI TUFF							
								H grey, with occ very vague, pale green frags; matrix occ perv. silicified; rock generally textureless; after 110, rock still H grey completely textureless and very hard - perv silicification?		4	94		26583	78.7%	
										3	69				
130			30%		Strong			at 125, vague, very pale green, lapilli frags back; also heavy sericite coatings on fracts; only occ. sericite coating after 146		4	38		26589	58.8%	
										4	75				
140					Mod					5	58				
										4	79		26585	70.9%	
				60%?	S			at 167, rock becomes a darker grey due to more chlorite; still hard and generally textureless; more zeol vning actually rock may be a fg tuff		3	61				
150					Weak				10%	4	94	NQWL	26586	97.6%	
										5	102				
160			20%		Strong					5	92		26587	97.5%	
	Tr									5	103				
170					Weak					5	92		26588	99.7%	
					M					5	105				
180					W										

133, smear of moly on fract

143½, pyr, moly, cpy, sphal vn't

172, moly in zeol vn't

HOLE NO. 74-1 (EC-119)
CASING COLLAR ELEV.:
GROUND ELEV.: 1475
COORDINATES: 218,400 N. 212,910 E.
INCLINATION: -45° BEARING: 225°

PROJECT: EXPO
DATE STARTED: Sept 30/74
DATE FINISHED: Oct 5/74
TOTAL DEPTH: 516

REF. TO CLAIM CORNER:
SCALE: 1" = 10'
LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.9%

DESCRIPTIVE GEOLOGY

100 - 252 BLEACHED LAPILLI TUFF

at 203, rock becomes a greener colour, still fairly hard and textureless;

from 231½ - 232, bx'd pink qtz vnlt; frags almost resemble a very pale pink garnet

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
180	Tr				Weak			5%	5	98	NQ WL	26589	99.4%	
190									5	100				
									5	100		26590	99.0%	
									5	98				
200									5	100		26591	99.1%	
					Mod			10%	5	107				
210									5	78		26592	90.0%	
									5	98				
220	2%								5	88				
								5%	5	107		26593	97.5%	
			20%					3%	5	93				
230					Weak				5	100		26594	95.5%	
240								5%						

HOLE NO. 74-1 (EC-119) | PROJECT: EXPO | PAGE NO: 4 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1475 | DATE STARTED: Sept 30/74 | REF. TO CLAIM CORNER:

COORDINATES: 218,400 N. 212,410 E. | DATE FINISHED: Oct 5/74 | SCALE: 1"=10'

INCLINATION: -45° | BEARING: 225° | TOTAL DEPTH: 516 | LOGGED BY: UGM

ALTERATION: PROPYLLITIC 2% | ARGILLIC | SERICITIC 20% 5% | SILICIC Tr 5% | FRACTURING: Weak Moderate Weak | MINERAL | GEOLOGY

COMMENTS:

AVE CORE REC'Y / HOLE 88.9%

DESCRIPTIVE GEOLOGY

100 - 252 BLEACHED LAPILLI TUFF

pink qtz vn

from 243 - 248 silicification, irreg pink qtz vnlts

252 - 376 WELDED TUFF?

lt grey, very hard, textureless with dark grey zones full of f.g mag; 10% mag, dissem and as vnlts; minor epidote; silicification as pink qtz vnlts and perv??; zeol vning also

mag gradually increasing; by 286 up to 15%; rock now dark grey; epidote asso'd with mag; also minor cpy

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
5%	5	88	NQWL	26595	97.4%	
	5	102				
	5	100		26596	97.0%	
	5	98				
	5	90		26597	98.1%	
	5	105				
	5	98		26598	99.4%	
3%	5	108				
	5	80		26599	95.4%	
	5	102				
	5	102		26600	100.5%	
10%	5	103				
3%						

HOLE NO. 74-1 (EC-119)
CASING COLLAR ELEV.: GROUND ELEV.: 1475
COORDINATES: 218,400 N. 212,910 E.
INCLINATION: -45° BEARING: 225°

PROJECT: EXPO
DATE STARTED: Sept 30/74
DATE FINISHED: Oct 5/74
TOTAL DEPTH: 516

PAGE NO: 5 OF 8
REF. TO CLAIM CORNER:
SCALE: 1" = 10'
LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.9%

DESCRIPTIVE GEOLOGY

252 - 376 WELDED TUFF?

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY
300	2%		5%	5%	W		
310					Mod		
320					Weak		
330					Weak @ M		
340					Weak		
350					Mod		
360					Weak		
					Mod		

% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
3%	5	92	NQ WL	26601 -	63.7%	
	5	35				
5%	10	93		26602	91.4%	
1%	9	85		26603	90.7%	
5%	10	104		26604	102.2%	
2%	10	98		26605	98.0%	
	10	98		26606	98.6%	

HOLE NO. 74-1 (EC-119) | PROJECT: EXPO | PAGE NO: 6 OF 8

CASING COLLAR ELEV.: | GROUND ELEV.: 1475 | DATE STARTED: Sept 30/74 | REF. TO CLAIM CORNER:

COORDINATES: 218,400 N. 212,910 E. | DATE FINISHED: Oct 5/74 | SCALE: 1"=10'

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AVE CORE REC'Y / HOLE 88.9%

DESCRIPTIVE GEOLOGY

252 - 376 WELDED TUFF?

376 - 381½ QUARTZ FELDSPAR PORPHYRY very unaltered intrusive with white m.g feld, glassy qtz eyes and green mostly sericite mafics; cut by zeol vnlts and broken qtz vnlt; 10% mag dissem; M. grey colour

381½ - 424 HORNFELS

from 381½ - 384 contact zone consisting of sheared hnf/s ? with bx'd zeol vnlts;

from 384 - 424 dark grey, very hard, textureless rock with 10% mag dissem and occ as vnlts

at 420, 2" finger of QFP; qtz eyes not visible; pink; very altered by zeol and epidote.

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
360	2%		5%	5%	Weak			2%	10	100	NQ WL	26607	100.0%	
370	Tr.		10%	Tr	Mod			5%	10	100		26608	94.6%	
380					Weak			3%	9	82		26609	89.2%	
390									10	100		26610	96.4%	
400	2%		5%						11	91		26611	93.4%	
410					Mod			5%	10	99		26612	88.9%	
420					W									

HOLE NO. 74-1 (EC-119)
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PROJECT: EXPO
DATE STARTED: Sept 30/74
DATE FINISHED: Oct 5/74
TOTAL DEPTH: 516

PAGE NO: 7 OF 8
REF. TO CLAIM CORNER:
SCALE: 1" = 10'
LOGGED BY: UGM

COMMENTS:

AVE CORE REC'Y / HOLE 88.9%

SECTION	ALTERATION: PROPYLLITIC	ALTERATION: ARGILLIC	ALTERATION: SERICITIC	ALTERATION: SILICIC	FRACTURING	MINERAL	GEOLOGY	DESCRIPTIVE GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
420	2%		5%	5%	W			424 - 426½ QUARTZ FELDSPAR PORPHYRY	5%			NQWL			
					Mod			~ctc. ~QFP ~ctc	3%	10	102		26613	100.5%	
430								cg, white, ang feld and cg qtz eyes with 5% sericite-chlorite, green mafics in lt grey matrix; rock very unaltered; upper ctc slightly displaced by zeol vnlt; both ctcs sharp	5%	6	97				
													26614	97.7%	
440								426½ - 440½ HORNFELS	8%	9	98				
								as 384 - 424.							
								~hybrid phase							
450								440½ - 448½ HYBRID		10	103		26615	102.0%	
								~QFP. a mixture of hornfels above and QFP below; dark grey with m.g. feld xls floating in matrix; occ pink feld? - shapeless; fresh; occ finger of QFP; from 447½ - 448½ hornfels as above with incipient feld xls.							
460					Weak				3%	10	100		26616	100.6%	
								448½ - 516 QFP							
								feld xls cg - euhedral; qtz eyes also cg very crowded; ctc sharp; frags of hnfls in QFP, ang, sharp ctcs still, occ. m.g. feld xls growing in hnfls frags.		6	86		26617	90.6%	
470															
										10	95		26618	96.2%	
480															

HOLE NO. 74-1 (EC-119) | PROJECT: EXPO | PAGE NO: 8 OF 8

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DESCRIPTIVE GEOLOGY

448½ - 516 QUARTZ FELDSPAR PORPHYRY

SECTION	ALTERATION: PROPYLLITIC	ARGILLIC	SERICITIC	SILICIC	FRACTURING	MINERAL	GEOLOGY	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTIMATED
480	2%		5%		Moderate	W	Mod	5%	10	101	NQ WL	26619	98.0%	
490					W	S	Mod		7	86		26620	93.5%	
500					Mod	W	Weak	3%	10	101		26621	90.5%	
510					W				5	80				
									6	81		26622	80.6%	