

Table 3. Summary of Ir measurements in and around the YDB

Interval and site	Depth, cm	Magnetic Grain Concentration, ppb				Bulk Sediment Concentration, ppb			
		UCLA	Becquerel	VUB	Budapest	Actlabs	UCLA	Becquerel	VUB
YDB layer									
Gainey	20	<0.1	<2	—	—	<1	<0.6	<0.5 (3)	—
Murray Springs	246-247	<0.1	<11 (2)	—	<6	≈2.2, <1	<0.6	<0.5 (3)	—
Blackwater Draw	263-272	—	<6 (2)	—	—	≈2.2, <0.1 (3)	—	<50	<0.5
Chobot	12-15	—	<100	—	—	—	—	—	—
Morley Drumlin	30	<0.1	<100	—	—	—	—	—	—
Wally's Beach	5	51±8	<100	—	—	<1	—	<50	—
Lake Hind	26-30	—	—	—	—	≈2.2, ≈3.8	≈0.4, ≈0.7	—	—
Lommel	40-44	≈0.5	—	—	<5	<1 (2)	—	—	—
Daisy Cave	100	—	—	—	—	<1	—	—	—
Topper	75-85	—	<100 (2)	—	—	<1 (4)	—	<50 (3)	—
Black Mat layer									
Murray Springs	245	—	—	—	—	—	—	<5	—
Blackwater Draw	252-263	—	—	—	—	≈2.0, <1	—	<5	<0.5
Lake Hind	26	—	—	—	—	≈3.0	≈0.6	—	—
Carolina Bays									
Blackville Bay	0-240	≈0.5	<100 (2)	—	—	4±2 , <0.5 (6)	—	<0.5 (4)	—
Bladen Bay-B14	20-100	—	<100	—	—	—	—	<100 (2)	—
Myrtle Bay-M33	0-700	—	<5 (3)	—	—	≈0.5, <0.5 (7)	—	<50 (4)	—
Howard Bay	325-594	—	—	—	—	—	—	—	<0.5
Non-YDB layers									
Murray Springs	0	<0.1	<5	—	—	—	—	—	—
	216	—	—	—	—	—	<0.1	—	—
	248-262	—	—	—	—	—	<0.1	<5 (2)	—
Blackwater Draw	140-252	—	<50	—	—	<0.1 (2)	—	<5 (2)	—
	283-468	—	<2	—	<6	<0.1 (4)	—	<5 (2)	<0.5
Chobot	8	—	—	—	—	<1	—	—	—
Lake Hind	12-20	—	—	—	—	<1 (2)	—	—	—
	32	—	—	—	—	<1	—	—	—
Lommel	30	—	—	—	—	<1	—	—	—
	48-70	<7	—	—	—	<1 (3)	—	—	—

Interval and site	Depth, cm	Magnetic Grain Concentration, ppb				Bulk Sediment Concentration, ppb			
		Actlabs	UCLA	Becquerel	VUB	Actlabs	UCLA	Becquerel	VUB
Daisy Cave	56-96	—	—	—	—	<1 (6)	—	—	—
	104-108	—	—	—	—	<1 (2)	—	—	—
Topper	0-40	—	—	<26 (2)	—	<1	—	<5 (2)	—
	120-325	<0.5	—	<27 (7)	—	<1 (4)	—	<5 (7)	—

Neutron Activation Analysis (NAA) measurements were performed at Actlabs and Becquerel Laboratories in Canada, and by Andras Simonits at the Budapest Reactor. ICP-MS measurements were performed by S.S. Que Hee at the University of California, Los Angeles (UCLA), and by P. Claeys at Vrije Universiteit Brussel (VUB). If more than one lower limit was measured, the lowest limit is given and the total number of measurements is shown in parentheses. Positive results, indicated in boldface type, were observed only in the YDB magnetic grains (5 of 21 measurements), YDB bulk sediments (6 of 33 measurements), the black mat (3 of 7 measurements), and in Carolina Bay magnetic grains (4 of 19 measurements) and Bay bulk sediments (2 of 25 measurements). The grand total was 20 positive out of 105 measurements. Above and below the YDB, no Ir was observed in 62 measurements of magnetic grains (17 measurements) and sediments (45 measurements). The large variation in Ir concentrations at various sites is attributed to the nugget effect (1), resulting from small sample sizes, and to the fact that many concentrations were near the lower NAA detection limit of 1-2 ppb. All 20 positive Ir measurements were substantially above crustal abundance (0.020 ppb). Uncertainties for positive values are $\pm 90\%$, unless otherwise noted.

1. Meisel T, Moser J, Wegscheider W (2001) *Fresenius' J Anal Chem* 370:566-572.