

DAILY REPORT #66 – DORIS NORTH INFRASTRUCTURE/ NORTH DAM

Prepared by:	John Kurylo Lawrence Borowski	Date:	2012.03.11		
Reviewed by:		Project #:	1CH008.058.0320		
Role	Company	Personnel – Position	On Site		
Client	Hope Bay Mining Limited (HBML)	Angela Holzapfel – ESR Compliance Manager	No		
		David Vokey – ESR Coordinator	Yes		
		Don Ethelston – HSLP Advisor	No		
		Dean Wold - Safety	Yes		
		Jill Turk – ESR Coordinator	No		
		Katsky Venter – ESR Manger	No		
		Michelle Tanquay – ESR Site Manager	Yes		
		Stirling Kelly – HSLP Advisor	Yes		
	JDS	Lloyd Jackson – Mechanical Superintendent	No		
		Doug Fielding – Construction Manager	No		
		Ishan Fechter – Construction Coordinator	Yes		
		Jerry Graham – Construction Manager	Yes		
		Kevin Whieldon – Project Coordinator	No		
		Mark Valeriote – Construction Manager	Yes		
Engineering Design Consultants	SRK Consulting (Canada) Inc.	John Kurylo – Site Engineer	Yes		
		Megan Miller – Site Engineer	No		
		Lawrence Borowski – Site Engineer	Yes		
		Murray McGregor – Site Engineer	No		
		Iozsef Miskolczi – Site Engineer	No		
		Lowell Wade – Senior Engineer	No		
	EBA Engineering Consultants Ltd.	Jeff Orr – Project Manager	Yes		
		Jennifer Stirling – Geologist	Yes		
		Thomas Bradshaw – Junior Engineer	No		
		Ernest Palczewski – Geologist	No		
		Earthworks Contractor	Nuna Logistics	Bradford Watkin – QC Manager	No
				Doug Haverland – Area Superintendent	Yes
Gary Sodhi – Field Engineer	Yes				
Georges Cornelissen – Survey Manager	No				
Jeff Roberts - Surveyor	Yes				
Jim Cardinal – Foreman	Yes				
Jordan Gunter – Foreman	No				
Kevin Oakes – Project Engineer	No				
Kevin Kozdrowski – Foreman (Night shift)	Yes				
Kyle Kuntz – Project Engineer	No				
Margaret Caley – Surveyor	No				
Matt McKay – Civil Supervisor	No				
Mike MacMaster – Surveyor	No				
Mike Price – Field Engineer	No				
Nick Stoneberger – Superintendent	No				
Rick Peter – Foreman (Day shift)	Yes				
Ron MacMaster – Surveyor	Yes				
Simon Chipper – Civil Supervisor	No				
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				
This Construction Daily Report is produced as an internal communication document between SRK site and head office staff. Any distribution of this report outside of SRK is done as a courtesy, and the information contained in this report are for information only to those external parties.					

WEATHER (ROBERTS BAY)

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

Temperature/Wind Chill (°C)	6AM: -36/-52	12PM: -34/-51	6PM: -30/-44	12AM: -29/-29
Precipitation (mm)	Rain: None		Snow: None	
Conditions	Day Shift: Clear, light wind, very cold		Night Shift: Clear, light wind, cold	
Daily norms (°C)	24 hour high: -29C		24 hour low: -37C	

HEALTH, SAFETY AND ENVIRONMENT

- John Kurylo attended the nightly Nuna toolbox meeting.
- Jennifer Stirling obtained her site driving license.
- The SRK truck was experience issues with the power-steering and was taken to the Nuna shop for repair during the night shift.
- Mechanic advises that a power steering pump is required, and needs to be ordered. Nuna provided a vehicle for the day shift.

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

- The daily meeting was attended by HBML [Michelle Tanguay], Newmont [Sterling Kelly], JDS [Gerry Graham, Ishan Fechter, Mark Valeriot]; 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: Worker strained back lifting bags. Strain was not reported at the time of the incident. Worker reported back pains overnight. On questioning by medical staff the next morning it was ascertained that lifting the bags was the cause of the back pains. • An Adco worker strained his back while entering a zoom boom. • Safety requested that we stay vigilant. There was a visit to Boston where journey plans were not submitted. • ESR: No issues.
North Dam	<ul style="list-style-type: none"> • Placed FCM from Sta 0+95 to Sta 1+75 • Volume placed 296 cu.m. • Plan to place FCM from Sta 0+95 to 0+45 today. • Night shift to place FCM in the south east corner.
Water Management Structures	<ul style="list-style-type: none"> • Layfield completed welding from Sta Sta 3+80 to 4+45 • Geotextile placed over HDPE. • Continue preparing trench and placing bentonite.
General	<ul style="list-style-type: none"> • Culvert installation at the Doris Bridge today.

- Additional details on the JDS and SRK discussion on the 'cover material' or overliner GCL material for the North Dam (resulting on 2012/03/10, see SRK Daily #65) are provided below.
 - The original plan for the 'cover material' was to use the frozen core material that was processed between mid-January and early March 2011. An RFI was sent out and the plan was approved by SRK. This material would meet the SRK particle size distribution specifications from the core material. It was understood that this material was noted to previously not be successful to place and ensure compaction and saturation criteria were met.
 - The current 'old' 2011 core material stockpile at Quarry #2 is frozen and would require too much work, and thus related cost, to make this material usable. Issues such as having to break up the frozen lumps, similar to as was done earlier this year with the remaining suitable 2011 core

material, would be expected.

- The current plan for the over GCL material or 'cover material' was to mix ¾" crush with the new 'manufactured fines' / 5mm minus crush material. This would be done to avoid unneeded effort and costs associated with making the 'old' 2011 core useable, while bringing up the top end of the core, to assist with the placement on the 2.5H:1V dam slopes.
- The minimum cover of core material over the GCL outlined above is acceptable to SRK as long as the design intent of the IFC's is upheld (which they appear to be). Minimum compaction requires and design lines / limits must be upheld during 'cover material' placement.

SURVEY:

Required	<ul style="list-style-type: none"> • File for additional patches of GCL.
Data Received	<ul style="list-style-type: none"> • Frozen Core Volumes (for up to and including March 10th). • QC Cross sections of work in progress (for up to March 10th) • FCM and Transition material placed on March 9 and 10th
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 strings were read: ND-HTS-060-33.5.0, ND-HTS-060-31.0, ND-HTS-060-28.8, ND-VTS-060-KT.

Frozen Core Plant

Dayshift

- Plant started at 12:00 pm and shut down at 2:00 pm
- The water dial started at the night shift setting of 56.5, and then was reduced twice to 55.
- Temperature was +36C

Nightshift

- Plant was started up around 04:00.
 - A small amount of water has been being used at the input to the plant drum. Night shift appears to be using slightly less water on the input end (based on the observation of wet FCM traces left on the outside of the drum and around the location of the sprinkler). This is expected to account for the slight differences in water pump dial setting noted between shifts (as the water pump is slightly adjusted to compensate for this small sprinkler). This sprinkler is being used to limit the amount of dust on the input end of the cycle which has caused some issues with clogging some of the tubes around the torch.
 - Initially the water dial was set to 55.1 and the belt speed was set to 21.0
 - Initial temperatures were around +36 to 37C. Temperatures were kept higher, although the ambient air temperature was warmer today, to allow for more time to place and pack the material in the tight / awkward SSE upstream slope area.
 - After the first truck the water dial was adjusted down to ~49.6.
- Around 5:30 the generator supplying electricity to the FCP pad overheated. The plant was stopped and placement did not recommence as the generator did not get restarted until ~5:50.

Dam Shell

Dayshift

- The excavator worked on the ROQ downstream slopes in the morning, primarily grading near the south thermosyphons.
- Packer work on the downstream slope.

- A small amount of ROQ was hauled to the north dam. (Trucks were hauling crush to the culverts at the Doris bridge.
- Work resumed on the ROQ downstream slopes after placing FCM was complete.
- Packer worked at the site all day.

Nightshift

- ROQ material was placed from ~1+95 to 1+00 an in a small area around 0+50 on the downstream side of the dam.
- Some Transition material was moved around station 1+95 to ~1+40.
- ROQ material was spread and packed around 0+20 and 1+95 to 1+00. Material was typically spread to blend in with the downstream 4H:1V slope and the downstream Transition material.
- Some snow was removed on the downstream around the north end (~ 1+60 to 1+95 area) as ROQ work progressed.

Key Trench/ Central Core

Dayshift

- Placed FCM between Sta 0+90 and Sta 0+52
- FCM was wet even though dial was reduced from 56.5 to 55.
- Placing started at 12:00 pm and ended at 2:00 pm.
- Grade at sta 0+85 was graded to elevation 33.5. Multi bead thermister ND-HTS-085-33.5 can be installed as the next lift is placed.
- Thermister ND-HTS-060-33.5 was installed during the day shift.
- At the end of the shift it was learned that the plant operator had installed a misterbar system to keep dust down. It is not known what impact this had on the final product.
- Test results were difficult to achieve as the FC was too wet.

Nightshift

- The area on the downstream 70 to 0+60, by the area where the horizontal portion of the fillet / fillet extension starts, was cleaned. The GCL liner was exposed and a few patches were put in this area before placement commenced. Patches were picked up by Nuna survey.
- FCM was placed from ~0+70 to 0+0+40 on the upstream of the dam.
 - Approximately 4 loads were placed on nightshift.
 - Material was placed along the most SE extents of the downstream slope, in the underbuilt SSE area. See Photo section for additional details on exact location / notable underbuilt SE slope area.
 - Difficult to access areas were packed with the hand / plate tamper.
 - The above area was cleared of snow through the use the skid steer, and shovelling.
 - The upstream slope continues to be sloped to 2.5H:1V grade as construction progresses. Due to access issues the Excavator spread the FCM but was unable to cut back the upstream slope to design limits. A notable about of hand shovelling and raking was required to cut back and smooth the slope. This was done under the guidance of Nuna survey.
- The elevations of the dam core at the remaining multibead locations are outlined below.

Station	Current Top Elevation (m)	Install Elevation (m)	Comment
0+85	33.50	33.50	Graded to multibead elevation.
0+60	33.50	33.50	Installed today.
0+40	33.50	33.50	Graded to multibead elevation. No change in elevation today

- The exposed end beads on thermistor string ND-HTS-060-31.0 were buried / installed today.
- Single bead thermistors were monitored. Progressing from north to south the following freezback was noted. Around 2:45 the area placed on nightshift on March 10th was noted to have frozen back (area along the far north and south ends). A core was taken immediately after the aforementioned area had

reached -2C. At the end of shift the area placed on March 9th night shift was around -0.1C.

- One drilled core was taken around station 1+60 on the downstream (HB12-ND-CORE-DC73-20120311). Issues with the shop vac continue. Snow and spill pads were utilized to clean up around the drilled core location. A new vacuum is being sourced out.

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
SB17	0+60	CL	SB16	1+60	CL			
SB18	0+50	U/S	SB11	1+00	US			

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

PARTICLE SIZE DISTRIBUTION SUMMARY

Collected	Testing In Progress	Completed
HB12-ND-CORE-PSD69-20120311	HB12-ND-CORE-PSD69-20120311	HB12-ND-CORE-PSD68-20120310

MOISTURE CONTENT SUMMARY

Collected	Testing In Progress	Completed
HB12-FCP-CORE-MC316-20120311 HB12-ND-CORE-MC317-20120311 HB12-ND-CORE-MC318-20120311 HB12-ND-CORE-MC319-20120311 HB12-ND-CORE-MC320-20120311		HB12-FCP-CORE-MC316-20120311 HB12-ND-CORE-MC317-20120311 HB12-ND-CORE-MC318-20120311 HB12-ND-CORE-MC319-20120311 HB12-ND-CORE-MC320-20120311

DRILLED CORE

Collected	Testing In Progress	Completed
HB12-ND-CORE-DC73-20120311	HB12-ND-CORE-DC73-20120311	

DORIS NORTH DIVERSION BERM:

- Placed bentonite between Sta 3+30 and Sta 3+80
- Layfield installed underliner between Sta 3+30 and Sta 3+80
- Started cleaning snow along the .5 meter width from the bank at Sta 5+80 proceeding west.
- Excavator placing crush on the berm and building access for placing overliner crush at ~ Sta 4+50
- Final cleaning from Sta 2+50 to Sta 3+30

DORIS SUMPS:

- Fabrication of the second lid started today.
- Insulating of the lids is required after fabrication is completed.

QUARRY 2:

- Two drills working during the day shift.

GENERAL:

- Pipes/culverts have been installed at the Doris Bridge. Crew was haling crush to the site and backfilling today.
 - Additional work was completed ripping a second culvert location on the Secondary Road around the Doris Bridge on nightshift.
- Dozer worked on the snow pile at Doris Lake this morning.
- D6 worked on pushing snow piles further SE onto Tails Lake at the start of nightshift.
- Windchills were -52C this morning. Temperatures moderated during the day and winds decreased.

PHOTOS:



Photo 1: Progress photo from photo point 2, facing NNW



Photo 2: Progress photo from point 3 , facing NNE



Photo 3: Progress photo showing east side of core.



Photo 4: Placing FCM Sta 0+90 facing south



Photo 5: Bead ND-HTS-060-33.5 partially covered.



Photo 6: Bead suspended beyond the edge of FCM



Photo 7: Excavator backsloping at Stn 0+40



Photo 8: Layfield placing underliner from Sta 3+30 to Sta 3+80



Photo 9: Surveying top of crush at Sta 3+30

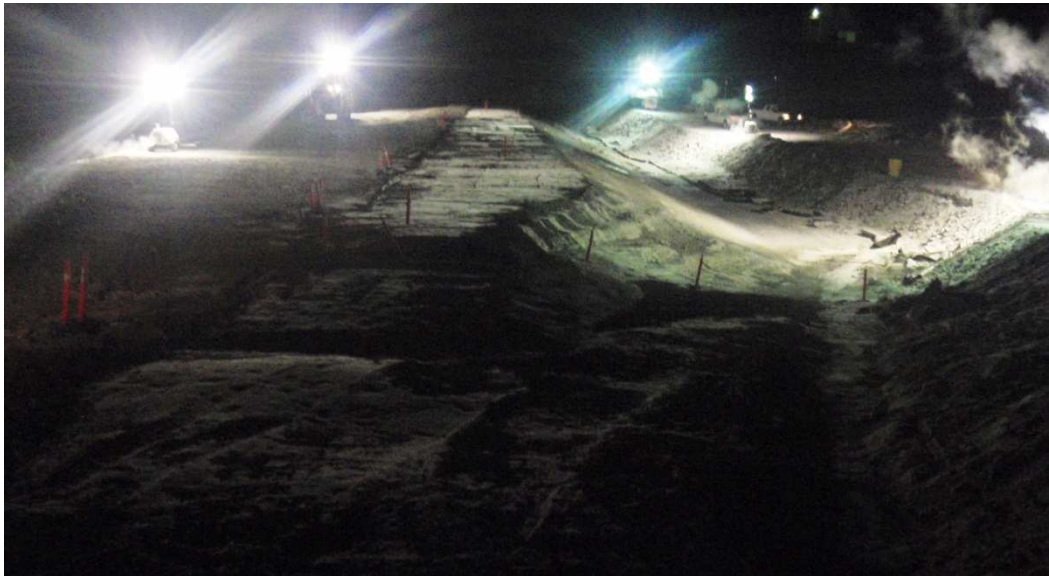


Photo 10: ~NE view down the Dam CL of construction progress



Photo 11: Excavator placing ROQ on downstream slope



Photo 10: Drilled core was taken around station 1+60 on the downstream (HB12-ND-CORE-DC73-20120311). Note that the very bottom of the core was noted to slightly melt when cored. This is expected to have resulted as the core was taken immediately after a -2C reading was obtained. This north area is expected to be placed on during dayshift tomorrow.



Photo 10: Labourers smoothing FCM in SE core area after packing with hand tamper



Photo 11: ~SW view down the Dam CL of construction progress

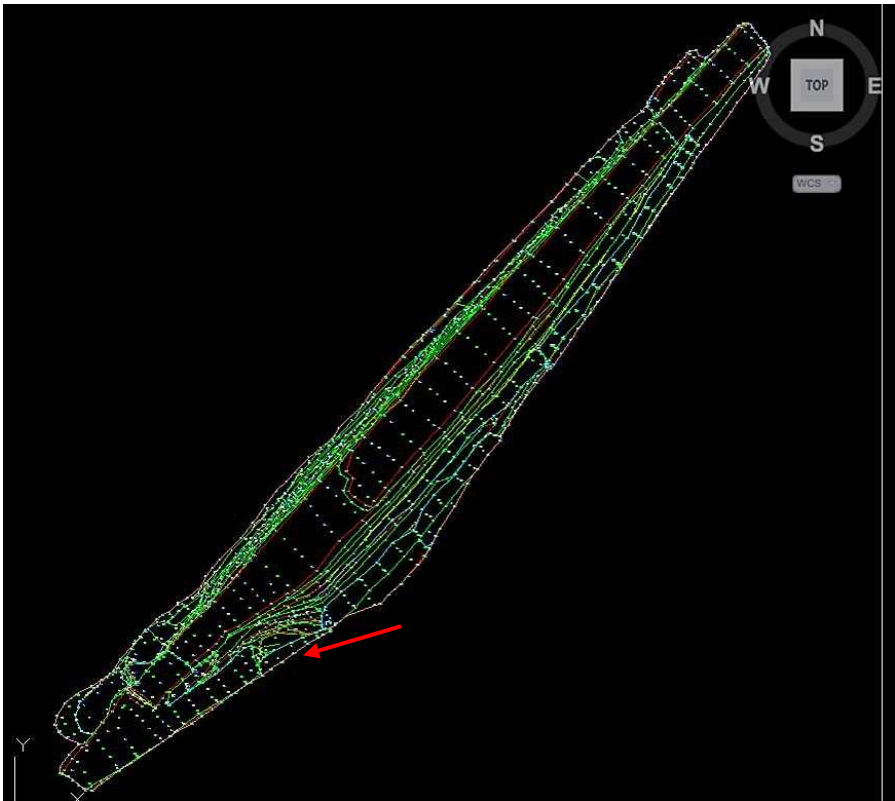


Photo 10 (with Acad Screenshot): ~ SW view of the area where placement along the SSE dam slope was completed on night shift. For reference a screenshot showing the as-built breaklines (as of March 10th) is provided. Note the indented almost 'U' shape underbuilt area of the SSE slope. This was the area of focus on tonight's nightshift.

FIGURES:

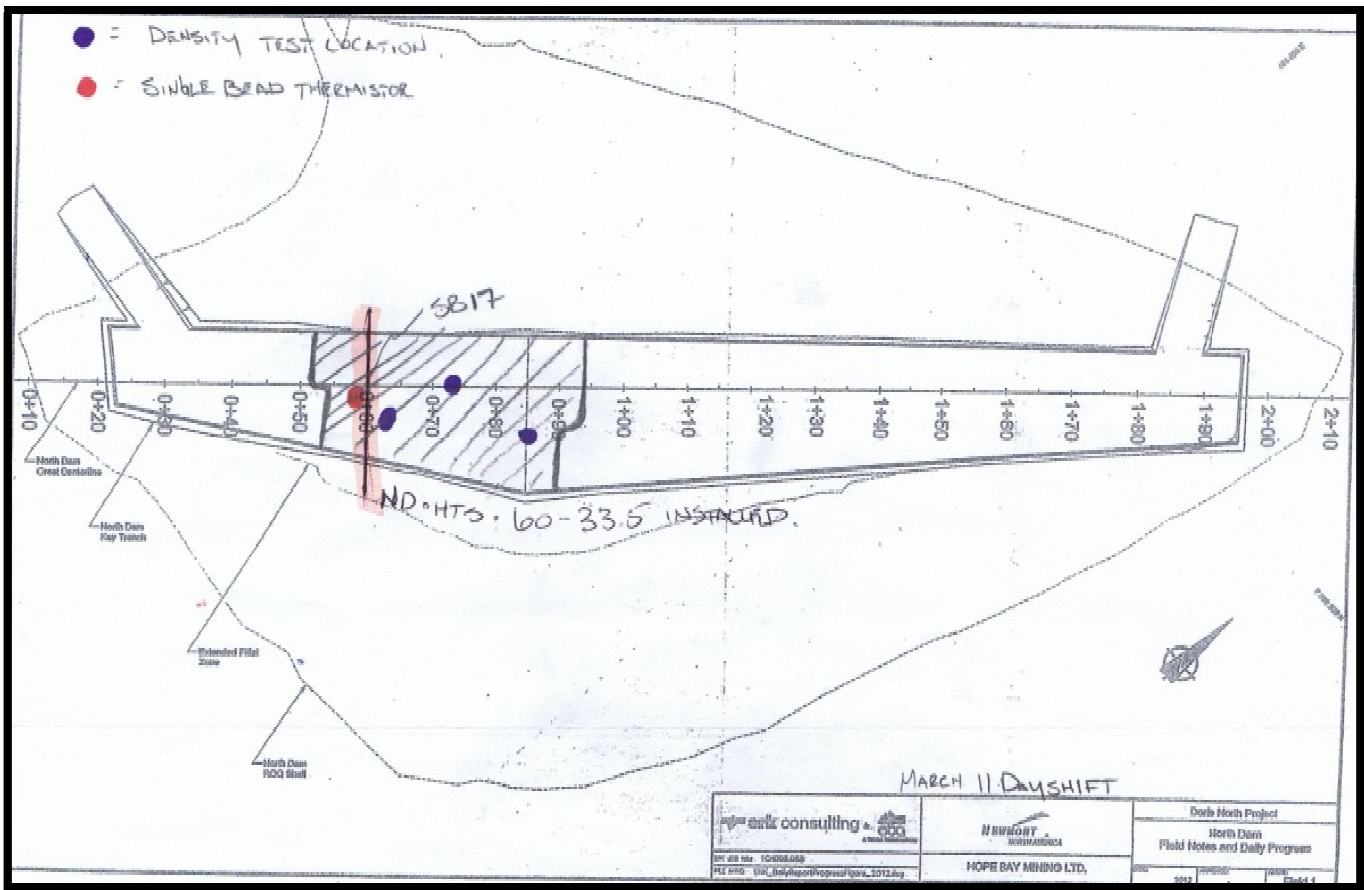


Figure 1 – North Dam Progress – Dayshift

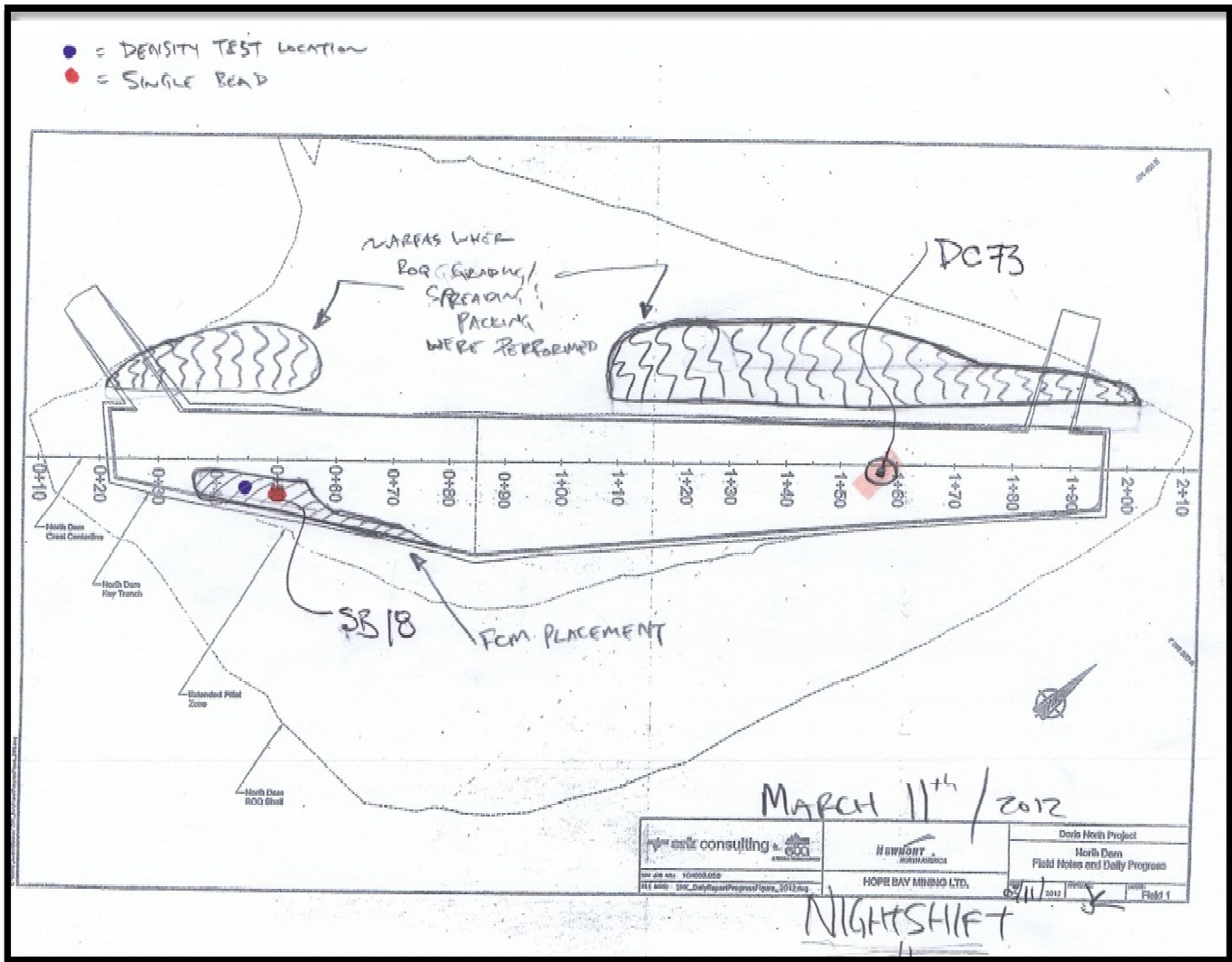


Figure 2 – North Dam Progress – Nightshift