

DAILY REPORT #11 – DORIS NORTH INFRASTRUCTURE/ NORTH DAM

Prepared by:	John Kurylo/ Jeff Orr	Date:	2012.01.16
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 No No No No Yes Yes
	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	Yes Yes No Yes Yes No No
Engineering Design Consultants	SRK Consulting (Canada) Inc.	John Kurylo – Site Engineer Megan Miller – Site Engineer Lawrence Borowski – Site Engineer Murry McGregor – Site Engineer Lowell Wade – Senior Engineer	Yes No No No No
	EBA Engineering Consultants Ltd.	Jeff Orr – Project Manager Jennifer Stirling – Geologist John Jaramillo – Eng. Technologist Thomas Bradshaw – Junior Engineer	Yes No 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	Yes No No No Yes No Yes No Yes Yes No No Yes No Yes Yes Yes Yes
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WEATHER (ROBERTS BAY)

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

Temperature/Wind Chill (°C)	6AM:-	1PM:-27.3/-42.5	6 PM :-26.3/-43.2	12 AM:-28.0/ -46.5
Precipitation (mm)	Rain: None		Snow: None	
Conditions	Day Shift: Moderate visibility, moderate wind		Night Shift: Blowing snow, high wind	
Daily norms (°C)	24 hour high: -26.1		24 hour low: -28.0	

HEALTH, SAFETY AND ENVIRONMENT

- No incidents were reported
- The signage on the Secondary Road Access to the North Dam was changed to reflect that channel 64 should now be radioed before trucks access the North Dam or Frozen Core Plant Pad work site.

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

- The daily meet was attended by ADCO, ACI, Williams Wireless, Nuna [Nick Stoneberger, Kevin Oakes, Bradford Watkin, Gary Sodhi], ESR [Michelle Tanquay], Newmont Safety [Stirling Kelly], JDS [Jerry Graham, Ishan Fechter, Sven Archimowtiz], SRK [John Kurylo], EBA [Jeff Orr].

Topic	Status
Health and Safety and Environment	<ul style="list-style-type: none"> • Radio control/ contact at the North Dam were discussed. Visitors entering the North Dam work site are required to radio in to the Nuna supervisor or foreman. • Nuna to update signs on the Secondary Road around the North Dam. • The electric box heaters in the Nuna site services shop will have a final inspection in the next day or so. • Field Level Risk Assessment (FLRA) cards are now being filled out by Nuna operators. If you enter into a new areas where equipment is working then Nuna operators will approach you and get you to sign onto their FLRA cards. • SRK inquired with ESR about requirements for storage of Glycol (or antifreeze) that will be used for coring activities at the North Dam. SRK has already contact waste management, informed them of upcoming drop offs of glycol and obtained labels and 5L pails for storage of glycol snow that is cleaned up from coring activities. • ESR to follow up with SRK about obtaining a small containment container for the glycol snow containers. For the time being SRK and EBA will be storing glycol snow in closed pails stored on spill mats on the deck to the FC Pad lab.
North Dam	<ul style="list-style-type: none"> • Nuna continues the 5/8" clear cover removal and general cleaning at the North Dam. Additional cleaning of the key trench is planned for today. • FCM placement is expected to result in the afternoon at the dam. • SRK to check and report back to JDS/ Nuna on freeze back progress of lift placed on 2012/01/15.
Water Management Structures	<ul style="list-style-type: none"> • The snow pads around Sump 1 and 2 are now completed. • SRK still requires that Nuna survey stake out the three requested points around the Sump 1 location. • SRK and Nuna survey to work together to finalize the location of Sump 1 in preparation of Westarcs arrival. Westarc may be on site as early as the end of the week.

General	<ul style="list-style-type: none"> A frost fighter was requested by ACI and a geni lift was requested by ATCO at the vent raise pad (Nuna to follow-up with). JDS and Nuna discussed the possibility of welling pipe by the Tail Lake Access Road or on the East side of the airstrip expansion.
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SURVEY:

Required	•
Data Received	<ul style="list-style-type: none"> CAB 110502 CO.dwg AB 120105 ND FC.dwg, .pdf and .csv PU 120116 ND Lift 2 Perimeter.csv AB 120116 ND FCM Excavation.pdf SM 120116 NORTH DAM 5-8 EXC.dwg SM 120116 NORTH DAM 5-8 EXC.pdf
Outstanding	•
Upcoming	<ul style="list-style-type: none"> Survey of frozen core surface after cleaning/ scraping activities at N. Dam (on going). Survey of FCM after placement (on going).

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

- Maintenance activities and clean-up was completed around the FCP plant.
- A D9 Dozer was used to break up and sort out large pieces/ clumps of frozen FCM at the stockpile on the FCP Pad.

Dam Shell

- Material removed from the key trench was short hauled and end dumped on the upstream side of the dam.
- End dump piles of cleared 5/8" material remain on the upstream ROQ shell. These piles are required to be mixed with ROQ before being placed in the outer dam shell.

Key Trench

- Two excavators (one with a toothed bucket and one with a finishing bucket) were used during the day and night shift to remove additional frozen 5/8" clear material in the key trench.
- Nuna survey picked up and as-built of the existing key trench excavation (from ~ chainage 0+35 to 0+70).
 - A more detailed field inspection of the clearing from station 0+35 to 0+70 will result on 2011/01/17.
 - Nuna survey completed a preliminary isopach for the key trench clearing around station 0+25 to 0+70 (see Figure section of this report).
 - SRK completed a preliminary isopach review to compare the existing key trench elevation to the 2011 FCM surface from ~ station 0+35 to 0+70. In general the existing surface was noted to be typically 0 to 0.05m (0.3m avg) above the 2011 FCM grade in this section. Details of this review are provided in the Figure section of this report.
- No material was placed today.
 - Freeze back was slower than anticipated (taken close to 22 hours), delaying FCM placement. The central key trench area is typically well sheltered by the wind (i.e. where placement on 2012/01/15 resulted).
 - Nuna's air compressor failed at the end of the day leaving them unable to clean the rough surface left by the hard ground 'zig zag' compactor used on the previous day.

- In preparation for tomorrow's planned placement, cleaning with an excavator Bobcat (equipped with brush) cleaned the area where material was placed on 2011/01/16, around ~ station 0+80 to 0+95.
 - Cleaning activities resulted at the end of day shift and on night shift.
 - Additional cleaning with compressed air is planned for tomorrow morning.
- An as-built figure (prepared by Nuna) outlining the area where core was placed on 2012/01/15 and the area that was cleaned on night shift are presented in the Figures section of this report.
- SRK completed a preliminary as-built isopach to investigate the thickness of the material placed on 2012/01/15. This isopach is presented in the Figures section of this report. In general the lift from 2012/01/15 was noted to have been placed to a thickness of about 0.3m.

Field Geotechnical Testing, Laboratory and Sampling

- Single bead #36, installed downstream around station 0+92, and was monitored. Single bead readings are outlined below.

SingleBead No.	Temperature (°C)			
	At 08:00	At 11:30	At 14:20	At 15:10
36	0	-0.09	-0.91	-2.48

- The generator used to power the core drill would not start. Core was done using the power from the light plants. However, coring locations were restricted to where the extension cords would allow the coring rig to venture from the light plant. The portable generator is expected to be serviced in the coming days.
- One core was drilled today (Sta. 1+30) to examine the interface between the 5/8" clear transition material (HB12-ND-CORE-DC1-QA-201200116), and to confirm the integrity of the excavated key trench base on the E.
 - A location where 5/8" clearing had not been full completed was selected to get a better idea of the observable contrast between the frozen 5/8" material and the 2011 FCM.
 - Details and Photos taken of core taken today are presented as Photos 9 to 12.
 - 5/8" material on the E side was not as saturated and not as intermixed with the FCM (pushed into), as the central area was. An additional core is planned to be taken close to 0+80 in the coming days.
- A summary of the material testing progress for 2012/01/16 is presented in the tables below.

PARTICLE SIZE DISTRIBUTION SUMMARY

Collected	Processed	Completed
	HB-FCP-CORE-PSD1-QA-20110115	

MOISTURE CONTENT SUMMARY

Collected	Processed	Completed
	HB-FCP-CORE-MC1-QA-20110115	
	HB-FCP-CORE-MC2-QA-20110115	

DRILLED CORE SUMMARY

Drilled			Processed			Completed		
ID	Station	US/DS/Centre	ID	Station	US/DS/Centre	ID	Station	US/DS/Centre
DC1	1+30	D/S						

DORIS NORTH CAMP:

- The construction of snow pads around the Doris North Camp sump locations 1 and 2 is completed.
- The snow road around the Doris North Diversion Berm area was started.

GENERAL:

- Flights in and out of site were canceled today due to weather (high winds, poor visibility and blowing snow).

PHOTOS:



Photo 1: ~SW view of center of key trench. Material placed on 2012/01/15 is in the forefront.



Photo 2: Close up view of Frozen Core Material surface. Note that this material was placed on 2011/01/15. Note the 'zig zag' compactor drum marks on the freezing surface.



Photo 3: ~NE view of the area where the next center lift is planned to be placed. Note the excavators and bobcat cleaning/ scratching the key trench surface in the background.



Photo 4: ~W view of the Excavator cleaning snow and 5/8" material in the key trench (around station 1+10)



Photo 5: View of Bobcat (equipped with brush), cleaning central key trench area (around station 0+80).



Photo 6: Progress photo of the North Dam construction. Photo taken from Photo Point 2, looking ~ north-west.
Note: Progress photo of the North Dam construction from Photo Point 1 was not taken today due to poor visibility.



Photo 7: ~ WSW view of construction progress in the key trench.



Photo 8: Dozer working on breaking up frozen clumps on top of FCM stockpile (at the FCP Pad).



Photo 9: Close up view of cleaning in progress. Note the coarser 5/8" material in relation to the finer core material. The dashed circle shows approximately what the cored location looked like prior to coring.
Note: scraping/ cleaning activities were not fully completed around this area at the time of this picture.

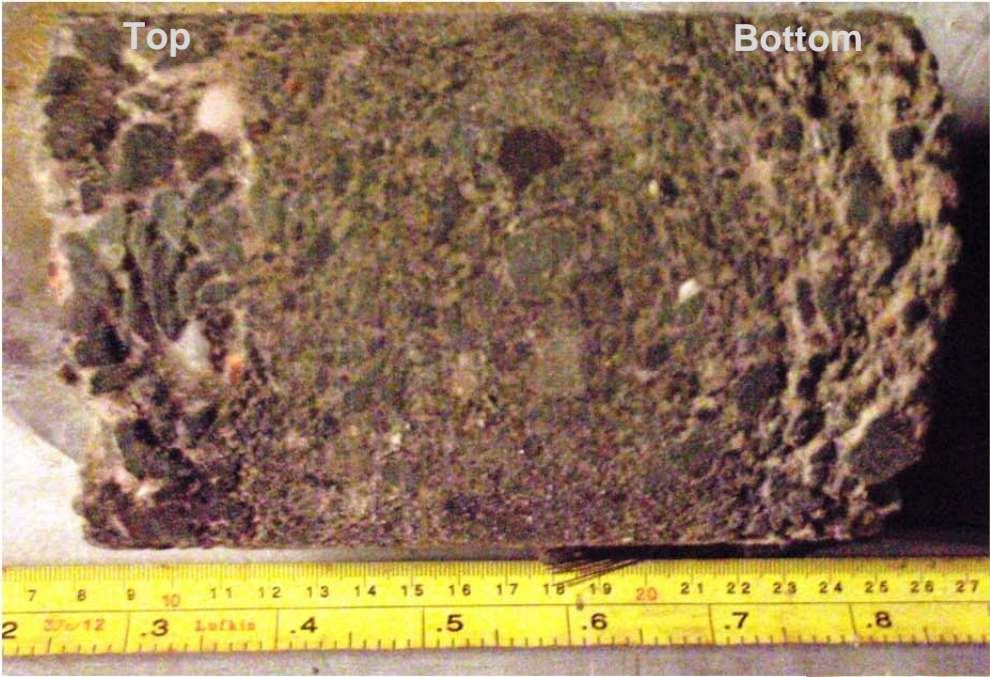


Photo 11: Drilled core collected today to investigate bonding of 5/8" material with underlying frozen core.
Note: the 5/8" material was noted to be more apparent around 1+30 compared to around the inflection point in the key trench. Cleaning activities were not fully completed around this location and a more 5/8" clear rich location was selected. Additional cores are planned to be taken closer to the inflection point in the key trench to further examine 5/8" and FCM interface (i.e. at an area that was softer at the time of closure and where more thorough cleaning has been completed.).



Photo 10: Coring around station 1+30, downstream.



Photo 12: Close up of 5/8" material at start of drilled core (HB12-ND-CORE-DC1-20120116).

FIGURES: - SRK Preliminary As-Built Review for 2012/01/15 FCM Placement.
- Note that the thickness of the place lift is shown in the Isopach below.

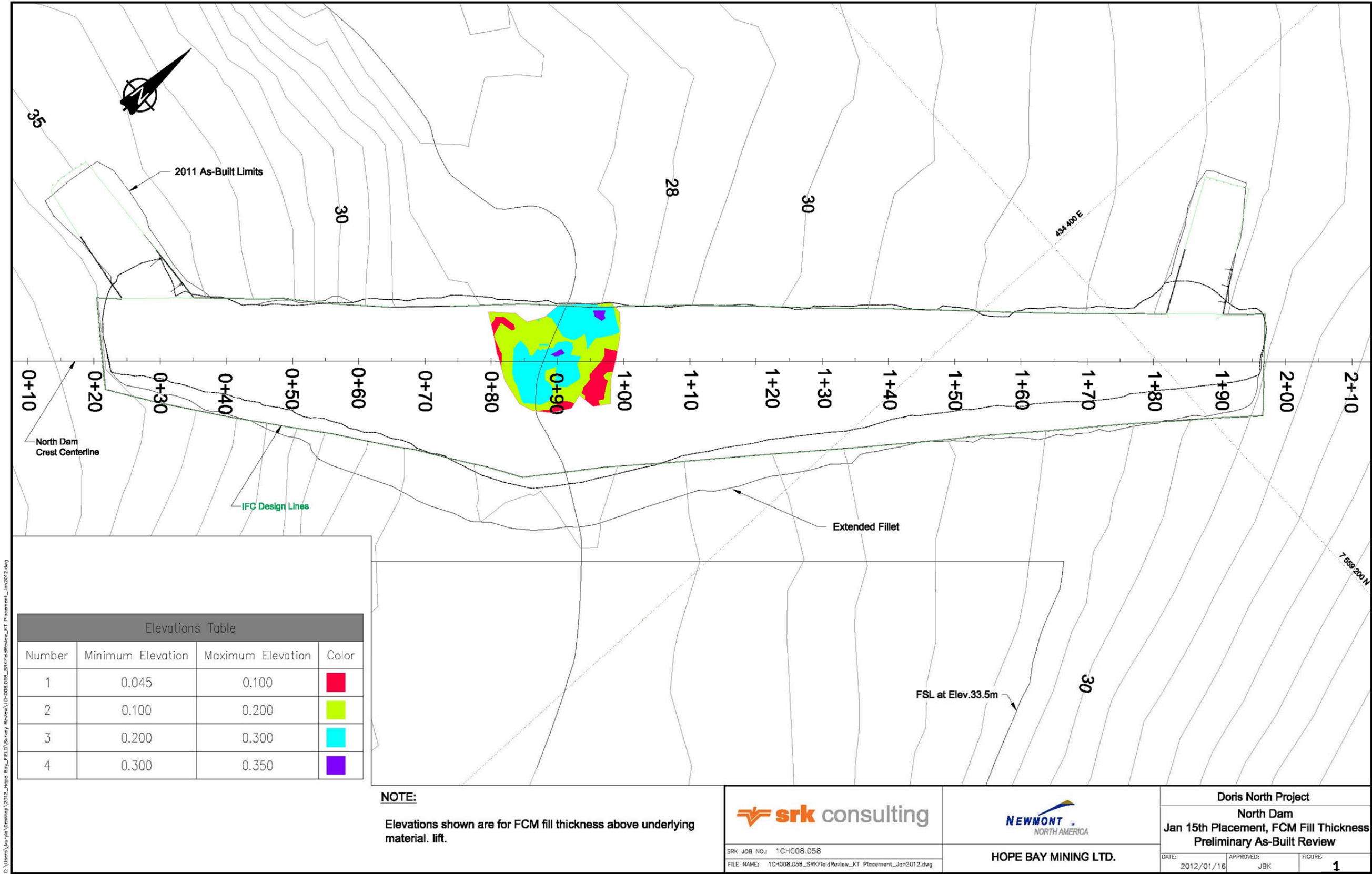


Figure - Nuna As-Built Review. Figure shows area of dental cleaning on night shift and area where core was placed on 2012/01/15

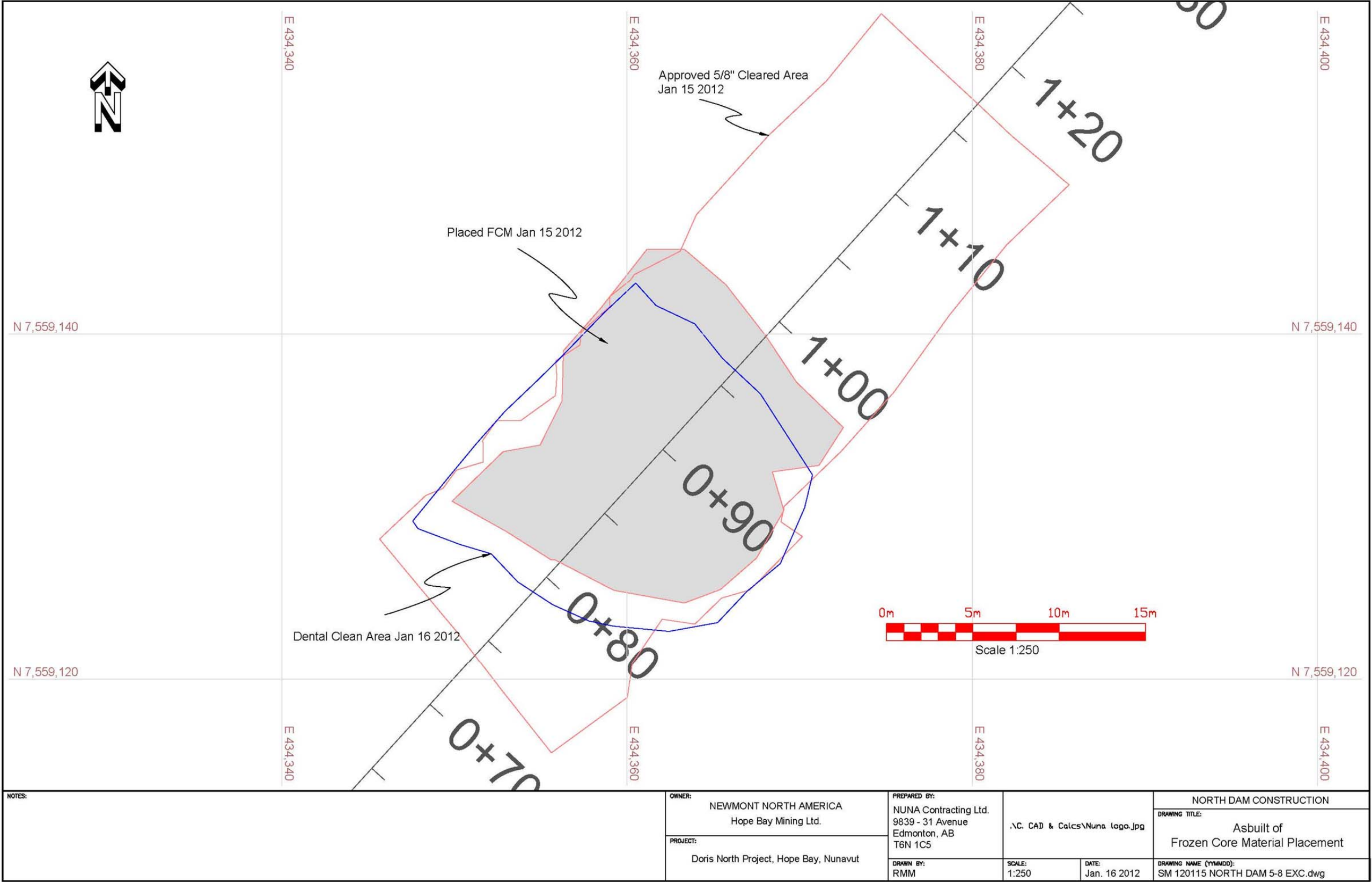


Figure - SRK Preliminary As-Built Review of Key Trench cleaning/ 5/8” material removal completed on 2012/01/16.
- Note that the existing elevation in relation to the 2011 FCM surface is shown in the isopach below/

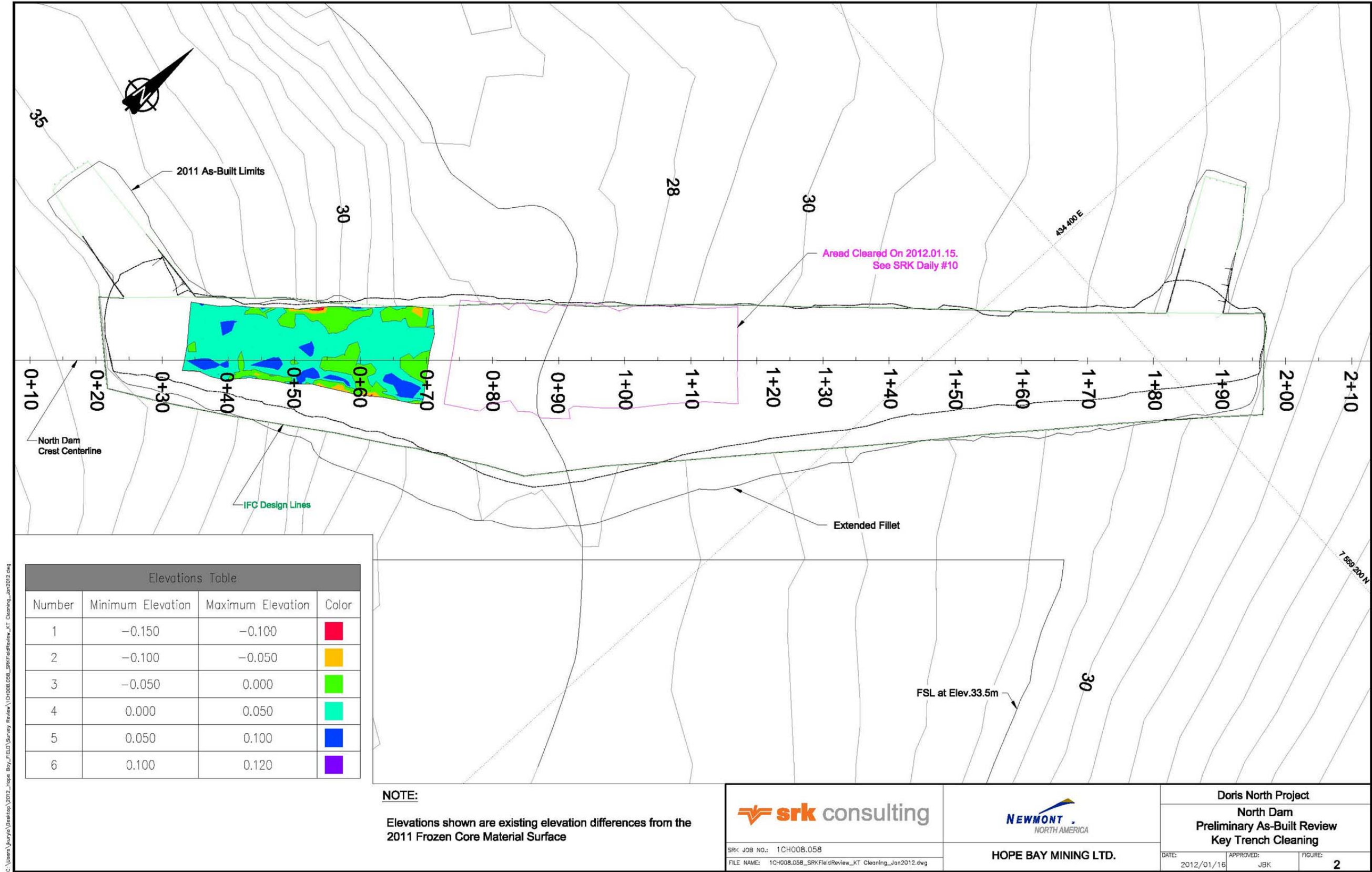


Figure - Nuna As-Built Review of Cover Material Excavation (i.e. Key Trench Cleaning) for 2012/01/16

- Note that the isopach points show the elevation difference from the 2011 Frozen Core elevation data (+ for above grade, - for cut /below)

