Appendix F.1

2021 Groundwater Monitoring Report - Part 1 of 2

Technical Memorandum

May 20, 2022

To	Deidre Puddister, M.Sc.	**Tel**	519-884-0510
From	Glen Merkley, P.Eng., Alan Deal, P.Geo.	**Ref. No.**	11222385
Subject	2021 Baseline Groundwater Program, Goldboro Gold Project		

1. Introduction

GHD Limited (GHD) is pleased to present Anaconda Mining Inc. (Anaconda) with the results of the 2021 baseline groundwater monitoring for the proposed Goldboro Gold Project (the Project), located in Guysborough County, Nova Scotia (NS). GHD completed baseline groundwater monitoring events for the Project from July 19-22, October 25-27, and December 13-17, 2021. Borehole drilling and monitoring well installation was completed by Logan Drilling Group (Logan) with supervision from Terrane Geoscience (Terrane) and technical direction from GHD. This memorandum is provided as part of the technical and permitting services in support of a Provincial Class 1 Environmental Assessment Registration Document (EARD) submission to the Nova Scotia Department of Environment and Climate Change (NSECC) for the Project.

This memorandum presents the findings of the 2021 groundwater monitoring program. Groundwater monitoring and monitoring well installation is ongoing; groundwater data collected in 2022 will be presented in subsequent reporting. Groundwater monitoring has also been completed at the site since August 2018 as part of the Industrial Approval (Approval No. 2018-101368-02) effective August 5, 2020.

1.1 Coordinates, Datum and Unit Systems

The Project is located on the eastern shore of Isaac's Harbour, in Guysborough County, NS, Canada. The Project Area (PA) is located approximately 175 kilometres (km) northeast of Halifax, 60 km southeast of Antigonish, and 1.6 km northeast of the community of Goldboro.

All coordinates are referenced to North American Datum 1983 (NAD83[CSRS]). Universal Transverse Mercator (UTM) Grid Projection Zone 20. All vertical levels are referenced to Canadian Geodetic Vertical Datum of 1928 (CGVD28).

This memo presents data in the International System of Units (SI), and length in meters (m), mass in kilograms (kg), and pressure in Pascals (Pa).

2. Methodology

2.1 Monitoring Locations

Boreholes were drilled at 19 locations throughout the PA in 2021. Between two and three monitoring wells were installed at each drilling location within individual boreholes advanced to different depths. Monitoring wells labelled 'A' and 'B' were installed to approximately 5 and 30 metres below ground surface (mbgs), respectively,

and wells labelled ‘C’ were installed to depths ranging from 41.1 to 196.6 mbgs. Monitoring wells monitored in 2021 are shown in Figure 1 and listed in Table 1, below.

Drilling is ongoing within the PA and will be completed in 2022. Borehole logs for wells installed in 2021 were completed by Terrane and are presented in Attachment 1.

Table 1 Monitoring Well Locations and Elevations

Monitoring Well ID	Coordinates (UTM Zone 20, NAD83 [CSRS])		Recorded Drilled Depth[1] (mbgs[2])	Screened Interval (mbgs)	Reference Elevation (masl[3])
	Northing (m)	Easting (m)			
MW1-A	5008839	608216	6.5	3.4 – 6.4	111.366
MW1-B	5008840	608218	30.3	19.9 – 22.8	111.297
MW5-A	5007231	606591	4.7	1.7 – 4.7	58.691
MW5-B	5007231	606592	31.1	28.0 – 31.1	58.795
MW6-A	5006806	606654	4.3	0.7 – 3.8	63.691
MW6-B	5006807	606654	30.2	26.5 – 29.6	63.771
MW7-A	5006845	605953	5.5	2.4 – 5.5	86.541
MW7-B	5006845	605952	30.5	27.5 – 30.5	86.632
MW15-A	5006593	605912	5.5	2.4 - 5.5	80.868
MW15-B	5006593	605911	30.2	24.0 – 27.0	80.906
MW15-C	5006595	605910	251.6	185.2 – 189.8	80.851
MW16-A	5006087	606366	14.0	11.2 – 14.0	64.619
MW16-B	5006090	606367	30.5	26.1 – 29.0	64.609
MW16-C	5006087	606371	101.0	38.2 – 41.1	64.118
MW20-A	5006226	606170	5.6	2.6 – 5.6	71.955
MW20-B	5006225	606169	30.2	26.8 – 29.8	71.931
MW20-C	5006224	606171	251.6	97.7 – 101.5	71.916
MW21-A	5005735	606440	9.2	6.3 – 9.2	59.837
MW21-B	5005734	606442	30.3	18.5 – 21.4	59.582
MW23-A	5006474	606971	7.2	4.1 – 7.1	58.447
MW23-B	5006473	606973	30.3	27.4 – 30.3	57.869
MW26-A	5006677	606402	6.8	3.9 – 6.8	72.239
MW26-B	5006676	606403	30.0	22.8 – 25.7	72.384
MW26-C	5006680	606397	251.4	149.8 – 152.6	71.306
MW29-A	5006140	606754	5.0	2.1 – 4.9	57.294
MW29-B	5006138	606752	30.5	6.4 – 7.6	57.272
MW30-A	5006720	606608	6.2	3.3 – 6.2	67.486
MW30-B	5006717	606613	30.4	15.5 – 18.4	66.984
MW30-C	5006715	606610	251.3	193.7 – 196.6	66.271
MW42-A	5007032	606657	5.1	1.8 – 4.6	59.620

Table 1 Monitoring Well Locations and Elevations

Monitoring Well ID	Coordinates (UTM Zone 20, NAD83 [CSRS])		Recorded Drilled Depth[1] (mbgs[2])	Screened Interval (mbgs)	Reference Elevation (masl[3])
	Northing (m)	Easting (m)			
MW42-B	5007030	606659	30.3	21.1 – 24.0	59.580
MW43-A	5007474	606424	12.3	9.3 – 12.2	61.801
MW43-B	5007475	606423	30.3	16.8 – 19.8	61.816
MW46-A	5006747	606390	6.1	3.3 – 6.1	76.047
MW46-B	5006748	606391	30.1	19.4 – 22.2	76.042
MW46-C	5006741	606389	149.6	110.3 - 113.6	74.822
MW51-A	5008623	607378	4.6	1.7 – 4.5	83.408
MW51-B	5008625	607379	30.5	8.0 – 10.9	83.507
MW54-A	5007673	607449	4.8	2.8 – 4.8	58.021
MW54-B	5007674	607449	30.3	7.9 – 10.8	58.154
MW55-A	5007525	607760	7.6	4.6 – 7.6	71.892
MW55-B	5007523	607758	30.5	11.5 – 14.3	71.899
MW56-A	5007455	608337	7.8	4.9 – 7.8	74.600
MW56-B	5007455	608337	30.5	25.7 – 28.6	74.230

Note: Monitoring wells were surveyed by Terrane and Anaconda in 2021.
[1] Borehole depths taken from borehole logs completed by Terrane
[2] metres below ground surface (mbgs)
[3] metres above sea level (masl)

2.2 Groundwater Levels

Groundwater static water levels were measured relative to surveyed referenced points (top of polyvinyl chloride [PVC] casing) with an electric water level probe. All monitoring wells also have transducers (Leveloggers) installed to automatically record hourly water levels.

The Leveloggers are removed from the monitoring well and data is downloaded in the field. Data is also retrieved from a Barologger, which is used to compensate the transducer data for the effects of atmospheric pressure. Transducers were re-installed following each sampling event.

Groundwater hydrographs are presented in Attachment 2. It should be noted that several monitoring wells were installed in November and December 2021 and do not have sufficient transducer data to produce a hydrograph. Hydrographs for all on-site monitoring wells will be presented in subsequent reporting.

2.3 Hydraulic Conductivity Testing

Logan and Terrane completed packer tests in 2021 to determine the hydraulic conductivity of the bedrock encountered during the investigation. A total of 47 packer tests (between two and five per borehole) were carried out between January 24 and December 1, 2021.

The packer tests were completed using the Lugeon test method, which consists of isolating a section of the previously drilled borehole using inflatable packers, and injecting water in the rock under five (5) pressures for 10 minutes each. The pressures correspond to 50%, 75%, 100%, 75% and 50% of the maximum test pressure. The maximum test pressure was determined based on the depth of the test, the overburden pressure and the

quality of the bedrock. The average hydraulic conductivity of the rock mass was determined using the average values of water pressure and flow rate measured at each stage, t.

2.4 Groundwater Sampling

Except as noted below, groundwater samples were collected from all available monitoring wells in July, October, and December 2021. Borehole drilling and monitoring well installation continued in 2022 and subsequent sampling events will be expanded to include all available wells. The monitoring network will continue to be modified over time as the mine enters different stages of its lifecycle. Further details on the modification of the monitoring well network will be included in future memos as the Project progresses.

Prior to collecting groundwater samples, the depth to water and total depth of the well were measured and used to calculate the volume of standing water in the well. Monitoring wells were purged prior to sampling and stabilization parameters were measured after every purged well volume until pH readings were within 1 standard unit and conductivity and temperature readings were within ten percent for three consecutive readings or a minimum of three well volumes were purged. The water level in each of the monitoring wells was allowed to recover (24 hours) to its approximate static water level prior to collecting groundwater samples. This approach allowed any silt in the water column to settle to the bottom of the well and avoid it from becoming entrained in the groundwater sample. This is intended to reduce the amount of turbidity, and associated filtering, required to prepare the groundwater samples collected for metals analysis. The samples were collected from the well with a bottom loading bailer and decanted into the laboratory supplied sample containers.

Samples for dissolved metals (including mercury) and dissolved organic carbon (DOC) analysis were filtered using dedicated Waterra tubing and in-line filters. The groundwater samples were placed directly in new laboratory supplied sample bottles and placed in coolers with ice immediately after they were collected. The samples were maintained in cool storage until delivery to Bureau Veritas Laboratories (BV Labs) in Bedford, NS. All waste generated from the sampling program was collected and disposed off-site, in accordance with provincial and municipal legislation.

The groundwater samples collected from the monitoring wells were submitted to BV Labs for the following analysis: total and dissolved mercury, general chemistry, dissolved metals, dissolved phosphorous, chemical oxygen demand (COD), DOC, total suspended solids, and benzene, toluene, ethylbenzene, xylenes (BTEX)/modified total petroleum hydrocarbons (mTPH).

One field duplicate sample for every 10 samples (10%) was collected in accordance with Quality Assurance/Quality Control (QA/QC) protocols. The results of the QA/QC sampling were used to evaluate the reliability of the sampling and analysis methods. During the July 2021 monitoring event, one field duplicate was taken: MW-DUP (field duplicate of MW20-B). During the October 2021 monitoring event, two field duplicates were taken at the following locations: MWA (field duplicate of MW26-A) and MWB (field duplicate of MW7-A). During the December 2021 monitoring event, four field duplicates were taken at the following locations: DUP-A (field duplicate of MW43-A), DUP-B (field duplicate of MW51-B), DUP-C (field duplicate of MW26-B), and DUP-D (field duplicate of MW46-A).

3. Monitoring Results

3.1 Groundwater Levels / Elevation Monitoring

Throughout the three monitoring events in 2021, the depth to groundwater ranged from 0.840 metres below top of riser (mbtr) (MW20-A, October 1, 2021) to 46.280 mbtr (MW26-C, October 1, 2021), with most of the static water levels ranging from approximately 1.0 – 4.0 m mbtr. Groundwater elevations are summarized in Table 2.

Table 2 Groundwater Monitoring Levels

Monitoring Well ID	Date	Reference Elevation (m CGVD28)	Static Water Level (mbtr[1])	Groundwater Elevation (masl[2])
MW1-A	15-Dec-21	111.366	1.11	110.26
MW1-B	15-Dec-21	111.297	6.52	104.78
MW5-A	29-Jul-21	58.691	1.095	57.60
	1-Oct-21		0.890	57.80
	25-Oct-21		0.914	57.78
	13-Dec-21		0.950	57.74
MW5-B	29-Jul-21	58.795	1.545	57.25
	1-Oct-21		1.300	57.50
	25-Oct-21		1.405	57.39
	13-Dec-21		1.470	57.33
MW6-A	29-Jul-21	63.691	1.895	61.80
	1-Oct-21		1.040	62.65
	25-Oct-21		1.721	61.97
	13-Dec-21		1.050	62.64
MW6-B	29-Jul-21	63.771	4.820	58.95
	1-Oct-21		4.780	58.99
	25-Oct-21		5.170	58.60
	13-Dec-21		4.635	59.14
MW7-A	29-Jul-21	86.541	1.991	84.55
	1-Oct-21		1.320	85.22
	26-Oct-21		1.480	85.06
	14-Dec-21		1.355	85.19
MW7-B	29-Jul-21	86.632	2.441	84.19
	1-Oct-21		1.960	84.67
	26-Oct-21		2.120	84.51
	14-Dec-21		1.906	84.73
MW15-A	29-Jul-21	80.868	1.305	79.56
	1-Oct-21		0.980	79.89
	26-Oct-21		1.054	79.81
	14-Dec-21		1.005	79.86
MW15-B	29-Jul-21	80.906	1.365	79.54
	1-Oct-21		1.15	79.76
	26-Oct-21		1.251	79.66
	14-Dec-21		1.158	79.75

Table 2 Groundwater Monitoring Levels

Monitoring Well ID	Date	Reference Elevation (m CGVD28)	Static Water Level (mbtr[1])	Groundwater Elevation (masl[2])
MW15-C	29-Jul-21	80.851	5.475	75.38
	1-Oct-21		5.28	75.57
	26-Oct-21		5.233	75.62
	14-Dec-21		4.975	75.88
MW20-A	29-Jul-21	71.955	1.114	70.84
	1-Oct-21		0.840	71.12
	26-Oct-21		0.985	70.97
	14-Dec-21		0.905	71.05
MW20-B	29-Jul-21	71.916	1.280	70.64
	1-Oct-21		1.170	70.75
	26-Oct-21		1.242	70.67
	14-Dec-21		1.251	70.67
MW20-C	29-Jul-21	71.931	6.085	65.85
	1-Oct-21		1.380	70.55
	26-Oct-21		1.402	70.53
	14-Dec-21		1.290	70.64
MW21-A	15-Dec-21	59.837	1.285	58.55
MW21-B	15-Dec-21	59.582	1.125	58.46
MW23-A	14-Dec-21	58.447	2.756	55.69
MW23-B	14-Dec-21	57.869	2.655	55.21
MW26-A	26-Oct-21	72.239	0.963	71.28
	14-Dec-21		0.835	71.40
MW26-B	26-Oct-21	72.238	1.388	70.85
	14-Dec-21		1.150	71.09
MW26-C	29-Jul-21	71.306	44.820	26.49
	1-Oct-21		46.280	25.03
	26-Oct-21		40.409	30.90
	14-Dec-21		37.100	34.21
MW29-A	15-Dec-21	57.294	2.135	55.16
MW29-B	15-Dec-21	57.272	2.206	55.07
MW30-A	26-Oct-21	67.486	1.904	65.58
	13-Dec-21		1.143	66.34
MW30-B	26-Oct-21	66.984	9.367	57.62
	13-Dec-21		9.676	57.31

Table 2 Groundwater Monitoring Levels

Monitoring Well ID	Date	Reference Elevation (m CGVD28)	Static Water Level (mbtr[1])	Groundwater Elevation (masl[2])
MW30-C	29-Jul-21	66.271	11.445	54.83
	1-Oct-21		8.615	57.66
	26-Oct-21		8.362	57.91
	13-Dec-21		9.016	58.26
MW42-A	26-Oct-21	60.582	1.792	58.790
	13-Dec-21		1.811	58.771
MW42-B	26-Oct-21	60.527	3.632	56.895
	13-Dec-21		3.299	57.228
MW43-A	25-Oct-21	61.801	1.823	59.98
	13-Dec-21		1.953	59.85
MW43-B	25-Oct-21	61.816	3.070	58.75
	13-Dec-21		3.105	58.71
MW46-A	26-Oct-21	76.047	0.525	75.52
	14-Dec-21		0.531	75.52
MW46-B	26-Oct-21	76.042	1.123	74.92
	14-Dec-21		1.043	75.00
MW46-C	29-Jul-21	74.822	3.140	71.68
	1-Oct-21		2.990	71.83
	26-Oct-21		2.893	71.93
	14-Dec-21		2.756	72.07
MW51-A	15-Dec-21	83.408	0.754	82.65
MW51-B	15-Dec-21	83.507	0.735	82.77
MW54-A	15-Dec-21	58.021	0.94	57.08
MW54-B	15-Dec-21	58.154	1.189	56.97
MW55-A	15-Dec-21	71.892	2.285	69.61
MW55-B	15-Dec-21	71.899	3.449	68.45
MW56-A	14-Dec-21	75.631	2.292	73.339
MW56-B	14-Dec-21	75.124	2.515	72.609

Groundwater elevations measured in December 2021 range from 110.256 masl (MW1-A) to 34.206 masl (MW26-C). The difference in groundwater elevations in the A series wells versus the B series wells range from 0.060 m to 8.533 m. The vertical hydraulic gradient is directed downward in all monitoring well nests with the exception of MW30, where the groundwater elevation in MW30-C is higher than in MW30-B. The difference in groundwater elevations in the B series wells versus the C series wells range from 0.160 m to 45.130 m. Monitoring wells are still being added to the network and are included in groundwater elevations monitoring events as they become available.

Continuous groundwater elevations measured at monitoring well nests MW5, MW6, MW7, MW15, MW20, MW26, MW30, and MW43 are presented in the hydrographs in Attachment 2. Precipitation data shown on the

hydrographs is from the Collegeville Auto Weather Station (ID 8201001), located approximately 60 km northwest of the Project.

3.2 Hydraulic Conductivity Testing

Analysis sheets for packer tests completed in 2021 are provided in Attachment 3 following the text. Table 3 provides a summary of the hydraulic conductivity values derived from the packer tests. The hydraulic conductivities calculated ranged from 5.70E-07 centimetres per second (cm/s) to 2.82E-04 cm/s.

Table 3 Packer Test Results

Monitoring Well ID	Testing Depth (mbgs)	Hydraulic Conductivity (cm/s)
MW1-B	19.71 – 22.59	2.82E-04
MW1-B	9.32 – 12.10	4.59E-05
MW5-B	15.85 - 31.70	9.99E-06
MW5-B	5.11 - 14.94	9.94E-06
MW6-B	21.80 - 30.19	2.26E-05
MW6-B	5.64 - 11.89	4.56E-06
MW7-B	16.46 - 30.48	2.62E-04
MW7-B	8.84 - 10.67	1.43E-03
MW15-B	27.74 - 30.18	6.16E-04
MW15-B	9.45 - 30.18	2.89E-04
MW15-C	224.60 - 227.82	3.04E-05
MW15-C	185.60 - 188.82	3.54E-05
MW15-C	155.60 - 158.82	9.61E-06
MW15-C	140.60 - 143.82	2.14E-05
MW16-B	25.96 – 28.74	1.83E-05
MW16-B	16.97 – 19.75	5.85E-06
MW20-B	6.55 - 30.18	6.09E-06
MW20-C	201.34 - 204.57	9.43E-06
MW20-C	125.74 - 128.97	1.82E-05
MW20-C	96.37 - 99.57	1.99E-05
MW20-C	27.34 - 30.57	3.10E-05
MW21-B	18.31 – 21.09	3.23E-05
MW21-B	7.82 – 10.60	1.15E-05
MW23-B	26.34 – 29.12	1.12E-05
MW23-B	15.32 – 18.10	1.30E-05
MW26-B	22.66 – 25.44	7.37E-06
MW26-B	16.66 – 19.44	1.72E-06
MW26-C	218.40 – 221.62	2.26E-05
MW26-C	194.40 – 197.62	1.02E-05
MW26-C	149.40 – 152.62	2.34E-05

Table 3 Packer Test Results

Monitoring Well ID	Testing Depth (mbgs)	Hydraulic Conductivity (cm/s)
MW26-C	53.40 – 56.62	2.44E-05
MW30-C	224.30 – 227.52	1.09E-05
MW30-C	194.30 – 197.52	2.56E-05
MW30-C	170.52 – 167.30	1.99E-05
MW30-C	116.30 – 119.52	2.39E-05
MW30-C	101.30 – 104.52	1.88E-05
MW42-B	21.11 – 23.99	6.66E-06
MW42-B	7.62 – 10.40	2.73E-06
MW46-B	19.50 – 22.30	5.70E-07
MW46-C	110.60 – 113.82	4.33E-05
MW46-C	86.60 – 89.82	2.72E-05
MW46-C	29.60 – 32.82	4.21E-05
MW51-B	22.96 – 25.74	4.65E-06
MW51-B	7.98 – 10.76	9.38E-06
MW56-B	25.62 – 28.40	2.12E-04
MW56-B	15.16 – 17.94	8.05E-05

3.3 Analytical Results

Groundwater samples were collected from available monitoring wells in July, October, and December 2021. This section provides an overview of the 2021 groundwater monitoring program analytical.

All groundwater quality results collected in 2021 compared to the applicable standards are presented in Attachment 4 following the text. Laboratory certificates of analysis are provided in Attachment 5. All groundwater analytical results were compared to potable water criteria (defined as the lowest of the Health Canada Guidelines for Canadian Drinking Water Quality (GCDWQ) Maximum Acceptable Concentrations (MAC) and the NS Tier I Environmental Quality Standards (EQS) for potable groundwater, residential land use, and coarse-grained soils), the Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines (WQG) for the Protection of Fresh Water Aquatic Life (FWAL), and the NSECC Pathway Specific Standards (PSS) for groundwater discharging to surface water (>10 m from a freshwater body). Concentrations that are greater than these criteria are flagged in Table 4 (General Chemistry), Table 5 (Metals), and Table 6 (BTEX/mTPH).

QA/QC sampling indicated that duplicate results agree closely with the corresponding sample and confirm the representativeness of the sampling procedures. 330 out of 332 constituents analyzed have relative percent differences (RPDs) of less than 40% between field duplicates and original samples. RPDs are presented in Attachment 4 following the text.

Table 4 2021 Groundwater Exceedances – General Chemistry

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW1-A	17-Dec-21	--	pH	--
MW1-B	17-Dec-21	--	--	--
MW5-A	21-Jul-21	--	--	--
	26-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21		--	--
MW5-B	21-Jul-21	--	--	--
	26-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21		--	--
MW6-A	21-Jul-21	--	--	--
	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21		pH	--
MW6-B	21-Jul-21	--	Ammonia Nitrogen	--
	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21		Ammonia Nitrogen	--
MW7-A	21-Jul-21	--	--	--
	27-Oct-21	--	--	--
MW7-A	16-Dec-21		pH	--
MW7-B	21-Jul-21	--	Ammonia Nitrogen	--
	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21		--	--
MW15-A	21-Jul-21	--	Ammonia Nitrogen	--
	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21		Ammonia Nitrogen, pH	--
MW15-B	21-Jul-21	--	Ammonia Nitrogen	--
	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21		Ammonia Nitrogen	--
MW16-A	16-Dec-21	--	Ammonia Nitrogen	--
MW16-B	16-Dec-21	--	--	--
MW20-A	21-Jul-21	--	--	--
	27-Oct-21	--	Ammonia Nitrogen, Total Cyanide	--
	16-Dec-21	--	--	--

Table 4 2021 Groundwater Exceedances – General Chemistry

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW20-B	21-Jul-21	--	--	--
	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW21-A	13-Dec-21	--	--	--
MW21-B	13-Dec-21	--	Ammonia Nitrogen	--
MW23-A	14-Dec-21	--	pH	--
MW23-B	14-Dec-21	--	Ammonia Nitrogen	--
MW26-A	27-Oct-21	--	Ammonia Nitrogen	--
	15-Dec-21	--	--	--
MW26-B	27-Oct-21	--	Ammonia Nitrogen	--
	15-Dec-21	--	Ammonia Nitrogen	--
MW29-A	17-Dec-21	--	--	--
MW29-B	17-Dec-21	--	--	--
MW30-A	27-Oct-21	--	--	--
	16-Dec-21	--	pH	--
MW30-B	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21	--	--	--
MW42-A	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21	--	--	--
MW42-B	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21	--	Ammonia Nitrogen	--
MW43-A	27-Oct-21	--	Ammonia Nitrogen	--
	16-Dec-21	--	Ammonia Nitrogen	--
MW43-B	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW46-A	27-Oct-21	--	--	--
	15-Dec-21	--	--	--
MW46-B	27-Oct-21	--	Ammonia Nitrogen	--
	15-Dec-21	--	--	--
MW51-A	17-Dec-21	--	pH	--
MW51-B	17-Dec-21	--	--	--
MW54-A	17-Dec-21	--		--
MW54-B	17-Dec-21	--	--	--
MW55-A	17-Dec-21	--	--	--

Table 4 2021 Groundwater Exceedances – General Chemistry

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW55-B	17-Dec-21	--	--	--
MW56-A	17-Dec-21	--	--	--
MW56-B	17-Dec-21	--	--	--

Table 5 2021 Groundwater Exceedances – Metals

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW1-A	17-Dec-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Copper	Dissolved Manganese
MW1-B	17-Dec-21	--	Dissolved Copper	Dissolved Cobalt
MW5-A	21-Jul-21	--	Dissolved Iron	Dissolved Manganese
	26-Oct-21	Dissolved Aluminum, Dissolved Iron	Dissolved Iron, Dissolved Zinc	Dissolved Manganese
	13-Dec-21	Dissolved Iron	Dissolved Aluminum, Dissolved Iron	Dissolved Manganese
MW5-B	21-Jul-21	--	Dissolved Iron, Dissolved Zinc	--
	26-Oct-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Iron	--
	16-Dec-21	Dissolved Aluminum	Dissolved Copper, Dissolved Iron, Dissolved Zinc	Dissolved Manganese
MW6-A	21-Jul-21	--	Dissolved Aluminum, Dissolved Cadmium, Dissolved Copper, Dissolved Nickel, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
	27-Oct-21	Dissolved Aluminum, Dissolved Copper	Dissolved Aluminum, Dissolved Arsenic, Dissolved Cadmium, Dissolved Copper, Dissolved Iron, Dissolved Lead, Dissolved Zinc	Dissolved Cobalt, Dissolved Lead
	16-Dec-21	Dissolved Aluminum, Dissolved Copper	Dissolved Aluminum, Dissolved Copper, Dissolved Zinc	--

Table 5 2021 Groundwater Exceedances – Metals

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW6-B	21-Jul-21	Dissolved Aluminum, Dissolved Arsenic	Dissolved Aluminum, Dissolved Arsenic	Dissolved Antimony, Dissolved Arsenic
	27-Oct-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Arsenic	Dissolved Arsenic
	16-Dec-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Arsenic	Dissolved Arsenic
MW7-A	21-Jul-21	Dissolved Copper	Dissolved Aluminum, Dissolved Copper, Dissolved Manganese, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
	27-Oct-21	Dissolved Aluminum, Dissolved Copper	Dissolved Aluminum, Dissolved Copper, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
	16-Dec-21	Dissolved Aluminum, Dissolved Copper	Dissolved Aluminum, Dissolved Copper, Dissolved Zinc	Dissolved Cobalt
MW7-B	21-Jul-21	--	Dissolved Arsenic, Dissolved Manganese	Dissolved Arsenic, Dissolved Manganese
	27-Oct-21	--	Dissolved Arsenic, Dissolved Manganese, Dissolved Zinc	Dissolved Arsenic, Dissolved Manganese
	16-Dec-21	--	Dissolved Arsenic	Dissolved Arsenic, Dissolved Manganese
MW15-A	21-Jul-21	Dissolved Aluminum, Dissolved Iron	Dissolved Aluminum, Dissolved Arsenic, Dissolved Iron, Dissolved, Dissolved Manganese	Dissolved Arsenic, Dissolved Manganese
	27-Oct-21	Dissolved Aluminum, Dissolved Iron	Dissolved Arsenic, Dissolved Iron, Dissolved, Dissolved Manganese, Dissolved Zinc	Dissolved Arsenic, Dissolved Manganese
	16-Dec-21	Dissolved Aluminum, Dissolved Iron	Dissolved Arsenic, Dissolved Iron, Dissolved Manganese	Dissolved Arsenic, Dissolved Manganese
MW15-B	21-Jul-21	Dissolved Aluminum, Dissolved Arsenic	Dissolved Arsenic	Dissolved Arsenic, Dissolved Manganese
	27-Oct-21	Dissolved Arsenic	Dissolved Arsenic, Dissolved Manganese, Dissolved Zinc	Dissolved Arsenic, Dissolved Manganese
	16-Dec-21	Dissolved Aluminum, Dissolved Arsenic	Dissolved Aluminum, Dissolved Arsenic, Dissolved Manganese	Dissolved Arsenic, Dissolved Manganese
MW16-A	16-Dec-21	Dissolved Arsenic	Dissolved Arsenic, Dissolved Copper, Dissolved Manganese	Dissolved Arsenic, Dissolved Manganese

Table 5 2021 Groundwater Exceedances – Metals

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW16-B	16-Dec-21	--	Dissolved Arsenic, Dissolved Manganese	Dissolved Manganese
MW20-A	21-Jul-21	Dissolved Iron	Dissolved Aluminum, Dissolved Iron, Dissolved Manganese	Dissolved Manganese
	27-Oct-21	Dissolved Iron	Dissolved Arsenic, Dissolved Iron, Dissolved Manganese, Dissolved Zinc	Dissolved Arsenic, Dissolved Cobalt, Dissolved Manganese
	16-Dec-21	Dissolved Iron	Dissolved Arsenic, Dissolved Iron, Dissolved Manganese, Dissolved Zinc	Dissolved Manganese
MW20-B	21-Jul-21	Dissolved Aluminum, Dissolved Arsenic	Dissolved Arsenic, Dissolved Iron	Dissolved Arsenic, Dissolved Manganese
MW20-B	27-Oct-21	Dissolved Aluminum, Dissolved Arsenic	Dissolved Arsenic, Dissolved Iron, Dissolved Zinc	Dissolved Arsenic, Dissolved Manganese
	16-Dec-21	Dissolved Arsenic	Dissolved Arsenic	Dissolved Arsenic, Dissolved Manganese
MW21-A	16-Dec-21	--	Dissolved Manganese	Dissolved Cobalt, Dissolved Manganese
MW21-B	16-Dec-21	--	Dissolved Copper	--
MW23-A	16-Dec-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Copper, Dissolved Iron, Dissolved Manganese, Dissolved Zinc	Dissolved Manganese
MW23-B	16-Dec-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Arsenic, Dissolved Copper, Dissolved Iron, Dissolved Lead, Dissolved Zinc	Dissolved Arsenic
MW26-A	27-Oct-21	--	Dissolved Arsenic, Dissolved Cadmium, Dissolved Copper, Dissolved Manganese, Dissolved Zinc	Dissolved Arsenic, Dissolved Cobalt, Dissolved Manganese
	15-Dec-21	--	Dissolved Cadmium, Dissolved Copper	--
MW26-B	27-Oct-21	Dissolved Aluminum, Dissolved Arsenic	Dissolved Aluminum, Dissolved Arsenic, Dissolved Copper, Dissolved Lead	Dissolved Arsenic
	15-Dec-21	Dissolved Aluminum, Dissolved Arsenic	Dissolved Aluminum, Dissolved Arsenic	Dissolved Arsenic

Table 5 2021 Groundwater Exceedances – Metals

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW29-A	17-Dec-21	Dissolved Cobalt	Dissolved Aluminum, Dissolved Copper, Dissolved Iron, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
MW29-B	17-Dec-21	--	Dissolved Aluminum	Dissolved Manganese
MW30-A	27-Oct-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Copper, Dissolved Iron, Dissolved Manganese, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
	16-Dec-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Copper, Dissolved Iron, Dissolved Zinc	--
MW30-B	27-Oct-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Arsenic	Dissolved Manganese
	16-Dec-21	--	Dissolved Arsenic	Dissolved Manganese
MW42-A	27-Oct-21	Dissolved Aluminum, Dissolved Copper, Dissolved Zinc	Dissolved Copper, Dissolved Iron, Dissolved Manganese, Dissolved Nickel, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
	16-Dec-21	Dissolved Iron	Dissolved Iron, Dissolved Manganese, Dissolved Nickel, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
MW42-B	27-Oct-21	Dissolved Aluminum	Dissolved Arsenic	Dissolved Arsenic
	16-Dec-21	--	Dissolved Arsenic	Dissolved Arsenic
MW43-A	27-Oct-21	Dissolved Aluminum	Dissolved Manganese, Total Mercury, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
	16-Dec-21	--	Dissolved Copper, Dissolved Iron, Dissolved Manganese, Total Mercury, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
MW43-B	27-Oct-21	--	Dissolved Iron, Dissolved Zinc	Dissolved Manganese
	16-Dec-21	--	Dissolved Zinc	--
MW46-A	27-Oct-21	--	Dissolved Copper, Dissolved Iron, Total Mercury, Dissolved Zinc	--
	16-Dec-21	--	Dissolved Aluminum, Dissolved Copper	--

Table 5 2021 Groundwater Exceedances – Metals

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW46-B	27-Oct-21	Dissolved Aluminum	Dissolved Aluminum, Dissolved Arsenic, Dissolved Copper, Dissolved Iron, Dissolved Manganese, Dissolved Selenium, Dissolved Uranium	Dissolved Arsenic, Dissolved Manganese, Dissolved Uranium
	16-Dec-21	Dissolved Aluminum	Dissolved Arsenic, Dissolved Uranium	Dissolved Arsenic, Dissolved Manganese, Dissolved Uranium
MW51-A	17-Dec-21	Dissolved Cobalt, Dissolved Copper	Dissolved Aluminum, Dissolved Copper, Dissolved Iron, Dissolved Manganese, Dissolved Silver, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
MW51-B	17-Dec-21	--	--	Dissolved Manganese
MW54-A	17-Dec-21	--	Dissolved Cadmium, Dissolved Copper, Dissolved Manganese, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
MW54-B	17-Dec-21	--	--	--
MW55-A	17-Dec-21	--	Dissolved Copper, Dissolved Iron, Dissolved Manganese, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
MW55-B	17-Dec-21	Dissolved Aluminum	Dissolved Copper, Dissolved Manganese	Dissolved Manganese
MW56-A	17-Dec-21	--	Dissolved Copper, Dissolved Manganese, Dissolved Nickel, Dissolved Zinc	Dissolved Cobalt, Dissolved Manganese
MW56-B	17-Dec-21	--	Dissolved Copper, Dissolved Manganese	Dissolved Manganese

Table 6 2021 Groundwater Exceedances – BTEX/mTPH

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW1-A	17-Dec-21	--	--	--
MW1-B	17-Dec-21	--	--	--
MW5-A	21-Jul-21	--	--	--
	26-Oct-21	--	--	--
	16-Dec-21	--	--	--

Table 6 2021 Groundwater Exceedances – BTEX/mTPH

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW5-B	21-Jul-21	--	--	--
	26-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW6-A	21-Jul-21	--	--	--
	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW6-B	21-Jul-21	--	--	--
	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW7-A	21-Jul-21	--	--	--
	27-Oct-21	--	--	--
MW7-A	16-Dec-21	--	--	--
MW7-B	21-Jul-21	--	--	--
	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW15-A	21-Jul-21	--	--	--
	27-Oct-21	--	--	--
	16-Dec-21	mTPH	--	--
MW15-B	21-Jul-21	--	Toluene	--
	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW16-A	16-Dec-21	--	--	--
MW16-B	16-Dec-21	--	--	--
MW20-A	21-Jul-21	--	--	--
	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW20-B	21-Jul-21	mTPH	--	--
	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW21-A	13-Dec-21	--	--	--
MW21-B	13-Dec-21	--	--	--
MW23-A	14-Dec-21	--	--	--
MW23-B	14-Dec-21	--	--	--

Table 6 2021 Groundwater Exceedances – BTEX/mTPH

Monitoring Well ID	Date	NS Tier II PSS for Groundwater Discharging to Surface Water (>10m)	CCME Water Quality Guidelines FWAL	Potable Water Criteria (Lowest of GCDWQ MAC and NS Tier 1 EQS)
MW26-A	27-Oct-21	--	--	--
	15-Dec-21	--	--	--
MW26-B	27-Oct-21	--	Toluene	--
MW26-B	15-Dec-21	--	--	--
MW29-A	17-Dec-21	--	--	--
MW29-B	17-Dec-21	--	--	--
MW30-A	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW30-B	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW42-A	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW42-B	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW43-A	27-Oct-21	--	--	--
	16-Dec-21	--	Toluene	--
MW43-B	27-Oct-21	--	--	--
	16-Dec-21	--	--	--
MW46-A	27-Oct-21	--	--	--
	15-Dec-21	--	--	--
MW46-B	27-Oct-21	--	--	--
	15-Dec-21	--	--	--
MW51-A	17-Dec-21	--	--	--
MW51-B	17-Dec-21	--	--	--
MW54-A	17-Dec-21	--	--	--
MW54-B	17-Dec-21	--	--	--
MW55-A	17-Dec-21	--	--	--
MW55-B	17-Dec-21	--	Toluene	--
MW56-A	17-Dec-21	--	--	--
MW56-B	17-Dec-21	--	--	--

3.4 Industrial Approval Monitoring Data

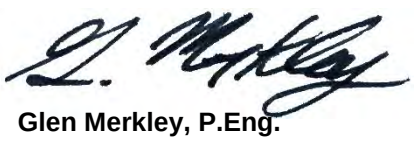
As part of the Industrial Approval (Approval No. 2018-101368-02) effective August 5, 2020, groundwater monitoring has been completed since August 2018. The five groundwater monitoring wells include: Domestic Well (#8), MW17-1, MW17-2, MW17-3S, and MW17-3D.

Water quality monitoring included general chemistry, metals, total suspended solids, and pH analyses compared to the 95th percentile of the statistically analyzed baseline data. Analytical results for the IA monitoring are provided in Attachment 6.

4. Closure

We trust this submission meets your request, however if you have any questions, please contact the undersigned at your convenience.

Regards,



Glen Merkley, P.Eng.
Intermediate Environmental Engineer

Alan Deal, P.Geo.
Senior Scientist

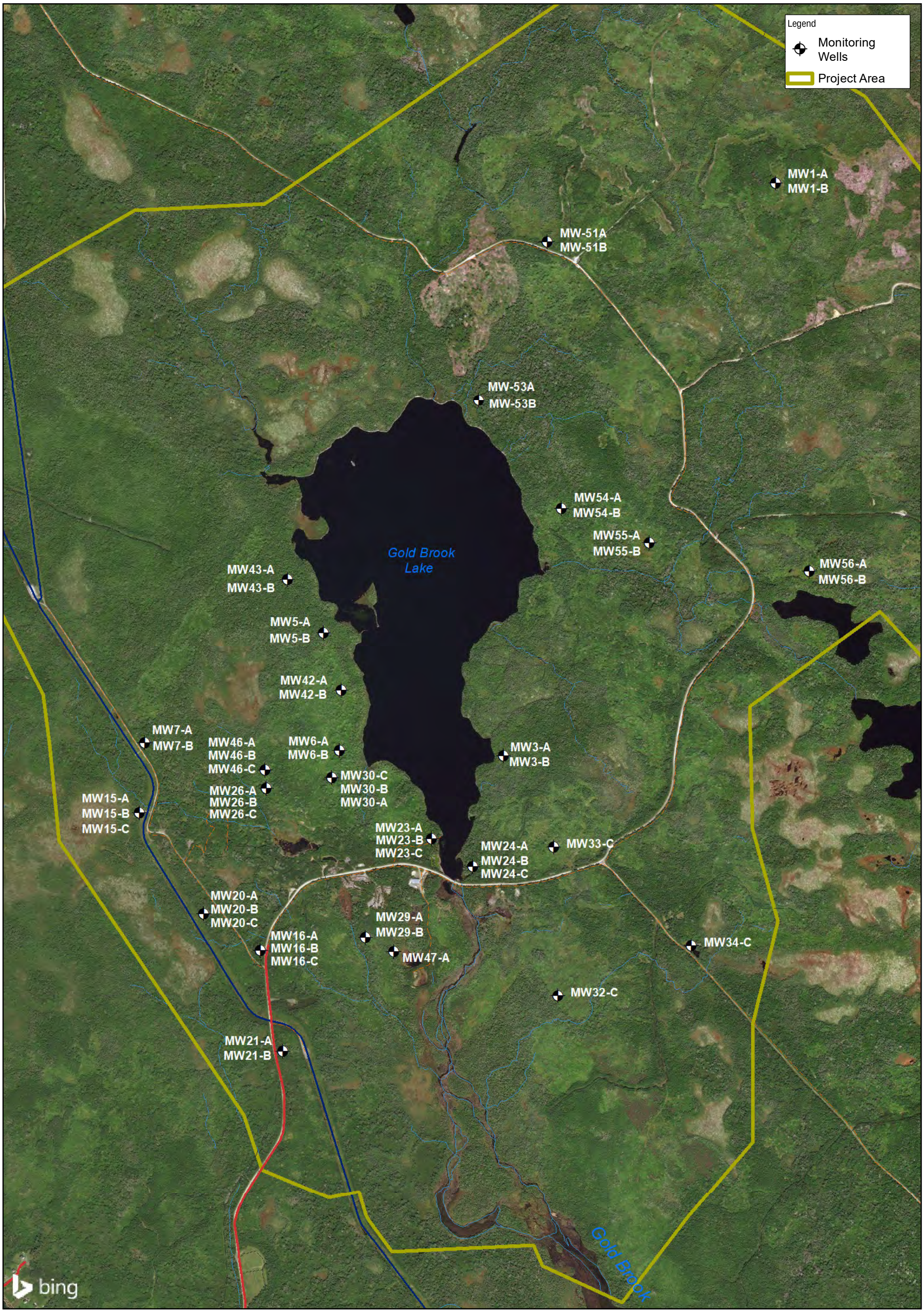
5. References

Canadian Council of Ministers of the Environment (CCME). 2021. Canadian Water Quality Guidelines for the Protection of Aquatic Life.

Health Canada. 2020. Guidelines for Canadian Drinking Water Quality Summary Table.

Nova Scotia Department of Environment and Climate Change (NSECC). 2021. Nova Scotia Tier II Pathway-Specific Standards for Surface Water and Groundwater Discharging to Surface Water.

NSECC. 2021. Nova Scotia Tier I Environmental Quality Standards (EQS).



Paper Size ANSI B

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983 CSRS
Grid: NAD 1983 CSRS UTM Zone 20N

N

GHD

ANACONDA MINING INC
GOLDBORO, GUYSBOROUGH, NOVA SCOTIA
GROUNDWATER MONITORING PROGRAM

2021 GROUNDWATER MONITORING LOCATIONS

Project No. 11222385
Revision No. -
Date 15/03/2022

FIGURE 1

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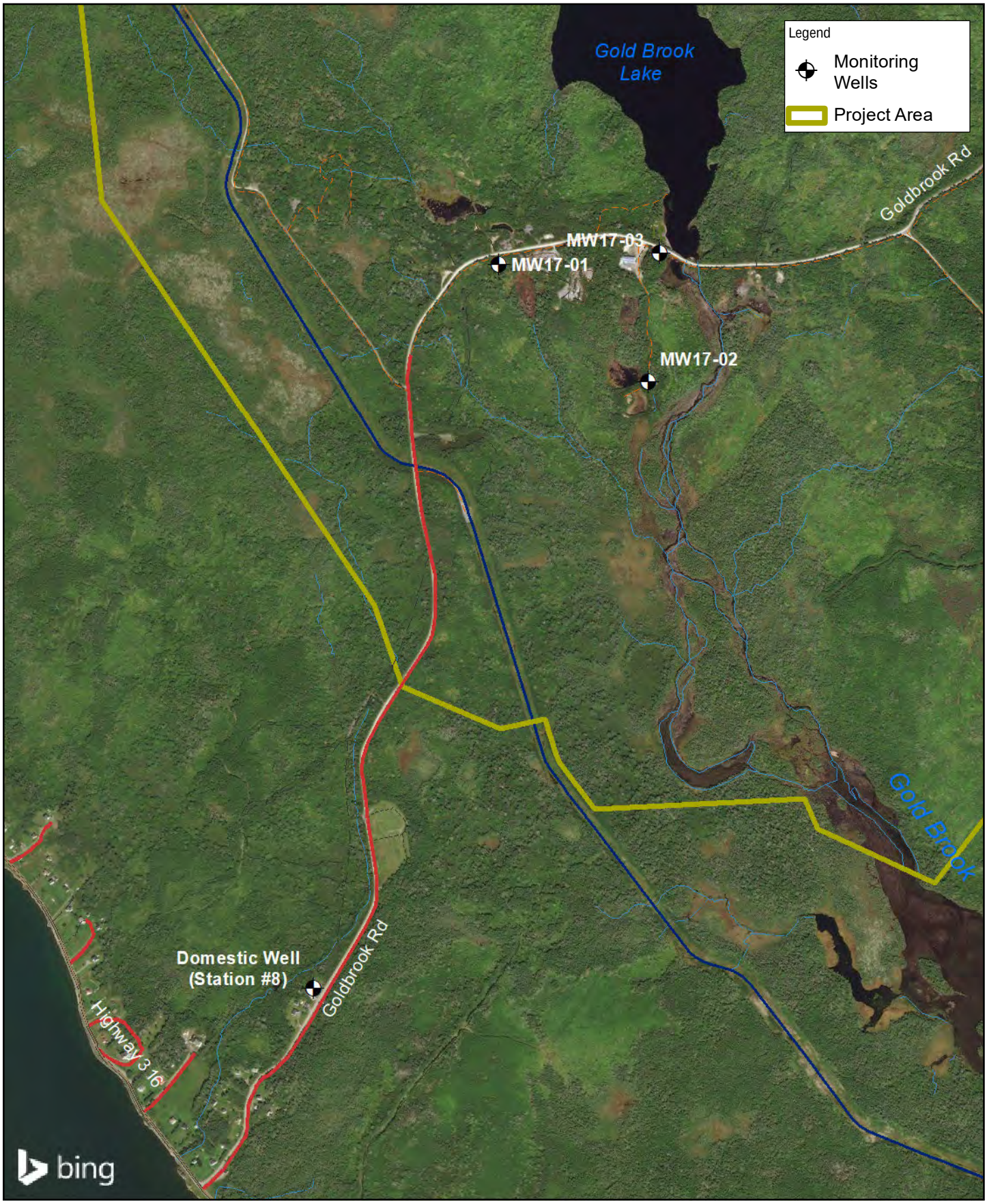
Data source: GHD, Anaconda, © 2022 Microsoft Corporation © 2022 Maxar ©CNES (2022) Distribution Airbus DS. Created by: jjparks



Paper Size ANSI A

0 125 250 375

Metres

Map Projection: Transverse Mercator
Horizontal Datum: North American 1983 CSRS
Grid: NAD 1983 CSRS UTM Zone 20N

N

GHD

ANACONDA MINING INC.
GOLDBORO, GUYSBOROUGH CO., NS
GOLDBORO GOLD PROJECT

2021 IA GROUNDWATER MONITORING LOCATIONS

Project No. 11222385
Revision No. -
Date 15/03/2022

FIGURE 2

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Print date: 15 Mar 2022 - 20:54

Attachment 1

Borehole Logs - Part 1 of 2

TERRANE GEOSCIENCE INC.

BOREHOLE/ MW RECORD

BOREHOLE No. MW1A
PAGE 1 of 1
PROJECT No. 20-113-H
METHOD ROTARY
SIZE HQ
DATUM GEODETIC

CLIENT ANACONDA MINING INC.
PROJECT GOLDBORO SITEWIDE GEOTECHNICAL INVESTIGATION
LOCATION GOLDBORO, NS N 295253.386 m E 5009425.241 m
DATES (yyyy-mm-dd): BORING 2021-11-18 to 2021-11-19 WATER LEVEL 0.41m 2021-12-3

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY(mm) OR TCR %	SAMPLES N-VALUE OR RQD %	SAMPLES OTHER TESTS	UNDRAINED SHEAR STRENGTH - kPa / WATER CONTENT & ATTERBERG LIMITS / DYNAMIC PENETRATION TEST, BLOWS/0.3m / STANDARD PENETRATION TEST, BLOWS/0.3m	WELL CONSTRUCTION DETAILS
0	110.64									10 20 30 40 50 60 70 80	WELL CAP - SU = 0.64 m
1		OVERBURDEN -NOTE: BOREHOLE DRILLED ON SAME PAD AS MW1B . REFER TO MW1B LOG FOR DETAILED SOIL AND ROCK INFORMATION		▼							50mm PVC CASING, BENTONITE CHIPS
2	108.89	Dark grey, fine grained, massive to poorly developed foliation, GREYWACKE			HQ	1	99%	0%			BENTONITE SEAL
3					HQ	2	46%	12%			SAND
4					HQ	3	66%	29%			WELL SCREEN
5											
6	104.16				HQ	4	100%	71%			SAND
7		End of Borehole at 6.5 m									
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

△ Unconfined Compression Test
□ Field Vane Test ■ (Remolded)
◇ Fall Cone Test ◆ (Remolded)
▽ Hand Penetrometer Test ◥ Torvane

LOGGED BY: MM
REVIEWED: GH

TERRANE GEOSCIENCE INC.

BOREHOLE/ MW RECORD

BOREHOLE No. MW1B
PAGE 1 of 2
PROJECT No. 20-113-H
METHOD ROTARY
SIZE HQ
DATUM GEODETIC

CLIENT ANACONDA MINING INC.
PROJECT GOLDBORO SITEWIDE GEOTECHNICAL INVESTIGATION
LOCATION GOLDBORO, NS N 295255.371 m E 5009425.866 m
DATES (yyyy-mm-dd): BORING 2021-11-16 to 2021-11-18 WATER LEVEL 4.62m 2021-12-3

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY(mm) OR TCR %	SAMPLES N-VALUE OR RQD %	SAMPLES OTHER TESTS	UNDRAINED SHEAR STRENGTH - kPa (10 20 30 40 50) / WATER CONTENT & ATTERBERG LIMITS W_P W W_L / DYNAMIC PENETRATION TEST, BLOWS/0.3m ★ / STANDARD PENETRATION TEST, BLOWS/0.3m ● (10 20 30 40 50 60 70 80)	WELL CONSTRUCTION DETAILS
0	110.51										
	109.90	ORGANICS/TOPSOIL Top 0.08 m PEAT			SS	1	80	4		●	WELL CAP - SU = 0.74 m
1		SAND, fine to coarse; AND SILT, low-plasticity; some gravel, sub-round to sub-angular, well-graded; dark brown to grey, very loose, massive, dry to moist, organics			SS	2	280	43			50mm PVC CASING, GROUT
	108.94				SS	3	360 l	17/200mm			
2		TILL: SAND, fine to coarse; AND SILT, low-plasticity; some gravel, sub-round to sub-angular, well-graded; light brown to grey, dense to very dense, wet, massive			HQ	1	98%	98%			
					HQ	2	71%	22%			
3											
4					HQ	3	56%	10%			
5		Dark grey, fine to medium grained, massive to poorly developed foliation, GREYWACKE with minor beds of ARGILLITE		▼	HQ	4	100%	76%			
6											
7					HQ	5	98%	81%			
8					HQ	6	97%	85%			
9											
10					HQ	7	100%	41%			
11					HQ	8	100%	80%			
12											
13					HQ	9	95%	78%			
14					HQ	10	100%	67%			
15											
16					HQ	11	100%	80%			
17											
18					HQ	12	100%	75%			BENTONITE SEAL
19					HQ	13	98%	79%			SAND
20											

△ Unconfined Compression Test
□ Field Vane Test ■ (Remolded)
◇ Fall Cone Test ◆ (Remolded)
▽ Hand Penetrometer Test ◥ Torvane

LOGGED BY: MM
REVIEWED: GH

TERRANE GEOSCIENCE INC.

BOREHOLE/ MW RECORD

BOREHOLE No. MW1B
PAGE 2 of 2
PROJECT No. 20-113-H
METHOD ROTARY
SIZE HQ
DATUM GEODETIC

CLIENT ANACONDA MINING INC.
PROJECT GOLDBORO SITEWIDE GEOTECHNICAL INVESTIGATION
LOCATION GOLDBORO, NS N 295255.371 m E 5009425.866 m
DATES (yyyy-mm-dd): BORING 2021-11-16 to 2021-11-18 WATER LEVEL 4.62m 2021-12-3

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY(mm) OR TCR %	SAMPLES N-VALUE OR RQD %	SAMPLES OTHER TESTS	UNDRAINED SHEAR STRENGTH - kPa / WATER CONTENT & ATTERBERG LIMITS / DYNAMIC PENETRATION TEST, BLOWS/0.3m / STANDARD PENETRATION TEST, BLOWS/0.3m	WELL CONSTRUCTION DETAILS
		Continued from Previous Page								10 20 30 40 50 60 70 80	
20		Dark grey, fine to medium grained, massive to poorly developed foliation, GREYWACKE with minor beds of ARGILLITE *(continued...)*			HQ	14	100%	47%			WELL SCREEN
21											
22					HQ	15	98%	47%			
23					HQ	16	91%	76%			SAND
24											BENTONITE SEAL
25					HQ	17	100%	51%			SAND
26											
27					HQ	18	100%	67%			
28											
29					HQ	19	100%	86%			
30	80.18				HQ	20	100%	70%			
31		End of Borehole at 30.3 m									
32											
33											
34											
35											
36											
37											
38											
39											
40											

△ Unconfined Compression Test
□ Field Vane Test ■ (Remolded)
◇ Fall Cone Test ◆ (Remolded)
▽ Hand Penetrometer Test ◥ Torvane

LOGGED BY: MM
REVIEWED: GH

DRILL HOLE ID: MW5A

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 4.72 m
N: 293603 E: 5007848
ELEVATION: 50 m

DATE STARTED: JAN. 28, 2021
DATE COMPLETED: JAN. 28, 2021
LOGGED BY: A. GUEST, P. ENG
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY (mm) or TCR (%)	SAMPLES: BLOWS/0.15m or RQD (%)	SAMPLES: N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
0.0	50.0	* Refer to MW5B for detailed soil and bedrock description									Bentonite chips 0.86-10.86 PVC 0.00-4.72 50 mm diameter
1.0	49.0										Sand filter pack 1.45-11.44
2.0	48.0										Slotted PVC screen 1.67-4.72 50 mm diameter
3.0	47.0										
4.0	46.0										

DRILL HOLE ID: MW5B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 31.09 m
N: 293603.2 E: 5007848
ELEVATION: 50 m

DATE STARTED: JAN. 27, 2021
DATE COMPLETED: JAN. 28, 2021
LOGGED BY: A. GUEST, P. ENG
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	SOIL PROFILE DESCRIPTION	STRATA	SAMPLES NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
0.0	50.0	Cobbles/boulders at surface with thin root mat cover: TOPSOIL									Bentonite chips 0.00-0.40
1.0	49.0	Compact, greyish brown, gravelly sand, trace silt and cobbles; wet: TILL		SS1	SS	254	20 14 10 16	24	●		PVC 0.00-31.09 50 mm diameter
2.0	48.0	Very dense to very dense, brown to grey, silty gravelly sand, trace cobbles; wet: TILL		SS2	SS	660.4	32 60 47 55	107	●		Sand filter pack 0.40-22.78
3.0	47.0	Very dense to very dense, grey with some brown, sand and gravel with trace silt and cobbles; wet: TILL		SS3	SS	292.1	75 70 42 55	112	●		
4.0	46.0	Strong, dark grey, generally massive with thin beds, generally fresh; Goldenville formation: GREYWACKE		RC1	RC	100	36				
5.0	45.0			RC2	RC	93	46				
6.0	44.0			RC3	RC	99	64				
7.0	43.0										
8.0	42.0			RC4	RC	98	80				
9.0	41.0			RC5	RC	97	94				
10.0	40.0										

DRILL HOLE ID: MW5B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 31.09 m
N: 293603.2 E: 5007848
ELEVATION: 50 m

DATE STARTED: JAN. 27, 2021
DATE COMPLETED: JAN. 28, 2021
LOGGED BY: A. GUEST, P. ENG
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	DESCRIPTION	STRATA	SAMPLES NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
11.0	39.0			RC6	RC	93	69				
12.0	38.0			RC7	RC	100	63				
13.0	37.0										
14.0	36.0			RC8	RC	97	84				
15.0	35.0			RC9	RC	93	62				
16.0	34.0										
17.0	33.0			RC10	RC	95	47				
18.0	32.0			RC11	RC	100	89				
19.0	31.0										
20.0	30.0			RC12	RC	99	95				

DRILL HOLE ID: MW5B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 31.09 m
N: 293603.2 E: 5007848
ELEVATION: 50 m

DATE STARTED: JAN. 27, 2021
DATE COMPLETED: JAN. 28, 2021
LOGGED BY: A. GUEST, P. ENG
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	DESCRIPTION	STRATA	SAMPLES: NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
21.0	29.0			RC13	RC	93	93				
22.0	28.0										
23.0	27.0			RC14	RC	97	89				Bentonite pellets 22.78-27.35
24.0	26.0			RC15	RC	99	91				
25.0	25.0										
26.0	24.0			RC16	RC	100	100				
27.0	23.0			RC17	RC	90	70				Sand filter pack 27.35-31.09
28.0	22.0										Slotted PVC screen 27.96-31.09 50 mm diameter
29.0	21.0			RC18	RC	93	93				
30.0	20.0			RC19	RC	100	100				

DRILL HOLE ID: MW5B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 31.09 m
N: 293603.2 E: 5007848
ELEVATION: 50 m

DATE STARTED: JAN. 27, 2021
DATE COMPLETED: JAN. 28, 2021
LOGGED BY: A. GUEST, P. ENG
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	SOIL PROFILE: ELEVATION (m)	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY (mm) or TCR (%)	SAMPLES: BLOWS/0.15m or RQD (%)	SAMPLES: N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
31.0	19.0			RC20	RC	66	15				

DRILL HOLE ID: MW6A

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 4.26 m
N: 5007425 E: 293652
ELEVATION: 69 m

DATE STARTED: JAN. 27, 2021
DATE COMPLETED: JAN. 27, 2021
LOGGED BY: A, GUEST, P. ENG
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	SOIL PROFILE: DESCRIPTION	STRATA	SAMPLES: NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
0.0	69.0	* Refer to MW6B for detailed soil and bedrock description									Bentonite chips 0.00-0.43 PVC 0.00-4.26 50 mm diameter Sand filter pack 0.43-3.78 Slotted PVC screen 0.74-3.78 50 mm diameter
1.0	68.0										
2.0	67.0										
3.0	66.0										
4.0	65.0										

DRILL HOLE ID: MW6B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.19 m
N: 5007425 E: 293652
ELEVATION: 69 m

DATE STARTED: JAN. 26, 2021
DATE COMPLETED: JAN. 27, 2021
LOGGED BY: J. TANINGCO, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	SOIL PROFILE DESCRIPTION	STRATA	SAMPLES NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
0.0	69.0										Bentonite chips 0.00-0.40 PVC 0.00-30.19 50 mm diameter Sand filter 0.90-21.64
1.0	68.0	Very dense, light brown, silty sand with gravel; moist: TILL		SS1	SS	203.2	41 34 41 20	75	●		
2.0	67.0	Very dense, light brown, silty sand with gravel; moist: TILL		SS2	SS	482.6	30 35 54 41	89	●		
3.0	66.0	Medium strong, dark grey, generally massive with thin beds, generally fresh; Goldenville formation: GREYWACKE		RC1	RC	100	0				
4.0	65.0			RC2	RC	93	66				
5.0	64.0			RC3	RC	95	76				
6.0	63.0	- Very strong		RC4	RC	100	77				
7.0	62.0										
8.0	61.0			RC5	RC	93	82				
9.0	60.0										
10.0	59.0			RC6	RC	98	82				

DRILL HOLE ID: MW6B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.19 m
N: 5007425 E: 293652
ELEVATION: 69 m

DATE STARTED: JAN. 26, 2021
DATE COMPLETED: JAN. 27, 2021
LOGGED BY: J. TANINGCO, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	DESCRIPTION	STRATA	SAMPLES NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE
11.0	58.0			RC7	RC	97	80	
12.0	57.0			RC8	RC	100	92	
13.0	56.0							
14.0	55.0			RC9	RC	95	94	
15.0	54.0							
16.0	53.0			RC10	RC	100	100	
17.0	52.0			RC11	RC	99	82	
18.0	51.0							
19.0	50.0			RC12	RC	94	94	
20.0	49.0							

STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m
DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m
SHEAR STRENGTH (Cu), kPa +
WATER CONTENT, % ○
0 — 100

WATER LEVEL (m)

PIEZOMETER OR MONITORING WELL INSTALLATION

DRILL HOLE ID: MW6B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.19 m
N: 5007425 E: 293652
ELEVATION: 69 m

DATE STARTED: JAN. 26, 2021
DATE COMPLETED: JAN. 27, 2021
LOGGED BY: J. TANINGCO, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	DESCRIPTION	STRATA	SAMPLES NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
21.0	48.0			RC13	RC	97	86				
22.0	47.0			RC14	RC	98	90				Bentonite pellets 21.64-25.60
23.0	46.0			RC15	RC	100	99				
24.0	45.0										
25.0	44.0			RC16	RC	94	84				
26.0	43.0										Sand filter pack 25.60-30.19
27.0	42.0			RC17	RC	97	85				Slotted PVC screen 26.51-29.56 50 mm diameter
28.0	41.0			RC18	RC	100	92				
29.0	40.0			RC19	RC	100	99				
30.0	39.0										

DRILL HOLE ID: MW7A

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 5.48 m
COORDINATES:
ELEVATION:

DATE STARTED: JAN. 24, 2021
DATE COMPLETED: JAN. 24, 2021
LOGGED BY: B. MERRY, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	SOIL PROFILE: ELEVATION (m)	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY (mm) or TCR (%)	SAMPLES: BLOWS/0.15m or RQD (%)	SAMPLES: N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
0.0		* Refer to MW7B for detailed soil and bedrock description									Bentonite chips 0.00-0.61 PVC 0.00-5.48 50 mm diameter Sand filter pack 0.61-0.76 Bentonite pellets 0.76-1.98 Sand filter pack 1.98-5.48 Slotted PVC screen 2.43-5.48 50 mm diameter
1.0											
2.0											
3.0											
4.0											
5.0											

DRILL HOLE ID: MW7B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.48 m
COORDINATES:
ELEVATION:

DATE STARTED: JAN. 23, 2021
DATE COMPLETED: JAN. 24, 2021
LOGGED BY: B. MERRY, EIT
REVIEWED BY: A. GUEST, P.ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	DESCRIPTION	STRATA	NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE
0.0		Loose, reddish brown to blackish brown, well graded, silty fine sand, trace gravel; moist: TOPSOIL		SS1	SS	25.4	1 1 3 7	4
1.0		Compact, greyish brown, gravelly sand, some silt; moist: TILL		SS2	SS	152.4	4 7 17 27	24
		Very dense, greyish brown, gravelly sand, some silt; moist: TILL		SS3	SS	304.8	33 30 23 27	53
2.0								
		Very dense, greyish brown, gravelly sand, some silt, some cobbles; moist: TILL		SS4	SS	279.4	30 28 25 25	53
3.0		Very dense, greyish brown, gravelly sand, some silt, some cobbles; moist: TILL Refusal at 3.35 m		SS5	SS	228.6	32 50	82
4.0		Medium strong, dark grey, fine grained, generally massive with thin bed; Goldenville Formation: GREYWACKE		RC1	RC	67	0	
5.0				RC2	RC	99	61	
6.0				RC3	RC	93	83	
7.0								
8.0				RC4	RC	99	79	
9.0								
10.0				RC5	RC	100	92	

STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m
DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m
SHEAR STRENGTH (Cu), kPa +
WATER CONTENT, % ○
0 — 100

WATER LEVEL (m)

PIEZOMETER OR MONITORING WELL INSTALLATION

Bentonite chips 0.00-4.57

PVC 0.00-30.48 50 mm diameter

Sand filter pack 4.57-23.00

DRILL HOLE ID: MW7B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.48 m
COORDINATES:
ELEVATION:

DATE STARTED: JAN. 23, 2021
DATE COMPLETED: JAN. 24, 2021
LOGGED BY: B. MERRY, EIT
REVIEWED BY: A. GUEST, P.ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	SOIL PROFILE: ELEVATION (m)	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY (mm) or TCR (%)	SAMPLES: BLOWS/0.15m or RQD (%)	SAMPLES: N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
11.0		- Very strong		RC6	RC	96	90				
12.0											
13.0				RC7	RC	99	97				
14.0				RC8	RC	98	98				
15.0											
16.0				RC9	RC	91	88				
17.0				RC10	RC	100	98				
18.0											
19.0				RC11	RC	97	91				
20.0											

DRILL HOLE ID: MW7B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.48 m
COORDINATES:
ELEVATION:

DATE STARTED: JAN. 23, 2021
DATE COMPLETED: JAN. 24, 2021
LOGGED BY: B. MERRY, EIT
REVIEWED BY: A. GUEST, P.ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	SOIL PROFILE: ELEVATION (m)	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY (mm) or TCR (%)	SAMPLES: BLOWS/0.15m or RQD (%)	SAMPLES: N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
21.0				RC12	RC	99	93				
22.0				RC13	RC	96	92				
23.0				RC14	RC	97	97				Bentonite pellets 23.00-27.00
24.0											
25.0				RC15	RC	100	97				
26.0				RC16	RC	98	98				
27.0											Sand filter pack 27.00-30.48
28.0				RC17	RC	91	78				Slotted PVC screen 27.50-30.48 50 mm diameter
29.0											
30.0				RC18	RC	100	87				

DRILL HOLE ID: MW15A

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 5.48 m
COORDINATES:
ELEVATION:

DATE STARTED: JAN. 23, 2021
DATE COMPLETED: JAN. 23, 2021
LOGGED BY: B. MERRY, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	SOIL PROFILE: ELEVATION (m)	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY (mm) or TCR (%)	SAMPLES: BLOWS/0.15m or RQD (%)	SAMPLES: N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
0.0		* Refer to MW15B for detailed soil and bedrock description									Sand filter pack 0.00-0.91 PVC 0.00-5.48 50 mm diameter Bentonite chips 0.91-1.82 Sand filter pack 1.82-5.48 Slotted PVC screen 2.43-5.48 50 mm diameter
1.0											
2.0											
3.0											
4.0											
5.0											

DRILL HOLE ID: MW15B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.16 m
COORDINATES:
ELEVATION:

DATE STARTED: JAN. 21, 2021
DATE COMPLETED: JAN. 22, 2021
LOGGED BY: B. MERRY, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m
DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m
SHEAR STRENGTH (Cu), kPa +
WATER CONTENT, % ○
0 — 100

DEPTH 1m:50m	ELEVATION (m)	DESCRIPTION	STRATA	NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
0.0		Loose, soft, reddish brown to blackish brown, silt with some sand, trace gravel, roots and organics; dry: TOPSOIL		SS1	SS	177.8	2 2 7 7	9		Bentonite chips 0.00-0.61
1.0		Dense, greyish brown, silty sand, some gravel, trace cobbles; wet: TILL		SS2	SS	76.2	9 15 20 22	35		PVC 0.00-27.13 50 mm diameter
		Dense, greyish brown, silty sand, some gravel, trace cobbles; moist: TILL		SS3	SS	270	13 12 27 32	39		Sand filter pack 0.61-18.90
2.0		Dense, greyish brown, sand, some silt and gravel, trace cobbles; moist: TILL		SS4	SS	170	20 16 14 14	30		
3.0		Dense, greyish brown, sand, some silt, trace gravel; moist: TILL		SS5	SS	280	15 15 16 16	31		
4.0		Dense, greyish brown, gravelly sand, some silt, trace cobbles; moist: TILL		SS6	SS	230	18 18 20 16	38		
		Compact, greyish brown, sand, some gravel, trace silt; moist: TILL		SS7	SS	230	18 16 10 10	26		
5.0		Dense, greyish brown, silty sand, trace gravel, clay; moist: TILL		SS8	SS	290	12 14 21 30	35		
6.0		Very dense, greyish brown, silty sand, trace gravel; moist: TILL		SS9	SS	127	100	100		
7.0		Strong, dark grey, fine grained, generally massive with thin beds; Goldenville Formation: GREYWACKE		SS10	SS	177.8	100	100		
8.0				RC1	RC	67	0			
9.0				RC2	RC	78	46			
10.0		- Very strong								

DRILL HOLE ID: MW15B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.16 m
COORDINATES:
ELEVATION:

DATE STARTED: JAN. 21, 2021
DATE COMPLETED: JAN. 22, 2021
LOGGED BY: B. MERRY, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	SOIL PROFILE: ELEVATION (m)	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY (mm) or TCR (%)	SAMPLES: BLOWS/0.15m or RQD (%)	SAMPLES: N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
11.0				RC3	RC	96	77				
12.0				RC4	RC	89	47				
13.0											
14.0				RC5	RC	96	55				
15.0											
16.0				RC6	RC	91	81				
17.0				RC7	RC	100	93				
18.0		- Strong									
19.0				RC8	RC	86	73				Bentonite pellets 18.90-23.47
20.0											

DRILL HOLE ID: MW15B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.16 m
COORDINATES:
ELEVATION:

DATE STARTED: JAN. 21, 2021
DATE COMPLETED: JAN. 22, 2021
LOGGED BY: B. MERRY, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	SOIL PROFILE: ELEVATION (m)	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY (mm) or TCR (%)	SAMPLES: BLOWS/0.15m or RQD (%)	SAMPLES: N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
21.0				RC9	RC	97	82				
22.0				RC10	RC	100	87				
23.0				RC11	RC	97	82				
24.0				RC12	RC	100	93				
25.0											
26.0				RC13	RC	95	80				
27.0				RC14	RC	99	99				
28.0											
29.0				RC15	RC	91	80				
30.0											

Sand filter pack 23.47-27.13

Slotted PVC screen 24.08-27.13 50 mm diameter

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
DATE COMPLETED: JUN 09, 2021
INCLINATION: -90°
AZIMUTH: 000° **COORD. SYS.:** NAD83 MTM Zone 4

PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
	63.8														
0		OVERBURDEN		▼										Bentonite slurry, 50 mm diameter PVC riser	
1															
2															
3															
4															
5															
6															
7															
	56.3														
8		Medium grey, medium grained GREYWACKE with well developed S1 foliation and local patchy silicification. Rust staining on broken surfaces.			HQ 1		100	62	6.1	5	2	CL, U, IN: cly	48		
9															
10					HQ 2		97	81	2.0	5	2	CL, U, IN: cly	52		
	52.9														
11		Medium grey, well foliated ARGILLITE with two folded veins. Rust stained fractured surfaces.													
12															
13					HQ 3		100	71	2.5	4	2	BD, U, IN: cly	43		
	49.9														
14															
15					HQ 4		99	82	1.5	5	2	BD, U, IN: fes	58		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

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PROJECT NO.: 20-113-H
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PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	OTHER TESTS
15		Medium grey, medium grained GREYWACKE with minor ARGILLITE beds, up to 70cm. Rust staining on fractured surfaces to 16.2m. *(continued...)*										
16			HQ 4		99	82	1.5	5	2	BD, U, IN: fes	58	
17												
18			HQ 5		100	96	1.3	4	2	CL, U, IN: cal	56	
19												
20												
21			HQ 6		100	79	2.0	5	2	BD, U, IN: cly	58	
22												
23												
24			HQ 7		100	84	1.8	5	1	BD, U, IN: sph	61	
25												
26												
27	36.6											
28		Medium grey ARGILLITE, weakly biotite spotted. Pyrrhotite veinlets throughout, and in blebs with pyrite near a 0.3cm vein ~27.7m.	HQ 8		99	84	1.3	4	1	BD, U, IN: bio	56	
29												
30	34.0		HQ 9		100	72	2.5	5	1	JS, U, IN: q-crb	57	

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

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PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining; epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	OTHER TESTS
30		Medium grey medium grained GREYWACKE. Local patchy silicification. Pyrrhotite veinlets throughout. *(continued...)*										
31			HQ 9		100	72	2.5	5	1	JS, U, IN: q-crb	57	
32												
33												
34			HQ 10		100	83	1.8	5	1	JS, U, IN: q-crb	61	
35												
36												
37			HQ 11		100	70	2.0	5	1	JS, U, IN: q-crb	57	
38												
39												
40			HQ 12		100	38	3.5	4	1	RZ, U, IN: RZ	47	Packer Test 5 38.60 to 41.82 m
41	23.2	Medium grey, entirely broken/rubbled ARGILLITE.										
42												
43	20.8	Medium grey, medium grained GREYWACKE.	HQ 13		100	45	5.0	4	1	FT, U, IN: gou	41	
44												
45			HQ 14		100	94	1.3	5	1	BD, U, IN: q-crb	74	

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

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PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining; epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	OTHER TESTS
45		Medium grey, medium grained GREYWACKE. *(continued...)*										
46			HQ 14		100	94	1:3	5	1	BD, U, IN: q-crb	74	
47	16.8	Medium grey, well foliated ARGILLITE with minor medium grey GREYWACKE. Bedding angles near 0.										
48												
49			HQ 15		99	90	1:5	5	1	BD, U, IN: sph	71	
50												
51												
52			HQ 16		99	76	2:0	4	1	BD, P, IN: sph	56	
53												
54												
55	8.8	Medium grey, medium grained GREYWACKE.	HQ 17		99	94	1:5	5	1	JS, U, IN: q-crb	64	
56												
57												
58	5.6	Medium grey, well foliated ARGILLITE with folded bedding.	HQ 18		100	85	1:5	4	1	FT, U, IN: gou	50	
59												
60			HQ 19		98	85	1:5	4	1	BD, U, IN: q-crb	66	

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

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BR-21-271

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DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining; epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
60															
	3.2	Medium grey, well foliated ARGILLITE with folded bedding. *(continued...)*													
61		Medium grey, medium grained GREYWACKE.			HQ 19		98	85	1.5	4	1	BD, U, IN: q-crb	66		
62															
63	0.8														
		Medium grey weakly foliated ARGILLITE. Minor pyrrhotite and pyrite mineralization along upper contact.			HQ 20		100	91	1.0	5	1	BD, U, IN: q-crb	64		
64	-0.8														
65		Medium to fine grained, medium to light grey GREYWACKE with well developed S1 foliation and localized carbonate filled fractures. Multiple areas of healed brecciation, concurrent with weak bleaching. Weak to moderate patchy silicification throughout unit.			HQ 21		100	100	0.8	5	1	BD, U, IN: q-crb	74		
66															
67															
68															
69					HQ 22		100	100	0.5	5	1	BD, U, IN: q-crb	74		
70															
71															
72															
73					HQ 23		99	96	1.0	5	1	CL, U, IN: q-crb	64		
74															
75					HQ 24		98	93	1.0	5	1	CL, U, IN: q-crb	64		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

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PROJECT NO.: 20-113-H
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PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE % (20 40 60 80)	R.Q.D. % (20 40 60 80)	FRACT. INDEX PER 0.3 m (5 10 15)	ROCK STRENGTH INDEX (R1 R2 R3 R4)	WEATHERING INDEX (W5 W4 W3 W2)	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976 (20 40 60 80)	WELL CONSTRUCTION DETAILS	OTHER TESTS
75		Medium to fine grained, medium to light grey GREYWACKE with well developed S1 foliation and localized carbonate filled fractures. Multiple areas of healed brecciation, concurrent with weak bleaching. Weak to moderate patchy silicification throughout unit. *(continued...)*			HQ 24		98	93	1.0	5	1	CL, U, IN: q-crb	64		
76															
77															
78					HQ 25		100	100	1.0	5	1	CL, U, IN: cln	64		
79															
80															
81					HQ 26		99	95	1.0	5	1	CL, U, IN: cln	74		
82															
83															
84					HQ 27		100	99	0.8	5	1	CL, U, IN: cln	74		
85															
86															
87					HQ 28		98	96	0.5	5	1	CL, U, IN: cln	74		
88															
89															
90					HQ 29		100	97	0.8	5	1	CL, U, IN: cln	74		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

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INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining; epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
90		Medium to fine grained, medium to light grey GREYWACKE with well developed S1 foliation and localized carbonate filled fractures. Multiple areas of healed brecciation, concurrent with weak bleaching. Weak to moderate patchy silicification throughout unit. *(continued...)*			HQ 29		100	97	0.8	5	1	CL, U, IN: cln	74		
91															
92															
93					HQ 30		100	100	1.2	5	1	CL, U, IN: cln	64		
94															
95															
96					HQ 31		99	99	0.4	5	1	CL, U, IN: chl	74		
97															
98															
99					HQ 32		100	89	1.0	5	1	CL, U, IN: cln	71		
100															
101															
102					HQ 33		100	100	0.5	5	1	CL, U, IN: cln	74		
103															
104															
105					HQ 34		98	93	1.0	5	1	CL, U, IN: cln	74		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
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PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sphalides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
105		Medium to fine grained, medium to light grey GREYWACKE with well developed S1 foliation and localized carbonate filled fractures. Multiple areas of healed brecciation, concurrent with weak bleaching. Weak to moderate patchy silicification throughout unit. *(continued...)*													
106					HQ 34		98	93	1.0	5	1	CL, U, IN: cln	74		
107															
108															
109					HQ 35		100	93	1.3	5	1	CL, U, IN: sph	64		
110															
111															
112					HQ 36		100	88	1.3	5	1	CL, U, IN: cln	61		
113															
114															
115					HQ 37		100	84	1.8	5	1	CL, U, IN: cln	61		
116															
117															
118					HQ 38		100	97	1.0	5	1	CL, U, IN: cln	74		
119															
120					HQ 39		100	100	0.8	5	1	CL, U, IN: q-crb	74		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
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PROJECT NO.: 20-113-H
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DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining; epi-Epidote, hem-Hematite, sph-Sphalides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
120		Medium to fine grained, medium to light grey GREYWACKE with well developed S1 foliation and localized carbonate filled fractures. Multiple areas of healed brecciation, concurrent with weak bleaching. Weak to moderate patchy silicification throughout unit. *(continued...)*			HQ 39		100	100	0.8	5	1	CL, U, IN: q-crb	74		
123					HQ 40		100	87	1.5	5	1	JS, U, IN: sph	71		
126					HQ 41		100	100	0.8	5	1	CL, U, IN: cln	74		
129					HQ 42		100	99	1.0	5	1	CL, U, IN: cln	74		
132					HQ 43		100	100	0.8	5	1	CL, U, IN: cln	74		
135					HQ 44		99	99	1.0	5	1	BD, U, IN: sph	74		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
DATE COMPLETED: JUN 09, 2021
INCLINATION: -90°
AZIMUTH: 000° **COORD. SYS.:** NAD83 MTM Zone 4

PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sphlides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
135		Medium to fine grained, medium to light grey GREYWACKE with well developed S1 foliation and localized carbonate filled fractures. Multiple areas of healed brecciation, concurrent with weak bleaching. Weak to moderate patchy silicification throughout unit. *(continued...)*													
136					HQ 44		99	99	1.0	5	1	BD, U, IN: sph	74		
137															
138															
139					HQ 45		100	96	1.0	5	1	CL, U, IN: cln	74		
140															
141															
142					HQ 46		99	76	1.5	5	1	CL, U, IN: q-crb	61		Packer Test 4 140.60 to 143.82 m
143															
144															
145					HQ 47		100	96	1.5	5	1	CL, U, IN: cln	64		
146															
147															
148					HQ 48		100	95	1.3	5	1	CL, U, IN: cln	74		
149															
150					HQ 49		100	95	1.0	5	1	CL, U, IN: sph	64		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
DATE COMPLETED: JUN 09, 2021
INCLINATION: -90°
AZIMUTH: 000° **COORD. SYS.:** NAD83 MTM Zone 4

PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
150															
151		Medium to fine grained, medium to light grey GREYWACKE with well developed S1 foliation and localized carbonate filled fractures. Multiple areas of healed brecciation, concurrent with weak bleaching. Weak to moderate patchy silicification throughout unit. *(continued...)*			HQ 49		100	95	1.0	5	1	CL, U, IN: sph	64		
152	-88.9														
153		Medium grey, biotite-rich ARGILLITE with folded and crenulated bedding.			HQ 50		98	98	0.4	4	1	BD, U, IN: q-crb	69		
154															
155															
156					HQ 51		98	93	0.8	4	1	BD, U, IN: bio	69		Packer Test 3 155.60 to 158.82 m
157															
158															
159					HQ 52		100	100	0.8	4	1	BD, U, IN: q-crb	69		
160	-96.6														
161		Medium grey, medium grained GREYWACKE. One 70 cm ARGILLITE bed.													
162															
163					HQ 53		100	98	1.0	5	1	CL, U, IN: cln	74		
164															
165					HQ 54		100	98	1.0	5	1	BD, U, IN: sph	74		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
DATE COMPLETED: JUN 09, 2021
INCLINATION: -90°
AZIMUTH: 000° **COORD. SYS.:** NAD83 MTM Zone 4

PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining; epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE % (20 40 60 80)	R.Q.D. % (20 40 60 80)	FRACT. INDEX PER 0.3 m (5 10 15)	ROCK STRENGTH INDEX (R1 R2 R3 R4)	WEATHERING INDEX (W5 W4 W3 W2)	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976 (20 40 60 80)	WELL CONSTRUCTION DETAILS	OTHER TESTS
165		Medium grey, medium grained GREYWACKE. One 70 cm ARGILLITE bed. *(continued...)*													
166					HQ 54		100	98	1.0	5	1	BD, U, IN: sph	74		
167															
168															
169					HQ 55		98	98	0.7	5	1	CL, U, IN: q-crb	74		
170															
171															
172					HQ 56		100	100	0.3	5	1	BD, U, IN: q-crb	74		
173	-109.7														
174		Medium grey, moderately foliated ARGILLITE. No veins.													
175	-111.1	Light grey, medium to fine grained GREYWACKE with well developed S1 foliation and local carbonate filled fractures.			HQ 57		100	97	0.5	5	1	CL, U, IN: q-crb	74		
176															
177															
178					HQ 58		100	100	0.4	5	1	CL, U, IN: cln	74		
179															
180					HQ 59		99	99	1.0	5	1	CL, U, IN: bio	64		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
DATE COMPLETED: JUN 09, 2021
INCLINATION: -90°
AZIMUTH: 000° **COORD. SYS.:** NAD83 MTM Zone 4

PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
180		Light grey, medium to fine grained GREYWACKE with well developed S1 foliation and local carbonate filled fractures. *(continued...)*													
181					HQ 59		99	99	1.0	5	1	CL, U, IN: bio	64		
182															
183															
184					HQ 60		99	99	0.7	5	1	CL, U, IN: bio	74	Bentonite seal	
185														Sand filter pack; Well screen, 50 mm diameter slotted PVC	
186															
187					HQ 61		100	96	0.9	5	1	CL, U, IN: bio	74		Packer Test 2 185.60 to 188.82 m
188														Sand filter pack	
189															
190					HQ 62		100	100	0.5	5	1	CL, U, IN: bio	74	Bentonite seal	
191															
192															
193					HQ 63		100	100	0.7	5	1	CL, U, IN: cln	74		
194															
195					HQ 64		100	99	0.9	5	1	CL, U, IN: cln	74		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
DATE COMPLETED: JUN 09, 2021
INCLINATION: -90°
AZIMUTH: 000° **COORD. SYS.:** NAD83 MTM Zone 4

PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
195		Light grey, medium to fine grained GREYWACKE with well developed S1 foliation and local carbonate filled fractures. *(continued...)*													
196					HQ 64		100	99	0.9	5	1	CL, U, IN: cln	74		
197														Bentonite slurry	
198					HQ 65		100	97	1.0	5	1	CL, U, IN: cln	74		
199															
200															
201					HQ 66		100	97	1.3	5	1	CL, U, IN: bio	64		
202															
203															
204					HQ 67		100	100	1.0	5	1	CL, U, IN: cln	64		
205															
206															
207															
	-144.0														
208		Medium grey, biotite-rich ARGILLITE with carbonate and quartz fracture fill throughout. Bedding is folded. Minor GREYWACKE.			HQ 68		98	93	0.5	4	1	BD, U, IN: bio	69		
209															
210					HQ 69		100	100	0.3	4	1	BD, U, IN: q-crb	69		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
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PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining; epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
210															
211		Medium grey, biotite-rich ARGILLITE with carbonate and quartz fracture fill throughout. Bedding is folded. Minor GREYWACKE. *(continued...)*			HQ 69		100	100	0.3	4	1	BD, U, IN: q-crb	69		
212	-148.0	Medium grey, medium grained GREYWACKE.													
213	-149.4	Medium grey ARGILLITE with locally well developed S2 foliation.			HQ 70		100	95	1.5	5	1	CL, U, IN: cln	64		
214															
215															
216					HQ 71		98	98	0.8	5	1	BD, U, IN: q-crb	64		
217	-153.9														
218		Medium grey, medium grained GREYWACKE. Heavily faulted/broken. Weak patchy silicification throughout.													
219															
220					HQ 72		98	91	1.5	5	1	JS, U, IN: q-crb	64		
221															
222															
223					HQ 73		100	57	2.8	4	1	JS, U, IN: q-crb	52		
224															
225					HQ 74		100	26	8.0	4	1	RZ, U, IN: RZ	42		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
DATE COMPLETED: JUN 09, 2021
INCLINATION: -90°
AZIMUTH: 000° **COORD. SYS.:** NAD83 MTM Zone 4

PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining; epi-Epidote, hem-Hematite, sph-Sphlides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
225		Medium grey, medium grained GREYWACKE. Heavily faulted/broken. Weak patchy silicification throughout. *(continued...)*													
226					HQ 74		100	26	8.0	4	1	RZ, U, IN: RZ	42		Packer Test 1 224.60 to 227.82 m
227															
228															
229					HQ 75		100	45	3.5	4	1	RZ, U, IN: sph	47		
230															
231															
232					HQ 76		98	62	2.5	4	1	CL, U, IN: bio	52		
233															
234															
235					HQ 77		100	58	4.8	4	1	RZ, U, IN: RZ	46		
236															
237															
238					HQ 78		100	89	1.6	5	1	CL, U, IN: chl	61		
239															
240					HQ 79		100	90	1.4	4	1	CL, U, IN: chl	56		

LOGGED: AG CHECKED: TG

RECORD OF BOREHOLE

DRILL HOLE ID: MW15C
BR-21-271

TOTAL DEPTH: 251.60 m
N: 5007224.58 **E:** 292905.37
ELEVATION: 63.80 m GEODETIC
WATER LEVEL: 0.75 m

DATE STARTED: JUN 03, 2021
DATE COMPLETED: JUN 09, 2021
INCLINATION: -90°
AZIMUTH: 000° **COORD. SYS.:** NAD83 MTM Zone 4

PROJECT NO.: 20-113-H
CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DISCONTINUITY: SH-SHEAR, JS-JOINT, CL-CLEAVAGE, VN-VEIN; CONT-CONTACT, BD-BEDDING, FT-FAULT, FO-FOLIATION; RZ-BROKEN CORE / RUBBLE ZONE, P-PLANAR, U-UNDULATING; RO-ROUGH, SL-SLICKENSIDED
INFILL: cln-Clean, cal-Calcite, chl-Chlorite, cly-Clay Minerals
q-crb-Quartz-Calcite, gou-Gouge, qtz-Quartz, fes-Iron Staining
epi-Epidote, hem-Hematite, sph-Sulphides, bio-Biotite

DEPTH (m)	ELEVATION (m)	LITHOLOGICAL DESCRIPTION	STRATA PLOT	WATER LEVEL	RUN No.	STRUCTURE	TOTAL CORE %	R.Q.D. %	FRACT. INDEX PER 0.3 m	ROCK STRENGTH INDEX	WEATHERING INDEX	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	RMR 1976	WELL CONSTRUCTION DETAILS	OTHER TESTS
240		Medium grey, medium grained GREYWACKE. Heavily faulted/broken. Weak patchy silicification throughout. *(continued...)*													
241					HQ 79		100	90	1.4	4	1	CL, U, IN: chl	56		
242															
243															
244					HQ 80		100	81	2.8	5	1	CL, U, IN: chl	61		
245															
246															
247					HQ 81		100	80	1.5	5	1	CL, U, IN: q-crb	71		
248															
249															
250					HQ 82		100	98	0.5	4	1	VN, U, IN: cly	69		
251															
	-187.8	END BOREHOLE @ 251.6 m													
252															
253															
254															
255															

LOGGED: AG CHECKED: TG

TERRANE GEOSCIENCE INC.

BOREHOLE/ MW RECORD

BOREHOLE No. MW16A
PAGE 1 of 1
PROJECT No. 20-113-H
METHOD CME55
SIZE HQ
DATUM GEODETIC

CLIENT ANACONDA MINING INC.
PROJECT GOLDBORO SITEWIDE GEOTECHNICAL INVESTIGATION
LOCATION GOLDBORO, NS N 293352.111 m E 5006707.575 m
DATES (yyyy-mm-dd): BORING 2021-11-27 to 2021-11-27 WATER LEVEL 0.03m 2021-12-3

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY(mm) OR TCR %	SAMPLES N-VALUE OR RQD %	SAMPLES OTHER TESTS	UNDRAINED SHEAR STRENGTH - kPa (10 20 30 40 50) / WATER CONTENT & ATTERBERG LIMITS (W_P W W_L) / DYNAMIC PENETRATION TEST, BLOWS/0.3m ★ / STANDARD PENETRATION TEST, BLOWS/0.3m ● (10 20 30 40 50 60 70 80)	WELL CONSTRUCTION DETAILS
0	63.89	NOTE: BOREHOLE DRILLED ON SAME PAD AS MW16B & MW16C. REFER TO MW16B & MW16C LOGS FOR DETAILED SOIL AND ROCK INFORMATION		▼							WELL CAP - SU = 0.71 m 50mm PVC CASING, BENTONITE SLURRY/CHIPS SAND
9					HQ	1	99%	42%			BENTONITE SEAL
10					HQ	2	90%	15%			SAND
11											WELL SCREEN
12					HQ	3	85%	32%			
13					HQ	4	100%	32%			
20											

△ Unconfined Compression Test
□ Field Vane Test ■ (Remolded)
◇ Fall Cone Test ◆ (Remolded)
▽ Hand Penetrometer Test ◥ Torvane

LOGGED BY: MM
REVIEWED: GH

TERRANE GEOSCIENCE INC.

BOREHOLE/ MW RECORD

BOREHOLE No. MW16B
PAGE 1 of 2

CLIENT ANACONDA MINING INC.
PROJECT GOLDBORO SITEWIDE GEOTECHNICAL INVESTIGATION
LOCATION GOLDBORO, NS N 293352.893 m E 5006709.929 m
DATES (yyyy-mm-dd): BORING 2021-11-27 to 2021-11-29 WATER LEVEL 0m 2021-12-3

PROJECT No. 20-113-H
METHOD CME55
SIZE HQ
DATUM GEODETIC

DEPTH (m)	ELEVATION (m)	DESCRIPTION	TYPE	NUMBER	RECOVERY(mm) OR TCR %	N-VALUE OR RQD %	OTHER TESTS
0	63.83						
	63.22	ORGANICS/TOPSOIL	SS	1	80	7	
1		SAND, fine to coarse; AND SILT, low-plasticity; some gravel, sub-round to sub-angular, well-graded; brown, loose, massive, dry, organics	SS	2	280	17	
			SS	3	360	39	
2		TILL: SAND, fine to coarse; AND SILT, low-plasticity; some gravel, sub-round to sub-angular, well-graded; brown to grey, loose to very dense, wet, massive; some cobble and boulders	SS	4	560	23	
			SS	5	610	50/254mm	
3			SS	6	205	50/229mm	
4							
5			SS	7	155	69/152mm	
6	57.73		BULK	8			
		TILL: CLAY, medium plasticity; AND SILT, medium-plasticity; some gravel, sub-round to sub-angular, poorly-graded; brown to grey, very dense, wet, massive; some cobble and boulders	SS	9	155	141/152mm	
7			BULK	10			
8			SS	11	270	100/279mm	
9	54.36		BULK	12			
10		Dark grey, fine to medium grained, massive to poorly developed foliation, GREYWACKE	HQ	13	100%	58%	
11							
12			HQ	14	100%	35%	
13			HQ	15	100%	88%	
14							
15			HQ	16	100%	73%	
16			HQ	17	100%	36%	
17							
18			HQ	18	100%	42%	
19			HQ	19	100%	23%	
20							

UNDRAINED SHEAR STRENGTH - kPa
10 20 30 40 50
WATER CONTENT & ATTERBERG LIMITS W_P W W_L
DYNAMIC PENETRATION TEST, BLOWS/0.3m ★
STANDARD PENETRATION TEST, BLOWS/0.3m ●
10 20 30 40 50 60 70 80

WELL CONSTRUCTION DETAILS
WELL CAP - SU = 0.70 m
50mm PVC CASING, GROUT

△ Unconfined Compression Test
□ Field Vane Test ■ (Remolded)
◇ Fall Cone Test ◆ (Remolded)
▽ Hand Penetrometer Test ◥ Torvane

LOGGED BY: MM
REVIEWED: GH

TERRANE GEOSCIENCE INC.

BOREHOLE/ MW RECORD

BOREHOLE No. MW16B
PAGE 2 of 2

CLIENT ANACONDA MINING INC.
PROJECT GOLDBORO SITEWIDE GEOTECHNICAL INVESTIGATION
LOCATION GOLDBORO, NS N 293352.893 m E 5006709.929 m
DATES (yyyy-mm-dd): BORING 2021-11-27 to 2021-11-29 WATER LEVEL 0m 2021-12-3

PROJECT No. 20-113-H
METHOD CME55
SIZE HQ
DATUM GEODETIC

DEPTH (m)	ELEVATION (m)	DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY(mm) OR TCR %	SAMPLES N-VALUE OR RQD %	SAMPLES OTHER TESTS	UNDRAINED SHEAR STRENGTH - kPa / WATER CONTENT & ATTERBERG LIMITS / DYNAMIC PENETRATION TEST, BLOWS/0.3m / STANDARD PENETRATION TEST, BLOWS/0.3m	WELL CONSTRUCTION DETAILS
		Continued from Previous Page								10 20 30 40 50 (WATER CONTENT & ATTERBERG W_P W W_L LIMITS; DYNAMIC PENETRATION TEST, BLOWS/0.3m ★; STANDARD PENETRATION TEST, BLOWS/0.3m ●) 10 20 30 40 50 60 70 80	
20		Dark grey, fine to medium grained, massive to poorly developed foliation, GREYWACKE *(continued...)*			HQ	20	100%	75%			
21					HQ	21	100%	88%			
22					HQ	22	100%	88%			
23					HQ	23	100%	79%			
24					HQ	24	100%	74%			BENTONITE SEAL
25					HQ	25	100%	50%			SAND
26					HQ	26	100%	83%			WELL SCREEN
27											
28											
29											SAND
30	33.36										BENTONITE SEAL
											SAND
31		End of Borehole at 30.5 m NOTE: BULK samples were sampled from inner tube of core barrel									
32											
33											
34											
35											
36											
37											
38											
39											
40											

△ Unconfined Compression Test
□ Field Vane Test ■ (Remolded)
◇ Fall Cone Test ◆ (Remolded)
▽ Hand Penetrometer Test ◥ Torvane

LOGGED BY: MM
REVIEWED: GH

DRILL HOLE ID: MW20A

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 5.64 m
N: 5006848 E: 293155
ELEVATION: 38 m

DATE STARTED: JAN. 25, 2021
DATE COMPLETED: JAN. 25, 2021
LOGGED BY: J. TANINGCO, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	SOIL PROFILE: DESCRIPTION	STRATA	SAMPLES: NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or ROD (%)	N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
0.0	38.0	* Refer to MW20B for detailed soil and bedrock description									Bentonite chips 0.00-1.52; PVC 0.00-5.64 50 mm diameter; Sand filter pack 1.52-5.64; Slotted PVC screen 2.59-5.64 50 mm diameter
1.0	37.0										
2.0	36.0										
3.0	35.0										
4.0	34.0										
5.0	33.0										

DRILL HOLE ID: MW20B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.17 m
N: 5006848 E: 293155
ELEVATION: 38 m

DATE STARTED: JAN. 24, 2021
DATE COMPLETED: JAN. 25, 2021
LOGGED BY: J. TANINGCO, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	DESCRIPTION	STRATA	NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE
0.0	38.0	Very loose, reddish brown, silty sand to sandy silt; moist: TOPSOIL		SS1	SS	355.6	1 1 1 5	2
1.0	37.0	Dense, light brown, silty sand with angular gravel: TILL		SS2	SS	228.6	46 23 17 28	40
		Very dense, light brown, silty sand with gravel; TILL		SS3	SS	533.4	25 28 30 35	58
2.0	36.0							
		Very dense, light brown, silty sand with fine to coarse gravel: TILL		SS4	SS	152.4	30 50	80
3.0	35.0							
4.0	34.0	Medium strong, dark Grey, fine grained, generally massive with thin beds; Goldenville Formation: GREYWACKE		RC1	RC	98	0	
5.0	33.0			RC2	RC	95	26	
		- Strong						
6.0	32.0			RC3	RC	88	56	
7.0	31.0							
8.0	30.0			RC4	RC	98	84	
9.0	29.0							
				RC5	RC	98	47	
10.0	28.0							

STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m
DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m
SHEAR STRENGTH (Cu), kPa +
WATER CONTENT, % ○
0 — 100

WATER LEVEL (m)

PIEZOMETER OR MONITORING WELL INSTALLATION

Sand filter pack 0.00-21.56

PVC 0.00-29.79 50 mm diameter

DRILL HOLE ID: MW20B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.17 m
N: 5006848 E: 293155
ELEVATION: 38 m

DATE STARTED: JAN. 24, 2021
DATE COMPLETED: JAN. 25, 2021
LOGGED BY: J. TANINGCO, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	DESCRIPTION	STRATA	SAMPLES NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE
11.0	27.0			RC6	RC	95	69	
12.0	26.0			RC7	RC	93	78	
13.0	25.0							
14.0	24.0			RC8	RC	98	92	
15.0	23.0			RC9	RC	100	100	
16.0	22.0							
17.0	21.0			RC10	RC	94	79	
18.0	20.0			RC11	RC	96	65	
19.0	19.0							
20.0	18.0							

STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m
DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m
SHEAR STRENGTH (Cu), kPa +
WATER CONTENT, % ○
0 — 100

WATER LEVEL (m)

PIEZOMETER OR MONITORING WELL INSTALLATION

DRILL HOLE ID: MW20B

RECORD OF BOREHOLE

TERRANE GEOSCIENCE INC.

TOTAL DEPTH: 30.17 m
N: 5006848 E: 293155
ELEVATION: 38 m

DATE STARTED: JAN. 24, 2021
DATE COMPLETED: JAN. 25, 2021
LOGGED BY: J. TANINGCO, EIT
REVIEWED BY: A. GUEST, P. ENG

CLIENT: ANACONDA MINING
PROJECT NAME: GOLDBORO PROJECT - SITEWIDE GEOTECHNICAL FIELD INVESTIGATION

DEPTH 1m:50m	ELEVATION (m)	SOIL PROFILE DESCRIPTION	STRATA	SAMPLES NUMBER	TYPE	RECOVERY (mm) or TCR (%)	BLOWS/0.15m or RQD (%)	N VALUE	STANDARD PENETRATION RESISTANCE (N) ● Blows/0.3m; DYNAMIC PENETRATION RESISTANCE ▲ Blows/0.3m; SHEAR STRENGTH (Cu), kPa +; WATER CONTENT, % ○ (0 – 100)	WATER LEVEL (m)	PIEZOMETER OR MONITORING WELL INSTALLATION
21.0	17.0			RC12	RC	94	88				
22.0	16.0	- Very strong		RC13	RC	100	48				Bentonite pellets 21.56-25.83
23.0	15.0			RC14	RC	89	34				
24.0	14.0										
25.0	13.0			RC15	RC	100	61				
26.0	12.0			RC16	RC	100	78				Sand filter pack 25.83-29.79
27.0	11.0										Slotted PVC screen 26.74-29.79 50 mm diameter
28.0	10.0			RC17	RC	100	82				
29.0	9.0			RC18	RC	100	80				
30.0	8.0										