



Pre-Permitting Environmental / Socio-Economic Data Report Series

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# Report Series E- Trace Elements (Sediments & Soils)

## Report E-2 Summary of Mine Area Sediment Inorganic Analytical Results, 2004 - 2007

*Submitted to the Alaska Department of Natural Resources September 2008*

*Collected for the Pebble Partnership by: SLR 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 Do not cite or quote.*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.



Prepared for the Pebble Limited Partnership by:

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**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

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)	Copper (mg/Kg)	Copper- SEM (mg/Kg)	Iron (mg/Kg)
236221	8/25/2006	7820	ND	10	74.7	0.294	ND	2.67	0.154	0.2	2750	7.5	4.21	5.71	1.9	14000
335051	25/08/2006	9420	ND	4.76	77.4	0.393	ND	3.24	ND	ND	4670	17.1	7.3	7.1	2.9	19100
335132	8/25/2006	12900	ND	3.89	119	0.508	ND	4.17	0.304	ND	4780	22.5	11.5	17.3	10.9	19200
335133	12/08/2007	11000	0.45	6.6	150	0.48	ND	ND	0.76		5400	25	12	20		28000
28B1	7/27/2006	9390	0.229	8.3	130	0.452	ND	2.67	0.609	ND	6780	19.9	8.19	74.8	51.6	13600
	8/11/2007	21000	0.45	15	170	0.58	ND	ND	0.95		8000	26	20	110		36000
28B2	10/08/2007	13000	0.47	16	190	0.39	ND	ND	1.3		7000	15	20	81		81000
BEARLAKE1	9/16/2005	7160	0.9	ND	29.3	ND	ND	ND	ND		5520	16	2.07	7.13		3830
BEARLAKE2	16/09/2005	6640	ND	ND	24.7	ND	ND	ND	ND		4740	12.8	1.91	6.24		3890
BEARLAKE3	9/16/2005	7100	ND	ND	25.2	ND	ND	ND	ND		5160	13.6	ND	6.82		4120
BLACK	18/08/2007	5900	0.24	8.5	62	0.2	12	ND	ND		2000	5.7	3	3.9		16000
BLKLK1	8/21/2005	6890	ND	8.49	40.4	0.287	ND	6.7	ND		2950	11	3.6	9.2		8350
BLKLK2	21/08/2005	4910	ND	7.66	43.6	0.404	ND	3.71	0.273		3260	11.1	4.26	8.47		8160
BUL	6/13/2007	5500	ND	4.78	72.5	0.131	0.0807	0.946	0.176		2490	13.6	6.45	15.5		11000
CHIQ	12/08/2007	4200	0.085	3.8	16	0.11	ND	ND	0.24		1100	9.2	2.9	3.9		8800
CR199A	6/5/2004	20200	0.174	13.9	128	0.359	0.0818	5.02	0.0863		4720	22.1	9.51	15.1		32500
FRYPAN	13/08/2007	12000	0.68	14	83	0.43	2.1	ND	0.29		2700	16	8	16		26000
FRYPAN1	7/14/2005	12600	0.289	9.42	92.9	0.422	ND	ND	ND		3710	18.1	8.78	62.2		17100
FRYPAN10	26/07/2006	9070	0.167	9.57	53.5	0.214	ND	2.05	0.154	0.2	2050	5.94	4.46	14.8	12.8	22200
FRYPAN11	7/26/2006	5760	0.168	13.4	29.3	0.197	ND	2.43	0.144	ND	1630	6.23	4.08	9.86	5.7	20700
FRYPAN13	26/07/2006	11700	0.256	9.74	112	0.45	ND	3.34	0.552	0.6	3160	13.2	9.77	94.6	75	19600
FRYPAN16	7/26/2006	8700	0.361	14.1	72.9	0.389	0.109	1.96	0.113	0.1	3000	9.42	6.2	7.64	3.9	15800
FRYPAN18	26/07/2006	11800	0.209	5.9	93.1	0.296	ND	1.4	0.349	0.3	3030	10.2	6.78	54.2	44.2	17600
FRYPAN19	7/27/2006	10500	0.175	7.96	81.3	0.381	0.151	3	0.184	0.3	2140	14.7	9.58	43.9	35.8	21800
FRYPAN2	14/07/2005	12500	0.269	8.9	98.5	0.357	ND	ND	ND		3900	16.6	7.61	61.7		17200
KC100A	6/5/2004	8570	0.153	53.3	53.1	0.159	ND	3.27	ND		3510	13.5	3.6	5.5		26300
	7/13/2004	4940	0.0915	8.15	32.1	0.106	ND	ND	ND		2210	6.87	3.32	3.93		8790
	9/15/2004	6730	0.113	27.1	41.9	0.141	ND	ND	ND		2380	7.12	3.1	3.66		15700
	6/13/2005	5700	ND	17.9	36.9	ND	ND	ND	ND		2750	10.2	2.57	4.76		12400
	7/12/2005	4270	0.063	14.1	26.7	0.102	ND	ND	0.17		1920	7.31	2.54	3.81		9620
KR100A	14/07/2004	5570	0.135	5.98	37.8	0.228	ND	ND	0.0799		2170	9.81	4.54	9.83		14100
	25/09/2004	6340	ND	6.87	41.7	0.226	ND	ND	0.0642		2080	11	4.69	10.5		15000

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	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)	Potassium (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Sodium (mg/Kg)	Thallium (mg/Kg)	Tin (mg/Kg)
236221	8/25/2006	3.95	4	2720	284	ND	ND	0.403	4.79	2.7	791	0.947	ND	271	0.042	1.27
335051	25/08/2006	3.88	ND	3900	360	ND	ND	ND	9.98	5.9	736	3.08	ND	352	0.0404	3.02
335132	8/25/2006	6.46	5.8	3810	353	408	ND	ND	14.2	8.4	562	1.49	ND	403	0.071	2.25
335133	12/08/2007	7.4		4000	350	220		0.76	15		550	0.33	0.76	230	0.76	0.52
28B1	7/27/2006	5.94	ND	2730	464	ND	ND	14.2	10.3	5.9	400	13.1	0.158	257	ND	4.55
	8/11/2007	8.3		6200	1200	83		14	18		700	4.7	0.95	100	0.95	0.62
28B2	10/08/2007	6.5		2700	950	85		22	11		870	3.5	1.3	120	1.3	0.45
BEARLAKE1	9/16/2005	5.43		1580	84.8	ND		ND	5.53		883	5.72	ND	ND	0.115	12.7
BEARLAKE2	16/09/2005	5.55		1200	85.1	ND		ND	4.21		581	ND	ND	345	ND	10.9
BEARLAKE3	9/16/2005	6.26		1420	74.6	ND		ND	4.65		560	ND	ND	ND	ND	14.7
BLACK	18/08/2007	2.7		2300	170	ND		0.29	3.5		450	0.22	0.24	77	0.24	0.6
BLK1K1	8/21/2005	4.7		1500	122	ND		ND	4.88		635	2.06	ND	188	ND	4.97
BLK1K2	21/08/2005	4.09		1580	117	ND		1.84	5.63		621	1.91	ND	228	0.0522	3.59
BUL	6/13/2007	6.37		2660	284	ND		0.448	4.68		593	ND	0.0412	550	0.0234	1.11
CHIQ	12/08/2007	2.6		2500	190	ND		0.24	3.9		150	0.13	0.24	18	0.24	0.16
CR199A	6/5/2004	8.44		3880	1030	49.9		0.605	12.9		687	0.626	0.0817	285	0.066	1
FRYPAN	13/08/2007	5.9		5000	320	ND		0.92	11		680	0.21	0.35	33	0.29	0.54
FRYPAN1	7/14/2005	6.2		2840	306	84.4		2.95	9.86		ND	1.73	ND	ND	0.124	ND
FRYPAN10	26/07/2006	3.5	4.4	2880	370	ND	ND	0.997	6.14	6	525	0.8	ND	182	0.0883	1.45
FRYPAN11	7/26/2006	3	3.3	2830	232	ND	ND	1.08	5.55	3.9	441	1.02	ND	110	0.0621	1.43
FRYPAN13	26/07/2006	5.98	ND	2980	549	ND	ND	2.21	9.77	6.5	751	5.15	ND	235	0.169	7.02
FRYPAN16	7/26/2006	5.28	4.5	4540	376	ND	ND	0.692	8.43	5.6	699	1.17	ND	280	0.0648	1.47
FRYPAN18	26/07/2006	4.98	ND	2730	261	ND	ND	2.24	7.51	5.7	621	2.81	ND	235	0.0978	2.79
FRYPAN19	7/27/2006	6.23	7.2	4100	738	ND	20	2.84	10.5	8.5	573	1.54	0.069	140	0.0784	1.41
FRYPAN2	14/07/2005	5.35		3160	301	40.8		3.44	8.71		680	1.65	ND	349	0.143	2.91
KC100A	6/5/2004	3.75		1420	323	34.1		1.1	3.93		519	0.849	0.0378	359	0.03	0.994
	7/13/2004	2.55		2220	160	ND		0.337	3.69		327	ND	ND	153	ND	0.974
	9/15/2004	2.71		2260	208	ND		0.526	3.62		362	0.155	0.0976	147	0.0408	0.976
	6/13/2005	3.05		1670	154	19.2		0.789	3.26		215	0.623	ND	ND	ND	ND
	7/12/2005	2.38		2260	167	ND		ND	3.63		330	0.681	ND	141	0.0422	1.36
KR100A	14/07/2004	3.39		2970	331	ND		0.439	5.71		483	ND	ND	157	ND	0.982
	25/09/2004	3.59		3000	305	ND		0.452	7.34		431	0.166	0.0307	140	ND	0.961

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	Vanadium (mg/Kg)	Zinc (mg/Kg)	Zinc- SEM (mg/Kg)	Chloride (mg/Kg)	Fluoride (mg/Kg)	Sulfate (mg/Kg)	Sulfur (mg/Kg)	Acid-Volatile Sulfide (mg/Kg)	Cyanide (mg/Kg)	Cyanide, Weak Acid Dissociable (mg/Kg)	Nitrogen, Ammonia (as N) (mg/Kg)
236221	8/25/2006	26.2	49.8	37.1	3.55	0.461	0.804	183	ND	0.03		59.6
335051	25/08/2006	37.5	55	37.3	22.1	ND	2.34	922	ND	0.031		230
335132	8/25/2006	55.7	68.8	56.1	1.6	ND	1.12	734	9.3	0.066		204
335133	12/08/2007	60	76		ND	ND	13			ND		140
28B1	7/27/2006	26.5	49.3	40.6	4.83	5.72	41	10000	1010	0.1		631
	8/11/2007	72	93		9.6	2.8	300			ND		290
28B2	10/08/2007	48	75		18	0.8	700			ND		1000
BEARLAKE1	9/16/2005	18.2	32.6		223	12.7	221			ND		ND
BEARLAKE2	16/09/2005	17.8	25		17.5	11.2	122			ND		666
BEARLAKE3	9/16/2005	17.5	26.8		12.6	ND	91.4			ND		616
BLACK	18/08/2007	13	28		ND	0.5	22			ND		34
BLK1K1	8/21/2005	22.7	44.5		4.8	2.17	73.5			ND		357
BLK1K2	21/08/2005	20.5	46.6		3.9	1.83	43.9			ND		198
BUL	6/13/2007	26.6	32.3		1.86	0.569	5.27			0.035		20.5
CHIQ	12/08/2007	15	27		5.7	0.14	1.6			ND		43
CR199A	6/5/2004	55.8	59.5		2.24	1.29	15.4			ND	0.216	441
FRYPAN	13/08/2007	45	63		ND	ND	14			ND		81
FRYPAN1	7/14/2005	25.7	81.3		6.7	1.29	11.6			ND		176
FRYPAN10	26/07/2006	25.3	48.4	49	0.821	0.484	8.42	235	ND	0.063		40.6
FRYPAN11	7/26/2006	26.7	42.6	33.4	ND	ND	1.18	99.8	ND	0.09		7.34
FRYPAN13	26/07/2006	28.5	91.9	86.7	3.15	ND	30.2	6090	60.3	0.03		402
FRYPAN16	7/26/2006	40	45.7	31.7	ND	ND	1.62	219	ND	ND		31.4
FRYPAN18	26/07/2006	44.5	75.1	77.4	2.59	0.985	62.6	3940	192	ND		127
FRYPAN19	7/27/2006	50.2	59.3	48.8	ND	ND	3.59	412	ND	0.069		41.8
FRYPAN2	14/07/2005	33.2	86.2		3.32	ND	8.97			ND		188
KC100A	6/5/2004	53.8	24.2							0.87	0.926	
	7/13/2004	22.3	28		1.12	0.382	195			0.078		43.1
	9/15/2004	28	22.5		3.15	0.85	5.14			0.082		38.4
	6/13/2005	32	22.3		7.44	30.2	129			0.21		135
	7/12/2005	24.7	28.7		1.2	0.492	4.83			ND		46.2
KR100A	14/07/2004	31.1	41.1		0.57	ND	20			ND		8.44
	25/09/2004	33.8	42.8		6.03	ND	14.6			0.057		37.2

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

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)	Copper (mg/Kg)	Copper- SEM (mg/Kg)	Iron (mg/Kg)
LAKE2	8/13/2007	7300	0.12	3.1	170	0.091	1.3	ND	0.44		1800	6	1.9	3.1		6900
LILLY	18/08/2007	18000	2.9	2.9	100	0.29	140	360	0.41		6500	22	2.1	23		9100
LK20105	8/24/2005	8600	ND	14.1	53.4	0.562	ND	10.6	ND		8810	29.3	4.64	13.8		14300
LK20205	24/08/2005	8840	ND	13	44.1	ND	ND	11.5	ND		6580	23.8	4.01	11.3		11600
LK20305	8/24/2005	12700	0.177	7.99	62.7	0.606	ND	6.87	0.373		6510	23.9	5.56	10.5		14400
MUDLAKE1	16/09/2005	11200	ND	ND	71.6	0.274	ND	2.03	0.433		3680	11.4	2.67	12.7		5680
NK100A	6/2/2004	20900	0.237	15.4	136	0.667	0.132	ND	0.178		5710	31.8	11.5	24.8		30600
	7/14/2004	6580	0.205	7.5	41.2	0.238	ND	ND	0.0676		2190	13.6	5.37	11.9		18100
	9/15/2004	8180	0.173	8.11	38.4	0.292	0.0688	5.16	0.0806		2140	12.8	5.39	11.5		20500
	6/3/2005	6900	0.172	9.25	48.9	0.236	0.208	ND	0.443		2200	11.7	5.39	12.3		17700
	7/9/2005	7500	0.148	8.01	39.6	0.22	ND	ND	0.255		2190	11.2	4.84	11.5		18300
	6/15/2006	13000	0.164	8.54	51.6	0.289	ND	1.42	0.184	ND	2470	14.6	6.61	15.4	1.6	31100
	6/18/2007	6100	0.22	9.7	47	0.26	ND	ND	0.13		2300	8.1	5.6	11		17000
NK100B	02/06/2004	11600	0.122	9.78	55.6	0.319	0.0667	4.59	0.0775		2090	14.1	4.98	11.7		22000
	04/06/2005	9270	0.126	8.56	55.7	0.234	ND	ND	0.299		2800	16.3	6.77	18		21600
	10/07/2005	7120	0.119	9.11	38.2	0.206	ND	ND	0.212		1780	7.64	4.25	17		13700
	13/09/2005	10400	0.105	8.89	58.5	0.385	ND	2.92	0.37		2990	13.5	8.49	17.7		24700
	15/06/2006	12600	0.158	9.68	64.4	0.404	ND	1.74	0.236	ND	3310	15.1	7.82	18.2	3.8	23300
	18/06/2007	11000	0.25	10	77	0.34	ND	ND	0.17		4100	15	8.4	20		23000
NK100C	6/2/2004	9430	0.0876	5.73	66	0.231	ND	4.88	0.0718		2490	14.8	4.27	5.57		25000
	7/14/2004	7590	0.121	7.94	54	0.25	ND		0.0754		2550	14.9	6.65	6.45		19100
	9/15/2004	8250	0.123	9.56	50.5	0.281	ND	5.31	0.0832		2500	12.7	6.76	6.3		20400
	6/5/2005	9440	0.0893	5.88	64.8	0.273	ND	ND	0.356		2860	15.2	5.32	5.71		16600
	7/11/2005	11400	0.12	8.64	75.5	0.354	ND	ND	0.364		3160	16.8	6.14	7.97		19600
	9/13/2005	12300	0.106	4.86	91.3	0.355	ND	1.66	0.263		3210	15.2	6.61	6.27		18900
	6/15/2006	12300	0.118	8.77	91.9	0.307	ND	1.39	0.285	0.13	3460	17.1	7.61	7.96	1.7	22200
	6/18/2007	14000	0.36	10	120	0.39	ND	ND	0.22		4700	23	8	8.7		20000

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	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)	Potassium (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Sodium (mg/Kg)	Thallium (mg/Kg)	Tin (mg/Kg)
LAKE2	8/13/2007	3.7		1700	98	ND		0.44	3.1		210	0.28	0.44	86	ND	0.27
LILLY	18/08/2007	3.3		1900	73	ND		2.9	9.5		490	1.8	2.9	ND	2.9	7.3
LK20105	8/24/2005	9.8		2590	217	ND		4.74	7.26		628	6.23	ND	441	0.127	9.71
LK20205	24/08/2005	8.3		2160	186	ND		4.09	6.27		417	7.8	ND	373	0.102	8.97
LK20305	8/24/2005	10.1		4260	238	103		2.2	9.32		617	4.24	ND	307	0.119	5.23
MUDLAKE1	16/09/2005	2.88		841	129	ND		ND	8.18		207	ND	ND	238	ND	6.65
NK100A	6/2/2004	10.1		5350	1160	42.2		1.8	15.6		826	0.94	0.122	397	0.0882	1.07
	7/14/2004	3.51		3680	379	ND		0.525	7.47		608	ND	ND	137	ND	0.958
	9/15/2004	3.46		3560	359	23.9		0.787	8.24		559	ND	0.1	138	0.234	1
	6/3/2005	5.27		3820	436	ND		0.531	8.36		476	0.479	ND	136	0.0265	0.958
	7/9/2005	3.37		4210	465	ND		0.815	7.92		636	ND	ND	172	0.0439	0.503
	6/15/2006	3.96	1.4	4620	624	ND	ND	0.593	10.4	0.9	580	ND	ND	133	0.0351	1.31
	6/18/2007	3.9		3100	560	16		0.74	5.7		500	0.52	0.21	ND	0.21	0.52
NK100B	02/06/2004	5.24		2350	445	41.9		0.855	7.23		493	0.661	0.0574	148	0.0496	0.994
	04/06/2005	4.47		4490	599	ND		0.603	8.67		570	0.497	ND	168	0.0432	0.995
	10/07/2005	5.33		3230	232	ND		1.02	5.5		461	ND	ND	147	0.0368	0.456
	13/09/2005	4.66		4230	796	ND		0.634	10.1		679	0.264	0.0904	180	0.0604	1.41
	15/06/2006	5.11	2	4540	657	ND	ND	0.696	10.8	2.1	647	ND	ND	243	0.0787	1.34
	18/06/2007	4.9		4100	970	28		0.74	8.9		580	0.62	0.25	300	0.25	0.62
NK100C	6/2/2004	4.53		1890	655	31.3		ND	5.6		348	0.485	0.0358	149	0.0375	0.97
	7/14/2004	3.21		3640	865	ND		0.392	7.6		612	0.159	ND	198	ND	0.969
	9/15/2004	3.01		3570	761	ND		0.457	6.76		652	0.355	0.124	202	0.219	1.11
	6/5/2005	4.45		3650	449	ND		ND	6.67		484	1.12	0.0348	191	0.0431	0.994
	7/11/2005	5.7		4090	728	ND		ND	7.03		587	1.02	ND	246	0.0748	1.89
	9/13/2005	5.02		4160	497	ND		ND	8.68		582	ND	0.0733	254	0.0609	1.57
	6/15/2006	5.2	2.2	4490	966	ND	ND	ND	9.65	2.1	623	ND	ND	234	0.0592	1.65
	6/18/2007	8.2		4100	890	23		0.49	9.2		310	0.89	0.36	ND	0.36	0.89

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	Vanadium (mg/Kg)	Zinc (mg/Kg)	Zinc- SEM (mg/Kg)	Chloride (mg/Kg)	Fluoride (mg/Kg)	Sulfate (mg/Kg)	Sulfur (mg/Kg)	Acid-Volatile Sulfide (mg/Kg)	Cyanide (mg/Kg)	Cyanide, Weak Acid Dissociable (mg/Kg)	Nitrogen, Ammonia (as N) (mg/Kg)
LAKE2	8/13/2007	15	25		ND	0.44	14			ND		420
LILLY	18/08/2007	39	17		ND	0.41	3.6			ND		940
LK20105	8/24/2005	48.1	55.9		9.81	4.12	158			ND		681
LK20205	24/08/2005	39.9	44.4		15.2	3.22	92.7			ND		776
LK20305	8/24/2005	39.7	59.7		12.7	3.04	45.6			ND		475
MUDLAKE1	16/09/2005	22.5	28.5		5.99	ND	6.68			ND		523
NK100A	6/2/2004	92.2	74.7							0.48	0.831	428
	7/14/2004	40.5	43.9		0.327	ND	10.2			ND		5
	9/15/2004	47.3	32.8		ND	ND	0.648			ND		ND
	6/3/2005	34.1	43.2		0.996	ND	7.14			ND		8.05
	7/9/2005	37.7	43.8		0.513	0.397	ND			0.047		27.5
	6/15/2006	39.3	53.4	6.1	ND	ND	1.61	119	ND	ND		7.11
	6/18/2007	30	40		ND	0.15	3.1			ND		200
NK100B	02/06/2004	39.1	38.3									497
	04/06/2005	51.4	52.4		1.32	ND	14.8			ND		42.5
	10/07/2005	32	68.5		0.652	0.625	0.984			ND		43.3
	13/09/2005	47.7	63.3		ND	1.44	1.08			0.031		7.75
	15/06/2006	52.3	61.4	13.4	0.587	ND	1.79	155	ND	0.058		41.3
18/06/2007	47	51		4.8	0.3	7.6			0.76		82	
NK100C	6/2/2004	28	35.6							0.76	0.647	435
	7/14/2004	40.6	55.4		1.14	0.437	56.5			0.078		40.3
	9/15/2004	38.6	49.9		0.608	ND	1.85			0.045		3.9
	6/5/2005	33.4	46.5		1.8	8.56	74.2			0.045		116
	7/11/2005	41.7	61.2		2.17	ND	3.9			ND		108
	9/13/2005	36.5	59.1		1.66	1.6	24.9			ND		65.4
	6/15/2006	42.4	70.3	21.3	1.33	0.56	3.24	320	ND	0.06		64.2
	6/18/2007	44	57		7.9	0.35	17			1.5		150

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

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)	Copper (mg/Kg)	Copper- SEM (mg/Kg)	Iron (mg/Kg)
NK119A	02/06/2004	18500	0.129	10.3	87.7	0.467	0.0984	5.3	0.162		4350	19.8	12.1	33		44500
	15/07/2004	9370	0.113	7.15	60	0.217	ND	ND	0.109		3080	16.1	9.66	40.2		24600
	15/09/2004	11900	0.138	7.78	60.3	0.227	ND	3.73	0.126		3020	16.7	10.9	54.6		26800
	04/06/2005	8790	0.128	8.41	55.7	0.15	ND	ND	0.377		2540	15.7	10.5	41.1		23800
	11/07/2005	10600	0.143	9.05	74.8	0.301	0.0977	ND	0.293		3320	16.8	9.35	42.6		26000
	18/06/2007	10000	0.26	10	70	0.24	ND	ND	0.12		2800	15	9.6	44		26000
SEC03	9/2/2004	11700	0.126	5.62	44.6	0.309	0.0809	ND	0.0773		2380	11.7	4.08	5.71		17000
	9/3/2004	19600	0.153	6.21	105	0.513	ND	6.38	0.0773		3570	30.6	10.3	13.9		34500
SEC04	02/09/2004	17400	0.178	6.84	91.9	0.324	0.156	ND	0.181		2910	18.5	9.11	36.8		30600
SEC11	9/4/2004	7020	0.229	6.46	48.6	0.185	ND	ND	0.505		4120	6.17	1.2	12.7		13000
SEC12	03/09/2004	11300	0.151	2.39	79.6	0.221	0.0859	ND	0.187		2640	14.1	3.69	9.12		9240
SEC16	9/4/2004	16600	0.184	12.8	54.6	0.255	0.0668	ND	ND		1160	14.9	6.39	16.7		19100
SEC17	04/09/2004	23100	0.122	2.28	74.9	0.416	0.15	ND	0.194		2030	14.8	3.92	21.1		7740
SEC19	9/2/2004	12500	0.206	10.7	34.3	0.203	ND	ND	ND		926	11.5	5.04	12.6		19700
SEC21	03/09/2004	18200	0.312	4.77	82.8	0.371	0.114	4.59	0.0981		1670	9.07	6.96	19.1		26700
SEC22	9/3/2004	5460	0.0847	1.59	35.7	0.199	0.0665	ND	0.0995		4950	4.81	1.22	5.49		3400
SEC23	02/09/2004	15700	0.468	40.7	79.2	0.403	0.157	ND	0.186		4720	21.7	3.32	12.9		22700
SEC26	9/2/2004	19300	0.231	6.16	84.9	0.453	0.33	ND	0.355		1730	23.3	2.56	64.5		6070
SEC27	03/09/2004	17600	0.137	5.68	91.4	0.522	ND	4.21	0.209		1750	12.2	3.06	13.2		12300
SEC28	8/25/2004	7020	0.0666	1.68	37.4	0.184	ND	ND	0.0788		2160	13.4	3.56	4.89		7970
	9/3/2004	9730	ND	1.87	30.7	0.193	ND	5.33	ND		1500	5.35	3.17	7.91		18500
SEC32	02/09/2004	18900	0.106	3.99	55.9	0.263	0.101	ND	0.77		7180	15.9	5.77	39.3		15400
SEC34	9/3/2004	4790	0.0761	1.23	16.8	0.132	ND	ND	0.112		3720	3.14	0.996	3.43		2940
SK100A	05/06/2004	19500	0.323	24.6	117	0.776	0.244	4.14	0.547		5960	29.6	12.4	57		23400
	02/06/2005	8050	0.155	10.8	43.1	0.276	ND	ND	0.247		2440	11	5.16	14.4		15800
	09/07/2005	7840	0.112	7.9	41	0.223	ND	ND	0.152		1860	7.42	4.01	15		14200
	18/06/2006	8260	0.194	13.1	59.4	0.361	ND	0.944	0.292	0.09	2570	9.61	6.25	18.7	2.9	16100
	16/06/2007	10000	0.26	12	44	0.27	ND	280	0.16		2700	8.8	5.4	15		22000

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals



**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	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)	Potassium (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Sodium (mg/Kg)	Thallium (mg/Kg)	Tin (mg/Kg)
NK119A	02/06/2004	5.86		5990	1320	52.6		1.53	13.6		805	0.975	0.0907	200	0.0915	0.998
	15/07/2004	3.64		4200	719	21.2		0.672	11.2		737	0.3	ND	187	ND	0.975
	15/09/2004	3.25		4620	788	15.7		0.789	13.7		1050	0.217	0.0994	186	0.108	0.994
	04/06/2005	2.83		4350	757	ND		0.722	11.4		984	0.49	ND	150	0.067	0.98
	11/07/2005	5.33		5870	711	ND		1.09	11.6		983	0.748	ND	216	0.103	1.48
	18/06/2007	3.7		4200	720	ND		1	9.7		570	0.47	0.19	ND	0.19	0.47
SEC03	9/2/2004	5.01		3630	323	ND		0.704	5.58		387	0.484	0.0387	135	0.044	0.968
	9/3/2004	5.56		3780	282	24.1		0.66	10.3		552	0.371	ND	193	0.0474	1.27
SEC04	02/09/2004	7.36		3220	593	76.5		4.66	9.03		532	2.07	0.0915	216	0.231	0.971
SEC11	9/4/2004	2.83		461	68.8	96		1.18	1.68		1770	1.27	0.0616	162	ND	0.989
SEC12	03/09/2004	4.75		1720	92	92.8		0.78	5.73		212	0.495	0.0598	176	0.136	0.989
SEC16	9/4/2004	7.12		3000	361	21.2		0.865	7.71		701	0.704	0.0981	115	ND	0.981
SEC17	04/09/2004	6.93		1780	59.7	53.7		0.67	10.4		338	2.68	0.0833	129	0.134	0.999
SEC19	9/2/2004	6.77		2970	203	14.6		0.603	5.81		518	0.759	0.0414	110	ND	0.99
SEC21	03/09/2004	4.99		2810	553	28.9		1.88	5.01		397	0.498	0.0358	74.9	0.0745	0.995
SEC22	9/3/2004	3		567	238	82.6		0.629	1.91		102	0.95	0.0751	101	0.111	0.994
SEC23	02/09/2004	7.26		1930	106	128		3.94	6.11		301	1.58	0.152	222	0.151	0.971
SEC26	9/2/2004	4.91		2500	76.8	32.3		9.29	7.81		256	5.18	0.153	108	ND	0.995
SEC27	03/09/2004	7.37		2190	142	35		0.765	7.09		580	0.974	ND	230	0.135	0.994
SEC28	8/25/2004	4.13		1980	116	ND		ND	5.92		315	0.145	ND	199	ND	0.966
	9/3/2004	2.28		1230	188	33.2		1.3	1.49		149	0.354	ND	ND	0.0079	0.966
SEC32	02/09/2004	7.03		3940	209	87.4		0.921	8.02		534	1.49	0.163	151	0.212	0.994
SEC34	9/3/2004	1.46		732	88.5	21.3		0.328	0.937		459	1.58	0.168	86.3	0.0412	0.979
SK100A	05/06/2004	20.4		6080	1150	49.3		5.35	15.3		725	2.76	0.239	321	0.138	1.11
	02/06/2005	6.02		3700	403	ND		1.55	6.32		463	1.34	0.0707	163	0.0316	0.992
	09/07/2005	5.12		3230	256	ND		0.926	5.96		465	ND	ND	146	0.0353	0.437
	18/06/2006	6.07	3.2	4540	487	ND	ND	1.19	8.37	0.7	682	ND	ND	197	0.0343	1.59
	16/06/2007	6.2		4800	380	ND		1.3	5.9		630	0.57	0.23	ND	0.23	0.57

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	Vanadium (mg/Kg)	Zinc (mg/Kg)	Zinc- SEM (mg/Kg)	Chloride (mg/Kg)	Fluoride (mg/Kg)	Sulfate (mg/Kg)	Sulfur (mg/Kg)	Acid-Volatile Sulfide (mg/Kg)	Cyanide (mg/Kg)	Cyanide, Weak Acid Dissociable (mg/Kg)	Nitrogen, Ammonia (as N) (mg/Kg)
NK119A	02/06/2004	77.6	58.4									465
	15/07/2004	69.7	43		1.55	0.348	28.5			0.084		43.8
	15/09/2004	66.9	35.5		ND	ND	0.942			0.11		ND
	04/06/2005	67.5	37		1.45	2.46	20.6			ND		24.8
	11/07/2005	81.1	55.5		1.9	ND	2.6			0.043		61.3
	18/06/2007	60	37		ND	0.14	3.3			ND		29
SEC03	9/2/2004	39.2	39.5		9.63	12.8	50.3			0.28		344
	9/3/2004	66.5	66.2		3.21	ND	20			0.099		40.2
SEC04	02/09/2004	46.3	45.9		25.1	14.3	356			0.57		495
SEC11	9/4/2004	17.7	14.1		80.8	118	274			1.9		1290
SEC12	03/09/2004	30.5	25		13	39.4	67.2			0.74		613
SEC16	9/4/2004	49.3	53.3		2.4	0.311	45.1			0.2		111
SEC17	04/09/2004	27.1	18.5		13.5	10.3	288			1		610
SEC19	9/2/2004	50.3	47.3		3.59	ND	11.9			0.11		68.8
SEC21	03/09/2004	74.4	41.9		2.22	ND	14			0.1		76.4
SEC22	9/3/2004	7.22	ND		11.9	1.95	62.5			0.57		1730
SEC23	02/09/2004	78.3	23.8		7.92	2.62	25.6			1.1		1150
SEC26	9/2/2004	55.3	20.3		ND	0.367	121			0.77		336
SEC27	03/09/2004	36.1	41.7		2.77	4.62	69.3			0.38		62.1
SEC28	8/25/2004	17.3	32.9		26.3	0.287	31.4			0.1		166
	9/3/2004	54.9	22.7		4.17	ND	9.34			0.2		192
SEC32	02/09/2004	48.1	59.3		12.7	ND	2600			1.9		882
SEC34	9/3/2004	10.6	ND		73	3.36	214			0.4		1200
SK100A	05/06/2004	94.4	145							0.54	0.225	665
	02/06/2005	33.1	51.6		0.998	1.59	19.5			0.041		49.6
	09/07/2005	30.9	64.1		1.1	0.671	1.38			ND		41.4
	18/06/2006	37.4	91.6	15.8	2.49	ND	4.28	84.6	ND	ND		8.7
	16/06/2007	34	61		4.4	0.38	4.2			ND		46

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

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)	Copper (mg/Kg)	Copper- SEM (mg/Kg)	Iron (mg/Kg)
SK100B	6/4/2004	24600	0.433	29.6	118	0.82	0.317	ND	0.552		6150	33.4	17.4	96.8		36300
	7/14/2004	8490	0.216	10.3	36.9	0.327	ND	ND	0.203		2760	13.2	7.69	33.4		22900
	9/13/2004	15500	0.203	9.37	51.2	0.363	0.131	3.23	0.357		3550	14.8	8.35	53.6		21400
	6/3/2005	11300	0.144	11.5	49	0.294	ND	ND	0.43		2630	11.4	7.19	41.8		20800
	7/8/2005	10800	ND	10.9	47.4	0.337	ND	6.86	0.188		2630	12.3	7.64	49.2		19800
	6/18/2006	11600	0.164	10.2	56.7	0.393	ND	0.951	0.498	0.42	3170	13	7.24	54.1	24.9	15800
	6/17/2007	12000	0.49	15	56	0.37	ND	ND	0.35		3400	13	9.8	51		26000
SK100B1	18/06/2006	8920	0.212	9.83	32	0.297	ND	1.67	0.211	0.21	3170	10.3	6.69	38.3	13.5	20900
SK100C	6/3/2004	25200	0.466	22.5	112	0.483	0.274	9.99	0.749		5110	22.7	14	138		41300
	7/13/2004	8330	0.262	17	49.4	0.296	ND	ND	0.804		4230	11.2	14.8	77.6		29300
	9/14/2004	13400	0.304	23	53.6	0.403	0.172	5.95	0.686		3710	13.5	14.6	89.9		33900
	6/4/2005	14900	0.282	24	54.1	0.334	0.177	ND	0.635		3380	14.5	14.2	79.9		32300
	7/8/2005	11200	0.26	18.8	53.3	0.374	0.135	5.45	0.776		4030	12	11.1	84.4		29800
	6/18/2006	21000	0.336	26.5	92.1	0.552	0.259	2.84	0.943	0.83	5840	19.7	16	144	72.8	33800
	6/17/2007	13000	0.85	34	130	0.53	ND	ND	2.6		3600	14	33	130		40000
SK100D	15/09/2005	13800	0.58	73.3	190	0.806	ND	7.64	0.882		2770	12.5	26.4	102		56500
SK100F	6/1/2004	15600	0.23	8.24	123	0.484	0.173	ND	0.217		5460	14.5	6.87	36.9		23700
	7/14/2004	14900	0.251	7.85	97.6	0.547	0.0745	ND	0.258		4150	16.9	7.94	48.3		21700
	9/14/2004	13300	0.27	7.68	99.8	0.499	0.194	4.26	0.169		3750	5.72	6.94	14.5		25600
	6/5/2005	8840	0.163	5.48	42.3	0.453	ND	3.74	0.234		2640	7.46	4.15	11.4		15700
	6/17/2007	15000	0.81	19	140	0.54	ND	ND	0.61		8300	17	12	94		33000
SK100G	01/06/2004	8370	0.135	13.8	86.9	0.297	0.0782	11.4	0.219		2950	10.3	6.66	130		83400
	15/07/2004	9550	0.136	9.1	86.5	0.291	ND	ND	0.12		2440	13	6.97	59		30900
	09/08/2004	9600	0.113	12	76.5	0.283	0.0821	ND	0.104		2270	10.9	6.82	55		31700
	14/09/2004	12500	0.185	11.1	94.6	0.326	0.0733	4.86	0.128		2090	13	6.89	59		31000
	05/06/2005	10100	0.136	13.3	92.9	0.378	ND	ND	0.43		2870	14.8	7	97.5		27000
	11/07/2005	9650	0.129	11	74.4	0.375	ND	ND	0.202		2990	12.6	6.06	83		27800
	17/06/2007	9600	0.32	18	97	0.35	ND	ND	0.19		2600	12	7.7	66		41000

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	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)	Potassium (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Sodium (mg/Kg)	Thallium (mg/Kg)	Tin (mg/Kg)
SK100B	6/4/2004	28.6		7110	1460	68.3		11.6	17.2		715	2.38	0.264	271	0.168	1.15
	7/14/2004	8.44		4160	541	ND		2.36	8.31		418	0.183	ND	113	ND	0.959
	9/13/2004	12.9		4520	325	21.5		3.58	9.85		447	0.605	0.12	149	0.0799	0.927
	6/3/2005	13.1		4660	461	ND		3.28	8.16		404	0.543	0.0899	118	0.0344	0.999
	7/8/2005	15		4030	455	20.5		3.63	8.12		375	ND	ND	ND	0.124	ND
	6/18/2006	12.8	11.3	4050	290	ND	ND	3.29	9.21	2.3	416	1.01	0.0775	141	0.0802	2.44
	6/17/2007	14		5200	650	40		4.3	9		330	0.77	0.27	ND	0.27	0.66
SK100B1	18/06/2006	10.3	7.7	3700	372	ND	ND	2.42	7.35	1.2	336	ND	ND	86.9	0.0397	1.4
SK100C	6/3/2004	40.3		7090	1110	38.3		6.4	16.1		679	1.15	0.216	218	0.0862	0.982
	7/13/2004	19.8		4830	1200	ND		4.01	10.2		479	0.528	ND	125	ND	0.971
	9/14/2004	27.9		5590	1250	16.7		5.05	12.3		505	0.635	0.173	116	0.135	0.998
	6/4/2005	23.8		5590	1720	19.9		6.3	9.95		450	1.06	0.0682	115	0.103	0.998
	7/8/2005	20.3		5080	955	ND		4.29	9.36		449	ND	0.0833	122	0.102	0.553
	6/18/2006	32.5	23.4	7490	969	33.5	ND	6.47	15.7	3.6	560	2.18	0.217	174	0.118	2.11
	6/17/2007	30		6100	4600	50		11	16		560	1	0.29	ND	0.33	0.73
SK100D	15/09/2005	8.48		3980	6970	31.8		20.5	18.1		570	0.447	0.079	177	0.445	1.66
SK100F	6/1/2004	5.78		3580	1010	33.9		1.9	7.7		847	1.04	0.0839	407	0.0914	0.996
	7/14/2004	7.18		3560	688	29.3		2.01	10.5		772	0.952	ND	250	ND	0.962
	9/14/2004	5.11		4160	880	ND		1.74	5.66		1180	0.473	0.0984	225	0.144	1.15
	6/5/2005	4.86		3060	439	ND		0.54	5.2		998	0.952	0.0341	187	0.076	0.998
	6/17/2007	8.3		4100	1700	75		3.5	12		570	2	0.81	ND	0.81	2
SK100G	01/06/2004	3.69		1550	943	79.8		5.8	7.68		376	1.65	0.104	104	0.0787	0.998
	15/07/2004	4.07		3460	366	17.8		2.39	8.48		541	0.408	ND	212	ND	0.967
	09/08/2004	3.46		3510	499	14.6		2.7	8.43		537	0.628	0.0624	183	0.0791	0.988
	14/09/2004	4.65		3580	276	19.9		2.38	9.39		556	0.409	0.115	238	0.136	0.983
	05/06/2005	5.12		3900	295	20		2.27	9.62		598	0.967	0.0441	210	0.0816	0.987
	11/07/2005	3.77		3650	462	27		2.69	8.2		621	2.12	ND	201	0.0957	2.05
	17/06/2007	5		3900	420	ND		4.8	8		690	0.55	0.22	ND	0.22	0.55

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	Vanadium (mg/Kg)	Zinc (mg/Kg)	Zinc- SEM (mg/Kg)	Chloride (mg/Kg)	Fluoride (mg/Kg)	Sulfate (mg/Kg)	Sulfur (mg/Kg)	Acid-Volatile Sulfide (mg/Kg)	Cyanide (mg/Kg)	Cyanide, Weak Acid Dissociable (mg/Kg)	Nitrogen, Ammonia (as N) (mg/Kg)
SK100B	6/4/2004	143	186							0.4	0.493	529
	7/14/2004	55	90.8		1.74	0.366	24.7			0.071		61.6
	9/13/2004	65.6	113		1.25	0.287	109			0.61		95
	6/3/2005	53.9	107		2.9	7.41	68.4			0.031		99.1
	7/8/2005	62.1	113		1.83	0.848	5.05			0.059		118
	6/18/2006	58.4	125	60.6	4.16	ND	6.14	1230	22.3	0.054		155
	6/17/2007	66	120		5.2	0.34	7			ND		100
SK100B1	18/06/2006	72.5	105	34.6	0.593	ND	7.41	189	ND	0.035		24.5
SK100C	6/3/2004	109	271		1.84	0.939	37.4			0.31	0.314	362
	7/13/2004	82.1	159		1.36	0.439	39.9			0.14		46.8
	9/14/2004	84.7	178		8.87	0.656	26.1			0.13		69.1
	6/4/2005	87.3	175		4.46	5.6	46.4			0.16		197
	7/8/2005	78.3	176		4.15	1.13	19.1			0.065		86.3
	6/18/2006	106	304	123	3.23	0.858	16.7	915	ND	0.11		114
	6/17/2007	88	240		ND	0.24	7.7			1.5		250
SK100D	15/09/2005	60.7	106		0.677	1.47	10.1			0.42		37.1
SK100F	6/1/2004	44.4	70.5									350
	7/14/2004	41.3	69.4		15.3	4.03	192			0.5		432
	9/14/2004	38	56.2		0.532	ND	4.23			0.79		10.6
	6/5/2005	20.5	46.5		1.14	1.93	70.1			ND		34.9
	6/17/2007	44	110		12	1.1	55			2.1		170
SK100G	01/06/2004	34.9	44.3							0.41	0.457	594
	15/07/2004	31.7	58.2		2.24	0.459	197			0.25		165
	09/08/2004	30.6	59.3		1.01	0.366	44.9			0.13		72.3
	14/09/2004	32.8	60		1.4	ND	36			0.091		27.7
	05/06/2005	40.2	72.4		2.38	9.63	103			0.082		169
	11/07/2005	34.7	63.9		2.29	0.764	3.18			ND		132
	17/06/2007	35	59		ND	0.48	8.6			ND		83

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

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)	Copper (mg/Kg)	Copper- SEM (mg/Kg)	Iron (mg/Kg)
SK119A	6/4/2004	16800	0.202	7.38	110	0.516	0.338	ND	0.264		5970	21.2	8.53	30.2		22000
	7/13/2004	11800	0.171	6.39	63.6	0.37	1.26	ND	0.18		3520	12.3	12.2	29		34400
	9/13/2004	9940	0.0897	5.08	47.6	0.252	0.104	5.36	0.164		3080	9.79	7.09	20.3		28900
	6/5/2005	9400	0.243	19.2	43.6	0.311	0.0976	5.45	0.789		4030	12.3	12	69.4		29800
	6/19/2006	12400	0.0939	5.54	57.7	0.331	0.0915	1.62	0.255	0.13	3140	7.5	6.43	28.6	5.3	26800
SK131A	13/07/2004	10300	0.409	14.6	74	0.406	ND	ND	0.13		3570	15.4	7.16	9.08		23800
	15/09/2004	10600	0.341	15.5	59.9	0.364	0.099	5.3	0.111		3070	11.8	6.18	7.73		21400
SP0405	7/21/2005	11400	0.166	8.64	68.7	0.45	ND	ND	0.393		3080	20.1	6.62	12.5		18400
	10/7/2005	18800	0.216	12.9	73	0.633	0.116	3.54	0.186		3910	20.6	8.39	14.9		29000
SP0705	19/07/2005	5400	0.153	9.94	51.4	0.246	ND	ND	0.277		3010	15.8	3.85	8.26		10600
SP1205	10/6/2005	15600	0.949	60.3	51.8	0.518	ND	9.57	ND		23400	105	3.14	18.3		9320
SP1505	05/10/2005	16000	1.04	130	41.8	0.889	0.0954	2.31	0.192		2310	5.69	3.42	5.67		22900
SP1705	7/18/2005	4280	0.156	15.2	25	0.155	ND	ND	0.136		1480	11.4	2.47	6.54		11300
	10/6/2005	7400	0.148	17.3	22.3	0.214	ND	2.08	ND		1910	10.5	2.47	6.44		14300
SP1805	17/07/2005	6100	0.225	24.9	49.3	0.238	0.115	ND	0.187		3370	15	4.45	7.96		14200
	06/10/2005	10600	0.159	26.3	49.2	0.218	ND	2.23	0.138		4010	12.6	4.34	6.93		22100
SP1905	7/17/2005	7830	0.148	17.4	32.7	0.305	ND	ND	0.239		2130	13.5	3.84	9.63		15900
SP2205	17/07/2005	7290	0.271	8.78	59.1	0.316	ND	ND	0.317		5510	19.4	5.65	16.7		14800
SP2405	7/21/2005	8510	0.317	22.9	12.3	0.673	0.31	ND	0.595		7990	5.85	15.4	90.5		30200
TPS1	23/08/2006									0.5					27.5	
	10/08/2007	15000	0.33	8.4	130	0.34	ND	ND	0.52		4200	18	7	35		21000
TPS2	8/23/2006	8190	ND	10.2	46.9	0.214	ND	6.05	ND	ND	6620	18.2	3.4	10.1	5.2	8270
	8/10/2007	11000	0.38	13	78	0.36	ND	ND	1.5		12000	20	6	16		16000
TPS3	23/08/2006	19000	ND	7.61	79.6	0.403	0.11	3.15	0.103	ND	1770	15.4	7.4	15.7	6.6	18300
	10/08/2007	5700	0.1	2.7	42	0.17	0.59	ND	0.23		1800	12	4	5.5		12000
TPS4	8/23/2006	5990	ND	ND	34	ND	ND	5.96	ND	ND	5480	6.36	2.82	15.7	3.7	6150
	8/10/2007	6000	0.19	2.1	44	ND	ND	240	1.9		7500	8.8	3.2	6.6		6800
TPS5	23/08/2006	15200	ND	5.61	77.3	0.418	ND	3.74	ND	ND	5190	22.9	6.03	13.1	6.9	14500
	11/08/2007	6900	0.35	17	38	0.22	ND	ND	0.29		2400	9.9	3.6	6.7		14000

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	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)	Potassium (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Sodium (mg/Kg)	Thallium (mg/Kg)	Tin (mg/Kg)
SK119A	6/4/2004	12.6		5090	804	39.2		3	9.74		585	0.991	0.177	232	0.0891	0.994
	7/13/2004	9.12		4510	625	ND		1.96	6.88		417	0.329	ND	130	ND	0.962
	9/13/2004	6.67		3810	517	ND		1.14	5.89		412	0.168	0.445	94.8	0.046	0.955
	6/5/2005	25.7		4920	1160	ND		4.25	8.71		390	1.66	0.167	92.9	0.0761	0.96
	6/19/2006	7.55	6.7	4650	549	ND	ND	1.17	6.34	1.1	462	ND	0.235	120	0.043	1.38
SK131A	13/07/2004	6.26		4720	469	ND		0.977	8.64		681	0.281	ND	216	ND	0.973
	15/09/2004	5.51		4200	421	ND		1.04	8.14		618	0.17	0.0992	169	0.135	1.13
SP0405	7/21/2005	6.69		4450	360	118		1.72	9.39		423	0.669	ND	218	0.0609	1.34
	10/7/2005	8.2		4820	527	166		2.66	11.1		509	0.802	0.103	203	0.0581	1.6
SP0705	19/07/2005	5.3		2450	259	ND		ND	5.51		506	0.934	ND	195	0.0442	1.47
SP1205	10/6/2005	5.82		2450	233	ND		ND	5.4		782	9.92	ND	366	ND	9.89
SP1505	05/10/2005	6.76		2710	409	65.5		3.75	2.97		534	1	2.54	118	0.263	1.49
SP1705	7/18/2005	5.06		2130	162	ND		ND	3.63		409	0.697	ND	124	0.0415	1.39
	10/6/2005	4.9		2150	162	ND		ND	4.03		378	ND	ND	121	0.0346	1.5
SP1805	17/07/2005	5.71		3700	343	ND		0.575	5.85		532	0.661	ND	261	0.0367	1.32
	06/10/2005	4.79		3570	368	ND		ND	6.36		524	0.71	0.0614	262	0.0273	1.42
SP1905	7/17/2005	6.28		3400	254	ND		ND	5.48		424	ND	ND	147	0.0427	1.39
SP2205	17/07/2005	8.59		3220	249	69.1		0.707	7.75		655	1.86	ND	258	0.0963	2.16
SP2405	7/21/2005	37.8		6800	1100	32.4		6.26	6.57		1640	1.7	ND	76.9	0.279	1.37
TPS1	23/08/2006		ND				ND			8.7						
	10/08/2007	6.2		4600	260	ND		0.88	13		1000	0.4	0.52	93	0.52	0.4
TPS2	8/23/2006	5.53	ND	1380	196	424	ND	ND	8.01	3.8	722	9.06	ND	197	0.109	6.13
	8/10/2007	6.6		2200	240	ND		1.5	12		420	3.7	1.5	190	1.5	0.43
TPS3	23/08/2006	8.9	5.5	3510	433	22.5	ND	0.688	10.4	4	462	1.1	ND	153	0.103	1.28
	10/08/2007	2.8		2600	230	17		0.23	6		340	0.09	0.23	ND	0.23	0.46
TPS4	8/23/2006	2.6	ND	919	111	ND	ND	ND	3.75	ND	367	4.67	ND	ND	0.137	5.89
	8/10/2007	2.7		1100	140	130		1.9	3.8		490	1.1	1.9	240	ND	0.32
TPS5	23/08/2006	10.2	ND	3630	183	64.2	ND	ND	10.1	5.9	546	2.93	ND	245	0.11	3.68
	11/08/2007	6.5		2100	260	24		0.44	4.7		290	0.27	0.29	38	0.29	0.25

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SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	Vanadium (mg/Kg)	Zinc (mg/Kg)	Zinc- SEM (mg/Kg)	Chloride (mg/Kg)	Fluoride (mg/Kg)	Sulfate (mg/Kg)	Sulfur (mg/Kg)	Acid-Volatile Sulfide (mg/Kg)	Cyanide (mg/Kg)	Cyanide, Weak Acid Dissociable (mg/Kg)	Nitrogen, Ammonia (as N) (mg/Kg)
SK119A	6/4/2004	97.7	82							0.58	0.955	647
	7/13/2004	94.2	69.2		2.09	0.458	27.7			0.094		53.8
	9/13/2004	77.3	53.8		ND	0.38	1.36			0.11		4.15
	6/5/2005	75.9	152		2.27	6.17	57.5			0.058		61.9
	6/19/2006	62	80.4	22.3	0.533	ND	2.03	144	ND	0.04		17.3
SK131A	13/07/2004	46.8	54.2		1.52	0.325	8.95			0.076		38.5
	15/09/2004	38.2	40.7		ND	ND	1.27			ND		ND
SP0405	7/21/2005	48	42.9		1.32	0.904	1.63			0.032		39.2
	10/7/2005	61.1	48.7		1.79	1.61	2.82			0.031		73.7
SP0705	19/07/2005	36.7	27.1		1.54	0.483	3.26			0.057		41.4
SP1205	10/6/2005	41	30.9		14.8	9.91	20.8			0.045		946
SP1505	05/10/2005	29.7	52.6		1.4	1.49	4.44			ND		42.3
SP1705	7/18/2005	37.2	26.5		1.5	0.513	3.8			ND		19.7
	10/6/2005	34.7	24.7		0.764	1.5	4.45			0.032		57.2
SP1805	17/07/2005	53.4	43.3		3.29	0.593	0.499			ND		18.1
	06/10/2005	44.5	37.1		3.3	1.42	4.17			ND		30.4
SP1905	7/17/2005	40.2	38.3		0.972	ND	4.71			ND		35
SP2205	17/07/2005	45.3	45		2.81	1.13	ND			0.12		203
SP2405	7/21/2005	129	313		1.12	1.98	42.7			0.072		50.5
TPS1	23/08/2006			51.6				1560	2.1			
	10/08/2007	43	88		ND	0.39	10			ND		180
TPS2	8/23/2006	19	41.6	33.2	4.65	2.07	16.9	4520	16.1	0.038		757
	8/10/2007	29	78		ND	1.9	38			ND		770
TPS3	23/08/2006	51.7	55.4	24.2	ND	0.52	2.23	279	ND	ND		63.7
	10/08/2007	24	32		1.3	0.17	3.5			ND		69
TPS4	8/23/2006	11.4	26.3	24.3	3.81	1.91	4.49	3500	3	ND		666
	8/10/2007	15	30		ND	1.2	31			ND		1600
TPS5	23/08/2006	32.4	81	60.6	3.33	ND	3.68	1230	ND	0.12		293
	11/08/2007	27	35		ND	0.18	6.9			ND		190

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals



**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

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)	Copper (mg/Kg)	Copper- SEM (mg/Kg)	Iron (mg/Kg)
TPS6	8/24/2006	18200	ND	95.2	91.6	0.293	ND	3.53	ND	ND	6180	29	7.51	12.1	5.4	17600
	8/11/2007	11000	0.64	54	66	0.32	ND	ND	0.49	ND	5200	22	5.1	7.7	5.4	14000
TPS7	24/08/2006	7550	ND	18.2	22.1	0.168	ND	1.95	ND	ND	1240	8.24	3.65	7.8	3.6	12300
	11/08/2007	5100	0.37	31	16	0.15	ND	ND	0.23	ND	1000	7.7	3.5	6.9	3.6	12000
TPS8	8/24/2006	7530	ND	26.2	37	0.232	ND	2.36	ND	ND	1520	7.33	4.05	6.19	2.2	13000
	8/11/2007	9400	1.1	270	95	0.33	3.1	ND	0.87	ND	6600	20	6.6	9.2	2.2	49000
UT100A	16/09/2004	10800	0.214	18.6	68.5	0.334	ND	4.31	0.174	ND	3340	13.3	6.98	8.62	2.2	21000
UT100B	6/3/2004	17300	0.344	38.9	144	0.636	0.125	3.75	0.182	ND	7510	39.3	14.8	17.7	2.7	27600
	7/15/2004	6710	0.191	17.4	55.7	0.338	ND	ND	0.0769	ND	3080	10.9	6.54	6.91	2.7	19500
	8/9/2004	7440	0.253	16	52.9	0.274	ND	ND	0.0679	ND	2660	12	5.7	7.23	2.7	18100
	9/16/2004	9070	0.207	15.5	43.1	0.277	ND	4.1	0.0717	ND	3140	15.5	6.47	8.24	2.7	21600
	6/3/2005	8790	0.158	16.1	56.4	0.302	ND	ND	0.244	ND	3290	14.6	6.02	6.91	2.7	19100
	7/10/2005	7180	0.166	15.1	39.7	0.227	ND	ND	0.299	ND	2340	9.92	5.09	15.3	2.7	18100
	9/14/2005	8480	0.173	16.2	54.5	0.348	ND	1.96	0.229	ND	2990	11.9	6.07	6.53	2.7	18800
	6/17/2006	13700	0.147	17.4	78.6	0.457	ND	1.56	0.157	0.14	3760	15.4	8.19	9	2.7	14800
6/19/2007	8700	0.39	27	74	0.37	ND	ND	0.16	ND	3400	13	8.5	7.6	2.7	23000	
UT100C	03/06/2004	12000	0.18	15.5	80.6	0.357	ND	4.52	0.0683	ND	4310	20.4	7.54	9.49	2.7	31800
UT100D	6/3/2004	21700	0.343	16.4	227	0.869	0.162	8.47	0.267	ND	10400	43.5	25.6	30.6	2.9	46200
	7/15/2004	9600	0.135	5.29	112	0.395	ND	ND	0.0785	ND	4340	17.8	11.9	8.93	2.9	24600
	9/17/2004	15500	0.154	8.84	143	0.454	ND	5.05	0.132	ND	5230	20.3	15.9	11.6	2.9	32200
	6/4/2005	9350	0.125	8.03	111	0.374	ND	ND	0.457	ND	3770	15.4	12.2	8.24	2.9	25500
	7/11/2005	11200	0.164	9.42	147	0.53	ND	ND	0.637	ND	4430	17.6	13.5	11.8	2.9	27900
	9/13/2005	12400	0.118	5.82	120	0.398	ND	3.5	0.203	ND	5270	19.4	13.7	11	2.9	28000
	6/17/2006	14800	0.103	5.33	107	0.324	ND	1.76	0.208	ND	3650	14.4	10.6	8.95	2.9	23400
	6/19/2007	16000	0.35	12	200	0.6	ND	ND	0.25	ND	7400	26	19	16	2.9	39000
UT100E	05/06/2004	24200	0.273	16.3	239	0.966	0.105	5.39	0.315	ND	9700	46.5	22.8	16.6	0.6	45500
	15/07/2004	9860	0.199	7.1	99.9	0.365	ND	ND	0.105	ND	4010	19.9	11.7	7.9	0.6	24600
	17/09/2004	12100	0.197	7.06	89.6	0.363	ND	4.78	0.117	ND	3890	18.4	10.3	7.79	0.6	25900
	04/06/2005	10300	0.175	9.27	90.2	0.422	ND	ND	0.543	ND	3800	18.2	9.98	7.38	0.6	27200
	17/06/2006	13800	0.128	7.46	113	0.414	ND	1.79	0.308	ND	3970	17.4	11.2	8.47	0.6	22800
	19/06/2006	11000	0.25	7.1	110	0.42	ND	ND	0.18	0.09	5000	17	12	8	0.6	28000

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	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)	Potassium (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Sodium (mg/Kg)	Thallium (mg/Kg)	Tin (mg/Kg)
TPS6	8/24/2006	8.46	ND	3760	268	74.4	ND	ND	10.9	5.7	659	2.42	ND	248	0.074	3.49
	8/11/2007	7.4		3200	170	29		0.63	7.3		490	0.71	0.49	87	0.49	0.36
TPS7	24/08/2006	6.46	6.5	2810	265	15.9	ND	0.516	4.8	2.1	496	ND	ND	87.2	0.0376	1.3
	11/08/2007	5.5		2000	330	16		0.54	4.5		270	0.17	0.23	ND	0.23	0.2
TPS8	8/24/2006	4.3	3.7	3160	359	ND	ND	0.689	5.07	2	429	1.41	ND	122	0.0423	1.34
	8/11/2007	6.8		2200	770	100		6.3	6.1		330	2.1	0.87	ND	0.87	0.34
UT100A	16/09/2004	10.8		4260	604	15.6		0.753	8.79		604	ND	0.0997	250	0.0331	1.11
UT100B	6/3/2004	10.7		6650	1330	128		1.73	18.7		815	1.07	ND	557	0.0282	1.21
	7/15/2004	4.31		3860	544	12.7		0.598	6.79		551	0.181	ND	251	ND	0.968
	8/9/2004	3.4		3600	387	120		0.502	7.72		510	0.302	0.055	190	0.0191	0.997
	9/16/2004	4.65		4390	414	ND		0.638	9.65		600	0.176	0.0948	193	0.0389	0.982
	6/3/2005	4.28		4140	441	ND		0.591	7.86		467	0.986	0.0566	234	0.0307	0.998
	7/10/2005	3.69		3660	393	43.4		0.573	6.82		547	ND	ND	208	0.0326	46.2
	9/14/2005	4.05		3760	516	23.8		0.585	8.34		495	ND	0.0662	187	0.0336	1.29
	6/17/2006	5.18	4.4	4830	486	44.8	ND	0.666	11	4	529	ND	ND	284	0.036	1.46
6/19/2007	5.1		4200	740	27		0.9	8.8		380	0.55	0.22	ND	0.22	0.55	
UT100C	03/06/2004	5.62		3560	692	160		0.976	9.81		466	0.481	0.0674	341	0.0576	0.961
UT100D	6/3/2004	11.1		7970	2890	119		1.72	27.4		1120	1.39	ND	492	0.0998	1.32
	7/15/2004	4.54		4190	758	59.6		0.509	10.8		535	0.252	ND	394	ND	0.959
	9/17/2004	5.29		4920	1330	52.8		0.875	14.8		709	0.305	0.0982	474	0.0755	1.08
	6/4/2005	4.23		3960	1140	64.8		0.714	10.7		724	1.02	0.0363	397	0.0611	0.995
	7/11/2005	4.85		5710	1230	61.3		0.825	13		892	0.698	ND	495	0.0827	1.4
	9/13/2005	4.63		4790	1120	38		0.595	14.7		631	0.37	ND	358	0.0241	1.49
	6/17/2006	3.98	2.9	4030	822	28.9	ND	0.483	11.3	4.6	512	ND	ND	276	0.0526	1.3
	6/19/2007	7.1		6000	1800	93		1.1	16		490	0.72	0.29	ND	0.29	0.72
UT100E	05/06/2004	9.45		6810	2860	64.6		1.49	25.7		934	2.36	0.113	423	0.106	1.31
	15/07/2004	4.46		3760	815	15.7		0.53	12		571	0.248	ND	312	ND	0.967
	17/09/2004	4.02		4270	859	19.1		0.609	11.7		637	ND	0.0982	269	0.047	1.09
	04/06/2005	4.36		4490	1020	16.1		0.686	10.6		636	0.988	0.0553	270	0.0649	0.997
	17/06/2006	4.44		4520	1060	ND		0.607	12.9		658	0.468	ND	269	0.0599	1.38
	19/06/2006		1.6				ND			2.7						
19/06/2007	4.7		7500	1200	19		0.64	15		420	0.62	0.25	ND	0.25	0.62	

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	Vanadium (mg/Kg)	Zinc (mg/Kg)	Zinc- SEM (mg/Kg)	Chloride (mg/Kg)	Fluoride (mg/Kg)	Sulfate (mg/Kg)	Sulfur (mg/Kg)	Acid-Volatile Sulfide (mg/Kg)	Cyanide (mg/Kg)	Cyanide, Weak Acid Dissociable (mg/Kg)	Nitrogen, Ammonia (as N) (mg/Kg)
TPS6	8/24/2006	52.9	62.7	40.9	4.1	1.69	7.74	1080	ND	0.078		327
	8/11/2007	35	53		ND	0.63	8.1		ND	ND		540
TPS7	24/08/2006	25.3	40.1	20.1	0.578	ND	1.31	132	ND	0.098		34.3
	11/08/2007	18	38		2.9	ND	2.3		ND	ND		59
TPS8	8/24/2006	24.7	33.5	14.5	0.724	ND	5.72	116	ND	ND		20.6
	8/11/2007	67	36		8.6	ND	150		ND	ND		1000
UT100A	16/09/2004	41.7	48.9		0.51	ND	3.47			0.37		45
UT100B	6/3/2004	87.4	84.5							0.38	0.26	
	7/15/2004	36.4	43.8		1.2	0.6	23.6			0.043		43.5
	8/9/2004	36.1	44.5		0.418	ND	4.86			0.032		18
	9/16/2004	46.9	38.1		ND	ND	1.57			0.066		4
	6/3/2005	36.5	40.1		2.11	3.72	29.9			0.034		46.3
	7/10/2005	30.8	40		0.575	ND	0.925			ND		30.2
	9/14/2005	36.1	42.9		2.28	1.3	1.2			ND		16.7
	6/17/2006	43	56.8	21.7	0.465	0.495	2.7	207	ND	0.058		11.8
6/19/2007	40	47		ND	0.19	5.2			0.48		45	
UT100C	03/06/2004	45.5	45.6							0.3	0.402	374
UT100D	6/3/2004	100	115		2.85	1.51	32.4			0.4	0.13	435
	7/15/2004	43.5	63.4		1.39	0.687	59.8			0.12		57.7
	9/17/2004	53.1	66.2		0.524	1.04	7.76			0.22		39.8
	6/4/2005	38.5	56.2		0.766	0.497	25.4			0.051		18.8
	7/11/2005	53.1	76.4		0.53	ND	4.01			0.044		40.2
	9/13/2005	45.4	72.4		1.24	1.54	4.94			0.054		52.5
	6/17/2006	36.5	63.6	28.7	0.444	ND	4.21	160	ND	0.043		44.3
6/19/2007	65	78		2.2	0.63	11			ND		120	
UT100E	05/06/2004	97.9	125							0.8	0.927	665
	15/07/2004	47.5	60		2.08	0.863	41.3			0.12		101
	17/09/2004	45	55.1		1.4	ND	2.8			0.089		13
	04/06/2005	43.6	56.4		1.75	0.477	27.1			0.047		37.4
	17/06/2006	44	73.9		0.714	0.514	3.23			0.081		32.3
	19/06/2006			18.3				149	ND			
19/06/2007	38	57		1.8	0.52	5.3			ND		63	

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

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)	Copper (mg/Kg)	Copper- SEM (mg/Kg)	Iron (mg/Kg)
UT119A	6/4/2004	10000	0.194	25.2	55.7	0.253	0.0704	ND	0.0806		4060	16.8	3.54	7.33		20100
	7/15/2004	8980	0.244	18.7	47.9	0.295	0.0886	ND	0.0942		2950	9.94	4.7	7.37		19700
	9/16/2004	9220	0.157	18.1	44.8	0.214	0.0629	3.33	0.0786		2570	10.4	4.27	6.13		15900
	6/2/2005	7340	0.112	14.1	41.8	0.182	ND	ND	0.135		2400	10.3	3.26	5.62		12700
	6/17/2006	8380	0.122	14.6	41	0.196	ND	0.594	0.0942	0.08	2410	9.77	3.74	7.13	1.4	9810
	6/20/2007	8300	0.25	20	48	0.26	ND	ND	0.14		3200	8.4	4.5	5.8		18000
UT119B	10/07/2005	9670	0.162	8.47	77.6	0.308	ND	ND	0.424		2120	11.7	6.15	84		22800
	17/06/2006	10900	0.164	21.6	66.9	0.382	ND	2.17	0.17	0.11	2600	13.1	5.72	10.5	2	13200
UT138A	7/15/2004	8650	0.165	7.54	99.3	0.379	ND	ND	0.0821		4150	23.1	13.8	9.17		33800
	9/17/2004	13200	0.19	8.29	124	0.48	ND	5.94	0.109		4730	22.4	13.5	8.82		33900
UT141A	15/07/2004	9920	0.138	9.17	69.6	0.278	ND	ND	ND		3550	16.4	8.22	6.77		23000
	17/09/2004	13900	0.158	15.2	86.8	0.288	ND	4.21	0.0876		4770	17.9	8.43	7.1		30200
	09/07/2005	11400	0.136	11.2	95.3	0.239	ND	ND	0.181		4070	14.5	7.04	7.06		22700
	17/06/2006	17400	0.122	10.5	85.9	0.336	ND	2.96	0.146	ND	3520	17.2	8.44	7.96	1.2	27700
	20/06/2007	14000	0.29	13	100	0.34	ND	ND	0.16		4600	20	9.6	7.9		27000
UT146A	7/15/2004	10900	0.123	8.24	116	0.656	ND	ND	0.265		3320	14.4	40.8	40.7		44400
	9/17/2004	17300	0.138	9.7	132	0.804	ND	7.31	0.406		3980	17	49.1	50.1		48600
WIGGLY	12/08/2007	5100	0.11	4.9	46	0.25	ND	ND	0.22		2400	12	5.8	6.6		17000
WIGGLY2	7/14/2005	15400	0.195	4.86	91.5	0.262	ND	ND	ND		5250	25.9	5.73	24.9		14100
WIGGLY4	14/07/2005	8230	ND	5.47	42.8	ND	ND	ND	ND		4880	24.7	4.59	11.9		9390
WIGGLY5	7/14/2005	4860	0.16	4.02	43.6	ND	ND	ND	ND		3000	14.8	3.5	6.26		8050
WLP01	26/07/2006	13000	0.338	20	193	0.467	ND	7.51	0.399	0.5	3620	10.9	18.3	145	115	47300
	10/08/2007	18000	0.52	15	120	0.37	ND	ND	0.54		3000	19	8.8	200		29000
WLS04D	7/26/2006	15200	0.198	11.4	65.4	0.3	0.115	2.27	0.193	ND	583	11	7.7	14.8	11.3	17900
	8/11/2007	11000	0.37	14	40	0.21	ND	ND	0.23		650	10	5.1	12		14000

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	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)	Potassium (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Sodium (mg/Kg)	Thallium (mg/Kg)	Tin (mg/Kg)
UT119A	6/4/2004	5.32		2080	365	19.4		0.493	5.45		564	0.876	0.0485	630	0.0291	0.982
	7/15/2004	4.42		3830	365	ND		0.541	6.07		549	0.483	0.0582	215	0.0967	0.967
	9/16/2004	4.3		3350	365	13.7		0.472	5.37		476	0.201	0.0978	159	0.0253	0.978
	6/2/2005	4.02		2830	267	ND		ND	4.68		401	1.09	0.0466	144	0.0258	0.996
	6/17/2006	4.62	3	3110	273	ND	ND	ND	5.65	0.7	435	0.299	ND	159	0.0266	1.33
	6/20/2007	5		3900	370	11		0.46	5.2		310	0.6	0.24	ND	0.24	0.6
UT119B	10/07/2005	4.29		3220	343	ND		6.64	7.95		629	ND	ND	175	0.0692	0.513
	17/06/2006	6.77	4.6	4140	399	21.8	ND	0.467	8.92	1.3	542	0.23	ND	166	0.06	1.46
UT138A	7/15/2004	4.02		4640	1150	19		0.671	14.3		461	ND	ND	298	ND	0.966
	9/17/2004	4.75		4890	1120	26.6		0.981	15		528	0.236	0.127	357	0.151	1.11
UT141A	15/07/2004	3.96		5100	397	18.7		0.424	9.54		411	ND	ND	186	ND	0.976
	17/09/2004	4.76		4770	462	177		0.841	10.1		426	0.526	0.118	241	0.0839	1.08
	09/07/2005	4.23		3960	712	59.9		0.844	7.69		379	ND	ND	283	0.07	ND
	17/06/2006	4.21	2.8	5550	401	41.2	ND	0.594	11.3	1.1	455	ND	ND	201	0.0375	1.47
	20/06/2007	5.3		5500	480	130		0.94	11		240	0.73	0.29	ND	0.29	0.73
UT146A	7/15/2004	3.68		3380	2310	20.9		1.46	30.6		572	0.279	ND	302	ND	0.97
	9/17/2004	3.78		3800	3640	25.5		1.58	46.9		573	0.664	0.0959	298	0.241	1
WIGGLY	12/08/2007	2.6		2700	310	17		0.28	8		220	0.066	0.22	ND	0.22	0.28
WIGGLY2	7/14/2005	6.07		2440	210	ND		ND	8.19		693	3.41	ND	301	0.133	4.76
WIGGLY4	14/07/2005	4.69		1720	157	ND		ND	6.86		452	4.88	ND	ND	0.121	9.75
WIGGLY5	7/14/2005	2.94		1780	119	ND		ND	4.73		475	2.44	ND	278	0.0833	4.89
WLP01	26/07/2006	7.27	ND	2130	2280	88.4	ND	11.4	9.32	7.1	342	7.28	0.2	ND	0.45	4.41
	10/08/2007	11		3400	600	230		12	9.2		510	1.5	0.54	ND	0.54	0.55
WLS04D	7/26/2006	7.97	8	2890	879	17.6	ND	1.09	8.5	6.3	615	1	0.0663	95	0.137	1.23
	8/11/2007	5.8		2500	190	12		0.6	6.8		390	0.37	0.23	ND	0.23	0.28

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals

**Pebble Project**  
**Summary of Mine Area**  
**Sediment Inorganic Analytical Results, 2004-2007**

Sample Station Location ID	Date Sampled	Vanadium (mg/Kg)	Zinc (mg/Kg)	Zinc- SEM (mg/Kg)	Chloride (mg/Kg)	Fluoride (mg/Kg)	Sulfate (mg/Kg)	Sulfur (mg/Kg)	Acid-Volatile Sulfide (mg/Kg)	Cyanide (mg/Kg)	Cyanide, Weak Acid Dissociable (mg/Kg)	Nitrogen, Ammonia (as N) (mg/Kg)
UT119A	6/4/2004	47.4	33							0.97	0.81	406
	7/15/2004	38.5	49.7		1.53	0.538	56.6			0.084		48.9
	9/16/2004	35.5	30.5		0.806	ND	2.08			0.21		32.5
	6/2/2005	29.5	30.1		4.01	3.5	23.4			0.047		74.7
	6/17/2006	30.3	39.4	8.6	1.17	ND	ND	156	ND	0.04		33.5
	6/20/2007	30	41		ND	0.14	2.6			ND		36
UT119B	10/07/2005	35.6	42.2		0.651	0.827	3.28			ND		27.6
	17/06/2006	47	56.2	14.8	2.08	0.462	ND	156	ND	0.065		76.2
UT138A	7/15/2004	56.9	66.6		1.34	0.576	26.2			0.082		58.5
	9/17/2004	54.6	61.3		1.14	0.306	2.12			0.091		ND
UT141A	15/07/2004	41.7	53.9		1.3	0.376	148			0.067		47.4
	17/09/2004	50.8	55.2		0.609	ND	5.48			0.13		82.8
	09/07/2005	40.6	49.1		3.34	0.872	3.98			0.042		195
	17/06/2006	45.7	66	14.6	0.534	ND	2.21	262	ND	0.045		41.8
	20/06/2007	51	57		ND	0.56	5			0.18		110
UT146A	7/15/2004	41.7	114		2.27	1.07	122			0.34		60.8
	9/17/2004	46.1	138		0.427	1.04	11.3			0.43		11.8
WIGGLY	12/08/2007	21	37		ND	ND	2			ND		36
WIGGLY2	7/14/2005	33.2	57.2		2.46	ND	53			ND		852
WIGGLY4	14/07/2005	31.9	41.4		10.3	ND	14			ND		932
WIGGLY5	7/14/2005	21.2	30.9		4.14	ND	6.58			ND		426
WLP01	26/07/2006	40.3	56.8	52.5	3.07	ND	9.47	2750	241	0.088		664
	10/08/2007	57	42		4.9	0.56	17			ND		810
WLS04D	7/26/2006	40.4	49.7	38.7	ND	ND	4.79	194	ND	0.044		28
	8/11/2007	30	43		ND	ND	2.8			ND		69

mg/Kg milligram per kilogram

µg/Kg microgram per kilogram

ND not detected above method reporting limit

SEM Acid Volatile Sulfides Simultaneous Extracted Metals