



October 9, 2016

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Manager of Licencing
Nunavut Water Board
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Re: 2016 Geotechnical Drilling Program- Type B Water Licence 2BE-MRY1421, QIA Lease No. Q13C301, INAC Land Use Permit N2014C0013.

Baffinland has commenced a geotechnical drilling program for the evaluating of geotechnical conditions adjacent and near to the existing Tote Road for the purpose of engineering studies. The program is being managed by Hatch Ltd. and performed by Boart Longyear. The program is scheduled for completion by the end of November 2017. A total of approximately 180 geotechnical boreholes are planned. The majority of these boreholes will be performed using a sonic drilling technique requiring no or little water usage (based on shallow depth through soils of around 5 metres). However, a select number of the boreholes, evaluating proposed future quarries, will require water to support rotary coring drill techniques. The quarry boreholes are planned to drill into bedrock to depths of up to around 20 metres. Refer to the attached four maps (Sheets 1 to 4) in Attachment A that show proposed borehole locations and proposed water sources in relation to the alignment of the existing Tote Road. The UTM coordinates for the drill program are presented in Attachment B.

The equipment to be utilized for the program includes a tracked drill rig (LS 250), capable of drilling using both sonic and rotary coring techniques. The diameter of the boreholes to be advanced is approximately 100 mm. Other supporting track vehicles include a flatbed (Nodwell type) for hauling water and other supplies and a skid steer for moving drill rods and other equipment/supplies. An archaeology survey of the area to be drilled and traversed was completed during summer 2016 and observed archaeology sites were identified and staked off. These coordinates have been provided, in confidence, to the drilling manager to minimize the potential for archaeological disturbance.

Under Part C, Item 1, of the Type B Water Licence 2BE-MRY1421, Baffinland is required to provide notification to the Board and the Inspector, of new water sources to be used during drilling that are not currently identified. There are 12 new water sources that may be used during the drilling program are denoted by the "PWS" symbol on the maps provided in Attachment A. In addition to the new water sources, there are eight (8) previously identified water sources (from



Type A Water Licence 2AM-MRY1325 / Amendment No.1) that may be used to support the drilling program, also denoted on the Attachment A maps. A table with existing and new water sources to support the drilling program are provided in Appendix C. The volume of water to be utilized at each new source is considered to be minimal. For rotary coring drill holes, the anticipated water use would be <10 m³, but typically <5 m³ per borehole. This is only for the boreholes denoted by the prefix, "BH16-Q". All of the ponds, lakes, and rivers identified can sustain such a very minor withdrawal of water. All other boreholes will use the sonic technique which typically drills without the use of water. Despite best planning, it should be noted that unforeseen geotechnical circumstances may preclude some changes in plans as the program proceeds. Baffinland will endeavor to inform the Inspector and land owner in such circumstances. Due to temperature restrictions tracking water usage volumes utilising water lines and flow meters will not be feasible. Therefore, Baffinland proposes to track water usage volumes by means of calibrated one cubic metre totes.

In accordance with Part F, Section 2, of the Type B Water Licence 2BE-MRY1421, this letter and attachments provides the notification for the drilling of 16 boreholes that will be closer than 31 metres from the ordinary high water mark of a water body. These locations are denoted by the prefix "BH16-B" on the maps provided in Attachment A. Locations of drill waste will be disposed of in natural depressions or sumps consistent with Part F Item 4 of Type B Water Licence. Daily environmental monitoring will be performed, including pre-, during and post- inspections. Drill water runoff and siltation mitigation measures consistent with Baffinland's Environmental Protection Plan BAF-PH1-830-P16-0008 r1 will be employed as required.

We trust that this information meets the various notifications required by the above referenced parties. Please do not hesitate to contact the undersigned, should you have any questions or comments.

Submitted by:

A handwritten signature in black ink, appearing to read "J. Millard", written over a horizontal line.

James Millard
2016-10-10
06:58-04:00

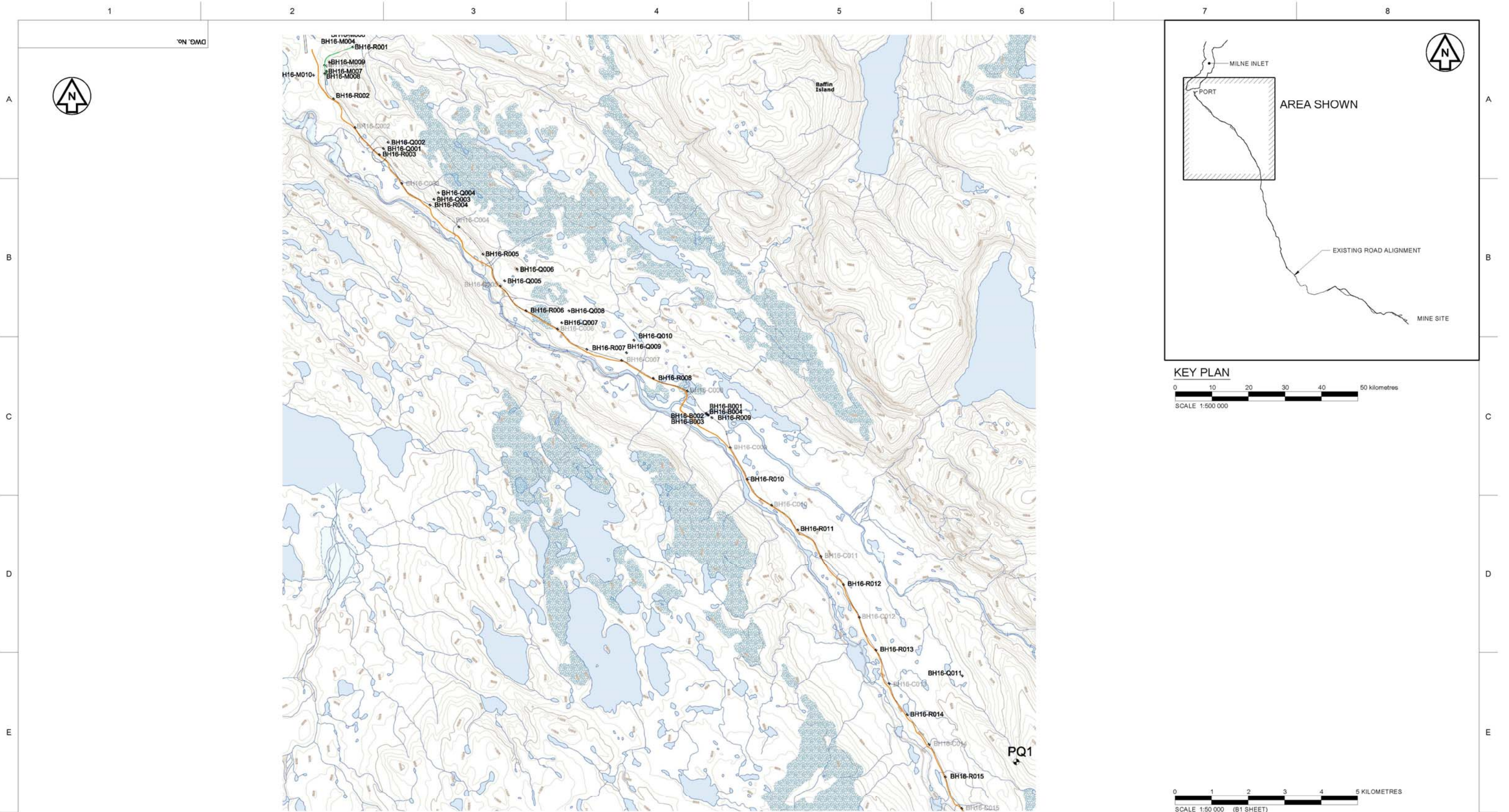
James Millard
Environmental Manager

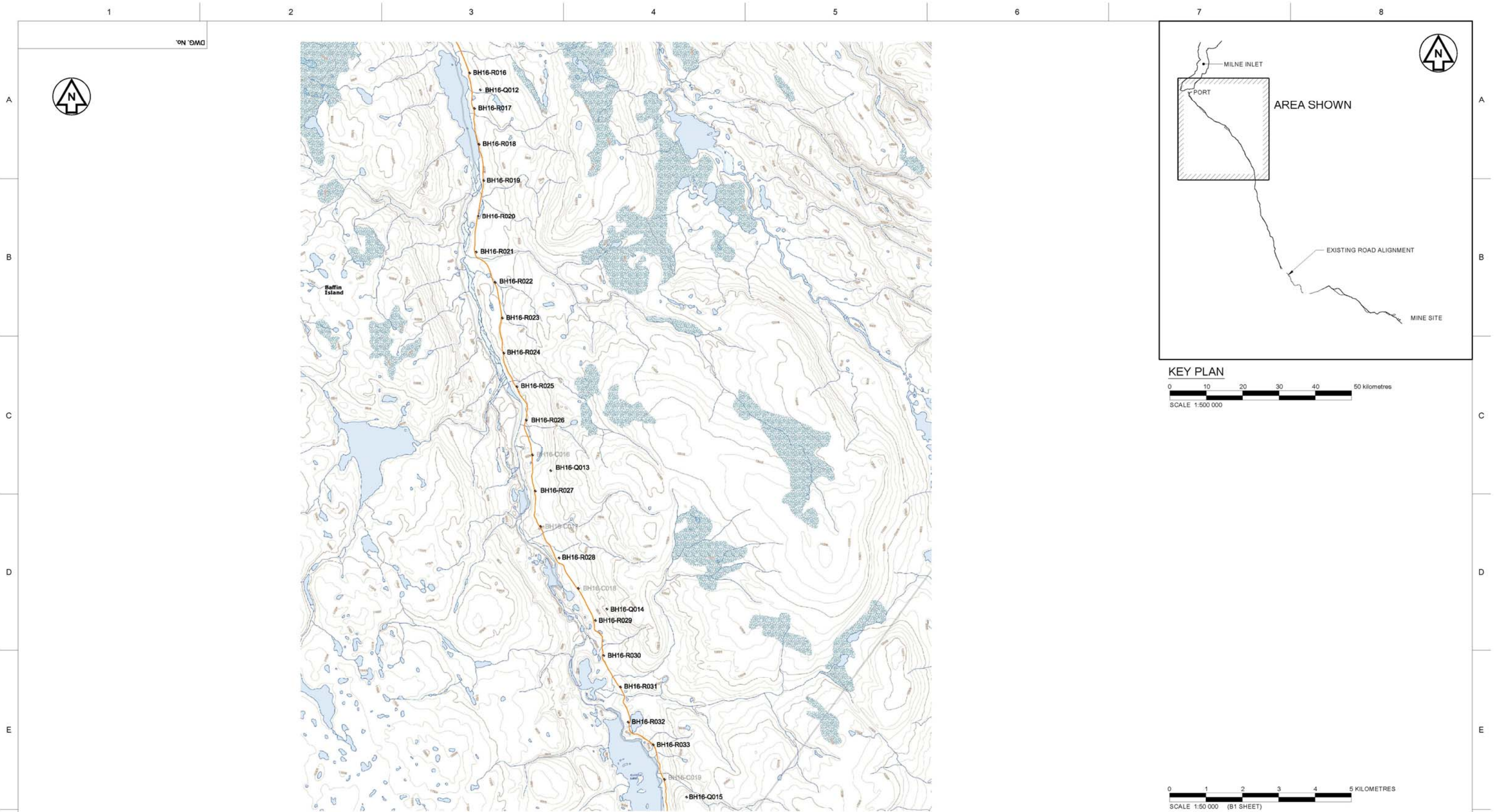
Attach: A: Map Sheets 1 to 4, 2016 Geotechnical Investigations –Borehole Locations (four pages).
B: UTM Coordinates of Proposed Boreholes (two pages).
C: Locations/UTM Coordinates of New/Existing Water Sources (one page).

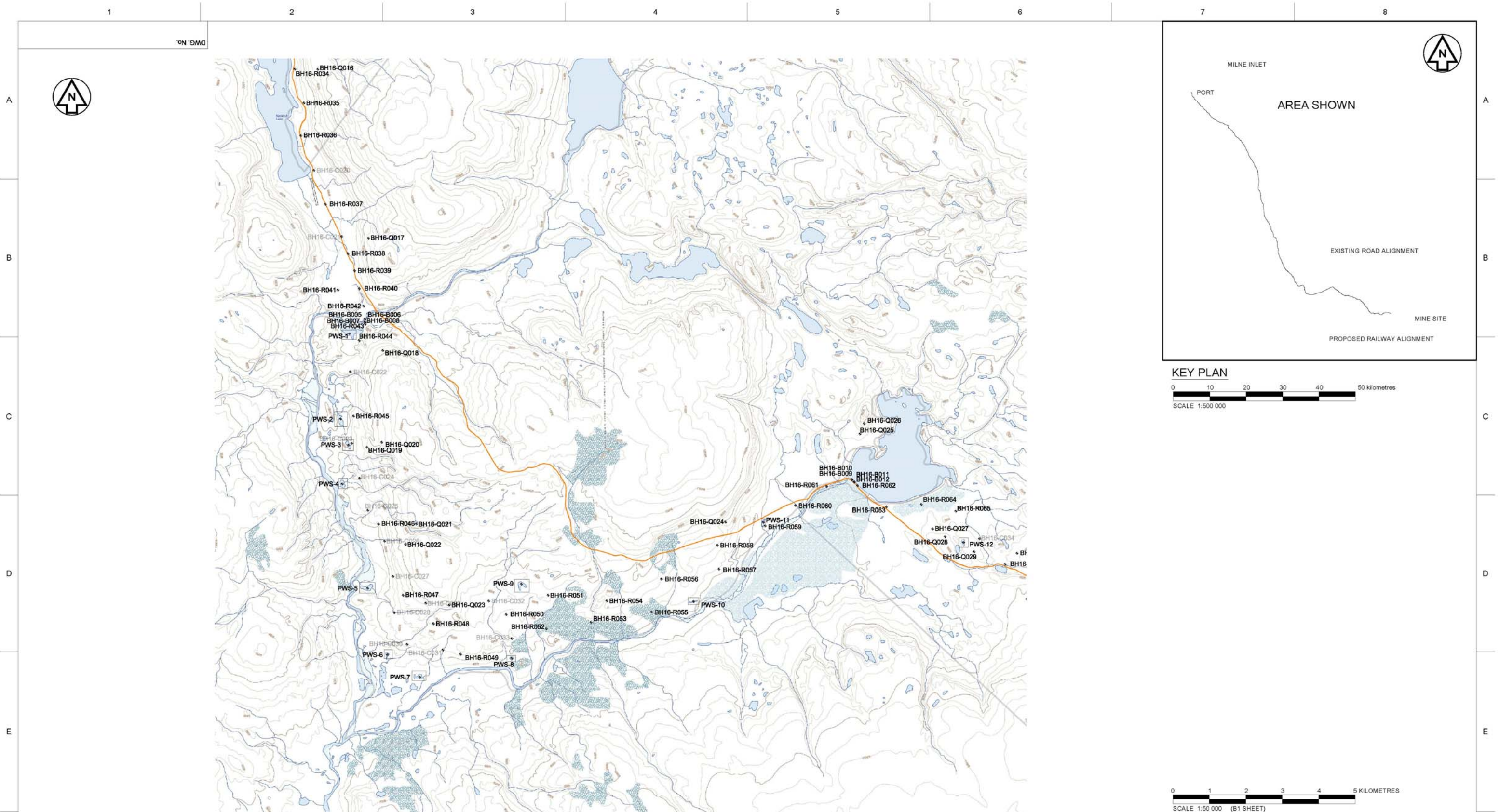
cc. Wayne McPhee, Todd Burlingame, Matt Weaver, William Bowden, Allan Knight (Baffinland), Sean Hinchberger and Warren Hoyle (Hatch)
Tracey McCaie, Scott Burgess, Erik Allain (INAC)

ATTACHMENT A

2016 Geotechnical Investigations - Borehole Locations

[illegible]

[illegible]

[illegible]

ATTACHMENT B

UTM Coordinates of Proposed Boreholes

Primary Geotechnical Borehole Summary

Borehole	Easting (m)	Northing (m)
BH16-R001	504533.65	7975684.81
BH16-R002	504009.06	7974262.97
BH16-R003	505260.92	7972722.28
BH16-R004	506651.29	7971352.64
BH16-R005	508097.79	7969996.47
BH16-R006	509277.49	7968463.97
BH16-R007	510940.28	7967393.61
BH16-R008	512762.81	7966603.87
BH16-R009	514366.46	7965535.46
BH16-R010	515334.49	7963835.89
BH16-R011	516718.55	7962460.69
BH16-R012	517969.02	7960960.06
BH16-R013	518855.9	7959177.6
BH16-R014	519711.68	7957395.63
BH16-R015	520756.92	7955702.92
BH16-R016	521601.09	7953915.81
BH16-R017	521735.9	7952926.21
BH16-R018	521860.85	7951939.23
BH16-R019	521990.59	7950954.78
BH16-R020	521841.15	7949967.65
BH16-R021	521783.73	7948975.67
BH16-R022	522304.71	7948153.32
BH16-R023	522504.56	7947177.37
BH16-R024	522543.93	7946201.39
BH16-R025	522903.68	7945278.06
BH16-R026	523160.37	7944369.58
BH16-R027	523406.53	7942407.31
BH16-R028	524062.66	7940581.02
BH16-R029	525062.46	7938850.92
BH16-R030	525289.55	7937896.29
BH16-R031	525752.76	7937017.67
BH16-R032	525963.87	7936051.68
BH16-R033	526653.3	7935438.82
BH16-R034	527044.19	7933499.76
BH16-R035	527291.89	7932564.09
BH16-R036	527210.36	7931660.33
BH16-R037	527885.06	7929785.58
BH16-R038	528501.03	7928421.17
BH16-R039	528683.34	7927953.44
BH16-R040	528814.39	7927478.94
BH16-R041	528226.57	7927437.88
BH16-R042	528936.79	7926996.65
BH16-R043	528972.59	7926498.29
BH16-R044	528808.25	7926043.52
BH16-R045	528656.18	7923976.28
BH16-R046	529339.96	7921011.1
BH16-R047	530016.35	7919054.59
BH16-R048	530847.09	7918279.43
BH16-R049	531591.93	7917445.62
BH16-R050	532842.71	7918524.43
BH16-R051	533990.77	7919056.07
BH16-R052	533943.33	7918145
BH16-R053	535168.39	7918315.84
BH16-R054	535604.57	7918898.81
BH16-R055	536828.91	7918592.04
BH16-R056	537100.69	7919497.8
BH16-R057	538679.57	7919772.09
BH16-R058	538636.3	7920429.45
BH16-R059	539946.38	7920964.1
BH16-R060	540780.25	7921513.12
BH16-R061	541633.14	7922035.22
BH16-R062	542479.02	7922057.44
BH16-R063	543271.11	7921477.25
BH16-R064	544230.27	7921543.66
BH16-R065	545173.82	7921368.35
BH16-R066	546524.35	7919908.26
BH16-R067	547122.32	7918948
BH16-R068	548376.36	7919196.78
BH16-R069	550045.05	7918286.07
BH16-R070	551208.32	7917481.1
BH16-R071	551373.43	7916823.39
BH16-R072	552111.33	7916151.54
BH16-R073	552871.51	7915507.87
BH16-R074	553654.49	7914913.89
BH16-R075	554638.76	7915064.52
BH16-R076	555482.59	7914565.85
BH16-R077	556304.5	7915062
BH16-R078	557291.79	7915145.75
BH16-R079	558235.15	7914931.45
BH16-R080	559063.06	7914396.51
BH16-R081	559911.13	7913877.66
BH16-R082	561437.53	7912685.58
BH16-R083	562230.59	7911943.36

Quarry Geotechnical Borehole Summary

Borehole	Easting (m)	Northing (m)
BH16-Q001	505988.71	7972100.02
BH16-Q002	506112.86	7972325.31
BH16-Q003	506355.87	7972624.62
BH16-Q004	507905.91	7970594.07
BH16-Q005	508123.12	7970799.72
BH16-Q006	509055.72	7969191.69
BH16-Q007	509289.13	7969375.13
BH16-Q008	509453.64	7969695.98
BH16-Q009	513470.58	7967887.03
BH16-Q010	514002.36	7967792.36
BH16-Q011	521219.25	7958472.68
BH16-Q012	521895.67	7953450.04
BH16-Q013	523833.86	7942967.75
BH16-Q014	525375.41	7939165.29
BH16-Q015	527570.65	7933988.24
BH16-Q016	527675.74	7933495.21
BH16-Q017	529065.83	7928847.16
BH16-Q018	529457.29	7925768.18
BH16-Q019	529021.19	7923113.12
BH16-Q020	529427.82	7923256.16
BH16-Q021	530377.36	7921013.23
BH16-Q022	530082.08	7920456.14
BH16-Q023	531275.46	7918786.11
BH16-Q024	538858.25	7921067.43
BH16-Q025	542547.72	7923489.38
BH16-Q026	542661.31	7923771.47
BH16-Q027	544539.04	7920883.14
BH16-Q028	544880.34	7920662.25
BH16-Q029	545675.28	7920251.76
BH16-Q030	546853.2	7920214.34
BH16-Q031	550621.84	7918070.02
BH16-Q032	551786.15	7917710.96
BH16-Q033	552880.78	7915894.76
BH16-Q034	555893.82	7915467.29
BH16-Q035	557276.34	7915478.36
BH16-Q036	558385.54	7915327.98

Near Water Port Geotechnical Borehole Summary

Borehole	Easting (m)	Northing (m)
BH16-B001	514211.61	7965650.2
BH16-B002	514206.53	7965643.11
BH16-B003	514260.62	7965604.73
BH16-B004	514266.92	7965611.04
BH16-B005	528961.37	7926640.54
BH16-B006	528971.18	7926641.36
BH16-B007	528964.15	7926554.87
BH16-B008	528975.87	7926555.04
BH16-B009	542323.47	7922217.9
BH16-B010	542327.47	7922223.1
BH16-B011	542384.67	7922154.85
BH16-B012	542392.11	7922160.31
BH16-B013	555691.83	7914665.08
BH16-B014	555685.13	7914669.66
BH16-B015	555726.52	7914711.77
BH16-B016	555715.88	7914715.73

Milne Port Geotechnical Borehole Summary

Borehole	Easting (m)	Northing (m)
BH16-M001	503619	7976245
BH16-M002	503665	7976245
BH16-M003	503619	7976125
BH16-M004	503665	7976124
BH16-M005	503666	7976196
BH16-M006	503964	7976123
BH16-M007	503820	7975018
BH16-M008	503769	7974955
BH16-M009	503900	7975263
BH16-M010	503459	7974911
BH16-M011	502935	7976271

Secondary Geotechnical Borehole Summary

Borehole	Easting (m)	Northing (m)
BH16-C001	503762.89	7975181.63
BH16-C002	504597.3	7973462.97
BH16-C003	505876.35	7971948.16
BH16-C004	507436.66	7970743.14
BH16-C005	508573.06	7969141.44
BH16-C006	510143.73	7967964.92
BH16-C007	511894.83	7967094.41
BH16-C008	513694.92	7966256.21
BH16-C009	514870.4	7964719.61
BH16-C010	516002.07	7963128.69
BH16-C011	517349.06	7961736.69
BH16-C012	518403.5	7960062.49
BH16-C013	519218.35	7958250.54
BH16-C014	520308.6	7956593.61
BH16-C015	521208.1	7954831.33
BH16-C016	523331.67	7943399.06
BH16-C017	523555.54	7941441.48
BH16-C018	524592.88	7939733.37
BH16-C019	526962.92	7934487.65
BH16-C020	527569.36	7930717.9
BH16-C021	528326.19	7928888.05
BH16-C022	528567.22	7925181.52
BH16-C023	528607.62	7923228.29
BH16-C024	528821.7	7922261.95
BH16-C025	529047.04	7921389.24
BH16-C026	529506.56	7920543.85
BH16-C027	529736.19	7919570.88
BH16-C028	529771.81	7918574.99
BH16-C029	530636.02	7918838.61
BH16-C030	530125.13	7917718.53
BH16-C031	531106.36	7917566.15
BH16-C032	532362.92	7918894.63
BH16-C033	532995.66	7917875.7
BH16-C034	545824.59	7920610.1
BH16-C035	547457.94	7919550.2
BH16-C036	549231.75	7918780.8
BH16-C037	550763.02	7917609.93

ATTACHMENT C

Locations of Existing / New Sources

Existing Water Sources*

Location	Tote Road Chainage
Km32 Lake	At Water Intake - km 32
CV128 River	Km17
Katiktok Lake	Km52-58
BG50 River	Km62
CV217 River	Km80
Muriel Lake	km78 - 80
David Lake	Km 87 - 89
CV233 (Tom River)	Km97
Camp Lake	At Water Intake - km 100

*Type A Licence 2AM-MRY1325 - refer to Part E, Tables 2, 3, and 4.

Potential New Water Taking Sources*

Location	Easting (m)	Northing (m)
PWS-1	528541	7936231
PWS-2	528298	7923899
PWS-3	528518	7923176
PWS-4	528345	7922100
PWS-5	529042	7912244
PWS-6	529585	7917433
PWS-7	534071	7916820
PWS-8	532993	7917330
PWS-9	533261	7919362
PWS-10	537981	7918880
PWS-11	539897	7921060
PWS-12	545388	7920511

* Refer to Attachment A, Sheets 1 to 4