

## DAILY REPORT #15 – DORIS NORTH INFRASTRUCTURE/ NORTH DAM

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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	No Yes Yes No No No Yes No
	JDS	Lloyd Jackson – Mechanical Superintendent Sven Archimowtiz – Electrical Superintendent Doug Fielding – Construction Manager Ishan Fechter – Construction Coordinator Jerry Graham – Construction Manager Kevin Whieldon – Project Coordinator Mark Valeriote – Construction Manager	No Yes Yes Yes No No Yes
Engineering Design Consultants	SRK Consulting (Canada) Inc.	John Kurylo – Site Engineer Megan Miller – Site Engineer Lawrence Borowski – Site Engineer Murry McGregor – Site Engineer Iozsef Miskolczi – Site Engineer	Yes Yes No No No
	EBA Engineering Consultants Ltd.	Jeff Orr – Project Manager Jennifer Stirling – Geologist Thomas Bradshaw – Junior Engineer Ernest Palczewki – Geologist	Yes Yes No No
Earthworks Contractor	Nuna Logistics	Bradford Watkin – QC Manager Dale Craig – Safety Don Webber – Foreman Doug Haverland – Area Superintendent Gary Sodhi – Field Engineer Georges Cornelissen – Survey Manager Jeff Roberts - Surveyor Jim Cardinal – Foreman Kevin Oakes – Project Engineer Kevin Kozdrowski – Foreman Margret Caley – Surveyor Matt McKay – Civil Supervisor Mike MacMaster – Surveyor Mike Price – Field Engineer Nick Stoneberger – Superintendent Rick Peters – Foreman Ron MacMaster – Surveyor Simon Chipper – Civil Supervisor	No No No Yes No Yes Yes Yes No No Yes Yes Yes Yes No No Yes No
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**WEATHER (ROBERTS BAY)**

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

Temperature/Wind Chill (°C)	6AM:-37.8/-37.8	12PM:-38.9/-38.9	6 PM: -39.9/-39.9	12 AM:-40.3/-40.3
Precipitation (mm)	<b>Rain:</b> None		<b>Snow:</b> None	
Conditions	<b>Day Shift:</b> Calm.		<b>Night Shift:</b> Calm, clear, cold.	
Daily norms (°C)	24 hour high: -35.4		24 hour low: -40.3	

**HEALTH, SAFETY AND ENVIRONMENT**

- Jennifer Stirling attended orientation during the day until 4 pm.

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

- The daily meet was attended by ADCO, ACI, Nuna [Doug Haverland, Matt McKay, Mike Price], ESR [Michelle Tanquay], Newmont Safety [Stirling Kelly], JDS [Doug Fielding, Ishan Fechter, Mark Valeriotte], SRK [John Kurylo], EBA [Jeff Orr].

Topic	Status
Health and Safety and Environment	<ul style="list-style-type: none"> <li>Working in cold weather conditions was discussed. Temperatures have been dropping recently and additional considerations should be given while working outside, especially when winds are present.</li> <li>Man lifts are required to be warmed up for additional periods of time before use in the cold weather.</li> </ul>
North Dam	<ul style="list-style-type: none"> <li>No FCM is expected to be place in the morning.</li> <li>Excavators available for the dam construction are currently limits. <ul style="list-style-type: none"> <li>The 330 excavator is having issues with the cooling fan for the hydraulic and is in the shop. This excavator is hoped to be back in service later this morning.</li> <li>The 325 currently has no radiator.</li> </ul> </li> <li>The 354 excavator is expected to be used to help dig into/ break up frozen clumps at the FCM stockpile (on the FCP Pad).</li> </ul>
Water Management Structures	<ul style="list-style-type: none"> <li>ESR has inspected the progress of the snow road progress near the DN Diversion berm. This area looks good thus far.</li> <li>JDS and Nuna discussed doing a test strip in the alignment for the DN Diversion Berm key trench to get a better feel for how difficult the frozen ground will be to excavate in this area.</li> <li>Nuna has indicated that a large portion of the DN Diversion Berm key trench is expected to be in bedrock. Therefore drilling and blasting should be expected for the Diversion Berm key trench, at its current alignment.</li> <li>SRK to inspect the Diversions Berm alignment in the coming day to two to get a better understanding of the areas where drilling and blasting activities may be required/ expected.</li> <li>The snow road by the DN Diversion berm is planned to continue today.</li> </ul>
General	<ul style="list-style-type: none"> <li>Til Cho is staring to remove snow from the berms (around the DN Tank Farm area).</li> <li>ATCO/ ATI to check with underground to see if lifts could be temporarily left in there shop.</li> <li>The supply of operators is currently somewhat limited.</li> <li></li> </ul>

**SURVEY:**

<b>Required</b>	<ul style="list-style-type: none"> <li>As-built survey of FCM placed on 2012/01/20</li> </ul>
<b>Data Received</b>	<ul style="list-style-type: none"> <li>None.</li> </ul>
<b>Outstanding</b>	<ul style="list-style-type: none"> <li>Survey data from as-built pick-up for FCM placed on 2012/01/18</li> <li>Survey data from 5/8" clearing (from ~ 1+38 to 1+70), picked up on 2012/01/20</li> </ul>
<b>Upcoming</b>	<ul style="list-style-type: none"> <li>Survey of frozen core surface after cleaning/ scraping activities at N. Dam (on going).</li> <li>Survey of FCM after placement (on going).</li> </ul>

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

- Maintenance resulted at the FCP today. The electricians visited the FCP and fixed the entry and exit doors.
- The FCP started up today around 4:30pm.
  - The saturated FCM exiting the chute was around 30° C.
  - The trucks were loaded only ~ ½ to ¾ full due to issues being experienced by the plant and constant required shut downs and restarts.
- The FCP plant continued to have issues with the outside belt feeder, from the hopper. At the end of the day the error code of this belt feeder was generated. Tomorrow the electricians will visit the FCP plant and investigate the ongoing issues.
- Due to cold temperatures and increase in the observed belt slippage from the FCP hopper belt feeder were observed.

*Nightshift*

- During the nightshift the frozen core plant was cleaned.
- A snow pad was built, extending the frozen core plant pad south. Material removed from the key trench was utilized to construct this pad.
- Clumps of frozen material from the FCM stockpile were hauled to the crusher with CAT 730 haul trucks.
- A bulldozer was used to try and break up the smaller chunks within the stockpile.

**Dam Shell**

- No significant activity.

**Key Trench***Dayshift*

- The 330 excavator (equipped with a finishing bucket) and 345 excavators (equipped with toothed bucket) were used during dayshift to assist with removal of additional frozen 5/8" clear material.
  - Most cleaning resulted between ~ 0+30 and 1+90.
  - The 330 excavator was down at the end of day shift due to hydraulic and mechanical issues, primarily associated with cold weather.
- Nuna survey picked up an as-built of cleaning completed around 1+30 to 1+70.
- 5/8" removal/ cleaning on the base of the key trench from ~ 0+40 to 1+70 was inspected.
  - The clearing from ~ 0+80 to 1+30 is completed, excluding the back ~ 1 to 2m against the downstream wall. This area was approved for placement.
    - As placement did not extend to the approved extents today additional snow clearing may be required before the next placement in this area.

- The 5/8" clearing from 0+40 to 0+80 is close to completed. There is a small patch around 0+50 upstream that needs additional clearing and the ~ back 2m against the downstream edge appears to still require further excavation (exact limits to be confirmed by survey in the coming days).
  - Additional 5/8" clearing is required on the side slopes of the key trench FCM.
  - There was one area of the key trench, around the downstream edge of 1+40 where the key trench was protruding inwards of the SRK design lines. The material in this area was ripped out to the SRK design limits with the toothed excavator bucket. Photo 3 shows this area before the aforementioned material was removed.
- SRK, Nuna and JDS held discussions in the field about the downstream core limits that have been laid out in the key trench. The extents for the key trench laid out today was offset from the core limit previously laid out on previous days, by up to ~1m in areas.
  - Nuna survey to recheck files/ layers in controller to confirm the appropriate IFC design surface limits are being used.
  - Survey filed to be looked at to ensure that core placement will progress to the design limits.
  - Additional clearing occurred along the downstream core limits within the key trench (to the further NNW lines laid out today).
- Three loads of core material were placed today near the end of shift (around 0+80 to 1+00 from the centerline to the upstream).
  - Nuna was experiencing problems with the frozen core plant as well as equipment issues. The daytime high temperature was only -39c and was causing problems throughout site.

#### *Nightshift*

- During the night shift the CAT 345 excavator (equipped with toothed bucket) was used to clear snow from the downstream edge of the key trench. Areas around the thermistor strings were left to be cleared by hand.
- A single set of pickup tracks was noted on the FCM placed during the day shift, prior to this material freezing back. The material was at ~0°C when it was driven on. A haul truck was also noticed to drive over the edge of this material. This was discussed with the foreman and traffic was kept off the area. This material was not frozen back by the end of nightshift.
- Multi-bead thermistor readings were taken for the upstream and downstream thermistors (minus ND-VTS-085-DS which is buried in snow) and ND-VTS-085-KT and ND-HTS-085-25.3.
- Thermistor ND-HTS-060-28.8 remains broken.
- A loader scraped snow of the edges and floor of the key trench for part of the night.
- A progress figure showing today's the approximate extent of today's placement is provided as Figure 1.

#### **Field Geotechnical Testing, Laboratory and Sampling**

- Single bead #59 and #54 were read. Freeze back of the lift placed on 2012/01/20 dayshift was not achieved by the end of night shift.

#### **SINGLE BEAD THERMISTOR STATUS**

Installed Today			Active			Destroyed / Abandoned		
ID	Station	US/DS/Center	ID	Station	US/DS/Center	ID	Station	US/DS/Center
54	0+90	U/S	36	0+92	D/S	53	0+85	Center
			59	0+90	D/S			

#### **RECENT SINGLE BEAD MEASUREMENTS**

Single	Temperature (°C)	Date
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Bead No.	20-Jan 17:50	20-Jan 17:55	21-Jan 00:15	21-Jan 01:00	21-Jan 04:20	21-Jan 05:15	Installed
59	-23.2			-24.9			17-Jan
54		21.2	0.0	0.0	0.1	0.0	20-Jan

- A summary of the material testing progress for 2012/01/20 is presented in the tables below.

#### PARTICLE SIZE DISTRIBUTION SUMMARY

Collected	Processed	Completed
HB-FCP-CORE-PSD4-QA-20110120	HB-FCP-CORE-PSD3-QA-20110118	

#### MOISTURE CONTENT SUMMARY

Collected	Processed	Completed
HB-FCP-CORE-MC7-QA-20110120	HB-FCP-CORE-MC6-QA-20110118	

#### COMPACTION TESTING SUMMARY

Number of Tests	Material	Tested By	Shift	Notes
2	Core	JO	Day	All Passed

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

#### DORIS NORTH CAMP:

- The snow road around the Doris North Diversion Berm progresses slowly.
- SRK plans to inspect the alignment of the DN diversion berm in the coming days.
- Westarc is now on site to start the drilling at the Doris North Sump locations (1 and 2).

#### GENERAL:

- The pickup assigned to SRK was having power issues at the end of dayshift and could not make it out of the key trench. At the beginning of night shift the mechanics brought the truck to the shop to be serviced, the truck will not be serviced until tomorrow morning (Jan 21).
- One of the Nuna surveyors is in the process of switching to nightshift and worked part of the night.



PHOTOS:



**Photo 1 (top left):** ~SEE view of snow pad near DN Camp Sump 1 location. Looking towards Doris Lake.



**Photo 2 (top center):** ~E view of FCM stockpile at the FCP Pad. Note that the frozen material is trying to be seperrated out and the better quality material stockpiled (i.e. small stockpile starting at the forefront of this picture).



**Photo 4 (mid right):** ~W view, looking down the key trench, at cleaning progress.

**Photo 3 (center):** View of downstream slope around 1+40. Note that the ‘knob’ of frozen original ground was ripped out today as it was slightly inwards of the IFC design lines.



**Photo 5 (bottom):** ~ N view of the FCP Pad.





**Photo 6:** Progress photo of the North Dam construction from Photo Point 1; taken in the pm, ~ SE view.



**Photo 7:** Progress photo of the North Dam construction from Photo Point 2; taken in the am, ~ WNW view.





**Photo 8:** ~ NEE view down key trench. Note recent January 19<sup>th</sup> placement is the darker coloured material in the central area.



**Photo 9:** ~ N view of excavators working on cleaning eastern portion of key trench (stitched Panoramic view)



**Photo 10 (top right):** Bobcat and 330 excavator working cleaning snow and 5/8" material from downstream of key trench.



**Photo 11 (right center):** Compaction testing being completed around station 0+90 in the central key trench area.



**Photo 12:** ~NNE view of 345 excavator spreading/ placing FCM.



FIGURE:  
• FCM Progress/ Placement

