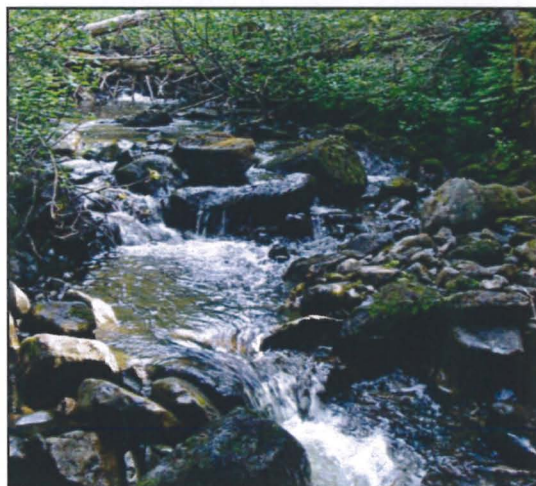
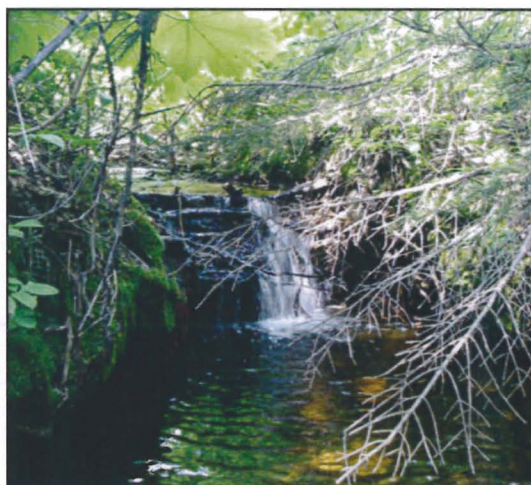


## APPENDIX 30

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## **Morrison Copper/Gold Project Navigable Waters Baseline Report**



Prepared by:

Rescan™ Environmental Services Ltd.  
Vancouver, British Columbia

March 2009



# Executive Summary

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This report presents the navigable waters study for Pacific Booker Minerals Inc. (PBM).

PBM's proposed Morrison Copper/Gold Project (the Project) is 65 km northeast of Smithers and 35 km north of the Village of Granisle in north-central British Columbia. The Project is on the east side of Morrison Lake on Crown land and falls within the traditional territory of the Lake Babine Nation. Access to the Project site is by road with barge access across Babine Lake, which is 50 km south of the site. The Project is approximately 35 km north of the former Bell and Granisle copper/gold mines.

The Morrison mine will be a 30,000 tpd open pit operation with ore processed in a conventional milling plant and the copper/gold concentrate transported to the Port of Stewart for shipment to offshore smelters. Molybdenum concentrate will be trucked from the mine to a refinery location to be confirmed. The mine will produce approximately 224 Mt of tailings and 170 Mt of waste rock.

The information contained in this baseline report is intended to support a full environmental and socio-economic impact assessment of the Project.

This study's objective is to provide information to Transport Canada in the form of measurements of streams, lakes, and ponds, as well as photographic evidence of the waterways in the Project area so they may assess navigability in accordance with requirements under the *Navigable Waters Protection Act*.

Watercourse crossings along the proposed transmission line alignments (Option A and Option B) were measured for mean bankfull channel width, wetted width, wetted depth, and channel gradient (%). Upstream and downstream photographs were taken at all crossings to accommodate further assessment by Transport Canada. Waterbodies at the mine site where infrastructure development will occur were measured for surface area, maximum length, and depth. As well, waterbody proximity to existing roadways was measured to estimate accessibility.

Channel widths were less than 3 m at stream crossings along transmission line alignment options A and B, except for the crossing at 16.8 km of Option B. Detailed information for this site is provided, including a map identifying the crossing site, habitat information, and photographs.

Booker Lake is the largest waterbody in the Morrison Lake watershed within the Project area with respect to length (559 m), average depth (8.6 m), and surface area (15.04 ha). Access to Booker Lake from the existing road follows a more gently sloping narrow access trail with fallen and cut trees. Ore Pond (2.11 ha) is 15 m from the nearest road, but access is down a forested slope greater than 40 degrees. Ponds 00302-BABL (5.95 ha) and 00309-BABL (3.01 ha) are atop a forested plateau containing numerous wetland areas and are farthest from any existing roads. The smallest ponds, Pond X (0.81 ha) and Pond W (0.07 ha), are within 75 m of existing

roads. Pond X is surrounded by a forested wetland area and the logging road approaching Pond W is overgrown with tall saplings.

There will be a total of 36 stream crossings by proposed infrastructure within the Project mine site, crossing a total of 10 streams. Of the 36 crossing locations, 17 possess existing structures in the form of road culverts and bridges. Four of the ten streams that will be crossed have bankfull widths greater than 3 m.

# Acknowledgements

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Glenn Wagner (Ph.D., R.P.Bio.) and Chris Burns (B.Sc., R.P.Bio.) were the principal authors of the report. The report was reviewed by François Landry (M.Sc., R.P.Bio.). Glenn Wagner was the principal investigator.

**Citation:**

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# Morrison Copper/Gold Project Navigable Waters Baseline Report

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# **Glossary, Acronyms, and Abbreviations**

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Bankfull width	Width of a stream channel from the top of the bank on one side to the top of the bank on the other side.
CEA Agency	Canadian Environmental Assessment Agency
DFO	Fisheries and Oceans Canada
FHAP	Fish Habitat Assessment Procedure
GIS	Geographic Information System
GPS	Global Positioning System
NCD	non-classified drainage
NVC	no visible channel
NWPD	Navigable Waters Protection Division of Transport Canada
PBM	Pacific Booker Minerals Inc.
the Project	the Morrison Copper/Gold Project
Rescan	Rescan Environmental Services Ltd.
Wetted width	Width of a stream channel measured at the surface of the water it is filled with at the time of the survey. Wetted width is generally smaller than bankfull width.



# 1. Introduction

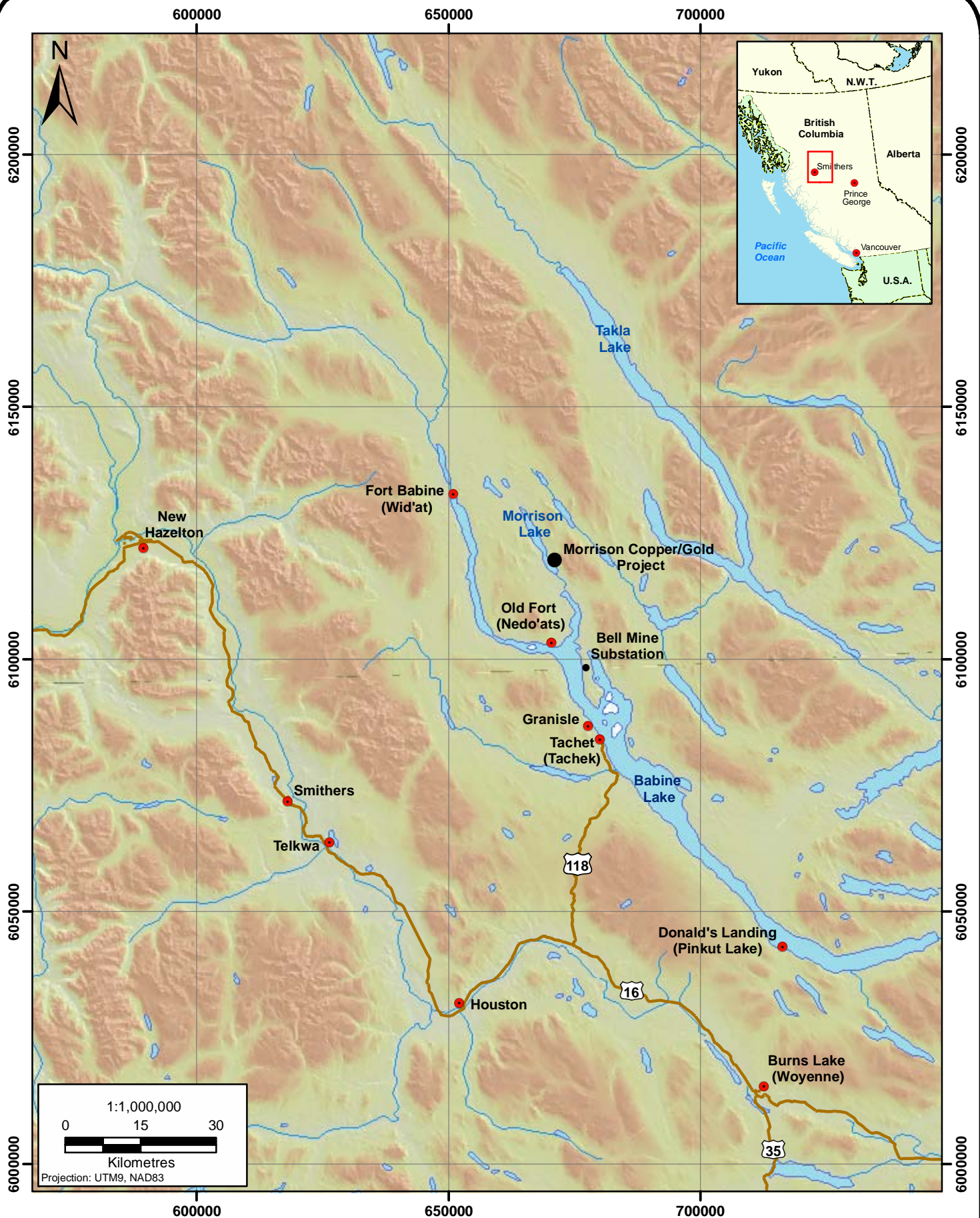
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Morrison Lake is approximately 65 km northeast of Smithers, BC, and 35 km north of the Village of Granisle, BC, within the traditional territory of the Lake Babine Nation. Pacific Booker Minerals Inc. (PBM) is exploring an ore deposit on the east side of the southern end of the lake containing significant quantities of copper, gold, and molybdenum. Coordinates of the Morrison Copper/Gold Project (the Project) property are 55°11'24"N and 126°19'7"W (Figure 1-1). The objective of this study was to provide navigable waters information for the Project.

Transport Canada (2006) defines navigable waters as any inland or coastal waters that floating vessels of any description can navigate for the purpose of transportation, commerce, or recreation. The public right to navigate Canadian waterways is protected by the *Navigable Waters Protection Act* (1985). From this act, any works to be built or placed in, on, over, under, through, or across navigable water have to be approved via the Navigable Waters Protection Program (Transport Canada 2006) by the Navigable Waters Protection Division of Transport Canada (NWPD).

The Project's proposed transmission line will cross a number of potentially navigable watercourses. These streams will not be crossed by a corresponding maintenance road because spur roads will be extended to each transmission tower site from the existing access road. Transport Canada requires information on watercourse crossings to assist in its determination of navigability pursuant to the *Navigable Waters Protection Act*. Watercourses along alignment Option B of the transmission line have been measured in the field to identify any potentially navigable crossings and their fish-bearing status. Several watercourses along alignment Option A of the transmission line were also measured. These watercourse crossings were all downstream of Option B. A third transmission line alignment, Option C, along the existing road route, was not surveyed because stream crossings are already in place. The field methods used at each watercourse crossing are described in this report and the results presented for determination of navigability.

Several ponds and a small lake will be affected during Project infrastructure development. If these waterbodies are deemed to be navigable by Transport Canada, a full environmental assessment by the Canadian Environmental Assessment Agency (CEA Agency) may be required through Section 5.1 of the *Waters Protection Act*. Another possible outcome is an exemption from this review process via Section 23. These waterbodies are identified and information provided on their size and accessibility.



## 2. Methods

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From 24 June to 5 July, 2008, GPS coordinates of watercourse crossings along options A and B of the proposed transmission line were noted. Mean bankfull channel width (m), wetted width (m), wetted depth (m), and channel gradient (%) were measured. Upstream and downstream photographs were taken at all crossings to accommodate further assessment of navigability by Transport Canada. Watercourses containing little or no water were classified as having no water, a non-classified drainage (NCD), or no visible channel (NVC).

Maximum length, surface area, and depth of small lakes and ponds in the Project area were measured using geographic information system (GIS) data. This information was also used to measure distances between waterbodies and nearby roads as an estimate of accessibility to these waterbodies. A bathymetric survey was undertaken of Booker Lake to ascertain its configuration and water volume.

Mapping was performed to overlay the Project infrastructure over the existing topography to identify stream locations that will be crossed or interrupted. Some stream habitat information was available for these crossing locations from previous studies performed in the Project area by David Bustard and Associates Ltd. (2005) and SKR Consultants Ltd. (2000; 2001; 2006).

### 3. Results and Discussion

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A total of 12 and 25 watercourse crossings were surveyed along Option A and Option B, respectively (Figure 3-1). Detailed information (i.e., location, bankfull width, wetted width, etc.) is provided in Table 3-1 for all stream crossings surveyed along these two alignments.

For Option B, five crossings were classified NVC, two crossings as NCD, and four contained no water. Only six streams were considered fish habitat. For Option A, three crossings were classified as NVC, two streams did not contain water, and two streams contained fish habitat. Potential stream crossings not surveyed along alignment Option A of the transmission line are all downstream of sites surveyed along Option B. These downstream sites are expected to be of equal size or larger than the upstream sites.

For stream crossings along the two alignment options, channel widths were less than 3 m except for one site. The stream crossing at 16.8 km of Option B had a bankfull width of 4.0 m. Detailed information for this site is provided in Appendix 1, including a map identifying the crossing site, habitat information, and photographs. The crossing at this site will consist of the transmission line only, as the spur road extended from the access road will travel to the transmission tower only and not cross the stream.

Waterbodies affected by proposed Project infrastructure development include Booker Lake, Ore Pond, Pond X, Pond W, and ponds 00302-BABL and 00309-BABL (Figure 3-2). The current Project development plan entails the draining of this small lake and the five ponds prior to construction of the tailings facility, open pit, and waste rock dump. Table 3-2 provides the length, area, and site access information for these waterbodies.

Booker Lake is the largest waterbody in the Morrison Lake watershed in the mine facilities area with respect to length (559 m), depth (8.6 m), and surface area (15.04 ha). The waterbody closest to an access road is Ore Pond. This pond is 15 m from the nearest road, but access is down a forested slope greater than 40 degrees. Access to nearby Booker Lake from the existing road follows a more gently sloping narrow access trail with fallen and cut trees. Ore Pond contains dead trees and snags across its surface (Plate 3-1). These same elements are present at Booker Lake, but only around its perimeter (Plate 3-2).

The two ponds in the proposed tailings facility area are both larger than Ore Pond, but not easily accessible. Pond 00302-BABL (Plate 3-3) is the farthest from any existing roads (1,137 m), followed by pond 00309-BABL (448 m; Plate 3-4). Both ponds are atop a forested plateau containing numerous wetland areas.

The smallest ponds in the Project area are Pond X (Plate 3-5) and Pond W (Plate 3-6). These shallow ponds are within 75 m of existing roads, but Pond X is surrounded by a forested wetland area and the logging road approaching Pond W is overgrown with tall saplings (Plate 3-7).

**Table 3-1**  
**All Stream Crossings Measured Along Two Proposed Transmission Line Options**  
**of the Morrison Copper/Gold Project**

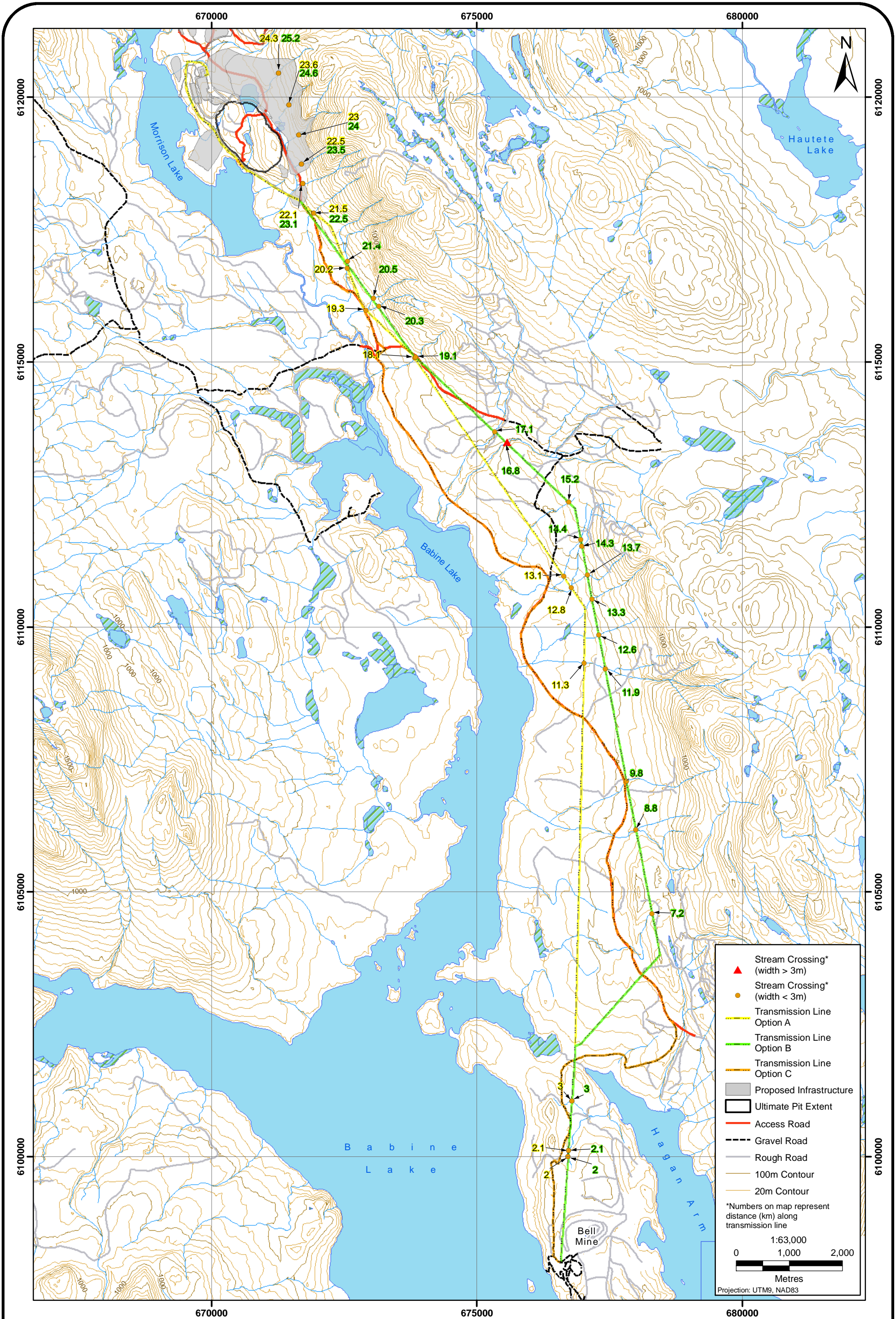
Transmission Line Option	KM Marker	Latitude	Longitude	Survey Length (m)	Slope (%)	Wetted Depth (m)	Wetted Width (m)	Bankfull Width (m)	Watershed Area (ha)	Wetted Stream Discharge (m <sup>3</sup> /s)
Option B	2.0	55° 0' 55.555" N	126° 14' 9.730" W	100	n/a	NVC	NVC	NVC	30.2	n/a
Option B	2.1	55° 0' 59.576" N	126° 14' 8.954" W	100	n/a	NVC	NVC	NVC	44.0	n/a
Option B	3.1	55° 1' 29.518" N	126° 14' 3.205" W	100	2	no water	no water	0.65	11.0	n/a
Option B	7.2	55° 3' 22.011" N	126° 12' 30.897" W	100	5	no water	no water	1.30	29.8	n/a
Option B	8.8	55° 4' 13.489" N	126° 12' 44.184" W	100	5	0.02	0.97	1.30	378.8	n/a
Option B	9.8	55° 4' 43.391" N	126° 12' 51.908" W	100	3	0.02	0.55	1.35	204.1	n/a
Option B	11.9	55° 5' 52.364" N	126° 13' 9.735" W	100	4	0.17	1.05	1.67	613.4	n/a
Option B	12.6	55° 6' 13.201" N	126° 13' 15.124" W	100	10	0.67	0.57	0.80	53.9	n/a
Option B	13.3	55° 6' 35.340" N	126° 13' 20.851" W	100	12	0.07	0.57	0.90	200.6	n/a
Option B	13.7	55° 6' 50.182" N	126° 13' 24.691" W	100	5	0.02	0.30	0.60	36.3	n/a
Option B	14.3	55° 7' 7.832" N	126° 13' 29.259" W	100	5	0.02	0.30	0.60	94.8	n/a
Option B	14.4	55° 7' 11.935" N	126° 13' 30.321" W	100	5	0.02	0.30	0.60	14.1	n/a
Option B	15.2	55° 7' 34.917" N	126° 13' 41.346" W	100	n/a	NVC	NVC	NVC	10.5	n/a
Option B	16.8	55° 8' 12.168" N	126° 14' 44.657" W	200	7	0.27	2.55	4.00	1,993.7	0.08
Option B	17.1	55° 8' 19.573" N	126° 14' 57.249" W	100	5	0.23	1.73	2.43	655.1	n/a
Option B	19.1	55° 9' 7.040" N	126° 16' 18.004" W	100	4	no water	no water	0.65	30.9	n/a
Option B	20.3	55° 9' 39.129" N	126° 16' 55.197" W	100	10	NCD	NCD	NCD	62.7	n/a
Option B	20.5	55° 9' 43.947" N	126° 17' 0.586" W	100	10	NCD	NCD	NCD	39.0	n/a
Option B	21.4	55° 10' 7.183" N	126° 17' 26.581" W	100	4	NVC	NVC	NVC	167.2	n/a
Option B	22.5	55° 10' 37.408" N	126° 18' 0.409" W	100	10	0.03	0.53	0.86	49.5	n/a
Option B	23.1	55° 10' 55.546" N	126° 18' 10.902" W	100	22	0.04	0.50	0.90	72.9	n/a
Option B	23.5	55° 11' 7.639" N	126° 18' 11.687" W	100	6	0.17	0.88	1.25	22.1	n/a
Option B	24.0	55° 11' 25.277" N	126° 18' 13.367" W	100	10	no water	no water	1.28	102.0	n/a
Option B	24.6	55° 11' 43.806" N	126° 18' 22.548" W	100	20	NVC	NVC	NVC	20.6	n/a
Option B	25.2	55° 12' 3.610" N	126° 18' 32.364" W	100	7	0.13	0.65	0.75	35.4	n/a
Option A	11.3	55° 5' 56.391" N	126° 13' 31.984" W	100	4	0.17	1.05	1.67	626.1	n/a
Option A	12.8	55° 6' 42.733" N	126° 13' 42.333" W	100	5	0.02	0.30	0.60	176.5	n/a
Option A	13.1	55° 6' 49.798" N	126° 13' 50.028" W	100	5	0.02	0.30	0.60	25.9	n/a
Option A	18.1	55° 9' 6.478" N	126° 16' 19.055" W	100	4	no water	no water	0.65	31.3	n/a
Option A	19.3	55° 9' 36.844" N	126° 17' 8.997" W	100	10	NVC	NVC	NVC	109.2	n/a
Option A	20.2	55° 10' 2.792" N	126° 17' 27.213" W	100	4	NVC	NVC	NVC	172.2	n/a
Option A	21.5	55° 10' 37.295" N	126° 18' 0.687" W	100	10	0.03	0.53	0.86	49.6	n/a
Option A	22.1	55° 10' 55.546" N	126° 18' 10.921" W	100	22	0.04	0.50	0.90	72.9	n/a
Option A	22.5	55° 11' 7.637" N	126° 18' 11.698" W	100	6	0.17	0.88	1.25	22.1	n/a
Option A	23.0	55° 11' 25.277" N	126° 18' 13.367" W	100	10	no water	no water	1.28	102.0	n/a
Option A	23.6	55° 11' 43.805" N	126° 18' 22.548" W	100	20	NVC	NVC	NVC	20.6	n/a
Option A	24.3	55° 12' 3.610" N	126° 18' 32.364" W	100	7	0.13	0.65	0.75	35.4	n/a

n/a = not available.

NCD = no classified drainage.

NVC = no visible channel.

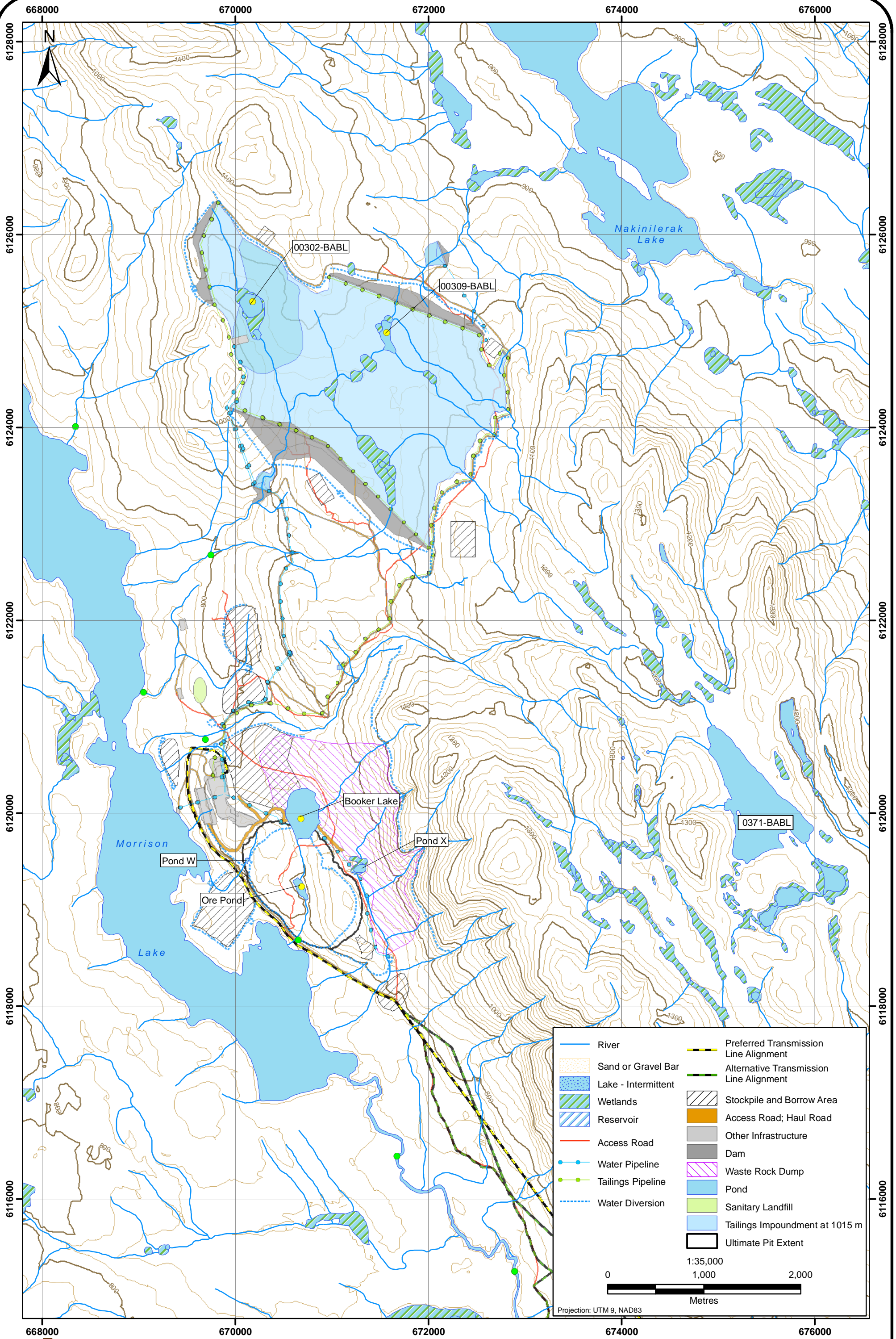




Stream Crossings Surveyed for the Proposed Transmission Line Options of the Morrison Copper/Gold Project







**Table 3-2**  
**Size and Accessibility of Small Lakes and Ponds**  
**in the Morrison Copper/Gold Project Area**

<b>Waterbody</b>	<b>Surface Area (ha)</b>	<b>Maximum Length (m)</b>	<b>Average Depth (m)</b>	<b>Distance to Nearest Road (m)</b>	<b>Comments</b>
<b>Booker Lake</b>	15.04	559	8.6	41	Narrow, broken access trail with fallen and cut trees. Dead trees and snags along lake perimeter.
<b>Ore Pond</b>	2.11	267	n/a	15	Access down steep, forested slope. Pond is flooded forest area with dead trees and snags
<b>Pond X</b>	0.81	137	n/a	73	Access through surrounding forest and wetland area.
<b>Pond W</b>	0.07	41	n/a	20	Nearest logging road overgrown with tall saplings.
<b>00302-BABL</b>	5.95	544	n/a	1,137	Forested access across hilled plateau with wetlands.
<b>00309-BABL</b>	3.01	361	n/a	448	Forested access across hilled plateau with wetlands.

n/a = not available.

A total of 36 stream crossing infrastructure locations are within the Project's mine site area, crossing a total of 10 streams. Table 3-3 provides stream habitat data for each crossing and Figure 3-3 shows the locations of these crossings. The majority of these streams are in the Morrison Lake basin. Stream habitat data for crossings were only available for streams assessed in past baseline studies, David Bustard and Associates Ltd. (2005) and SKR Consultants Ltd. (2000; 2001; 2006). Four of the ten streams that will be crossed possess bankfull widths greater than 3 m. Of these four streams, three had existing crossing structures. Of the 36 stream crossings, 17 possessed existing stream crossing structures.





**Plate 3-1. Booker Lake facing west with dead trees and snags along perimeter.**



**Plate 3-2. Ore Pond with dead trees and snags across surface.**





**Plate 3-3. Pond X with surrounding bog mat and forest facing east.**



**Plate 3-4. Pond 00302-BABL with surrounding floating bog mat and forest.**





**Plate 3-5. Pond 00309-BABL with surrounding floating bog mat and forest.**



**Plate 3-6. Pond W with surrounding marsh and forest facing east.**



**Plate 3-7. Old logging road to Pond W overgrown with saplings.**



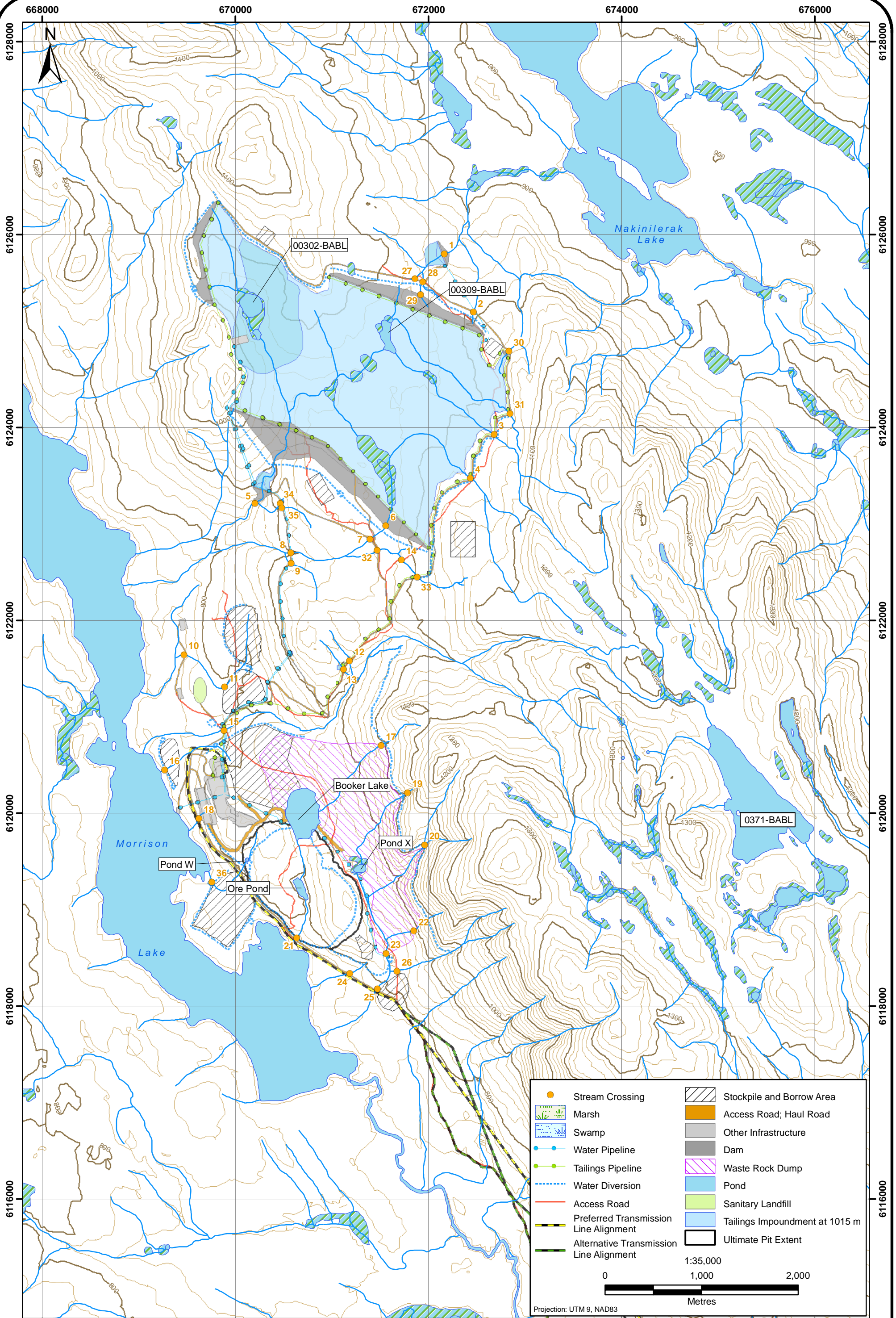
**Table 3-3**  
**Stream Habitat Information for Infrastructure Locations of the Morrison Copper/Gold Project**

ID	Watershed Basin	Latitude (north)	Longitude (west)	Stream Drainage	Distance Upstream (m)	Average Gradient	Average Bankfull Width (m)	Average Wetted Width (m)	Average Wetted Depth (m)	Data Source	Existing Stream Crossing	Infrastructure Type
1	Nakinilerak Lake	55° 14' 54.979"	126° 17' 29.318"	6070-429	1960.7	n/a	n/a	n/a	n/a		No	Dam
2	Nakinilerak Lake	55° 14' 35.132"	126° 17' 13.639"	6070-494	2558.1	n/a	n/a	n/a	n/a		Yes	Road
3	Morrison Lake	55° 13' 53.790"	126° 17' 4.292"	53400	5896.9	n/a	n/a	n/a	n/a		Yes	Road/Pipeline
4	Morrison Lake	55° 13' 39.440"	126° 17' 19.165"	53400-12700	4926.0	n/a	n/a	n/a	n/a		Yes	Road/Pipeline
5	Morrison Lake	55° 13' 33.876"	126° 19' 25.932"	53400	1805.2	3.3	2.4	1.1	0.2	SKR 2006 <sup>1</sup>	No	Dam
6	Morrison Lake	55° 13' 24.605"	126° 18' 9.738"	53400-12700	3039.7	n/a	n/a	n/a	n/a		No	Dam
7	Morrison Lake	55° 13' 20.401"	126° 18' 19.308"	53400-12700	2821.8	n/a	n/a	n/a	n/a		Yes	Road
8	Morrison Lake	55° 13' 16.852"	126° 19' 5.882"	53400-12700	1917.9	12.0	1.2	0.8	0.2	Bustard 2005 <sup>2</sup>	Yes	Road/Pipeline
9	Morrison Lake	55° 13' 13.276"	126° 19' 6.012"	53400-12700	2050.8	n/a	n/a	n/a	n/a		Yes	Road/Pipeline
10	Morrison Lake	55° 12' 44.036"	126° 20' 10.806"	50000-48010	739.0	0.7	1.0	1.0	0.3	SKR 2006 <sup>1</sup>	Yes	Road
11	Morrison Lake	55° 12' 32.676"	126° 19' 47.646"	50000-48010	1325.8	n/a	n/a	n/a	n/a		No	Stockpile/Borrow pit
12	Morrison Lake	55° 12' 39.854"	126° 18' 34.131"	44800	2965.6	9.0	5.0	5.0	0.2	Bustard 2005 <sup>2</sup>	Yes	Road/Pipeline
13	Morrison Lake	55° 12' 37.014"	126° 18' 37.750"	44800	2930.1	9.0	5.0	5.0	0.2	Bustard 2005 <sup>2</sup>	Yes	Road/Pipeline
14	Morrison Lake	55° 13' 12.970"	126° 18' 1.245"	53400	3170.2	n/a	n/a	n/a	n/a		Yes	Road
15	Morrison Lake	55° 12' 18.136"	126° 19' 48.993"	44800	968.2	4.0	3.5	3.5	0.4	Bustard 2005 <sup>2</sup>	Yes	Road/Pipeline
16	Morrison Lake	55° 12' 6.715"	126° 20' 20.693"	n/a	129.2	n/a	n/a	n/a	n/a		No	Stockpile/Borrow pit
17	Morrison Lake	55° 12' 11.068"	126° 18' 17.404"	29000	2442.6	3.3	1.1	0.3	0.2	SKR 2006 <sup>1</sup>	No	Waste rock pile
18	Morrison Lake	55° 11' 48.917"	126° 20' 5.739"	n/a	172.1	n/a	n/a	n/a	n/a		No	Road/Transmission line
19	Morrison Lake	55° 11' 54.909"	126° 18' 3.128"	25500	4179.2	n/a	n/a	n/a	n/a		No	Waste rock pile
20	Morrison Lake	55° 11' 37.108"	126° 17' 54.256"	25500	2721.9	n/a	n/a	n/a	n/a		No	Waste rock pile
21	Morrison Lake	55° 11' 7.615"	126° 19' 11.245"	29000	119.9	8.0	4.9	1.5	0.2	Bustard 2005 <sup>2</sup>	No	Road/Transmission line
22	Morrison Lake	55° 11' 8.494"	126° 18' 2.575"	25500	1716.3	n/a	n/a	n/a	n/a		No	Waste rock pile
23	Morrison Lake	55° 11' 1.369"	126° 18' 19.335"	25500	1261.8	3.0	1.5	1.3	n/a	Bustard 2005 <sup>2</sup>	No	Waste rock pile
24	Morrison Lake	55° 10' 55.115"	126° 18' 40.958"	n/a	445.1	n/a	n/a	n/a	n/a		No	Road/Transmission line
25	Morrison Lake	55° 10' 49.603"	126° 18' 25.146"	25500	830.9	6.0	2.1	1.5	n/a	Bustard 2005 <sup>2</sup>	No	Road/Transmission line
26	Morrison Lake	55° 10' 55.217"	126° 18' 13.369"	25500	1133.6	n/a	n/a	n/a	n/a		Yes	Road
27	Nakinilerak Lake	55° 14' 47.031"	126° 17' 47.121"	6070-429	2374.9	n/a	n/a	n/a	n/a		Yes	Road
28	Nakinilerak Lake	55° 14' 45.997"	126° 17' 42.394"	6070-429	2372.9	n/a	n/a	n/a	n/a		Yes	Road
29	Nakinilerak Lake	55° 14' 41.645"	126° 17' 44.072"	6070-429	2515.8	n/a	n/a	n/a	n/a		No	Dam
30	Nakinilerak Lake	55° 14' 21.615"	126° 16' 53.682"	6070	2614.6	n/a	n/a	n/a	n/a		Yes	Dam/Road/Pipeline
31	Morrison Lake	55° 14' 0.581"	126° 16' 54.506"	53400	6409.3	n/a	n/a	n/a	n/a		Yes	Road/Pipeline
32	Morrison Lake	55° 13' 16.489"	126° 18' 15.380"	53400-12700	2860.2	n/a	n/a	n/a	n/a		Yes	Road
33	Morrison Lake	55° 13' 7.073"	126° 17' 52.496"	53400-12700	3411.6	n/a	n/a	n/a	n/a		No	Road/Pipeline
34	Morrison Lake	55° 13' 33.539"	126° 19' 10.985"	53400	2151.5	n/a	n/a	n/a	n/a		No	Road/Pipeline
35	Morrison Lake	55° 13' 31.920"	126° 19' 10.252"	53400	2135.0	n/a	n/a	n/a	n/a		No	Road/Pipeline
36	Morrison Lake	55° 11' 27.519"	126° 19' 59.547"	Pond W	112.4	n/a	n/a	n/a	n/a		No	Stockpile

n/a = not available

<sup>1</sup> survey performed in summer

<sup>2</sup> survey performed in spring



# References

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1985. *Navigable Waters Protection Act, RSC. C. N-22.*

Bustard. 2005. *2004 fisheries studies Morrison watershed.* N.p.: Prepared for Pacific Booker Minerals Inc. by David Bustard and Associates Ltd.

SKR. 2000. *Reconnaissance (1:20000) fish and fish habitat inventory at six sub-basins in the Morrison Creek watershed.* N.p.: Prepared for Houston Forest Products Co. by SKR Consultants Ltd.

SKR. 2001. *Reconnaissance (1:20000) fish and fish habitat inventory at three sub-basins in the Morrison Creek watershed.* N.p.: Prepared for Houston Forest Products Co. by SKR Consultants Ltd.

SKR. 2006. *Unpublished fish and fish habitat survey data from creeks in the Morrison Creek watershed.* N.p.: Performed for Rescan Environmental Services Ltd. by SKR Consultants Ltd.

Transport Canada. 2006. *Pipeline crossing guidelines.* Navigable Waters Protection Division. <http://www.tc.gc.ca/pacific/marine/nwpc/pipelinecrossingguidelines.htm> (accessed December 2008).

**APPENDIX 1**  
**MORRISON COPPER/GOLD PROJECT POTENTIALLY**  
**NAVIGABLE WATERS: CROSSING 16.8 KM UNNAMED CREEK**

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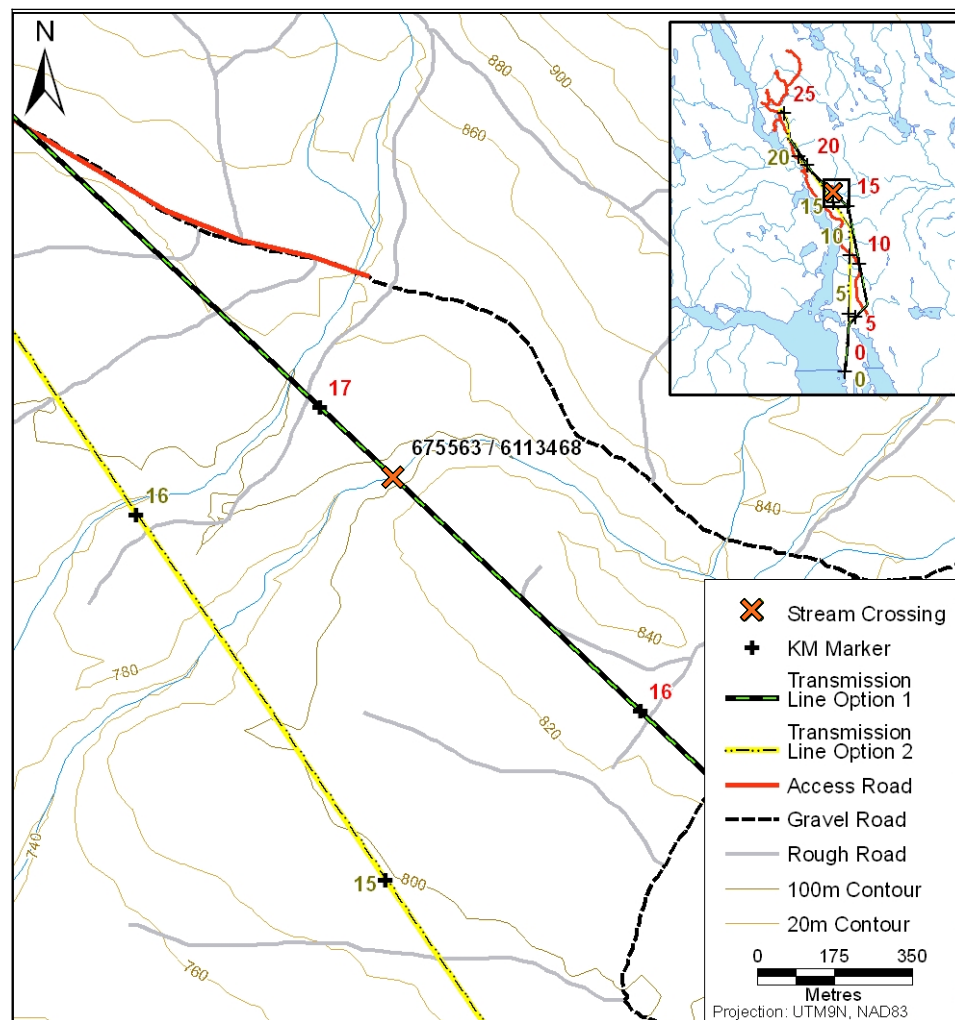
# Morrison Project

## Potentially Navigable Waters

Crossing 16.8 km



Latitude	55° 8' 12.2" N	Wetted Width (m)	2.55	Bankfull Width (m)	4.00	Slope	7.0 %	<b>Watercourse:</b> Small flowing stream containing Dolly Varden.
Longitude	126° 14' 44.7" W	Wetted Depth (m)	0.27	Bankfull Depth (m)	1.36	Fish Bearing	Yes	
Survey Length	200 m	Wetted Stream Discharge (m <sup>3</sup> /s)	0.08	Watershed Area (ha)	1,993.7			



Riffle section upstream of crossing



Cascade section downstream of crossing