

## DAILY REPORT #09 – DORIS NORTH INFRASTRUCTURE/ NORTH DAM

|   |  |  |  |
|---|--|--|--|
| Prepared by:  | John Kurylo  | Date:  | 2012.01.14   |
| Reviewed by:  |  | Project #:   | 1CH008.058.0320  |
| Role  | Company  | Personnel – Position   | On Site  |
| Client  | Hope Bay Mining Limited (HBML)   | Angela Holzapfel – ESR Compliance Manager<br>David Vokey – ESR Coordinator<br>Don Ethelston – HSLP Advisor<br>Dean Wold - Safety<br>Jill Turk – ESR Coordinator<br>Katsky Venter – ESR Manger<br>Michelle Tanquay – ESR Site Manager<br>Stirling Kelly – HSLP Advisor  | No<br>Yes<br>No<br>No<br>No<br>No<br>Yes<br>Yes  |
|   | JDS  | Lloyd Jackson – Mechanical Superintendent<br>Sven Archimowtiz – Electrical Superintendent<br>Doug Fielding – Construction Manager<br>Ishan Fechter – Construction Coordinator<br>Jerry Graham – Construction Manager<br>Kevin Whieldon – Project Coordinator<br>Mark Valeriote – Construction Manager  | Yes<br>Yes<br>No<br>Yes<br>Yes<br>No<br>No   |
| Engineering Design Consultants  | SRK Consulting (Canada) Inc.   | John Kurylo – Site Engineer<br>Megan Miller – Site Engineer<br>Lawrence Borowski – Site Engineer<br>Murry McGregor – Site Engineer<br>Lowell Wade – Senior Engineer  | Yes<br>No<br>No<br>No<br>No  |
|   | EBA Engineering Consultants Ltd.   | Jeff Orr – Project Manager<br>Jennifer Stirling – Geologist<br>John Jaramillo – Eng. Technologist<br>Thomas Bradshaw – Junior Engineer   | Yes<br>No<br>No<br>No  |
| Earthworks Contractor   | Nuna Logistics   | Bradford Watkin – QC Manager<br>Dale Craig – Safety<br>Don Webber – Foreman<br>Doug Haverland – Area Superintendent<br>Gary Sodhi – Field Engineer<br>Georges Cornelissen – Survey Manager<br>Jeff Roberts - Surveyor<br>Jim Cardinal – Foreman<br>Kevin Oakes – Project Engineer<br>Kevin Kozdrowski – Foreman<br>Margret Caley – Surveyor<br>Matt McKay – Civil Supervisor<br>Mike MacMaster – Surveyor<br>Mike Price – Field Engineer<br>Nick Stoneberger – Superintendent<br>Rick Peters – Foreman<br>Ron MacMaster – Surveyor<br>Simon Chipper – Civil Supervisor | Yes<br>No<br>No<br>No<br>Yes<br>No<br>Yes<br>No<br>Yes<br>Yes<br>No<br>No<br>Yes<br>No<br>Yes<br>Yes<br>Yes<br>Yes |
| External Distribution List:   | SRK: Seema Kang, Lowell Wade, Maritz Rykaart<br>EBA: Robert Zschuppe<br>Nuna: Chris Petrovic<br>JDS: Bob Prince-Wright<br>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:-22.3/-32.2                                     | 12PM:-23.3/-33.4 | 6 PM :-27.4/-42.6                               | 12 AM:-29.7/-45.3 |
| Precipitation (mm)          | <b>Rain:</b> None                                   |                  | <b>Snow:</b> None                               |                   |
| Conditions                  | <b>Day Shift:</b> Overcast, moderate to strong wind |                  | <b>Night Shift:</b> Partly cloudy, blowing snow |                   |
| Daily norms (°C)            | 24 hour high: -20.4                                 |                  | 24 hour low: -29.8                              |                   |

**HEALTH, SAFETY AND ENVIRONMENT**

- No incidents were reported

**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, Lloyd Jackson], SRK [John Kurylo], EBA [Jeff Orr].

| Topic                             | Status   |
|-----------------------------------|--|
| Health and Safety and Environment | <ul style="list-style-type: none"> <li>Electrical box heaters have been noted at the Roberts Bay area. These box heaters should be removed and/ or not left unattended.</li> <li>Additional light plants are needed to be mobilized to various work sites to increase visibility/ safety.</li> <li>Double checks should be done when leaving doors to ensure that they are shut.</li> <li>The silt curtain near the Jetty is starting to get buried. No construction activities at the jetty are planned for the next few months. Before construction around the jetty recommences the silt curtain should be uncovered/ dug out.</li> <li>ESR inquired about the fuel tank system at Windy. JDS/ Nuna to follow up as to the status of three tanks.</li> </ul>  |
| North Dam                         | <ul style="list-style-type: none"> <li>No issues with removal of material at the North Dam.</li> <li>Nuna continues at the North Dam to remove 5/8" clear cover over the key trench.</li> <li>Additional cleaning of the key trench is planned for today.</li> <li>The central portion of the key trench is near the frozen core grade.</li> <li>SRK outlined that an as-built survey and preliminary review (i.e. isopach done in the field) will be required before approval for initial frozen core placement results (this is expected to be done in sections). SRK and Nuna survey to work together to meet this requirement.</li> <li>SRK indicated that one of the scales is missing from the FCP Pads materials testing lab. Personnel in attendance will keep an eye out for this scale.</li> </ul> |
| Water Management Structures       | <ul style="list-style-type: none"> <li>Updated IFC drawings for the Doris North Water Diversion Berm have been issued.</li> <li>Snow pads have started to be constructed around Sump 1 and 2.</li> <li>The alignment for the Doris North Diversion Berm is planned to be laid out today.</li> <li>A snow access road is planned to be constructed around the Doris North Water Diversion Berm.</li> <li>Nuna and Williams Wireless to further discuss the existing cables around the Doris North Diversion Berm area.</li> </ul>   |

**SURVEY:**

|                      |  |
|----------------------|--|
| <b>Required</b>      | •  |
| <b>Data Received</b> | <ul style="list-style-type: none"> <li>• Original ground around the sump location</li> <li>• Toe of the existing, widened, Float Plane Dock Access Road, around the location of Sump #1</li> </ul> |
| <b>Outstanding</b>   | •  |
| <b>Upcoming</b>      | • Survey of frozen core surface after cleaning/ scraping activities at N. Dam.   |

**NORTH DAM/FROZEN CORE PLANT PAD:**

- Two excavators were used during the day and night shift to remove additional frozen 5/8" clear material from the key trench footprint.
  - The central portion of the key trench continues to be worked on.
  - Additional final surface cleaning will be required once the key trench is at the frozen core grade.
  - One excavator was scratching the frozen 5/8" material with a toothed bucket while one would follow up cleaning the surface with a finishing bucket.
- Material removed from the key trench (primarily frozen 5/8" material) continues to be loaded into 730 haul trucks and end dumped on the upstream side of the dam. The 5/8" end dump piles require blending with ROQ.
- SRK held discussions on site with Nuna survey and field personnel about the as-built survey requirements required before a cleaned surface will be approved for core placement.
  - Nuna survey will pick up an as-built of an area and send the points to SRK for approval, once an area is completed but before the final clean-up of the surface has been completed.
  - SRK will utilize the as-built data to create an isopach between the existing key trench surface and the frozen core surface from 2011 construction activities.
- Nuna survey has been making grade to the FCM (grade based on a DEM created from the 2011 frozen core elevations) until grades are less than 0.05 m.
- A small area, ~ 7x2m, near the location of the old central ramp (around chainage 0+080) was cleaned for Transition material placement.
  - See photo 9 for details on aforementioned area.
  - The ROQ at the toe of this ramp was previously pulled back out of the Transition zone, cutting off the central access route into the key trench.
  - Night shift placed a couple loads of transition material around 0+080 and re-established the central access ramp.
  - Compaction of the Transition material placed at the toe of the central access ramp is still required.
- The FCP Plant operators commented/ noted that when the drum at the plant was preheated for a few minutes then the frozen clumps noted within the mixed frozen core stockpile would readily break apart.
- Snow was placed by an excavator and watered near the WNW end of the FCP Pad. This snow placement is being completed to extend the W end of the FCP pad to allow for a wider turning radius for the haul trucks entering the FCP.
  - See Photo 11
  - To minimize the amount of time that the FCP access doors are open, flow through the FCP plant is expected to go from the S end of the FCP plant to the N.
- Some of the ground temperature cables, installed in the North Dam, were read. The current location of the ground temperature cables are shown in Figure 1 (found at the end of the report). Today's readings are provided below.

| Bead No. | Ground Temperature Cable Temperature (°C) |                 |               |               |               |                 |
|----------|---|-----------------|---------------|---------------|---------------|-----------------|
|          | ND-VTS-060-DS                             | ND-HTS-085-25.3 | ND-VTS-085-KT | ND-VTS-085-DS | ND-VTS-175-KT | ND-HTS-175-32.5 |
| 1        | -10.62                                    | -14.31          | -14.35        | Buried        | -17.43        | -14.58          |
| 2        | -9.44                                     | -16.29          | -12.61        | -             | -14.50        | -19.84          |
| 3        | -8.40                                     | -19.53          | -11.08        | -             | -12.49        | -19.77          |
| 4        | -6.78                                     | -20.41          | -8.64         | -             | -10.02        | -21.73          |
| 5        | -5.58                                     | -20.87          | -7.10         | -             | -8.61         | -22.33          |
| 6        | -4.97                                     | -20.67          | -6.39         | -             | -7.81         | -22.01          |
| 7        | -4.96                                     | -19.00          | -6.35         | -             | -7.38         | -20.88          |
| 8        | -5.34                                     | -16.09          | -6.64         | -             | -7.27         | -18.94          |
| 9        | -5.90                                     | -13.99          | -6.93         | -             | -7.43         | -18.24          |
| 10       | -6.47                                     | -13.60          | -7.28         | -             | -7.79         |                 |
| 11       | -6.63                                     | -13.40          | -7.39         | -             | -8.03         |                 |
| 12       |   | -12.83          |               |               |               |                 |
| 13       |   | -13.71          |               |               |               |                 |
| 14       |   | -15.05          |               |               |               |                 |
| 15       |   | -15.33          |               |               |               |                 |

- EBA fixed the sieve shaker the in the FCP material testing lab.
- The scale that was noted to be missing from the material testing lab was located/ retrieved from the batch plant.

#### **DORIS NORTH CAMP:**

- The construction of snow pads around the Doris North Camp sump locations 1 and 2 continued today. Lifts of snow were spread with an excavator and sprayed with water.
- SRK completed a preliminary survey review around Sump #1 to assist in determining a new field fit location. Details on the preliminary survey review are provided at the end of this report after the Photos section.
- The final location of Sump 1 will be determined in the coming days. The current snow pad appears to be in a suitable location however, the final Sump 1 location is expected to move inwards towards the NNE of the proposed stake location noted in SRK daily #8.
- SRK provided Nuna survey with the digital files for the Doris North Diversion Berm. The follow surface file (3d face files and contour data) was provided:
  - 0 OG Survey 6Jan2012
  - 1 ROQ Diversion Berm
  - 2 Keytrench Excavation
  - 3 Liner
  - 4 Liner Cover
  - 5 ROQ Keytrench Cover

#### **GENERAL:**

- A D9 dozer worked the Transition material stockpile (dug in and moved material around), stockpile located near the Batch Pant area.



PHOTOS:



**Photo 1:** ~NW view of the frozen core material stockpile at the FCP Plant pad.



**Photo 2:** ~SW view of the excavators removing frozen 5/8" material from the key trench.



**Photo 3 (bottom left):** ~WNW view of the excavators removing frozen 5/8" material from the key trench.



**Photo 4 (bottom center/ right):** Close-up view of frozen 5/8" material being ripped with the toothed excavator bucket.





**Photo 5 (above/ top right):** View of the Roberts Bay Quarry #1 Tank Farm.



**Photo 6 (above/ top right):** Dozer working transition material stockpile by the Batch Plant (near Quarry #2)

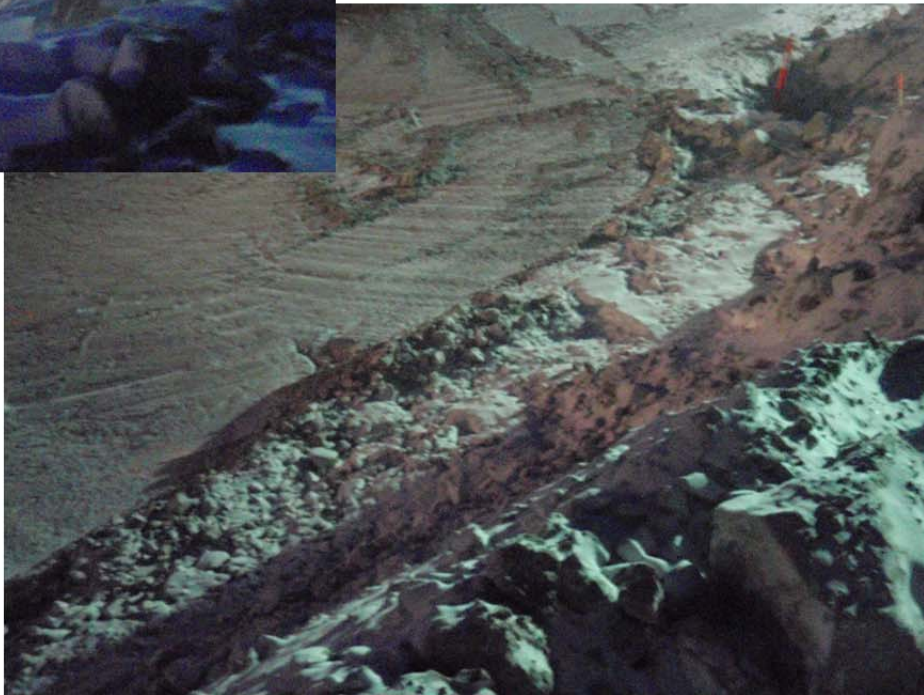


**Photo 8 (center):** View of excavator working on 5/8" material and survey checking grades in the central portion of the key trench.

**Photo 9 (bottom right):** Close up view of the area where ROQ was pulled back (near the area where the central ramp was previously location, ~ around chainage 0+080). Note that the snow was removed from the transition material before night shift placed additional material at this location.



**Photo 7 (above/ top right):** ~ ESE view of snow pad construction around the Sump 1 location.







**Photo 10:** Progress photo of the North Dam construction. Photo taken from Photo Point 1, looking ~ south-east.

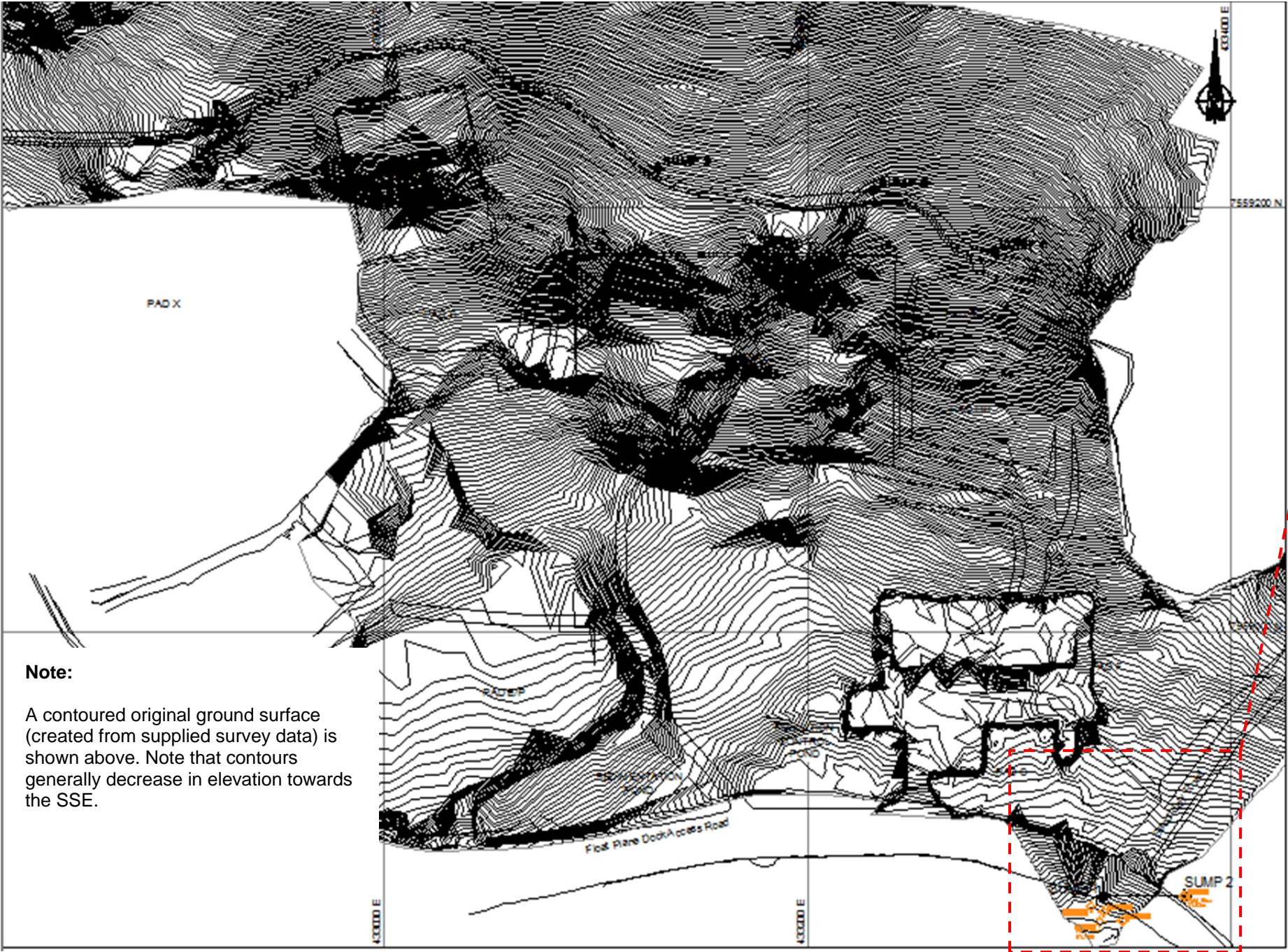


**Photo 11:** Snow being spread and watered near the west extents of the FCP Plant Pad.



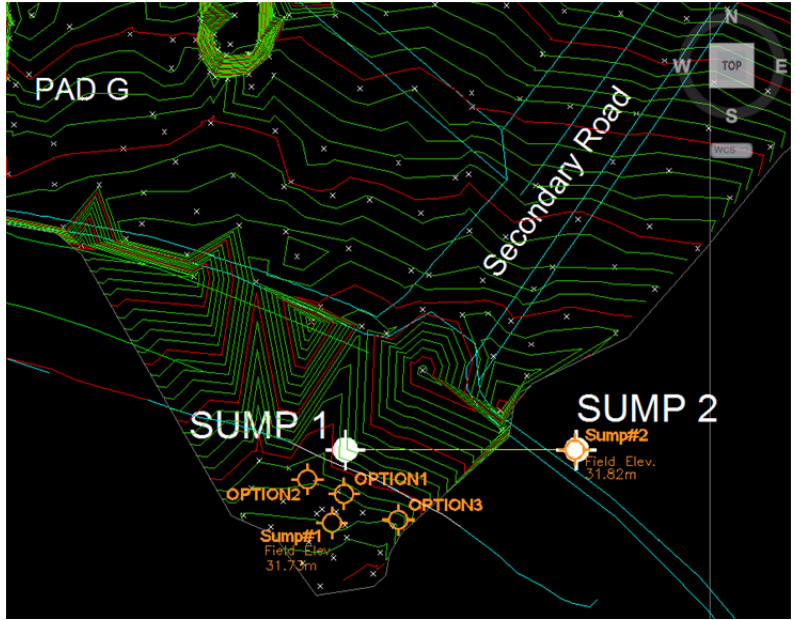
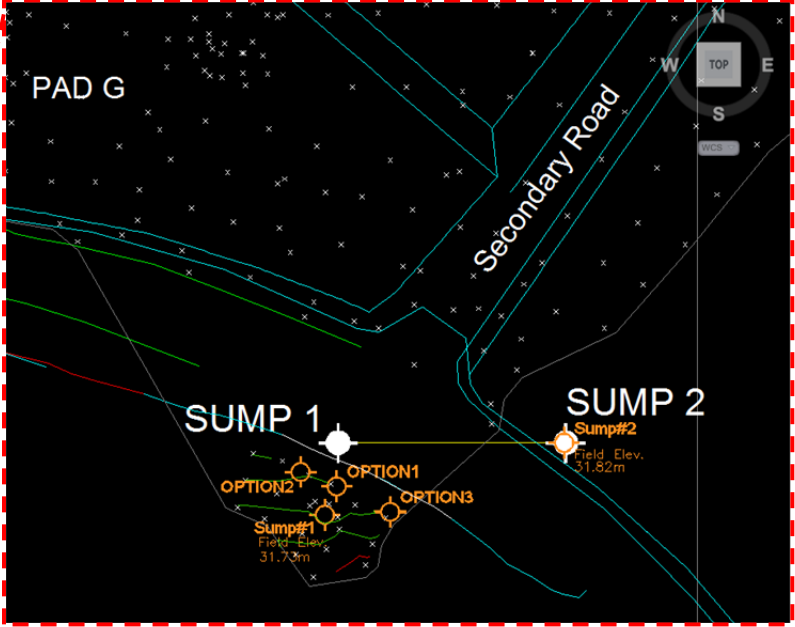
SURVEY REVIEW NOTES:

Preliminary notes for Sump #1 – Field Fit (In Progress) - 2011/01/14



COORDINATES FOR NEW SUMP #1 OPTIONS (~ 2.5m offset from outside of proposed sump to cables at S road toe):

- *OPTION 1* → N = 7558867.75, E = 433339.79, Elev ~31.80m
- *OPTION 2* → N = 7558870.16, E = 433333.76, Elev ~31.82m
- *OPTIONS 3* → N = 7558863.51, E = 433348.70, Elev ~31.74m

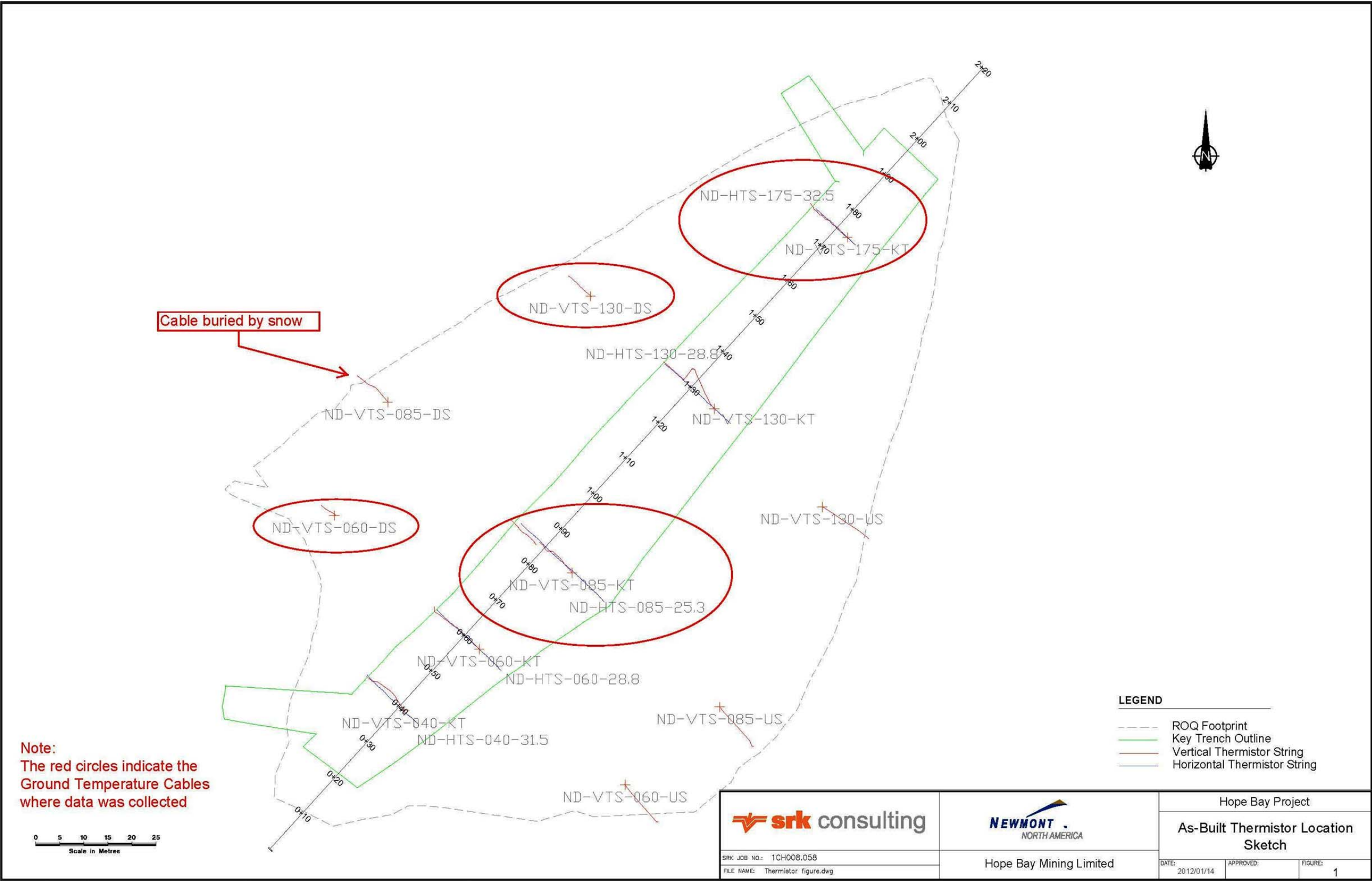


Note:

- IFC location for Sump 1 and 2 are shown in white.
- Previously proposed Sump 1 and 2 locations (see SRK daily #8) are shown in Orange and labeled as Sump 1 and Sump 2. The location of Sump 2 is expected to remain as outlined on dwg DN-DMC-045
- The location of Sump 1 is expected to move S, as the original location was located on the side slope of the Float Plane Dock Access Road.
- The final options for sump 1 are outlined in orange as 'Option' 1 to 3.
- Final field fit location for Sump 1 to be determined tomorrow.



FIGURE:



J:\01\_SITES\Hope.Bay\1CH008.058\_2012 Infrastructure Design\300\_Engineering Site Supervision\10\_Office Support\_ND\Thermistor figure.dwg