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July 6 2015

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Dear Ms. Beaulieu, Ms. Aredes;

Re:

- **Part G Item 19 of 2AM-DOH1323, Request for Approval of Revised Waste Rock and Ore Management Plan - Responses to Party Comments**
 - **Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate 003 and Water Licence 2AM-DOH1323 – Clarification on Waste Rock and Ore Management Plan**
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With respect to the Request for approval of the revised Doris *Waste Rock and Ore Management Plan* (WR&OMP I) submitted to the Nunavut Water Board (NWB) on May 1, 2015, and in response to the comments received by interested parties on or before the extended comment period closing date of June 8, 2015, TMAC Resources Inc. (TMAC) is pleased to provide the following responses. Comments were received from AANDC and the KIA. These comments are provided in Table 1, with responses and/or clarifications for each item.

Further, TMAC wishes to respond to the letter from the NWB received on July 3, 2015, to address the inconsistencies between the WR&OMP I and the *Hope Bay Waste Rock and Ore Management Plan* (WR&OMP II) submitted in June 2015 as part of a resubmission of an Application for Amendment to 2AM-DOH1323. TMAC recognizes that the timing of the submissions and the difference in content is confusing, yet purposeful, hence the desire to address both topics under the same cover.

WR&OMP 1

As stated in the request for approval of the WR&OMP I (April 2015):

- TMAC wishes to utilize Pad T for waste rock storage in the near term (2015-2016).
- TMAC wishes to achieve this through approval of a revised WR&OMP (I).
- The revisions to the WR&OMP I are restricted to the addition of Pad T; no changes to waste rock characterization, handling or segregation are proposed.
- The revisions to the WR&OMP I are based on the current mine plan, permitted under 2AM-DOH1323. This mine plan results in some unmineralised waste rock to be left on site at closure.

Based on a review of procedural history and the points listed above, TMAC understands that Pad T can be approved as a revision to the WR&OMP I by the NWB, and does not require an amendment to 2AM-DOH1323. The WR&OMP I remains largely similar to the approved version of the WR&OMP (2010); waste rock characterization, handling and segregation, along with facility closure will occur in accordance with current approved procedures and closure planning.

It is understood that the WR&OMP I has undergone a preliminary review by the NWB and is currently being assessed by the Nunavut Impact Review Board (NIRB).

WR&OMP II

As a component of the recent submission to the NWB, *Revisions to TMAC Resources Inc. Amendment Application No. 1 of Project Certificate 003 and Water Licence 2AM-DOH1323*, TMAC has submitted an updated *Hope Bay Waste Rock and Ore Management Plan* (WR&OMP II). This Plan has been revised to support a new mine plan and differs substantially from both the current approved WR&OMP (2010) and the revised version, the WR&OMP I currently under review in the Pad T submission, in the following ways:

- Revised approach to waste rock characterization, handling and segregation.
- Under the new mine plan, all waste rock will be used either for construction (if deemed suitable) or as backfill underground, with no waste rock on surface at closure.
- Revised approach to closure of waste rock facilities.
- Assumes Pad T has been permitted and will be the approved waste rock pad, once operations under a revised 2AM-DOH1323 commence (late 2016).

These changes are substantial enough in nature that TMAC anticipated an amendment process would be required to facilitate review and approval, hence the inclusion of the revised WR&OMP II in the Amendment Application Package.

WR&OM Implementation Plan

Figure 1 illustrates the relationship between the current approved WR&OMP (2010), the WR&OMP I currently under review by the NIRB (April 2015) and the revised WR&OMP II (June 2015) recently submitted, as well as the related mine plans and water licences.

It is understood that proceeding in this manner will allow TMAC to construct and utilize Pad T for waste rock storage in the near term to support current approved development activities. Changes in waste rock characterization, handling and segregation procedures would be implemented following approval of 2AM-DOH1323 Amendment 1 (2016). Proceeding in this manner ensures timely, efficient and compliant waste rock characterization, handling, segregation and storage to support current development and future mining.

TMAC is on a forward-moving path to production across the Hope Bay belt; with the several licences in place and reviews underway, TMAC recognises that the rationale for the various submissions is complex and the processes interconnected. However, the strategy being implemented follows both the NIRB and the NWB processes, and is key to achieving both near term and long term success throughout the Hope Bay belt, and to bring sustained benefits to the Kitikmeot region and Nunavut.

TMAC is committed to participating in an open and collaborative dialogue to facilitate a timely and thorough understanding and review of the various licences in place and reviews underway.

Should you have any questions regarding the responses, or require any further information, please contact me at john.roberts@tmacresources.com.

Yours sincerely,



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	2015			2016				2017			
	YTD	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Mine Plan	<ul style="list-style-type: none">• Current• 698,700 t ore• Doris zone only• Waste rock on surface at closure				<ul style="list-style-type: none">• Revised• 2.5M t ore• Doris, Connector and Central zones• No waste rock on surface at closure						
Water Licence	2AM-DOH1323				2AM-DOH1323 Amendment 1						
	(Review of 2AM-DOH1323 Amendment 1)										
Waste Rock and Ore Management Plan	Current (2010)		WR&OMP I (April 2015)		WR&OMP II (June 2015)						

Figure 1 Implementation of the various versions of the *Waste Rock and Ore Management Plan*.

Table 1 Part G Item 19 of 2AM-DOH1323, Request for Approval of Revised Waste Rock and Ore Management Plan (WR&OMP I)- Responses to Party Comments

ITEM	TOPIC	PARTY COMMENT	PARTY REQUEST	TMAC RESPONSE
AANDC June 5, 2015				
Issue #1 Thermal Analysis of Pad T's Foundation (Permafrost Soils)				
A1	Stability	<p>Section 2.1.1 of the Stability Analysis Memo (SRK 2015c) states:</p> <p>Pad T will be constructed on permafrost soils (i.e., directly onto the tundra) and is designed to promote freeze-back, thereby minimizing long-term environmental effects from possible acid rock drainage and/or metal leaching. Permafrost soils will provide suitable foundation conditions for waste rock piles, provided the foundation remains frozen. SRK (2006) presents the thermal analysis for the site that demonstrates the viability of this approach.</p>	<p>TMAC should verify the stability of Pad T's foundation (permafrost soils) based on updated thermal analysis because the 2006 thermal model results (SRK 2006) are dated.</p> <p>Climate change and/or global warming may impact the foundation's material properties. These details should be considered.</p>	<p>The stability analysis conducted assumes:</p> <ul style="list-style-type: none"> Both the full load of Pad T as well as the maximum extent of waste rock on the pad. Both Pad T and the waste rock are assumed to be fully thawed. <p>In reality, the majority of waste rock on Pad T will be stored on surface temporarily; at most 188 Mt unmineralized (of the total 848 Mt capacity) waste rock will remain on surface, while the remaining 660 Mt will ultimately be used as underground backfill. Therefore, the expected permanent long term load on the foundation soils at closure will be less than 25% of what has been presented in the stability analysis.</p> <p>The Mean Annual Air Temperature (MAAT) based on 30 year climate normal for the Doris North Project used in the 2006 thermal assessment was -12.1°C. The equivalent MAAT in 2015 is -11.7°C. Climate change predictions for the Project site suggest that the MAAT could increase to about -10.5°C by the year 2030, and to about -5.5°C by the year 2100. Should these predictions materialize, the result will be a very slow and marginal increase in the depth of the active layer. Based on professional judgement, the difference in the MAAT between 2006 and 2015 is not considered significant enough to indicate that the thermal analysis completed by SRK in 2006 is invalid for estimating the active layer thickness.</p> <p>As climate change predictions materialize, the active layer deepening will occur over decades, allowing any thawing soils ample time to consolidate and strengthen. With the minimal load of Pad T and only 188 Mt of unmineralized waste rock on these foundation soils, there are no long term engineering concerns.</p> <p>In addition, parts of Pad T, and possibly portions of the waste rock pile are expected to freeze, as has been demonstrated at Hope Bay and at other arctic mine sites. In the near term this additional frost will act to substantially slow down the deepening of the active layer</p>

				as the MAAT increases.																				
Issue # 2 Incremental Liability Associated with Waste Rock Storage on Pad T																								
A2	Liability, Stability	<p>Table 2 of the Stability Analysis Memo (SRK 2015c) presents material properties of the foundation soils. The Apparent Cohesion (c') of the frozen marine silt and clay is 112 kPa, whereas, in unfrozen state it is 0. An unexpected temperature rise can decrease the Apparent Cohesion of silt and clay, jeopardizing the stability of underneath soils.</p> <p>Section 2 of the Security Brief (SRK 2015b) provides the total incremental liability associated with Pad T, i.e., CAD \$6,000, in undiscounted 2014 Canadian dollars</p>	<p>The Licensee should ensure that the incremental liability amount will be sufficient if ambient air temperatures were to increase due to climate change and/or global warming.</p> <p>The possibility of the waste rock pile becoming unstable due to temperature rise and resulting unfrozen soil conditions should be considered.</p>	<p>As described in the response to comment A1 there is no plausible scenario where climate change would result in a sudden loss of permafrost and subsequent sudden and complete loss in strength of the foundation materials under Pad T. Therefore the closure plan for Pad T, which entails primarily re-grading of the pad, is appropriate and as a result the proposed liability amount associated with Pad T is appropriate.</p>																				
Issue #3 Reclamation Cost Estimate Details																								
A3	Liability	<p>The Security Brief (SRK 2015b) does not include details on why \$6,000 in undiscounted Canadian dollars is considered to be the total incremental liability associated with the revised waste rock management strategy (use of Pad T). Details such as tasks, quantities, units, unit cost codes, associated subtotals, and indirect costs (e.g., general and administrative costs, post closure monitoring, etc.) are not provided.</p> <p>Section 2 states that it was assumed that 100% of the pad surface area would be re-graded to ensure positive drainage and ponding. Section 3 states that the value was calculated using the same principles and costing assumptions used in the current Doris North Closure and Reclamation Plan (SRK 2012).</p>	<p>TMAC should provide details (i.e., spreadsheet based) that demonstrate why \$6,000 in undiscounted Canadian dollars is considered to be the total incremental liability associated with the Waste Rock Storage Pile (Pad T).</p>	<p>Consistent with TMAC's past approach to closure costing (current bonding line items already on file with and approved by the NWB), 'regrading' as an activity consists of the line items presented below.</p> <p>Final cost amounts are rounded to the neared \$1,000.</p> <p>The Closure Cost Estimate for Pad T is broken down as follows:</p> <table><tr><td>Task</td><td>Quantity</td><td>Unit Cost</td><td>Activity Total</td></tr><tr><td>Collect all debris</td><td>42,600 m2</td><td>\$0.14</td><td>\$5,799.03</td></tr><tr><td>Load waste into containers for shipping off-site</td><td>10.0 m3</td><td>\$8.65</td><td>\$86.52</td></tr><tr><td>Haul debris to Roberts Bay Laydown</td><td>10.0 m3</td><td>\$2.54</td><td>\$25.40</td></tr><tr><td>Regrade area for positive drainage</td><td>42,600 m2</td><td>\$0.01</td><td>\$497.40</td></tr></table>	Task	Quantity	Unit Cost	Activity Total	Collect all debris	42,600 m2	\$0.14	\$5,799.03	Load waste into containers for shipping off-site	10.0 m3	\$8.65	\$86.52	Haul debris to Roberts Bay Laydown	10.0 m3	\$2.54	\$25.40	Regrade area for positive drainage	42,600 m2	\$0.01	\$497.40
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Issue #3 Groundwater Considerations				
A4	Ground-water	Information to prevent surface water contamination due to seepage has been provided in section 5 of the submitted plan (Revised Waste Rock and Ore Management Plan (SRK 2015d)). However, groundwater information is not available. Seepage and runoff from the waste rock storage pad may contaminate groundwater.	<p>In addition to surface water protection, TMAC should consider groundwater protection.</p> <p>TMAC should provide groundwater information.</p>	<p>The entire Doris North Project site is located within a zone of continuous permafrost, extending to a depth of about 500 m, as confirmed through both shallow and deep drill holes and ground temperature cable readings. There is no groundwater present under this site.</p> <p>Free water is present in the unfrozen, 1 m thick, active layer that thaws each summer. The base of Pad T, like all service pads at Hope Bay, is designed to ensure that the summer active layer occurs within in the pad thickness and that the tundra below remains frozen year round. Thermistor data reported in regular NWB and NIRB reports indicates this design concept has been proven. Hence no unfrozen tundra, or shallow groundwater is anticipated beneath Pad T.</p> <p>Seepage from the waste rock on the pad and the pad itself is collected in the pollution control collection system and is deposited in the Tailings Impoundment Area (TIA). Data from these collection systems are reported regularly in the SNP reports.</p>
KIA June 3, 2015				
Issue #1 Stockpile Configuration				
K1	Design slope for pile	<p>Figure 3 shows 2.5H:1V on waste rock slope.</p> <p>Drawing DN-DMC-T3 shows 2.5H:1V on waste rock slope and 2H:1V on diversion berm slopes.</p>	<p>TMAC to confirm design slope for the waste rock pile.</p> <p>If 2.5H:1V is long term slope, why not construct waste dump at such slope rather than leaving possible re-sloping liability until later?</p>	<p>The long term overall slope design for the waste rock pile is 2.5H:1V.</p> <p>While it may be prudent to ensure the pile is constructed to that configuration from the outset to avoid later re-grading it should be noted that the majority of the waste rock pile on Pad T is temporary, as most of the material will ultimately be used as backfill in the mine. In addition, waste rock cannot be dumped to slopes other than angle of repose. Therefore the operational practice is to dump at angles of repose with setback benches followed by re-grading to achieve the overall design grade. This grading can either be done as dumping progresses or when all dumping has taken place.</p>

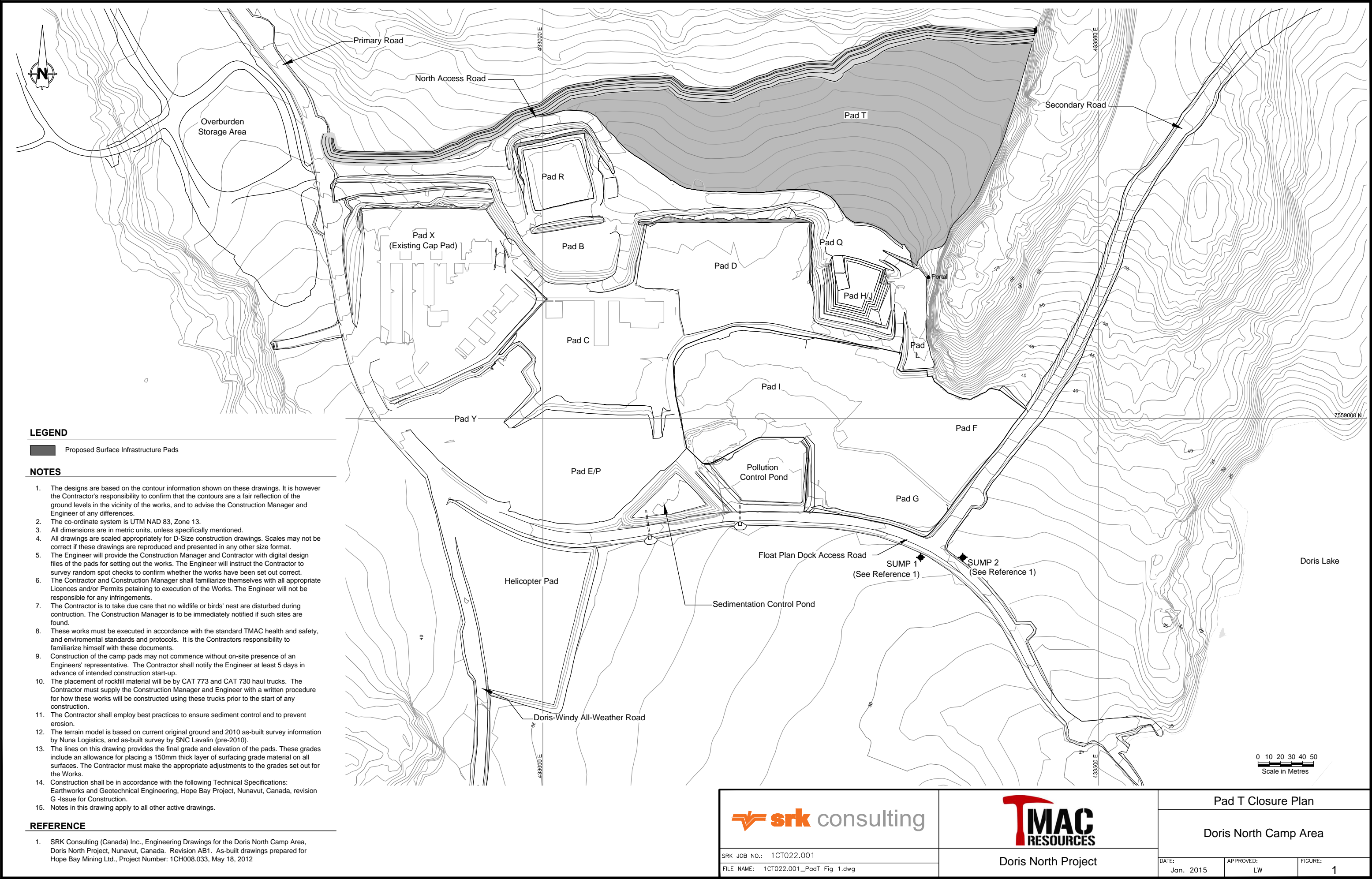
Issue #2 Water Management				
K2	Sumps	<p>All seepage and runoff from waste rock pads are directed to Pollution Control Ponds and sumps (as shown on Figure 6). No sumps are shown on associated plans or sections in Drawings DN-DMC-T0 to –T3.</p>	<p>If all seepage and run-off reports to Pollution Control Pond, why is there a need for sumps on the downstream side?</p> <p>How does the water from Pad T reach these sumps?</p> <p>Are the sumps lined to contain all contact water?</p> <p>Are there specific design criteria for the sumps to prevent overflow or seepage?</p> <p>Why are the sumps not shown on the engineering drawings?</p>	<p>Water management, including Underflow Interception Sump location, design and operation, is presented in the approved <i>Interim Water Management Plan</i>-Rev 5 (SRK 2012):</p> <ul style="list-style-type: none"> Figures 1, 2 and 3 illustrate the sump locations; Section 3.3.3 describes components of the water management system, including sumps. <p>Updated Drawing and Figures, showing the locations of Sumps 1 and 2, are provided (see attached).</p>
Issue #3 Low Salt Underground Brine Water Use				
K3	Salt levels	<p>A procedure is outlined for low salt use.</p> <p>Section 3.4 refers to salt testing for acceptable levels.</p> <p>No comment or commitment provided therein to monitor salt content in the actual waste rock. In addition, no target salt level forecast when using the low salt procedure.</p>	<p>Could TMAC confirm acceptable salt levels (possibly defined in water licence for Station ST-2)?</p> <p>If salt levels not acceptable, what happens to impacted water?</p>	<p>The <i>Seepage Monitoring Program</i>, under both the current approved and the revised <i>Waste Rock and Ore Management Plan</i> (SRK 2010, SRK 2015), includes seepage monitoring for chloride from the toe of the waste rock pile, as reported annually to the NWB (refer to <i>Hope Bay Seepage Monitoring Program, 2014</i>).</p> <p>Contact water from the waste rock pile collects in the Pollution Control Pond (PCP). This water is pumped from ST2 (PCP discharge point) to the Sedimentation Pond (Sed Pond). Under 2AM-DOH1323, water is required to be monitored for chloride at ST2, however, 2AM-DOH1323 imposes no criteria here, or elsewhere (exception being TL3).Sed Pond water is then pumped from ST1 (Sed Pond discharge point) to the TIA.</p> <p>The TIA discharges to the receiving environment. Chloride is</p>

				<p>measured at the end of the mixing zone in the Doris Creek (TL3). At TL3, the licence criteria for chloride is 150 mg/L max concentration (any grab sample). To date, TMAC remains in compliance with this criteria (Typical values for chloride at TL1 and TL4 are in the range of 40-60 mg/l, as reported in SNP Reports).</p> <p>There are no direct discharges from either the PCP or the Sed Pond to the tundra.</p>
Issue #4 Waste Rock Pile				
K4	Salinity	<p>Section 5.1 outlines parameters to be checked at Station ST-2 from Pollution Control Pond (off waste rock).</p> <p>Listed parameters do not include salinity.</p>	Does salinity need to be checked based on comment above?	<p>Chloride arising from drilling contributes to the salinity that is measured in relation to the waste rock runoff. Therefore, TMAC feels it is appropriate to monitor chloride, as opposed to salinity.</p> <p>Chloride is monitored both under 2AM-DOH1323 as well as the seepage monitoring program.</p>
Issue #5 Drawing Details				
K5	GCL Liner	<p>Detail1 of Drawing DN-DMC-T3 Pad T – Section and Details shows GCL liner installed at 1H:1V slope.</p> <p>If GCL liner installed at 1H:1V slope, it will be very difficult to place bedding layer and properly compact over top, leading to potential stability issues on the upstream side. No information noted regarding bedding or cover layer to protect GCL. Liner would possibly be punctured without these layers leading to leakage through Diversion Berm</p>	Could there be any chance of salty water from the waste dump impacting the GCL as performance of these liners may be impacted by salt.	<p>The Doris North Camp Area Diversion Berm was constructed in 2012 as referenced on drawing DN-DMC-T3. The geosynthetic clay liner (GCL) was successfully covered and compacted and the berm has shown no signs of stability concerns as demonstrated in the two annual geotechnical inspections conducted and reported to the NWB since its construction.</p> <p>The function of the GCL liner is to divert upstream non-contact surface water runoff away from the Doris North Camp Pads. There is no chance of contact water from the waste rock pile coming into contact with the GCL liner within the Doris North Camp Diversion</p>

				Berm.
Issue #6 Non-mineralised rock on surface at closure				
K6	Closure	<p>Regarding SRK 2015 (Attachment 6; Security Brief): Any exposed areas of Pad T, not covered by non-mineralised waste rock, will remain in place at closure and only minimal grading will be required.</p> <p>The text notes that only non-mineralised waste rock is to be left on surface. The SRK sentence on page 2 of the memo implies that mineralize waste rock can be left uncovered at closure. At first review, this statement would be contrary to leaving only non-mineralised waste rock on surface. Leaving mineralised waste rock on surface without a cover would seem to represents a bigger liability for the KIA.</p>	<p>Could TMAC clarify their closure intentions for waste rock and confirm if any uncovered mineralised waste rock will be left on surface at closure?</p>	<p>To clarify: “Any exposed areas of Pad T, not covered by non-mineralised waste rock, will remain in place at closure and only minimal grading will be required” refers to the pad itself, which will remain in place at closure.</p> <p>Section 2.1 of the submitted <i>Waste Rock and Ore Management Plan</i> states: “It is expected that all of the waste rock remaining on surface at the end of the mine life will be non-mineralized.”</p> <p>In summary:</p> <ul style="list-style-type: none"> • Mineralized rock will be preferentially used for backfill in the mine so as to preclude its remaining on the surface at closure. • Only non-mineralised waste rock may remain on surface at closure. • Pad T will remain in place at closure.

	Issue #7 Extra Security			
K7	Security	<p>Regarding SRK 2015 (Attachment 6): \$6000 extra security estimated based on regarding costs only.</p> <p>This assumes that only non-mineralised waste rock remain on surface at closure. If mineralised waste rock placed on surface (previous question), then liability to manage waste and contact water would be much higher. So the estimate security value is related to previous question.</p>	-	<p>Refer to response to Item A3.</p> <p>Further, closure planning is ongoing throughout the life of the mine and should waste rock disposition change during the course of operations there is opportunity to adapt the management practices and closure planning to this situation and thereby continue to protect the environment. Options include relocating all mineralized waste rock underground at closure, and designing covers suitable to isolate any material on surface, as required.</p>

C:\01_SITES\Hope Bay\Doris North\Pad T\1CT022.001_PadT Fig 1.dwg



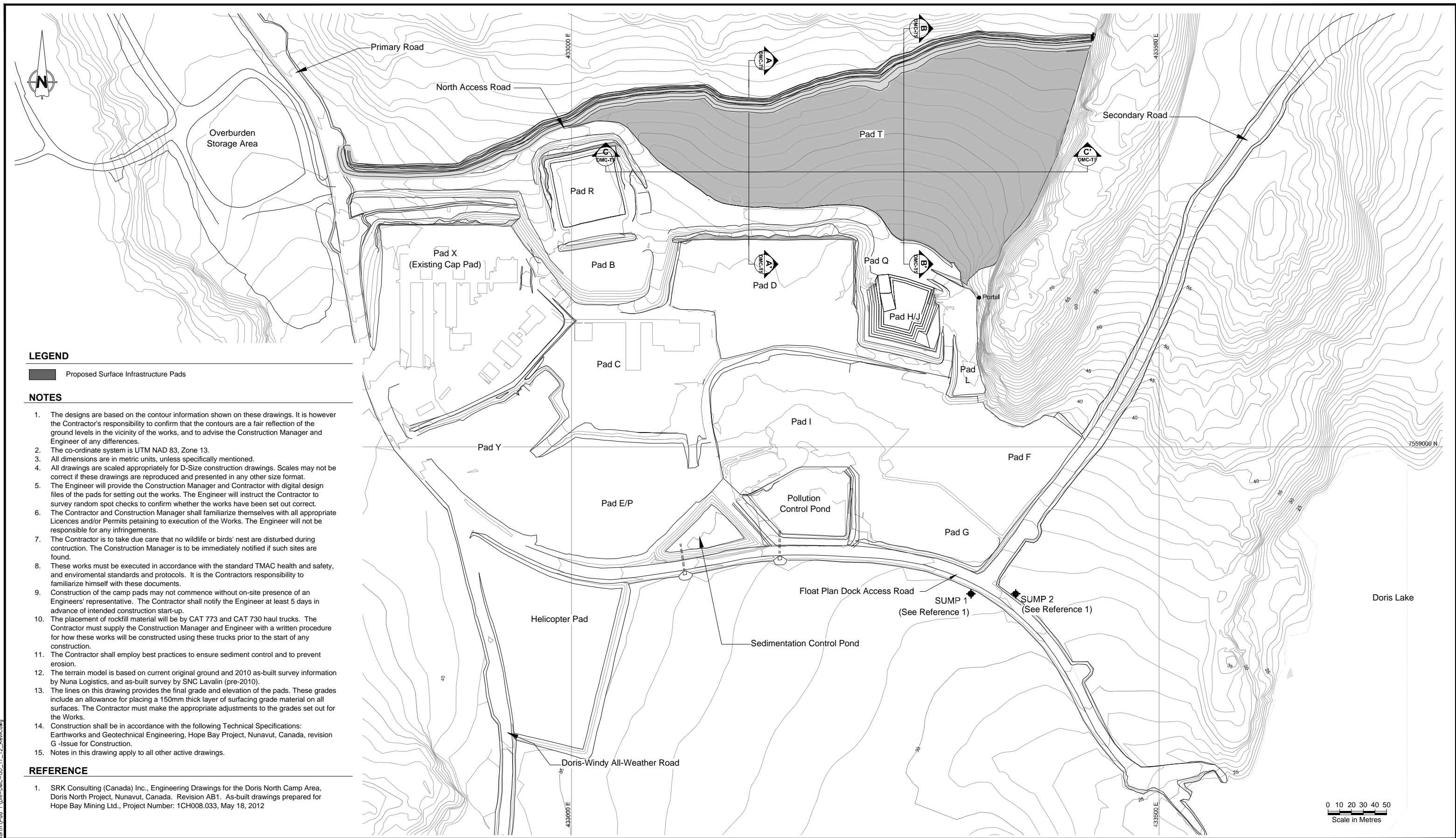
Engineering Drawings for the Doris North Camp Area - Pad T, Doris North Project, Nunavut, Canada Water License Amendment



ACTIVE DRAWING STATUS

SRK DWG NUMBER	DRAWING TITLE	REV.	DATE	STATUS
DN-DMC-T0	Engineering Drawings for the Doris North Camp Area - Pad T	B	Mar. 27, 2015	Issued for Discussion
DN-DMC-T1	Pad T General Arrangement	A	Mar. 27, 2015	Issued for Discussion
DN-DMC-T2	Pad T Waste Rock Storage Capacity	A	Mar. 27, 2015	Issued for Discussion
DN-DMC-T3	Pad T Sections & Details	A	Mar. 27, 2015	Issued for Discussion

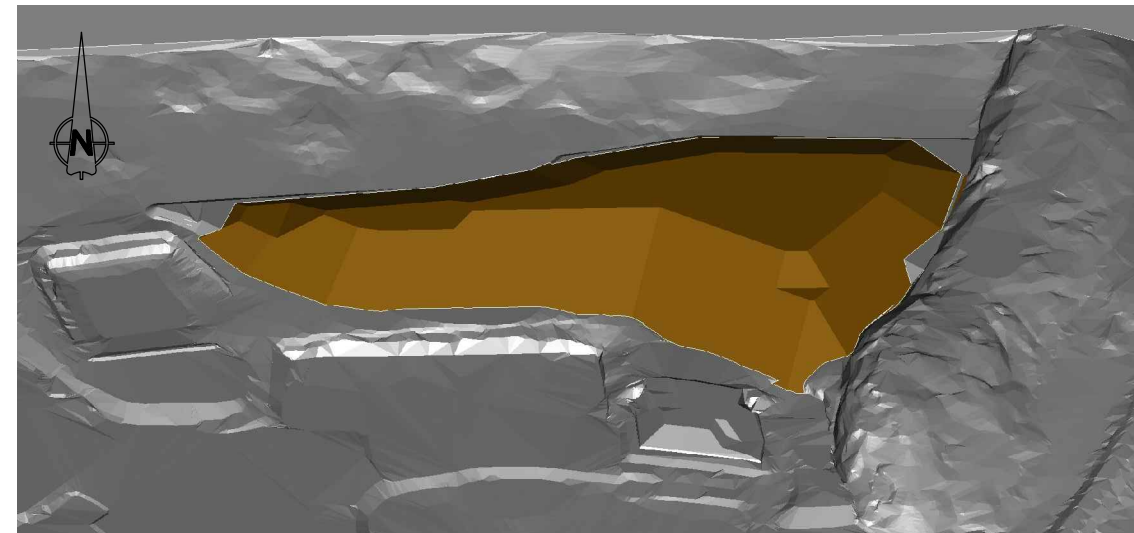
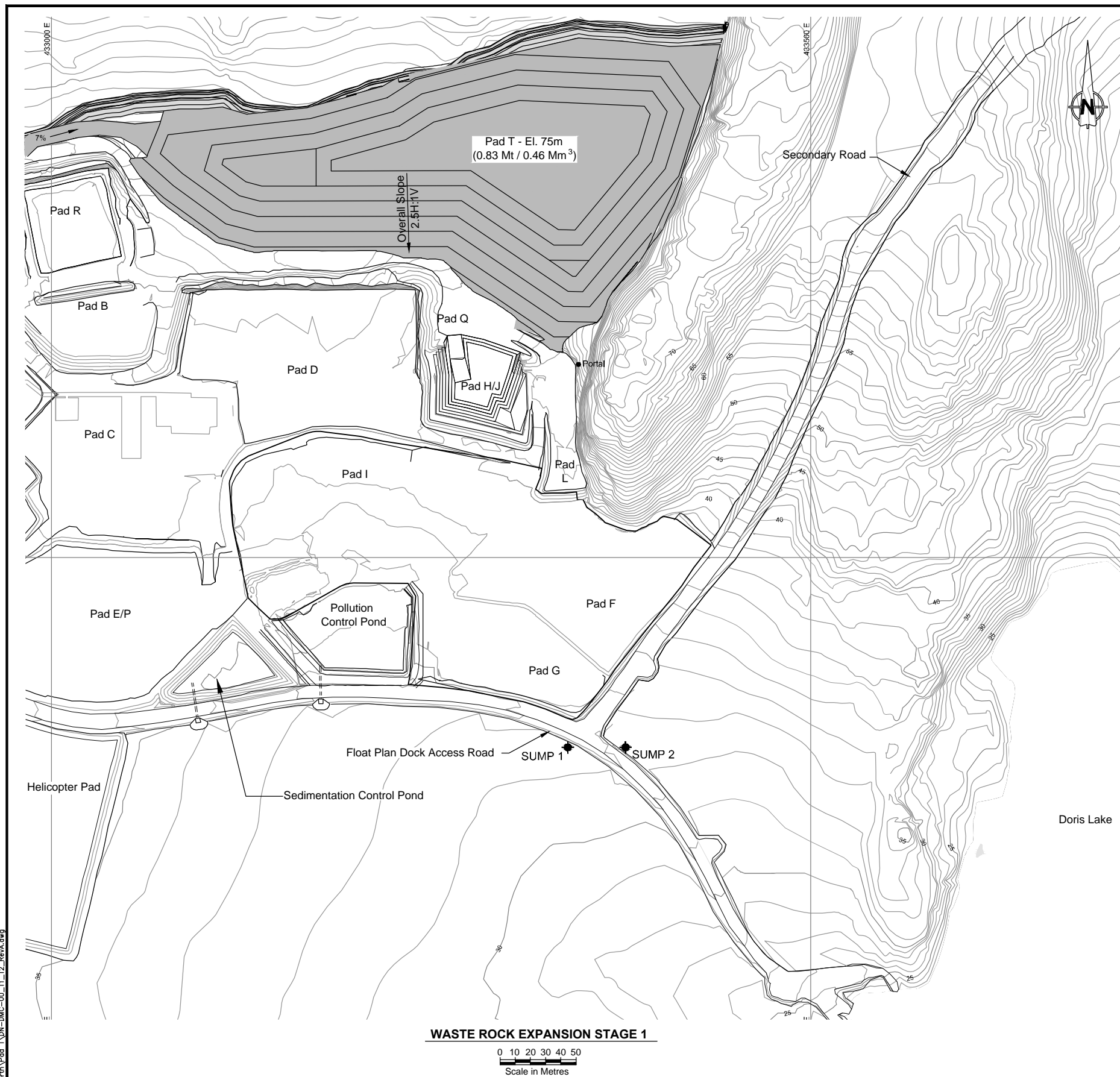


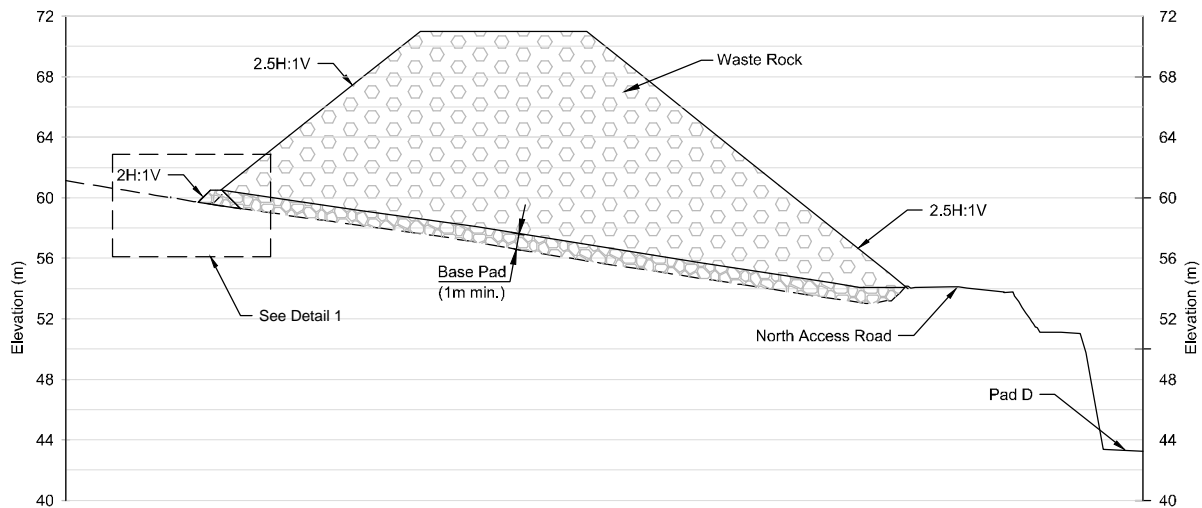
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ISSUED FOR DISCUSSION
Revision B
March 27, 2015
DN-DMC-T0



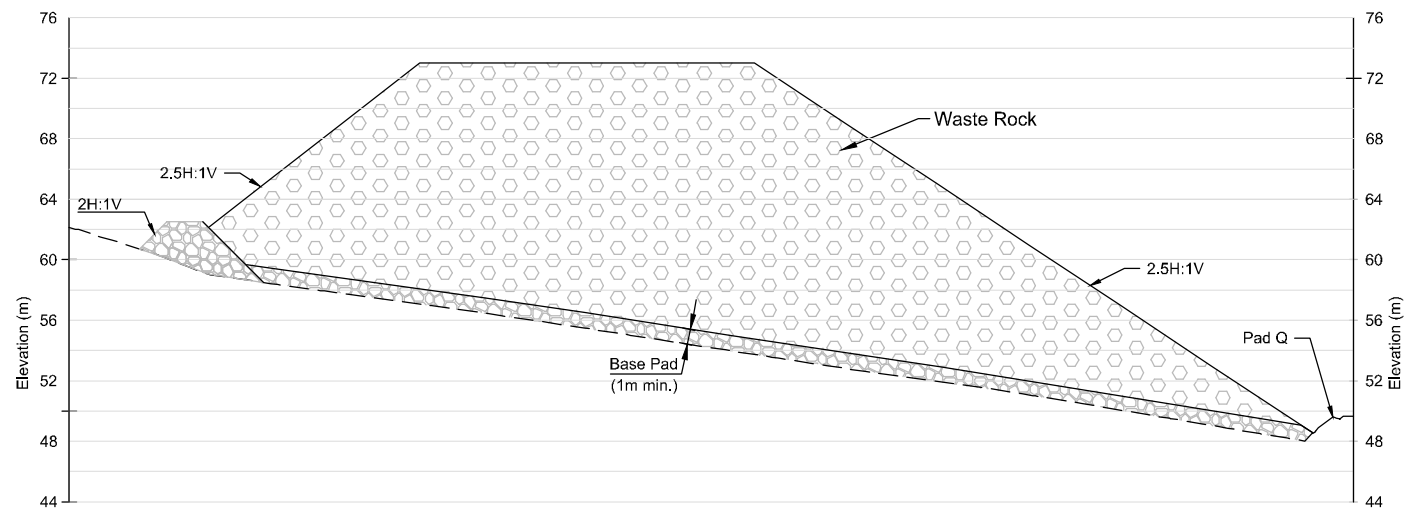
																Doris North			
																DRAWING TITLE:			Pad T General Arrangement
										DESIGN: LW/JBK			DRAWN: NV		REVIEWED: LW		HOPE BAY PROJECT		
										CHECKED: LW		APPROVED: EMR		DATE: Mar. 27, 2015					
										PROFESSIONAL ENGINEERS' STAMP			FILE NAME: DN-DMC-00_T1_T2_RevA.dwg			SRK JOB NO.: 1CT022.002.100			

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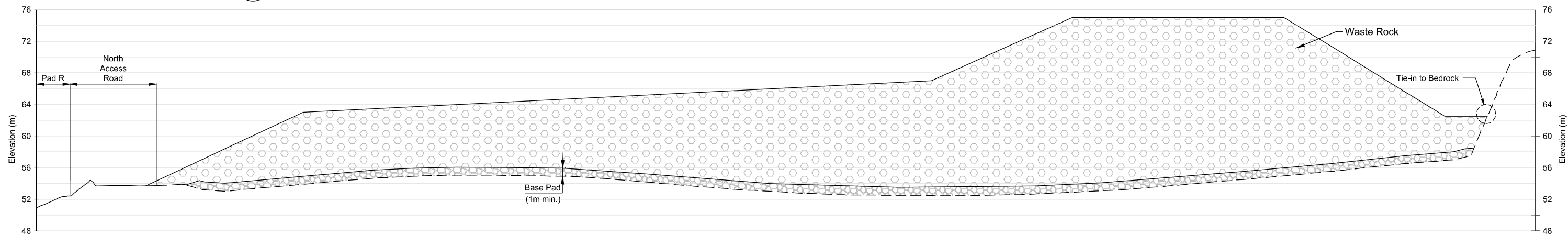




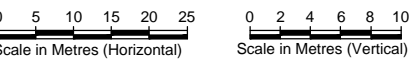
A
SECTION A - A'
DN-DMC-T3



B
SECTION B - B'
DN-DMC-T3

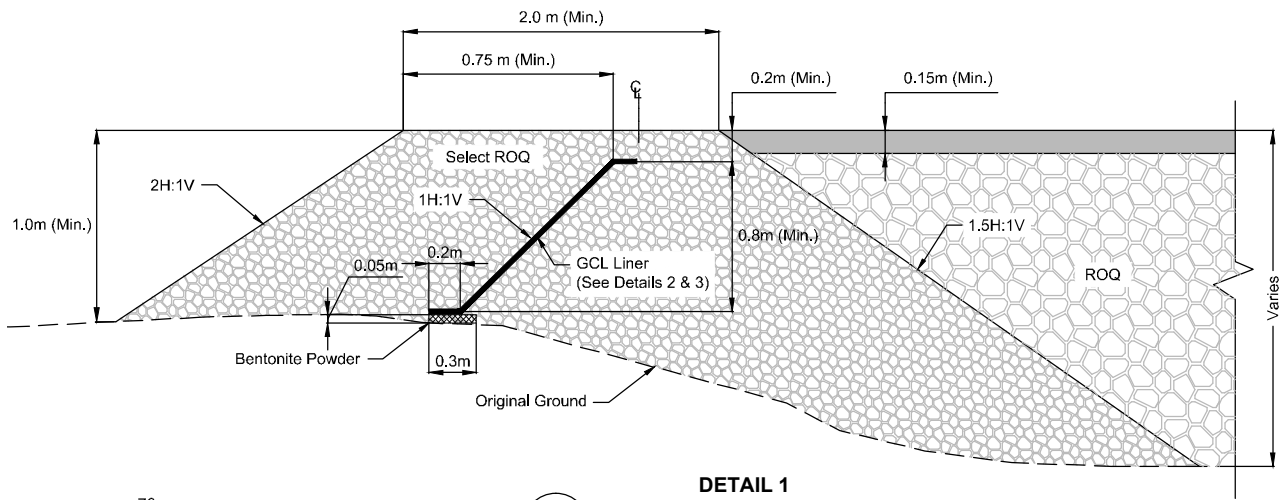


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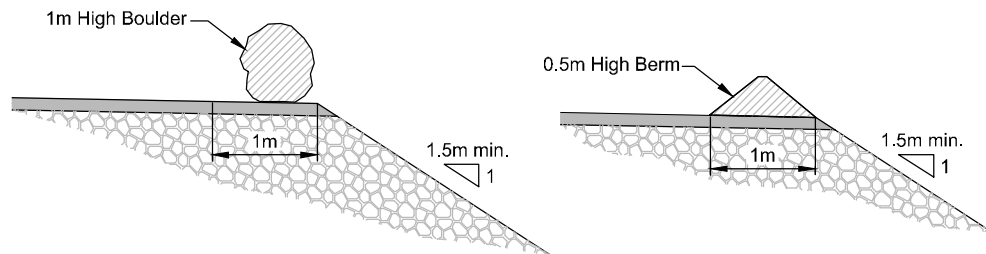


REFERENCE

1. Engineering Drawings for the Doris North Camp Area Diversion Berm, Doris North Project, Nunavut, Canada, Water Licence Amendment, As-Built Drawings Prepared for Hope Bay Mining Ltd., Project No. 1CM008.058, July 16, 2012



1
UPSTREAM DIVERSION BERM
DN-DMC-T5
See Reference 1



4
TYPICAL BERM BARRIER OPTIONS
NOT TO SCALE

LEGEND

- Existing ground surface
- Surfacing Material
- Run of Quarry Material
- Select Run of Quarry Material
- 2010 As-built Surface


NOTES

1. All dimensions in metres unless noted otherwise.
2. Where the thickness of the pads is greater than 3.0m allow for the placement of barriers.
3. The barriers are to consist of boulders larger than 1m in diameter or a rock fill berm 0.5m high. Maximum spacing between barriers is 3.3m.
4. Notes in this drawing apply to all other active drawings.

C:\01_SITES\Hope Bay\Doris North\Pad T\DN-DMC-00_T3_RevA.dwg

DRAWING NO.		DRAWING TITLE		DRAWING NO.		DRAWING TITLE		A		ISSUED FOR DISCUSSION		LW		EMR		27MAR15	
NO.		DESCRIPTION		CHK'D		APP'D		DATE		NO.		DESCRIPTION		CHK'D		APP'D	
REFERENCE		DRAWINGS															

PROFESSIONAL ENGINEERS' STAMP



DESIGN: LW/JBK		DRAWN: NV		REVIEWED: LW	
CHECKED: LW		APPROVED: EMR		DATE: Mar. 27, 2015	
FILE NAME: DN-DMC-00_T3_RevA.dwg					

SRK JOB NO.: 1CT022.002.100	
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Doris North		
DRAWING TITLE:		
Pad T - Sections & Details		
DRAWING NO.	SHEET	REVISION NO.
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