

DAILY REPORT #67 – 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	In 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	Bradford Watkin – QC Manager 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	No Yes Yes No Yes Yes No No Yes No No No No No No Yes Yes In
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: -25/-40	12PM: -22/-36	6PM: -20/-34	12AM
Precipitation (mm)	Rain: None		Snow: None	
Conditions	Day Shift: Cloudy, windy, brief period of light snow		Night Shift: Clear, light wind, cold	
Daily norms (°C)	24 hour high: -20C		24 hour low: -26C	

HEALTH, SAFETY AND ENVIRONMENT

- John Kurylo attended the nightly Nuna toolbox meeting.
- SRK is using a pickup provided by Nuna

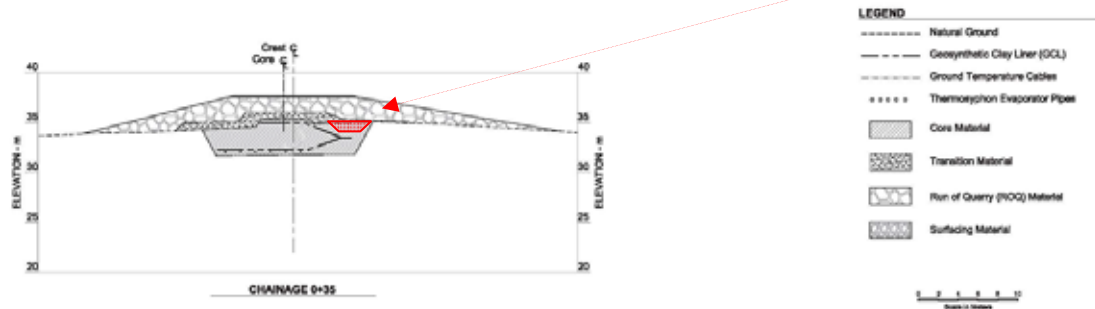
COMMENTS, CORRESPONDENCE AND ACTIVITIES**DAILY MEETING WITH NUNA AND HBML TEAM:**

- 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"> • Communication issues at the dam on channel 64. Radios are cutting out midway through discussions. Do not assume transmissions have been received. Request acknowledgement. • Checkoff sheets are being received very late. • ESR: No issues.
North Dam	<ul style="list-style-type: none"> • Placed FCM from Sta 0+90 to Sta 0+52 during day shift • Nightshift placed 4 loads in the SE corner • Dayshift placed 12 loads • Plan to place FCM at the south end and between Sta 1 + 74 and Sta 1 + 00 today.
Water Management Structures	<ul style="list-style-type: none"> • Placed bentonite between Sta 3+30 and Sta 3+85 • Layfield installed underliner between Sta 3+30 and Sta 3+85 • 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 • Plan to place HDPE, bentonite and start backfilling today.
General	<ul style="list-style-type: none"> • Culvert installation at the Doris Bridge today.

- After the morning meeting SRK and JDS had additional discussions. The following main items were discussed.
 - 'Scheduling efficiency' for monitoring freezeback was noted. This was discussed so that all parties could work together to determine as soon as possible / practical when lifts reach -2C so corning and placement can then result.
 - A plan to keep one multimeter with SRK and the other one with the Nuna foreman is was discussed. SRK will continue to monitor the single beads as then have been doing but will make sure inform the Nuna foreman immediately once it is know that temperatures are below 0 degrees (i.e ~ -0.5C or lower). If / as wanted the Nuna foreman can then also monitor the single bead location(s). Once a reading of -2C or lower has been noted then this will be communicated to the other party.

- Based on the 3D geometry of the key trench and dam core there are some areas around the north and south end where the GCL hinge (the joint between the lower and upper GCL panels) is somewhat below the elevation of the original ground (i.e. in the original key trench). JDS inquired if the area in excess of 0.3m above the upper GCL liner cover, but below the original ground elevation, was required to be filled with FCM. See notes on area in red on section below.



This was brought up as Transition material placement in this area would be easier for construction, would reduce the need for handling of multiple materials (one of which has to go through the plant) for extended periods and would provide time and cost benefits for this installation

From section ~ 0+40 South and from section ~ 1+80 North this is most apparent.

This aforementioned area is required to be backfilled with 'cover material/ however the approved (fillet zone) construction variance method used in 2011 can be utilized. This variance would be slightly different in that the cover material gradation is expected to be slightly different than what has been observed to be used for the saturated core material. Overall the following requirements are expected to be met as the over liner material is filled up the original ground elevation at the ends.

- Using blended core material that meets the original (tech spec) gradation limits (i.e. similar to the material processed between mid-January and early March 2011). As noted in Daily #66 this is expected to be a material that is a mix of ¾" crush with the newer 5mm minus product.
- Ensure minimum Standard Proctor Density requirements are met for the cover material.
- Moisture content no less than optimum Moisture Content (OMC), but no requirement to meet the 85% saturation
- No freeze back wait period between lifts

SURVEY:

Required	<ul style="list-style-type: none"> Transition material placed on March 11th and 12th and FCM placed on March 12th.
Data Received	<ul style="list-style-type: none"> Frozen Core Volumes (for up to and including March 12th) QC Cross sections of work in progress (for up to March 12th) FCM material placed on March 11th
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**

- All installed multi-beads were read:
 - ND-HTS-040-31.5, ND-HTS-040-33.5, ND-VTS-040-KT
 - ND-HTS-060-28.8, ND-HTS-060-31.0, ND-HTS-060-33.5, ND-VTS-060-KT, ND-VTS-060-DS, ND-VTS-060-US
 - ND-HTS-085-25.3, ND-HTS-085-29.4, ND-VTS-085-KT, ND-VTS-085-DS, ND-VTS-085-US
 - ND-HTS-130-28.8, ND-HTS-130-31.0, ND-VTS-130-33.5, ND-VTS-130-KT, ND-VTS-130-DS, ND-VTS-130-US
 - ND-HTS-175-32.5, ND-HTS-175-33.5, ND-VTS-175-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

- Maintenance and cleaning was completed around the FCP.

Dam Shell*Dayshift*

- ROQ was hauled to the dam shell, downstream in the afternoon. Packer worked with the excavator during placement.
- JDS requested signoff on the completed slope section.
- Slope has been graded and packed between Sta 0+60 and 0+135.
- Slope has been graded from Sta 0+40 to 0+60, but not packed. Slope is graded from Sta 1+35 to the thermosyphons. This section needs some cleanup and compaction.
- Night shift to confirm with the night shift surveyor that completed sections have been surveyed, at which time the area will be signed off.

Nightshift

- ROQ material was placed in areas of the downstream from ~0+80 to 1+80. See Figure 2 for additional details.
 - Two vibrator packers worked on packing the downstream crest and slope of ROQ.
 - Material was spread with the 330 excavator.
- SRK and Nuna survey completed some field sloping and grade checks of the downstream dam shell. Additional notes on this inspection are provided in Figure 2.
 - Nuna survey has picked up the current downstream ROQ (picked up before snow blows in over area).
 - A few excavator buckets of material were placed and spread in a few small low areas notes.
 - There is a portion along the bottom / edge of the ROQ toe that is still rough looking and could use some additional compaction. At times the packers are having difficulties with traction at the bottom of the slope (due to the angles and existing light dusting of snow over some area. If this area blows in the final compaction of the slope around the toe would result at a later date (closer to summer). Overall the slopes look good from station ~0+60 to 1+35.
 - Around station 1+60 to 1+80 there appears to be an indent around the existing crest location where some additional ROQ may be required to reach the 4H:1V slope grades (to be confirmed by survey in the coming days).
 - Nuna survey will provided SRK with the recent downstream ROQ slope survey in the coming week. A preliminary as-built review will be completed at that time. Based on the field inspection grades typically looked to be within -5cm to +10cms.

- Some snow was removed on the upstream around the north end (~ 1+60 to 1+95 area) as HDPE liner removal work progressed.

Key Trench/ Central Core

Dayshift

- Placed FCM between Sta 1+74 and Sta 1+00.
- Placed FCM between Sta 0+52 and the south wall on both the lower bench and over the main core.
- All surfaces were swept with the skid steer before any placement took place.
- Dial for water was set at 53 and remained unchanged all day. Temperature was set in the +31 to +32 range. FCM was noticeable dryer than yesterday and compaction was easily obtained.
- Thermister ND-HTS-040-33.5 was installed during the day shift. Nodes were surveyed.
- A total of 17 loads were placed

Nightshift

- Some of the upstream slope around was removed around the north end (~ 1+60 to 1+95 area) were scraped down.
- Some ROQ was pulled back from the upstream inside slope (i.e. slope adjacent to the fillet hinge area) around 0+40 to 1+60
- Two excavators and a small labour crew worked on removing the HDPE (previously used for protection over the GCL) from around ~stations 0+40 to 0+90 and 1+20 1+60.
 - SRK held discussions with the Nuna foreman about the current inside upstream slope of the ROQ.
 - It is expected, at this time, that this inside upstream slope may be pulled back to something around 3H:1V to better allow for equipment access and working space when the upper GCL paned and cover material is placed.
 - Due to the steep 2.5HL1V grade of the upstream core slope it is expected that the packer may not be able to travel upslope. At this time it is expected that the packer will either go down from the top then up the sloped upstream ROQ and around or will be tied to a excavator that will assist / guide when the packer is required to travel back up slope.
- 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. No work done at this location today.
0+40	33.50	33.50	Installed today

- Single bead thermistors were monitored. No freezeback was noted on nightshift. At the end of nightshift most areas were at 0C and the area placed on March 11th dayshift was around -0.9C.

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
SB14	0+35	D/S	SB17	0+60	CL	SB16	1+60	CL
SB11	1+08	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-PSD70-20120312	HB12-ND-CORE-PSD70-20120312	HB12-ND-CORE-PSD69-20120311

MOISTURE CONTENT SUMMARY

Collected	Testing In Progress	Completed
HB12-FCP-CORE-MC321-20120312	HB12-FCP-CORE-MC321-20120312	HB12-FCP-CORE-MC321-20120312
HB12-ND-CORE-MC322-20120312	HB12-ND-CORE-MC322-20120312	HB12-ND-CORE-MC322-20120312
HB12-ND-CORE-MC323-20120312	HB12-ND-CORE-MC323-20120312	HB12-ND-CORE-MC323-20120312
HB12-FCP-CORE-MC324-20120312	HB12-FCP-CORE-MC324-20120312	HB12-FCP-CORE-MC324-20120312
HB12-ND-CORE-MC325-20120312	HB12-ND-CORE-MC325-20120312	HB12-ND-CORE-MC325-20120312
HB12-ND-CORE-MC326-20120312	HB12-ND-CORE-MC326-20120312	HB12-ND-CORE-MC326-20120312
HB12-FCP-CORE-MC327-20120312	HB12-FCP-CORE-MC327-20120312	HB12-FCP-CORE-MC327-20120312
HB12-ND-CORE-MC328-20120312	HB12-ND-CORE-MC328-20120312	HB12-ND-CORE-MC328-20120312

DRILLED CORE

Collected	Testing In Progress	Completed
HB12-ND-CORE-DC74-20120312	HB12-ND-CORE-DC74-20120312	HB12-ND-CORE-DC73-20120311 HB12-ND-CORE-DC74-20120312

DORIS NORTH DIVERSION BERM:

- Bentonite placement over liner between Sta 5+30 and 5+85 completed, surveyed , inspected and approved. Crush surface placement over the geotextile started. To be followed with ROQ.
- Bentonite placement over liner between Sta 3+85 and 4+45 completed and inspected.
- Layfield laying out HDPE liner between Sta 3+35 and Sta 3+85.
- Another cut in the liner was identified at Sta 5+24. Layfield [atched.

DORIS SUMPS:

- Fabrication of the second lid started yesterday. Work on this lid is not expected to be continuous. Although the main portion of the first lid has been completed insulation installation is still required before the lid is completed. The lid at the batch plant pad (S end of the lower Reagent Pad area) was inspected on nightshift. Completed portion of the sump lid look good thus far.

QUARRY 2:

- Two drills working during the day shift. One drill shut down for servicing during part of the day.

GENERAL:

- Pipes/culverts have been installed at the Doris Bridge. Additional work was completed around the second culvert location on the Secondary Road around the Doris Bridge on nightshift. Crush was placed around the culverts in area and ROQ was removed as required. Some of this removed ROQ was hauled, dumped and placed on the downstream dam shell.
- Windchills were -40C this morning. Temperatures moderated during the day but winds did not abate.

- Snow that was forecast in Cambridge Bay. Minor amounts of snow/ flurries were noted on nightshift. Winds were from the east. The North Diversion Berm is sheltered from east winds. Accordingly, drifting at the berm was not an issue.
- The ice airstrip and access road was graded on nightshift. Survey completed a pick-up of the ice strip after it was graded.
- 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.

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PHOTOS:



Photo 1: Progress photo from photo point 3, facing NNE



Photo 2: Placing FCM at the south end.



Photo 3: FCM dryer than FCM placed yesterday



Photo 4: Backslopes on downstream, ~ Sta 0+40 facing north



Photo 5: FCM, Sta 1+00 facing north



Photo 6: Installation of multi bead thermister ND- HTS-040-33.5



Photo 7: Final installation



Photo 8: Bentonite over liner Sta 5+85 facing west (to Sta 5+30)



Photo 9: Bentonite over liner Sta 3+85, facing east (to Sta 4+45)



Photo 10: Layfield placing HDPE between Sta. 3+35 and Sta 3+85



Photo 11: Layfield repairing HDPE liner at Sta 5+24



Photo 12: Two vibratory packers and 330 Excavator placing ROQ material around 1+40



Photo 13: Looking ~ NE from around station 1+20 towards packer working on top ROQ surface.



Photo 14: ~NEE view of downstream 4H:1V dam shell; taken from ~ station 0+60



Photo 15: ~SE view of downstream dam shell after 4H:1V sloping.



Photo 16: ~NEN view of excavators working on removing the protective HDPE liner over the fillet GCL.



Photo 17: ~WSW view of excavators working on removing HDPE liner and pulling back ROQ on upstream slope.

FIGURES:

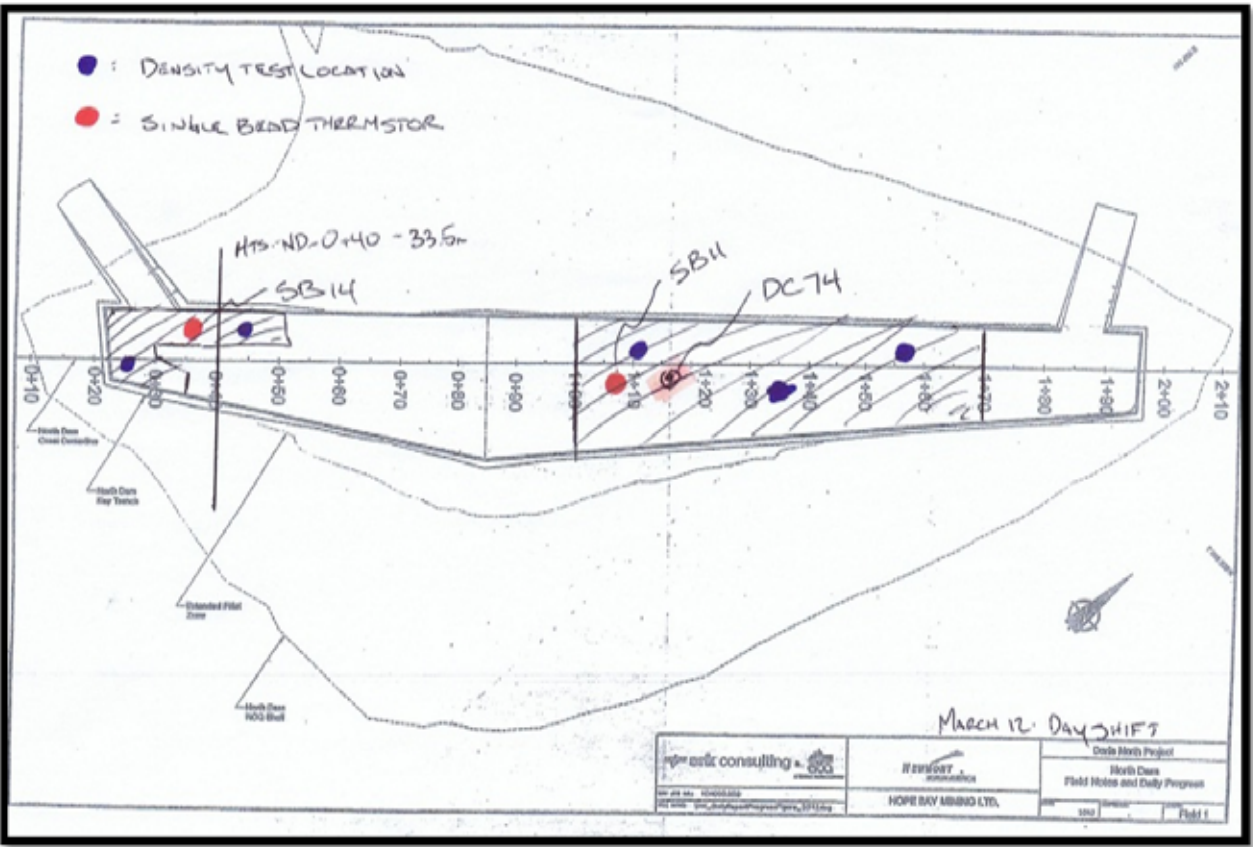


Figure 1 – North Dam Progress – Dayshift

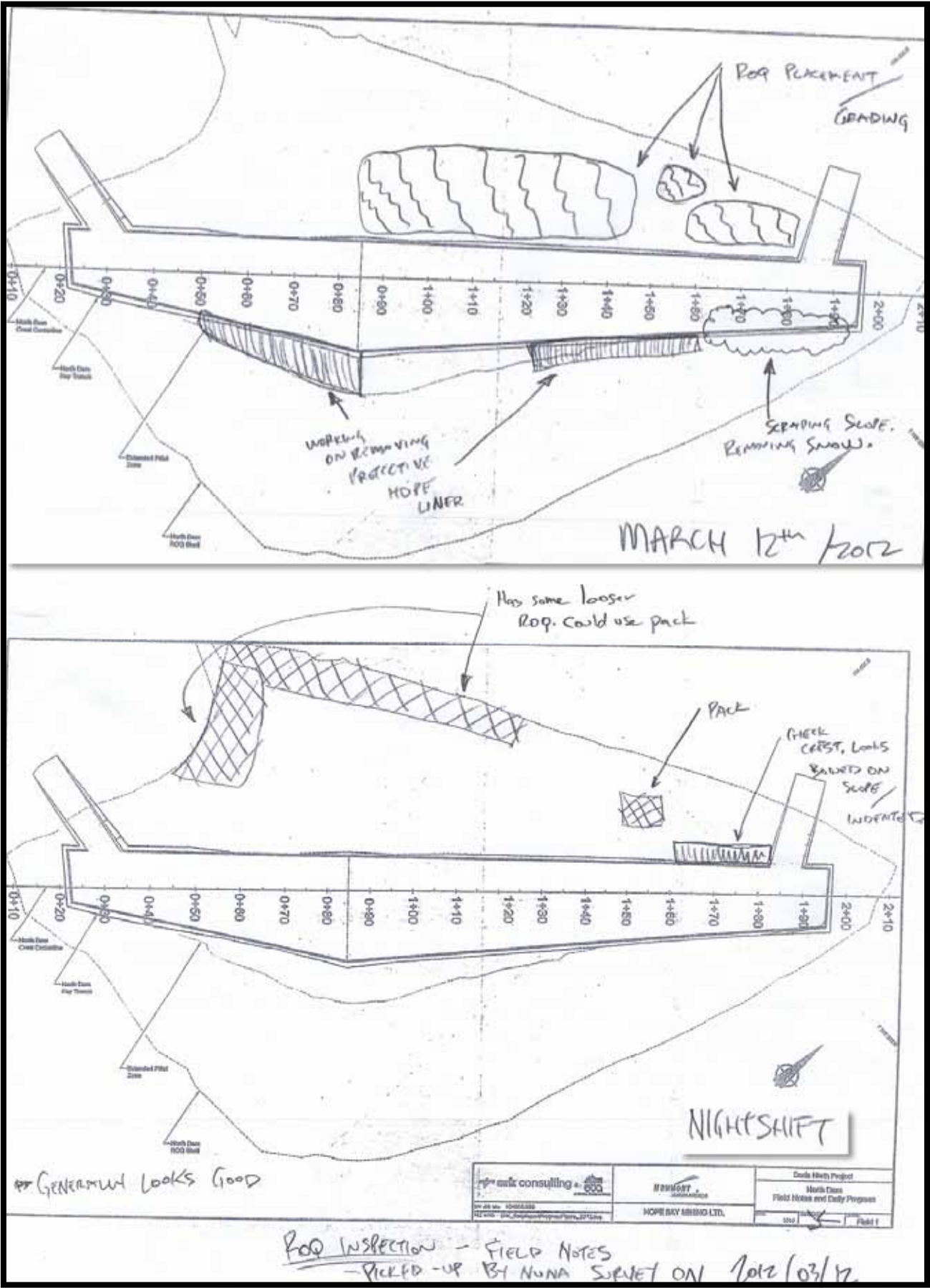
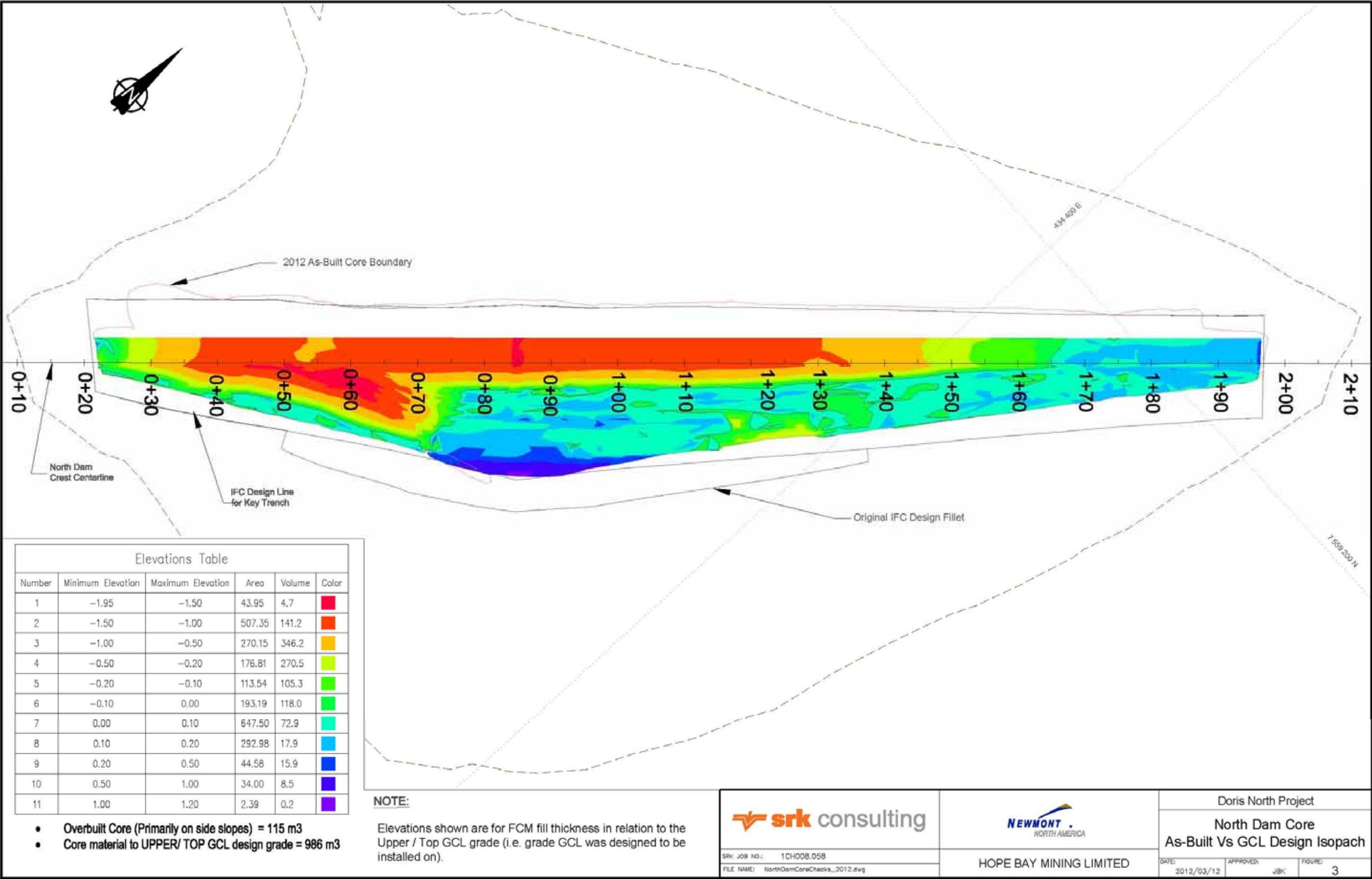
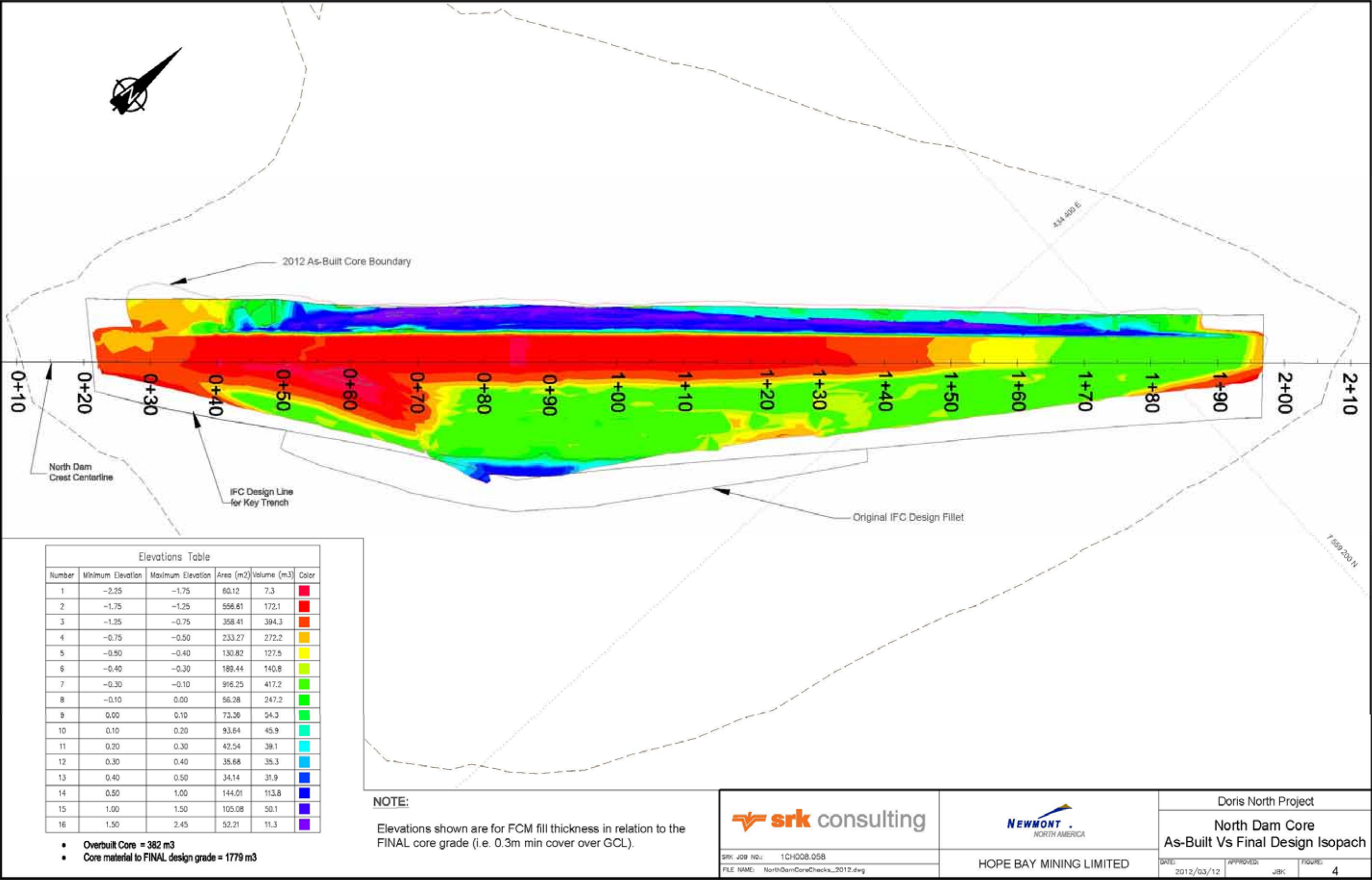


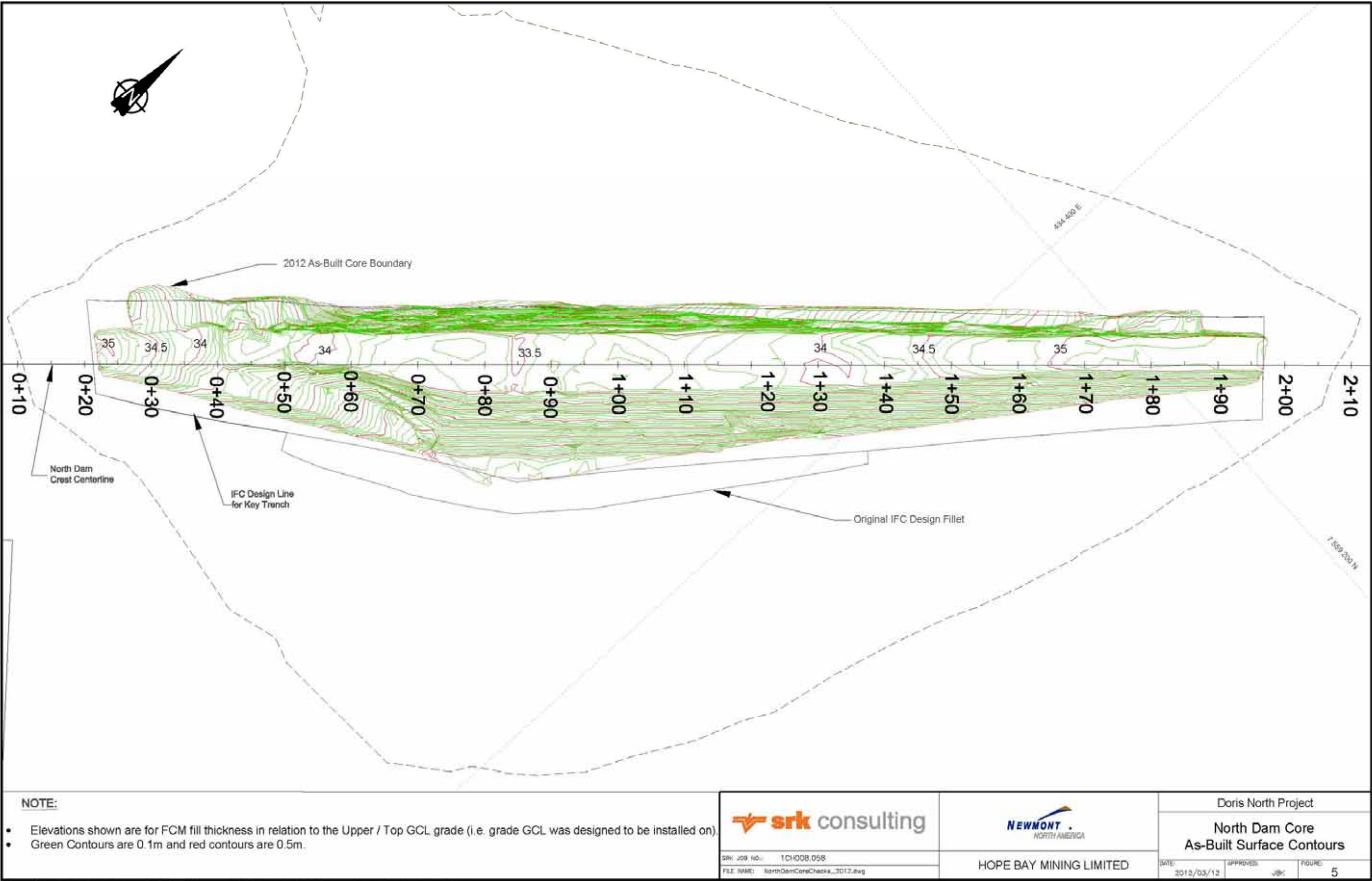
Figure 2 – North Dam Progress – Nightshift



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