

DAILY REPORT #70 – DORIS NORTH INFRASTRUCTURE/ NORTH DAM

Prepared by:	John Kurylo Lawrence Borowski	Date:	2012.03.15
Reviewed by:		Project #:	1CH008.058.0320
Role	Company	Personnel – Position	On Site
Client	Hope Bay Mining Limited (HBML)	Angela Holzapfel – ESR Compliance Manager David Vokey – ESR Coordinator Don Ethelston – HSLP Advisor Dean Wold - Safety Jill Turk – ESR Coordinator Katsky Venter – ESR Manger Michelle Tanquay – ESR Site Manager Stirling Kelly – HSLP Advisor	Yes Yes No Yes No No Yes Yes
	JDS	Lloyd Jackson – Mechanical Superintendent Doug Fielding – Construction Manager Ishan Fechter – Construction Coordinator Jerry Graham – Construction Manager Kevin Whieldon – Project Coordinator Mark Valeriote – Construction Manager	No No Yes Yes No Yes
Engineering Design Consultants	SRK Consulting (Canada) Inc.	John Kurylo – Site Engineer Megan Miller – Site Engineer Lawrence Borowski – Site Engineer Murray McGregor – Site Engineer Iozsef Miskolczi – Site Engineer Lowell Wade – Senior Engineer	Yes No Yes No No No
	EBA Engineering Consultants Ltd.	Jeff Orr – Project Manager Jennifer Stirling – Geologist Thomas Bradshaw – Junior Engineer Ernest Palczewski – Geologist	Yes Yes No no
Earthworks Contractor	Nuna Logistics	Doug Haverland – Area Superintendent Gary Sodhi – Field Engineer Georges Cornelissen – Survey Manager Jeff Roberts - Surveyor Jim Cardinal – Foreman Jordan Gunter – Foreman Kevin Oakes – Project Engineer Kevin Kozdrowski – Foreman (Night shift) Kyle Kuntz – Project Engineer Margaret Caley – Surveyor Matt McKay – Civil Supervisor Mike MacMaster – Surveyor Mike Price – Field Engineer Nick Stoneberger – Superintendent Rick Peter – Foreman (Day shift) Ron MacMaster – Surveyor Simon Chipper – Civil Supervisor	Yes Yes No Yes Yes No No Yes No No No No No No No Yes Yes Yes
External Distribution List:	SRK: Maritz Rykaart, Lowell Wade, Seema Kang, Silkie Wong EBA: Robert Zschuppe Nuna: Chris Petrovic JDS: Bob Prince-Wright, Calvin Goldschmidt HBML: Dave Power, Gerry Benson		
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WEATHER (ROBERTS BAY)

<http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=INUNAVUT3>

Temperature/Wind Chill (°C)	6AM: -33/-50	12PM : -33/46	6PM: -30/-46	12AM
Precipitation (mm)	Rain: None		Snow: None	
Conditions	Day Shift: Clear, very windy, very cold.		Night Shift: Cold, light wind, clear	
Daily norms (°C)	24 hour high:-30		24 hour low: -33	

HEALTH, SAFETY AND ENVIRONMENT

- John Kurylo and Jennifer Stirling attended the nightly Nuna toolbox meeting.
- SRK is using a pickup provided by Nuna on dayshift and provided by JDS on nightshift.

COMMENTS, CORRESPONDENCE AND ACTIVITIES**DAILY MEETING WITH NUNA AND HBML TEAM:**

- The daily meeting was attended by HBML [Michelle Tanguay, Angela Holzapfel] Newmont [Sterling Kelly], JDS [Gerry Graham, Ishan Fechter, Mark Valeriotte]; Nuna [Doug Haverland, Kyle Kuntz] and SRK [Lawrence Borowski, Jeff Orr, John Kurylo].

Topic	Status
Health and Safety and Environment	<ul style="list-style-type: none"> • Safety: No issues. • ESR: Inspected conditions at the North Dam. Prepared list of issues. • Inspected overburden pile and selected material for Boston. • Vehicles still plugged in and idling..
North Dam	<ul style="list-style-type: none"> • Today was a freezeback day. • Placed ROQ on downstream side. • Two sets of thermister strings strung across to the backslope. • Snow is accumulating especially at the SE corner. • Continue placing ROQ today.
Water Management Structures	<ul style="list-style-type: none"> • No progress cleaning key trench due to drifting snow. • Placed some second lift ROQ • Continue placing ROQ today
General	<ul style="list-style-type: none"> • One drill working at Quarry 2, day shift and night shift • Blast Saturday or Sunday. • Grader worked on runway last night.

SURVEY:

Required	<ul style="list-style-type: none"> • Recently placed ROQ on the downstream.
Data Received	<ul style="list-style-type: none"> • Frozen core Volumes (Rec'd Mar 16th) • Lower Liner patches (Rec'd Mar 15th) • Planned Map Remaining (Rec'd Mar 15th) • Signed QC Forms (Rec'd Mar 15th) • North Dam Survey Data (Rec'd Mar 15th) • Frozen Core Volumes (Rec'd Mar 15th) • Frozen Core Volumes (Rec'd Mar 14th)
Outstanding	<ul style="list-style-type: none"> •
Upcoming	<ul style="list-style-type: none"> • Survey of FCM after placement (ongoing). • Survey of Doris North Diversion berm (ongoing).

NORTH DAM/FROZEN CORE PLANT PAD:**Multi-bead Thermistors**

- The following multi-bead thermistors were read:
 - ND-HTS-060-28.8, ND-HTS-060-31.0, ND-HTS-060-33.5, ND-VTS-060-KT
 - ND-HTS-085-33.5, ND-HTS-085-29.4, ND-HTS-085-25.3, ND-VTS-085-KT
 - ND-VTS-130-33.5, ND-VTS-130-31.0, ND-VTS-130-28.8, ND-VTS-130-KT, ND-VTS-130-DS
 - ND-HTS-175-32.5, ND-HTS-175-33.5, ND-VTS-175-KT
 - Difficulties were had taking the multibead readings again as the LCD screen / readout box continues to frequently freeze.

Frozen Core Plant*Dayshift*

- FCP operated between 2:00 pm and 4:30 pm
- Temperature set at 40C
- Water dial start 53, raised to 54.5
- 9 loads produced; 2 loads waste

Nightshift

- No activity at the plant
- Transition material was hauled from outside Quarry #2 / by the Batch Plant to the FCP Pad. Transition material at the FCP pad was stockpiled by an excavator.

Dam Shell*Dayshift*

- Continued placing and compacting ROQ on downstream side until planned morning shift change.

Nightshift

- ROQ material was placed on the downstream from ~0+95 to 0+75.
 - No compaction was observed on this material (packer was not working on nightshift).
 - ROQ material was placed with a D6.
- Reject material was removed in areas from the upstream dam shell. Minor work with the excavator clearing buried 5/8 and HDPE material continued on the south end of the dam, primarily around the most southern end and around station 0+95.
- On well graded compacted ROQ material a bed / pad of crush (dimensions as per original IFC design guidelines, i.e., ~ 0.3m thickness of crush below cables) was constructed at station 0+85. The multibead thermistors at station 0+85 were untangled and spread across the crush bedding pad (see Photo 12). After the multibead cables were strung to the downstream the excavator placed ~0.4m of crush material over the cables for protection. Once the cables were encased in core the excavator continued to bucket tamp the crush. See Photos 13 and 14. Crush to cover the cables was sourced from Quarry #2.
- Select ROQ material was placed over the protective crush placed over the multibeads at 0+85.
- Some snow and some boulders were cleared from within the downstream Transition material footprint. The boulders in this area were there as they were previously bladed to the side by the

dozer. See Photo 16. After the snow and oversized material was removed then Transition material was placed in areas from ~ 1+35 to 0+65 along the downstream edge (adjacent to the core). No compaction was observed to result on this material on nightshift.

Key Trench/ Central Core

Dayshift

- Single bead thermistors were monitored.
- Snow is accumulating at the SE corner and along the entire length of the frozen core east slope.
- Today was planned shift change day. Some ROQ hauling and placing in the morning. After the plane failed to land there was the period of confusion where the decision had to be made whether to try again or abort. When the decision was made to abort, the site decision was made to pour FCM.
- Snow had blown off the pour area, and little effort was required to sweep it clean.
- FCM was placed between Sta 1+10 and Sta 0+64
- Due to strong winds and low temperatures (-33C) temperature at the plant was set at +40C
- Water dial started at 53, but was raised 3 times to 54.5.
- Nine loads were hauled. Plant operating time was 2.5 hours
- All test results met specifications.

Nightshift

- No FCM placement resulted today. As of March 15th 9,991 m³ of FCM have been placed at the North Dam in 2012.
- Single bead thermistors were monitored.
 - The section from 0+55 to the south end (around 0+20) was noted as being +0C at the end of nightshift. Large snow drifts have accumulated over the area of the single bead (> 1m thick in areas).
 - The area placed on dayshift (from ~1+10 and 0+64) had reached 0C at the end of nightshift.
 - On March 13th Nightshift only one single bead was installed around the middle of placement. On the 13th material was placed from ~ 1+70 to 1+00 and from ~ 0+55 to around 0+25.
 - Due to the slow freezeback being noted in the area of the single bead (see notes above) it was decided by SRK / EBA that a core would be drilled in the area between 1+70 and 1+00. A core was drilled in the aforementioned area. Based on inspection of the drilled core it was deemed that the area from ~ 1+70 to 1+00 had reached freezeback.
 - The area from ~ 0+55 to 0+25 has not reached freezeback. As the top area of this lift has been left exposed and is not covered in snow, SRK has allowed for a one time allowance for the excavator to travel on the top portion of the slope so that it can remove the snow insulating the lower portion of the slope. See Photos 3, 4 and 15 for visuals of the area in question. Placement over this entire area will not result until freezeback has been reached at the single bead location.
- Drilled core HB12-ND-CORE-DC78-20120315 was drilled today around station 0+65 CL. This was from the lift placed on March 13th dayshift.
- Drilled core HB12-ND-CORE-DC79-20120315 was drilled today around station 1+15 DS. This was from the lift placed on March 13th nightshift.

Field Geotechnical Testing, Laboratory and Sampling

SINGLE BEAD THERMISTOR STATUS									
Installed Today			Active			Destroyed / Abandoned			
ID	Station	US/DS/Center	ID	Station	US/DS/Center	ID	Station	US/DS/Center	
SB28	0+72	U/S	SB30	0+70	CL	SB17	0+60	CL	SB17
			SB27	0+38	U/S	SB18	0+50	U/S	SB18
						SB14	0+35	D/S	SB14
						SB11	1+08	CL	SB11

- A summary of today's material testing progress is presented in the tables below.

PARTICLE SIZE DISTRIBUTION SUMMARY

Collected	Testing In Progress	Completed

MOISTURE CONTENT SUMMARY

Collected	Testing In Progress	Completed
HB12-FCP-CORE-MC340-20120315		HB12-FCP-CORE-MC340-20120315
HB12-ND-CORE-MC341-20120315		HB12-ND-CORE-MC341-20120315
HB12-ND-CORE-MC342-20120315		HB12-ND-CORE-MC342-20120315
HB12-ND-CORE-MC343-20120315		HB12-ND-CORE-MC343-20120315
HB12-FCP-CORE-MC344-20120315		HB12-FCP-CORE-MC344-20120315

DRILLED CORE

Collected	Testing In Progress	Completed
HB12-ND-CORE-DC78-20120315		HB12-ND-CORE-DC75-20120313
HB12-ND-CORE-DC79-20120315		HB12-ND-CORE-DC76-20120313
		HB12-ND-CORE-DC77-20120313

DORIS NORTH DIVERSION BERM:

- The third Layfield "weather day"
- Hauled ROQ to the diversion berm site area.
- Placed second lift of ROQ between Sta. 5+30 and 5+85
- Second lift placing completed today,

DORIS SUMPS:

- Plates for the second lid have been welded together. The circle has not been cut out.

QUARRY 2:

- One drill working during day shift and one drill working on nightshift (i.e. one drill working 24 hours).

GENERAL:

- Snow ended during the night, but winds were strong all day. Drifting became an issue at the berm, and drifts are apparent in several areas at the dam. At times visibility was limited due to drifting snow. Today was truly a miserable day, again, for those who were exposed to the elements for any

length of time. Wind chills reached -52C

- SRK's truck remains down. SRK is currently sharing a truck with Nuna supervisor and field engineering crew on dayshift. Additional vehicles are available on nightshift due to the smaller crew size.
- Today's shift change did not materialize. Initially the 737 was held in Edmonton. Eventually it left Edmonton with arrival time ~ 11:30 am. The 737 circled the Hope Bay airstrip once, and then returned south, eventually landing at 5:00 pm.
- The IFC drawings for the Doris North – Additional North Dam Instrumentation were issued today.
- The airstrip was graded on nightshift.

PHOTOS:



Photo 1: Progress photo from photo point 3. Note snow in SE corner.



Photo 2: North dam facing south, looking down dam centerline.



Photo 3: East side facing north.



Photo 4: SE corner facing south



Photo 5: East bank excavation down to separation material.



Photo 6: Packing frozen core material, ~ S close-up view.



Photo 7: Rakers and surveyor placing FCM



Photo 8: Placing FCM, ~ NNE view.



Photo 9: Progress on the second Sump lid



Photo 10: Snow blown in key trench Sta 4+45 facing west.



Photo 11: Placing second lift ROQ in key trench Sta 5+30 to 5+85



Photo 12: Thermistor cables being laid out around 0+85 in preparation for burring covering cables with additional crush.



Photo 13: Excavator starting to place ¾" crush around sta 0+85.



Photo 14: Excavator placing crush material over multi-bead. multi-bead thermistor strings.



Photo 15: Blown in snow over the SSE area. Note the cone in the



Photo 16: View of a few larger boulders that were bladed to the side as ROQ placement progressed. These were removed from the Transition material footprint on the downstream before additional Transition material placement occurred on nightshift. background shows the location of single bead 27.



Photo 17: View of D6 spreading ROQ material along downstream



Photo 18: Excavator removing ROQ from upstream inside slope to expose Transition material placed in 2011.



Photo 19: Drilled Core 78. Taken from ~ station 0+65 CL.



Photo 20: Drilled Core 79. Taken form ~ 1+15 DS.

FIGURES:

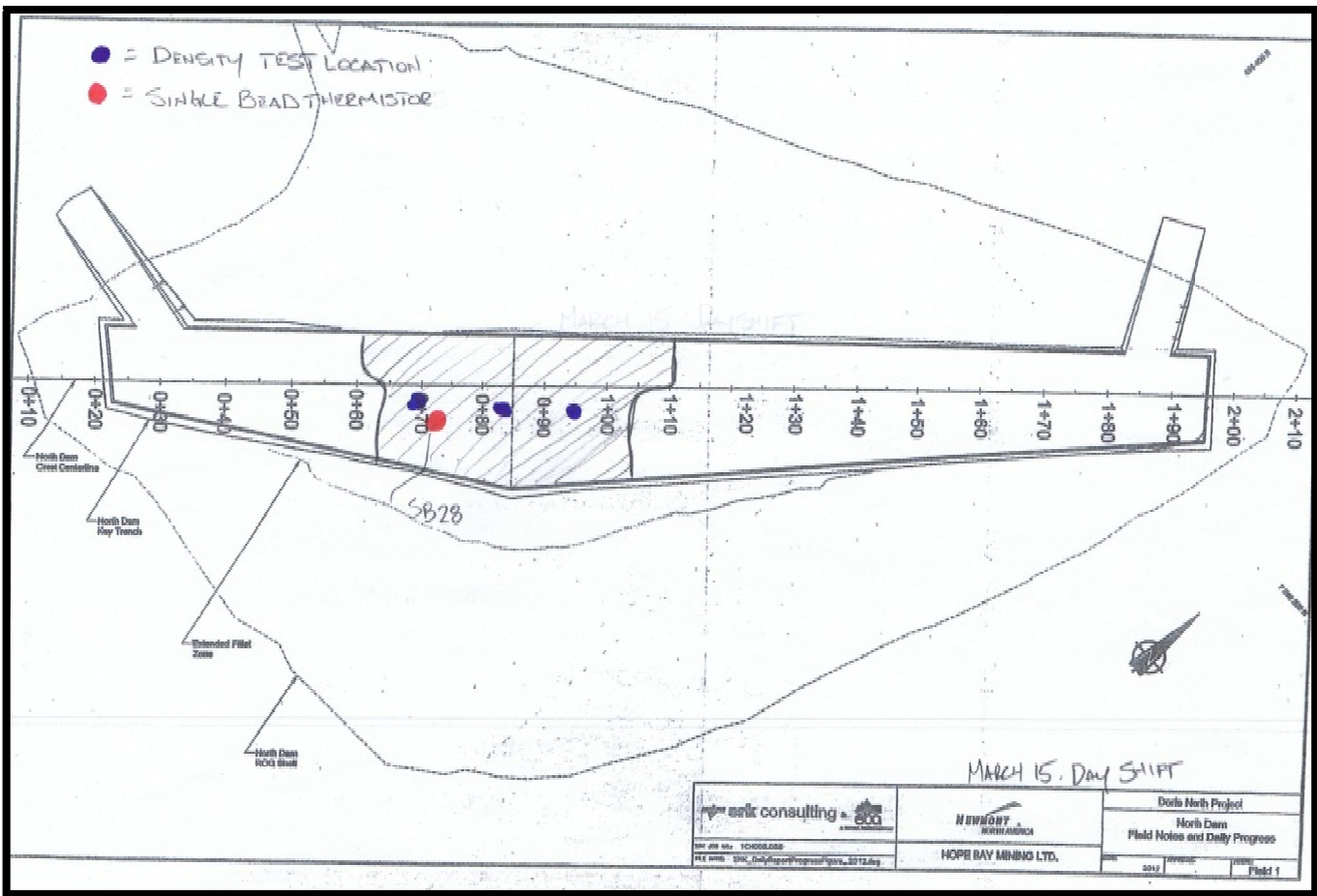


Figure 1 – North Dam Progress – Dayshift

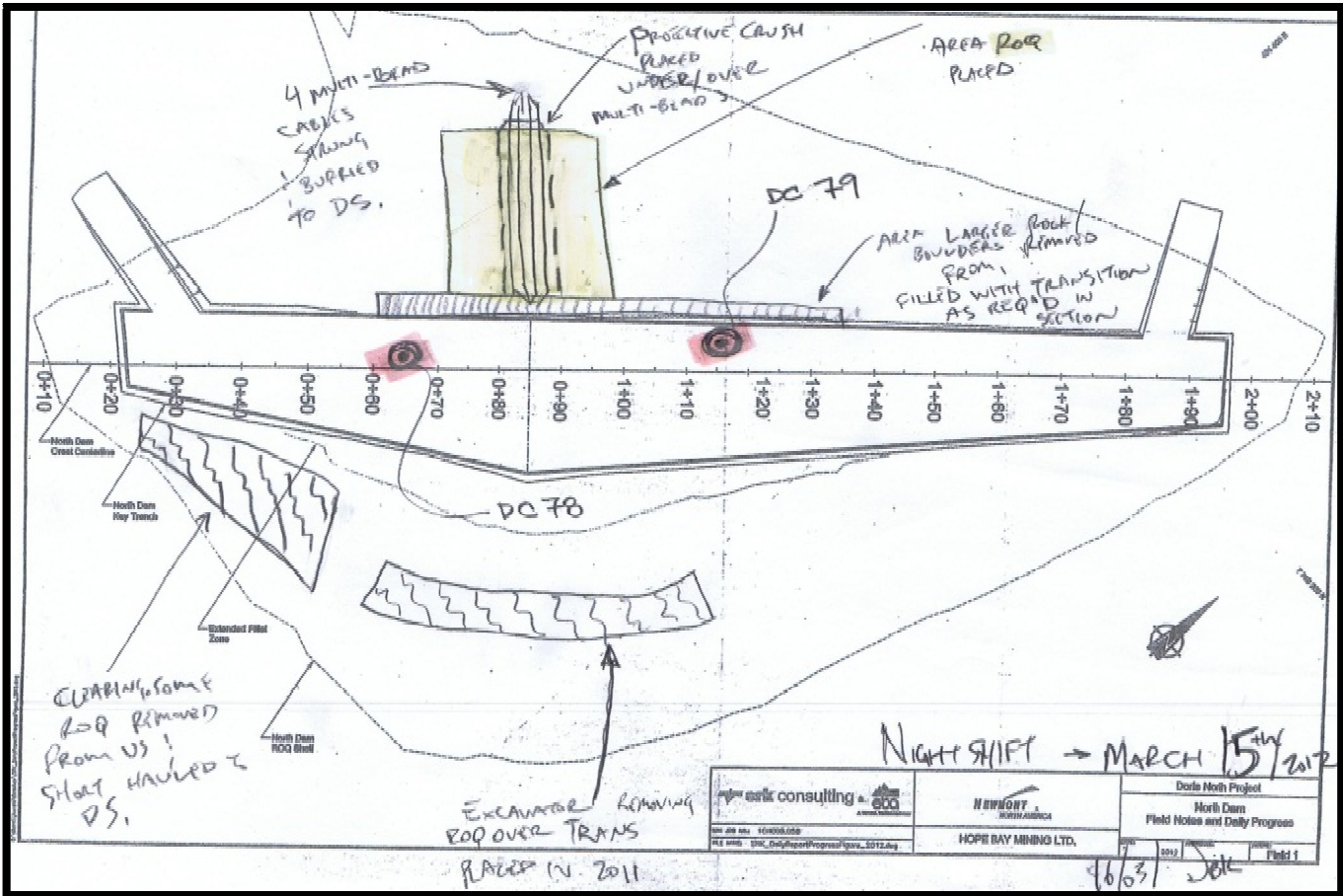


Figure 2 – North Dam Progress – Nightshift