

### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: C0024 Hole: D Core: 1 Observer: AD Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → "1" Bottom → "-1"	top	bottom	az./trend	dip	
1																Entire core is completely disturbed and preserves no original structures
2																
3																
4																
5																
6																

# Structural Geology Observation Sheet

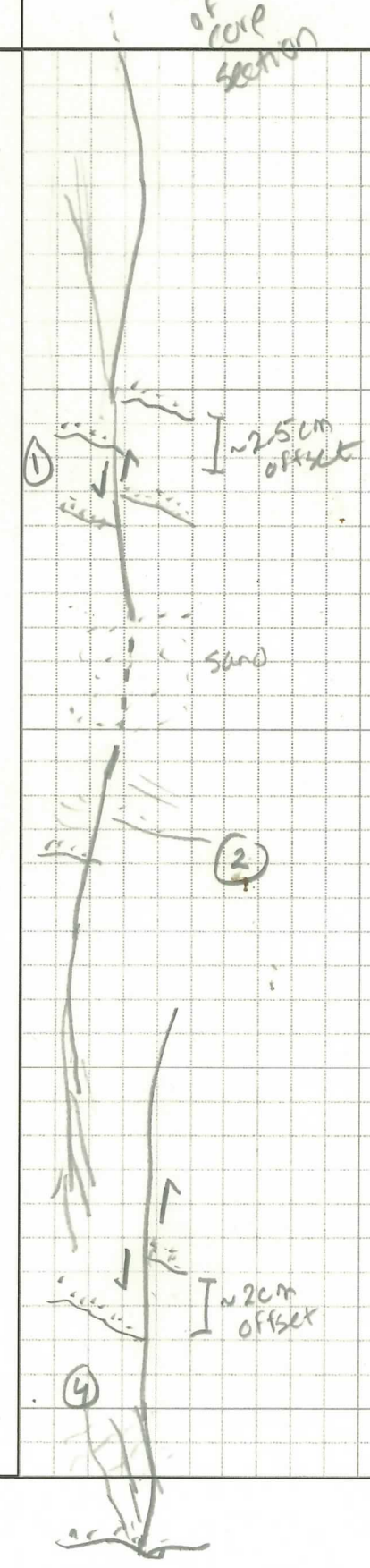
No. \_\_\_\_\_

Exp.: 358 Site: C24 Hole: D Core: 2 Observer: CR Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1° Bottom → -1°	top	bottom	az./trend	dip	
1	Fault ①	36 cm	93		1mm	090°	86	270	0°							<p>Sketch of core section</p> <p>high angle to near vertical faults with normal sense ↑ apparent displacement</p> <p>truncation of turbidite sands</p> <p>truncation of turbidite sands</p>
	- near vertical app. dip displacement measured at 41cm															
	Brookly ①	56	58		2cm	270°	25°	180°	3°							
	②	38	93		1mm	090°	87°	191	0°							
	- near vertical dip displacement measured at 85cm															
	③	90	119		1mm	090°	85	184	0°							
	- near vert fault app. dip displacement measured at															

Core 2 Section 2 48-50 cm

Sweet core batman



normal fault ④ 110 118 1mm 180° 54° 090° 82

### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 354 Site: C24 Hole: D Core: 2 Observer: CR Summary: ~~minor to no~~

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake ( $\leq 90$ )	from ( $\pm 1, 90$ or $270$ ) * Top $\rightarrow$ "+" Bottom $\rightarrow$ "-"	top	bottom	az./trend	dip	
2	Drill induced fractures	7	37													
	Beddy	33	35		1cm	270	22	180°	7							
	Fault	38	44		1-2 mm	180°	30°	270	30°							light band in CT image, compaction along fault
	Fault	41	48		1-2 mm	180°	51	270	40							strike is ~ 57°, light band in CT
3	bed	15	17		1cm	180°	9°	270°	10°							
	bed w/ pretty flames	27	29		1cm	180	3	270	18							
4	bed	38	41		1cm	180	5°	270	18							
	bed	30	52		1cm	180	6°	270	10							measured on CT
	bed	124	127		2cm	0	3°	270	21							
	fault or fracture	103	129		1mm	270	80	180°	66							minimal to no displacement visible, light band in CT mm scale apparent offset of sand bed

Structural Geology Observation Sheet

Exp.: 358 Site: C24 Hole: D Core: 2 Observer: CR Summary: some faults are thick high CT bands (shear compaction?) others are not.

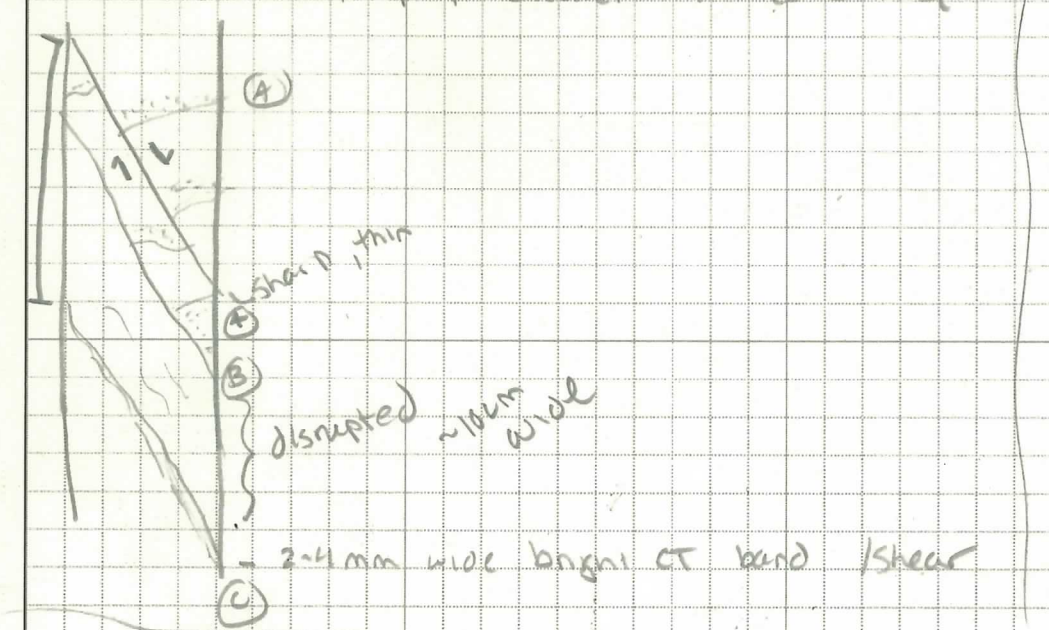
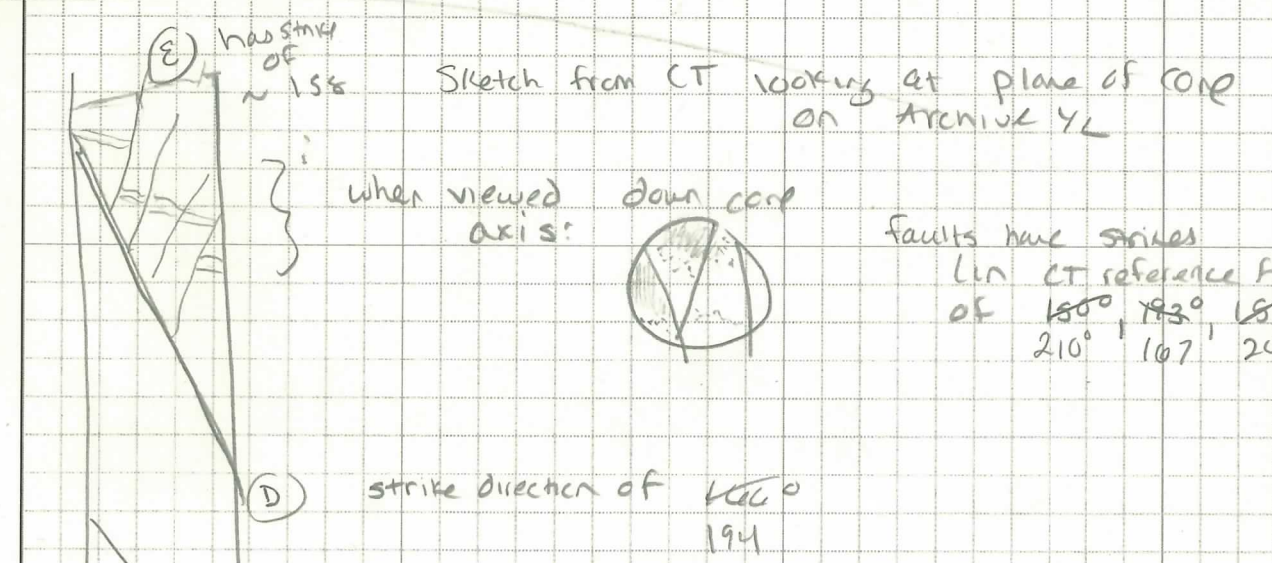
No. \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes	
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1 Bottom → -1*	top	bottom	az./trend	dip		
5	bed	23	26		1 cm	0°	3	270	22							base turbidite	
	minor fracture	26	40		1 mm	270	07	180	48							↓	
	bed	23	34		1 cm	180	0	270	16								
	bed	70	73		1 cm	180	0	270	14								
	Fault	92	90		1 mm	180°	30°	270°	110								apparent thrust? offset of turbidite bed base
	bed	114	116		1 cm	0°	3°	270°	19								apparent top toward 0° in core reference frame
	Fault	119	122		1 mm	180°	26°	307	0°								turbidite bed base
	bed	125	127		1 cm	180	2	270	18								- fault with apparent thrust (could be low angle slump D...?) bright band in CT (compaction)?
6	bed	12	14		1 cm	180°	2°	270	20								rhythmically bedded turbidites; <del>are</del>
	bed	57	59		1 cm	180	3	270	15								dips measured at turbidite sand bed bases
	bed	96	98		1 cm	180	2	270	13								
	Fault	123	129			180	34	xx	xx								few mm of apparent thrust
	Fault	131	135		2 mm	180	28	304	0								in face ⊥ to core face ~ 8 mm offset
7	bed	8	10		1 cm	180°	0	270	14								bases of turbidite beds
	Fault normal	3	14		1 mm	0°	80°	90°	80								- fault offsets beds, not a bright CT band
	bed	28	31		1 cm	180°	0°	270	14°								
	shear zone	64	67		6 mm	180	32	270	26								no. 6 mm wide shear zone or deformation band?
	Fault	64	79		1 mm	0°	33	90	63								bright CT band, no major offset (fracture?)
	bed	85	88			180	0	270	8°								

# Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: 124 Hole: D Core: 2 Observer: CR Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → '+' Bottom → '-'	top	bottom	az./trend	dip	
9	Fault Normal (A)	28	43		1mm	0°	51	270	63							<p>In CT Scan cut perpendicular to core face</p>  <p>In core face looking on archive half.</p> <p>2H-9-95-97/10-47</p>
	Fault (B)	35	46		2mm	0°	40	270	56							
	Fault (C)	49	64		6mm	0°	45	270	62							
	Bed	32	32		1cm	0°	0°	90	11							
	Bed	72	76		1cm	180°	150	90	25							
	main Fault (D)	80	96		1mm	270	66°	0	35							
antithetic Fault (E)	69	82			90°	76	180	65							<p>Sketch from CT looking at plane of core on archive 42</p> <p>when viewed down core axis:</p>  <p>strike direction of 160° 194</p> <p>difficult to tell direction of offset and these be have a strike slip component?</p>	
(synthetic) parallel main Fault (F)																

10) fault 40 44 1mm 90° 72 170° 0°

~~22th~~  
Strike  
at minimums  
OK

### Structural Geology Observation Sheet

Exp.: 358 Site: C24 Hole: D Core: 3 Observer: CR Summary:

No. \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes	
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → *1* Bottom → *1*	top	bottom	az./trend	dip		
1	bed	52	56		0.5cm	0	0	90	26								
	normal	62	79		1-2mm	196	0°	270	65								Bright CT band app. normal offset (strike is parallel in core face)
	Bed	101	104		1cm	0°	11	90°	23								sandy bed
2	bed	29	33		1cm	0°	0°	90°	20								
	Fault normal	69	77		1mm	180°	43	90	45								~1cm app normal offset
4	bed	23	26		1cm	0	0	90°	14								
	Fault normal	34	41		1mm	180	62	236	0°								~0.5cm offset
	Fault normal	88	101		1mm	180	62	270	60								~1-2mm offset
5	Fault normal	27	37		1.5cm	180	59	90	02								In CT image Branching fault zone at least 9cm displacement
	Bed	113	115		1cm	180	3	90	12								turbidite base

### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: C24 Hole: D Core: 3 Observer: CR Summary: \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1° Bottom → -1°	top	bottom	az./trend	dip	
6	① Fault disp uncertain	38	47		1mm	180	48	90	39							<p>Fault ① Stratigraphy doesn't match up across fault. either displacement is more than core width or there is strike slip?</p> <p>Fault ② looks to truncate fault ① Fault ② has very minor (mm?) displacement</p> <p>Fault ③ splays into hasetail in FW apparent normal offset. displacement of a few mm on splays</p> <p>laminar Bedding doesn't continue across main strand of fault ③ Displacement is &gt; than core width or there is strike slip?</p> <p>④ Minor Fracture measured one in a set</p> <p>Fault ⑤ truncates fault ⑥</p>
	② minor fault	45	63			0°	75	210	67							
	③ Fault normal (+ strike slip?)	58	82		1-150 mm	0	66	270	55							
	④ minor fractures	80	92		hairline/ 1mm	180	42	90	26							
	⑤ Fault slip?	93	101			0	46	90	30							
	⑥ Fault slip?	94	100			0	84	90	68							

# Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: <sup>24</sup> ~~24~~ Hole: D Core: 3 Observer: OR

Summary: \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes	
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → + Bottom → -	top	bottom	az./trend	dip		
8	bed	66	71		1cm	180	22	90	23								
	minor shears	98	103		harine set ~9cm wide	0	24	133	0								zone ~9cm wide with 5-8 minor shears with apparent thrust of + lateral apparent offset of beds
	fault slip?	128	132		2mm	180	20	90	18								bright CT band, unclear offset
9	bed	19	22		1cm	180	22	90	13								sandy bed
	set of shears	40	47		2.5 cm	0	27	90	37								bright CT bands, zone of 5-6+ harine shears near orientara (a strike of ~160°)




Structural Geology Observation Sheet

Exp.: 354 Site: 24 Hole: D Core: 4 Observer: ER BJ AS Summary:

No. \_\_\_\_\_

→ two apparent dips from CT scan

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes	
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → "1" Bottom → "-1"	top	bottom	az./trend	dip		
1	Bed	75	76		2cm	180	7	270	8								
	Bed			114	-	cannot be measured											
2	Bed			20		0	25	90	30								
	Bed			93		0	24	90	30								
3					1W												
4	Bed			36		0	14	90	25								
	SSD	80	97														Soft sediment deformation, isoclinal folding of clay rich sed.
																	
		131	139														Hydroclastic basaltic (clay horizon (131-139 cm) volcanic ash
5	Bed			11		0	0	90	27								
	Bed			122		0	0	90	19								
6	Pumice			15													
	"	34	35			0	0	90	14								
	"	65	68			0	9	90	17								
				117													
7-cc																	117: disrupted / disturbed core sections 7-cc all disturbed

### Structural Geology Observation Sheet

No. \_\_\_\_\_


Exp.: 558 Site: 24 Hole: D Core: 5 Observer: AD B7 Summary: \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes	
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → "1" Bottom → "-1"	top	bottom	az./trend	dip		
1	Bed			10		0	4	90	22								
	Bed			75		0	6	90	9								
	Bed			125		180	7	270	7								
2	Bed			32		180	15	270	4								
	Bed			124		0	0	0	0								→ horizontal bedding
3	Bed			13		0	20	0	0								
	Bed			43		0	0	90	0								→ horizontal bedding
5	Bed			20		0	0	90	0								→ horizontal bedding

### Structural Geology Observation Sheet

No. \_\_\_\_\_


Exp.: 358 Site: C0024 Hole: D Core: 4 Observer: AD/BT Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → "1" Bottom → "-1"	top	bottom	az./trend	dip	
1	Bed			61		0	0	0	0							→ subhorizontal bedding
	Bed			113		180	3	270	22							
2	Bed			26		0	0	270	6							
	Bed	68	71													
	Bed	109	111													
3	Bed			131		6	0	270	20							→ disturbed bedding (109-111 cm) 
	Bed			11		0	0	90	22							
5	Bed			34		0	0	90	0							→ subhorizontal bedding
6	Bed			48		0	17	90	7							
	Bed			112		0	0	270	23							
7	Bed			21		180	22	276	12							
	Bed			119		180	13	270	6							
8	Bed			43		0	19	90	3							
cc	Bed															

### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: 24 Hole: D Core: 7 Observer: CR Summary: \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1° Bottom → -1°	top	bottom	az./trend	dip	
1	Bed	90	92		1cm	0	17	90	16							Several fractures offset core - drill induced.  they offset edge of core NO change in CT #
	Bed	99	100			0	12	90	10							
3	Bed	28	31		1cm	0	0	90	16							~1.5 cm displacement
	Fault normal	101	109			180	58	270	40							

### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: 24 Hole: D Core: 8 Observer: CR Summary: \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1° Bottom → -1°	top	bottom	az./trend	dip	
1	Bed	62	68		1cm	180	17	270	34							lots of gas expansion induced fracturing ✓ few to no faults.
	Bed	116	118		1cm	0	22	270	3							
2	minor fault	28	30		1mm	0	43	270	62							
	Bed	31	52		1cm	0	8	270	9							
3	Bed	44	45		1cm	180	2°	270	0							
4	Bed	20	21		1mm (arm. rags)	0	0	270	0							
	Bed	62	63		1mm	180	12	270	0°							
5	bed	85	86		0.5cm	180	0	270	0							
6	bed	21	22		2cm	0°	2	270	5							
	bed	29	30		1cm	0	0	270	0							

### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: 24 Hole: D Core: 9 Observer: CR Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave, depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1° Bottom → -1°	top	bottom	az./trend	dip	
1	Fault?	69	101		1mm	0	38	90	31							Whole core: lots of gas expansion fracturing, some <del>near</del> biscuits?  Bright Dark CT
	beds	121	126		2mm	0	0	270	0							
2	beds	30	39		2mm	0	0	270	0							4 thin ~2mm beds, bright in CT  4 thin ~2mm beds, bright in CT biscuiting near base
	beds	5	8		2mm	0	0	271	0							
4	bed	19	22		2mm	0	2	270	5							3 thin beds, bright CT biscuiting near 65 cm bed from 71-73 cm, darker CT (lower density) ⇒ Ash  biscuits at 26-27, 43-54,  nearly flat bedding
	bed	74	75		2cm	180	6	90	4							
5	bed	127	128		2mm	180	0	270	6							bright CT bed
6	bed	82	83			180	4	90	0							72-65 some biscuiting?
	bed	119	120			90	17	0	4							
7	bed	35	35			0	0	90	0							bright CT bed
	bed	122	122			0	0	90	0							
8	bed					0	6	270	1							basically flat.

# Structural Geology Observation Sheet

Exp.: 358 Site: ~~24~~ Hole: D Core: 10X Observer: CR Summary:

No. \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes	
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1° Bottom → -1°	top	bottom	az./trend	dip		
1	Bed	21	22		1cm	0	0	90	0								
2	Bed	26	27		1cm	0	0	90	0								
3	Bed	17	39		1cm	0	9	270	9								
3	Bed	59	61		1cm	180	20	270	0								poorly visible in core face CT image
3	Bed	84	88		1cm	0	0	270	25								
3	Bed	113	114		3cm	0	8	90	10								
3	minor thrust?	115	118		1mm	0	30	270	26								maybe ~2mm displacement of <del>the</del> bright CT bed hard to see in CT because of gas expansion core fracturing
4	Bed	26	27		0.5cm	0	0	270	0								
	Bed	50	57		1cm	0	0	270	0								
6	Bed	12	14		1cm	0	6	270	11								
6	Bed	9	11		0.5cm	180	7	90	11								
→	Bed	00	03		3cm	270	18	0	0								
	Bed	103	106		1cm	0	2	90	12								
	Bed	130	130		1cm	0	0	90	0								
8	Bed	25	26		1cm	0	8	270	4								
	Bed	68	69		1cm	0	0	90	0								

+ variable dip/direction in a single section  
- real or drill induced spinning?

### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: 24 Hole: D Core: 11x Observer: CR/ST Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes	
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1° Bottom → -1°	top	bottom	az./trend	dip		
1	Bed	69	69		1cm	0	0	90	0								
2	Bed	170	170		1cm	0	0	90	0								
2	Bed	48	49		2cm	0	0	90	5								
2	Bed	86	87		0.5cm	0	0	90	0								
4	Minor Fault normal	32	47		1mm	180	64	270	57								orientation not well constrained ...? crack?
5	bed	87				180	10	270	3								
6	bed	14				0	0	90	8								
6	bed	35				0	10	270	13								
6	fault	89				0	60										- normal fault w/ 1cm dip slip toward 0° (60° dip)
6	bed	108	116														ash bed
7	bed	64				0	12	90	6								
7	bed	63	73			0	65	90	54								normal fault 1cm dip slip down toward 0° as dip toward 0°
7	bed	86				180	14	270	0								base of ash horizon
7	bed	135				0	5	270	0								? basaltic hyaloclastite?
8	bed	20				0	0	90	0								
8	fault	24	39			180	66										normal fault, ~ 5mm dip slip
8	bed	51				0	0	90	0								



### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp. : 358 Site : 0024 Hole : D Core : 12 Observer : BT Summary: \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → +1° Bottom → -1°	top	bottom	az./trend	dip	
1	bed	38				0	0	90	0							
1	bed	56				0	0	90	0							
1	bed	92.5				0	0	90	0							
1	bed	119				0	0	90	0							
2	bed	14				0	0	90	0							
2	bed	56				180	9	270	13							
2	bed	132				180	16	270	17							
3	bed	22				0	17	90	16							
3	bed	94				0	0	90	0							
3	bed	119				0	0	90	0							
4	bed	29				0	10	90	12							
4	bed	60				0	8	90	0							
4	bed	77				0	14	270	22							
4	bed	92				180	17	270	15							
5	bed	29				0	0	90	0							
5	bed	61				0	0	90	0							
7	bed	25				0	0	90	0							

### Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp.: 358 Site: 24 Hole: D Core: 13 Observer: TBJ Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → *1* Bottom → *1*	top	bottom	az./trend	dip	
1	bed	32				0	0	90	0							
1	bed	66.5				180	13	90	0							
2	bed	17				180	23	90	0							
2	bed	40				0	0	90	0							
2	bed	62				0	0	90	0							
4	bed	5				0	0	90	0							
4	"	52				0	0	90	0							
4	"	74				0	0	90	0							
4	"	117				180	5	90	10							basaltic layer (? hyaloclastite)
5	b	23				0	0	90	0							
	b	33				0	6	90	0							
	b	46				0	10	90	0							
6	b	64				0	0	90	0							
	b	84				180	6	90	14							
	b	110				0	25	270	30							
7	b	25				0	0	90	0							
	b	44				0	10	90	0							load structure (sand or silty clay)
8	b	18														very disturbed

# Structural Geology Observation Sheet

No. \_\_\_\_\_

Exp. : 358 Site : 24 Hole : D Core : 14 Observer : \_\_\_\_\_ Summary: \_\_\_\_\_

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Thickness of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Notes	
						az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270) * Top → * Bottom → *-1*	top	bottom	az./trend	dip		
					all												
					<del>disrupted</del>												