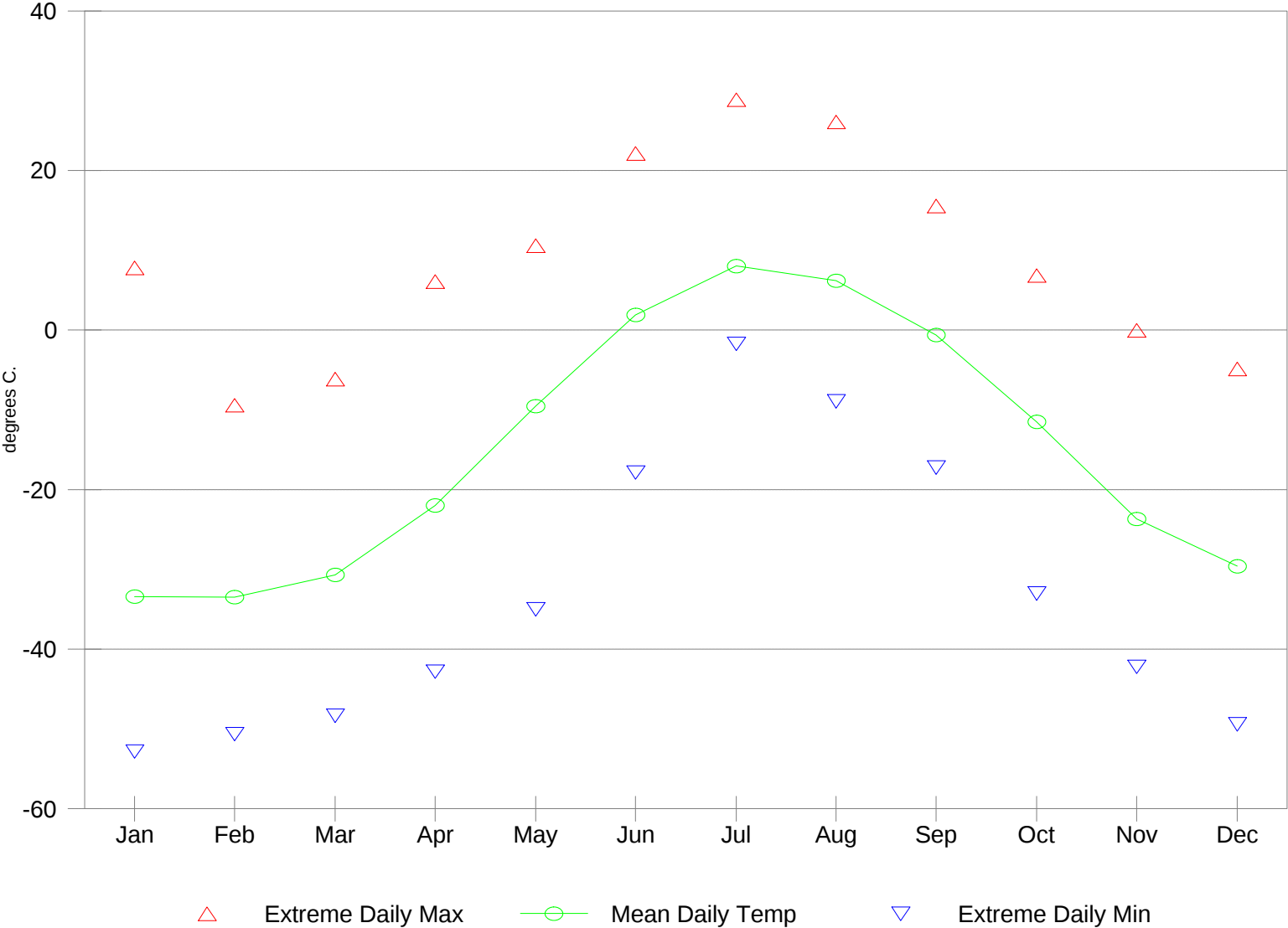


Figure 13. Lupin Annual Temperature Profile: 1983 - 2001



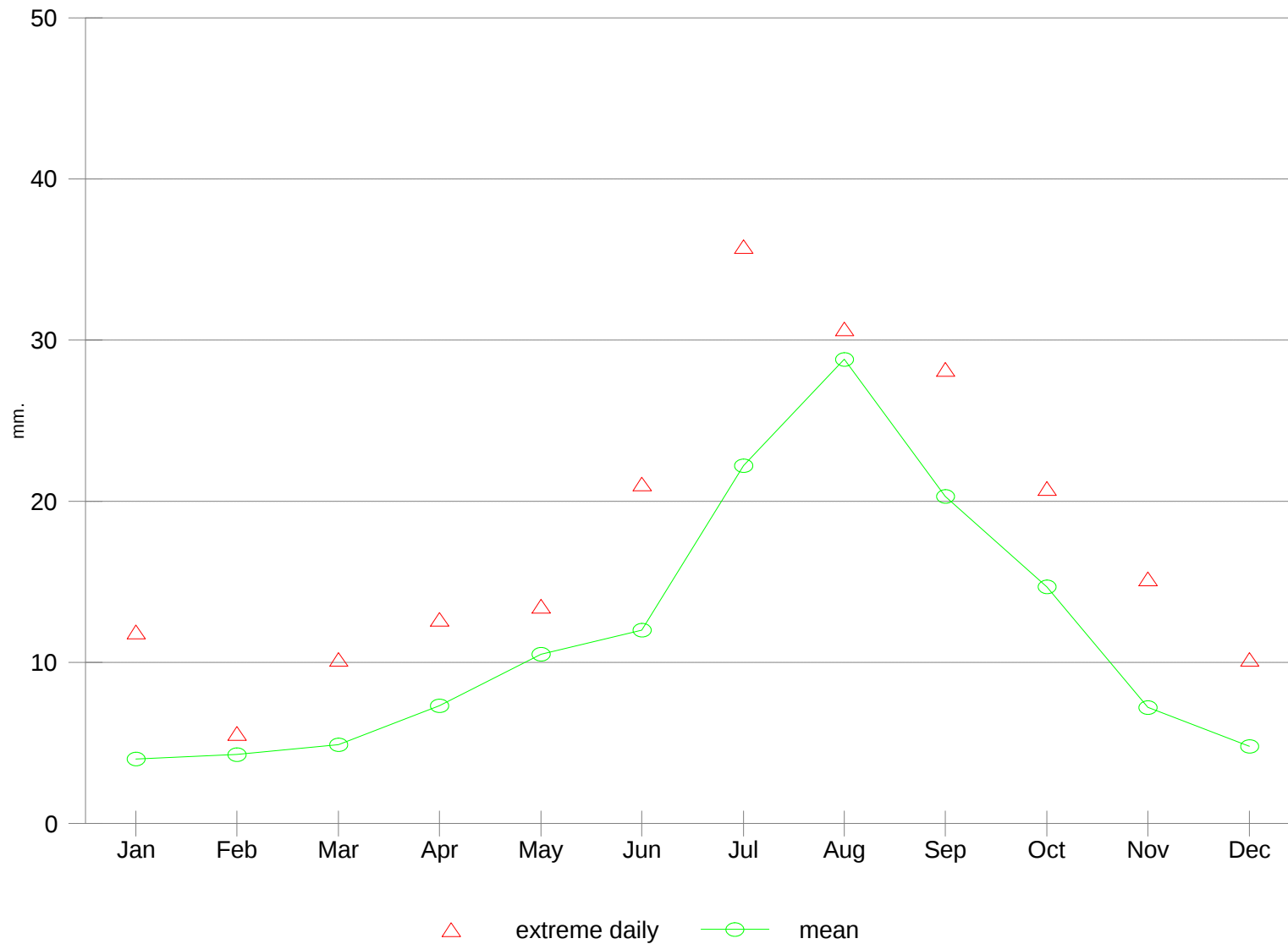
Source: SNC-Lavalin, 2001

Figure 14. Cambridge Bay Annual Temperature Profile: 1927 - 1993



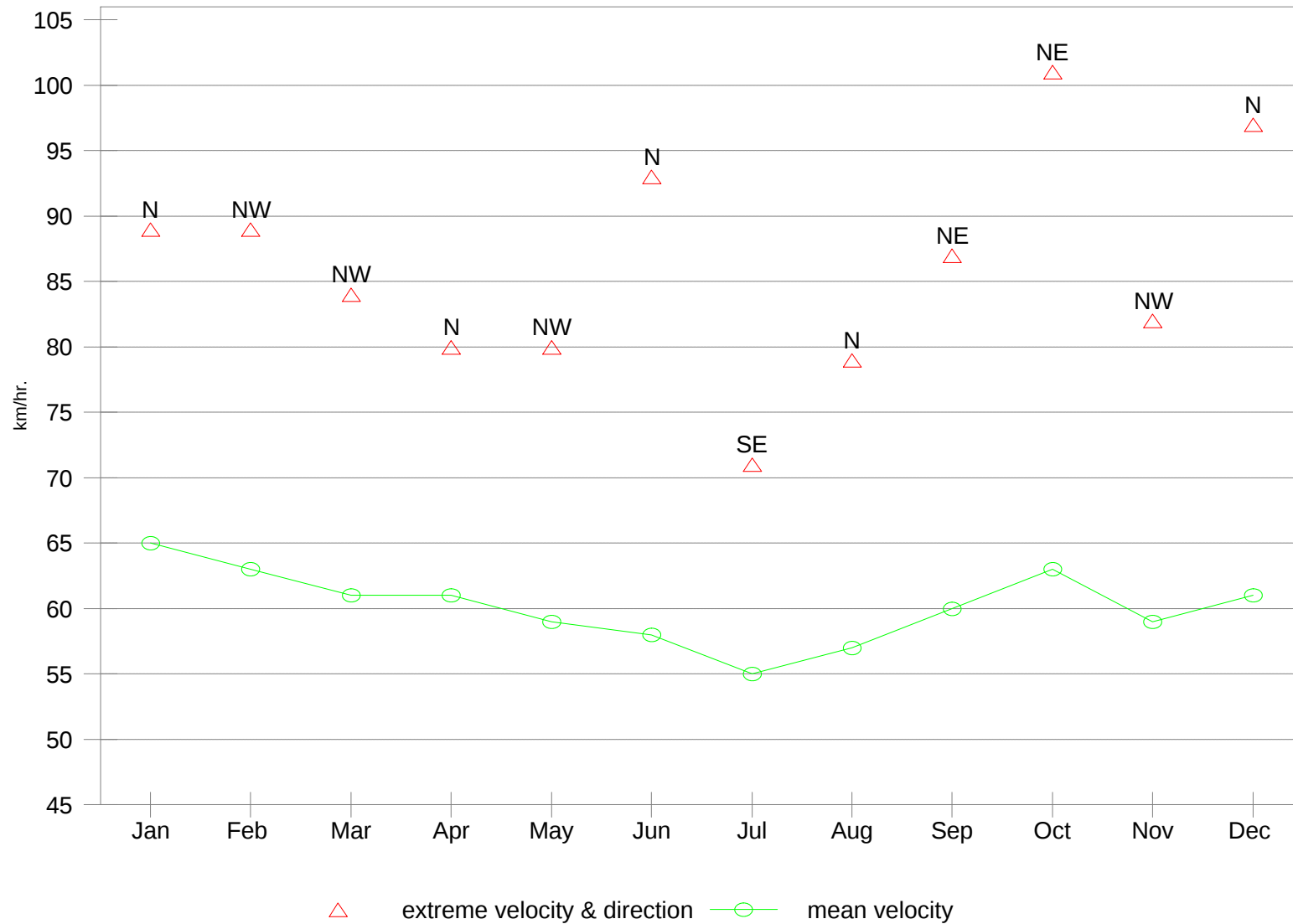
Source: Environment Canada 1994. Canadian Climate Data

Figure 15. Cambridge Bay Annual Precipitation Profile: 1927 - 1993



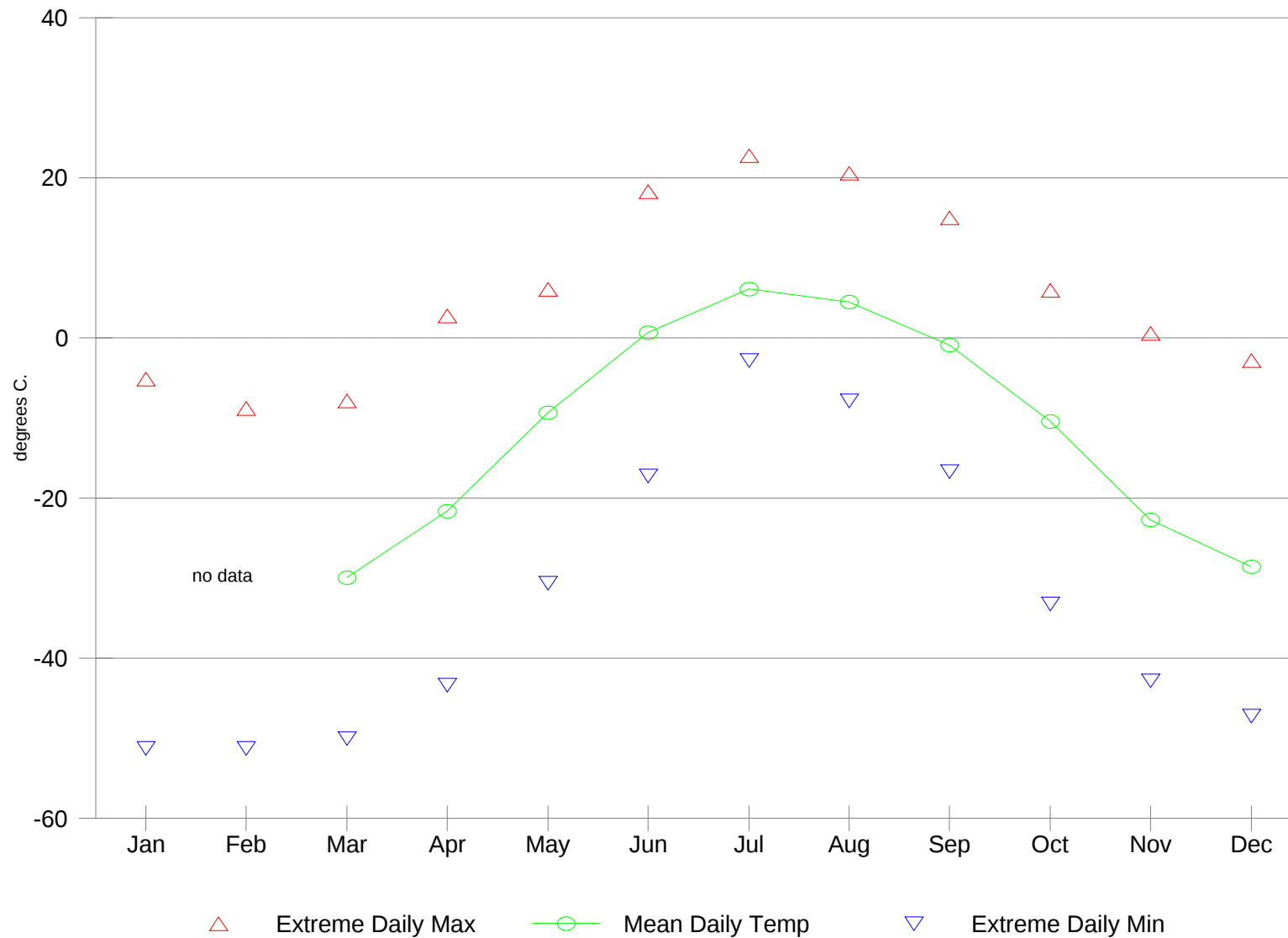
Source: Environment Canada 1994. Canadian Climate Data

Figure 16. Cambridge Bay Annual Wind Profile: 1927 - 1993



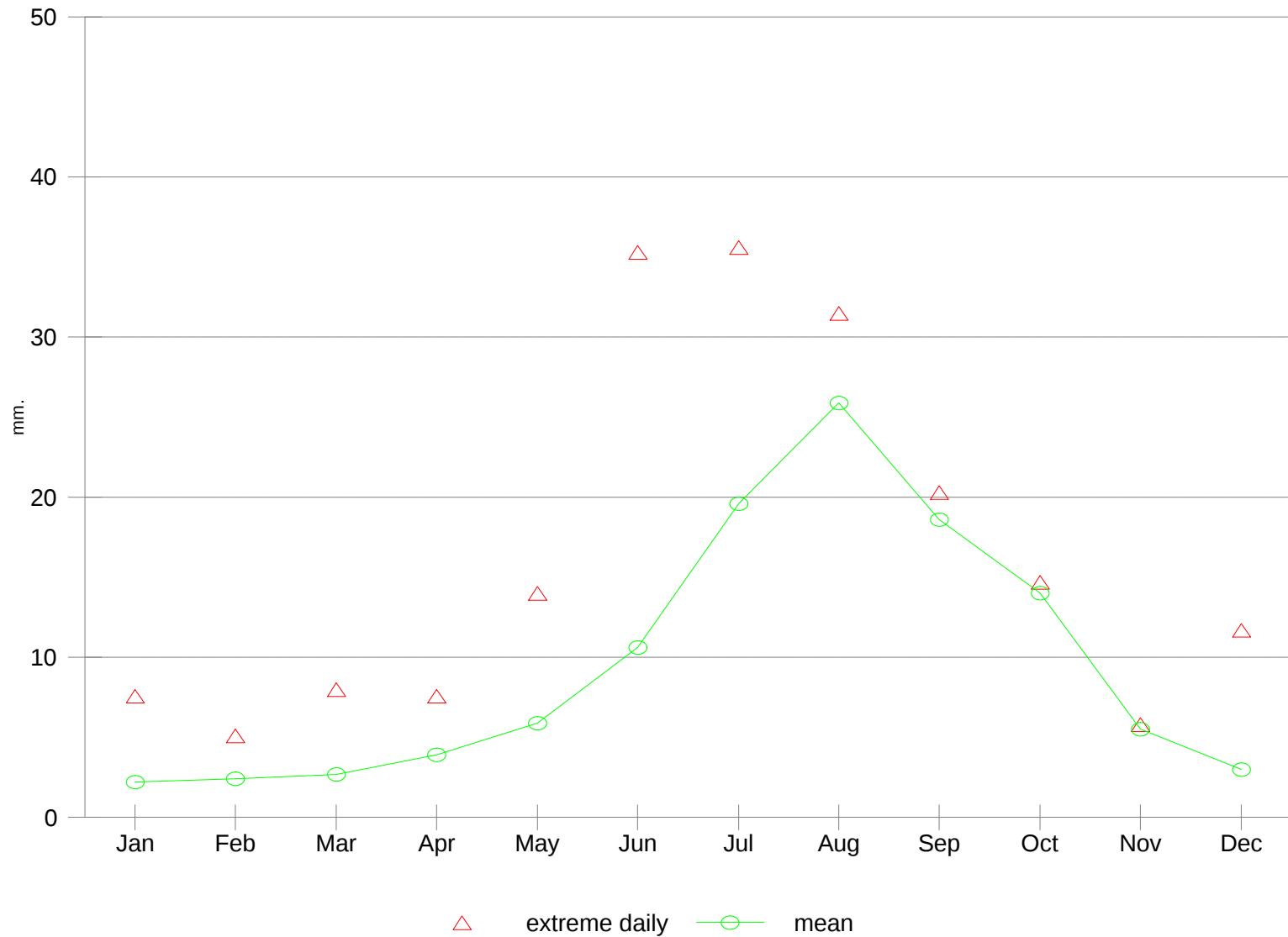
Source: Environment Canada 1994. Canadian Climate Data

Figure 17. Jenny Lind Island Annual Temperature Profile: 1955 - 1993



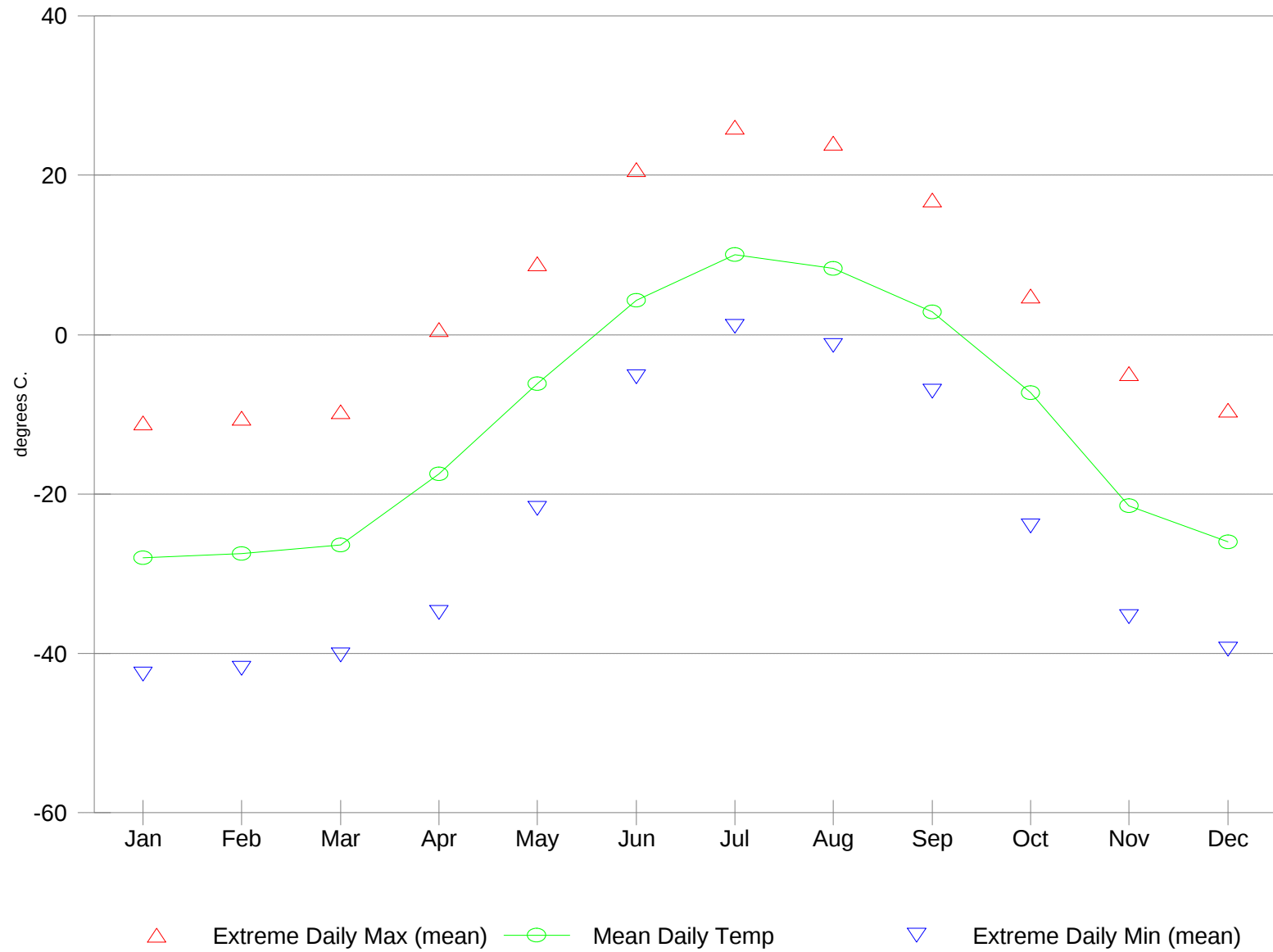
Source: Environment Canada 1994. Canadian Climate Data

Figure 18. Jenny Lind Island Annual Precipitation Profile: 1955 - 1993



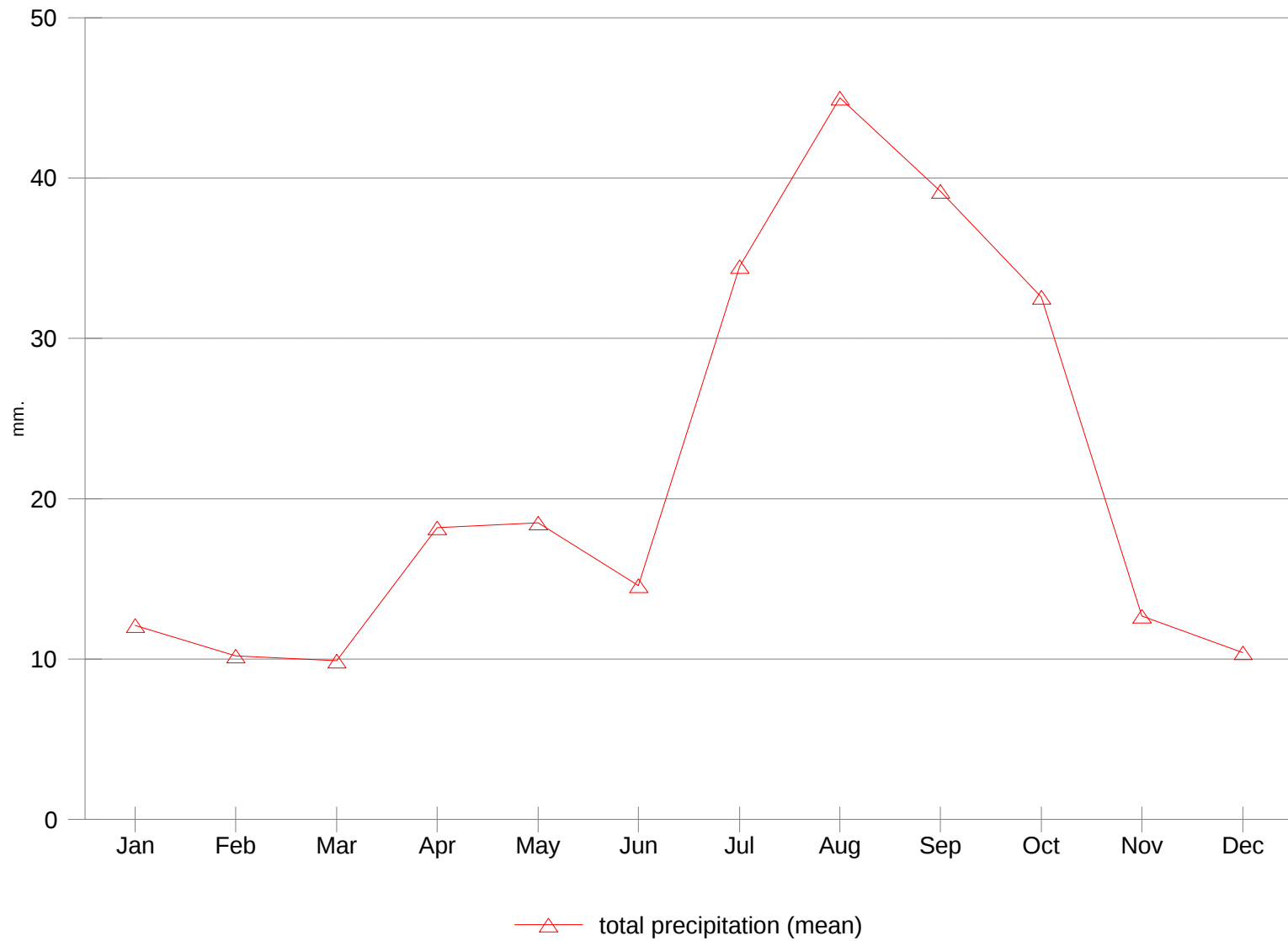
Source: Environment Canada 1994. Canadian Climate Data

Figure 19. Kugluktuk Annual Temperature Profile: 1977 - 1993



Source: Environment Canada 1994. Canadian Climate Data

Figure 20. Kugluktuk Annual Precipitation Profile: 1977 - 1993



Source: Environment Canada 1994. Canadian Climate Data

Figure 21. Ice Thickness - Cambridge Bay, Calculated Weekly (1959-2003) (Enfotec, 2003)

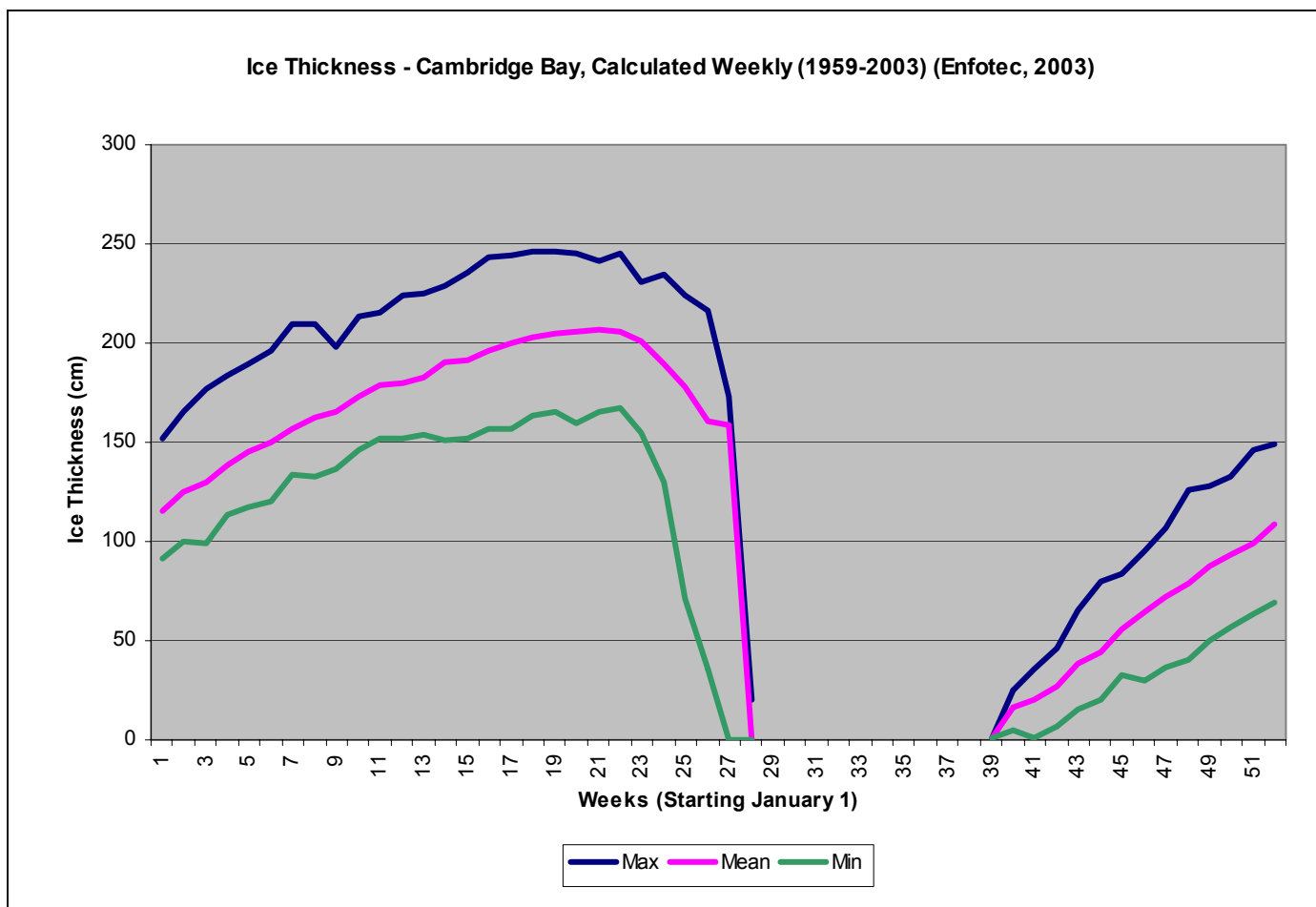


Figure 22. Ice Thickness - Kugluktuk, Calculated Weekly (1958 - 1988) (Canarctic 1993a in Metall Mining Corporation 1993)

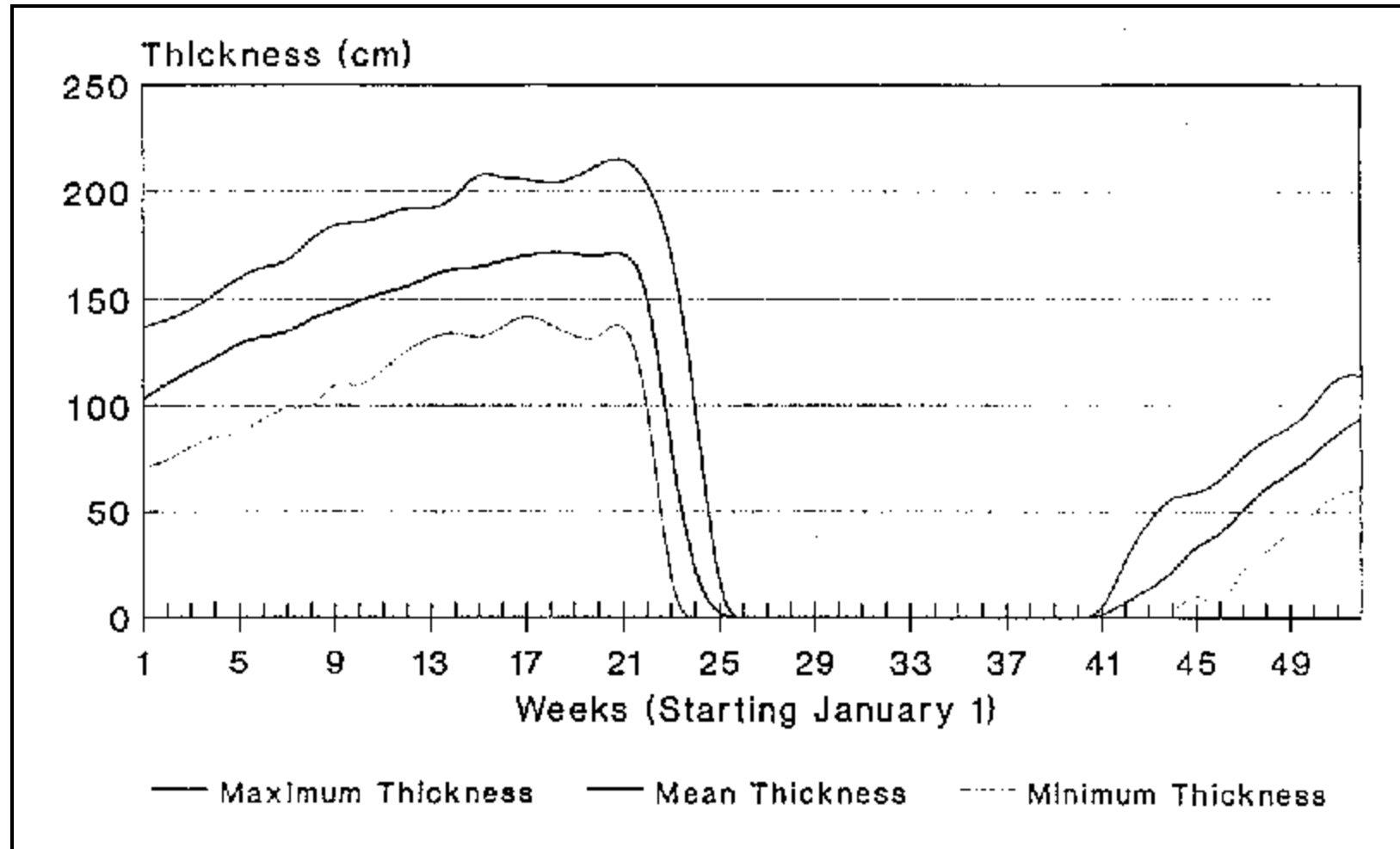


Figure 23. Annual average ice cover at minimum conditions during the mid-September period for the study region (Markham 1981 from Canarctic 1993a in Metall Mining Corporation, 1993)

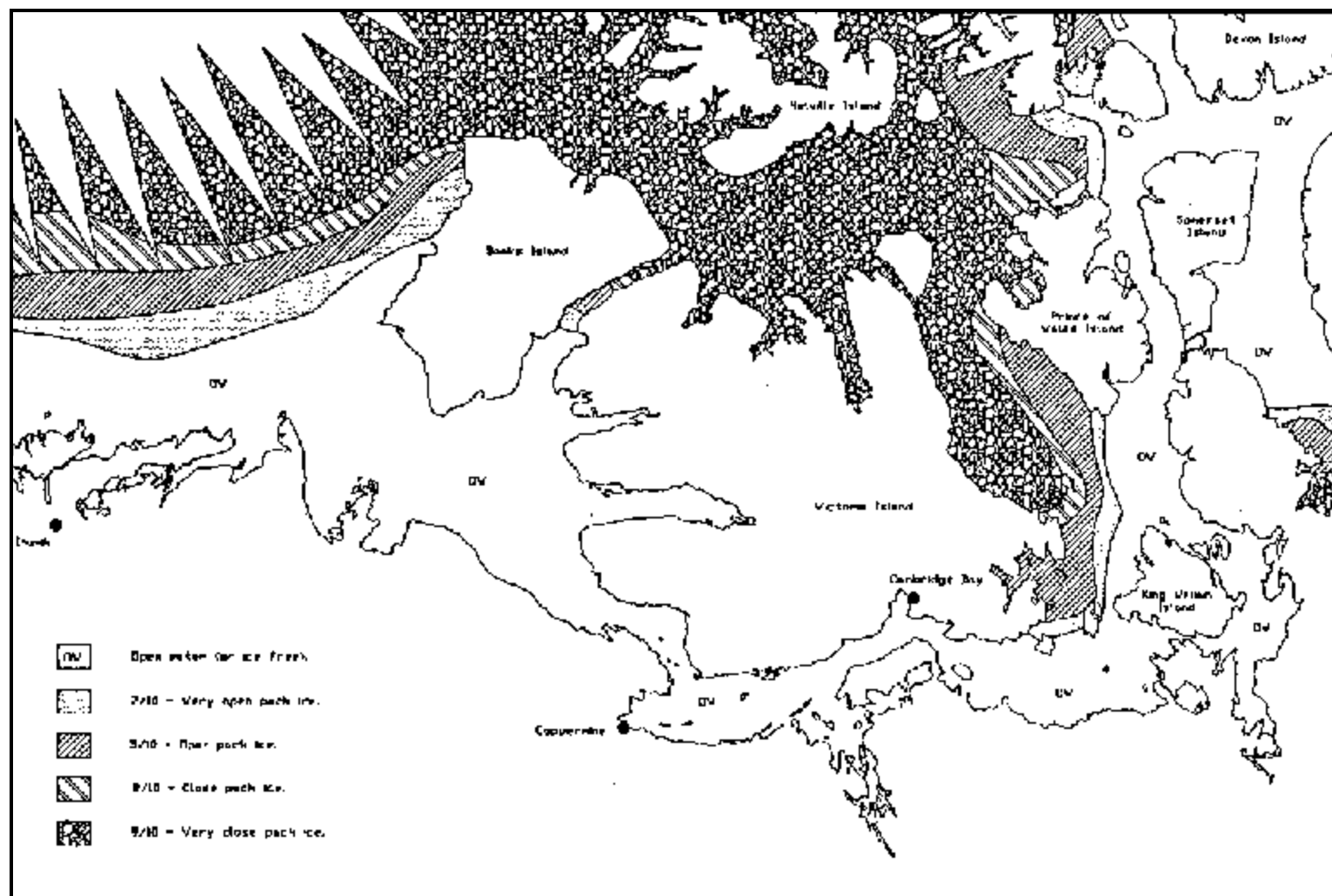


Figure 24. Fracture Sequence for Coronation Gulf Region (Enfotec, 2003)

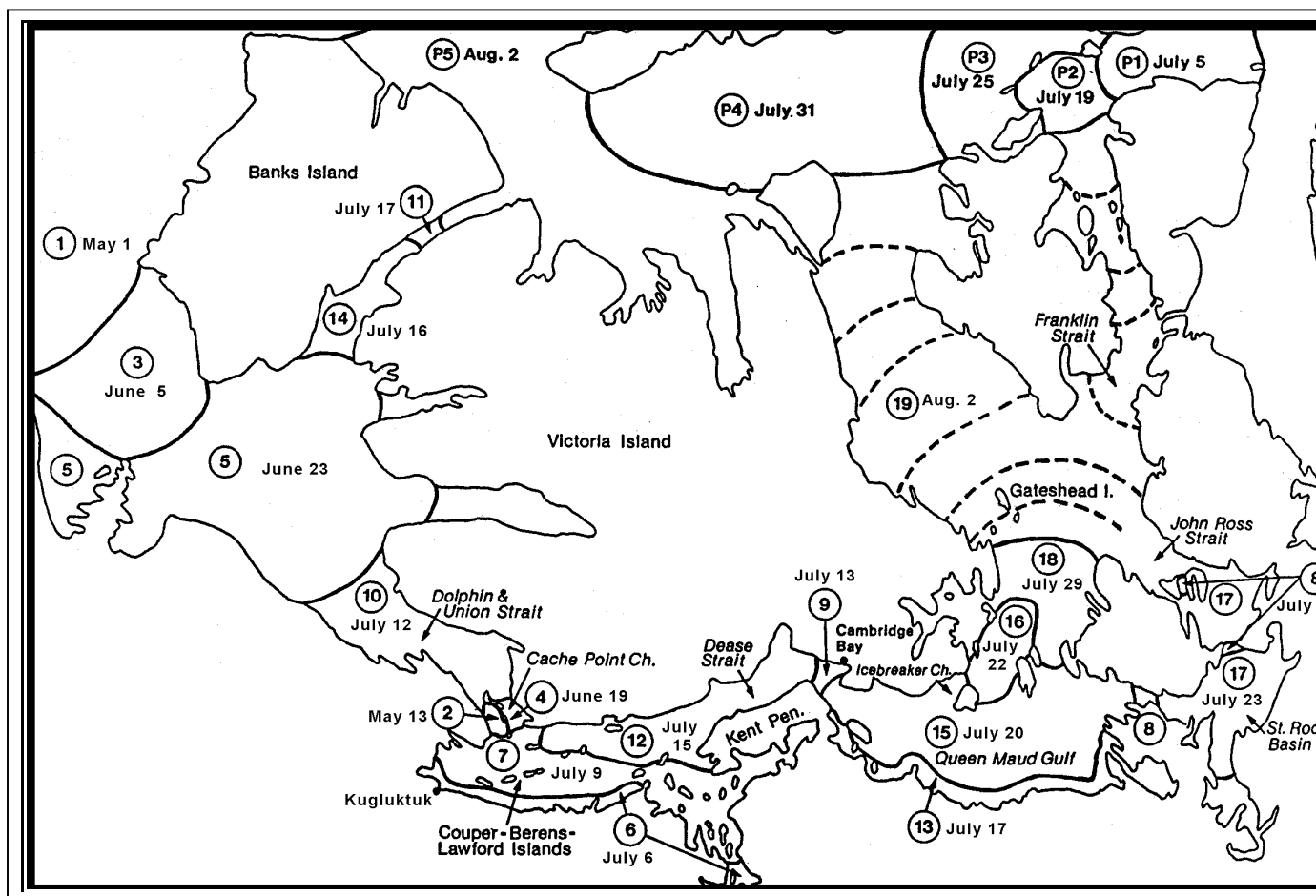


Table 7. Fracture Sequence for the Coronation Gulf Region 1975-2002

Event	Average Date of Occurrence	Earliest	Latest
1. Cape Bathurst Polynya	May 1	April 3 (84,75)	May 25 (80)
2. Lambert Channel Polynya	May 13 ¹	March 24 (91)	June 16 (92)
3. Fracture of Western Amundsen Gulf	June 5 ²	May 4 (77)	June 27 (79)
4. Fracture of Cache Point	June 19 ³	May 2 (98)	July 5 (90)
5. Fracture of Eastern Amundsen Gulf	June 23 ⁴	May 12 (95)	July 15 (79,82)
6. Shore Lead Southern Coronation Gulf/Bathurst Inlet	July 6	June 27 (84,98)	August 8 (78)
7. Fracture/Melt of Western Coronation Gulf	July 9	June 30 (84,96)	August 8 (78)
8. Melt out of Simpson Rae and James Ross Straits	July 12	July 2 (84)	July 30 (86,92)
9. Fracture of Eastern Dease Strait	July 13	June 27 (75)	August 5 (78)
10. Fracture of Dolphin and Union Strait	July 12	July 2 (88,96)	August 5 (78)
11. Fracture of Central Prince of Wales Strait	July 17	July 2 (89,98)	August 4 (86,92)
12. Fracture of Eastern Coronation Gulf and Dease Strait	July 15	July 1 (84)	August 28 (78)
13. Shore Melt, Southern Queen Maud Gulf	July 17	July 3 (84)	August 5 (78)
14. Fracture of Southern Prince of Wales Strait	July 16	July 3 (93,98)	August 4 (86)
15. Fracture of Queen Maud Gulf	July 20	July 7 (96)	August 5 (78)
16. Fracture of Victoria Strait	July 22	July 7 (96)	August 22 (78)
17. Fracture of St. Roch and Rasmussen Basins	July 23	July 11 (94)	August 12 (78,86)
18. Fracture of Northern Victoria Strait	July 29	July 15 (96)	August 28 (78)
19. Fracture of Peel and Larsen Sounds and M'Clintock Channel	August 2	July 20 (81)	August 28 (78)

¹ Did not consolidate in the winters of 1990/91, 1987/88, 1981/82, and 1980/81.

² Did not consolidate in the winters of 2000/01, 1999/2000, 1998/99, 1997/98, 1996/97, 1995/96, 1993/94, 1992/93, 1991/92, 1990/91, 1987/88, 1986/87, 1984/85, 1982/83, 1980/81, and 1977/78.

³ Did not consolidate in the winter of 1987/88.

⁴ Did not consolidate in the winters of 2000/01, 1998/99, 1997/98, 1995/96, 1993/94, 1992/93, 1991/92, 1987/88, 1980/81, and 1977/78.

Figure 25. Consolidation Sequence for Coronation Gulf Region (Enfotec, 2003)

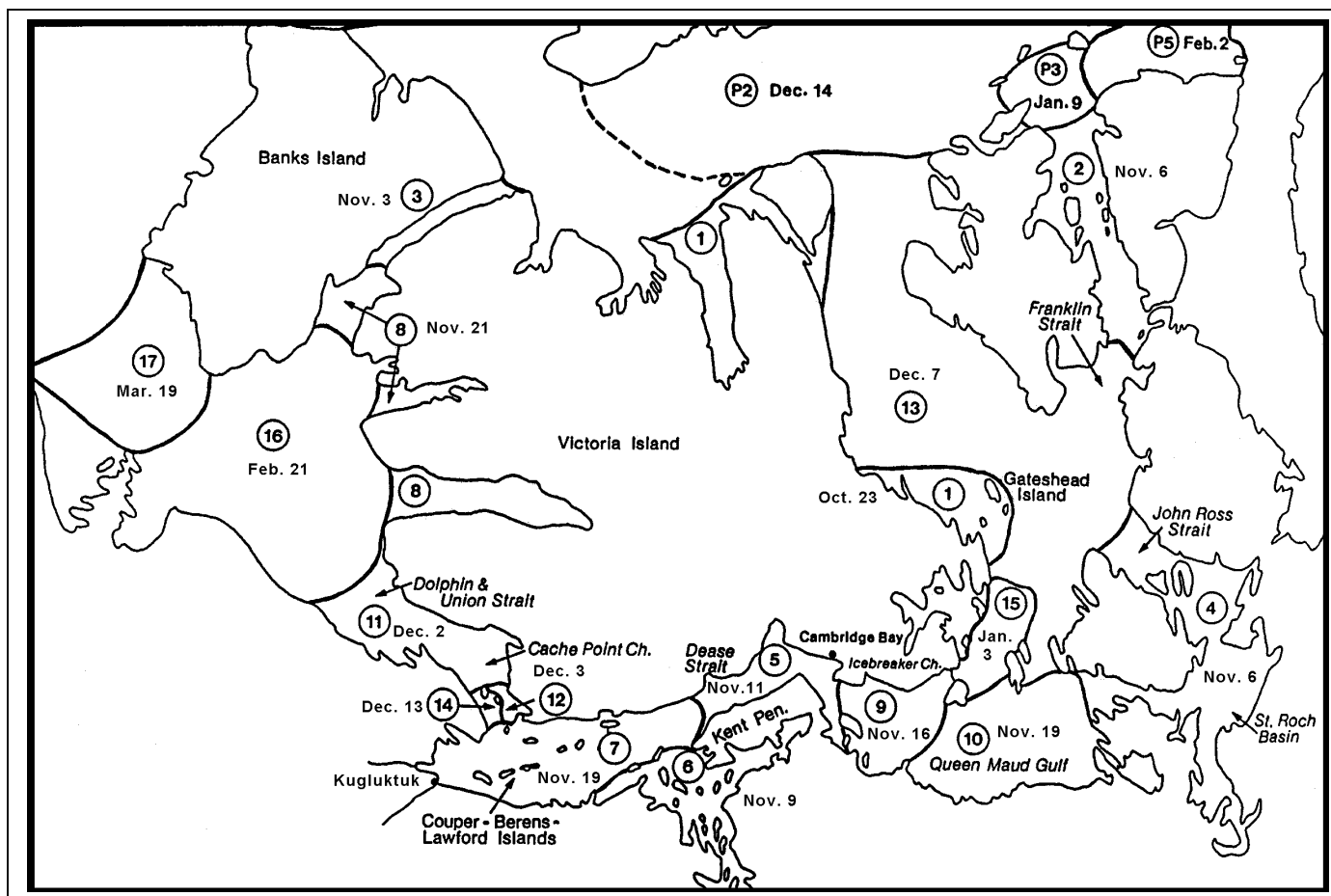


Table 8. Consolidation Sequence for the Coronation Gulf Region 1975-2003

Event	Average Date of Occurrence	Earliest	Latest
1. Shore-fast Ice along Western M'Clintock	October 23	October 10 (76)	November 10 (83)
2. Consolidation of Peel Sound	November 6	October 10 (80,76)	December 8 (98)
3. Consolidation of Central Prince of Wales Strait	November 3	October 12 (91)	December 2 (92)
4. Consolidation of St. Roch and Rasmussen Basins	November 6	October 12 (79)	November 27 (98)
5. Consolidation of Dease Strait	November 11	October 18 (78)	December 10 (88)
6. Consolidation of Bathurst Inlet	November 9	October 22 (86,78)	November 20 (75,00)
7. Consolidation of Coronation Gulf	November 19	November 2 (78)	January 5 (99)
8. Consolidation of Southern Prince of Wales Strait	November 21	October 19 (79)	December 16 (80)
9. Consolidation of Western Queen Maud Gulf	November 16	October 22 (78)	December 11 (79)
10. Consolidation of Eastern Queen Maud Gulf	November 19	October 21 (86,78)	December 11 (79)
11. Consolidation of Dolphin and Union Strait	December 2	November 12 (90)	January 12 (84)
12. Consolidation of Cache Point Channel	December 3 ¹	November 17 (90,84)	January 12 (84)
13. Consolidation of Larsen Sound and M'Clintock Channel	December 7	October 23 (78)	January 3 (84,03)
14. Consolidation of Lambert Channel	December 13 ²	November 17 (84)	February 1 (89)
15. Consolidation of Victoria Strait	January 3	November 28 (78)	March 4 (00)
16. Consolidation of Eastern Amundsen Gulf	February 21 ³	December 2 (79)	May 4 (96)
17. Consolidation of Western Amundsen Gulf	March 19 ⁴	February 14 (03)	April 30 (77)

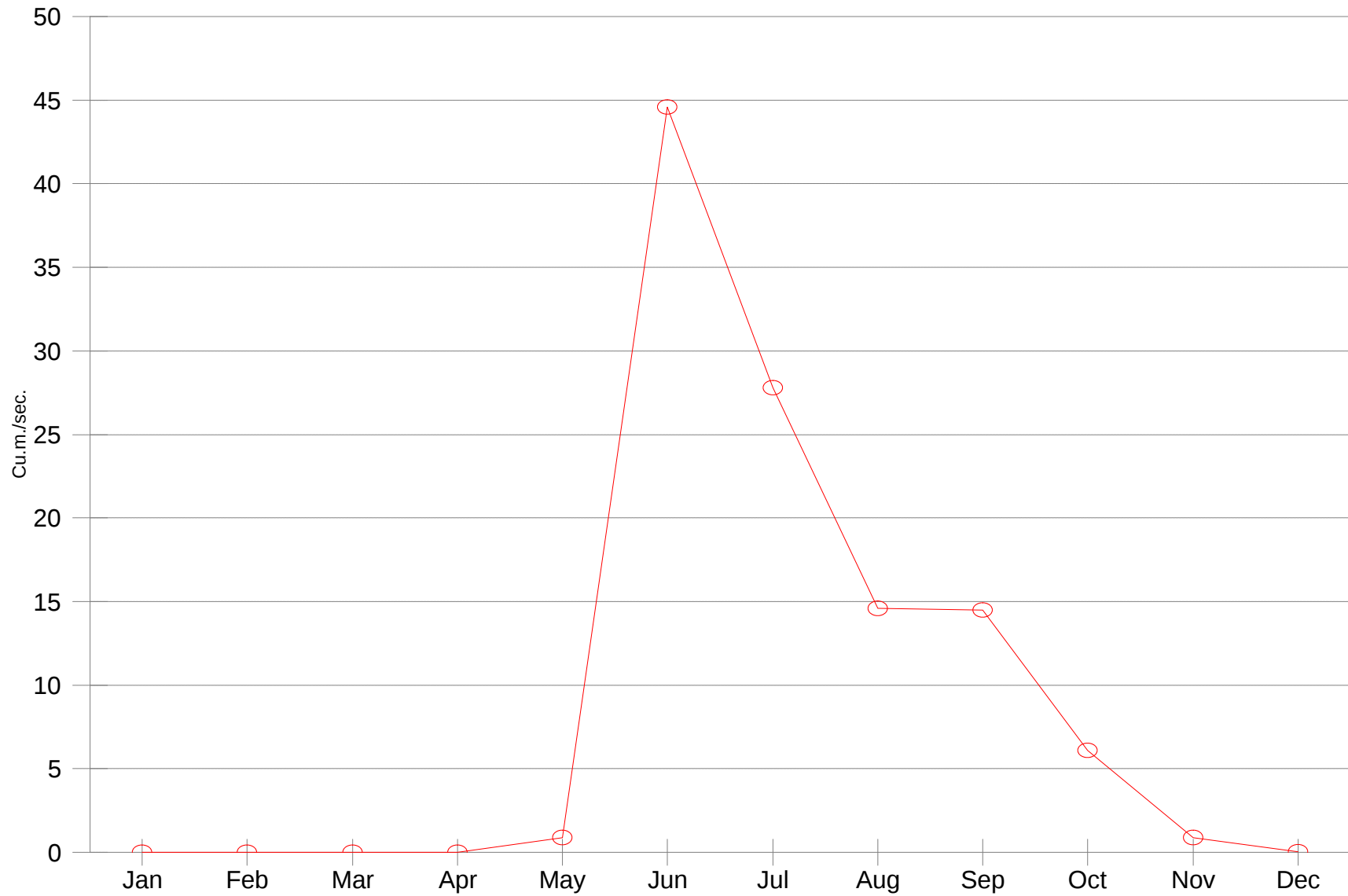
¹ Did not consolidate in the winter of 1987/88.

² Did not consolidate in the winters of 1990/91, 1987/88, 1981/82, and 1980/81.

³ Did not consolidate in the winters of 2000/01, 1998/99, 1997/98, 1995/96, 1993/94, 1992/93, 1991/92, 1987/88, 1980/81, and 1977/78.

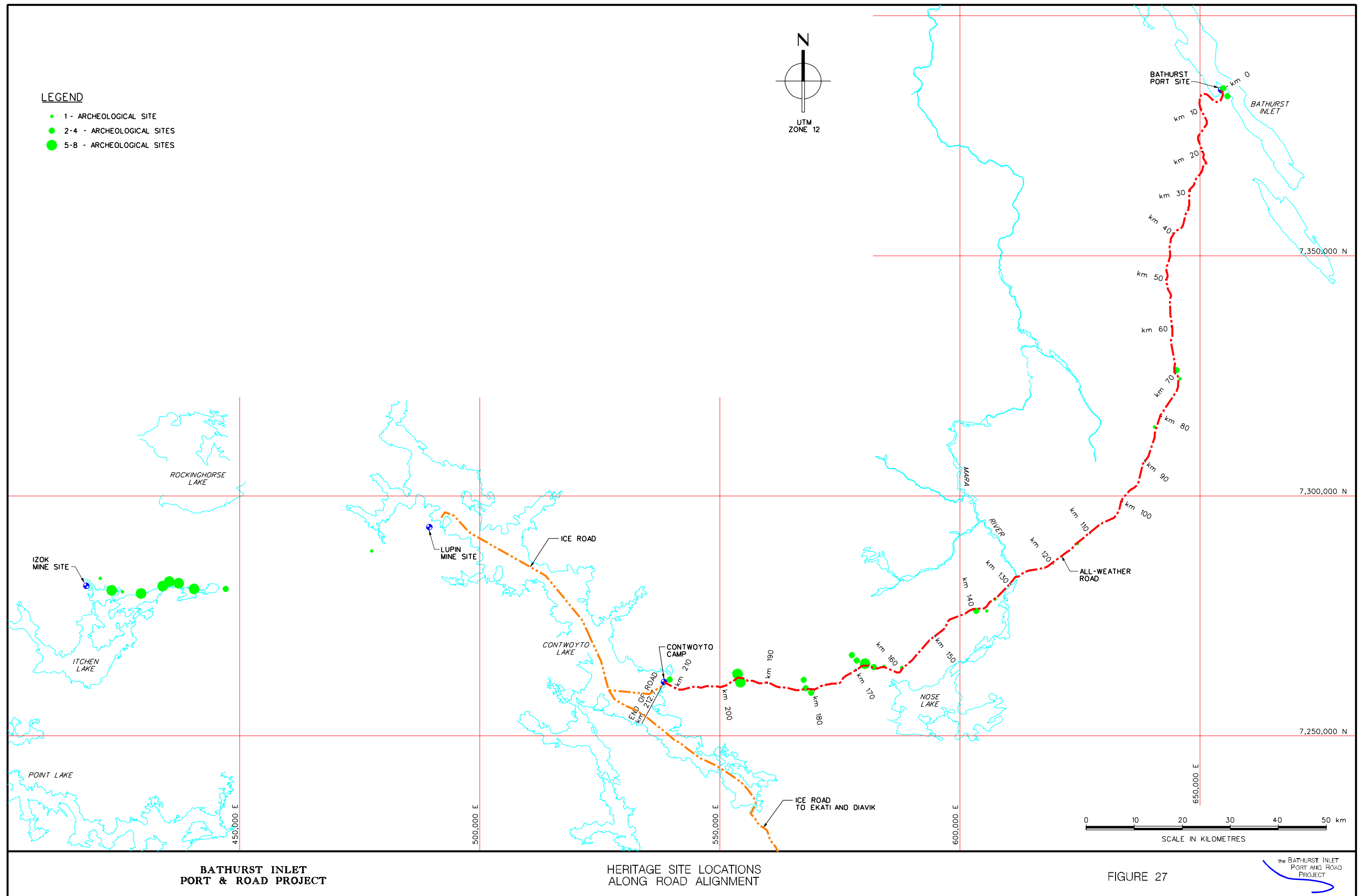
⁴ Did not consolidate in the winters of 2000/01, 1999/2000, 1998/99, 1997/98, 1996/97, 1995/96, 1993/94, 1992/93, 1991/92, 1990/91, 1987/88, 1986/87, 1984/85, 1982/83, 1980/81, and 1977/78.

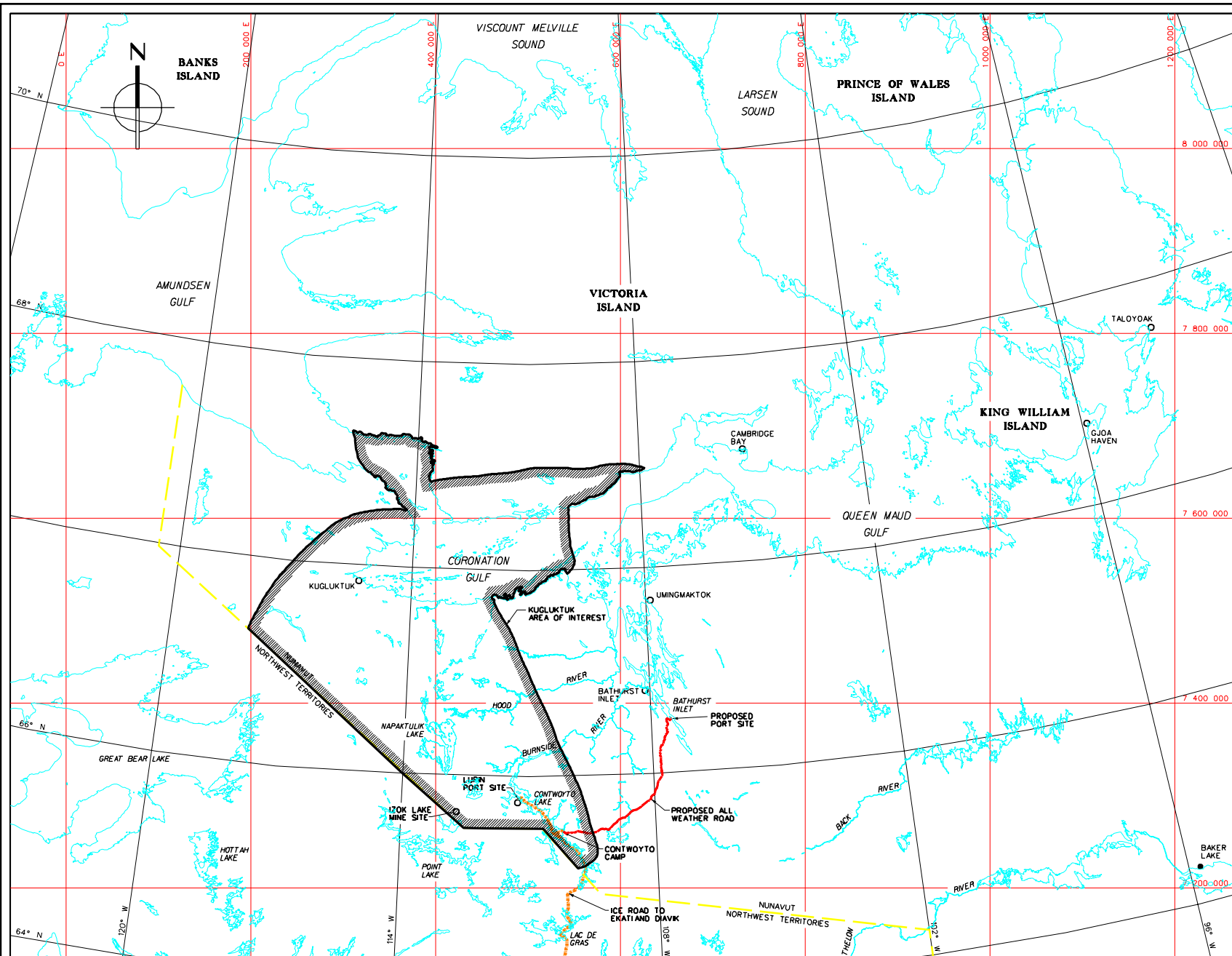
Figure 26. Mean Discharges (cu.m./sec) or the Gordon River, Nunavut (1977-1992)



Location: Lat 66 48 31 N. Long 107 06 13 W.

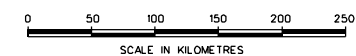
Drainage area 1530 sq.km.





NOTES:

1. BASE MAPPING DERIVED FROM INFORMATION PROVIDED BY KITKMEOT GEOSCIENCES LTD.
2. GRID SHOWN IS ZONE 12 UTM NAD 83.

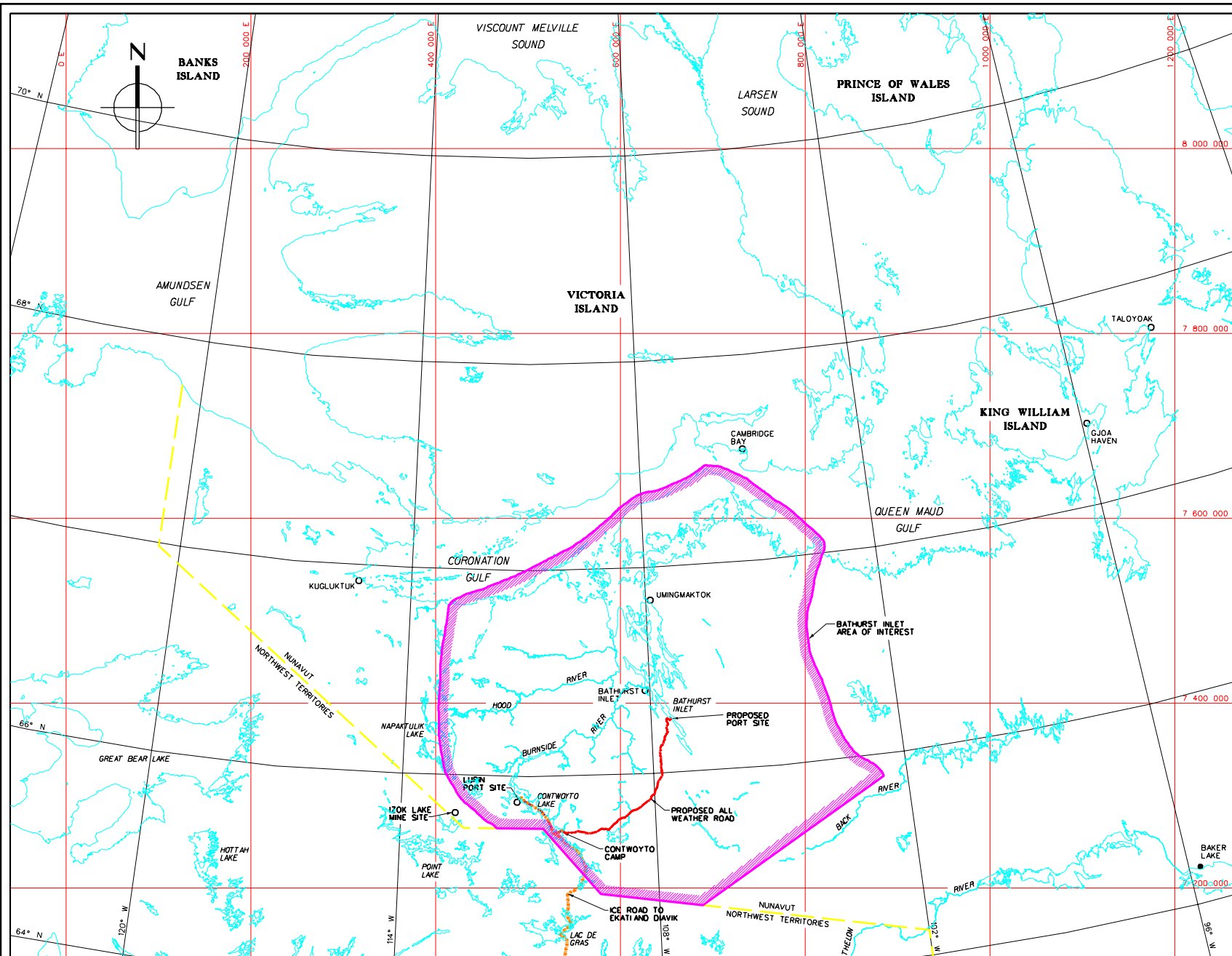


**BATHURST INLET
PORT & ROAD PROJECT**

KUGLUKUTUK AREA OF INTEREST
(COURTESY NUNAVUT PLANNING COMMISSION)

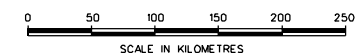
FIGURE 28

the BATHURST INLET
PORT AND ROAD
PROJECT



NOTES:

1. BASE MAPPING DERIVED FROM INFORMATION PROVIDED BY KITKMEOT GEOSCIENCES LTD.
2. GRID SHOWN IS ZONE 12 UTM NAD 83.

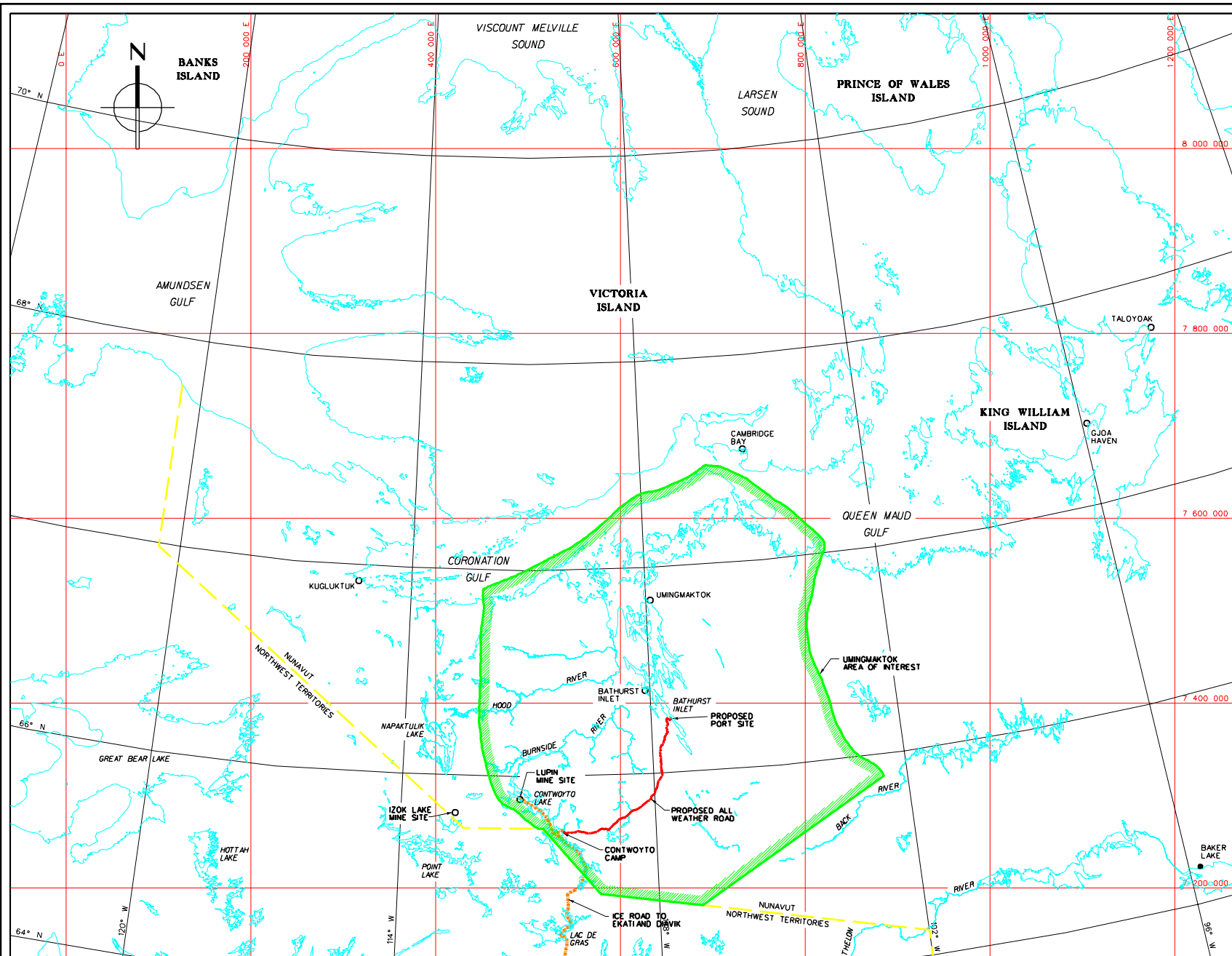


**BATHURST INLET
PORT & ROAD PROJECT**

BATHURST INLET AREA OF INTEREST
(COURTESY OF NUNAVUT PLANNING COMMISSION)

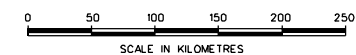
FIGURE 29





NOTES:

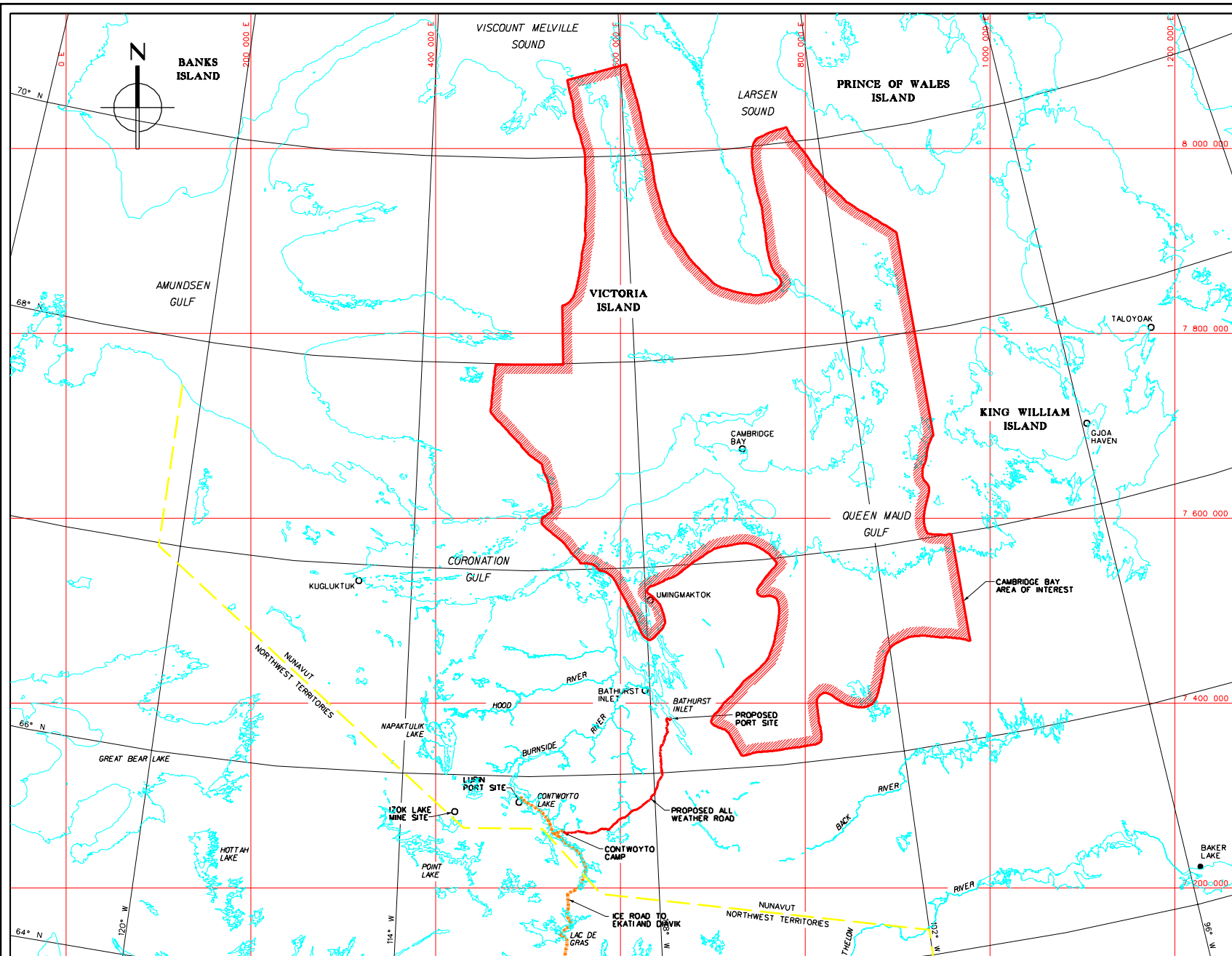
1. BASE MAPPING DERIVED FROM INFORMATION PROVIDED BY KITKMEOT GEOSCIENCES LTD.
2. GRID SHOWN IS ZONE 12 UTM NAD 83.



**BATHURST INLET
PORT & ROAD PROJECT**

UMINGMAKTOK AREA OF INTEREST
(COURTESY NUNAVUT PLANNING COMMISSION)

FIGURE 30



NOTES:

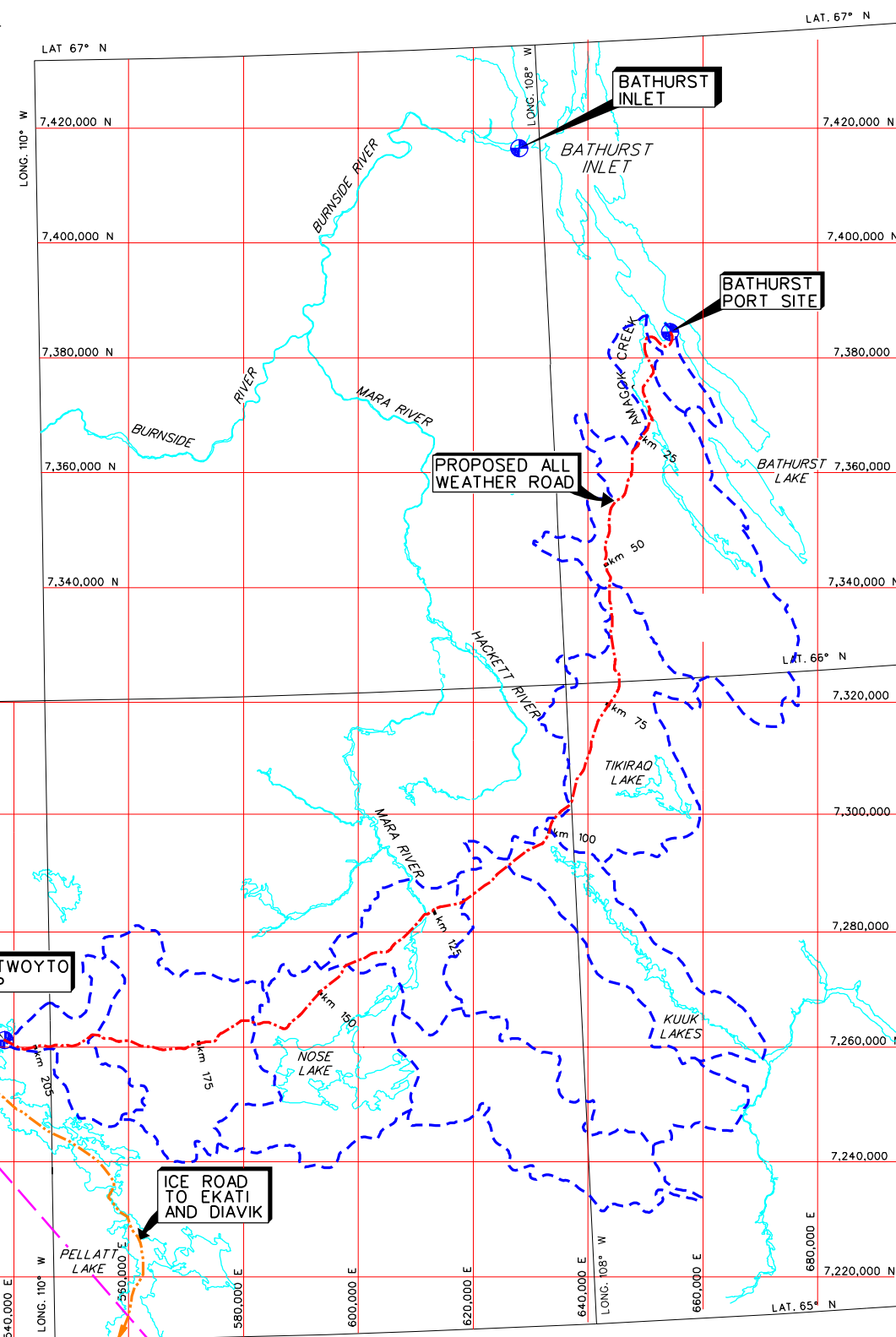
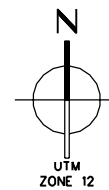
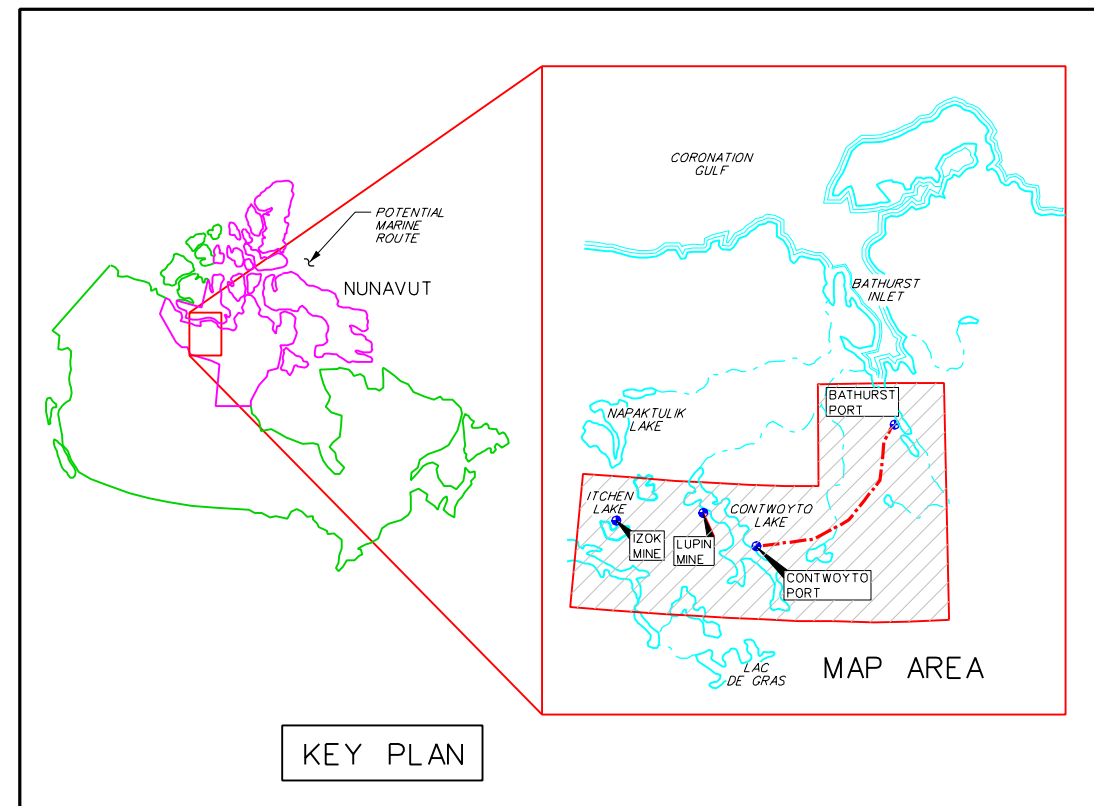
1. BASE MAPPING DERIVED FROM INFORMATION PROVIDED BY KITKMEOT GEOSCIENCES LTD.
2. GRID SHOWN IS ZONE 12 UTM NAD 83.

**BATHURST INLET
PORT & ROAD PROJECT**

**CAMBRIDGE BAY
AREA OF INTEREST**

FIGURE 31



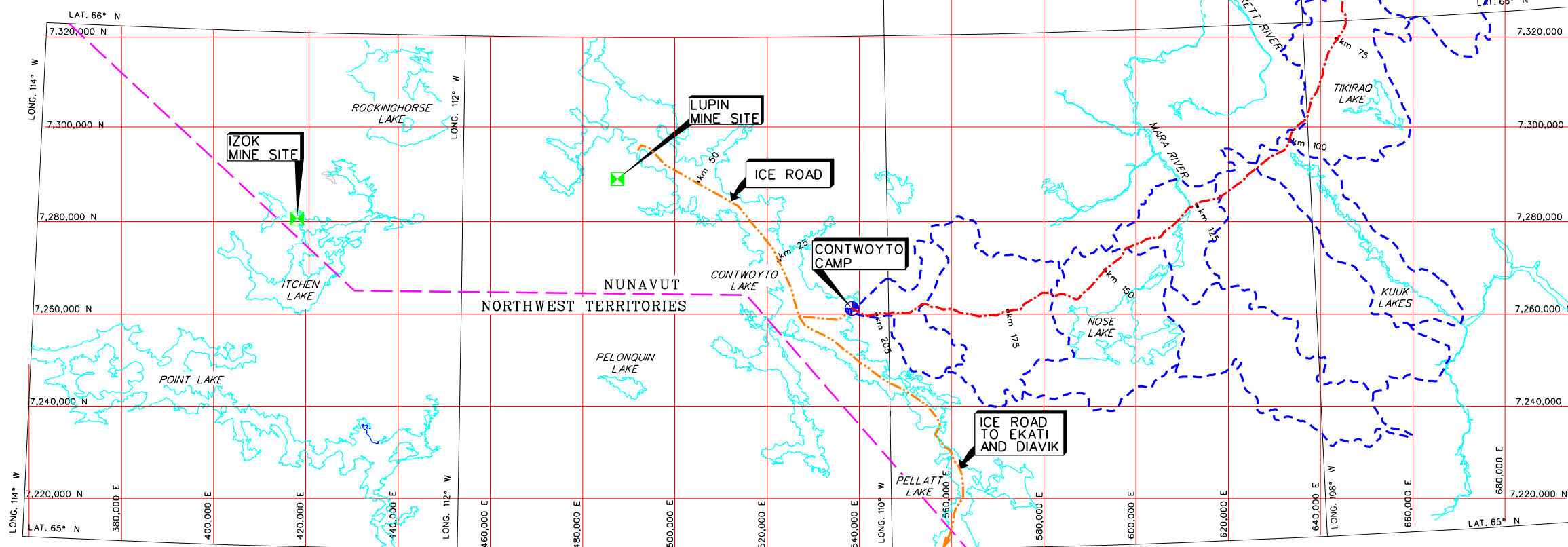


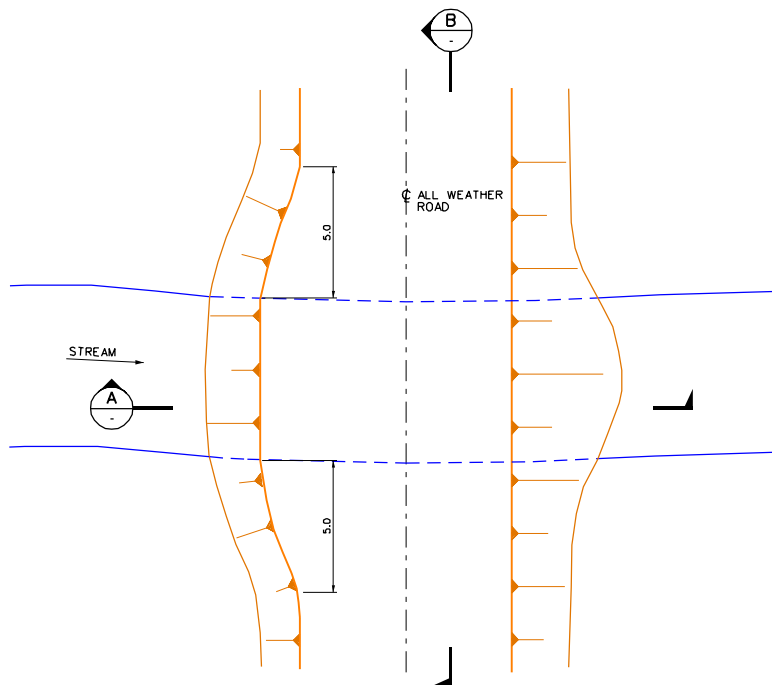
NOTES:

1. MAPPING FROM GEOWEST ENVIRONMENTAL CONSULTANTS.
2. ZONE 12 NAD 83 UTM GRID SHOWN.

LEGEND:

--- DRAINAGE BASIN OUTLINE



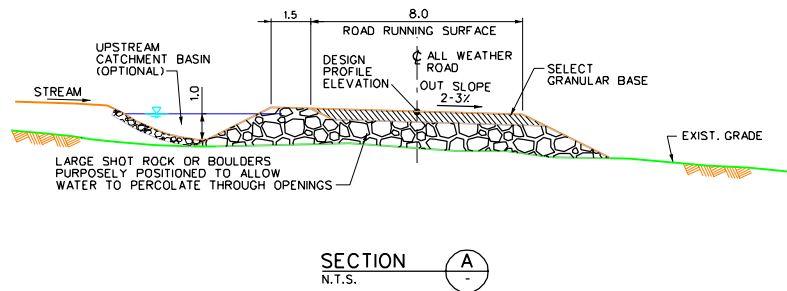


TYPICAL MINOR STREAM FORD CROSSING

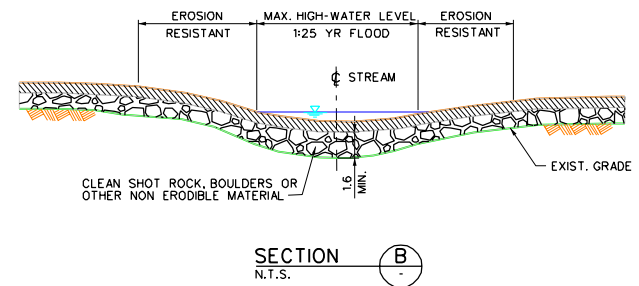
N.T.S.
CATCHMENT AREA > 5 km²



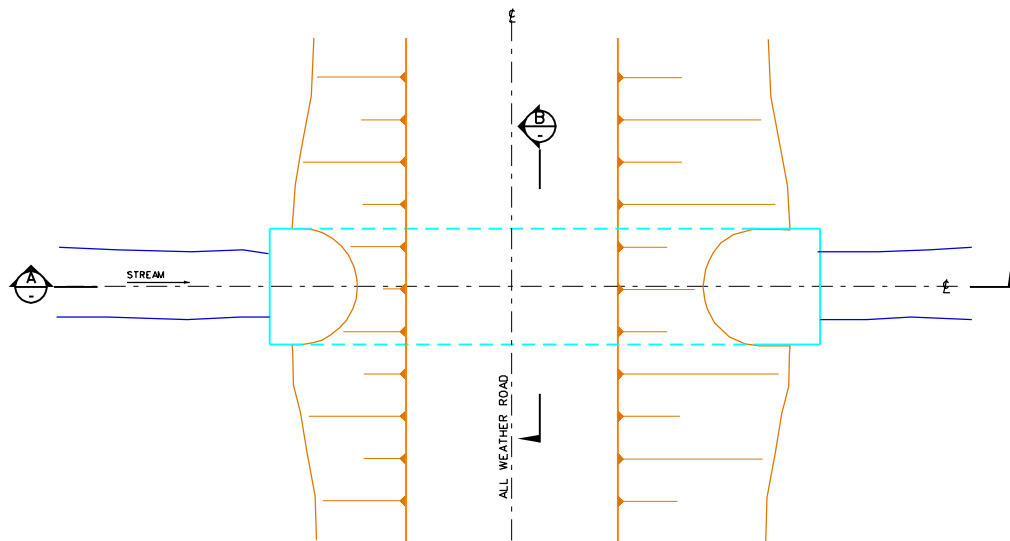
TYPICAL LOCATION FOR A MINOR STREAM FORD CROSSING



SECTION A
N.T.S.



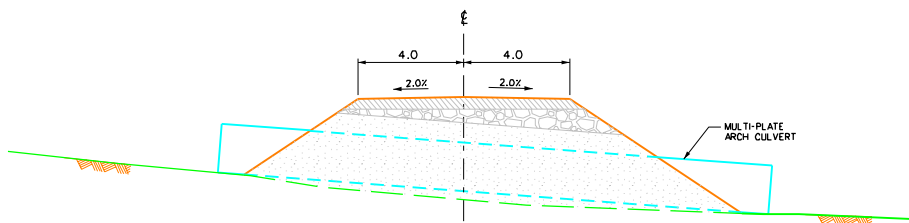
SECTION B
N.T.S.



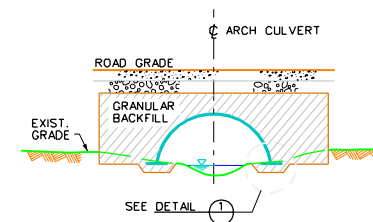
PLAN



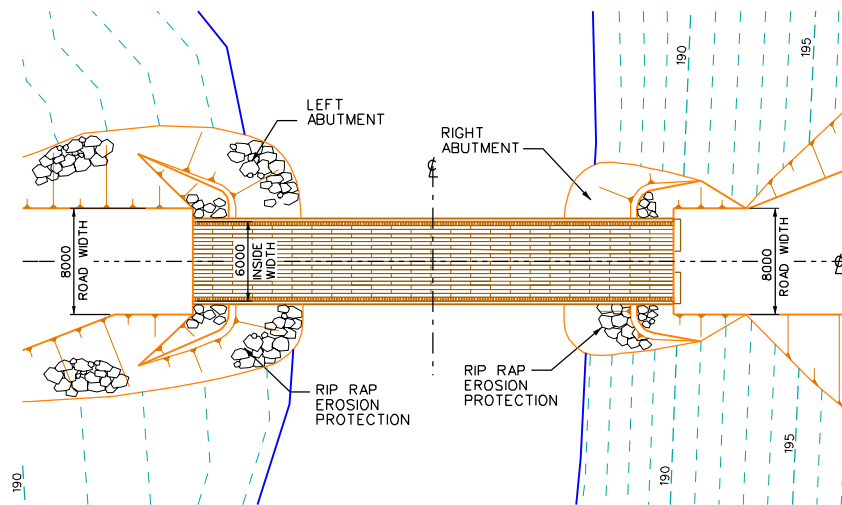
TYPICAL STREAM FOR ARCH CULVERT CROSSING



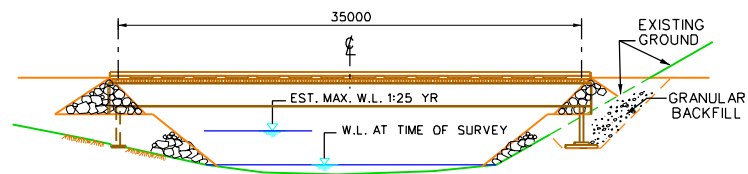
SECTION A-A
NTS



SECTION B-B
NTS

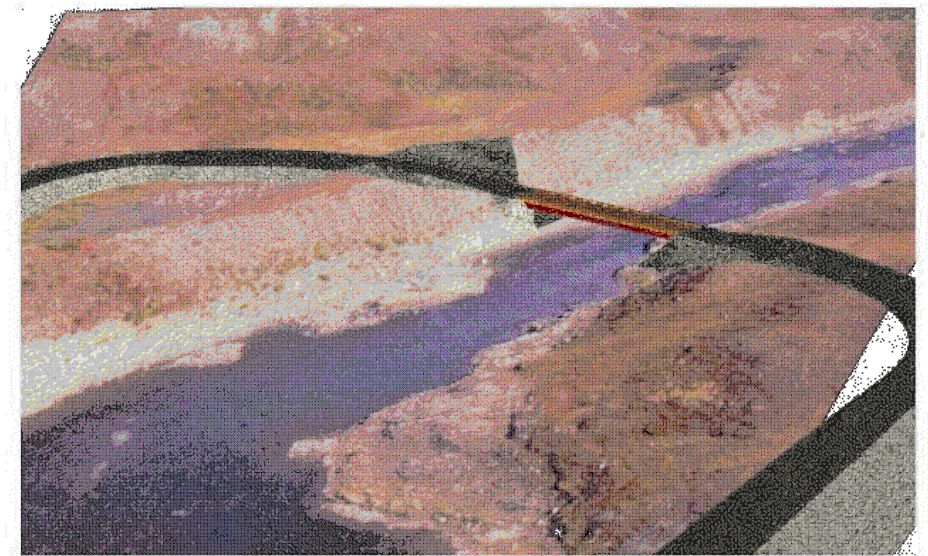


PLAN

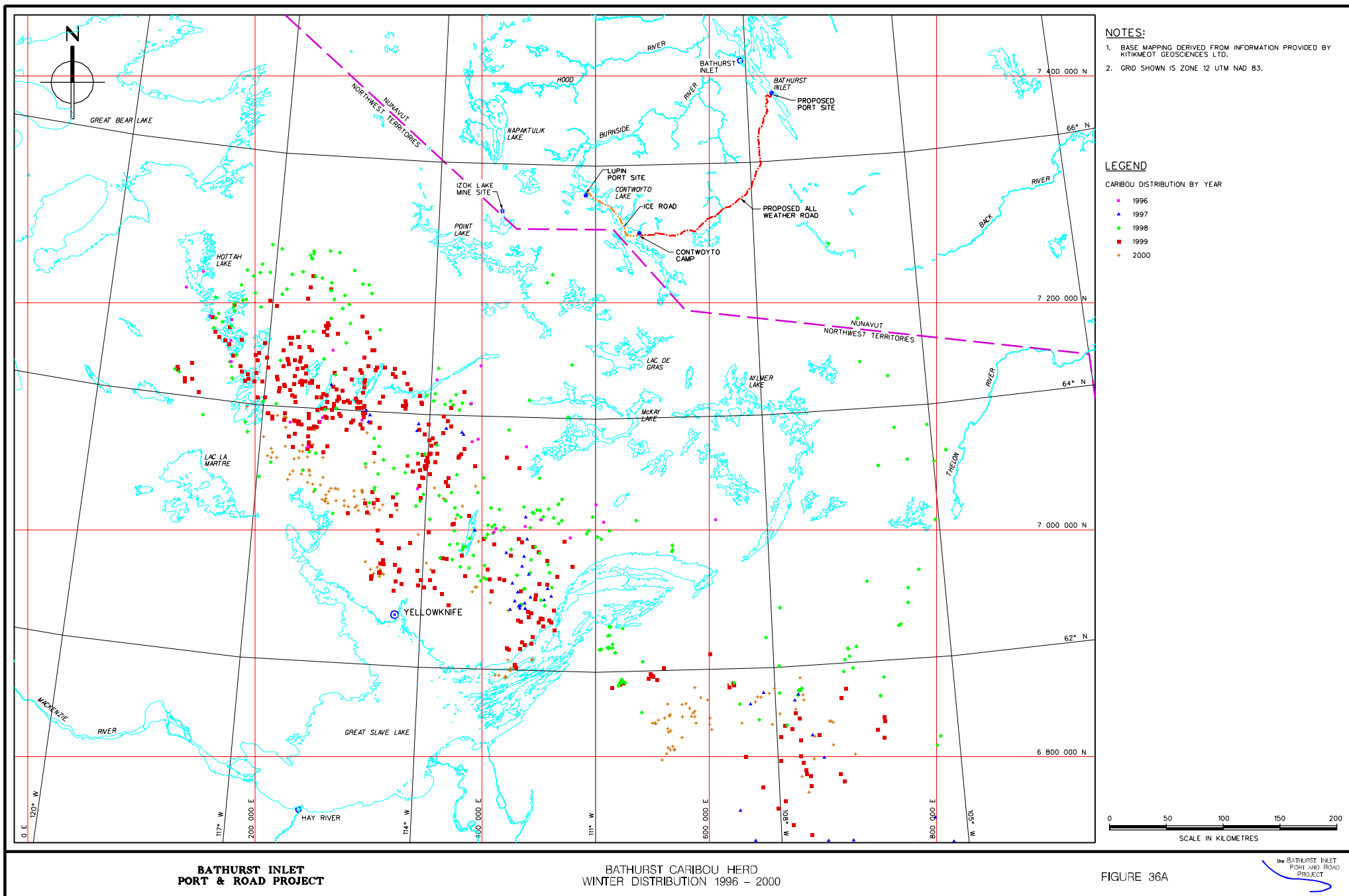


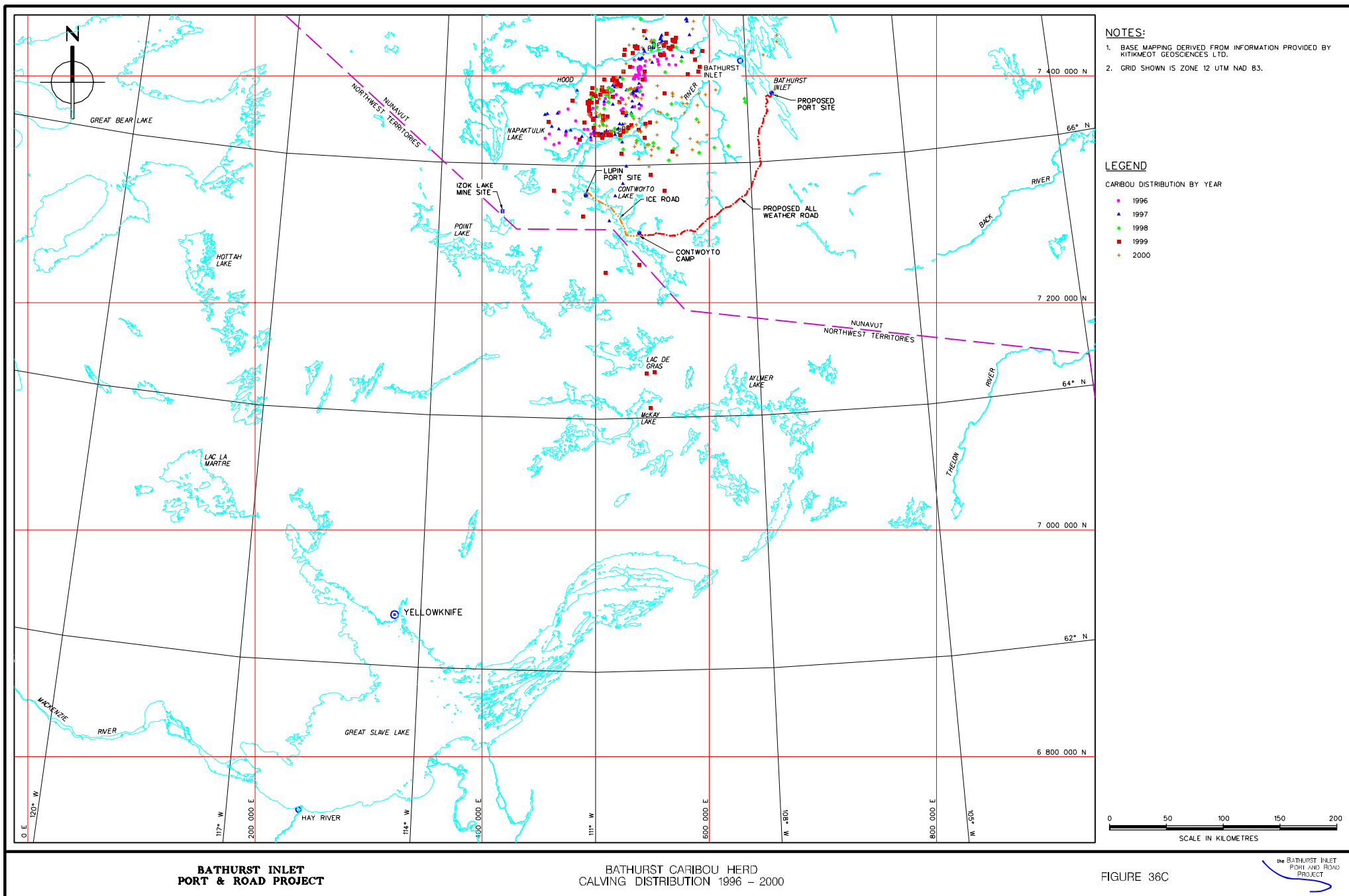
ELEVATION

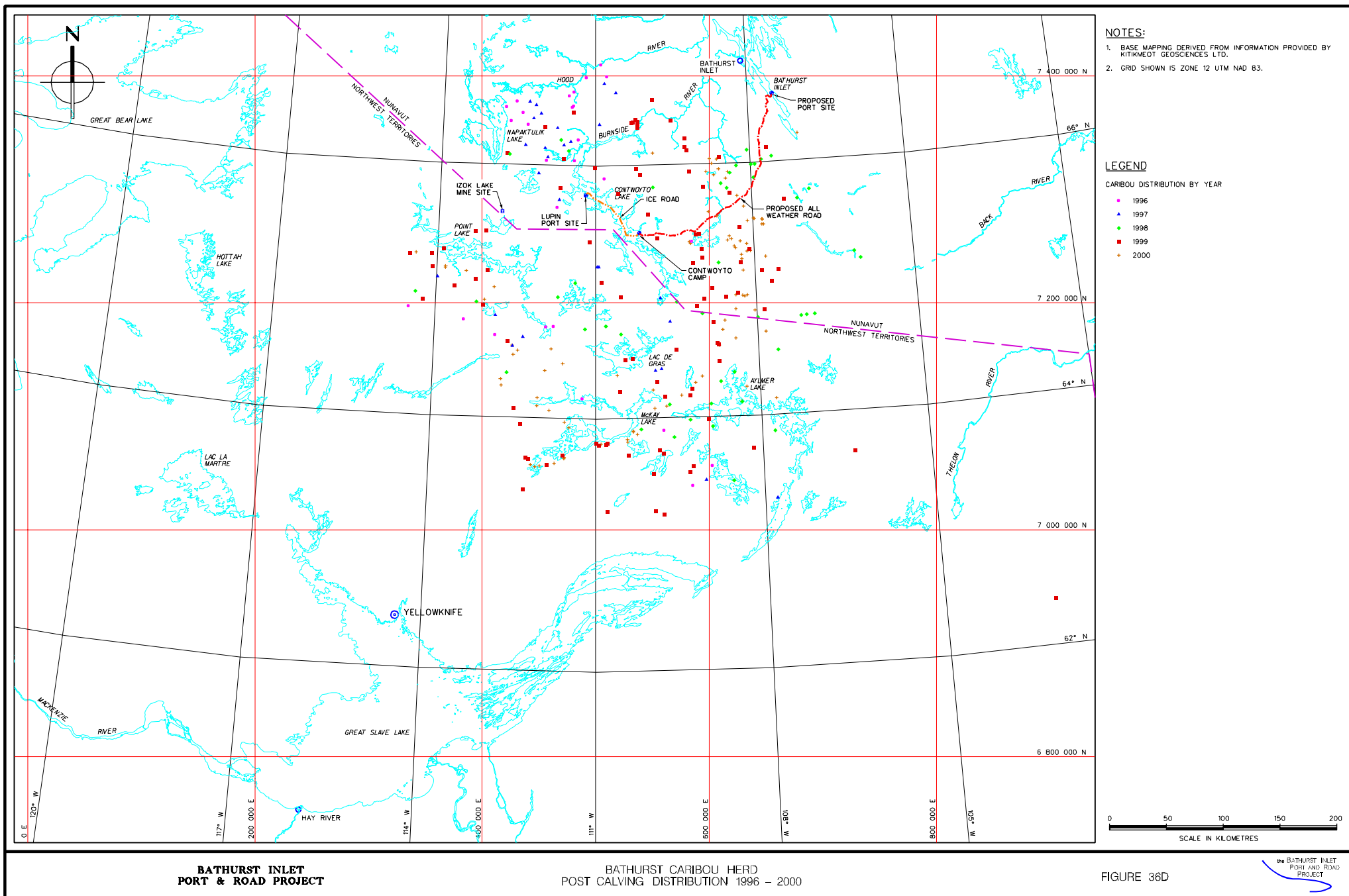
SINGLE SPAN BRIDGE WATER CROSSING
TYPICAL DETAILS

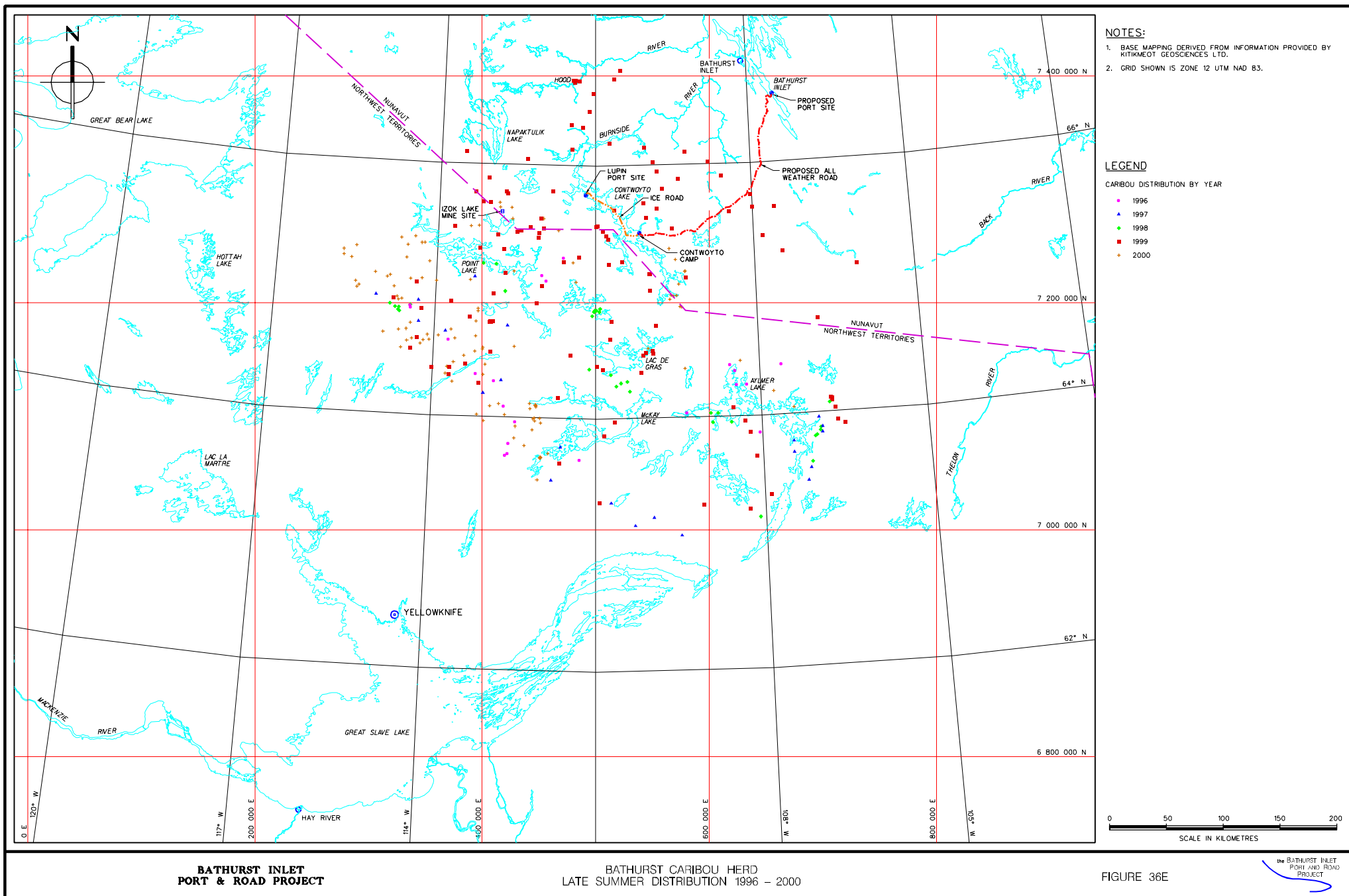


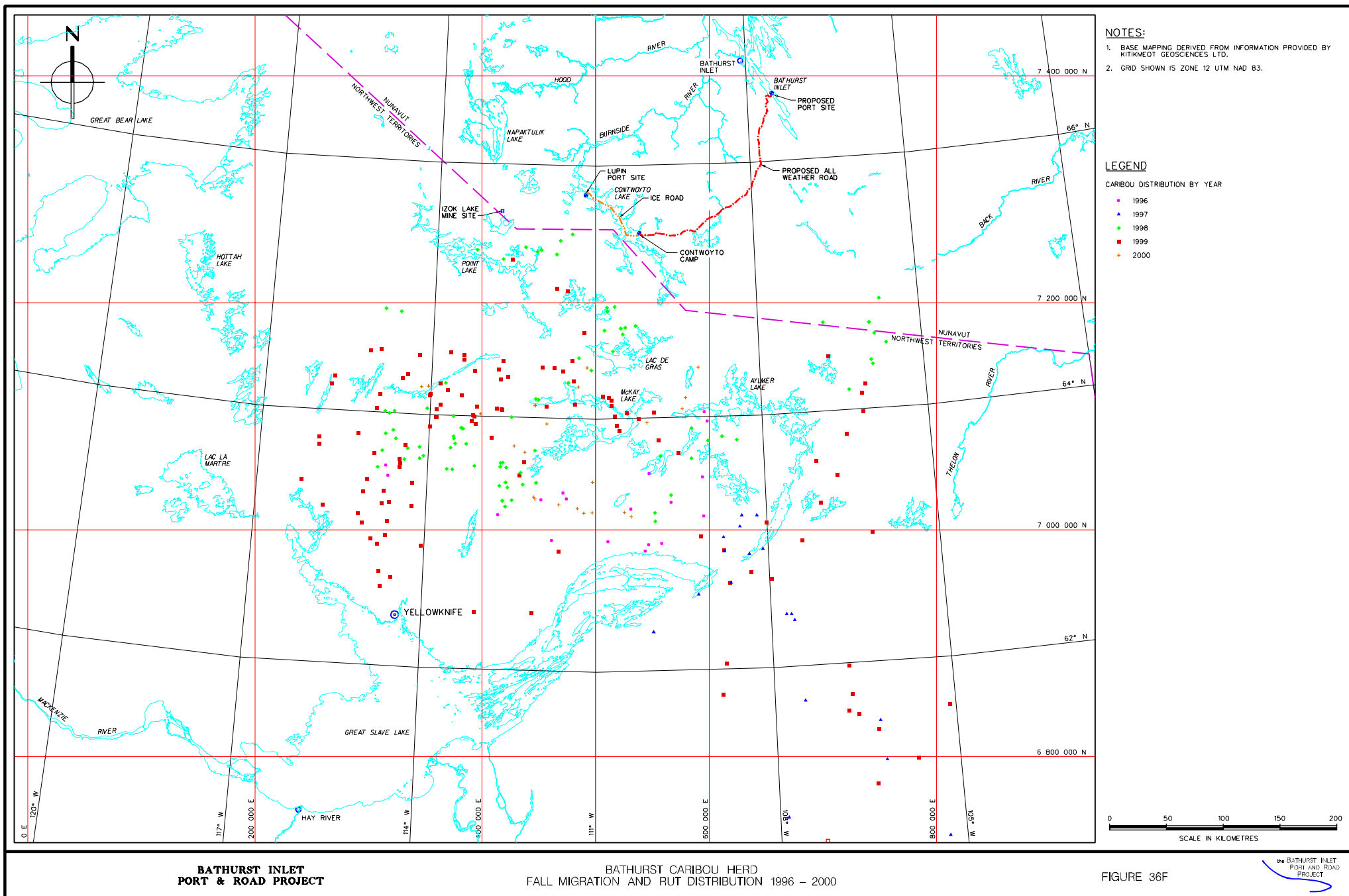
SINGLE SPAN BRIDGE WATER CROSSING
TYPICAL LOCATION













APPENDIX 1

DRAFT ENVIRONMENT POLICY

APPENDIX 1.

BATHURST INLET PORT AND ROAD JOINT VENTURE

Draft Environmental Policy

The purpose of the Bathurst Inlet Port and Road Project is to build and operate a transportation network in the West Kitikmeot Region of Nunavut to enhance the economic feasibility of resource development in the region for the benefit of the Inuit residents there. Port and road construction and operations will be conducted in a manner that protects the long term integrity of the tundra environment and the fish and wildlife populations it sustains. Every person and company that uses the Project's transportation network and facilities will be required to adhere to the Code of Good Conduct for Land Users in the region established by the Nunavut Planning Commission (1997).

Code of Good Conduct for Land Users*

1. The landscape of each camp and other land use sites will be restored to its original condition to the greatest degree possible. Water quality will be preserved and no substances that will impair water quality will be dumped in water bodies. When possible, and feasible, old sites will be restored to the natural state.
2. All land users shall assist communities and government(s) in identifying and protecting archaeological sites and carving stone sites.
3. As a general rule, low-level flights by aircraft at less than 300 meters should not occur where they will disturb wildlife or people. Where possible scheduled low-level flights will only take place after consultation with the appropriate communities. All land users are responsible for reporting to the appropriate authorities any illegal or questionable low level flight.
4. All activities on the land will be conducted in such a fashion that the renewable resources of the area in question are conserved.
5. Whenever practicable, and consistent with sound procurement management, non-resident land users will follow the practice of local purchase of supplies and services.
6. Non-resident land users will establish working relationships with local communities and respect the traditional uses of the land.
7. During the caribou calving, post-calving, and migrating season, land use activities should be restricted to avoid disturbing caribou, in general, and more specifically will be governed by caribou protection measures.
8. Artifacts must be left where they are found. All land users are responsible for reporting to the appropriate authorities the location of, or any removal or disturbance of artifacts.

* Source: Nunavut Planning Commission, 1997. West Kitikmeot Regional Land Use Plan (draft).

APPENDIX 2

GENERAL REQUIREMENTS FOR A PROJECT DESCRIPTION (NIRB, 1997)

APPENDIX B

NUNAVUT IMPACT REVIEW BOARD GENERAL REQUIREMENTS FOR A PROJECT DESCRIPTION

Although the level of detail will vary with the scope of the project a description of the following elements should be included with a project proposal application.

In making its determination NIRB uses both traditional Inuit knowledge and recognized scientific methods. Throughout the document please cite whether information was gathered through Inuit knowledge or by recognized scientific methods.

1. BACKGROUND INFORMATION

◊ Proponent Identification Information

- ◊ company name and mailing address;
- ◊ phone and fax number;
- ◊ contact person; and
- ◊ field supervisor, phone number and/or radio phone number.

◊ The Name of the Lead Authorising Agency and List of all Approvals, Permits and Licenses Required

- ◊ list the approvals, permits and licenses required (regulatory agency, contact name, address, phone number)

◊ A List of Previous Environmental Assessments

- ◊ describe all prior relevant environmental assessments of the project (proponent name, type of operation, year operation began)

2. PROJECT DESCRIPTION

This section should describe in sufficient detail all aspects of the planning, designing, construction, operation, ongoing restoration activities, decommissioning, and post-decommissioning phases of the proposal including:

◊ Title of Project

◊ Type of Activity

◊ Summary of Operation (purpose, nature of all activities)

◊ Preferred Option(s)

- ◊ include supporting rationale; and
- ◊ evaluate any and describe any *alternatives* to the project and to the project components eg. alternative routes, alternative technologies.

◇ **Project Location**

- ◇ indicate the ownership of land(s) that the project would be using (whether the project requires the use of Inuit Owned Lands, Crown land, Commissioner's land, or combination thereof);
- ◇ a general location map and a map of adjacent area (1:1,000,000 or 1:4,000,000); and
- ◇ a location map of activities, facilities and camp(s), including off-site facilities such as roads, airstrips, camps and staging areas (include NTS maps at 1:250,000 and at 1:50,000 scale; provide latitude and longitude of primary activities).

◇ **Schedule**

- ◇ timetable of activities including:
 - ◇ construction, operation and decommissioning schedules; and
 - ◇ the length of time of each activity.

◇ **Operations Plan**

- ◇ site facilities and associated infrastructure (during all phases of project)
- ◇ methods and processes involved;
- ◇ technology to be used (including drills, pumps, chemicals, transportation, etc.)
- ◇ detailed description of any new technology;
- ◇ waste (describe all types, volumes, handling, disposal methods and alternatives including: garbage, sanitary and sewage wastes, brush and vegetation, overburden, waste rock, tailings);
- ◇ water (sources, amounts and composition at different stages in the process);
- ◇ energy (sources, amounts and alternatives) (e.g. types of fuels to be used and amounts; associated infrastructure (bermed tanks, etc.));
- ◇ camp facilities; and
- ◇ workforce.

◇ **Site Access and Transportation Methods**

- ◇ existing or new access (land, air or sea);
- ◇ staging areas; and
- ◇ volumes, frequency, type and weight of vehicles.

◇ **Environmental Protection and Contingency Plans**

- ◇ describe the types, volumes, handling, storage and disposal of all toxic substances;
- ◇ describe types of pollution control systems and procedures, including safety systems and procedures, and the environmental and safety standards to be met by proponent;
- ◇ describe any environmental management plans (such as acid rock drainage (ARD) control, erosion control, air and water quality control, wildlife management);
- ◇ provide a spill contingency plan that outlines the response procedures to be followed and any onsite equipment to be used for emergency situations such as spills, fire, floods or other acts of nature.

3. DESCRIPTION OF THE ENVIRONMENT

The descriptions should encompass both scientific and traditional ecological knowledge.

◊ Description of the Biophysical Environment

- ◊ site location, topography and geology, including: soils; geologic hazards: earthquakes, landslides, erosion, permafrost, acid rock drainage potential;
- ◊ hydrology - drainage region and watershed, name of nearest creek, river or lake system; water quality and flow characteristics;
- ◊ ecology -important flora and fauna, their habitats, distribution, migration routes and relationships to other species; rare and endangered species; ecological succession; existing environmental stresses;
- ◊ a list of the *Valued Ecosystem Components*, including a list of all globally, nationally, provincially or locally rare, sensitive or protected species found in the project environment, and their significance;
- ◊ climate -daily and monthly averages and extremes of temperature, humidity, wind speed and direction, precipitation and storms, violent weather; noise
- ◊ an overview of traditional knowledge of the environment;
- ◊ land use -traditional use areas; special land designation, commercial, industrial, residential, recreational; land capability; transportation routes and corridors (road, water, air); utilities and transmission lines; water resources; and
- ◊ other imminent plans that will affect land use.

◊ Description of the Social, Cultural and Economic Environments

- ◊ elements and features considered to be unique to the area and/or its inhabitants and their quality of life
- ◊ list the affected communities, outpost camps, traditional use areas, camps and tourist facilities;
- ◊ socio-economic conditions (including lifestyle and types of employment)
- ◊ historical, scenic, cultural and natural landmarks -registries of historical places; archaeological surveys

4. DESCRIPTION OF PUBLIC CONSULTATION PROCESS

◊ provide a summary of pre-submission consultation including;

- ◊ organization(s) and person(s) consulted;
- ◊ the response of the public to the project;
- ◊ a description of the issues and concerns raised and the proponent's response to these concerns.
- ◊ a list of the Valued Ecosystem and Valued Socio-Economic Components (VECs, VSCs) that were identified during consultation;
- ◊ how the consultation has affected project design;
- ◊ an outline of existing and planned information materials such as news releases, reports, bulletins, newsletters, brochures, audio-visual materials, other print and electronic advertisements or displays; and
- ◊ any plans for future consultation activities and their timing.

- ◊ An "Executive Summary" document should be provided to the affected communities and to NIRB written in the each community's preferred language (Inuktitut or Innuinaqun).

N.B. An Inuktitut / Innuinaqun speaking community liaison person may be beneficial to the public consultation process.

5. IDENTIFICATION OF ENVIRONMENTAL EFFECTS

This is a key section in which predicted environmental, social, cultural and economic effects of the project are summarized and discussed using both traditional and scientific knowledge. The potential effects should be identified in terms of existing environmental, social, cultural and economic values.

- ◊ **Identification of Biophysical Environmental Effects**
- ◊ describe potential effects on environment and resources
 - ◊ terrain
 - ◊ water (fresh water and marine)
 - ◊ vegetation
 - ◊ fisheries
 - ◊ wildlife
 - ◊ marine mammals
 - ◊ environmental health
 - ◊ heritage resources
 - ◊ other land uses/land users
- ◊ describe the potential effects of the environment on the project (eg. floods, permafrost)
- ◊ **Identification of Social, Cultural and Economic Effects**
- ◊ describe potential effects on communities, outpost camps, tourist facilities;
- ◊ describe potential effects on the social, cultural and economic environments(eg. impacts on traditional land use and hunting, trapping or fishing);
- ◊ describe impacts on women, men, children, elders, families;
- ◊ describe impacts on aesthetics;
- ◊ estimate the amount and type of labour required, over how long, and how this is to be met for all stages of the project cycle, including construction and operation of the project;
- ◊ describe plans to hire and train northerners, and specifically the Inuit;
- ◊ describe plans to contract local or Inuit owned companies to provide services or / and products to your operation;
- ◊ if applicable, indicate whether an Inuit Impact Benefit Agreement is in process or has been completed;
- ◊ describe expected requirements for local facilities and services (electricity, water, sewage, schools, health services, housing, roads, transportation, air traffic, weather forecasting and monitoring etc.);
- ◊ describe potential effects on cultural landmarks; and
- ◊ list benefits and drawbacks associated with the project

6. IDENTIFICATION OF CUMULATIVE ENVIRONMENTAL EFFECTS

- ◊ identify past, present and imminent projects and / or activities occurring in the area; and
- ◊ describe the impacts of past and present projects / activities in combination with the potential impacts of other imminent projects.

7. IDENTIFICATION OF MITIGATION MEASURES AND RESIDUAL IMPACTS

- ◊ Describe the measures which will be used to minimize or mitigate any identified harmful environmental, social, economic, cultural and cumulative impacts and enhance any beneficial effects.

8. ABANDONMENT/DECOMMISSIONING PLANS

- ◊ Describe the options for temporary, seasonal and final closure.

N.B. NIRB will uphold a "pack-it-in" - "pack-it-out" philosophy.

9. MONITORING AND MAINTENANCE PLANS

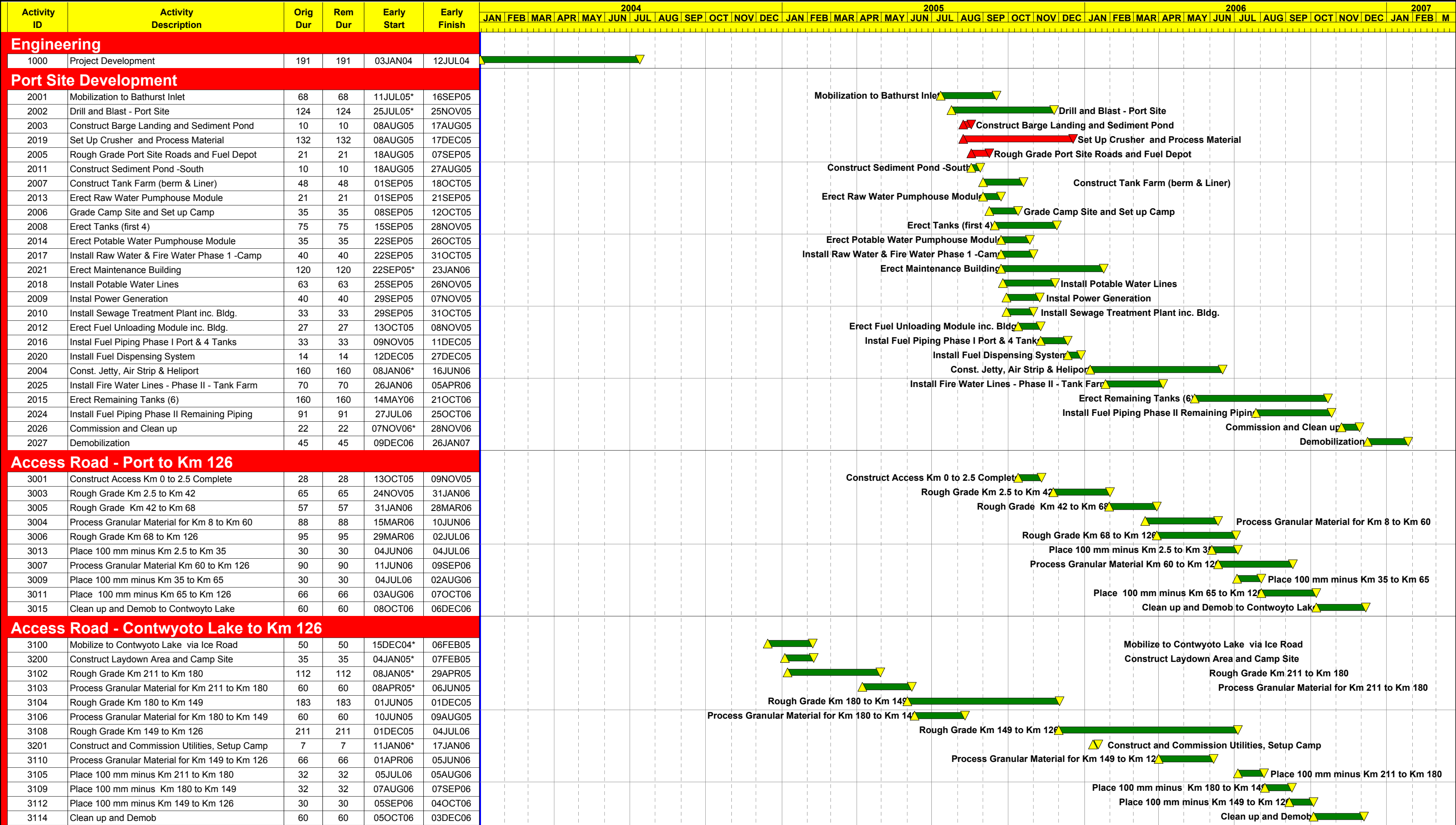
- ◊ Describe any monitoring plans and the schedule for submitting these monitoring reports to NIRB.

10. LIST INFORMATION SOURCES

- ◊ list all information sources used in the preparation of the project description; and
- ◊ list any available documentation on any baseline data that has been collected.

APPENDIX 3

DETAILED PROJECT SCHEDULE



APPENDIX 4

LAND USE AND WATER USE APPLICATIONS

NUNAVUT WATER BOARD LICENCE APPLICATION FORM

Application for licence, amendment to licence, or renewal of licence

APPLICATION/LICENCE NO: (Amendment or renewal only)	
1. NAME AND MAILING ADDRESS OF APPLICANT Bathurst Inlet Port and Road Joint Venture Ltd. c/o 666 Burrard Street, Suite 340 Vancouver, BC V6C 2X8 Phone: <u>(604) 682-4667</u> Fax: <u>(604) 682-4473</u>	2. ADDRESS OF HEAD OFFICE IN CANADA IF INCORPORATED 9839 31 Avenue Edmonton, AB T6N 1C5
3. LOCATION OF UNDERTAKING (describe and attach a map, including watercourse and location of any proposed waste deposits) Bathurst Inlet to Contwoyto Lake. Please see Project Description attached.	
4. DESCRIPTION OF UNDERTAKING (describe and attach plans) Build and operate a commercial port and toll road. Please see Project Description attached.	
5. TYPE OF UNDERTAKING ☒ Industrial ☐ Mining and Milling ☐ Municipal ☐ Power ☐ Other (describe): ☐ Conservation ☐ Agricultural ☐ Recreation	
6. WATER USE ☒ To obtain water ☒ To cross a watercourse ☐ To modify the bed or bank of water ☐ Other (describe): ☐ Flood control ☐ To divert water ☐ To alter the flow of, or store, water	

7. WASTE DEPOSIT (quantity, quality, treatment and disposal) Port (Construction and Operations) At port potable water will be by desalination; sewage will be treated prior to discharge to land field above Bathurst Inlet; all other water uses will take marine water from Bathurst Inlet. Road Construction Road construction will be from 60 person mobile camps with a 16,000 litre per day water demand with sewage treated prior to discharge onto tundra field. Contwoyto Lake Operations At Contwoyto Lake, 20 person camp requirements will be an estimated 6,000 litres per day with sewage treated prior to discharge onto tundra field.
8. OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (give name mailing address and location; attach if necessary) The Project will require the use of Inuit Owned Land and Federal Crown Land. No current and ongoing local or subsistence land uses have been noted in the course of field investigations to date. The Project Description provides locations of known heritage sites along the proposed road alignment.
9. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION Please see Project Description provided.
10. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)
11. STUDIES UNDERTAKEN TO DATE (attach if necessary) Please see Project Description provided; Project EIS to be submitted that meets requirements of NIRB. Guidelines requested.
12. PROPOSED TIME SCHEDULE Start Date: <u>September 2005</u> Completion Date: <u>December 2006</u>

A. J. Keen, P.Eng.

Name (Print)

Project Manager

Title (Print)

Signature



Application No./N° de la demande

**APPLICATION FOR AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT
DEMANDE D'AUTORISATION POUR DES OUVRAGES OU ENTREPRISES MODIFIANT L'HABITAT DU POISSON**

I, the undersigned, hereby request authorization to carry out the works or undertakings described on this application form. I understand that the approval of this application, if granted, is from the Minister of Fisheries and Oceans standpoint only and does not release me from my obligation to obtain permission from other concerned regulatory agencies.

Je soussigné, demande par les présentes l'autorisation d'exploiter les ouvrages ou entreprises décrits dans la formule. Je comprends que l'approbation de cette demande, le cas échéant, porte sur ce qui relève du ministre des Pêches et des Océans et ne me dispense pas d'obtenir la permission d'autres organismes réglementaires concernés.

If an authorization is granted as a result of this application, I hereby agree to carry out all activities relating to the project within the designated time frames and conditions specified in the authorization.

Si la demande est approuvée, je consens par les présentes à exécuter tous les travaux relatifs à ce projet selon les modalités et dans le laps de temps prescrits dans l'autorisation.

Applicant's Name (Please Print) Bathurst Inlet Port and Road Joint Venture Ltd Nom du requérant (lettres moulées)

Applicant's Business Address c/o Nuna Logistics Adresse d'affaires du requérant

666 Burrard Street, Suite 340

Vancouver, BC V6C 2X8

Applicant's Telephone No./ N° de téléphone du requérant 604 682 4667

Date May 12, 2003

I solemnly declare that the information provided and facts set out in this application are true, complete and correct, and I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath. This declaration applies to all material submitted as part of this application.

Je déclare solennellement que les renseignements fournis et les faits énoncés dans cette demande sont véridiques, complets et exacts, et je fais cette déclaration solennelle, la croyant consciencieusement vraie et sachant qu'elle a la même force et le même effet que si elle était faite sous serment. Cette déclaration s'applique à tout document qui est présenté dans le cadre de cette demande.

"A.J.Keen"

Signature du requérant (et sceau de la société)

Applicant's Signature (and corporate seal)

Name of watercourse or waterbody (give coordinates)
Cours d'eau ou plan d'eau (donner les coordonnées)

Please see schedule attached.

This watercourse is a tributary of (where applicable)
Cours d'eau tribulaire de (le cas échéant)

Please see schedule attached.

Nearest community
Localité la plus proche

County
Comté

Province
Province

Bathurst Inlet

Kitikmeot

Nunavut



Application No./N° de la demande

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Type of Activity/Genre d'activité

- | | | | |
|--|---|--|---|
| ☒ Bridge
Pont | ☐ Stream Realignment
Alignement de cours d'eau | ☐ Gravel Removal
Enlèvement du gravier | ☒ Stream Traverse
Traversée de cours d'eau |
| ☒ Culvert
Ponceau | ☐ Channelization
Canalisation | ☐ Obstruction Removal - Bypass
Enlèvement ou contournement
d'obstacle | ☐ Seismic Survey
Levé sismique |
| ☐ Dam
Barrage | ☒ Wharf - Break water
Quai - Brise-lames | ☐ Stream Utilization - Recreation
Utilisation récréative du cours d'eau | ☐ Agriculture |
| ☐ Stream Diversion
Dérivation de cours d'eau | ☐ Dewatering
Assèchement | ☐ Erosion Control
Lutte contre l'érosion | ☐ Other (specify)
Autres (préciser) |
| ☐ Mining
Activité minière | ☐ Aquaculture | ☐ Flood Protection
Protection contre les inondations | |

**List of Agencies (Federal, Provincial or Municipal) contacted or notified, or who have initiated contact with the applicant.
Liste des organismes (fédéraux, provinciaux ou municipaux) contactés ou qui ont pris contact avec le requérant.**

Kitikmeot Inuit Association – Cambridge Bay and Kugluktuk

Indian and Northern Affairs Canada - Iqaluit

Nunavut Water Board – Gjoa Haven

**PROVIDE DETAILS OF PROPOSED ACTIVITY INCLUDING REASONS FOR THE PROJECT AND TYPES OF EQUIPMENT TO BE USED
DONNER DES PRÉCISIONS SUR LES TRAVAUX PROJETÉS, Y COMPRIS LA JUSTIFICATION DU PROJET ET
LE TYPE D'ÉQUIPEMENT À UTILISER**

Please see Project Description attached.

- the proposed sheet pile wharf and barge dock at the port on Bathurst Inlet will cover approx. 26,000m² near shore ocean floor in Bathurst Inlet;
- water crossings of known fish bearing streams will not encroach on the stream bed. (Table 20).



**APPLICATION FOR AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT
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SCHEDULE/CALENDRIER

	D/J	M/M	Y/A
Proposed Starting Date Date prévue du début des travaux	<u>01</u>	<u>09</u>	<u>2005</u>
Proposed Completion Date Date prévue de l'achèvement des travaux	<u>31</u>	<u>12</u>	<u>2006</u>

Approximate Timing of Work in shoreline, foreshore, tidal zone, or underwater areas.
Période approximative des travaux sur le rivage et les estrans ainsi que dans les zones à marées et les zones sous-marines.

	D/J	M/M	Y/A		D/J	M/M	Y/A
From/De	<u> </u>	<u> </u>	<u> </u>	To/À	<u> </u>	<u> </u>	<u> </u>

Please see detailed Project Schedule in Appendix 3 of Project Description.

The following documents will assist in assessing your application and help expedite its approval. Please check which documents you have attached.

Les documents suivants faciliteront l'évaluation de votre demande et permettront d'accélérer son approbation. Veuillez cocher les documents vous avez joints à votre demande.

Map indicating location of project	☒	Carte indiquant l'emplacement du projet
Engineering Specifications (preliminary)	☒	Spécifications techniques
Scale Drawings	☒	Dessins à l'échelle
Dimensional Drawings	☒	Plans cotés
Assessment of Existing Fish Habitat Characteristics	☒	Évaluation des caractéristiques existantes de l'habitat du poisson
Assessment of Potential Effects of Project on Fish Habitat	☒	Évaluation des répercussions possibles sur l'habitat du poisson
Measures Proposed to Offset Potential Damage to Fish Habitat	☐	Mesures proposées pour compenser les éventuels dommages à l'habitat du poisson
• to be developed in consultation with DFO and KIA		
Other	☐	Autres

**ENVIRONMENTAL ASSESSMENT AND REVIEW PROCESS
CONSIDERATIONS**

NOTE: All applications pursuant to section 35 of the Fisheries Act will be assessed in accordance with applicable federal environmental assessment requirements.

**CONSIDÉRATIONS CONCERNANT LE PROCESSUS
D'ÉVALUATION ET D'EXAMEN EN MATIÈRE D'ENVIRONNEMENT**

REMARQUE : Toute demande en vertu l'article 35 de la Loi sur les pêches sera soumise aux exigences fédérales applicables à l'évaluation environnementale.



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COMPLETE ONLY IF USE OF EXPLOSIVES IS INTENDED
À REMPLIR SEULEMENT EN CAS D'UTILISATION D'EXPLOSIFS

EXPLOSIVES CONTRACTOR (IF DIFFERENT FROM APPLICANT)/RESPONSABLE DES EXPLOSIFS (SI AUTRE QUE LE REQUÉRANT)

Name/Nom : _____

Address/Adresse : _____

Telephone No./N° de téléphone : _____

	D/J	M/M	Y/A		D/J	M/M	Y/Y
Anticipated Starting Date				Completion Date			
Date prévue du début des travaux	_____	_____	_____	Date d'achèvement	_____	_____	_____

DETAILS OF EXPLOSIVES/PRÉCISIONS SUR LES EXPLOSIFS

Type (including trade name)
Genre (y compris la marque)

Weight and configuration (where applicable)
Poids et forme (le cas échéant)

Weight of individual shots and shot pattern where multiple charges are used
Poids des coups individuels et déploiement des coups, en cas de charges multiples

Detonation depth (in the rock; note also the depth of water, if applicable)
Profondeur de détonation (dans le roc; indiquer aussi la profondeur de l'eau, s'il y a lieu)

Method of detonation
Méthode de détonation

Table 20 Location, watershed, and fish habitat characteristics for water crossings

From Bathurst Inlet to Contwoyto Lake							
Final Road Chainage km	Watershed Area km ²	Habitat Quality Rating*	Estimated Stream Depth Design 1:25 yr m	Estimated Streamflow Design 1:25 yr m ³ /s	Crossing Type/Length		
					Rock Fill m	Arch m	Bridge m
2.5	66.4	High	0.45	16.38			20
3.0	1.1	Low		0.63	X		
7.7	6.8	Low		2.68		X	
14.3	75.3	Low	0.83	18.09			10
18.7	1.7	Low		0.89	X		
21.5	1143.1	High	0.98	156.68			50
23.2	N/A	Nil		N/A	X		
24.8	0.7	Nil		0.44	X		
25.3	0.5	Nil		0.34	X		
28.5	3.4	Nil		1.55	X		
30.2	N/A	Nil		N/A	X		
31.5	0.3	Nil		0.23		X	
31.8	N/A	Medium		N/A		X	
31.9	42.7	Low	0.35	11.54			30
32.9	60.5	Medium	0.39	15.21			30
33.9	43.0	Medium	0.32	11.60			30
36.3	0.2	Nil		0.16	X		
36.9	0.4	Medium		0.28	X		
37.6	N/A	Nil		N/A	X		
38.6	2.6	Nil		1.25	X		
39.5	N/A	Nil		N/A	X		
40.2	9.5	Medium	0.22	3.50			20
41.5	6.1	Nil		2.46	X		
42.8	2.0	Medium		1.02		X	
45.5	2.5	Nil		1.21	X		
48.0	9.9	Medium		3.62		X	
50.5	46.3	Nil	0.59	12.30			20
52.4	3.6	Nil		1.62	X		
54.0	0.7	Nil		0.44	X		