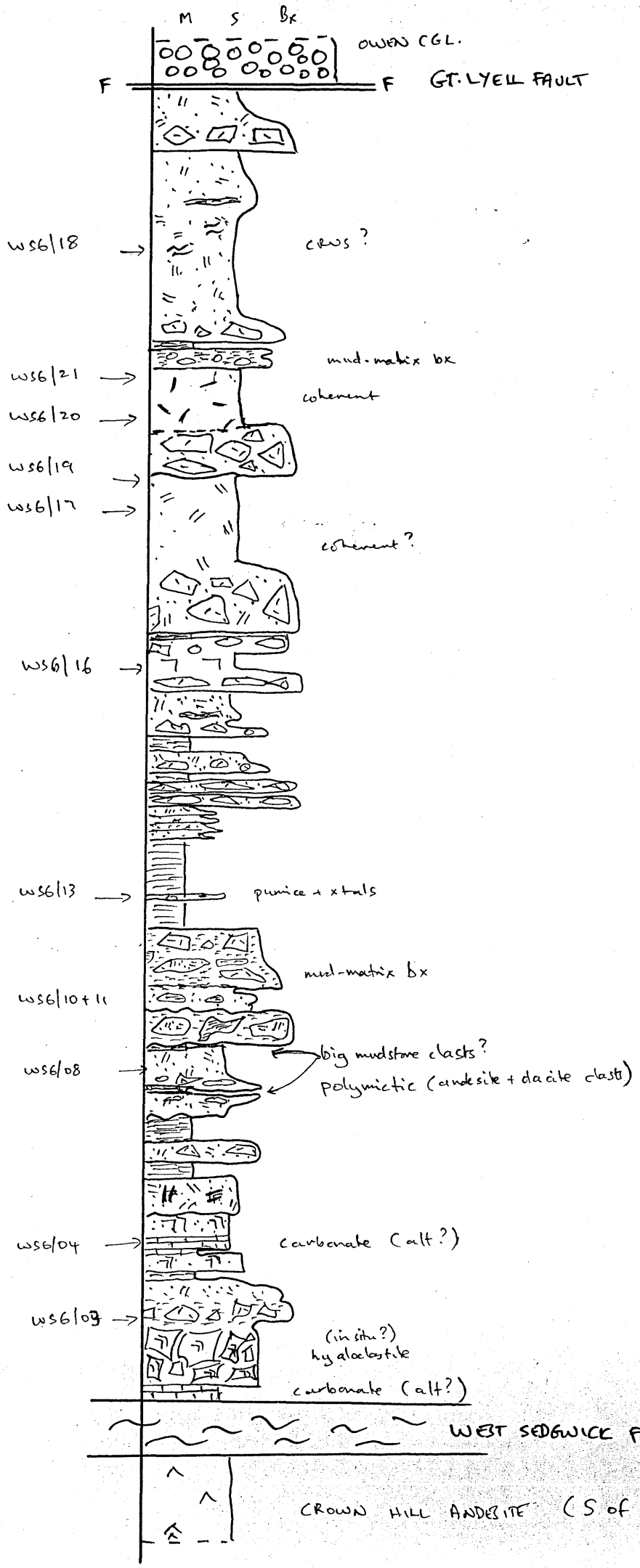
1.500 WEST SEDGWICK DDH WS06

16146

Greg Ebsworth, 2002



* est true width

* TS

DIAMOND DRILL LOG	LOCATION: WEST SEDGWICK	HOLE NO:
	AMG: 381396 E 5346900 N	WS006

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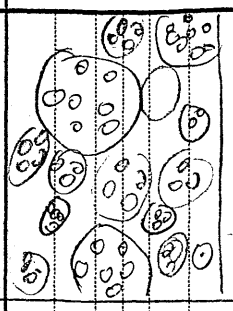
Mag. sus.	Structure	grainsize mm (1/16, 1/2, 2, 8, 64)	ALT	Description
				Glacial Till (owen cgl) 9.00
				12.00 No core
				clay. 16.70 sharp
				Orange brown Sandy clay, prob. after weathered andesite 26.30 grad.
	Mod-strong fol. 30-40/CA			Grey brown strongly weathered feromag-phyric coh – bx? andesite 37.80
mod-high 500-2000	Mod-strong fol 20-40/CA		Mod chlr mod ser 42.30 patchy v vein ab/h	Green grey plag-hbl?-phyric andesite 1-2% ech hbl? phens, 2-3mm, up to 10 mm, 2-3% 0.5-1mm ech. plag phenos. Limonitic joints to 43.50m then fresh 45.20 m sharp
low	30-40/CA	FAULT – broken core & pug near contacts 46.10 m		
mod-high	Mod fol 30-40/CA		patchy ab/h	Green grey plag-hbl? phyric andesite More strongly porphyritic (plag >> hbl?) as shown – with 5-10% plag.

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Mag. sus.	Structure	grainsize mm (1/16, 1/2, 2, 8, 64)	ALT
		52.5	52 patchy ab/h
		56	
		57	57
	Mod-st fol ⊥ but ~30/CA		61 patchy ab/h
			66
All high – v. high most 1000? 2000		67.8	
		68.2	
		?4	
		76.25	
	FAULT	76	
		76.30	
			~83 patchy ab/h chlor
high – v. high	Mod fol. 30–40 /CA		

Green plag-hbl? phyric andesite as prev.

52.5 – 56.1 m – strong qtz-carb-chlor veins – low CA.

Much of the unit has only minor, small hbl? phenos – same ab/h alt parts have obvious hbl.

* more plag-phyric parts assoc. ± ab/h ⇒ chlor alt has destroyed phenos → aphyric appearance

66.6 – 70.40 – broken core. Patchy ab/h alt → pseudobx appearance.

76.25 – 76.30 – puggy fault

Core broken 80.2 – 82.80 m.

~83.0 grad.

Andesite volcaniclastic bx? – ss el. ab/h alt of p-hbl-phyric clasts? in a chlor alt p-hbl xtal? rich matrix. Not entirely convincing WS6/01 87.5m typical bx. clasts up to 100mm, most 20–30mm. This could be an in situ hyaloclastite with the 'xtal' rich comp just strongly p-porphyritic glassy andesite. Mainly matrix supported.

At ~93 – 93.5 m wispy silic. sst? clasts? ⇒ partly intrusive hyalo?

Core very broken 94–96.30 m – fault?

DIAMOND DRILL LOG

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Depth	Mag. sus.	Structure	grainsize mm (1/16, 1/2, 2, 8, 64)	ALT	Description
100					Andesite bx? as prev.
					101.30 FAULT – puggy
	high mag	S fol – sheared thick 40-50 CA	104.2 FAULT 108.1	var chlor ± ser.	101.50 Strongly plag-phyric andesite, var alt to chlor → aphyric app. strongly fol. + cut by strong faults & broken core as shown. west Sedgwick fault
110			109.5 FAULT 112.1		
				us ser py	112.1-113 – us ser py alt
	mod-high lower in broken parts	US fol. 40-50 CA		M-S ser chlor	FAULT ZONE – mostly broken core of var. porphy andesite.
120					123.4 sharp.
	mod 400-600	S 40-50 CA		M-S chlor	Var chlor alt, gen. broken, strongly plag-phyric andesite
130					130.1 FAULT
		fol. 40-50 CA		M-S chlor	130.25 As above but v. broken less alt parts ⇒ orig- strongly plag phyric.
140		fol 40-50 CA Minor puggy faults		ab/h + chlor	Possible andesite vc bx as at 83-100 contacts gradl. strong plag-phyric. clast selectively alt → ab/h. groundmass chloritic. Mainly clast-supported.
					144.4 sharp
		fol. 50-60 CA?			FAULT puggy ± broken andesite core. WSF
150		fol. 50/60			Andesite as prev. – mostly broken.

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Mag. sus.	Structure	grainsize mm (1/16, 1/2, 2, 8, 64)	ALT	Description
150				
low Mod 100 – 400	↓ S for. 50-60/ CA		M-S clay	broken core with lots of small puggy fault, in andesite as prev – most not obviously porphyritic
160				
	174 – – – fault – – – 176		165 S ser py	174-176 – fault & pug.
			167.9	178.3
170			M-S ser/ (clay)	Grey green var plag (feromag?) phyric andesite. Gen. quite alt and sheared, cut by numerous puggy faults, core mostly broken. Parts are strongly plag-phyric (less altered?) eg at ~201 m.
Mod 200 – 500				Poss. more chloritic => Lower Contact.
180				
190				
			M-S ser + chl	
200				

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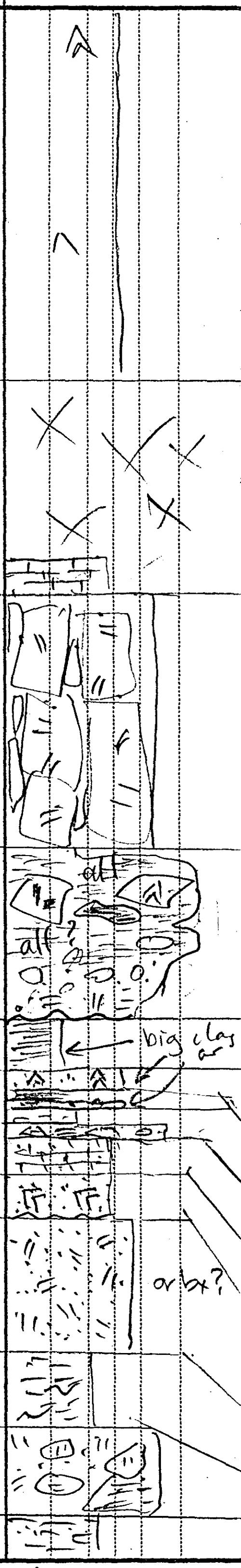
Depth	Mag. sus.	Structure	grainsize mm (1/16, 1/2, 2, 8, 64)	ALT	Description
200–212.0	low				andesite as prev 212.0 sharp
212.0–219.6	low				FAULT Mostly rubble carbonate veined felsic volc. block recorded in orig. log. 218.30 — 219.60 — grey massive carbonate. WSF 219.6 sharp
219.6–226.7		Massive – bx		mod silic + ser.	Sheared, fractured / altered. Clast supported q (f)-phyric volcaniclastic bx. difficult to say if insitu or resed. minor siderite veinlets WS6/02 226.4 'clasts' ~ 2-3cm. Less alt parts appear to be xtal rich. 226.7m Sharp. v. irreg.
226.7–232.50			alt?	ser/carb line ↓?	Pseudobx due to strong ser/carb alt of f-q felsic volc (vc bx?) *WS6/03 232.35 — bx Max-'clasts' ~ 12cm, most 1-2 cm Parts of alt part more f-q rich than clasts - very broken at top + mainly mudstone - fines downhole, base mainly f+q phyric 232.50 sharp irreg.
232.50–		Lam 70-50?/CA	big clast? or M/F?		grey-black mudstone. weakly lam
234.2–235.30					234.2 - 235.30 - f-CRUS with very irreg. contacts to mudstone + some mudstone in interval → coarse bx
–236.5					Grey silic. slst - forms sed. bx ē mudstone 236.5m + f-CRUS in lowest 0.3m
236.5–237.8			or bx?		237.8 Carbonate - massive possibly after f-CRUS ✗ WS6/04 237.1
237.8–239.0					v.f grnd f vc ss (?) - presence of prim. or vc slst; rounded felds?; black flecks 239.0 WS6/05 238.2
239.0–243.60					Q-f-VC - Possibly a CRUS - alt to pseudobx or complex bx ē slst etc - maybe even coh fqcd WS6/06 243.15 Q - 2.5mm f 1-2mm 243.60
243.60–245.85					Grey fine vc slst - prob vitric 245.85
245.85–248.3					Complex bx of vc clst and q-f-CRUS poss. with clasts of f-q-coh. volc. 248.3 Very hard rock WS6/07 247.3 See below

grey vf vcss or slst

Sampl
c̄
Pum
Rex
Summ

NB: CHANGE SCALE

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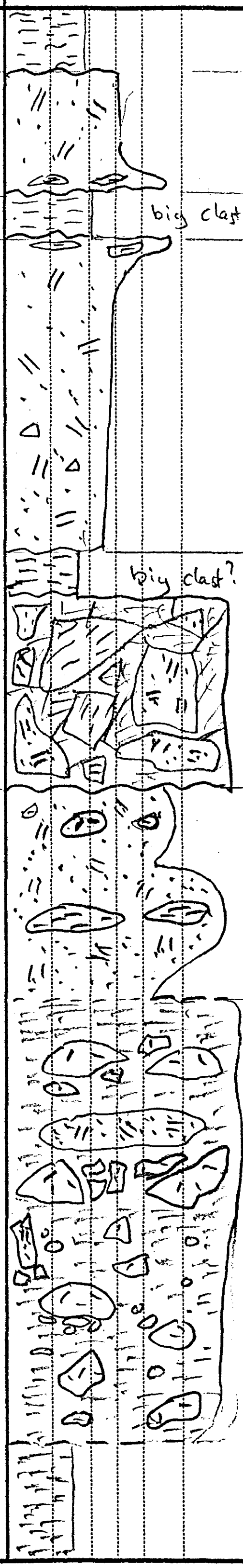
Depth	Mag. sus.	Structure	ALT	Description
250				Grey, vitric? vc slst or vf. vc ss.
				251.10 sharp, irregular, erosional on slst
	low	Massive		Pink-grey, f-q-CRVS. vlc. 60-70% 0.5-2.5mm subang. felds - some ab/lh alt 30-40% 0.5-2.0mm subang qtz xtals. Minor ragged chlorite blebs - after pumice? Minor slst clasts to 5cm
				253.00 v. irreg, bx.
	low	big clast?		Grey, vitric? vc slst - irreg. contacts etc. ⇒ could be large clast in vc ss.
				253.80 v. irreg, bx
255	low	⇓		Minor slst clasts to 5cm q-f-CRVS as prev, fines downhole, rare cherty lithics * WS6/08 251.70m q-f CRVS v. poorly sorted, ab/lh alt, q-f CRVS some pumice + slst clasts, 10-20% alt matrix
				258.80 irreg. sharp
260		big clast?		Black mudstone for 70cm, then coarse bx of black massive + lam mudstone, f-m grnd f-q-CRVS. Lots of wispy mudstone clasts through CRVS ⇒ primary sedimentary intraformational bx. WS6/09 260.25 typ. bx.
				262.85m graded/planar contact
265		⇓		Graded, diffuse contact to coarse grnd f-q-CRVS. Fines downhole. Minor f-q-felsic volc. lithics (0.5-2cm), several large (10's cm) mudstone clasts (or 11B's) near base *WS6/10 263.15 coarse vc bx *WS6/11 264.80 coarse CRVS
				266.0m grad
270				Mud-matrix breccia with var. alt. f-q-phyric volc clast with near jigsaw fit textures. Post minor f-q-CRVS clasts. Peperite of rhyolite in mudstone/CRVS? WS6/12 267.85 mud matrix bx. peperite? some CRVS?
				273.1m grad.
275				Black, parallel-lam mudstone

Grainsize mm: 1/16, 1/2, 2, 8, 64



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	Description	Logged by: GBE — Date: 5/2/02

Depth (m)	Mag. sus.	Structure	ALT	Description
275				black mudstone
				276.09-276.24, interbed of q-xtal-lithic-vitric? VC. slst, & pumices? [WS6/13 276.15m] vc slst.
	low			
				black mudstone
280				
		So 49/CA		282.90m sharp
	low	So 48/CA		v.f. grd slst for 1cm, then normally graded, v.f grd q(f)-lithic CRVS → grey vf. vc (vitric) slst for 0.5m → Lam. slst + dk grey-blk mudstone [WS6/14 283.0]
285		normally graded units		284.40 Blue-grey q(f) xtal-vitric vc ss. Two massive units with thin mudstone tops
	low			285.66 sharp 30 cm norm. gded. q(f)-f grd CRVS, then 50cm mudstone, the 25cm med. q(f) CRVS → sharp base of c grd → grading to f. grd q(f) CRVS, then 20 cm mudstone
				287.22 sharp, erosional
				Coarse bx of 0.5-15cm poorly sorted, round-angular q-f rhyolite and q(f) CRVS clasts, in a q(f)-vitric CRVS - mud matrix. Minor large (10's cm) mudstone clasts (or 10's?). Rhyolite clasts partly look like hyaloclastite ⇒ peperite? in part.
	low			289.30 [WS6/15 287.70m]
290				Massive black mudstone
				290.26
	low			Normally graded unit of q(f) rhyolite, clast-supported bx (0.2-5cm) in q(f) CRVS matrix - grades downhole to q(f) CRVS
				292.5
	low			Black mudstone
				293.7
				Q(f) vf. xtal-vitric vc. slst c 1-3cm q-f-rhyolite clasts at top then just vc slst with minor 1-3cm mudstone clasts
295	low			
				299.0 gradational.
300	low	almost jig-saw fit	s	Near jig-saw fit bx of 0.5-5cm q(f) rhyolite clasts in f(q) CRVS matrix?

Small mass flows of sq in kf (285–287 m)

NOTE: CHANGE of SCALE

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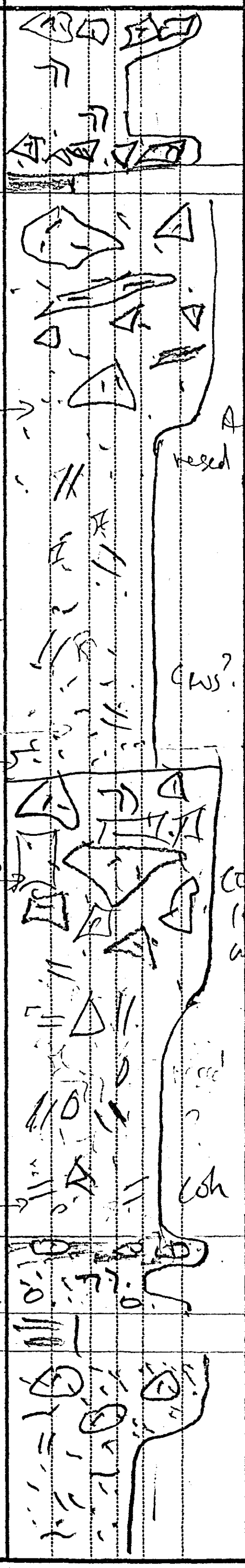
Mag. sus.	Structure	grainsize mm 1/16 1/2 2 8 64	ALT	Description — Logged by: GBE — Date: 6/2/02
low	coh? almost jig-saw fit			300 — clasts strongly sil/ser/chlor alt – autobx rel. to dacite. F(q) strongly porphyritic coh. dacite. Dacite ✱ WS6/16 302.20. bx as prev at 304–305.5 – xtal-rich matrix. 305.50. 306.0m black mudstone. (margin: Hyalo clastite)
	WS6/17 → ; vesed hyalo?		vs ab/lt chlor	310 — Strongly altered f-q CRWS with coarse (2–15 cm) polymictic subang basal bx of q-f rhyolite + mudstone clasts totalling 10–20% to 313m, then massive F-Q-CRWS which fines downhole & inc. vitric (now chloritic) component esp in lowest 0.5m
low	Massive; CRWS?; WS6/19			320 — ✱ WS6/17 313.40 F-Q-VCRWS 20–20% qtz (margin: vesed hyalo). ~324.00 – poss base of next unit obscured by alteration
	WS6/20; COH lobes in hyalo.			Coarse bx of q-f rhyolite clasts – autobx?
	coh; WS6/21		335; vs silic	330 — CRWS ✱ WS6/19 324.85 — looks like next CRWS – hard to rationalise & WS6/17 + 20+21 (margin: to 30–40 qtz + 30–40 feld x). coh ✱ WS6/20 328.10 – perlitic, coh q-f volc or glassy. ✱ WS6/21 339.95 – spherulitic / perlitic coh (strongly felds-qtz 30–40% 10–20%). more vitric? 339.70m
low	broken			340 — Mud-matrix vc bx – nbg clasts 340.15m then fq CRWS with minor lithics → base 342.0m (margin: peperite?)
low	fol 10/CA			342.90 black pyritic mudstone
low			v str ser/chlor + ab/lt chlor	F-Q CRWS – possibly originally c high vitric component. Minor lithics as shown. ✱ WS6/18 349.70m typical F-Q CRWS (20–40% Q 30–50% alt felds) poorly sorted 5–10% chlor matrix. Altered unit — 350



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grainsize mm 1/16 1/2 2 8 64	RL: DIP: AZ:	Page 9 of 9
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Depth	Mag. sus.	Structure	ALT	Description
350			351 VS ab/h	
			356.5	
360	low			360.0 – 10 cm mudstone clast
				366.00 prob. base – not very sharp
	low	371 S shear. 45/CA	370 M→S chlor alt	Bx of q-f-rhyolite clasts in Q.F.CRVS – then strongly chloritised q-f CRVS? towards fault
370				373.0
		Fault		GT LYELL FAULT ?
				Owen Cgl. silic. vf grd in top 30cm, then cgl.
				(Fgrd part of fault?)
380				380.50
				EOH
390				
400