

Structural Geology Observation Sheet

entered 15/11

No.

Exp.: 405

Site: C0019

Hole: M

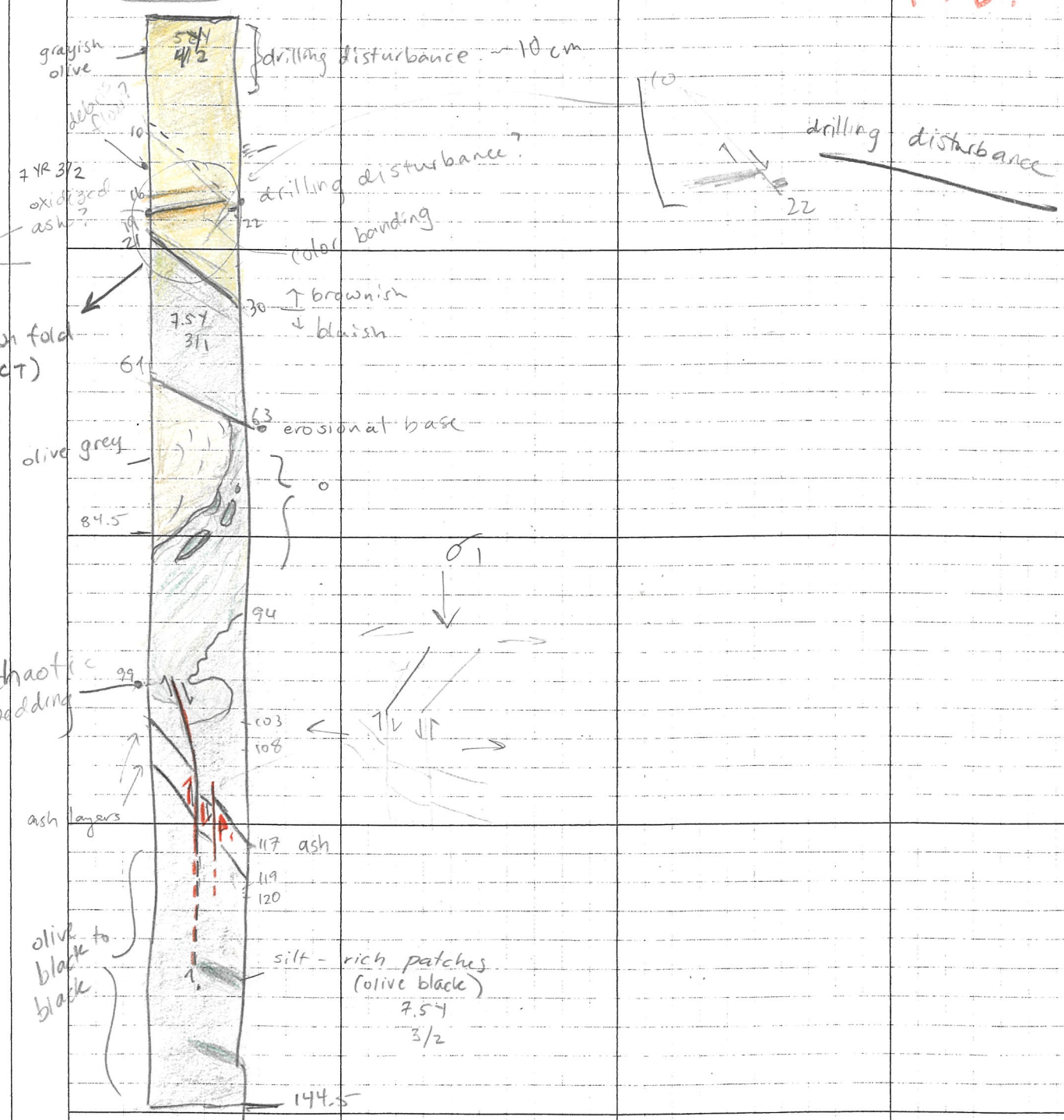
Core: 1H

Observer: AL+H0

Summary: Mass transport deposits cut by thrust³ normal faults

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip	
1	normal no Fault? (vis)	10	22	90	57	DRILLING DISTURBANCE								CI T→B.
	bedding (vis)	18	21.5	270	17	0	0		horizontal					
	Fault (thrust) (vis)	19.5	22	270	45	180	43							
	Contact (vis)	21.5	30	90	50	0	53							
	bedding (vis)	61	63	90	35	0	0		horizontal					
	ash layer (seen as a color band)													
	Normal fault 100 cm / ~2mm offset	99	130	90	66	0	85							
	115 cm (vis)	108	109	90	82	0	88							
	Bedding (vis)	111.5	117	90	26	0	14							
	Bedding (vis)	113	118.5	90	31	0	16							
	Bedding (vis)	113	118.5	90	40	0	31							
	Bedding (CT)	115	116	90	26	0	27							
	Bedding (vis)	132	136	90	39	0	28							
	Bedding (vis)	138	143	90	41	180	12							
	silt rich patches													

section 1



entered 15/11

No.

Structural Geology Observation Sheet

Exp.: 405

Site:

Hole:

Core: 14

Observer: AL HO

Summary:

mass transport deposits cut by thrust fault(s?)

[illegible]

Structural Geology Observation Sheet

entered 15/11

No.

Exp.: 405

Site: C0019

Hole: A

Core: 2H

Observer: HH YH DG AL Summary:

[illegible]

Structural Geology Observation Sheet

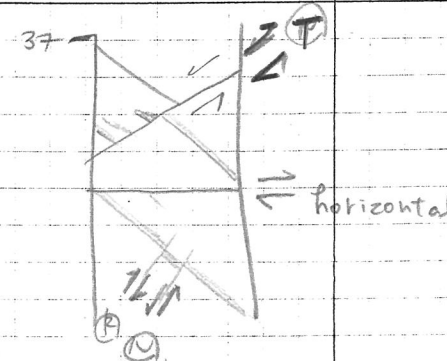
① coherent blocks in prism - MTD downslope calcareous shallow water species
② OR - formed in place - concretions

entered 15/11

J

No. _____

Exp.: 405 Site: C0019 Hole: M Core: 2H Observer: HH YH DG AL Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip				
5	Bedding? (CT) (V) " Bedding (V) 116.5 " Bedding (V) 97 contact (V)	126 121 83 128	132 121 83 132	90 90 90 90	36 31 41 43	0 0 180 0	19 2 19 22									CI T→B	
6	Bedding? (CT) (V) Bedding (CT) (V) Bedding? (CT) (V)	5 112 84	6 117.5 87	90 90 90	14 20 19	0 0 0	11 10 6									T→B	
7	Fault OR coring disturbance? fault - TH Bedding (CT) (V) Bedding (V) Bedding (V) Bedding (V) Bedding (CT) Bedding (CT) Bedding (V)	93 40 8 29 47.5 115 54 88 127	136 55 12 33 48.5 117 56 91 129	90 90 90 90 90 90 90 90 90	62 19 24 22 33 20 33 17	0 0 0 0 0 0 0 0 0	60 15 0 24 29 32 30 14						← high angle, reverse?		0-101.5 103-138.5		
8	Bedding (CT) (V) Bedding (CT)	9 4	10 6	90 90	5 40	0 0	12 26									T→B	
CC	NO STRUCTURE																

Structural Geology Observation Sheet

Exp.: 405

Site: C0019 -

Hole: M

Core: 3H

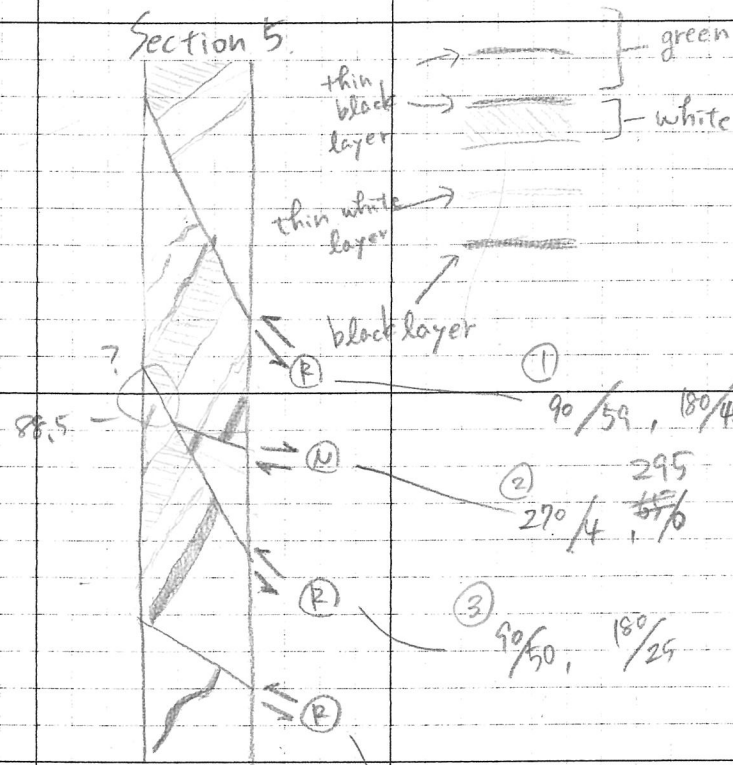
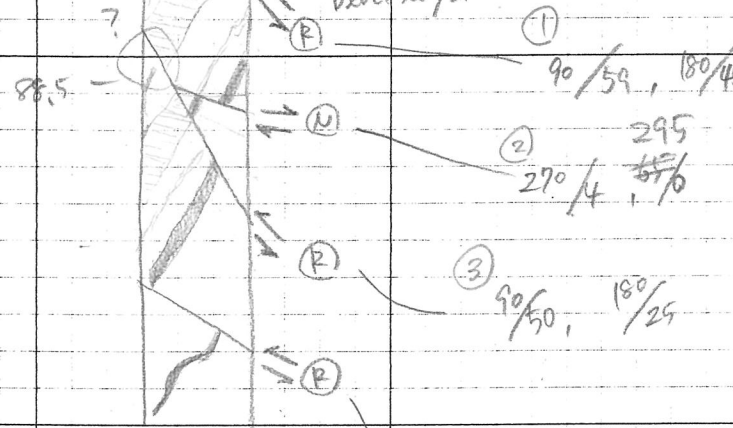
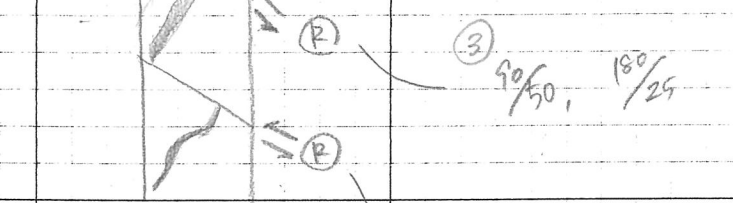
Observer: HH AL

Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤ 90)	from ($\pm 1, 90$ or 270)	top	bottom	az.	dip				
1	Bedding (v)	7	10	90	27	180	15							Void moved. ↓ Cannot measure the angle in CT			
2	Bedding (CT) (V)	107	114	270	43	180	17										
	"	92	98	270	40	180	8										
	"	3	811	270	49	0	38										
3	Bedding (CT) (V)	3	8	270	38	180	21										
	Wavy Bedding (CT) (V)	33	36	270	40	180	9										
	Fault (CT) (V)	97	103	90	48	180	11										
	concretion	111	116.5														
	Bedding (CT) (V)	117	118.5	270	12	180	8										
4	fault (CT) (V)	1	4	90	27	180	14										
	Reverse fault (CT) (V)	94	98	90	53	180	32										
	fault (CT)	17	19	90	19	180	24										
	fault (CT)	22	24	90	21	180	18										
	fault (CT)	30	33	90	27	180	20										
	bedding (CT)	50	54	270	19	180	38										
	reverse fault (V)	52	55	90	70	180	58										
	reverse fault (V)	134	139	90	47	180	44										
	planar bedding (v)	93.5	99.5	270	32	180	23										

Structural Geology Observation Sheet

Exp.: 405 Site: C0019 Hole: M Core: 3H Observer: HH YH DG Summary: _____

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip				
5	Bedding (CT) (V)	118	126	270	52	0	2								green	white	CI
	"	108	117	270	50	0	14										
	Fault zone	96.5	99														
	Bedding (CT)	92.5	95	270	36	0	0										
	Contact (CT)	71	82	90	60	180	47										
	Sediment filled vein	98	113														
6	Bedding (CT) (V)	30	35	270	41	180	6								90/59, 180/45	295	71.5-82.5
	Bedding (CT) (V)	37	42	270	40	180	19										
	Vanst.	0	10														
		15	24														
		58	67														
CC	CANNOT identify	91	89												90/50, 180/25	88.5-93	88.5-88.5
	Flow in	30	43														
															90/31, 180/26	97-100	0-14
																	14-28
																	29.5-44.5

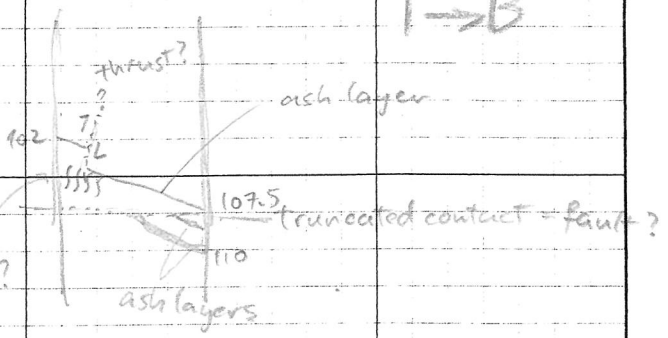
Structural Geology Observation Sheet

Exp.: 405 Site: C0019 Hole: M Core: 44 Observer: HO Summary: _____

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip				
1	via vein st.	25	30											chaotic structure			CI 0-24 24.5-30
2	fault (vis)	0	11	90	64	0	27										T→B
	Bedding (vis)	10.5	14.5	270	30	0	43										
	"	12.5	15	270	28	0	43										
	"	13.5	17.5	270	28	0	43										
	"	16.5	20	270	25	0	45										
	"	76.5	79	270	20	0	40										
	conclusion?	112	120														
3	Bedding (vis)	12.5	16.5	270	25	0	41										T→B
	"	17	20.5	270	20	0	45										
	"	79	79	270	0	0	45										
4	Bedding (vis)	6	10	90	39	0	32										T→B
	Bedding (vis)	83	90	90	42	180	18										
	1cm-thick ash bed																
	fracture? (CT)	20?	35?	270	74	0	75										
	Bedding (vis)	95	101.5	90	50	180	14										
	reverse fault (vis)	103	104	270	85	325	0										
	sed-fill veins (vis)	103.5	105														
	bedding (vis)	104	107	90	45	180	22										
	fault (vis)	107	107	90	5	180	38										
	bedding (vis)	107	108.5	90	45	180	15.4										
	bedding (vis)	107	110	90	45	180	21										
	bedding (vis)	115	122.5	90	40	180	30										
	bedding (vis)	124	129	90	40	180	12.3										

vein 99-134

Need to be checked



vein 36-54

Structural Geology Observation Sheet

Exp.: 405

Site: 00019

Hole: M

Core: 4 H

Observer: HO

Summary:

measure in CT

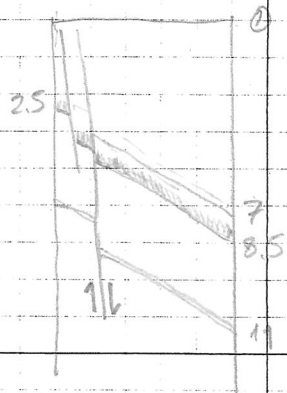
Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤ 90)	from ($\pm 1, 90$ or 270)	top	bottom	az.	dip	
5	Bedding (VIS)	0	6	90	47	180	24							CI T-B Vern. 10-35 83-101
	Bedding (VIS)	2.5	8	90	53	180	16							
	"	34	39	90	40	180	5							
	"	35	40	90	40	180	5							
	"	36	42	90	40	180	7							
	"	39	43	90	40	180	2							
	"	45.5	51	90	40	180	2							
	fault (VIS)	59	71	270	60	180	19							
6	Bedding (VIS)	33	37	90	20	0	1							bended ash layer. Bottom of ash layer core 6 ← core 5 (8cm thick) T-B Vern. 36-52 85-118
	"	73	83	90	40									
	fault? (VIS)	114	123	270	50	180	24							
7	Bedding (VIS)	8	11	90	30	180	6							white ← Bottom of ash layer. ← Bottom of black ash layer NOT planer. ash intrusion (~1cm) whitish layer. red-fill vein? network? from bottom of core 5 to top of core 6 T-B Vern 41-63 67-76 76-91 95-126
	sed-fill vein (VIS)	12	22											
	sed-fill vein (VIS)	48	55											
	sed fill vein (VIS)	56	63											
	red fill vein (VIS)	69	74											
	sed fill vein (VIS)	86	91											
	Contact (VIS)	94	101	270	60	180	22							
	Bedding (VIS)	93	95.5	90	30	180	5							

Bedding (vis)	42	46	90	40	180	9
"	40	43	90	40	(*) 180	9
"	35.5	38	90	35	180	9
rev. fault (vis)	30	11	270	78	180	34

Structural Geology Observation Sheet

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Exp.: 405 Site: C0019 Hole: M Core: 44 Observer: HD Summary: _____

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip				
8	normal fault (vis)	0	60	90	75	0	68								Vein, 2.5-1.5	T→B	
	Bedding (vis)	3	6.5	90	35	180	13										
	"	4.5	8.5	90	35	180	10										
	"	7	11	90	35	180	15										
	Sed fill vein? (vis)	24	44	90	75												
Cc	wla.																0-3 3-7 7-10 10-19

Exp.: 405

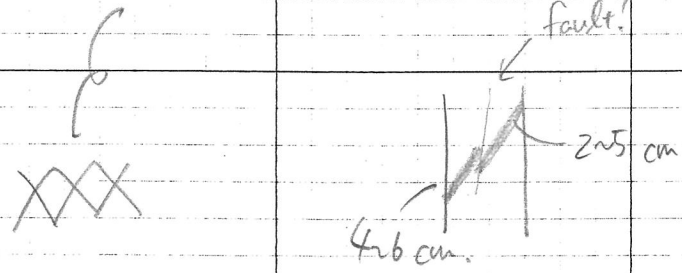
Site: CO019

Hole: M

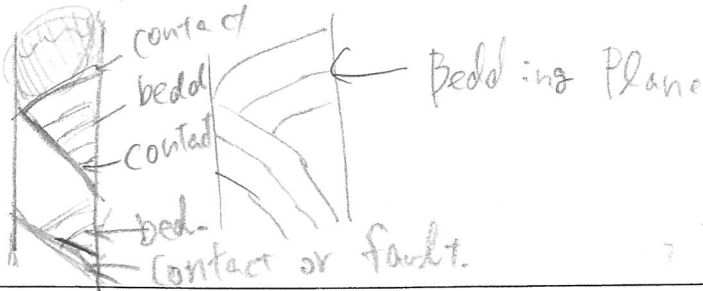
Core: 5H

Observer: HH, DG

Summary: Gas expansion

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤ 90)	from ($\pm 1, 90$ or 270)	top	bottom	az.	dip				
1	Bedding (CT) (V)	94	99.	270	36	0	21										CI 0-119.5 119.5-137.5
2	Bedding (CT) (V)	2	5.	270	33	0	17										Section 2 cross. disturbance crack? fault? 2m5 cm vein 48-90
	"	4	6.	270	37	0	21										
	Contact (CT) (V)	95	102	90	43	0	20										
	Bedding (CT) (V)	108	114.	270	41	180	8										
3	High CT. Frac. (CT) (V)	91	96.	90	29	180	54										T → B
	"	95.5	103.	90	54	180	27										
	Bedding (CT) (V)	136	140.	270	38	0	6										
4	Bedding (CT) (V)	11.5	18.	270	44	0	32										T → B
	"	37.5	44.5	270	49	180	4										
	Bedding (V)?	53.0	59.0	270	51.	180	56										

Structural Geology Observation Sheet



entered 15/11

No.

Exp.: 405 Site: C0019. Hole: M Core: 5H Observer: HH, DG Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip				
5	laminae " fault High CT (CT).	60	63.	270	21	180	41										CZ
		65	74	270	53	180	19										0-18.5
		70	92	90	83	180	51										18.5-143.5
		122	125	90	29	180	27										
6	Bedding (CT)(V) Wavy Contact. (CT)(V)	86	94	270	51	0	25										T→B
		17	20	90	7	0	55										
7	laminae (CT)(V) Bedding (CT)(V) laminae (CT)(V) laminae (CT)(V)	97	93.	90	43	180	29										T→B
		92	96	→ contact		180	40										
		112	119	→ contact		0	35										
		50	56	→ contact		0	24										
8	laminae (CT)(V) "	21	29	→ contact / fault?		180	44										T→B
		"	16.5	90	49	0	18										
				270	35												
																	0-15.5

15.5-22.5
22.5-27.5
27.5-36.5

Structural Geology Observation Sheet

Exp.: 405

Site: C0019. Hole: M

Hole: M

Core: 6H

Observer: HH, DG

Summary:

[illegible]

Exp.: 405

Site: C0019 Hole: M

Core: 6H

Observer: DG

Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤ 90)	from ($\pm 1, 90$ or 270)	top	bottom	az.	dip				
5	bedding (v)	16.0	22.0	270	36	180	46										
	contact (v) (ct)	53.5	58	270	45	180	57										0-140
	bedding (v)?	74.0	76.0	270	30												0-136
	contact fault? (ct) (v)	100.0	117.0	270	63	180	25										
	contact (v)	113.0	116.0	270	29	180	53										
6	contact (v) (ct)	46.5	50.5	270	33	0	20										
	bedding (v)	53.0	57.5	90	40		20										0-136
	contact (v) (ct)	64.5	71.0	270	48	180	41										
	" (ct)	71	74	270	45	180	42										
	bedding? (v) (ct)	26.0	34.0	270	49	180	30										
	bedding? (v) (ct)	76.0	79.0	270	36	180	36										
	small faults	53.0	57.0	270	38	0	36										0-25
contact (ct)	61.5	63	270	17	180	62											
CC	? bedding (v)	7.5	8 ?														
	bedding (v)?	11.5	12.5	90	08	180	29										8-18 21-25 27-32 38-46

Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note
				az.	dip	az.	dip	rake (≤ 90)	from ($\pm 1, 90 \text{ or } 270$)	top	bottom	az.	dip	
1	disturbed laminae (v)	0	35.0											drilling disturbance, soupy S-108
	laminae (v) CT	82.0	88.0	90	40	0	20							
	laminae (v) CT	39.5	43.0	90	28	0	19							
	fault(CT only)	29.0	46.0	90	69	180	12							
	laminae? fault?(CT)	36.0	38.0	90	22	0	21							
	bedding(v) laminae (CT)	98.0	104.0	90	32	180	16							
2	bedding(v)	11.5	19.5	90	51	0	24							 → cut by minor fault O-108
	bedding(v)	16.5	23.0	90	51	0	27							
	bedding (v)	24.0	31.0	90	45	0	9							
	bedding (v)	31.0	39.0	90	50	0	10							
	sharp contact (ct)	50.0	52.0	90	7	0	60							
	bedding (v)	65.0	70.0	90	40	0	24							
	bedding(v)(cr)	69.0	74.5	90	45	0	20							
	bedding(V)(CT)	97.5	106.0	90	54	0	14							

Structural Geology Observation Sheet

Exp.: 405 Site: C0019 Hole: M Core: 7H Observer: DG Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip				CI
3	Bedding (CT)	24.5	32.0	90	50	0	25										3-122
	laminar (V)	49.0	57.0	90	60	0	33							→ laminar are // throughout			
	bedding (V) (CT)	101	122	90	64 75	0	60							→ " " "			
4	Bedding (CT) (V)	0	38.5	90	84	294	0										0-132
	alteration front	101.5	109.0	298	52	180	26							no structure (homogenite?)			
5	laminar (V) band?	51.0	55.0	90	36	180	65	←	can't see in CT								0-125
	laminar (V) band?	100.5	103.0	90	24	180	30							alteration front:			
6	n/a																0-122
														no structure, mottled appearance pumice at 35.0 cm, 53-57 cm			
7	fracture (CT)?	16.0	26.0	90	60	180	37										0-121
	bedding? (V)	60.0	63.5	90	25	180	29										
	alteration? band	45.0	48.0	90	20	180	22										
8														vertical dark-green banding bands	39-41 cm		0-94
														→ flow in			

CC

16 17
18.5 22

cylindrical black band
→ flow in
(Y.H.)

Summary:

- ash patch?

Structural Geology Observation Sheet

SS entered 15/11



No.

Exp.: 405 Site: C0019 Hole: M Core: ~~14~~⁸ Observer: H10 Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

CI
0-103
106-124

0-64
66-132

0-101
104-153

Structural Geology Observation Sheet

Exp.: 405

Site: C0019

Hole:

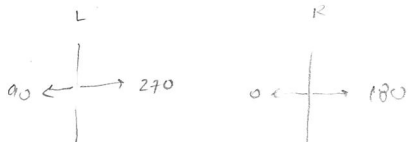
Core: 8 H

Observer: _____

Summary:

[illegible]

Structural Geology Observation Sheet



No.

Exp.: 405 Site: 00019 M Hole: M Core: 9H Observer: AL Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip				
1	NO structure																CI 10-15
2	Bedding (v)	22	39	90	25	180	14										2-121
	color banding																
	Bedding (v)	67	70	90	32	180	20										
	Bedding (v)	67	70	90	22	180	15										
	Bedding (v)	72	73	90	22	180	16										
3	Bedding (v)	78	85	90	28	180	16										15-111
	Fault - Normal (v)	70	75	90	70	180	68										
3	Bedding (v)	28	33	90	31	180	17										4-112
	Bedding (v)	52	55	90	36	180	19										
	Fault (normal)	90	94	270	54	180	77										
	Bedding (v)	91	98	90	36	180	19										
	Bedding (v)	82	86	90	32	180	19										
4	Normal fault	91	99	270	63	0	59										4-112
	Bedding (v)	48	52	90	31	180	20										
4	Bedding (v)																4-112
	Contact (v)	88	92	90	35	0	8										
	Bedding (v)	79	82	270	24	0	65										
	Bedding (v)	25	29	90	38	180	41										
	Fault (unknown displacement) (v)	21	26	270	36	0	64										
4	Fault (v)	54	81	90	81	180	61										4-112

6

Structural Geology Observation Sheet

J

Exp.: 405 Site: C0019 Hole: M Core: 9 H Observer: AL Summary: _____

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note			
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip				
5	Bedding (v)	26	33	90	31	180	14										CI
	Bedding (v)	42.5	46	90	27	180	22										0-3
	contact (v)	79	93	90	35	180	17										4-128
	Bedding (v)	89	100	90	22	180	17										
6	contact bedding (v)	34	39	90	35	180	16										13.5
	bedding (v)	42	45	90	30	180	14										133
	contact (v)	109	113	90	37	180	18										
	Fault (normal) ct	35	42	90	75	180	71										
7	Bedding (v)	13	17	90	36	180	14										0-60
	Bedding (v)	30	41	90	36	180	23										
8	nada									0	15						
										15	34						
										58	67						

[illegible]

Structural Geology Observation Sheet

J

Exp.: 405 Site: 00019 Hole: M Core: 11x Observer: Summary:

Sec No.	Structure ID	Top of Struct	Bottom of Struct	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
				az.	dip	az.	dip	rake (≤90)	from (±1, 90 or 270)	top	bottom	az.	dip																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

Structural Geology Observation Sheet

Exp.: 405 Site: C0019 Hole: M11 Core: 12X Observer: F.H. Summary:

[illegible]

Structural Geology Observation Sheet

Exp.: 405

Site: COO 19.

Hole: M.

Core: 14X

Observer: HH

Summary:

[illegible]