Environment Canada Environnement Canada

Annual Arctic Ice Atlas

Winter 2006

By

Canadian Ice Service
Le service canadien des glaces

Canada

Table of Content

Freeze-Up and Winter Ice Regime

Hudson Bay and Approaches

Temperatures were above normal over most of the area from October through the end of January. The exception was Davis Strait where temperatures were near normal in January. Freeze-up was delayed by two to three weeks over all areas. As a result, by the end of January, the calculated and measured ice thicknesses were less than normal.

New ice started to form along the shores of Southampton Island, in Roes Welcome Sound and along the northwestern shore of Hudson Bay during the second week in November. By the end of November, new and grey ice lay along the western and southern shores of Hudson Bay, James Bay and southern Ungava Bay. There was mostly grey ice over northwestern Hudson Bay, Foxe Channel and off Southampton Island to west of Nottingham Island. The main ice pack in Davis Strait lay north of Cumberland Sound with patchy new ice along the southern Baffin Island Coast. Freeze-up was three weeks later than normal.

Hudson Bay and Hudson Strait became completely ice covered with grey to thin first year ice just before Christmas Day. At this time the main ice edge lay near Cape Chidley with new ice along the Labrador Coast, grey ice in Frobisher Bay and Cumberland Sound and greywhite to thin first year offshore. The trace of old ice lay near Resolution Island.

By the beginning of February, most of Hudson Bay and Hudson Strait was covered with thin to medium first year ice, the Labrador Coast and northwestern Hudson Bay with greywhite to thin first year ice and Davis Strait with thin first year ice. The ice extent was near normal. The trace of old ice lay 100 miles north of Nain at this time.

Eastern Arctic

Above normal temperatures were recorded over all areas during the months of October and November. Freeze-up started about a week later than normal. Temperatures dropped in December to near normal over the central Arctic but remained above normal elsewhere. In January near normal temperatures were reported over Baffin Bay and Foxe Basin while the remainder of the Eastern Arctic was above normal. By the end of January, near normal ice conditions were reported over the entire area. Calculated and measured ice thicknesses were slightly less than normal.

By the end of the summer of 2005, the old ice distribution was near normal. Around mid-September, new ice started forming in Eureka Sound, Norwegian Bay, Barrow Strait and a week later in Wellington Channel and Prince Regent Inlet. By early October this ice had thickened to mostly grey ice.

By the end of October this grey ice had thickened to mostly thin first year with grey ice over northwestern Baffin Bay and new ice over northern Foxe Basin. Freeze-up was getting under way.

At mid-November, Eureka Sound, Norwegian Bay, northeastern Wellington Channel had consolidated. By the end of November, Admiralty Inlet, Pelly Bay, southern portions of Committee Bay and portions of Foxe Basin consolidated. At this time the ice growth in Baffin Bay extended southward along the eastern side of Baffin Island to the entrance of Cumberland Sound and to 74N along the western Greenland Coast. Freeze-up in Baffin Bay was about 10 days later than normal. There was patchy two tenths of old ice in Central Baffin Bay. Foxe Basin was covered with greywhite to thin first year ice.

By the end of December, Barrow Strait west of Resolute Bay had become consolidated. The bergy water lead along the west Greenland Coast extended north of Disco Island to 73N.

By the beginning of February, the ice extent was near normal. Barrow Strait had consolidated with Lancaster Sound and Prince Regent Inlet remaining mobile. Robeson Channel to Kane Basin remained mobile allowing old ice to continue flowing from the north into Baffin Bay. There was a long line of 2 tenths of old ice in the main ice pack in Baffin Bay. The bergy water along the west Greenland Coast lay south of Disco Island. The ice extent was near normal but the calculated ice thicknesses remained less than normal.

Western Arctic

Temperatures were above normal in October, near to above normal in November and above normal in December. A northwest flow brought colder temperatures to the Beaufort Sea in January. At this time, temperatures were slightly below normal over the Beaufort Sea and above normal in the Amundsen Gulf eastwards. By the end of January, the ice extent was near normal. The old ice edge was near normal off the Tuktoyaktuk Peninsula and Banks Island but slightly closer than normal in the Beaufort Sea with an intrusion of old ice just along the Alaskan Coast just west of Point Barrow. The measured ice thicknesses were less than normal at Inuvik and near normal at Cambridge Bay.

At the beginning of freeze-up, the old ice extent was slightly greater than normal over Larsen Sound. Some of this old ice flowed from Larsen Sound through Victoria Strait into northwestern Queen Maud Gulf. Elsewhere, there was open water from St. Roch Basin through Dease Strait into the Amundsen Gulf and along the Alaskan Coast. The main pack of old ice was near normal along the Alaskan Coast. New ice growth started in mid-September over Larsen and Peel Sounds which was near normal.

By mid-October, there was rapid ice growth and expansion with new and grey ice along the Alaskan Coast to Point Barrow, in Mackenzie Bay eastward to Queen Maud Gulf to St.ch Basin. Peel Sound had thickened to greywhite and thin first year with more old ice than normal in Larsen Sound and central Queen Maud Gulf. One week later, portions of the Tuktoyaktuk Peninsula and Queen Maud Gulf had become consolidated. Ice had thickened in the waterways to grey and greywhite. By the end of October, mostly grey ice covered much of Beaufort Sea south of the main old ice pack. The old ice pack was well offshore.

At mid-November, Peel Sound had consolidated. A week later, Roch Basin through the Queen Maud Gulf to Coronation Gulf became consolidated. By the end of November, the inland waters of the Western Arctic from Viscount Melville Sound through Larsen Sound to the Coronation Gulf were consolidated. Ice had thickened to thin first year over the Amundsen Gulf and Beaufort Sea with the old ice edge about 50 miles off Banks Island and 70 miles north of the Tuktoyaktuk Pensinula and 30 miles off Point Barrow.

By the end of December, Amundsen Gulf and along the Alaskan Coast to the old ice edge was covered with thin and medium first year with a trace of old ice. The waterways was completely consolidated with medium first year ice except for embedded seven tenths of old ice in the central portion of the Queen Maud Gulf.

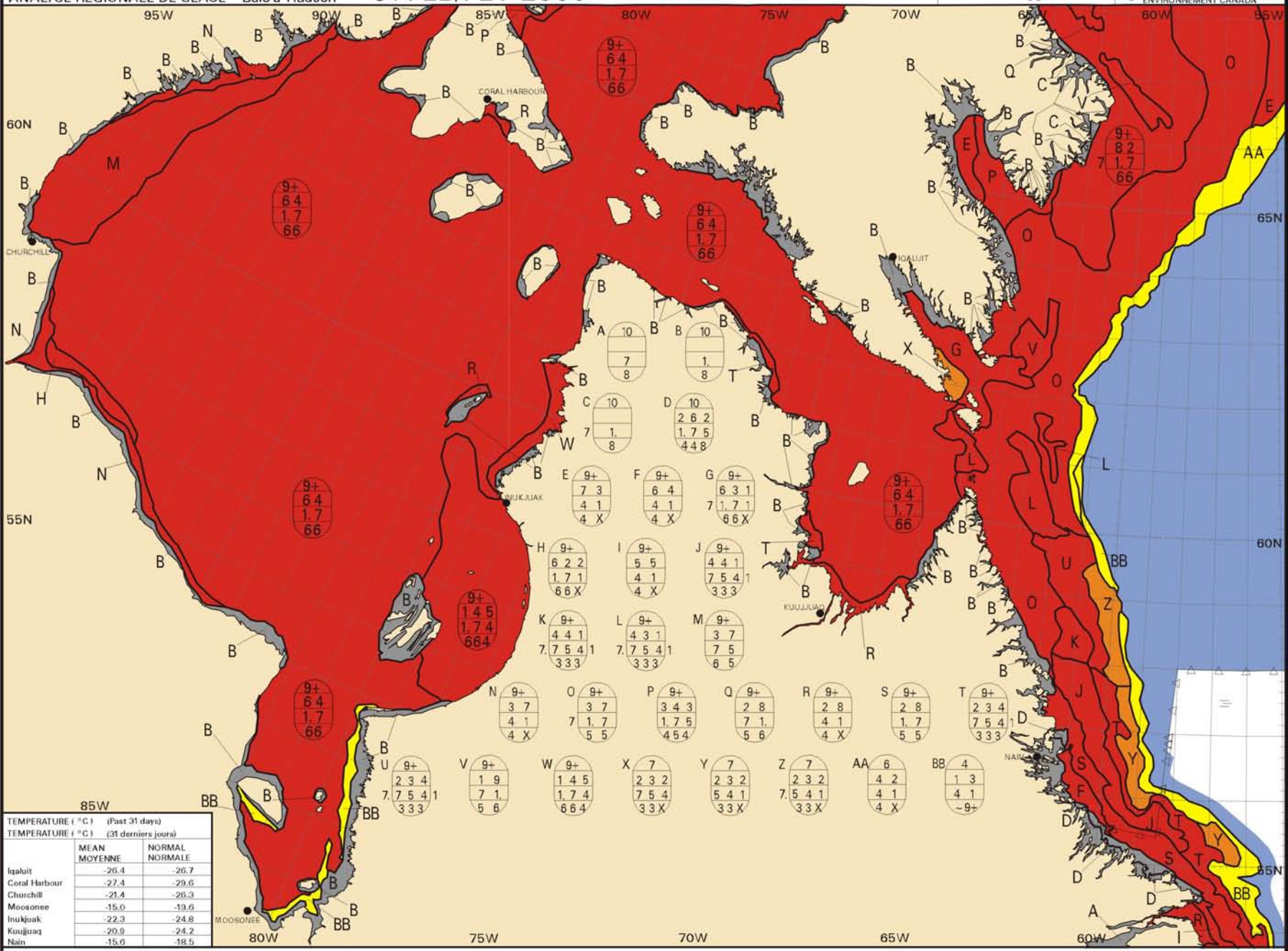
During the month of January, the fast ice edge along the Alaskan Coast and Amundsen Gulf thickened to thick first year with a trace of old ice. There was a mean northwesterly flow over the Beaufort Sea during this period causing the main pack of old ice to move slightly eastwards and southwards over the Beaufort Sea but near the coast around Point Barrow. By the end of January, the old ice edge lay 50 miles west of Banks Island, 100 miles north of the Tuktoyaktuk Peninsula but along the coast near Point Barrow southwestwards. It is unusual to have an old ice concentration of five tenths just west of Point Barrow.

REGIONAL ICE ANALYSIS
ANALYSE REGIONALE DE GLACE

Hudson Bay
Baie d'Hudson

01 FEB/FEV 2006

CANADIAN ICE SERVICE
SERVICE CANADIEN DES GLACES
JC



TEMPERATURE (°C) (Past 31 days) / TEMPERATURE (°C) (31 derniers jours)	MEAN MOYENNE	NORMAL NORMALE
Iqaluit	-26.4	-26.7
Coral Harbour	-27.4	-29.6
Churchill	-21.4	-26.3
Moosonee	-15.0	-19.6
Inukjuak	-22.3	-24.8
Kuujjuaq	-20.9	-24.2
Nain	-15.6	-18.5

WMO Colour Code - Concentration

Code de couleurs de l'OMM - Concentration

- Ice Free / Eau libre
- < 1/10
- 1-3/10
- 4-6/10
- 7-8/10
- 9-10/10
- Fast Ice / Banquise côtière
- ? ? Undefined / Indéterminée
- New Ice / Nouvelle glace
- Nilas/Grey Ice / Nilas/glace grise

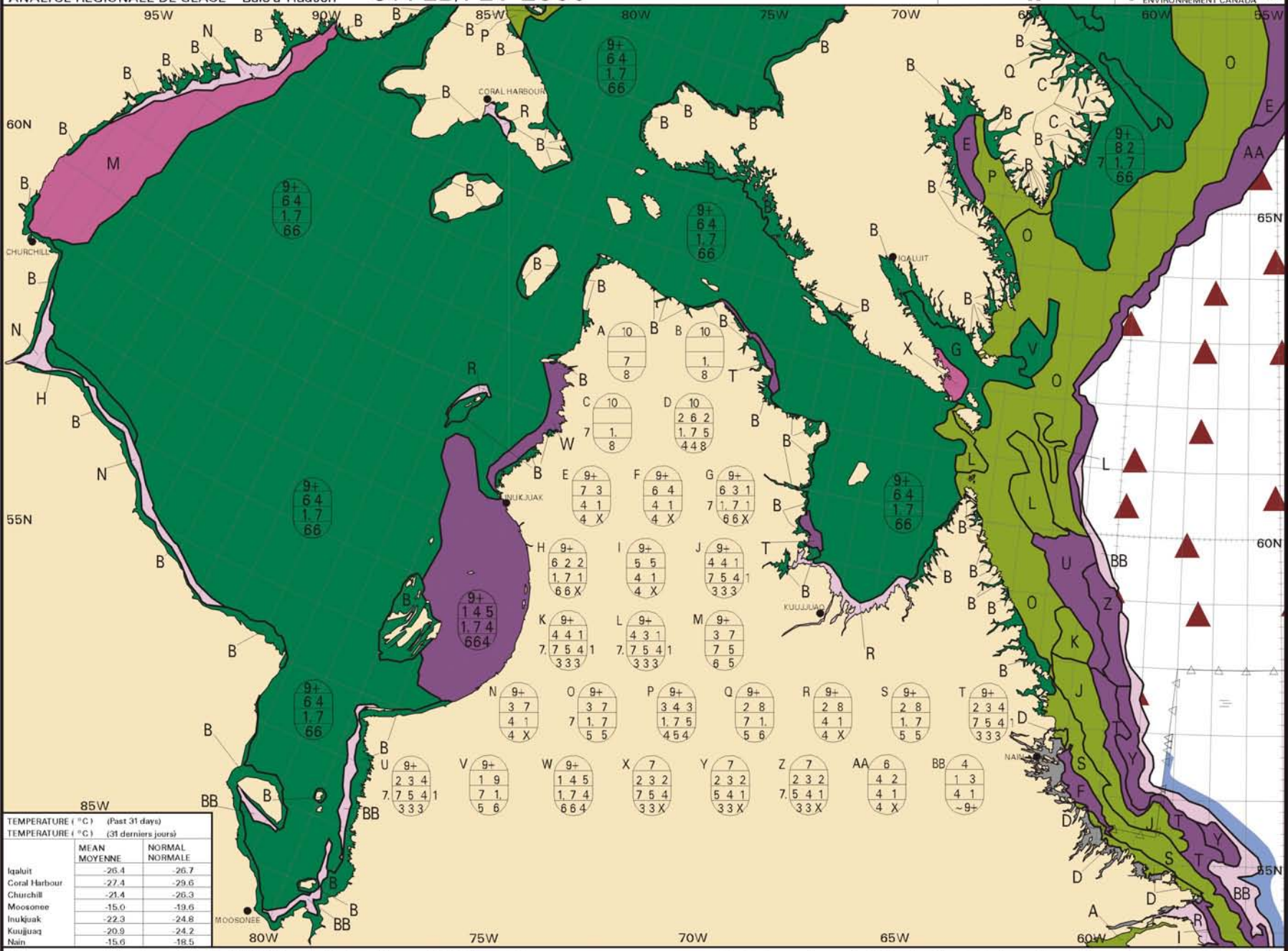
REGIONAL ICE ANALYSIS
ANALYSE REGIONALE DE GLACE

Hudson Bay
Baie d'Hudson

01 FEB/FEV 2006

CANADIAN ICE SERVICE
JC

SERVICE CANADIEN DES GLACES



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WMO Colour Code - Stage of Development

- Ice Free / Eau libre
- Open Water / Eau Libre
- Icebergs
- New / Nouvelle
- Grey / Grise
- Grey-white / Blanch âtre
- First-year / Première ann ée

Code de couleurs de l'OMM - Stade de formation

- Thin First-year / Mince de premi ère ann ée
- Medium First-year / Moyenne de premi ère ann ée
- Thick First-year / Epaisse de premi ère ann ée
- Old ice / Vieille glace
- Second-year / Deuxième ann ée
- Multi-year / Plusieurs ann ées
- Undefined Fast Ice / Indéfini Banquise c ôtière
- Undefined / Indéterminée

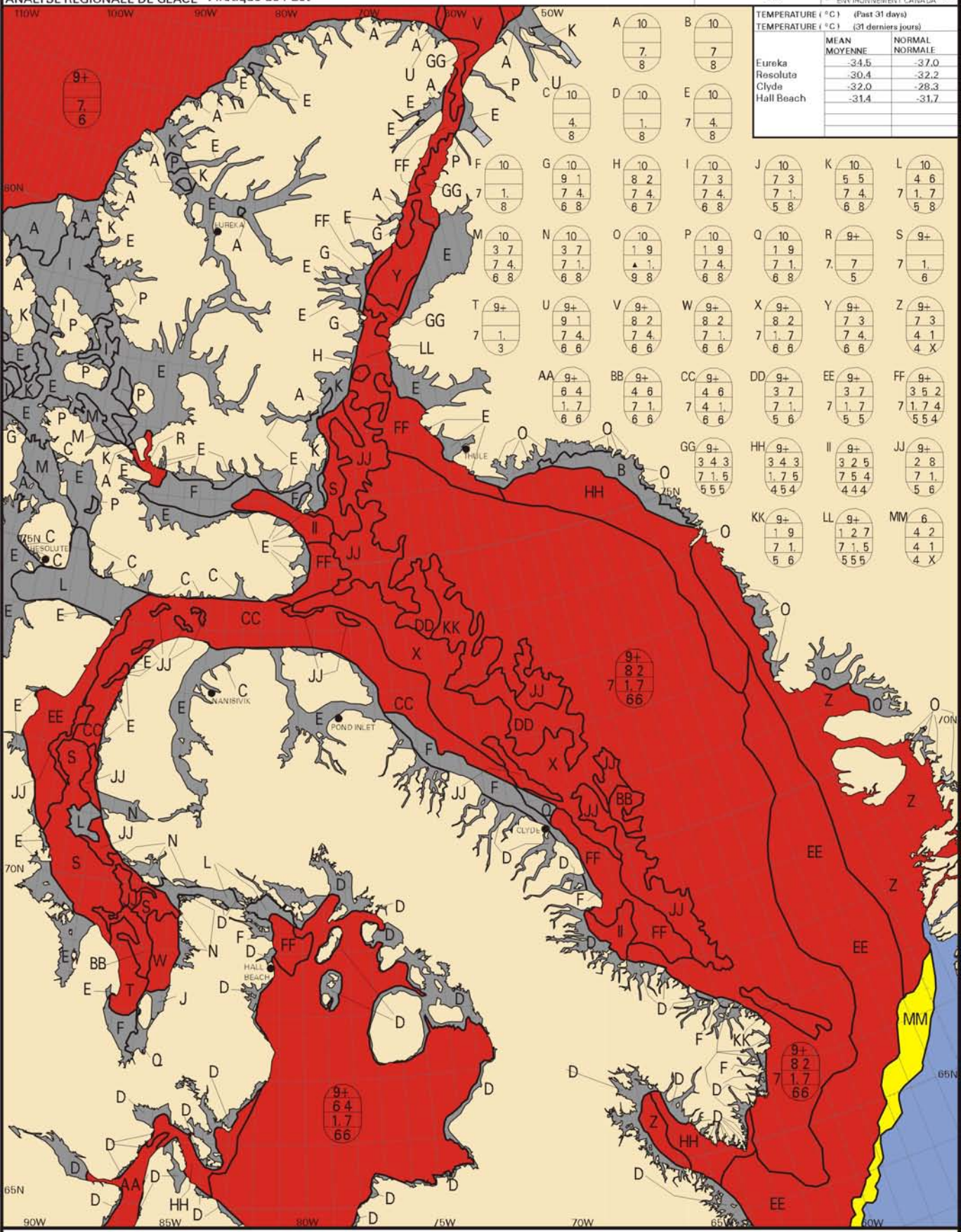
REGIONAL ICE ANALYSIS
ANALYSE REGIONALE DE GLACE

Eastern Arctic
Arctique de l'Est

01 FEB/FEV 2006

CANADIAN ICE SERVICE
SERVICE CANADIEN DES GLACES
JC
ENVIRONMENT CANADA
ENVIRONNEMENT CANADA
2006

TEMPERATURE (°C) (Past 31 days) / TEMPERATURE (°C) (31 derniers jours)	MEAN MOYENNE	NORMAL NORMALE
Eureka	-34.5	-37.0
Resolute	-30.4	-32.2
Clyde	-32.0	-28.3
Hall Beach	-31.4	-31.7



WMO Colour Code - Concentration

Ice Free / Eau libre
< 1/10
1-3/10
4-6/10
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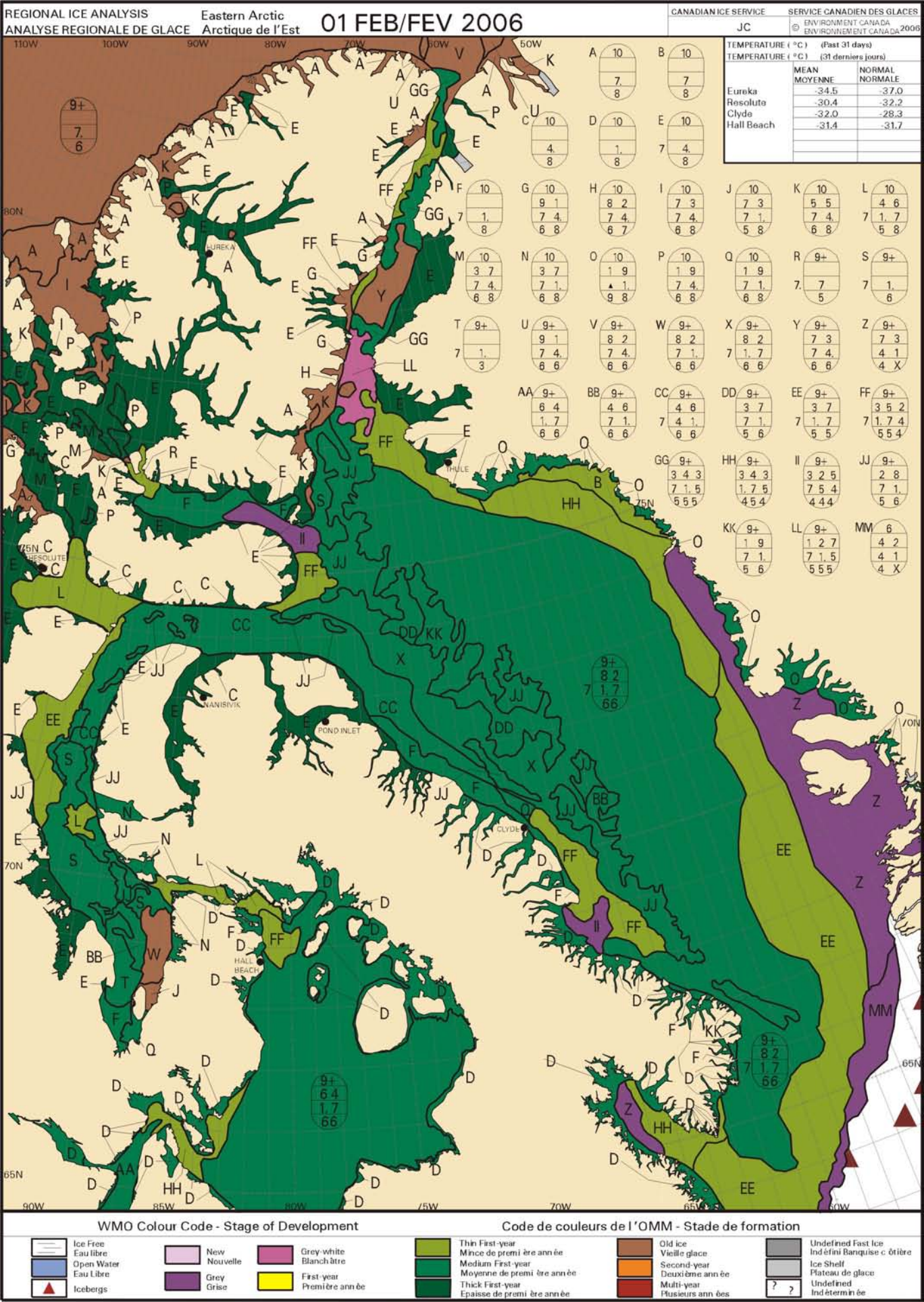
9-10/10

Code de couleurs de l'OMM - Concentration

New Ice / Nouvelle glace
Nilas/Grey Ice / Nilas/glace grise
Fast Ice / Banquise c ôtière
Ice Shelf / Plateau de glace
? ? Undefined / Indéterminée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Arctique de l'Est
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110W
100W
90W
80W
70W
60W
50W
80N
75N
70N
65N
EUREKA
RESOLUTE
THULE
NANISIVIK
POND INLET
CLYDE
HALL BEACH
90W
85W
80W
75W
70W
65W
60W
WMO Colour Code - Stage of Development
Code de couleurs de l'OMM - Stade de formation
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Vieille glace
Second-year
Deuxième ann ée
Multi-year
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Undefined Fast Ice
Ind éfini Banquise c ôtière
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Plateau de glace
Undefined
Ind étermin ée

REGIONAL ICE ANALYSIS
ANALYSE REGIONALE DE GLACE

Western Arctic
Arctique de l'Ouest

01 FEB/FEV 2006

CANADIAN ICE SERVICE
SERVICE CANADIEN DES GLACES

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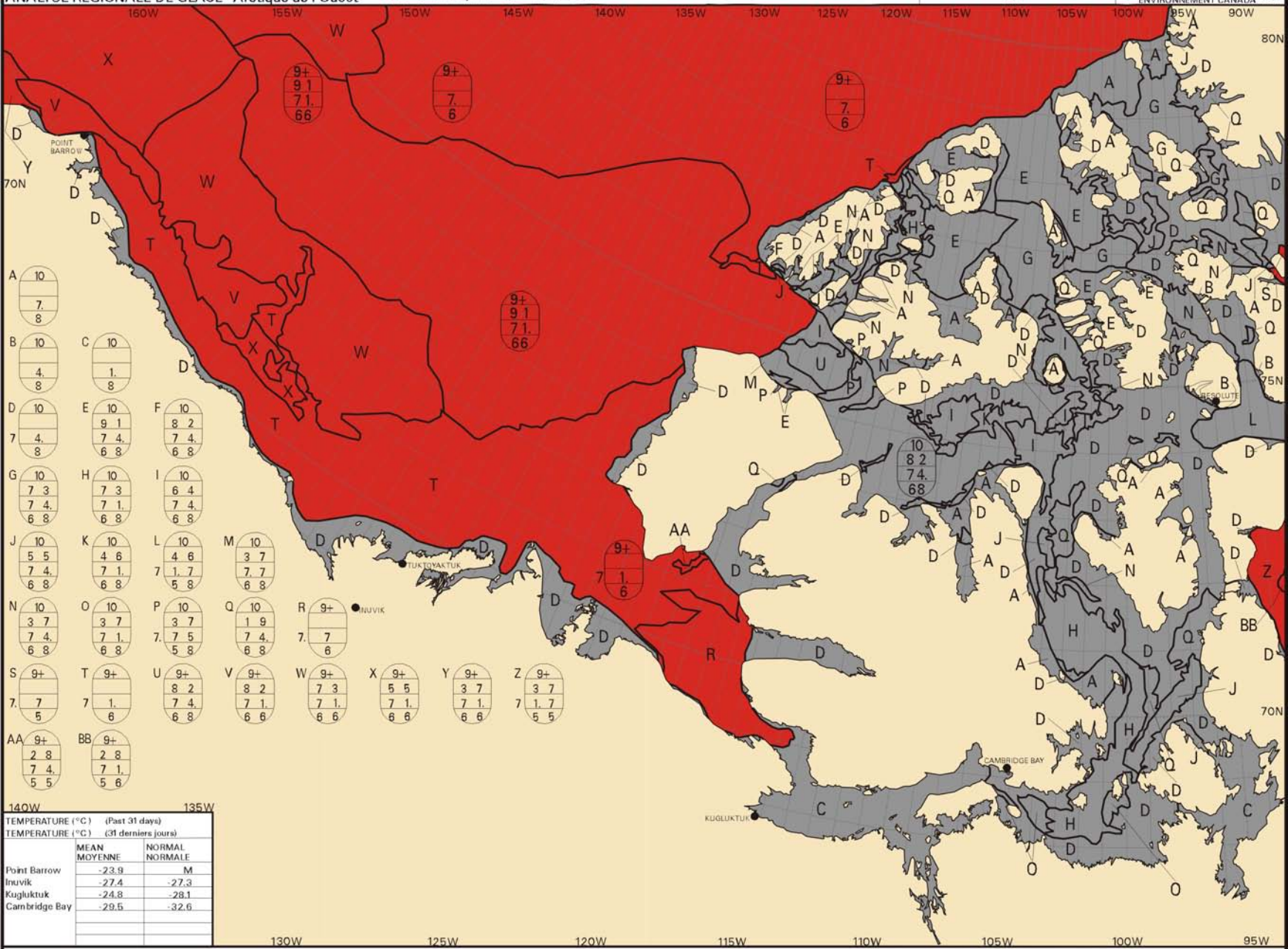

TEMPERATURE (°C) (Past 31 days)
TEMPERATURE (°C) (31 derniers jours)

	MEAN MOYENNE	NORMAL NORMALE
Point Barrow	-23.9	M
Inuvik	-27.4	-27.3
Kugluktuk	-24.8	-28.1
Cambridge Bay	-29.5	-32.6

WMO Colour Code - Concentration

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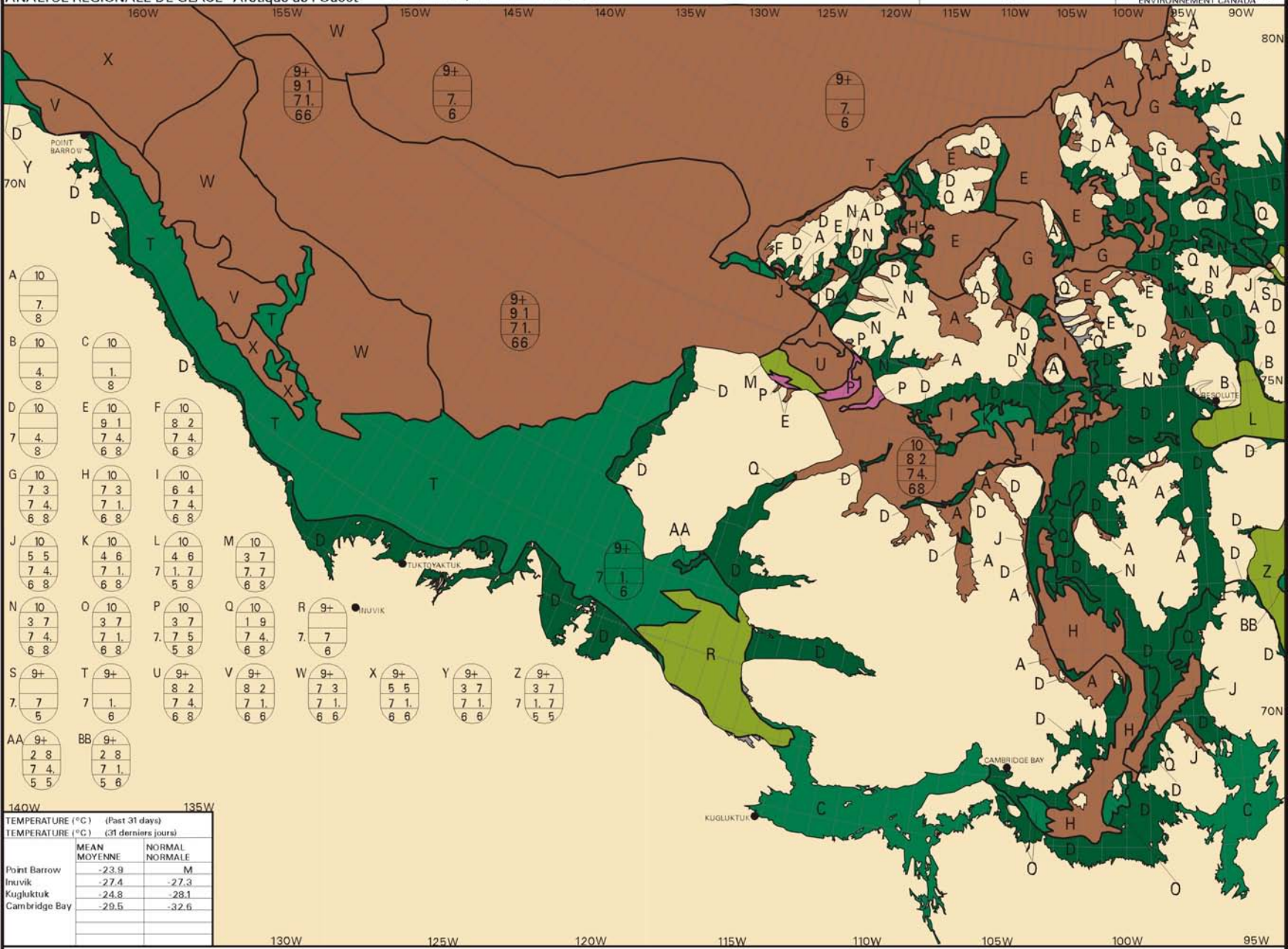

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Ice Free
Eau libre

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Eau Libre

Icebergs

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Nouvelle

Grey
Grise

Grey-white
Blanchâtre

First-year
Première année

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Medium First-year
Moyenne de première année

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Old ice
Vieille glace

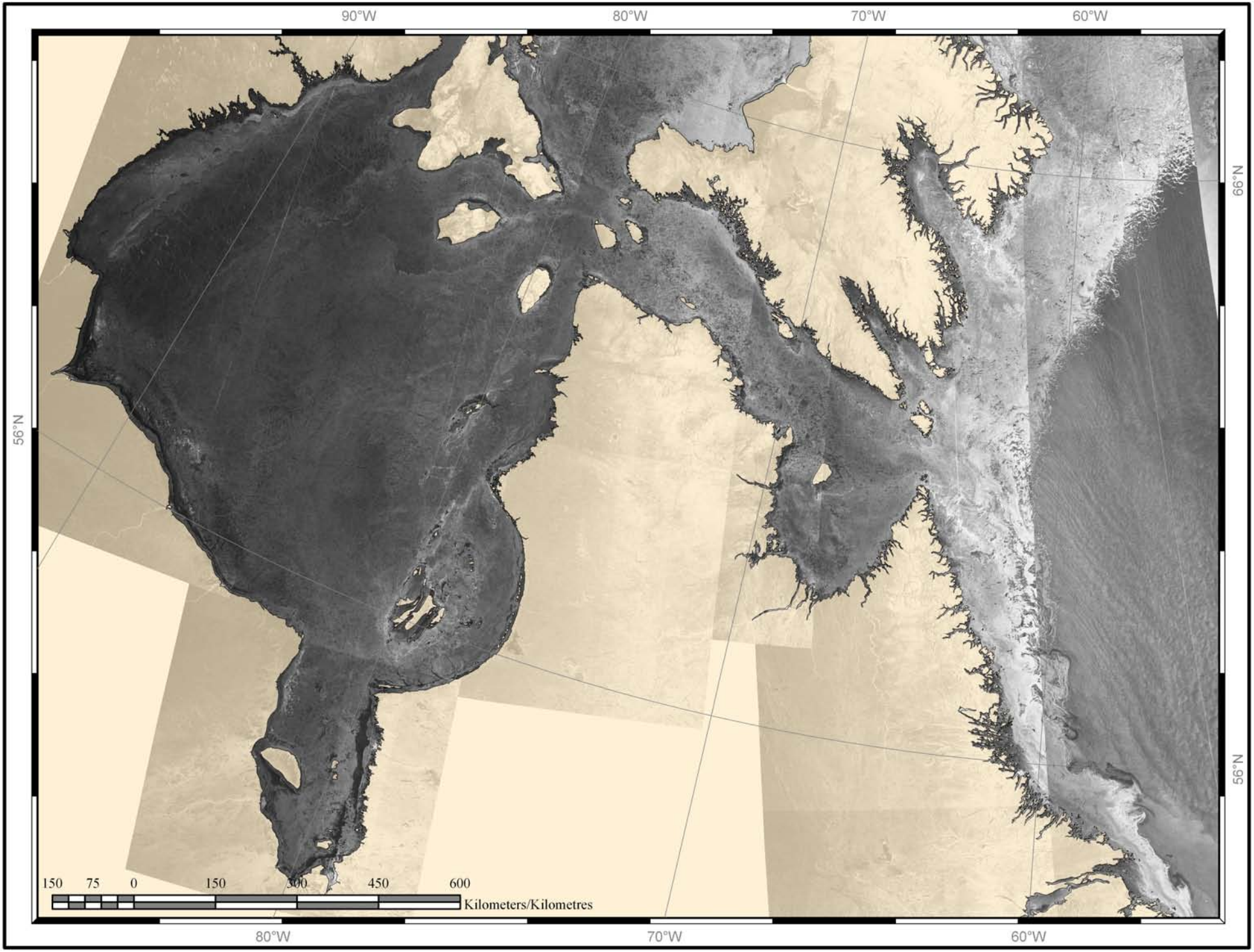
Second-year
Deuxième année

Multi-year
Plusieurs années

Undefined Fast Ice
Indéfini Banquise côtière

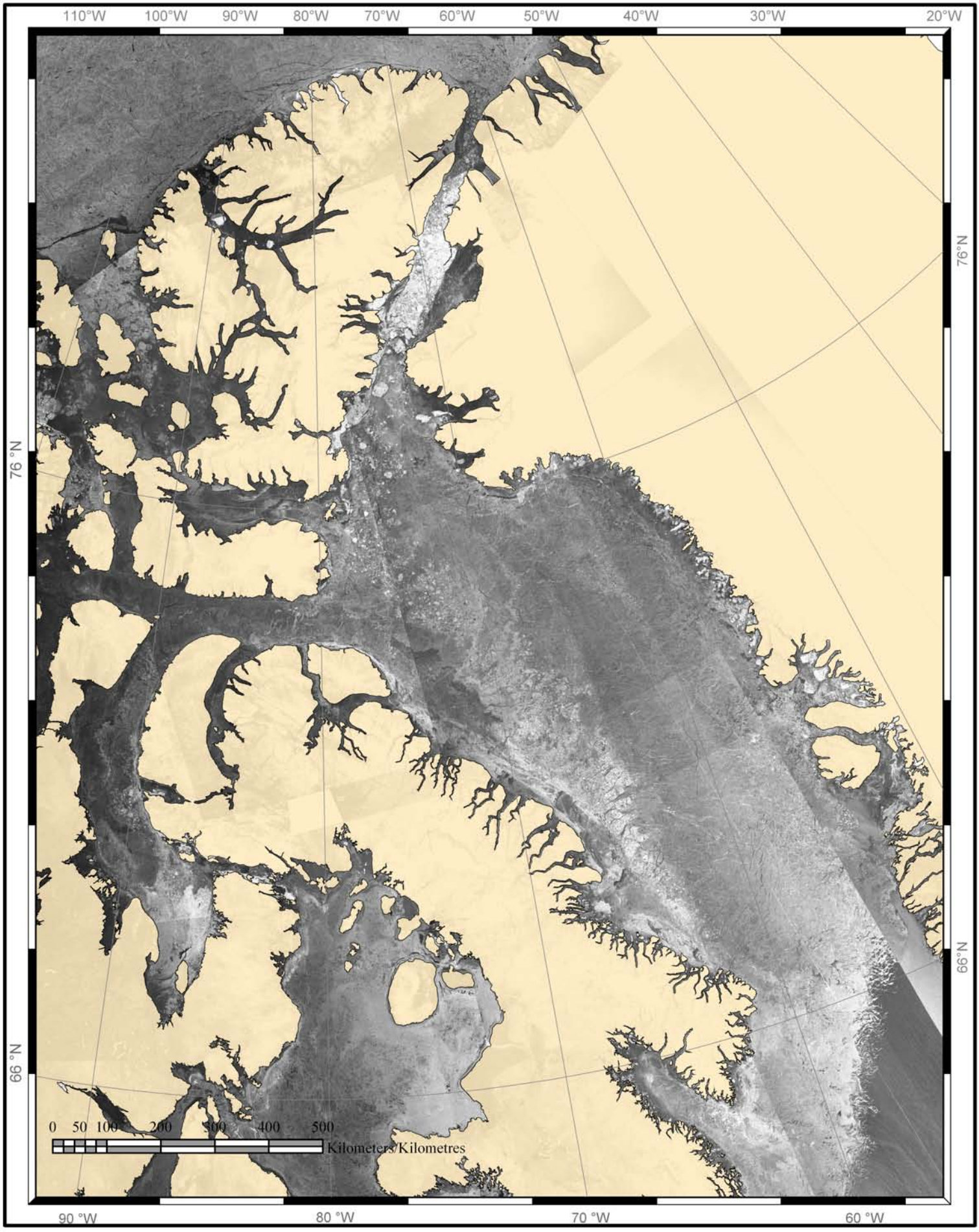
Ice Shelf
Plateau de glace

Undefined
Indéterminée



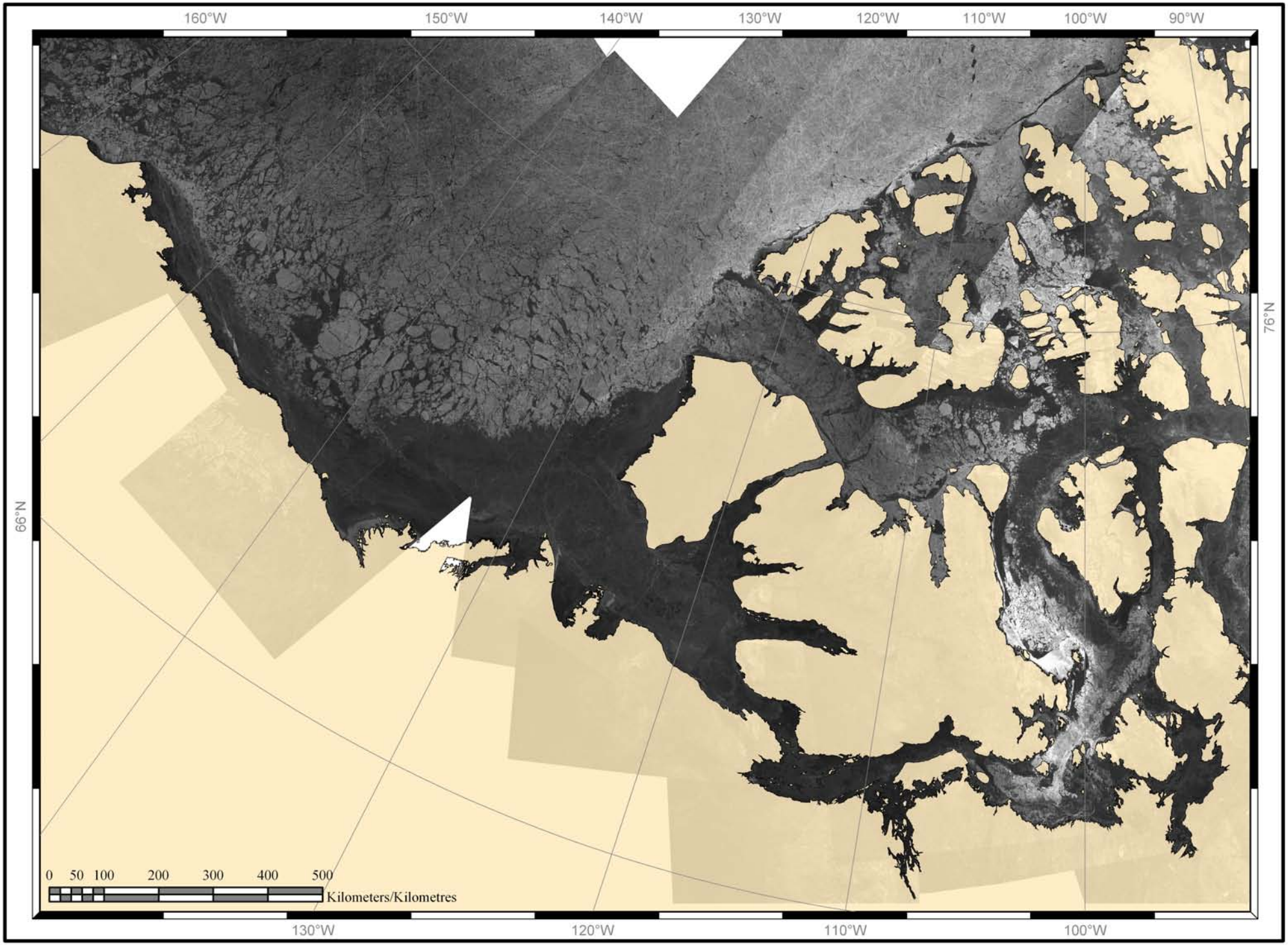
HUDSON BAY / BAIE D' HUDSON

Jan 30 - Feb 2 2006



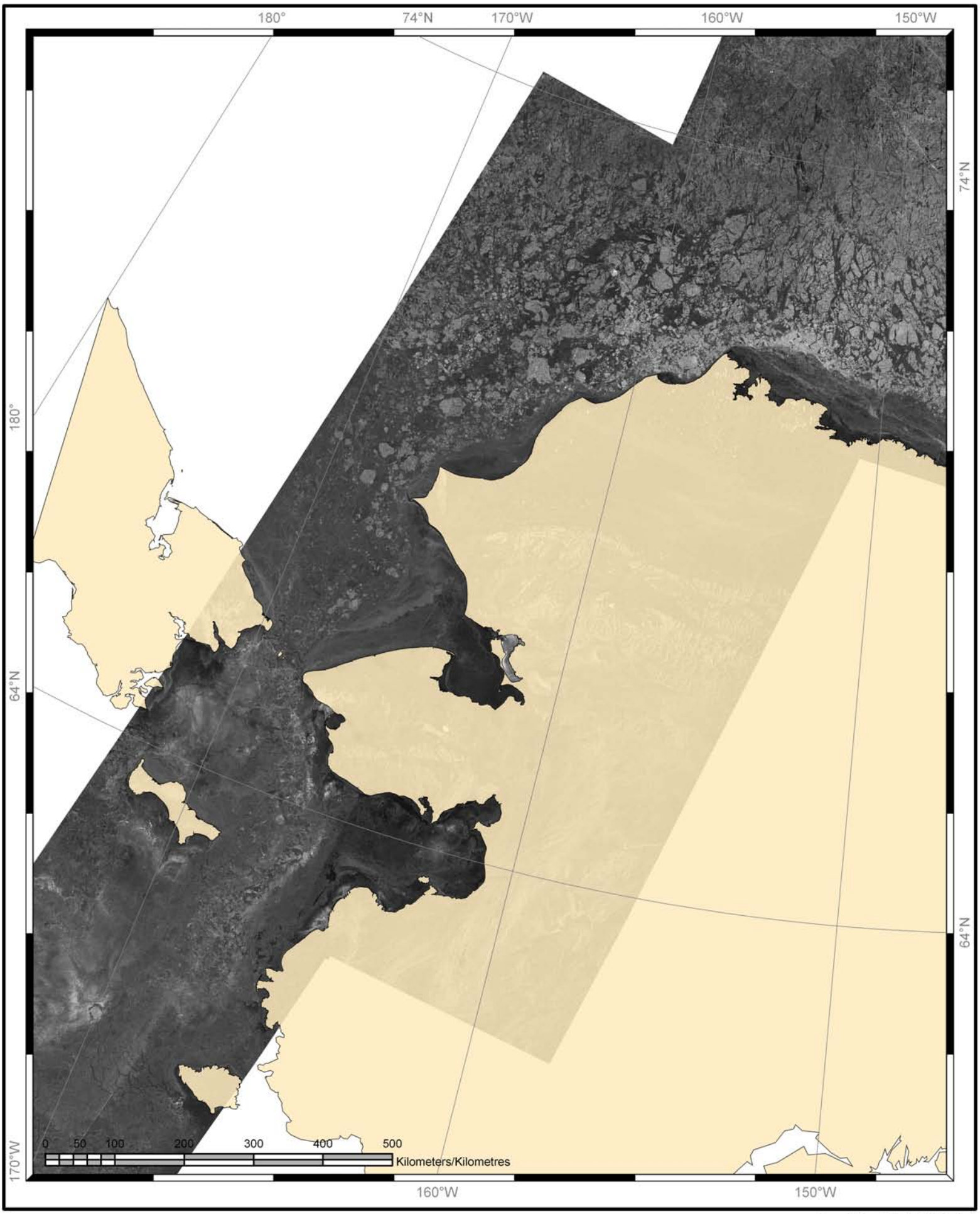
January 30 - February 2 2006

EASTERN ARCTIC / L 'EST DE L' ARCTIQUE



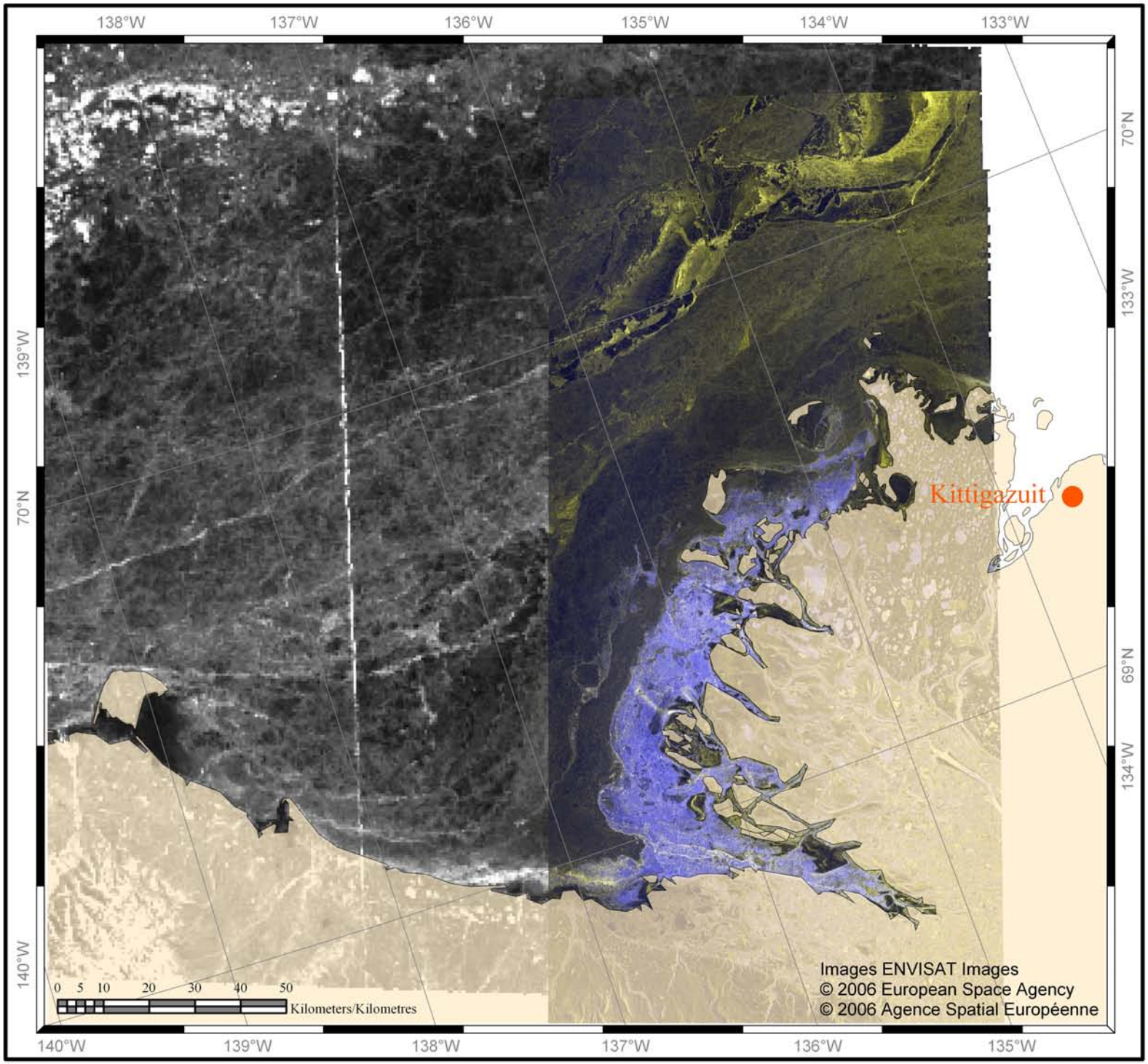
Jan 30 - Feb 2 2006

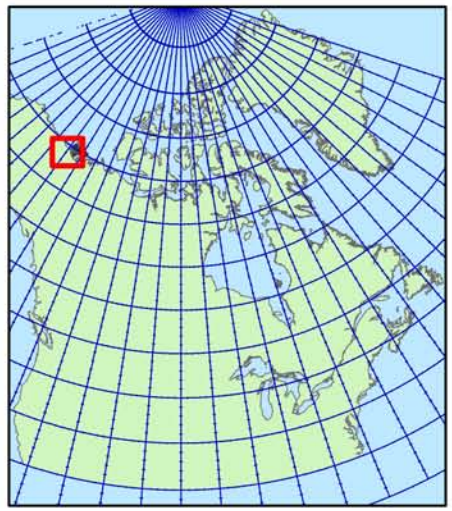
WESTERN ARCTIC / L'OUEST DE L'ARCTIQUE



Jan 30 - Feb 2 2006

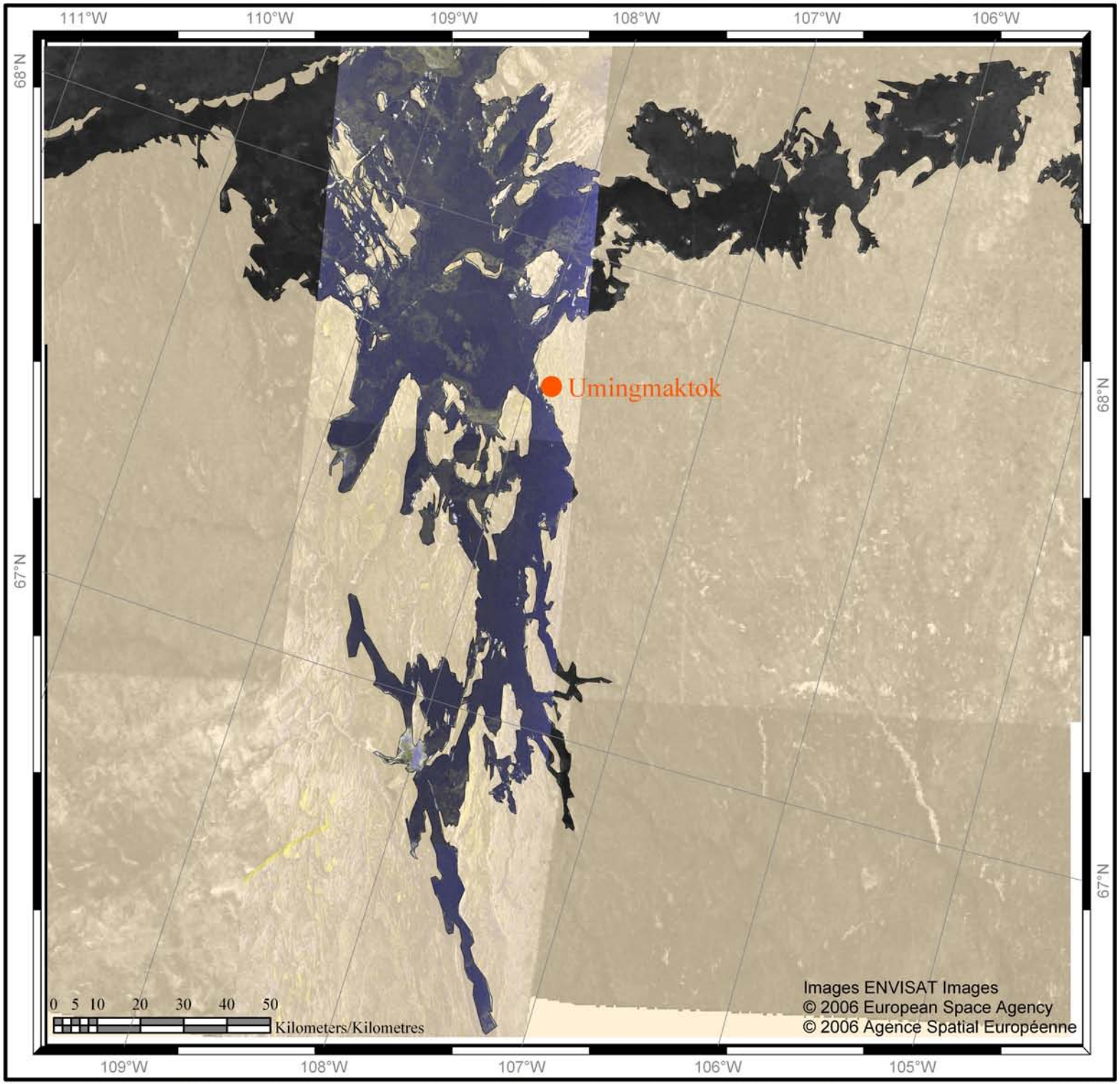
CHUKCHI SEA / MER DE CHUKCHI

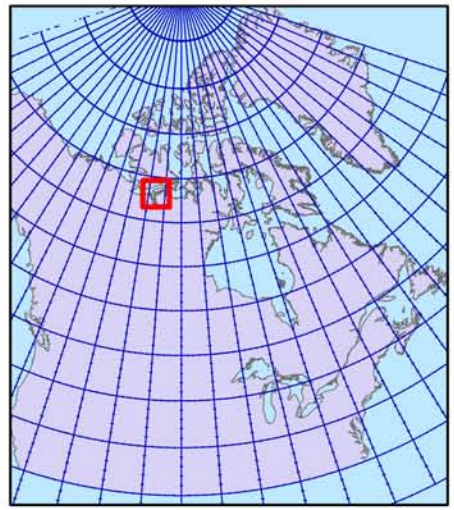




Feb 17 2006

MACKENZIE BAY / BAIE MACKENZIE





BATHURST INLET / L'ANSE DE BATHURST

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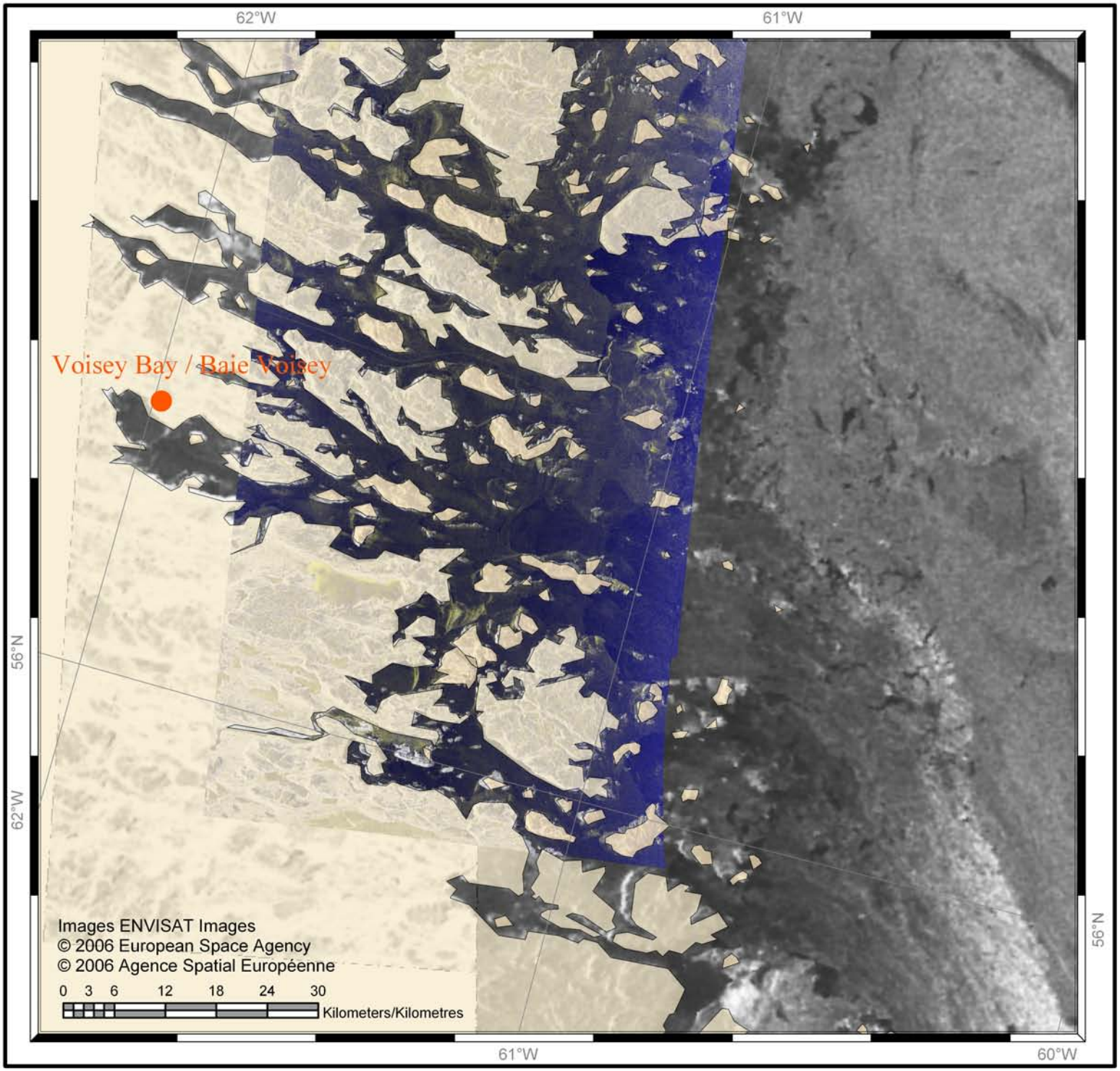

Feb 7, 2006

VOISEY BAY / BAIE VOISEY