



2023 Annual Water License Report

Pine Point Mining Limited
MV2020L8-0012
Pine Point District, NT

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TABLE OF CONTENTS

1	INTRODUCTION	1
2	ANNUAL REPORT	3
2.1	SUMMARY OF PROJECT ACTIVITIES	3
2.2	PROJECT SCHEDULE	3
2.3	CALIBRATION AND STATUS OF METERS AND DEVICES.....	4
2.4	ENGAGEMENT ACTIVITIES.....	4
2.5	TRADITIONAL KNOWLEDGE	4
2.6	WATER WITHDRAWAL PLAN ACTIVITIES	4
2.6.1	<i>Water Quantities Obtained from Approved Water Withdrawal Plan</i>	<i>4</i>
2.6.2	<i>Field Confirmation Completed</i>	<i>6</i>
2.6.3	<i>Approved Updates to the Water Withdrawal Plan.....</i>	<i>6</i>
2.7	CONSTRUCTION ACTIVITIES – SUMMARY.....	6
2.8	MAINTENANCE ACTIVITIES.....	6
2.9	WASTE MANAGEMENT.....	7
2.9.1	<i>Waste Management Changes</i>	<i>7</i>
2.9.2	<i>Contaminated (Hazardous) Waste Discharged- Monthly and Quarterly.....</i>	<i>7</i>
2.9.3	<i>General Solid Waste –Monthly and Annual</i>	<i>7</i>
2.9.4	<i>General Liquid Waste</i>	<i>7</i>
2.9.5	<i>Ammonium Nitrate Vehicle Wash Runoff</i>	<i>8</i>
2.9.6	<i>Drill Cuttings</i>	<i>8</i>
2.9.7	<i>Treated Sewage</i>	<i>8</i>
2.9.8	<i>Sewage Solids.....</i>	<i>8</i>
2.9.9	<i>Sump Locations</i>	<i>9</i>
2.10	WATER MANAGEMENT	9
2.10.1	<i>Hydrogeological Testing Locations</i>	<i>9</i>
2.10.2	<i>Water Transfer (Pump) Tests.....</i>	<i>11</i>
2.11	BEDROCK SAMPLING ACTIVITIES	13
2.12	CONSTRUCTION ACTIVITIES.....	13
2.13	SPILL CONTINGENCY PLAN ACTIVITIES	13
2.14	CLOSURE AND RECLAMATION ACTIVITIES.....	14
2.15	SNP DATA.....	14
2.15.1	<i>SNP-1</i>	<i>14</i>
2.15.2	<i>SNP-2</i>	<i>14</i>
2.15.3	<i>SNP-3</i>	<i>14</i>
2.15.4	<i>SNP-4</i>	<i>15</i>
2.15.5	<i>SNP-5</i>	<i>15</i>
2.15.6	<i>SNP-6</i>	<i>15</i>
2.16	NON-COMPLIANCES.....	15
2.17	INSPECTION REPORT NON-CONFORMANCES.....	15
2.18	OTHER DETAILS REQUESTED BY THE BOARD.....	17
3	REFERENCES	17

LIST OF APPENDICES

APPENDIX I DRILL COLLAR LOCATIONS
APPENDIX II MAPS SHOWING LOCATIONS OF DRILLHOLES (SUMPS) AND ACCESS TRAILS CONSTRUCTED.
APPENDIX III HYDROGEOLOGICAL TESTS PERFORMED
APPENDIX IV SHIPPING MANIFESTS
APPENDIX V COMPATIBILITY TEST AUTHORIZATION
APPENDIX VI PUMP TEST PUMPING WELL ANALYTICAL RESULTS
APPENDIX VII PUMP TEST INJECTION WELL ANALYTICAL RESULTS

LIST OF FIGURES

FIGURE 1 METEX 03N SERIES IN-LINE DIGITAL WATER METER..... 4
FIGURE 2 REGIONAL LOCATION MAP 18
FIGURE 3 PROPERTY OVERVIEW 19

LIST OF TABLES

TABLE 1 WATER USAGE (M³) BY SOURCE IN 2023 (TOTAL IN PANEL 2)..... 5
TABLE 2 LOCATION OF WATER SOURCES USED IN 2023 5
TABLE 3 MONTHLY AND ANNUAL QUANTITY OF HAZARDOUS WASTE SHIPPED OFF-SITE..... 7
TABLE 4 MONTHLY AND ANNUAL SOLID WASTE SHIPPED OFF-SITE (“DISCHARGED”) 7
TABLE 5 GREY WATER DISCHARGED 7
TABLE 6 DRILL CUTTINGS PRODUCTION BY MONTH (NR INDICATES DATA NOT RECORDED, NO DRILLING) 8
TABLE 7 SEWAGE SOLIDS SHIPPED OFFSITE 8
TABLE 8 COMPATIBILITY TEST RESULTS..... 11
TABLE 9 SUMMARY OF PUMP TEST WATER SAMPLING **ERROR! BOOKMARK NOT DEFINED.**
TABLE 10 MONTHLY AND ANNUAL QUANTITIES AND ANNUAL OF HAZARDOUS WASTE SPILLED IN 2023..... 14

1 INTRODUCTION

Pine Point Mining Limited (PPML) holds mineral leases and claims, located approximately 180 km south of Yellowknife, NT, near the south shore of Great Slave Lake (Figure 2). These mineral dispositions comprise the Pine Point Project (Project).

The Project includes 40 mineral leases and 106 mineral claims held by PPML, a Joint Venture formed between Osisko Metals Incorporated and Appian Natural Resources Fund III LLP (Figure 3). In 2023, the number of mineral claims was reduced by 3 claims to 106 as 3 small claims were amalgamated. As of the effective date of this report, the leases and claims are in good standing. The Project is located between 114° and 115° 15' West longitude and 61° 0' and 61° 45' North latitude, within the Mackenzie Mining Division of the Northwest Territories (NT) of Canada. The western boundary of the Project is located 42 km east of the town of Hay River, NT and approximately 10 km south of the Great Slave Lake. The Property lies about 60 m above the lake level.

The Project is an exploration and development project located partly on a previously disturbed former mine site. Cominco Ltd. operated the Pine Point Mine site between 1964 and 1988 and produced approximately 64 million tonnes of material from 50 open pit and two underground mines. The Project area includes historical disturbances such as open pits, waste rock stockpiles, overburden stockpiles, Pine Point town water ponds, the plant site, haulage and service roads, the footprint of the former townsite of Pine Point and a former airstrip. A tailings impoundment area (TIA), located north of the old mill site, is currently under licence (MV2017L2-007) by Teck Metals Ltd.

New authorizations were issued to Pine Point Mining Limited on November 2, 2021, for a Land Use Permit (MV2020C0017) and on December 8, 2021, for a Type A Water Licence (MV2020L8-0012). Management plans required for Phase 1 were approved by the Land and Water Board on August 31, 2022.

PPML occupies a field camp located at 60°51'32.50" N - 114°27'50.56" W in the Pine Point area. Land Use Permit MV2020C0017 authorizes a camp with a capacity of 249 persons. The camp capacity in 2023 peaked at 77 persons.

This report fulfills licence MV2020L8-0012 Part B, Condition 19 which reads:

"19. Beginning March 31, 2022, and no later than every March 31 thereafter, the Licensee shall submit an Annual Water License Report to the Board. The Report shall be in accordance with Schedule 1, Condition 1."

Please see the concordance table below:

Schedule 1 Requirement	See Section
1(a) Brief Summary of Project Activities including, but not limited to drill sites, roads, trails, boreholes, sumps and any other disturbances	2.1, Appendix II
1(b) An updated project schedule	2.2
1(c) A summary of the calibration and status of the meters and devices referred to in Part B, Condition MEASURE WATER USE AND WASTE DISCHARGED of this licence	2.3
1(d) A summary of engagement activities conducted in accordance with the approved Engagement Plan, referred to in Part B, Condition ENGAGEMENT PLAN of this licence.	2.4
1(e) A summary of how traditional knowledge was incorporated into decision making.	2.5
1(f) A summary of activities conducted in accordance with the approved Water Withdrawal Plan , referred to in Part D, Condition WATER WITHDRAWAL PLAN, including but not limited to:	

Schedule 1 Requirement	See Section
i. The monthly and annual quantities in cubic metres of Water obtained from each Water source referred to in Part D, Condition WATER SOURCE AND MAXIMUM VOLUME	2.6.1
ii. A summary of field confirmation completed as referred to in Part D, Condition FIELD CONFIRMATION – AUTHORIZATION; and	2.6.1
iii. A summary of approved updates or changes to the Water Withdrawal Plan ;	2.6.3
1(g) A summary of Construction activities conducted in accordance with Part E of this Licence;	2.7
1(h) A summary of major maintenance activities conducted in accordance with this Licence;	2.8
1(i) A summary of activities conducted in accordance with the approved Waste Management Plan , referred to in Part F, Condition WASTE MANAGEMENT PLAN of this Licence, including, but not limited to:	2.9
i. A summary of approved updates or changes to the process or facilities required for the management of Waste;	2.9.1
ii. Monthly and annual quantities, in cubic metres, of Hazardous Waste discharged, by location;	2.9.2
iii. Monthly and annual quantities, in cubic metres, of solid Waste discharged, by location;	2.9.3
iv. Monthly and annual quantities of Greywater discharged, by location;	2.9.4
v. Monthly and annual quantities of ammonium nitrate vehicle wash Runoff, discharged, by location;	2.9.5
vi. Monthly and annual quantities of drilling cuttings discharged, by location;	2.9.6
vii. Monthly and annual quantities, in cubic metres, of treated Sewage from the Sewage Treatment Plant;	2.9.7
viii. Monthly and annual quantities, in cubic metres, of Sewage solids removed from the existing Sewage Treatment Plant identified by disposal location; and	2.9.8
ix. A map depicting the location of the Sumps, including soil conditions and type of Drilling Waste.	2.9.9
1(j) A summary of activities conducted in accordance with the approved Water Management Plan , referred to in Part F, Condition WATER MANAGEMENT PLAN of this Licence, including:	2.10
i. A summary of hydrogeological testing locations including a map and geographic coordinates;	2.10.1
ii. A record of dates, duration, and flow rates of the hydrogeological testing;	2.10.2
iii. Total Water Drawdown quantity, in cubic metres, identified by Drawdown location;	2.10.2.2
iv. Total Drawdown and Water discharged for hydrogeological testing, in cubic metres, identified by Drawdown and Discharge location;	2.10.2.3
v. The Water quality data for samples collected for the hydrogeological testing, identified by Drawdown and Discharge locations, including tabular summaries of all data and information generated and graphical summaries of parameters, in Excel format;	2.10.2.4
vi. The Water quality criteria compatibility test results for the hydrogeological testing conducted;	2.10.2.5
vii. A summary and interpretation of monitoring results, including any Action Level exceedances; and	2.10.2.6
viii. A description of actions taken in response to any Action Level exceedances.	2.10.2.7
1(k) A summary of activities conducted in accordance with the approved Bedrock Sampling Management Plan referred to in Part F, Condition BEDROCK SAMPLING MANAGEMENT PLAN of this Licence, including:	2.11
i. A summary of approved updates or changes to the process or facilities required for the management of bedrock, ore, overburden, and till;	2.11
ii. Monthly and annual quantities, in cubic metres and tonnes, of each type of Waste Rock placed into bedrock sampling pits, including a map or diagram of the locations and types of Waste Rock deposited;	2.11
iii. The size, depth, and/or area of the bedrock sampling pit;	2.11
iv. Monthly and annual quantities by location of metallurgical samples collected under the Plan;	2.11
v. A summary of approved updates or changes to the types of explosives to be used or the facilities to be used for management and storage of explosives; and	2.11
vi. Monthly and annual quantities by location of explosives managed under the Plan.	2.11
1(l) A summary of approved updates or changes to the types of explosives to be used or the facilities to be used for management and storage of explosives; and	2.12
i. Inspections conducted to fulfill Part E and Part F of this Licence;	2.12
ii. Inspection conducted under the Part F, Condition INSPECTION OF SEWAGE TREATMENT PLANT; and	2.12
iii. Inspections conducted under the Design and Construction Plan required under Part E of this Licence.	2.12
1(m) A summary of activities conducted in accordance with the approved Spill Contingency Plan , referred to in Part G, Condition SPILL CONTINGENCY PLAN of this Licence, including:	2.13

Schedule 1 Requirement	See Section
i. A list and description for all Unauthorized Discharges, including the date, NWT spill number, volume, location, summary of the circumstances and follow-up actions taken, and status (i.e., open or closed), in accordance with the reporting requirements in Part G, Condition REPORT SPILLS of this Licence; and	2.13
ii. An outline of any spill training carried out.	2.13
1(n) A summary of activities conducted in accordance with the Closure and Reclamation Plan , referred to in Part H, Condition CLOSURE AND RECLAMATION PLAN of this Licence, including:	2.14
i. Details of any Progressive Reclamation undertaken;	2.14
ii. A discussion on whether planning and implementation remains on schedule, and a summary of any new scheduling setbacks;	2.14
iii. A summary of Reclamation Research completed	2.14
iv. A summary of engagement conducted regarding Closure and Reclamation; and	2.14
v. A list of any factors that would increase or decrease the Closure Cost Estimate the next time the Estimate is updated.	2.14
1(o) Tabular summaries of all data and information generated under the SNP annexed to this Licence and graphical summaries of parameters with EQC referred to in Part F, Condition EFFLUENT QUALITY CRITERIA, at the point of compliance (SNP Station 4), in Excel format.	2.15
1(p) A list of any non-compliance(s) with the conditions of this Licence or any directive from the Board pursuant to the conditions of this Licence;	2.16
1(q) A summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector; and	2.17
1(r) Any other details requested by the Board by November 1 of the year being reported.	2.18

The Annual Report is organized according to sections outlined in Schedule 1, Condition 1 of issuance MV2020L8-0012.

2 ANNUAL REPORT

2.1 SUMMARY OF PROJECT ACTIVITIES

The ongoing program's objective is to continue to upgrade the confidence of the mineral resource estimate to the Indicated Resource category and to collect environmental baseline data to support the proposed mine Environmental Assessment. In 2023, 570 drill holes were completed for a total of 39,814 m of drilling (Appendix I, Drill Collar Locations).

At most sites, existing trails were used to access the drill locations. At some sites, access was obtained by the construction of new trails. A total of 45.8 km of new trails/roads were constructed. In winter, the snowpack was compacted on the road surface and ice was built up on the road surface in softer areas (Appendix II, Maps showing Locations of Drillholes (Sumps) and Access Trails Constructed).

2.2 PROJECT SCHEDULE

The drill program commenced on January 7, 2023. No drilling was undertaken from April 25, 2023 to May 14, 2023. Drilling recommenced on May 15, 2023 and continued until May 28, 2023. The Fall program commenced on October 3, 2023, after a delay due to wildfire threats in the area. The drills demobilized on December 2, 2023. Work began preparing executing a pump test to transfer water between O556 and P499 from December 5, 2024, until December 22, 2023.

2.3 CALIBRATION AND STATUS OF METERS AND DEVICES

Metex 03N Series in-line digital water meters were used in each drill's pump station. The meters were factory calibrated with an accuracy of 1.5%. They are reset at the start of every shift.

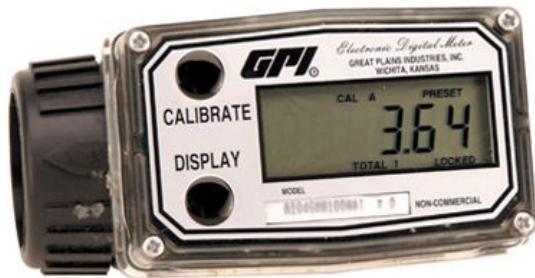


Figure 1 Metex 03N Series In-line Digital Water Meter

2.4 ENGAGEMENT ACTIVITIES

PPML maintained its engagement with communities, regulators and other impacted parties, using various methods such as written correspondence, phone calls, conference calls, and in-person meetings. During this reporting year, community engagement activities focused on the Developer's Assessment Report (DAR) preparation and associated environmental assessment.

2.5 TRADITIONAL KNOWLEDGE

During 2023, PPML actively engaged with local Indigenous communities, Elders and Indigenous Knowledge holders to seek their input and insights regarding the Project and potential interactions with the land and areas of cultural significance. PPML also employed Indigenous Knowledge holders and contractors to assist with camp operations, drill site clearing surveys and baseline environmental studies.

Site visits with communities were undertaken on July 6 (Fort Resolution Metis Government members) and August 9, 2023 (Deninu Kué First Nation Members).

NWTMN undertook the management of the maintenance of the passive sampler replacement in the Meteorological stations in 2023.

PPML will continue to engage with the Indigenous communities on the exploration drilling program, environmental baseline data collection and the overall mine development project.

2.6 WATER WITHDRAWAL PLAN ACTIVITIES

2.6.1 Water Quantities Obtained from Approved Water Withdrawal Plan

- Licensed maximum water volume withdrawal: 15,380 m³ per day.
- Total volume withdrawn for 2023: 45,383 m³.
- Water Usage by Month and source is tabulated in Table 1.

- Locations of the water sources used is listed in Table 2.

Table 1 Water Usage (m³) by Source in 2023 (Total in Panel 2)

Month	A55 Pit	Great Slave Lake (N204)	Great Slave Lake (X18)	J69 Pit	K53 Pit	K53 Pit Ditch	L37 Pit	M64 Pit	Mill Site Pit	N81 Pit	O556 Ditch Pit
Jan	-	-	-	2,440.7	-	-	-	1,877.1	-	-	-
Feb	-	-	-	709.1	-	-	-	709.1	-	-	-
Mar	-	-	419.9	1,125.3	669.4	-	-	455.9	-	-	-
Apr	-	-	-	540.7	540.7	-	143.8	287.5	-	-	-
May	-	-	-	-	-	108.7	-	-	276.3	-	-
Jun	-	-	-	-	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	40.0	248.0	-	-	288.0
Nov	59.1	186.5	-	-	-	-	342.4	227.4	130.7	155.9	-
Dec	-	-	-	-	-	-	101.5	-	-	101.5	-
Total (m³)	59.1	186.5	419.9	4,815.8	1,210.1	108.7	627.6	3,805.1	406.9	257.4	288.0

Month	O556 Hydrohole	R190 Pit	T37 Pit	X15 Pit	X25 Gravel Pit	X25 Hole	X51 Pit	X56 Pit	X61 Pit	X65 Ditch Pit	Z64 Pit	Total
Jan	-	-	-	-	563.6	597.9	2,240.0	-	-	-	-	7,719.2
Feb	-	-	-	-	249.5	709.1	659.2	-	-	2,240.0	-	5,276.0
Mar	-	-	669.4	-	167.3	705.4	-	409.7	829.7	-	-	5,452.1
Apr	-	-	-	-	-	-	167.3	-	540.7	684.5	-	2,905.3
May	-	-	-	-	-	-	-	-	-	108.7	-	493.7
Jun	-	-	-	-	-	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-	576.0
Nov	-	-	-	130.7	-	-	-	-	-	-	96.8	1,329.4
Dec	21,403.0	25.3	-	-	-	-	-	-	-	-	-	21,631.3
Total (m³)	21,403.0	25.3	669.4	130.7	980.3	2,012.4	3,066.5	409.7	1,370.4	3,033.2	96.8	45,382.9

Table 2 Location of Water Sources used in 2023

Water Source	Easting NAD83 CSRS	Northing NAD83 CSRS	UTM Zone
A55 Pit	633275.3	6751584.42	11
Great Slave Lake (N204)	659751.45	6762876.89	11
Great Slave Lake (X18)	651483.92	6765195	11
J69 Pit	626589.44	6743963.72	11
K53 Pit	634316.66	6747558.12	11

K53 Pit Ditch	636210.85	6748530.46	11
L37 Pit	641279.34	6750692.67	11
M64 Pit	629517.38	6743998.12	11
Mill Site Pit	640583.36	6751040.42	11
N81 Pit	621540.47	6739990.14	11
O556 Ditch Pit	599414.69	6734214.01	11
O556 Hydrohole	599521.33	6734121.54	11
R190 Pit	601738.76	6734262.44	11
T37 Pit	641121.53	6758172.1	11
X15 Pit	650859.34	6753426.85	11
X25 Gravel Pit	608455.69	6732298.15	11
X25 Hole	606472.2	6735883.48	11
X51 Pit	635415.14	6754127.48	11
X56 Pit	633025.37	6752719.32	11
X61 Pit	630551.83	6751374.96	11
X65 Ditch Pit	628138.74	6749825.89	11
Z64 Pit	628860.67	6749956.82	11

2.6.2 Field Confirmation Completed

A notice was sent to the GNWT Water Resource Officer detailing the locations and water withdrawal anticipated before drilling began. A weekly report submitted to the GNWT Water Resource Officer described all in-use and planned water sources and volumes. The GNWT Water Resource Officer performed a field inspection on February 15, 2023.

Field confirmation of water source for drilling activities was conducted in accordance with PPML's Water Management Plan v2.1. Ice thickness was measured with a Kovacs drill system and water depth was measured with a 3 m pole prior to any withdrawal.

2.6.3 Approved Updates to the Water Withdrawal Plan

The Water Withdrawal Management Plan (WWP V2.0) was not updated during the reporting period.

2.7 CONSTRUCTION ACTIVITIES – SUMMARY

No construction activities associated with Part E of the Licence were conducted during the reporting period. No engineered structures were designed or constructed. Equipment and infrastructure on site were similar to previous years consistent with a modest exploration program.

2.8 MAINTENANCE ACTIVITIES

Maintenance activities at the camp consisted of snow removal and generator maintenance. Maintenance of the trails consisted of clearing and packing snow. No temporary water crossings were constructed. The

gray water sump area was pumped out during the year and the water was disposed of at the Hay River Sewage Treatment facility.

2.9 WASTE MANAGEMENT

2.9.1 Waste Management Changes

No significant changes to the waste management processes or facilities were made by PPML or approved during the reporting period.

2.9.2 Contaminated (Hazardous) Waste Discharged- Monthly and Quarterly

Hazardous waste shipped off site (“discharged”) is provided in Table 3.

Hazardous waste shipped consisted of used oil, oil absorbent matting, contaminated soil and used containers. All hazardous waste was placed in a sealed container and periodically removed by Hay River Disposals Ltd and then shipped to a licenced facility in Alberta for final disposal.

The waste shipment manifests from the waste disposal company are included in Appendix IV.

Table 3 Monthly and Annual Quantity of Hazardous Waste Shipped Off-site

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Quantity (m3)	0	17.2 ¹	0	0	0	0	0	0	0	0	0	0	17.2

Note:

1: Content of the shipment in February 2023 included the grey water filter, sump cleanup and replacement of engine oils, fluids, and grease.

2.9.3 General Solid Waste –Monthly and Annual

General waste was placed in 20 m³ sealed containers on site and transported to the Hay River Landfill on an as-needed basis. General waste is all solid waste that is normally placed in garbage containers located at camp or at active field sites. This waste does not include any hazardous waste, contaminated materials or sewage. The monthly and annual quantities of solid waste are tabulated in Table 4.

Table 4 Monthly and Annual Solid Waste Shipped Off-site (“Discharged”)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Quantity (m3)	17.2	51.6	86	103.2	0	0	0	0	0	34.4	34.4	17.2	344

2.9.4 General Liquid Waste

Liquid waste, or ‘grey water’, generated from the kitchen or camp ‘Dry’ facilities is passed through a grease trap and discharge to a sump at the camp site. The volumes of grey water discharged are tabulated in Table 5.

Table 5 Grey Water Discharged

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Usage (kL)	169.1	110.6	178.3	109.3	9.3	17.3	9.3	2.325	171.6	75.9	111.3	41.2	1,005.6

2.9.5 Ammonium Nitrate Vehicle Wash Runoff

No activities involving ammonium nitrate or any other explosives took place during the reporting period, hence no ammonium nitrate vehicle runoff was generated.

2.9.6 Drill Cuttings

Nearby natural depressions were used as sumps to contain drill cuttings during the program. In some cases, a ditch was excavated adjacent to the drill where the cuttings would then be collected. The estimated monthly production of drill cuttings is listed in

Table 6 below. The drill cuttings volume is estimated to be 76.42 m³. A summary of drill collar locations, each with an adjacent small cuttings deposit, is included in Appendix I.

Table 6 Drill cuttings production by month (NR indicates data not recorded, no drilling)

Drill Cuttings	
Month	m ³
January	13.46
February	8.51
March	21.15
April	9.68
May	1.72
June	NR
July	NR
August	NR
September	NR
October	18.21
November	3.40
December	0.28
Total	76.42

2.9.7 Treated Sewage

A sewage treatment plant has not been installed. Incinolet toilets are used at the site.

2.9.8 Sewage Solids

A sewage treatment plant has not been installed, however raw sewage from a trailer washroom was shipped off site in 2023 (Appendix IV).

Table 7 Sewage Solids shipped offsite

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Usage (kL)	30	75	75	75	15	0	0	0	5	15	5	5	300

2.9.9 Sump Locations

No sumps were dug. Drill cuttings were placed adjacent to the drilling rigs in consultation with the Land Use Inspector (Appendix I, Drill Collar Locations; Appendix II, Maps showing Locations of Drillholes (Sumps) and Access Trails Constructed).

Soils developed at the site are typically less than 1m thick. Regional Mapping of soils by the GSC is used to characterize the soil types. A summary of soil types that may be encountered includes peatlands of varying thickness that occur over extensive areas such as patterned and horizontal fens, treed bogs, and peat plateaus (the latter on permanently frozen organic soils) (ECG 2009). No permafrost was encountered during the drilling.

2.10 WATER MANAGEMENT

2.10.1 Hydrogeological Testing Locations

Pump (Water Transfer) testing conducted during the reporting period involved pumping from well 0556-23-PW-01 to well P499-23-IW-01 (see Appendix II, Sheet A). Details of the pump test are provided in section 2.10.2).

New hydrogeological monitoring boreholes were surveyed for hydrogeological properties and water quality samples were taken. The hydrogeological monitoring hole locations are listed in Appendix III which are included in the drill locations shown on the maps in Appendix II.

The tests performed in the hydrogeological monitoring wells are detailed in the following sections.

2.10.1.1 Slug Tests

Those consist of instantaneously removing a finite amount of water and measuring water recovery. Using the equations developed by Hvorslev (1951), it is possible to obtain the average K value of the hole. This approach is simple and rapid, and it provides values to compare with results obtained from the Profile Tracer Tests (Section 2.10.1.3).

The Hvorslev method determines the H/H₀ ratio, where H corresponds to the drawdown and H₀ to the initial level. The H/H₀ ratio is represented as a function of time on a semi-logarithmic graph. The general form of the equation is as follows:

$$K = \frac{r^2 \cdot \ln(L/R)}{2 \cdot L \cdot T_0}$$

Where:

K: hydraulic conductivity (m/s)

R: core radius (m)

r: radius of hole (m)

L: saturated length (m)

T₀: specific time for which h/h₀ is equal to 0.37 (37% variation)

2.10.1.2 Injection Tests

Injection tests consist of injecting water freely into a hole at constant flow rate for a specific amount of time. Using the equations developed by Copper and Jacobs (1946), it is possible to obtain the average K

value of the hole and the specific capacity (Sc). The Sc allows for evaluation of the approximate flow rate it could be possible to pump within the tested hole during a short period. When the position of the flow zone is known, the combined results of the injection and the Profile Tracer Test (PTT) are very efficient in predicting inflow.

Transmissivity (T) represents the volume of water flowing through a vertical section of unit width. According to Cooper-Jacob's (1946) method of analysis for pumping a free aquifer, the transmissivity (T) is calculated according to the following relationship:

$$T = \frac{0,183Q}{C}$$

Where

T: Transmissivity

Q: pumping rate during the test (m³/min);

C: slope of the drawdown as a function of time (m/min).

The value of the hydraulic conductivity (K) is a function of the transmissivity (T) calculated from the pumping test and the saturated thickness of the aquifer formation. The hydraulic conductivity is obtained by dividing the transmissivity by the saturated thickness of the aquifer. In a rock environment, this thickness is not simple to define, so the saturated length of the tested hole is considered.

2.10.1.3 Profile Tracer Test (PTT)

The Profile Tracer Test (PTT) can accurately isolate water bearing discontinuities using a groundwater tracer. Compared to packer testing, the PTTs are not affected by scale and are preferred in this type of environment. PTT consists of mixing a tracer as uniformly as possible along an open borehole. Then, a series of concentration profiles are carried out along the same hole at various intervals. The dilution of the tracer indicates the position of the flow along the borehole and the presence of vertical flow, caused by variable pressure within the discontinuities.

When the flow is mostly horizontal, it is possible to generate a profile of the Hydraulic Conductivity (K), flow rate (Q) and Darcy flux (v). If vertical flow is too great, those parameters cannot be calculated, because the average K value derived from the equations will be underestimated. This approach is currently protected under patent no US 63/275,258 and cannot be used nor copied. To maintain confidentiality on the approach, the equations are not provided publicly: therefore, comparisons of K values are possible by the reader with the PTT, slug and injection tests.

2.10.1.4 Chemical Profile (EC)

The chemical profile provides a complete profile of water temperature, total dissolved solids (TDS), electrical conductivity (EC) and salinity (S) along the drilled holes. These chemical profiles help isolate changes in water chemistry, often caused by water-containing discontinuities. They also make it possible to validate the links between water-bearing discontinuities. Those holes that were tested are listed in Appendix III.

2.10.1.5 Vertical Flow Profile

This test measures the axial velocity (upward or downward) within a specific drill hole. The probe is inserted into the drill hole to the bottom and axial flow measurements are performed every 5m. Water

bearing faults can be isolated where significant change in flow velocity occurs. This can be coupled with the PTT to obtain a better structural interpretation.

2.10.2 Water Transfer (Pump) Tests

A hydrogeological pump test was conducted from 12 December to 19 December 2023. The test pumped water from 0556-13-PW-01 via pipeline to an injected into well P499-23IW-01, a distance of approximately 1.05km (see Appendix II, Sheet A).

2.10.2.1 Hydrogeological Testing Flowrates

The average testing flow rate was 2044L/min (540Usgpm) which varied between 1590 and 2120 L/min.

2.10.2.2 Water Drawdown

The maximum drawdown measured in the pumping well was of 1.83m after 6600 minutes of pumping. Only 2 other piezometers showed drawdown, which are 0556-21-PP-001 (3.4cm at 60m distance from the well) and 0556-21-PP-011RC (56cm at 20m distance from the well).

2.10.2.3 Water Discharged

The water was discharged into hole P499-23-IW-02. The probe installed into the IW was damaged, so there are no measurements of the changes in that hole during pumping. Water did not overflow in this hole and the piezometer P499-23-IW-02 located nearby did not show any variation.

2.10.2.4 Water Quality

The probe monitoring pH, temperature and specific conductivity malfunctioned. In lieu of probe data, the water quality samples from the pumping well were sampled on Day 1, Day 3 and Day 7 (Day 7 occurring 48 hours after completion of the tests). Water quality sample results in the injection well are available pre-pumping and post-pumping. Samples in the pumping well could not be collected during the pump test due the high volume inflows. The analytical results are provided in Appendix VI and Appendix VII.

2.10.2.5 Water Quality Data Compatibility Testing

Water compatibility testing prior to testing was completed for the pumping well (0556-23-PW-01) and the injection well (P499-230IW-01). The results of the pre-pumping compatibility tests are presented in Table 8. The compatibility test criteria confirmed the waters were compatible prior to commencing water transfer. The Water Resource Officer approved these results (Appendix V) on 29 November 2023 as per Condition F.5 and as outlined in the Water Management Plan V1.2 Section 3.4.4.

Table 8 Compatibility Test Results

Water Transfer Type:	Well to Well						
Date of Sample Collection:	13 Nov 2023 14:15 (Source) and 14 Nov 2023 15:00 (Receiver)						
Source Name:	O556-23-PW-01						
Receiver Name:	P499-23-IW-01						
Sampling Notes:	Source Well ID - O556-23-PW-01 - Purge time = 21.5 hours; no field physico-chemical measurement data available at time of reporting						
	Receiver Well ID - P499-23-IW-01 - Purge time = 11.75 hours - no field physico-chemical measurement data available at time of reporting						
Screening Step 1. TDS Concentrations Derived from Field Specific Conductivity Measurements							
Source Water (the following table allows for water column or extraction well data)					O556-23-PW-01		
Depth (m)	pH	Temperature (°C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Derived TDS Calculated (mg/L)	Lab TDS Calculated (mg/L)	
Well	-	-	3,100	-	-	2,500	[Used Lab result]
Receiver Water (the following table allows for water column or injection well data)					P499-23-IW-01		
Depth (m)	pH	Temperature (°C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Derived TDS Calculated (mg/L)	Lab TDS Calculated (mg/L)	
Well	-	-	2,600	-	-	2,000	[Used Lab result]
Receiver TDS Calc +30% (mg/L)						2,600	
Note: Lab-derived Calculated TDS used - no field measured specific conductivity data available at time of reporting							
Question: Is the Source Water TDS (Calculated) less than the Receiver Water TDS (Calculated) + 30%?							
Yes, the Source water TDS is compatible with the Receiver							
Screening Step 2. Constituents of Potential Concern Concentrations							
Parameter	Units	Guideline	Source Location O556-23-PW-01 Concentration	Are Concentrations above Chronic WQ Guideline?	Receiver Location P499-23-IW-01 Concentration	Are Concentrations above Guidelines?	Are Concentrations Compatible?
Fluoride	mg/L	0.12	1.3	Yes	1.3	Yes	Yes
Sulphate ^(a)	mg/L	429	1,400	Yes	1,100	Yes	Yes
Aluminium	mg/L	0.1	0.0045	No	0.0094	No	Yes
Cadmium ^(b)	mg/L	0.37000	0.00002	No	0.00002	No	Yes
Chromium	mg/L	0.0010	0.001	No	0.0011	Yes	Yes
Copper ^(b)	mg/L	0.004	0.001	No	0.001	No	Yes
Iron	mg/L	0.3	4.6	Yes	14	Yes	Yes
Lead ^(b)	mg/L	0.007	0.0002	No	0.00064	No	Yes
Thallium	mg/L	0.0008	0.0002	No	0.0002	No	Yes
Uranium	mg/L	0.015	0.00061	No	0.00013	No	Yes
Zinc (Diss) ^(c)	mg/L	0.1031	0.003	No	0.003	No	Yes
Indicates non-detects, and reporting concentration						Compatibility Score	100%
Hardness	mg/L		1,600		1,200		
pH			7.91	[Lab pH]	7.93	[Lab pH]	
DOC	mg/L		7.2		3.4		
Risk Evaluation:							
At the time of well sampling, the Source well TDS(Calc) and COPC concentrations are compatible with the Receiver well TDS(Calc) and COPC concentrations.							
Question: Are the CoPCs in the Source compatible with those in the Receiver?							
Yes, CoPCs are compatible							
3. Acute Toxicity Tests (to be conducted if fish have been identified in the Receiver)							
	Source Pit						
Test	Result (Pass/Fail)						
Rainbow Trout	Not Applicable						
<i>Daphnia magna</i>	Not Applicable						
Question: If fish are present in the Receiver Pit, is the water in the source pit acutely toxic?							
Not Applicable							
PPML Recommendation: The Source is compatible with the Receiver							

2.10.2.6 Monitoring Results, Action Level Exceedances

The compatibility assessment for water transfers between a source and receiver for the CEP water licence is, as stated in Section 3.4 of the Water Management Plan v1.5, consistent with the v1.4 version. However, for a number of onsite reasons, the compatibility process that would be applied during the pumping test in December 2023 between the source and receiver could not be undertaken according to these requirements during the pumping process. The reasons included the short duration of the water transfer process, a lack of field monitoring data to evaluate compatibility and action levels for TDS in real-time, lab data not being reported within the pumping period to support the lack of field data and to provide a compatibility assessment for the other CoPCs, and not being able to obtain water samples from the injection well during the transfer pumping. The list of CoPCs used in the compatibility assessment and the thresholds applied to the CoPCs remains consistent with those presented in Table 3.2 of the Water Management Plan.

As a result of the limitation of the short test period and delayed lab results, the red action levels triggers were only identified following the completion of the test. Based on the Water Management Plan, a number of constituents, including total copper, total lead, dissolved zinc, total aluminum, total chromium, and total uranium, should've have triggered the relevant red action levels.

In future pumping tests, to make sure that compatibility assessments and action level screening are undertaken in accordance with the WMP requirements, PPML will make sure in situ physico-chemical field data are collected, samples for lab analysis are submitted under a rapid analysis turnaround time, and that there is a higher level of engagement with the Inspector to provide information on the status of the pumping tests, the field and lab testing results, and action level screening.

Further, as the hydrogeological test was conducted in mid-December, when the water related instrumentation malfunctioned during the test. Where practical, PPML will avoid conducting such tests in the winter months in the future. Additional water chemistry probes will be available in the future program.

2.10.2.7 Responses to Action-Level Exceedances

No exceedances were observed.

2.11 BEDROCK SAMPLING ACTIVITIES

Bedrock sampling was not undertaken during the reporting period. The bedrock sampling plan is in draft and will be updated as required prior to any bedrock sampling taking place.

2.12 CONSTRUCTION ACTIVITIES

Facilities designed to contain, withhold, divert or retain water or waste were not designed or constructed during the reporting period.

2.13 SPILL CONTINGENCY PLAN ACTIVITIES

The Spill Contingency Plan (PPML 2022b) and related activities associated with Part H of the licence were updated as part of the MV2020C0017 LUP issuance. The Spill Contingency Plan was approved by the MVLWB on April 22, 2022.

Spill training has been provided to the staff involved on the operations. These included review of standard operating procedure for reporting and cleanup of spills. Spill response training has also been provided to

new staff to the project. This document is reviewed after non-reportable spill events and periodically during toolbox meetings.

No spills occurred during 2023. Monthly Quantities of Hazardous Waste spilled per month and for the reporting period are listed in Table 10.

Table 9 Monthly and Annual Quantities and Annual of Hazardous Waste Spilled in 2023

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Volume (m ³)	0	0	0	0	0	0	0	0	0	0	0	0	0.0

2.14 CLOSURE AND RECLAMATION ACTIVITIES

Progressive reclamation activities were undertaken at site.

All drill holes have a Van Ruth grout plug placed in the bedrock just below the bedrock-till contact and are cemented in to seal the bedrock aquifer. All drill casing was removed and a 5-foot-long metal pipe was inserted in the hole as a permanent marker. The metal pipe was left in the ground and, if it extended above ground, it was cut off at or near the ground surface to help restore the drill sites' original appearance and to remove trip hazards. The drill pads were levelled, and all holes and cavities were backfilled. Piles of cuttings were broken up to allow vegetation to repopulate the area.

Drilling was conducted from January to late-May and from early-October to early December with a short break from late-April to mid-May. Drill sites and access roads were remediated after drilling was completed at a site. Pine Point has been in regular communication with the GNWT Land Use Inspector regarding the schedule of this work.

2.15 SNP DATA

2.15.1 SNP-1

Water withdrawn for approved source is tabulated in Table 1, as required by Part D, Condition Water Source and Maximum Volume.

2.15.2 SNP-2

The probe installed for pH, temperature and specific conductivity monitoring malfunctioned during the test. In lieu of the probe information additional water quality samples were collected. The results are presented in Appendix VI.

Samples of the water transferred were taken from the pipe from the Pumping Well (0556-23-PW-1) on Day 1 (12 December, 2023), on Day 3 (14 December, 2023 Pump test) and 2 days after the test was completed (21 December, 2023) (refer to Appendix VI).

2.15.3 SNP-3

The probe installed for pH, temperature and specific conductivity monitoring the piped water malfunctioned during the test

Samples of the water transferred were taken at the Discharge Location on prior to the pump test commencing and 2 days after the test was completed (21 December, 2023), refer to Appendix VII

Samples in the pumping well could not be collected during the pump test due the high volume of the inflows.

2.15.4 SNP-4

A sewage treatment plant has not been installed at the site, hence there were no releases.

2.15.5 SNP-5

No artesian wells were encountered in the reporting period.

2.15.6 SNP-6

No water was withdrawn for dust suppression.

2.16 NON-COMPLIANCES

No spills occurred during the reporting period.

2.17 INSPECTION REPORT NON-CONFORMANCES

The Land Use Inspector and Water Resource Officer undertook inspections for permit MC2020C0017 and MV2020L8-0012. The inspection reports are available on the Mackenzie Valley Land and Water Board [Public Registry](#).

MV2020C0017

Inspection 15 January 2023:

Findings:

*Great Slave Drilling Rig #5 was working on target M67-23-PP-005, while Great Slave Drilling Rig #1 was working on target M67-23-PP-029. It was noted that a plastic bucket is being used to capture the drilling waste instead of a casing pot attached to the collar. From the bucket, the waste is pumped to a natural depression. **Condition 44** - The Inspector notes that the plastic bucket system allows for an excess of water and cuttings to be released around the drill, creating an initially wet area which eventually freezes leaving slippery conditions for the workers. The Inspector recommends that the Great Slave drills switch over to using the casing pot or a similar system to keep the work area around the drill drier which allows for easier cleanup in the event of a spill and minimizes the volume of drill cuttings released around the drill.*

Spill kits and drip trays were on site at the drills and secondary containment was in place for fuel and engine oils.

Corrective Action:

PPML amended the site operating procedure to include confirmation that hole plugs were successfully installed and that PPML would approve the closure of the hole prior to the drill move.

MV2022C0017

Inspection 27 January 2023:

Findings in the X25 drill sites:

*Drill waste must be collected and contained at the collar and pumped to a natural depression for proper offsite disposal. The drill waste must be pumped to an area greater than 100 meters from the OHWM of any watercourses. It has been noted at Great Slave Drilling Limited setups that drill waste (cuttings and water) is being deposited directly under the drill in contravention of **Permit Condition #44 (Drilling Waste)** as shown in Figure 7. It is required that Great Slave Drilling Limited implements a system that will address this concern. The Inspectors recommend that Great Slave Drilling Limited use the same system currently being used by Foraco Drilling Ltd. and Northtech Drilling Ltd. who are currently operating in the Pine Point area under the authority of this land use permit. This system includes the use of a casing pot during active drilling operations and a pump in a shallow earthen sump at the collar during the setting of casing. This concern was discussed with Eric Garcelon, Exploration Geologist with Pine Point Mining Limited on January 25th, 2023. Mr. Garcelon informed the Inspectors that he would be addressing this concern with Great Slave Drilling limited.*

*A small amount of garbage was observed on the ground at the X25-23-PP-018 drill site shown in Figure 5. Two lengths of discarded pvc hose were seen sticking out of the snow on the X25-23-PP-015 drill pad shown in Figure 4. It is noted that these pvc hoses may have been left behind on a previous drill program. When drilling in winter conditions, drill sites must be inspected by drill crew prior to removal of the drill to ensure all garbage is picked up before the site is covered by snow. All garbage and waste items must be picked up and removed in accordance with **Permit Condition #52 (Waste Management)**.*

*Loader parked at the pump shack did not have a drip tray present. Drip trays must be placed under all equipment parked for two hours or more in accordance with **Permit Condition #75 (Drip Trays)**.*

*A small diesel fuel spill was observed inside the pump shack. It is noted that the pump shack has secondary containment and there was no risk of fuel dripping onto the ground. However, workers walking inside the shack can transfer this fuel to the surrounding lands. It is required that all spills be immediately cleaned up in accordance with **Permit Condition #76 (Clean Up Spills)**. This was discussed on site with Great Slave Drilling personnel.*

*The only spill response material observed on site was located inside the drill. It is noted that this small spill kit is not adequate to respond to a larger spill. Permittee must ensure that a proper sized spill kit is made available to respond to any potential spills in accordance with **Permit Condition #74 (Spill Response)**.*

Response: Drilling stopped at these locations and deferred until frozen ground conditions are present.

O26 and 27: Cuttings and water appear to continue to be discharged under the drill in some areas and not into natural depressions, as noted in the previous inspection. This method of disposal is not a concern in areas where the drilling took place on a rock pad (Y58 & Y56), however in all other areas drill waste must be disposed of as per Condition 39.

Corrective Action:

All cuttings are to be disposed of into natural depressions going forward.

MV2020C0017

Inspection 15 February 2023

Non-Compliance Findings:

- 1.) *The licensee needs to fix the plumbing leak outlined in the report. The licensee shall ensure that all structures intended to contain, withhold, divert, or retain water are designed, constructed, and maintained to minimize the escape of waste to the receiving environment. License Condition E.1.*
- 2.) *Human wastes were noted outside of facilities. The licensee shall manage Waste and Water with the objective of minimizing the impacts of the project on the quantity and quality of Water in the receiving environment through the use of appropriate mitigation measures, monitoring, and follow-up actions. License Condition F.1*

Corrective Actions:

1. The plumbing was repaired immediately. The greywater from the showers froze around the leak. The ice was chipped off and disposed of in the hazardous waste container.
2. Repairs were made to the washroom at the same time. Site advised that the washrooms were back in working order.

2.18 OTHER DETAILS REQUESTED BY THE BOARD

No other details were requested by the Board for the year being reported.

3 REFERENCES

PPML 2022a, Engagement Plan of the Confirmation and Exploration Program, Pine Point District, Northwest Territories.

PPML 2022b, Spill Contingency Plan for the Confirmation and Exploration Program, Pine Point District, Northwest Territories.

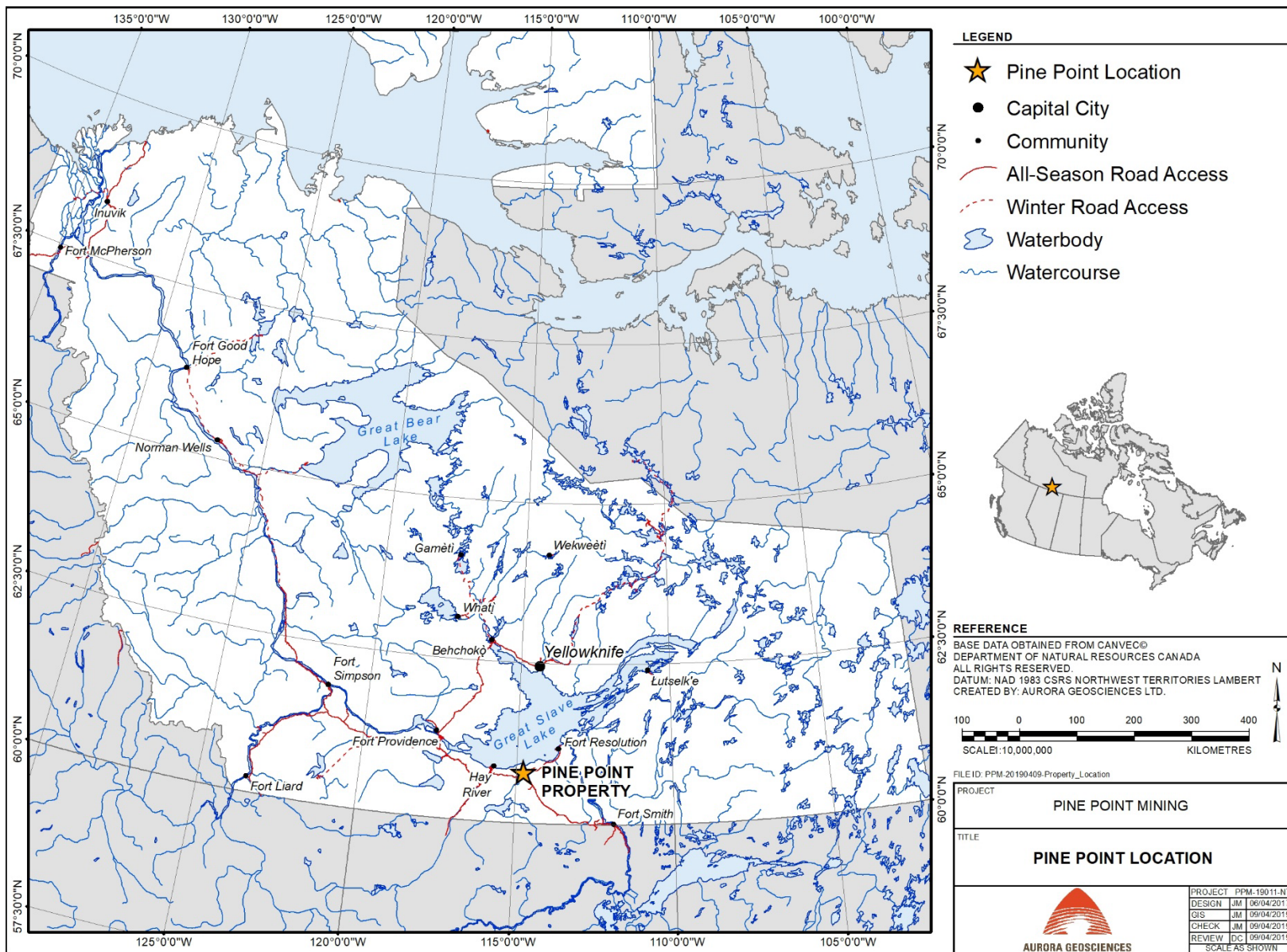


Figure 2 Regional location map

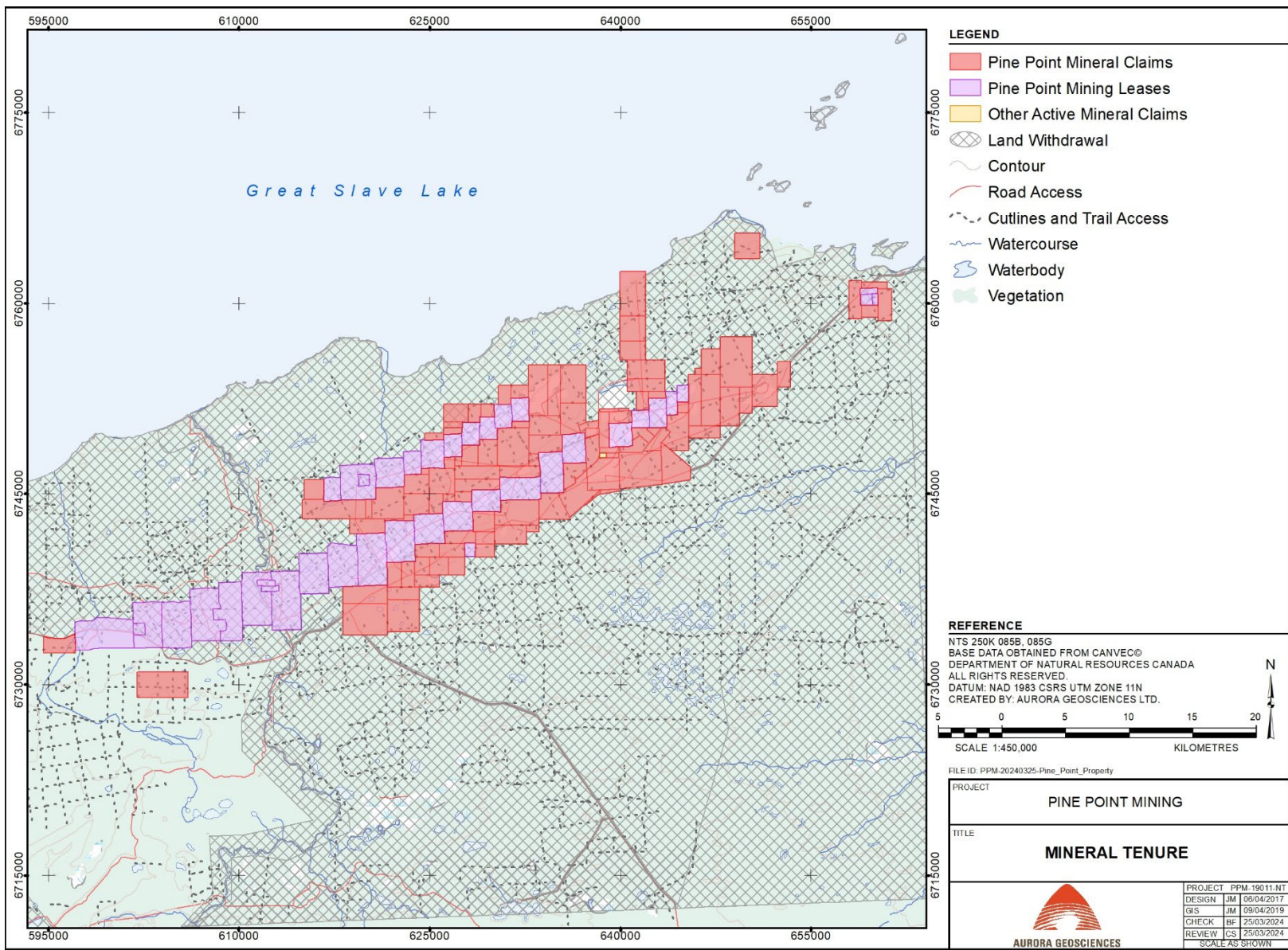


Figure 3 Property overview

Appendix I DRILL COLLAR LOCATIONS

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
BH-23-01	2023-10-05	2023-10-05	640080.07	6751193.47	11	10.70
BH-23-02	2023-10-09	2023-10-09	640048.54	6750920.24	11	14.90
BH-23-03	2023-10-05	2023-10-05	639906.60	6751115.88	11	6.70
BH-23-04	2023-10-08	2023-10-09	639964.85	6750984.98	11	13.70
BH-23-05	2023-10-08	2023-10-08	640023.26	6751023.93	11	13.40
BH-23-06	2023-10-06	2023-10-06	639975.07	6750902.73	11	17.90
BH-23-07	2023-10-09	2023-10-09	640023.20	6750861.68	11	18.30
BH-23-08	2023-10-08	2023-10-08	639879.21	6750885.21	11	15.70
BH-23-09	2023-10-09	2023-10-09	639759.24	6750829.91	11	11.70
BH-23-10	2023-10-05	2023-10-05	640134.51	6751026.51	11	14.20
BH-23-11	2023-10-06	2023-10-06	640151.99	6750987.77	11	14.90
BH-23-12	2023-11-22	2023-11-23	635508.25	6750496.41	11	14.90
BH-23-13	2023-10-10	2023-10-10	639933.83	6750852.70	11	14.20
BH-23-14	2023-11-12	2023-11-13	639888.46	6750914.47	11	6.70
BH-23-15	2023-11-29	2023-11-29	640245.53	6751149.40	11	15.00
BH-23-16	2023-11-29	2023-11-29	640367.96	6751211.71	11	13.00
C1-23-004	2023-11-17	2023-11-18	629408.34	6744960.42	11	25.00
C1-23-004-A	2023-11-18	2023-11-18	629409.59	6744958.20	11	15.50
C2-23-003	2023-11-16	2023-11-17	636685.74	6748142.58	11	24.70
C2-23-003-A	2023-11-17	2023-11-17	636686.03	6748144.31	11	15.80
EM-23-001	2023-11-06	2023-11-07	646510.45	6753236.52	11	18.10
EM-23-001-B	2023-11-07	2023-11-08	646507.77	6753235.40	11	6.40
EM-23-002	2023-11-10	2023-11-11	642535.31	6750831.04	11	13.30
EM-23-PP-001	2023-05-18	2023-05-19	641362.64	6751379.25	11	60.00
EM-23-PP-002	2023-05-18	2023-05-18	642594.95	6751354.35	11	60.00
EM-23-PP-003	2023-05-19	2023-05-19	640337.99	6750422.54	11	60.00
EM-23-PP-004	2023-05-15	2023-05-16	638482.60	6749759.28	11	60.00
EM-23-PP-004B	2023-05-16	2023-05-16	638487.56	6749759.60	11	60.00
EM-23-PP-005	2023-05-19	2023-05-20	639793.69	6749125.42	11	60.00
EM-23-PP-OS-006	2023-05-22	2023-05-22	641999.37	6751461.10	11	60.00
EM-23-PP-OS-007	2023-05-21	2023-05-21	640634.49	6750089.66	11	39.00
EM-23-PP-OS-008	2023-05-21	2023-05-21	640245.77	6749866.89	11	42.00
EM-23-PP-OS-009	2023-05-21	2023-05-21	640118.12	6749956.09	11	42.00
I46/J44-23-001	2023-11-24	2023-11-26	637543.08	6750154.81	11	72.60
J68-23-PP-001	2023-01-14	2023-01-16	627312.93	6744288.29	11	29.00
J68-23-PP-001B	2023-01-14	2023-01-16	627312.93	6744288.29	11	62.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
J68-23-PP-002	2023-01-16	2023-01-16	627262.01	6744258.41	11	65.00
J68-23-PP-003	2023-01-16	2023-01-17	627291.29	6744250.22	11	65.00
J68-23-PP-004	2023-01-17	2023-01-17	627263.38	6744211.95	11	68.00
J68-23-PP-005	2023-01-17	2023-01-17	627234.18	6744217.08	11	65.00
J68-23-PP-006	2023-01-18	2023-01-18	627184.84	6744088.35	11	77.00
J68-23-PP-007	2023-01-18	2023-01-19	627222.40	6744041.85	11	53.00
K51-23-PP-001	2023-03-07	2023-03-08	635037.45	6747935.69	11	50.00
K51-23-PP-002	2023-03-07	2023-03-07	635056.28	6747909.69	11	57.00
K51-23-PP-003	2023-03-06	2023-03-07	635081.89	6747918.09	11	44.00
K51-23-PP-004	2023-03-08	2023-03-08	635062.17	6747859.02	11	46.00
K51-23-PP-005	2023-03-06	2023-03-07	634833.21	6747776.58	11	49.00
K51-23-PP-006	2023-03-07	2023-03-07	634839.33	6747741.26	11	49.00
K51-23-PP-008	2023-03-08	2023-03-08	634984.67	6747867.63	11	53.00
K51-23-PP-009	2023-03-07	2023-03-07	634963.00	6747790.67	11	52.00
K51-23-PP-OS-001	2023-04-08	2023-04-09	634959.04	6747790.31	11	59.00
K51-23-PP-OS-002	2023-04-07	2023-04-08	634959.98	6747785.02	11	59.00
K51-23-PP-OS-003	2023-04-09	2023-04-09	634962.91	6747790.77	11	59.00
K52-23-PP-001	2023-03-14	2023-03-15	635249.42	6747538.22	11	47.00
K52-23-PP-002	2023-03-12	2023-03-13	635203.36	6747528.33	11	47.00
K52-23-PP-003	2023-03-14	2023-03-14	635186.03	6747502.01	11	43.00
K52-23-PP-004	2023-03-11	2023-03-11	635170.45	6747528.33	11	44.00
K52-23-PP-005	2023-03-13	2023-03-14	635119.31	6747501.37	11	49.00
K52-23-PP-006	2023-03-10	2023-03-10	635103.89	6747525.92	11	41.00
K52-23-PP-007	2023-03-09	2023-03-09	635089.11	6747497.78	11	42.00
K52-23-PP-008	2023-03-11	2023-03-12	635069.68	6747474.03	11	46.00
K52-23-PP-009	2023-03-12	2023-03-12	635047.06	6747443.90	11	46.00
K52-23-PP-010	2023-03-10	2023-03-11	635058.16	6747503.51	11	49.00
K52-23-PP-011	2023-03-09	2023-03-10	635025.51	6747500.54	11	43.00
K52-23-PP-012	2023-03-09	2023-03-09	635010.83	6747527.82	11	43.00
K52-23-PP-013	2023-03-15	2023-03-15	635225.53	6747596.01	11	50.00
K52-23-PP-014	2023-03-14	2023-03-14	635178.39	6747578.08	11	56.00
K52-23-PP-015	2023-03-10	2023-03-10	635043.21	6747528.28	11	43.00
K52-23-PP-016	2023-03-09	2023-03-10	635073.80	6747531.55	11	50.00
K52-23-PP-017	2023-03-12	2023-03-12	635169.53	6747480.07	11	47.00
K52-23-PP-018	2023-03-14	2023-03-14	635151.76	6747512.34	11	46.00
K52-23-PP-019	2023-03-13	2023-03-13	635205.86	6747575.85	11	44.00
K52-23-PP-020	2023-04-03	2023-04-04	634892.70	6747511.54	11	65.00
K52-23-PP-OS-001	2023-04-04	2023-04-04	635056.13	6747480.40	11	59.00
K52-23-PP-OS-002	2023-04-05	2023-04-06	635068.92	6747475.98	11	59.00
K52-23-PP-OS-003	2023-04-06	2023-04-07	635096.96	6747490.93	11	58.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
K68-23-PP-001	2023-01-20	2023-01-20	628073.31	6743959.18	11	68.00
K68-23-PP-002	2023-01-24	2023-01-24	628045.79	6743975.00	11	68.00
K68-23-PP-003	2023-01-20	2023-01-21	628044.51	6743941.04	11	72.00
K68-23-PP-004	2023-01-22	2023-01-22	628036.72	6743910.97	11	71.00
K68-23-PP-005	2023-01-22	2023-01-23	628011.85	6743894.49	11	71.00
K68-23-PP-006	2023-01-21	2023-01-21	628014.38	6743930.69	11	68.00
K68-23-PP-007	2023-01-24	2023-01-26	628010.40	6743960.23	11	68.00
K68-23-PP-008	2023-01-28	2023-01-29	627996.09	6743988.00	11	68.00
K68-23-PP-009	2023-01-28	2023-01-29	627966.66	6743972.79	11	68.00
K68-23-PP-010	2023-01-26	2023-01-26	627981.15	6743944.37	11	71.00
K68-23-PP-011	2023-01-21	2023-01-22	627982.52	6743912.07	11	71.00
K68-23-PP-012	2023-01-23	2023-01-23	627982.03	6743883.79	11	71.00
K68-23-PP-013	2023-01-23	2023-01-24	627951.12	6743900.07	11	71.00
K68-23-PP-014	2023-01-25	2023-01-26	627951.17	6743930.14	11	68.00
K68-23-PP-015	2023-02-04	2023-02-04	627934.90	6743988.63	11	65.00
K68-23-PP-016	2023-02-03	2023-02-04	627902.34	6743978.51	11	65.00
K68-23-PP-017	2023-01-29	2023-01-30	627909.00	6743949.18	11	68.00
K68-23-PP-018	2023-01-27	2023-01-27	627919.27	6743921.27	11	68.00
K68-23-PP-019	2023-01-27	2023-01-28	627922.75	6743891.81	11	74.00
K68-23-PP-020	2023-01-30	2023-01-30	627889.06	6743909.67	11	71.00
K68-23-PP-021	2023-01-31	2023-01-31	627860.65	6743898.24	11	74.00
K68-23-PP-022	2023-01-31	2023-02-02	627849.25	6743923.51	11	71.00
K68-23-PP-023	2023-02-03	2023-02-03	627871.65	6743969.79	11	65.00
K68-23-PP-024	2023-02-02	2023-02-02	627847.48	6743953.17	11	68.00
K68-23-PP-025	2023-02-06	2023-02-07	627803.30	6743865.58	11	74.00
K68-23-PP-026	2023-02-07	2023-02-08	627796.53	6743894.55	11	71.00
K68-23-PP-027	2023-02-09	2023-02-09	627789.04	6743923.71	11	68.00
K68-23-PP-028	2023-02-09	2023-02-10	627768.91	6743943.20	11	62.00
K68-23-PP-029	2023-03-07	2023-03-07	627760.78	6743909.06	11	68.00
K68-23-PP-030	2023-03-07	2023-03-08	627737.31	6743893.92	11	65.00
K68-23-PP-031	2023-03-08	2023-03-08	627771.71	6743851.82	11	71.00
K68-23-PP-032	2023-03-08	2023-03-08	627744.65	6743834.42	11	68.00
K68-23-PP-033	2023-03-09	2023-03-09	627741.37	6743865.93	11	74.00
K68-23-PP-034	2023-03-10	2023-03-10	627709.14	6743881.86	11	65.00
K68-23-PP-035	2023-03-10	2023-03-10	627708.77	6743914.98	11	59.00
K68-23-PP-036	2023-02-09	2023-02-10	627735.05	6743957.22	11	56.00
K68-23-PP-037	2023-02-11	2023-02-11	627716.09	6743944.87	11	59.00
K68-23-PP-038	2023-03-11	2023-03-11	627678.09	6743969.19	11	59.00
K68-23-PP-039	2023-03-10	2023-03-10	627678.56	6743934.53	11	62.00
K68-23-PP-040	2023-03-11	2023-03-12	627649.87	6743919.28	11	63.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
K68-23-PP-041	2023-03-13	2023-03-13	627657.90	6743887.70	11	63.00
K68-23-PP-042	2023-03-17	2023-03-18	627685.69	6743870.69	11	65.00
K68-23-PP-043	2023-03-13	2023-03-14	627688.93	6743831.85	11	72.00
K68-23-PP-044B	2023-03-20	2023-03-21	627661.75	6743855.26	11	80.00
K68-23-PP-045	2023-03-10	2023-03-11	627635.52	6743836.84	11	66.00
K68-23-PP-046	2023-02-08	2023-02-09	627609.43	6743815.76	11	72.00
K68-23-PP-047	2023-02-09	2023-02-09	627608.55	6743854.03	11	69.00
K68-23-PP-048	2023-03-12	2023-03-12	627622.51	6743901.13	11	68.00
K68-23-PP-049	2023-03-11	2023-03-12	627628.00	6743944.70	11	65.00
K68-23-PP-050	2023-03-11	2023-03-11	627630.94	6743978.21	11	62.00
K68-23-PP-051	2023-03-16	2023-03-16	627593.16	6744000.58	11	68.00
K68-23-PP-052	2023-03-16	2023-03-17	627601.19	6743969.28	11	65.00
K68-23-PP-053	2023-03-16	2023-03-16	627586.86	6743947.78	11	65.00
K68-23-PP-054	2023-03-15	2023-03-15	627545.03	6743966.05	11	65.00
K68-23-PP-055	2023-03-15	2023-03-16	627552.43	6743920.50	11	70.00
K68-23-PP-056	2023-03-14	2023-03-14	627580.46	6743910.41	11	71.00
K68-23-PP-057	2023-03-13	2023-03-13	627576.52	6743882.70	11	74.00
K68-23-PP-058	2023-03-12	2023-03-13	627593.09	6743879.07	11	71.00
K68-23-PP-059	2023-03-14	2023-03-15	627559.85	6743858.69	11	68.00
K68-23-PP-060	2023-03-14	2023-03-14	627553.44	6743827.95	11	65.00
K68-23-PP-061	2023-02-07	2023-02-08	627575.41	6743806.55	11	66.00
K68-23-PP-062	2023-01-30	2023-01-31	627896.01	6743877.90	11	68.00
K68-23-PP-063	2023-02-05	2023-02-06	628098.79	6743937.47	11	68.00
K68-23-PP-063B	2023-02-28	2023-03-01	628098.79	6743937.47	11	92.00
K68-23-PP-064	2023-02-04	2023-02-04	628100.64	6743972.68	11	68.00
K68-23-PP-064B	2023-03-02	2023-03-02	628100.64	6743972.68	11	92.00
K68-23-PP-065	2023-03-06	2023-03-06	627831.74	6743880.16	11	80.00
K68-23-PP-066	2023-03-01	2023-03-01	628071.14	6743922.12	11	92.00
K68-23-PP-067	2023-02-26	2023-02-28	628125.01	6743926.58	11	95.00
K68-23-PP-068	2023-03-02	2023-03-03	628126.87	6743956.75	11	95.00
K68-23-PP-069	2023-03-03	2023-03-04	628131.87	6743981.86	11	80.00
K68-23-PP-070	2023-03-04	2023-03-04	628109.79	6743997.57	11	80.00
K68-23-PP-071	2023-03-04	2023-03-05	628073.15	6743989.56	11	74.00
K68-23-PP-072	2023-03-05	2023-03-05	628027.68	6744000.59	11	77.00
K68-23-PP-073	2023-03-05	2023-03-06	627995.07	6744019.37	11	77.00
K68-23-PP-OS-001	2023-03-19	2023-03-20	627661.83	6743855.12	11	68.00
K68-23-PP-OS-002	2023-03-19	2023-03-20	627966.73	6743972.80	11	71.00
K68-23-PP-OS-003	2023-03-21	2023-03-22	627888.36	6743910.20	11	74.00
L27-23-006	2023-11-08	2023-11-09	645652.32	6752889.96	11	71.40
L35-23-005	2023-11-09	2023-11-10	642476.53	6751871.40	11	21.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
L35-23-GT-01	2023-11-19	2023-11-20	642235.80	6751544.43	11	75.00
L35-23-GT-02	2023-11-18	2023-11-19	641631.70	6750802.15	11	75.00
L35-23-PP-001	2023-04-14	2023-04-14	643523.61	6752143.20	11	40.00
L35-23-PP-OS-001	2023-04-13	2023-04-13	641988.43	6751457.46	11	58.00
L35-23-PP-OS-002	2023-04-13	2023-04-13	641989.44	6751457.60	11	58.00
L35-23-PP-OS-003	2023-04-14	2023-04-14	641994.80	6751459.09	11	58.00
L37-23-GT-01	2023-11-27	2023-11-29	641062.90	6750430.96	11	81.00
L37-23-GT-02	2023-11-29	2023-11-30	641285.48	6750482.49	11	93.00
L37-23-PP-001	2023-11-15	2023-11-16	640883.29	6750079.68	11	69.00
L37-23-PP-002	2023-11-16	2023-11-17	640884.27	6750078.76	11	75.00
L37-23-PP-003	2023-05-26	2023-05-28	640862.96	6750062.41	11	141.00
L39-23-PP-OS-001	2023-04-10	2023-04-12	640634.52	6750106.01	11	53.00
L39-23-PP-OS-002	2023-04-12	2023-04-12	640651.19	6750089.21	11	52.00
L65-23-GT-01	2023-10-22	2023-10-24	628705.44	6744174.85	11	90.00
L65-23-GT-02	2023-10-24	2023-10-25	628554.87	6743929.87	11	90.00
L65-23-PP-001	2023-01-21	2023-01-21	628205.48	6743688.86	11	78.00
L65-23-PP-002	2023-01-26	2023-01-27	628246.97	6743666.41	11	90.00
L65-23-PP-003	2023-01-25	2023-01-26	628235.66	6743691.64	11	18.00
L65-23-PP-003A	2023-01-25	2023-01-26	628235.66	6743691.64	11	75.00
L65-23-PP-004	2023-01-24	2023-01-25	628226.69	6743709.41	11	69.00
L65-23-PP-005	2023-01-21	2023-01-22	628197.63	6743719.33	11	75.00
L65-23-PP-006	2023-01-21	2023-01-22	628157.87	6743717.65	11	90.00
L65-23-PP-007	2023-01-22	2023-01-23	628146.29	6743742.05	11	90.00
L65-23-PP-008	2023-01-23	2023-01-24	628165.06	6743772.37	11	90.00
L65-23-PP-009	2023-01-24	2023-01-24	628175.30	6743750.24	11	90.00
L65-23-PP-010	2023-01-22	2023-01-23	628184.29	6743730.93	11	90.00
L65-23-PP-011	2023-01-23	2023-01-24	628214.59	6743738.01	11	90.00
L65-23-PP-012	2023-01-31	2023-02-01	628203.48	6743762.03	11	78.00
L65-23-PP-013	2023-01-30	2023-01-31	628192.97	6743785.61	11	90.00
L65-23-PP-014	2023-02-01	2023-02-03	628224.54	6743784.51	11	90.00
L65-23-PP-015	2023-02-03	2023-02-04	628237.99	6743759.49	11	66.00
L65-23-PP-016	2023-02-04	2023-02-05	628248.36	6743737.58	11	90.00
L65-23-PP-017	2023-02-05	2023-02-06	628256.91	6743718.64	11	72.00
L65-23-PP-018	2023-01-27	2023-01-28	628275.97	6743677.32	11	90.00
L65-23-PP-019	2023-03-01	2023-03-01	628304.55	6743683.50	11	92.00
L65-23-PP-020	2023-02-08	2023-02-10	628331.95	6743697.80	11	92.00
L65-23-PP-021	2023-02-27	2023-02-28	628294.84	6743707.62	11	92.00
L65-23-PP-022	2023-02-07	2023-02-07	628323.98	6743718.65	11	92.00
L65-23-PP-023	2023-02-26	2023-02-27	628284.92	6743730.54	11	92.00
L65-23-PP-024	2023-02-10	2023-02-10	628274.14	6743751.98	11	92.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
L65-23-PP-025	2023-02-09	2023-02-09	628264.65	6743772.61	11	95.00
L65-23-PP-026	2023-02-08	2023-02-08	628255.60	6743793.15	11	92.00
L65-23-PP-027	2023-02-03	2023-02-03	628279.28	6743811.60	11	90.00
L65-23-PP-028	2023-01-31	2023-02-01	628307.40	6743822.09	11	92.00
L65-23-PP-029	2023-02-04	2023-02-05	628290.66	6743785.76	11	92.00
L65-23-PP-030	2023-02-05	2023-02-05	628302.63	6743764.18	11	71.00
L65-23-PP-031	2023-01-30	2023-01-31	628319.86	6743795.46	11	90.00
L65-23-PP-032	2023-02-03	2023-02-03	628329.67	6743774.86	11	92.00
L65-23-PP-033	2023-02-06	2023-02-06	628313.38	6743738.36	11	92.00
L65-23-PP-034	2023-02-05	2023-02-06	628350.13	6743731.11	11	91.00
L65-23-PP-035	2023-02-07	2023-02-08	628339.57	6743752.31	11	76.00
L65-23-PP-036	2023-01-20	2023-01-22	628358.51	6743784.14	11	75.00
L65-23-PP-037	2023-01-21	2023-01-22	628384.95	6743781.72	11	73.00
L65-23-PP-038	2023-01-23	2023-01-24	628352.07	6743813.36	11	69.00
L65-23-PP-039	2023-01-28	2023-01-29	628335.28	6743833.51	11	41.00
L65-23-PP-039B	2023-01-28	2023-01-29	628335.28	6743833.51	11	71.00
L65-23-PP-040	2023-02-02	2023-02-05	628356.64	6743847.17	11	74.00
L65-23-PP-041	2023-01-22	2023-01-23	628398.77	6743841.39	11	76.00
L65-23-PP-042	2023-01-23	2023-01-23	628390.77	6743860.98	11	87.00
L65-23-PP-043	2023-02-01	2023-02-02	628368.77	6743867.47	11	82.00
L65-23-PP-044	2023-01-24	2023-01-25	628390.81	6743877.68	11	91.00
L65-23-PP-045	2023-01-31	2023-02-01	628337.98	6743898.48	11	82.00
L65-23-PP-046	2023-01-30	2023-01-31	628363.45	6743911.53	11	85.00
L65-23-PP-047	2023-01-29	2023-01-30	628374.47	6743935.27	11	82.00
L65-23-PP-048	2023-01-28	2023-01-29	628390.84	6743917.80	11	88.00
L65-23-PP-049	2023-01-27	2023-01-28	628412.74	6743935.22	11	85.00
L65-23-PP-050	2023-01-26	2023-01-27	628406.34	6743895.42	11	97.00
L65-23-PP-051	2023-02-27	2023-02-27	628445.49	6743869.88	11	91.00
L65-23-PP-052	2023-03-02	2023-03-02	628527.14	6743955.19	11	79.00
L65-23-PP-053	2023-03-03	2023-03-03	628519.54	6743982.63	11	79.00
L65-23-PP-054	2023-02-28	2023-02-28	628546.52	6744003.02	11	79.00
L65-23-PP-055	2023-03-01	2023-03-01	628567.25	6743990.55	11	64.00
L65-23-PP-056	2023-03-01	2023-03-02	628594.58	6743973.73	11	79.00
L65-23-PP-057	2023-03-02	2023-03-02	628820.36	6743999.27	11	83.00
L65-23-PP-058	2023-03-01	2023-03-02	628846.34	6744003.40	11	77.00
L65-23-PP-059	2023-01-12	2023-01-13	628681.69	6744175.58	11	65.00
L65-23-PP-060	2023-01-12	2023-01-12	628710.16	6744206.12	11	74.00
L65-23-PP-061	2023-01-09	2023-01-10	628695.07	6744229.18	11	71.10
L65-23-PP-062	2023-01-11	2023-01-11	628664.98	6744219.12	11	68.00
L65-23-PP-063	2023-01-28	2023-01-30	628229.33	6743657.97	11	78.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
L65-23-PP-OS-001	2023-04-17	2023-04-17	628260.53	6743754.00	11	90.00
L65-23-PP-OS-002	2023-04-09	2023-04-11	628268.57	6743752.12	11	90.00
L65-23-PP-OS-003B	2023-04-12	2023-04-12	628265.56	6743759.25	11	90.00
L65-23-PP-OS-003B	2023-04-12	2023-04-12	628265.56	6743759.25	11	90.00
M40-23-003	2023-11-12	2023-11-13	639916.62	6749905.22	11	16.50
M40-23-GT-01	2023-11-13	2023-11-14	639769.97	6749466.78	11	81.00
M40-23-PP-OS-001	2023-04-13	2023-04-13	640243.54	6749871.77	11	45.00
M40-23-PP-OS-002	2023-04-13	2023-04-14	640240.02	6749879.28	11	42.00
M40-23-PP-OS-003	2023-04-16	2023-04-16	640234.35	6749897.47	11	44.00
M40-23-PP-OS-004	2023-04-15	2023-04-16	640020.52	6749532.25	11	62.00
M40-23-PP-OS-005	2023-04-16	2023-04-16	640011.04	6749529.10	11	60.00
M48-23-PP-001	2023-04-09	2023-04-10	636391.06	6747717.68	11	48.00
M48-23-PP-002	2023-04-10	2023-04-10	636440.00	6747754.39	11	51.00
M48-23-PP-003	2023-04-11	2023-04-11	636479.97	6747835.14	11	45.00
M48-23-PP-003	2023-04-11	2023-04-11	636391.41	6747714.92	11	45.00
M48-23-PP-OS-001	2023-04-10	2023-04-11	636439.22	6747753.26	11	55.00
M48-23-PP-OS-002	2023-04-12	2023-04-12	636480.08	6747835.09	11	55.00
M48-23-PP-OS-002B	2023-04-10	2023-04-10	636479.79	6747835.70	11	55.00
M48-23-PP-OS-003B	2023-04-11	2023-04-11	636391.41	6747714.92	11	55.00
M62-23-PP-001	2023-01-17	2023-01-18	630064.70	6744825.75	11	88.00
M62-23-PP-002	2023-01-15	2023-01-16	630066.44	6744800.94	11	58.00
M62-23-PP-003	2023-01-18	2023-01-18	630002.45	6744774.61	11	67.00
M62-23-PP-004	2023-01-19	2023-01-20	629975.60	6744791.69	11	61.00
M62-23-PP-005	2023-04-08	2023-04-09	629867.63	6744775.39	11	57.00
M62-23-PP-006	2023-01-17	2023-01-18	629844.02	6744758.06	11	23.00
M62-23-PP-006B	2023-01-18	2023-01-19	629844.02	6744758.06	11	63.00
M62-23-PP-007	2023-01-16	2023-01-18	629815.64	6744759.71	11	54.00
M62-23-PP-007B	2023-01-16	2023-01-18	629815.64	6744759.71	11	65.00
M62-23-PP-008	2023-01-08	2023-01-09	630126.16	6744498.38	11	23.00
M62-23-PP-008B	2023-01-09	2023-01-13	630126.16	6744498.38	11	62.00
M62-23-PP-009	2023-01-14	2023-01-15	630093.09	6744466.28	11	67.00
M62-23-PP-010	2023-01-13	2023-01-14	630082.90	6744493.14	11	73.00
M62-23-PP-011	2023-01-11	2023-01-12	630063.57	6744478.92	11	69.00
M62-23-PP-012	2023-01-14	2023-01-15	630051.41	6744439.23	11	71.00
M62-23-PP-013	2023-04-07	2023-04-08	629811.44	6744581.83	11	84.00
M62-23-PP-014	2023-04-09	2023-04-09	629761.07	6744584.86	11	36.00
M62-23-PP-014B	2023-04-09	2023-04-11	629761.07	6744584.86	11	87.00
M62-23-PP-015	2023-04-16	2023-04-16	629791.93	6744546.87	11	87.00
M62-23-PP-016	2023-04-16	2023-04-16	629778.32	6744519.10	11	90.00
M62-23-PP-017	2023-04-18	2023-04-18	629785.37	6744486.75	11	90.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
M62-23-PP-018	2023-04-19	2023-04-20	629748.16	6744482.93	11	90.00
M62-23-PP-019	2023-04-18	2023-04-19	629718.59	6744482.41	11	90.00
M62-23-PP-020	2023-04-19	2023-04-20	629749.55	6744452.15	11	90.00
M62-23-PP-OS-001	2023-04-22	2023-04-23	629480.13	6744339.05	11	90.00
M62-23-PP-OS-002	2023-04-20	2023-04-20	629497.52	6744344.05	11	90.00
M62-23-PP-OS-003	2023-04-20	2023-04-21	629487.68	6744344.05	11	90.00
M63-23-GT-01	2023-10-26	2023-10-28	629593.39	6744430.50	11	87.00
M63-23-GT-02	2023-10-25	2023-10-26	630136.27	6744520.70	11	65.00
M63-23-GT-03	2023-11-01	2023-11-02	629588.62	6744347.42	11	90.00
M67-23-GT-01	2023-10-29	2023-10-31	627893.71	6743538.72	11	102.00
M67-23-GT-02	2023-10-31	2023-10-31	628189.02	6743676.26	11	75.00
M67-23-PP-001	2023-01-07	2023-01-08	627896.27	6743459.13	11	72.00
M67-23-PP-002	2023-01-08	2023-01-09	627888.18	6743480.04	11	75.00
M67-23-PP-003	2023-01-09	2023-01-09	627961.03	6743512.69	11	75.00
M67-23-PP-004	2023-01-09	2023-01-09	627987.71	6743495.50	11	75.00
M67-23-PP-005	2023-01-15	2023-01-16	628004.09	6743513.80	11	78.00
M67-23-PP-006	2023-01-10	2023-01-10	628012.41	6743480.05	11	72.00
M67-23-PP-007	2023-01-11	2023-01-16	628025.08	6743503.20	11	75.00
M67-23-PP-008	2023-01-11	2023-01-11	628042.06	6743477.46	11	75.00
M67-23-PP-009	2023-01-17	2023-01-18	628057.28	6743511.82	11	81.00
M67-23-PP-010	2023-01-18	2023-01-18	628067.72	6743490.21	11	75.00
M67-23-PP-011	2023-01-18	2023-01-18	628080.42	6743517.91	11	78.00
M67-23-PP-012	2023-01-18	2023-01-19	628108.43	6743517.01	11	75.00
M67-23-PP-013	2023-01-18	2023-01-19	628124.72	6743539.00	11	81.00
M67-23-PP-014	2023-01-19	2023-01-20	628130.94	6743564.39	11	81.00
M67-23-PP-015	2023-01-16	2023-01-17	628038.93	6743569.95	11	81.00
M67-23-PP-016	2023-01-16	2023-01-16	628029.48	6743587.88	11	81.00
M67-23-PP-017	2023-01-21	2023-01-21	628039.10	6743621.93	11	81.00
M67-23-PP-018	2023-01-08	2023-01-10	628064.79	6743667.54	11	81.00
M67-23-PP-019	2023-01-10	2023-01-11	628103.25	6743662.02	11	81.00
M67-23-PP-020	2023-01-11	2023-01-12	628100.70	6743635.27	11	84.00
M67-23-PP-021	2023-01-12	2023-01-13	628139.96	6743621.65	11	84.00
M67-23-PP-022	2023-01-13	2023-01-15	628137.83	6743643.05	11	84.00
M67-23-PP-023	2023-01-15	2023-01-16	628125.07	6743683.04	11	75.00
M67-23-PP-024	2023-01-16	2023-01-17	628156.57	6743686.50	11	78.00
M67-23-PP-025	2023-01-17	2023-01-19	628174.79	6743675.15	11	78.00
M67-23-PP-026	2023-01-20	2023-01-21	628195.15	6743674.40	11	78.00
M67-23-PP-027	2023-01-26	2023-01-27	627958.20	6743481.20	11	69.00
M67-23-PP-028	2023-01-26	2023-01-27	627930.84	6743513.22	11	69.00
M67-23-PP-029	2023-01-25	2023-01-25	627908.70	6743497.53	11	66.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
M67-23-PP-030	2023-01-25	2023-01-26	627923.68	6743471.15	11	69.00
M67-23-PP-OS-001	2023-04-03	2023-04-06	628038.19	6743566.13	11	90.00
M67-23-PP-OS-002	2023-04-07	2023-04-08	628041.49	6743566.99	11	90.00
N1-23-005	2023-11-22	2023-11-22	635055.43	6752955.00	11	20.40
N1-23-006	2023-11-20	2023-11-20	630426.62	6750233.07	11	23.30
N1-23-007	2023-11-19	2023-11-20	627169.87	6748190.92	11	24.00
N204-23-013	2023-11-02	2023-11-04	659294.00	6760985.92	11	19.00
N204-23-GT-01	2023-11-10	2023-11-11	659331.06	6760687.14	11	71.00
N204-23-GT-01B	2023-11-12	2023-11-13	659330.05	6760686.81	11	72.00
N204-23-GT-02	2023-11-11	2023-11-12	659430.77	6760265.99	11	75.00
N2-23-008	2023-11-18	2023-11-19	619322.50	6746590.21	11	37.50
N32-23-PP-001	2023-05-18	2023-05-18	643133.85	6751071.90	11	42.00
N33-23-PP-OS-001	2023-04-07	2023-04-08	643103.61	6751191.50	11	40.00
N42/O42-23-002	2023-11-13	2023-11-16	639588.98	6748313.56	11	68.00
NE1-23-009	2023-10-10	2023-10-10	641278.89	6757991.34	11	26.40
O53-23-GT-01	2023-11-02	2023-11-05	633963.70	6745787.81	11	99.00
O53-23-GT-02	2023-11-05	2023-11-09	633867.98	6745650.38	11	102.00
O53-23-PP-OS-001	2023-05-22	2023-05-23	634078.76	6745736.64	11	90.00
O53-23-PP-OS-002	2023-05-24	2023-05-24	633952.03	6745698.50	11	72.00
O53-23-PP-OS-003	2023-05-24	2023-05-24	633950.10	6745700.78	11	72.00
O556-23-PP-001	2023-03-15	2023-03-15	599505.06	6734180.17	11	192.00
O556-23-PP-002	2023-03-15	2023-03-17	599513.83	6734141.95	11	192.00
O556-23-PP-003	2023-03-19	2023-03-29	599478.30	6734123.41	11	192.00
O556-23-PP-004	2023-03-17	2023-03-19	599520.11	6734108.25	11	192.00
O556-23-PP-005	2023-03-29	2023-03-30	599498.00	6734109.78	11	192.00
O556-23-PP-006	2023-03-25	2023-03-26	599446.52	6734128.37	11	192.00
O556-23-PP-007	2023-03-24	2023-03-25	599423.17	6734115.15	11	192.00
O556-23-PP-008	2023-03-26	2023-03-27	599428.82	6734088.75	11	192.00
O556-23-PP-009	2023-03-27	2023-03-28	599459.05	6734080.69	11	192.00
O556-23-PP-010	2023-03-30	2023-03-31	599487.11	6734076.18	11	192.00
O556-23-PP-OS-001	2023-03-31	2023-04-02	599467.78	6734110.89	11	192.00
O556-23-PP-OS-002	2023-04-03	2023-04-05	599458.81	6734080.62	11	192.00
O556-23-PW-01	2023-10-22	2023-10-28	599521.15	6734121.75	11	138.70
P499-23-IW-01	2023-10-13	2023-10-17	600001.18	6733756.54	11	128.04
P499-23-IW-02	2023-10-17	2023-10-22	599872.21	6733703.39	11	128.04
P499-23-PP-001	2023-04-02	2023-04-04	600340.13	6733557.90	11	168.00
P499-23-PP-002	2023-04-01	2023-04-01	600307.90	6733557.04	11	186.00
P499-23-PP-003	2023-03-30	2023-04-01	600270.86	6733559.56	11	189.00
P499-23-PP-004	2023-04-05	2023-04-06	600280.51	6733578.00	11	189.00
P499-23-PP-OS-001	2023-04-06	2023-04-08	600316.91	6733578.96	11	190.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
P499-23-PP-OS-001B	2023-04-06	2023-04-08	600316.97	6733579.10	11	92.00
R190-23-GT-02	2023-12-01	2023-12-03	602245.22	6734345.95	11	186.00
T37-23-PP-001	2023-03-15	2023-03-15	640676.53	6757978.24	11	25.00
T37-23-PP-002	2023-04-05	2023-04-06	640713.17	6758002.97	11	36.00
T37-23-PP-003	2023-03-16	2023-03-17	640778.56	6758025.86	11	30.00
T37-23-PP-004	2023-03-16	2023-03-16	640820.69	6758038.78	11	27.00
T37-23-PP-005	2023-03-17	2023-03-18	640849.93	6758072.40	11	30.00
T37-23-PP-006	2023-03-17	2023-03-17	640881.81	6758103.90	11	33.00
T37-23-PP-007	2023-03-17	2023-03-17	640699.88	6757937.91	11	33.00
TSFE-23-006	2023-10-12	2023-10-12	643536.85	6754692.73	11	28.90
TSFE-23-007	2023-11-10	2023-11-10	641996.12	6753612.43	11	21.00
TSFE-23-008	2023-11-10	2023-11-11	642846.89	6752675.49	11	13.40
TSFE-23-009	2023-11-11	2023-11-12	642905.01	6753738.09	11	21.90
TSFE-23-010	2023-10-11	2023-10-11	642602.68	6754724.31	11	27.30
TSFE-23-010-B	2023-10-10	2023-10-10	641673.08	6755315.76	11	20.30
TSFW-23-001	2023-11-27	2023-11-27	637415.75	6750616.01	11	18.10
TSFW-23-002	2023-10-25	2023-10-26	635753.37	6752443.55	11	27.30
TSFW-23-003	2023-10-20	2023-10-24	635443.04	6750856.80	11	21.00
TSFW-23-004	2023-11-23	2023-11-23	636147.44	6751531.85	11	21.00
TSFW-23-005	2023-11-28	2023-11-28	637162.75	6752260.26	11	23.20
W85-23-GT-01	2023-11-25	2023-11-27	619792.89	6746348.06	11	156.00
W85-23-GT-02	2023-11-22	2023-11-24	619667.55	6746537.74	11	120.00
WZ-23-011	2023-10-31	2023-11-02	607052.99	6736085.90	11	46.00
WZ-23-012	2023-10-29	2023-10-31	601392.09	6734106.06	11	46.00
X15/W17-23-007	2023-11-04	2023-11-05	650875.37	6752930.86	11	63.40
X15/W17-23-007A	2023-11-05	2023-11-06	650872.61	6752931.13	11	2.10
X18-23-PP-003	2023-03-19	2023-03-21	650112.85	6764586.09	11	57.00
X18-23-PP-008	2023-03-21	2023-03-22	650089.47	6764561.05	11	21.00
X25-23-PP-001	2023-01-28	2023-02-01	606181.53	6735791.15	11	198.00
X25-23-PP-002	2023-02-07	2023-02-09	606188.79	6735823.70	11	129.00
X25-23-PP-002B	2023-02-02	2023-02-10	606188.79	6735823.70	11	201.00
X25-23-PP-003	2023-03-02	2023-03-07	606196.90	6735806.82	11	198.00
X25-23-PP-004	2023-02-26	2023-03-02	606219.05	6735811.93	11	195.00
X25-23-PP-005	2023-03-08	2023-03-10	606255.65	6735834.83	11	180.00
X25-23-PP-006	2023-02-07	2023-02-08	606291.51	6735819.45	11	165.00
X25-23-PP-007	2023-02-05	2023-02-06	606317.42	6735797.58	11	177.00
X25-23-PP-008	2023-02-04	2023-02-05	606325.71	6735767.88	11	138.00
X25-23-PP-009	2023-02-03	2023-02-04	606344.33	6735740.02	11	138.00
X25-23-PP-010	2023-02-02	2023-02-03	606367.38	6735727.77	11	147.00
X25-23-PP-011	2023-02-01	2023-02-02	606369.91	6735751.31	11	141.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
X25-23-PP-012	2023-01-31	2023-02-01	606390.81	6735742.59	11	144.00
X25-23-PP-013	2023-01-31	2023-01-31	606407.93	6735753.18	11	144.00
X25-23-PP-014	2023-01-29	2023-01-30	606436.12	6735767.24	11	150.00
X25-23-PP-015	2023-01-26	2023-01-27	606392.60	6735773.01	11	153.00
X25-23-PP-016	2023-01-26	2023-01-27	606413.11	6735780.15	11	141.00
X25-23-PP-017	2023-01-28	2023-01-29	606439.30	6735790.60	11	126.00
X25-23-PP-018	2023-01-24	2023-01-25	606403.27	6735812.14	11	144.00
X25-23-PP-019	2023-01-21	2023-01-24	606391.02	6735840.19	11	138.00
X25-23-PP-020	2023-03-12	2023-03-12	606338.81	6735843.24	11	105.00
X25-23-PP-021	2023-02-08	2023-02-09	606306.40	6735870.80	11	177.00
X25-23-PP-022	2023-03-10	2023-03-12	606311.96	6735895.43	11	153.00
X25-23-PP-023	2023-03-10	2023-03-11	606331.77	6735879.09	11	180.00
X25-23-PP-024	2023-03-14	2023-03-16	606351.54	6735865.84	11	156.00
X25-23-PP-025	2023-03-11	2023-03-12	606372.87	6735865.82	11	138.00
X25-23-PP-026	2023-01-16	2023-01-20	606414.75	6735854.09	11	153.00
X25-23-PP-027	2023-03-16	2023-03-17	606457.43	6735861.32	11	132.00
X25-23-PP-028	2023-01-10	2023-01-15	606439.94	6735868.28	11	154.00
X25-23-PP-029	2023-03-12	2023-03-14	606398.50	6735882.37	11	132.00
X25-23-PP-030	2023-03-06	2023-03-08	606356.22	6735893.80	11	183.00
X25-23-PP-031	2023-03-08	2023-03-09	606336.80	6735921.51	11	147.00
X25-23-PP-032	2023-03-05	2023-03-05	606383.61	6735909.35	11	138.00
X25-23-PP-033	2023-03-01	2023-03-02	606441.99	6735961.84	11	141.00
X25-23-PP-034	2023-03-02	2023-03-03	606480.24	6735924.59	11	150.00
X25-23-PP-035	2023-03-04	2023-03-04	606497.37	6735893.16	11	150.00
X25-23-PP-036	2023-02-28	2023-03-01	606518.49	6735878.19	11	150.00
X25-23-PP-037	2023-02-28	2023-03-01	606524.38	6735906.10	11	150.00
X25-23-PP-038	2023-02-25	2023-02-27	606564.99	6735907.07	11	150.00
X25-23-PP-039	2023-02-12	2023-02-26	606546.02	6735920.61	11	144.00
X25-23-PP-040	2023-02-08	2023-02-09	606554.45	6735945.55	11	144.00
X25-23-PP-041	2023-02-10	2023-02-10	606524.66	6735963.05	11	144.00
X25-23-PP-OS-001	2023-03-20	2023-03-22	606480.16	6735924.57	11	180.00
X25-23-PP-OS-002	2023-03-20	2023-03-23	606480.02	6735924.53	11	155.00
X49-23-PP-001	2023-03-24	2023-03-24	636108.48	6754449.24	11	38.00
X49-23-PP-002	2023-03-23	2023-03-24	636103.46	6754467.71	11	29.00
X49-23-PP-003	2023-03-23	2023-03-23	636092.92	6754480.19	11	38.00
X49-23-PP-004	2023-03-24	2023-03-24	636058.42	6754468.74	11	26.00
X49-23-PP-005	2023-03-24	2023-03-24	636065.01	6754457.54	11	41.00
X49-23-PP-006	2023-03-25	2023-03-25	636072.48	6754434.76	11	26.00
X49-23-PP-007	2023-03-25	2023-03-26	636074.39	6754408.23	11	38.00
X49-23-PP-008	2023-03-25	2023-03-25	636037.98	6754390.50	11	41.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
X49-23-PP-009	2023-03-26	2023-03-26	636024.66	6754374.06	11	23.00
X49-23-PP-010	2023-03-26	2023-03-26	636000.47	6754333.02	11	41.00
X49-23-PP-011	2023-03-26	2023-03-26	635970.75	6754306.89	11	41.00
X49-23-PP-012	2023-03-27	2023-03-27	635940.96	6754313.93	11	41.00
X49-23-PP-013	2023-03-27	2023-03-27	635932.01	6754331.91	11	29.00
X49-23-PP-014	2023-03-26	2023-03-26	635937.94	6754353.61	11	41.00
X49-23-PP-015	2023-03-27	2023-03-27	635854.86	6754278.00	11	29.00
X49-23-PP-016	2023-03-27	2023-03-28	635697.07	6754265.96	11	29.00
X49-23-PP-017	2023-03-28	2023-03-28	635678.97	6754230.71	11	32.00
X49-23-PP-018	2023-03-28	2023-03-28	635673.31	6754215.10	11	41.00
X49-23-PP-019	2023-03-29	2023-03-29	635653.02	6754185.97	11	32.00
X49-23-PP-020	2023-03-28	2023-03-29	635633.47	6754227.98	11	26.00
X49-23-PP-021	2023-03-28	2023-03-28	635593.18	6754226.59	11	32.00
X49-23-PP-022	2023-03-29	2023-03-29	635615.84	6754180.53	11	32.00
X49-23-PP-023	2023-03-29	2023-03-29	635617.64	6754163.58	11	41.00
X49-23-PP-024	2023-03-29	2023-03-30	635590.71	6754148.29	11	32.00
X49-23-PP-025	2023-03-30	2023-03-30	635475.11	6754108.32	11	26.00
X49-23-PP-026	2023-03-30	2023-03-30	635448.08	6754083.84	11	29.00
X49-23-PP-027	2023-03-30	2023-03-30	635434.58	6754110.75	11	29.00
X49-23-PP-028	2023-03-31	2023-03-31	635367.26	6754142.88	11	38.00
X49-23-PP-029	2023-03-31	2023-03-31	635357.57	6754159.02	11	38.00
X49-23-PP-030	2023-04-01	2023-04-01	635326.22	6754154.42	11	38.00
X49-23-PP-031	2023-04-01	2023-04-01	635336.49	6754120.16	11	20.00
X49-23-PP-OS-001	2023-03-31	2023-03-31	635436.05	6754110.51	11	35.00
X59-23-PP-001	2023-03-16	2023-03-17	631479.06	6752138.94	11	58.00
X59-23-PP-002	2023-03-17	2023-03-17	631435.74	6752117.11	11	58.00
X59-23-PP-003	2023-03-19	2023-03-19	631499.99	6752094.49	11	58.00
X59-23-PP-004	2023-04-02	2023-04-02	631540.61	6752092.26	11	62.00
X59-23-PP-005	2023-03-18	2023-03-18	631518.81	6752055.78	11	61.00
X59-23-PP-006	2023-03-20	2023-03-21	631605.13	6752072.38	11	46.00
X59-23-PP-007	2023-03-20	2023-03-20	631657.88	6752040.02	11	40.00
X59-23-PP-008	2023-03-20	2023-03-20	631602.48	6752046.21	11	40.00
X59-23-PP-009	2023-03-21	2023-03-21	631572.14	6752039.10	11	58.00
X59-23-PP-010	2023-03-19	2023-03-19	631545.96	6752025.50	11	55.00
X59-23-PP-011	2023-03-18	2023-03-18	631497.88	6752039.08	11	61.00
X59-23-PP-012	2023-03-21	2023-03-22	631524.00	6751996.16	11	55.00
X59-23-PP-013	2023-03-22	2023-03-22	631510.48	6751971.46	11	58.00
X59-23-PP-014	2023-03-22	2023-03-22	631496.55	6751944.06	11	37.00
X59-23-PP-015	2023-03-23	2023-03-23	631458.22	6751973.45	11	58.00
X59-23-PP-016	2023-03-22	2023-03-23	631470.67	6751929.71	11	52.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
X59-23-PP-017	2023-03-22	2023-03-22	631458.13	6751903.88	11	58.00
X59-23-PP-OS-001	2023-04-03	2023-04-04	631504.73	6751956.53	11	62.00
X59-23-PP-OS-002	2023-04-02	2023-04-03	631548.16	6752017.36	11	62.00
X60-23-PP-001	2023-03-22	2023-03-22	631373.19	6751832.65	11	50.00
X60-23-PP-002	2023-03-20	2023-03-20	631327.73	6751848.72	11	41.00
X60-23-PP-003	2023-03-21	2023-03-21	631349.56	6751795.42	11	50.00
X60-23-PP-004	2023-03-19	2023-03-20	631318.43	6751808.08	11	56.00
X60-23-PP-005	2023-03-21	2023-03-21	631297.73	6751772.80	11	50.00
X60-23-PP-006	2023-03-18	2023-03-18	631269.94	6751825.49	11	51.00
X60-23-PP-007	2023-03-19	2023-03-19	631238.17	6751832.28	11	50.00
X60-23-PP-008	2023-03-19	2023-03-19	631195.34	6751860.31	11	38.00
X60-23-PP-009	2023-04-06	2023-04-06	631215.29	6751807.69	11	39.00
X60-23-PP-010	2023-03-17	2023-03-17	631241.18	6751751.22	11	50.00
X60-23-PP-011	2023-03-16	2023-03-17	631145.20	6751730.95	11	35.00
X60-23-PP-OS-001	2023-04-05	2023-04-06	631216.29	6751734.97	11	62.00
X60-23-PP-OS-002	2023-04-04	2023-04-05	631289.01	6751797.63	11	62.00
X61-23-PP-001	2023-03-25	2023-03-25	630345.37	6751380.14	11	55.00
X61-23-PP-002	2023-03-24	2023-03-24	630338.28	6751414.44	11	53.00
X61-23-PP-OS-002	2023-04-01	2023-04-02	630520.38	6751495.86	11	65.00
X64-23-PP-001	2023-04-04	2023-04-04	628896.89	6750521.46	11	61.00
X64-23-PP-002	2023-04-05	2023-04-05	628874.96	6750538.21	11	61.00
X64-23-PP-003	2023-04-05	2023-04-05	628868.84	6750560.75	11	61.00
X64-23-PP-004	2023-04-06	2023-04-06	628856.20	6750552.66	11	60.00
X64-23-PP-005	2023-04-03	2023-04-04	628783.85	6750512.50	11	61.00
X64-23-PP-006	2023-04-03	2023-04-03	628775.12	6750527.53	11	60.00
X64-23-PP-007	2023-04-02	2023-04-02	628764.07	6750515.21	11	61.00
X64-23-PP-008	2023-04-01	2023-04-01	628740.22	6750516.10	11	61.00
X64-23-PP-009	2023-04-02	2023-04-02	628748.82	6750503.04	11	61.00
X64-23-PP-010	2023-03-31	2023-04-01	628737.05	6750491.07	11	60.00
X64-23-PP-011	2023-03-30	2023-03-31	628717.48	6750492.02	11	60.00
X64-23-PP-OS-001	2023-04-08	2023-04-08	628772.46	6750530.52	11	50.00
X65-23-PP-OS-001	2023-04-09	2023-04-10	628100.71	6749803.59	11	50.00
X68-23-PP-003	2023-04-10	2023-04-11	627020.12	6749056.22	11	35.00
X68-23-PP-005	2023-04-08	2023-04-09	627270.00	6749099.24	11	46.00
X68-23-PP-006	2023-04-06	2023-04-07	627290.46	6749107.54	11	44.00
X68-23-PP-007	2023-04-09	2023-04-09	627262.74	6749130.66	11	47.00
X68-23-PP-008	2023-04-07	2023-04-08	627284.32	6749154.78	11	45.00
X68-23-PP-009	2023-04-04	2023-04-04	627362.77	6749148.67	11	41.00
X68-23-PP-010	2023-04-04	2023-04-05	627386.94	6749090.58	11	41.00
X68-23-PP-011	2023-04-05	2023-04-06	627354.50	6749099.72	11	42.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
X68-23-PP-012	2023-03-31	2023-04-01	627622.75	6749238.92	11	74.00
X68-23-PP-013	2023-04-01	2023-04-02	627614.91	6749219.82	11	72.00
X68-23-PP-014	2023-04-02	2023-04-02	627594.13	6749228.53	11	72.00
X68-23-PP-015	2023-04-03	2023-04-04	627598.23	6749250.75	11	72.00
X68-23-PP-016	2023-04-09	2023-04-10	627052.92	6749007.66	11	74.00
X68-23-PP-OS-003	2023-04-10	2023-04-11	627594.13	6749228.53	11	47.00
Y55-23-PP-001	2023-03-16	2023-03-17	632905.56	6752383.80	11	36.60
Y55-23-PP-002	2023-03-17	2023-03-18	633012.85	6752355.83	11	30.80
Y55-23-PP-003	2023-03-18	2023-03-19	633027.43	6752405.30	11	32.00
Y55-23-PP-004	2023-03-17	2023-03-17	632984.41	6752424.45	11	24.00
Y55-23-PP-005	2023-03-19	2023-03-19	633000.03	6752473.50	11	32.00
Y55-23-PP-006	2023-03-18	2023-03-18	633028.03	6752489.01	11	32.00
Y55-23-PP-007	2023-03-19	2023-03-19	633053.31	6752446.67	11	32.00
Y55-23-PP-008	2023-03-19	2023-03-20	633105.79	6752427.86	11	27.00
Y55-23-PP-009	2023-03-20	2023-03-20	633153.73	6752414.46	11	32.00
Y55-23-PP-010	2023-03-21	2023-03-21	633130.26	6752468.50	11	32.00
Y55-23-PP-011	2023-03-20	2023-03-20	633176.00	6752452.80	11	23.00
Y55-23-PP-012	2023-03-20	2023-03-21	633189.68	6752486.20	11	50.00
Y55-23-PP-013	2023-03-22	2023-03-22	633159.17	6752488.14	11	26.00
Y55-23-PP-014	2023-03-23	2023-03-23	633137.26	6752525.84	11	32.00
Y55-23-PP-OS-001	2023-03-21	2023-03-22	633160.14	6752488.31	11	32.00
Y55-23-PP-OS-002	2023-03-22	2023-03-23	633185.22	6752495.06	11	32.00
Y55-23-PP-OS-003	2023-03-23	2023-03-23	633190.49	6752487.89	11	32.00
Y55-23-PP-OS-004	2023-03-24	2023-03-24	633188.90	6752484.71	11	32.00
Y57-23-PP-001	2023-03-29	2023-03-29	634928.83	6752402.54	11	23.00
Y57-23-PP-002	2023-03-29	2023-03-29	634967.67	6752389.83	11	20.00
Y57-23-PP-003	2023-03-30	2023-03-31	634983.88	6752418.67	11	30.00
Y57-23-PP-004	2023-03-30	2023-03-30	634999.88	6752390.19	11	20.00
Y57-23-PP-005	2023-03-30	2023-03-30	635036.60	6752396.40	11	23.00
Y57-23-PP-006	2023-03-31	2023-04-01	635012.69	6752413.21	11	20.00
Y57-23-PP-007	2023-03-31	2023-03-31	635039.17	6752427.46	11	23.00
Y57-23-PP-008	2023-03-31	2023-03-31	635035.99	6752457.50	11	20.00
Y58-23-PP-001	2023-03-27	2023-03-28	633981.51	6751884.57	11	32.00
Y58-23-PP-002	2023-03-27	2023-03-27	633980.25	6751909.92	11	29.00
Y58-23-PP-003	2023-03-26	2023-03-26	633984.53	6751941.09	11	29.00
Y58-23-PP-004	2023-03-26	2023-03-26	633957.31	6751959.23	11	29.00
Y58-23-PP-005	2023-03-27	2023-03-27	633957.64	6751930.12	11	32.00
Y58-23-PP-006	2023-03-28	2023-03-28	633955.93	6751899.74	11	29.00
Y58-23-PP-007	2023-03-25	2023-03-26	633928.49	6751948.04	11	29.00
Y60-23-008	2023-11-20	2023-11-21	631109.68	6750902.89	11	34.00

Hole ID	Date Opened	Date Closed	Easting NAD83	Northing NAD83	UTM Zone	Length (m)
Y62-23-PP-001	2023-03-29	2023-03-30	629975.57	6751085.97	11	47.00
Y62-23-PP-002	2023-03-26	2023-03-26	629783.05	6751085.00	11	41.00
Y62-23-PP-002B	2023-03-28	2023-03-28	629782.62	6751085.12	11	56.00
Y62-23-PP-003	2023-03-27	2023-03-27	629809.57	6751117.60	11	53.00
Y65-23-PP-001	2023-05-26	2023-05-26	628229.57	6749899.84	11	60.00
Y65-23-PP-002	2023-05-26	2023-05-26	628268.69	6750000.17	11	60.00
Y65-23-PP-003	2023-05-25	2023-05-26	628267.39	6750017.29	11	60.00
Y65-23-PP-OS-001	2023-04-09	2023-04-09	628631.12	6750114.32	11	50.00
Y68-23-PP-001	2023-03-28	2023-03-29	628070.13	6749762.53	11	58.00
Y68-23-PP-002	2023-03-29	2023-03-30	628094.64	6749760.18	11	58.00
Y68-23-PP-003	2023-03-26	2023-03-26	628113.22	6749788.30	11	55.00
Y68-23-PP-004	2023-03-27	2023-03-27	628120.12	6749765.13	11	55.00
Y68-23-PP-005	2023-03-26	2023-03-27	628144.90	6749773.44	11	55.00
Y68-23-PP-006	2023-03-24	2023-03-24	628153.92	6749821.89	11	55.00

*Appendix II MAPS SHOWING LOCATIONS OF DRILLHOLES (SUMPS) AND ACCESS TRAILS
CONSTRUCTED.*

Appendix III HYDROGEOLOGICAL TESTS PERFORMED

ID	X_NAD83 z11	Y_NAD83 z11	Electrical Conductivity Test	Injection Test	PTT Test	Slug Test	Vertical Velocity Profile 2023
EM-23-PP-001	641362.64	6751379.25	x	x	x	x	x
EM-23-PP-002	642594.95	6751354.35	x		x		
EM-23-PP-003	640337.99	6750422.54	x	x	x		x
EM-23-PP-004	638482.60	6749759.28	x	x		x	x
EM-23-PP-004B	638487.56	6749759.60	x		x		
EM-23-PP-005	639793.69	6749125.42	x	x	x		x
HG-21-PP-001	607986.04	6734053.06					x
HG-21-PP-002	618673.94	6743441.16					x
HG-21-PP-004	629261.32	6743478.70					x
HG-21-PP-008	620397.63	6740805.10					x
HG-22-PP-001	626833.54	6749138.29	x				x
HG-22-PP-002	630484.97	6751338.45	x				x
HG-22-PP-003	628935.30	6750030.92	x				x
J68-23-PP-001	627312.93	6744288.29		x			
J68-23-PP-001B	627312.93	6744288.29	x	x	x	x	x
J68-23-PP-007	627222.40	6744041.85	x	x	x	x	x
K52-23-PP-020	634892.70	6747511.54	x	x	x	x	x
K60-21-PP-001	630415.88	6745332.63					x
K68-23-PP-007	628010.40	6743960.23	x	x	x	x	x
K68-23-PP-044B	627661.75	6743855.26		x	x	x	x
K68-23-PP-044B	627661.75	6743855.26	x				
L37-23-PP-003	640862.96	6750062.41	x	x	x		x
L65-21-PP-003	628460.24	6743829.44					x
L65-21-PP-022	628768.46	6743989.15					x
M40-21-PP-001	639614.26	6749591.81					x
M62-23-PP-005	629867.63	6744775.39	x	x	x	x	x
M67-21-PP-001	628085.16	6743585.73					x
M67-23-PP-001	627896.27	6743459.13	x	x	x	x	x

M67-23-PP-001	627896.27	6743459.13			x		
N204-22-PP-001	659460.39	6760866.54	x	x	x	x	x
N204-22-PP-017	659559.49	6760521.35	x	x	x		x
N32-23-PP-001	643133.85	6751071.90	x		x		
N39-21-PP-010	640248.28	6749907.70					x
O556-21-PP-001	599463.07	6734112.54			x		
O556-21-PP-011-RC	599521.83	6734145.51	x	x			
O556-23-PW-01	599521.152	6734121.75	x	x	x		
P499-21-PP-001	600318.12	6733583.00	x		x		
P499-23-IW-01	600001.178	6733756.543	x	x	x		x
P499-23-IW-02	599872.21	6733703.39	x	x	x		x
R190-21-PP-002	602316.71	6734307.63					
R190-21-PP-004	602271.87	6734375.36			x		
T37-23-PP-002	640713.17	6758002.97	x	x	x	x	x
X25-21-PP-001	606232.27	6735838.07		x			x
X25-21-PP-002	606375.25	6735796.75		x			x
X25-22-PP-021	606472.20	6735883.48		x	x		x
X49-23-PP-006	636072.48	6754434.76	x				x
X55-21-PP-001	633020.14	6752949.70	x		x		x
X59-23-PP-004	631540.61	6752092.26	x				x
X60-23-PP-009	631215.29	6751807.69	x				x
X61-22-PP-005	630431.82	6751511.31					x
X64-22-PP-009	628841.38	6750588.20	x				
X68-22-PP-035	627323.02	6749097.22	x				x
X71-22-PP-051	625892.07	6749155.82	x				
Y55-23-PP-001	632905.56	6752383.80	x	x	x	x	x
Y56-21-PP-001	633795.63	6752184.20					x
Y62-22-PP-028	630097.13	6751346.64	x				x
Y65-22-PP-009	628536.24	6750112.54	x		x		
Y68-22-PP-011	627512.10	6749734.88	x		x		
Y68-22-PP-035	627813.32	6749747.43			x		

Y68-22-PP-036	627851.66	6749887.32	x		x		
Z60-21-PP-001	631063.61	6750379.59	x	x		x	x
Z60-21-PP-016	631451.93	6750592.74	x				x
Z60-22-PP-004	630809.16	6750379.80		x			

Appendix IV SHIPPING MANIFESTS

Appendix V COMPATIBILITY TEST AUTHORIZATION

Water Transfer Type: Well to Well
Date of Sample Collection: 13 Nov 2023 14:15 (Source) and 14 Nov 2023 15:00 (Receiver)
Source Name: O556-23-PW-01
Receiver Name: P499-23-IW-01

Sampling Notes:

Source Well ID - O556-23-PW-01 - Purge time = 21.5 hours - no field physico-chemical measurement data available at time of reporting
 Receiver Well ID - P499-23-IW-01 - Purge time = 11.75 hours - no field physico-chemical measurement data available at time of reporting

Screening Step 1. TDS Concentrations Derived from Field Specific Conductivity Measurements

Source Water (the following table allows for water column or extraction well data)					O556-23-PW-01	
Depth (m)	pH	Temperature (°C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Derived TDS Calculated (mg/L)	Lab TDS Calculated (mg/L)
Well	-	-	3,100	-	-	2,500
[Used Lab result]						
Receiver Water (the following table allows for water column or injection well data)					P499-23-IW-01	
Depth (m)	pH	Temperature (°C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Derived TDS Calculated (mg/L)	Lab TDS Calculated (mg/L)
Well	-	-	2,600	-	-	2,000
[Used Lab result]						
Receiver TDS Calc +30% (mg/L)						2,600

Note: Lab-derived Calculated TDS used - no field measured specific conductivity data available at time of reporting

Question: Is the Source Water TDS (Calculated) less than the Receiver Water TDS (Calculated) + 30%?

Yes, the Source water TDS is compatible with the Receiver

Screening Step 2. Constituents of Potential Concern Concentrations

Parameter	Units	Source Location O556-23-PW-01		Are Concentrations above Chronic WQ Guideline?	Receiver Location P499-23-IW-01		Are Concentrations above Guidelines?	Are Concentrations Compatible?
		Guideline	Concentration		Concentration	Concentration		
Fluoride	mg/L	0.12	1.3	Yes	1.3	1.3	Yes	Yes
Sulphate ^(M)	mg/L	429	1,400	Yes	1,100	1,100	Yes	Yes
Aluminium	mg/L	0.1	0.0045	No	0.0094	0.0094	No	Yes
Cadmium ^(P)	mg/L	0.37000	0.00002	No	0.00002	0.00002	No	Yes
Chromium	mg/L	0.0010	0.001	No	0.0011	0.0011	Yes	Yes
Copper ^(P)	mg/L	0.004	0.001	No	0.001	0.001	No	Yes
Iron	mg/L	0.3	4.6	Yes	14	14	Yes	Yes
Lead ^(P)	mg/L	0.007	0.0002	No	0.00064	0.00064	No	Yes
Thallium	mg/L	0.0008	0.0002	No	0.0002	0.0002	No	Yes
Uranium	mg/L	0.015	0.00061	No	0.00013	0.00013	No	Yes
Zinc (Diss) ^(M)	mg/L	0.1031	0.003	No	0.003	0.003	No	Yes

Indicates non-detects, and reporting concentration

Compatibility Score 100%

Hardness	mg/L	1,800	1,200
pH		7.91 [Lab pH]	7.93 [Lab pH]
DOC	mg/L	7.2	3.4

Risk Evaluation:

At the time of well sampling, the Source well TDS(Calc) and COPC concentrations are compatible with the Receiver well TDS(Calc) and COPC concentrations.

Question: Are the CoPCs in the Source compatible with those in the Receiver?

Yes, CoPCs are compatible

3. Acute Toxicity Tests (to be conducted if fish have been identified in the Receiver)

Test	Source Pit Result (Pass/Fail)
Rainbow Trout	Not Applicable
Daphnia magna	Not Applicable

Question: If fish are present in the Receiver Pit, is the water in the source pit acutely toxic?

Not Applicable

PPML Recommendation:

The Source is compatible with the Receiver

Authorization:

PPML Signatory Date

Johua Guthrie *Nov 29, 2023*
GNWT Inspector Date

Notes:

Screening Step 1. Physico-chemical Field Measurements

Process - Collect field physico-chemical water quality data from the Source and Receiver. Insert these data into the template. The tool will use the site-specific TDS(calculated) v. specific conductivity relationship (Sheet 2, "SpCond_v_TDSCalc") to estimate an average pit TDS(calculated) concentration for the source and receiver. The tool will then compare the Source TDS(calculated) concentration to that of the Receiver to determine if the TDS(calculated) of the Source lies within the Receiver TDS(calculated)+30% threshold to confirm a water transfer based on the TDS(calculated) screening

QA Step - Once the analytical laboratory data become available, the field specific measurements should be cross-checked against the laboratory specific conductivity. If there is agreement within 20%, the field specific data can be considered valid, and the field specific conductivity and laboratory TDS(calculated) data added to the data set in Sheet 2 to supplement the site-specific TDS(calculated) v. specific conductivity relationship. As a final validation step, the resulting plot of the relationship should be reviewed to make sure the data specific to the Source and Receiver as part of this compatibility assessment lie within reasonable bounds of the full dataset, and that the coefficient of determination (R^2) is greater than 0.8.

Screening Step 2. Constituents of Potential Concern Concentrations

Process - Once the analytical data are available from the lab for the Source and Receiver, the CoPC concentrations (i.e., those constituents that have WQG, which have previously been measured above guidelines in site waters) should be added to the template, as well as available hardness, pH, and dissolved organic carbon (DOC) data. For each CoPC, the Source concentration is compared to the Receiver concentration. The CoPCs are considered compatible if the Source concentration is below the Receiver concentration +30% threshold or if the Source concentration is below guidelines.

Step 2 - The tool calculates overall compatibility if all of the focus parameters have been determined to be compatible. If any focus parameters are determined to not be compatible, some professional judgment may be applied to evaluate the influence of the non-compatible focus parameter may have on aquatic biota. Review suggestions include evaluating the relative concentration of the non-compatible focus parameter, its magnitude of deviation from their compatibility threshold, the status of the threshold (i.e., is it an interim guideline), and the supplemental results of the acute toxicity tests (where fish have been identified in the Receiver Pit). This judgement can also be supported by any available existing water quality data for the Source and Receiver under assessment.

(a) the sulphate guideline is from the BC ENV. The guideline is hardness dependent. The guideline range shown is based on the hardness range observed in (b) WQG are hardness dependent

(c) the chronic dissolved zinc guideline is pH, hardness, and dissolved organic carbon dependent. The guideline that results in the minimum chronic zinc guideline (0.0278 mg/L) is based on the combination of field pH (8.2), hardness (207.2 mg/L) and dissolved organic carbon (2.0 mg/L). Guidelines calculated with pH, hardness, and dissolved organic carbon values falling outside the defined range (i.e., pH 6.5 to 8.13, hardness 23.4 to 399 mg/L and dissolved organic carbon 0.3 to 22.9 mg/L) should be used with caution, as the WQG does not necessarily accurately reflect toxic effects at the low and high pH, hardness and dissolved organic carbon extremes. The calculation of the zinc guideline is capped to the upper bound limits for this equation (e.g., hardness maximum is 399 mg/L).

Appendix VI PUMP TEST PUMPING WELL ANALYTICAL RESULTS

PPML - Hydrogeological Testing - Pumping Well Samples													
ROUTINE WATER & DISS. REGULATED METALS (WATER)													
Bureau Veritas ID		CEM775			CGO268			CGS730			CGX144		
Sampling Date		2023-11-14 13:00			2023-12-12 18:00			2023-12-14 18:10			2023-12-18 18:30		
COC Number		711383-01-01			708789-01-01			708789-01-01			1 of 2		
	UNITS	0556-23-PW-01	RDL	QC Batch	0556.23.PW.01 (D1)	RDL	QC Batch	0556-23-PW-01 (D3)	RDL	QC Batch	055623.PW-01(D7)	RDL	QC Batch
		Pre-Pumping			Day 1			Day 3			Day 7		
Anion Sum	meq/L	42	N/A	B199172	46	N/A	B233740	43	N/A	B236140	45	N/A	B238733
Cation Sum	meq/L	40	N/A	B199172	47	N/A	B233740	46	N/A	B236140	51	N/A	B238733
Hardness (CaCO3)	mg/L	1600	0.50	B199518	2100	0.50	B232854	2100	0.50	B236246	2300	0.50	B238729
Ion Balance (% Difference)	%	2.4	N/A	B199073	1.40	N/A	B233738	4.1	N/A	B236139	6.2	N/A	B238732
Misc. Inorganics													
Acidity (pH 4.5)	mg/L	ND	1.0	B208709	ND	1.0	B237925	ND	1.0	B238191	ND	1.0	B243309
Acidity (pH 8.3)	mg/L	5.0	1.0	B208709	2.7	1.0	B237925	46	1.0	B238191	45.8	1.0	B243309
Conductivity	uS/cm	3100	2.0	B199732	3200	2.0	B235648	3300	1.0	B238191	3300	2.0	B242933
pH	pH	7.91	N/A	B199731	7.95	N/A	B235647	7.93	N/A	B238184	7.62	N/A	B242932
Calculated Total Dissolved Solids	mg/L	2500	26	B199174	2800	26	B233742	2700	26	B236147	2900	29	B238739
Total Suspended Solids	mg/L	9	1.0	B199700	2.5	1.0	B235274	ND	1.0	B238927	4.3	1.0	B241443
True Colour	PtCo Units	25	2.0	B200402	370	10	B235759	610	20	B238496	490	10	B242642

Turbidity	NTU	51	0.10	B199710	100	0.10	B240260	490	0.10	B238125	210	0.10	B240260
Anions													
Alkalinity (PP as CaCO3)	mg/L	ND	1.0	B199729	ND	1.0	B235646	ND	1.0	B238182	ND	1.0	B242931
Alkalinity (Total as CaCO3)	mg/L	450	1.0	B199729	460	1.0	B235646	380	1.0	B238182	450	1.0	B242931
Bicarbonate (HCO3)	mg/L	550	1.0	B199729	560	1.0	B235646	470	1.0	B238182	550	1.0	B242931
Bromide (Br)	mg/L	0.11	0.10	B203452	0.28	0.010	B235739	0.29	0.100	B239562	0.27	0.050	B242505
Carbonate (CO3)	mg/L	ND	1.0	B199729	ND	1.0	B235646	ND	1.0	B238182	ND	1.0	B242931
Hydroxide (OH)	mg/L	ND	1.0	B199729	ND	1.0	B235646	ND	1.0	B238182	ND	1.0	B242931
Chloride (Cl)	mg/L	160	5.0	B200061	150	5.0	B235727	160	5.0	B238483	150	5.0	B242982
Dissolved Fluoride (F)	mg/L	1.3	0.050	B199733	1.3	0.050	B235649	1.5	0.050	B238186	1.4	0.050	B242934
Sulphate (SO4)	mg/L	1400	25	B200061	1600	25	B235727	1500	25	B238483	1500	25	B242982
Nutrients													
Total Ammonia (N)	mg/L	0.84	0.015	B199986	0.22	0.015	B240343	0.23	0.015	B238946	0.2	0.015	B243845
Nitrate (N)	mg/L	ND	0.050	B200695	ND	0.050	B234981	ND	0.100	B239159	ND	0.050	B240743
Nitrate (NO3)	mg/L	ND	0.22	B199427	ND	0.22	B233741	ND	0.44	B236194	ND	0.22	B238735
Nitrite (NO2)	mg/L	ND	0.033	B199427	ND	0.033	B233741	0.057	0.033	B236194	ND	0.16	B238735
Nitrite (N)	mg/L	ND	0.010	B200582	ND	0.010	B235674	0.017	0.010	B238294	ND	0.050	B242203
Nitrate plus Nitrite (N)	mg/L	ND	0.050	B200582	ND	0.050	B235674	ND	0.100	B238294	ND	0.050	B242203
Total Total Kjeldahl Nitrogen (Calc)	mg/L	1.95	0.200	B201206	0.87	0.40	B234985	0.61	0.20	B239164	0.44	0.20	B240747
Total Nitrogen (N)	mg/L	1.9	0.200	B200750	0.87	0.40	B239947	0.61	0.20	B240663	0.44	0.20	B243111
Orthophosphate (P)	mg/L	ND	0.0030	B200034	ND	0.0030	B239113	ND	0.0030	B242639	0.017	0.0030	B242639
Dissolved Phosphorus (P)	mg/L	0.025	0.0030	B199871	0.01	0.0030	B239573	ND	0.030	B242819	ND	0.030	B242819
Total Phosphorus (P)	mg/L	0.032	0.0030	B199897	ND	0.060	B239301	ND	0.0300	B239580	ND	0.030	B243200

Dissolved Organic Carbon (C)	mg/L	7.2	1.00	B199855		21.00	10	B238201		16.0	10.0	B239495		6.0	2.5	B243115
Total Organic Carbon (C)	mg/L	9.2	1.00	B199867		16.00	10	B237914		14.0	10.0	B240867		6.0	2.5	B243470
Total Metals																
Total Aluminum (Al)	mg/L	0.0045	0.0030	B198360		0.0036	0.0030	B237432		0.004	0.0030	B240059		0.0042	0.0030	B242874
Total Antimony (Sb)	mg/L	ND	0.00060	B198360		ND	0.00060	B237432		ND	0.00060	B240059		ND	0.00060	B242874
Total Arsenic (As)	mg/L	0.00210	0.00020	B198360		0.0011	0.00020	B237432		0.0018	0.00020	B240059		0.001	0.00020	B242874
Total Barium (Ba)	mg/L	0.060	0.010	B198367		0.015	0.010	B237434		0.014	0.010	B240108		0.013	0.010	B242875
Total Beryllium (Be)	mg/L	ND	0.0010	B198360		ND	0.0010	B237432		ND	0.0010	B240059		ND	0.0010	B242874
Total Boron (B)	mg/L	0.72	0.020	B198367		0.58	0.020	B237434		0.60	0.020	B240108		0.53	0.020	B242875
Total Cadmium (Cd)	ug/L	ND	0.020	B198947		ND	0.020	B233287		ND	0.020	B236378		ND	0.020	B238724
Total Calcium (Ca)	mg/L	360	0.30	B198367		530	1.5	B237434		540	1.50	B240108		480	0.30	B242875
Total Chromium (Cr)	mg/L	ND	0.0010	B198360		ND	0.0010	B237432		ND	0.0010	B240059		ND	0.0010	B242874
Total Cobalt (Co)	mg/L	ND	0.00030	B198360		0.00041	0.00030	B237432		ND	0.00030	B240059		ND	0.00030	B242874
Total Copper (Cu)	mg/L	ND	0.0010	B198360		ND	0.0010	B237432		0.014	0.0010	B240059		0.0054	0.0010	B242874
Total Iron (Fe)	mg/L	5	0.060	B198367		0.079	0.070	B237434		0.1	0.060	B240108		0.2	0.060	B242875
Total Lead (Pb)	mg/L	ND	0.00020	B198360		0.00037	0.00020	B237432		ND	0.00020	B240059		0.00085	0.00020	B242874
Total Lithium (Li)	mg/L	0.087	0.020	B198367		0.044	0.020	B237434		0.050	0.020	B240108		0.043	0.020	B242875
Total Magnesium (Mg)	mg/L	180	0.20	B198367		210	0.20	B237434		220	0.20	B240108		200	0.20	B242875
Total Manganese (Mn)	mg/L	0.6	0.0040	B198367		0.047	0.0040	B237434		0.04	0.0040	B240108		0.033	0.0040	B242875

Total Mercury (Hg)	mg/L	-	-	-	0.0511	0.0019	B235397	0.0417	0.0019	B237910	ND	0.019	B243220
Total Molybdenum (Mo)	mg/L	0.0018	0.00020	B198360	0.0005	0.00020	B237432	0.00039	0.00020	B240059	ND	0.00020	B242874
Total Nickel (Ni)	mg/L	0.00160	0.00050	B198360	0.011	0.00050	B237432	0.0130	0.00050	B240059	0.0068	0.00050	B242874
Total Phosphorus (P)	mg/L	ND	0.10	B198367	ND	0.10	B237434	ND	0.10	B240108	ND	0.10	B242875
Total Potassium (K)	mg/L	9.4	0.30	B198367	4.5	0.30	B237434	4.4	0.30	B240108	4.5	0.30	B242875
Total Selenium (Se)	mg/L	0.00034	0.00020	B198360	ND	0.00020	B237432	ND	0.00020	B240059	ND	0.00020	B242874
Total Silicon (Si)	mg/L	3.6	0.50	B198367	4.5	0.50	B237434	4.7	0.50	B240108	4.4	0.50	B242875
Total Silver (Ag)	mg/L	ND	0.00010	B198360	ND	0.00010	B237432	ND	0.00010	B240059	ND	0.00010	B242874
Total Sodium (Na)	mg/L	210	0.50	B198367	110	0.50	B237434	110	0.50	B240108	100	0.50	B242875
Total Strontium (Sr)	mg/L	8.7	0.10	B198367	11	0.10	B237434	11.0	0.10	B240108	10	0.10	B242875
Total Sulphur (S)	mg/L	470	0.20	B198367	630	1.0	B237434	610	1.00	B240108	560	1.0	B242875
Total Thallium (Tl)	mg/L	ND	0.00020	B198360	ND	0.00020	B237432	ND	0.00020	B240059	ND	0.00020	B242874
Total Tin (Sn)	mg/L	0.0027	0.0010	B198360	ND	0.0010	B237432	ND	0.0010	B240059	ND	0.0010	B242874
Total Titanium (Ti)	mg/L	ND	0.0010	B198360	ND	0.0010	B237432	ND	0.0010	B240059	ND	0.0010	B242874
Total Uranium (U)	mg/L	0.00061	0.00010	B198360	0.00078	0.00010	B237432	0.00046	0.00010	B240059	0.00047	0.00010	B242874
Total Vanadium (V)	mg/L	ND	0.0010	B198360	ND	0.0010	B237432	ND	0.0010	B240059	ND	0.0010	B242874
Total Zinc (Zn)	mg/L	ND	0.0030	B198360	0.012	0.0030	B237432	0.0069	0.0030	B240059	0.081	0.0030	B242874
Dissolved Metals													
Dissolved Aluminum (Al)	mg/L	ND	0.0030	B200172	ND	0.0030	B236363	ND	0.0600	B240807	ND	0.0060	B242917
Dissolved Antimony (Sb)	mg/L	ND	0.00060	B200172	ND	0.00060	B236363	ND	0.0120	B240807	ND	0.0012	B242917
Dissolved Arsenic (As)	mg/L	0.0018	0.00020	B200172	0.00065	0.00020	B236363	ND	0.00400	B240807	0.00072	0.00040	B242917

Dissolved Barium (Ba)	mg/L	0.057	0.010	B200174	0.016	0.010	B235697	0.015	0.010	B239479	ND	0.20	B242510
Dissolved Beryllium (Be)	mg/L	ND	0.0010	B200172	ND	0.0010	B236363	ND	0.0200	B240807	ND	0.0020	B242917
Dissolved Boron (B)	mg/L	0.73	0.020	B200174	0.61	0.020	B235697	0.60	0.020	B239479	0.61	0.40	B242510
Dissolved Cadmium (Cd)	ug/L	ND	0.020	B199517	ND	0.020	B233286	ND	0.400	B236377	ND	0.020	B238724
Dissolved Calcium (Ca)	mg/L	340	0.30	B200174	490	0.30	B235697	490	0.30	B239479	540	6.0	B242510
Dissolved Chromium (Cr)	mg/L	ND	0.0010	B200172	ND	0.0010	B236363	ND	0.0200	B240807	ND	0.0020	B242917
Dissolved Cobalt (Co)	mg/L	ND	0.00030	B200172	ND	0.00030	B236363	ND	0.00600	B240807	ND	0.00060	B242917
Dissolved Copper (Cu)	mg/L	ND	0.0010	B200172	ND	0.0010	B236363	ND	0.0200	B240807	ND	0.0020	B242917
Dissolved Iron (Fe)	mg/L	ND	0.060	B200174	ND	0.060	B235697	ND	0.060	B239479	ND	1.2	B242510
Dissolved Lead (Pb)	mg/L	ND	0.00020	B200172	ND	0.00020	B236363	ND	0.00400	B240807	ND	0.00040	B242917
Dissolved Lithium (Li)	mg/L	0.081	0.020	B200174	0.05	0.020	B235697	0.049	0.020	B239479	ND	0.40	B242510
Dissolved Magnesium (Mg)	mg/L	170	0.20	B200174	210	0.20	B235697	210	0.20	B239479	230	4.0	B242510
Dissolved Manganese (Mn)	mg/L	0.60	0.0040	B200174	0.044	0.0040	B235697	0.036	0.0040	B239479	ND	0.080	B242510
Dissolved Mercury (Hg)	ug/L	ND	0.0019	B199739	ND	0.019	B237371	0.0152	0.0019	B238687	0.0115	0.0019	B243208
Dissolved Molybdenum (Mo)	mg/L	0.00034	0.00020	B200172	ND	0.00020	B236363	ND	0.00400	B240807	ND	0.00040	B242917
Dissolved Nickel (Ni)	mg/L	0.00051	0.00050	B200172	0.0069	0.00050	B236363	ND	0.0100	B240807	0.0013	0.0010	B242917
Dissolved Phosphorus (P)	mg/L	ND	0.10	B200174	ND	0.10	B235697	ND	0.10	B239479	ND	2.0	B242510
Dissolved Potassium (K)	mg/L	8.9	0.30	B200174	4.4	0.30	B235697	4.8	0.30	B239479	ND	6.0	B242510

Dissolved Selenium (Se)	mg/L	0.00750	0.00020	B200172		ND	0.00020	B240807		ND	0.00400	B240807		0.004	0.00040	B242917
Dissolved Silicon (Si)	mg/L	3.5	0.50	B200174		4.1	0.50	B235697		4.3	0.50	B239479		ND	10	B242510
Dissolved Silver (Ag)	mg/L	0.00011	0.00010	B200172		ND	0.00010	B236363		ND	0.00200	B240807		ND	0.00020	B242917
Dissolved Sodium (Na)	mg/L	200	0.50	B200174		110	0.50	B235697		110	0.50	B239479		120	10	B242510
Dissolved Strontium (Sr)	mg/L	8.3	0.10	B200174		11	0.10	B235697		11.0	0.10	B239479		12	0.40	B242510
Dissolved Sulphur (S)	mg/L	520	1.00	B200174		1400	1.0	B235697		1000	1.0	B239479		2200	4.0	B242510
Dissolved Thallium (Tl)	mg/L	ND	0.00020	B200172		ND	0.00020	B236363		ND	0.00400	B240807		ND	0.00040	B242917
Dissolved Tin (Sn)	mg/L	0.0022	0.0010	B200172		ND	0.0010	B236363		ND	0.0200	B240807		ND	0.0020	B242917
Dissolved Titanium (Ti)	mg/L	ND	0.0010	B200172		ND	0.0010	B236363		ND	0.0200	B240807		ND	0.0020	B242917
Dissolved Uranium (U)	mg/L	0.00046	0.00010	B200172		0.00063	0.00010	B236363		ND	0.00200	B240807		0.00031	0.00020	B242917
Dissolved Vanadium (V)	mg/L	ND	0.0010	B200172		ND	0.0010	B236363		ND	0.0200	B240807		ND	0.0020	B242917
Dissolved Zinc (Zn)	mg/L	ND	0.0030	B200172		0.014	0.0030	B236363		ND	0.0600	B240807		ND	0.0060	B242917

Appendix VII PUMP TEST INJECTION WELL ANALYTICAL RESULTS

PPML - Hydrogeological Testing - Injection Well Samples							
ROUTINE WATER & DISS. REGULATED METALS (WATER)							
Bureau Veritas ID		CEM773			CHA172		
Sampling Date		2023-11-13 14:15			2023-12-21 08:00		
COC Number		711383-01-01			708789-01-01		
	UNITS	P499-23-IW-01	RDL	QC Batch	P499-23-1W-01(AP)	RDL	QC Batch
		Pre-Pumping			Post-pumping		
Anion Sum	meq/L	34	N/A	B199172	42	N/A	B241154
Cation Sum	meq/L	32	N/A	B199172	45	N/A	B241154
Hardness (CaCO ₃)	mg/L	1200	0.50	B199072	2000	0.50	B241374
Ion Balance (% Difference)	%	2.5	N/A	B199073	3.7	N/A	B241153
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	ND	1.0	B208709	ND	1.0	B243309
Acidity (pH 8.3)	mg/L	2.8	1.0	B208709	42.7	1.0	B243309
Conductivity	uS/cm	2600	2.0	B199732	3000	2.0	B243165
pH	pH	7.93	N/A	B199731	7.69	N/A	B243164
Calculated Total Dissolved Solids	mg/L	2000	25	B199174	2600	25	B241159
Total Suspended Solids	mg/L	30	1.0	B199700	71	1.0	B244169
True Colour	PtCo Units	4.6	2.0	B200402	340	10	B242642
Turbidity	NTU	110	0.10	B199708	95	0.20	B242384
Anions							
Alkalinity (PP as CaCO ₃)	mg/L	ND	1.0	B199729	ND	1.0	B243163
Alkalinity (Total as CaCO ₃)	mg/L	370	1.0	B199729	460	1.0	B243163
Bicarbonate (HCO ₃)	mg/L	450	1.0	B199729	560	1.0	B243163
Bromide (Br)	mg/L	ND	0.10	B203452	0.27	0.010	B244365

Carbonate (CO3)	mg/L		ND	1.0	B199729		ND	1.0	B243163
Hydroxide (OH)	mg/L		ND	1.0	B199729		ND	1.0	B243163
Chloride (Cl)	mg/L		120	1.0	B200061		110	2.0	B243091
Dissolved Fluoride (F)	mg/L		1.3	0.050	B199733		1.4	0.050	B243166
Sulphate (SO4)	mg/L		1100	25	B200061		1400	25	B243091
Nutrients									
Total Ammonia (N)	mg/L		0.73	0.015	B199986		0.21	0.015	B242987
Nitrate (N)	mg/L		ND	0.050	B200695		ND	0.050	B243604
Nitrate (NO3)	mg/L		ND	0.22	B199427		ND	0.22	B241157
Nitrite (NO2)	mg/L		ND	0.033	B199427		ND	0.033	B241157
Nitrite (N)	mg/L		ND	0.010	B200582		ND	0.010	B242393
Nitrate plus Nitrite (N)	mg/L		ND (1)	0.050	B200582		ND (1)	0.050	B242393
Total Total Kjeldahl Nitrogen (Calc)	mg/L		1.18	0.050	B201206		0.61	0.20	B243606
Total Nitrogen (N)	mg/L		1.2	0.020	B200750		0.61	0.20	B243111
Orthophosphate (P)	mg/L		ND	0.0030	B200034		0.02	0.0030	B242639
Dissolved Phosphorus (P)	mg/L		0.02	0.0030	B201646		ND (2)	0.030	B242819
Total Phosphorus (P)	mg/L		0.012	0.0030	B201652		0.0094	0.0030	B242884
Dissolved Organic Carbon (C)	mg/L		3.4	0.50	B199855		5.5	2.5	B243115
Total Organic Carbon (C)	mg/L		3.8	0.50	B199867		6.1	2.5	B243470
Total Metals									
Total Aluminum (Al)	mg/L		0.0094	0.0030	B198360		0.016	0.0030	B244544
Total Antimony (Sb)	mg/L		ND	0.00060	B198360		ND	0.00060	B244544
Total Arsenic (As)	mg/L		0.00073	0.00020	B198360		0.001	0.00020	B244544
Total Barium (Ba)	mg/L		0.064	0.010	B198367		0.014	0.010	B244546
Total Beryllium (Be)	mg/L		ND	0.0010	B198360		ND	0.0010	B244544
Total Boron (B)	mg/L		0.57	0.020	B198367		0.52	0.020	B244546
Total Cadmium (Cd)	ug/L		ND	0.020	B198947		ND	0.020	B241368
Total Calcium (Ca)	mg/L		290	0.30	B198367		440	0.30	B244546
Total Chromium (Cr)	mg/L		0.0011	0.0010	B198360		0.0037	0.0010	B244544
Total Cobalt (Co)	mg/L		ND	0.00030	B198360		ND	0.00030	B244544

Total Copper (Cu)	mg/L		ND	0.0010	B198360		ND	0.0010	B244544
Total Iron (Fe)	mg/L		14	0.060	B198367		9.8	0.060	B244546
Total Lead (Pb)	mg/L		0.00064	0.00020	B198360		0.0018	0.00020	B244544
Total Lithium (Li)	mg/L		0.075	0.020	B198367		0.045	0.020	B244546
Total Magnesium (Mg)	mg/L		160	0.20	B198367		180	0.20	B244546
Total Manganese (Mn)	mg/L		1	0.0040	B198367		0.99	0.0040	B244546
Total Molybdenum (Mo)	mg/L		0.0014	0.00020	B198360		0.00022	0.00020	B244544
Total Mercury (Hg)	mg/L		-	-	-		0.0192	0.0019	B243529
Total Nickel (Ni)	mg/L		0.00089	0.00050	B198360		0.0024	0.00050	B244544
Total Phosphorus (P)	mg/L		ND	0.10	B198367		ND	0.10	B244546
Total Potassium (K)	mg/L		7.9	0.30	B198367		4.3	0.30	B244546
Total Selenium (Se)	mg/L		0.00034	0.00020	B198360		ND	0.00020	B244544
Total Silicon (Si)	mg/L		3.2	0.50	B198367		4.1	0.50	B244546
Total Silver (Ag)	mg/L		ND	0.00010	B198360		ND	0.00010	B244544
Total Sodium (Na)	mg/L		180	0.50	B198367		97	0.50	B244546
Total Strontium (Sr)	mg/L		7.1	0.10	B198367		9.7	0.10	B244546
Total Sulphur (S)	mg/L		390	0.20	B198367		480	0.20	B244546
Total Thallium (Tl)	mg/L		ND	0.00020	B198360		ND	0.00020	B244544
Total Tin (Sn)	mg/L		0.0041	0.0010	B198360		ND	0.0010	B244544
Total Titanium (Ti)	mg/L		ND	0.0010	B198360		ND	0.0010	B244544
Total Uranium (U)	mg/L		0.00013	0.00010	B198360		0.00029	0.00010	B244544
Total Vanadium (V)	mg/L		ND	0.0010	B198360		ND	0.0010	B244544
Total Zinc (Zn)	mg/L		ND	0.0030	B198360		0.006	0.0030	B244544
Dissolved Metals									
Dissolved Aluminum (Al)	mg/L		ND	0.0030	B200172		ND	0.0060	B242917
Dissolved Antimony (Sb)	mg/L		ND	0.00060	B200172		ND	0.0012	B242917
Dissolved Arsenic (As)	mg/L		ND	0.00020	B200172		0.00091	0.00040	B242917
Dissolved Barium (Ba)	mg/L		0.06	0.010	B200174		0.014	0.010	B243443
Dissolved Beryllium (Be)	mg/L		ND	0.0010	B200172		ND	0.0020	B242917
Dissolved Boron (B)	mg/L		0.54	0.020	B200174		0.55	0.020	B243443

Dissolved Cadmium (Cd)	ug/L		ND	0.020	B198935		ND	0.040	B241367
Dissolved Calcium (Ca)	mg/L		260	0.30	B200174		480	0.30	B243443
Dissolved Chromium (Cr)	mg/L		ND	0.0010	B200172		ND	0.0020	B242917
Dissolved Cobalt (Co)	mg/L		ND	0.00030	B200172		ND	0.00060	B242917
Dissolved Copper (Cu)	mg/L		ND	0.0010	B200172		ND	0.0020	B242917
Dissolved Iron (Fe)	mg/L		2.6	0.060	B200174		ND	0.060	B243443
Dissolved Lead (Pb)	mg/L		ND	0.00020	B200172		ND	0.00040	B242917
Dissolved Lithium (Li)	mg/L		0.069	0.020	B200174		0.053	0.020	B243443
Dissolved Magnesium (Mg)	mg/L		140	0.20	B200174		190	0.20	B243443
Dissolved Manganese (Mn)	mg/L		0.9	0.0040	B200174		1	0.0040	B243443
Dissolved Mercury (Hg)	ug/L		ND	0.0019	B199739		ND	0.0019	B243208
Dissolved Molybdenum (Mo)	mg/L		0.00065	0.00020	B200172		ND	0.00040	B242917
Dissolved Nickel (Ni)	mg/L		ND	0.00050	B200172		ND	0.0010	B242917
Dissolved Phosphorus (P)	mg/L		ND	0.10	B200174		ND	0.10	B243443
Dissolved Potassium (K)	mg/L		7.2	0.30	B200174		4.6	0.30	B243443
Dissolved Selenium (Se)	mg/L		0.00091	0.00020	B200172		0.0035	0.00040	B242917
Dissolved Silicon (Si)	mg/L		2.8	0.50	B200174		4.2	0.50	B243443
Dissolved Silver (Ag)	mg/L		0.00014	0.00010	B200172		ND	0.00020	B242917
Dissolved Sodium (Na)	mg/L		170	0.50	B200174		100	0.50	B243443
Dissolved Strontium (Sr)	mg/L		6.2	0.10	B200174		9.2	0.10	B243443
Dissolved Sulphur (S)	mg/L		450	0.20	B200174		650	1.0	B243443
Dissolved Thallium (Tl)	mg/L		ND	0.00020	B200172		ND	0.00040	B242917
Dissolved Tin (Sn)	mg/L		0.003	0.0010	B200172		ND	0.0020	B242917
Dissolved Titanium (Ti)	mg/L		ND	0.0010	B200172		ND	0.0020	B242917
Dissolved Uranium (U)	mg/L		ND	0.00010	B200172		0.00026	0.00020	B242917
Dissolved Vanadium (V)	mg/L		ND	0.0010	B200172		ND	0.0020	B242917
Dissolved Zinc (Zn)	mg/L		ND	0.0030	B200172		ND	0.0060	B242917

