

Structural Geology Observation Sheet

Exp.: 322 Site: C0011B Core: BR Observer: YIC Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes	
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip		
BR	1	83	84		90	9	0	6			0	140	116.5	48.8	fine lamina sharp boundary with thin black layer homogeneous clay above, disturbed clay below	
	2															
	3															
	4	None														
	6															
	7															
	8	Bedding	122	125		90	10	0	2			108	133	77.2		47.4
	9															
	CC															
	7R	1														
3		None														
4																
5		Bedding	40	40		90	1	0	1			13	43	-115.3	18.7	
6																
	7	Sandstone?	24	30		90	33	0	2			23	37	36.5	20.6	— Black clast → thin sec
8R	1	Sandstone?	34	39		290	37	0	20			25	40			
	2	IW														
	3	Base chaotic	42	46		290	28	0	22			33	59			
	4	bed?	52	58		290	34	0	37			33	59			
	4	Base sand	99	105		290	40	0	31			62	105	-117.7	78.1	
	5	Sand base	6	14		290	42	0	3			0	31	49.7	-21.8	
	5	Sandstone	89	96		290	54	280	0			84	105			
6	Sand base	118	119		290	6	180	35			110	124				
7	fault	8	22		90	62	320	0			10	46	110.2	68.8	— thin section	

1-35
122.8, 61.6
1-120
116.5, 48.8

8-128
77.2, 47.4

3-10
112.7, 89

5-82
-40.6, -30

6-74
72.7, 86

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Exp.: 322 Site: 1004 Core: 95 Observer: Y. Fuji Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
5	fault	6	7		90	3	0	15			0	9	126.4	-19.5	Highly disturbed core
100	1	103	105		290	19	0	5			102	106			Highly disturbed
110	2	12	15	→ →	90	3	180	9							
					290	11	180	3			8	18	-67.9	6.3	
3	fault	40	41		290	4	180	2			34	90			Ⓟ 2-100m: -4.3, -16.3
	Bolby	92	93		290	3	180	7			89	96			
	Layer parallel fault	12	13		90	2	0	6			41	21	176.9	-42.7	
	Laminar	18	19		90	2	0	5			11	21	"	"	
	11	25	26		90	1	0	6			21	33			
6	Bolby	133	133		90	0	0	7			100	100			Ⓟ 6.88m: -70.3, -49
7	Bolby	18	19		290	4	180	7			0	23	65	28.9	-13m
	4	36	37		290	4	180	6			30	57			
	7	90	91		290	5	180	7			88	109	-12	-19.1	-93m
8	fault	47	47		90	0	180	4			0	109	161.8	-22.8	
													-80	-8.6	

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Exp.: 322 Site: Coo113 Core: 12 Observer: YK Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
12R 1	Fault	8	8		90	4	0	7			2	17			① 61cm: -17.4, 8.2
1	Fault	10	10		90	4	0	6							
1	Fault	16	16		90	3	0	6							
2	Fault	16	16		270	7	180	7			3	35	17.8	-16.9	
3	Fault	9	9		90	1	180	4			1	14			
3	Fault	82	82		270	2	180	9							
3	Fault	83	86		270	55	180	42			22	91			
3	Fault	84	84		270	3	180	12							
3	Fault	85	85		90	48	180	20							
3	None														
13R 1															
2	None														
4															
5	Bedding	75	75		270	1	180	11			72	85			⑤ 5.45: -36.7, 54.8 / 5.124: 107.1, 45.4
6	Bedding	92	92		90	3	0	1			26	140	-26.8	58.8	
7	Bedding	27	28		90	13	180	2			6	54	-13	37.3	

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Exp.: 322 Site: C0011B Core: 14 Observer: YK Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
14R	1 Bedding	93	93		270	6	0	0			88	73			Ⓟ 14.1.23: 88.3, 56.8
	2 "	36	37		90	10	90	4			20	50			Ⓟ 2.65: 56.6, 31.6
	5 "	22	23		90	2	180	2			120	142	122.9	45.6	
15R	1 Bedding	45	45		270	2	180	6			35	56	90.6	27.5	mud turbidite base
	2 "	62	62		90	10	180	7			48	72			greenish layer Ⓟ 2.5 2.99
	34 "	36	36		90	10	180	8			22	55			mud turbidite base Ⓟ 4.12
	4 "	101	100		90	0	180	10			81	104	8.5	178	mud turbidite base
	5 "	26	26		90	7	0	7			9	30			Greenish layer Ⓟ 5.4 5.84
	6) None														
	7) None														
16R	1) None														
	2) None														
	cc														
17R	cc none														
18R	No recovery														
19R	4 Bedding	118	118		90	8	0	5.5			77	140	-150.9	31.3	Base of turbidite
20R	None														
21R	3 Bedding	10	13		90	21	0	40			9	18	166.3	53	fast flow band thickness in flow
	3 Bedding	37	37		270	11	0	3					Ⓟ 5.15		fault with wavy plane → photo

Structural Geology Observation Sheet

Exp.: 322 Site: Cool B Core: Observer: Miyama Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
21R	Carbonate														
5	Bedding	60	60		270	7	180	49			0	39	D23, 107		Carbonate layer, 6mm thick
	fault	116	118		290	12	180	4			102	110	48.2	-31.8	
6	sand layer / horizon	49	54		290	15	180	6			33	55	D10, 101		
7	laminar	111	112		290	7	0	8			105	140	D11, 102		
8	carb layer	130	132		290	19	0	20			12	35	-27.1	69.6	
22R	a only														
23R	chlorite conc. zone	132	133		290	14	0	1			132	144	D14, 103		
7	fault	135	136		290	6	0	2			5	36	-53.3	57	
	Bddy	43	43		290	7	0	8			38	106	-61.3	62.5	
24R	none														
25R	fault	23	25		90	15	180	5			23	26	D78		
26R	fault	49	50		90	10	180	13			22	97			
4	bedding	52	52		90	5	180	2			0	140			Carbonate layer
4	"	110	110		270	2	0	6			0	140	16.6	58.2	

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Exp.: 322 Site: C0041B Core: Observer: Yk Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
26R	continued														
5	Bedding	45	46		90	9	0	6			12	47	11.6	54.3	sandy green layer
6	"	6	6		270	1	0	2			0	110	-30.9	63.8	Greenish layer
7	(Bedding)	7	7		270	2	0	5			0	16	-27	59.7	Bioturbation that seems to be parallel to bedding
7	"	102	104		270	21	0	2			50	129	@21	green layer	significant change in inclination
27R	1 Bedding	60	61		270	15	0	10			25	86	-34	74	
4	"	17	18		270	13	0	11			0	140	-85.7	63.2	"
5	"	10	10		270	6	180	16			0	80	-111.3	66	lamina
6	"	85	86		90	11	180	3			0	111	-20.4	60.1	green layer
28R	1 "	70	70		90	6	180	2			54	94	156.4	33	"
?	2 Slump structure														
	2 Bedding	95	106		270	45	30	0			96	106) Slump internal structures
	2 fault	96	106		90	90	29	0			96	106			
29R	cc only														
30R	1 Carboniferous	94	95		250	8	0	2			62	82	163.4	9.7	→ TSB → XRD
	"	96	96		250	15	0	1			60	82	163.4	9.7	
	Block	98	98		250	4	0	7			93	102	165.8	-7.1	
3	Bedding	33	35		250	1	0	2			418	45	-171.6	-32.1	
	Calciferous	89	90		250	6	120	4			87	100		@114	
	"	91	91		250	1	120	6			87	100			
	"	95	97		250	11	120	12			87	100			
	"	103	103		250	4	0	4			110	130			

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Exp.: Site: Core: Observer: Summary:

30R

31R

32R

33R

34R

35R

36R

37R

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave, depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
4	fault	35	36		250	5	0	4			0	52	-90.1	60.7	
		49	50		250	3	0	10			24	52	-90.1	60.7	
2	fault	100	110		90	15	180	0	300	0	000	130	-40.5	-54.2	striations 30.0 9.0 12.0 8.0 20.0 8.0
1	bedding	92	92		270	4	120	15			12	86	112.4	-40.3	
1	bedding	78	78		270	8	0	50			10	86	"	"	
3	bedding	35	35		90	10	0	16			0	57	38.8	-4.3	
1	bedding	126	127		90	7	0	6			2	142	0.3	9.2	"
2	bedding	129	130		270	5	0	6			0	142	26.6	67	"
4	fault	70	84		270	88	339	0			0	141	-141	1.6	high angle fault → Not in CT
4	fault	90	104		270	67	324	0			"	"	-141	1.6	"
4	Bedding	71	72		270	8	180	5			0	89	-166.1	48.1	
	cc only														
	Bedding	18	19		270	4	0	0			18	22			
4	Bedding	60	61		270	15	180	10			55	65			36R bedding for Drilling induced breccia

32R 1 fault 107 117 270 56 180 70 65 142 -57 55.9 measured on CT

Structural Geology Observation Sheet

Exp.: 322 Site: C004B Core: Observer: YK Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes	
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip		
37R	5	Beddy	132	133		270	6	180	3			130	133		green layer	
7	7	Drilling fault	18	20		270	28	180	13			0	33	14.1	80.6) drilling induced conjugate fault
	7	"	"	"		90	32	0	9			"	"	14.1	80.6	
38R	1	fault	128	129		270	4	180	7			112	130		low Deformation zone	
	3	Beddy	30	30		270	7	180	8			18	37		green layer	
39R	8	fault	42	42		270	22	180	57	69	90	19	85	-152.5	58.2	high angle fault cuts drilling faults and boreholes w/ striations
39P	2	Beddy	3	37		90	5	180	15			0	45	18.7	57.4	
	5	Beddy	114	115		90	7	0	3			113	122			
	6	Beddy	36	38		250	8	180	4			30	42			
40R	1	Beddy	102	103		250	11	0	2			98	130	176.9	60.9	light gray-greenish layer
			112	113		250	8	0	2			98	130	176.9	60.9	
41R	cc	fault	4	6		250	12	0	7			2	15			
			8	10		250	12	0	6			"	"			
			12	13		250	11	0	7			"	"			
42R	1	Beddy	72	73		90	4	0	2			69	74			- base - loading sc.
			89	92		90	11	180	4			45	100			



It seems that drilling faults stop at this fault fracture plane i.e. this is likely a natural fault. YK, 23/6/09

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Exp.: Site: Core: Observer: Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
43R	1 Bedding	12	12		90	6	0	8			0	30			green layer
44R	1 Bedding	80	80		90	8	0	10			52	140	-120.4	46.4	"
	4 "	112	112		270	7	0	6			24	144	13.9	62.8	"
43R	1 fault	86	86		90	12	180	52	75	282	71	140	-98.7	82.9	
	1 "	77	77		90	0	180	50	78	270	"	"	"	"	this is not completely faulted on CT image. then is same one?
45R	5 Bedding	81	82		270	12					0	143	-132.3	-4.9	Base of turbidite
	"	84	85		270	11									"
	"	100	101		270	11									"
	"	114	115		270	11	180	8							"
	7	132	133		90	4	180	19			102	144	-142.4	0.9	green layer
46R	none														
45R	3 Bedding	9	9		90	8	180	3			2	70			Base of turbidite
4	"	36	39		250	5	180	9			33	40			
	"	45	45		250	4	180	4			40	49			→ XRD x2 (turbidite & hemipelagic)
	"	61	62		90	6	180	2			60	67			"
	"	72	72		250	3	0	5			70	74			"
4	"	88	88		250	1	180	3			87	90			"
	"	94	94		90	1	180	3			93	94			"
	"	112	112		90	1	0	3			110	115			"
5	"	38	68		90	12	0	1		36	42	-62.6	-35.9	"	

Structural Geology Observation Sheet

Exp.: 322 Site: Cool/B Core: Observer: Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
48R	1 Beddy	66	66		270	5	180	2			21	68	-20.2	13	Base of turbidite
	4 "	56	56		90	7	180	2			22	66			"
49R	2 Beddy	15	15		270	4	180	6			13	18			"
	1 "	51	51		270	5	180	3			45	57			"
	5 "	84	84		270	7	0	5			80	86	-110.9	51.5	"
	7 "	119	119		90	4	0	4			116	125			"
50R	1 "	14	14		270	3	0	2			9	16	-76.4	61.5	green layer
57R	1 fault	71	71		90	28	0	0			70	99			fault in within homogeneous claystone
	2 Beddy	23	23		90	1	180	4			7	97	-6.8	63	
	6 Beddy	84	84		0	0	0	0			0	140	-39.4	48.4	Base of turbidite
	7 "	126	126		270	1	180	1			0	180	-42	69.4	" ?
	9 "	35	35		270	7	180	9			0	94			green layer
52R	2 Beddy	78	78		270	1	180	6			69	80	-113.1	59.2	Base of carb. sand layer
	" fault	79	79		270	4	180	5			69	80	"	"	L.P.F.
	5 Carb. interval	33	37		270	7	180	4			30	38			Carbonate interval
	5 fault	14	17		90	27	180	20	↙ ↘		12	21	-146.6	-12	1 cm scale fault with calcareous veins ← Dog teeth
	5 fault	40	42		90	18	180	30	↙ ↘		39	42			Fault with calcareous veins ← brecciated veins partly dog teeth

52-58R
no data 9/9: 100
Pmag

Structural Geology Observation Sheet

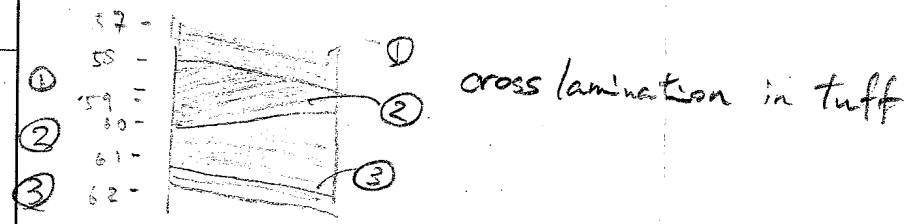
Exp.: 322 Site: Coo11B Core: Observer: YK&TY Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip	
54R	2 Bedding	74	74		270	3	0	0			64	91			Base of turbidite
	2 "	77	77		90	2	0	6			64	91			"
	4 fault	33	44		270	61	0	0	2	(30) 90	33	44	-150.4	173	100% sand dividing fault flow structure in hanging wall mud.
	5 "	7	10		270	27	180	17			(0 8)	(8 32)	145.6	-9.9	
	4 Bedding	112	112		90	3	180	1			90	120	120	50.6	Base of turbidite
55R	3 Bedding	112	112		270	1	180	2			103	141	-161.9	69.8	green layer
	3 Bedding	130	130		270	3	180	2			103	141	↓	↓	parallel lamina
56R	1 Bedding	0	4		270	2	180	1			0	19	47.1	61.4	laminated ss.
	"	15	17		270	1	90	2			0	19	↓	↓	"
	"	42	45		270	1	90	1			42	47	46.1	49.7	"
	3 "	0	1		90	1	0	0			0	6			base of turbidite.
	"	20	23		90	1	0	3			14	23	133.2	56.2	laminated ss
	"	32	34		90	3	0	1			30	48			"
	"	33	38		90	3	180	1			30	48			"
	"	48	49		270	1	180	2			48	53			"
	"	53	54		90	2	180	1			53	60			"
57R	1 Bedding	47	47		90	3	180	5			46	80	-45.9	82.1	
	"	3	3		270	2	180	12			0	18			
	1 fault	19	23		270	39	0	37	40	270	19	38	-45.7	63.9	
	"	25	33		270	50	0	0	10	90	1	1	↓	↓	

Structural Geology Observation Sheet

Exp.: 822 Site: 0011R Core: Observer: YK Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes	
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip		
51R	1	50	55		90	39	0	9	5	270	49	26	-45.9	82.1		
	1	62	70		270	54	180	44	16	90	"	"	↓	↓		
	2	77	81		270	34	0	37	2.1	270	11	45	-86.9	78.8		
	3	7	15		90	39	180	32	2.3	270	0	38	-90	63.7		
	1	Beddy	119	119		90	3	180	4			76	130			
	2	"	64	64		90	2	0	2			53	72			
	3	"	29	79		270	2	0	7			0	140	-149.2	8.1	
	3	"	90	90		270	3	0	7			0	140	↓	↓	
	3	Voic	44	99		90	17	0	7			38	92	↓	↓	
	7	Jan K	31	39		270	90	180	55			10	43	-12.7	27.1	
6	Beddy	23	33		270	8	0	1			26	58				
38R	1	23	23		90	3	180	8			0	85	30.9	-47.9	laminar in tuff	
	1	29	29		90	4	180	1			0	85	↓	↓	laminar	
	1	39	39		90	2	180	7			"	"	-174.5	58.7		
	1	53	53		90	4	0	2			"	"	F	↓		
1	cross lamina	57	57		90	5	0	9			"	"	↓	↓		
1	"	59	60		270	6	180	5			"	"	↓	↓		
1	"	61	62		90	9	0	3			"	"	↓	↓		
1	Beddy	117	117		270	1	180	4			97	127	-130.4	68.2		
4	"	131	131		270	5	0	0			107	144				
5	"	25	25		90	1	180	3			15	33	168.6	78.9	green layer	



Structural Geology Observation Sheet

Exp.: 322 Site: C0011B Core: Observer: YK & YF Summary:

Section No.	Structure ID	Top of Struct	Bottom of Struct	ave. depth	Core face app. Dip		2nd app. Dip		Striation on surface		Coherent interval (for P-mag)		P-mag pole		notes	
					az.	dip	az.	dip	rake	from	top	bottom	az./trend	dip		
58R 5	Bedding	48	48		270	2	180	4			46	58				
1	fault	130	132		90	24	0	48	42	90	127	133				
5	Beddy	96	98		270	4	180	3			74	128	-85.2	77.2		
	"	117	118		270	4	180	2			74	128	↓	↓		
6	Beddy	14	14		270	3	180	2			0	45	-149.5	72.8		
	"	32	33		270	9	180	3					↓	↓		
7	"	18	19		90	4	0	2			0	29	-19.9	-19.8		
8	"	18	19		90	4	0	1			5	29			ash layer	
	"	50	51		270	2	180	1			45	63			ash base	
	"	81	82		270	1	180	2			68	123	50.2	80.2	"	
	"	117	118		270	4	0	3			68	123	↓	↓	sand laminae	
4	fault	39	42		90	29	0	50	48	90	0	42	42	-144.2	39.6	
59R 1	bedding	73	74		270	1	180	2			44	115	-151.4	80.1	base ash	
	"	109	110		270	5	180	5			44	115	103.7	87.8		
2	"	5	6		90	4	180	1			0	15				
4	"	34	34		270	3	180	3			34	44	208	74.5		