

Appendix A: Analytical Methods

The archived sample of DSDP Leg 58 and ODP Leg 131 used in our analyses are stored at the Texas A&M University. Researchers can apply for use of these archived samples using the website of the ODP [URL1].

Bulk analyses of major and trace elements were carried using a ZSX Primus II XRF spectrometer at the Atmosphere and Ocean Research Institute (AORI) and an Agilent model 7500c inductively coupled plasma mass spectrometer (ICP-MS) at the Department of Systems Innovation, School of Engineering, University of Tokyo (using acid fusion methods).

Analyses of major elements, Co and Cr by XRF were conducted using glass beads. Samples were cut into slabs, washed with distilled water, and finely ground in an agate ball mill grinder. One gram of each powdered sample was dried at 110°C for 10 hours and weighed to obtain weight percent H₂O loss. The dried samples were then ignited at 950°C for 4 hours and weighed to obtain loss on ignition (LOI). Fused disks were prepared with a lithium tetraborate (Li₂B₄O₇) flux at a dilution ratio of 1:10. For other trace element analyses, pressed powder pellets (~4 g of the sample) were inserted into a polyvinyl acetate ring holder (Goto and Tatsumi, 1991). Data from the analyses of major and trace elements using XRF are presented in Appendix Table 1.

Trace element analyses by ICP-MS were performed using the acid-dissolving process following the procedure reported by Machida et al (2008). Powdered samples (0.05 g) were digested completely with a HNO₃-HClO₄-HF mixed acid in a tightly sealed Teflon

screw-cap beaker and then evaporated. The dried material was then dissolved in a HNO₃-HCl-HF mixed acid. Analyses were conducted in a dilute HNO₃ matrix at a 1/4,000 concentration of dissolved solids. Analysis was carried out by the standard addition technique described by Kato et al (2005). Data gathered by ICP-MS data are presented in Appendix Table 2.

References

- Goto, A and Tatsumi, Y., 1991, Quantitative analysis of rock sample using X-ray fluorescence analyzer. *Rigaku-Denki Jour.*, **22**, 28–44.*
- Kato, Y., Fujinaga, K. and Suzuki, K., 2005, Major and trace element geochemistry and Os isotopic composition of metalliferous umbers from the Late Cretaceous Japanese accretionary complex. *Geochem. Geophys. Geosys.*, **6**, Q07004. doi:10.1029/2005GC000920
- Machida, S., Ishii, T., Kimura, J.-I., Awaji, S. and Kato, Y., 2008, Petrology and geochemistry of across-chains in the Izu-Bonin back arc: three mantle components with contributions of hydrous liquids from a deeply subducted slab. *Geochem Geophys Geosyst* **9**, Q05002. doi:10.1029/2007GC001641
- [URL1] Ocean Drilling Program Scientific Operator, <http://www-odp.tamu.edu>

*in Japanese

Appendix Table 1.

Sample ID	mbsf	SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	Total	H ₂ O(-)	LOI	Co	Cr	Ba	Nb	Ni	Pb	Rb	Sr	Th	Y	Zr
Site 442		wt%													ppm										
442A, 31R-1, 75-78	285.75	50.46	1.32	15.98	9.62	0.15	6.39	13.01	2.70	0.26	0.14	100.03	0.65	0.81	32.8	216	31.1	3.6	43.0	1.7	4.3	161	0.8	26.3	65.5
442A, 31R-1, 86-95	285.86	49.17	1.29	15.57	9.14	0.14	6.33	13.89	2.55	0.26	0.15	98.49	0.81	1.61	32.4	217	29.4	3.7	43.4	0.3	4.3	162	0.9	25.9	63.5
442A, 32R-2, 86-91	290.86	50.89	1.20	16.06	8.42	0.11	6.94	13.22	2.59	0.28	0.11	99.81	1.66	1.79	40.2	259	32.0	3.7	85.1	0.9	3.0	166	0.8	25.1	63.1
442A, 32R-2, 92-99	290.92	50.75	1.19	15.91	9.18	0.12	6.78	12.82	2.63	0.36	0.11	99.85	1.53	1.72	32.3	250	26.4	3.5	52.0	2.9	5.5	161	0.3	24.5	61.4
442A, 34R-1, 72-79	304.72	51.13	1.22	16.22	10.11	0.14	6.24	11.81	2.78	0.47	0.12	100.22	1.52	1.22	28.4	225	33.3	3.2	33.2	0.9	12.6	160	0.9	24.2	61.7
442A, 34R-1, 72-78	304.72	50.59	1.24	15.97	9.99	0.14	6.19	11.88	2.73	0.46	0.12	99.30	1.62	1.16	28.4	217	26.5	3.6	34.5	0.6	11.7	160	1.1	24.5	62.8
442B, 3R-3, 40-46	289.90	50.57	1.41	15.87	10.63	0.18	6.05	11.84	2.75	0.39	0.22	99.90	0.79	0.37	35.2	179	34.9	3.8	37.2	1.8	6.4	162	0.1	26.8	66.4
442B, 3R-3, 136-139	290.86	50.19	1.42	16.20	9.91	0.14	6.28	12.76	2.73	0.28	0.17	100.08	1.36	1.17	35.5	232	34.6	3.8	47.2	0.7	3.5	166	0.5	27.2	69.3
442B, 5R-2, 56-64	307.56	50.85	1.27	16.38	8.72	0.11	7.40	11.77	2.75	0.24	0.12	99.60	1.46	1.07	41.3	246	37.1	3.6	162	1.2	1.7	167	1.3	26.7	68.0
442B, 5R-2, 94-101	307.94	50.80	1.23	16.28	8.74	0.11	7.40	11.91	2.73	0.37	0.11	99.68	2.04	1.77	36.7	249	30.3	3.5	76.8	0.5	4.7	167	0.5	25.1	65.4
442B, 6R-2, 32-36	316.82	50.54	1.24	16.16	9.42	0.13	6.44	12.82	2.64	0.28	0.14	99.80	1.81	1.65	30.1	244	24.0	3.4	50.2	0.4	3.7	165	0.9	25.3	64.1
442B, 6R-2, 140-148	317.90	50.27	1.27	16.77	9.06	0.13	6.73	12.02	2.76	0.37	0.12	99.50	1.75	1.46	30.0	244	28.3	3.4	50.9	1.1	3.0	172	0.3	25.7	66.3
442B, 11R-2, 49-55	364.49	49.52	1.70	17.40	11.99	0.15	3.71	11.88	2.85	0.45	0.26	99.92	1.62	1.25	28.7	176	32.7	4.4	44.9	17.7	3.6	149	0.5	30.2	76.9
442B, 11R-2, 86-93	364.86	49.46	1.71	17.45	12.02	0.16	3.61	11.94	2.81	0.46	0.27	99.89	1.79	1.28	29.0	171	30.3	4.5	46.2	18.7	4.6	150	0.9	30.0	77.3
442B, 12R-1, 93-99	372.93	49.45	1.71	17.56	12.08	0.17	3.36	12.09	2.83	0.49	0.31	100.05	1.55	1.34	34.9	171	40.0	4.3	46.4	22.0	4.6	153	0.8	30.2	77.3
442B, 12R-1, 116-123	373.16	49.10	1.70	17.22	12.19	0.21	3.42	12.05	2.84	0.53	0.29	99.56	1.62	1.32	50.7	179	37.5	4.4	53.9	18.7	6.5	149	0.6	29.5	76.0
Site 443																									
443, 49R-3, 123-128	457.73	50.41	1.67	16.23	10.04	0.29	5.66	12.29	2.90	0.21	0.16	99.84	1.04	0.51	40.1	230	39.0	5.0	48.7	33.7	1.8	140	1.1	29.2	75.2
443, 52R-1, 0-5	477.50	50.43	1.59	16.68	9.72	0.28	5.52	12.47	2.90	0.19	0.15	99.93	0.89	0.71	40.0	230	36.3	4.8	50.7	10.6	1.6	143	0.8	28.4	73.2
443, 52R-1, 84-89	478.34	48.55	1.35	15.85	10.31	0.17	5.62	15.10	2.59	0.31	0.13	99.97	1.38	3.31	38.6	252	19.1	3.9	66.4	1.6	5.1	147	0.6	24.9	60.5
443, 53R-2, 114-122	484.64	50.11	1.40	16.19	10.34	0.15	6.43	12.31	2.83	0.26	0.12	100.12	1.18	1.28	44.2	245	26.2	3.9	80.7	0.2	3.1	150	0.8	26.0	64.4
443, 55R-1, 83-89	501.83	49.07	1.76	14.76	11.43	0.18	6.52	12.41	2.46	0.38	0.19	99.15	2.52	2.30	41.0	229	42.1	5.1	68.2	0.7	4.0	150	0.7	30.5	77.8
443, 55R-1, 100-106	502.00	48.86	1.66	14.68	10.94	0.15	7.41	12.01	2.31	0.33	0.17	98.51	3.46	2.12	42.1	236	32.9	4.9	86.0	0.5	3.8	148	0.8	29.5	75.1
443, 55R-1, 142-148	502.42	49.09	1.72	14.69	11.35	0.15	7.12	11.59	2.37	0.36	0.17	98.61	3.17	1.95	42.5	223	31.2	5.2	84.6	0.4	4.0	146	0.6	30.4	76.6
443, 55R-2, 113-119	503.63	49.29	1.64	14.59	11.01	0.14	7.42	11.74	2.44	0.34	0.17	98.78	10.16	2.09	34.4	232	32.1	5.0	94.6	0.2	3.3	146	0.3	29.5	74.1
443, 58R-4, 28-35	524.78	51.19	1.82	15.15	9.42	0.10	8.46	9.53	2.91	0.27	0.18	99.02	1.79	1.35	47.3	246	55.9	5.3	122	0.5	2.9	146	0.6	30.9	87.4
443, 59R-2, 10-15	531.10	49.71	1.28	15.82	9.75	0.13	7.46	11.55	2.76	0.23	0.09	98.80	1.14	1.44	42.4	286	48.1	3.4	115	n.d.	2.5	151	0.4	25.3	61.3
443, 59R-2, 91-97	531.91	49.51	1.28	15.88	9.65	0.14	7.63	11.72	2.72	0.12	0.09	98.74	0.96	0.73	42.0	282	21.5	3.5	97.5	0.4	1.7	138	0.4	25.3	59.4
443, 59R-3, 0-6	542.50	49.54	1.29	15.88	9.57	0.13	8.03	11.39	2.74	0.14	0.09	98.79	1.22	1.22	43.0	288	24.1	3.6	99.9	0.7	1.7	136	0.4	25.3	58.8
443, 59R-3, 96-103	543.46	50.28	1.31	16.08	9.48	0.13	7.78	11.43	2.85	0.25	0.10	99.69	1.61	1.55	48.1	289	22.8	3.5	141	0.3	2.9	136	0.3	25.6	60.3
443, 60R-2, 104-110	541.54	49.69	1.28	15.96	9.73	0.16	8.58	11.07	2.65	0.10	0.09	99.30	0.87	1.60	41.6	282	17.9	3.5	89.5	0.4	1.4	127	0.5	25.3	57.5
443, 60R-4, 0-10	543.50	49.10	1.29	15.65	9.72	0.17	8.21	11.24	2.63	0.08	0.09	98.19	0.92	1.58	38.5	282	19.3	3.7	82.2	0.4	1.3	134	0.7	25.4	59.0
443, 61R-3, 10-17	551.60	49.35	1.28	16.14	9.73	0.15	7.09	12.08	2.68	0.21	0.09	98.82	1.31	0.74	40.2	288	19.5	3.5	91.3	0.3	2.9	148	0.1	25.0	60.2
443, 61R-3, 36-42	551.86	49.79	1.26	16.37	9.69	0.15	6.99	12.18	2.72	0.23	0.09	99.46	1.79	1.04	42.1	293	18.7	3.4	108	0.7	3.4	153	0.9	24.7	60.2
443, 61R-3, 98-102	552.48	49.38	1.28	15.89	9.58	0.14	8.19	11.55	2.60	0.07	0.09	98.76	1.47	1.14	41.9	283	17.1	3.4	95.3	0.4	1.1	135	0.7	25.3	58.5
Site 444																									
444A, 20R-1, 74-79	244.24	50.40	2.23	16.34	9.26	0.16	5.79	8.59	3.90	2.50	0.44	99.59	1.98	2.76	27.2	110	184	18.9	30.9	2.6	12.0	382	1.8	31.1	187.3
444A, 20R-2, 4-10	245.04	48.78	1.60	16.52	9.01	0.15	9.28	8.41	3.40	2.02	0.33	99.50	2.70	2.38	41.0	241	148	14.3	154	2.7	12.8	264	2.1	25.8	124.5
444A, 24R-1, 89-93	279.39	49.76	1.72	15.47	10.81	0.20	6.88	11.19	2.82	0.26	0.22	99.31	1.39	0.83	37.2	217	104	6.5	50.8	7.6	3.0	137	0.6	30.6	86.7
444A, 27R-1, 78-84	301.28	49.53	1.44	16.60	9.70	0.16	7.70	11.33	2.65	0.26	0.18	99.54	0.82	0.90	38.8	269	51.1	5.9	82.0	n.d.	2.6	151	0.8	27.8	79.1
444A, 27R-5, 71-77	307.21	49.06	1.54	15.58	10.37	0.17	7.69	11.13	2.64	0.31	0.19	98.67	0.93	0.54	43.3	267	63.2	5.9	78.6	1.1	3.1	141	0.5	28.4	80.1
Site 808																									
808, 106R-1, 113-118	1300.23	49.13	1.57	16.63	9.15	0.22	6.49	11.81	3.05	0.08	0.13	98.25	1.73	1.33	56.6	264									
808, 106R-2, 2-8	1300.62	47.84	1.30	16.06	9.97	0.18	8.39	12.53	2.56	0.07	0.11	99.01	1.92	3.21	37.0	255	17.2	3.2	88.3	1.3	1.7	206	0.2	23.5	76.5
808, 106R-2, 23-30	1300.83	48.19	1.47	16.42	9.68	0.14	7.06	11.35	2.81	0.07	0.13	97.33	1.21	1.53	40.4	256	21.7	3.6	93.8	2.9	1.1	186	0.6	26.3	85.2
808, 106R-2, 55-66	1301.15	48.67	1.50	16.64	9.79	0.15	7.12	11.40	2.87	0.07	0.13	98.33	1.20	1.59	46.4	262	24.2	3.8	100.5	0.5	0.8	185	0.5	26.6	85.8
808, 106R-2, 71-76	1301.31	48.87	1.49	16.70	9.61	0.17	7.14	11.88	2.88	0.07	0.13	98.93	1.19	2.07	41.7	259	19.9	3.8	101.9	2.3	1.0	274	0.5	26.5	101.8
808, 107R-1, 21-28	1308.51	48.89	1.57	14.89	10.12	0.21	6.68	12.30	2.81	0.14	0.15	97.75	1.33	0.85	41.9	279	32.7	4.9	56.2	1.1	2.4	170	0.6	27.2	79.8
808, 107R-1, 46-52	1308.76	49.18	1.58	15.08	9.84	0.20	6.44	12.43	2.76	0.08	0.15	97.74</													

Appendix Table 2.

Sample ID	mbsf	SiO2	Sc	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Rh	Pd	Ag	Cd	In	Sn	Sb
Site 442		wt%	ppm																						
442A, 31R-1, 75-78	285.75	50.46	12.84	242.9	200.2	35.01	58.08	65.57	78.41	18.36	0.70	0.69	5.01	151.5	21.00	60.51	1.13	0.25	0.01	0.06	0.15	0.19	0.05	0.97	0.09
442A, 32R-2, 86-91	290.86	50.89	4.27	206.1	220.7	43.28	105.20	69.31	68.37	16.27	0.58	0.16	3.16	145.1	15.84	52.37	0.98	0.17	0.00	0.02	n.d.	0.20	0.05	1.03	0.06
442A, 34R-1, 72-79	304.72	51.13	15.31	212.4	184.4	28.48	40.49	61.02	54.14	16.52	0.71	0.53	15.42	143.5	20.85	54.02	0.99	0.16	0.01	0.06	n.d.	0.07	0.05	0.64	n.d.
442B, 3R-3, 40-46	289.90	50.57	17.21	235.6	167.8	37.64	49.90	60.07	78.28	18.61	1.00	1.37	7.32	155.8	24.60	62.46	1.21	0.21	0.01	0.08	0.09	0.12	0.06	0.89	0.17
442B, 5R-2, 56-64	307.56	50.85	3.13	225.9	202.8	47.82	210.32	82.24	67.23	17.77	1.00	0.72	1.53	152.3	16.74	59.28	1.10	0.37	0.01	0.08	n.d.	0.17	0.06	0.58	n.d.
442B, 6R-2, 32-36	316.82	50.54	15.67	223.0	204.8	32.32	66.65	72.61	71.85	17.49	0.88	0.14	3.83	151.0	21.22	57.96	1.06	0.16	0.01	0.04	n.d.	0.19	0.05	0.83	n.d.
442B, 11R-2, 49-55	364.49	49.52	32.82	279.9	160.1	29.31	61.06	55.05	88.78	20.31	0.70	12.86	4.96	150.7	33.81	79.87	1.62	0.23	0.01	0.06	n.d.	0.11	0.06	1.00	0.76
442B, 12R-1, 93-99	372.93	49.45	35.70	303.7	167.7	36.88	66.08	62.60	95.97	21.09	0.71	16.79	6.92	161.7	35.25	83.64	1.72	0.28	0.02	0.06	n.d.	0.12	0.07	1.10	0.93
Site 443																									
443, 49R-3, 123-128	457.73	50.41	12.10	247.2	205.0	43.81	63.96	82.26	74.42	18.20	0.73	22.93	1.51	126.7	24.67	69.58	2.77	0.73	0.02	0.08	n.d.	0.11	0.06	1.02	n.d.
443, 52R-1, 0-5	477.50	50.43	27.39	244.4	208.5	45.10	69.17	84.17	75.62	18.69	0.77	7.50	2.17	137.8	29.24	73.10	2.75	0.67	0.02	0.06	n.d.	0.17	0.06	1.00	n.d.
443, 53R-2, 114-122	484.64	50.11	17.18	229.7	225.8	47.27	104.54	71.01	60.91	17.24	0.93	0.19	3.39	144.0	24.48	62.33	1.70	0.19	0.02	0.02	n.d.	0.10	0.06	0.59	n.d.
443, 55R-1, 83-89	501.83	49.07	30.58	280.6	196.5	42.40	86.33	51.48	83.11	17.63	0.79	0.42	5.30	144.6	33.53	79.53	2.62	0.23	0.01	0.10	n.d.	0.17	0.06	1.01	n.d.
443, 58R-4, 28-35	524.78	51.19	4.96	270.6	204.4	48.10	143.90	54.82	77.58	18.42	0.61	0.26	3.29	124.7	21.67	79.18	2.68	0.41	0.02	0.08	0.12	0.09	0.07	0.93	n.d.
443, 59R-2, 91-97	531.91	49.51	32.75	203.5	242.2	43.81	125.63	66.68	54.04	16.25	0.64	0.18	1.78	125.1	23.69	55.05	1.07	0.18	0.01	0.05	n.d.	0.10	0.05	0.69	n.d.
443, 60R-2, 104-110	541.54	49.69	4.77	206.4	246.5	44.83	123.66	77.78	57.16	16.56	0.78	0.20	1.08	112.4	18.79	53.58	1.09	0.21	0.01	0.05	n.d.	0.14	0.05	0.73	n.d.
443, 61R-3, 36-42	551.86	49.79	6.18	198.6	243.5	43.65	136.62	69.74	61.24	16.45	0.97	0.61	4.11	141.8	21.30	53.31	1.03	0.17	0.01	0.03	n.d.	0.10	0.05	0.72	n.d.
Site 444																									
444A, 20R-1, 74-79	244.24	50.40	17.95	264.8	90.21	29.65	37.14	53.95	63.20	19.98	0.96	1.28	12.38	317.5	28.63	128.2	23.59	2.08	0.01	0.14	0.13	0.14	0.06	1.38	0.06
444A, 20R-2, 4-10	245.04	48.78	1.92	194.7	183.5	41.30	198.91	34.33	50.29	17.42	0.68	0.98	12.88	213.7	19.14	91.25	16.75	1.50	0.02	0.10	0.10	0.12	0.04	1.00	n.d.
444A, 24R-1, 89-93	279.39	49.76	28.76	233.1	182.2	37.40	64.03	50.89	61.71	17.53	0.79	2.61	3.75	121.3	28.72	63.34	4.84	0.81	0.01	0.05	0.10	0.12	0.06	0.96	n.d.
444A, 27R-5, 71-77	307.21	49.06	27.08	212.9	223.5	41.12	111.98	61.46	66.31	17.02	0.80	0.83	3.50	126.5	28.31	79.12	4.66	0.42	0.01	0.06	n.d.	0.16	0.05	0.96	n.d.
Site 808																									
808, 106R-1, 113- 118	1300.23	49.13	15.88	191.6	209.0	54.67	136.97	75.96	55.38	16.04	0.74	6.88	0.55	160.9	20.45	73.55	1.25	0.39	0.01	0.09	0.18	0.12	0.05	0.93	n.d.
808, 106R-2, 2-8	1300.62	47.84	31.66	194.7	213.9	45.09	127.87	78.95	52.18	16.61	0.81	0.28	0.83	164.3	25.27	74.99	1.25	0.31	n.d.	0.03	n.d.	0.13	0.06	0.96	n.d.
808, 107R-1, 21-28	1308.51	48.89	2.81	224.9	225.9	39.29	70.36	75.14	58.97	16.26	0.75	0.36	2.27	148.4	18.81	70.67	3.34	0.29	n.d.	0.06	0.10	0.11	0.06	0.79	n.d.
Sample ID	Te	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U
Site 442	ppm																								
442A, 31R-1, 75-78	n.d.	0.25	14.89	3.43	10.51	1.76	9.46	3.09	1.13	4.15	0.72	4.72	0.99	2.90	0.41	2.61	0.39	2.22	0.07	0.02	0.02	1.68	0.01	0.14	0.13
442A, 32R-2, 86-91	n.d.	0.13	13.86	2.98	9.07	1.55	8.27	2.62	1.01	3.50	0.60	3.99	0.84	2.39	0.34	2.13	0.32	1.90	0.06	n.d.	0.02	1.75	0.02	0.10	0.34
442A, 34R-1, 72-79	n.d.	0.83	13.60	3.09	9.47	1.60	8.54	2.72	1.03	3.71	0.63	4.24	0.89	2.61	0.37	2.42	0.36	2.01	0.06	0.05	0.02	0.84	0.01	0.16	0.32
442B, 3R-3, 40-46	n.d.	0.17	17.59	3.86	11.38	1.92	10.02	3.25	1.21	4.41	0.76	5.03	1.06	3.11	0.45	2.84	0.42	2.39	0.08	0.03	0.20	1.15	0.01	0.18	0.49
442B, 5R-2, 56-64	n.d.	0.02	16.27	3.39	10.47	1.73	9.03	2.94	1.10	3.86	0.66	4.33	0.92	2.65	0.38	2.33	0.35	2.17	0.07	0.08	0.14	0.98	0.01	0.10	0.36
442B, 6R-2, 32-36	n.d.	0.18	11.31	3.38	10.10	1.75	9.11	3.03	1.11	3.86	0.68	4.52	0.94	2.78	0.40	2.53	0.38	2.14	0.07	0.42	0.02	1.27	0.02	0.16	0.46
442B, 11R-2, 49-55	n.d.	0.08	13.87	4.26	13.08	2.27	11.92	4.00	1.47	5.25	0.92	6.23	1.31	3.90	0.57	3.64	0.55	2.96	0.10	0.05	0.01	1.24	0.01	0.23	0.41
442B, 12R-1, 93-99	n.d.	0.13	14.40	4.59	13.62	2.35	12.43	4.15	1.50	5.52	0.96	6.54	1.38	4.08	0.59	3.83	0.58	3.07	0.11	0.06	0.03	1.28	0.01	0.24	0.51
Site 443																									
443, 49R-3, 123-128	n.d.	0.01	15.03	4.62	13.24	2.17	11.13	3.54	1.32	4.78	0.81	5.25	1.12	3.19	0.46	2.82	0.42	2.67	0.17	0.04	0.17	1.21	0.02	0.21	0.09
443, 52R-1, 0-5	0.05	0.04	16.11	4.65	13.38	2.18	11.47	3.70	1.35	4.93	0.85	5.60	1.19	3.48	0.49	3.22	0.48	2.71	0.17	0.04	0.13	1.68	0.01	0.27	0.13
443, 53R-2, 114-122	0.05	0.12	14.92	3.54	10.54	1.81	9.32	3.08	1.17	4.19	0.73	4.90	1.03	3.04	0.44	2.75	0.41	2.32	0.10	0.02	0.02	0.82	0.01	0.18	0.07
443, 55R-1, 83-89	0.06	0.24	13.99	5.30	14.87	2.41	12.53	4.03	1.41	5.41	0.95	6.26	1.33	3.95	0.58	3.70	0.55	2.96	0.16	0.04	0.03	0.95	0.01	0.44	0.17
443, 58R-4, 28-35	0.07	0.06	22.85	4.96	14.14	2.28	11.77	3.72	1.32	4.90	0.84	5.45	1.14	3.22	0.46	2.88	0.42	2.97	0.17	0.03	0.05	0.67	0.00	0.23	0.20
443, 59R-2, 91-97	n.d.	0.11	6.81	2.76	8.92	1.56	8.36	2.79	1.11	3.81	0.68	4.42	0.95	2.79	0.40	2.57	0.38	2.05	0.06	0.00	0.04	0.47	0.01	0.15	0.05
443, 60R-2, 104-110	n.d.	0.01	7.43	2.74	9.02	1.59	8.46	2.89	1.12	3.86	0.66	4.32	0.91	2.61	0.36	2.33	0.34	2.04	0.06	0.01	0.01	0.48	0.01	0.10	0.05
443, 61R-3, 36-42	n.d.	0.32	6.92	2.74	8.74	1.54	8.17	2.78	1.10	3.87	0.67	4.37	0.93	2.74	0.39	2.49	0.37	2.00	0.06	0.01	0.01	0.86	0.01	0.12	0.08
Site 444																									
444A, 20R-1, 74-79	0.05	0.07	124.30	19.73	39.97	4.87	20.38	4.92	1.63	5.62	0.93	5.82	1.21	3.47	0.50	3.18	0.47	3.81	1.48	0.34	0.06	1.61	0.01	2.13	0.85
444A, 20R-2, 4-10	n.d.	0.26	100.60	14.32	28.98	3.52	14.80	3.62	1.21	3.99	0.66	4.12	0.86	2.44	0.34	2.21	0.33	2.72	1.05	0.13	0.06	2.02	0.01	1.13	0.61
444A, 24R-1, 89-93	n.d.	0.14	69.37	6.34	16.57	2.59	13.01	3.94	1.41	4.98	0.86	5.51	1.15	3.32	0.46	2.96	0.44	2.33	0.28	0.08	0.10	0.51	0.01	0.39	0.10
444A, 27R-5, 71-77	n.d.	0.08	36.44	5.92	15.67	2.42	12.13	3.74	1.33	4.71	0.82	5.26	1.13	3.28	0.47	3.05	0.46	2.76	0.27	0.04	0.02	1.10	0.00	0.53	0.16
Site 808																									
808, 106R-1, 113- 118	0.06	0.06	7.97	3.62	12.02	1.99																			