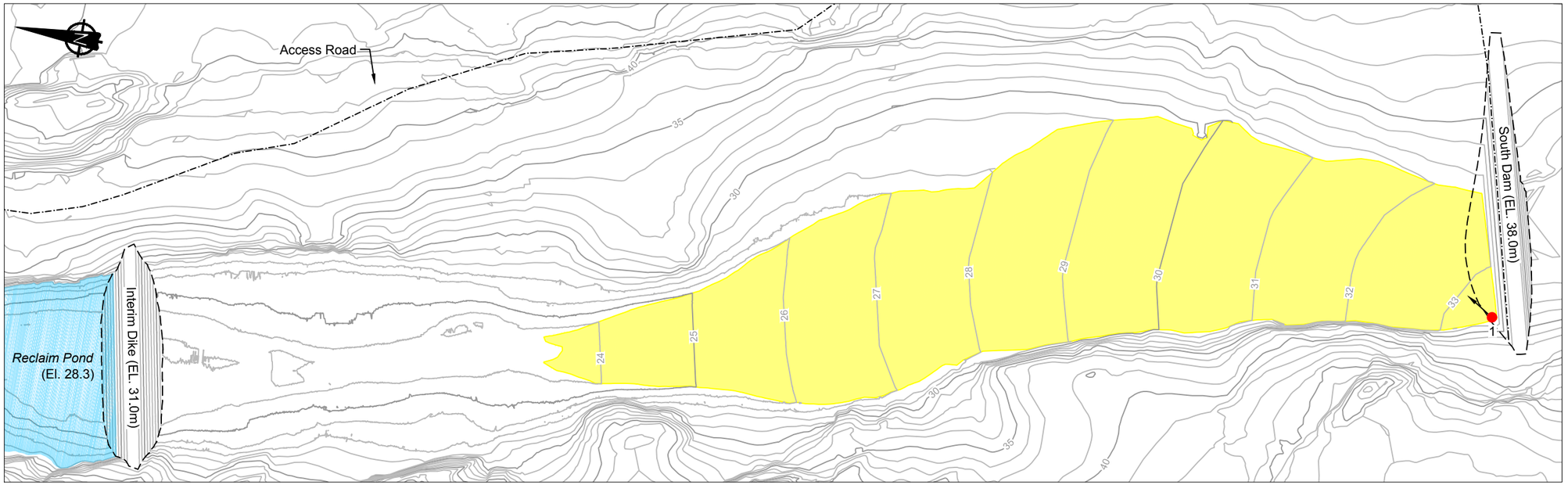
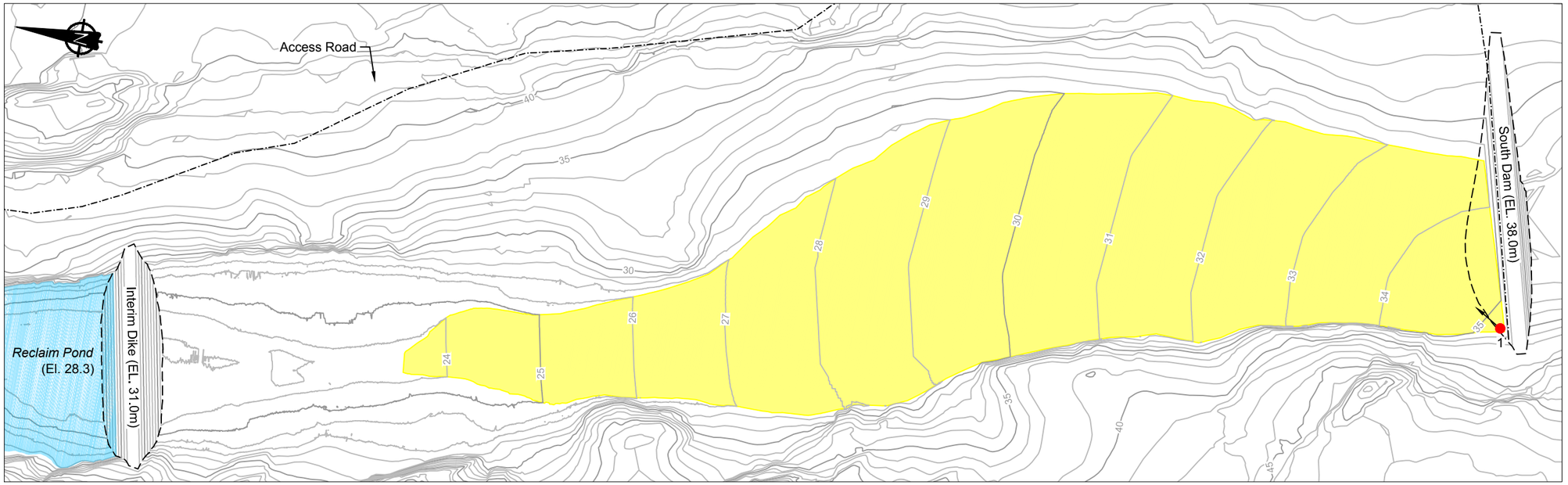



## TAILINGS DEPOSITION - YEAR 1

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




## 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

- Spigot Location
- Major Contour (5m)
- Minor Contour (1m)
- Approximate Tailings Line
- Current 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).

0m 50 100 150 200

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FILE NAME: 1CT022.002 - SC4 -staged.dwg

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# TAILINGS DEPOSITION PLAN (YEARS 1 & 2)

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| May 2016 | EK/SA | 8 |

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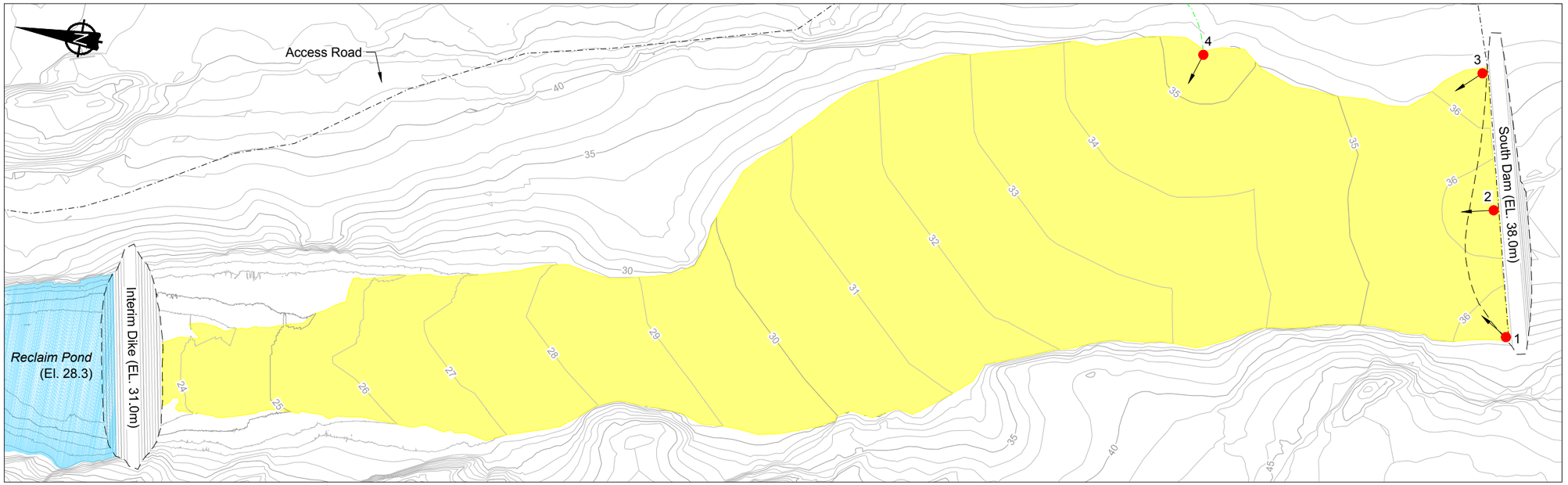
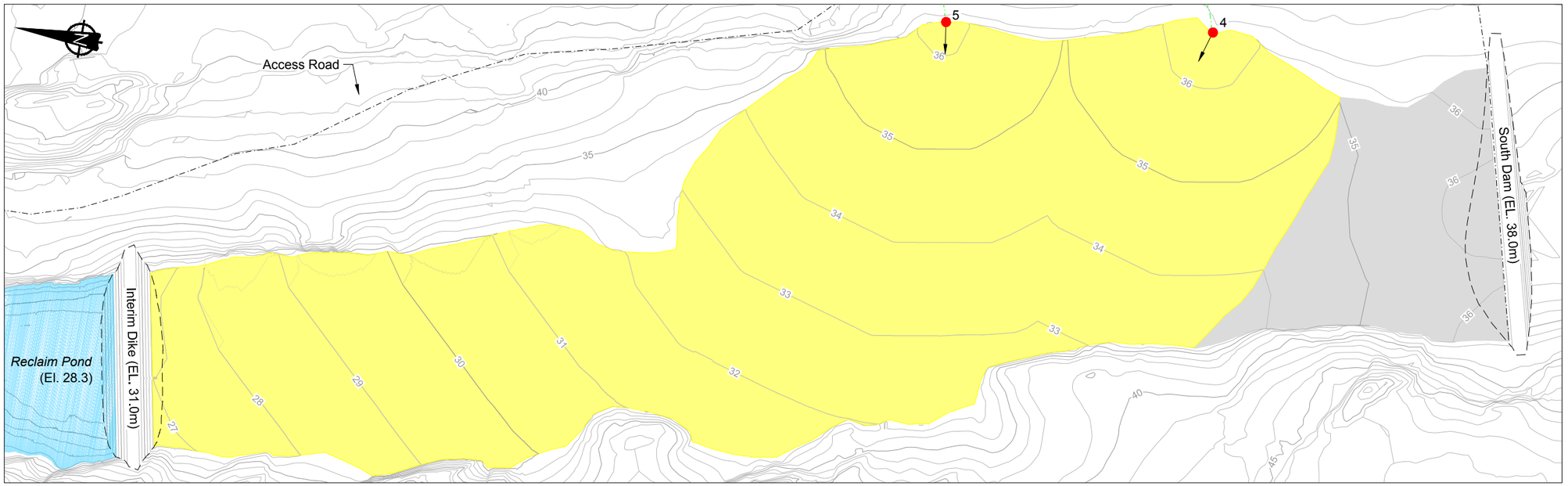



## TAILINGS DEPOSITION - YEAR 3

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

- Spigot Location
- Major Contour (5m)
- Minor Contour (1m)
- Approximate Tailings Line
- Active 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).

0m 50 100 150 200

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# TAILINGS DEPOSITION PLAN (YEARS 3 & 4)

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
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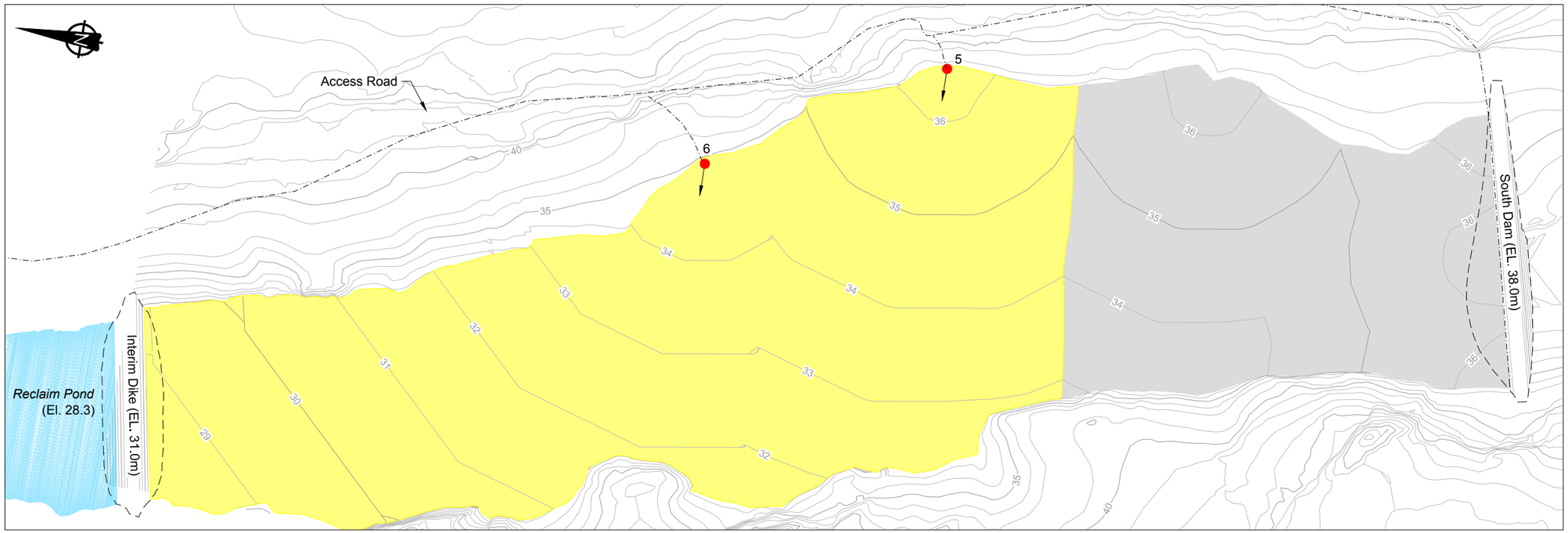
## LEGEND

- Spigot Location
- Major Contour (5m)
- Minor Contour (1m)
- Approximate Tailings Line
- Active 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).




## 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

0m 50 100 150 200

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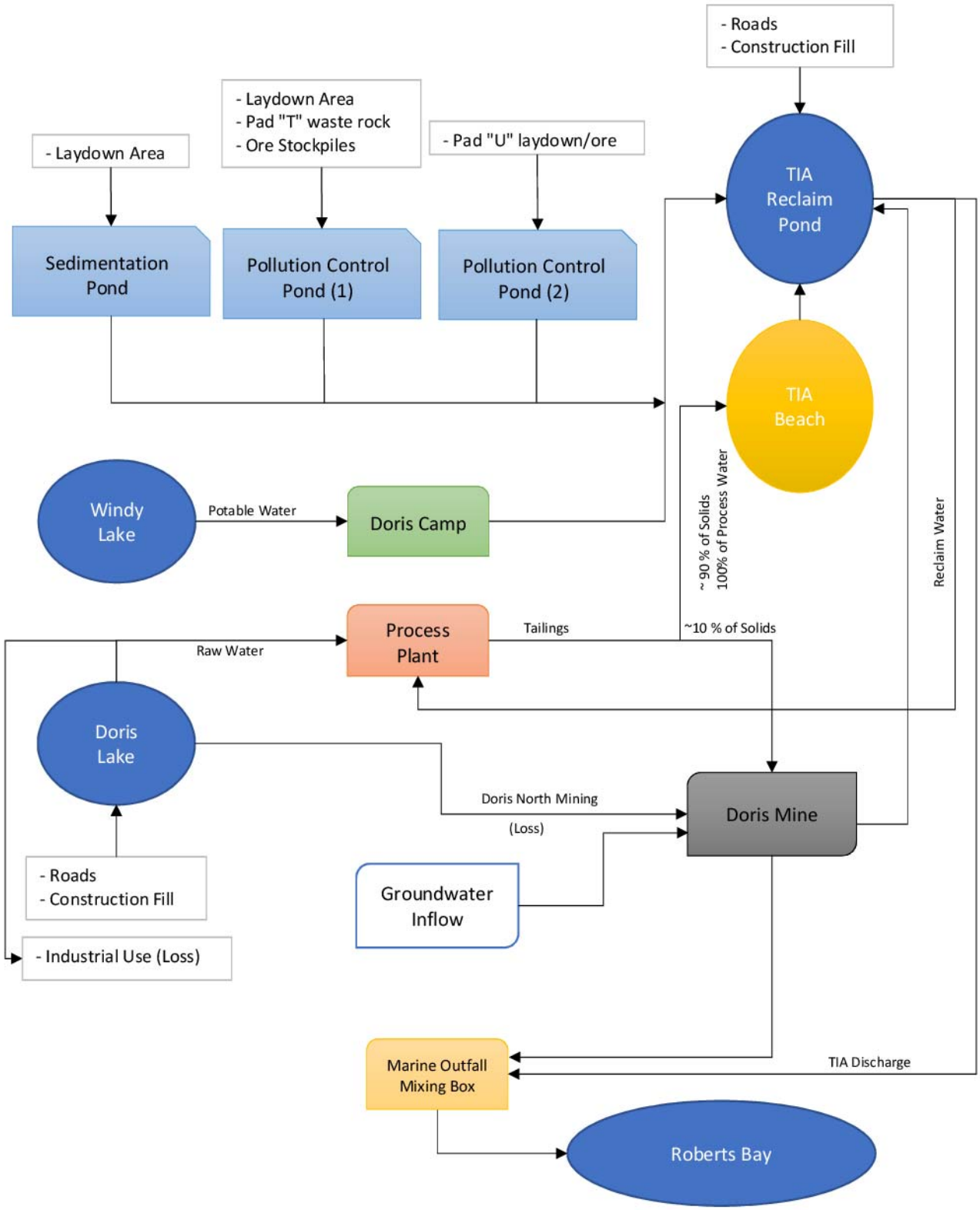
# TAILINGS DEPOSITION PLAN
(COMPLETE AT YEAR 4 + 5 MONTHS)

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| May 2016 | EK/SA | 10 |

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|---|---|---|---|---|
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| | | **Water Management - Operations** | | |
| Job No: 1CT022.002.200.2000<br>Filename: 1CT022.022.200.2000_Figure14.pptx | Hope Bay Project | Date: May 2016 | Approved: EK/SA | Figure: **11** |

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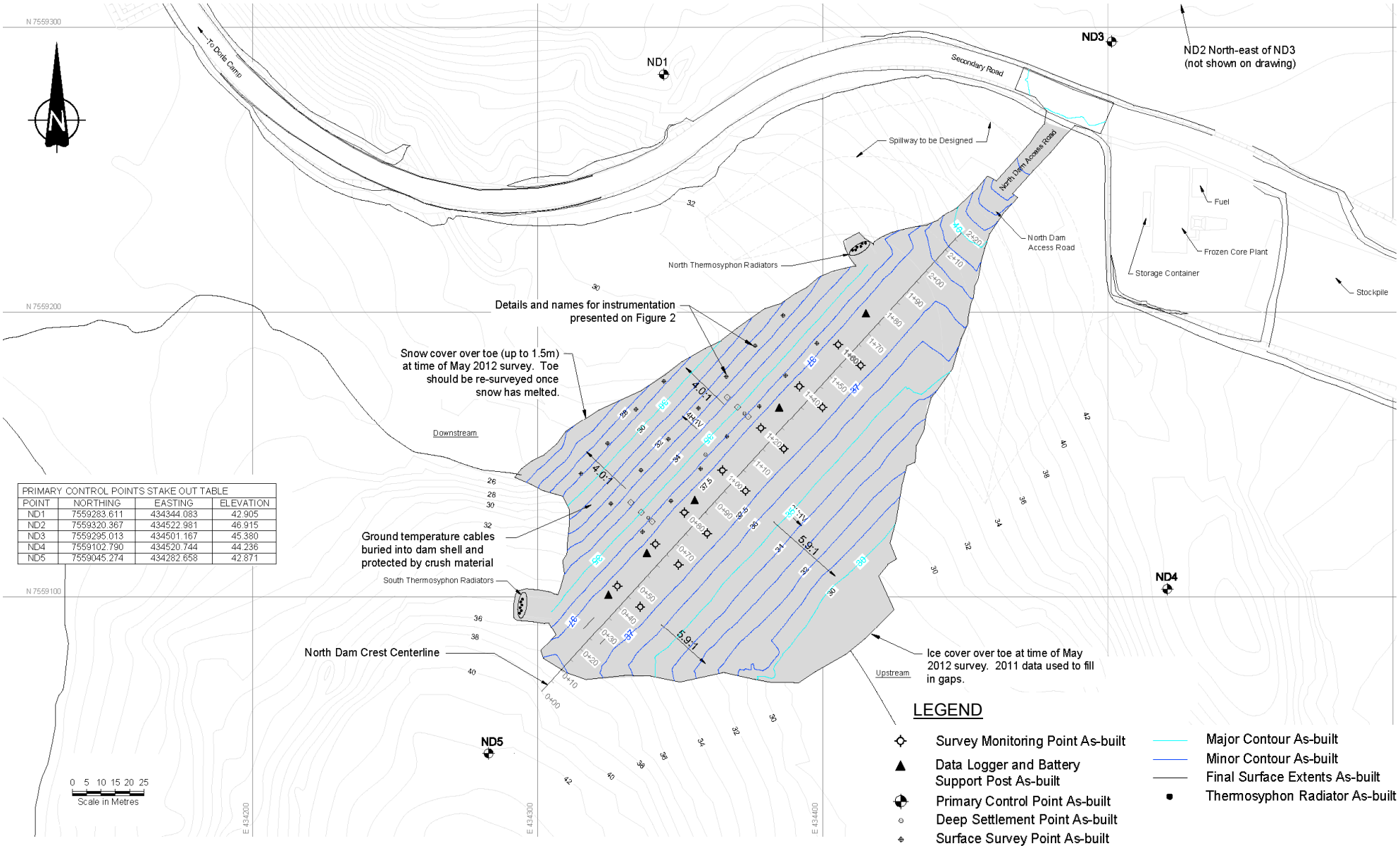


| PRIMARY CONTROL POINTS STAKE OUT TABLE | | | |
|---|---|---|---|
| POINT | NORTHING | EASTING | ELEVATION |
| ND1 | 7559283.611 | 434344.083 | 42.905 |
| ND2 | 7559320.367 | 434522.981 | 46.915 |
| ND3 | 7559295.013 | 434501.167 | 45.380 |
| ND4 | 7559102.790 | 434520.744 | 44.236 |
| ND5 | 7559045.274 | 434282.658 | 42.871 |

## LEGEND

- Survey Monitoring Point As-built
- Data Logger and Battery Support Post As-built
- Primary Control Point As-built
- Deep Settlement Point As-built
- Surface Survey Point As-built
- Inclinometer Location As-built
- Major Contour As-built
- Minor Contour As-built
- Final Surface Extents As-built
- Thermosyphon Radiator As-built

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# North Dam General Arrangement and Primary Control Points

Job No: 1CT022.002.200 Task 2000

Filename: HopeBay_DorisNorthTIA_OMS_Manaul_SA.pptx

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Date: May 2016

Approved: EK/SA

Figure: 12

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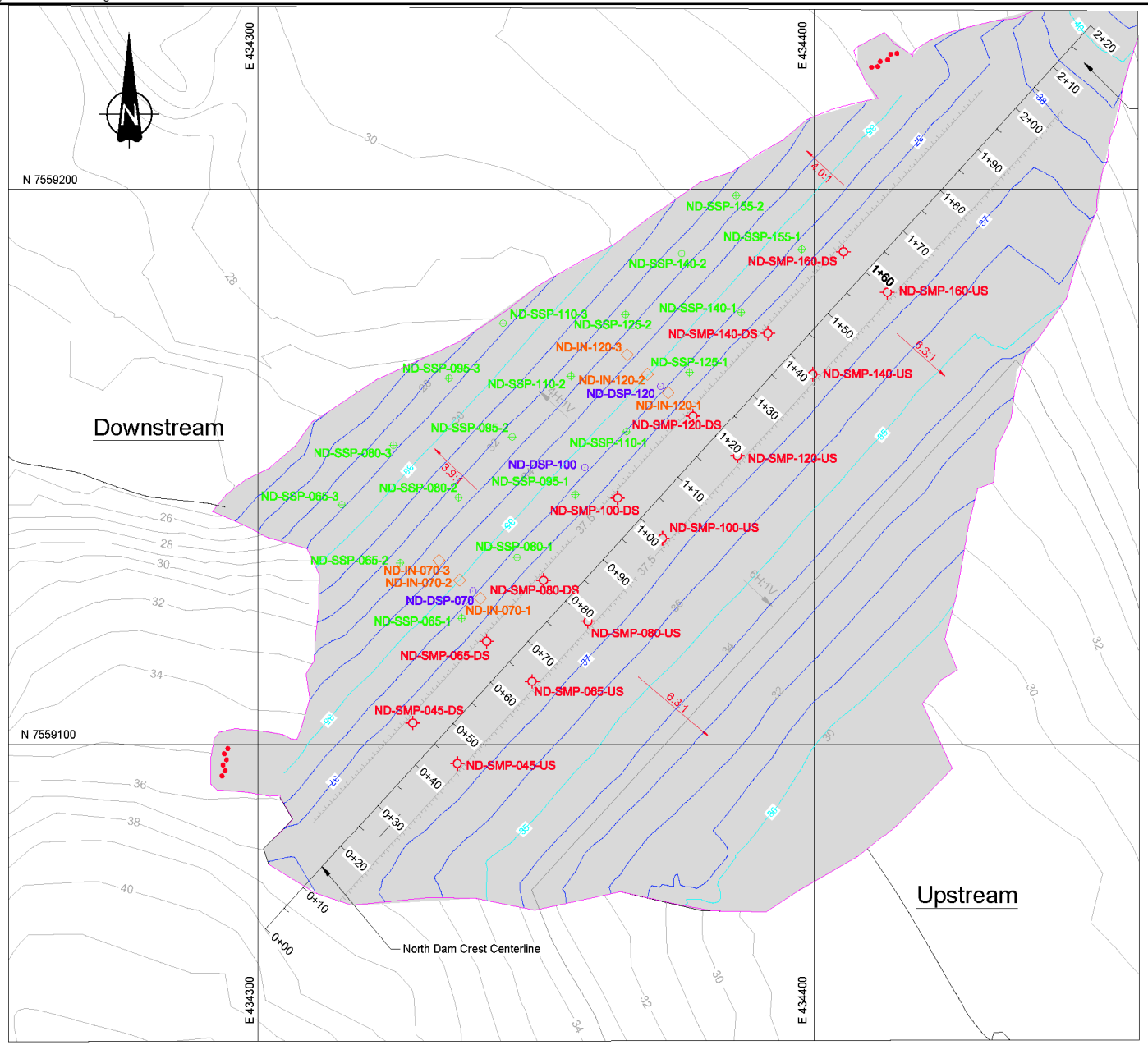


LEGEND

- Survey Monitoring Point As-built
- Deep Settlement Point As-built
- Surface Survey Point As-built
- Inclinometer Location As-built
- Major Contour As-built
- Minor Contour As-built
- Final Surface Extents As-built
- Thermosyphon Radiator As-built

AS-BUILT DEEP SETTLEMENT POINTS STAKEOUT TABLE

| ID | Northing | Easting | Elev. (m) |
|---|---|---|---|
| ND-DSP-070 | 7559127.69 | 434338.65 | 36.95 |
| ND-DSP-100 | 7559149.78 | 434358.75 | 36.86 |
| ND-DSP-120 | 7559164.46 | 434372.37 | 36.92 |

AS-BUILT INCLINOMETER LOCATION STAKEOUT TABLE

| ID | Northing | Easting | Elev. (m) |
|---|---|---|---|
| ND-IN-070-1 | 7559126.41 | 434340.00 | 37.44 |
| ND-IN-070-2 | 7559129.63 | 434336.27 | 36.20 |
| ND-IN-070-3 | 7559133.13 | 434332.57 | 34.85 |
| ND-IN-120-1 | 7559163.31 | 434373.78 | 37.44 |
| ND-IN-120-2 | 7559166.64 | 434370.03 | 36.05 |
| ND-IN-120-3 | 7559170.15 | 434366.40 | 34.95 |

AS-BUILT SURFICIAL SURVEY POINTS STAKEOUT TABLE

| ID | Northing | Easting | Elev. (m) |
|---|---|---|---|
| ND-SSP-065-1 | 7559122.80 | 434336.67 | 36.77 |
| ND-SSP-065-2 | 7559132.67 | 434325.55 | 32.81 |
| ND-SSP-065-3 | 7559143.10 | 434315.11 | 29.43 |
| ND-SSP-080-1 | 7559133.65 | 434346.59 | 36.79 |
| ND-SSP-080-2 | 7559144.37 | 434336.10 | 32.92 |
| ND-SSP-080-3 | 7559153.75 | 434324.36 | 29.33 |
| ND-SSP-095-1 | 7559144.90 | 434357.04 | 36.58 |
| ND-SSP-095-2 | 7559155.21 | 434345.72 | 32.85 |
| ND-SSP-095-3 | 7559165.92 | 434334.35 | 28.70 |
| ND-SSP-110-1 | 7559156.20 | 434366.29 | 36.32 |
| ND-SSP-110-2 | 7559166.31 | 434356.29 | 32.88 |
| ND-SSP-110-3 | 7559175.79 | 434344.10 | 28.97 |
| ND-SSP-125-1 | 7559166.97 | 434377.61 | 36.77 |
| ND-SSP-125-2 | 7559177.37 | 434366.08 | 32.91 |
| ND-SSP-140-1 | 7559177.75 | 434386.85 | 36.48 |
| ND-SSP-140-2 | 7559188.28 | 434376.19 | 32.84 |
| ND-SSP-155-1 | 7559189.07 | 434397.79 | 36.80 |
| ND-SSP-155-2 | 7559198.85 | 434385.98 | 32.91 |

AS-BUILT SURVEY MONITORING POINTS STAKEOUT TABLE

| ID | Northing | Easting | Elev. (m) |
|---|---|---|---|
| ND-SMP-065-DS | 7559118.52 | 434341.14 | 38.46 |
| ND-SMP-065-US | 7559111.31 | 434349.30 | 38.36 |
| ND-SMP-080-DS | 7559129.57 | 434351.35 | 38.41 |
| ND-SMP-080-US | 7559122.27 | 434359.34 | 38.40 |
| ND-SMP-100-DS | 7559144.32 | 434364.71 | 38.39 |
| ND-SMP-100-US | 7559137.12 | 434372.77 | 38.46 |
| ND-SMP-120-DS | 7559159.12 | 434378.24 | 38.41 |
| ND-SMP-120-US | 7559151.88 | 434386.24 | 38.46 |
| ND-SMP-140-DS | 7559173.98 | 434391.69 | 38.39 |
| ND-SMP-140-US | 7559166.62 | 434399.77 | 38.42 |
| ND-SMP-160-DS | 7559188.64 | 434405.30 | 38.40 |
| ND-SMP-160-US | 7559181.37 | 434413.18 | 38.43 |

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# North Dam Instrumentation Layout

Job No: 1CT022.002.200 Task 2000

Filename: HopeBay_DorisNorthTIA_OMS_Manaul_SA.pptx

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Date: May 2016

Approved: EK/SA

Figure: 13

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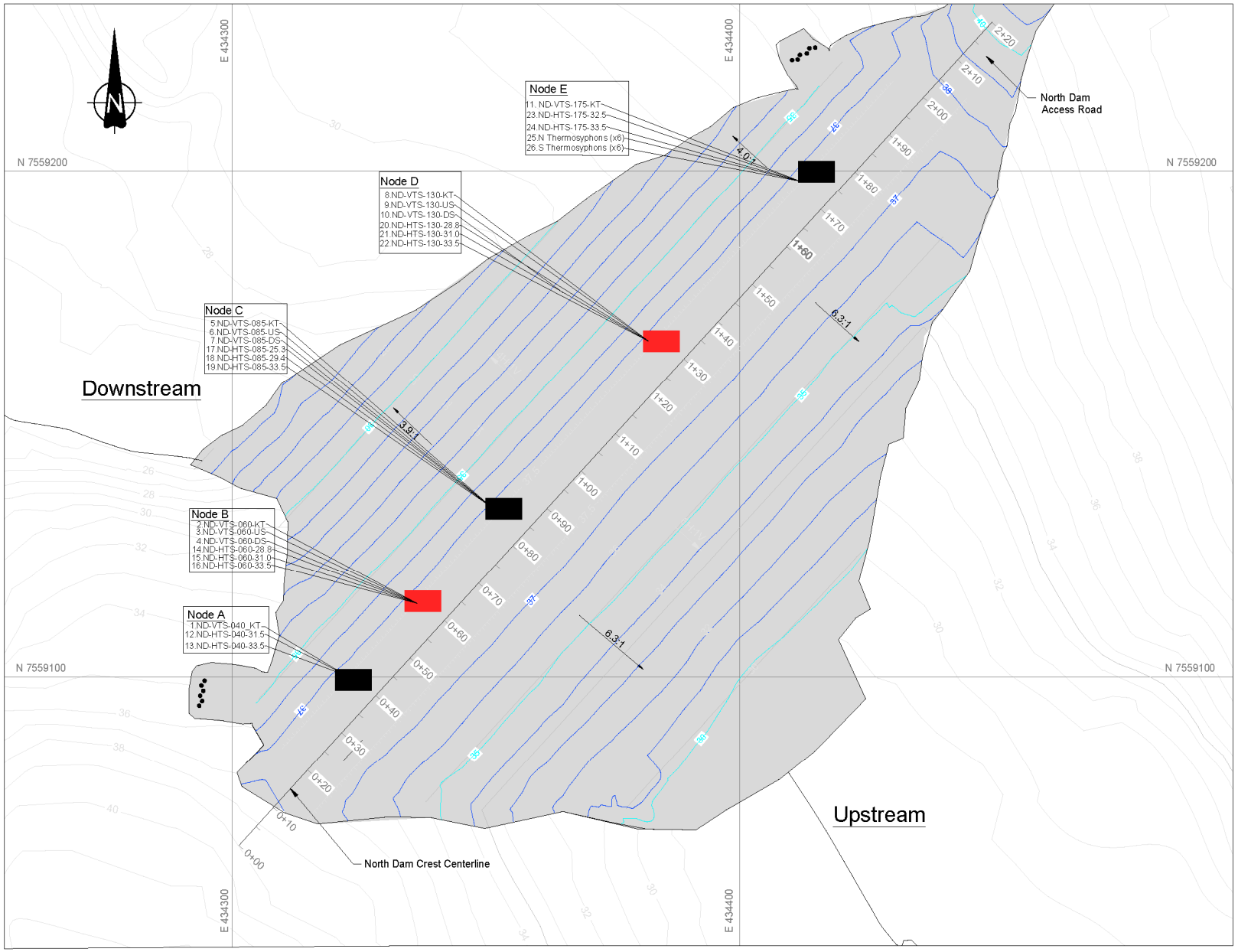


LEGEND

- Major Contour As-built (5m)
- Major Contour As-built (1m)
- Final Surface Extents As-built
- Thermosyphon Radiator As-Built

*Note:* the two weatherproof enclosures which house the data loggers are shown in red.

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Job No: 1CT022.002.200 Task 2000

**Filename:** HopeBay_DorisNorthTIA_OMS_Manaul_SA.pptx

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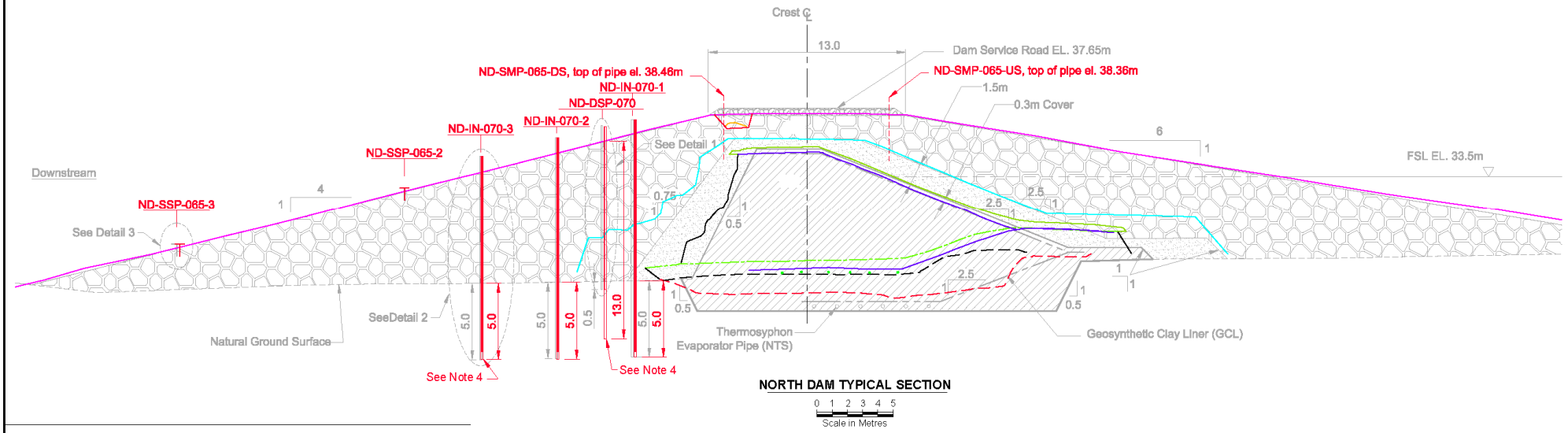
**North Dam Ground and Thermosyphon Temperature Cable Locations**

| Date: | Approved: | Figure: |
|---|---|---|
| May 2016 | EK/SA | **14** |




**NORTH DAM TYPICAL SECTION**

0 1 2 3 4 5
Scale in Metres

- Core Material
- Transition Material
- Run of Quarry (ROQ)
- Surfacing Material
- Bedrock
- Peat

- GCL As-built
- Core Material As-built
- Core Material (2011) As-built
- Levelling Course (Core Material) As-built
- Instrumentation Trench Cover As-built
- Key Trench / Instrumentation Trench As-built
- GCL Cover Material As-built
- Transition Material As-built
- ROQ Material As-built
- Thermosyphon Evaporator Pipes As-built


Example of as-built instrumentation installed on the downstream of dam.

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**North Dam Deformation Monitoring Instrumentation Layout**

Job No: 1CT022.002.200 Task 2000

Filename: HopeBay_DorisNorthTIA_OMS_Manaul_SA.pptx

HOPE BAY PROJECT

| Date: | Approved: | Figure: |
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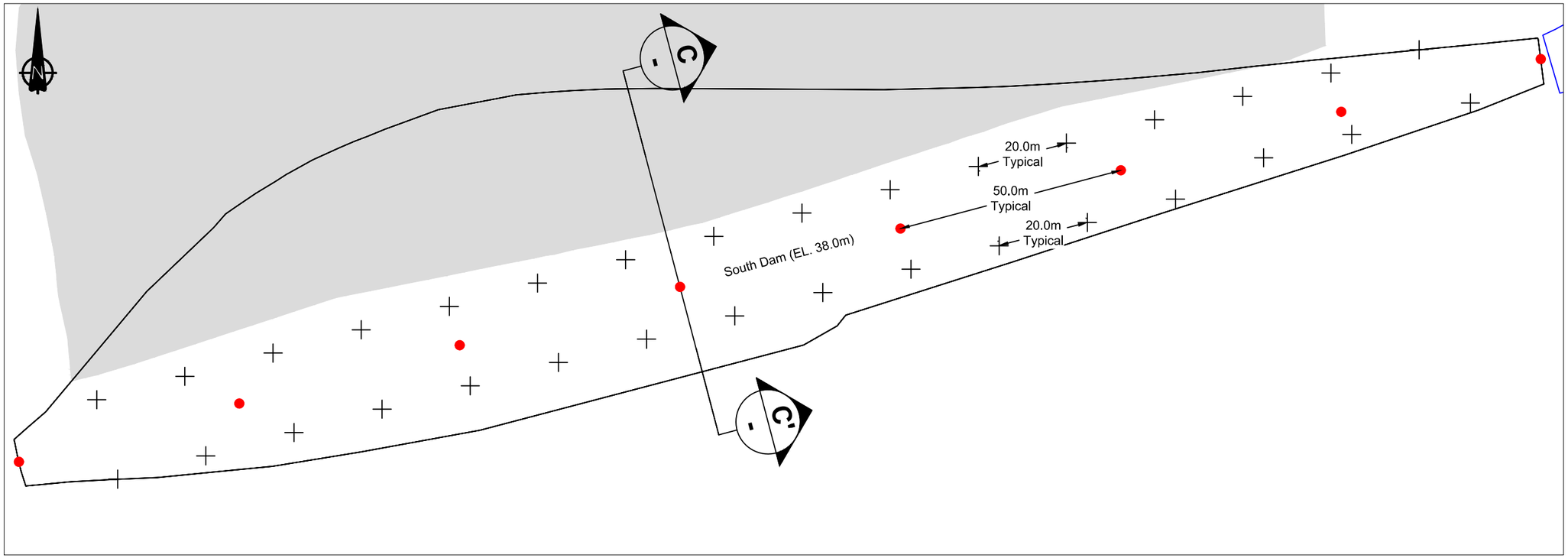
| May 2016 | EK/SA | 15 |




## LEGEND

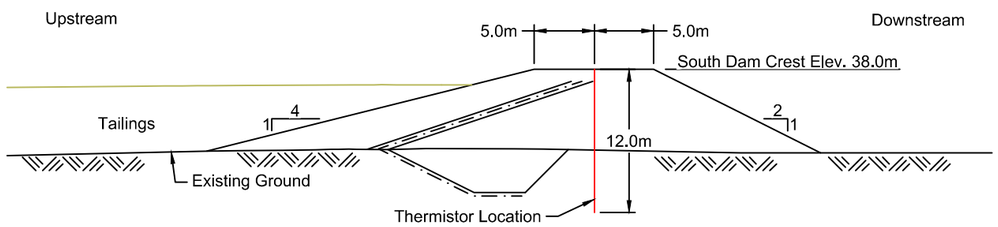
- Proposed Thermistor Location
- Proposed Monitoring Point Location
- Proposed Tailings Surface

## NOTES

1. Contours shown at 1.0m interval.
2. Thermistors shall be installed through the centerline of the dam every 50m to a depth of 12m.
3. The dam crest shall have survey monitoring points at 20m intervals on the upstream and downstream sides.

## PROPOSED SOUTH DAM INSTRUMENTATION

0m 10 20 30 40




## C - TYPICAL SECTION THROUGH SOUTH DAM

0m 10 20 30 40

| | | | |
|---|---|---|---|
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| SRK JOB NO.: 1CT022.002.2000 | HOPE BAY PROJECT | South Dam Monitoring Instrumentation | |
| FILE NAME: 1CT022.002 - Instrumentation Plan_Figure21.dwg | | DATE: May 2016 / APPROVED: EK/SA | DRAWING: 16 |

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# APPENDIX A:
# SUMMARY OF CURRENTLY AVAILABLE DUST CONTROL PRODUCTS