



Pre-Permitting Environmental / Socio-Economic Data Report Series

Report Series E- Trace Elements (Sediments & Soils)

Report E-8 Summary of Lake Iliamna Sediment Inorganic Analytical Results, 2005 - 2006

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Collected for the Pebble Partnership by: HDR Alaska

Preliminary data. Do not cite or quote.

The Pebble Partnership is providing environmental and socio-economic baseline data collected to inform the development of the Pebble Project to state and federal agencies, project stakeholders and the general public prior to project permitting as part of its commitment to full and open disclosure.

A comprehensive Environmental Baseline Document (EBD) will subsequently be prepared and appended to future project permit applications. The EBD will also be made publicly available when complete.



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Pebble Project
Summary of Lake Iliamna
Sediment Inorganic Analytical Results, 2005-2006

Sample Station Location ID	Date Sampled	Aluminum (mg/Kg)	Antimony (mg/Kg)	Arsenic (mg/Kg)	Barium (mg/Kg)	Beryllium (mg/Kg)	Bismuth (mg/Kg)	Boron (mg/Kg)	Cadmium (mg/Kg)	Cadmium- SEM (mg/Kg)	Calcium (mg/Kg)	Chromium (mg/Kg)	Cobalt (mg/Kg)
BL1C	9/28/2005	12600	0.188	4.98	114	0.187	ND	2.65	22.3		5600	10.5	3.95
	9/12/2006	8600	ND	4.76	119	0.124	ND	2.51	ND	ND	3130	5.61	4.15
FL1C	6/14/2005	4420	0.102	1.85	28.2	0.2	ND	3.55	0.162		3960	2.72	1.19
	9/29/2005	3380	ND	ND	19	0.262	ND	2.41	ND		2900	2.73	ND
	9/11/2006	6090	ND	3.07	34.4	ND	ND	8.15	ND	ND	5000	1.23	1.64
FN1C	6/14/2005	5280	0.0891	3.29	35.6	0.148	ND	ND	0.0904		1940	3.02	1.67
	9/11/2006	6590	ND	7.71	42.4	ND	ND	6.19	ND	ND	3060	1.46	2.36
KN1C	6/14/2005	4540	0.0363	0.908	26.6	0.126	ND	ND	0.0653		2200	2.03	1.44
	9/29/2005	5980	ND	0.706	31.1	0.108	ND	1.07	0.0991		2540	3.08	2.12
	10/14/2005	11200	ND	2.86	59.7	0.18	ND	5.25	ND		3810	6.34	2.68
NE1C	6/16/2005	9000	0.118	6.02	111	0.24	ND	ND	0.262		4180	8.08	4.07
	9/28/2005	10200	0.112	5.48	138	0.12	ND	2.7	0.324		5430	8.85	4.58
PB1C	6/14/2005	8360	0.107	4.22	97.8	0.111	0.116	ND	0.157		3630	7.21	4.76
	9/29/2005	10700	0.0929	5.48	123	0.0648	0.156	3.23	0.158		4670	9.23	6.66
RB1C	6/15/2005	4920	0.0703	5.12	71.1	0.12	ND	ND	0.127		2710	5.31	1.86
	9/28/2005	4800	0.0614	4.47	64.3	0.124	ND	1.14	0.136		2670	5.2	1.96
WW1C	9/11/2006	7000	ND	7.28	71	0.417	ND	6.33	ND	ND	3870	4.35	3.35

Key:

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

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Sample Station Location ID	Date Sampled	Copper (mg/Kg)	Copper- SEM (mg/Kg)	Iron (mg/Kg)	Lead (mg/Kg)	Lead- SEM (mg/Kg)	Magnesium (mg/Kg)	Manganese (mg/Kg)	Mercury (µg/Kg)	Mercury- SEM (µg/Kg)	Molybdenum (mg/Kg)	Nickel (mg/Kg)	Nickel- SEM (mg/Kg)
BL1C	9/28/2005	18.3		11900	79.1		3190	208	63.7		ND	6.43	
	9/12/2006	5.83	2.2	15400	4.58	8.9	4080	272	ND	ND	ND	5.73	0.6
FL1C	6/14/2005	11.5		4180	1.78		615	88.7	23.1		2.03	1.65	
	9/29/2005	12.4		1850	1.29		483	38.6	ND		ND	1.55	
	9/11/2006	16	8.5	2570	3.39	ND	994	118	ND	ND	2.86	2.62	ND
FN1C	6/14/2005	9.35		11200	2.57		707	97.7	18.2		4.58	1.55	
	9/11/2006	13.5	8.5	15000	2.73	ND	838	132	ND	ND	6.77	3.08	ND
KN1C	6/14/2005	6.67		8940	7.76		1770	195	ND		0.586	2.68	
	9/29/2005	7.9		7490	4.5		2400	279	ND		ND	5.91	
	10/14/2005	16.1		26400	3.61		1070	172	ND		8.47	4.32	
NE1C	6/16/2005	22.4		10700	4.57		3840	196	15		3.35	4.96	
	9/28/2005	23.6		12600	4.75		3870	235	ND		3.67	6.39	
PB1C	6/14/2005	56.9		17000	5.75		3860	307	19.1		2.23	4.02	
	9/29/2005	90.6		24100	6.01		4510	591	ND		2.93	6.07	
RB1C	6/15/2005	5.31		8290	2.7		1840	169	ND		1.36	2.3	
	9/28/2005	4.61		9010	2.09		1730	150	ND		1.3	2.7	
WW1C	9/11/2006	13.9	7.1	9690	3.81	ND	1910	292	ND	ND	5.02	4.22	ND

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Sample Station Location ID	Date Sampled	Potassium (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Sodium (mg/Kg)	Thallium (mg/Kg)	Tin (mg/Kg)	Vanadium (mg/Kg)	Zinc (mg/Kg)	Zinc- SEM (mg/Kg)	Chloride (mg/Kg)	Fluoride (mg/Kg)	Sulfate (mg/Kg)
BL1C	9/28/2005	641	ND	ND	481	ND	6.78	40.8	88.2		9.42	3.68	54.4
	9/12/2006	521	1.28	ND	277	0.0428	0.593	29.9	44	11.2	7.32	0.643	3.31
FL1C	6/14/2005	203	1.54	ND	417	0.0203	0.996	12.9	12.6		18.3	53.7	426
	9/29/2005	ND	ND	ND	339	ND	6.83	ND	13.7		10.8	6.81	67.3
	9/11/2006	343	12.5	ND	554	0.163	ND	16	24.8	14.6	9.02	3.64	14.9
FN1C	6/14/2005	268	0.774	ND	455	0.0402	0.994	23.1	24.4		17	25.2	399
	9/11/2006	389	9.02	ND	534	0.116	ND	27.8	33.7	19.9	18.5	ND	49.5
KN1C	6/14/2005	381	ND	ND	154	0.0188	0.968	12.6	27.9		7.28	8.78	42.3
	9/29/2005	572	ND	ND	159	ND	1.47	15.3	37		2.37	1.52	2.66
	10/14/2005	453	2.18	ND	636	0.0366	4.36	42.3	43.7		5.8	4.39	67.7
NE1C	6/16/2005	1030	0.774	ND	544	0.0773	0.996	36.2	42.8		28.2	13	146
	9/28/2005	1590	1.07	ND	971	ND	3.46	37.7	51.3		62.3	3.56	6.97
PB1C	6/14/2005	1150	0.63	ND	428	0.0606	0.991	37.8	45.2		3.11	3.99	88.8
	9/29/2005	1580	ND	0.0807	591	0.0282	1.93	48.8	58.3		1.53	1.96	19.7
RB1C	6/15/2005	486	0.163	ND	360	0.0204	0.973	20.2	23.9				
	9/28/2005	507	ND	ND	339	ND	1.73	21	23.2		37.8	1.79	4.97
WW1C	9/11/2006	684	6.64	ND	423	0.0993	ND	28.8	31.2	15.7	97.6	3.65	61.7

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Sample Station Location ID	Date Sampled	Sulfur (mg/Kg)	Acid-Volatile Sulfide (mg/Kg)	Cyanide (mg/Kg)	Cyanide, Weak Acid Dissociable (mg/Kg)	Nitrogen, Ammonia (as N) (mg/Kg)
BL1C	9/28/2005			0.035		233
	9/12/2006	313	ND	0.08		37.2
FL1C	6/14/2005			0.43		570
	9/29/2005			ND		335
	9/11/2006	2070	ND	0.042		508
FN1C	6/14/2005			0.26		303
	9/11/2006	2840	16.8	0.088		494
KN1C	6/14/2005			0.077		78.9
	9/29/2005			ND		58.6
	10/14/2005			0.056		362
NE1C	6/16/2005			0.19		99.3
	9/28/2005			ND		245
PB1C	6/14/2005			0.058		86.7
	9/29/2005			ND		40.3
RB1C	6/15/2005					
	9/28/2005			ND		68.7
WW1C	9/11/2006	2110	4.4	0.4		512

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