IRD Methodology

Lithic counts were carried out on the coarse (>250 μm) fraction. Most IRD counts presented are total counts of all the lithic grains within each sample however where the > 250 μm fraction was particularly large counts were carried out on a split fraction. Traditionally grains coarser than 150 μm are considered to be ice rafted [*Hemming*, 2004], here we use a slightly coarser fraction due to the possibility that the shelf was a higher energy environment when compared to the deep ocean, especially at times when eustatic sea level was lower. Seismic evidences indicates deposition was in a low energy environment [*Wilson*, 2004] so it is likely that most grains > 63 μm are ice rafted.

The IRD concentration (grains g^{-1} dry sediment) was converted to a flux rate:

$IRD_{(flux)} = BMAR \times IRD_{(conc)}$

To calculate the Bulk Mass Accumulation Rate (BMAR) we used the age model to extrapolate:

$BMAR\ (grains\ cm^{-2}\ ka^{-1}) = LSR \times \rho DB$

Where LSR is Linear Sedimentation Rate (cm ka^{-1}) and ρDB is dry bulk density calculated using cubes of known volume (g cm^{-3}).

References cited in DR

Hemming, S. R. (2004), Heinrich events: Massive late Pleistocene detritus layers of the North Atlantic and their global climate imprint, *Rev. Geophys.*, *42*(1), RG1005.

Wilson, L. J. (2004), Late Quaternary Stratigraphies from the Hebridean Continental Shelf and Margin, North West Scotland, United Kingdom., St Andrews.

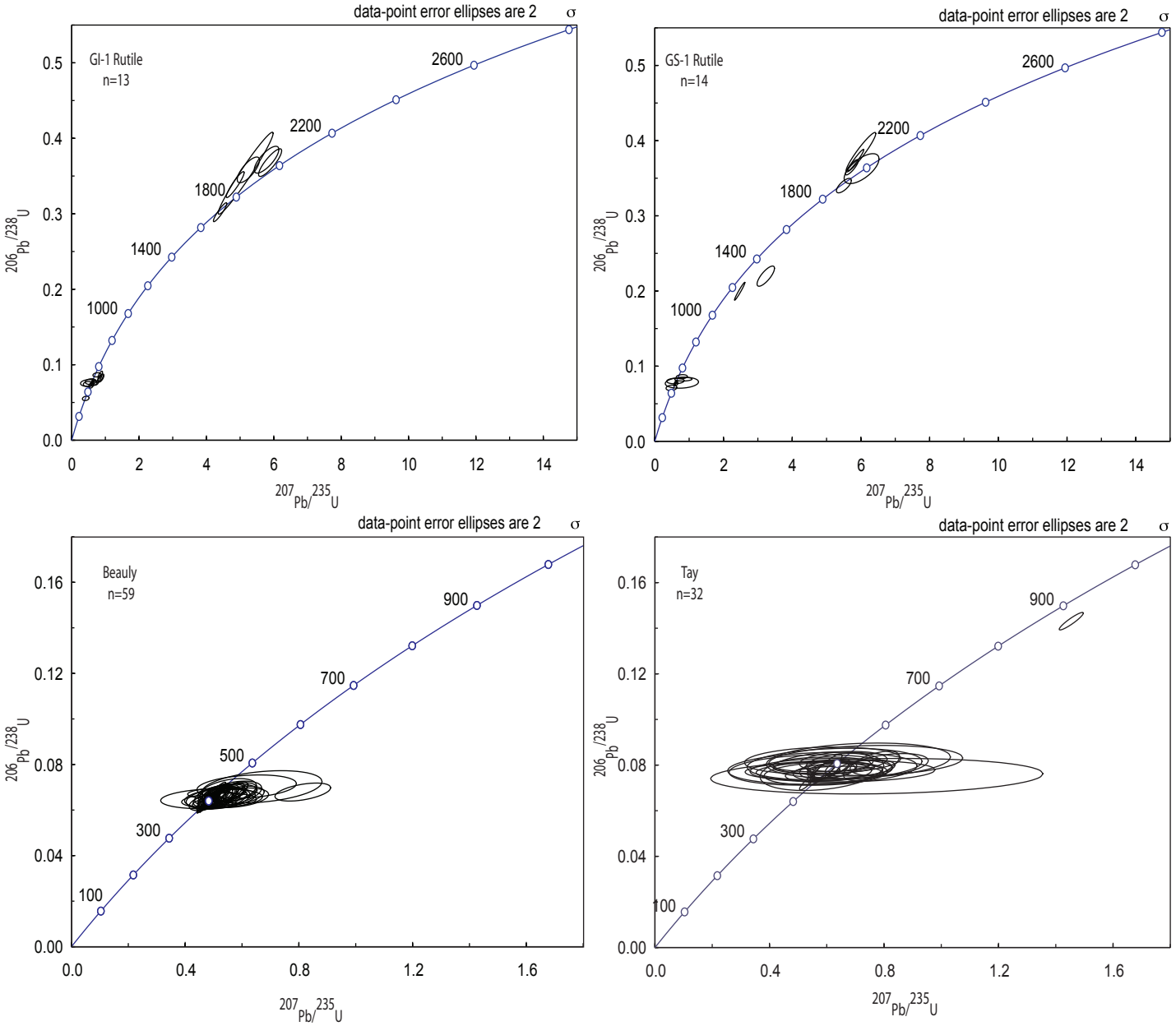

Figure DR1. Concordia diagrams for analysed Rutille samples. IRD rutile comprise the top two plots (GI-1 & GS-1), fluvial rutile comprise the bottom two plots. n= number of concordant rutiles in each sample.

Data table DR1 Results of U-Pb isotpic analyses by multicollector LA-ICP-MS.

"Data is presented in the following order; IRD rutile grains, Fluvial Rutile Grains, IRD zircon grains"

"MD95-2007 (57°31.057'N, 08°23.171'W, 158 m water depth) GI-1; core depth 931-1006 cm"

Rutile

Sample	U (ppm)	207Pb/ 235U	±%	206Pb/ 238U	±%	error corr.	207Pb/ 235U	±(Ma)	206Pb/ 238U	±(Ma)	207Pb/ 235U	±(Ma)	BestAge	±(Ma)
IRD2	7	0.42	9.69	0.06	2.14	0.22	399.6	211.8	347.6	14.5	354.4	56.4	347.6	14.5
IRD6	6	5.89	2.38	0.37	2.03	0.86	1898.2	22.1	2018.9	70.2	1960.0	40.5	1898.2	22.1
IRD7	16	4.41	1.84	0.30	1.70	0.92	1728.3	13.3	1701.6	50.5	1713.6	30.1	1728.3	13.3
IRD13	429	0.60	1.98	0.08	1.96	0.99	469.9	6.0	481.0	18.1	479.1	15.0	481.0	18.1
IRD19	12	4.85	2.24	0.34	2.08	0.93	1696.0	15.5	1880.1	67.4	1794.3	37.0	1696.0	15.5
IRD64	3	0.48	11.53	0.07	1.75	0.15	39.2	272.7	463.8	15.6	399.0	73.4	463.8	15.6
IRD65	9	0.58	5.15	0.07	2.14	0.42	523.5	102.8	452.6	18.7	464.5	37.7	452.6	18.7
IRD67	17	0.60	2.72	0.08	1.22	0.45	504.1	53.4	473.3	11.1	478.6	20.5	473.3	11.1
IRD70	16	5.17	6.44	0.35	6.27	0.97	1730.3	27.2	1952.5	207.9	1847.1	104.1	1730.3	27.2
IRD71	19	0.60	2.50	0.07	1.17	0.47	539.4	48.4	463.6	10.5	476.5	18.9	463.6	10.5
IRD73	3	5.78	2.58	0.37	1.95	0.76	1846.3	30.4	2037.1	67.9	1944.1	43.6	1846.3	30.4
IRD77	23	0.62	2.13	0.08	1.14	0.54	538.2	39.3	482.8	10.6	492.5	16.5	482.8	10.6
IRD79	5	0.75	6.34	0.09	1.30	0.21	692.4	132.3	535.5	13.4	566.4	53.6	535.5	13.4
IRD83	8	0.57	11.76	0.08	1.96	0.17	320.6	263.4	482.0	18.2	455.0	82.8	482.0	18.2
IRD89	5	0.51	19.76	0.08	2.47	0.12	134.2	460.7	470.8	22.4	417.8	127.0	470.8	22.4
IRD90	8	5.25	2.57	0.36	1.94	0.76	1735.6	30.9	1973.4	65.6	1860.0	42.9	1735.6	30.9

"MD95-2007 (57°31.057'N, 08°23.171'W, 158 m water depth) GS-1; core depth 101-512 cm"

IRD22	8	6.00	2.95	0.38	2.79	0.95	1850.6	17.3	2097.8	99.1	1975.9	50.1	1850.6	17.3
IRD24	2	6.02	3.44	0.36	2.24	0.65	1961.5	46.6	1995.1	76.4	1978.6	58.2	1961.5	46.6
IRD26	35	2.47	2.52	0.20	2.45	0.97	1421.3	11.4	1173.3	52.3	1263.7	35.8	1421.3	11.4
IRD27	1	0.79	25.10	0.08	3.81	0.15	1025.1	502.0	484.0	35.5	590.7	203.1	484.0	35.5
IRD30	2	0.54	9.38	0.08	1.11	0.12	175.2	217.3	491.3	10.5	439.3	64.8	491.3	10.5
IRD31	2	0.79	8.36	0.09	1.31	0.16	815.3	172.6	531.4	13.4	588.5	72.1	531.4	13.4
IRD36	1	0.60	17.26	0.08	1.89	0.11	380.5	385.7	497.9	18.1	477.5	123.7	497.9	18.1
IRD38	1	0.83	12.39	0.08	1.20	0.10	1014.4	249.8	511.8	11.8	614.6	108.3	511.8	11.8
IRD47	3	5.50	1.61	0.34	1.15	0.72	1916.6	20.2	1887.3	37.6	1901.3	27.3	1916.6	20.2
IRD48	19	0.58	1.90	0.08	1.24	0.65	427.4	32.1	471.0	11.2	463.6	14.0	471.0	11.2
IRD53	73	0.63	2.56	0.08	1.24	0.48	607.7	48.5	475.8	11.3	499.2	20.0	475.8	11.3
IRD55	33	0.59	1.98	0.08	1.40	0.71	429.5	31.3	482.2	13.0	473.2	14.9	482.2	13.0
IRD58	13	5.85	1.63	0.37	1.57	0.96	1855.4	8.1	2048.3	54.7	1953.9	27.9	1855.4	8.1
IRD74	7	5.74	1.34	0.36	1.14	0.85	1866.4	12.6	2003.6	39.1	1936.9	22.8	1866.4	12.6
IRD76	52	0.63	1.86	0.08	1.30	0.70	522.7	29.2	489.9	12.2	495.7	14.5	489.9	12.2
IRD87	10	3.23	3.21	0.22	2.50	0.78	1742.8	36.9	1280.5	57.7	1464.6	48.5	1742.8	36.9
IRD88	8	0.49	13.25	0.07	2.09	0.16	168.7	305.5	443.4	17.9	401.8	84.3	443.4	17.9

"River BLY catchment, (57° 25.53N, 04° 36.37W) Point bar deposit"

BLY 16	4	0.493	14.83	0.06	2.78	0.19	412.3	325.7	406.0	21.8	406.9	94.9	406.0	21.8

BLY 18	14	0.471	4.96	0.06	2.28	0.46	369.4	99.2	395.7	17.5	391.8	31.7	395.7	17.5
BLY 19	13	0.505	4.89	0.06	2.28	0.47	471.7	95.7	405.0	17.9	415.1	32.8	405.0	17.9
BLY 20	78	0.484	2.60	0.06	2.40	0.92	409.9	22.3	399.3	18.5	400.9	17.1	399.3	18.5
BLY 22	11	0.505	5.75	0.07	2.65	0.46	418.0	113.9	414.4	21.3	414.9	38.4	414.4	21.3
BLY 23	154	0.547	5.27	0.07	2.55	0.48	638.3	99.3	406.2	20.0	442.9	37.1	406.2	20.0
BLY 24	29	0.479	3.31	0.06	2.35	0.71	407.6	52.3	395.6	18.0	397.4	21.6	395.6	18.0
BLY 25	203	0.485	2.62	0.06	2.57	0.98	417.6	10.9	398.3	19.8	401.2	17.2	398.3	19.8
BLY 26	18	0.499	4.47	0.07	2.88	0.64	432.7	76.3	407.3	22.7	411.1	29.8	407.3	22.7
BLY 27	11	0.517	5.53	0.07	2.40	0.43	457.7	110.6	416.6	19.4	423.0	37.6	416.6	19.4
BLY 28	8	0.587	6.31	0.07	2.51	0.40	747.0	122.4	414.3	20.1	469.1	46.4	414.3	20.1
BLY 29	102	0.485	2.68	0.06	2.55	0.95	415.9	18.2	399.0	19.7	401.5	17.6	399.0	19.7
BLY 30	321	0.480	2.47	0.06	2.45	0.99	433.7	6.7	391.9	18.6	398.1	16.1	391.9	18.6
BLY 32	156	0.512	2.70	0.07	2.65	0.98	448.2	11.3	414.9	21.3	420.0	18.4	414.9	21.3
BLY 33	330	0.522	2.55	0.07	2.52	0.99	459.8	7.6	420.3	20.5	426.5	17.6	420.3	20.5
BLY 34	12	0.544	5.04	0.07	2.38	0.47	551.9	97.0	420.3	19.3	441.2	35.4	420.3	19.3
BLY 36	322	0.507	2.47	0.07	2.45	0.99	445.7	6.7	411.4	19.5	416.7	16.7	411.4	19.5
BLY 37	6	0.582	7.84	0.07	2.67	0.34	758.9	155.4	408.4	21.1	465.7	56.9	408.4	21.1
BLY 38	15	0.522	4.67	0.07	2.99	0.64	532.9	78.7	406.9	23.5	426.3	32.0	406.9	23.5
BLY 39	16	0.555	4.80	0.07	3.40	0.71	609.2	73.3	417.6	27.4	448.4	34.2	417.6	27.4
BLY 40	19	0.534	4.12	0.07	2.96	0.72	551.9	62.5	413.0	23.7	434.8	28.7	413.0	23.7
BLY 41	4	0.616	11.59	0.07	2.98	0.26	728.3	237.5	437.9	25.1	487.6	86.0	437.9	25.1
BLY 42	151	0.501	3.16	0.06	3.11	0.98	452.4	13.1	405.1	24.3	412.2	21.2	405.1	24.3
BLY 43	44	0.517	2.93	0.07	2.57	0.87	478.9	31.4	413.3	20.5	423.4	20.1	413.3	20.5
BLY 44	6	0.565	7.57	0.07	3.27	0.43	633.4	147.1	420.0	26.5	454.5	54.0	420.0	26.5
BLY r 1	17	0.492	3.73	0.06	1.44	0.39	462.0	76.3	396.5	11.0	406.3	24.7	396.5	11.0
BLY r 2	32	0.493	2.50	0.07	1.53	0.61	400.4	44.3	407.9	12.1	406.8	16.6	407.9	12.1
BLY r 3	15	0.477	4.41	0.06	1.43	0.32	410.0	93.4	393.5	10.9	395.9	28.5	393.5	10.9
BLY r 4	20	0.502	3.36	0.06	1.85	0.55	459.5	62.3	405.1	14.5	413.3	22.6	405.1	14.5
BLY r 6	6	0.510	8.13	0.07	1.37	0.17	410.5	179.3	420.3	11.1	418.8	54.3	420.3	11.1
BLY r 7	21	0.514	3.80	0.07	2.52	0.66	427.2	63.5	420.3	20.5	421.4	25.9	420.3	20.5
BLY r 8	120	0.475	1.87	0.06	1.74	0.93	388.8	15.3	395.2	13.3	394.3	12.1	395.2	13.3
BLY r 9	7	0.553	7.43	0.07	2.37	0.32	580.5	153.0	421.2	19.3	446.8	52.3	421.2	19.3
BLY 10	29	0.478	2.66	0.06	1.59	0.60	412.2	47.8	393.9	12.1	396.5	17.3	393.9	12.1
BLY 11	167	0.466	2.17	0.06	2.10	0.97	401.7	11.6	386.6	15.8	388.8	13.9	386.6	15.8
BLY 46	4	0.510	6.57	0.06	2.22	0.34	509.7	135.9	402.4	17.3	418.7	44.1	402.4	17.3
BLY 47	4	0.548	7.68	0.07	3.33	0.43	538.9	151.4	425.5	27.4	443.6	53.8	425.5	27.4
BLY 49	27	0.483	2.53	0.06	2.23	0.88	400.8	26.7	400.3	17.3	400.3	16.6	400.3	17.3
BLY 50	103	0.502	2.34	0.07	2.30	0.98	410.1	9.8	413.7	18.4	413.1	15.8	413.7	18.4
BLY 51	42	0.585	2.61	0.07	2.50	0.96	712.6	16.0	419.5	20.3	467.8	19.4	419.5	20.3
BLY 52	51	0.471	2.58	0.06	2.48	0.96	383.3	16.3	393.6	18.9	392.1	16.7	393.6	18.9
BLY 53	6	0.514	4.64	0.06	2.22	0.48	519.6	89.4	403.1	17.3	420.9	31.5	403.1	17.3
BLY 55	35	0.506	2.36	0.07	2.14	0.91	418.1	22.2	415.5	17.2	415.9	16.0	415.5	17.2
BLY 56	8	0.516	4.07	0.07	2.29	0.56	463.6	74.5	415.2	18.4	422.7	27.8	415.2	18.4
BLY 57	4	0.571	5.77	0.07	2.61	0.45	644.1	110.6	422.6	21.3	458.7	41.7	422.6	21.3
BLY 58	10	0.504	3.69	0.07	2.39	0.65	392.2	62.9	418.5	19.4	414.5	24.8	418.5	19.4
BLY 60	5	0.536	5.27	0.07	1.85	0.35	519.7	108.3	419.8	15.0	435.5	36.7	419.8	15.0

BLY 61	3	0.516	8.91	0.07	2.97	0.33	510.1	184.6	406.8	23.3	422.6	59.8	406.8	23.3
BLY 62	56	0.492	2.37	0.06	2.27	0.96	416.8	15.2	404.3	17.8	406.2	15.7	404.3	17.8
BLY 63	2	0.519	10.35	0.06	2.04	0.20	555.9	221.4	400.9	15.9	424.7	69.4	400.9	15.9
BLY 64	21	0.526	2.80	0.07	2.41	0.86	433.5	31.7	428.1	20.0	428.9	19.4	428.1	20.0
BLY 65	1	0.396	25.40	0.06	3.62	0.14	4.7	605.5	388.9	27.3	338.4	136.6	388.9	27.3
BLY 67	3	0.577	9.60	0.07	3.28	0.34	688.4	192.5	418.5	26.6	462.7	69.0	418.5	26.6
BLY 70	12	0.561	3.37	0.07	2.43	0.72	599.5	50.8	423.6	19.9	452.1	24.3	423.6	19.9
BLY 71	61	0.502	2.42	0.07	2.34	0.97	384.9	14.2	418.1	18.9	413.1	16.3	418.1	18.9
BLY 74	38	0.513	2.34	0.07	2.15	0.92	377.5	20.8	428.0	17.7	420.2	16.0	428.0	17.7
BLY 75	2	0.522	9.72	0.07	2.71	0.28	531.4	204.5	407.6	21.4	426.7	65.6	407.6	21.4

"River Tay catchment (56° 34.87N, 03° 37.44W) Sand lag on gravel lateral bar."

TAY 2	11	0.61	4.97	0.08	1.49	0.300	434.58	105.5	490.2	14.1	480.6	37.3	490.2	14.1
TAY 3	4	0.58	11.97	0.08	1.65	0.138	315.60	269.6	497.8	15.8	466.6	85.8	497.8	15.8
TAY 4	2	0.59	19.03	0.08	2.95	0.155	277.32	430.4	508.0	28.8	468.2	133.5	508.0	28.8
TAY 5	3	0.56	17.69	0.08	2.03	0.115	287.59	401.6	480.6	18.7	448.6	120.8	480.6	18.7
TAY 7	3	0.58	17.48	0.08	2.60	0.149	375.30	389.0	483.6	24.2	465.2	122.8	483.6	24.2
TAY 8	73	0.53	2.03	0.07	1.78	0.877	343.71	22.1	449.7	15.4	432.8	14.2	449.7	15.4
TAY 9	8	0.74	5.51	0.08	1.78	0.322	866.96	108.2	489.2	16.7	561.6	46.5	489.2	16.7
TAY 10	3	0.55	16.77	0.07	2.45	0.146	336.37	375.8	465.1	21.9	444.0	114.0	465.1	21.9
TAY 11	5	0.62	9.04	0.08	2.04	0.225	547.06	192.3	477.7	18.7	489.8	67.9	477.7	18.7
TAY 13	1	0.78	30.58	0.08	4.23	0.138	1064.21	609.2	467.0	38.0	582.8	240.4	467.0	38.0
TAY 14	15	0.59	3.89	0.08	1.52	0.390	432.85	79.8	478.2	14.0	470.4	28.9	478.2	14.0
TAY 15	4	0.63	11.18	0.08	1.94	0.174	600.68	238.3	471.4	17.6	494.1	83.9	471.4	17.6
TAY 16	72	1.45	1.18	0.14	1.09	0.925	1033.43	9.1	862.1	17.6	911.6	14.1	862.1	17.6
TAY 18	3	0.59	12.26	0.08	1.40	0.114	381.09	273.9	490.2	13.2	471.5	88.5	490.2	13.2
TAY 19	2	0.71	18.49	0.08	3.86	0.209	705.58	384.7	507.5	37.5	545.1	145.1	507.5	37.5
TAY 20	31	0.60	3.97	0.08	3.54	0.890	424.49	40.4	484.8	32.9	474.4	29.7	484.8	32.9
TAY 22	19	0.60	3.48	0.08	2.19	0.630	437.04	60.2	481.9	20.3	474.2	26.0	481.9	20.3
TAY 23	2	0.63	19.89	0.08	3.56	0.179	478.27	432.4	498.2	34.1	494.7	144.9	498.2	34.1
TAY 24	32	0.64	2.75	0.08	1.80	0.656	544.25	45.4	491.1	17.0	500.6	21.5	491.1	17.0
TAY 25	2	0.58	23.10	0.08	3.64	0.158	370.20	513.9	487.7	34.1	467.6	159.9	487.7	34.1
TAY 26	0	0.77	60.15	0.09	10.17	0.169	688.34	1264.9	553.8	107.1	580.9	427.9	553.8	107.1
TAY 27	7	0.61	6.74	0.08	2.18	0.324	461.65	141.3	484.5	20.3	480.6	50.3	484.5	20.3
TAY 28	8	0.82	6.82	0.08	2.48	0.364	1041.59	128.2	497.1	23.7	606.9	60.5	497.1	23.7
TAY 29	33	0.59	2.66	0.08	1.95	0.733	417.23	40.4	482.9	18.1	471.6	19.9	482.9	18.1
TAY 31	9	0.62	5.55	0.08	1.71	0.309	509.79	116.1	482.6	15.9	487.3	42.1	482.6	15.9
TAY 32	2	0.67	19.17	0.08	2.47	0.129	689.33	405.5	480.1	22.9	518.1	144.7	480.1	22.9
TAY 33	3	0.60	14.73	0.08	2.72	0.185	482.39	319.8	473.7	24.8	475.2	106.1	473.7	24.8
TAY 35	15	0.76	5.28	0.08	3.30	0.626	894.67	85.0	494.1	31.4	571.9	45.2	494.1	31.4
TAY 36	3	0.58	15.13	0.08	4.48	0.296	399.99	323.8	480.2	41.3	466.6	107.3	480.2	41.3
TAY 40	2	0.54	21.39	0.08	3.49	0.163	225.89	487.8	483.4	32.4	441.1	142.6	483.4	32.4
TAY 42	2	0.74	18.79	0.08	3.34	0.178	780.97	388.6	507.5	32.5	560.3	150.2	507.5	32.5
TAY 43	4	0.66	9.52	0.08	2.19	0.230	547.63	202.4	505.5	21.2	513.2	74.0	505.5	21.2
TAY 44	7	0.64	7.46	0.08	2.30	0.309	530.94	155.5	499.7	22.1	505.3	57.7	499.7	22.1

TAY 45	2	0.84	16.03	0.08	6.97	0.435	1025.13	292.0	516.6	68.8	621.6	139.0	516.6	68.8
TAY 46	2	0.59	21.95	0.08	2.97	0.135	367.17	490.2	493.8	28.1	471.9	153.5	493.8	28.1

"MD95-2007 (57°31.057'N, 08°23.171'W, 158 m water depth) GI-1; core depth 931-1006 cm"

Zircon

z3	203	4.664	1.94	0.32	1.93	0.99	1737.8	7.7	1780.4	59.9	1760.9	32.0	1737.8	7.7
z4	127	2.127	1.70	0.20	1.61	0.95	1146.5	21.5	1163.4	34.3	1157.5	23.2	1146.5	21.5
z5	84	1.932	1.87	0.18	1.70	0.91	1103.1	31.0	1086.6	34.0	1092.1	24.7	1103.1	31.0
z6	115	6.304	1.78	0.37	1.77	0.99	1999.9	8.1	2037.7	61.4	2019.0	30.8	1999.9	8.1
z7	107	4.110	2.20	0.30	2.18	0.99	1629.1	12.4	1677.9	64.0	1656.3	35.3	1629.1	12.4
z8	588	1.783	1.83	0.17	1.82	0.99	1042.1	7.7	1037.9	34.7	1039.3	23.5	1042.1	7.7
z9	184	1.668	2.13	0.17	2.08	0.98	1004.9	18.9	992.7	38.1	996.5	26.7	1004.9	18.9
z10	556	0.365	1.74	0.05	1.59	0.92	329.7	31.5	313.7	9.7	315.6	9.4	313.7	9.7
z11	88	3.333	2.48	0.26	2.43	0.98	1476.5	19.3	1497.4	64.5	1488.8	38.0	1476.5	19.3
z13	85	1.608	1.88	0.16	1.62	0.86	964.3	39.4	977.4	29.2	973.3	23.3	964.3	39.4
z14	75	1.630	2.92	0.16	2.71	0.93	989.4	44.8	978.3	49.0	981.7	36.1	989.4	44.8
z15	573	1.562	3.64	0.16	3.55	0.97	1011.3	33.0	931.0	61.2	955.2	44.1	1011.3	33.0
z16	180	2.236	2.07	0.20	2.03	0.98	1192.3	15.2	1192.2	44.1	1192.3	28.6	1192.3	15.2
z35	57	1.665	2.35	0.17	1.94	0.83	961.2	53.8	1010.6	36.2	995.1	29.3	961.2	53.8
z36	230	1.843	1.58	0.18	1.54	0.97	1018.4	15.2	1081.9	30.5	1061.0	20.6	1018.4	15.2
z37	9	9.490	2.59	0.36	1.88	0.73	2752.3	58.4	1982.2	63.8	2386.5	46.4	2752.3	58.4
z38	53	1.758	2.15	0.18	1.62	0.75	971.6	57.5	1057.9	31.5	1030.1	27.4	971.6	57.5
z39	233	3.598	1.93	0.26	1.90	0.99	1612.6	11.2	1503.1	50.9	1549.2	30.2	1612.6	11.2
z40	125	3.276	2.15	0.26	2.11	0.98	1446.7	15.9	1495.6	56.2	1475.5	33.0	1446.7	15.9
z41	317	0.561	4.81	0.07	4.68	0.97	467.7	49.3	448.9	40.5	452.0	34.5	448.9	40.5

"MD95-2007 (57°31.057'N, 08°23.171'W, 158 m water depth) GS-1; core depth 101-512 cm"

z17	161	0.744	1.96	0.09	1.64	0.84	558.3	46.6	566.3	17.8	564.7	16.8	566.3	17.8
z18	97	0.539	2.84	0.07	1.72	0.61	445.0	100.4	436.6	14.5	438.0	20.0	436.6	14.5
z19	48	3.277	2.01	0.26	1.81	0.90	1490.0	32.9	1465.6	47.3	1475.6	30.8	1490.0	32.9
z20	150	2.926	1.91	0.23	1.86	0.97	1438.7	16.7	1356.5	45.4	1388.8	28.5	1438.7	16.7
z21	73	14.235	2.29	0.55	2.28	1.00	2716.3	6.4	2833.5	103.7	2765.5	42.5	2716.3	6.4
z22	58	0.332	5.55	0.05	1.81	0.33	189.8	244.3	304.0	10.7	291.2	27.7	304.0	10.7
z23	64	1.909	2.35	0.18	2.09	0.89	1065.0	43.2	1093.9	41.9	1084.3	30.8	1065.0	43.2
z24	746	0.625	2.29	0.07	1.87	0.82	882.3	54.8	413.4	14.9	493.0	17.7	413.4	14.9
z25	51	15.214	1.67	0.56	1.65	0.99	2805.5	9.0	2861.4	75.8	2828.7	31.4	2805.5	9.0
z26	106	2.864	1.97	0.24	1.90	0.97	1368.6	19.3	1374.9	47.0	1372.4	29.2	1368.6	19.3
z27	50	1.835	2.16	0.18	1.64	0.76	1029.8	56.7	1071.6	32.2	1057.9	27.9	1029.8	56.7
z28	86	1.839	1.97	0.18	1.77	0.90	1039.7	35.5	1069.3	34.7	1059.6	25.6	1039.7	35.5
z29	107	0.327	3.74	0.05	1.91	0.51	252.2	147.9	291.9	10.9	287.5	18.6	291.9	10.9
z30	169	3.569	2.24	0.27	2.23	0.99	1528.2	10.3	1553.1	61.2	1542.6	35.0	1528.2	10.3
z31	259	4.030	1.79	0.29	1.79	1.00	1663.9	6.3	1621.9	51.0	1640.3	28.8	1663.9	6.3
z32	117	12.143	2.12	0.48	2.10	0.99	2684.1	7.9	2527.7	87.4	2615.5	39.0	2684.1	7.9
z33	143	2.127	1.86	0.20	1.79	0.96	1101.2	20.4	1187.8	38.8	1157.5	25.4	1101.2	20.4
z34	53	3.343	2.15	0.27	1.99	0.93	1449.3	30.4	1520.6	53.7	1491.1	33.0	1449.3	30.4