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Memo

To:	Chris Hanks, Newmont Bill Patterson, Newmont	**Date:**	June 1, 2010
cc:		**From:**	Lisa Barazzuol Kelly Sexsmith
Subject:	Geochemical characterization of Boston camp fuel berm sample - FINAL	**Project #:**	1CH008.014

1 Introduction

In support of the most recent waste rock and ore management plan for Boston, SRK completed a geochemical assessment of materials from the ore stockpiles, edges of the Boston camp pad and airstrip (SRK 2009a). One objective of SRK (2009a) was to assess the distribution and geochemically characterize ore stockpile material that had been used for construction projects, such as airstrip resurfacing and repairs to the road and camp pad. Since this initial investigation, SRK geochemists learned that the fuel tank berm was constructed using ore stockpile material. Samples of the berm were not previously geochemically characterized. In August 2009, a sample of the Boston fuel tank farm berm was obtained by an SRK geochemist. This memorandum presents the results for this sample.

2 Methods

Inspection of the fuel containment berm on August 8, 2009 by an SRK geochemist confirmed that the tank farm was constructed from ore stockpile material. The material was predominantly pink and grey-green schistose sediments with quartz veining or black mafic volcanics. Disseminated 1 to 2 mm cubic pyrite was associated with the mafic volcanics and quartz. Weathered iron carbonate minerals were associated with quartz. A sample of the < 1cm fraction was obtained from the southern berm of the fuel containment area. The sample was submitted to Cantest Ltd. for the analysis of Modified acid-base accounting (ABA), total inorganic carbon (TIC) and trace elements using aqua regia digestion with ICP-MS finish.

3 Results and Discussion

The ore sample contained high levels of sulphide but was characterized as non-PAG based on ratios of NP/AP and TIC/AP (Table 1). Values of TIC were higher than NP, likely due to the presence of iron carbonate minerals, which have been documented at the Boston deposit. Iron carbonates provide less buffering capacity than calcium or magnesium carbonates. ABA data were comparable to the other ore samples from Boston (Table 2).

Trace element content was compared to ten times the average crustal abundance for basalt (Price 1997) to screen for contaminants of potential concern (Table 3). Based on solid-phase data only, elevated parameters included arsenic, antimony, tungsten and selenium. The arsenic content was higher than other Boston ore samples but antimony, tungsten and selenium were within the range of the existing sample set (Table 4).

Table 1: Acid-Base Accounting Data

Sample ID	Paste pH	Total S (Wt.%)	Sulphate (Wt.%)	Sulphide (Wt.%)	Modified NP ($kgCaCO_3/t$)	TIC ($kgCaCO_3/t$)	Fizz Rating	NP/AP	TIC/AP
09-BOS-01B	8.7	2.34	0.04	2.30	222.5	301.8	Strong	3.1	4.2

Table 2: ABA Data for Boston Ore Stockpile Samples (SRK 2009a)

Statistic	Paste pH	Total S (Wt.%)	Sulphate (Wt.%)	Sulphide (Wt.%)	Modified NP ($kgCaCO_3/t$)	TIC ($kgCaCO_3/t$)
Minimum	8.12	0.13	0.01	0.13	135.10	185.91
Median	8.48	2.01	0.01	2.00	239.90	356.59
Maximum	8.85	4.04	0.02	4.02	307.45	418.41

Table 3: Trace Element Data

Sample ID	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb
09-BOS-01B	0.4	120.2	11.4	61	1.5	247.3	61.9	1328	6.76	3120	<0.1	4005
Crustal Abundance for Basaltic Rocks	*1.5*	*87*	*6*	*105*	*0.11*	*130*	*48*	*1500*	*8.65*	*2*	*1*	*4*
Sample ID	**Th ppm**	**Sr ppm**	**Cd ppm**	**Sb ppm**	**Bi ppm**	**V ppm**	**Ca %**	**P %**	**La ppm**	**Cr ppm**	**Mg %**	**Ba ppm**
09-BOS-01B	0.1	48	0.2	3.8	<0.1	45	5.98	0.025	<1	170	2.54	29
Crustal Abundance for Basaltic Rocks	*4*	*465*	*0.22*	*0.2*	*0.007*	*250*	*7.6*	*0.11*	*15*	*170*	*4.6*	*330*
Sample ID	**Ti %**	**B ppm**	**Al %**	**Na %**	**K %**	**W ppm**	**Hg ppm**	**Sc ppm**	**Tl ppm**	**S %**	**Ga ppm**	**Se ppm**
09-BOS-01B	0.002	<20	1.08	0.159	0.11	11	<0.01	12.1	<0.1	2.2	2	1.6
Crustal Abundance for Basaltic Rocks	*1.38*	*5*	*7.8*	*1.8*	*0.83*	*0.7*	*0.09*	*30*	*0.21*	*#N/A*	*17*	*0.05*

Table 4: Trace Metal Data for Boston Ore Stockpile Samples (SRK 2009a)

Statistic	As ppm	Sb ppm	W ppm	Se ppm
Minimum	199.3	0.7	0.2	<0.5
Median	693.7	1.3	0.9	1.3
Maximum	2943.3	4.3	63.3	4.8

4 References

SRK 2009a. Geochemical Characterization of Historic Waste Rock and Ore Stockpiles at the Boston Deposit, Hope Bay Project, Nunavut. Report prepared for Hope Bay Mining Ltd. by SRK Consulting (Canada) Inc., April 2009.

SRK 2009b. Water and Ore/Waste Rock Management Plan for the Boston Site, Hope Bay Project, Nunavut. Report prepared for Hope Bay Mining Ltd. by SRK Consulting (Canada) Inc., July 2009.