

PIN-2 SITE-SPECIFIC INFORMATION

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A. PIN-2 Cape Young

A.1 Introduction

The former PIN-2 (Cape Young) DEW Line site is located on the mainland of Nunavut, adjacent to Dolphin and Union Strait, at approximately 68° 55' 44" N and 116° 55' 46" W. PIN-2 is approximately 150 km northwest of Kugluktuk and is accessible via charter aircraft.

The former DEW Line station was located 18 m above sea level. The terrain is characterized by a shallow, flat-bottomed channel with numerous small thermokarst lakes and other permafrost-related landforms.

PIN-2 was an auxiliary site within the original DEW Line system. The station was constructed in the 1950s and was decommissioned in 1993, following construction of a more modern North Warning System (NWS) short range radar (SRR) site designated as PIN-2A, approximately 8 km southwest of the former DEW Line site.

The environmental clean-up and demolition of DEW Line facilities began in 2009 and were completed in 2011. All DEW Line structures at the site were demolished, with the exception of a hangar. The clean-up included the remediation and closure of seven existing landfills as well as the construction of two new engineered facilities consisting of a non-hazardous waste landfill for the disposal of site debris and demolition waste, and a Tier II Disposal Facility for the disposal of Tier II contaminated soil.

The landfills subject to long term monitoring are shown on the site plan, Figure PIN-2.1, and are listed below:

- Airstrip Landfill
- USAF Landfill
- Station West Landfill
- Tier II Disposal Facility
- Airstrip South Landfill
- Pallet Line West Landfill
- Non-Hazardous Waste Landfill
- South Landfill East
- South Borrow Landfill

The monitoring schedule for PIN-2 is provided in Table A.1.

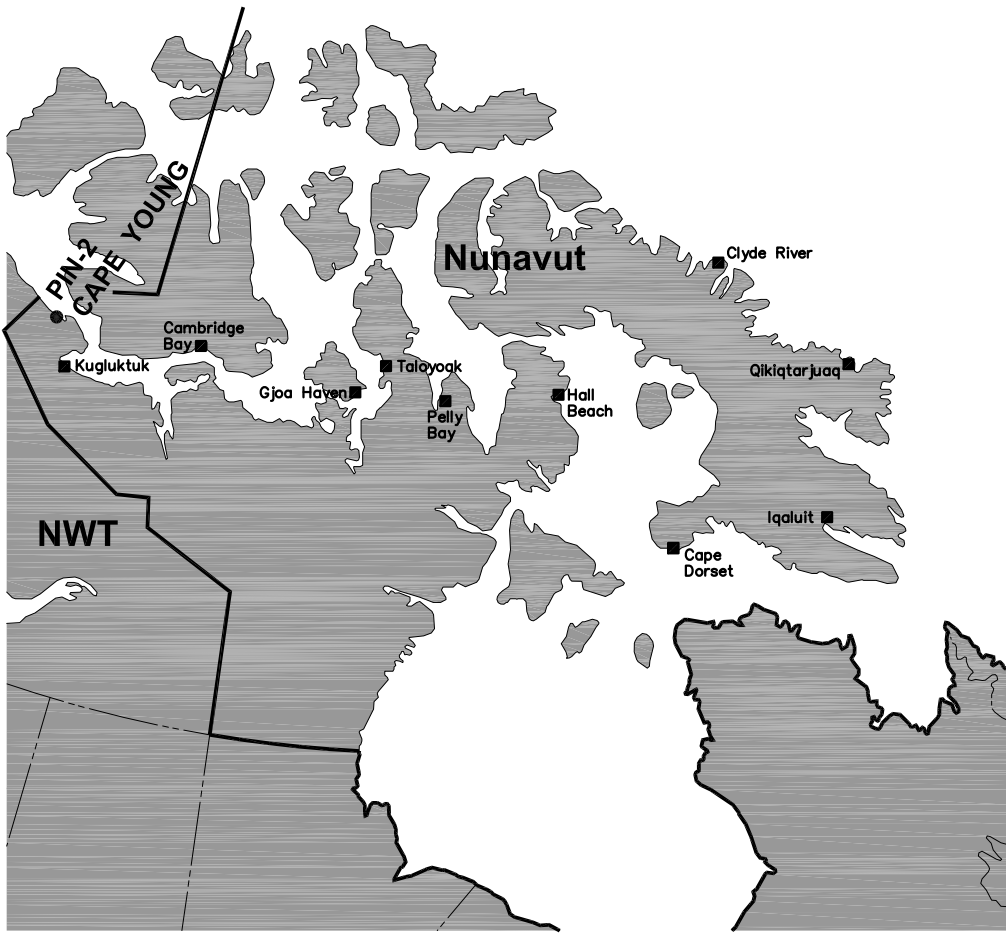
Table A.1: Monitoring Schedule		
Monitoring Event Name¹	Monitoring Event Number	Year
Year 1	1	2012
Year 2	2	2013
Year 3	3	2014
Year 4	4	2015
Year 5	5	2016
Year 7	6	2018
Year 13 ²	7	2024
Year 15	8	2026
Year 25	9	2036
Notes: - The monitoring event name represents the number of years since site clean-up was completed. - The Year 10 monitoring event was originally scheduled for 2021; due to COVID-19, the monitoring schedule has been adjusted and a Year 13 event will take its place in 2024.		

A summary of the monitoring locations associated with each landfill is provided in Table A.2. Approximate locations are shown on Figures PIN-2.2 through PIN-2.10.

Table A.2: Summary of Landfill Monitoring Locations		
Monitoring Locations	Northing (m)	Easting (m)
Airstrip Landfill		
P2-21 (soil)	7647259.4	502522.7
P2-22 (soil)	7647374.4	502534.4
P2-23 (soil)	7647376.1	502589.0
P2-24 (soil)	7647401.3	502630.7
P2-25 (soil)	7647373.2	502649.0
P2-26 (soil)	7647317.2	502639.7
USAF Landfill		
P2-01 (soil)	7646958.9	502197.6
P2-02 (soil)	7646923.4	502248.7
P2-03 (soil)	7646867.2	502251.9
P2-04 (soil)	7646896.5	502197.3

Table A.2: Summary of Landfill Monitoring Locations		
Monitoring Locations	Northing (m)	Easting (m)
Station West Landfill		
P2-05 (soil)	7646879.8	502095.4
P2-06 (soil)	7646789.2	502096.1
P2-07 (soil)	7646762.2	502149.3
P2-08 (soil)	7646799.9	502200.8
Tier II Disposal Facility		
MW-01 (soil and groundwater)	7646319.6	502402.9
MW-02 (soil and groundwater)	7646239.7	502421.9
MW-03 (soil and groundwater)	7646236.8	502497.9
MW-04 (soil and groundwater)	7646319.8	502549.3
VT-1 (temperature)	7646281.0	502434.2
VT-2 (temperature)	7646274.2	502465.0
VT-3 (temperature)	7646307.5	502460.3
VT-4 ¹ (temperature)	7646284.2	502497.4
Airstrip South Landfill		
P2-13 (soil)	7646266.2	503171.4
P2-14 (soil)	7646247.1	503238.0
P2-15 (soil)	7646292.9	503248.6
P2-16 (soil)	7646337.3	503220.9
Pallet Line West Landfill		
P2-09 (soil)	7645741.6	502570.5
P2-10 (soil)	7645790.2	502630.3
P2-11 (soil)	7645843.2	502590.0
P2-12 (soil)	7645861.2	502537.2
Non-Hazardous Waste Landfill		
MW-05 (soil and groundwater)	7645229.3	503029.4
MW-06 (soil and groundwater)	7645297.0	503054.2
MW-07 (soil and groundwater)	7645272.0	503102.0
MW-08 ² (soil and groundwater)	7645223.0	503076.6

Table A.2: Summary of Landfill Monitoring Locations		
Monitoring Locations	Northing (m)	Easting (m)
South Landfill East		
P2-17 (soil)	7645060.0	503404.5
P2-18 (soil)	7645111.0	503473.2
P2-19 (soil)	7645086.7	503533.0
P2-20 (soil)	7645058.1	503557.1
South Borrow Landfill		
P2-27 (soil)	7643445.0	503881.5
P2-28 (soil)	7643474.1	503877.4
P2-29 (soil)	7643506.8	503910.6
P2-30 (soil)	7643476.5	504053.7
Projection: NAD83 – Zone 11		

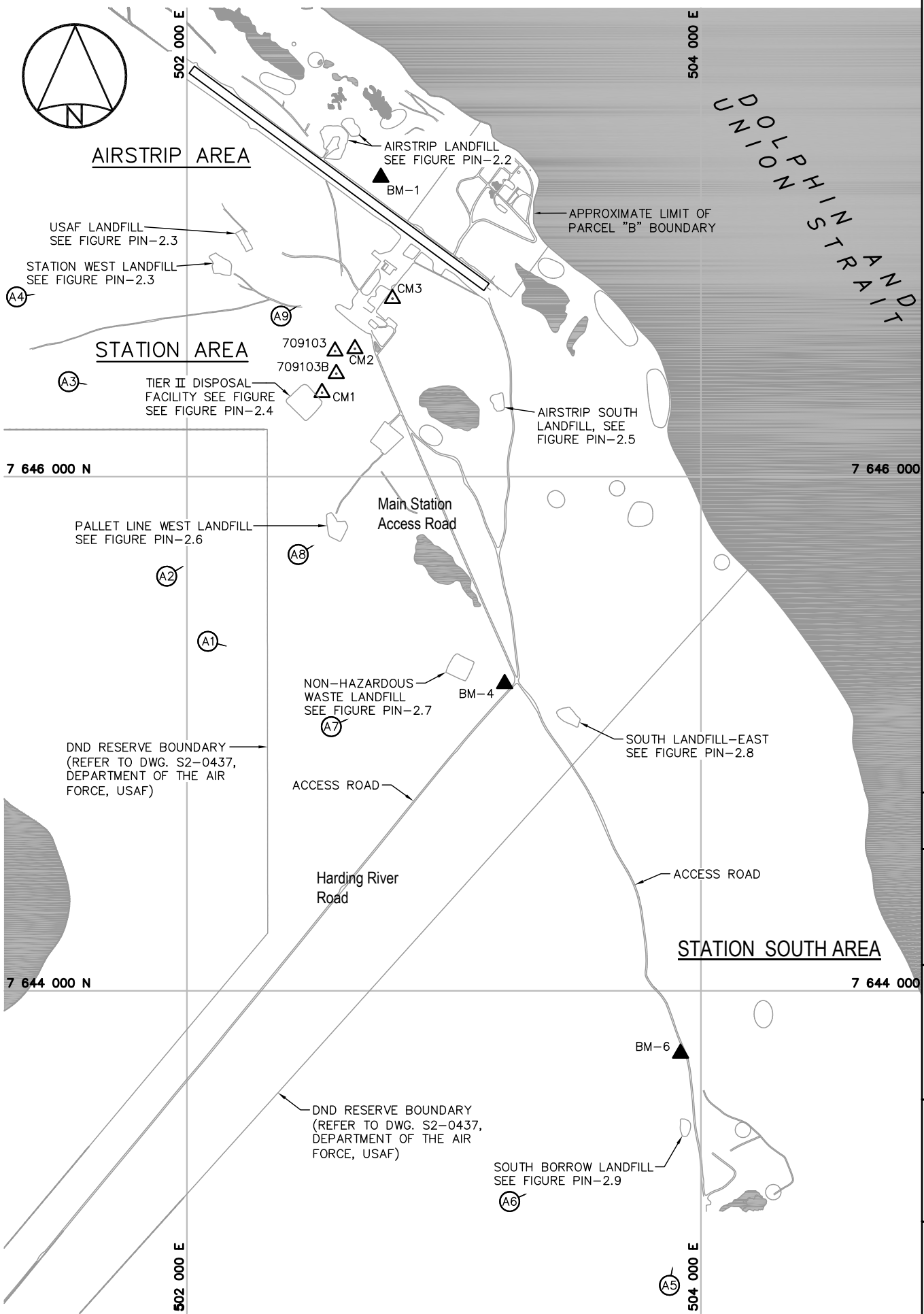


LOCATION OF CAPE YOUNG WITHIN NUNAVUT TERRITORY
SCALE: NTS

SURVEY CONTROL MONUMENTS				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
CM1	7 646 327.029	502 525.754	13.804	PIN-2 BASELINE STA. 0+00
CM2	7 646 497.473	502 653.662	13.993	PIN-2 BASELINE STA. 7+00
CM3	7 646 692.507	502 799.974	14.534	PIN-2 BASELINE STA. 15+00
709103	7 646 487.974	502 576.191	13.790	GEODETIC BENCHMARK
709103B	7 646 400.920	502 581.212	13.954	GEODETIC BENCHMARK

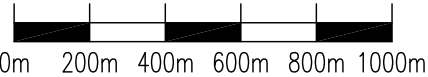
NOTE: BASELINE STATIONS SHOWN ARE IN IMPERIAL UNITS.

PERMANENT BENCHMARK (AS-BUILT)				
NO.	UTM COORDINATES		ELEV.	DESCRIPTION
	NORTHING	EASTING		
BM-1	7 647 164.203	502 754.676	14.398	25mm DIA. STEEL PIPE
BM-4	7 645 194.471	503 236.108	17.189	25mm DIA. STEEL PIPE
BM-6	7 643 756.513	503 920.587	13.296	25mm DIA. STEEL PIPE



LEGEND

- △ CM1 SURVEY CONTROL MONUMENT (5)
- ▲ BM-1 PERMANENT BENCHMARK LOCATION (3)
- ARCHAEOLOGICAL FEATURES
- APPROXIMATE LOCATION OF PROPERTY BOUNDARY
- BODY OF WATER
- (A1) AERIAL PHOTOGRAPH



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COLLECTION OF
LANDFILL MONITORING DATA
PIN-2, CAPE YOUNG, NUNAVUT
LOCATION PLAN

SITE REMEDIATION SOLUTIONS

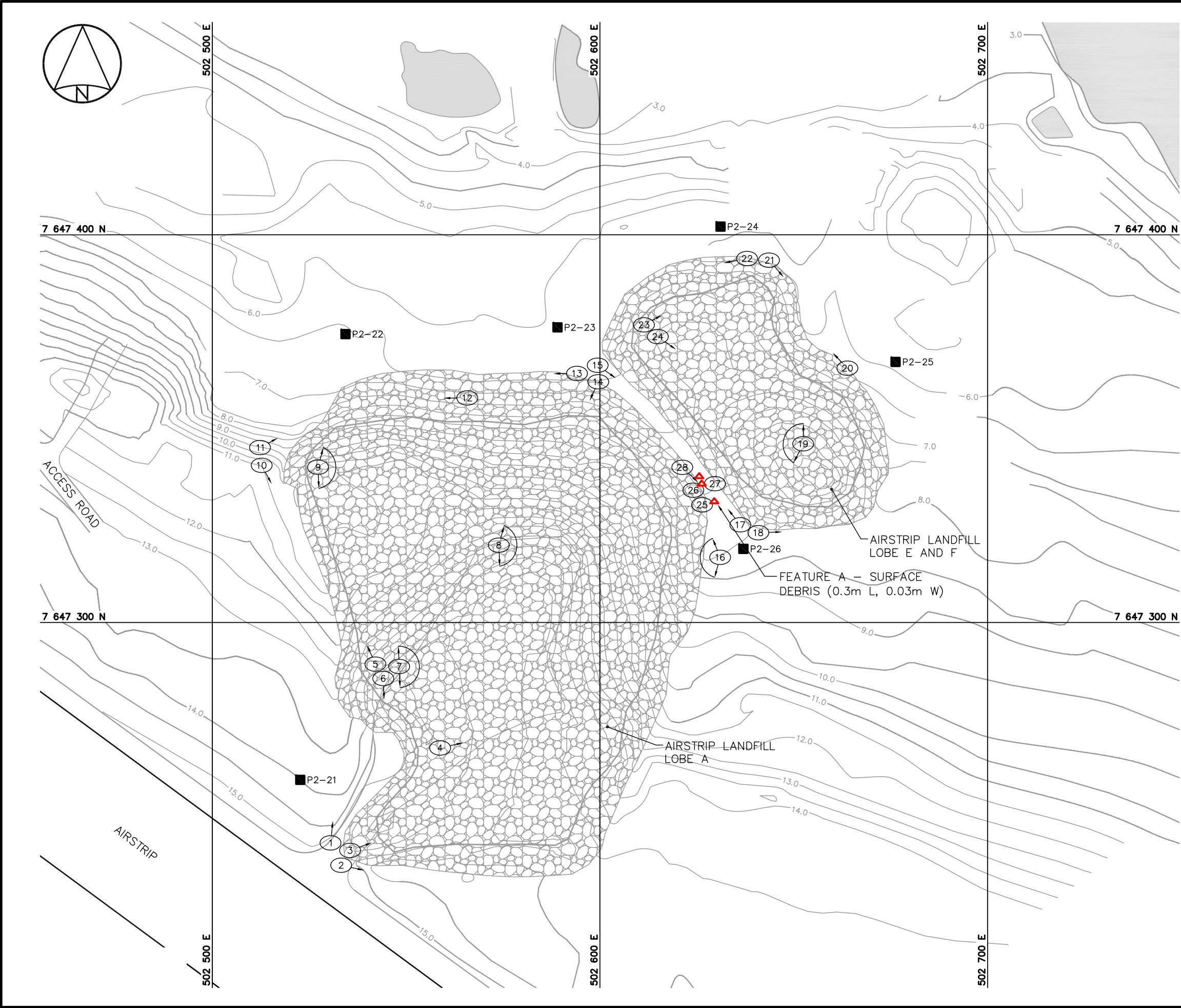
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PROJECT NO: CD3654_200_203	DRAWING NO: CD3654_200_203-PIN-2A-PL	PAGE PL

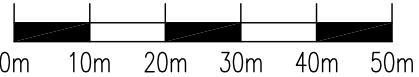
FIGURE PIN-2.1

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LEGEND

- MONITORING SOIL SAMPLE LOCATION (6)
- ② APPROX. PHOTOGRAPHIC VIEWPOINT
- ☪ BODY OF WATER
- ▲ DEBRIS (NTS)



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COLLECTION OF
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PIN-2, CAPE YOUNG, NUNAVUT

AIRSTRIP LANDFILL

SITE REMEDIATION SOLUTIONS

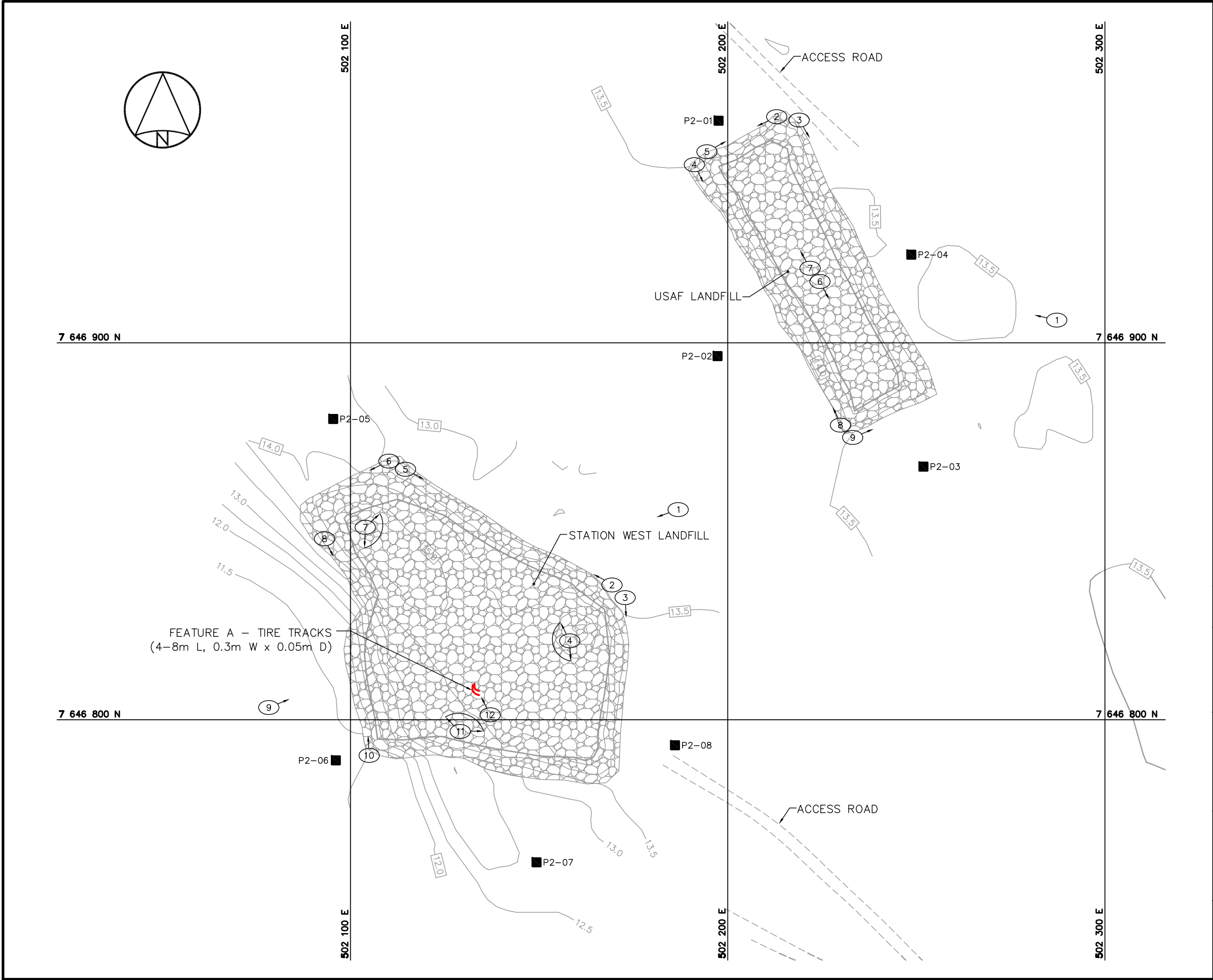
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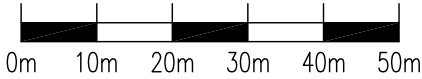
FIGURE PIN-2.2

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LEGEND

- MONITORING SOIL SAMPLE LOCATION (8)
- ② APPROX. PHOTOGRAPHIC VIEWPOINT
- TIRE TRACKS NTS



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COLLECTION OF
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PIN-2, CAPE YOUNG, NUNAVUT
USAF LANDFILL AND
STATION WEST LANDFILL

SITE REMEDIATION SOLUTIONS

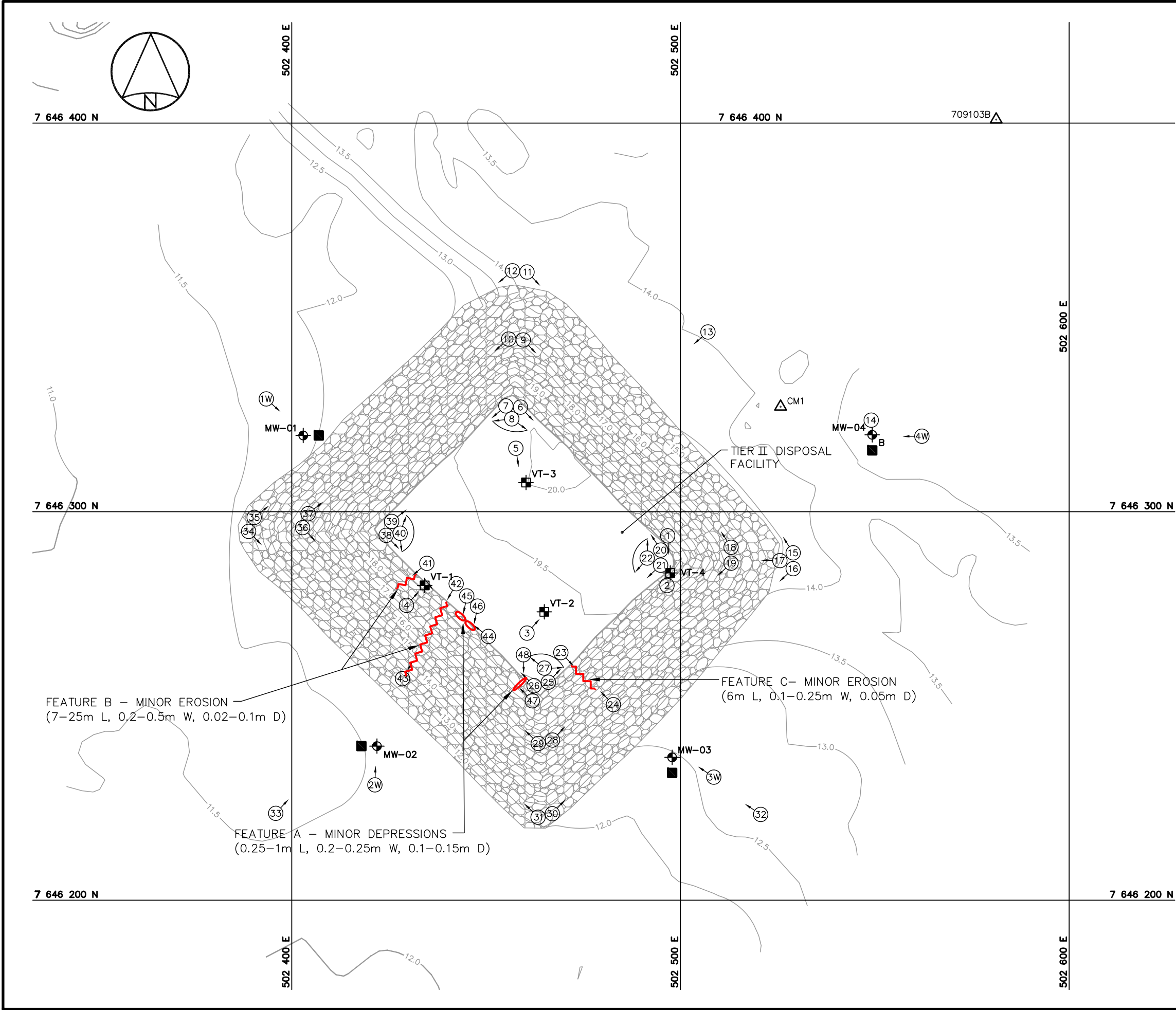
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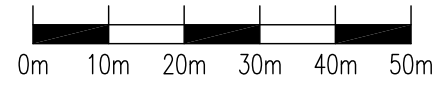
FIGURE PIN-2.3

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LEGEND

- MONITORING WELL LOCATION (3)
- BACKGROUND MONITORING WELL LOCATION (1)
- GROUND TEMPERATURE CABLE LOCATION (4)
- MONITORING SOIL SAMPLE LOCATION (4)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)
- MINOR EROSION (NTS)



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COLLECTION OF
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PIN-2, CAPE YOUNG, NUNAVUT
TIER II DISPOSAL FACILITY

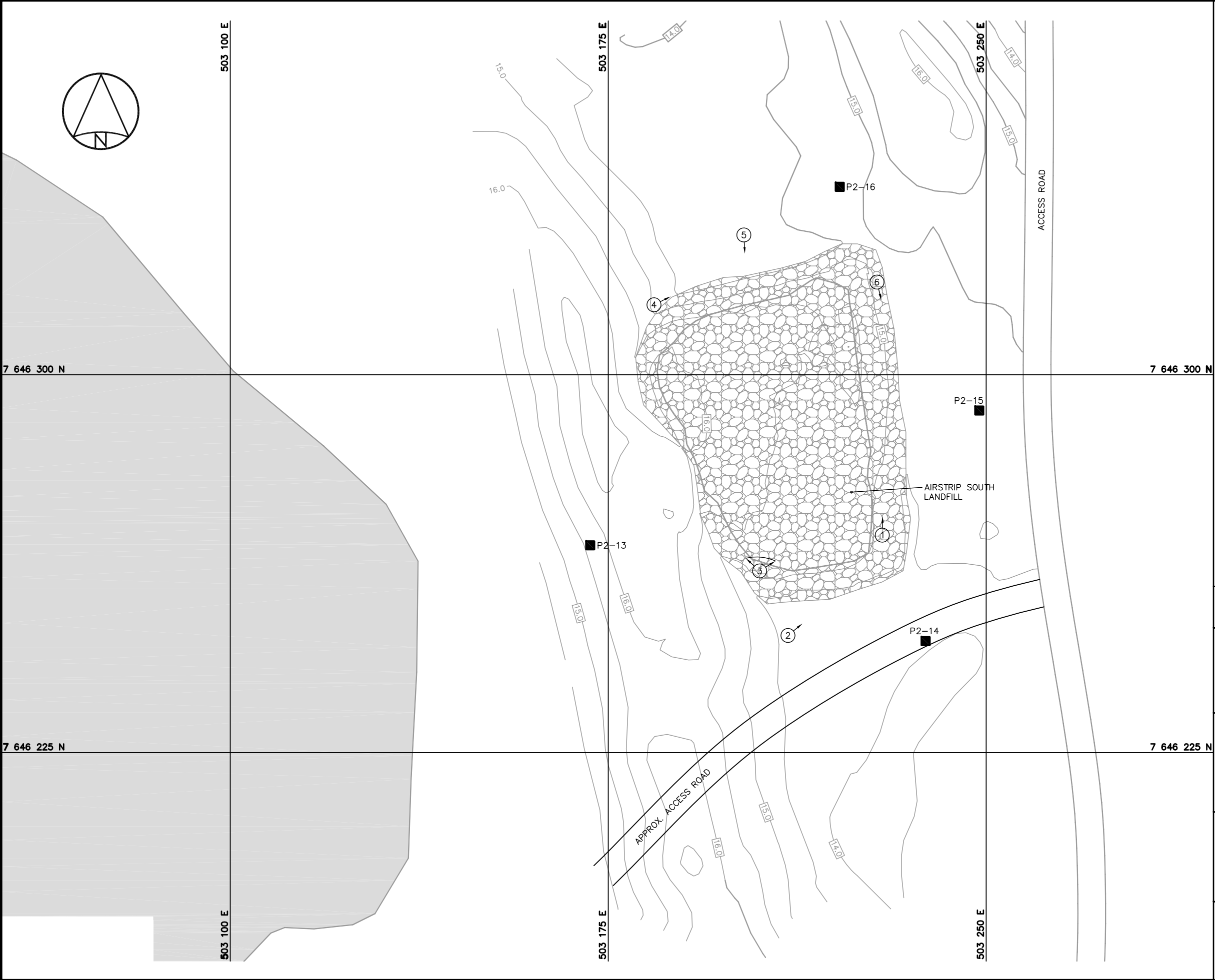
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FIGURE PIN-2.4

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LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- BODY OF WATER



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COLLECTION OF
LANDFILL MONITORING DATA
PIN-2, CAPE YOUNG, NUNAVUT
AIRSTRIP SOUTH LANDFILL

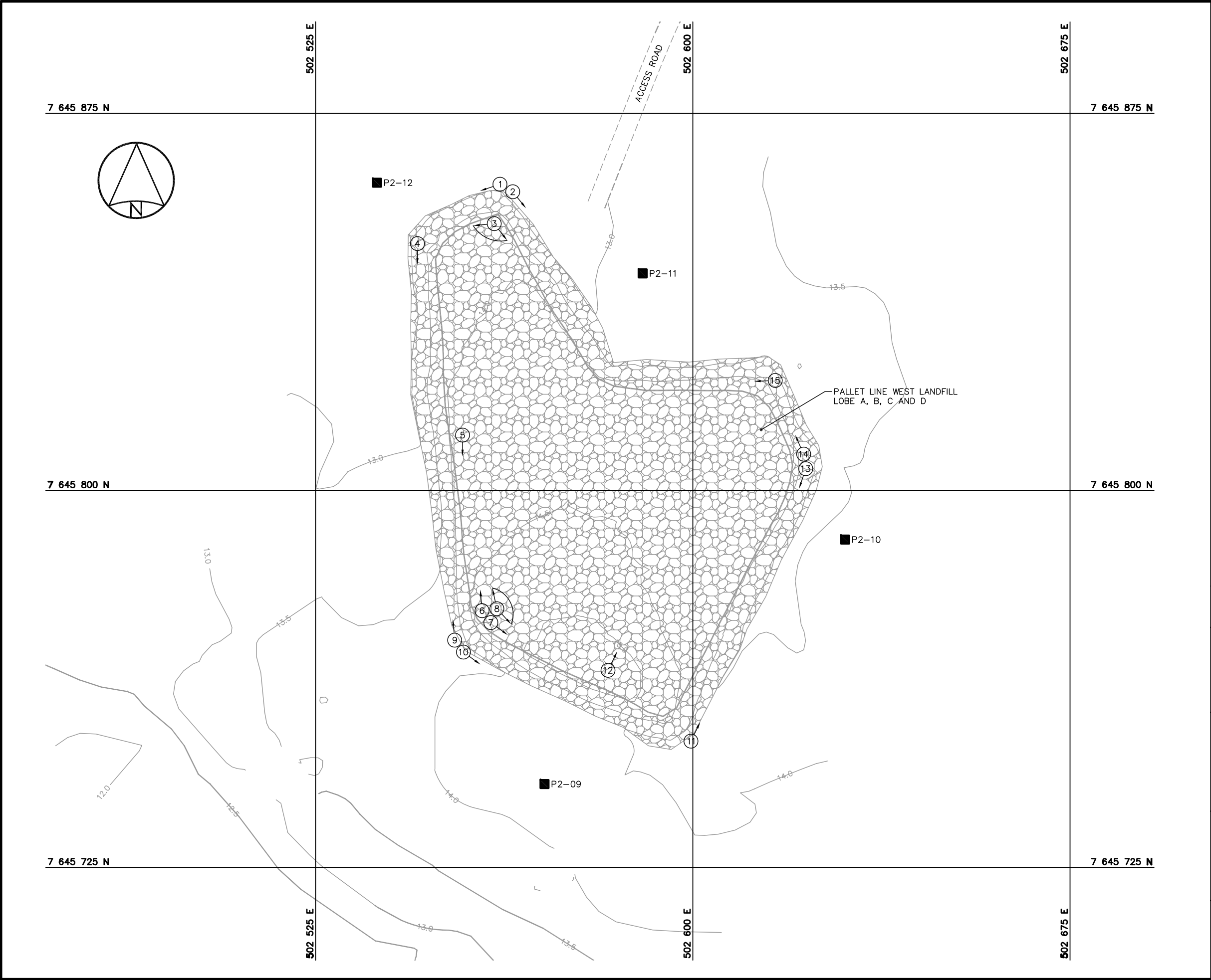
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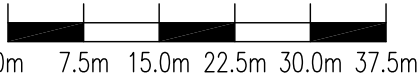
FIGURE PIN-2.5

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LEGEND

- MONITORING SOIL SAMPLE LOCATION (6)
- ④ → APPROX. PHOTOGRAPHIC VIEWPOINT



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COLLECTION OF
LANDFILL MONITORING DATA
PIN-2, CAPE YOUNG, NUNAVUT
PALLET LINE WEST LANDFILL

SITE REMEDIATION SOLUTIONS

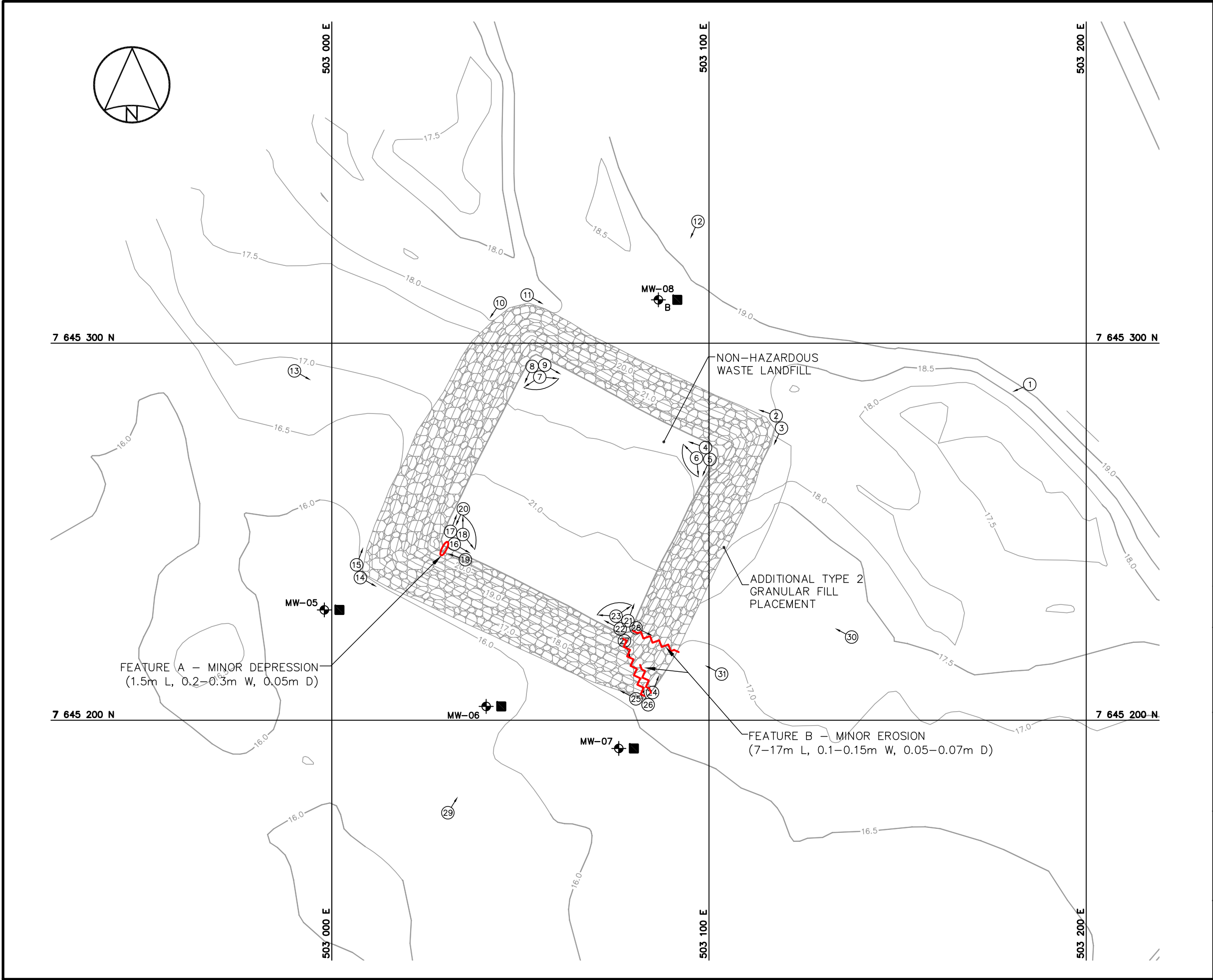
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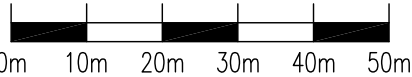
FIGURE PIN-2.6

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LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- ⊕ MONITORING WELL LOCATION (3)
- ⊕_B BACKGROUND MONITORING WELL LOCATION (1)
- ④ APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)
- 〰 MINOR EROSION (NTS)



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COLLECTION OF
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PIN-2, CAPE YOUNG, NUNAVUT
NON-HAZARDOUS WASTE LANDFILL

SITE REMEDIATION SOLUTIONS

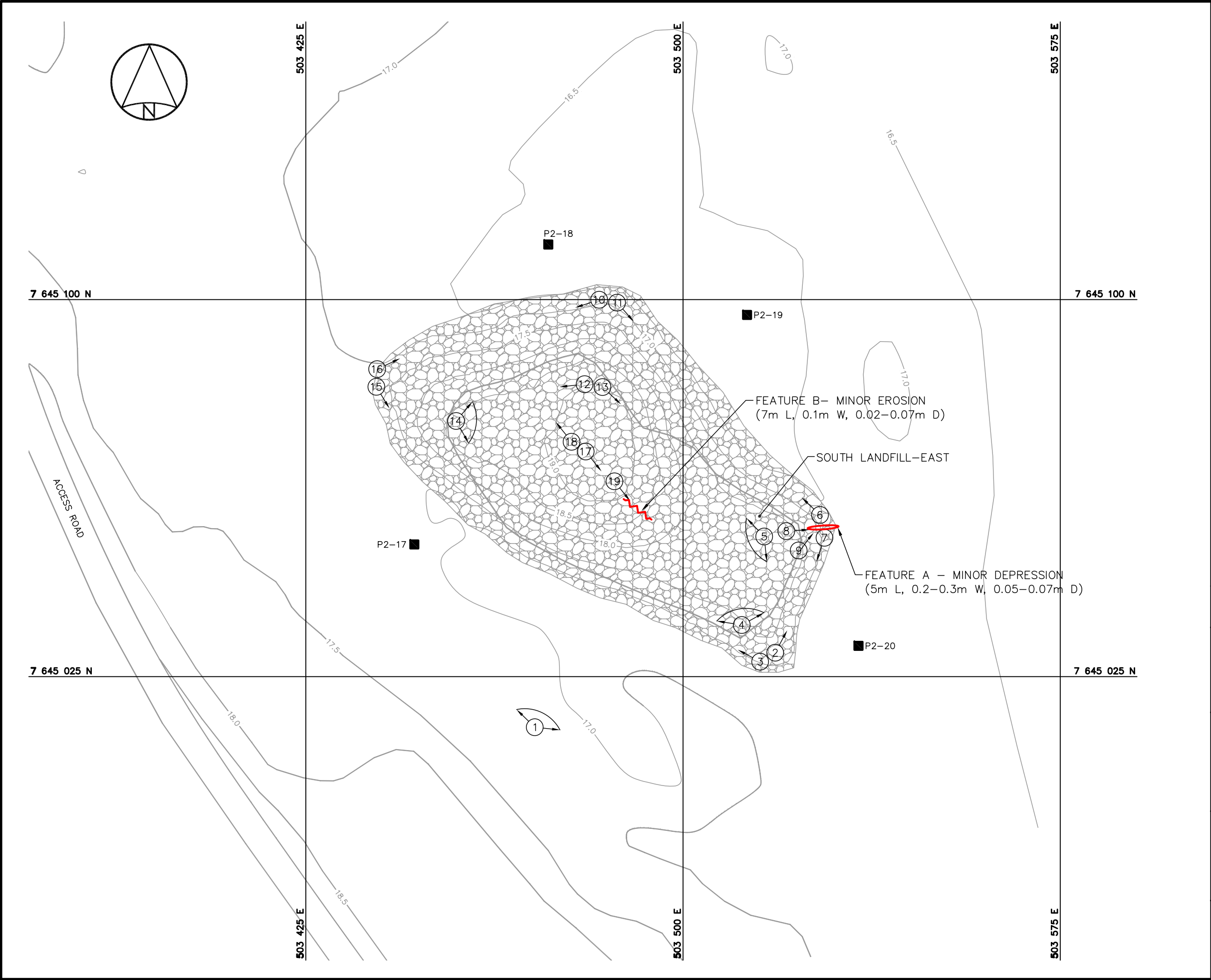
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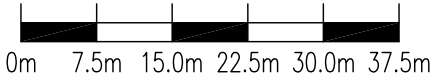
FIGURE PIN-2.7

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LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- ① → APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)
- ⚡ MINOR EROSION (NTS)



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COLLECTION OF
LANDFILL MONITORING DATA
PIN-2, CAPE YOUNG, NUNAVUT
SOUTH LANDFILL - EAST

SITE REMEDIATION SOLUTIONS

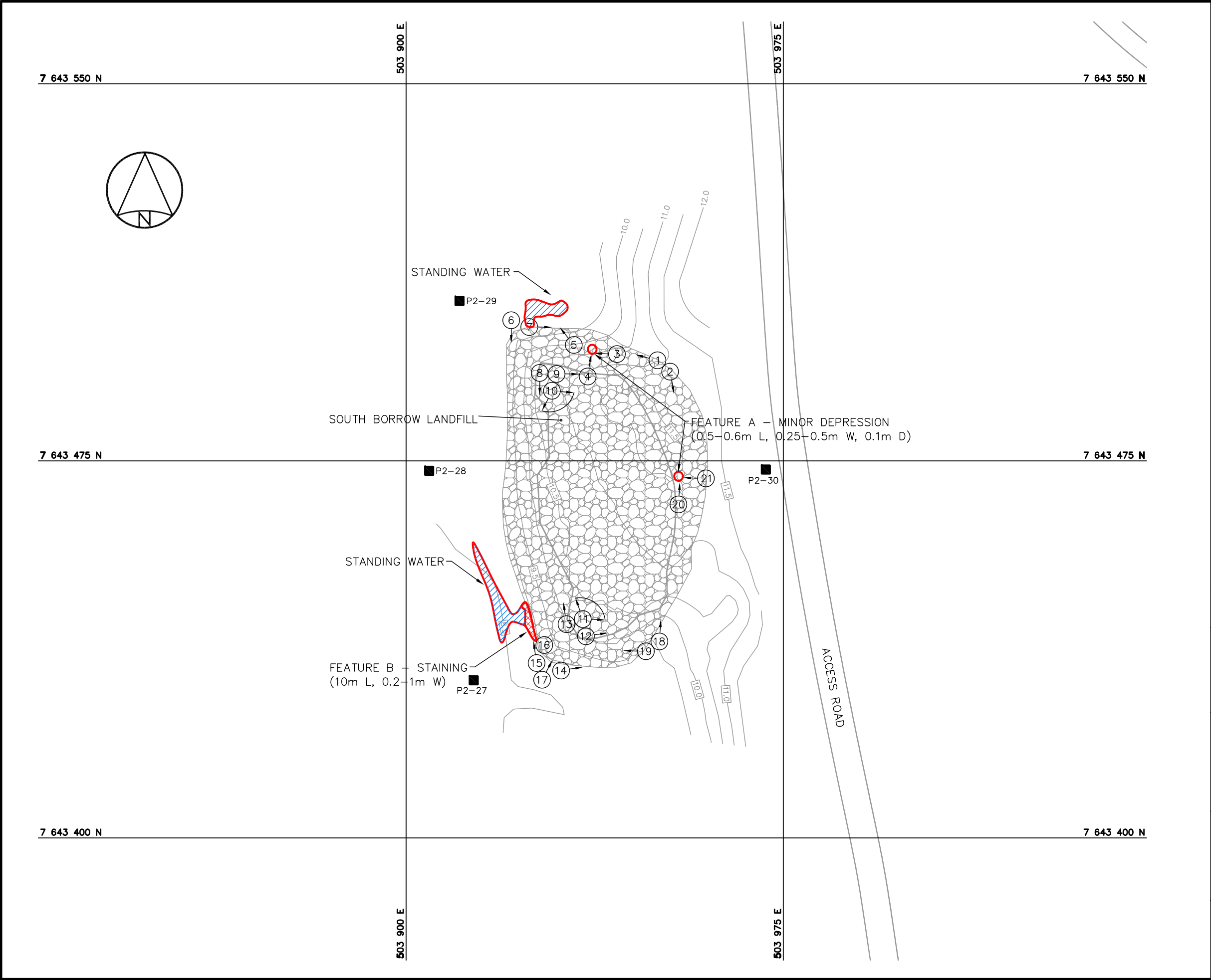
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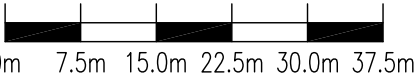
FIGURE PIN-2.8

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LEGEND

- MONITORING SOIL SAMPLE LOCATION (4)
- APPROX. PHOTOGRAPHIC VIEWPOINT
- MINOR SETTLEMENT (NTS)
- STAINING (NTS)
- PONDING (NTS)



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COLLECTION OF
LANDFILL MONITORING DATA
PIN-2, CAPE YOUNG, NUNAVUT
SOUTH BORROW LANDFILL

SITE REMEDIATION SOLUTIONS
Biogenie, a division of EnGlobe Corp.
4495 Wilfrid-Hamel Blvd, Suite 200
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FIGURE PIN-2.9