May 30, 2019

Solomon Amuno
Technical Advisor II
Nunavut Impact Review Board

Re: QIA Letter to NIRB on Draft Agenda for Second Technical Meeting for Baffinland's Phase 2 Proposal

Dear Solomon,

Baffinland would like to correct a statement made in the first paragraph of page 3 of the QIA's letter submitted on May 24, 2019 to the Nunavut Impact Review Board (NIRB) on the Draft Agenda for the Second Technical Meeting, which stated:

> *"For Example, QIA asked about waterbodies of cultural importance during the first technical meeting. In its response, the Proponent referred QIA to the FEIS Addendum. Upon further review, QIA found the Proponent had not identified any waterbodies of cultural importance in its past assessment work. A response to a question in a technical meeting should be fulsome in the interests of constructively advancing the review without obfuscation."*

While Baffinland did initially indicate the source of the information was in the FEIS Addendum, an updated reference was provided during the first technical meeting to HC 02 Attachment 2 from the Advance Technical Comment Submission (Jan 2019). Further to the verbal update, the reference was also recorded in Baffinlands Commitment List in response to QIA 20, which was reviewed by the QIA prior to submission to the NIRB and subsequent circulation with the Mary River Distribution List on April 18, 2019. To expedite the review of this document Baffinland would like to clarify that it is in fact Appendix A of HC 02 to Attachment 2 and copied to this letter.

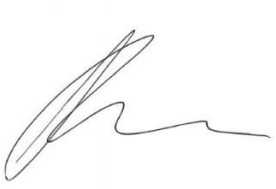
The relevant document is a letter dated November 30, 2018 in regard to the Water Compensation Agreement between Baffinland and the QIA and was subject to an in-person discussion between the two parties in Ottawa on December 12, 2018. The letter notes that while information on waters important to Inuit were sought during the IQ study, and such locations were identified, none of the identified waters important to Inuit were in the vicinity of the Project. Additionally, scoping work for the FEIS derived from discussions with IQ working groups and from the public consultation record identified generic concerns regarding potential impacts to water quality as a result of the Project, but concerns were not expressed regarding project impacts on specific bodies of water of importance. As such, there were no Project interactions with waters important to Inuit to assess in the FEIS.

Baffinland understands the need to provide fulsome responses to advance resolutions at technical meetings, but in this case the request from QIA was confirmation as to whether or not Baffinland had considered waterbodies of cultural importance, and the response was positive confirmation and reference to a relevant document that was submitted as part of the Phase 2 review. Baffinland has not,

and will not, endeavor to obfuscate the review process and strongly rejects any implications to the contrary.

For any questions or clarifications please do not hesitate to contact the undersigned for further information.

Best Regards,



Lou Kamermans
Director, Sustainable Development

Cc: Ryan Barry, NIRB
Cory Barker, NIRB
Tara Arko, NIRB
Sophia Granchinho, NIRB
Megan Lord-Hoyle, BIM
Grant Goddard, BIM
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HC 02 Attachment 2 from the Advance Technical Comment Submission (Jan 2019)

November 30, 2018

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Dear Christopher,

RE: Mary River Project - Freshwater Waterbodies with Unique Value and/or Cultural Significance to Inuit

1.0 INTRODUCTION

Baffinland Iron Mines Corporation (Baffinland) requested that Knight Piésold Ltd. (KP) identify freshwater waterbodies with unique value and/or cultural significance to Inuit that occur on Inuit Owned Land (IOL) and have the potential to be affected by the Mary River Project. The Mary River Inuit Knowledge Study (MRIKS); (Baffinland, 2014) was identified as a key information source in this regard. This work will assist Baffinland in its interpretation of the Water Compensation Agreement (WCA) between the company and the Qikiqtani Inuit Association (QIA).

2.0 BACKGROUND

Article 20 of the *Nunavut Agreement* is titled Inuit Water Rights, and Section 20.3.1 states the following:

> *"No project or activity within the Nunavut Settlement Area which may substantially affect the quality of water flowing through Inuit Owned Lands, or the quantity of such water, or its flow, shall be approved by the NWB [Nunavut Water Board] unless the applicant for a licence has entered into a compensation agreement with the DIO [Designated Inuit Organization] for any loss or damage which may be caused by the change in quality, quantity or flow of the water or the NWB has made a determination in accordance with Section 20.3.2."*

Baffinland and the QIA signed a WCA in 2013, in accordance with Section 20.3.2 of the *Nunavut Agreement*, and Section 63 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. Section 20.3.3 of the *Nunavut Agreement* provides guidance in regard to determining compensation for loss or damage caused by the change in quality, compensation, or flow of water through IOL:

> *"In determining the appropriate compensation for loss or damage under Section 20.3.2, the NWB shall take into account the following:*
>
> - *the adverse effects of the change in quality, quantity or flow of water on Inuit Owned Lands, owned or used by the person or group affected*
> - *the nuisance, inconvenience, disturbance or noise caused by the change in quality, quantity or flow of water to the person or group affected*
> - *the adverse effects of the change in quality, quantity or flow of water in combination with existing water uses*

- *the cumulative effect of the change in quality, quantity or flow of water in combination with existing water uses*
- *the cultural attachment of Inuit to Inuit Owned Lands, including water, adversely affected by the change in quality, quantity or flow of water*
- *the peculiar and special value of Inuit Owned Lands, including water, affected by the change in quality, quantity or flow of water, and*
- *interference with Inuit rights, whether derived from this Article or some other source."*

We understand that it is bullets 5 and 6 above (the cultural attachment and peculiar and special value of IOL including water) that Baffinland would like to identify in relation to the Project.

Overlap of the Project footprint with IOL is shown on Figure 1. Milne Port, the Mine Site, most of the Northern Transportation Corridor, and the northern 30 km of the South Railway is situated on IOL. As such, this review will focus on potential interactions of these project components with waters important to Inuit.

3.0 INUIT KNOWLEDGE STUDIES

Community based research programs were undertaken by Baffinland to obtain community input, socio-economic information, and Inuit knowledge. The MRIKS was conducted by Baffinland from 2006 through 2010 (Baffinland, 2014). Objectives of the study included obtaining local knowledge of wildlife, land use, and areas of cultural significance to support Project decision-making and the environmental assessment process. Inuit have a unique knowledge about their local environment, how it functions, and its characteristic ecological relationships. Inuit knowledge is recognized as an important part of project planning, resource management, and environmental assessment.

Workshops and interviews with elders were undertaken in the communities of Arctic Bay, Clyde River, Hall Beach, Igloolik, and Pond Inlet in 2007 and 2008, and workshops were held in the South Baffin communities of Cape Dorset and Kimmirut in 2010. The results of Inuit knowledge studies were incorporated to the Final Environmental Impact Statement (FEIS) report (Baffinland, 2012) and FEIS Addendum report (Baffinland, 2013) for the Early Revenue Phase (ERP). A database was eventually assembled that consists of research agreements, interview questions, audio recordings of interviews, written interview transcripts in Inuktitut and English, and the keyword summaries and maps that were the main products of the study (Baffinland, 2014). The study methodology is summarized in Appendix A.

4.0 METHODOLOGY

KP led the study and developed the study products, and hence has a familiarity with the MRIKS database. KP reviewed the database with the aim of identifying those waters that were identified as important to Inuit that may potentially be affected by the Project. A number of interview questions produced information on areas of importance to Inuit. This included questions regarding travel routes and camps, water, and areas important for fishing. The interview questions assessed as having information on the importance of freshwater bodies in the region are provided in Appendix B.

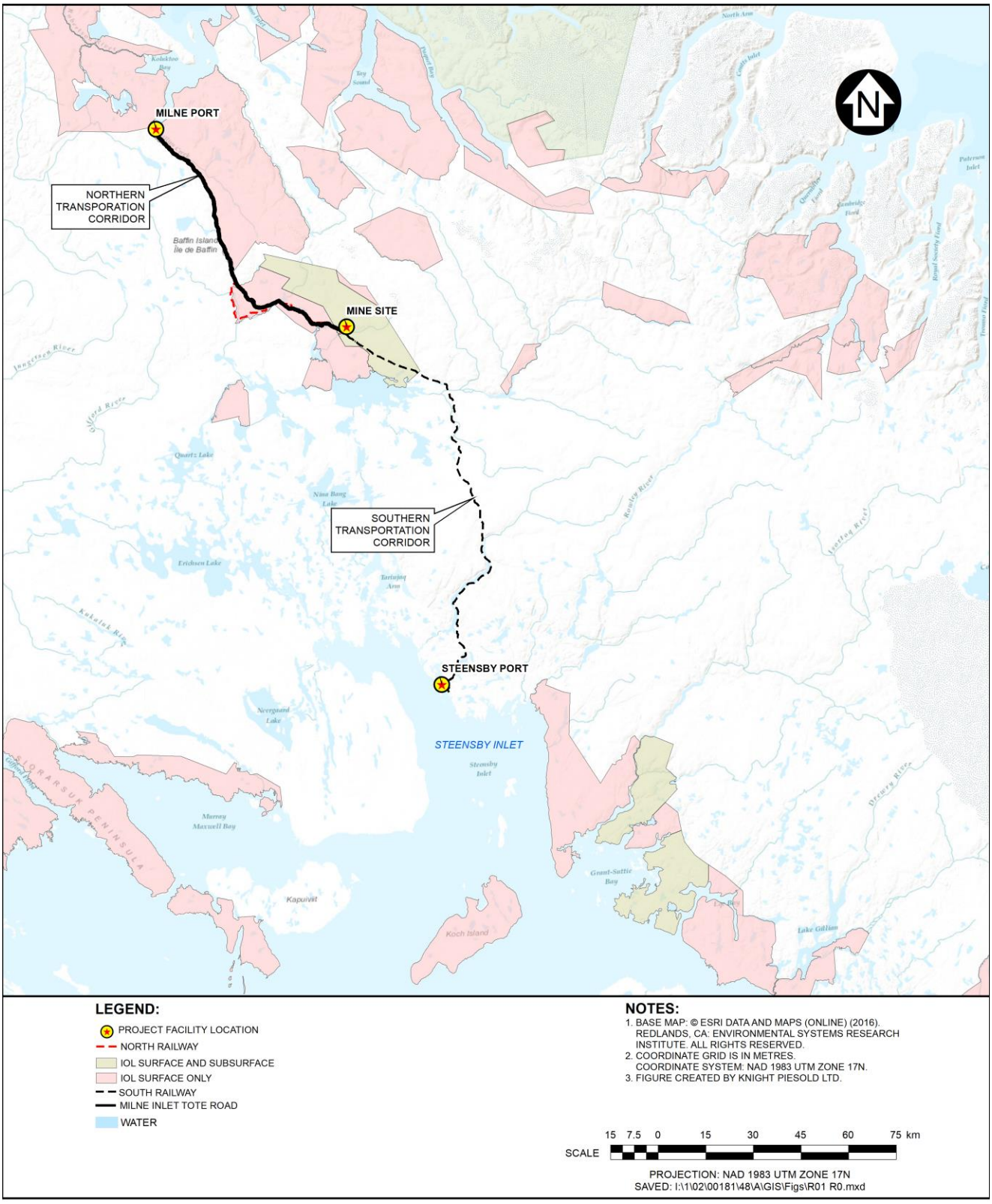


Figure 1 Project Location Relative to Inuit Owned Lands

In completing this review, KP undertook the following:

- Identified and reviewed the applicable maps that show the following information:
  - Camps
  - Travel routes
  - Lakes and rivers of importance
  - Special places and resource collection areas
  - Fishing areas
- Reviewed keyword summaries related to the above topics
- Reviewed individual transcripts corresponding to mapped features discussing lakes and rivers of importance

Relevant figures presenting the above information are included in Appendix C, as follows:

- Figure 1.4 Travel Routes - Project Study Area (Interview Results)
- Figure 1.6 Berry Picking Locations - Project Study Area (Workshop Results)
- Figure 1.8 Camping Locations - Project Study Area (Workshop Results)
- Figure 1.12 Special Places - Project Study Area (Interview Results)
- Figure 1.16 Stone Quarry Locations - Project Study Area (Workshop Results)
- Figure 3.20 Water and Ice Features - Project Study Area (Interview Results)
- Figure 5.2 Fish Locations - Project Study Area (Interview Results)

The results of the review are provided below.

5.0 RESULTS

5.1 THE IMPORTANCE OF WATER

A number of study participants stated that good drinking water was of primary importance for well-being, and water is also an important source of food (fish).

> *It's vitally important you get some water for drinking purposes. But, lakes are also important because when I go fishing to a lake and I stay there for a long time and when I become thirsty I can drink the water from the lake. Yea, there are a whole lot of lakes in this area here. For example, the residents of Pond Inlet we go to this lake to go fishing.* (PI-03, Pond Inlet)

Several elders emphasized the need to have a good water source near to camp sites.

> *We made sure to camp nearby water sources such as lakes, rivers and streams so we had water nearby our camp… This has always been one of the case for all time, when choosing a camp site, we had to be sure to have a water source nearby… Lakes and rivers are all important as we camp or live around those for our water source and we fish off the lakes and rivers during the run… Having water is essential to us and water keeps us alive.* (Elijah Panipakoocho, Pond Inlet)

> *We have always had to live nearby lakes for our water source and we even use it as storage or deep freeze with our meat supplies. This lake is where the river runs from where we fish. … These lakes are very, very important to me. Some campers camp where there are no lakes, and in early fall they have no water source at all, so it is important to live or camp nearby lakes.* (Ikey Kigutikkarrjuk, Arctic Bay)

While out on the land, hunters and travellers consume water from ice, snow, lakes and rivers. In winter, snow is relied upon as a water source. Water from glaciers was identified by many study participants as the best available water.

> *Only when you have good drinking water are you more livelily and when you don't have good drinking water it is unpleasant and you always look for a source of good drinking water… When you're at Qaurnak in the summertime and the icebergs arrive you have an excellent source of drinking water… When we were camping out there we had excellent drinking water. Water is very important to our livelihood.* (Jochabed Katsak, Pond Inlet)

> *Our waters are frozen for longer periods of time. There is a lot of snow that we can also use for water. They are clean as they are frozen more than half the time. Outside of the community there are lakes that have clean water. Lakes up here freeze often and there is an abundance of it to be used for drinking. There is a lot of that in our environment. We can get our water anywhere. We can either use ice or snow.* (AB-13, Arctic Bay)

The lakes and rivers are an important source of food, fish are caught from their depths and mammals are hunted from the water. During the open water period, major rivers are generally preferred over smaller watercourses, and in particular, rivers with a gravel bottom, with an awareness that smaller streams or streams with finer substrate (and hence lower flow) are more likely to contain harmful bacteria. Inuit commonly observe the water to see if it is foggy or murky, since it is believed that clear water is the best water to consume.

> *After there's no longer some ice we didn't just fetch water from ordinary streams but major rivers seemed to have better drinking water source and also rivers have little germs… we were discouraged from drinking from small streams or lakes. Only we were told to drink water from major rivers such as if the river had gravel bottom. That's a very good drinking water and everyone has known that for a long time… if it's for making tea then you can easily identify if it's poor source of drinking water and the tea tends to turn black and you can tell that it is not good drinking water by sampling the tea you can notice it right away so tea is an excellent source of identifying the quality of drinking water because they tend to turn black and then you know.* (Jochabed Katsak, Pond Inlet)

Tea is said to be a good indicator of water quality. Also, nowadays people reportedly boil their water before consuming.

5.2 PROJECT AREAS

Table 1 summarizes the Inuit land uses including the identification of important waters within the Project's development areas on IOL, as established by the mapping developed from the MRIKS (Appendix C).

Table 1 Geographic Areas with Cultural or Land Use Importance

Project Areas	Travel Routes	Camps	Water (specific locations)	Harvesting Food (specific locations)	Special Places (includes carving stone deposits)
Milne Port	Yes	Yes	No	No	No
Northern Transportation Corridor	Yes	Yes	No	No	No
Mine Site	Yes	Yes	No	No	Yes

A summary of the land uses and likely presence of waters of importance to Inuit is provided below for each of the Project Areas. Although the first 30 km of the South Railway is located on IOL, this area has been incorporated into the discussion on the Mine Site.

5.3 MILNE PORT

Milne Port is an important entrance into the interior of northern Baffin Island, mainly for the people of Pond Inlet. It is also along the main travel route between Pond Inlet and Igloolik (Figure 1.4). It is an area historically and currently used for camping (Figure 1.8). Important waterbodies were not identified at the port site as part of the MRIKS (Figure 3.20). Important waters nearest to Milne Port include the Robertson River system to the northeast, which drains into Koluktoo Bay, and the Tugaat River system to the east. Both these rivers are important for harvesting anadromous Arctic Char.

An old outpost camp is located on the beach at Milne Port to the east of Baffinland's port facilities. The camp was originally constructed during mineral exploration activities in the early 1960s, and while the building is in poor condition and not habitable, it continues to serve as a refuge for land users, and the area continues to be where hunters will land their boats, sometimes offloading all-terrain vehicles (ATVs) to travel inland. It is reasonable to assume that land users use the stream adjacent to the HTO cabin, though this stream beyond the influence of the Project.

Prior to development of Milne Port, hunters would also land boats at the mouth of Phillips Creek, anchoring them inside the sand spit that crosses part of the mouth of the river. The lowest reach of the river behind the sand spit has been found to be brackish and not suitable for drinking, though further upstream at Baffinland's approved water withdrawal location, the water is fresh with no evidence of salt intrusion. Baffinland's Hunter and Visitor Site Access Procedure (Baffinland, 2015) directs hunters to land on the east end of the beach in the vicinity of the HTO cabin mentioned above, and as such, presumably land users no longer land boats at Phillips Creek and depart inland from this location.

5.4 NORTHERN TRANSPORTATION CORRIDOR

Phillips Creek and the Milne Inlet Tote Road (Tote Road) is part of the corridor into the interior of the island, as referenced above (Figure 1.4), and a number of camp sites have been identified (Figure 1.8). No important waters were identified within the corridor (Figure 3.20). The lakes within this corridor were noted to support land-locked Arctic Char.

Given the amount of travel and camps found along Phillips Creek, as well as archaeological sites that demonstrate its historic use as a travel corridor, it is reasonable to assume that Phillips Creek and the lakes within the river system (i.e., KM26 Lake, KM32 Lake and Katiktok Lake) have been and may continue to be used by Inuit as a water source. As noted in Section 5.1, Inuit strategies to obtain good drinking water includes seeking larger waterbodies with gravel substrate, and hence it is unlikely that land users (at least experienced land users) would seek to obtain drinking water from the many small tributaries of Phillips Creek that are crossed by the Tote Road.

5.5 MINE SITE

Deposit No. 1 (Nuluujaak) is used as a landmark for navigation while traveling on the land, being about 500 m above the surrounding ground to the south, and highly visible from afar. It is removed from the main Pond Inlet to Igloolik travel corridor. Nonetheless, Inuit have traditionally traveled through the Mine Site area to reach lands further east via the Ravn River valley (Figure 1.4), or to hunt caribou or collect carving stone (Figure 1.16).

> *Yes …Hunters would hunt for caribou there as there would be a lot of caribou in early spring. I would be able to see Mary River from there. We knew Mary River all along as we would be able to see it from there. We weren't aware of the fact that it has minerals but the mountains would become visible and we could tell that it was Mary River. We knew where Mary River is but weren't aware that it has minerals in it.* (Sakiasie Qaunaq, Arctic Bay)
>
> *We used to go [to Mary River] to go pick up soapstone. We would take the soapstone to Pond Inlet. The soapstone at Mary River is good quality stone.* (Ipeelie Koonoo, Arctic Bay)
>
> *The only place that I know is at Nulujaak (Mary River) near the camp they had set up, up at the hill, in a gully there is some variety carving stones that some people quarried and stones for making pots can be found at Tuapak, and marble, Nallua has some marble.* (Calab Ootoova, Pond Inlet)

No important waters were identified in the Mine Site area, or along the first 30 km of the South Railway (Figure 3.20). Although not identified in the IQ studies (Figure 1.8), there was a cabin at the Mine Site, originally constructed as part of mineral exploration in the early 1960s, which was used by hunters until construction of the mine in 2013. At the start of mine construction, Baffinland replaced this cabin with a new cabin, positioned on the west side of Camp Lake near its outlet at the request of the Mittimatalik Hunters and Trappers Organization. Based on the location of the new cabin, Camp Lake is the obvious water source for camp occupants, at least during the period of open water. The outlet stream of Camp Lake is not expected to be used for water, as it is shallow with sometimes limited flow. Water could be withdrawn from the Tom River, which is similar in size to the Mary River, though it is further removed from the cabin. Snow is likely the source of water during periods of ice cover, which is much of the year.

6.0 CONCLUSIONS

The MRIKS (Baffinland, 2014) is a useful resource for identifying waters that are important to Inuit, i.e., with a cultural attachment and peculiar and special value. Though waters on IOL that are important to Inuit were identified from the study, none of the identified locations are close to the Project.

It is reasonable to assume, however, that watercourses close to areas used by Inuit may be used as sources of drinking water. This includes:

- The stream next to the HTO cabin on the east side of the Milne Inlet beach
- Phillips Creek and the lakes within the Phillips Creek catchment
- Camp Lake
- Possibly the Tom River

These watercourses are not thought to qualify as having a cultural attachment and peculiar and special value, as described in Section 20.3.3 of the *Nunavut Agreement*.

7.0 REFERENCES

Baffinland Iron Mines Corporation (Baffinland), 2012. *Mary River Project - Final Environmental Impact Statement*. February.

Baffinland Iron Mines Corporation (Baffinland), 2013. *Mary River Project - Addendum to the Final Environmental Impact Statement for the Early Revenue Phase*. June.

Baffinland Iron Mines Corporation (Baffinland), 2014. *Mary River Inuit Knowledge Study, 2006-2010*. Compiled by Knight Piésold Ltd.

Baffinland Iron Mines Corporation (Baffinland), 2015. *Hunter and Visitor Site Access Procedure*. February 17. Doc. No. BAF-PH1-830-PRO-0002, Rev. 1.

Knight Piésold Ltd. (KP), 2015. Letter to: Oliver Curran, Baffinland Iron Mines Corporation, Re: *Mary River Project's Inuit Knowledge Study Database*. February 6. Ref. No. NB14-00411.

8.0 CLOSURE

Please contact the undersigned if you have questions or comments about the content of this letter.

Yours truly,
Knight Piésold Ltd.

Prepared:

Richard Cook, P.Geo. (Ltd.)
Specialist Environmental Scientist | Associate

Reviewed:

Oscar Gustafson, R.P. Bio.
Specialist Environmental Scientist | Associate

Approval that this document adheres to the Knight Piésold Quality System:

Attachments:

Appendix A	MRIKS Study Methodology
Appendix B	Select Interview Questions
Appendix C	Select MRIKS Figures

/rc

APPENDIX A

MRIKS Study Methodology

(Pages A-1 to A-4)

APPENDIX A
MRIKS STUDY METHODOLOGY

1.0 INFORMATION SOURCES

Community based research programs were undertaken by Baffinland to obtain community input, socio-economic information, and Inuit knowledge. The Mary River Inuit Knowledge Study (MRIKS) was undertaken by Baffinland from 2006 through 2010. Inuit have a unique knowledge about their local environment, how it functions, and its characteristic ecological relationships. Inuit Qaujimajatuqangit (IQ) is recognized as an important part of project planning, resource management, and environmental assessment. In 2006, the study started in Pond Inlet. Workshops and interviews with elders were undertaken in the communities of Arctic Bay, Clyde River, Hall Beach, Igloolik, and Pond Inlet between 2007 and 2010. Workshops were held in the South Baffin communities of Cape Dorset and Kimmirut during 2010. The objectives of the IQ study were to obtain local knowledge of wildlife, land use, and areas of cultural value to support Project decision-making and the environmental assessment process. The results of IQ studies conducted from 2006 through 2010 were incorporated to the Final Environmental Impact Statement (FEIS) report (Baffinland, 2012) and FEIS Addendum report (Baffinland, 2013) for the Early Revenue Phase (ERP).

Research agreements were negotiated between each of the five North Baffin community working groups and Baffinland as follows:

- Pisiksik Working Group (Pond Inlet) - 2006
- Qaatiliit Working Group (Igloolik) - 2007
- Inuksuligarjuk Working Group (Arctic Bay) - 2007
- Tikkuu Working Group (Hall Beach) - 2008
- Ukkakkut Working Group (Clyde River) - 2008

These agreements outline the following:

- Roles and responsibilities of the parties
- Purpose and methods of the IQ study
- Clarification on matters of privacy, informed consent and ownership of data

IQ workshops were initiated to provide another source of community-based data, to help verify results from other data sources (e.g. IQ interviews, working group meetings), and to engage a broader community audience. Workshops on caribou, marine mammals and Inuit land use were conducted in the North Baffin and South Baffin communities to identify areas of importance and use to Inuit and to identify potential project interactions with these things. In the North Baffin, these workshops were structured to have both ‘public’ and ‘invited persons’ components. Workshop minutes were recorded for all meetings. In some cases, additional public outreach was made, in the form of radio call-in shows and staffed tables set up in public places (e.g., Co-op stores).

Baffinland has continued to consult with Inuit communities for the existing operations and Phase 2 Proposal. These discussions have not provided new information specific to the designation of new and/or culturally important freshwater waterbodies.

2.0 INTERVIEW QUESTIONS AND WORKSHOPS

2.1 METHODOLOGY

IQ interviews with elders were held in Arctic Bay, Igloolik and Pond Inlet over the period of late 2006 into 2008. Working groups identified the key knowledge holders in the community.

Interviews were carried out using a set list of interview questions. The Pisiksik Working Group developed an initial list of 168 interview questions based on an example provided by Knight Piésold from another Project. Questions focused on Inuit use and understanding of the land, caribou, marine mammals, fish, birds, and other land mammals. For Arctic Bay and Igloolik a shorter questionnaire was developed, containing only 83 questions. Questionnaires in Arctic Bay and Igloolik were shortened after it was recognized the Pond Inlet questionnaire was cumbersome and the length of interviews and subsequent transcribing was difficult for the interviewer and elder consultant to complete.

Interviews were recorded on either recordable mini-disc or by digital recorder and relevant information mapped at a 1:1,000,000 scale. The audio recordings of the interviews were transcribed into Inuktitut and then translated into English.

Data verification sessions were held in each of the three communities after all the interviews had been completed. During these visits, the interviewees were invited to review draft GIS IQ maps. Interviewees commented on the accuracy of the data that had been produced. Data features were deleted, added or modified on the maps to reflect interviewee wishes.

The types of data collection during interviews and workshops included marine mammals, caribou, land use, fish, birds, and other land mammals.

Land use data were collected during workshops in Arctic Bay, Clyde River, Hall Beach, Igloolik, Pond Inlet, Kimmirut and Cape Dorset, although only a selection of questions were asked in the South Baffin communities. Land use data were also collected through individual interviews with elders in Arctic Bay, Igloolik and Pond Inlet. Questions asked during the interviews and workshops pertained specifically to:

- Travel routes
- Camps
- Archaeological sites
- Traditional plant use
- Resource collection areas (including carving stone and berry picking areas)
- Ice and water conditions
- Special places on the land

Lines of questioning focussed on:

- Inuit land use (e.g. locations, uses of locations, stories and/or legends)
- Interaction of Project components with land use activities (e.g. location of Project components in regards to land use activities)

Fish data were collected during individual interviews with elders in Arctic Bay, Igloolik and Pond Inlet. Additionally, some fish data were collected during workshops in Kimmirut and Cape Dorset. Questions asked during the interviews pertained specifically to fish interviewees were familiar with. Lines of questioning focussed on:

- Life cycle activities (e.g. migrations, areas of concentration, spawning areas) of fish
- Inuit use of fish (e.g. harvesting locations, harvesting methods)
- Interaction of Project components with fish (e.g. ship traffic)

These questions were asked in an effort to better understand potential impact pathways and opportunities for mitigation.

2.2 MAPS

A number of maps were produced during both the IQ interviews and workshops. Sheets of transparent Mylar were placed over large (1.1m x 1.6m) topographic regional maps, so geographic and other features of interest could be marked directly onto the sheets. The sheets of Mylar were then hand digitized by Knight Piésold staff (i.e., the mapped information was copied into a computer database using a digitizing table) using the AutoCAD software program. Once digitizing was complete, files were transferred over to the Geographic Information System (GIS) software package ArcView for more detailed data analysis and presentation.

A separate series of maps were produced for the workshops and interviews. For example, maps from each of the communities' workshops were digitally combined and then presented according to theme (e.g. Inuit travel routes, ringed seal locations, berry-picking locations). Similarly, maps from each of the individual interviews were digitally combined and also presented according to theme. Presenting data in this fashion allowed for data from all the communities to be displayed at once and facilitated comparison between the two data sources (i.e. workshops and interviews).

These maps have been released in a separate mapbook (KP, 2015). The relevant maps from the mapbook related to freshwater waterbodies are included as Attachment A.

2.3 IQ DATABASE

All interview transcripts, workshop notes and working group meeting minutes were incorporated into a central database and coded to sort by topic. Coding was completed using the NVivo 7 software package, a commonly used application for analyzing qualitative research data. The IQ database contains over 500 topic 'directories', often organized according to major themes. As an example, 'caribou' is one major theme, while 'calving locations', 'migrations' and 'reaction to disturbance' are a few examples of caribou sub-themes. Other major themes include: 'marine mammals', 'birds', 'fish', 'Inuit and the land', 'shipping' and 'terrestrial mammals'. There also exists a directory for all other topics not covered under a major theme. All topic reports were made available on a password-protected FTP site for the various scientists and specialists involved in the Project to use. IQ data from these topic reports is then available to be incorporated into the impact assessment, and for other long-term Project needs.

Keywords were used to code the interview transcripts, workshop notes and working group meeting minutes, as well as the number of references associated with each keyword. The keywords and sub-keywords related to the unique value and/or cultural significance of freshwater waterbodies include:

- Inuit and the Land - camps and living areas, places names, water, water quality, song and stories, and importance of lakes and rivers
- Fish - Arctic char, land-locked (nutilliarjuit), locations and harvesting locations, non-migrating fish, and fish living only in rivers, and stories

The IQ database was compiled and issued to the participating communities and the QIA in 2014. The information can be used by the public, in accordance with the research agreements Baffinland negotiated with the working groups that led the study in each community.

APPENDIX B

Select Interview Questions

(Pages B-1 to B-2)

APPENDIX B
SELECT INTERVIEW QUESTIONS

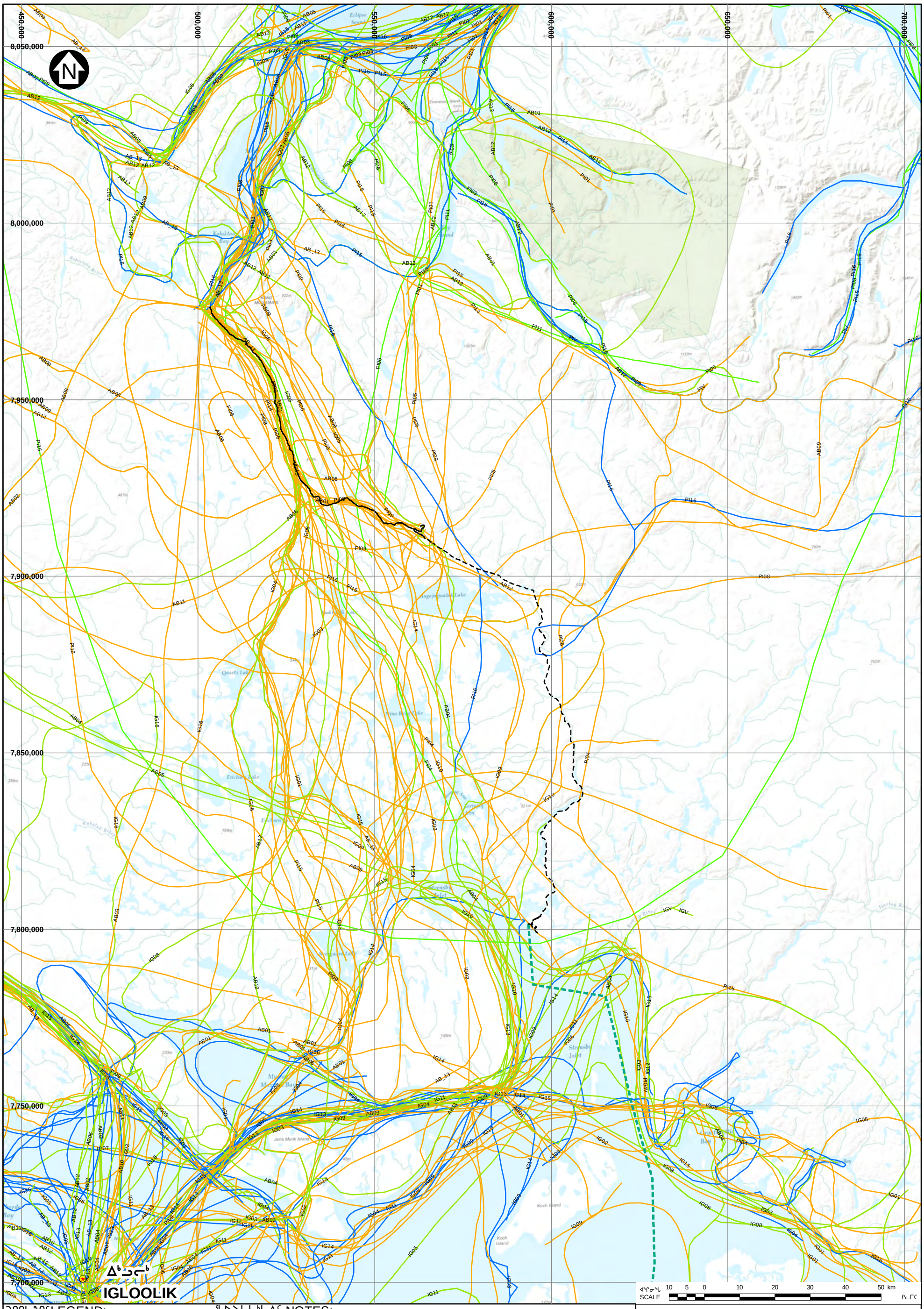
1. Can you show me [on the map] the major camps you used for the areas you will talk about today? Seasons: spring, summer, fall, and winter. Why are these places important?
2. Can you show me [on the map] special areas on the land? These might include sacred places, mythical events, giant sites and supernatural areas that might cause disorientation or where people would receive visits. Other important places would include archaeological sites and burials places.
3. We are interested in place names. Can you give us the names for the major land and water features [on the map] for the areas you know?
4. Where did you go to collect other significant resources such as water, wood, carving stone, stone for fire starters, etc. Did this differ by season - spring, summer, fall, and winter? [Use map]
5. Can you show me [on the map] the areas you traveled with your family when you were young?
6. Can you show me [on the map] the areas you traveled during your adult life up to now? It would be use full to us if you could talk about the seasons you used the land (spring, summer, fall, and winter).
7. Can you show me [on the (map) the major] Inuit travel routes in Mary River area around it? Did these vary by seasons - spring, summer, fall and winter?
8. Could you show me [on the map] which lakes and rivers are most important in your area? Why are they important?
9. What does good water mean to you?
10. Do the places you set nets change by season? [Use map]
11. Where are the best places to jig for fish? [Use map]
12. Are there Arctic char in the _____ River (Individuals may want to discuss several rivers in their traditional lands). Are the fish land locked, or sea run? Do the sea run fish move every year? How far up river do the fish run? Do the fish hold over the winter in the river? [Use map]
13. How did people in the past catch fish in rivers? Do people fish in rivers today?
14. Are the mouths of rivers important fishing areas? Please show me on the map which rivers are important for fishing.
15. Are there areas that were important for fishing in the past but are no longer used?
16. Which lakes do people regularly fish in your area? [Use map] What time of year do people fish on the lakes?
17. Which lakes have Arctic char in your area? [Use map]. Are they sea run or land locked fish? If they migrate when do they return to the lake? When do they return to the sea?

18. Please tell me about fish in lakes and rivers.
19. In which lakes are landlocked char found?
20. In which lakes is migrating char found? When do these fish migrate to the sea? When do they return to lakes?

APPENDIX C

Select MRIKS Figures

Figure No.	Revision	Description
Figure 1.4	0	Travel Routes - Project Study Area (Interview Results)
Figure 1.8	0	Camping Locations - Project Study Area (Workshop Results)
Figure 3.20	0	Water and Ice Features - Project Study Area (Interview Results)
Figure 1.6	0	Berry Picking Locations - Project Study Area (Workshop Results)
Figure 5.2	0	Fish Locations - Project Study Area (Interview Results)
Figure 1.12	0	Special Places - Project Study Area (Interview Results)
Figure 1.16	0	Stone Quarry Locations - Project Study Area (Workshop Results)



LEGEND:

ᐃᓄᒃᓂᓪ ᐃᓕᓴᐅᑉᐳᓪᓕ
TRAVEL ROUTE
ᐅᐊᖁᑎᐊᕐ ᑐᓴᓇᕐᓂᓪ ᐊᖏᔪᑎᒃᓵᐊᒡᐸᕐᓵᒃᓵ
TRAVEL ROUTE USED IN THE PAST
ᓱᓕᒥ ᐃᓕᓴᐅᑉᐳᓱᓕᖅ
SEA ICE MAIN TRAVEL ROUTE
ᑭᖑᓪᓗᓂ ᐊᖏᔪᑎ ᐅᓱᑲᑦᑐᐃᑦ
MILNE INLET TOTE ROAD
ᓄᓇᓕᐅᑎᓄᑦ ᐋᔪᑎᒋᓴᐊᖁᓪᓗᒃ
PROPOSED RAILWAY ALIGNMENT
ᐃᓚᒃᓂᓄᑦ ᐅᒥᐊᖁᐊᓂᓪᓂᑦ ᐊᖏᑕᐅᖄᑦᓴᐊᔪᖅ
NOMINAL SHIPPING ROUTE

NOTES:

1. ᓄᓇᖑᐊᒃᓵᐊᑕᐃᑦ ᐊᐃᒃ ᐲᓇᑕᒧᑦ
IMAGERY: © ESRI DATA & MAPS [ONLINE] (2014). REDLANDS, CA: ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE. ALL RIGHTS RESERVED.
2. ᓄᓇᖑᐊᑦ ᑎᑎᕐᒪᓂᖓ ᒪᓕᓚᔪᖅ UTM (NAD83) ZONE 17 AND IS IN METRES.
COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. ᐅᓇ ᓄᓇᒃᖑᐊᖅ ᓴᖅᑭᑕᐅᓕᒪᔪᖅ ᑐᖅᓱᓐᓂᕐᑎᑦ ᐅᖃᐅᓕᕐᓂᒃ ᐊᖅᖁᖅᑐᓂᒃᑐᑦ ᐃᓄᓐᓂᑦ ᐅᐃᖅᑲᐅᒃᖁᓕᖅ ᐊᐃᓕᖅᑐᑦ ᓄᓇᓕᓐᓂᑦ ᐊᖏᔪᑎᒃᓵᐊᒡᐸᕐᓵᒃᓵ ᐊᐃᓕᖅᑐᑦ ᐅᓂᒃᑳᖅᑐᑦ ᐃᓄᓐᓂᑦ ᓄᓇᖑᐊᒃᓵᐊᑕᐃᑦ ᐃᓄᓐᓂᑦ ᐅᐃᖅᑲᐅᒃᖁᓕᖅ ᐊᐃᓕᖅᑐᑦ ᐊᖏᔪᑎᒃᓵᐊᒡᐸᕐᓵᒃᓵ ᐊᐃᓕᖅᑐ

Family camping

Family camping

Old and current camping routes

Clyde River, Pond Inlet, Arctic Bay and Igloolik people would all meet here and camp in this area while on inland caribou hunt - Aug-Sept

Old camping sites throughout

Clyde River, Igloolik, Pond Inlet and Arctic Bay people meet here and camp in this area.

NOTE: Almost anywhere there is a camp site, there is a cache site. Caches can be found anywhere on the land and on the coast. After a hunt, hunters would travel to the closest location they could to cache food.

People travel all this area for caribou hunting - camps throughout & places where people would sleep & pile rocks around them to protect them

People traditionally camped all along this area

DIO outpost camp

Re-supply route (Camp to community)

Hunting and camping travel route

Hunting and camping travel route - Dec-May

Hunting & re-supply the camps

Hunting and camping travel route

IGLOOLIK

SCALE 10 5 0 10 20 30 40 50 km

LEGEND:

PLACES THAT YOU HAVE CAMPED IN YOUR LIFETIME

PLACES THAT YOU KNOW YOUR FAMILY AND FRIENDS HAVE CAMPED IN THE PAST

CAMPS THAT WERE OCCUPIED SO LONG AGO THAT YOU DON'T KNOW WHO CAMPED THERE

MILNE INLET TOTE ROAD

PROPOSED RAILWAY ALIGNMENT

NOTES:

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BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

CAMPING LOCATIONS - PROJECT STUDY AREA (WORKSHOP RESULTS)

Knight Piésold CONSULTING

P/A NO.	REF NO.	REV
NB102-181/25	NB14-00411	0

FIGURE 1.8

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500000
550000
600000
650000
8000000
7950000
7900000
7850000
7800000
7750000
MARY RIVER MINE SITE
IG08
Tremblay Sound
Milne Inlet
Eskimo Inlet
Koluktoo Bay
KRAG MOUNTAINS
Emmerson Island
Tay Sound
Angajurjualuk Lake
Inuktorfik Lake
Quartz Lake
Nina Bang Lake
Erichsen Lake
Tariuliaq Arm
Steensby Inlet
Neergaard Lake
Murray Maxwell Bay
Jens Munk Island
Steensby Inlet
Koch Island
Grant-Suttie Bay
Eqe Bay
N
SCALE 10 5 0 10 20 30 40 50 Km

LEGEND:
FLOE EDGE LOCATION
SEA-ICE LEADS LOCATION
SEA-ICE OPEN YEAR ROUND
LAKES AND RIVERS OF IMPORTANCE
BAD FLOOD OR EXTREMELY HIGH TIDE LOCATION
SEASONAL WATER QUALITY CHANGE LOCATION
GENERAL WATER QUALITY CHANGE LOCATION
MILNE INLET TOTE ROAD
PROPOSED RAILWAY ALIGNMENT
NOMINAL SHIPPING ROUTE

NOTES:
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3. THIS MAP WAS PRODUCED FROM INFORMATION COLLECTED DURING INUIT QAUJIMAJATUQANGIT INTERVIEWS WITH LOCAL RESIDENTS. THIS INFORMATION SHOWS PATTERNS OF LAND USE AND LOCAL KNOWLEDGE OF THE LAND. THE MAP IS NOT INTENDED TO BE A COMPLETE REPRESENTATION OF WHAT IS KNOWN.

BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT
WATER AND ICE FEATURES - PROJECT STUDY AREA (INTERVIEW RESULTS)
Knight Piésold CONSULTING
P/A NO. NB102-181/35 | REF. NB14-00411 | REV. 0
FIGURE 3.20

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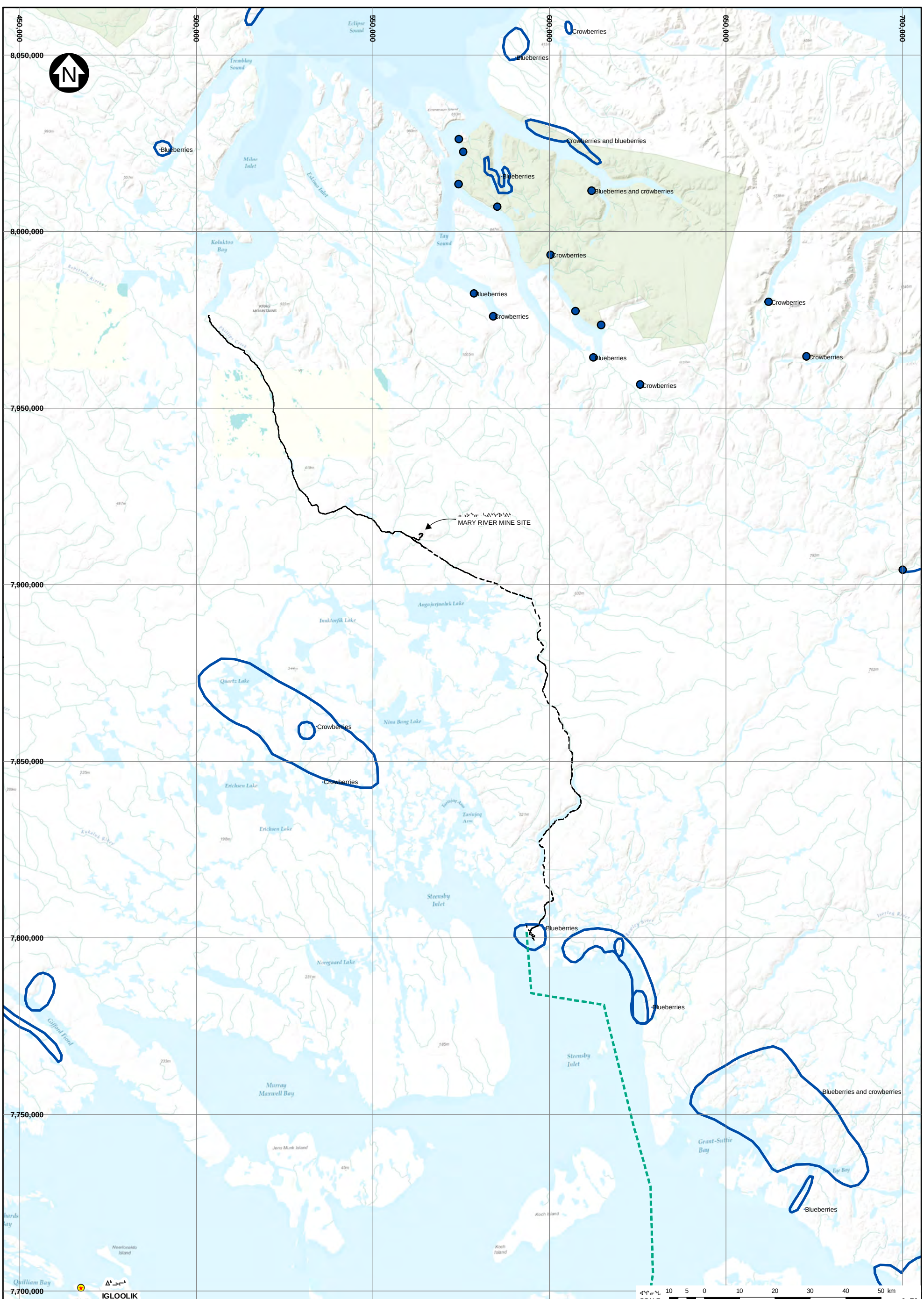

LEGEND:

- BERRY PICKING PLACES
- MILNE INLET TOTE ROAD
- PROPOSED RAILWAY ALIGNMENT
- NOMINAL SHIPPING ROUTE

NOTES:

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BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

BERRY PICKING LOCATIONS - PROJECT STUDY AREA (WORKSHOP RESULTS)

Knight Piésold CONSULTING

P/A NO.	REF NO.	REV
NB102-181/35	NB14-00411	0

FIGURE 1.6

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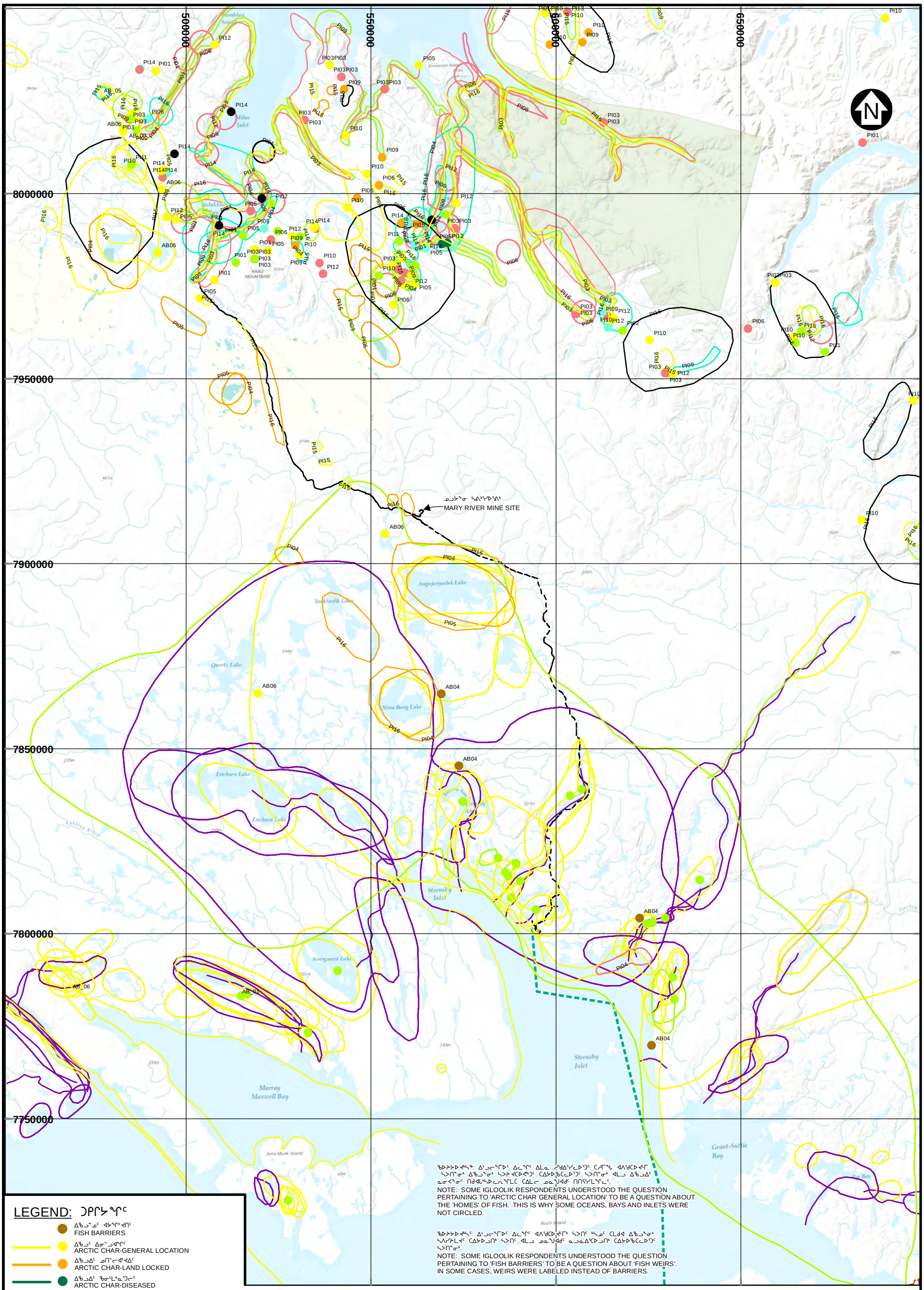
550000
600000
650000
8000000
7950000
7900000
7850000
7800000
7750000
MARY RIVER MINE SITE
Milne Inlet
Angajurjualuk Lake
Inuktorfik Lake
Quartz Lake
Nina Bang Lake
Erichsen Lake
Steensby Inlet
Neergaard Lake
Murray Maxwell Bay
Jens Munk Island
Grant-Suttie Bay
Koch Island
Kakaluq River
KRAG MOUNTAINS
N
NOTE: SOME IGLOOLIK RESPONDENTS UNDERSTOOD THE QUESTION PERTAINING TO 'ARCTIC CHAR GENERAL LOCATION' TO BE A QUESTION ABOUT THE 'HOMES' OF FISH. THIS IS WHY SOME OCEANS, BAYS AND INLETS WERE NOT CIRCLED.
NOTE: SOME IGLOOLIK RESPONDENTS UNDERSTOOD THE QUESTION PERTAINING TO 'FISH BARRIERS' TO BE A QUESTION ABOUT 'FISH WEIRS'. IN SOME CASES, WEIRS WERE LABELED INSTEAD OF BARRIERS.
LEGEND:
FISH BARRIERS
ARCTIC CHAR-GENERAL LOCATION
ARCTIC CHAR-LAND LOCKED
ARCTIC CHAR-DISEASED
ARCTIC CHAR-POPULATION FLUCTUATING
RIVER OF IMPORTANCE
FISHING LOCATION YEAR-ROUND
JIG AND NET FISHING LOCATION
OCEAN FISHING LOCATION
MILNE INLET TOTE ROAD
PROPOSED RAILWAY ALIGNMENT
NOMINAL SHIPPING ROUTE
NOTES:
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SCALE 10 5 0 10 20 30 40 50 Km
BAFFINLAND IRON MINES CORPORATION
MARY RIVER PROJECT
FISH LOCATIONS - PROJECT STUDY AREA (INTERVIEW RESULTS)
Knight Piésold CONSULTING
P/A NO. NB102-181/35
REF. NB14-00411
REV. 0
FIGURE 5.2
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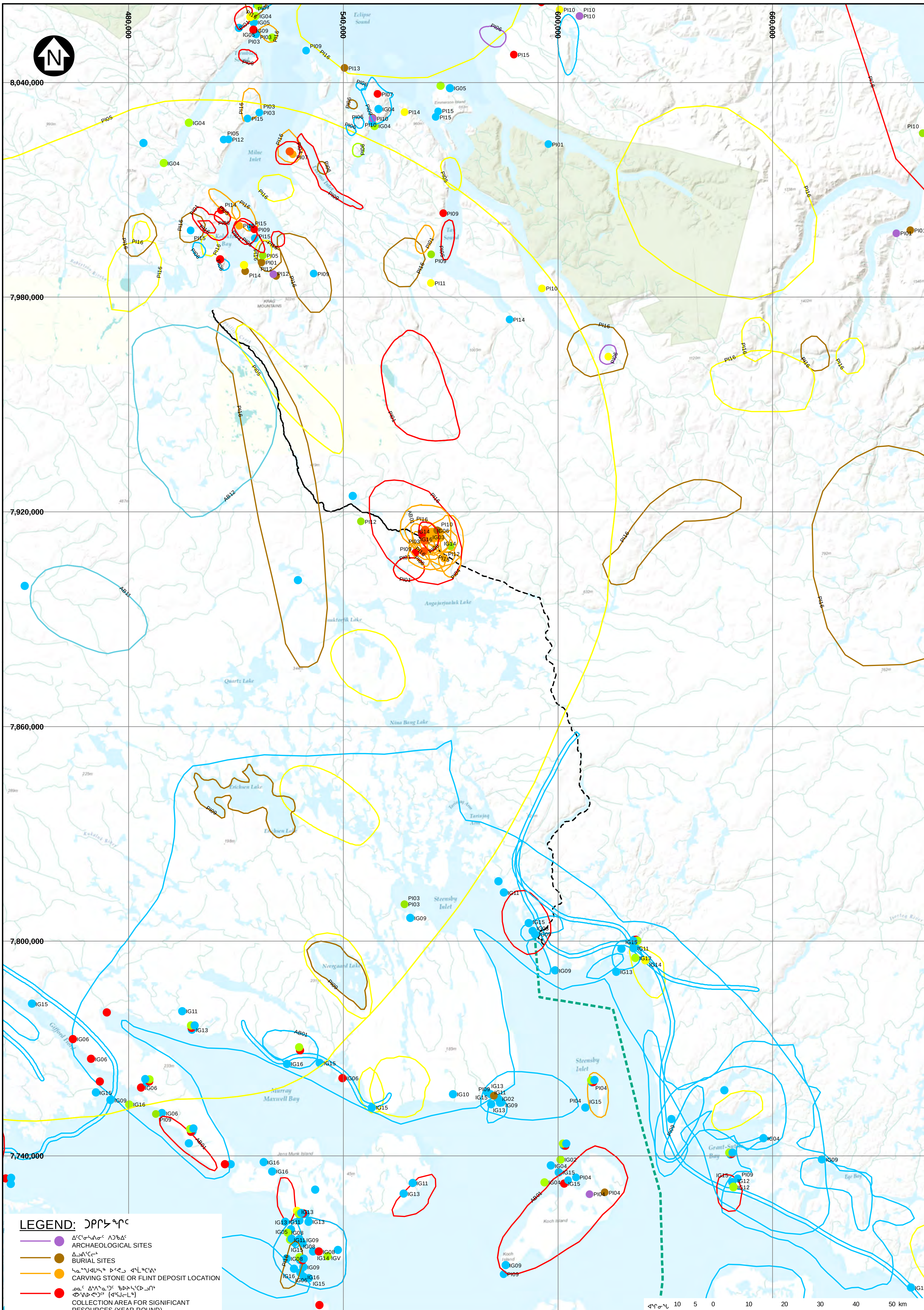

LEGEND: ᑐᑭᓯᔭᖏᑦ

ᐃᑦᑕᕐᓂᓴᕕᓂᑦ ᐱᑐᖃᐃᑦ
ARCHAEOLOGICAL SITES

ᐃᓗᕕᑦᑕᓕᒃ
BURIAL SITES

ᓴᓇᐅᒐᒃᓴᖅ ᐅᕿᒧ ᐊᓪᓚᕐᑕᕕᒃ
CARVING STONE OR FLINT DEPOSIT LOCATION

ᓄᓇᑦ ᐃᑭᐊᕐᓇᕐᑐᑦ ᖃᐅᔨᓴᕐᑕᐅᓗᑎᒃ
ᐊᐅᕐᕕᐅᕙᕐᑐᑦ (ᐊᕐᕌᒍᓕᒫᖅ)
COLLECTION AREA FOR SIGNIFICANT RESOURCES (YEAR-ROUND)

ᐊᐱᖅᓱᖅᑕᐅᔪᑦ ᐃᓅᕕᖓ
CONSULTANT'S BIRTH LOCATION

ᐊᐱᖅᓱᖅᑕᐅᔪᑦ ᑕᒪᕐᕕᐅᓂᖓ ᐊᒻᒪ ᐊᑐᖅᑕᐅᕙᑦᑐᕕ
ᓄᑦ ᑕᒪᕐᕕᑦ ᐊᕐᕌᒍᓕᒫᑦ ᐊᑐᖅᑕᐅᔪᓂᒃ
CONSULTANT'S CAMP LOCATION AND MAJOR YEAR-ROUND CAMPS

ᐊᓐᓂᕐᓴᐅᑎᓪᓗᑎᒃ ᓄᓇᐃᑦ ᑕᑯᓐᓇᒧ
SPECIAL AREAS

ᖃᖓᒃᑕᓂ ᐊᖁᑎ ᐅᓯᒃᑕᕕᒃ
MILNE INLET TOTE ROAD

ᓄᓇᓯᐅᑎᑯᑦ ᐊᖁᑎᓂᐊᕐᑕᖓ
PROPOSED RAILWAY ALIGNMENT

ᐃᓚᓐᓂᒍᑦ ᐅᒥᐊᕐᔪᐊᓂᑦ ᐊᖁᑕᐅᕙᑦᑐᓂᐊᕐᑐᖅ
NOMINAL SHIPPING ROUTE

ᖃᐅᔨᒪᔭᒃᓴᐃᑦ NOTES:

1. ᓄᓇᖑᐊᓕᐅᕐᑕᐃᑦ: ᑯᐃᓐ ᑲᓇᑕᒧᑦ
   BASE MAP: © HER MAJESTY THE QUEEN IN RIGHTS OF CANADA, DEPARTMENT OF NATURAL RESOURCES (2004). ALL RIGHTS RESERVED.
2. ᓄᓇᖑᐊᑉ ᑎᑎᕋᓂᖓ ᒪᓕᒃᖢᒍ UTM (NAD83) ZONE 17 AND IS IN METRES.
   COORDINATE GRID IS SHOWN IN UTM (NAD83) ZONE 17 AND IS IN METRES.
3. THIS MAP WAS PRODUCED FROM INFORMATION COLLECTED DURING INUIT QAUJIMAJATUQANGIT INTERVIEWS WITH LOCAL RESIDENTS. THIS INFORMATION SHOWS PATTERNS OF LAND USE AND LOCAL KNOWLEDGE OF THE LAND. THE MAP IS NOT INTENDED TO BE A COMPLETE REPRESENTATION OF WHAT IS KNOWN.

ᐊᖏᓂᖓ SCALE 10 5 0 10 20 30 40 50 km ᑭᓛᒥᑕ

BAFFINLAND IRON MINES CORPORATION

ᓄᓗᔾᔪᓂ ᐅᔭᕆᐅᕐᐅᑎᑦ MARY RIVER PROJECT

ᓄᓇᐃᑦ ᐱᓐᓇᓴᐅᔪᑦ - ᐱᓕᕆᕝᕕᐅᔪᑦ ᐃᓗᐊᓂ (ᐊᐱᖅᓱᕐᓂᒃᑯᑦ ᖃᐅᔨᓴᐅᔪᑦ)

SPECIAL PLACES - PROJECT STUDY AREA (INTERVIEW RESULTS)

Knight Piésold CONSULTING

P/A NO.	REF NO.	REV
NB102-181/35	NB14-00411	0

ᑎᑎᖅᑲᖅ FIGURE 1.12

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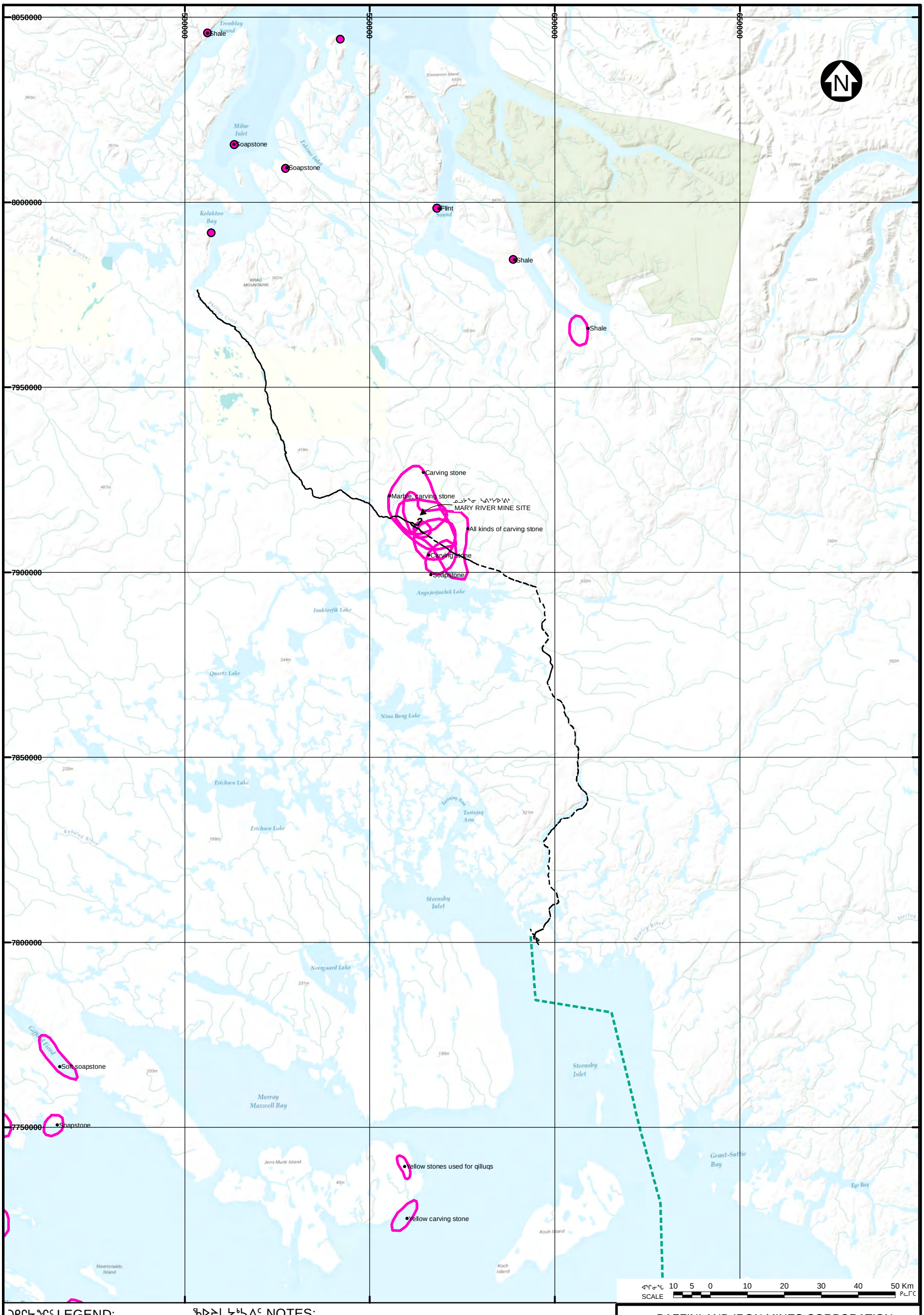

LEGEND:

- STONES USED BY PEOPLE
- MILNE INLET TOTE ROAD
- PROPOSED RAILWAY ALIGNMENT
- NOMINAL SHIPPING ROUTE

NOTES:

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BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

STONE QUARRY LOCATIONS - PROJECT STUDY AREA (WORKSHOP RESULTS)

Knight Piésold CONSULTING

P/A NO.	REF.	REV
NB102-181/35	NB14-00411	0

FIGURE 1.16

SAVED: I:\1\102\00181\135A\GIS\Figs\Figures_IQIB13_r0.mxd: Sep 05, 2014 10:42 AM; asimpson