

SCALE 1:750

- estimated true thicknesses

Sound to 64 mm cherty clasts within basalt

MOUNT JACOBS - MTD 18 - AS DRILLED

1 1/2 2 64 mm DENISON GROUP corals

J570 T1/2r

J571 16.5 MS002

MS004

J572 MS006

MS007 MS008

J573 J573 18.9

J574 J574 T1/2r-80

MS010

J575 J575 16.9

J576 J576 19

MS012

J577

MS017

J578

MS018

MS021

MS029

J579

MS031

J580

MS030

NORTH

polyminic siltstone

stockwork

stockwork

basalt dyke

peperite?

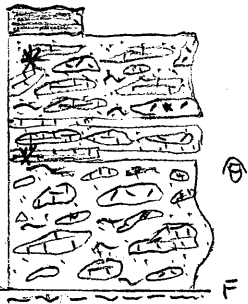
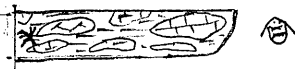
sed. br slt/crns

peperite?

hyalite

basalt dyke

carbonate celt(?) clasts shale clasts



13353 (Greg Ebsworth, 2001)

ARA correlate + Lynchford Member?

Mt Julia Member?

Add HS

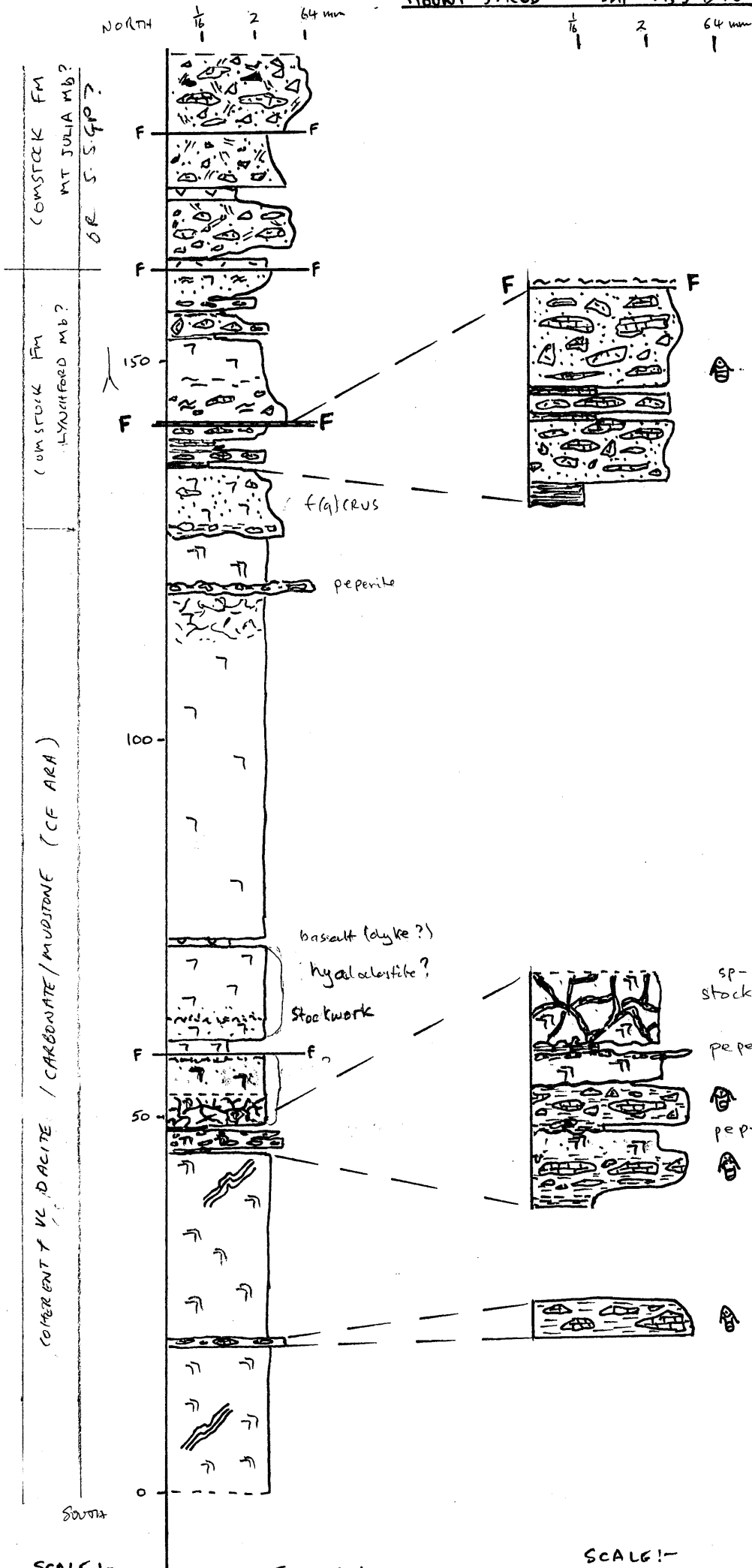
* HS-GBE

* TS-GBE

* TS-MRT

* Berham-MRT

MOUNT JACOB DDH - MTJ D18



have MAT analyses
 refer TS descr. - 5569

DIAMOND DRILL LOG				LOCATION: MOUNT JACOB (WINTERBROOK SHEET)		HOLE NO: MT 5 D18		
Mag. sus.	Structure	grainsize mm				ALT	RL: DIP: AZ:	Page 1 of 13
		1/16	1/8	2	8		64	Description
0	50/CA					Strongly Haem.	POLYMET CHEALTY CONGLOMERATE Matrix-sup Mod-poorly sorted, gran-pebb, subang-round, v-fine (chert?) clasts - some E distinct lamina (prob. sed) 1.0m Clasts + matrix strongly haem alt	
0.1 - 0.3	HQ NR					st. Haem.	ALTERED COHERENT VOLCANIC. st. haem alt, v-fine, with sparse felds? or augite 3.75m clastic in part Basalt? 5569-2.6m	
5	FAULT?					S. haem.	SILICLASTIC SANDSTONE - F-m grad, less alt parts have distinct rounded qt 2-1.2m 4.2m + minor larger chert? (2-3m) in haem matrix	
10						Weak m haem.	POLYMET SILICLASTIC CONGLOMERATE Mod-poorly sorted, gran-pebble, clast-supported conglomerate. Clasts mainly quartzite and lesser vein quartz Pink-mottled-cream due to w-m haem. alteration. minor larger clast	
13.2						PS	13.6 Quartz-py-haem veining	
15								
20								
23.0							23.0 Irregular, broken - prob. unconformable	
0.2 - 0.4						Haem Limonite	F(?) - phytic coherent FELSIC- (see below) VOLCANIC	

25

DIAMOND DRILL LOG				LOCATION: MOUNT JACOB			HOLE NO: MTJ D18	
				AMG: E N				
		grainsize mm				RL: DIP: AZ:		Page 2 of 13
		1/16	1/8	1/4	1/2	ALT		
						Description		Logged by:
						Date:		
25								F-(g?) - phytic coherent FELSIC? VOLCANIC
								Upper part v. strongly ferruginised - could be UC SS or strongly porphyritic coh. volc.
								Less ferruginised, strong ser. alt.
								20-25% (?) 1-2 um euh-subh. ser-haem alt. feldspar 3570-29.1m
30								Minor - 1%? 1-3um euh. quartz
								Minor 0.5-3um euh-subh. Ferrings - pyx?
								Minor 0.5um + 1-2um unreg! mt? hbl?
								Grd mass v-f grad, mainly haem alt with unreg 1-3um green blebs (epidote?)
								~34.0m
35		35.2						
								Zone of strong pink ab/haem(?) alteration with assoc. 0.5-1cm patches and 1-4um unreg. veins of dark haem? or MnO. Central part of zone is strongly ferrug. and leached - possibly sheared low/CA
								41.1m - box of strong haem/limonite alt
								f-g-coh. laute?
								As above but green-grey - due to mod - strong ser-chlor alt. Possible banded perlite
45								
50								
								b. perlite? ser alt strong porph (f-g) coh. volc
								* MTJ.001 50.2m

DIAMOND DRILL LOG				LOCATION: MOUNT JACOB			HOLE NO: MTJ D18		
				AMG: E N			Page 3 of 13		
Mag. sus.	Structure	grainsize mm		ALT	RL: DIP: AZ:	Description		Logged by:	Date:
		1/16	1/2	2	8	64			
50							F-a) coh. (dauite - andesite?) As above minor qtz-carb veins thruout.		
55	low						(Ref MRT J571 ~ 57.1m) J571-57-57.4 - missing ~58.0 m		
60	FB? low/CA						As above - possible flow banding and minor autobx. ~60.9 m 61.7m Sharp, cont? masked partly by ser alt.		
65	low	S19 low/CA					SILTSTONE CARBONATE CLAST. BRECCIA Poorly sorted, mainly clast supported, granule-fab bx of grey-cream rext. and-sub ang carb. clasts (some with brachiopod, echinid, or trilobite frags?) vs v.f. grad dk grey-brown, py-ser alt mud. -substone - pos. e.v.f. carb. in part. p. [MJ002-62.0m (MJ003-62.6m trilob. section) 62.8m sharp, cont. - ser alt masks		
70							As above - dauite - andesite? Parts rich in qtz phenos, common other have large emb. ferromags - hbl or pyx?		
75									

ser
bleached

DIAMOND DRILL LOG				LOCATION:			HOLE NO:	
				AMG:	E	N	MTJ D18	
		grainsize mm		RL:	DIP:	AZ:	Page 4 of 13	
Mag. sus.	Structure	$\frac{1}{16}$ $\frac{1}{2}$ 2 8 64	ALT	Description		Logged by: GBE	Date: 7/8/01	
75							As above - dacite or andesite	
							Possible banded perlite?	
	low			M			typical, red unalt.	
				ser			f. (q, f, mon) phytic	
				chr			b. perlite? (rhyo?) dacite	
80							slightly finer grained?	
85				M			dacite or andesite?	
				ser				
				chr				
90	low						90.5m - qtz-carb veins	
95								
100								

75
80
85
90
95
100

low
mg
~ 20% ch

MG004 - 78.25m

DIAMOND DRILL LOG				LOCATION:			HOLE NO:	
				AMG:	E	N	MTJ D18	
Mag. sus.	Structure	grainsize mm		RL:	DIP:	AZ:	Page 5 of 13	
		1/16	1/2	2	8	64	ALT	Description
								Logged by: GBE
								Date: 30/8/01
100								F-(q-) coh dacite or andesite?
105	low						M-S Ser- chlor	as above
110								10cm q-carb vein
								113.05 sharp
115	low							CARBONATE CLAST - mudstone/slst BX small round cream-grey carb, poorly sorted, 3-peg mainly matrix supported bx. Some clasts 2 abt TRILLOBITE + BRACH? sent to MJ005-114.25m 115.15 114.0-115.2
								Stringy porphyritic f(q) dacite intrudes carb bx - sharp contacts & peperite 115.50 MJ006-115.40
								carb-and/slt bx as above - some clasts fossiliferous SHARP
								117.25m
								F(q-) coh (rhyo) dacite
								118.65-118.80 mudstone (slst) - sharp contacts Peperite?
120	low						S- US (ser-) chlor	strong altered, stockworked, coh. vok- prob f(q?) coh. (rhyo) dacite or (rhyo?) Rel. abt pseudomorphed ferromags in part Abt. carb (siderite?) - sp-gl - q veins forming stockwork Vein 2-30mm.
125								

100
105
110
115
120
125

45/CA
FB?
low/CA

low
CUT
CORE

note

peperite

SHARP

DIAMOND DRILL LOG				LOCATION:			HOLE NO:	
				AMG:	E	N	MTJ D 18	
Mag. sus.	Structure	grainsize mm 1/16 1/8 1/4 1/2 1		ALT	RL:	DIP:	AZ:	Page 6 of 13
					Description		Logged by: GBE	Date: 30/8/01
125	CUT CORE			S-VS Ser chlor?	As above ~127.0 - grad. contact			
130	low			S Ser chlor	F-(q) - diacidic hyaloclastite? ± ferromag. Strongly altered weakly stockworked in places.			
135					* MTJ 007 136.0m less altered			
				VS Ser chlor	Stockworked? 138.10m Sharp - irregular, then broken broken - sheared, fault?			
140	BRACKEN FAULT? SI? 45° CA				Pink brown, f grad, massive - weakly fol, con wale? darks/hole fine blebs of red chert jasper, shadowy f, q, ferromag? phens? MJ 008 - 139.60m obscured by silicification			
145	low			S Ser chlor	f-(q) ± ferromag con-dactite daatic CRUS? gen. v. altered ~147.0m			
				VS Ser? chlor	Stockworked, strongly altered zone ~148.6m. q-c - P3, SP?			
150					(ref MRT sample 5573) - see database 150m - 5573 v. alt. dense?			

DIAMOND DRILL LOG				LOCATION:			HOLE NO:	
				AMG:	E	N	MTJ D 18	
Mag. sus.	Structure	grainsize mm		RL:	DIP:	AZ:	Page 7 of 13	
		1/16	1/2	ALT	Description		Logged by:	Date: 30/8/01
150					f (q?) ferrungy coh. dante?			
					As above, gen. very altered			
155	low				158.5 broken			
					Fgnd brown coh. vol? as at 138.1-141.5			
					158.8 broken			
160	low				f (q?) ferrungy coh. dante			
					as above			
					163.6m sharp -			
					Q-carb veins			
165	SI? 45/CA	V	⊙	chlor epid.	Amigdaloidal BASALTIC DYKE - w. fgnd with abt. 2-10mm carb-filled amgs. Chilled margins			
					164.6m Q-carb-gl-sp veinlets		164.10	
					164.6m			
	low				f (q?) ferrungy coh. dante			
170					170.70m typical dante			
					170.70m			
175								

MBT?
5574?
574

DIAMOND DRILL LOG				LOCATION: AMG: E N			HOLE No: MTJ D 18				
Mag. sus.	Structure	grainsize mm				ALT	RL:	DIP:	AZ:	Page 9 of 13	
		1/16	1/8	2	8		64	Description	Logged by:	Date:	
225											2018/01
230											
235											
240											
245											
250											

F-(q?) ferromag r. daube
as above.

~ 228m

(Ref. MAT 5576 ~ 228.1m)

f(q) rhyolite weak chlor veining 5576

m-s
chlor
ab/horn

MJ 015 232-25

altered
f-q-phyrlic
rhyolite

Zone of chlorite microveins, in part assoc. with strong ab/horn alt, esp → base

S
ab/
horn
chl.

239.80m sharp, controllable?

VOLCANICLASTIC? BRECCIA - almost
by aloclastite? peperite?
Strongly carb-chlor - horn. altered unit
with prominent grey (ser) alt? patches/
clasts; red carb? or jasper clasts/lam.
in a vfgd greenish silty matrix as
carb. as blobs/patches, veins; not obvious
clasts.

S horn
carb
chlor
ser.

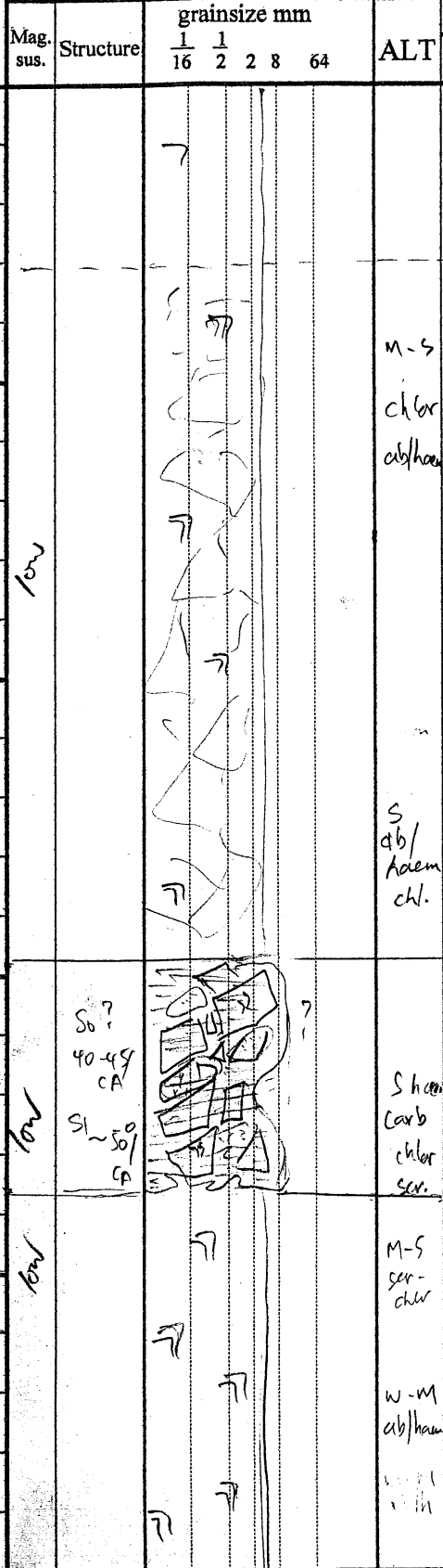
MJ 012 - 241.1m - clasts
MJ 013 - 242.4m - lamae

242.6m unreg. peperitic

M-S
ser-
chlor

F-(q?) - phyrlic (rhyo?) daube
Abt 1-3mm fcls, minor? 1-3mm q, mm
ferromags. (Pyx?) v.f. (ser alt? good mass)

w-m
ab/horn



low

low

low

Sb?
40-45
CA
Sl ~ 50
CA

DIAMOND DRILL LOG				LOCATION:			HOLE NO:	
				AMG:	E	N	MJT D18	
		grainsize mm		RL:	DIP:	AZ:	Page 10 of 13	
Mag. sus.	Structure	$\frac{1}{16}$ $\frac{1}{2}$ 2 8 64	ALT	Description		Logged by:	Date: 3/8/01	
250	low		M-S Ser-chr	<div style="border: 1px solid black; padding: 2px; display: inline-block;">MJ 014 252.70m</div> F-9 rhyo. dautt? 252.85 peperitic?				
255	low		M Ser	SEDIMENTARY BRECCIA? coarse (2-10cm) bx of irreg. grey silic. & 1st, dark matrix and poss. CRUS. plus minor 1-3cm white carb. clasts (colt near base) - <div style="border: 1px solid black; padding: 2px; display: inline-block;">MJ016 - 255.35m</div> (ret mat J 577) <div style="border: 1px solid black; padding: 2px; display: inline-block;">5577 254.0m</div> * UCSS 255.5m sharp, conf?				
260	low		M Ser M-S ab/h	F-(9-) CRUS med grd with ~50% 2-3m emb-subh felds xtals, minor 0.5-1mm emb qtz. Parts of unit look like sed bx with disrupted grey f. slst, patches - but could be patchy (ser?) alt - has fine remnant qtz xtals * <div style="border: 1px solid black; padding: 2px; display: inline-block;">MJ017 264.7m</div> ser-alt CRUS? Overall gives bx/pseudo bx appearance 264.8m sharp-irregular				
265	low		early ser-chr	Black pyritic mudstone to parallel lam 265.4 CARBONATE BRECCIA. Poorly sorted (emb-subh) gen matrix supported bx of carbonate + minor (ser) volc. clast in a dark ser-chlor matrix. Common volc qtz + poss. felds? clasts subang - sub round 267.10 NO fossils seen 267.85 MASSIVE carbonate 268.55 Parts almost clast supported. 268.75 massive carbonate fossils 269.10 J 578				
270	low		S Ser	Much of the bx looks like carbonate - altered volc or VC, with volc q in carb + volc? clasts as well as the seritic matrix. Difficult as clast margins are now stylolites, some zones have a 'q-saw' texture - maybe due to compaction on stylolites - * <div style="border: 1px solid black; padding: 2px; display: inline-block;">MJ018 - 266.55</div> (<div style="border: 1px solid black; padding: 2px; display: inline-block;">MJ019 - 269.25</div>) (<div style="border: 1px solid black; padding: 2px; display: inline-block;">MJ020 - 271.3</div>) MJ 032 268.2 VC/carb bx & qtz + points? 1' or 2' or MS 10A * 268.2				
		FAULT		Sheared/broken core strongly bled 273.1m (F-9) dautt or vclastic?				
275	low		M-S Sil-chlor	Pumiceous? DACIC VOLCANIC BX WITH VOLC. + MINOR CARBONATE CLASTS Grey, mottled unit, with lang-s-round, 0.5-2cm				

DIAMOND DRILL LOG					LOCATION:			HOLE NO:	
					AMG:	E	N	MTJ D18	
		grainsize mm			RL:	DIP:	AZ:	Page	of
		1	1	2 2 8 64	ALT	Description		Logged by: GBE	Date: 2/18/01
275									
	low								
280									
	low	fol 70/CA			S- Ser- chlor epid.				
285					M- Ser chr				
290									
	low				M- S chlor Ser				
295		Sb? 10-20/CA							
300					M- Ser				

volc + carb clasts in a vitric-looking matrix with F(+q?) xstls, plus chlamitic (pumice?) wisps - 5-15 mm

* MJ21 - 275.7m typical bx, volc clasts?

minor carbonate + volc. clasts - finer grained pumiceous?

-279.8 gradational?

diffuse fol/bx in upper 2-3m - autobx?

F(q?) phytic con. dacite (lava with autobx top grading to pumiceous bx?)

289.65 sharp but altered. siltstone at top?

DACITE-SILTSTONE (PEPERITE?) BX

Coarse bx of grey alt, massive slt and dark, (glassy -> chlamitic) of (q)-porphyritic dacite zones of "jig saw fit" slt base MJ022 291.5m ned pep. MJ023 - 292.9m slt *

SILTSTONE by glassy volc? bx * 295.30 sharp

granule volc clasts in slt matrix? peperite? MJ024 295.30m lower contact 295.20m sharp MJ025 - 295.70 lower contact

slt at top?

Dacitic VC sequence possibly vitric in part. Difficult to say if VC or strongly alt lava bx.

DIAMOND DRILL LOG				LOCATION: AMG: E N			HOLE NO: MTJ D18				
Mag. sus.	Structure	grainsize mm				ALT	RL:	DIP:	AZ:	Page 13 of 13	
		1/16	1/8	2	8		64	Description	Logged by:	Date: 3/18/01	
325	↓ BROKEN FAULT?										
330											
335											
340											
345											
350											

q-f CRUS
As above
(↓ fine top?)
328.9. sharp irregular
329.00 ~~with mnr. euh. qtz. xtal. sharp or phos. VC slst or thin. intrusions?~~

carbonate (clasts?) - irreg, angular
Polymict? Rhyolaitic VC bx - CRUS
As prev. & more oxidised pink clasts. Possibly polymict as has var. altered rhyolite clasts + minor carbonate (clasts) and possibly some shale clasts. Rhyolite clasts to 15cm, carb 3-4cm. Generally matrix supported & v. poorly sorted - bands of med. bx in lowest metre or so are clast supported, poorly sorted, with a CRUS? - vitric matrix.
340.8m - J 580
v. Coarse bx

* MTJ030 344.5m matrix support poorly sorted granule-pebble lithic VC bx poor channel bedding?

clast supported, med bx
347.2m

325

330

335

340

345

350