

## DAILY REPORT #75 – DORIS NORTH INFRASTRUCTURE/ NORTH DAM

Prepared by:	John Kurylo Megan Miller	Date:	2012.03.20
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	In No Yes No Yes No No No
	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 Yes Yes No 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 In Out No No No
	EBA Engineering Consultants Ltd.	Jeff Orr – Project Manager Jennifer Stirling – Geologist Thomas Bradshaw – Junior Engineer Ernest Palczewski – Geologist	No Yes No Yes
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 (Dayshift) 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 Ron MacMaster – Surveyor Simon Chipper – Civil Supervisor	Yes No Yes Yes Yes Yes No Yes No Yes No No Yes No No No 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: -37/-47	12PM :-31/-41	6PM: -27/-40	12AM -27/ -42
Precipitation (mm)	<b>Rain:</b> None		<b>Snow:</b> None	
Conditions	<b>Day Shift:</b> Overcast light wind.		<b>Night Shift:</b> Light winds, cold warming up near the end of shift.	
Daily norms (°C)	24 hour high:-27		24 hour low: -35	

\*Site Weather station not working, weather reported from Cambridge Bay:

([http://www.weatheroffice.gc.ca/forecast/24\\_hour\\_conditions\\_e.html?ycb&unit=m](http://www.weatheroffice.gc.ca/forecast/24_hour_conditions_e.html?ycb&unit=m))

**HEALTH, SAFETY AND ENVIRONMENT**

- John Kurylo attended the nightly Nuna toolbox meeting.
- Earnest Palczewski attended the daily tool box meeting.
- One of the packers had a small fluid leak on the rock access ramp when exiting the North Dam. This minor fluid volume (<1L) was cleaned up with spill pads and a small amount of material was removed by hand shovelling.

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

- The daily meeting was attended by Newmont [Don Ethelston, Jill Turk], JDS [Doug Fielding, Ishan Fechter, Mark Valeriot]; Nuna [Doug Haverland,] and SRK [Lawrence Borowski, John Kurylo].

Topic	Status
Health and Safety and Environment	<ul style="list-style-type: none"> <li>• JDS to follow-up with Safety for recent minor incident where a worker hit his face with a wrench.</li> <li>• An increase in dust levels in the FCP was discussed. Currently the nightshift plant operator has been leaving the bay doors slightly open to promote air flow. This has been noted to be helping the dust levels in the plant.</li> <li>• Preparation of upcoming regulator visits is in progress. The mines inspector is scheduled to come to site next week.</li> <li>• The EnviroTank at Boston was recently installed. Also the drill at Boston has been moved from that area. A few things around the drill location (such as frozen timbers) may remain until Spring to clean but for the most part everything from this location that can be readily moved will be.</li> </ul>
North Dam	<ul style="list-style-type: none"> <li>• SRK provided a update on construction activities at the dam.               <ul style="list-style-type: none"> <li>○ GCL was placed to 1+40 yesterday.</li> <li>○ GCL placement progressed well yesterday.</li> <li>○ 20 loads of FCM were placed on nightshift on March 19<sup>th</sup>.</li> <li>○ The intermediate slope in the underbuilt SSE corner was cleaned and saturated material was placed over this slope last night. This has left a smoother ~ 2H;1V slope that will be much easier to clean before future days placements.</li> <li>○ The Nuna electricians took a quick look at the severed cables (at 1+75) yesterday. Nuna electricians to further look at the spliced cables in the coming days.</li> </ul> </li> </ul>
Water Management Structures	<ul style="list-style-type: none"> <li>• Layfield placed geotextile between ~Sta 3+00 and 3+45 at the berm yesterday.</li> <li>• Continued clearing trenches / excavation at berm.</li> <li>• JDS inquired as to if boots would be required to be welded around the culverts crossing at the W end of the DN Diversion Berm. SRK</li> </ul>

	<p>indicated that it was there understanding that this was required. SRK to follow-up with JDS to confirm the need to the boots connecting the HDPE to the culverts.</p> <ul style="list-style-type: none"> <li>Nuna indicated that Layfield is expected / hoped to demobilize from site next week.</li> </ul>
General	<ul style="list-style-type: none"> <li>A blast is planned at Quarry #2 today.</li> <li>Power supply for the drill core used at the dam was further discussed.</li> <li>JDS noted that the slope buttress for the Secondary road is not planned to be completed this year, at this time.</li> </ul>

**SURVEY:**

<b>Required</b>	<ul style="list-style-type: none"> <li>Recent multi-bead cable string pickups and crush cover over cables.</li> <li>As-built information for the overliner material placed on March 19.</li> <li>To date as-builts of Doris Diversion Berm (ROQ, underliner crush, liner, overliner crush)</li> </ul>
<b>Data Received</b>	<ul style="list-style-type: none"> <li>QC Cross sections for North Dam as-built (as of March 19)</li> <li>As-built surfaces of the North Dam ROQ, Transition and FCM placed from March 1 to March 19, 2012.</li> </ul>
<b>Outstanding</b>	
<b>Upcoming</b>	<ul style="list-style-type: none"> <li>Survey of FCM after placement (ongoing).</li> <li>Survey of Doris North Diversion berm (ongoing).</li> </ul>

**NORTH DAM/FROZEN CORE PLANT PAD:****Frozen Core Plant***Dayshift*

- FCM material was hauled to the frozen core plant stockpile.
- The CAT 330 excavator was working the stockpile.
- No plant operator was available for day shift.

*Nightshift*

- Overliner Material was produced at the FCP today:
  - The FCP was started up around 21:15
  - Water was started at ~38.5 on the water pump dial
  - Water was increased to ~ 39.5 on the water dial at 22:30 in an attempt to get the Overliner material closer to optimum moisture.
  - At 23:30 the moisture / water was further increased to ~ 41.0
  - At 1:00 am the water was further increased to 41.9 on the water pump dial, where it was left till the end of placement.
  - At 1:20 the generator for the plant went down. Around 2:15 the generator was fixed and back up and running. The plant was restarted with the same setting that it ended off with.
  - A ~ ¼ load of material was sent to the reject each time the plant started / restarted.
  - The FCM temperature exiting the chute was around +26C at start-up and made it up to +28C throughout nightshift.
  - The plant was run for ~ 7 hours.
- 27 truckloads and ½ reject load (~168 loader buckets total) were produced at the FCP today.
- At the end of shift the Overliner material stockpile was fairly small. Additional Overliner material will be required to be hauled to the FCP pad before future day's placements over placed GCL result.

**Dam Shell***Dayshift*

- No activity

*Nightshift*

- Minor work was completed packing the ROQ on the upstream of the dam.

**Key Trench/ Central Core***Dayshift*

- Labourers used the air compressor to clean the lower GCL near the center of the dam.
- Three additional sections of GCL were placed on the dayshift. The GCL was examined after placement.
- The electricians started to splice the cut cables at 1+75. They did not finish splicing the cables by the end of the shift. The heating and hoarding were left of the cables so the splicing could be continued tomorrow.

*Nightshift*

- Overliner material was placed on nightshift from ~ 1+95 to 1+60.
  - All liner except for a ~ 2m offset was covered over the GCL. At the toe of the upstream slope the excavator did spread one load of material which went over the last panel of GCL at the end. When this was noticed the overliner material was hand shoveled off the GCL to ensure that dayshift would be able to maintain an overlap at the bottom of the slope on this panel.
  - An additional piece of liner was added on dayshift to the most northern end. For this tie-in to the original ground the excess liner was draped against the neighbouring slope and then overliner material was placed over this area to pin the GCL panel in place.
  - A first lift of material was placed over the liner and along the base horizontal fillet extension area. After this first lift was placed a second lift was placed at the NE end of the dam core around 1+65 to 1+95.
  - A minimum of ~ 0.4 to 0.6m of cover material was maintained at all times over the liner as the excavator worked. Typically the excavator would try to work from the transition above and below the slope when possible. After the first pass or two from the compactor survey would do grade checks and indicate low and high areas to the excavator operator (for filling or cutting).
  - When the generator at the plant went down, the Overliner material placement temporarily stopped. This was noted to be favourable to the placement as this allowed the excavator and packer operator to catch up and finish the areas where placement had resulted.
    - A bit of the frozen crust was just starting to form in areas by the time the packer worked the area.
    - SRK held discussions with the Nuna nightshift forman about the possibility of taking breaks in future placements to allow for the packer and excavator operator to finish material placement and packing before it freezes up.
  - The 330 excavator placed then smoothed the overliner material before packing.
    - As directed by SRK the excavator operator tried to preferentially push / pull material up slope rather than pushing / pulling downwards. This was done to limit the potential for wrinkles or rolls in the GCL forming.
    - Typically overliner material was preferentially placed over the GCL overlaps first to hold the panels in place then the bulk of the over liner material was spread over the general areas.
  - The overliner material was packed with a 10 ton vibrator compactor. Compaction >90% was achieved.
    - From ~ station 1+70 to 1+95 the packer could travel fully up the side slopes. From ~1+70 S the packer could only make it partly up the slope (~ ½ to ¾ of the way up). The packer worked the bottom area first and then did loops by travelling down the

- slope from the top of the core then going around from the bottom back to the top.
- At the base of the liner at the end of placement the packer ran over a small portion of the outside of the upstream liner (at the toe). SRK will further inspect this area on dayshift to determine if any damage resulted to the liner. On a quick inspection no large or notable damage could be observed.

#### 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
			SB21	1+10	D/S			

##### PARTICLE SIZE DISTRIBUTION SUMMARY

Collected	Processed	Completed
HB12-ND-CORE-PSD73-QA-20120320		

##### MOISTURE CONTENT SUMMARY

Collected	Processed	Completed
HB12-FCP-CORE-MC364-20120320		HB12-FCP-CORE-MC364-20120320
HB12-FCP-CORE-MC365-20120320		HB12-FCP-CORE-MC365-20120320
HB12-FCP-CORE-MC366-20120320		HB12-FCP-CORE-MC366-20120320
HB12-ND-CORE-MC367-201203120		HB12-ND-CORE-MC367-201203120
HB12-ND-CORE-MC368-201203120		HB12-ND-CORE-MC368-201203120
HB12-FCP-CORE-MC369-20120320		HB12-FCP-CORE-MC369-20120320
HB12-FCP-CORE-MC370-20120320		HB12-FCP-CORE-MC370-20120320
HB12-ND-CORE-MC371-201203120		HB12-ND-CORE-MC371-201203120
HB12-ND-CORE-MC372-201203120		HB12-ND-CORE-MC372-201203120

##### DRILLED CORE

Collected	Processed	Completed
		HB12-ND-CORE-DC84-20120319

##### COMPACTION TESTING SUMMARY

Number of Tests	Material	Tested By	Shift	Notes
0	FCM	EP	Day	N/A
4	Over GCL Crush	JS	Night	Tests Acceptable

- Compaction and saturation results from the nuclear densometer were acceptable.

#### DORIS NORTH DIVERSION BERM:

- Placement of ROQ, geotextile and crush continued on dayshift.
- Some snow was removed from the key trench area west of the power cable crossing.
- Crush placed on slope appeared rough. Additional bucket tamping of the crush is expected to be completed with the excavator before additional geotextile deployment.

#### DORIS SUMPS:

- Second lid has been fabricated. Insulation is still required to be installed into the sump lids. Tli Cho is planned to complete this work.
- No notable work at Sumps. The sump locations are ready for the sump lids and overburden backfill. The overburden backfill remains stored in bags at the Batch Plant.

**QUARRY 2:**

- One drill working during dayshift and one drill working on nightshift (i.e. one drill working 24 hours).
- A blast occurred today at Quarry #2.

**GENERAL:**

- Today was SRK dayshift crew change day. Lawrence Borowski left site and Megan Miller arrived on site. Due to the crew change there was minimal SRK coverage on dayshift.
- SRK's truck 10-010 was working on dayshift



PHOTOS



**Photo 1:** Daily progress figure from photo point 1, photo looking south.



**Photo 2:** Daily progress figure from photo point 2m photo looking north west.



**Photo 3:** Looking south west at the ROQ along the top of the diversion berm. The ROQ surface does not appear packed; however this could be due to the excavator running on the packed surface.



**Photo 4:** Looking south west along the upstream slope of the core. Labourers using air compressor to clean the slope.



**Photo 5:** Underliner crush placed on diversion berm. Photo looking east.



**Photo 6:** View of GCL placed along upstream slope of core. Photo looking north east along dam.





**Photo 7:** The start of Overliner GCL material placement (at ~ 1+95)



**Photo 8:** Excavator spreading first few loads of Overliner material on the N end of the core.



**Photo 9:** ~SWW view of overliner material construction progress (taken around mid shift)



**Photo 10:** ~NEE view of Overliner material placement.



**Photo 11:** View of second lift of Overliner material starting to be placed at the N end of the core.



**Photo 12:** Packer working from the top to the bottom of the slope during Overliner placement.



FIGURES:

Figure 1 – North Dam Progress – Dayshift

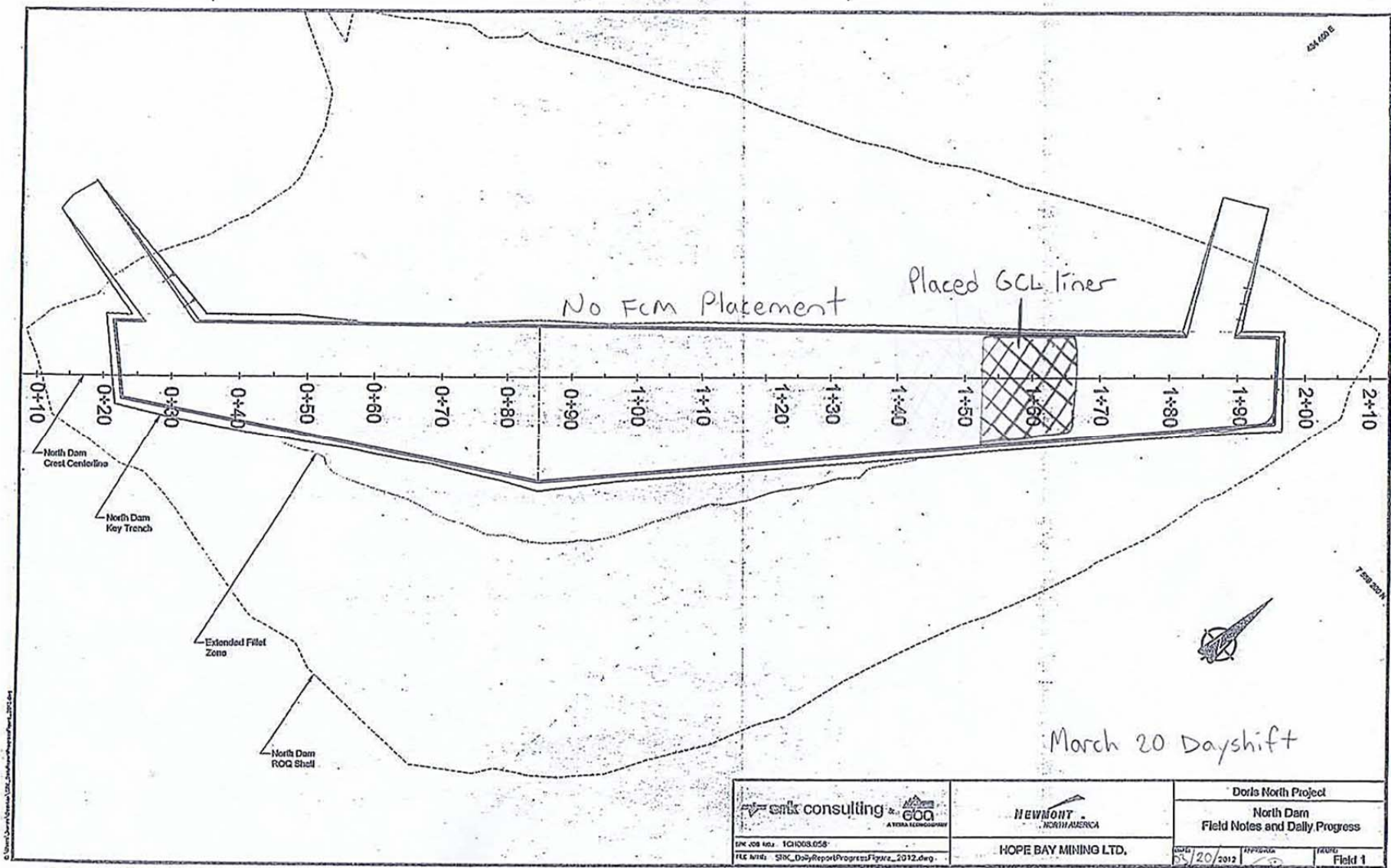


Figure 2 – North Dam Progress – Nightshift

