

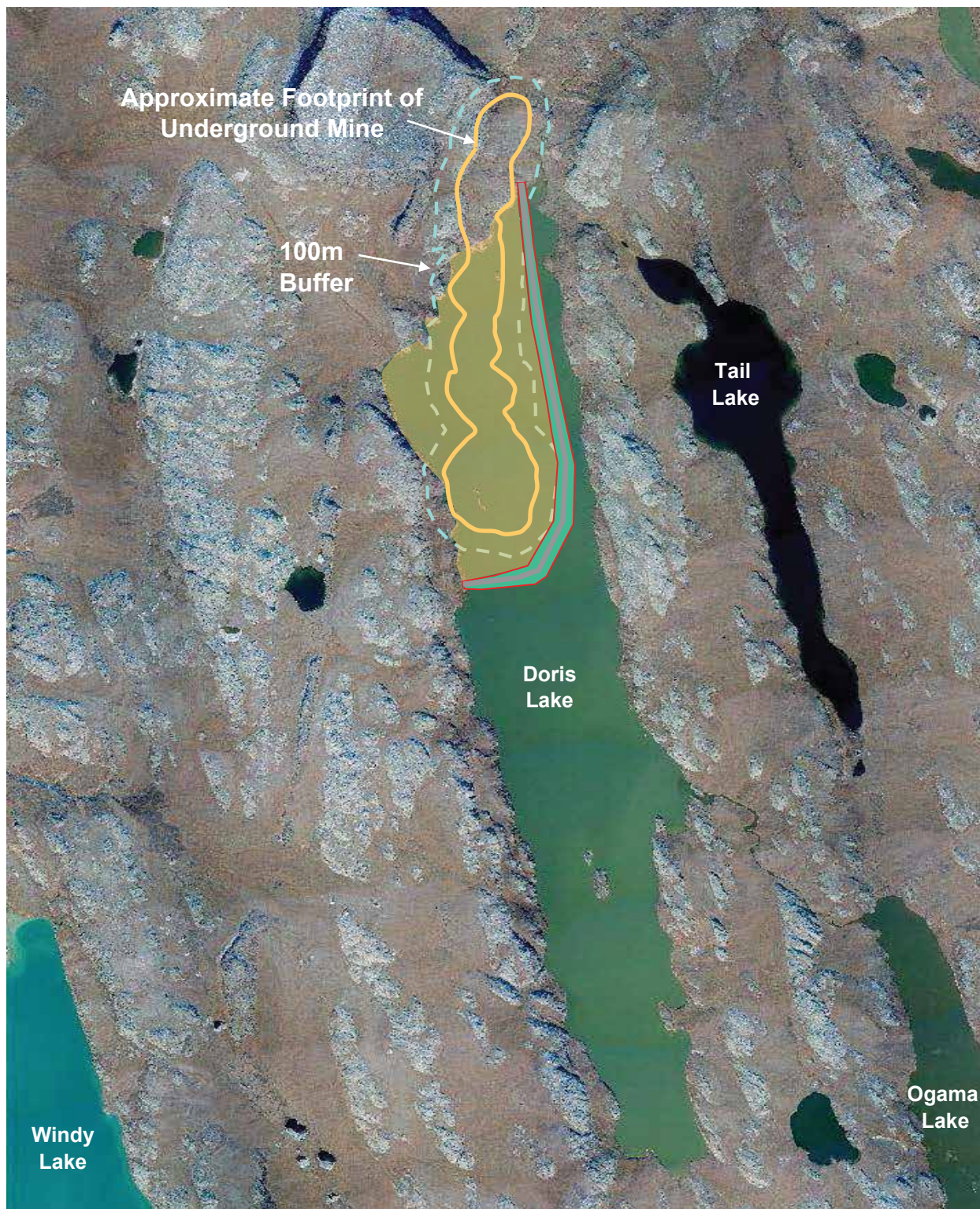
# **Appendix A**

## **List of Supplemental Figures**

## **DFO 3.2.2**

Figure DFO 3.2.2-1 Doris Lake	Supplemental Water Sources for
Figure DFO 3.2.2-2 Doris Lake	Supplemental Water Sources for
Figure DFO 3.2.2-3 Doris Lake	Supplemental Water Sources for
Figure DFO 3.2.2-4 Watershed	Streams within the Doris
Figure DFO 3.2.2-5 Doris	Supplemental Water Sources for

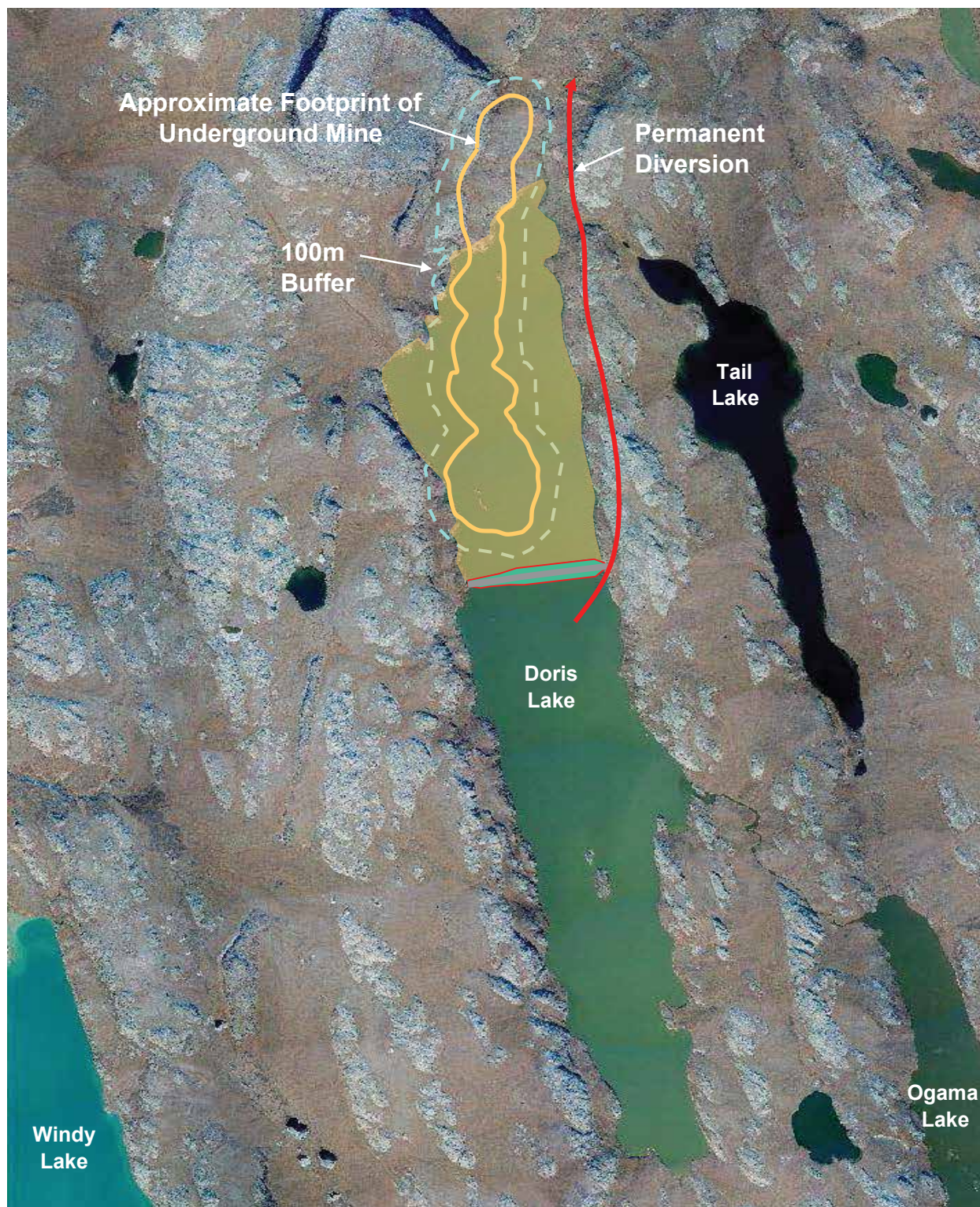
Figure DFO 3.2.2-1  
Supplemental Water Sources  
for Doris Lake



Source: SRK Consulting (2015).



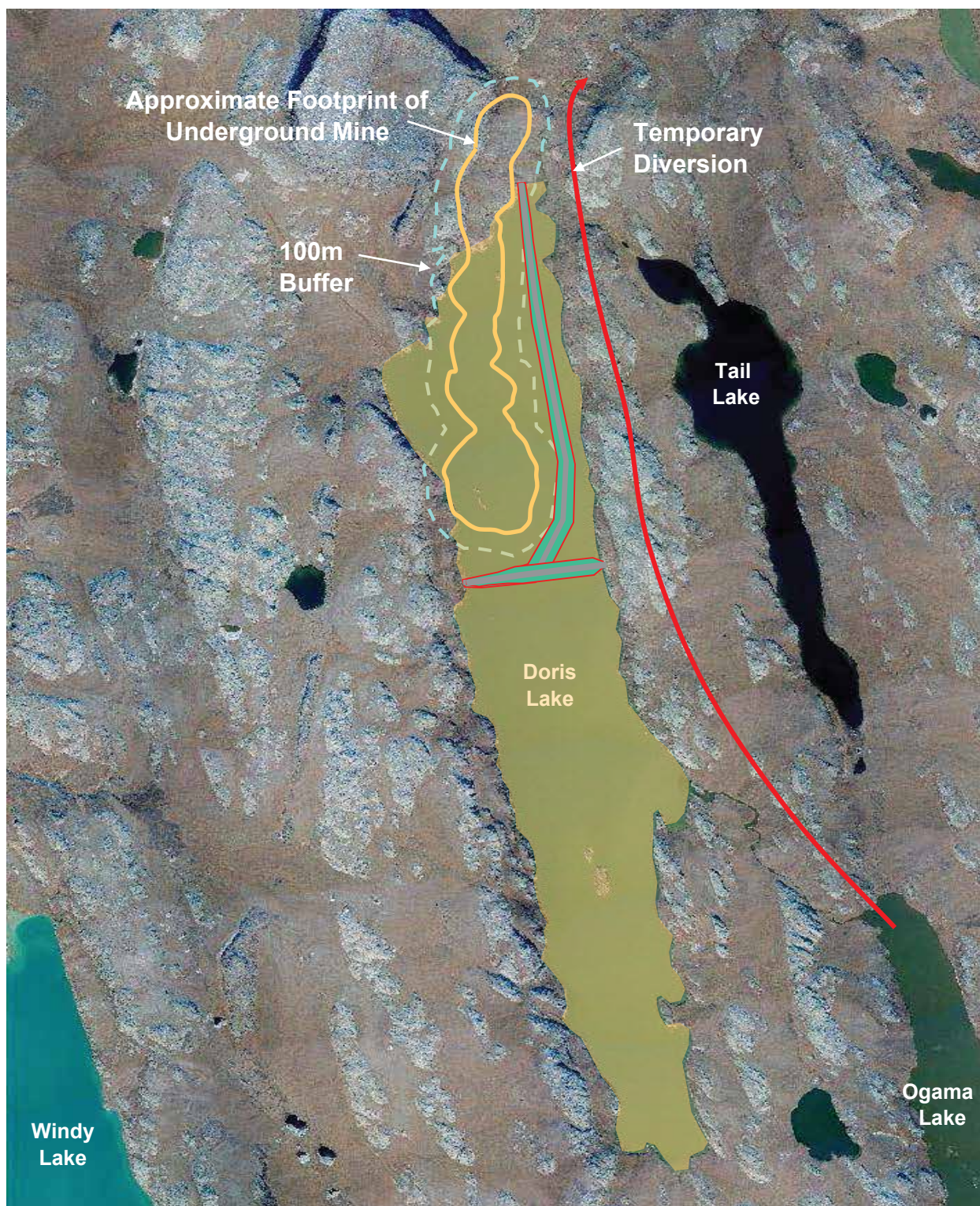
Figure DFO 3.2.2-2  
Supplemental Water Sources  
for Doris Lake



Source: SRK Consulting (2015).



Figure DFO 3.2.2-3  
Supplemental Water Sources  
for Doris Lake



Source: SRK Consulting (2015).



Figure DFO 3.2.2-4  
Streams within the Doris Watershed



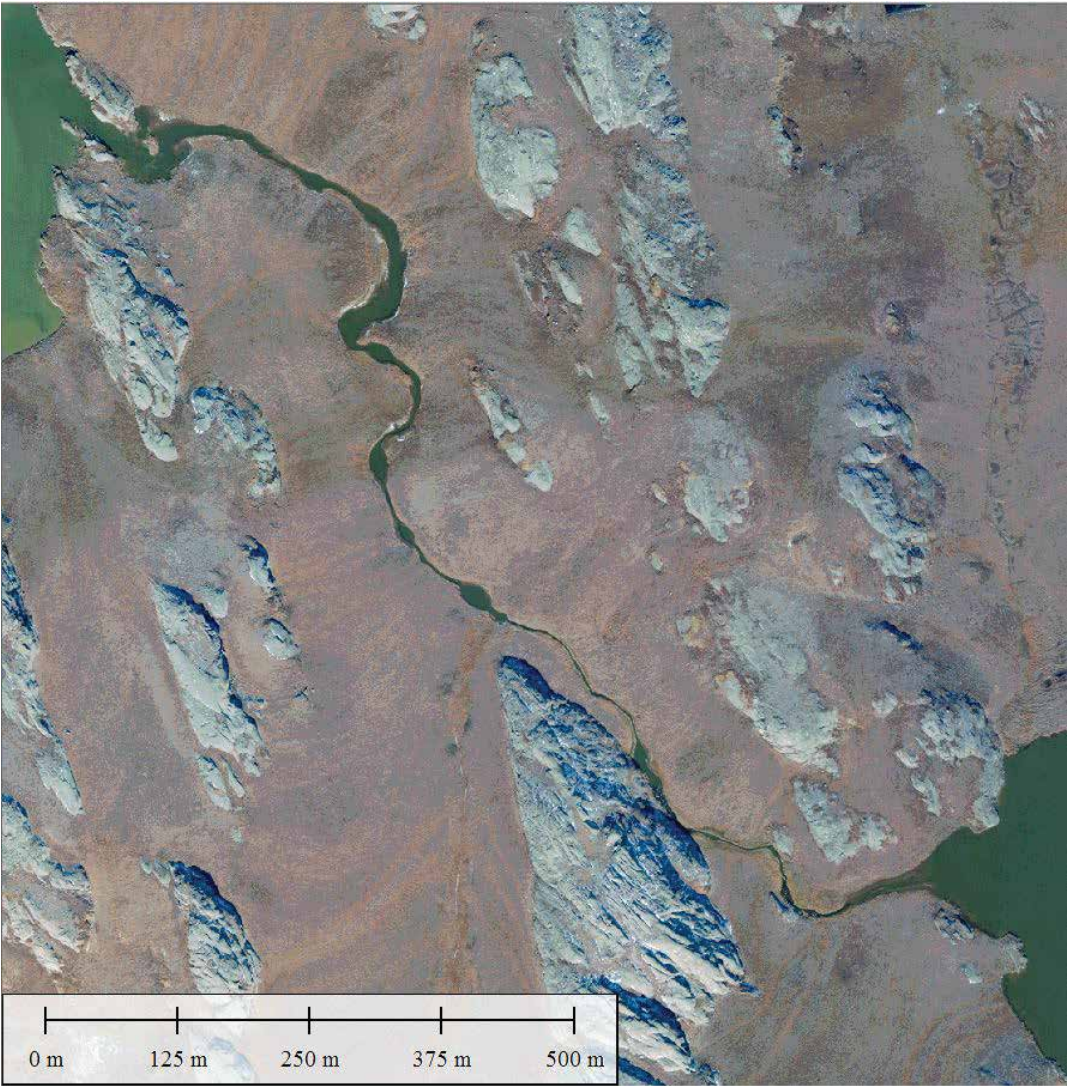
*Patch Lake to P.O. Lake*



*P.O. Lake to Ogama Lake*



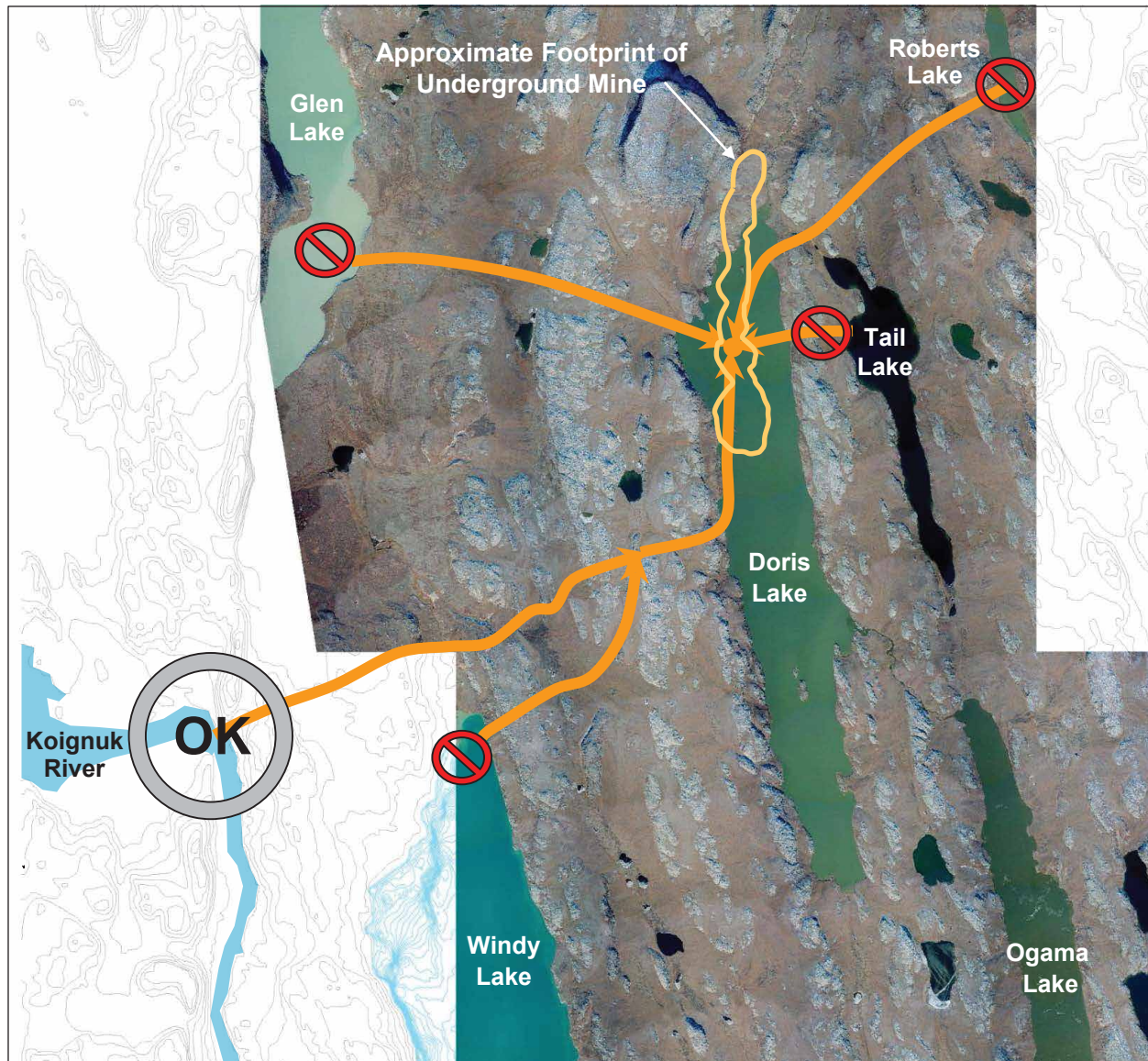
*Ogama Lake to Doris Lake*



Source: SRK Consulting (2015).



Figure DFO 3.2.2-5  
Supplemental Water Sources  
for Doris Lake



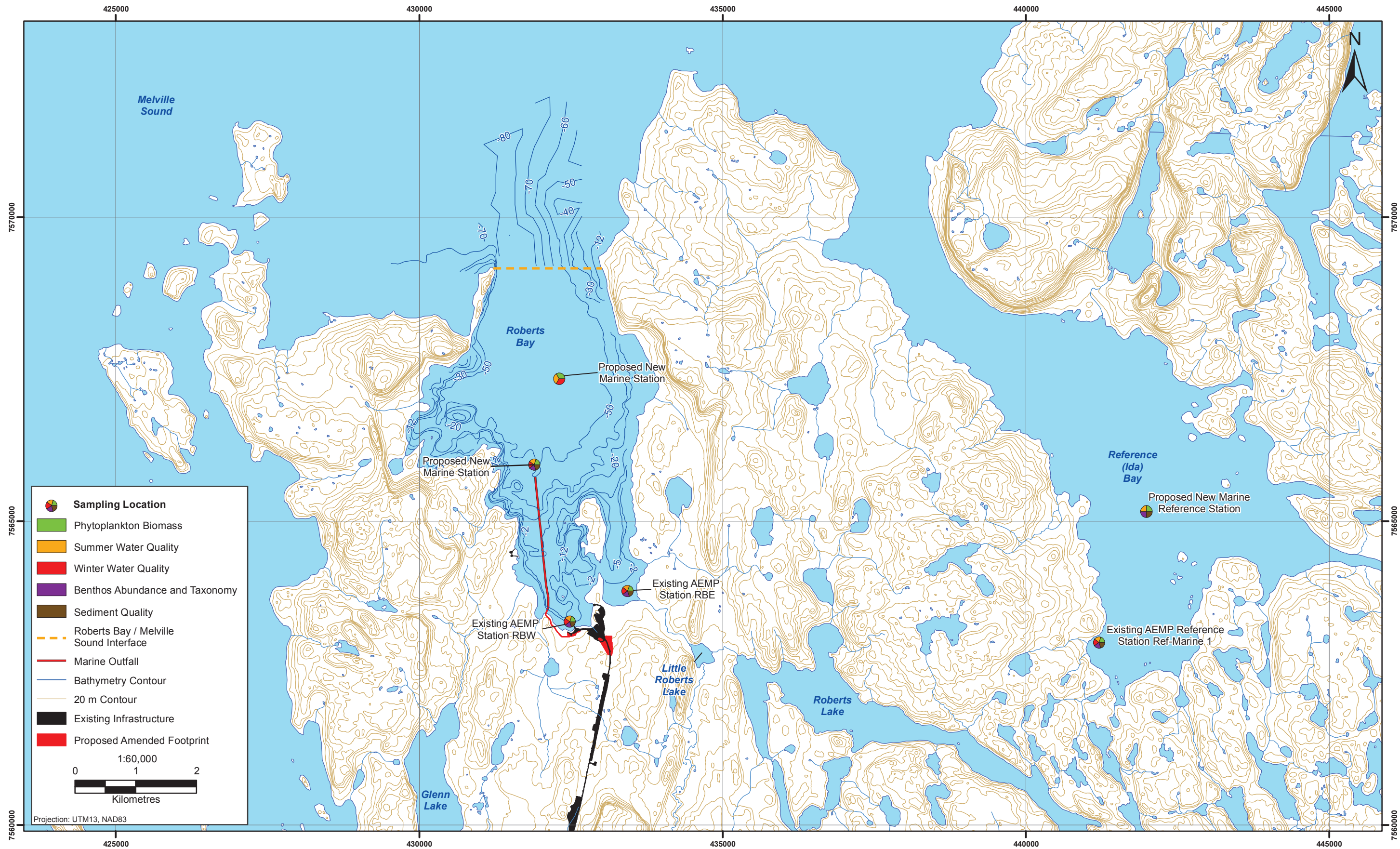
Source: SRK Consulting (2015).

## **ECCC-1/ECCC-8**

Figure ECCC-1/8-1      Proposed Marine Monitoring  
Stations



Figure ECCC-1/8-1  
Proposed Marine Monitoring Stations



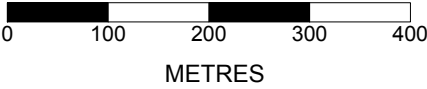
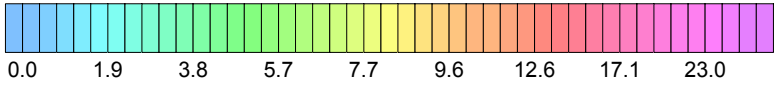
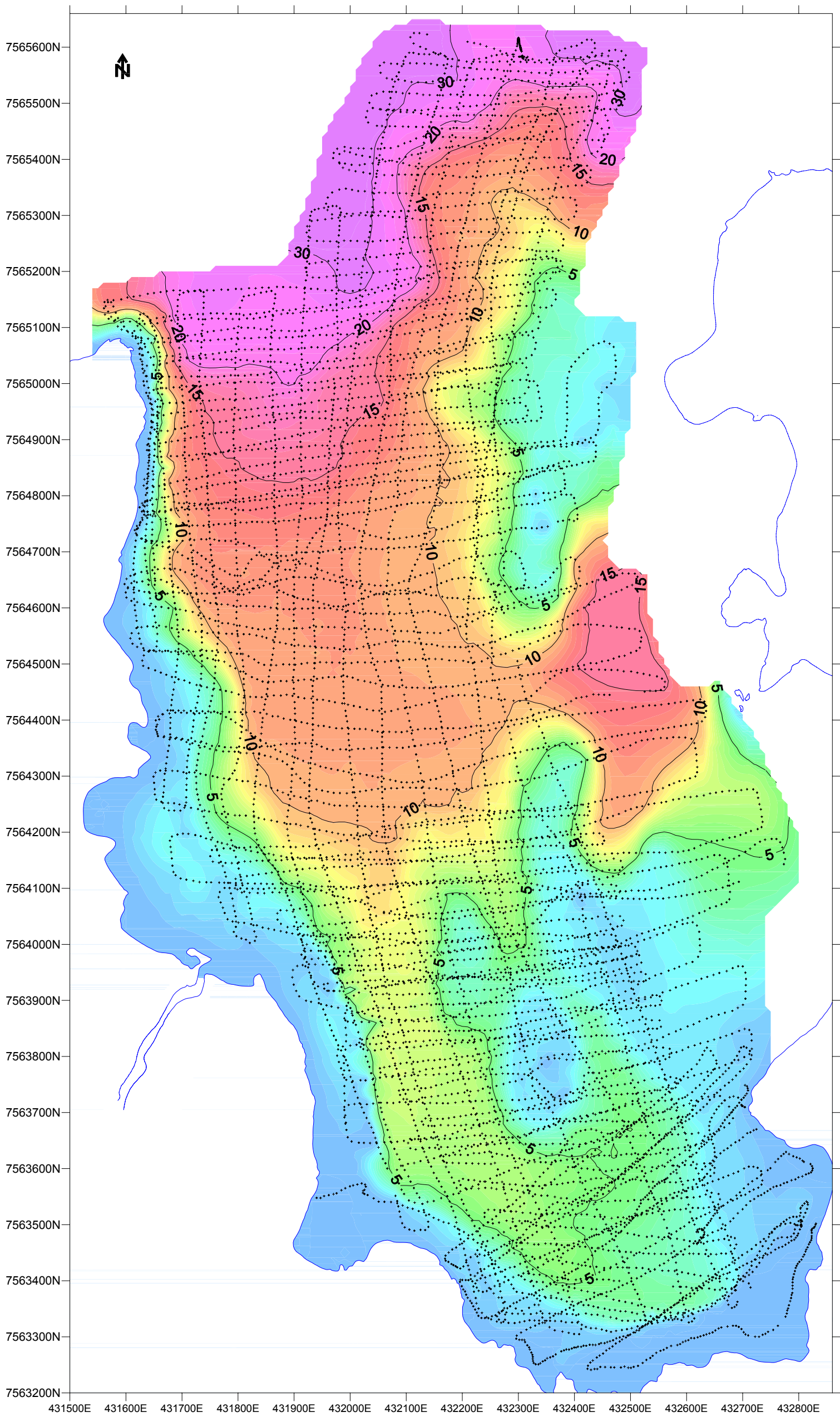


## **INAC-8**

Figure INAC-8-1      Bathymetry Contour Plan, September  
2003

Figure INAC-8-2      2011 Bathymetry Sampling Sites,  
Doris North Project

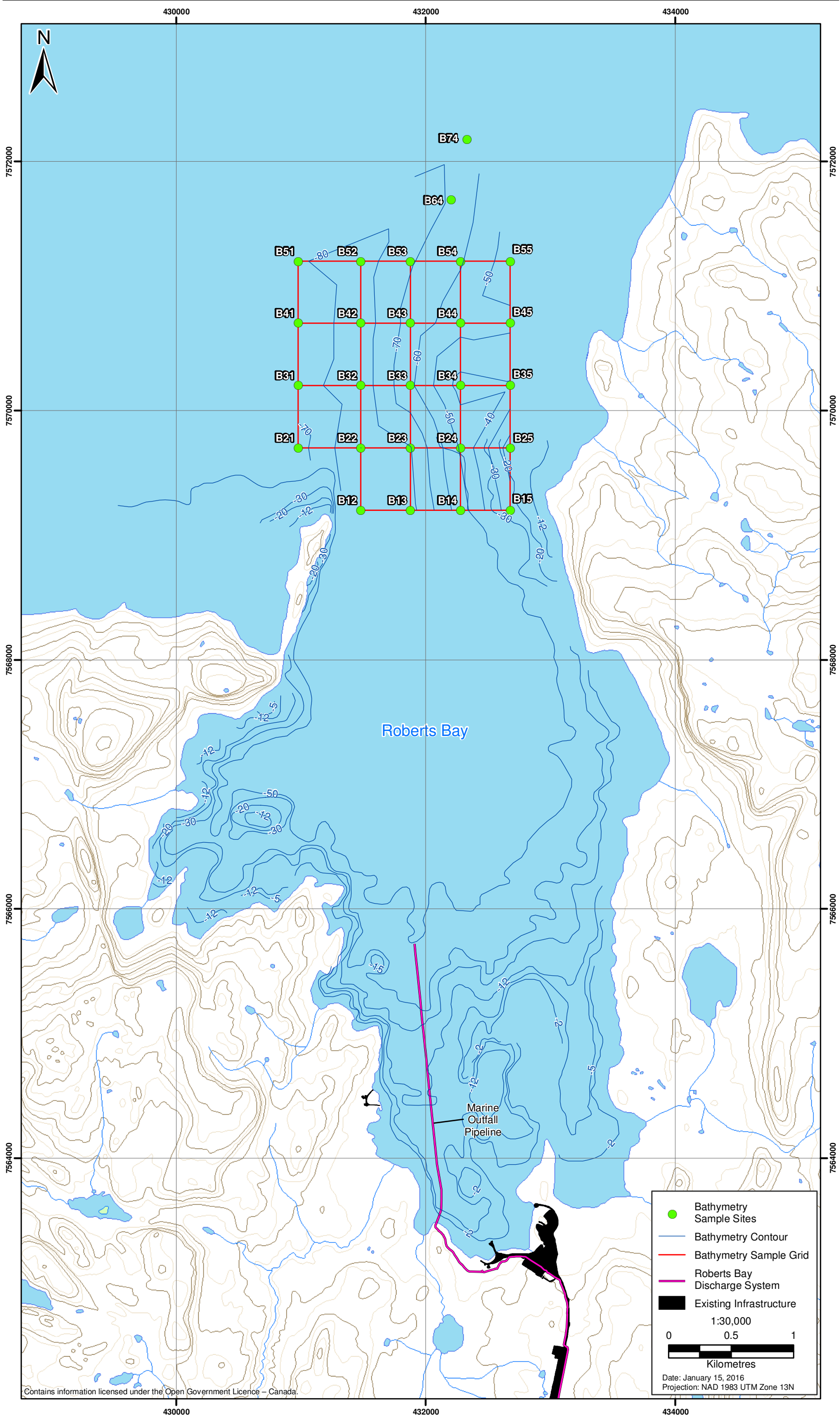




INSTRUMENT: MARINETEK PCS-200  
DATUM: NAD83 UTM ZONE 13

SRK CONSULTING ROBERTS BAY, NUNAVUT		
HYDROGRAPHIC SURVEY		
BATHYMETRY CONTOUR PLAN		
FRONTIER GEOSCIENCES INC.		
DATE: SEPT. 2003	SCALE 1:7,500	FIG.



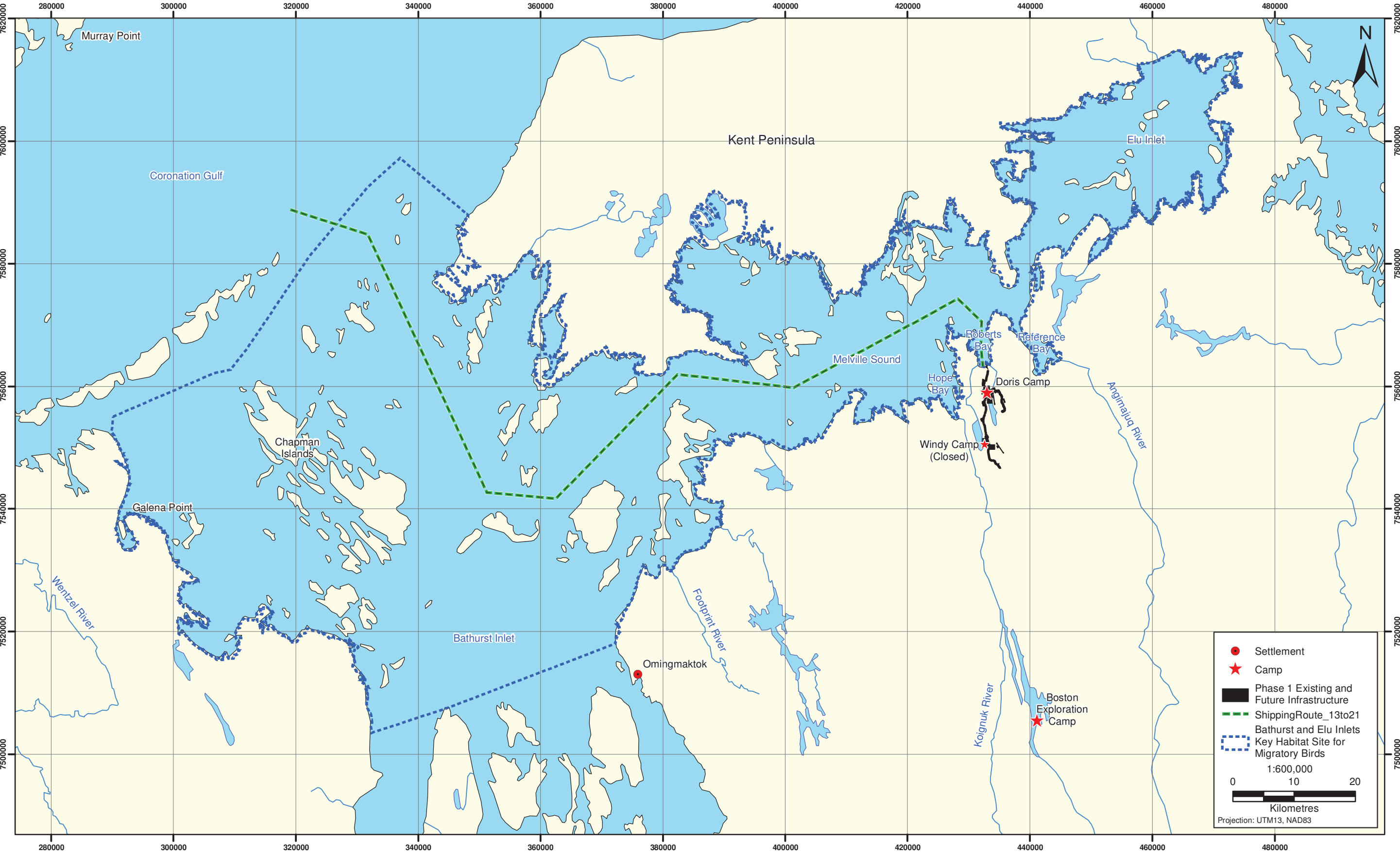


## **ECCC-11**

**Figure ECCC-11-1 Shipping Routes through Bathurst  
Inlet and Melville Sound**



Figure ECCC-11-1  
Shipping Routes through Bathurst Inlet and Melville Sound

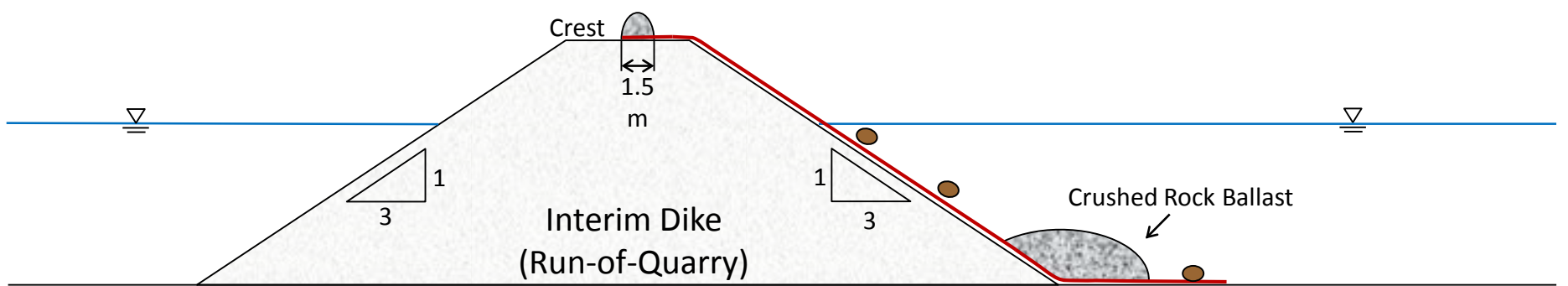
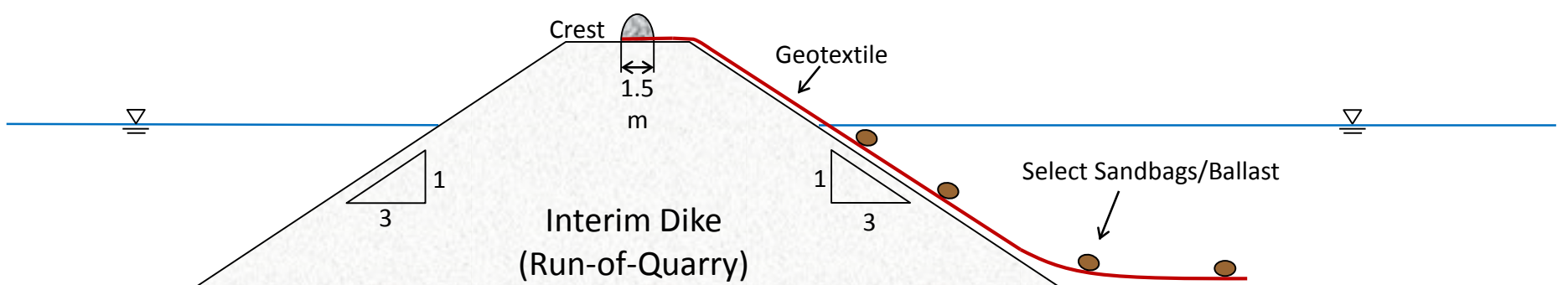
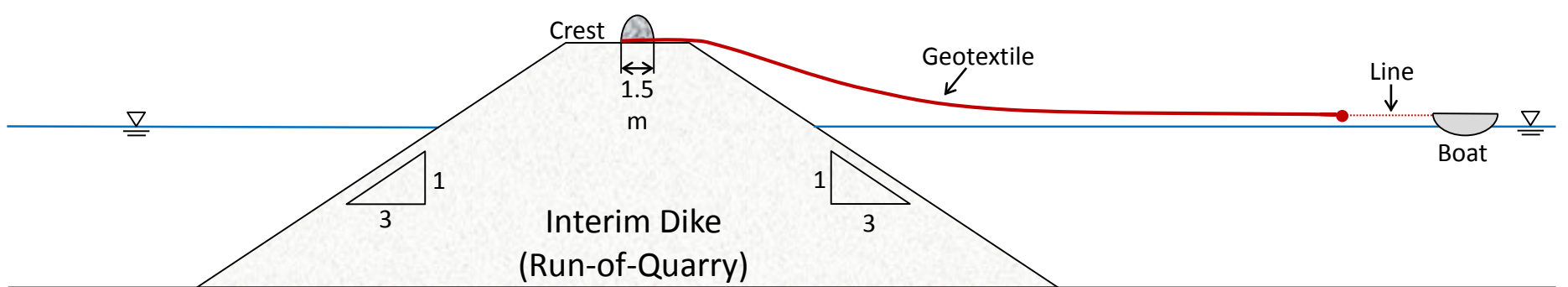
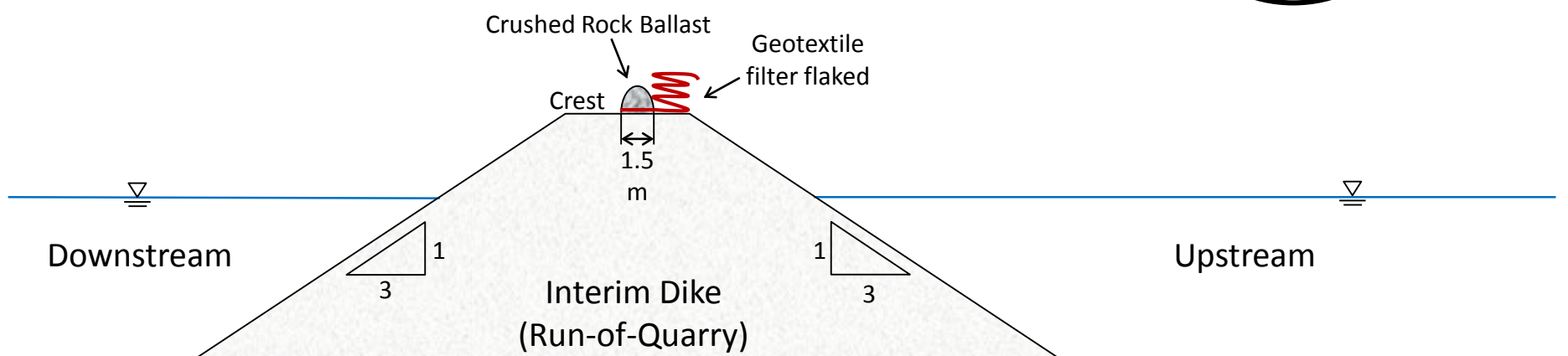
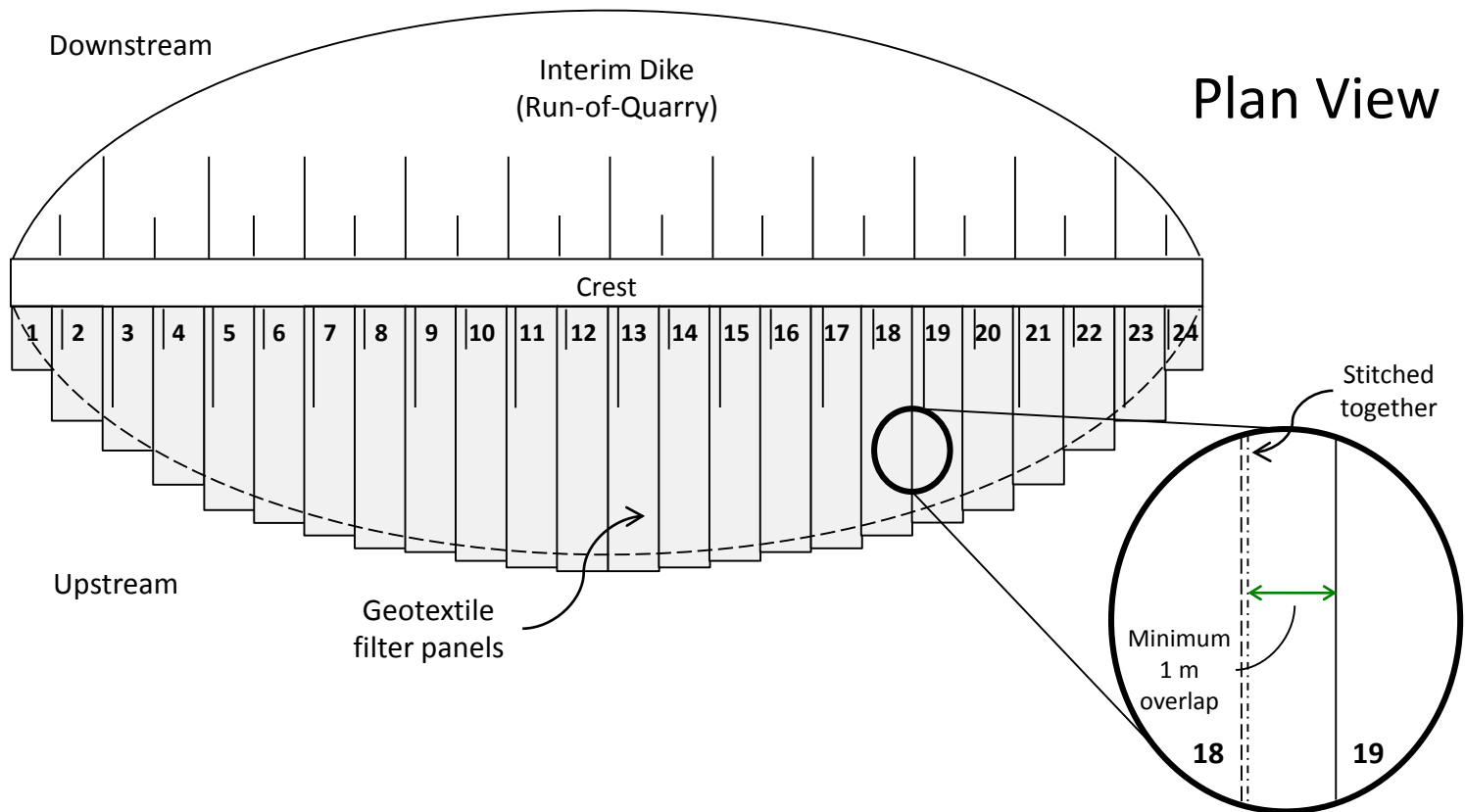


## **INAC-17**

Figure INAC-17-1 Idealized Construction Procedure for  
Geotextile Filter for the Interim Dike

Figure INAC-17-2 Idealized Construction Procedure for  
Manufactured Graded Rock Filter for the Interim  
Dike





Notes:  
1. Schematic not to scale  
(vertical scale exaggerated)



Job No: 1CT022.002  
Filename: Fig17a\_InterimDikeFilter\_Geotextile\_Installation\_Rev1\_ts.pptx



Doris North Project

Type A Water License Amendment

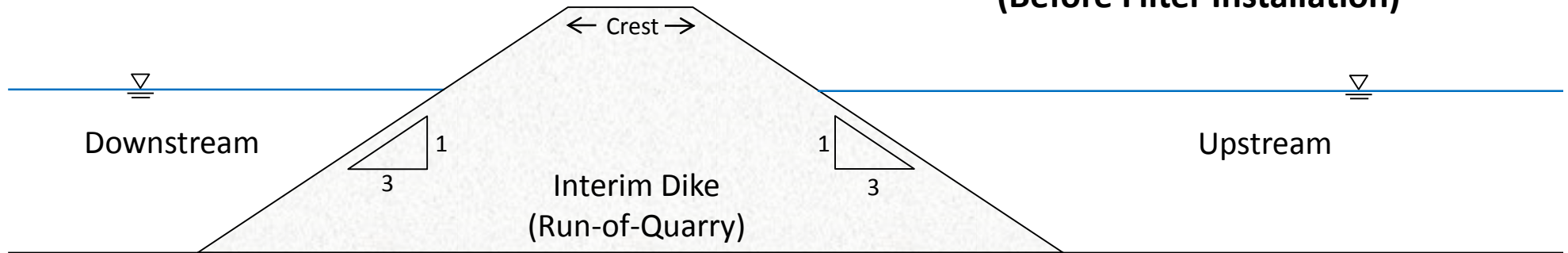
**Idealized Construction Procedure  
for Geotextile Filter for the  
Interim Dike**

Date:  
January 2016

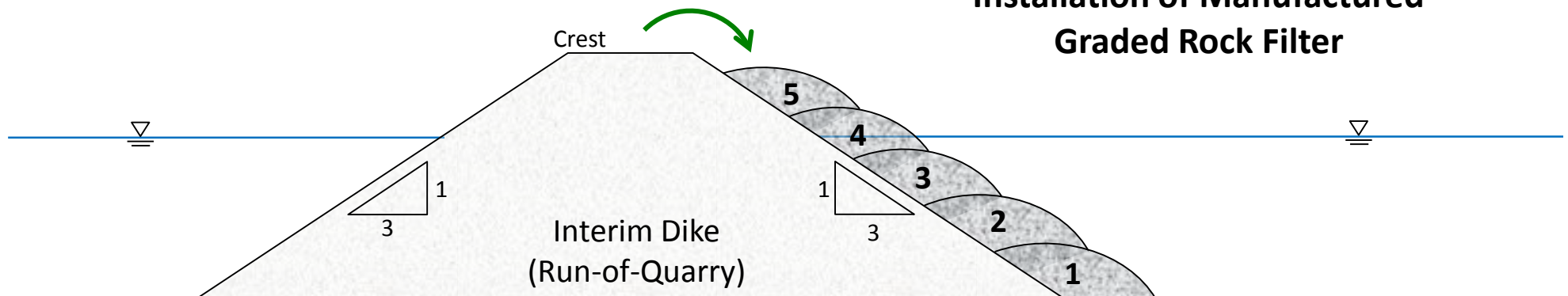
Approved:  
TS

Figure:  
**INAC-17a**

## Typical Dike Cross Section (Before Filter Installation)



## Installation of Manufactured Graded Rock Filter



### Notes:

1. Schematic not to scale  
(vertical scale exaggerated)



Job No: 1CT022.002  
Filename:  
Fig17b\_InterimDikeFilter\_GradedRock\_Installation\_Rev1\_ts.pptx



Doris North Project

Type A Water License Amendment

**Idealized Construction Procedure  
for Manufactured Graded Rock  
Filter for the Interim Dike**

Date:  
January 2016

Approved:  
TS

Figure:  
**INAC- 17b**



## **INAC-19**

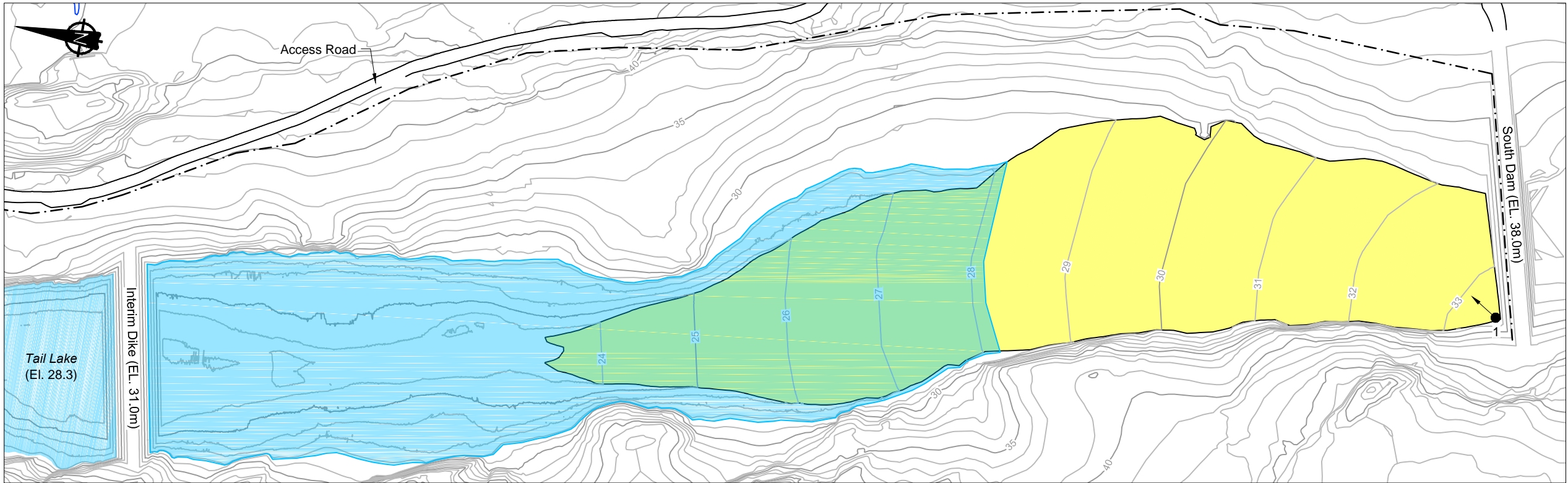
Figure INAC-19-1 Tailings Deposition Plan (Years 1 & 2)

Figure INAC-19-2 Tailings Deposition Plan (Years 3 & 4)

Figure INAC-19-3 Tailings Deposition Plan (Complete at  
Year 4 + 5 Months)

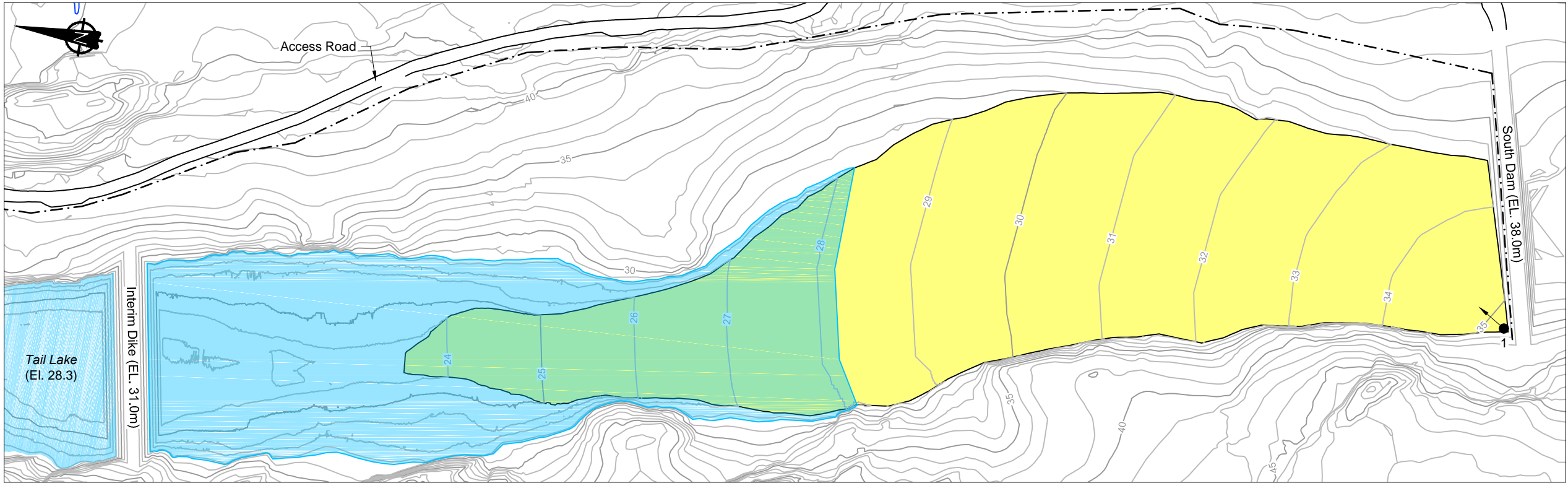


\\VANSUR\Projects\01\_SITES\Hope Bay\CT022.002\_2015\_Hope Bay Ongoing Support\200\_Type\_A\_Water\_License\500\_New\_Tailings\_Mgt\_System\525\_Tailings\_Deposition\_Plan\070\_ACAD\CT022.002\_SC4\_staged.dwg



TAILINGS DEPOSITION - YEAR 1

Spigot Elev.: No.1: 33.5m  
Deposited Tailings: 0.34Mm³  
Duration: 1 Year  
Production Rate: 773.4m³/day (1,000tpd)  
Deposited Tailings Surface Area (cumulative): 0.17km²



TAILINGS DEPOSITION - YEAR 2

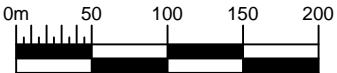
Spigot Elev.: No.1: 35.25m  
Deposited Tailings (Cumulative): 0.68Mm³  
Duration: 1 Year  
Production Rate: 773.4m³/day (1,000tpd)  
Deposited Tailings Surface Area (cumulative): 0.23km²

LEGEND

- Deposition Location
- Major Contour (5m)
- Minor Contour (1m)
- Approximate Tailings Line
- Current Deposition
- Proposed Dam / Dike

NOTES

- Deposition durations are approximate and were based on an average production rate of 1,000tpd for years 1 and 2 and 2,000tpd for years 3 and 4.
- Assumed an average deposited tailings beach slope of 1.0%.
- A deposited tailings dry density of 1.29 t/m³ was used (based on laboratory testing).
- All tailings volumes presented include ice entrainment, which was assumed at 20% of production.
- Dam and dike elevations shown were assumed constant for throughout deposition.
- Total storage requirement is 2.32Mm³ (tailings 1.93Mm³ + ice entrainment 0.39Mm³).



SRK JOB NO.: 1CT022.002  
FILE NAME: 1CT022.002 - SC4 -staged.dwg

DORIS NORTH PROJECT

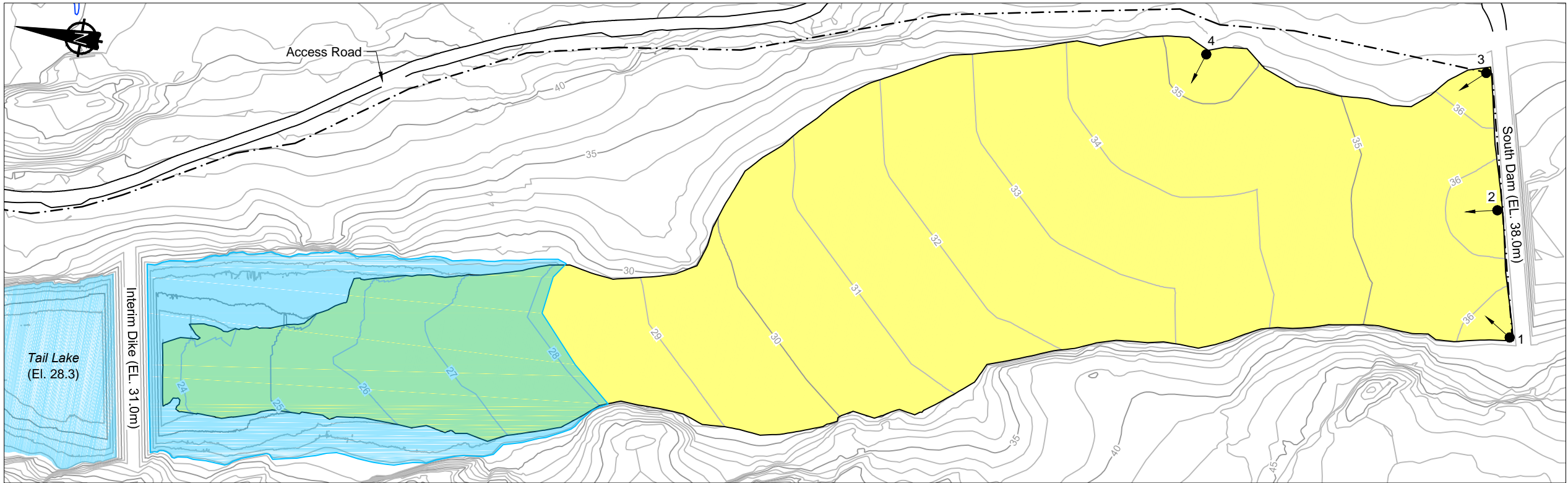
TAILINGS DEPOSITION PLAN

TAILINGS DEPOSITION PLAN  
(YEARS 1 & 2)

DATE: 2015/09/25  
APPROVED: TPP  
FIGURE: 06



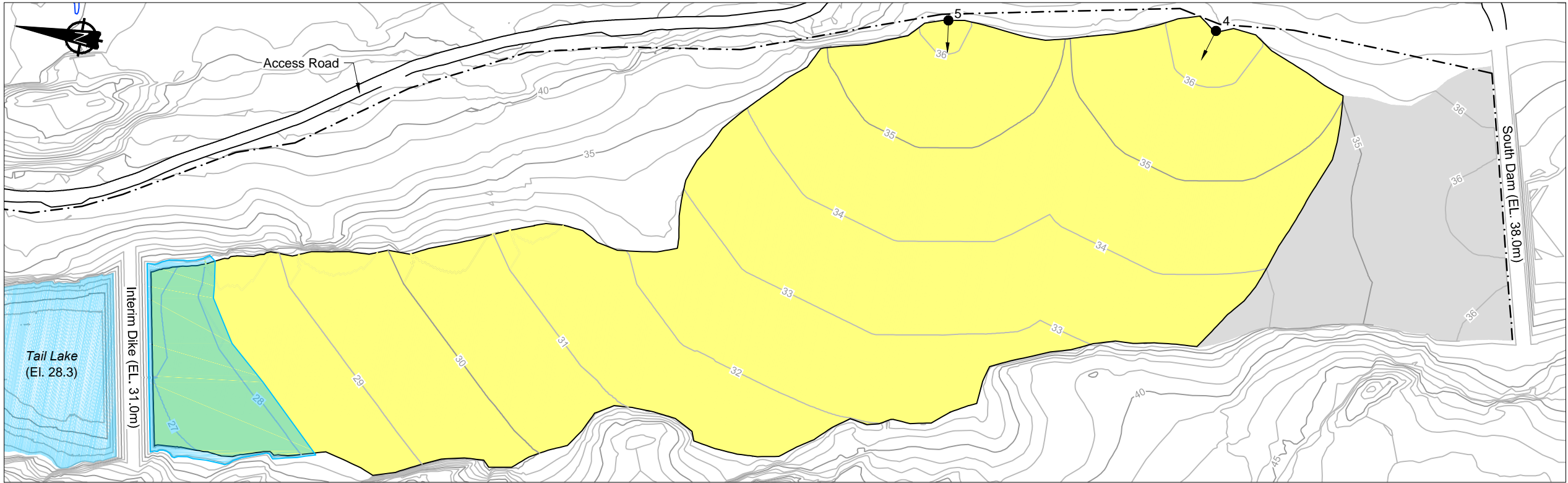
\\VANSUR\Quarry\srk\ad\Project\01\_SITES\Hope Bay\CT022.002\_2015\_Hope Bay Ongoing Support\200\_Type A - Water License\500\_New Tailings Mgt\_System\525\_Tailings\_Deposition\_Plan\070\_ACAD\CT022.002\_SC4\_staged.dwg



#### TAILINGS DEPOSITION - YEAR 3

Spigot Elev.: No.'s 1 to 3: 36.5m  
No. 4: 35.5m  
Deposited Tailings (Cumulative): 1.35Mm³  
Duration: 1 Year

Production rate: 1,546.8m³/day (2,000tpd)  
Deposited Tailings Surface Area (cumulative): 0.34km²



#### TAILINGS DEPOSITION - YEAR 4

Spigot Elev.: No. 4: 36.5m  
No. 5: 36.25m  
Deposited Tailings (Cumulative): 2.03Mm³  
Duration: 1 Year

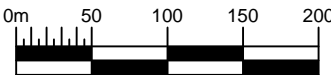
Production Rate: 1,546.8m³/day (2,000tpd)  
Deposited Tailings Surface Area (cumulative): 0.36km²  
Previous Tailings Surface Area: 0.06km²

#### LEGEND

- Deposition Location
- Major Contour (5m)
- Minor Contour (1m)
- Approximate Tailings Line
- Current Deposition
- Previous Deposition
- Proposed Dam / Dike

#### NOTES

- Deposition durations are approximate and were based on an average production rate of 1,000tpd for years 1 and 2 and 2,000tpd for years 3 and 4.
- Assumed an average deposited tailings beach slope of 1.0%.
- A deposited tailings dry density of 1.29 t/m³ was used (based on laboratory testing).
- All tailings volumes presented include ice entrainment, which was assumed at 20% of production.
- Dam and dike elevations shown were assumed constant for throughout deposition.
- Total storage requirement is 2.32Mm³ (tailings 1.93Mm³ + ice entrainment 0.39Mm³).



SRK JOB NO.: 1CT022.002  
FILE NAME: 1CT022.002 - SC4 -staged.dwg



DORIS NORTH PROJECT

TAILINGS DEPOSITION PLAN

TAILINGS DEPOSITION PLAN  
(YEARS 3 & 4)

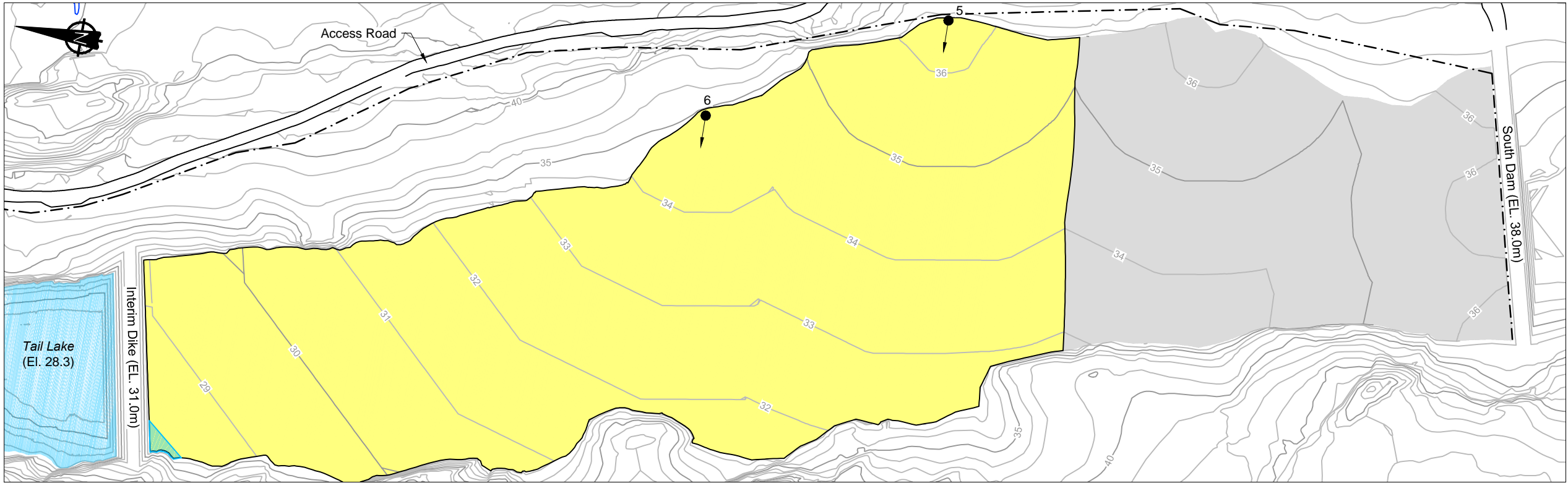
DATE:  
2015/09/25

APPROVED:  
TPP

FIGURE:  
07



\\VANSUR\0\unna.srk\ad\Project\01\_SITES\Hope Bay\CT022.002\_2015\_Hope Bay Ongoing Support\200\_Type A - Water\_License\500\_New\_Tailings\_Mgt\_System\505\_Tailings\_Deposition\_Plan\070\_ACAD\CT022.002\_SC4\_staged.dwg



**TAILINGS DEPOSITION - END OF MINE (YEAR 4, MONTH 5)**

Spigot Elev.: No. 5: 36.5m  
No. 6: 35.0m  
Deposited Tailings (Cumulative): 2.32Mm³  
Duration: 5 Months

Production Rate: 1,546.8m³/day (2,000tpd)  
Deposited Tailings Surface Area (cumulative): 0.30km²  
Previous Tailings Surface Area (cumulative): 0.14km²

LEGEND

Deposition Location

Major Contour (5m)

Minor Contour (1m)

Approximate Tailings Line

Current Deposition

Previous Deposition

Proposed Dam / Dike

- NOTES
1.

Deposition durations are approximate and were based on an average production rate of 1,000tpd for years 1 and 2 and 2,000tpd for years 3 and 4.
2.

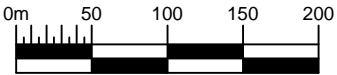
Assumed an average deposited tailings beach slope of 1.0%.
3.

A deposited tailings dry density of 1.29 t/m³ was used (based on laboratory testing).
4.

All tailings volumes presented include ice entrainment, which was assumed at 20% of production.
5.

Dam and dike elevations shown were assumed constant for throughout deposition.
6.

Total storage requirement is 2.32Mm³ (tailings 1.93Mm³ + ice entrainment 0.39Mm³).



srk consulting

SRK JOB NO.:

1CT022.002

FILE NAME:

1CT022.002 - SC4 -staged.dwg

TMAC

RESOURCES

DORIS NORTH PROJECT

TAILINGS DEPOSITION PLAN

TAILINGS DEPOSITION PLAN  
(COMPLETE AT YEAR 4 + 5 MONTHS)

DATE:

2015/09/25

APPROVED:

TPP

FIGURE:

07