

DAILY REPORT #27 – DORIS NORTH INFRASTRUCTURE/ NORTH DAM

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|---|---|--|-----------------------------|
| Prepared by: | John Kurylo/ Jeff Orr / Megan Miller | Date: | 2012.02.01 |
| 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 | Yes |
| | | Dean Wold - Safety | No |
| | | Jill Turk – ESR Coordinator | No |
| | | Katsky Venter – ESR Manger | Yes |
| | | Michelle Tanquay – ESR Site Manager | No |
| | | Stirling Kelly – HSLP Advisor | No |
| | JDS | Lloyd Jackson – Mechanical Superintendent | Yes |
| | | Sven Archimowtiz – Electrical Superintendent | Yes |
| | | Doug Fielding – Construction Manager | Yes |
| | | Ishan Fechter – Construction Coordinator | No |
| | | Jerry Graham – Construction Manager | No |
| | | Kevin Whieldon – Project Coordinator | Yes |
| | | Mark Valeriote – Construction Manager | Yes |
| | Engineering Design Consultants | SRK Consulting (Canada) Inc. | John Kurylo – Site Engineer |
| Megan Miller – Site Engineer | | | Yes |
| Lawrence Borowski – Site Engineer | | | No |
| Murry McGregor – Site Engineer | | | No |
| Iozsef Miskolczi – Site Engineer | | | No |
| EBA Engineering Consultants Ltd. | | Jeff Orr – Project Manager | Yes |
| | | Jennifer Stirling – Geologist | Yes |
| | | Thomas Bradshaw – Junior Engineer | No |
| Earthworks Contractor | Nuna Logistics | Ernest Palczewski – Geologist | Yes |
| | | Ben Vostermans - Foreman | Yes |
| | | Bradford Watkin – QC Manager | No |
| | | Doug Haverland – Area Superintendent | Yes |
| | | Gary Sodhi – Field Engineer | Yes |
| | | Georges Cornelissen – Survey Manager | Yes |
| | | Jeff Roberts - Surveyor | No |
| | | Jim Cardinal – Foreman | No |
| | | Kevin Oakes – Project Engineer | Yes |
| | | Kevin Kozdrowski – Foreman | No |
| | | Kyle Kuntz – Project Engineer | No |
| | | Margaret Caley – Surveyor | Yes |
| | | Matt McKay – Civil Supervisor | Yes |
| | | Mike MacMaster – Surveyor | Yes |
| | | Mike Price – Field Engineer | No |
| | | Nick Stoneberger – Superintendent | No |
| Rick Peters – Foreman | No | | |
| Ron MacMaster – Surveyor | No | | |
| Simon Chipper – Civil Supervisor | Yes | | |
| External Distribution List: | SRK: Maritz Rykaart (on site), Lowell Wade, Seema Kang, Silkie Wong EBA: Robert Zschuppe Nuna: Chris Petrovic (on site) JDS: Bob Prince-Wright, Calvin Goldschmidt (on site) 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:N/A | 12PM: -28/-28 | 6 PM: -24.2 | 12 AM: -23.4/-30 |
| Precipitation (mm) | Rain: None | | Snow: Trace | |
| Conditions | Day Shift: Light wind | | Night Shift: Calm, clear. | |
| Daily norms (°C) | 24 hour high: -20.4 | | 24 hour low: -28.0 | |

HEALTH, SAFETY AND ENVIRONMENT

- Jeff Orr and Ernest Palczewski attended the daily Nuna safety meeting.
- Megan Miller attended the nightly Nuna toolbox meeting.
- There was a small incident with the back bumper of the SRK truck getting caught on the trailer hitch for the geotechnical lab at the frozen core plant. The bumper was damaged. An incident report is being created.

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

- The daily meeting was attended by ADCO, Nuna [Doug Haverland, Chris Petrovic, Kevin Oakes], Newmont Safety [Don Ethelston], ESR [Katsky Venter], JDS [Doug Fielding, Mark Valeriote, Kevin Whieldon, Calvin Goldschmidt, Lloyd Jackson, Sven Archimowtiz], SRK [John Kurylo, Maritz Rykaart].

| Topic | Status |
|-----------------------------------|--|
| Health and Safety and Environment | <ul style="list-style-type: none"> • Safety had no issues to report. • No spills were reported yesterday. • ESR inquired with Nuna about the vehicle and generator run times. A report of the aforementioned hours is required for pollution monitoring/ regulatory requirements. |
| North Dam | <ul style="list-style-type: none"> • SRK provided a brief update for construction activities at the North Dam that resulted on 2012/ 01/ 31. <ul style="list-style-type: none"> ◦ Placement yesterday resulted from ~ 1+10 to 0+35 yesterday (over day and night shift combined). ◦ Approximately 40 loads were placed at the dam on yesterday (21 on days and 19 on nights). • Additional ripping and working at the FCM stockpile on the FCP pad is expected to result today. • SRK inquired about the bentonite powder supply that is currently on site. JDS/ Nuna indicated that additional bentonite powder was ordered and is currently on site. • A few bags of bentonite will be brought to the North Dam area to be used in upcoming horizontal thermistor string installation (as bentonite water stops between the thermistor string beads). • SRK inquired as to the status of the exhaust fan installation. This is set-up and is expected to be completed when the weather permits and a man lift becomes available. • Discussions were had about the area on the current upstream fillet slope where the GCL liner was ripped. Damaged GCL liner is required to be exposed so the damage can be better assessed. FCM placement is recommended to be offset from the area where the liner has been damaged to limit the potential for creating reworking. |
| Water Management Structures | <ul style="list-style-type: none"> • The DN Diversion berm is planned to be drilled and blasted (as noted in daily #26). The first blast will be sometime after February 3rd. <ul style="list-style-type: none"> ◦ HBML safety and Nuna to meet and discuss the procedure and plans for the aforementioned blast. |

| | |
|---------|---|
| | <ul style="list-style-type: none"> ○ The blast is expected to be a small blast matted shot that will not require evacuation in areas beyond the immediate vicinity of the diversion key trench. • Construction activities around the sumps are planned to continue today. • The electrical cables around Sump #1 continue to be thawed out (hoarded and heated). |
| General | <ul style="list-style-type: none"> • The ADCO lift is now back up and ready for use. • The camp power will be shut down today and switched over the permanent power around 8:30am. • The stacks at the power house are planned to be started on Friday. |

SURVEY:

| | |
|----------------------|---|
| Required | • Survey of core material placed Jan 31, 2012 |
| Data Received | • Survey files for the Sump #2 excavation (AB 120201 SUMP 2 EXCAVATION) |
| Outstanding | • |
| Upcoming | • Survey of placed core material (ongoing) |

NORTH DAM/FROZEN CORE PLANT PAD:

- SRK and JDS held discussions about the North Dam construction:
 - The upper and lower GCL ti-in, on the fillet expansion, were further discussed. The current liner tie in plan is presented in daily report #18 (see Figure 3 in this report).
 - The use of a dozer versus an excavator for FCM placement was discussed. Based on past experience JDS has observed that less material is required to be removed when cleaning if an excavator is used. Further, there are many pieces of equipment that are down on site that are down or required at other areas of site (such as the smaller 325 with finishing bucket).
 - The option of burying the thermistor cables in the dam shell rather than putting the cables in steel pipes on the outside of the dam was discussed. This would be done near the end of the dam construction once all cables have been routed to the outside of the dam shell. The cables would be encased in crush material for protection before being covered (similar to the cable trenched outlined in the original N Dam IFC except running parallel to the final dam slopes). This will be further discussed at a later date. At this time SRK does not object to this proposal.
 - Construction sequencing of the core and transition material was discussed. At this time is recommended/ expected that, at least a couple lifts of, the transition material along the downstream slope will be placed. This would be done to fill in some of the large open spaces on the downstream, and to limit the creation of areas that are hard to come back to construct (which could potentially lead to unnecessary reworking). JDS to have additional discussions with Nuna on this.

Frozen Core Plant*Dayshift*

- The FCP was not run on dayshift today.
- Some additional work was completed on the FCM stockpile at the FCP Pad to sort and break down unsaturated frozen lumps. Some frozen unsaturated lumps were hauled to the crusher area. See Photo 2.

Nightshift

- The plant started at ~8 pm and ran until 5 am and ran with no problems.
- The CAT 980 loader was sorting the stockpile to remove the clumps.
- Plant temperatures were measured at 35°C at the beginning of the shift and 34°C at the end of shift.
- Approximately 212 CAT 930 loader buckets were fed into the plant hopper during the shift.

- When in the plant at ~4 am one clump of frozen core material was noticed every 5-8 feet along the belt. Frozen clumps were not noticed in the placed material.

Dam Shell

- A small lift of Transition material was placed on the downstream edge of the dam around 0+70 to 1+10. Transition (6" minus material) was placed with the CAT 345 excavator and compacted with the vibrator drum roller. Snow was removed or minor snow on the slope was scratched before transition material placement. See photo 12 and 13.

Key Trench

Dayshift

- No core material was placed on dayshift today. This was due to waiting for freeze back on the previously placed material.
- The key trench was cleaned with the skid steer from ~ station 1+17 to 1+40.
- Two drilled cores were collected on dayshift.
 - One core was collected from ~ 1+60 around the centerline. This core was of poor quality. This core was taken just after lift reached -2°C (according to the installed single bead). As the lift was just frozen the core melted/ outside did not core nicely due to the higher temperatures and melt of the core during drilling. It was planned that nightshift would core this lift again after additional time was allowed for further freezing/ lift temperature drops.
 - The second core was taken from ~ 1+75 on the downstream. Core was of good quality.
- Discussions were had in the field about cable ND-VTS-60-KT. After review of photos and the as-built it was noted that the aforementioned cable was started to be buried in dry FCM in 2011. In order for the cables to be brought up the upstream slope of the core and out the top horizontal 'cable trench' (design change noted in 2011 RFI from JDS) it will be required that this cable be wrapped back towards the S to meet the other cable. This cable 'fold back' is acceptable if the cable is well covered/encased in finer crush material. The area will be further cleaned and the cable will be run to the downstream of the core.
- On 2012/01 there was an area, around station 1+10 to 1+25, which was noted to have been under built by ~ 0.3m. In this area the downstream 0.5H:1V slope of the core has started to be constructed upwards before the adjacent area was brought up to grade. This area is planned to be brought up to grade with the next lift that is placed in this area. The next lift in this area will result after freezeback has occurred.
- A small area, less than ~5 to 10 cm in width, was noted to have been underbuilt at the current FCM lift elevation. This area is on the downstream edge along ~0+80 to 0+90. It was decided by SRK that a onetime allowance to fill this small area with compacted transition material would be allowed. This was done as core placement in this area would be very difficult to complete in adequate lift sizes while meeting compaction requirements. Transition material could readily be packed in its current arrangement. In this area the next lift of FCM is expected to extend slightly (a few centimetres) onto the underlying Transition material.
- Figure 1 presents the North Dam dayshift construction progress, for 2012/02/01.

Nightshift

- The key trench was cleaned from station 1+25 north east with the skid steer broom.
- FCM was placed from Sta. 1+25 to station 1+80.
 - The first few loads of material at placement was looking wet, but not overly wet and the saturation and moisture content results did not seem overly high. However after this material sat for a while water was noticed to be bleeding from the end and sides of the material. The plant was contacted and the water was turned down. The water at the plant was turned down several times during the placement.
 - The surface of the placed material was undulating.
 - Lots of footprints were noticed on the placed core material. The surveyor and labourers were asked not to walk on the freshly placed core material.
 - At the start of placement the in-place compacted temperature was measured at 35°C and 37°C. The plant operator was asked to lower the plant temperature. Later in the shift a in-place temperature of 27°C was measured.

- Survey guided the excavator operator in placing the lift at station 1+75 such that the elevation of the top of the lift is at the elevation of the next horizontal thermistor.
- From sta. 1+45 north east the lift of placed material was getting close to the hinge of the fillet slope on the upstream side. Therefore the lift could not be tied into the slope.
- Survey picked up the coordinates and elevations of the drilled core samples taken on dayshift.

| Drilled Core | HB12-ND-DC14-20120201 | HB12-ND-DC15-20120201 |
|--------------|-----------------------|-----------------------|
| Northing | 7,559,186 | 7,559,203 |
| Easting | 434,408 | 434,420 |
| Elevation | 32.7 | 33.7 |

- Multi-bead thermistor readings were collected for most of the thermistors cables.
- A core sample was collected (HB12-ND-CORE-DC16-QA-20120201) from the upstream edge of the dam near station 1+65. The core was of good quality.
- Figure 2 presents the North Dam nightshift construction progress, for 2012/02/01.
- The table below present the cumulative as-built volume (as provided by Nuna Survey) for FCM placed from January 29th to January 31st.

SUMMARY OF CORE MATERIAL PLACED (AS-BUILT)

| Date | FCM Placed/ Incremental Volume (m ³) | Cumulative FCM Volume Placed (m ³) |
|--------------------------|--|--|
| January 31 st | 418.4 | 2,659.0 |
| January 30 th | 518.8 | 2,240.6 |
| January 29 th | 184.1 | 1,721.8 |

Field Geotechnical Testing, Laboratory and Sampling

- Single bead 45, 60, 43 and 44 were monitored today.
- Single bead 49 was installed around station 1+60 centerline.

SINGLE BEAD THERMISTOR STATUS

| Installed Today | | | Active | | | Destroyed / Abandoned | | |
|-----------------|---------|--------------|--------|---------|--------------|-----------------------|---------|--------------|
| ID | Station | US/DS/Center | ID | Station | US/DS/Center | ID | Station | US/DS/Center |
| SB49 | 1+60 | Center | SB43 | 1+15 | D/S | SB44 | 1+70 | Center |
| | | | SB45 | 0+45 | U/S | | | |
| | | | SB60 | 0+75 | CL | | | |

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

PARTICLE SIZE DISTRIBUTION SUMMARY

| Collected | Processed | Completed |
|------------------------------|-----------|------------------------------|
| HB12-FCP-CORE-PSD14-20120201 | | HB12-FCP-CORE-PSD13-20120131 |

MOISTURE CONTENT SUMMARY

| Collected | Processed | Completed |
|--------------------------------|-----------|--------------------------------|
| HB12-FCP-CORE-MC44-QA-20120201 | | HB12-FCP-CORE-MC39-QA-20120131 |
| HB12-FCP-CORE-MC45-QA-20120201 | | HB12-FCP-CORE-MC40-QA-20120131 |
| HB12-FCP-CORE-MC46-QA-20120201 | | HB12-FCP-CORE-MC41-QA-20120131 |
| HB12-FCP-CORE-MC47-QA-20120201 | | HB12-FCP-CORE-MC42-QA-20120131 |
| | | HB12-FCP-CORE-MC43-QA-20120131 |

DRILLED CORE

| Collected | Processed | Completed |
|-------------------------------|-------------------------------|-----------|
| HB12-ND-CORE-DC14-QA-20120201 | HB12-ND-CORE-DC12-QA-20120130 | |
| HB12-ND-CORE-DC15-QA-20120201 | HB12-ND-CORE-DC13-QA-20120131 | |

| | | |
|-------------------------------|--|--|
| HB12-ND-CORE-DC16-QA-20120201 | | |
|-------------------------------|--|--|

COMPACTION TESTING SUMMARY

| Number of Tests | Material | Tested By | Shift | Notes |
|-----------------|----------|-----------|-------|------------|
| 9 | FCM | JS | Night | All Passed |

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

DORIS NORTH CAMP:

- Westarc continues drilling along the DN Diversion berm alignment. Three rows of drill holes, around what looked to be the central area of the key trench, were noted in > 1/3 of the diversion berm alignment. See Photos 5 and 6.
- Electrical issues (damaged cable) were noted around the Sump #1 location today. For safety this area was blocked off. An inspection into the cause of the observed electric/ power arcing is in progress.
- The 325 excavator continued excavating material from the Sump #2 area/ footprint.
 - This area is nearing the required depth and dimensions for the sump excavation.
 - See Photo 3.
 - Nuna survey completed a as-built survey of the base of the sump excavation.
 - A survey of the top of the excavation (3D polyline around the top of the excavation where it intersects the original ground) is required in order to create an approximate 3D as-built surface for the excavation. Further this line will allow for as-built checks on the total embedment of the culvert to be checked before the sump installation.

QUARRY #2:

- The recommissioning of the Quarry #2 crusher resumed today. Cleaning with the skid steer, air compressor, brooms and hand shovels were used around the crusher area (primarily around the belts). Most belts were running by the end of dayshift however, a few main belts (for example the belt from the jaw) still require further work to get running.
- CAT 730 haul trucks hauled large frozen unsaturated FCM lumps from the FCP pad to the Quarry #2 crusher. The frozen lumps stockpile, at the crusher, is shown in Photo 4.
- Figure 3, prepared by Nuna survey, shows the material stockpiles in Quarry #2 as of November 2011 (attached for reference).

PHOTOS:



Photo 1: ~WSW view down key trench of FCM placed on 2012/ 01/ 02.



Photo 2: ~ SEE view of work on FCM stockpile at the FCP Pad. Note the equipment breaking up the large frozen lump and hauling away the frozen lumps that are unable to be broken up.

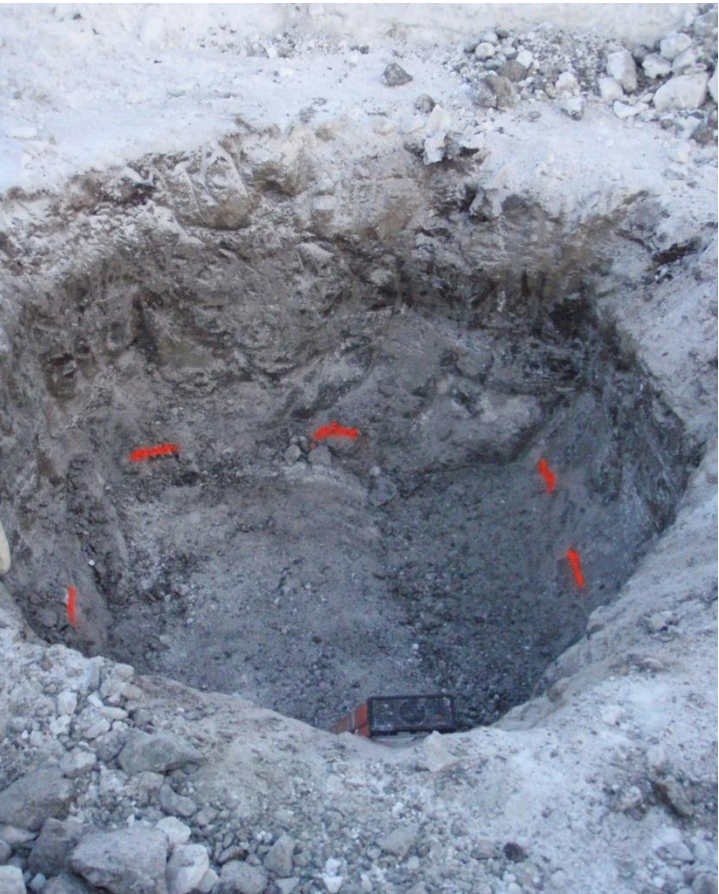


Photo 3: Close-up view of Sump #2 excavation. Note the base elevation of the culvert painted on the side slopes of the excavation.



Photo 4: View of large FCM 'frozen lump' stockpile at the Quarry #2 crusher.



Photo 5: ~ WSW view down DN Diversion berm alignment. Note the blast cones showing the areas along that alignment base that have been drilled.



Photo 6: ~ W of the Westarc drill working on drilling the bedrock outcrop near the central east portion of the Diversion berm alignment.



Photo 7: Progress photo of North Dam from photo point 1. ~SW view.



Photo 8: Progress photo of North Dam from photo point 2. ~WNW view.



Photo 9: Progress photo of North Dam from photo point 3. ~ENE view.



Photo 10: ~ HB12-ND-DC14-20120201, taken from 1+60 centerline. Note the very poor quality of the core. Material was taken just after lift reached -2°C (according to the installed single bead). As the lift was just frozen the core melted/ outside did not core nicely due to the higher temperatures.



Photo 11: HB12-ND-CORE-DC15-QA-20120201 taken from ~ 1+75 on the downstream. Note that this lift had been frozen for a few days now.



Photo 12: ~ ENE view of the 345 excavator spreading transition material around station 0+70 on the downstream.



Photo 13: ~WNW of excavator and vibrator compactor working on placing and compacting material on the downstream around station 0+70 to 1+00.



Photo 14: HB12-ND-CORE-DC16-QA-20120201 taken from ~ 1+65 on the upstream side.



Photo 15 (Left): CAT 345 excavator placing FCM on nightshift.



Photo 16: Water was noted to be bleeding from the end of the placed material. This photo was taken when the bleeding was first noted; additional bleeding occurred after this photo was taken.

FIGURES:
Figure 1 – North Dam Progress – February 1st DAYSHIFT

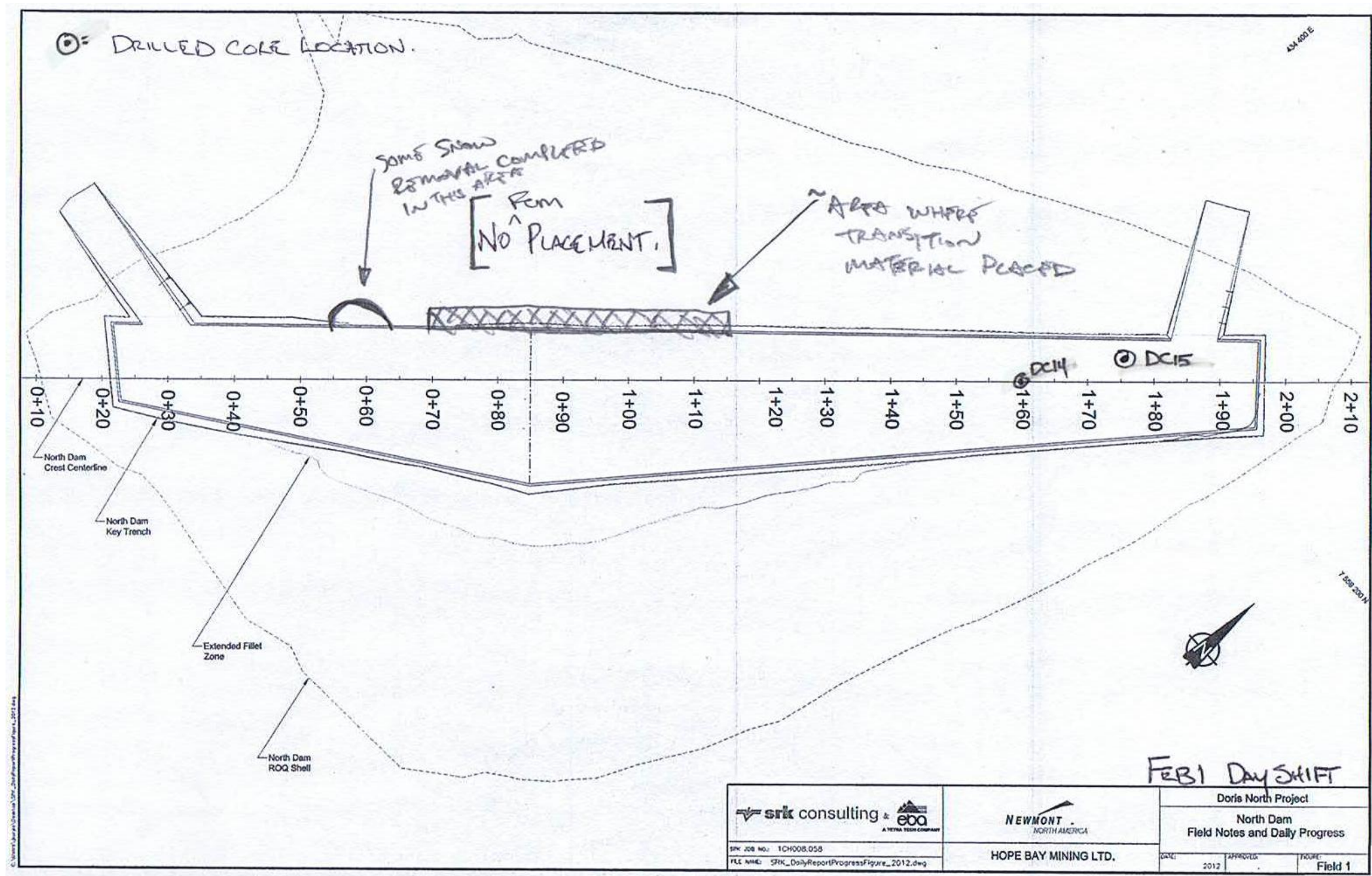


Figure 2 – North Dam Progress – February 1st NIGHTSHIFT

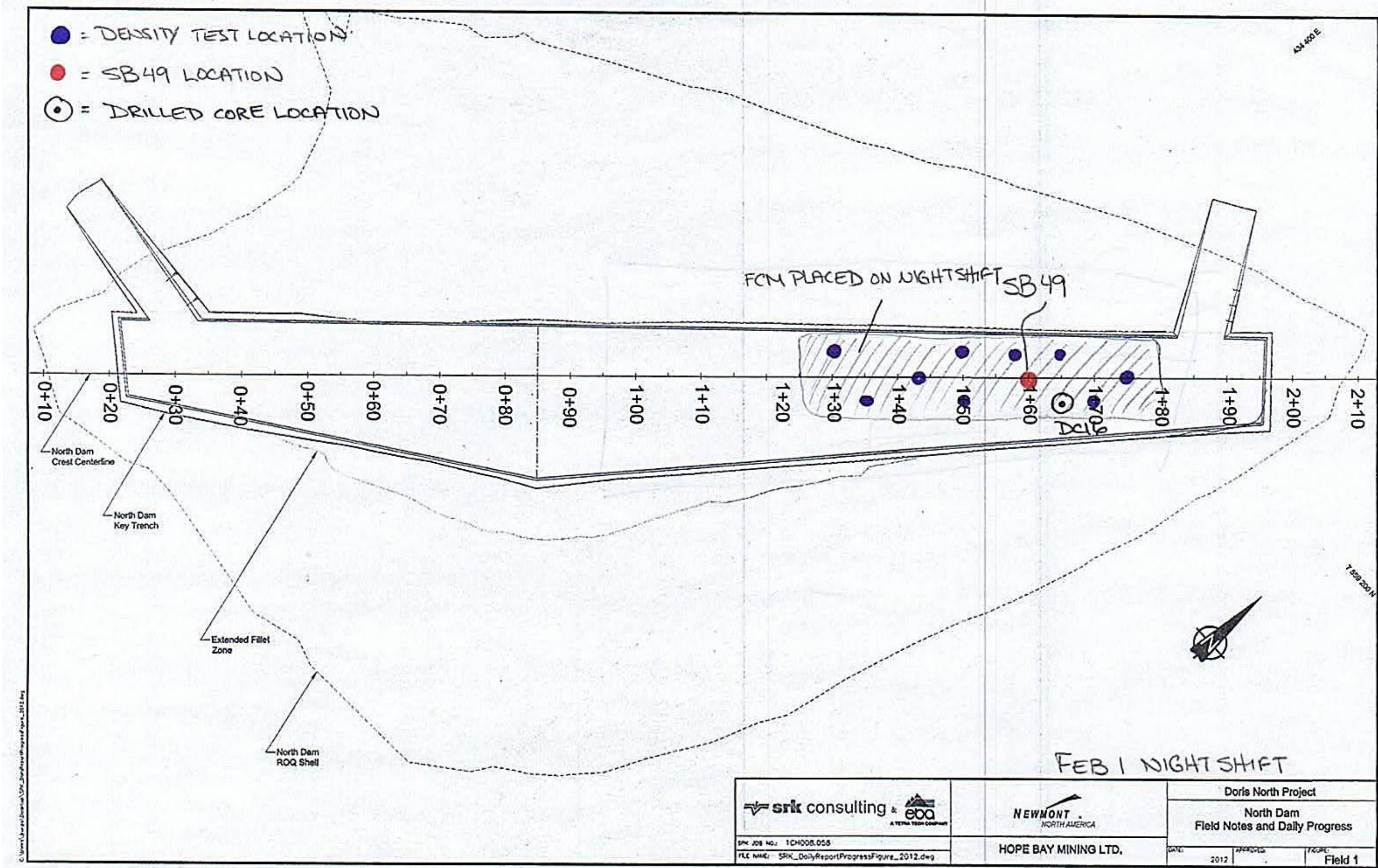


Figure 3 – 2011 As-built Figure of Quarry #2 Material Stockpile location (created by Nuna Survey, provided for reference)

