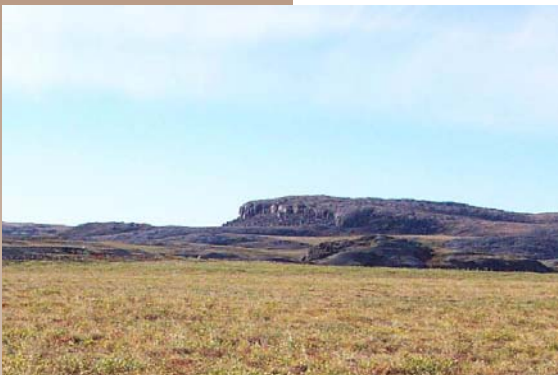




Geochemical Characterization of Portal Development Rock, Doris North Project, Hope Bay, Nunavut, Canada (Revised March 2007)

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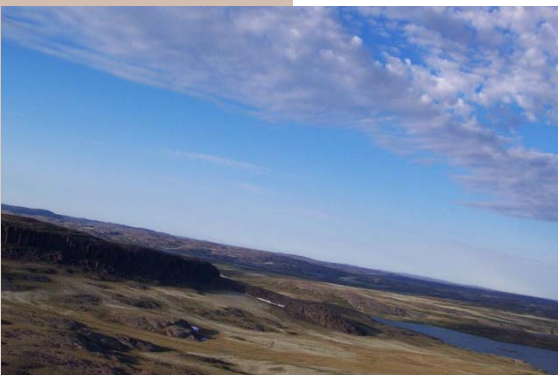


Prepared by:



SRK Project No. 1CM014.008.241

March 2007



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March 2007

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1 Introduction

This report provides the details and results of a 2006 geochemical drilling, sampling and analysis program in support of the Doris North Project. The objective of this program was to characterize representative samples from the planned Doris North portal development rock to verify that these rock sources will not be a source of metal leaching or acid rock drainage (ML/ARD) when temporarily stockpiled on surface at the mill site. Portal development rock will be produced at the beginning of mine life, as the underground access ramp is driven from the collar location to the ore body. The access ramp is expected to pass through unmineralized to weakly mineralized gabbro, diabase, and basalt.

This document is not intended to provide a complete geochemical assessment of waste rock to be mined from adjacent to the ore as part of the Doris North mine development and operation. The reader is referred to the following geochemical characterization reports for this information:

- ARD and Metal Leaching Characterization Studies in 2003 – 2005 Doris North Project, Nunavut, Canada. Prepared for Miramar Hope Bay Ltd. by AMEC Earth & Environmental, dated October 2005 – Supporting Document B2 to the Technical Report component of the Final Environmental Impact Statement submitted to the Nunavut Environmental Impact Review Board in October 2005; and
- Integrated ARD Characterization Report – Hope Bay Project. Prepared for the Hope Bay Joint Venture by Knight Piesold Ltd, dated June 2002 – Supporting Document B4 to the Technical Report component of the Final Environmental Impact Statement submitted to the Nunavut Environmental Impact Review Board in October 2005.

The ML/ARD characteristics of the ore zone waste rock are not discussed in this report. This report addresses the ML/ARD characteristics of the waste rock that will be generated during development of the portal and access ramp (decline) to be developed to access the Doris North deposit. This rock will become the base of the temporary waste rock stockpile (rock from the decline will be the first rock placed on top of the temporary waste rock stockpile pad. The pad itself will be constructed of quarried rock).

2 Sample Collection

Samples were collected through diamond drilling over the period of May 28 through June 4, 2006. A total of four holes were drilled along the alignment of the proposed decline. Table 1 shows the surveyed coordinates of these four boreholes. Locations of drillhole collars are shown in Figure 1.

Core was logged and sampled by MHL geologists and shipped to Vison Scitec in Vancouver for static geochemical testing. Samples were generally collected on 1 m intervals over the core length passing through the proposed development rock.

Table 1: Survey coordinates for 2006 portal alignment drillholes

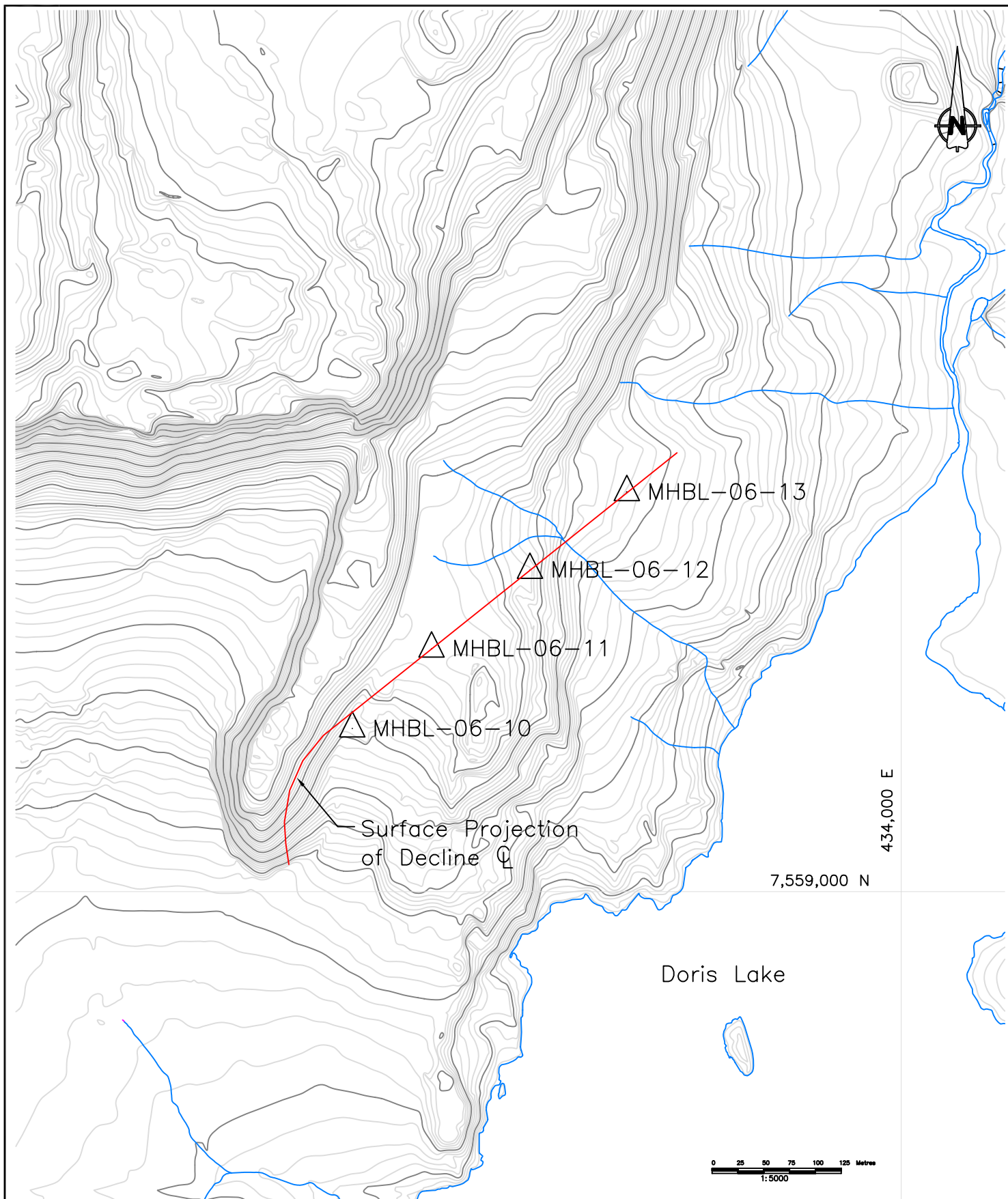
Drillhole Name (for plotting, sampling and analysis)	Drillhole Name (for drilling and logging)	Northing (UTM NAD 83, Zone 13w)	Easting (UTM NAD 83, Zone 13w)	Elevation (m.a.s.l.)	Azimuth (degrees)	Dip (degrees)	Date Drilled
MHBL06-10	06TDD615	7559158.03	433468.34	56.6	281.9	-63.6	31-May-06
MHBL06-11	06TDD614	7559235.38	433545.14	63.26	0	-90.0	30-May-06
MHBL06-12	06TDD613A	7559311.648	433640.471	63.92	0	-90.0	28-May-06
MHBL06-13	06TDD616	7559387.085	433734.304	46.55	0	-90.0	4-Jun-06

3 Methods of Geochemical Characterization

Acid-base accounting (ABA) tests were carried out on all 125 samples collected. ABA tests included paste pH, determination of Sobek neutralization potential (NP), determination of total sulphur and sulphate-sulphur, and determination of total inorganic carbon (TIC).

Trace element analysis was carried out by aqua regia digestion followed by ICP-MS. Major oxides were determined by x-ray fluorescence (XRF) following lithium borate fusion.

Laboratory testing was carried out at Vison Scitec of Vancouver, B.C.



Geochemical Characterization
of Portal Development Rock

2006 Portal Alignment Drillhole Plan

SRK JOB NO.: 1CM014.008.241

FILE NAME: DRILLHOLE PLAN_Quarry.dwg

Doris North Project

DATE:
March 2007

APPROVED:
DBM

FIGURE:
1

4 Results and Discussion

4.1 Visual observations of drill core

Logging of core from four drillholes along the proposed decline alignment demonstrated that a single rock type occurs over the intersection of the decline rock mass for each drillhole. Table 2 summarizes the rock types intersected and down-hole core intervals sampled that include the decline intersection. Veins were noted to comprise 0.5 to 4% of the core, and vein minerals were visually identified as quartz, calcite, dolomite, and epidote. Traces of pyrite, chalcopyrite, and hematite were noted. Complete core logs are provided in Appendix A.

Table 2: Rock types and sample intervals for 2006 portal alignment drillholes

Drillhole Name	Rock Type	Sampled Interval Containing Development Rock Intersection (down-hole length)	
		From (m)	To (m)
MHBL06-10	diabase	25	55
MHBL06-11	gabbro	40	68
MHBL06-12	basalt	46	71
MHBL06-13	basalt	40	69

4.2 Static test results

4.2.1 ABA characteristics of portal development rock

NP content of the core samples tested varied widely between basalt and gabbro + diabase. Basalt from drillholes MHBL06-12 and MHBL06-13 returned NP results ranging from 18 to 302 kg CaCO₃/tonne, with an average NP of 157 kg CaCO₃/tonne. Diabase (drillhole MHBL06-10) and gabbro (drillhole MHBL06-11) returned uniformly low NP values ranging from 8 to 19 kg CaCO₃/tonne. The diabase and gabbro results show that these rocks have little capacity to neutralize acid, while the basalt material is shown to have a much higher acid neutralization capacity.

The form of measured NP is an important factor in NP availability for neutralization of acid. For portal development rock, NP calculated from TIC (NP-TIC) is plotted against NP in Figure 2, and it is clear that most of the measured NP for diabase and gabbro samples was in a form other than carbonate. Figure 2 also shows that NP-TIC was substantially less than NP for the basalt samples.

A plot of NP and acid potential (AP) results is shown in Figure 3. A common screening criterion for assessing the potential for acid generation is an NP:AP ratio of 3. Most of the 125 samples analyzed returned NP:AP ratios greater than 3, with only 10 samples having NP:AP < 3.

Six of 125 samples had total sulphur contents exceeding 0.3%. All six of these samples were collected over short sample intervals (0.1 to 0.75 m) that were selected to target veins containing 3 to 50% sulphide mineral content by visual estimate. Five of these six samples had NP:AP ratios less

than 3. In general, the development rock samples tested were low in sulphur, as shown by the low AP values (<10 kg CaCO_3 /tonne) in Figure 3 for the majority of samples.

Figure 4 shows a plot NP calculated from TIC (NP-TIC) and AP. Sixty-one of the samples tested (fifty-two basalt, 2 diabase, 5 gabbro) returned NP-TIC:AP ratios of greater than 3. Diabase or gabbro made up 57 of the 64 samples with NP-TIC:AP <3 . Of the 7 basalt samples with NP-TIC:AP <3 , four had total sulphur content greater than 0.3%, as discussed above. NP-TIC:AP remained greater than 3 for most of the basalt samples tested.

Complete static test results are provided in Appendix B.

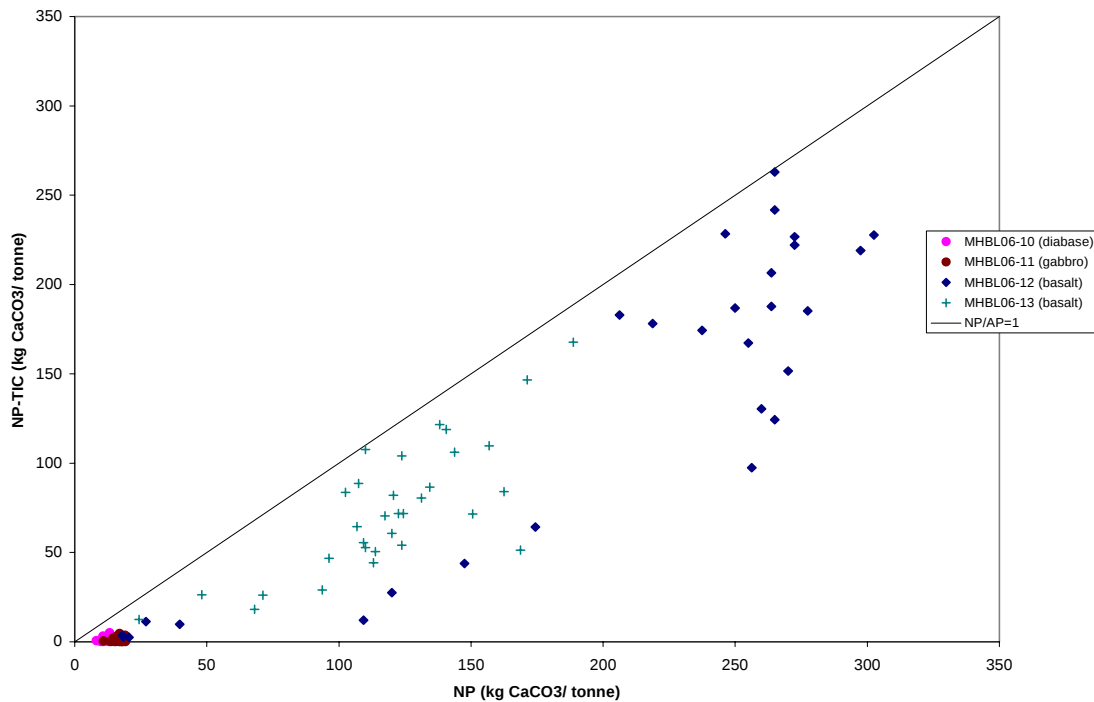


Figure 2: NP-TIC vs. NP for core from Doris North portal development rock

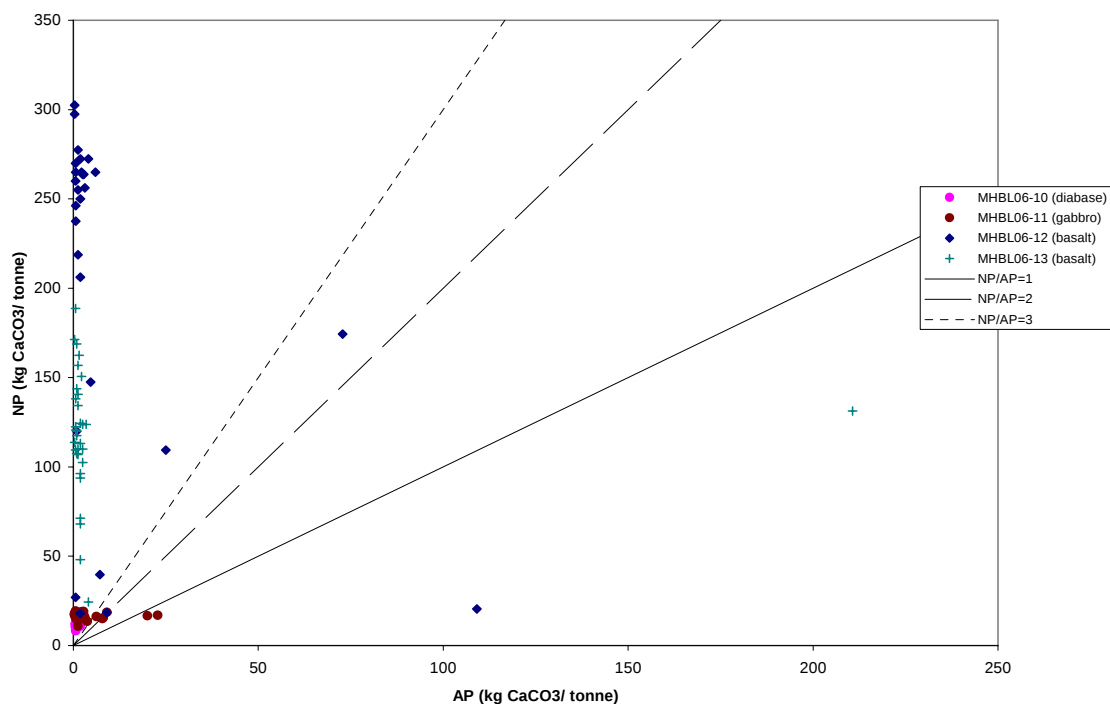


Figure 3: NP vs. AP for core from Doris North portal development rock

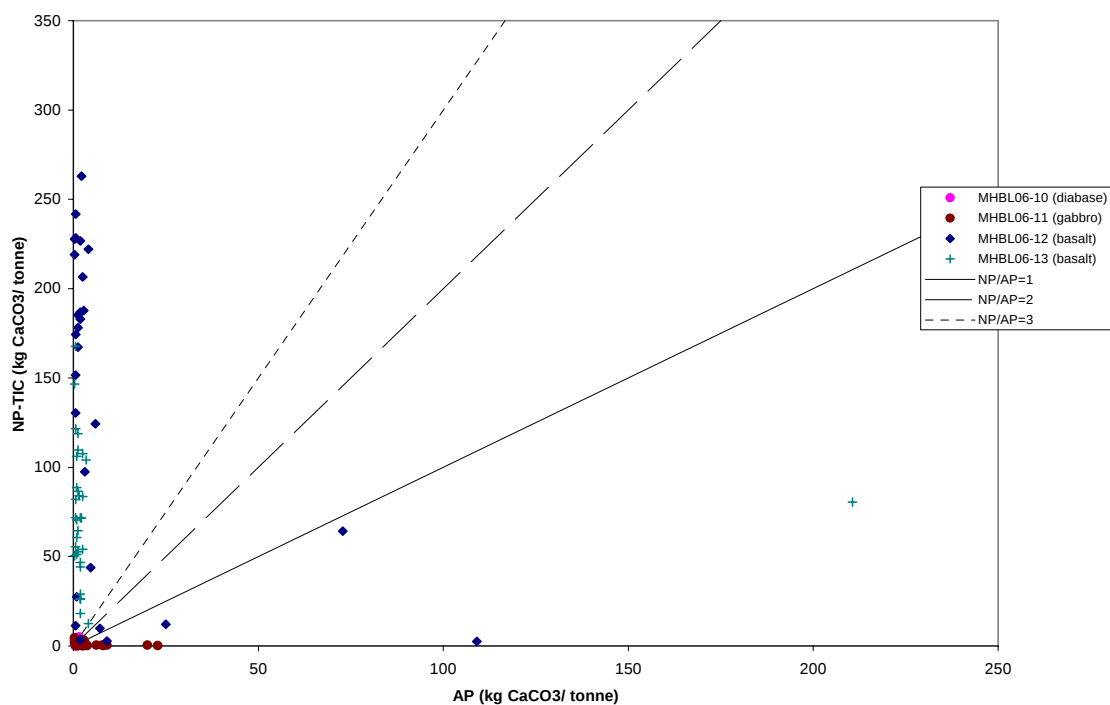


Figure 4: NP-TIC vs. AP for core from Doris North portal development rock

4.2.2 Trace element content of portal development rock

Copper concentrations were elevated (up to 5038 mg/kg) in a number of samples of the gabbro intersected in MHBL06-11, and most diabase samples (MHBL06-10) contained elevated copper (up to 820 mg/kg). In contrast, most basalt samples (MHBL06-12 and -13) had lower copper concentrations (range 14 to 450 mg/kg, median 34 mg/kg) that were comparable to the average crustal basalt copper concentration of 87 mg/kg (Table 3, after Price, 1997). However, there was a zone of anomalously high copper concentrations (130 to 450 mg/kg) at the base of the interval analysed in MHBL06-12. This anomalous interval stands out in Figure 5, which shows a plot of copper content against length for each of the four drillholes.

Lead, zinc, and several other elements were also found to have anomalously high concentrations over the lower interval of basalt from MHBL06-12; Figure 6 shows a plot of zinc concentration in each of the four boreholes with length. Disseminated, fracture-fill, and vein pyrite was logged over this interval, and although no base metal sulphides were observed, it is likely that sulphide mineralization was responsible for the observed trace element concentrations over this interval.

Other than metals discussed above, median trace element concentrations ranged from <0.1 to 1.6 times crustal average concentrations (Price, 1997), and are not likely to leach from development rock under neutral pH conditions in a quantity that impairs water quality in the receiving environment.

Table 3 Crustal average concentrations of selected elements in basaltic rocks

Copper	Zinc	Lead
(mg/kg)	(mg/kg)	(mg/kg)
87	105	6

*Data from Price, 1997

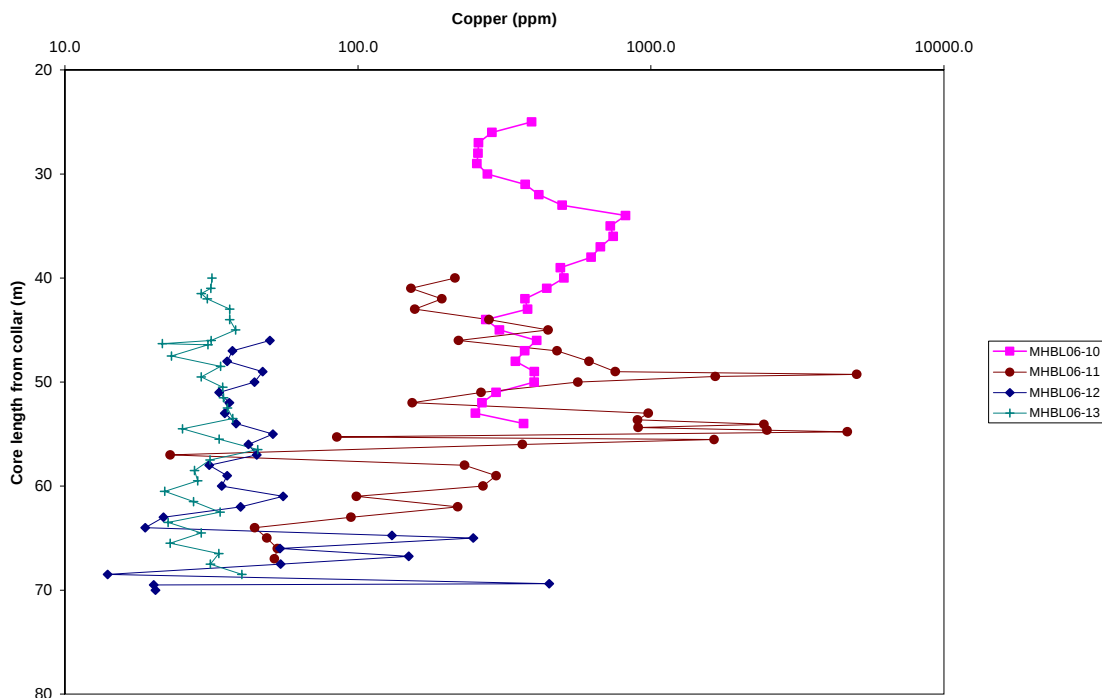


Figure 5: Copper concentrations as a function of length for core from Doris North portal development rock

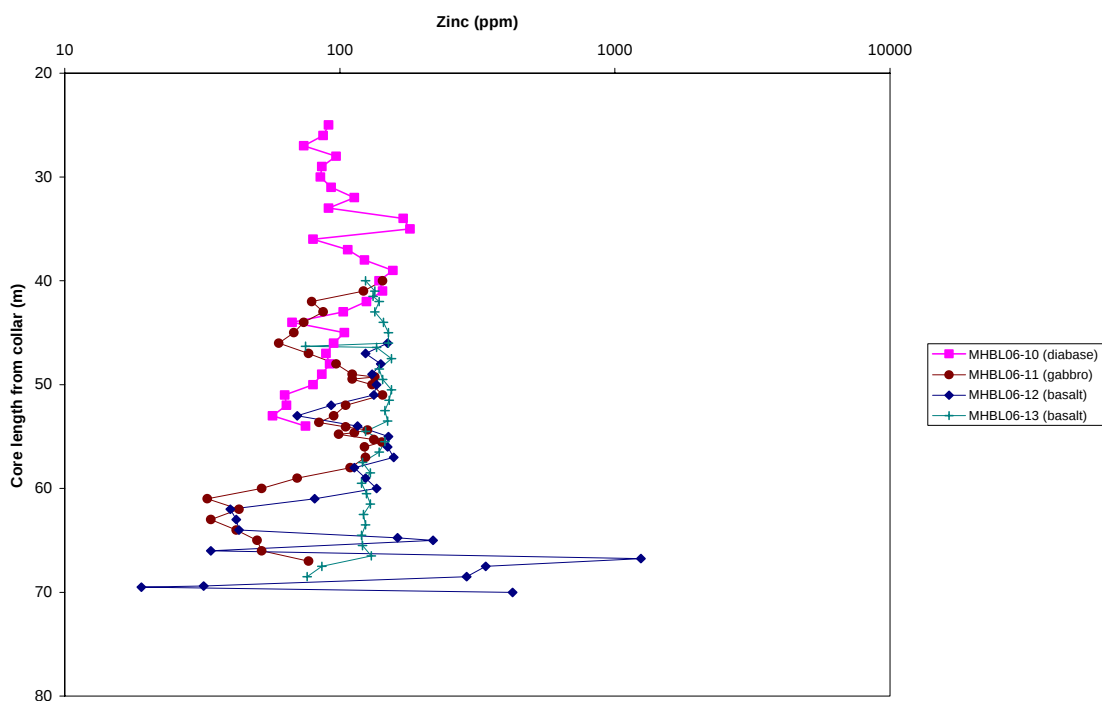


Figure 6: Zinc concentrations as a function of length for core from Doris North portal development rock

5 Conclusions and Recommendations

Analysis of development rock samples collected by diamond drilling along the proposed Doris North decline alignment has allowed the following conclusions to be made regarding the ML/ARD characteristics of the development rock:

- Total sulphur concentrations are generally less than 0.3%, and the potential for acid production is limited. Several narrow intervals (0.1 to 0.75 m) containing vein material were sampled, some of which returned much higher sulphur contents (up to 6.8%). These intervals will be mixed with rock containing low concentrations (<0.3%) of total sulphur and excess NP as a natural course of mining.
- A significant component (approximately 23%, on average) of the analytically-determined NP for all rock types was found to be derived from sources other than carbonates.
- Diabase and gabbro were found to have low AP (0.3 to 23 kg CaCO₃/ tonne, median 0.93 kg CaCO₃/tonne) and very low NP (8 to 19 kg CaCO₃/ tonne, median 16 CaCO₃/ tonne). Most diabase and gabbro samples had NP-TIC:AP ratios below 3. However, the low sulphur content (median 0.04%) of these rocks limits the potential for acid production.
- Basalt was found to have a wide range of NP, and generally low AP. On average, the basalt appears to be strongly net acid consuming. However, the lower 6 m of MHBL06-12 had generally lower NP:AP ratios, and this material could be net acid generating.
- Copper concentrations were elevated in the gabbro and to a lesser degree in the diabase. Basalt from the lower portion of MHBL06-12 also returned elevated copper contents for isolated samples. Significant copper leaching from these materials is not likely under neutral pH conditions, but local development of acidic conditions could mobilize copper and other trace elements.

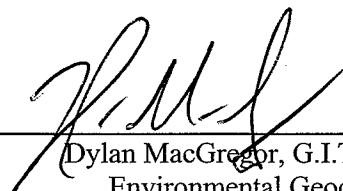
Miramar plans to temporarily stockpile development rock on surface until the material can be backfilled into voids generated during mining of the Doris North ore body, where it will be completely encased in permafrost. Management of development rock and waste rock from adjacent to the ore zone is described in Section 4.4 of the Revised Water License Application Support Document, and in Sections 3 and 4 of Supporting Document S10d- Waste Rock Management Plan.

Given the short period of exposure (up to 2 years), the cold conditions, the low precipitation, the generally low sulphur content of the development rock, and the substantial NP contained in the development basalt, there is a high level of confidence that the practice of temporarily stockpiling portal development rock will not lead to generation of ARD or to environmentally-significant metal leaching.

Precipitation runoff and drainage from the temporary waste rock stockpile will be collected in a pollution control pond and then pumped via the mill to the tailings containment area. The quality of this water will be monitored as part of the water license SNP as described in Section 4 of Supporting Document S10d- Waste Rock Management Plan.

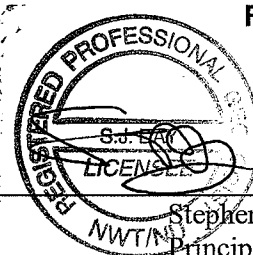
This report, "**Geochemical Characterization of Portal Development Rock, Doris North Project, Hope Bay, Nunavut, Canada (Revised March 2007)**" has been prepared by SRK Consulting (Canada) Inc.

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6 References

AMEC Earth and Environmental, 2005. Supporting Document B2: ARD and Metal Leaching Characterization Studies in 2003-2005, Doris North Project, Nunavut, Canada. *In* Supporting Documents A3- B3 Supplemental to Final Environmental Impact Statement: Doris North Project, Nunavut, Canada. Prepared for Miramar Hope Bay Limited, October 2005.

Price, W.A., 1997. DRAFT Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia. BC Ministry of Employment and Investment, Energy and Minerals Division. 159 pp.

Appendix A
2006 Portal Alignment Drillhole Logs

Table of Drillhole Equivalents

2006 geochemical characterization drillholes were drilled and logged using drillhole names beginning with '06TDD6'. Sampling and chemical analysis was carried out after renaming drillholes with names beginning with 'MHBL06-', and the drillhole plan in Figure 1 shows the 'MHBL06-' series labels. The table below shows how the drillhole logs correspond to mapped collar locations and analytical results.

Drillhole sampled, analyzed and plotted as:	Drillhole drilled and logged as:
MHBL06-10	06TDD615
MHBL06-11	06TDD614
MHBL06-12	06TDD613A
MHBL06-13	06TDD616

Initials: _____

Initials: _____

06TDD613A

Initials: _____

From	To	Litho	Surface Code
3.60	71.00	BSLT	1py

(Continued from previous page)

STRUCTURES					ALTERATION										VEINS						MINERALIZATION								SAMPLES								
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

17.00 26.00 1 FG -

Fine grained pyrite disseminated throughout.

19.50 40.50 1 0 0 3

White, 1-5 mm thick, fragmented and irregular calcite veins at various angles t.c.a.

26.00 33.00 3 FG -

Fine grained pyrite in small patches.

33.00 40.00 2 FG -

Fine grained pyrite in small patches.

40.00 61.00 1 FG -

Fine grained pyrite disseminated throughout.

40.50 59.00 3 0 0 2

White-grey, 1-3 cm thick, patchy and irregular calcite veining sub-parallel to foliation.

46.00 47.00 214262
 47.00 48.00 214263
 48.00 49.00 214264
 49.00 50.00 214265
 50.00 51.00 214266
 51.00 52.00 214267
 52.00 53.00 214268
 53.00 54.00 214269
 54.00 55.00 214270
 55.00 56.00 214271
 56.00 57.00 214272
 57.00 58.00 214273
 58.00 59.00 214274
 59.00 60.00 214275

59.00 65.00 2 30 0 0.5

White-grey, 1-5 cm thick quartz-calcite veins at 60-80 degrees t.c.a.

Initials:

Page 3 of 3

HBJV Drill Log
Doris Hinge

Signature: _____
Initials: _____

06TDD614

From	To	Litho	Surface Code
0.00	7.51	OB	

Overburden and boulders to 7.51 m.

STRUCTURES					ALTERATION												VEINS						MINERALIZATION								SAMPLES						
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

From	To	Litho	Surface Code
7.51	68.00	GAB	10a

Gabbro; Dark green, medium grained gabbro. Leucoxene noted.

STRUCTURES					ALTERATION												VEINS							MINERALIZATION								SAMPLES					
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

7.51	68.00	FOL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
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06TDD614

Initials: _____

From	To	Litho	Surface Code
7.51	68.00	GAB	10a

(Continued from previous page)

STRUCTURES					ALTERATION										VEINS						MINERALIZATION							SAMPLES									
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

27.00 32.00 2 0 0 1 30
 Grey-white, 5-20 mm thick calcite veins at 25-40 degrees t.c.a., oxidized hematite staining noted.

31.66 31.78 0.1 FG - CP 5
 Fine grained pyrite disseminated throughout, strong amount of chalcopyrite within vein.
 31.78 38.00 0.1 FG - CP 0.5
 Fine grained pyrite disseminated throughout, chalcopyrite associated with veining.

32.00 38.00 0.5 0 0 1
 Grey, 5-10 mm thick calcite veining at various angles t.c.a.

38.00 38.16 0.1 FG - CP 2
 Fine grained pyrite disseminated throughout, strong chalcopyrite associated with veining.

38.00 40.00 3 0 0 1 30
 Grey-mauve, 1-6 cm thick calcite veins at 20-40 degrees t.c.a., oxidized hematite staining observed.

38.16 39.62 0.5 FG - CP 0.1
 Fine grained pyrite disseminated throughout, weak chalcopyrite.
 39.62 49.26 1 FG - CP 0.5
 Fine grained pyrite in patches, weak chalcopyrite associated with veining.

40.00 53.38 1 0 0 2
 Grey, 3-10 mm thick calcite veins at various angles t.c.a.

40.00 41.00 214291

41.00 42.00 214292
 42.00 43.00 214293
 43.00 44.00 214294

Initials:

[illegible]

Initials: _____

(Continued from previous page)

57.00 68.00 1 FG - CP 0.5

55.29	55.53	214512
55.53	56.00	214513
56.00	57.00	214514
57.00	58.00	214515

58.00	59.00	214516
59.00	60.00	214517
60.00	61.00	214518
61.00	62.00	214519
62.00	63.00	214520
63.00	64.00	214521
64.00	65.00	214522
65.00	66.00	214523
66.00	67.00	214524
67.00	68.00	214525

HBJV Drill Log
Doris Hinge

Signature: _____

Initials: _____

06TDD615

From	To	Litho	Surface Code
0.00	2.50	OB	

Overburden to 2.50 m.

STRUCTURES					ALTERATION												VEINS						MINERALIZATION								SAMPLES						
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

From	To	Litho	Surface Code
2.50	5.58	BSLT	1p

Pillowed Basalt; Dark green to black, fine grained basalt. Chlorite stringers noted.

STRUCTURES					ALTERATION												VEINS							MINERALIZATION								SAMPLES					
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

2.50 5.57 FOL
No visible foliation.

2.50 5.58 W - W - M - - - -
Pervasive chlorite alteration. Unit is weakly silicified.

2.50 5.58 1 50 0 0.5
White-grey, 3-5 mm thick quartz-
calcite veins at various angles t.c.a.

2.50 5.58 1 MG -
Medium grained pyrite associated with
selvages.

5.57 5.58 CON 30 W
Sharp contact.

From	To	Litho	Surface Code
5.58	62.00	DIAB	11c

Diabase; Grey to black, very coarse grained, highly magnetic.

STRUCTURES					ALTERATION												VEINS						MINERALIZATION								SAMPLES						
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

5.58 14.17 0 0 0
No veining observed.

From	To	Litho	Surface Code
5.58	62.00	DIAB	11c

Diabase; Grey to black, very coarse grained, highly magnetic.

STRUCTURES					ALTERATION												VEINS							MINERALIZATION								SAMPLES					
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

5.5862.00FOL
No internal structure.

5.5862.00- - - - -
No alteration observed.

5.5862.000 - -
No sulphides observed.

14.1714.281500120
White-grey, 1 cm thick quartz-calcite
vein at 20 degrees t.c.a.

14.2844.53000
No veining observed.

- 25.0026.00214526
- 26.0027.00214527
- 27.0028.00214528
- 28.0029.00214529
- 29.0030.00214530
- 30.0031.00214531
- 31.0032.00214532
- 32.0033.00214533
- 33.0034.00214534
- 34.0035.00214535
- 35.0036.00214536
- 36.0037.00214537
- 37.0038.00214538
- 38.0039.00214539
- 39.0040.00214540
- 40.0041.00214541
- 41.0042.00214542
- 42.0043.00214543
- 43.0044.00214544
- 44.0045.00214545

44.5344.650.3500125
White-grey, 3 mm thick quartz-
calcite vein at 25 degrees t.c.a.

44.6562.00000
No veining observed.

45.0046.00214546

From	To	Litho	Surface Code	(Continued from previous page)														
5.58	62.00	DIAB	11c															

STRUCTURES					ALTERATION													VEINS							MINERALIZATION									SAMPLES			
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

46.00 47.00 214547
47.00 48.00 214548
48.00 49.00 214549
49.00 50.00 214550
50.00 51.00 214551
51.00 52.00 214552
52.00 53.00 214553
53.00 54.00 214554
54.00 55.00 214555

HBJV Drill Log
Doris Hinge

Signature: _____
Initials: _____

06TDD616

From	To	Litho	Surface Code
0.00	18.56	OB	

Overburden to 18.56 m.

STRUCTURES					ALTERATION												VEINS							MINERALIZATION								SAMPLES					
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

From	To	Litho	Surface Code
18.56	69.69	BSLT	1ay

Amygdaloidal Basalt; Strongly altered at the top of hole to dolomite and sericite. Moderately to strongly foliated, amygdules stretched. Epidote alteration noted downhole. Quartz vein with 10 cm alteration halo and strong pyrite mineralization from 46.31 - 46.41 m depth.

STRUCTURES					ALTERATION												VEINS							MINERALIZATION								SAMPLES					
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

18.56 22.00 M M - W M - - - - -
Banded dolomite with sericite and chlorite, diffuse contacts.

18.56 30.20 5 50 50 5 30 18.56 30.20 2 FG -
White-grey, 3-20 mm thick boudined
quartz-dolomite veins sub-parallel
t.c.a. Fine grained pyrite disseminated
throughout.

18.56 37.42 FOL 30 M
Strong to moderate
foliation at 30 degrees
t.c.a., decreasing in
intensity downhole.

22.00 25.03 S M - S M - - - - -
25.03 35.22 M W - M M - - - - -

30.20 30.35 90 50 50 1 30 30.20 30.35 5 SEUH -
White-pink, boudined quartz-
dolomite veining. Fine to medium grained pyrite
associated with veining.

06TDD616

Initials: _____

From	To	Litho	Surface Code
18.56	69.69	BSLT	1ay

(Continued from previous page)

STRUCTURES					ALTERATION												VEINS						MINERALIZATION							SAMPLES							
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	OZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

30.35 34.00 3 50 50 6 30
 White-grey, 3-10 mm thick boudined
 quartz-dolomite veining sub-parallel.

30.35 38.50 1 FG -
 Fine grained pyrite disseminated
 throughout.

34.00 34.50 40 50 50 4 30
 White-grey, boudined quartz-
 dolomite veining sub-parallel t.c.a.

34.50 38.50 2 50 50 3 30
 White-grey, 2-5 mm thick boudined
 quartz-dolomite veins sub-parallel
 t.c.a., white 3-5 mm thick quartz-
 dolomite veins cross-cutting foliation
 at various angles t.c.a.

35.22 37.42 W VW - W M - - - - -
 37.42 41.50 VW - - - M - - - - -

37.42 69.69 FOL 25 W
 Weak foliation at 25-30
 degrees t.c.a.

38.50 46.31 2 MG -
 Fine to medium grained pyrite
 disseminated throughout.

38.50 56.50 0.3 30 0 0.25
 White, 1-10 mm thick dominantly
 calcite veining at various angles t.c.a.

40.00 41.00 214556
 41.00 41.50 214557
 41.50 42.00 214558

41.50 51.50 VW - - - M - - - - W

42.00 43.00 214559
 43.00 44.00 214560
 44.00 45.00 214561

October 18, 2006

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Initials:

October 18, 2006

From	To	Litho	Surface Code	(Continued from previous page)														
18.56	69.69	BSLT	1ay															

STRUCTURES					ALTERATION													VEINS							MINERALIZATION								SAMPLES				
From	To	Struct	CA	Strain	From	To	INT	SR	SIL	DL	CL	TO	AB	FU	CC	EP	MT	From	To	Vn%	QZ%	DL%	V/m	CA	From	To	PY%	Style	VG	Min	Min%	Min2	M2%	From	To	Sample	Au g/t

67.50 68.50 214586
68.50 69.00 214587

Appendix B

Static Test Results

Laboratory sample ID and equivalent drillhole and sample interval

Sample ID	From (m)	To (m)	Drillhole drilled and logged as:	Drillhole plotted, sampled and analyzed as:
HB-214526	25	26	06TDD615	MHBL06-10
HB-214527	26	27	06TDD615	MHBL06-10
HB-214528	27	28	06TDD615	MHBL06-10
HB-214529	28	29	06TDD615	MHBL06-10
HB-214530	29	30	06TDD615	MHBL06-10
HB-214531	30	31	06TDD615	MHBL06-10
HB-214532	31	32	06TDD615	MHBL06-10
HB-214533	32	33	06TDD615	MHBL06-10
HB-214534	33	34	06TDD615	MHBL06-10
HB-214535	34	35	06TDD615	MHBL06-10
HB-214536	35	36	06TDD615	MHBL06-10
HB-214537	36	37	06TDD615	MHBL06-10
HB-214538	37	38	06TDD615	MHBL06-10
HB-214539	38	39	06TDD615	MHBL06-10
HB-214540	39	40	06TDD615	MHBL06-10
HB-214541	40	41	06TDD615	MHBL06-10
HB-214542	41	42	06TDD615	MHBL06-10
HB-214543	42	43	06TDD615	MHBL06-10
HB-214544	43	44	06TDD615	MHBL06-10
HB-214545	44	45	06TDD615	MHBL06-10
HB-214546	45	46	06TDD615	MHBL06-10
HB-214547	46	47	06TDD615	MHBL06-10
HB-214548	47	48	06TDD615	MHBL06-10
HB-214549	48	49	06TDD615	MHBL06-10
HB-214550	49	50	06TDD615	MHBL06-10
HB-214551	50	51	06TDD615	MHBL06-10
HB-214552	51	52	06TDD615	MHBL06-10
HB-214553	52	53	06TDD615	MHBL06-10
HB-214554	53	54	06TDD615	MHBL06-10
HB-214555	54	55	06TDD615	MHBL06-10
HB-214291	40	41	06TDD614	MHBL06-11
HB-214292	41	42	06TDD614	MHBL06-11
HB-214293	42	43	06TDD614	MHBL06-11
HB-214294	43	44	06TDD614	MHBL06-11
HB-214295	44	45	06TDD614	MHBL06-11
HB-214296	45	46	06TDD614	MHBL06-11
HB-214297	46	47	06TDD614	MHBL06-11
HB-214298	47	48	06TDD614	MHBL06-11
HB-214299	48	49	06TDD614	MHBL06-11
HB-214300	49	49.26	06TDD614	MHBL06-11
HB-214501	49.26	49.46	06TDD614	MHBL06-11
HB-214502	49.46	50	06TDD614	MHBL06-11
HB-214503	50	51	06TDD614	MHBL06-11
HB-214504	51	52	06TDD614	MHBL06-11
HB-214505	52	53	06TDD614	MHBL06-11
HB-214506	53	53.63	06TDD614	MHBL06-11
HB-214507	53.63	54.07	06TDD614	MHBL06-11
HB-214508	54.07	54.37	06TDD614	MHBL06-11
HB-214509	54.37	54.63	06TDD614	MHBL06-11
HB-214510	54.63	54.78	06TDD614	MHBL06-11
HB-214511	54.78	55.29	06TDD614	MHBL06-11
HB-214512	55.29	55.53	06TDD614	MHBL06-11
HB-214513	55.53	56	06TDD614	MHBL06-11
HB-214514	56	57	06TDD614	MHBL06-11
HB-214515	57	58	06TDD614	MHBL06-11
HB-214516	58	59	06TDD614	MHBL06-11
HB-214517	59	60	06TDD614	MHBL06-11
HB-214518	60	61	06TDD614	MHBL06-11
HB-214519	61	62	06TDD614	MHBL06-11
HB-214520	62	63	06TDD614	MHBL06-11
HB-214521	63	64	06TDD614	MHBL06-11
HB-214522	64	65	06TDD614	MHBL06-11
HB-214523	65	66	06TDD614	MHBL06-11
HB-214524	66	67	06TDD614	MHBL06-11
HB-214525	67	68	06TDD614	MHBL06-11

Laboratory sample ID and equivalent drillhole and sample interval

Sample ID	From (m)	To (m)	Drillhole drilled and logged as:	Drillhole plotted, sampled and analyzed as:
HB-214262	46	47	06TDD613A	MHBL06-12
HB-214263	47	48	06TDD613A	MHBL06-12
HB-214264	48	49	06TDD613A	MHBL06-12
HB-214265	49	50	06TDD613A	MHBL06-12
HB-214266	50	51	06TDD613A	MHBL06-12
HB-214267	51	52	06TDD613A	MHBL06-12
HB-214268	52	53	06TDD613A	MHBL06-12
HB-214269	53	54	06TDD613A	MHBL06-12
HB-214270	54	55	06TDD613A	MHBL06-12
HB-214271	55	56	06TDD613A	MHBL06-12
HB-214272	56	57	06TDD613A	MHBL06-12
HB-214273	57	58	06TDD613A	MHBL06-12
HB-214274	58	59	06TDD613A	MHBL06-12
HB-214275	59	60	06TDD613A	MHBL06-12
HB-214276	60	61	06TDD613A	MHBL06-12
HB-214277	61	62	06TDD613A	MHBL06-12
HB-214278	62	63	06TDD613A	MHBL06-12
HB-214279	63	64	06TDD613A	MHBL06-12
HB-214280	64	64.75	06TDD613A	MHBL06-12
HB-214281	64.75	65	06TDD613A	MHBL06-12
HB-214282	65	66	06TDD613A	MHBL06-12
HB-214283	66	66.75	06TDD613A	MHBL06-12
HB-214284	66.75	67.5	06TDD613A	MHBL06-12
HB-214285	67.5	68.5	06TDD613A	MHBL06-12
HB-214286	68.5	69.4	06TDD613A	MHBL06-12
HB-214287	69.4	69.5	06TDD613A	MHBL06-12
HB-214288	69.5	70	06TDD613A	MHBL06-12
HB-214289	70	71	06TDD613A	MHBL06-12
HB-214556	40	41	06TDD616	MHBL06-13
HB-214557	41	41.5	06TDD616	MHBL06-13
HB-214558	41.5	42	06TDD616	MHBL06-13
HB-214559	42	43	06TDD616	MHBL06-13
HB-214560	43	44	06TDD616	MHBL06-13
HB-214561	44	45	06TDD616	MHBL06-13
HB-214562	45	46	06TDD616	MHBL06-13
HB-214563	46	46.31	06TDD616	MHBL06-13
HB-214564	46.31	46.41	06TDD616	MHBL06-13
HB-214565	46.41	47.5	06TDD616	MHBL06-13
HB-214566	47.5	48.5	06TDD616	MHBL06-13
HB-214567	48.5	49.5	06TDD616	MHBL06-13
HB-214568	49.5	50.5	06TDD616	MHBL06-13
HB-214569	50.5	51.5	06TDD616	MHBL06-13
HB-214570	51.5	52.5	06TDD616	MHBL06-13
HB-214571	52.5	53.5	06TDD616	MHBL06-13
HB-214572	53.5	54.5	06TDD616	MHBL06-13
HB-214573	54.5	55.5	06TDD616	MHBL06-13
HB-214574	55.5	56.5	06TDD616	MHBL06-13
HB-214575	56.5	57.5	06TDD616	MHBL06-13
HB-214576	57.5	58.5	06TDD616	MHBL06-13
HB-214577	58.5	59.5	06TDD616	MHBL06-13
HB-214578	59.5	60.5	06TDD616	MHBL06-13
HB-214579	60.5	61.5	06TDD616	MHBL06-13
HB-214580	61.5	62.5	06TDD616	MHBL06-13
HB-214581	62.5	63.5	06TDD616	MHBL06-13
HB-214582	63.5	64.5	06TDD616	MHBL06-13
HB-214583	64.5	65.5	06TDD616	MHBL06-13
HB-214584	65.5	66.5	06TDD616	MHBL06-13
HB-214585	66.5	67.5	06TDD616	MHBL06-13
HB-214586	67.5	68.5	06TDD616	MHBL06-13
HB-214587	68.5	69	06TDD616	MHBL06-13

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Table 1: ABA Results for Miramar Hope Bay Windy Lake Samples - August 2006

Sample	Paste pH	CO2 (Wt.%)	CaCO3 Equiv. (Kg CaCO3/Tonne)	Total Sulphur (Wt.%)	Sulphate Sulphur (Wt.%)	Sulphide Sulphur* (Wt.%)	Maximum Potential Acidity** (Kg CaCO3/Tonne)	Neutralization Potential (Kg CaCO3/Tonne)	Net Neutralization Potential (Kg CaCO3/Tonne)	Fizz
HB-214262	8.4	8.22	186.8	0.12	0.06	0.06	1.9	250.0	248.1	Strong
HB-214263	8.6	8.26	187.7	0.11	0.02	0.09	2.8	263.8	260.9	Strong
HB-214264	8.6	8.15	185.2	0.10	0.06	0.04	1.3	277.5	276.3	Strong
HB-214265	8.5	9.77	222.0	0.20	0.07	0.13	4.1	272.5	268.4	Strong
HB-214266	8.6	7.84	178.2	0.10	0.06	0.04	1.3	218.8	217.5	Strong
HB-214267	8.7	7.67	174.3	0.08	0.06	0.02	0.6	237.5	236.9	Strong
HB-214268	8.7	10.64	241.8	0.08	0.06	0.02	0.6	265.0	264.4	Strong
HB-214269	8.6	11.57	263.0	0.11	0.04	0.07	2.2	265.0	262.8	Strong
HB-214270	8.8	9.98	226.8	0.12	0.06	0.06	1.9	272.5	270.6	Strong
HB-214271	8.9	10.05	228.4	0.07	0.05	0.02	0.6	246.3	245.6	Strong
HB-214272	8.7	10.02	227.7	0.09	0.10	0.01	0.3	302.5	302.2	Strong
HB-214273	8.7	8.05	183.0	0.11	0.05	0.06	1.9	206.3	204.4	Strong
HB-214274	8.8	9.09	206.6	0.12	0.04	0.08	2.5	263.8	261.3	Strong
HB-214275	8.9	9.64	219.1	0.09	0.08	0.01	0.3	297.5	297.2	Strong
HB-214276	8.9	7.36	167.3	0.09	0.05	0.04	1.3	255.0	253.8	Strong
HB-214277	9.0	5.47	124.3	0.23	0.04	0.19	5.9	265.0	259.1	Strong
HB-214278	8.9	6.67	151.6	<0.02	0.01	<0.02	0.6	270.0	270.0	Strong
HB-214279	9.2	5.74	130.5	<0.02	<0.01	<0.02	0.6	260.0	260.0	Strong
HB-214280	8.9	4.29	97.5	0.11	0.01	0.10	3.1	256.3	253.1	Strong
HB-214281	9.1	2.83	64.3	2.35	0.02	2.33	72.8	174.4	101.6	Strong
HB-214282	9.0	1.93	43.9	0.15	<0.01	0.15	4.7	147.5	142.8	Strong
HB-214283	9.3	1.21	27.5	0.04	0.01	0.03	0.9	120.0	119.1	Strong
HB-214284	8.9	0.53	12.0	0.81	0.01	0.80	25.0	109.4	84.4	Moderate
HB-214285	8.9	0.43	9.8	0.24	0.01	0.23	7.2	39.8	32.6	Slightly
HB-214286	9.3	0.50	11.4	<0.02	0.01	<0.02	0.6	27.0	27.0	Slightly
HB-214287	8.2	0.11	2.5	3.52	0.03	3.49	109.1	20.5	-88.6	None
HB-214288	8.9	0.16	3.6	0.07	0.01	0.06	1.9	18.0	16.1	None
HB-214289	8.9	0.12	2.7	0.30	0.01	0.29	9.1	18.5	9.4	None
HB-214526	9.7	0.10	2.3	0.02	<0.01	0.02	0.6	12.1	11.5	None
HB-214527	9.6	0.06	1.4	<0.02	<0.01	<0.02	0.6	11.8	11.8	None
HB-214528	9.7	0.02	0.5	<0.02	<0.01	<0.02	0.6	12.0	12.0	None
HB-214529	9.7	0.05	1.1	0.02	<0.01	0.02	0.6	12.3	11.6	None
HB-214530	9.7	0.11	2.5	0.02	<0.01	0.02	0.6	15.0	14.4	None
HB-214531	9.8	0.07	1.6	0.03	<0.01	0.03	0.9	11.4	10.4	None
HB-214532	9.5	0.08	1.8	0.03	<0.01	0.03	0.9	13.3	12.3	None
HB-214533	9.3	0.09	2.0	0.03	<0.01	0.03	0.9	12.0	11.1	None
HB-214534	9.3	0.08	1.8	0.04	<0.01	0.04	1.3	18.1	16.9	None
HB-214535	9.5	0.11	2.5	0.05	<0.01	0.05	1.6	11.8	10.2	None
HB-214536	9.4	0.14	3.2	0.06	<0.01	0.06	1.9	10.8	8.9	None
HB-214537	9.3	0.12	2.7	0.05	<0.01	0.05	1.6	18.4	16.8	None
HB-214538	9.5	0.22	5.0	0.05	<0.01	0.05	1.6	13.3	11.7	None
HB-214539	9.6	0.12	2.7	0.04	<0.01	0.04	1.3	15.8	14.5	None
HB-214540	9.4	0.10	2.3	0.03	<0.01	0.03	0.9	11.3	10.3	None
HB-214541	9.5	0.08	1.8	0.02	<0.01	0.02	0.6	17.0	16.4	None
HB-214542	9.6	0.09	2.0	0.03	<0.01	0.03	0.9	13.8	12.8	None
HB-214543	9.5	0.09	2.0	0.03	<0.01	0.03	0.9	12.1	11.2	None
HB-214544	9.9	0.06	1.4	0.02	<0.01	0.02	0.6	12.3	11.6	None
HB-214545	9.8	0.03	0.7	0.02	<0.01	0.02	0.6	16.8	16.1	None
HB-214546	9.8	0.05	1.1	0.03	<0.01	0.03	0.9	12.9	11.9	None
HB-214547	9.9	0.02	0.5	0.02	<0.01	0.02	0.6	12.5	11.9	None
HB-214548	9.8	0.03	0.7	0.02	<0.01	0.02	0.6	8.3	7.6	None
HB-214549	10.0	0.03	0.7	0.02	<0.01	0.02	0.6	16.1	15.5	None
HB-214550	9.8	0.04	0.9	0.02	<0.01	0.02	0.6	11.0	10.4	None
HB-214551	9.7	0.01	0.2	0.02	<0.01	0.02	0.6	13.0	12.4	None
HB-214552	9.8	0.01	0.2	0.02	<0.01	0.02	0.6	10.3	9.6	None
HB-214553	10.1	0.01	0.2	<0.02	<0.01	<0.02	0.6	10.8	10.8	None
HB-214554	10.1	0.01	0.2	0.02	<0.01	0.02	0.6	9.9	9.3	None
HB-214555	9.7	0.01	0.2	0.03	<0.01	0.03	0.9	13.8	12.8	None
HB-214556	9.0	3.16	71.8	0.14	0.08	0.06	1.9	124.4	122.5	Strong
HB-214557	8.9	3.15	71.6	0.13	0.06	0.07	2.2	150.6	148.4	Strong
HB-214558	9.0	2.67	60.7	0.09	0.06	0.03	0.9	120.0	119.1	Strong
HB-214559	8.9	2.26	51.4	0.10	0.07	0.03	0.9	168.8	167.8	Strong
HB-214560	8.9	2.38	54.1	0.15	0.07	0.08	2.5	123.8	121.3	Strong
HB-214561	8.9	2.32	52.7	0.10	0.06	0.04	1.3	110.0	108.8	Strong
HB-214562	8.8	3.10	70.5	0.11	0.08	0.03	0.9	117.5	116.6	Strong
HB-214563	8.8	3.16	71.8	0.06	0.06	0.00	0.0	122.5	122.5	Strong



Table 1: ABA Results for Miramar Hope Bay Windy Lake Samples - August 2006

HB-214564	8.3	3.54	80.5	6.82	0.08	6.74	210.6	131.3	-79.4	Strong
HB-214565	8.9	2.84	64.5	0.09	0.05	0.04	1.3	106.9	105.6	Strong
HB-214566	8.9	2.44	55.5	0.07	0.07	0.00	0.0	109.4	109.4	Strong
HB-214567	8.9	1.95	44.3	0.11	0.05	0.06	1.9	113.1	111.3	Strong
HB-214568	9.0	2.06	46.8	0.11	0.05	0.06	1.9	96.3	94.4	Strong
HB-214569	9.0	1.15	26.1	0.09	0.03	0.06	1.9	71.3	69.4	Strong
HB-214570	8.8	0.80	18.2	0.11	0.05	0.06	1.9	68.1	66.3	Strong
HB-214571	8.9	1.28	29.1	0.12	0.06	0.06	1.9	93.8	91.9	Strong
HB-214572	8.9	2.22	50.5	0.08	0.07	0.01	0.3	113.8	113.4	Strong
HB-214573	8.5	3.68	83.6	0.14	0.06	0.08	2.5	102.5	100.0	Moderate
HB-214574	8.6	4.58	104.1	0.13	0.02	0.11	3.4	123.8	120.3	Moderate
HB-214575	8.6	5.23	118.9	0.11	0.07	0.04	1.3	140.6	139.4	Moderate
HB-214576	8.8	3.61	82.0	0.07	0.05	0.02	0.6	120.6	120.0	Moderate
HB-214577	8.8	3.90	88.6	0.10	0.07	0.03	0.9	107.5	106.6	Moderate
HB-214578	8.6	6.45	146.6	0.09	0.08	0.01	0.3	171.3	170.9	Moderate
HB-214579	8.4	7.38	167.7	0.06	0.06	0.00	0.0	188.8	188.8	Moderate
HB-214580	8.5	4.83	109.8	0.11	0.07	0.04	1.3	156.9	155.6	Moderate
HB-214581	8.3	3.81	86.6	0.09	0.05	0.04	1.3	134.4	133.1	Moderate
HB-214582	8.3	3.70	84.1	0.10	0.05	0.05	1.6	162.5	160.9	Moderate
HB-214583	8.3	4.67	106.1	0.08	0.05	0.03	0.9	143.8	142.8	Moderate
HB-214584	8.5	5.35	121.6	0.07	0.05	0.02	0.6	138.1	137.5	Moderate
HB-214585	8.7	4.74	107.7	0.14	0.06	0.08	2.5	110.0	107.5	Moderate
HB-214586	8.6	1.16	26.4	0.10	0.04	0.06	1.9	48.1	46.3	Moderate
HB-214587	8.6	0.55	12.5	0.15	0.02	0.13	4.1	24.4	20.3	Slight
HB-214291	8.5	0.11	2.5	0.05	0.01	0.04	1.3	15.3	14.0	None
HB-214292	8.5	0.20	4.5	0.03	0.02	0.01	0.3	17.0	16.7	None
HB-214293	8.3	0.02	0.5	0.05	0.01	0.04	1.3	10.9	9.6	None
HB-214294	8.5	0.15	3.4	0.02	0.01	0.01	0.3	18.0	17.7	None
HB-214295	8.5	0.07	1.6	0.04	0.01	0.03	0.9	14.5	13.6	None
HB-214296	8.7	0.12	2.7	0.09	0.01	0.08	2.5	15.8	13.3	None
HB-214297	8.6	0.09	2.0	0.06	<0.01	0.06	1.9	14.8	12.9	None
HB-214298	8.4	0.03	0.7	0.08	0.01	0.07	2.2	18.8	16.6	None
HB-214299	8.1	0.01	0.2	0.11	0.01	0.10	3.1	14.9	11.8	None
HB-214300	8.3	0.03	0.7	0.06	0.01	0.05	1.6	16.0	14.4	None
HB-214501	7.9	0.01	0.2	0.74	0.01	0.73	22.8	17.0	-5.8	None
HB-214502	8.1	0.02	0.5	0.25	<0.01	0.25	7.8	15.0	7.2	None
HB-214503	8.2	0.01	0.2	0.08	<0.01	0.08	2.5	19.0	16.5	None
HB-214504	8.2	<0.01	<0.2	0.05	0.01	0.04	1.3	17.8	16.5	None
HB-214505	8.5	0.01	0.2	0.02	<0.01	0.02	0.6	18.0	17.4	None
HB-214506	8.4	0.08	1.8	0.10	<0.01	0.10	3.1	15.8	12.6	None
HB-214507	8.2	0.01	0.2	0.13	0.01	0.12	3.8	13.5	9.8	None
HB-214508	8.2	<0.01	<0.2	0.27	0.01	0.26	8.1	15.5	7.4	None
HB-214509	8.4	<0.01	<0.2	0.09	0.01	0.08	2.5	17.0	14.5	None
HB-214510	8.3	0.02	0.5	0.30	0.01	0.29	9.1	18.6	9.6	None
HB-214511	8.3	0.02	0.5	0.65	0.01	0.64	20.0	16.6	-3.4	None
HB-214512	8.5	0.08	1.8	<0.02	0.01	<0.02	<0.6	18.8	18.8	None
HB-214513	7.9	0.02	0.5	0.21	0.01	0.20	6.3	16.3	10.0	None
HB-214514	8.4	0.15	3.4	0.10	0.01	0.09	2.8	17.3	14.4	None
HB-214515	8.4	0.06	1.4	0.03	0.01	0.02	0.6	15.8	15.1	None
HB-214516	8.4	0.08	1.8	0.02	0.01	0.01	0.3	17.5	17.2	None
HB-214517	8.8	0.16	3.6	0.04	0.02	0.02	0.6	19.1	18.5	None
HB-214518	8.7	<0.01	<0.2	0.05	0.01	0.04	1.3	18.0	16.8	None
HB-214519	9.1	<0.01	<0.2	0.09	0.01	0.08	2.5	17.4	14.9	None
HB-214520	9.2	<0.01	<0.2	0.03	0.01	0.02	0.6	19.3	18.6	None
HB-214521	9.0	0.12	2.7	0.07	<0.01	0.07	2.2	18.8	16.6	None
HB-214522	9.1	0.02	0.5	0.10	0.01	0.09	2.8	19.0	16.2	None
HB-214523	9.1	0.03	0.7	0.04	0.01	0.03	0.9	15.9	14.9	None
HB-214524	9.0	<0.01	<0.2	0.08	0.01	0.07	2.2	18.0	15.8	None
HB-214525	9.3	0.01	0.2	0.06	0.02	0.04	1.3	15.8	14.5	None
Detection Limits	0.1	0.01		0.02	0.01					
Vizon Method										
Number	7160	LECO	Calculation	LECO	7410	Calculation	Calculation	7110	Calculation	7150

*Based on difference between total sulphur and sulphate-sulphur

**Based on sulphide-sulphur

CO2 and Total Sulphur by LECO furnace

NP method used: Standard Sobek NP Method

Table 2a: QA/QC for NP Determination

Sample	Neutralization Potential (kgCaCO3/Tonne)	Neutralization Potential (kgCaCO3/Tonne)
Duplicates - NP		
HB-214262	250.0	261.3
HB-214271	246.3	260.0
HB-214527	11.8	11.0
HB-214537	18.4	18.2
KZK-1 Reference (NP = 59)	58.8	-
KZK-1 Reference (NP = 64.8)	68.1	-

Table 2b: QA/QC for Sulphur Speciation

Sample	Sulphur (Wt.%)	Sulphur (Wt.%)
Duplicate - Total Sulphur		
HB-214271	0.07	0.08
HB-214281	2.35	2.11
HB-214527	<0.02	<0.02
HB-214537	0.05	0.05
HB-214547	0.02	0.03
HB-214555	0.03	0.03
Vizon Ref. (0.11% S)	0.11	0.11
STD CSC (4.19% S)	4.22	4.20
Duplicates - Sulphate-Sulphur		
HB-214262	0.06	0.02
HB-214271	0.05	0.06
HB-214527	<0.01	<0.01
HB-214537	<0.01	<0.01
Vizon Ref. (0.27% SO4-S)	0.30	0.32

Table 2c: QA/QC for CO2 Determination

Sample	CO2 (Wt.%)	CO2 (Wt.%)
Duplicates - CO2		
HB-214271	10.05	10.02
HB-214281	2.83	2.82
HB-214527	0.06	0.06
HB-214537	0.12	0.15
HB-214547	0.02	0.02
HB-214555	0.01	<0.01
STD CSC (1.49% CO2)	1.50	1.50



Table 3: Trace Metals Using Aqua Regia Digestion with ICP-MS Finish for Miramar Hope Bay Windy Lake Samples - August 2006

Sample	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	Ga ppm	Se ppm	Hg ug/g
HB-214262	2.3	50.1	2.2	149	0.1	3.5	39.6	1985	12.16	1.9	0.1	0.8	0.3	77	0.1	0.1	0.1	57	8.22	0.103	3	26	1.51	23	0.018	3	4.25	0.007	0.13	0.1	0.01	12.4	0.1	16	0.5	0.001
HB-214263	1.7	37.3	1.1	124	0.1	2.3	31.3	2082	10.98	1	0.1	0.7	0.3	72	0.1	0.1	0.1	55	8.31	0.091	3	23	1.38	17	0.013	3	3.71	0.010	0.11	0.1	0.01	12.3	0.1	14	0.5	0.001
HB-214264	1.0	35.8	2.1	141	0.1	2.8	33.5	2049	11.34	1.2	0.1	0.9	0.3	67	0.1	0.1	0.1	65	7.95	0.100	3	13	1.41	14	0.014	3	3.83	0.011	0.10	0.1	0.01	15.8	0.1	16	0.5	0.001
HB-214265	1.3	47.3	1.4	131	0.1	2.6	31.9	2348	10.91	1.1	0.1	0.5	0.3	83	0.1	0.1	0.1	59	9.34	0.090	3	16	1.38	13	0.014	3	3.61	0.011	0.09	0.1	0.01	14.4	0.1	15	0.5	0.001
HB-214266	0.9	44.4	0.9	136	0.1	2.9	37.3	2134	11.44	2.3	0.1	1.3	0.3	59	0.1	0.1	0.1	54	6.96	0.106	4	13	1.44	17	0.014	4	3.55	0.012	0.12	0.1	0.01	13.8	0.1	15	0.5	0.001
HB-214267	0.6	33.6	0.5	133	0.1	3.2	34.9	2082	11.66	2.5	0.1	0.5	0.4	37	0.1	0.1	0.1	58	5.43	0.110	4	11	1.53	9	0.015	3	3.27	0.015	0.08	0.1	0.01	14.9	0.1	15	0.5	0.001
HB-214268	1.7	36.4	1.1	93	0.1	3.4	31.0	2564	10.57	5	0.1	1.4	0.3	53	0.1	0.1	0.1	33	7.05	0.106	3	20	1.48	13	0.013	5	2.04	0.016	0.14	0.1	0.01	10.6	0.1	9	0.5	0.001
HB-214269	1.4	35.1	1.7	70	0.1	2.7	28.8	2278	8.11	7.7	0.1	0.5	0.2	60	0.1	0.1	0.1	25	8.29	0.091	3	18	1.14	17	0.011	7	1.71	0.012	0.15	0.1	0.01	7.8	0.1	6	0.5	0.001
HB-214270	0.9	38.4	1.5	116	0.1	2.5	32.8	2324	11.10	4.4	0.1	0.5	0.3	59	0.1	0.1	0.1	42	7.70	0.098	3	10	1.38	17	0.011	4	2.67	0.011	0.14	0.1	0.01	11.1	0.1	11	0.5	0.001
HB-214271	1.1	51.3	1.1	150	0.1	2.6	34.5	2236	11.16	4.9	0.1	0.5	0.3	67	0.2	0.1	0.1	46	8.34	0.100	3	15	1.40	18	0.012	3	2.99	0.012	0.14	0.1	0.01	11.3	0.1	13	0.5	0.001
HB-214272	1.0	42.3	1.1	149	0.1	3.0	36.9	2237	11.26	5.3	0.1	0.5	0.3	67	0.1	0.1	0.1	43	8.51	0.101	3	10	1.42	21	0.012	4	3.26	0.011	0.16	0.1	0.01	10.9	0.1	13	0.5	0.001
HB-214273	0.9	45.2	3.8	157	0.1	2.7	37.7	1934	10.45	6.3	0.1	0.7	0.3	53	0.2	0.5	0.1	45	7.34	0.109	3	10	1.35	22	0.020	3	3.27	0.013	0.16	0.1	0.01	11.1	0.1	13	0.5	0.001
HB-214274	0.8	31.1	0.9	113	0.1	3.9	33.6	2089	9.17	3.6	0.1	0.5	0.3	57	0.1	0.1	0.1	52	8.78	0.099	3	12	1.18	12	0.026	3	2.88	0.020	0.09	0.1	0.01	13.3	0.1	13	0.5	0.001
HB-214275	2.5	35.8	1.2	124	0.1	2.1	31.2	1980	10.47	4.1	0.1	0.7	0.3	61	0.1	0.1	0.1	52	8.16	0.094	3	10	1.22	14	0.027	2	3.57	0.010	0.10	0.1	0.01	12.3	0.1	13	0.5	0.001
HB-214276	1.7	34.3	1.6	136	0.1	2.5	30.4	1828	10.77	10.7	0.1	1.6	0.5	38	0.1	0.1	0.1	57	7.69	0.099	5	19	1.44	59	0.066	5	3.65	0.021	0.47	0.1	0.01	14.2	0.1	15	0.5	0.001
HB-214277	2.7	55.6	14.3	81	0.3	3.5	37.6	2046	10.97	23.9	0.1	1.6	0.6	23	0.1	0.1	0.1	77	6.27	0.100	7	30	2.15	101	0.221	15	3.25	0.090	0.97	0.1	0.01	12.6	0.2	18	0.5	0.001
HB-214278	1.5	39.8	0.6	40	0.1	1.8	29.2	2051	10.38	16.2	0.1	0.5	0.6	21	0.1	0.1	0.1	76	7.70	0.102	7	18	2.12	83	0.196	11	3.14	0.088	0.63	0.1	0.01	10.4	0.1	17	0.5	0.001
HB-214279	1.3	21.7	2.1	42	0.1	2.1	31.3	1994	11.06	16.4	0.1	0.6	0.7	21	0.1	0.1	0.1	76	7.15	0.102	7	17	2.47	71	0.216	13	3.21	0.119	0.50	0.1	0.01	10.7	0.1	18	0.5	0.001
HB-214280	1.6	18.8	6.2	43	0.1	2.9	38.9	1699	11.02	24.7	0.1	1.7	0.7	21	0.1	0.1	0.3	83	6.09	0.114	6	14	2.56	87	0.238	13	3.03	0.189	0.65	0.1	0.01	11.6	0.3	19	0.5	0.001
HB-214281	3.5	130.6	62.8	162	0.6	3.2	65.0	1200	11.73	71.1	0.1	65.7	0.7	21	0.3	1.2	1.3	83	3.45	0.123	6	42	2.14	47	0.189	11	2.75	0.171	0.42	0.1	0.01	12.7	0.2	17	0.5	0.001
HB-214282	2.1	247.7	47.5	218	0.1	3.3	36.4	809	8.87	4.2	0.1	5.3	0.7	18	0.4	0.1	0.1	90	2.34	0.118	8	27	2.61	17	0.317	8	2.98	0.101	0.13	0.1	0.01	12.1	0.1	19	0.5	0.001
HB-214283	1.8	54.2	4.3	34	0.1	2.3	18.0	814	7.59	2.1	0.1	1.8	0.7	14	0.1	0.1	0.1	71	1.90	0.119	6	22	1.97	14	0.274	8	2.22	0.136	0.10	0.1	0.01	7.5	0.1	16	0.5	0.001
HB-214284	2.2	149.1	283.8	1242	0.7	3.1	60.0	680	6.97	5.1	0.1	4.4	0.6	10	2.2	0.3	0.5	75	1.18	0.108	6	30	1.66	24	0.262	6	1.94	0.130	0.16	0.1	0.01	7.4	0.1	15	0.9	0.001
HB-214285	2.1	54.5	112.8	339	0.7	3.3	29.6	654	5.53	1.1	0.1	1.9	0.6	10	1.1	0.3	0.1	57	1.26	0.110	6	28	1.30	8	0.289	5	1.54	0.141	0.04	0.1	0.01	6.7	0.1	13	0.5	0.001
HB-214286	1.1	14.0	39.5	289	0.1	2.2	14.4	490	4.08	0.5	0.1	0.5	0.5	9	0.7	0.1	0.1	42	1.26	0.102	5	15	1.00	5	0.221	3	1.14	0.120	0.02	0.1	0.01	5.1	0.1	10	0.5	0.001
HB-214287	2.2	449.6	52.6	32	1	4.9	121.7	642	8.78	24.9	0.1	177	0.7	8	0.1	0.9	1.4	68	0.80	0.105	5	28	1.29	13	0.281	7	1.54	0.134	0.08	0.1	0.01	6.5	0.5	14	2.2	0.001
HB-214288	1.2	20.1	4.7	19	0.1	2.1	16.4	637	5.38	0.6	0.1	6.1	0.6	8	0.1	0.1	0.1	60	0.94	0.108	6	18	1.29	5	0.269	4	1.52	0.130	0.02	0.1	0.01	5.2	0.1			



Table 3: Trace Metals Using Aqua Regia Digestion with ICP-MS Finish for Miramar Hope Bay Windy Lake Samples - August 2006

Sample	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	Ga ppm	Se ppm	Hg ug/g
HB-214547	1.9	407.6	2.2	95	0.1	20.4	25.0	477	6.04	0.5	0.1	4.4	0.5	30	0.1	0.1	0.1	471	0.99	0.079	5	27	0.54	28	0.348	5	1.38	0.249	0.23	0.1	0.01	2.9	0.1	10	0.5	0.001
HB-214548	2.4	371.1	2.4	89	0.1	23.2	24.6	468	5.63	0.5	0.1	4.9	0.4	35	0.1	0.1	0.1	494	1.18	0.071	4	36	0.56	29	0.384	4	1.59	0.319	0.19	0.1	0.01	3.0	0.1	10	0.5	0.001
HB-214549	1.9	344.7	1.4	92	0.1	23.7	24.7	474	5.71	0.5	0.1	6.2	0.4	32	0.1	0.1	0.1	531	1.03	0.065	4	29	0.48	22	0.456	2	1.46	0.288	0.16	0.1	0.01	2.5	0.1	10	0.5	0.001
HB-214550	2.0	399.8	1.4	86	0.1	17.7	23.2	458	5.33	0.5	0.1	8	0.4	30	0.1	0.1	0.1	418	0.99	0.067	4	29	0.43	18	0.366	3	1.40	0.261	0.16	0.1	0.01	2.4	0.1	9	0.5	0.001
HB-214551	2.4	399.3	1.6	80	0.1	17.1	22.5	455	5.34	0.5	0.1	7.9	0.5	34	0.1	0.1	0.1	386	1.10	0.075	5	37	0.39	9	0.431	2	1.53	0.310	0.12	0.1	0.01	2.5	0.1	9	0.5	0.001
HB-214552	2.1	296.4	3.6	63	0.1	16.6	18.1	352	4.10	0.5	0.1	6.6	0.4	39	0.1	0.4	0.1	318	1.24	0.051	3	33	0.42	13	0.320	3	1.79	0.358	0.12	0.1	0.01	2.3	0.1	8	0.5	0.001
HB-214553	2.4	265.2	1.9	64	0.1	18.5	18.0	345	4.07	0.5	0.1	6.2	0.4	45	0.1	0.2	0.1	319	1.36	0.053	3	39	0.46	15	0.333	3	2.02	0.433	0.13	0.1	0.01	2.4	0.1	9	0.5	0.001
HB-214554	7.6	251.8	1.5	57	0.1	18.4	15.2	302	3.58	0.5	0.1	5.7	0.3	35	0.1	0.1	0.1	267	1.09	0.051	3	116	0.42	16	0.242	4	1.55	0.318	0.13	0.1	0.01	1.9	0.1	7	0.5	0.001
HB-214555	2.2	367.6	2.8	75	0.1	16.7	18.8	353	4.28	0.7	0.1	8.2	0.5	38	0.1	0.1	0.1	263	1.29	0.091	5	33	0.55	47	0.222	4	1.67	0.344	0.25	0.1	0.01	2.8	0.1	9	0.5	0.001
HB-214291	0.9	214.5	3.4	143	0.1	18.9	23.0	1583	6.63	1	0.1	0.6	0.3	5	<1	0.1	0.1	155	0.44	0.057	5	17	1.88	5	0.096	14	2.14	0.083	0.02	0.1	0.01	4.9	<1	12	0.5	< 0.001
HB-214292	0.4	151.8	2.7	122	<1	17.7	22.8	1694	7.04	0.6	<1	<5	0.2	5	<1	<1	<1	157	0.51	0.052	2	9	1.99	3	0.087	10	2.33	0.071	0.02	<1	<0.1	4.9	<1	12	<5	< 0.001
HB-214293	1.0	193.5	1.6	79	<1	22.7	27.6	1057	7.27	2.4	0.1	3.4	0.3	5	<1	0.1	0.1	184	0.35	0.060	3	15	2.18	9	0.117	11	2.25	0.075	0.04	<1	<0.1	5.6	<1	13	0.5	< 0.001
HB-214294	0.5	156.4	1.3	87	<1	17.7	21.5	1173	6.67	1.3	<1	24.4	0.2	5	<1	0.1	0.1	153	0.46	0.058	3	12	1.89	3	0.096	10	2.10	0.081	0.02	0.1	<0.1	4.9	<1	11	0.6	< 0.001
HB-214295	0.6	280.3	1.1	74	<1	17.4	25.2	1009	6.47	1.7	0.1	23.4	0.2	7	<1	0.1	0.1	139	0.45	0.053	6	11	1.95	5	0.116	10	2.04	0.084	0.03	0.1	<0.1	3.7	<1	10	<5	< 0.001
HB-214296	0.5	445.3	0.7	68	<1	20.5	31.5	951	6.65	3.9	<1	21.7	0.3	7	<1	0.1	0.1	164	0.54	0.053	4	12	1.94	7	0.139	11	2.08	0.091	0.04	<1	<0.1	4.1	<1	11	0.8	< 0.001
HB-214297	1.2	220.7	1.1	60	<1	18.3	26.0	771	6.19	2.2	0.1	4.7	0.2	9	<1	0.1	0.1	173	0.56	0.052	7	22	1.75	7	0.172	11	1.82	0.096	0.05	<1	<0.1	4.5	<1	10	<5	< 0.001
HB-214298	0.7	477.8	1.4	77	<1	23.5	31.6	1033	6.77	2.6	0.1	4	0.2	7	<1	0.1	0.1	174	0.43	0.053	6	16	2.11	5	0.126	13	2.08	0.094	0.02	<1	<0.1	4.0	<1	12	0.6	< 0.001
HB-214299	0.7	614.7	3.2	97	<1	24.3	30.3	1491	7.11	1.9	<1	6	0.3	6	<1	0.2	0.1	180	0.44	0.052	2	15	2.20	4	0.133	11	2.33	0.104	0.02	0.1	<0.1	4.7	<1	13	0.9	< 0.001
HB-214300	0.7	756.0	1.3	111	<1	21.9	28.9	1618	7.65	<5	0.1	3.8	0.3	5	0.1	0.1	<1	177	0.34	0.057	2	17	2.44	4	0.101	12	2.51	0.095	0.02	<1	<0.1	3.8	<1	15	0.8	< 0.001
HB-214501	0.7	5038.1	5.3	134	0.4	51.2	54.4	1623	9.22	5.3	0.1	70.2	0.2	6	<1	0.1	0.4	194	0.41	0.062	2	16	2.81	4	0.107	13	2.77	0.105	0.02	<1	<0.1	4.3	<1	15	3	< 0.001
HB-214502	0.7	1657.0	4.2	111	0.3	32.7	38.5	1418	7.35	1.2	0.1	13.2	0.3	6	<1	0.1	0.1	188	0.43	0.060	3	17	2.49	5	0.109	12	2.40	0.111	0.02	<1	0.01	4.4	<1	12	1.5	< 0.001
HB-214503	0.6	562.9	2.0	131	0.2	30.2	36.8	1826	7.99	0.5	<1	6.7	0.3	5	<1	<1	0.1	208	0.39	0.056	2	18	2.79	5	0.122	13	2.62	0.095	0.02	<1	<0.1	3.7	<1	14	0.9	< 0.001
HB-214504	0.4	263.0	1.6	143	<1	29.6	37.3	1991	8.55	<5	<1	1.3	0.3	5	<1	0.1	<1	201	0.35	0.055	1	14	2.88	4	0.108	16	2.76	0.087	0.02	<1	<0.1	3.9	<1	15	<5	< 0.001
HB-214505	0.5	153.2	1.9	105	<1	24.0	30.8	1605	11.41	1	0.1	0.8	0.2	7	<1	0.2	<1	189	0.31	0.048	2	13	2.60	8	0.107	31	2.61	0.083	0.03	0.1	<0.1	3.5	<1	14	<5	< 0.001
HB-214506	0.7	979.6	1.8	95	0.2	24.9	33.2	1418	7.59	0.6	0.1	1125	0.2	6	<1	0.1	0.1	181	0.38	0.059	2	17	2.40	3	0.113	18	2.39	0.087	0.02	<1	<0.1	4.2	<1	13	0.6	< 0.001
HB-214507	0.7	900.8	2.7	84	0.3	30.6	32.8	1418	6.98	0.7	0.1	14.5	0.3	4	<1	0.1	0.1	203	0.38	0.058	2	21	1.92	3	0.127	10	2.13	0.089	0.02	<1	<0.1	4.9	<1	12	0.5	< 0.001
HB-214508	1.3	2430.3	2.7	105	0.5	34.6	45.7	1365	7.01	1	0.1	18.3	0.2	5	<1	0.1	0.1	173	0.40	0.058	4	26	2.11	3	0.116	9	2.13									



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Sample	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	Ga ppm	Se ppm	Hg ug/g
HB-214561	0.7	36.5	0.6	144	<.1	0.7	31.0	1657	9.17	0.8	0.1	<.5	0.5	33	<.1	0.1	<.1	79	2.10	0.095	5	6	1.64	2	0.168	2	2.64	0.016	<.01	<.1	<.01	19.5	<.1	14	<.5	< 0.001
HB-214562	0.7	38.3	0.8	150	<.1	0.8	34.9	1828	9.88	1.1	0.1	<.5	0.6	46	0.1	0.1	<.1	85	2.73	0.097	5	5	1.68	2	0.131	1	2.79	0.017	0.01	<.1	<.01	20.1	<.1	16	<.5	< 0.001
HB-214563	0.5	31.6	0.6	150	<.1	0.6	30.4	1789	10.22	1.3	0.1	<.5	0.5	59	0.1	<.1	<.1	91	2.71	0.098	6	3	1.72	1	0.029	<.1	3.14	0.014	<.01	<.1	<.01	24.3	<.1	18	<.5	< 0.001
HB-214564	1.4	21.5	2.2	75	<.1	0.8	32.0	1356	10.02	113	<.1	363	0.3	61	0.1	0.3	0.2	74	2.72	0.091	2	10	1.32	2	0.009	<.1	1.98	0.019	<.01	0.1	0.01	16.8	<.1	12	1.4	< 0.001
HB-214565	0.6	30.8	0.5	136	<.1	0.7	31.1	1713	9.44	1.8	0.1	2.3	0.6	47	0.1	0.1	<.1	83	2.43	0.095	5	5	1.62	1	0.096	<.1	2.69	0.014	<.01	<.1	<.01	20.3	<.1	16	<.5	< 0.001
HB-214566	0.9	23.1	0.8	154	<.1	0.8	30.8	1733	9.58	1.2	0.1	<.5	0.6	35	0.1	0.1	<.1	79	2.26	0.102	5	6	1.68	1	0.174	1	2.65	0.015	<.01	<.1	<.01	18.7	<.1	15	0.5	< 0.001
HB-214567	1.4	34.0	0.4	139	<.1	0.9	31.7	1658	9.25	1.9	0.1	<.5	0.6	28	0.1	0.1	<.1	78	1.84	0.093	4	11	1.53	1	0.209	<.1	2.33	0.016	<.01	<.1	<.01	16.1	<.1	13	<.5	< 0.001
HB-214568	0.9	29.2	0.4	143	<.1	1.1	33.0	1702	9.85	1.4	0.1	0.5	0.6	40	<.1	0.1	<.1	85	1.98	0.098	4	7	1.57	4	0.104	<.1	2.44	0.016	<.01	<.1	<.01	16.0	<.1	14	<.5	< 0.001
HB-214569	1.2	34.6	0.4	154	<.1	1.1	31.1	1666	9.80	1.1	0.1	<.5	0.6	21	0.1	0.1	<.1	75	1.40	0.099	4	6	1.56	3	0.222	<.1	2.30	0.014	<.01	<.1	<.01	11.4	<.1	13	<.5	< 0.001
HB-214570	1.1	34.8	0.5	151	<.1	1.1	30.7	1618	9.18	0.9	0.1	<.5	0.6	22	0.1	0.1	<.1	65	1.12	0.098	4	9	1.52	2	0.251	<.1	2.27	0.014	0.01	0.1	<.01	10.1	<.1	11	0.7	< 0.001
HB-214571	1.3	35.9	0.4	146	<.1	0.9	33.6	1667	9.12	1.5	0.1	<.5	0.6	26	0.1	0.1	<.1	66	1.47	0.094	4	9	1.52	2	0.259	<.1	2.38	0.016	0.01	<.1	<.01	12.0	<.1	12	<.5	< 0.001
HB-214572	1.0	37.4	0.8	149	<.1	1.3	31.3	1775	9.72	1.3	0.1	<.5	0.6	42	0.1	0.1	<.1	83	2.13	0.103	5	8	1.50	2	0.151	<.1	2.55	0.016	0.01	<.1	<.01	14.9	<.1	13	<.5	< 0.001
HB-214573	0.8	25.2	1.0	124	<.1	0.7	31.6	1630	9.65	3.1	<.1	0.7	0.6	38	0.1	0.1	<.1	87	3.00	0.094	5	5	1.40	2	0.046	<.1	2.86	0.013	<.01	<.1	<.01	21.6	<.1	16	<.5	< 0.001
HB-214574	0.6	33.6	0.4	146	<.1	0.8	31.8	1689	10.19	1.3	<.1	<.5	0.6	46	0.1	<.1	<.1	92	3.79	0.099	5	3	1.36	1	0.044	<.1	3.30	0.009	<.01	<.1	<.01	22.2	<.1	17	<.5	< 0.001
HB-214575	0.5	45.5	0.5	139	<.1	0.6	31.1	1605	9.88	0.8	<.1	<.5	0.4	57	0.2	<.1	0.1	88	4.21	0.087	5	3	1.21	2	0.033	<.1	3.15	0.010	<.01	0.1	0.01	23.5	<.1	16	<.5	< 0.001
HB-214576	0.8	31.3	0.4	121	<.1	1.0	31.5	1689	10.09	0.8	<.1	<.5	0.4	44	0.1	<.1	<.1	91	2.99	0.095	6	7	1.33	2	0.028	<.1	2.88	0.015	<.01	<.1	<.01	25.1	<.1	15	<.5	< 0.001
HB-214577	0.7	27.7	0.4	129	<.1	0.7	28.0	1744	9.92	0.8	<.1	202	0.4	45	0.1	<.1	<.1	91	3.13	0.096	5	5	1.31	1	0.029	<.1	2.69	0.017	<.01	<.1	<.01	23.7	<.1	16	<.5	< 0.001
HB-214578	0.5	28.4	0.6	120	<.1	0.5	30.2	1938	10.01	0.9	<.1	2.7	0.3	82	0.1	<.1	<.1	86	5.07	0.085	4	3	1.38	1	0.029	<.1	3.16	0.010	<.01	<.1	<.01	24.6	<.1	18	0.5	< 0.001
HB-214579	0.9	21.9	0.6	125	<.1	0.7	28.4	1585	9.90	0.9	<.1	0.8	0.3	90	0.1	<.1	<.1	87	5.91	0.087	5	4	1.21	2	0.035	<.1	3.03	0.010	<.01	<.1	<.01	21.7	<.1	17	<.5	< 0.001
HB-214580	0.5	27.5	0.3	129	<.1	0.7	32.2	1268	10.23	0.9	<.1	<.5	0.3	42	0.1	<.1	<.1	89	3.93	0.089	5	2	1.51	1	0.034	2	3.38	0.012	<.01	<.1	<.01	26.8	<.1	17	<.5	< 0.001
HB-214581	0.7	33.9	1.3	122	<.1	0.6	32.0	1060	10.21	1.8	<.1	<.5	0.4	27	<.1	0.1	<.1	87	3.13	0.089	5	5	1.56	1	0.076	4	3.22	0.020	<.01	<.1	0.01	20.9	<.1	17	<.5	< 0.001
HB-214582	0.6	22.5	1.0	124	<.1	0.7	30.9	1327	9.74	1.1	<.1	0.8	0.3	36	<.1	0.1	<.1	82	3.98	0.084	5	4	1.47	1	0.031	1	3.08	0.013	<.01	<.1	<.01	21.8	<.1	16	<.5	< 0.001
HB-214583	0.9	29.2	0.2	120	<.1	0.8	30.3	1162	10.11	0.9	<.1	<.5	0.3	32	<.1	<.1	<.1	84	3.48	0.083	5	6	1.43	1	0.033	1	3.04	0.012	<.01	<.1	0.01	23.9	<.1	16	<.5	< 0.001
HB-214584	0.6	22.9	0.5	121	<.1	0.6	29.4	1507	9.24	0.9	<.1	1.1	0.3	37	0.1	<.1	<.1	83	3.55	0.077	4	4	1.43	1	0.024	3	2.69	0.011	<.01	<.1	<.01	23.5	<.1	17	0.5	< 0.001
HB-214585	0.7	33.5	0.5	130	<.1	0.7	32.1	1661	9.88	1.1	<.1	<.5	0.3	33	0.1	0.1	<.1	83	2.86	0.088	3	5	1.43	1	0.023	<.1	2.40	0.016	<.01	<.1	<.01	23.8	<.1	16	0.6	< 0.001
HB-214586	1.0	31.4	1.1	86	<.1	0.7	28.7	564	9.25	2.1	0.1	0.8	0.5	10	<.1	0.1	<.1	82	1.17	0.093	5	8	1.06	1	0.131	2	1.67	0.032	<.01	0.1	0.01	14.2	<.1	13	0.8	< 0.001
HB-214587	1.4	40.2	2.7	76	<.1	0.7	32.2	491	9.53	4.1	0.1	1	0.6	7	<.1	0.2	0.1	81	0.77	0.102	6	12	0.96	1	0.141	2	1.47	0.040	<.0							



Table 4: Results of Whole Rock Analysis by XRF for Miramar Hope Bay Windy Lake Samples - August 2006

Sample	SiO2 %	TiO2 %	Al2O3 %	Fe2O3 %	MnO %	MgO %	CaO %	Na2O %	K2O %	P2O5 %	Ba(F) %	LOI %	Total %
HB-214262	43.38	1.33	12.31	15.63	0.23	2.77	10.56	0.33	1.54	0.22	0.02	11.29	99.61
HB-214263	47.36	1.20	10.95	13.83	0.24	2.46	10.44	0.75	1.16	0.25	0.01	11.05	99.70
HB-214264	46.64	1.23	11.36	14.49	0.24	2.54	10.17	1.18	0.92	0.21	0.01	10.85	99.84
HB-214265	43.68	1.17	10.89	14.20	0.28	2.47	12.21	1.14	0.92	0.20	0.01	12.35	99.52
HB-214266	47.20	1.25	11.65	14.65	0.23	2.55	8.95	0.95	1.36	0.22	0.02	10.59	99.62
HB-214267	47.98	1.30	12.12	15.06	0.23	2.70	7.17	2.06	1.00	0.23	0.01	9.91	99.77
HB-214268	46.26	1.20	11.05	13.29	0.29	2.57	9.02	0.98	1.85	0.22	0.01	12.86	99.60
HB-214269	47.78	1.06	9.79	11.41	0.28	2.18	11.03	0.65	1.97	0.19	0.01	13.60	99.95
HB-214270	46.74	1.19	10.95	13.69	0.26	2.41	9.65	0.75	1.68	0.21	0.02	12.22	99.77
HB-214271	45.50	1.21	11.30	13.67	0.25	2.44	10.26	0.85	1.59	0.26	0.01	12.43	99.77
HB-214272	44.99	1.21	11.19	14.09	0.26	2.49	10.66	0.42	1.62	0.21	0.02	12.62	99.78
HB-214273	48.88	1.26	11.66	13.27	0.21	2.35	9.00	0.74	1.64	0.21	0.02	10.64	99.88
HB-214274	49.49	1.15	10.58	11.40	0.23	2.00	10.83	1.65	0.91	0.20	0.01	11.24	99.69
HB-214275	44.65	1.22	11.31	13.26	0.22	2.16	12.38	0.62	1.32	0.20	0.01	12.44	99.79
HB-214276	48.57	1.18	10.98	13.67	0.22	2.60	9.83	0.28	2.00	0.21	0.03	10.33	99.90
HB-214277	46.08	1.17	11.07	15.57	0.32	4.00	8.90	0.93	3.05	0.22	0.04	8.25	99.60
HB-214278	43.23	1.16	10.84	15.30	0.33	4.00	10.89	1.20	2.49	0.38	0.03	9.89	99.74
HB-214279	41.89	1.17	11.07	17.04	0.32	4.70	10.46	1.51	2.20	0.23	0.03	9.19	99.81
HB-214280	41.16	1.24	11.65	17.95	0.32	5.04	9.53	1.82	2.55	0.32	0.05	8.23	99.86
HB-214281	48.16	1.34	11.58	16.52	0.23	4.07	6.40	2.27	1.88	0.28	0.04	6.47	99.24
HB-214282	50.90	1.40	12.99	14.73	0.20	4.93	5.10	3.93	0.50	0.26	0.01	4.74	99.69
HB-214283	51.38	1.37	12.71	15.75	0.22	4.46	5.20	4.56	0.36	0.24	0.01	3.53	99.79
HB-214284	53.45	1.42	13.14	14.87	0.21	4.01	3.79	5.05	0.41	0.26	0.01	2.95	99.57
HB-214285	53.22	1.41	13.04	15.11	0.23	3.68	4.68	5.60	0.24	0.30	0.01	2.26	99.78
HB-214286	53.55	1.34	12.63	14.85	0.21	3.73	5.69	5.57	0.17	0.22	0.00	1.79	99.75
HB-214287	50.89	1.39	12.99	17.07	0.21	3.41	3.44	5.50	0.40	0.31	0.01	4.02	99.64
HB-214288	52.81	1.37	13.02	15.62	0.22	3.88	4.81	5.55	0.27	0.32	0.01	2.02	99.90
HB-214289	54.27	1.39	13.03	14.59	0.21	3.76	4.31	5.56	0.33	0.28	0.00	2.07	99.80
HB-214526	47.88	2.50	13.99	16.97	0.21	5.19	10.09	2.40	0.46	0.15	0.00	0.09	99.93
HB-214527	47.09	2.60	13.65	17.89	0.21	5.54	10.07	2.30	0.41	0.14	0.00	0.02	99.92
HB-214528	47.69	2.26	14.47	16.36	0.19	5.63	10.24	2.36	0.50	0.11	0.00	0.15	99.96
HB-214529	46.00	2.85	13.36	18.89	0.22	5.79	10.04	2.25	0.38	0.12	0.00	0.08	99.98
HB-214530	47.86	2.31	13.70	17.11	0.22	5.66	9.84	2.40	0.45	0.15	0.01	0.28	99.99
HB-214531	47.04	2.72	12.35	18.39	0.21	5.92	10.10	2.27	0.34	0.16	0.00	0.45	99.95
HB-214532	46.37	3.24	11.72	21.03	0.22	5.01	9.34	2.27	0.43	0.26	0.00	-0.02	99.87
HB-214533	46.26	3.43	11.06	21.72	0.25	5.06	9.27	2.23	0.45	0.21	0.00	-0.06	99.88
HB-214534	47.76	3.21	11.45	20.01	0.24	4.15	9.14	2.52	0.67	0.27	0.01	0.21	99.64
HB-214535	47.91	3.30	11.15	21.28	0.29	3.74	8.48	2.78	0.56	0.29	0.01	0.09	99.88
HB-214536	49.53	2.89	11.07	20.61	0.30	3.28	8.00	2.66	0.82	0.35	0.01	0.20	99.72
HB-214537	49.50	2.77	11.06	20.44	0.26	3.82	8.22	2.58	0.72	0.33	0.01	0.20	99.91
HB-214538	50.02	2.85	11.14	19.48	0.26	3.51	8.00	2.69	0.94	0.36	0.01	0.67	99.93
HB-214539	47.30	3.46	10.49	22.05	0.27	4.35	8.66	2.31	0.52	0.26	0.00	0.04	99.71
HB-214540	45.42	3.77	10.56	22.97	0.27	5.10	9.29	2.12	0.36	0.20	0.00	-0.28	99.78
HB-214541	45.92	3.49	11.11	22.01	0.25	5.03	9.22	2.19	0.41	0.20	0.01	-0.02	99.82
HB-214542	43.90	4.01	10.61	23.94	0.26	5.37	9.13	2.03	0.36	0.19	0.00	-0.23	99.57
HB-214543	43.81	3.91	10.98	23.39	0.23	5.58	9.33	2.06	0.34	0.16	0.00	-0.20	99.59
HB-214544	46.14	3.04	12.01	20.47	0.23	5.65	9.62	2.23	0.35	0.17	0.00	-0.08	99.83
HB-214545	47.75	2.35	12.72	17.73	0.21	5.84	10.23	2.31	0.32	0.20	0.00	0.31	99.97
HB-214546	47.64	2.41	12.29	18.06	0.23	5.97	9.99	2.35	0.36	0.20	0.00	0.31	99.81
HB-214547	48.40	2.45	12.41	18.16	0.23	5.45	9.80	2.29	0.36	0.20	0.00	0.12	99.87
HB-214548	48.39	2.29	12.37	17.79	0.24	6.06	9.91	2.20	0.30	0.22	0.00	0.08	99.85
HB-214549	47.80	2.48	12.30	18.23	0.24	6.29	9.93	2.23	0.28	0.15	0.00	0.04	99.97
HB-214550	48.50	2.35	12.35	17.71	0.23	5.91	9.93	2.33	0.29	0.16	0.00	0.12	99.88
HB-214551	48.74	2.27	12.24	17.57	0.23	5.93	9.78	2.35	0.33	0.18	0.01	0.20	99.83
HB-214552	49.27	1.78	13.10	15.21	0.21	6.65	10.97	2.25	0.26	0.13	0.00	0.09	99.92
HB-214553	49.27	1.73	12.87	14.98	0.21	7.13	11.12	2.14	0.26	0.19	0.00	0.06	99.96
HB-214554	49.61	1.64	12.88	14.75	0.21	7.19	10.99	2.17	0.25	0.13	0.00	0.09	99.91
HB-214555	49.44	2.08	12.20	16.74	0.21	5.90	9.93	2.33	0.46	0.21	0.01	0.17	99.68
HB-214291	48.78	1.49	13.95	17.45	0.29	5.25	4.49	4.76	0.40	0.21	0.02	2.72	99.81
HB-214292	47.55	1.47	13.83	18.55	0.31	5.58	4.76	4.41	0.37	0.16	0.02	2.92	99.92
HB-214293	49.05	1.56	14.22	16.87	0.18	5.62	3.93	4.86	0.39	0.17	0.01	2.90	99.75
HB-214294	48.77	1.47	13.80	17.76	0.22	5.40	4.49	4.68	0.33	0.17	0.01	2.76	99.85
HB-214295	48.01	1.49	13.77	17.63	0.21	5.88	4.96	4.28	0.50	0.16	0.01	2.70	99.60
HB-214296	47.56	1.50	14.04	17.74	0.19	5.59	5.03	4.31	0.52	0.16	0.01	2.80	99.45
HB-214297	48.97	1.53	14.11	16.68	0.17	5.28	5.13	4.75	0.57	0.20	0.01	2.48	99.89
HB-214298	48.21	1.50	14.15	17.40	0.20	5.77	4.36	4.44	0.65	0.16	0.02	2.93	99.78
HB-214299	47.44	1.53	14.34	17.60	0.27	6.05	4.15	4.52	0.45	0.18	0.02	3.38	99.95
HB-214300	47.29	1.53	14.67	17.63	0.27	6.16	3.82	4.59	0.43	0.15	0.02	3.36	99.91



Table 4: Results of Whole Rock Analysis by XRF for Miramar Hope Bay Windy Lake Samples - August 2006

Sample	SiO2 %	TiO2 %	Al2O3 %	Fe2O3 %	MnO %	MgO %	CaO %	Na2O %	K2O %	P2O5 %	Ba(F) %	LOI %	Total %
HB-214501	44.91	1.44	14.07	19.52	0.25	6.60	3.67	4.16	0.40	0.17	0.01	3.83	99.03
HB-214502	47.61	1.50	14.09	17.60	0.25	6.21	4.36	4.25	0.57	0.15	0.03	3.22	99.85
HB-214503	47.28	1.50	14.24	17.66	0.28	6.49	3.76	4.30	0.74	0.15	0.06	3.38	99.84
HB-214504	45.92	1.48	13.99	19.19	0.30	6.86	3.49	4.06	0.68	0.21	0.05	3.67	99.89
HB-214505	43.08	1.29	12.90	25.47	0.25	6.12	2.91	3.99	0.37	0.14	0.02	3.46	99.99
HB-214506	47.87	1.48	14.30	17.65	0.25	6.05	3.80	4.80	0.49	0.15	0.02	3.13	99.99
HB-214507	49.98	1.55	15.16	15.68	0.22	4.70	3.34	5.67	0.53	0.17	0.01	2.82	99.82
HB-214508	49.05	1.42	13.86	17.16	0.23	5.42	4.01	5.09	0.26	0.14	0.01	2.73	99.39
HB-214509	44.61	1.44	13.32	20.16	0.24	7.63	3.90	3.65	0.40	0.15	0.01	4.28	99.79
HB-214510	46.30	1.46	13.90	18.81	0.24	6.62	3.55	4.31	0.47	0.19	0.01	3.69	99.54
HB-214511	50.98	1.20	12.08	17.31	0.17	5.65	4.02	4.61	0.28	0.18	0.01	2.58	99.06
HB-214512	45.25	1.41	13.50	20.08	0.30	7.26	4.11	3.54	0.49	0.17	0.02	3.77	99.90
HB-214513	45.54	1.39	13.64	19.68	0.29	6.78	4.05	4.00	0.46	0.20	0.01	3.49	99.54
HB-214514	46.32	1.39	13.19	19.32	0.32	6.57	4.68	3.83	0.53	0.13	0.03	3.26	99.57
HB-214515	47.36	1.36	13.88	17.85	0.31	6.53	4.31	4.20	0.62	0.21	0.03	3.21	99.86
HB-214516	45.61	1.37	13.61	19.82	0.27	6.88	4.43	3.67	0.60	0.14	0.04	3.42	99.86
HB-214517	46.44	1.39	13.78	17.78	0.22	7.34	5.29	3.40	0.93	0.13	0.03	3.07	99.82
HB-214518	46.82	1.36	13.82	17.40	0.19	7.29	5.50	3.51	0.77	0.13	0.02	2.89	99.68
HB-214519	47.18	1.39	13.80	17.63	0.23	6.59	6.66	3.25	0.89	0.12	0.01	2.14	99.89
HB-214520	47.26	1.32	14.33	17.53	0.23	6.63	5.70	3.47	0.96	0.16	0.02	2.37	99.99
HB-214521	47.04	1.26	13.12	18.49	0.21	5.86	7.23	2.32	1.79	0.12	0.06	2.23	99.71
HB-214522	47.16	1.33	13.81	17.69	0.23	6.94	6.21	2.92	1.07	0.14	0.02	2.37	99.89
HB-214523	46.36	1.34	14.08	18.24	0.24	7.26	5.61	3.32	0.76	0.19	0.01	2.52	99.94
HB-214524	46.51	1.29	13.48	19.42	0.27	6.79	6.47	2.63	0.85	0.13	0.02	2.15	99.99
HB-214525	46.46	1.28	13.50	19.38	0.28	6.64	7.11	1.89	0.85	0.12	0.02	2.14	99.68
HB-214556	53.13	1.34	12.51	16.04	0.20	2.90	4.31	4.10	0.06	0.23	0.01	4.90	99.73
HB-214557	52.28	1.35	12.62	16.72	0.22	3.00	4.37	4.03	0.11	0.28	0.01	4.97	99.94
HB-214558	52.66	1.35	12.67	16.78	0.22	2.93	4.37	3.92	0.11	0.26	0.01	4.57	99.84
HB-214559	52.93	1.37	12.74	16.90	0.22	2.95	4.52	3.82	0.09	0.25	0.01	4.11	99.91
HB-214560	52.80	1.36	12.62	16.80	0.23	3.03	4.83	3.67	0.08	0.24	0.01	4.29	99.95
HB-214561	53.14	1.36	12.62	16.99	0.21	3.08	4.32	3.52	0.10	0.25	0.01	4.30	99.90
HB-214562	52.06	1.34	12.47	16.69	0.22	3.04	4.91	3.58	0.10	0.24	0.01	5.05	99.71
HB-214563	52.32	1.35	12.50	16.75	0.22	3.18	4.48	3.24	0.07	0.25	0.01	5.57	99.94
HB-214564	49.86	1.26	11.90	15.84	0.17	2.50	4.69	4.28	0.05	0.21	0.01	5.08	95.85
HB-214565	52.75	1.36	12.59	16.59	0.22	3.09	4.58	3.43	0.06	0.25	0.01	4.91	99.84
HB-214566	52.88	1.35	12.61	16.81	0.22	3.12	4.52	3.57	0.07	0.23	0.01	4.53	99.92
HB-214567	53.41	1.37	12.70	16.86	0.23	3.01	4.31	3.82	0.05	0.25	0.01	3.86	99.88
HB-214568	53.28	1.37	12.77	16.89	0.22	2.97	4.33	3.75	0.03	0.26	0.01	3.93	99.80
HB-214569	53.91	1.39	12.99	17.03	0.22	2.93	4.22	3.87	0.04	0.29	0.01	2.63	99.52
HB-214570	54.22	1.39	12.87	17.16	0.23	2.97	4.79	3.24	0.05	0.31	0.01	2.72	99.96
HB-214571	53.35	1.37	12.89	17.05	0.24	2.93	5.35	2.99	0.06	0.24	0.01	3.30	99.78
HB-214572	52.77	1.36	12.76	16.86	0.24	2.82	5.31	3.20	0.04	0.26	0.01	4.28	99.92
HB-214573	52.00	1.35	12.39	16.32	0.21	2.76	5.48	3.13	0.04	0.27	0.01	5.82	99.79
HB-214574	51.08	1.32	12.22	16.18	0.21	2.55	6.32	2.78	0.03	0.22	0.01	6.74	99.67
HB-214575	50.13	1.28	11.95	15.96	0.21	2.44	7.19	2.70	0.02	0.22	0.01	7.77	99.89
HB-214576	52.26	1.34	12.52	16.41	0.21	2.56	5.02	3.49	0.03	0.23	0.01	5.79	99.88
HB-214577	51.78	1.34	12.41	16.35	0.22	2.56	5.32	3.72	0.03	0.29	0.01	5.85	99.89
HB-214578	48.74	1.24	11.47	15.33	0.25	2.63	8.40	2.57	0.02	0.21	0.01	8.71	99.59
HB-214579	47.98	1.21	11.17	14.79	0.20	2.37	9.69	2.57	0.03	0.23	0.01	9.75	99.99
HB-214580	50.42	1.31	12.14	16.01	0.17	2.93	6.45	2.68	0.02	0.26	0.01	7.44	99.84
HB-214581	50.98	1.34	12.46	16.41	0.17	3.29	5.44	3.09	0.02	0.22	0.01	6.34	99.78
HB-214582	49.67	1.31	11.95	15.67	0.20	3.09	6.91	2.75	0.02	0.23	0.01	7.98	99.80
HB-214583	50.64	1.31	12.30	16.19	0.16	3.06	6.02	3.06	0.02	0.23	0.01	6.92	99.92
HB-214584	50.62	1.30	12.00	15.48	0.22	3.12	6.30	3.16	0.02	0.23	0.01	7.38	99.83
HB-214585	51.85	1.31	12.12	15.96	0.22	2.93	4.95	3.91	0.02	0.22	0.01	6.21	99.72
HB-214586	53.75	1.36	12.80	17.43	0.20	3.05	3.50	5.17	0.08	0.25	0.01	2.38	99.97
HB-214587	54.40	1.39	13.10	17.66	0.20	2.87	2.90	5.50	0.07	0.28	0.01	1.56	99.94
QAQC													
HB-214262	43.39	1.33	12.29	15.65	0.23	2.76	10.54	0.33	1.53	0.29	0.02	11.28	99.65
HB-214283	51.52	1.36	12.62	15.80	0.22	4.51	5.22	4.56	0.39	0.24	0.01	3.52	99.96
HB-214537	49.43	2.77	10.97	20.40	0.25	3.61	8.16	2.58	0.72	0.31	0.01	0.25	99.46
STD: SY-4	49.90	0.28	20.65	6.20	0.09	0.54	8.04	7.06	1.67	0.14	0.03	4.59	99.20
True Value Std SY-4	49.90	0.29	20.69	6.21	0.11	0.54	8.05	7.10	1.66	0.13	0.03	-	-
Percent Difference	0.0	3.4	0.2	0.2	16.8	-0.7	0.1	0.6	-0.6	-4.9	6.8	-	-
Detection Limits	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-

ANALYTICAL METHODS

Other elements by Li borate fusion/XRF. Where no FeO value shown "Fe2O3" is total Fe as Fe2O3