

NOTICE

348 0002P

moddy (silly)

Anito, Michi, Mari

IODP Exp. 353 Cuttings Description Sheet (macroscopic)

silty claystone

NO. Date: / /18

OBSERVER:

Sample ID	(fine) silty Claystone						Siltstone						Sandstone						Wood/lignite	Ash/Tuff	Fossils	Visual description
	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture				
242	317 (1-4-22)	gray 7.5Y	Loose Soft Semi Hard	Yes • (No)	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	14 9	Dark gray 3/1	Loose Soft Semi Hard	Yes • (No)	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	0 0		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
	97 (1-4-22)	6/1																				
196	25	gray 5/	Loose Soft Semi Hard	Yes • (No)	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	17 7	Dark gray 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	9 6	gray 5/	Loose Soft Semi Hard	Yes • (No)	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
	91																					
283	120 (93)	7.5Y 5/1 gray	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	8 5	2.50Y 3/1 gray	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	2 7	7.5Y 9/1 gray	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
	90																					
176	155		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	5 2		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	3 7		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
	90																					
			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	

Wood/Lignite Fossils abundances:
N = Not observed, R = Rare, F = Few, C = Common, A = Abundant, D = Dominant

C0002R

silty claystone / clayey siltstone

Arito, Michi, Mari

IODP Exp. 358 Cuttings Description Sheet (macroscopic)

NO. Date: / /18 OBSERVER:

Depth (mbsf)

Sample ID	Claystone						Siltstone						Sandstone						Wood/lignite	Ash/Tuff	Fossils	Visual description
	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture				
2812.5 1 89 SMW 1-4mm			Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	10	black 7.5y 2/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	4	olive 7.5y 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	pyrites in sandstone. Fibers in cuttings abundant. not enough grains for N=100 count
2817.5 89 SMW 1-4mm	6	2.5y 5/1 5/1y	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	75	2.5y 3/1 olive 8/2y	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	17	N 5/1 8/2y	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	+ 3 grains zement.
2822.5 5 2829.5 97 SMW >4mm	0		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	225		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	79		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Sandstones very thin in grain size including few fine-sandstone or sandy siltstone
2832.5 1 2839.5 57 SMW 14mm	0		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	84	Dark gray N 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	17	gray N 4/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fibers are common.
2842.5 1 2849.5 107 SMW >4mm	0		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	304	2.5y 2/1 Black	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	45	dark olive gray 2.5y 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fibers are common
2842.5 1 2849.5 107 SMW 14mm	0		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	81	Dark green gray 10G 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	30	gray N 4/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fibers and only one cement fragment.
2842.5 1 2849.5 150 >4mm	3	7.5y 5/1 8/1y	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	206	2.5y 2/1 black	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	60	2.5y 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Some sedimentary structure (bedding), biogenic burrows (pyritized), black organic specs coal-bearing sandstones
2852.5 1 2859.5 150 1-4mm	0		Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	84	gray 10Y 4/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	20	dark olive gray 2.5y 10Y 6/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	
2852.5 1 2859.5 152 7mm	6	Dark olive gray 2.5y 1/2	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	274	Black 2.5y 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	47	2.5y 2/1 dark olive gray	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Some sedimentary str of lamination. Some silty claystone is covered with sandstone layer.
2852.5 1 2859.5 152 1-4mm	3	7.5y 5/1 8/1y	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	82	Dark 8Y 10G 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	22	dark olive gray 2.5y 3/1	Loose Soft Semi Hard	Yes • No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	two oldest types of sandstone one (gray) is softer

Wood/Lignite Fossils abundances: N = Not observed, R = Rare, F = Few, C = Common, A = Abundant, D = Dominant

C0002R

silky claystone

Arto, Mani Mishi

IODP Exp. 358 Cuttings Description Sheet (macroscopic)

NO. Date: / /18

OBSERVER:

2862.5
1
2867.5

2872.5
1
2877.5

Sample ID	Claystone						Siltstone						Sandstone						Wood/Lignite	Ash/Tuff	Fossils	Visual description
	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture				
154 1 14mm	1	grayish olive 4/2	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	82	Dark olive gray 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	17	gray N5/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	
154 1 >4mm	1	7.5Y 4/2 grayish olive	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	73	2.5GY 3/1 dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	30	2.5GY 3/1 dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Some streaklines pyrites occasional patchy white/gray siltstone
228 1 14mm	0		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	80	2.5 GY 3/2 d. olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	12	GY N5/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	24 grains Tuff different appearance of tuff
228 1 >4mm	1	7.5Y 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	283	2.5 GY 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	77	2.5 GY 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	8 tuffs (OYR (cement?) 4/2) Make thin sections
230 2 74mm	2	7.5Y 4/2	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	158	2.5 GY 3/2	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	57	2.5 GY 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	39 tuff cmlly sandstone partly fine sand or sandy siltstone tuff shows bioturbation
230 1 14mm	0		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	92	Dark gray N3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	4	Dark olive gray 2.5GY 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	4 tuff cuttings Gray 7.5 Y 5/1
232 2 79mm	2		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	235	7.5 GY 3/2	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	57	2.5 GY 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	31# tuff gray 7.5 Y 5/1
232 3 14mm	3	grayish olive 7.5Y 5/2	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	82	black 2.5Y 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	19	gray 7.5Y 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	16 of tuff or cement grayish olive 7.5Y 4/2
236 1 1-4mm	0		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	91	2.5 GY 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	36	2.5GY 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Tuff/cement: 20
236 1 >4mm	0		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	445	2.5 GY 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	47	2.5GY 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	cement 41

Wood/Lignite Fossils abundances:
N = Not observed, R = Rare, F = Few, C = Common, A = Abundant, D = Dominant

C0002 R

IODP Exp. 358 Cuttings Description Sheet (macroscopic)

silty claystone

NO.

Date: 1/1/18

OBSERVER: Anita, Mani, Mahi

Sample ID	Fine silty Claystone						Siltstone						Sandstone						Wood/lignite	Ash/Tuff	Fossils	Visual description
	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture				
240 1-4mm	0		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	98	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	32	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Tuff = 10. Some mineral veins
240 >4mm	0		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	295	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	31	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
272 1-4mm	0		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	80	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	23	2.5 Gy 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Tuff = 4 Sandstone have some organic laminae - pyrite abundant
272 7-4mm	3		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	296	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	54	2.5 Gy 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Cement 25 Plastic Fibers
287 1-4mm	0		Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	96	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	33	2.5 Gy 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Tuff = 3
287 7-4mm	4	light color here	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	294	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	85	7.5Y 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Tuff = 10 (partly blocky = cause?) Sandstone have organic and mineral pyrite present
289 1-4mm	4	2.5 Gy 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	98	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	39	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Tuff = 6
289 7-4mm	15	2.5 Gy 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	385	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	42	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
293 1-4mm	18	2.5 Gy 6/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	71	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	17	2.5 Gy 5/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
293 >4mm	12	2.5 Gy 5/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	289	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	57	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Tuff = 8 Burrows (bioturbation) observed in silty claystone + fine silty claystone

IODP Exp. 358 Cuttings Description Sheet (macroscopic)

silty claystone

NO.

Date: 12/19

OBSERVER:

Anto Michio Mari

Sample ID	Fine Silty Claystone						Siltstone						Sandstone						Wood/Lignite	Ash/Tuff	Fossils	Visual description
	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture				
297 >4mm	16	2.5GY 4/1	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	191	2.5 GY 3/1	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	31	2.5 GY 3/1 (lighter)	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	- organic-rich lamination - Cement: 4 - 32 out of 191 is likely Siltstone
297 1-4mm	23	5GY 5/1 Olive gray	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	61	2.5GY 2/1 black	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	16	2.5GY 4/1 Dark olive gray	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Cement 4 Many plastic fibers
303 1-4mm	38	2.5GY 4/1 Dark olive gray	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	64	5GY 3/1 Dark olive gray	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	15	Dark gray N3/1	Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Cement 4 Many plastic fibers
303 >4mm			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Fossil: 2 Fine
			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes · No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	

change
in
descriptions

162
2468
230

52
37
89

IODP Exp. 358 Cuttings Description Sheet (macroscopic)

NO. Date: / /18

OBSERVER: Arito, Michi, Mahi

Sample ID	Claystone (Dominant)						Siltstone						Sandstone						Wood/lignite	Ash/Tuff	Fossils	Visual description
	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture				
303 74mm	230	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	89	2.5 Gy 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	53	2.5 Gy 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty claystone = 36 Cement = 11 (Tuff?) Tube-like fossil = 2
299 14mm	50	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	33	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	17	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty claystone = 21
299 74m	107	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	35	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	16	2.5 Gy 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	29 Fine silty clay mostly soft but partly round 4 cement/tuff?
310 14mm	67	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	27	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	25	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty claystone = 15 cement/tuff? = 8
310 >4mm	315	2.5 Gy 2/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	44	2.5 Gy 3/1 dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	42	2.5 Gy 3/1 olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty claystone 11 Cement/tuff 12
314 >4mm	151	2.5 Gy 2/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	53	2.5 Gy 3/1 dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	47	N4/1 gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty claystone 8 Cement/tuff 10
314 14mm	64	2.5 Gy 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	35	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	44	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty clay: 4 Cement/Tuff: 9 (white and orange)
316 14mm	58	2.5 Gy 2/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	22	2.5 Gy 3/1 dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	19	2.5 Gy 3/1 dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty claystone 2 Cement/tuff 4
316 74	162	"	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	48	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	26	2.5 Gy 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	fine silty claystone 3 Cement/tuff 8
320 14mm	61	2.5 Gy 3/1 dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	32	2.5 Gy 2/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	31	2.5 Gy 2/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty claystone 2

Wood/Lignite Fossils abundances:
N = Not observed, R = Rare, F = Few, C = Common, A = Abundant, D = Dominant

Arito, Michi, Mari

IODP Exp. 358 Cuttings Description Sheet (macroscopic)

NO. / Date: / /18 OBSERVER:

Sample ID	Silty Claystone						Siltstone						Sandstone						Wood/Lignite	Ash/Tuff	Fossils	Visual description
	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture				
822 1-4 mm	80	2.5G 2/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	14	2.5G 4/1 dark gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	6	N 4/0 gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	1x cement 10x lighter color fine soft fine silty clay
320 74 mm	290	7.5Y 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	62	2.5 6/1 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	59	N 4/0 gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	3x silty claystone 5 cement silty claystone: sometimes brownish color
322 74 mm	256	dark gray N3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	57	N3/1 dark gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	59	2.5G 5/1 olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	Fine silty claystone 3 cement/tuff & Alternation of fine silty claystone & silty claystone
324 1-4 mm	92	7.5Y 2/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	25	2.5Y 2/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	30	7.5Y 3/1 olive black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	1x cement 8x Fine silty claystone
324 74 mm	228	7.5Y 3/1 ol. blk	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	43	7.5Y 3/1 olive blk	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	26	7.5Y 4/1 gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	8x Fine silty clay 2x cement Foram.
328 7-4 mm	69	7.5Y 3/1 olive black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	20	7.5Y 4/1 gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	25	2.5Y 4/1 gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	0x Fine silty clay 2x cement
328 3A 74 mm	157	N4/1 gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	55	2.5Y 5/1 olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	29	2.5G 4/1 dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	0x Fine silty claystone 4x cement
332 1-4 mm	65	7.5Y 3/1 olive black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	11	7.5Y 3/1 black	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	10	7.5Y 4/1 gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	7x black FeS pigment 3x Tuff/cement? 24 Fine silty clay (lighter color)
332 24 mm	121	N3/1 dark gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	48	N3/1 dark gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	37	2.5G 4/1 Dark olive gray	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	9x Fine silty claystone 12x cement
			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R F/C A/D	N/R F/C A/D	N/R F/C A/D	

332 0.062 mm has abundant black sand grains (→ Pyrite coarse grains or organic material)

Wood/Lignite Fossils abundances:
N = Not observed, R = Rare, F = Few, C = Common, A = Abundant, D = Dominant

Anjo, Mari Michi

IODP Exp. 358 Cuttings Description Sheet (macroscopic)

NO. / Date: / /18

OBSERVER:

Sample ID	Claystone						Siltstone						Sandstone						Wood/lignite	Ash/Tuff	Fossils	Visual description
	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture	N	Color	Consolidation	Structures	Shape	Texture				
334 14mm	41	2.5Y 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	24	2.5Y 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	38	2.5Y 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Fine silty claystone → 5 Cement → 1
334 74mm	73	7.5Y 2/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	39	2.5Y 3/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	29	7.5Y 4/1	Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	Fine silty claystone 4 Cement 4
			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	
			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile			Loose Soft Semi Hard	Yes No	Blocky/Angular Round Platy/Tabular Splinter Curved	Crumbly Sticky Fissile	N/R/ F/C/ A/D	N/R/ F/C/ A/D	N/R/ F/C/ A/D	

Wood/Lignite Fossils abundances:
N = Not observed, R = Rare, F = Few, C = Common, A = Abundant, D = Dominant

>4mm Count.

$$\begin{array}{r} 289 \\ - 4 \\ \hline 255 \end{array}$$

$$\begin{array}{r} 57 \\ - 20 \\ \hline 37 \end{array}$$

$$\begin{array}{r} 38 \\ - 16 \\ \hline 22 \end{array}$$

Counted number

Count 100 From WASHED

Hole ID	Sample ID	From (mbsf)	To (mbsf)	Cement	Sandstone	Siltstone	(Silty) Claystone	(Fine silty) Claystone	Ash/Tuff	New lithology
C0002R	89	2812.5	2817.5		4	0	10	0	0	0
C0002R	97	2822.5	2827.5		41	48	134+9=143	225	0	0
C0002R	107	2832.5	2837.5		13	62	262+12=274	304	0	0
C0002R	150	2842.5	2847.5		35	22	98+30	206	8	0
C0002R	152	2852.5	2857.5		63	74	166+60=226	274	6	0
C0002R	154	2862.5	2867.5		27	38	76+21=97	73	1	0
C0002R	228	2872.5	2877.5		97	21	235+27=262	283	1	7
C0002R	230	2882.5	2887.5		7	17	127+33=160	158	5	38
C0002R	232	2892.5	2897.5		39	99	195+73=268	235	2	20
C0002R	236	2902.5	2907.5		14	52	112+31=143	445	5	12
C0002R	240	2912.5	2917.5		24	63	239 (19 mixed)	295	0	4
C0002R	272	2922.5	2927.5		16	16	62+5=67	296	3	4
C0002R	287	2932.5	2937.5		85	61	169+56=225	274	4	12
C0002R	289	2942.5	2947.5		41	25	90+53=143	385	15	0
C0002R	293	2952.5	2957.5		37	54	219+36=255	289	12	4
C0002R	297	2962.5	2967.5			32		159	16	3
C0002R	299	2972.5	2977.5			35	71+36=107		29	4
C0002R	303	2982.5	2987.5			89	(32+22=54)	230	36	11
C0002R	310	2992.5	2997.5			62	193+104=297	315	11	12
C0002R	314	3002.5	3007.5			53		151	0	10
C0002R	316	3012.5	3017.5			48	140+23=163		3	7
C0002R	320	3022.5	3027.5			62		290	9	5
C0002R	322	3032.5	3037.5			57		256	3	4
C0002R	324	3042.5	3047.5			43		228	8	2
C0002R	328	3052.5	3057.5			55		157	0	4
C0002R	332	3062.5	3067.5			48		121	7	10
C0002R	334	3072.5	3077.5			39		133	4	1
C0002R	155	2867.5	3267.5		24	30	152	2		

No silty claystone due to XRD
 → Arto ✓
 → Michi ✓
 → Arto ✓
 → Arto Michi ✓
 → Mari ✓
 *Half of sample should be XRD

(-4mm) C0002R 155 2 26 40 46 5 0 -

Based on counting = R/F/C...
 Please recheck / fix out blue cells!

Sandstone Consolidation #	Sandstone Structures	Sandstone Structures #	Sandstone Shape	Sandstone Shape #	Sandstone Texture	Sandstone Texture #	Organic material	Organic material #	Ash/Tuff	Ash/Tuff #	Fossils	Fossils #	
3	NO	#N/A	Round	3	Fissile	3	R	#N/A	NO	#N/A	NO	#N/A	
3	NO	#N/A	Blocky/Angular	1	Fissile	3	Few	2	NO	#N/A	NO	#N/A	
3	No	#N/A	Blocky/Angular	1	Fissile	3	R	#N/A	NO	#N/A	NO	#N/A	
3	NO	#N/A	Blocky/Angular	1	Fissile	3	R	2	Not observed	0	Not observed	0	
3	YES	#N/A	Blocky/Angular	1	Fissile	3	Not observed	0	Not observed	0	Not observed	0	
3	No	#N/A	Round	3	Fissile	3	Not observed	0	Not observed	0	Not observed	0	
3	Yes	#N/A	Blocky/Angular	1	Fissile	3	R	#N/A	Few	2	NO	#N/A	
3	NO	#N/A	Blocky/Angular	1	Fissile	3	Not observed	0	Common Abundant	4	Not observed	0	
3	Yes	#N/A	Platy/Tabular	4	Fissile	3	Not observed	0	Common Abundant	4	Not observed	0	
3	Yes	#N/A	Blocky/Angular	1	Fissile	3	Not observed	0	Few	0	Not observed	0	
3	Yes	#N/A	Blocky/Angular	1	Fissile	3	Not observed	0	Not observed	0	Rare	0	
3	NO	#N/A	Blocky/Angular	1	Fissile	3	Not observed	0	Not observed	0	Not observed	0	
3	Yes	1	Blocky/Angular	1	Fissile	3	Few	2	Few	#N/A	Not observed	0	
3	Yes	#N/A	Blocky/Angular	1	Fissile	3	Few	2	Not observed	0	Not observed	0	
3	"	#N/A	Blocky/Angular	1	Fissile	3	Few	2	(Few)	#N/A	Not observed	0	
3	Yes	1	Blocky/Angular	1	Fissile	3	Few	2	Not observed	0	Not observed	0	
3	No	0	Blocky/Angular	1	Fissile	3	R	#N/A	Few	2	Not observed	0	
3	Yes	#N/A	Blocky/Angular	1	Fissile	3	R	2	(Few)	#N/A	Rare	1	
3	Yes	1	Blocky/Angular	1	Fissile	3	R	2	(Few)	#N/A	Not observed	0	
3	No	0	Blocky/Angular	1	Fissile	3	(Few)	2	(Few)	#N/A	Not observed	0	
3	No	0	Blocky/Angular	1	Fissile	3	Few	#N/A	(Few)	#N/A	Not observed	0	
3	No	0	Blocky/Angular	1	Fissile	3	(Few)	2	Not observed	0	Not observed	0	
3	Yes	1	Blocky/Angular	1	Fissile	3	(Few)	2	Few	#N/A	Not observed	0	
3	No	0	Blocky/Angular	1	Fissile	3	(Few)	2	Not observed	0	Rare	1	
3	Yes	1	Blocky/Angular	1	Fissile	3	Few	2	Common	R	#N/A	Not observed	0
3	No	0	Blocky/Angular	1	Fissile	3	Few	3	Common	R	#N/A	Not observed	0
3	Yes	1	Blocky/Angular	1	Fissile	3	Few	#N/A	R	#N/A	Rare	1	

First occurrence of tuff

303
 340
 314
 316
 320
 322
 324
 328
 332
 334

Yes " " Rare NO NO
 Yes " " RARE NO RARE

← Aster added to drilling mud!

→ 9.5-9.4% Gray: fine silty clay
 9.5-2% Black: silty clay
 9.5-3% olive black: siltstone, sandstone

Please also note color here



	(Silty) Claystone Shape	(Silty) Claystone Shape #	(Silty) Claystone Texture	(Silty) Claystone Texture #	Siltstone (%)	Siltstone Consolidation	Siltstone Consolidation	Siltstone Structures	Siltstone Structures #	Siltstone Shape	Siltstone Shape #	Siltstone Texture	Siltstone Texture #	Sandstone (%)	Sandstone Consolidation
89	Platy/Tabular	4	Fissile	3	0	-	#N/A	-	#N/A	-	#N/A	-	#N/A		Hard
97	Blocky/Angular	1	Fissile	3	7.54 2/1 Black	Hard	#N/A	No	#N/A	Blocky/Angular	#N/A	Fissile	#N/A		Hard
107	Blocky/Angular	1	Fissile	3	7.54 2/1 Black	Hard	#N/A	Yes	#N/A	"	#N/A	"	#N/A		Hard
150	Blocky/Angular	1	Fissile	3	7.54 3/1 Olive black	"	#N/A	Yes	#N/A	"	#N/A	Fissile	#N/A		Hard
152	Blocky/Angular	1	Fissile	3	"	"	#N/A	Yes	1	"	#N/A	"	#N/A		Hard
154	Platy/Tabular	4	Fissile	3	7.54 3/1 Olive Black	Hard	#N/A	No	#N/A	Blocky/Angular	#N/A	Fissile	#N/A		Hard
228	Blocky/Angular	1	Fissile	3	7.54 2/1 Black	"	#N/A	Yes	#N/A	"	#N/A	"	#N/A		Hard
230	Blocky/Angular	1	Fissile	3		"	#N/A	No	#N/A	"	#N/A	"	#N/A		Hard
232	Blocky/Angular	1	Fissile	3	N 4/1 gray	Hard	#N/A	Yes	#N/A	Blocky/Angular	#N/A	"	#N/A		Hard
236	Blocky/Angular	1	Fissile	3	7.54 3/1 Olive black	Hard	#N/A	Yes	#N/A	Blocky/Angular	#N/A	Fissile	#N/A		Hard
240	Platy/Tabular	4	Fissile	3	2.56 2/1 Black	Hard	#N/A	Yes	#N/A	"	#N/A	"	#N/A		Hard
292	Platy/Tabular	4	Fissile	3	7.54 4/1 gray	Hard	#N/A	No	#N/A	Blocky/Angular	#N/A	Fissile	#N/A		Hard
287	Blocky/Angular	1	Fissile	3	7.54 2/1 Black	Hard	#N/A	No	#N/A	Blocky/Angular	#N/A	"	#N/A		Hard
289	Blocky/Angular	1	Fissile	3	2.56 3/1 d. olive gray	"	#N/A	Yes	#N/A	"	#N/A	"	#N/A		Hard
293	Blocky/Angular	1	Fissile	3	2.56 2/1 Black	"	#N/A	"	#N/A	"	#N/A	"	#N/A		Hard
297	Blocky/Angular	1	Fissile	3	"	"	#N/A	-	#N/A	"	#N/A	"	#N/A		Hard
299	Blocky/Angular	1	Fissile	3		Hard	3	Yes	1	Blocky/Angular	1	Fissile	3		Hard
303	Blocky/Angular	1	Fissile	3		Hard	3	Yes	1	Blocky/Angular	1	Fissile	3		Hard
310	Platy/Tabular	4	Fissile	3		Hard	3	Yes	1	Blocky/Angular	1	Fissile	3		Hard
314	Platy/Tabular	4	Fissile	3		Hard	3	Yes	1	Blocky/Angular	1	Fissile	3		Hard
316	Blocky/Angular	1	Fissile	3		Hard	3	Yes	1	Blocky/Angular	1	Fissile	3		Hard
320	Blocky/Angular	1	Fissile	3		Hard	3	No	#N/A	Blocky/Angular	1	Fissile	3		Hard
322	*Platy/Tabular	4	Fissile	3		Hard	3	Yes	#N/A	Blocky/Angular	1	Fissile	3		Hard
324	Blocky/Angular	1	Fissile	3		Hard	3	Yes	1	Blocky/Angular	1	Fissile	3		Hard
328	Platy/Tabular	4	Fissile	3		Hard	3	No	0	Blocky/Angular	1	Fissile	3		Hard
332	Platy/Tabular	4	Fissile	3		Hard	3	No	0	Blocky/Angular	1	Fissile	3		Hard
334	Blocky/Angular	1	Fissile	3		Hard	3	Yes	1	Blocky/Angular	1	Fissile	3		Hard

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Yes
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(-4 mm Recount (10 Jan)

silty

Color, consolidation, sed. structure, shape texture
 Only for "siltstone"

Arito, Mari

Sample ID (>4mm or 1-4mm)	Depth (from)	Depth (to)	Claystone					Siltstone					Sandstone					fine silty claystone					Organic material	Ash/Tuff	Fossils				
			N	Color	Consolidation	Sed. structures	Shape	Texture	N	Color	Consolidation	Sed. structures	Shape	Texture	N	Color	Consolidation	Sed. Structure	Shape	Texture	N	Color				Consolidation	Sed. Structure	Shape	Texture
Arito 89		60			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	25	2.5/4/1 gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	11		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	4		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Mari 97		62			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	48	2.5/4/1 dark olive gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	23		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	1		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Arito 107		81			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	21	2.5/4/1 gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	10		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	0		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Arito 150		66			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	26	2.5/4/1 gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	13		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	0		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Arito 152		64			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	21	2.5/3/1 gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	18		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	0		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Mari 154		165			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	91	2.5/4/1 dark olive gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	43		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	0		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Arito 228		73			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	18	2.5/4/1 gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	14		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	3		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Arito 230		83			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	17	2.5/4/1 gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	6		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	1		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Mari 232		71			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	23	2.5/4/1 dark olive gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	18		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	2		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Arito 236		66			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	24	2.5/4/1 gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	15		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	1		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Arito 240		70			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	22	2.5/4/1 gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	10		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	5		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D
Mari 272		75			Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	14	2.5/4/1 dark olive gray	Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	21		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	9		Loose Soft Semi Hard	Yes · No	Blocky / Angular Round Platy / Tabular Splinter Curved	Crumbly Sticky Fissile	N/R / F/C / A/D	N/R / F/C / A/D	N/R / F/C / A/D

gray

Visual description
no tuff
no tuff, no cement.
no tuff
no tuff
tuff 1 (cement?)
no tuff, no cement
Tuff 13
Tuff 6
Tuff 9
tuff 14
tuff 7
Tuff 2.

Visual description
tuff 1
Tuff 6
Tuff 4
Tuff 11
tuff 7