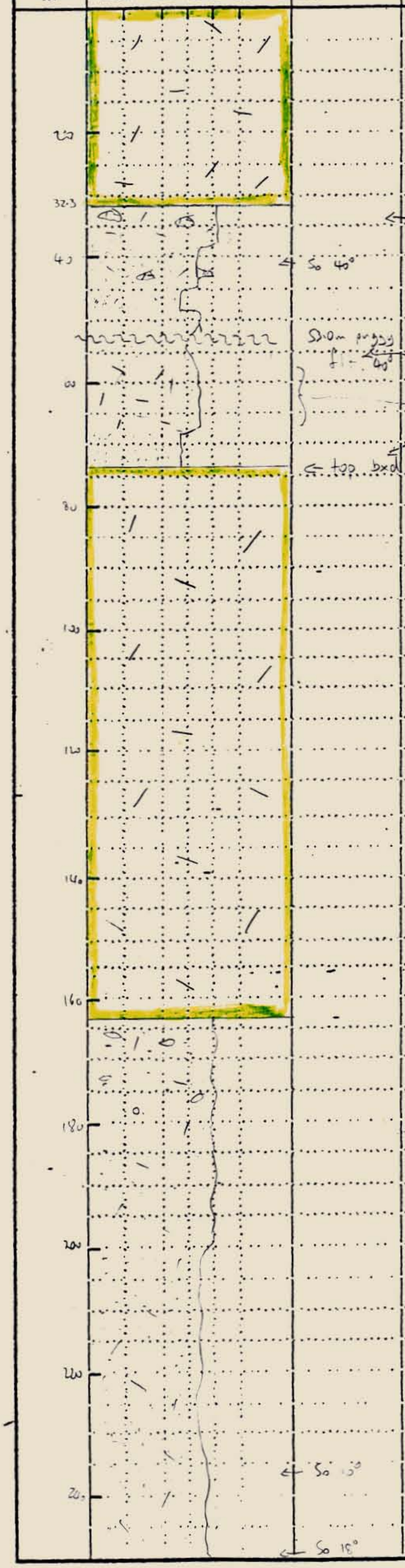
390914

GRAPHIC CORE LOG	Hole No. SHD-13	Depth m
Scale 1: 1000	Project	
By Grant MacDonald	Section	
Date	Collar co-ords	RL
Page 1 of 5	Az. °G	°

5 cm

Depth m	Mean Grainsize (Mud 0.5 2 8 32 mm)	Max. clast φ & Structure	Description



Description

QFpR massive 1-2 mm sub ang Q xtals ~15%, 1-2 mm pk/org F xtals ~ 8-10% in pk/org mx.

← Gygn slt/sst c rhy clasts

Pk arg mod sst

gy gn slt

gy gn slt c rod aphyric R clasts

blochy pk alb altd F>>Q xtal sst

Gy gn slt c aphyric pk rhyo casts.

transitional to ov sst/bx

QFpR

QFpR Massive Q (1-2 mm, sub ang, 15%) & F (1-2 mm, wt, 10%) p R - Mt

Julia Rhyolite

10° @ 232

18° @ 249

10° @ 263

25° @ 278

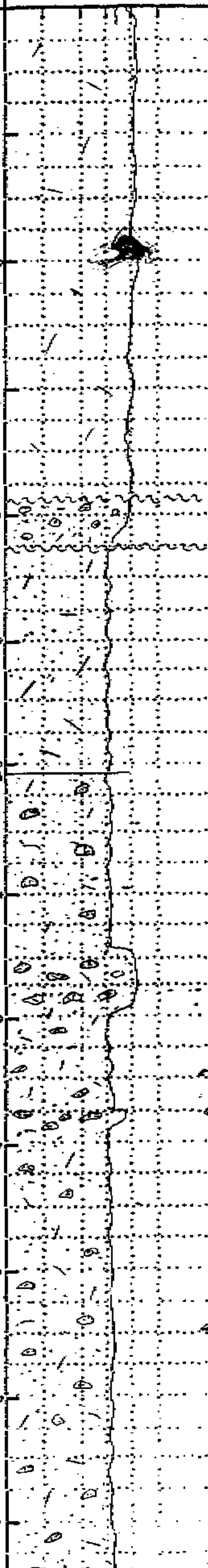
15° @ 303 m

gygn F>Q xtal sst/bx & F>Q xtal sst. Parcels of F>Q xtal sst/bx clast rich c ~ 50% QFpR to ~ 20 mm & lesser (~20%) gy gn sst/slt. Slt/sst occurs as rafts in bx also as poorly graded beds c sharp erosional contacts c bx units. The flow mechanism was not conducive to grading. So readings possibly incorrect. More sst/slt units from ~ 202 m - 250 m

390915

GRAPHIC CORE LOG	Hole No. SHD-13	Depth m
Scale 1:1000	Project	
By Grant MacDonald	Section	5 cm
Date	Collar co-ords	RL
Page 2 of 5	Az. °G	°

Depth m	Mean Grainsize Mud 0.5 2 8 32 mm	Max. clast φ & Structure	Description
			F > Q sst/bx (QFpR, slt) [cont]
270			
290			
310			
		F 336-338.7 25°	
330		F 336-336.7 25°-30°	F > Q xtal sst. Bright pk/red in parts, overall pink >> green. Faulted upper contact. Similarly orid chl in fs vn persists down to ~350. F glg marked by pk alb alt. F ~ Q ~ 1-2mm. Lower contact defined by end of alb alt, possibly corresponding to a change in lithology.
350			
370 / 371.6			F > Q xtal sst/bx c ~5% clasts (except for 398m - 409m, 415m - 427m c ~20% clasts) of gy gn slt, QFpR, FpD (p.gn) in xtal mx. Only ocl mn internal grading.
390			
410		Subtle banding S(?) 35°	
		Subtle banding S(?) 30°-35°	
430			
450		subtle banding S(?) 35°	
470			
490			



390916

GRAPHIC CORE LOG

Hole No. SHD-13 | Depth 1051.0 m

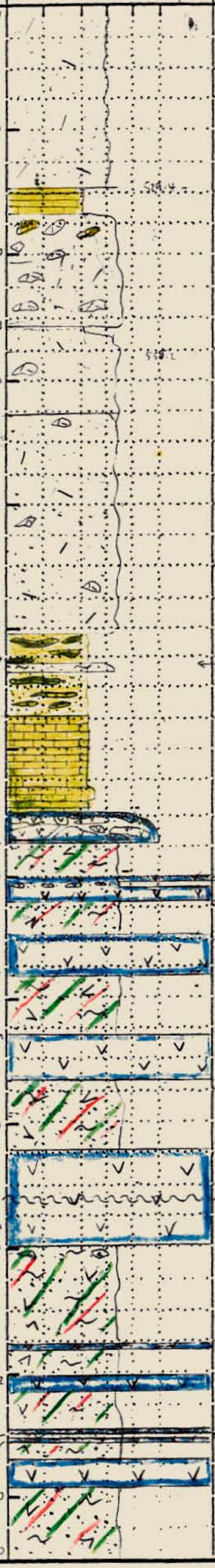
Scale 1: 1000
By G. MacDonald
Date
Page 3 of 5

Project
Section
Collar co-ords
Az. °G

5 cm

RL
°

Depth m	Mean Grainsize (Mud 0.5 2 8 32 mm)	Max. clast φ & Structure	Description
500			
520			posc nor flt but gnd water.
528.4		f. 60°	Limestone Wt to p pk. Sharp upper contact though now 8cm healed bx. – similar basal contact
540			Siltstone / bx – marly slt becoming sof... slump bx in parts $\bar{c}$ p cm qn frags ... Some lst clasts in immediate fw to msv lst, else cm s.d? QFpR or aphyric.
551.3 / 560			F > Q xtal sst $\bar{c}$ QFpR clasts
565.3			F > Q xtal sst/bx (clasts < 10% QFpR) msv, gy gn
580			
600			Marly gy slt $\bar{c}$ cb nodules growing in situ
606.4 / 607.5		← So 25°	Pumiceous F xtal v/clastic. Aphyric clasts in fining upwards unit [PTO]
614.7			Marly slt/sh $\bar{c}$ calc nodules growing in situ. Fn (So?) @ 25° ca [PTO]
620			Limestone. Pink to wt (variable hmt) typical lst – probably fossiliferous in lower 0.5m. Most lst has grown in the slt/sst mx $\bar{c}$ gn slt, stylolites + ocl z' $\bar{c}$ sandy text. Fn 25-30° ca [PTO]
629.7			
634.2			Basalt bx. Dk ppl (hmt) basalt clasts (> 98 %) in mn mx $\bar{c}$ [PTO]
640		639.7 uc conf fn @ 25°	F xtal pumiceous v/clastic. Irreg F xtals (~25 %) in wispy [PTO]
		640.0 / 644.0	Basalt. Gly coherent except def clastic z. Gly dk ppl to bge [PTO]
649.5			F xtal pumx v/clastic – dacitic ie pumx FpD v/clastic. Blotchy p. ppl (hmt)
			Basalt. Pk/org glomeroporph-like F (1-2 mm). Somewhat ragged [PTO]
655.7		lc 50° ~ conf. fn	F xtal pumx v/clastics – dacitic ~25% irreg pk/org F
660			xtals in wy sorc mx – ocl pk/org aphyric lasts (as for FPB) [PTO]
666m			Basalt pk/org to dk ppl $\bar{c}$ F's pk/org to olgn respectively [PTO]
673.3		10° ca contact	F xtal pumx v/clastics as above fol p.ppl/gn but maltered
680			visually. Wispy ppl to p ppl clasts? / apophyses? of basalt 678.5 – 679
			Basalt Dk ppl to dkgygn F pk/org 2 mm glomeroporph like probably more orthogonal to So as strain not partitioned into hmt basalt
		Flt 692-693m	~15% of total rock. Shp upper & lower contacts – intrusive.
699.8 / 700			Small z of pumx v/clastic either incorporated in melt or at edge of intrusive
			F xtal pumx v/clastics – clasts 700.0 – 702.5 from 687.5 – 687.–
715.4 / 716.2		← uc 35° / lc 35°	Basalt dyke – over prob FpD – not basalt
720 / 720.2 / 723		← uc 0°-35° / lc 35°	Basalt dyke – Dk gy gn (chl) only ppl (hmt) $\bar{c}$ pseudoclastic chl alt^n ~740-750. F xtals ~25%
729.6 / 730.2		← v shp 40° / 70°	Basalt dykes – now $\bar{c}$ calc filled vl' irreg distrib^n in wy chl/ser alt'd mx – poss
731.2 / 731.9		734.2 – 35°	
740		738.6 – 35° ←	Basalt dyke – wk peripheral Na↓ alt^n reg. sd.
750			



06.4 607.3 Pumiceous dacitic F xtal vlclastic [cont] Neg cb in mx. 1-2 mm F xtals ~25% in fol. wy serc(?) mx. Not hydrothermally altd - no sd'. Small pulses of reworked pumx vlclastic.

07.3 614.7 Marly slt/sh. Typical nodular cb slt ± 'pods' of calc. growing in silty mx. Lower contact defined by reasonably sharp change to more purer lst.

614.7 629.7 Limestone. Sweat out calcite vng. Lower contact is defined by uppermost basalt but sedimentary cb decreases fairly quickly in underlying basalt bx.

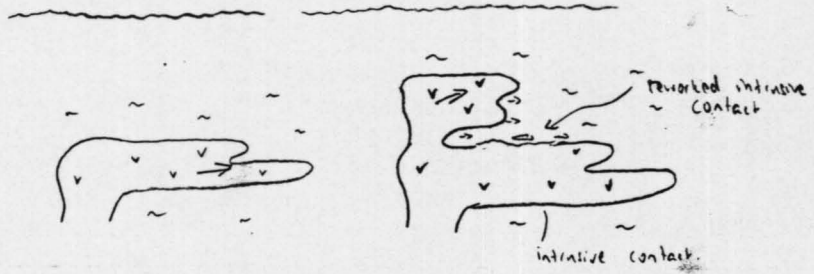
629.7 634.2 Basalt. [cont] wt F (1mm) in wispy serc(?) material ← sim to in pu bx. predominantly in upper part. Basalt clasts are dk ppl ± gn flecks here aft 1-2 mm tab plag xtals & not vls as in other holes. Chl & calc in mx & vng t/o. Lower contact apparently conformable. Visually quite flattened clasts but one suspects that not a huge strain would be required to deform hmt+chl+calc altd (not necess hydrothermally) basalt. Clasts have sharp ragged margins as if shreddded - ejected viciously. Some smaller clasts bleached. Fn @ 25° ca. Some form of graded mass flow of basalt clasts, caused by some form of fire fountain breccia erupting into a pumiceous unit.

634.2 639.7 Pumiceous vlclastics. [cont] serc mx but not significantly visually altd - correlate of STD-1 dacitic pumiceous vlclastics.

639.7 644.0 Coherent upper & lower zones with an apparently clastic centre. Probably some form of sill into unconsolidated pumx vlclastics. Clastic ± (640.8 - 641.4) has ~ 10% wispy ppl basalt ± chl altd F in pumx mx.

644.0 644.5 $^{pumx}_{\wedge}$FpD vlclastic (cont), gn (chl) or p pk (bleached? cb?) but not significantly visually hydrothermally altd - no sd'.

6[illegible] 655.7 Basalt (cont) upper contact suggestive of some degree of extension ie



Other forms of disruption of a basalt sill intruded into unconsolidated pu bx can be envoked.

With lower contact sharp @ 50° ca

655.7 666m $^{pumx}_{\wedge}$FpD vlclastic [cont] - these pk/org aphyric clasts are not distinctive to this pu bx unit (= to Roseberry/Hercules fw according to Rod Allen in his interp of the spillway sequence for Rasmisco (~ 1993-4?) - there is perhaps a genetic link between pumx vlclastic, D pu bx + pk/org aphyric clasts.

666m 673.3 Basalt (cont) Uc shap ~ 80°, lc shp 15-20° ca. then runs sub-parallel to core for ~ 1 m to 673.3m.

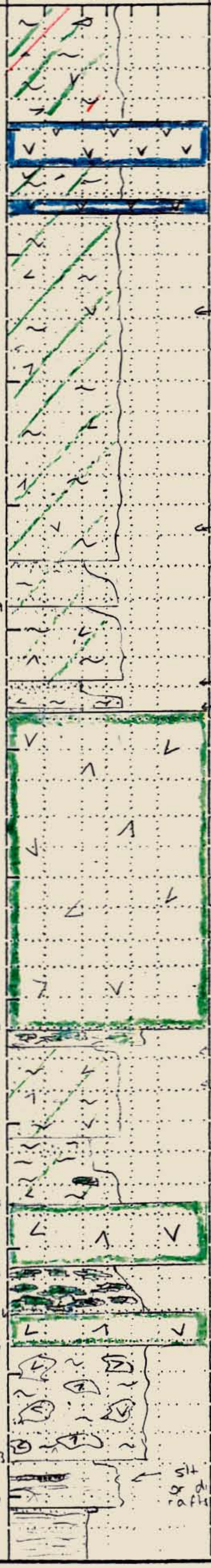
390917

GRAPHIC CORE LOG

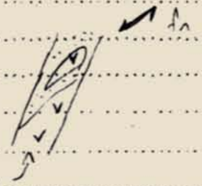
Scale 1:1000
By Gillan Donald
Date
Page 4 of 5

Hole No. SHD-13 Depth 1051.0 m
Project SOUTH HENTY
Section
Collar co-ords RL
Az. °G
5 cm

Depth m	Mean Grainsize Mud 0.5 2 8 32 mm	Max. clast φ & Structure



769 / 770 — 25° but ē / 25° conf fr — some fragmentation on ctc ie
25° Basalt dyke ē shp basal contact, fragmented upper contact



775.8 / 781 / 783 — Basalt dyke - contacts indistinct

790 — fn 28° — Dacitic pumiceous volcaniclastics as for sim rocks (probably same unit) up to 634.2 m
~20% F xtals irreg or rd F 1-2 mm + plag to clear. Gly gy gn ē ocl paler z' due to weak chl/ser - reg sd' S_1 fol as shown.

810

830 — fn 25°

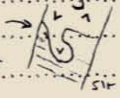
839 — Gy gn slt gly poorly bedded top to segregated flow ē pumx base. Change is sharpish @841.7. Base cs ~10% gy gn slt + 90% F xtal pumx v/clastic as above.

845.9 / 850 — Sim 839–845.9 ē ~40cm bedded ashy top to S_1 fol

859 — S_0 40° — gy gn pumx F xtal v/clastic ie Similar pulse to ov. unit.
864 — S_0 75° — Sim graded slt / pumx v/clastic unit. Well bedded slt 40° also 10–15° in agt folds (soft sed?)
Gy gn slt bedded 75°

870 — FpD. Foliated but ē evenly distributed F xtals in gn clc mx. Moderately flattened ie [illegible] Only one possibly non-coherent zone from 905–905 but this best explained tectonically.

890 — Upper contact is sharp ē tongue like intrusion into ov slt - shallow intrusive. Lower contact is [illegible] hyalo / peperitic contact



910 / 915 — Round gy gn [illegible] (corroded) FpD clasts ē ~20% F xtal pumx v/clastic like a [illegible]. Juvenile hyalo → peperite - suggests ov dyke is shallow burrowing intrusive sill
918 — S_0 43° — F xtal pumx v/clastic as for prev. sim units.
fn 35° — Gy gn [illegible] chl reg sd' fol 25° 0.5m sandy top.

930 — Poorly intermixed slt > pumx v/clastic above ~938 — ē more pumx + ocl FpD clasts in lower part.

943 — FpD clasts not obviously related to un FpD

950 — FpD. Gy gn fol as above - sharp - upper + lower contacts - mn late stage cubic / worm trail py

953 / 960 — Polymict bx ē ragged FpD - juv hyalo - ē irreg gy slt

966 — FpD ē ↑ prob assd hyalo top. espec btw 956. Bkd py

970 — FpD clasts in [illegible] clasts look like basalt but are F xtal pumx v/clastic mx - as if advancing hyalo appron associated ē ov sill ~25% clast / vol - prob relatively proximal hyalo but not juvenile.

984.3 / 990 — slt as mx or discrete rafted beds. — Package graded slt / pumx v/clastic units but ē poor segregation ie chaotic movements.
Black slt gly bl - fol only bdd not conductive (tested)

390919

GRAPHIC CORE LOG	Hole No. SHD-13 Depth 1051.0 m
Scale 1: 1000	Project "South Henty"
By G MacDonald	Section
Date	Collar co-ords
Page 6 of 5	Az. °G

5 cm

RL °

Depth m	Mean Grainsize Mud 0.5 2 8 32 mm	Max. clast φ & Structure	Description
1000 1006.5 1020 1040 1051.0m EOH		lge slug py > cpy > sph ± gn 1048.7 ← 10 cm(tw) pyr. hc vn/shear puggy	Bk siltstone (not graphitic) Finely bedded @ 35°-50° ca interbedded, lower contact c̄ m bx ? ° Ragged FpD clasts juvenile hyaloclastic ~ 50% in pumx mx ie wispy gy/yw/gn c̄ F x'als irreg distributed - + is this mx which is p yw gn to p pk Sd' red bn sph > gn pre or syn def Pumx v/clastic - bge in colour but are in vnt' but murky Ocl scattered AEF type Q x'als eg ~ 1047m Late stage but pervasive/vnt/blebby tan cb pre (or syn) defⁿ - Mn(?) Cb - Mn levels to 4000 ppm P pk in colour from 1028.5 - 1930.7 Rare sd' are in pre/syn defⁿ blebs. Some v mn gy ashy material in the mx in parts

Ser + $MnCO_3$ altⁿ-