

APPENDIX 5.3-1.

DETAILED HABITAT ASSESSMENTS AND SUMMARY OF RESULTS FOR WATERBODIES IN QUARRY SITES.

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Table A5.3-1.1. Summary of results from surveys and assessments that fall within Quarry boundaries.

Site	Survey Year	Survey Date	UTM Coordinates			Habitat Rating	ARCH seen ¹	NNST seen ¹	Comments
			Zone	Easting	Northing				
Q-0+500			17W	563871	7912027				Contains Railway sites 1, 1A and CV-000-1
Q-0+500	2010	27-Aug	17W	563510	7912424	None	No	No	-
1	2007	7-Aug	17W	563473	7911679	None	No	No	-
1A	2007	7-Aug	17W	563583	7911598	None	No	No	-
CV-000-1a	2007	7-Aug	17W	563768	7911403	None	No	No	-
Q4+100			17W	566420	7909555				Does not touch any waterbodies on map
Q7+500			17W	569266	7907635				Does not touch any waterbodies on map
Q10+250a			17W	572892	7905223				Does not touch any waterbodies on map
Q14+500			17W	575634	7904553				Contains Railway sites CV-013-1, CV-013-2, CV-014-1 and CV-014-2
CV-013-1	2008	23-Jul	17W	574988	7904117	Marginal	Yes	No	-
CV-013-2	2007	8-Aug	17W	575210	7904017	None	No	No	-
CV-014-1	2007	8-Aug	17W	575527	7903863	None	No	No	-
CV-014-2	2007	8-Aug	17W	575666	7903777	None	No	No	-
Q18+100			17W	579052	7902454	-	-	-	Contains Railway sites CV-017-2, CV-018-1, CV-018-2, CV-018-3
Q18+100	2008	9-Sep	17W	579052	7902454	None	No	No	-
CV-017-2	2007	9-Aug	17W	578733	7902277	None	No	No	-
CV-018-1	2007	9-Aug	17W	578855	7902210	Important	Yes	No	-
CV-018-2	2007	9-Aug	17W	579063	7902106	None	No	No	-
CV-018-3	2007	9-Aug	17W	579363	7902009	None	No	No	-
Q22+500			17W	583188	7901545				Contains Railway sites CV-021-2, -022-1, -022-2, -022-3, -022-4, -022-5
CV-021-2	2007	9-Aug	17W	582569	7901018	None	No	No	-
CV-022-1	2008	24-Jul	17W	582846	7900965	None	No	No	-
CV-022-2	2007	9-Aug	17W	583058	7900918	None	No	No	-
Q25+500			17W	586451	7900278				Contains Railway sites CV-R01, -R02 and Access Road sites AR-187b, -187c
CV-R01	2008	1-Sep	17W	585831	7899673	None	No	No	-
CV-R02	2008	1-Sep	17W	586176	7899452	None	No	No	-
AR-187b	2010	27-Aug	17W	585703	7900187	Marginal	No	No	-
AR-187c	2010	27-Aug	17W	585808	7900502	Marginal	No	No	-
Q28+400			17W	588324	7898582				Does not touch any waterbodies on map
Q31+500			17W	590918	7897799				Does not touch any waterbodies on map
Q35+000			17W	594460	7896830				Does not touch any waterbodies on map
Q35+500			17W	595362	7896249				Contains Railway site CV-R14
CV-R14	2008	2-Sep	17W	594975	7895888	None	No	No	-
Q38+700			17W	596331	7893053				Does not touch any waterbodies on map

Table A5.3-1.1. Continued.

Site	Survey Year	Survey Date	UTM Coordinates			Habitat Rating	ARCH seen ¹	NNST seen ¹	Comments
			Zone	Easting	Northing				
Q42+000			17W	598271	7890788				Contains Railway site CV-R27 and CV-R28
CV-R27	2008	11-Aug	17W	596886	7891237	Important	No	Yes	-
CV-R28	2008	11-Aug	17W	597243	7890426	None	No	No	-
Q44+300			17W	598177	7887982				Contains Railway site CV-R31
CV-R31	2008	4-Sep	17W	597364	7888229	None	No	No	-
CV-R32	2008	4-Sep	17W	597515	7887484	Marginal	No	No	-
Q44+000			17W	596207	7885965				Does not touch any waterbodies on map
Q45+000			17W	596225	7884719				Does not touch any waterbodies on map
Q45+800			17W	597025	7884173				Does not touch any waterbodies on map
Q48+000			17W	598595	7882731				Contains Railway site CV-047-1
CV-047-1	2007	11-Aug	17W	598223	7882688	None	No	No	-
Q50+000			17W	597417	7881000				Does not touch any waterbodies on map
Q53+700			17W	597711	7877619				Does not touch any waterbodies on map
Q56+750			17W	598870	7875350				Does not touch any waterbodies on map
Q60+000			17W	598983	7871962				Contains Railway site BR-059-1
BR-059-1	2008	5-Sep	17W	598858	7872547	Marginal	No	No	-
Q64+400			17W	600174	7868669				Contains Railway site CV-063-1
Q64+400	2008	7-Sep	17W	600174	7868669	Important	No	Yes	-
CV-063-1	2007	12-Aug	17W	598618	7868739	None	No	No	-
Q67+200a			17W	600060	7865572				Contains Railway site CV-67-1
CV-067-1	2007	12-Aug	17W	600269	7866042	None	No	No	-
Q71+000			17W	602468	7863129				Does not touch any waterbodies on map
Q74+200			17W	603522	7860211				Does not touch any waterbodies on map
Q77+200			17W	604898	7857773				Contains Railway sites CV-077-1, -077-2 and Access Road sites AR-091a, -094a
AR-094a	2010	27-Aug	17W	604981	7858113	None	No	No	-
CV-077-1	2008	6-Sep	17W	605007	7857943	None	No	No	-
CV-077-2	2008	6-Sep	17W	605069	7857825	None	No	No	-
AR-091a	2010	27-Aug	17W	605221	7857810	None	No	No	-
Q79+600			17W	605364	7855480				Contains Railway site CV-079-2, CV-079-3, and CV-079-4a
CV-079-2	2007	12-Aug	17W	605517	7855672	None	No	No	-
CV-079-3	2007	12-Aug	17W	605523	7855495	None	No	No	-
CV-079-4a	2007	12-Aug	17W	605545	7855098	None	No	No	-
Q82+700			17W	606182	7852818				Contains Railway site CV-082-2a, CV-082-3a, CV-082-4a
CV-082-2a	2007	12-Aug	17W	605904	7852967	Marginal	No	No	-
CV-082-3a	2007	12-Aug	17W	605966	7852920	None	No	No	-

Table A5.3-1.1. Continued.

Site	Survey Year	Survey Date	UTM Coordinates			Habitat Rating	ARCH seen ¹	NNST seen ¹	Comments
			Zone	Easting	Northing				
CV-082-4a	2007	12-Aug	17W	606116	7852804	None	No	No	-
Q85+200			17W	606253	7850260				Contains Railway site CV-085-1, CV-085-2
CV-085-1	2007	12-Aug	17W	606352	7850306	None	No	No	-
CV-085-2	2007	12-Aug	17W	606381	7850063	None	No	No	-
Q88+800			17W	606000	7846618				Does not touch any waterbodies on map
Q92+000			17W	605868	7843546				Does not touch any waterbodies on map
Q95+400			17W	607651	7841003				Does not touch any waterbodies on map
Q96+100			17W	608562	7840516				Does not touch any waterbodies on map
Q96+700			17W	608976	7839908				Does not touch any waterbodies on map
Q110+200			17W	600294	7831190				Does not touch any waterbodies on map
Q114+600			17W	597759	7827791				Does not touch any waterbodies on map
Q116+800			17W	597570	7826076				Does not touch any waterbodies on map
Q127+800			17W	598769	7815815				Contains Railway site CV-127-2
CV-127-2	2008	3-Aug	17W	598585	7815834	None	No	Yes	-
Q128+000			17W	598750	7813701				Does not touch any waterbodies on map
Q131+100			17W	600240	7813576				Does not touch any waterbodies on map
Q133+500			17W	601412	7811035				Does not touch any waterbodies on map
Q138+100			17W	598794	7807534				Contains Railway site CV-138-1
CV-138-1	2007	13-Aug	17W	598855	7806965	None	No	No	-
Q139+600			17W	598770	7806171				Does not touch any waterbodies on map
QTR4A			17W	598561	7820471				Does not touch any waterbodies on map
QTR21			17W	605729	7845346				Does not touch any waterbodies on map
QTR22			17W	605269	7843323				Does not touch any waterbodies on map
QTR23			17W	606018	7841721				Does not touch any waterbodies on map
QTR10			17W	611571	7839318				Does not touch any waterbodies on map
QTR11			17W	611940	7837944				Does not touch any waterbodies on map
QTR6			17W	611404	7836488				Does not touch any waterbodies on map
QTR12			17W	610810	7836146				Does not touch any waterbodies on map
QTR13			17W	609489	7833926				Does not touch any waterbodies on map
QTR7			17W	608237	7832739				Does not touch any waterbodies on map
QTR14			17W	607626	7831592				Does not touch any waterbodies on map
QTR15			17W	606073	7830292				Does not touch any waterbodies on map
QTR16			17W	603175	7830702				Does not touch any waterbodies on map
QTR17			17W	604014	7832674				Does not touch any waterbodies on map
QTR8			17W	602064	7829996				Contains Access Road site AR-031 and AR-030a

Table A5.3-1.1. Continued.

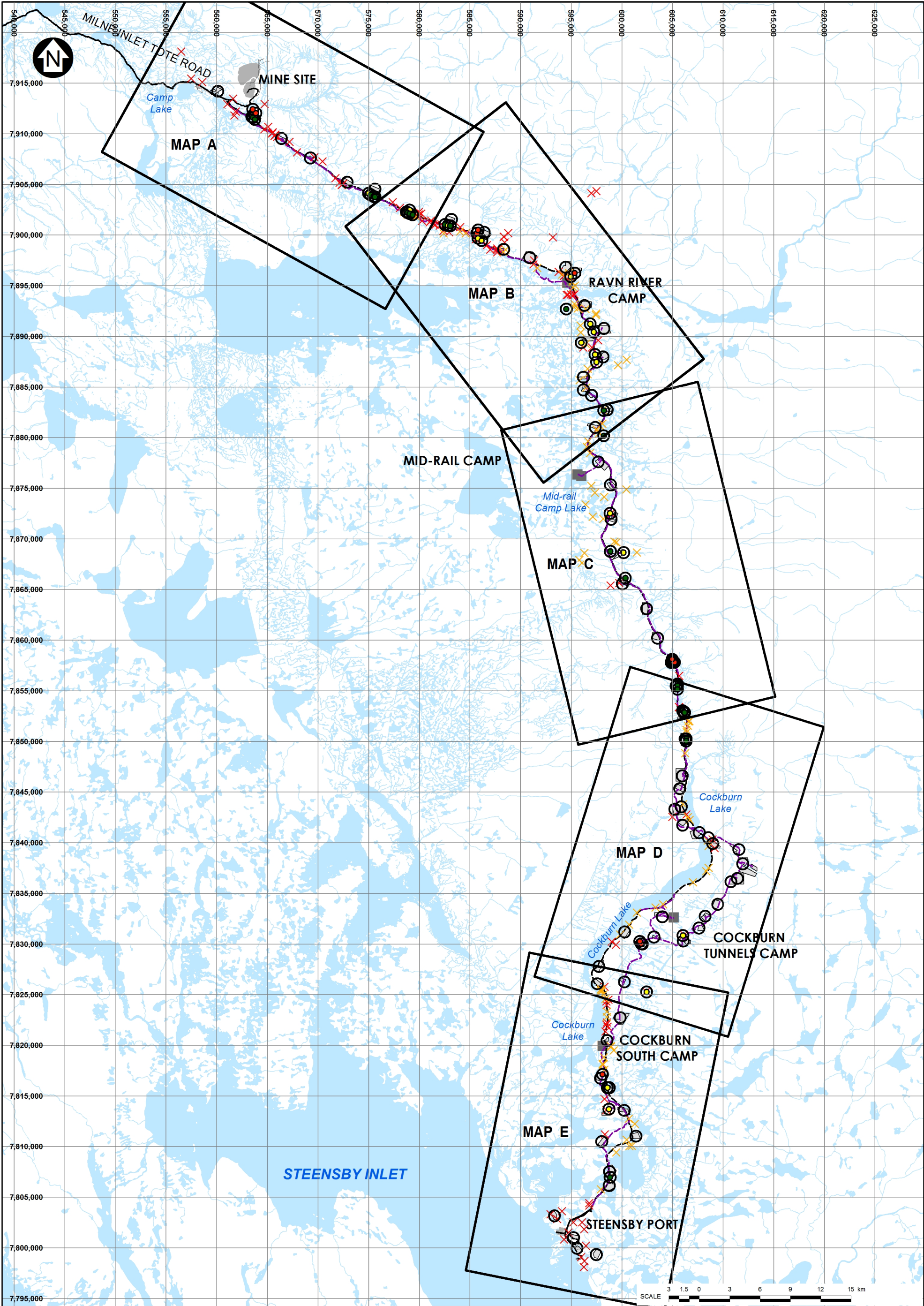
Site	Survey Year	Survey Date	UTM Coordinates			Habitat Rating	ARCH seen ¹	NNST seen ¹	Comments
			Zone	Easting	Northing				
AR-030a	2010	27-Aug	17W	601932	7830020	None	No	No	-
AR-031	2010	27-Aug	17W	601777	7830247	None	No	No	-
QTR9			17W	600279	7826243				Does not touch any waterbodies on map
QTR18			17W	599876	7822737				Does not touch any waterbodies on map
QTR19			17W	597909	7816733				Contains Railway site AR-014b
AR-014b	2010	26-Aug	17W	598116	7817121	Marginal	No	No	-
QTR20			17W	598037	7810505				Does not touch any waterbodies on map
QS1			17W	593366	7803184				Does not touch any waterbodies on map
QS2			17W	595250	7801000				Does not touch any waterbodies on map
QS3A			17W	595593	7799980				Does not touch any waterbodies on map
QS3			17W	597500	7799349				Does not touch any waterbodies on map
QMR2			17W	560128	7914203				Adjacent to Camp Lake Tributary 1; part of mine site infrastructure

¹ - includes all ARCH or NNST that were captured.

Table A5.3-1.2. List of assessments used to evaluate habitat within each Quarry.

Site	Comments
Q-0+500	See Quarry site assessment Q0+ 500, as well as Railway site assessments 1, 1A and CV-000-1a.
Q14+500	See Railway site assessments CV-013-1, CV-013-2, CV-014-1 and CV-014-2.
Q18+100	See Quarry site assessment Q18+ 100, as well as Railway site assessments for CV-017-2, CV-018-1, CV-018-2 and CV-018-3.
Q22+500	See Railway site assessments CV-21-2, CV-22-1 and CV-22-2.
Q25+500	See Railway site assessments CV-R01and CV-R02, as well as Access Road site assessments AR-187b and AR-187c.
Q35+500	See Railway site assessment CV-R14.
Q42+000	See Railway site assessments CV-R27 and CV-R28.
Q44+300	See Railway site assessments CV-R31 and CV-R32.
Q48+000	See Railway site assessment CV-047-1.
Q60+000	See Railway site assessment BR-059-1.
Q64+400	See Quarry site assessment Q64+400, as well as Railway site assessment CV-063-1.
Q67+200a	See Railway site assessment CV-067-1.
Q77+200	See Railway site assessments CV-077-1 and CV-077-2, as well as Access Road site assessments AR-094a and AR-091a.
Q79+600	See Railway site assessments CV-079-2, CV-079-3 and CV-079-4a.
Q82+700	See Railway site assessments CV-082-2a, CV-082-3a and CV-82-4a.
Q85+200	See Railway site assessments CV-085-1 and CV-085-2.
Q127+800	See Railway site assessment CV-127-2.
Q138+100	See Railway site assessment CV-138-1.
QTR8	See Access Road site assessments AR-031and AR-030a.
QTR19	See Access Road site assessment AR-014b.
QMR2	Adjacent to Camp Lake Tributary 1; part of mine site infrastructure.

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LEGEND:

- | | |
|---|---|
| ● QUARRY SITE YEAR SURVEYED
● 2007
● 2008
● 2010 | --- RAILWAY ALIGNMENT (PROPOSED)
... CONSTRUCTION ACCESS ROAD (PROPOSED) |
| ○ STREAM CROSSING | ▨ POTENTIAL AREAS OF QUARRY ACCESS |
| ✕ FISH BARRIER (CONFIRMED) | ■ QUARRY SITE |
| ✕ FISH BARRIER (AERIAL PHOTO INTERPRETATION) | ■ WATER |
| — MILNE INLET TOTE ROAD (EXISTING) | ■ INFRASTRUCTURE |

NOTES:

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3. PROPOSED RAILWAY ALIGNMENT PROVIDED BY CANRAIL CONSULTANTS INC.
4. PROPOSED RAILWAY CONSTRUCTION ACCESS ROAD ALIGNMENT PROVIDED BY CANRAIL CONSULTANTS INC. DRAWING NO.: RAILWAY ALIGNMENT AND CONST ACCESS RD - MARY RIVER STEENSBY 2010 - 12AUG2010.DWG
5. LOCATION OF PROPOSED INFRASTRUCTURE IS APPROXIMATE AND SUBJECT TO FIELD ADJUSTMENTS

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

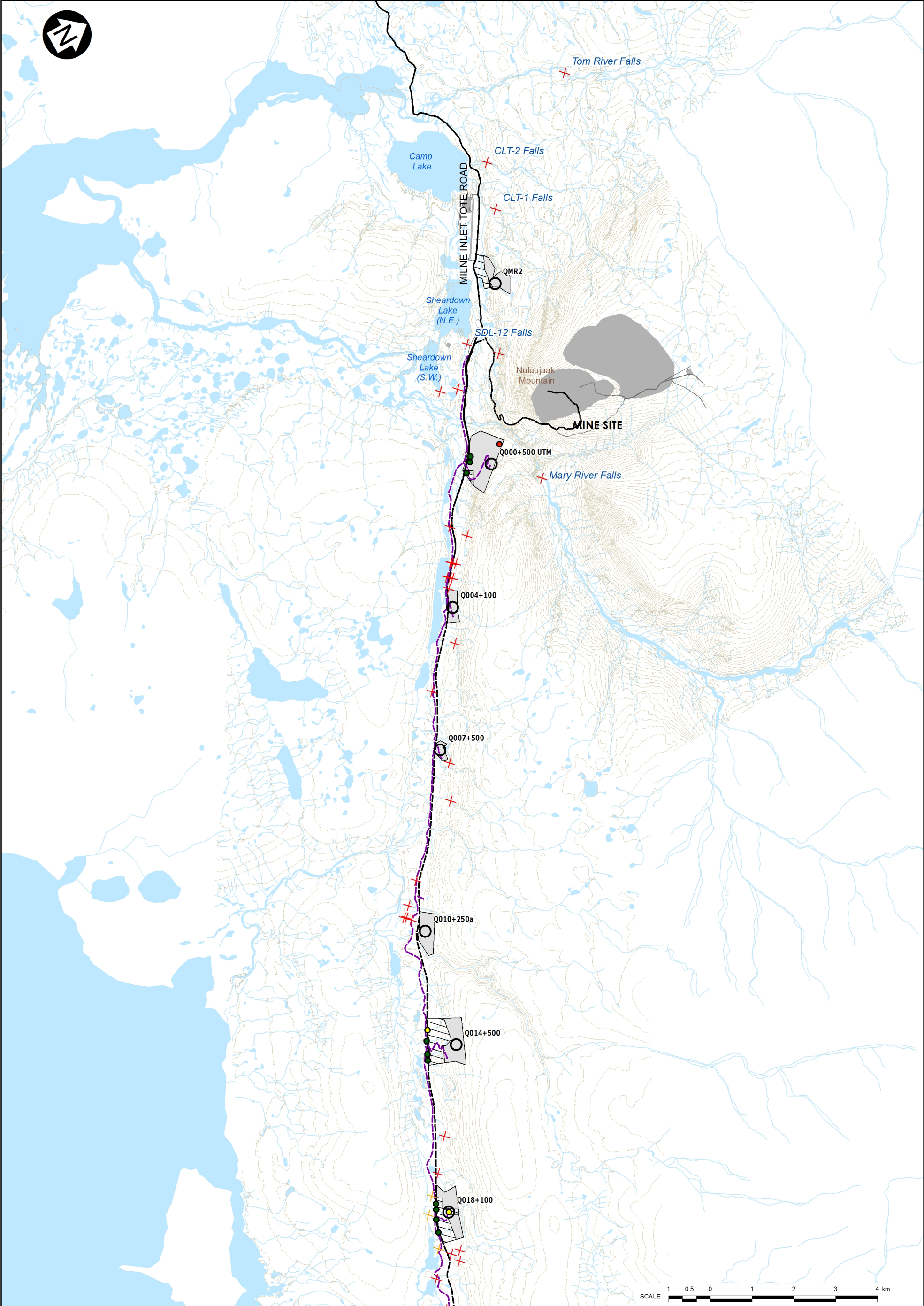
Quarry Sites



P/A NO.
-
DATE: 19/11/2010

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2

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LEGEND:

- | | |
|--|---|
| ● 2007 | — MILNE INLET TOTE ROAD (EXISTING) |
| ● 2008 | - - - RAILWAY ALIGNMENT (PROPOSED) |
| ● 2010 | - · - · CONSTRUCTION ACCESS ROAD (PROPOSED) |
| ○ STREAM CROSSING | ▨ POTENTIAL AREAS OF QUARRY ACCESS |
| ✕ FISH BARRIER (CONFIRMED) | ■ QUARRY SITE |
| ✕ FISH BARRIER (AERIAL PHOTO INTERPRETATION) | ■ WATER |
| — CONTOUR | ■ INFRASTRUCTURE |

NOTES:

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4. PROPOSED RAILWAY CONSTRUCTION ACCESS ROAD ALIGNMENT PROVIDED BY CANRAIL CONSULTANTS INC. DRAWING NO. RAILWAY ALIGNMENT AND CONST ACCESS RD - MARY RIVER STEENSBY 2010 -12AUG2010.dwg
5. LOCATION OF PROPOSED INFRASTRUCTURE IS APPROXIMATE AND SUBJECT TO FIELD ADJUSTMENTS
6. CONTOUR INTERVAL IS 25 AND IS IN METRES.

SCALE 1 0.5 0 1 2 3 4 km

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

Quarry Sites (MAP A)

North/South Consultants Inc.
Aquatic Environment Specialists

P/A NO.
-
DATE: 19/11/2010

REF NO.
-
REV
2

Rail Alignment Watercourse Crossing Assessment

Location

Crossing ID: Q0+500
UTM Coordinates: 17 W 563510 7912424

Date/Time Surveyed: 27-Aug-10

General Physical Characteristics

Floodplain Width (m):	N/M	Channel Pattern:	N/M	Stage:	N/A
Channel Confinement:	N/M	Channel Gradient (range):	N/M	Flow Regime:	EPH
Bank Height (range in m):	N/M	Bank Shape:	N/M	T_w (°C):	N/M

Hydrology & Habitat Characteristics

N/M

Fisheries Information

Electrofishing Conducted:	N	Effort (min):	N/A	Electrofisher Settings:	N/A
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Fish Habitat Potential

Species	Spawning	Overwintering	Rearing	Migration Corridor
ARCH	No	No	No	No
NNST	No	No	No	No

Comments & Summary

From UTM coordinates, watercourse was dry upstream. At the coordinates to approximately 250 m downstream the drain had a steep gradient and a poorly formed channel; no fish habitat potential. Further downstream, channel formation was evident, but disjointed/discontinuous.

Baffinland Iron Mines
Mary River Project



Fish Habitat Quality – NO FISH HABITAT

Rail Alignment Watercourse Crossing Assessment

Location

Crossing ID: Q0+500
UTM Coordinates: 17 W 563510 7912424

Date/Time Surveyed: 27-Aug-10

Photographs



A



B



C



D



E

Figure 1. Upstream from site coordinates (A), view near coordinates (B), view downstream from coordinates (C), view of steep gradient drop off and the beginning of some channel development approximately 250 m downstream from coordinates (D), discontinuous channel downstream of D (E).

Rail Alignment Watercourse Crossing Assessment

Location

Crossing ID: Q18+100
UTM Coordinates: 17 W 579052 7902454

Date/Time Surveyed: 9-Sept-2008/8:40

General Physical Characteristics

N/M

Hydrology & Habitat Characteristics

N/M

Fisheries Information

Electrofishing Conducted: N

Effort (min): N/A

Electrofisher Settings: N/A

Fish Habitat Potential

Species	Spawning	Overwintering	Rearing	Migration Corridor
ARCH	No	No	No	No
NNST	No	No	No	No

Comments & Summary

High altitude lake attached to CV-019 at UTM 17 W 579888 7902514. The surface is frozen. Potential downstream barrier at UTM 17 W 579987 7902247 and UTM 17 W 579968 7902018. Hard to see channel. Additional small pool near quarry at UTM 17 W 579423 7902296. Cannot tell how it would drain into the large downstream river, which is currently frozen.

Baffinland Iron Mines
Mary River Project



Fish Habitat Quality – NO FISH HABITAT

Rail Alignment Watercourse Crossing Assessment

Location

Crossing ID: Q18+100
UTM Coordinates: 17 W 579052 7902454

Date/Time Surveyed: 9-Sept-2008/8:40

Photographs



A



B



C



D



E



F



G

Figure 1. View of dry or frozen channel (A-C), downstream barrier (D), frozen pond (E), and high altitude lake (F-G).