ARC 402

Canadian

Sailing Directions

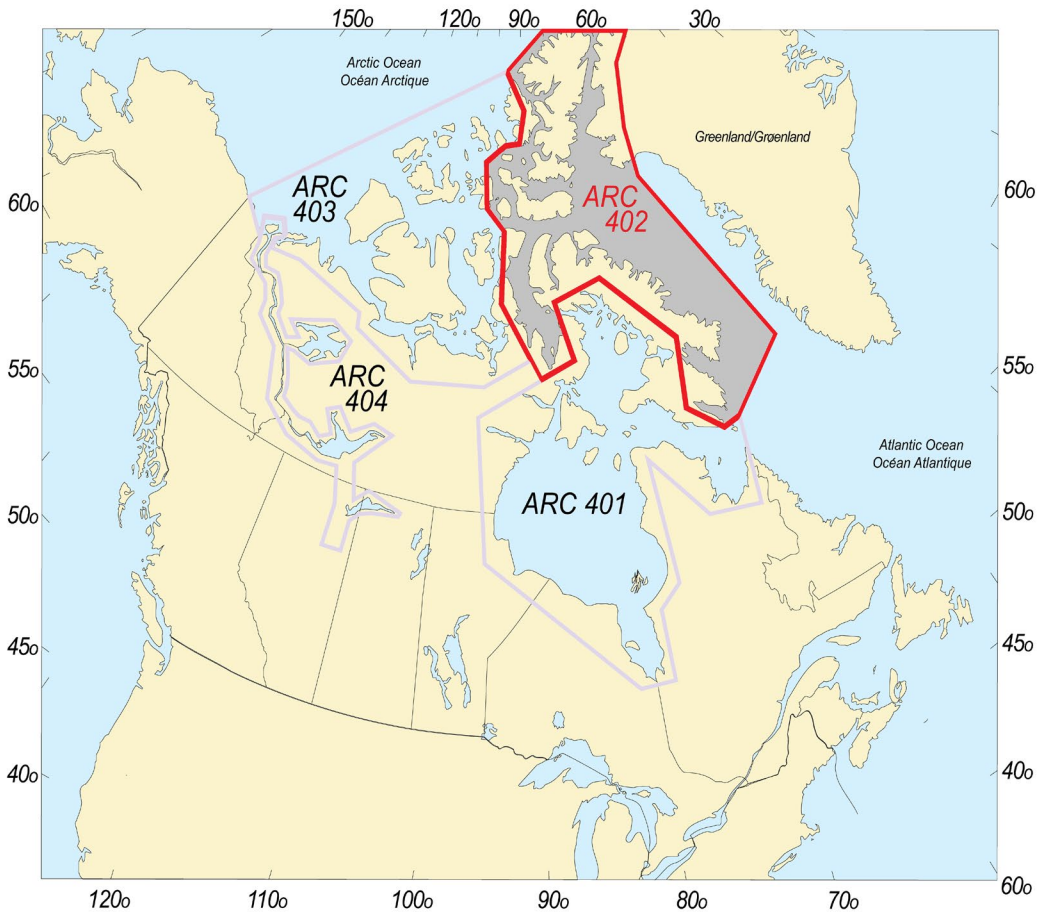
Eastern Arctic



2026/04

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Canada



Sailing Directions

ARC 400
General Information,
Northern Canada

ARC 401
Hudson Strait, Hudson Bay
and Adjoining Waters

ARC 402
Eastern Arctic

ARC 403
Western Arctic

ARC 404
Great Slave Lake
and Mackenzie River

Arctic Cautionary Note

CAUTION REQUIRED WHEN NAVIGATING IN ARCTIC WATERS

Updated March 6, 2026

A Joint Advisory from the Arctic Regional Hydrographic Commission and the Arctic Council's Working Group on the Protection of the Arctic Marine Environment

The Arctic Regional Hydrographic Commission (ARHC) and the Arctic Council's Working Group on the Protection of the Arctic Marine Environment (PAME) advise caution when navigating in Arctic waters.

Despite advancements in hydrographic surveying and charting in the region, ongoing limitations and risks associated with marine navigation, compounded by a rapidly changing Arctic including the opening of new potential maritime routes and increasing vessel traffic, are the impetus for issuing this updated notice.

The International Maritime Organization (IMO) allows S-100-capable Electronic Chart Display and Information Systems (ECDIS) on SOLAS ships beginning in 2026 (Resolution MSC.530(106)/Rev. 1(2024)). In the near future, vessels may become increasingly reliant on state-of-the-art products and services meeting the IHO S-100 Standards or other digital navigational tools. However, despite ongoing progress, substantial areas of the Arctic still lack modern hydrographic data regardless of whether the chosen official navigational method is paper or digital. Challenges with digital communication technology, modern surveys, and predictability of ice coverage limit availability and reliability of Electronic Navigation Charts (ENCs) and S-100 products and services in the Arctic.

Navigating outside areas supported by modern or adequate survey data, or without thorough voyage planning, ice experience, considering relevant local knowledge, or taking other precautions can result in the loss of human life and damage to property and the environment.

The International Code for Ships Operating in Polar Waters (Polar Code) and Regulation V/4 of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers provide an international set of safety, crew training, and environmental standards. Following these standards helps to mitigate the risks associated with ships operating in hazard-prone areas of the Arctic and ensures that mariners are sufficiently experienced. Mariners must plan well in advance of any prospective voyages, review emergency procedures, understand their operating environment where conditions can change rapidly and vary seasonally, assess survival equipment and determine necessary risk control measures, and be familiar with the quality of navigational services and nautical charts along their planned routes.

While the safety of Arctic navigation continues to improve through the collective efforts of mariners, regulatory bodies, and national hydrographic offices, the Arctic remains a complex and potentially dangerous area for mariners to navigate. Mariners are encouraged to promptly report uncharted dangers, chart discrepancies, and other relevant navigational observations to the national hydrographic office responsible for charting in their navigational area of interest.

Pictogram Legend


Anchorage


Current


Radio calling-in point


Wharf


Caution


Lifesaving Station


Marina


Light


Pilotage

Report discrepancies between real-world observations and descriptions in the publication

Users of this publication are requested to forward information regarding newly discovered dangers, changes in aids to navigation, the existence of new shoals or channels, or other information that would be useful for the correction of nautical charts and publications affecting Canadian waters to: chsinfo@dfo-mpo.gc.ca

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Record of Changes

As the CHS acquires new information, relevant changes are applied to Sailing Directions volumes in order to maintain safety of navigation. It is the responsibility of the mariner to maintain their digital Sailing Directions file by ensuring that the latest version is always downloaded. Visit charts.gc.ca to download the most recent version of this volume, with all current changes already incorporated.

The table below lists the most recent changes that have been applied to this volume of Sailing Directions. This record of changes will be maintained at the discretion of the Canadian Hydrographic Service.

Date	Chapter / Paragraph	Description of Change
2025/02	Entire Booklet	ARC 402 has been reformatted and now meets Web Content Accessibility Guidelines (WCAG) 2.0. Other changes include updated imagery, hyper-links, and indexing.
2025/02	C3/P38	Removed paragraph 38 in chapter 3
2025/07	C3/P93	Removed paragraph 93 in chapter 3
2025/07	C3/P141	Updated depths
2025/10	C6/168	Added reported (2025) obstruction
2025/12	Entire Booklet	Updated all references of NOTSHIPs & Notice(s) to Shipping to NAVWARNs & Navigational Warnings
2025/12	C3/P64	Removed information about two oil tanks
2025/12	C3/P65	Removed paragraph 65 in chapter 3
2025/12	C3/P160	Removed paragraph 160 in chapter 3
2025/12	C10/P190	Removed paragraph 190 in chapter 10
2025/12	C11/P88	Removed paragraph 88 in chapter 11
2026/03	C4/P132	New paragraph 132 added in chapter 4 with breakwater information.
2026/03	Entire Booklet	Amended “Sail Plan” title in book to “Trip Plan” per Transport Canada
2026/04	i pages	Added Arctic Cautionary Note

Contents

Arctic Cautionary Note ..... **iii**

Pictogram Legend ..... **iv**

Record of Changes ..... **v**

Preface ..... **xv**

References to Other Publications ..... **xv**

Explanatory Notes ..... **xvi**

Abbreviations ..... **xvii**

Chapter 1: Davis Strait — Frobisher Bay **1-1**

General 1-1

Outer Frobisher Bay — NE side 1-3

Loks Land to Cape Cracroft 1-3

Cape Cracroft to Brewster Point 1-3

Outer Frobisher Bay — SW side 1-5

East Bluff to Peters Point 1-5

Peters Point to President's Seat 1-6

Central Frobisher Bay — NE side 1-6

Off-lying islands and dangers 1-6

Brewster Point to Opera Glass Cape 1-7

Ward Inlet and approaches 1-7

Central Frobisher Bay — SW side 1-8

President's Seat to Ney Harbour 1-8

Ney Harbour to Cape Poillon 1-8

Inner Frobisher Bay approach channels 1-9

Pike-Resor Channel 1-10

Cincinnati Press Channel 1-11

Whiskukun Channel 1-12

Fletcher Channel 1-12

Bartlett Narrows 1-12

Algerine Passage and Deep Passage 1-13

Inner Frobisher Bay 1-13

Cape Rammelsberg to Bay of Two Rivers 1-13

Inner Frobisher Bay — North side 1-14

Inner Frobisher Bay — NE side 1-14

Koojesse Inlet 1-14

Chapter 2: Davis Strait — Cumberland Sound 2-1

General 2-1

Loks Land to Cumberland Sound 2-2

Cape Daly to French Headland 2-2

Cyrus Field Bay 2-3

Off-lying islands and dangers 2-3

Cape Farrington to Cape Hoey 2-3

Cornelius Grinnell Bay 2-4

Robinson Sound 2-5

Brevoort Harbour 2-5

Cape Murchison to Christopher Hall Island 2-6

Cumberland Sound 2-6

Entrance to Cumberland Sound — SW side 2-7

Entrance to Cumberland Sound — NE side 2-7

Cumberland Sound — West side 2-7

Cumberland Sound — East side 2-9

Pangnirtung Fiord 2-9

Head of Cumberland Sound 2-10

Chapter 3: Davis Strait — Cape Mercy — Cape Aston 3-1

General 3-1

Cape Mercy to Cape Dyer 3-2

Leopold Island to Clephane Bay 3-2

Clephane Bay to Cape Dyer 3-2

Cape Dyer 3-3

Cape Dyer to Kangeeak Point 3-4

Cape Dyer to Durban Harbour 3-4

Durban Harbour to Broughton Island 3-5

Broughton Island 3-6

Broughton Island to Kangeeak Point 3-7

Kangeeak Point to Cape Aston 3-8

Kangeeak Point to Cape Hooper 3-8

Cape Hooper 3-8

Ekalugad Fiord 3-9

Ekalugad Fiord to Arguyartu Point 3-10

Arguyartu Point to Cape Henry Kater 3-10

Cape Henry Kater to Cape Aston 3-10

Chapter 4: Baffin Bay — South part 4-1

General 4-1

Cape Aston to Cape Hunter 4-2

Cape Aston to Kangiqtugaapik (Clyde Inlet) 4-2

Kangiqtugaapik (Clyde Inlet) 4-2

Cape Christian to Niaqurnaaluk (Cape Eglinton) 4-3

Niaqurnaaluk to Cape Hunter 4-4

Cape Hunter to Cape Macculloch 4-5

Cape Hunter to Cape Cargenholm 4-5

Dexterity Fiord 4-5

Cape Cargenholm to Cape Macculloch 4-6

Pond Inlet 4-7

Pond Inlet — North side 4-7

Pond Inlet — South side 4-8

Tasiujaq 4-9

East part of Tasiujaq — North side 4-9

East part of Tasiujaq — South side 4-9

Oliver Sound 4-10

Tay Sound 4-10

White Bay 4-10

Milne lnlet 4-10

Tremblay Sound 4-12

Navy Board Inlet 4-12

Navy Board Inlet — South side 4-12

Navy Board Inlet — North side 4-13

Tay Bay 4-13

Bylot Island — East and north coasts 4-13

Niaqunnguut to Cape Fanshawe 4-13

Cape Fanshawe to Navy Board Inlet 4-14

Chapter 5: Parry Channel — East part (Lancaster Sound and Admiralty Inlet) 5-1

General 5-1

Lancaster Sound — East part 5-2

North side — Cape Sherard to Dundas Harbour 5-2

Dundas Harbour 5-2

Dundas Harbour to Cape Bullen 5-3

South side — Adams Island to Admiralty Inlet 5-3

Admiralty Inlet — East side 5-4

Cape Charles Yorke to Strathcona Sound 5-4
Strathcona Sound 5-4
Graveyard Point to Adams Sound 5-5
Adams Sound and Arctic Bay 5-5
Adams Sound to Yeoman Island 5-6
Admiralty Inlet — West side 5-6
Cape Crauford to Yellow Valley 5-6
Inner part of Admiralty Inlet 5-7
Easter Sound 5-7
Berlinguet Inlet 5-7
Lancaster Sound — West part 5-7
South side — Cape Crauford to Cape York 5-7
North side — Cape Bullen to Cape Hurd 5-7
Chapter 6: Prince Regent Inlet — Gulf of Boothia — Committee Bay 6-1
General 6-1
Prince Regent Inlet 6-2
Prince Regent Inlet — East side 6-2
Prince Regent Inlet — West side 6-3
Bellot Strait and approaches 6-5
East approaches to Bellot Strait 6-5
Bellot Strait 6-6
Gulf of Boothia 6-7
Gulf of Boothia — East side 6-7
Gulf of Boothia — West side 6-8
Cape Farrand to Cape Allington 6-8
Cape Allington to Lord Mayor Bay 6-9
Lord Mayor Bay 6-9
Pelly Bay 6-10
Committee Bay 6-11
Committee Bay — East side 6-11
Committee Bay — West side 6-12
Chapter 7: Parry Channel — East part (Barrow Strait) 7-1
General 7-1
Barrow Strait — SE part 7-2
Prince Leopold Island to Pressure Point 7-2
Barrow Strait — NE part 7-3
Cape Hurd to Cape Spencer 7-3

Cape Hotham to Resolute Bay 7-4
Resolute Bay 7-5
Barrow Strait — NW part 7-6
Resolute Passage 7-6
Bathurst Island — South shore 7-7
Barrow Strait — SW part 7-8
Prince of Wales Island — NE shore 7-8
Baring Channel and Russell Island 7-8
Offshore islands 7-9

Chapter 8: Barrow Strait — Norwegian Bay — North coast of Bathurst Island 8-1

General 8-1
Wellington Channel to Queens Channel 8-2
Wellington Channel — East side 8-2
Wellington Channel — North side 8-3
Wellington Channel — West side 8-3
Maury Channel 8-4
Couch Passage — Pioneer Channel 8-4
McDougall Sound to Queens Channel 8-5
McDougall Sound — East side 8-5
McDougall Sound — West side 8-6
Crozier Strait and approaches 8-6
Pullen Strait and approaches 8-7
Queens Channel 8-7
Queens Channel — South part 8-8
Queens Channel — West side 8-8
Queens Channel — NE side 8-9
Penny Strait 8-9
Penny Strait — East side 8-9
Northumberland Sound 8-10
Penny Strait — NE approaches 8-10
Penny Strait — Offshore islands 8-11
Penny Strait — West side 8-11
Bathurst Island — North coast 8-11
Sir William Parker Strait 8-12
May Inlet 8-12
Belcher Channel 8-13
Belcher Channel — South side 8-14
Belcher Channel — Offshore islands 8-14

Belcher Channel — North side 8-14

Chapter 9: Baffin Bay — North part 9-1

General 9-1

Baffin Bay — NW side 9-2

Devon Island 9-2

Jones Sound — East entrance 9-3

Ellesmere Island — SE coast 9-3

Baffin Bay — NE side 9-5

Kalaallit Nunaat (Greenland) 9-5

Kap York to Kap Atholl 9-5

Bylot Sund 9-6

Wolstenholme Fjord 9-7

North Star Bugt 9-7

Thule Air Base 9-8

Wolstenholme Fjord to Inglefield Bredning 9-9

Kap Abernathy to Inglefield Bredning 9-9

Inglefield Bredning and approaches 9-10

South approaches 9-11

North approaches 9-11

Qaanaaq (Thule or Qānāq) 9-12

Olrik Fjord 9-12

Inglefield Bredning 9-12

Kap Robertson to Kap Chalon 9-13

Kap Chalon to Kap Alexander 9-14

Chapter 10: Jones Sound — Eureka Sound 10-1

General 10-1

Jones Sound 10-2

Jones Sound — South side 10-3

Cape Caledon to Sverdrup Inlet 10-3

Sverdrup Inlet to Cape Vera 10-4

Jones Sound — North side 10-4

Craig Harbour 10-5

Craig Harbour to Grise Fiord 10-5

Grise Fiord 10-6

Grise Fiord to South Cape 10-6

South Cape to Walrus Cape 10-7

Jones Sound to Norwegian Bay 10-8

Fram Sound 10-8

Fram Sound — South side 10-8
Fram Sound — North side 10-8
Hell Gate 10-8
Cardigan Strait 10-10
Cardigan Strait — East side 10-10
Cardigan Strait — West side 10-10
Norwegian Bay 10-10
Off-lying islands 10-11
Norwegian Bay — East part 10-11
Ellesmere Island — Lands End to Great Bear Cape 10-11
Bjorne Peninsula — West coast 10-12
Inlets in SW part of Ellesmere Island 10-12
Axel Heiberg Island — South coast 10-13
Norwegian Bay — West part 10-14
Eureka Sound 10-14
Eureka Sound — South part 10-15
West side — Hyperite Point to May Point 10-15
East side — Bear Corner to Cape Chase 10-16
Bay Fiord and SW approaches 10-16
Eureka Sound — North Part 10-16
West side — May Point to Butter Porridge Point 10-16
East side — Bay Fiord to Slidre Fiord 10-17
Slidre Fiord 10-17
Slidre Fiord to Nansen Sound 10-18

Chapter 11: Nares Strait — Smith Sound — Lincoln Sea 11-1

General 11-1
Smith Sound 11-2
Smith Sound — West side 11-2
Smith Sound — East side 11-3
Kap Alexander to Hartstene Bugt 11-3
Hartstene Bugt and Foulke Fjord 11-3
Sunrise Pynt to Cairn Pynt 11-4
Kane Basin 11-5
Kane Basin — West side 11-5
Buchanan Bay — South side 11-5
Alexandra Fiord 11-6
Buchanan Bay — North side 11-6

Hayes Fiord, Jokel Fiord and Beitstad Fiord 11-6
Flagler Bay 11-7
Bache Peninsula — East shore 11-7
Princess Marie Bay 11-7
Cape D'Urville to Cape Louis Napoleon 11-8
Cape Louis Napoleon to Cape M'Clintock 11-9
Cape M'Clintock to Cape Lawrence 11-9
Kane Basin — East side 11-10
Cairn Pynt to Kap (Cape) Frederik VII 11-10
Kap (Cape) Frederik VII to Kap (Cape) Jackson 11-10
Kennedy Channel 11-11
Kennedy Channel — NW side 11-11
Kennedy Channel — SE side 11-12
Hall Basin 11-13
Hall Basin — West side 11-13
Discovery Harbour 11-13
Conybeare Fiord 11-14
Archer Fiord 11-14
Hall Basin — East side 11-15
Petermann Fjord 11-15
Kap Tyson to Kap Lupton 11-15
Robeson Channel 11-15
Robeson Channel — West side 11-16
Robeson Channel — East side 11-17
Lincoln Sea 11-17
Cape Sheridan to Cape Belknap 11-18
Alert 11-18
Cape Belknap to Cape Joseph Henry 11-18
Cape Joseph Henry to Cape Columbia 11-19
Lincoln Sea — East side 11-20

Chapter 12: Nansen Sound — Lincoln Sea 12-1

General 12-1
Nansen Sound 12-2
Nansen Sound — SW side 12-2
Nansen Sound — NE side 12-3
Greely Fiord 12-5
Greely Fiord — North side 12-5

Borup Fiord 12-5
Greely Fiord — South side 12-6
Canon Fiord 12-6
Canon Fiord to Tanquary Fiord 12-6
Tanquary Fiord 12-7
Ellesmere Island — North coast 12-7
Lands Lokk Point to Phillips Inlet 12-8
Phillips Inlet 12-8
Cape Woods to Alert Point 12-9
Yelverton Bay 12-9
Yelverton Bay — West side 12-10
Yelverton Bay — East side 12-10
Yelverton Inlet 12-10
Milne Fiord 12-11
Ayles Fiord 12-11
Ayles Fiord — West side 12-11
Ayles Fiord — East side 12-11
M'Clintock Inlet 12-12
Cape Discovery to Cape Columbia 12-12
Disraeli Fiord 12-13
Markham Fiord 12-13
Appendices: Trip Plan A-1
Other References A-3
Index I-1

Preface

This Second Edition of *Sailing Directions, ARC 402 — Eastern Arctic*, 2024, has been compiled from Canadian Government and other information sources. All hydrographic terms used in this booklet are in accordance with the meanings given in the *Hydrographic Dictionary* (Special Publication No. 32), published by the *International Hydrographic Organization*.

General information for Northern Canada is grouped in one booklet: Sailing Directions, ARC 400 — General Information, Northern Canada. It contains navigational information and a brief description of the main port facilities as well as geographic, oceanographic and atmospheric characteristics. Booklet ARC 400 also includes a geographical index for Northern Canada.

The geographical areas are described in a series of booklets; their limits are shown on the back cover of each booklet. For more information, consult the Catalogue of Nautical Charts and Publications 4, Arctic.

Tidal, water level and current information has been revised by the Tides, Currents and Water Level Section of the Canadian Hydrographic Service.

The photographs, except where credits are given, are by the Canadian Hydrographic Service or the Canadian Coast Guard, Fisheries and Oceans Canada.

Users' comments concerning the format, content or any other matter relating to Sailing Directions would be appreciated and should be forwarded to the Director General, Canadian Hydrographic Service, Fisheries and Oceans Canada, Ottawa, Ontario, Canada, K1A 0E6.

References to Other Publications

Canadian Hydrographic Service

- *Catalogue of Nautical Charts and Publications*
- *Canadian Tide and Current Tables*

Canadian Coast Guard

- *List of Lights, Buoys and Fog Signals*
- *Radio Aids to Marine Navigation (Atlantic, St. Lawrence, Great Lakes, Lake Winnipeg, Arctic and Pacific)*
- *Annual Edition of Notices to Mariners*

Explanatory Notes

Canadian Sailing Directions expand charted details and provide important information of interest to navigation which may not necessarily be found on charts or in other marine publications. They are intended to be read in conjunction with the charts quoted in the text.

Remarks

Buoys are described in detail only where they have special navigational significance, or where the scale of the chart is too small to clearly show all the details.

Chart references, in *italics*, refer to the largest scale Canadian chart. Occasionally a smaller scale chart may be quoted where its use is more appropriate.

Tidal information relating to the vertical movements of the water is not given and the *Canadian Tide and Current Tables* should be consulted. However, abnormal changes in water level are noted.

Names have been taken from the most authoritative source. Where an obsolete name still appears on the chart or is of local usage, it is given in brackets following the official name.

Wreck information is included where drying or submerged wrecks are relatively permanent features and are of navigation or anchoring significance.

Units and terminology used in this booklet

Latitude and **longitudes** given in brackets are approximate, and are intended to facilitate reference to the chart quoted.

Bearings and **directions** refer to True North (geographic) and are given in degrees from 000° clockwise to 359°. The bearings of conspicuous objects, ranges and light sectors are given from seaward. **Courses** always refer to the course to be made good.

Tidal streams and **currents** are described by the direction towards which they flow. The **ebb** stream is caused by a falling tide and the **flood** stream is caused by a rising tide. **Winds** are described by the direction from which they blow.

Distances, unless otherwise stated, are expressed in nautical miles. For practical purposes, a nautical mile is considered to be the length of one minute of arc, measured along the meridian, in the latitude of the position. The international nautical mile, which has now been adopted by most maritime nations, is equal to 1,852 m (6,076 ft).

Speeds are expressed in knots, which mean 1 nautical mile per hour.

Depths, unless otherwise stated, are referred to chart datum. As depths are liable to change, particularly those in dredged channels and alongside wharves, it is strongly recommended these be confirmed by the appropriate local authority.

Elevations and **vertical clearances** are given above Higher High Water, Large Tides. In non-tidal waters they are referred to chart datum.

Heights of objects, distinct from the elevations, refer to the heights of the structures above the ground. A statement, “a hill ... m (... ft) high”, is occasionally used when there could be no confusion and in this case the reference will signify an elevation.

The *List of Lights, Buoys and Fog Signals* number is shown **in brackets** after the navigational aid (light, leading lights, buoy). The expression “seasonal” indicates that it is operational for a certain period during the year; mariners should consult the *List of Lights, Buoys and Fog Signals* to determine the period of operation. The expression “private” means that the navigational aid is privately maintained; it will not necessarily be mentioned in the *List of Lights, Buoys and Fog Signals* and its characteristics may change without issuance of a *Navigational Warning*.

Time, unless otherwise stated, is expressed in local standard or daylight time. For the waters described in this booklet, local time is Atlantic Standard Time (AST Z+4).

Deadweight tonnage and **masses** are expressed in metric tonnes. The kilogram is used to describe relatively small masses.

Public wharf is a wharf that is available for public use, though certain fees may be charged by local authorities. It may be shown as “Government wharf” or “Gov’t whf” on older charts.

Conspicuous objects, natural or artificial, are those which stand out clearly from the background and are easily identifiable from a few miles offshore in normal visibility.

The expression "**small craft**" refers to pleasure craft and small vessels with shallow draught.

Diagrams are large scale cartographic representations of harbours, wharves, anchorages,or marinas.

Pictograms are symbols shown at the beginning of the paragraphs to allow quick reference to information or to emphasize details. The Pictogram Legend is shown on the third page of this booklet.

Abbreviations

Units

°C	degree Celsius
cm	centimetre
fm	fathom
ft	foot
h	hour
ha	hectare
HP	horsepower
kHz	kilohertz
km	kilometre
kn	knot
kPa	kilopascal
m	metre
mb	millibar
MHz	megahertz
min	minute
mm	millimetre
NM	nautical mile
t	metric tonne
°	degree (plane angle)
‘	minute (plane angle)

Directions

N	north
NNE	north northeast
NE	northeast
ENE	east northeast
E	east
ESE	east southeast
SE	southeast
SSE	south southeast
S	south
SSW	south southwest
SW	southwest
WSW	west southwest
W	west
WNW	west northwest
NW	northwest
NNW	north northwest

Various

A.P.A.	Atlantic Pilotage Authority
CCG	Canadian Coast Guard
CHS	Canadian Hydrographic Service
DFO	Department of Fisheries and Oceans, Canada
DWT	deadweight tonnage
ETA	estimated time of arrival
ETD	estimated time of departure
HF	high frequency
HW	high water
LW	low water
M	million, mega
MCTS	Marine Communications and Traffic Services
NAD	North American Datum
No.	number
SAR	Search and Rescue
U.S.A.	United States of America
VHF	very high frequency
VTS	Vessel Traffic Services

Chapter 1

Davis Strait
Frobisher Bay



General

Charts 5411, 7000, 7050, 7121, 7122, 7125, 7126, 7127

1 **Davis Strait**, bordered to the west by **Baffin Island** and to the east by Kalaallit Nunaat (Greenland), extends north for 600 miles from the 60th parallel of latitude to its border with Baffin Bay at the 70th parallel. There are no known off-shore dangers in the strait. *(For general information on **weather**, **climate**, **ice** and **currents** in Davis Strait, see Sailing Directions booklet ARC 400 — General Information, Northern Canada.)*

2 **Frobisher Bay** indents the SE coast of Baffin Island for almost 150 miles. The bay can be divided into three parts, outer Frobisher Bay, central Frobisher Bay and inner Frobisher Bay, separated by island chains. The entrance to outer Frobisher Bay lies between Black Bluff *(61°56'N, 65°06'W)* on Edgell Island and Queen Elizabeth Foreland of Loks Land, 33 miles to the NNE. Gabriel Strait, on the east side, and Annapolis Strait, on the NW side of Lower Savage Islands, provide alternative entrances. *(The above-mentioned islands and straits, except Loks Land, and Resolution Island are described in Sailing Directions booklet ARC 401 — Hudson Strait, Hudson Bay and Adjoining Waters.)*

3 **Historical note**. — The bay was discovered by Frobisher in 1576 and until 1861 was believed to be a strait.

4 ***Northern Canada Vessel Traffic Services (NORDREG) Zone*** covers all waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

5 Traffic clearance requests and reports required by this system shall be addressed to ***NORDREG CANADA***. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

6 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at: https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html.)*

7 **Caution**. — Most of the **depths** in the outer part of Frobisher Bay, as far NW as Cape Vanderbilt *(63°06'N, 67°36'W)*, are from **reconnaissance soundings**. Most of the NE side of the outer bay is **not surveyed**.

8 Charts of the area from Cape Vanderbilt to Koojesse Inlet *(63°43'N, 68°30'W)* are based mostly on controlled surveys made between 1950 and 1958, but still contain much information of a reconnaissance nature *(see notes, Source Classification Diagrams and cautions on charts)*. Many areas in Frobisher Bay, particularly inshore waters, bays and inlets, have not been surveyed.

9 In general, mid-channel **depths** in the outer part of the bay are great. A deep trough extends along the SW side from a threshold at the entrance to the bay to the islands which separate the inner and central parts. A shelf with depths of under 20 fathoms (37 m) extends up to 12 miles offshore along the NE shore of the outer bay.

10 Frobisher Bay has an exceptionally large **tidal range** which contributes to the difficulties of navigation in this area.

11 **Caution**. — The **tidal streams** are very **strong** around the entrance to the bay. The tides create remarkably **erratic and powerful currents**, reaching velocities of 5 to 7 knots, between the islands that lie in the entrance to inner Frobisher Bay. The current at times sets in opposite directions through the channels.

12 *Iqaluit (Index No. 4140)* is a reference port and *Resor Island (Index No. 4100)*, *Frobisher's Farthest (Index No. 4120)* and *Lewis Bay (Index No. 4135)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

13 Fog is fairly common in Frobisher Bay and is most prevalent in September and October although less frequent towards the head of the bay.

14 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/.*)*

15 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/. For maps relating to general weather patterns, visit: https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784.)

16 **Ice**, consisting of floes, icebergs, and growlers from Baffin Bay, is carried southward through Davis Strait into the Labrador Sea by the southerly current along the east coasts of Baffin Island and Labrador. Pack ice, in varying concentrations, may be expected in the entrance of Frobisher Bay until the last part of July.

17 Numerous **icebergs**, large and small, are encountered in outer Frobisher Bay. Most of these bergs enter from Davis Strait, usually along the north shore, being carried as far as a few miles beyond Chase Island *(63°03'N, 66°55'W)* before turning south and passing out to Davis Strait again along the SW shore. A few bergs, products of Grinnell Glacier, originate within the bay, but these are small and usually melt before drifting out into Davis Strait. No bergs appear to penetrate beyond the island barrier at the entrance to the inner part of the bay, but some may ground in shallow water among the islands or in the bays.

18 Ice in Frobisher Bay begins to break up some time in June; it breaks up early in the open stretches of the outer part of the bay and along the SW shore, later in the shallow inlets of the NE shore, and usually later still in the inner reaches of the bay above the island barrier. Strong tidal streams and west or NW winds help to clear the broken ice out of the outer bay, but the island barrier modifies their influence in the inner part and in Koojesse Inlet near the head. East or SE winds will delay the movement of ice out of the bay and will drive northern ice into the entrance from Davis Strait.

19 Inner Frobisher Bay is usually clear of ice by the end of the first week in August.

20 Ice may begin to form late in September, but it is subject to being broken up by wind and tidal streams, and does not usually form a solid cover until late October or early November. The strong tidal streams may produce some open patches of water at almost any time of the year.

21 The navigation season in Frobisher Bay extends from early August to the last part of September, with some seasons having earlier open water, and a later freeze-up date.

22 *(For general **ice conditions** in the Eastern Arctic, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html.*)*

23 The **magnetic compass** is reasonably stable in this area. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada, for more information.)*

24 Both shores of Frobisher Bay, almost as far as its head, are rugged and mountainous. The SW shore is the higher and bolder, with steep cliffs rising in places 1000 feet (305 m) or more from the sea. The SW shore is backed by mountains with elevations of 2000 to 3000 feet (610 to 914 m). The only loose surface materials are rock debris which has accumulated near the bases of cliffs and

alluvial deposits wherever rivers enter the bay. There are a few raised beaches but most of the alluvium appears to be under water at high tide, emerging as mud flats at low water. Inland from the coasts of Frobisher Bay the land is even more mountainous than near the shore; small lakes are very numerous and there are several small mountain glaciers; there is almost no vegetation. Two permanent ice caps, Grinnell Glacier and Terra Nivea ice cap, lie near the SW shore of the bay. At the head of the bay a lowland area, flanked by mountains to the NE and SW, extends inland.

Outer Frobisher Bay — NE side

Chart 7050

25 **Caution**. — The inshore waters of NE Frobisher Bay are mostly **not sounded**.

Loks Land to Cape Cracroft

26 **Loks Land**, on the NE side of the entrance to Frobisher Bay, is fairly low on its SW side. The much higher and more rugged central and NE parts provide good radar response at 40 miles.

27 **Historical note**. — The island was named by Frobisher for his patron, Michael Lok.

28 **Queen Elizabeth Foreland** *(62°23'N, 64°28'W)*, the SE extremity of Loks Land, rises steeply from the water to over 200 feet (61 m). To the NE, **Morris Island** and **Bear Island** both have an elevation of about 600 feet (183 m). **Osbon Bay** lies WNW of these islands. **Hudson Island**, whose northernmost point is **Cape Hayes**, is separated from Loks Land by **Kane Channel**. **Hall Island**, with **North Foreland** *(62°32'N, 64°06'W)* at the easternmost point, and **Little Hall Island** lie east of Hudson Island. **Mount Warwick**, at 1050 feet (320 m), is the highest elevation on Hall Island.

29 **Harper Islands** are a group of low islands lying SE of **Bigler Bay** on the south coast of Loks Land; **Cape Carter** and **Cape Chapel** are prominent low peninsulas on the west coast.

30 **Caution**. — Four **low rocks** known as **d'Iberville Rocks** *(62°16'N, 64°28'W)*, lying 7 miles south of Queen Elizabeth Foreland, are shown as above-water rocks but are reported to be visible only for 2 hours before and after low water. **Rocks** with less than 6 feet (1.8 m) over them, position approximate, lie 1.5 miles south and 4 miles west of d'Iberville Rocks.

31 **Hubbel Point**, the westernmost point of a large unnamed island lying NW of Loks Land, is almost joined to Blunt Peninsula by a low isthmus of rocks, sand flats and lagoons. **Beare Sound**, which runs around the north and east sides of the group that includes **Lefferts Island**, contains many islands and rocks.

32 **Caution**. — Two **shoals** have been reported extending across Beare Sound north of the Lefferts Island group.

33 **Lupton Channel** runs NE from Beare Sound between the large unnamed island and the NW part of Loks Land.

34 **Caution**. — There are very **strong tidal streams** with numerous **overfalls**, **eddies** and **tide rips** in Beare Sound.

35 **Blunt Peninsula** is bare and rocky. **Cape True** *(62°32'N, 65°12'W)*, at its SW end, was formerly the site of a whaling depot.

36 **Caution**. — An area of comparatively **shallow water** lies off the west coast of Blunt Peninsula, extending about 10 miles SW and perhaps 20 miles NW. Within this area, **largely unsurveyed**, it is reported that some conditions of wind and tidal streams cause a very rough sea with waves breaking several miles from the shore. It is possible that there are a number of **uncharted dangers** off this part of the coast.

37 The coastal area between Cape True and **Sabine Bay**, 7 miles NNW, is low, formed of rocky outcrops, lakes and patches of bog. The lowlands end abruptly at varying distances inland against the steep cliffs of the interior highlands.

38 **Caution**. — Sabine Bay appears to be very **shallow**.

39 **Sharko Peninsula** *(62°42'N, 65°20'W)*, on the west side of Sabine Bay, is a spectacular sand spit about 35 to 75 feet (11 to 23 m) high with rock outcrops reaching about 100 feet (30 m). The base of Sharko Peninsula ends a short distance north of Cape Cracroft against the cliffs of the interior which here rise precipitously to over 1200 feet (366 m).

Cape Cracroft to Brewster Point

40 **Countess of Warwick Sound** lies between **Cape Cracroft** *(62°42'N, 65°20'W)* and Cape Sarah *(62°48'N, 65°32'W)*. The shores of the east side of the sound rise sheer from the water in cliffs more than 1000 feet (305 m) high. The NW side of the sound is much less precipitous and is broken by broad valleys.

41 **Historical note**. — Countess of Warwick Sound was named by Frobisher whose ships anchored there in 1577 and 1578.

42 **Newland Island** and **Willows Island**, with elevations of about 200 and 400 feet (61 and 122 m), and **Shepard Island**, form part of a chain extending to the SSE from Cape Sarah.

43 **Caution**. — There are numerous **underwater rocks** and **ledges** off Shepard Island.

44 **Caution**. — It is reported that the approaches to Countess of Warwick Sound are made dangerous by outlying **rocks**, some of which are barely **awash**, and there are reported to be a number of **uncharted shoals** and **shoal patches** in the sound. An islet is 5 miles west of Cape Cracroft and there is evidence of **shoal water** extending across much of the entrance. The **channels** between the islands described above all appear to be **foul** and the whole of the NW shore of the sound shows indications of offshore **shoaling**.

45 **Victoria Bay** *(62°47'N, 65°18'W)* has shores which rise almost perpendicularly from the sea. The bay appears to be generally deep except near a point on the north shore, about 2 miles within the entrance, where a large river delta, fed from a stream dropping straight down the sheer cliffs, extends far out across the channel.

46 **Harris Highlands** is a flat-topped area which rises almost direct from the sea to over 1600 feet (488 m). **Lincoln Bay** and **Napoleon Bay**, both with high steep shores, share a common entrance. A river discharges into the head of Lincoln Bay, and from the head a pass, which was used in winter by the Inuit, leads to Cyrus Field Bay. The head of Napoleon Bay is connected by a valley to Frenchman Cove, at the head of Cyrus Field Bay *(described in Chapter 2)*.

47 **Caution**. — Many **rocks** and **shoals** are on each side of the entrance to Lincoln Bay and Napoleon Bay.

48 **Cape Sarah** is the west entrance point of Countess of Warwick Sound and is joined to the mainland by a narrow isthmus. The cape rises to about 400 feet (122 m); it is steep on the west but slopes gradually on the east side. Between Cape Sarah and the east entrance point of Wiswell Inlet, 6 miles NNW, there are several high cliffs.

49 **Caution**. — Along this stretch of coast there are numerous islets and **rocks** and indications of **dangers** extending about 2.5 miles offshore.

50 **Kodlunarn Island** *(62°49'N, 65°25'W)*, 3.3 miles ENE of Cape Sarah, is rocky with steep-to shores averaging about 25 feet (7.6 m) in elevation; the shores are broken by a succession of gravel and shingle beaches. The island has a maximum elevation of 55 feet (17 m).

51 **Caution**. — **Shoals**, some of which are **awash** at low water, have been reported in the vicinity of Kodlunarn Island.

52 **Historical note**. — Kodlunarn Island was the site of Frobisher's attempted settlement. Numerous relics of his expeditions have been found on the island, among them the foundations, still visible in 1927, of the plastered house built by his masons.

53 The schooner *Bowdoin*, drawing 10 feet (3 m), found **anchorage** behind some shoals eastward of Kodlunarn Island in a position with a small, bold island northward of Kodlunarn Island bearing 265°.

54 **Caution**. — Take special care in this vicinity to avoid **uncharted shoals**.

55 **Sumner Island**, elevation about 200 feet (61 m), is one of a group of islands and rocks in the mouth of Wiswell Inlet, but is neither the largest nor most distinctive of this group. The highest islet of the four lying 4 miles SW, position approximate, of Sumner Island has an elevation of between 50 and 60 feet (15 and 18 m).

56 The shores of **Wiswell Inlet** *(62°55'N, 65°45'W)* are either precipitous cliffs or very steep, and reach a maximum elevation of 1400 feet (427 m) on the east side near the head of the inlet where there are two islands.

57 **Caution**. — Above the two islands, Wiswell Inlet shows signs of **shoal water**.

58 **Tagliabue Mountain**, elevation about 1400 feet (427 m), is prominent.

59 **Caution**. — The coast between Wiswell Inlet and Cape Jones, 6 miles NW, is rocky and bordered by **isolated rocks** and **underwater dangers**.

60 **Gold Cove** is surrounded by steep cliffs. The island which shelters the cove has an elevation of about 400 feet (122 m).

61 **Caution**. — The waters in Gold Cove appear **shallow** and **submerged sand flats** are evident.

62 **Cape Jones** *(62°56'N, 65°57'W)*, a domed headland over 600 feet (183 m) in elevation, is joined to the mainland by a low isthmus.

63 **Peter Force Sound**, according to Hall, is well sheltered and a good harbour with an excellent entrance for ships, but it is not known if any large vessel has used it. **McKay Island** has an elevation of about 600 feet (183 m).

64 **Brewster Point**, the SE extremity of **Barrow Peninsula**, slopes down to the sea from an elevation of about 200 feet (61 m) and is continued offshore by a group of low rocky islands. **Nouyarn Island**, with a maximum elevation of 200 feet (61 m), is the largest of this group.

65 **Caution**. — The Nouyarn Island group is encumbered with **shoals** and **underwater rocks**, particularly to the SW.

66 The unnamed fiord NE of Peter Force Sound has precipitous cliffs as far as the bays at its head. The NW arm of this fiord has two rivers at its head; the cliffs at the junction of the arm with the main fiord have an elevation of over 1300 feet (396 m).

67 **Caution**. — Sediments from rivers and streams flowing into the bays at the head of the fiord appear to have formed **shoals**; the sediments have also generated sand flats, especially along the SW shore of the NW arm.

68 The small peninsula *(62°59'N, 65°54'W)* on the north side of the unnamed fiord is prominent with an elevation of about 600 feet (183 m).

69 **Caution**. — The peninsula has a cluster of above-water and **underwater rocks** off its north end.

70 **Newton Fiord** runs through rugged country; its sides rise to over 1000 feet (305 m). A number of streams flow into the fiord.

71 **Caution**. — Sand and gravel deposits cause **shallows** near the mouths of these streams.

Outer Frobisher Bay — SW side

72 *(Lower Savage Islands, Edgell Island and Resolution Island, and the straits in this area, are described in Sailing Directions booklet ARC 401 — Hudson Strait, Hudson Bay and Adjoining Waters.)*

73 The SW shore of Frobisher Bay is backed by the precipitous mountains of **Meta Incognita Peninsula**. In spite of its numerous indentations, the outline of this shore when seen from a distance is said to appear smooth in comparison to that of the NE shore. In summer the mountains on the SW side of Frobisher Bay are likely to be covered with snow while the hills on the lower, NE side are usually bare.

Chart 5411

East Bluff to Peters Point

74 **East Bluff** *(61°53'N, 65°57'W)* is an imposing promontory rising sheer from the water to 400 feet (122 m) with elevations of about 600 feet (183 m) immediately inland. It is the southern termination of a cliff of solid rock 3.5 miles long.

75 **Caution**. — **Tidal streams** sweep rapidly past this cliff and are deflected by the bluff well out into Annapolis Strait, which runs between East Bluff and Lower Savage Islands.

76 The coast between East Bluff and Noble Inlet, 10 miles NNW, is high and rugged.

77 **Noble Inlet** may be entered through a channel west of the islands in its mouth but local knowledge is advised.

78 **Caution**. — The **narrow channel** east of the islands is suitable only for boats.

79 **Anchorage** in 12 to 30 fathoms (21.9 to 55 m) with good shelter from all winds can be found in Noble Inlet.

80 **Sugarloaf Hill** *(62°03'N, 66°06'W)*, elevation 1000 feet (305 m), is **conspicuous**.

81 Between Noble Inlet and the unnamed promontory 10 miles NNE, the coast is high and rugged but falls off in elevation close to the sea; it is backed a short distance inland by the steep cliffs of the interior. **Potter Island** is separated from the mainland to the NW, and from **Palmer Island** and **Gross Island**, by **Kendall Strait**. These islands are relatively low, reaching about 200 feet (61 m).

Chart 7050

82 From the unnamed promontory NNE of Noble Inlet to Cape Vanderbilt, 70 miles NW, almost the whole length of the coast has cliffs that rise steeply from the sea to elevations of between 1000 and 3000 feet (305 and 914 m).

83 **Halford Island** *(62°16'N, 66°05'W)* has an elevation of 100 feet (30 m). A **conspicuous** block-like mountain 1 mile west of the north end of Halford Island, on the mainland, has a number of 1400-foot (427-m) elevations that form natural amphitheatres.

84 **Caution**. — Halford Island is separated from the mainland by a narrow strait filled with islets, **rocks** and **shoals**.

85 The head of **Henderson Inlet** is separated by a low isthmus from the head of Jackman Sound.

86 The smooth dome of the **Terra Nivea** ice cap, within 5 miles of Jackman Sound, is very **conspicuous** on a fine day when the glare from its surface can be seen at least as far as Resolution Island. A number of glaciers descend from the ice cap but do not quite reach the sea.

87 **Jackman Sound** is entered between **Buerger Point** *(62°20'N, 66°13'W)* and an unnamed point, 3 miles to the NW, with elevations of 1200 and 1000 feet (366 and 305 m) respectively. Both points are precipitous, and on both sides within the entrance of the sound there are rugged hills with sharp ridges rising from 1200 to 1500 feet (366 to 457 m) close to the water. The shores are steep but rounded and at the head of the sound there is a sandy beach.

88 **Caution**. — Compared to fiords along this coast Jackman Sound appears relatively **shallow**, particularly in its SE arm, owing to outwash from the ice cap.

Peters Point to President's Seat

89 **York Sound** lies between **Peters Point** *(62°25'N, 66°20'W)*, a striking promontory rising to over 1000 feet (305 m), and a headland with an elevation of 1200 feet (366 m), 4.5 miles NW, formed of two high ridges separated by a small bay. At the head of the inner part of York Sound the alluvial cliffs of the huge sand plain of the **York River** are clearly visible from seaward; these are from 65 to 120 feet (20 to 37 m) high and are fresh in appearance, being continually undermined. At high water there is usually a beach a few yards (metres) wide at the base of the cliffs; at low water a wide expanse of boulder-strewn sand is exposed.

90 **Caution**. — The delta being produced by the York River causes **shallow water** for at least 1 mile offshore. The transition from deep water to the shallow water towards the head of the sound is abrupt, thus **soundings give little warning**.

91 Between York Sound and Wynne-Edwards Bay, 6 miles NW, the coast is precipitous cliffs which reach elevations of 2000 feet (610 m) or more. The cliffs are indented by several small bays.

92 **Caution**. — These bays have sand flats or rocks and **shallow water** at their heads. Midway along this stretch a rocky islet surrounded by dangerous **shoals** lies about 1 mile offshore.

93 **Wynne-Edwards Bay** *(62°32'N, 66°36'W)* lies between two sharp ridges rising to 2400 feet (732 m); these ridges continue out into Frobisher Bay as clusters of rocks and islets.

94 **Caution**. — A tongue from **Grinnell Glacier** flows into the head of Wynne-Edwards Bay; its load of outwash causes **shallow water** in the bay.

95 Between Wynne-Edwards Bay and Charles Francis Hall Bay, 8 miles NW, several more glacial tongues descend steeply to the heads of fiords, creating boulder-strewn mud flats. These glaciers are not very active and seldom calve; any icebergs are small. Because the coastal mountains in this area are about the same elevation as Grinnell Glacier, this glacier does not form the skyline from seaward as does Terra Nivea ice cap.

96 **Charles Francis Hall Bay** is divided into two arms by a high, razor-back ridge.

97 **Caution**. — There appears to be **shallow water** near the heads of both arms of Charles Francis Hall Bay.

98 **President's Seat** *(62°39'N, 66°46'W)*, a flat-topped summit with precipices and sharp ridges all around, is the most distinctive mountain and headland on the SW side of Frobisher Bay.

99 **Caution**. — There appear to be **strong tidal streams** off the coast of President's Seat.

Central Frobisher Bay — NE side

Off-lying islands and dangers

100 **Gabriel Island** *(62°53'N, 66°30'W)* has a greatest elevation of about 600 feet (183 m). Approaching Gabriel Island from southward, the water is reported to shoal gradually.

101 **Caution**. — The islets lying close off **Cape Osborn**, at the south end of Gabriel Island, appear to be joined to each other and to the cape itself by **sand bars** at low water.

102 A small vessel has obtained **anchorage** in 14 fathoms (25.6 m) 0.5 mile off a small cove on the SW side of Gabriel Island with good shelter from winds between NW and east.

103 **Caution**. — There are reported **shoals**, which may dry, extending south and west of Gabriel Island for nearly l mile.

104 **Johnston Island** *(63°00'N, 66°37'W)* and **Harris Island**, both with an elevation of about 200 feet (61 m), and **Blanchard Island** lie in the chain of islands, islets and rocks that links Gabriel Island with the mainland.

105 **McLean Island**, elevation about 400 feet (122 m), and **Dominick Island** lie west of Gabriel Island.

106 **Chase Island** *(63°03'N, 66°55'W)* has an elevation of about 600 feet (183 m) in its central part. **Storer Island**, close SE of Chase Island, is a mass of rocks and sand flats.

107 **Caution**. — **Foul ground** extends for about 3.5 miles off **Cape Mills**, the NW extremity of Chase Island.

108 **Caution**. — Vessels are advised to stay well west of all the islands described above as there may be **uncharted dangers**.

109 **Strong tidal streams** with **eddies** and **tide rips** are evident between Gabriel Island and McLean Island and among the islets between McLean Island and Chase Island.

Brewster Point to Opera Glass Cape

110 The coast between Brewster Point *(62°57'N, 66°03'W, previously described)* and Opera Glass Cape, 35 miles NW, is mostly rather low close to the shoreline but rises quickly a short distance inland. It is fronted by many islands, islets and shoals.

111 **Beauty Bay** consists of outer and inner parts connected by a channel about 0.2 mile wide. Beauty Bay is separated from a bay close westward by a rocky peninsula, about 400 feet (122 m) in elevation, connected to the mainland by a sandy isthmus.

112 **Caution**. — The approaches to both these bays are encumbered by many islets, **rocks** and **shoals**.

113 About 5 miles within the entrance to **Hamlen Bay**, on the east side, there is a striking promontory *(63°05'N, 66°30'W)*; it consists of two rocky islets joined to each other and the mainland by narrow, sandy isthmuses. The inner part of the bay is steep-walled; the land on both sides rises to over 1400 feet (427 m) within a short distance of the shore.

114 **Caution**. — Numerous islets and **shoals** are in the approaches to and outer part of Hamlen Bay. In the innermost 6 or 7 miles there are sand or mud **bars** and **flats** which may **uncover** at low water. Rivers flowing into Hamlen Bay deposit sediment and build deltas, thus **shallow water** is possible throughout its length.

115 The land between Hamlen Bay and **Royer Cove** *(63°13'N, 66°48'W)* is relatively low with rocky ridges and remnant lakes or sandy lake bottoms, and, as mentioned previously, there are numerous offshore islets and rocks.

116 From Royer Cove to **Tongue Cape** *(63°15'N, 67°00'W)* the coast is low and rugged with cliffs rising a short distance inland; it appears to be free of offshore obstructions. **Field Island** has an elevation of about 200 feet (61 m).

Charts 7050, 7121

117 **Waddell Bay** is entered between Tongue Cape and **Opera Glass Cape** *(63°16'N, 67°10'W)*. Opera Glass Cape rises fairly steeply to about 320 feet (98 m).

118 **Caution**. — A string of rocks, **shoals** and islets extend SE and SW from Opera Glass Cape.

119 The east arm of Waddell Bay is a fiord-like inlet with sheer cliffs at its head, 2000 feet (610 m) or more in elevation.

120 **Caution**. — On each side of the east arm there are bays with very **shallow water** and **drying flats**. The west arm is possibly encumbered with **sand bars** and **underwater dangers**.

121 The schooner *Bowdoin*, drawing 10 feet (3 m), found **anchorage** in a cove in the outer part of the eastern arm of Waddell Bay.

Chart 7121

Ward Inlet and approaches

122 The shoreline between Opera Glass Cape and **Cape Stevens** *(63°23'N, 67°18'W)*, 8 miles NNW, is relatively low but rises rapidly inland to over 1000 feet (305 m).

123 **Caution**. — This section of coast is bordered with islets, dangerous **underwater rocks** and **shoals**.

124 **Cape Ware** is low and rugged. The cape has many off-lying islets and dangerous **underwater rocks** encumbering the entrance to **Cormack Bay**. It is reported that the water near the mouth of Cormack Bay is comparatively shallow but within the entrance depths increase and deeper water continues almost to the head of the bay.

Chart 7050

125 **Caution**. — Rivers entering the head of Cormack Bay are building up alluvial **shoals**.

Chart 7121

126 The average **tidal range** in Cormack Bay is reported to be 25 feet (7.6 m).

127 **Bruce Island** *(63°19'N, 67°25'W)* has an elevation about 400 feet (122 m).

128 **Caution**. — Many dangerous **underwater rocks** and **shoals** exist or are reported to exist up to 5 miles SW, south and SE of Bruce Island; among these is a dangerous **shoal**, position approximate, with less than 9.1 m over it 1 hour after high water. This shoal is reported to lie 5 miles SW of the south end of Bruce Island.

129 **Caution**. — **Ogden Island**, **Mary Island** and **Pope Island**, with elevations of about 200 feet (61 m), are other named islands of the numerous islands, islets, dangerous **underwater rocks** and **shoals** that lie in the approaches and entrance to Ward Inlet.

Chart 7050

130 **Ward Inlet** extends about 25 miles between black, buttress-like shores. At **The Narrows**, 3.5 miles from its head, the inlet is constricted between two points to a width of less than 0.5 mile. **Anna Maria Port**, named by Hall, is

the area inside The Narrows. The land rises at the head of Anna Maria Port to 1000 feet (305 m) or more.

131 **Caution**. — The east shore of Ward Inlet, from Cape Ware to beyond **Edmund Point** *(63°32'N, 67°34'W)*, is bordered up to 2 miles off by islands, rocks and **shoals**.

132 Edmund Point is the south extremity of two rocky islets joined to each other and the mainland by drying sand bars. **Augustus Island**, further up the inlet, has an elevation of about 400 feet (122 m) and is extremely rugged.

133 **Caution**. — There are many islets and rocks off the shores of Augustus Island and **shoal water** is probable in its vicinity. **Cornelia Channel** appears to have many **shallow spots**. Several rivers with **drying** alluvial flats at their mouths enter Ward Inlet above Augustus Island.

134 **Becher Peninsula** forms the west side of Ward Inlet and is of moderate elevation compared with the neighbouring mainland. The interior of the peninsula is very rugged and along most of its Ward Inlet coast cliffs rise almost sheer from the sea. Except for **Emily Bay**, the indentations on this coast are minor.

135 **Caution**. — Most of the indentations are **shallow** as a result of sediment from streams draining the numerous lakes of the peninsula.

136 **Rae Point** *(63°22'N, 67°42'W)* is the SW end of Becher Peninsula.

Central Frobisher Bay — SW side

President's Seat to Ney Harbour

137 The coast from President's Seat to Ney Harbour, 18 miles NW, and beyond to Cape Vanderbilt, is very rugged with many short fiords separated by high, cliffy headlands. There is a drying mud flat at the head of every fiord. **Everett Mountains** rise close to this part of the coast and, with their razor-sharp spurs, constitute some of the most rugged and picturesque topography in eastern North America.

138 **Watts Bay** *(62°41'N, 66°55'W)* has precipitous shores which rise to over 2400 feet (732 m) and are steep-to. At the head of the larger arm of the bay, a large stream is building a delta at the base of the cliffs. Elsewhere, the bay appears to be deep. The small island in the middle of the entrance to the bay has a rock off its east end. Two tongues of Grinnell Glacier flow down to the small east arm of the bay; one reaches tidewater, the other ends a short distance inland. From both glacier tongues broad streams of melt water pour into the bay, discolouring the water and building up sand flats and deltas.

139 **Caution**. — An **islet** which possibly **covers** at high water, a **shoal**, and a dangerous **underwater rock**, position approximate and reported in 1955, lie about 2.5 miles NE of the NW entrance point of Watts Bay.

140 **Delano Bay** *(62°42'N, 66°59'W)* is almost blocked by an island which rises steeply on its SE side to 1400 feet (427 m).

141 **Caution**. — The narrow channels past the island have indications of rocks and sand banks. A rocky islet with **off-lying shoals** lies SE of the above-mentioned island.

142 **Minturn Bay** has a stream and a large delta at its head and is surrounded by very steep cliffs with elevations of about 2000 feet (610 m). The channel leading to the inner bay is about 650 feet (198 m) wide. The schooner *Bowdoin*, with 100 fathoms (183 m) of chain out, could find no anchorage in the inner bay 0.25 mile from the shore.

143 **Griffin Bay** *(62°49'N, 67°10'W)* is separated from Minturn Bay by a precipitous headland, elevation 2200 feet (671 m). This headland is broken by a small cove. Griffin Bay is surrounded by high, steep cliffs with occasional talus slopes. A schooner found anchorage at the mouth of a small stream on the SE side of the bay near its head, mooring to the cliffs with quarter lines; however, there is no good anchorage.

144 **Caution**. — The inner part of Griffin Bay is probably **shallow**.

Ney Harbour to Cape Poillon

145 **Ney Harbour** *(62°52'N, 67°15'W)* is separated from Griffin Bay by two steep promontories that rise to over 2400 feet (732 m); the promontories enclose a narrow fiord. An L-shaped lake close to the head of Ney Harbour is only slightly above sea level; the lake and the harbour are connected at high water springs. The only codfish in Frobisher Bay were found in this lake, which drains the **Oogah River**. The shores of Ney Harbour are steep and generally steep-to, and depths of up to 200 fathoms (366 m) have been found.

146 The schooner *Bowdoin* obtained **anchorage** in 7 fathoms (12.8 m) off the mouth of a stream that empties into the south side of the head of Ney Harbour.

147 **Knife Edge Mountain** rises north of Ney Harbour. The headlands between Ney Harbour and Cape Lawrence are precipitous with maximum elevations of over 2200 feet (671 m).

148 **Caution**. — The inlets between these headlands have **shallow water** at their heads and in some cases their **entrances** are **encumbered** with rocks.

Chart 7121

149 **Cape Lawrence** *(62°58'N, 67°24'W)* is a bold promontory at the end of a ridge.

150 **Kneeland Bay** has steep, rugged shores, particularly near its entrance and along its SE coast. A rocky island about 25 feet (7.6 m) in elevation near the NW entrance point forms a **conspicuous** promontory; it is connected to the shore by a narrow neck of sand and gravel.

151 **Caution**. — A 3.7-m sounding is SE of the conspicuous promontory.

152 A larger, L-shaped island *(62°58'N, 67°32'W)*, off the south shore of Kneeland Bay, has an elevation of about 200 feet (61 m). Two streams enter the bay near this island and others flow into the head of the bay and into a cove on its NW shore.

153 It is reported that **anchorage** can be obtained in Kneeland Bay close west of the L-shaped island.

154 The peninsula separating Kneeland Bay from Leach Bay is indented by two small bays; the SE one is closed by silt from a river at its head.

155 **Caution**. — Soundings indicate that an area of relatively **shoal water** extends off the above-mentioned peninsula.

156 The shores of **Leach Bay** *(63°02'N, 67°40'W)* are generally high and rugged but somewhat less precipitous than in the inlets to the SE. At the head of the bay a large stream is building a delta.

157 **Anchorage** can be obtained in Leach Bay in 37 to 46 m but the bottom is rocky and holding is poor.

158 **Caution**. — **Gales**, from the SE or south in Frobisher Bay, come down over the mountains and blows through Leach Bay with great force. Moderate swells can arise. Daniel Island Harbour, to the NW, offers better holding and protection.

159 **Cape Vanderbilt** *(63°06'N, 67°36'W)*, bold and steep-to, marks the end of the line of precipitous headlands that forms the SW shore of the outer part of Frobisher Bay; beyond this cape, to the head of the inner part of the bay, the mountains near the coastline are lower and more rounded in form and the higher summits lie farther inland.

160 **Daniel Island** is high and rugged, especially in its NW part where cliffs rise almost sheer from the water. Its named features are **Dundalk Point**, **Outremont Point**, and **Skua Point**.

161 **Daniel Island Harbour** *(63°05'N, 67°46'W)* affords **anchorage** in 66 m, mud, about 0.5 mile SSW of Dundalk Point. This is reported to be a good anchorage and an excellent place to await favourable tides or weather for proceeding into inner Frobisher Bay.

162 **Caution**. — A **shoal** which dries 0.4 m is west of the anchorage.

163 The **tidal range** in Daniel Island Harbour is reported to be about 20 feet (6.1 m) and there is very little current.

164 **Fresh water** may be obtained at the waterfall on the south shore of the harbour.

165 **Kittiwake Rocks** are about 1 mile north of Daniel Island.

166 **Caution**. — Kittiwake Rocks are on the SW side of a group of **drying shoals** and islets which includes **Gosling Islet**, **Gander Islet** and **Nesters Islet** *(63°08'N, 67°41'W)*, the highest of the islets.

Chart 7125

167 **Cape Poillon** *(63°08'N, 67°52'W)* is a steep promontory. **Newell Sound**, entered south of Cape Poillon, has steep shores rising to over 1000 feet (305 m) and a sand plain at its head; several large rivers flow over the plain into the sound.

168 **Caution**. — There are indications of **strong currents** off Cape Poillon. About 1 mile inside the entrance of Newell Sound a line of **drying shoals** and **shoal water** extends almost the full width of the sound, leaving a channel 0.1 mile wide on the north side.

Inner Frobisher Bay approach channels

Chart 7121

169 The inner part of Frobisher Bay is separated from the central part by an intricate labyrinth of islands of all sizes extending from shore to shore.

170 The islands are composed of mica schist, the predominant rock of this region; they have little or no vegetation and contain many polished summits.

171 A number of channels and passages run through the islands. Of these, **Pike-Resor Channel** is the most suitable for deep-draught vessels. Pike-Resor Channel has navigational aids, no sharp bends and is free of ice before the others. *(The channels and passages are described below, first Pike-Resor Channel, then the others in order from SW to NE.)*

172 **Caution**. — **Tidal streams** in some channels attain rates of 5 to 7 knots and there are **strong eddies** in many places.

173 **Fog** is most prevalent during July and early August when the ice is breaking up in the various channels; 120 hours of fog have been recorded in July and 135 hours in the period August 1-15. Thereafter the frequency falls to about 15 hours per month. On most days when fog occurred it lifted to a ceiling of about 200 feet (61 m) by noon. On calm days, hazy conditions and mirages are common. *(For present and forecast **weather conditions**, visit:* https://weather.gc.ca/*.)*

174 The **depths** in Cincinnati Press Channel are based on United States' surveys prior to 1944. **Depths** in the remainder of the channels and passages described in this section are based on *Canadian Hydrographic Service* controlled surveys between 2003 and 2018.

175 **Caution**. — Parts of the **entrances** to inner Frobisher Bay are **unsurveyed**.

Chart 7125

Pike-Resor Channel

176 *(The usual tracks to approach and pass through Pike-Resor Channel are shown on the charts.)*

177 *Resor Island (Index No. 4100)* is a secondary port in *Canadian Tide and Current Tables, Volume 4.*

178 **Caution**. — The **currents** in Pike-Resor Channel are tidal with velocities varying from 5 knots at large tides to about 2 knots at mean tides, and with little difference apparent between the velocities at flood and ebb. Little advantage is to be gained by planning a passage during slack water as this takes the form of a short period of turbulence between tidal streams.

179 **Caution**. — A vessel **unable to maintain 10 knots** should not attempt a passage against the tidal stream at large tides.

180 **Caution**. — A master navigating this channel for the first time may find it advantageous to do so at low water when many of the **shoals** are visible.

181 Cape Poillon *(previously mentioned)* is in the south approaches to Pike-Resor Channel. **Scalene Island** lies 1.5 miles to the NE. **Redan Island** is 0.3 mile SE of **Pike Island**. **Sackville Point** is the SW extremity of Pike Island.

182 **Caution**. — A 1-foot (0.3-m) **shoal** lies 0.3 mile SE of Redan Island. **Aiguille Shoal**, with a depth of 2.2 m, is 1.2 miles WSW of Sackville Point. The shoal rises steeply from depths of over 400 m on its SW side. Early in the season Aiguille Shoal may be marked by **grounded ice**; **tide rips** sometimes form during open water periods.

183 **Sepiment Rocks** *(63°11'N, 67°56'W)*, close NW of Sackville Point, are two rocks drying 31 and 36 feet (9.4 and 11 m). From southward they generally appear to be the end of a low point protruding from Pike Island, however at high water they are separate from one another and from the island.

184 **Caution**. — **Agitator Reef**, 0.5 mile WSW of **Basset Point** on Pike Island, consists of five **drying rocks**. The two easternmost dry only at lowest low water, the others dry with all tides. Early in the season this shoal may be marked by grounded ice; **tide rips** are nearly always present. Three more **shoals** with least depths from drying 0.5 m to 9.7 m lie between 0.3 and 1 mile north and NW of Agitator Reef.

185 **Beluga Point** *(63°12'N, 68°00'W)*, the SE extremity of **Resor Island**, cannot be distinguished as a point at low water large tides when it is joined to Whiskukun Island. **Nest Island** is a tiny islet 0.2 mile south of Beluga Point. At **Staith Point** a valley runs SE across Resor Island, separating the low hills of the SE part of the island from the higher hills of the central part.

186 A **peninsula**, lying between **Benoe Point** and **Hare Point** on Pike Island, rises rapidly from the water to 90 feet (27 m) and is **conspicuous** from the south because the land north of it is lower.

187 *Cape Poillon range* **lights** *(2566, 2567)*, in line bearing 149½°, and *Pike Island range 1* **lights** *(2570, 2571)*, in line bearing 329½°, both lead past the dangers in the south end of Pike-Resor Channel. *Cape Poillon range* lights are on Cape Poillon and on the south entrance point of Newell Sound. *Pike Island range 1* lights are SSE of Hare Point.

188 **Caution**. — *Pike Island range 1* lights do not provide a very sensitive range and should be considered as secondary to the *Cape Poillon range* lights.

189 *Cape Poillon West* **light** *(2568)*, 1.8 miles NW of Cape Poillon, when bearing 238° indicates the turning point at the south end of *Cape Poillon range*. *Basset Point* **light** *(2569)*, 0.9 mile NNW of Basset Point, when bearing 060° indicates the turning point at the north end of the range.

190 **Farbusher Point** *(63°14'N, 68°04'W)* is near the middle of the east shore of Resor Island; **Whistler Point**, elevation 150 feet (46 m), is the north end of the island. **Dog Island** and **Luella Island** are the only named islands in the chain extending NNW of Resor Island.

191 **Caution**. — **Shoal water** extends 0.6 mile NNW of **Lapointe Rock**, at the NW end of this chain.

192 **False Haven** is on the west side of Pike Island between Hare Point and **Montcalm Point**. The coast from Montcalm Point to **Ayde Point** *(63°15'N, 68°02'W)* is low

but rises abruptly 0.3 mile inland to about 400 feet (122 m). There is a **conspicuous** waterfall midway between Ayde Point and **Sliver Island**, 3.2 miles to the NNW. The shore in this vicinity is formed of 100-foot (30-m) cliffs.

193 **Caution**. — A rock drying 0.5 m lies off Pike Island, 0.3 mile west of **Scaur Point**.

194 **Metela Island** has an elevation in its central part of about 200 feet (61 m). **Canaille Point** is the NW extremity of Metela Island.

195 **Caution**. — Metela Island and **Camp Island** are in a chain of islands and **drying shoals** which extends NNW from Pike Island for 3 miles.

196 **Caution**. — **Quadrifid Island** *(63°18'N, 68°08'W)*, **Kungo Island** and **Kungo Reef** form parts of a chain of islets and **shoals** lying in the middle of the north part of Pike-Resor Channel.

197 *Pike Island No. 2 range* **lights** *(2572, 2573)*, near Montcalm Point and Hare Point, in line bearing 146°, lead through the channel from abreast Quadrifid Island to abreast Lapointe Rock. The rear light is also the rear light, previously described, of *Pike Island range 1*.

198 *Quadrifid Island* **light** *(2574)*, when bearing 236°, indicates the turning point at the south end of *Pike Island No. 2 range*. *Lapointe Rock* **light** *(2575)*, when bearing 236°, indicates the turning point at the north end of *Pike Island No. 2 range*.

Charts 7121, 7125

199 **Caution**. — When entering Pike-Resor Channel from northward, in poor visibility, **range beacons** may be **obscured**. Lapointe Rock should be positively identified before entering the channel.

Cincinnati Press Channel

200 **Cincinnati Press Channel** runs between Pugh Island and the mainland to the SW.

201 **Caution**. — Cincinnati Press Channel is **obstructed** near its south end by a **bar** with a least depth of 2.8 m and has many **shoals** in its north entrance. Although the tidal range in these waters is so great that the bar is no obstacle to passage at high water, Cincinnati Press Channel has **no aids to navigation**, is seldom used and is not recommended without **local knowledge**.

202 **Caution**. — The **tidal stream** in Cincinnati Press Channel turns to SE 1 hour 40 minutes before high water by the shore, and this is the best time to make the passage. The stream attains a rate of 5 knots or more in the narrowest part of the channel.

203 On the SW and west sides of the channel, from Cape Poillon *(previously described)* to Hidden Bay *(63°09'N, 68°04'W)* the coast is high, steep and rugged. Elevations are not as great as those to the SE toward Cape Vanderbilt.

204 **Hidden Bay**, nearly landlocked by two rocky islands in its mouth, is entered through the passage west of these islands. The bottom of the bay is soft and comparatively free of boulders. It is surrounded by rather gently sloping shores backed by hills rising to 1800 and 2000 feet (549 and 610 m).

205 The schooner *Bowdoin* obtained **anchorage** in Hidden Bay in 8 fathoms (14.6 m).

206 A waterfall close NW of the entrance passage provides an excellent place to take on **fresh water**.

207 **Egglestone Bay** has mud flats at its head topped by a prominent flat-topped deposit of sand and gravel about 320 feet (98 m) high. The land NW of the bay rises rapidly to 2200 feet (671 m).

208 There is reported to be good **anchorage** in Egglestone Bay in 18.3 to 27.4 m.

209 **Caution**. — **NW winds** may funnel violently into Egglestone Bay.

210 The coast from Egglestone Bay to **Jaynes Inlet**, 3.5 miles NNW, is formed of cliffs rising sheer from the sea to 1400 feet (427 m).

211 **Caution**. — Jaynes Inlet has relatively low shores and is **shallow** throughout its length; its inner part is filled with **sand bars** and **drying flats**.

212 Between Jaynes Inlet and Cape Caldwell, 5 miles NNW, the coast rises steeply to 600 feet (183 m).

213 **Cape Caldwell** *(63°21'N, 68°20'W)* is the end of a peninsula formed of rocky ridges linked by heavy sand deposits.

214 **Caution**. — The coast in the vicinity of Cape Caldwell is bordered in several places with **rocky ledges** and sand flats, and the water appears to be **very shallow**.

215 **Pugh Point**, on the east side of Cincinnati Press Channel, is the south extremity of **Pugh Island**. Like the neighbouring islands, Pugh Island is formed of rocky ridges.

216 **Caution**. — **Crowell Island**, north of Pugh Island, is bordered with **rocky ledges** in a number of places, and has dangerous **shoals** extending 1.3 miles NNW from its NW end.

217 **Crowell Harbour** lies between Crowell Island and **Anchorage Island** *(63°19'N, 68°16'W)*.

218 **Caution**. — A **bar** with a greatest depth of 11.9 m extends SE from Anchorage Island to Crowell Island. The anchorage is on the south side of this bar.

219 **Caution**. — An area of **foul ground** surrounds the northernmost of the two islets 0.7 mile NNW of Anchorage Island.

220 **Caution**. — There is a 1.9-m) **shoal** 0.9 mile west of the middle of Luella Island.

Whiskukun Channel

221 **Caution**. — **Whiskukun Channel** is blocked at its outer end by **Whiskukun Island** *(63°12'N, 68°03'W)* and adjacent **drying ledges**. **Wedge Island** lies in the middle of the central portion of the channel; **October Shoal**, with a least depth of 3.1 m, lies 1.5 miles farther NNW.

Fletcher Channel

222 **Fletcher Channel** runs along the east shore of Pike Island. The east side of the channel is formed by **Eden Island** and **Fletcher Island**.

223 **Caution**. — Fletcher Channel is obstructed at its south end by **Fletcher Reefs** *(63°11'N, 67°51'W)*, and bordered at its NW end by **Biserial Reefs** and the group of islands, islets and **shoals** extending NNW from Fletcher Island. Named islands in this group closest to the channel are **Falk Island**, **Brigus Island**, **Smith Island**, **Bate Islands**, **Precipice Island** and **Mark Island**. **Air photos** show **drying ledges** extending from most of the islands, and most of the channels between them appear to be encumbered with **rocks** and **shoals**.

224 **Caution**. — The direction of the **tidal streams** in Fletcher Channel is affected by the flow of water between the islands and shoals forming its eastern side and is quite **irregular**.

225 Fletcher Channel is not recommended without **local knowledge**.

Charts 7121, 7126

Bartlett Narrows

226 **Bartlett Narrows** *(63°25'N, 67°59'W)* was used, before the establishment of Pike-Resor Channel, as an alternative to the Algerine-Deep Passage route when the latter was blocked by ice or when the range beacons on Frobisher's Farthest could not be seen. *(See "Caution", below, under Algerine and Deep Passages.)*

227 Fletcher Island and Falk Island *(both previously described)*, **Brook Island**, **Gay Island** and **Culbertson Island** lie on the west side of the south approaches to both Bartlett Narrows and the Algerine-Deep Passage route.

228 **Caution**. — Two **drying shoals** lie about 1 mile east of Falk Island, joined to the island by **foul ground**. In 1948 a vessel drawing 22.5 feet (6.9 m) struck a **submerged obstruction** about 1.5 miles east of Falk Island, about one hour before high water. A 14.6-m **shoal patch**, reported in 1949, is 2 miles east of the south tip of Gay Island. *(The dangers lying on the east side of the approaches, about 4 miles south and SW of Bruce Island, were described previously.)*

229 Culbertson Island has a sharp peak in its southern part. **Camels Neck**, the SE end of the island, is a rocky peninsula. **Peak Island** *(63°23'N, 67°53'W)* has a sharp summit with a **cairn** on it.

230 Sheltered **anchorage** can be found in the area between the SE end of Culbertson Island and the north points of Gay Island and the eastern Bate Island. The north arm of this anchorage is the small bay west of Camels Neck; here the water **shoals** gradually from more than 55 m in the entrance to 11 m near the head. Entry to this anchorage is made from ENE between an islet that lies close east of Camels Neck and the islets and shoals extending north from the north extremity of Gay Island.

231 **Caution**. — A 1.8-m **shoal patch** lies about 0.15 mile south of Camels Neck and there are many other dangers lying off the shores of the islands and islets which shelter the anchorage. Local knowledge is advised.

232 Small craft can find well-sheltered **anchorage** in the channel between Peak Island and Culbertson Island.

233 **Caution**. — Entry to the anchorage is from the north between the **rocky ledges** off the north end of Peak Island and an area of **shoals** about 0.2 mile NW.

234 **Outer Peak Reef** lies 1.3 miles NNE of Peak Island.

235 **McAllister Island** *(63°24'N, 67°58'W)*, elevation about 200 feet (61 m), **Low Island**, **Scylla Reef**, **Theron Reefs** and **Nipper Rock** border the south and west sides of Bartlett Narrows. **Mitchell Island** and **Alligator Island**, both about 200 feet (61 m) in elevation, are on the NE side. **Pink Lady Island**, at the NW end of the passage, has an elevation of about 200 feet (61 m) and is formed of two rocky domes linked by a high broad valley. **Folly Reefs** lie 2 miles NNW of Pink Lady Island.

236 **Caution**. — There are several **shoals** between Theron Reefs and Nipper Rock. **Charybdis Reef** and many unnamed **shoals** border the north and east sides of Bartlett Narrows. Great care is required to avoid the **shoal water** on the NE side of the entrance to the narrows, off Mitchell Island.

237 **Caution**. — **Currents** of up to 6 or 7 knots have been encountered in Bartlett Narrows.

Charts 7122, 7126

Algerine Passage and Deep Passage

238 Until the establishment of Pike-Resor Channel, large vessels proceeding to inner Frobisher Bay generally used Algerine Passage and Deep Passage, preferring these passages to Bartlett Narrows because they were marked by beacon ranges although the turns are sharper and eddies are encountered. *(The usual tracks through Algerine and Deep Passages are shown on the charts.)*

239 **Caution**. — The **range beacons** leading through these passages are **no longer charted**, **not maintained** and are in **disrepair** *(2013)*.

240 *Frobisher's Farthest (Index No. 4120)* is a reference port in *Canadian Tide and Current Tables, Volume 4*.

241 **Caution**. — Vessels navigating either Algerine Passage and Deep Passage or Bartlett Narrows should do so if possible at **slack water** and only **by day** under **good visibility**. Sufficient speed should be maintained to ensure good steerage in the **strong eddies** which may be encountered.

242 **Caution**. — The SW side of Becher Peninsula, from Rae Point *(previously mentioned)* past **Cape Christy** *(63°25'N, 67°48'W)* to Churchill's Thumb, is fronted by many islets and **shoals**.

243 **Churchill's Thumb** is a **conspicuous** thumb-shaped knoll with steep sides and a rounded summit; it has an elevation of over 400 feet (122 m) and is higher than the surrounding hills.

244 **Old Squaw Islands** lie in the south part of **Wayne Bay**. **Mandarin Passage** separates the island named Frobisher's Farthest from **Koodloo Point** *(63°32'N, 68°01'W)*.

245 **Caution**. — Mandarin Passage has, as are common in this area, **strong tidal streams** producing many **eddies** and **whirlpools**.

246 **Caution**. — **Algerine Passage** is bordered to the east by Outer Peak Reef *(previously described)*, by a 4.5-m **shoal patch** 0.8 mile SW of **Pan Island**, and by **Peter Ledge (Peter Reef)**. To the west the passage is bordered by the islets off the NE side of Mitchell Island and by **Algerine Island** *(63°28'N, 67°59'W)*.

247 **Caution**. — A 5.4-m **shoal patch** lies 0.2 mile off the easternmost of the islets on the NE side of Mitchell Island.

248 **Deep Passage** is bordered to the north by **Frobisher's Farthest**, a bold, dark-coloured island, elevation 596 feet (182 m). The island is higher than others in the vicinity, with rugged cliffs rising steeply from the sea. **Romulus Rock** and **Remus Rock** lie about 0.7 mile SW of Frobisher's Farthest.

249 **Hancock Harbour** *(63°28'N, 68°02'W)*, a snug **anchorage** which has been used in bad weather by a survey vessel, is entered from southward over a bar with a depth of 10.1 m.

250 **Alligators Teeth**, **drying rocks** which extend NW from Alligator Island, and isolated **drying** and **underwater rocks** midway between Alligators Teeth and the north end of Algerine Island, are dangers on the south side of Deep Passage.

251 Pink Lady Island *(previously described)* is at the west end of Deep Passage. Folly Reefs lie 2 miles NNW of Pink Lady Island.

Inner Frobisher Bay

Chart 7122

252 **Caution**. — **Depths** in inner Frobisher Bay are based mostly on *Canadian Hydrographic Service* controlled surveys between 2003 and 2018 but includes some information of a **reconnaissance** nature.

Cape Rammelsberg to Bay of Two Rivers

253 **Cape Rammelsberg** *(63°26'N, 68°23'W)* is the extremity of a peninsula formed of steep, rocky ridges and outcrops overlain by heavy sand deposits.

254 **Caution**. — Rocky islands, islets, **ledges** and **shoals** extend almost 2 miles east and 7.5 miles north and NW of the cape. Included among these are **Gardiner Island**, **Thompson Island**, **Coffin Island**, **Aubrey Island**, **Beveridge Island**, **Emerick Island** and **Ptarmigan Island**.

255 The coast between Cape Rammelsberg and **Bay of Two Rivers**, 14 miles NW, consists of steep cliffs at intervals, remnants of an ancient sand plain. It is backed about 2 miles inland by an escarpment rising as high as 2000 feet (610 m).

256 **Caution**. — **Drying rock ledges** border much of the shoreline and **shoals** lie up to 5 miles offshore.

257 **Faris Island** *(63°36'N, 68°44'W)*, **Bishop Island** and **Hill Island** lie off Bay of Two Rivers. The bay dries completely.

258 Good **anchorage** for small craft is reported off the NW end of Bishop Island.

259 **Mount Sharat** rises to about 1600 feet (488 m) about 5 miles west of Bay of Two Rivers. **Armshow River** is the southernmost of the two which drain into the bay.

Inner Frobisher Bay — North side

260 In contrast with the rugged SW shore, the north shore of the head of Frobisher Bay is bordered by relatively low land consisting of grassy plains and grass-covered hills.

261 **Foul Inlet** *(63°43'N, 68°52'W)* dries almost completely. **Jordan River** empties into the head of Foul Inlet; **Carter Islands** lie in the mouth of the inlet.

262 **Caution**. — Most of the area between Carter Islands and Peale Point, 4 miles ENE, is obstructed by islands, islets, above-water rocks, **rocks awash**, dangerous **underwater rocks** and **shoals**.

263 **Peale Point**, elevation 136 feet (41 m), consists of rugged rocks and is a little higher than the rest of the land at the head of Frobisher Bay.

264 **Caution**. — **Peterhead Inlet** is relatively **shallow** with a number of above-water rocks, **drying ledges**, **underwater rocks** and **shoals** in the approaches and within the inlet. The head and east side of the inlet dry.

Inner Frobisher Bay — NE side

265 **Lewis Bay** *(63°36'N, 68°06'W)* has sheer cliffs along its east shore and drying sand and mud flats at its head. **Pichit Island**, in the mouth of the bay, has a **conspicuous cairn** at its south end.

266 **Caution**. — Islets and **drying rocks** extend SSE from Pichit Island.

267 Lewis Bay offers well protected **anchorage** in 55 m, mud.

268 **Fresh water** can be obtained from a stream which enters Lewis Bay close north of the unnamed peninsula on the east side of the bay, NE of Pichit Island.

269 *Lewis Bay (Index No. 4135)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

270 **Porter Inlet** is separated from Lewis Bay by **Pichit Peninsula**, and is bounded on its west side by a twisting ridge of rock named **Crimmins Island** *(63°35'N, 68°11'W)*.

271 **Anchorage** may be obtained in the NW part of Porter Inlet.

272 **Sybil Island** lies 0.5 mile SSW of Crimmins Island. **Jenvey Island** lies within Porter Inlet; **Wigle Islands** lie in the mouth.

273 **Caution**. — Two **shoal patches** lie up to 0.7 mile north of Wigle Islands, and an **isolated rock** with 3.6 m over it lies 1.3 miles south of the southernmost Wigle Island. Other dangers lie between the last-mentioned rock and Folly Reefs *(previously mentioned)*, to the south.

274 **Burton Bay**, most of which dries, is entered between **Kudlago Island** and an islet 0.5 mile south of **Sale Island** *(63°37'N, 68°16'W)*. Sale Island is separated from **Miner Point** by a narrow drying channel.

275 **Caution**. — **Drying rocks**, **rocks awash**, dangerous **underwater rocks** and **shoals** extend south and west from Sale Island.

276 **Caution**. — Many **shoal patches** and dangerous **underwater rocks** lie off the NE shore of inner Frobisher Bay. Among these dangers are **O'Connell Reef**, **Quinn Reef** and **Laprade Reef** *(63°34'N, 68°19'W)*, up to 3.3 miles west of Sybil Island; three unnamed **rocks** lying about 1.3 miles north and NNE of Laprade Reef; **Johnston Reef** and **Palmer Reef**, up to 2.3 miles west of Sale Island; and two **shoal patches** 0.8 mile west of Johnston Reef. Vessels should take care to stay on the tracks usually followed.

277 **Caution**. — **Laird Peninsula** is formed of rough terrain and much of its shore is bordered by **shoals**. South of **Lamb Point**, these shoals extend about 1.5 miles offshore. The land NW of Laird Peninsula is lower.

Chart 7127

Koojesse Inlet

278 **Koojesse Inlet**, entered between Innuit Head and Apex Hill, has at its head the town of **Iqaluit** and an airfield.

279 **Ice** begins to break up in Koojesse Inlet about the end of June. The inlet is generally free of ice by about July 25 although some years the ice stays until well into August. Small amounts of drift ice may be encountered throughout the summer. Freeze-up is usually in the second or third week in October but may not be complete until November. *(For more ice information, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

280 A *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre in Iqaluit is open from early July until the end of October or as long as ships are at sea in the area.

281 The **approach channel** leads between **Deception Reef** *(63°39'N, 68°26'W)*, which covers at extreme high water, and **Shagstone Reef**, then west of **Cairn Island**.

282 **Caution**. — A **drying shoal** lies on the east side of the channel 1.5 miles NNW of Cairn Island, and there are a number of **shallow patches** on the west side; the shallowest of these shoal patches is a rock 1.9 miles NW of Cairn Island that dries 1.3 m.

283 **Mair Island** and **McLaren Island**, with several islets between them, lie off the west side of Laird Peninsula.

284 **Tarr Inlet** dries. The peninsula on the NW side of the entrance to Tarr Inlet is heavily mantled with sand deposits at its base, and rises to the peak of **Apex Hill**. Apex Hill has a steep **conspicuous bluff** facing the sea. A **radio tower** is on the hill. The village of **Apex** is near by.

285 **Monument Island** rises from steep sides to a high pointed summit; it is the most **conspicuous landmark** in the approaches to Koojesse Inlet. A monolith stands close NW of the island's south end.

286 *Monument Island* **light** *(2576)* is shown from the summit of Monument Island. *Long Island* **light** *(2580)* is shown from the NW part of Long Island. *Frobisher Landing* **light** *(2584)* is on an islet 0.5 mile south of the head of the inlet.

287 A rotating aeronautical **light** is near the airfield.

288 A privately maintained **aeromarine radiobeacon** *(63°44'N, 68°33'W)* transmits on 204 kHz with identification *Morse* "YFY" (— • — — • • — • — • — —). A privately maintained **aeronautical radiobeacon** *(63°45'N, 68°28'W)* transmits on 117.4 MHz with identification *Morse* "YFB" (— • — — • • — • — • • •). Two other nearby aeronautical radiobeacons transmit on 109.9 MHz.

289 **Caution**. — The channel between **Innuit Head**, which is an island, and **Long Island** is obstructed by three **drying shoals** named **White Top Ledge**, **Polaris Reef** and **Black Ledge**. The top of White Top Ledge, when dry, has a white appearance.

290 Each of the three shoals is marked by starboard-hand boat-type ***light buoys*** numbered *N22 (2577)*, *N26 (2579)* and *N30 (2581)*, respectively. A port-hand boat-type ***light buoy*** numbered *N23 (2578)* marks the west side of the channel abreast Innuit Head.

291 Long Island is marked by a **beacon** consisting of a square skeleton tower, 25 feet (7.6 m) high, with a fluorescent-orange **daymark**. A similar **beacon** is reported on Innuit Head.

292 *Koojesse Inlet range* **lights** *(2585, 2586)*, established at the head of the inlet, in line bearing 344°, leads to a position about 0.3 mile south of White Top Ledge.

293 **Best Point**, 0.3 mile NW of Innuit Head, is on the SE side of the mouth of the **Sylvia Grinnell River**; **Davidson Point** is on the NW side. **Qarsau Island** lies 0.6 mile west of Davidson Point.

294 **Caution**. — The approaches to and lower reaches of Sylvia Grinnell River are encumbered by **drying rocky ledges**.

295 Tall **buildings** in the settlement and **oil tanks** on the west side of Koojesse Inlet are **conspicuous**.

296 Ships have found **anchorage** in about 37 m, 0.5 mile east of the north end of Monument Island.

297 **Caution**. — Ships at this anchorage have been known to **drag anchor** in a moderate gale.

298 **Oil** is pumped direct from tankers moored off Innuit Head through about 800 feet (244 m) of 6-inch (15-cm) floating hose.

299 A tanker of 33 000 tons, length 525 feet (160 m), beam 58 feet (18 m) and draught 30 feet (9.1 m), has moored in the **anchorage** east of Innuit Head to discharge oil, heading SE with quarter lines to bollards above high water level on Innuit Head.

300 **Caution**. — It is considered that this berth would be precarious in a strong gale.

301 Vessels not over 350 feet (107 m) long can find **anchorage** with limited swinging room in about 12.8 m, 0.3 mile NNE of Black Ledge.

302 **Caution**. — Shelter in the anchorage NNE of Black Ledge is poor with **southerly winds**.

303 *Frobisher Bay (Iqaluit) range* **lights** *(2582, 2583)*, in line bearing 230°, lead to the anchorage 0.3 mile NNE of Black Ledge.

304 The bottom in the Koojesse Inlet anchorages is granite bedrock covered with thin patches of clay or mud.

305 **Caution**. — The anchorages are protected except to the SE; strong winds from this direction may force a vessel to leave. Surf and sea are usually low in Koojesse Inlet.

306 A vessel has ridden out 60-knot SE winds without dragging while anchored in 12.8 m east of Long Island.

307 The **landing beach**, about 300 feet (91 m) wide, is composed of hard rock, shale, mud and sand, with a gradient of about 1:150. It has been cleared of boulders and graded sufficiently to allow ships of 2000 tons and more to beach in order to work cargo or for repairs. Larger vessels moor in deep water and freight is lightered ashore. Landing craft and

dumb barges are beached 20 minutes to 1 hour after high water; when the water recedes a crane is placed alongside to discharge cargo to vehicles for transfer to marshalling areas. The traction for vehicles in the beach area is good.

308 With no commercial port facilities in Iqaluit, the *Canadian Coast Guard* supplies personnel and equipment to coordinate the arrival, safe mooring and unloading and departure of commercial cargo ships conducting the sealift. The *Coast Guard* oversees other traffic in the area through the *Marine Communications and Traffic Services (MCTS)* centre in Iqaluit.

309 *Iqaluit MCTS* centre also broadcasts *Canadian Ice Service* ice analysis charts and handles *NORDREG* communications traffic. *(See Radio Aids to Marine Navigation (Atlantic, St. Lawrence, Great Lakes, Lake Winnipeg and Eastern Arctic) for details.)*

310 The modern community of Iqaluit, population 6699 *(2011)*, is the capital of Nunavut and is the chief administrative, communications and transportation centre in the eastern Arctic.

311 Satellite-based **telecommunications**, including the internet, connect Iqaluit with other northern communities and to population centres to the south. Transportation to Iqaluit is by sea, from early August to the last part of September, and by air year-round. Several airlines provide passenger and freight services.

312 *Royal Canadian Mounted Police (RCMP)* Headquarters for the eastern Arctic is located here, and the local detachment is in the same building. *(For police services, dial 867-979-1111.)* There is regular postal service. *Canadian Border Service Agency (CBSA)*, at Iqaluit Airport, has Customs and Immigration agents available weekdays 9 am to 5 pm. *CBSA* operates the automated *Border Information Service* by telephone 24 hours a day, 7 days a week. For service in English, dial 1-800-461-9999. For service in French, dial 1-800-959-2036.

313 *Qikiqtani General Hospital*, a 35-bed full-service facility, serves patients from 13 communities in Nunavut's Qikiqtaaluk region. The old Baffin Regional Hospital building houses physicians' and specialists' clinics, outpatient services and a pharmacy.

314 *Canadian Imperial Bank of Commerce (CIBC)*, *RBC Royal Bank* and *First Nations Bank of Canada* maintain branches in Iqaluit.

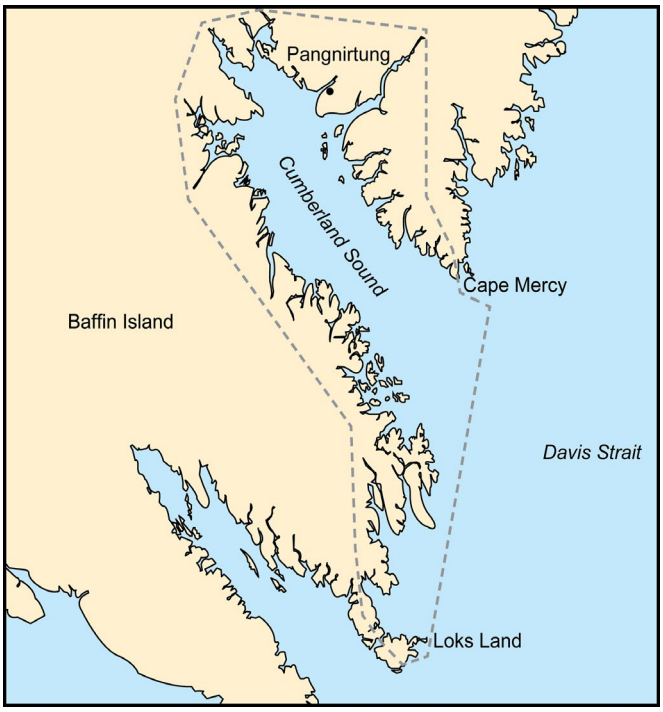
315 Several hotels and bed-and-breakfast facilities offer accommodation, and there are a variety of retail food, clothing and equipment outlets.

316 There are no ship chandlers or ship repair facilities in Iqaluit, although there may be some machine shop help available in an emergency. Outboard motor service is available.

317 Limited amounts of diesel fuel are available, but must be transferred from the beaching area. For large amounts, prior notification is necessary. Fresh water is available, also transferred from the beaching area.

Chapter 2

Davis Strait
Cumberland Sound



General

Charts 7010, 7050, 7051, 7103, 7134, 7135, 7136, 7150

1 Davis Strait, bordered to the west by Baffin Island and to the east by Kalaallit Nunaat (Greenland), extends north for 600 miles from the 60th parallel of latitude to its border with Baffin Bay at the 70th parallel.

2 The SE coast of Baffin Island between Loks Land *(62°26'N, 64°38'W)* and Cape Dyer, 250 miles NNE, is high and rocky with many fiord-like inlets. The land rises sharply from the sea, often in cliffs of great height, and then slopes more gently to the summits of the interior tablelands. On Hall Peninsula there are elevations of more than 3000 feet (914 m), and on Cumberland Peninsula elevations of about 7000 feet (2134 m) are found within 20 miles of the sea. Penny Ice Cap, which has elevations approaching 7000 feet (2134 m), and many of the other high parts of Cumberland Peninsula are permanently snow-covered. *(For general information on the physiography of Baffin Island see Chapter 3 of Sailing Directions booklet ARC 400 — General Information, Northern Canada.)*

3 This chapter describes the SE coast of Baffin Island from Loks Land to Cape Mercy and includes Cumberland Sound.

4 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all Canadian waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

5 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

6 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at: https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html.)*

7 **Caution**. — Much of the **depth** information shown on the charts covering the area described in this chapter is based on **track soundings** and **reconnaissance surveys**.

8 There are no soundings available for waters close to the shore except for those soundings shown on the charts covering Brevoort Island and Pangnirtung and their approaches, and corridor surveys of the northern approaches to Robinson Bay on Loks Land and the SW approach to Cape Mercy *(see notes, Source Classification Diagrams and cautions on charts)*.

9 **Caution**. — Great care is necessary when approaching this part of the coast because of the meagre information on **depths** and **dangers** in waters bordering the shore.

10 *Brevoort Harbour (Index No. 4070)*, *Imigen Island (Index No. 4045)*, *Aulatsivik Point (Index No. 4031)* and *Clearwater Fiord (Index No. 4040)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

11 *(For general **weather conditions** in Davis Strait, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For current weather and forecasts, visit:* https://weather.gc.ca/. *For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784.*)*

12 It is usually possible to proceed northward along this portion of the Baffin Island coast in late August and throughout September.

13 *(For information on ice and currents in Davis Strait and a general description of the climate of Arctic Canada, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For current **ice conditions** visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html.*)*

14 The **magnetic compass** is reasonably stable in this area. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada, for more information.)*

Loks Land to Cumberland Sound

Chart 7050

Cape Daly to French Headland

15 **Cape Daly** *(62°34'N, 64°31'W)* is a bold headland which forms the north point of Loks Land *(described in Chapter 1)*. Between Cape Daly and Cape Murchison, 44 miles NNE, the SE coast of Baffin Island is mostly high and rugged. Much of the shore is cliffs and, within 2 to 5 miles of the sea, the land rises quickly in many places to elevations of 1500 to 2000 feet (457 to 610 m).

16 **Mount Dillon**, prominent, peaked and rising to 1200 feet (366 m), is 4.5 miles ESE of Cape Daly on the east side of **Young Bay**.

Chart 7134

17 **Robinson Bay** is marked on the east side of its entrance by a fortress-like cliff 259 to 274 m high, and on its west side by **Jones Tower**, a distinctive tower-like peak with an elevation of 183 m.

Chart 7050

18 **Lupton Channel** *(62°33'N, 64°50'W)*, which has high, bold shores, separates the NW part of Loks Land from the unnamed large island to the NW. **Sylvia Island**, elevation 200 feet (61 m), is the westernmost of the group lying off the NE entrance to Lupton Channel. At this entrance it is reported that a line of breakers forms from shore to shore when a rough sea from Davis Strait meets an outgoing tidal stream from Beare Sound *(described in Chapter 1)*. **Matlack Island** is the centre island and **Ellis Island** is the NW of the three islands at the south end of Lupton Channel where the channel joins Beare Sound; both named islands have an elevation of about 400 feet (122 m).

19 **Caution**. — Powerful and **erratic currents** prevail in Lupton Channel; navigation is difficult and dangerous. According to the Inuit, the channel never freezes over. Although the passage was frequently used by the Inuit, it should only be attempted by shallow-draught craft, even at slack water.

20 **Scott's Fortress** *(62°37'N, 64°55'W)*, rising to over 850 feet (259 m), is the largest of the islands and islets in the entrance to **Chapell Inlet**. The peninsula on the north side of the entrance is surrounded by a narrow coastal plain and rises in the middle to 1000 feet (305 m). The shores of the inlet consist mostly of sheer cliffs rising to over 600 feet (183 m). The cliffs end abruptly in the sand bars, rocks and lagoons which separate Chapell Inlet from Frobisher Bay.

21 Hall's schooner obtained good **anchorage** at the head of the inlet in 27 feet (8.2 m).

22 The coast between Chapell Inlet and French Headland is a rugged escarpment fronted by a low, rocky shore. **French Headland** *(62°43'N, 64°57'W)*, with its 1200-foot (366-m) cliffs, is a prominent mark in the approaches to Cyrus Field Bay.

23 **Caution**. — This section of coastline has many off-lying **rocks** and **underwater dangers**.

24 Between French Headland and Cape Melby the coast is high and precipitous, broken by numerous steep-walled inlets and coves and bordered by islets and above-water rocks.

Cyrus Field Bay

25 **Cyrus Field Bay**, entered between Cape Melby and Cape Farrington, 9 miles ENE, is surrounded by rugged granite hills. On **Blunt Peninsula**, these hills rise to over 1800 feet (549 m).

26 **Caution**. — The north end of Cyrus Field Bay is **shallow** with an uneven bottom. There are numerous low islands and **shoals**, many of which are joined at low water.

27 **Cape Melby** is low but backed by cliffs rising to 800 feet (244 m). The cliffs continue around **Parker Bay** *(62°48'N, 65°04'W)* where they rise sheer from the sea.

28 **Caution**. — The entrance to Parker Bay is encumbered with islets and **shoals**.

29 From Parker Bay almost to the entrance to Frenchman Cove the high cliffs of the coastal escarpment fall sheer to the sea in most places and there are few islets or above-water rocks.

30 **George Henry Island**, with a 200-foot (61-m) hill near its NW end, is the largest of the group of islands which almost fills the head of Cyrus Field Bay.

31 **Frenchman Cove** has a number of rocky islets across its mouth. The water outside the cove appears to be deep. The cove is bordered as far as Mount Alden by a low coastal plain of rock, marsh and lagoons. Rock outcrops occasionally rise from the plain to form either distinctive hills or low ridges. **Mount Alden** *(62°59'N, 65°12'W)*, elevation over 400 feet (122 m), is the largest of these outcrops. Frenchman Cove is bordered by cliffs or steep slopes from Mount Alden to its head. A large river flows into the head through a broad valley.

32 **Caution**. — Within Frenchman Cove many areas of **shallow water** are evident. The inlet at the head of Cyrus Field Bay, west of **Mount Grinnell**, has many islets and **shoals**.

33 **Mount Budington**, elevation about 500 feet (152 m), is on the NE side of Cyrus Field Bay. The mount, although not as high as the land a short distance northward, is the most distinctive feature along the coast in its area.

34 **Cape Farrington** *(62°51'N, 64°45'W)*, the east entrance point to Cyrus Field Bay, is the end of a low peninsula.

35 **Caution**. — Islets and dangerous **underwater rocks**, positions approximate, lie up to 6.5 miles east of Cape Farrington.

36 **Anchorage** can be obtained within the four small islands in a cove close SE of Mount Budington. This anchorage, known as **Rescue Harbour**, was frequently used by whalers and was considered to be safe, but the schooner *Rescue* was driven ashore and wrecked here. Another **anchorage** used by whalers is between the SE end of George Henry Island and some islets close southward. This anchorage, known as **George Henry Harbour**, was reported by Hall to be good.

Chart 7103

Off-lying islands and dangers

37 Islands and islets of the Monumental Island and Lady Franklin Island groups, lying up to 25 miles east of the mainland, are the outermost known dangers in this area.

38 **Monumental Island** *(62°46'N, 63°52'W)* has a uniform elevation of 510 feet (155 m) and sheer sides. Clusters of islets and above-water rocks, positions approximate, lie up to 2.5 miles east and south of the island; others lie close to it.

39 **Lady Franklin Island**, 10 miles NNE, is composed of angular black rock slabs. Islets extend almost 2 miles west from this island.

40 **Caution**. — Lines of **grounded icebergs** have been observed between Monumental Island and Lady Franklin Island. **Dangerous shoals** may exist in the **unsurveyed area** which extends from Lady Franklin Island to the islets 10 miles to the NW. Vessels navigating this coast are advised to keep well clear of the unsurveyed area.

Chart 7050

Cape Farrington to Cape Hoey

41 **Caution**. — The numerous inlets between Cape Farrington and **Cape Haven** *(62°54'N, 64°36'W)*, 5 miles NE, appear to be encumbered with islets and dangers, and the approaches to the cape are reported to be filled with **dangerous shoals**.

42 A snug **harbour** formerly used by whalers is inshore of a rocky island close WSW of Cape Haven.

43 **Williams Peninsula** has a maximum elevation in its north part of 1200 feet (366 m). **Cape Colby** is the NW entrance point of the inlet on the west side of Williams Peninsula.

44 **Caution**. — The inlet between Williams Peninsula and Cape Colby has **shoal depths** under 10 fathoms (18.3 m) and a number of islets.

45 The shores of **Butterfly Bay** are extremely rugged with low, jagged ridges forming sharp headlands.

46 **Caution**. — The headlands, particularly at the head and along the north coast of Butterfly Bay, continue offshore as **shoals** and islets.

47 The inlet midway between Butterfly Bay and Castle Bay has vertical cliffs over 1000 feet (305 m) high at its head and along its north shore. Some rocky islets lie in the centre of this inlet.

48 The south entrance point to **Castle Bay** *(63°02'N, 64°45'W)* is a bold headland with an elevation of 1000 feet (305 m). The bay probably takes its name from a precipitous peak midway along its south shore. A steep promontory divides the head of the bay into two arms; the promontory has an elevation of 600 feet (183 m).

49 **Cape Howe** and the cape close south rise spectacularly from the water to over 1650 feet (503 m). **Mount Bouton** rises to 1200 feet (366 m) near the head of **Tookoolito Inlet**. The north entrance point to this inlet is a promontory with an elevation of 800 feet (244 m). The coast between this promontory and **Cape Hoey** *(63°09'N, 64°48'W)*, 3.5 miles NNW, continues to be rugged with an elevation of more than 1200 feet (366 m).

50 **Caution**. — There is evidence of strong **tidal streams** off this part of the coast.

Cornelius Grinnell Bay

51 **Cornelius Grinnell Bay** is entered between Cape Hoey and **Cape Arnoux**, the south extremity of Archibald Promontory, 6.5 miles NE. The bay extends to the north end of Allen Island. A preliminary survey suggests that the water is deep in the central part of the bay but is comparatively shallow close SW of Allen Island.

52 The inlet west of Cape Hoey has high steep shores and is unobstructed by islands or above-water rocks. The peninsula on the north side of this inlet is bold with an elevation of 1600 feet (488 m).

53 **Rogers Island** *(63°13'N, 64°42'W)* is very rugged with 600-foot (183-m) cliffs. **Enchantress Island**, elevation about 200 feet (61 m), lies 1.5 miles NNW of Rogers Island.

54 **Caution**. — A 5-fathom (9.1-m) **shoal patch** and a **rock awash**, position approximate, are about 1.5 and 2.5 miles ESE and SE of Rogers Island, and there are more dangers in that vicinity. The area between the two islands is **obstructed** by islets and above-water rocks. **Underwater rocks** and **shoal depths** are up to 1.8 miles NNW, NNE and east of Enchantress Island.

55 The SW arm of **Butler Bay**, 5 miles WSW of Rogers Island, is reported to be deep in mid-channel almost to its head. The land which separates the SW and NW arms of Butler Bay is a high bluff rising to 1800 feet (549 m).

56 **Caution**. — Butler Bay has **shallow water** in the channel running north of the islands in its entrance.

57 The east end of the peninsula separating Butler Bay and **Ebierbing Bay** *(63°14'N, 64°55'W)* rises almost sheer from the sea to over 1200 feet (366 m). The NE entrance point to Ebierbing Bay is relatively low. The shores of the east arm of the bay are steep and high; those of the west arm are somewhat less bold.

58 **Clark Harbour**, 7 miles north of the entrance to Ebierbing Bay, is said to have been used by whalers but appears, from **air photos**, to be an unlikely anchorage and the name may be wrongly applied.

59 The unnamed inlet entered 3 miles NNW of Clark Harbour has a rugged peninsula on its south shore; a sheltered, west-facing harbour is on the south side of the peninsula. The promontory between this unnamed inlet and the inlet close north is precipitous with an elevation of over 1400 feet (427 m).

60 The head of Cornelius Grinnell Bay is NW of a rocky peninsula with an elevation of over 1200 feet (366 m) extending NNW from Allen Island. The steep mainland shoreline is broken by the estuary of a large river.

61 **Caution**. — The water becomes quite **shallow** near the estuary.

62 **Allen Island** *(63°28'N, 64°54'W)* has a maximum elevation of 2000 feet (610 m) near its north end; its east coast is high and precipitous. **Cape Simonton** is the SE end of Allen Island. **Smith Channel**, which has several small islets in its approaches, separates Allen Island from **Beekman Peninsula**.

63 **Caution**. — Strong **tidal streams** are evident off Cape Simonton and in Smith Channel.

64 An unnamed fiord reaches NNW for 17 miles from Smith Channel. A small island *(not shown on Chart 7050)* lies in mid-channel in the entrance to the fiord. The west side of the fiord is steep and rugged, rising to almost 3000 feet (914 m); the east side is lower and less steep. At the head of the fiord, the land is low; several streams empty through wide valleys. A glacier about 3 miles west of the fiord has several tongues extending almost to tidewater.

65 **Caution**. — **Depths** in the unnamed fiord are **unknown**.

Robinson Sound

66 **Robinson Sound** lies between Beekman Peninsula and Brevoort Island. **Sarah Island** *(63°12'N, 64°33'W)*, in the SW approaches to the sound, is a narrow ridge of rock about 100 feet (30 m) in elevation.

67 **Caution**. — An **uncharted rock**, with less than 6 feet (1.8 m) over it, lies about 1.5 miles SSW of Sarah Island *(not shown on the chart)*. *(Dangers ESE and SE of Rogers Island were described previously.)* A 6-fathom (11-m) **shoal patch** lies near the middle of the entrance to Robinson Sound, 9 miles east of Sarah Island. A group of islets, position approximate, and above-water and **underwater rocks** lie on the east side of the entrance, 3 miles north of the 6-fathom (11-m) shoal patch.

68 **Sterry Tower Island** rises near its south end to a rather flat-topped summit about 600 feet (183 m) high. The island forms a most distinctive and prominent landmark from the east.

69 **Archibald Promontory** is the south end of Beekman Peninsula. The point 1 mile NE of Sterry Tower Island is a narrow rocky ridge rising sheer from the sea.

70 **Amor Smith Inlet** *(63°18'N, 64°33'W)* has steep high walls with lower broken land towards its head. The south entrance point is precipitous, rising to over 1200 feet (366 m). The island in the central part of the inlet has steep cliffs and an elevation of about 400 feet (122 m), and appears to be linked to the south shore by islets and above-water rocks.

71 The coast between Amor Smith Inlet and **Winton Bay** is precipitous. The north side of Winton Bay is steep, rising rapidly to 1400 feet (427 m); the inner half of the south side is lower.

72 The unnamed inlet *(63°39'N, 64°40'W)* at the NW end of Robinson Sound has very steep shores rising on the west side to 2000 feet (610 m) and on the east to 1600 feet (488 m), while at its head the land is quite low and flat. The north end of Robinson Sound merges with Anderson Channel NW of Brevoort Island.

73 **Brevoort Island** is rugged and high, although lower than Beekman Peninsula. It has many glaciated valleys which reach the sea as coves and inlets.

Charts 7135, 7103

Brevoort Harbour

74 **Brevoort Harbour** *(63°19'N, 64°08'W)* was formerly the site of *DEW Line* communications installations and an airstrip. These were abandoned in 1974. In 1988, a *North Warning System* station was established here.

75 *Brevoort Harbour (Index No. 4070)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

76 The harbour is generally free of winter ice by late July, but pack ice from Baffin Bay is usually present during August, drifting in and out with the tide. The harbour is normally free of all ice by the end of August and remains so until mid-October. *(For detailed information on present and predicted **ice conditions** in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

77 **Cape Murchison** *(63°16'N, 64°03'W)*, the south end of Brevoort Island, is a narrow ridge of steep cliffs. From SE, the Cape Murchison area appears as one large headland. From SSW, the cape is easily identified as a high rocky point with a rounded top; the west end is a rounded brown bluff. **The Needle** is a small **conspicuous** headland close south of the cape. A few rocky islands extend about 1 mile SE of Cape Murchison.

78 **Pullen Point**, the west entrance point to Brevoort Harbour, is a sheer **conspicuous** headland when viewed from SE. **Labrador Head**, flat-topped and sheer, is a **conspicuous headland** on the north side of the harbour.

79 **Caution**. — A group of above-water and **underwater rocks** lies 0.3 mile SSE of Pullen Point; a 47-foot (14.3-m) **shoal patch** lies 0.8 mile farther south. A **shoal**, with a least depth of 55 feet (16.8 m), lies 1 mile west of Cape Murchison. **Asiak Rock** and an isolated 8-foot (2.4-m) **shoal patch** lie, respectively, 0.3 mile SSW and 0.25 mile SE of Labrador Head.

80 **Anchorage** can be obtained in 16 fathoms (29.3 m) about 0.6 mile SSE of Labrador Head with excellent shelter except from winds between south and west. Winds from these directions may raise a sea up to 8 feet (2.4 m) high. The bottom is sand and shell and appears to be good holding ground.

81 To discharge oil, tankers were moored about 0.3 mile off and stern to the beach, with stern lines secured to wire strops permanently fixed to large rocks on the beach. Oil was pumped ashore through about 2000 feet (610 m) of floating hose. Two oil **storage tanks** on the beach are **conspicuous** *(2004)*.

82 The former **landing beach** has a steep gradient (1:8) and is very rough with large rocks and **boulders** that cover and uncover. During resupply operations a road was built, commencing at high water and progressing as the tide fell; several hundred cubic metres of fill were used between each high and low water to maintain the road.

83 **Caution**. — The water is deep right up to the **drying rocks** and **boulders** at the beach; craft

must approach with **extreme caution**. **Landing** is not practicable in **rough weather**.

84 **Fresh water** is available from several streams in the harbour.

85 The *DEW Line* structures have been removed and the site has been remediated. A *North Warning System* station has been established; a **conspicuous radome** with an aircraft warning **light** is mounted on a tower 1.3 miles north of Labrador Head. Other domes, at ground level, and several buildings are prominent.

86 **Caution**. — The *NWS* station is **unmanned**. There is an emergency shelter with telephone and motion-activated camera, but no supplies.

Chart 7050

Cape Murchison to Christopher Hall Island

87 All the islands lying off the coast between Cape Murchison and Cape Edwards *(64°54'N, 65°55'W)*, 110 miles NNW, are included under the name **Lemieux Islands**.

88 The islands lying north and NE of Brevoort Island are rugged, with high cliffs, pinnacles and razorback ridges facing Davis Strait.

89 **Caution**. — Strong **currents** are evident off the islands and in the many channels between them.

90 **Anderson Channel** *(63°45'N, 64°43'W)*, with high, rugged shores, continues north from Robinson Sound *(previously described)*.

91 **Caution**. — A **drying rock** lies in the narrowest part of the channel, with deep water on either side.

92 **Cape St. David** has an elevation of 1600 feet (488 m). Flat-topped and steep-to, the cape is prominent.

93 **Tupiuyak Island** *(64°02'N, 64°21'W)* is the northernmost of a group of islands lying ENE of Cape St. David. The islands have a maximum elevation of 605 feet (184 m). **Vivi Harbour** is entered 4 miles NNW of Cape St. David.

94 **Okalik Bay**, sheltered to the north by **Okalik Island**, has high rugged cliffs. A river drains a snow field to the NW through a glacial valley at the head of the bay. **Misty Island** is a small island 2 miles NW of Okalik Island.

95 **Hozier Islands** *(64°08'N, 64°35'W)* have high glaciated cliffs and steep-walled coves. **Leybourne Islands** rise in some cases almost sheer from the water to 1500 feet (457 m) or more.

96 The inlets of **Popham Bay** are fiord-like with high precipitous cliffs. The south approaches to the bay are obstructed. The north entrance, between Leybourne Islands and **Christopher Hall Island** *(64°29'N, 65°01'W)*, is clear.

Cumberland Sound

Chart 7051

97 **Cumberland Sound**, entered between Christopher Hall Island and Cape Mercy, 44 miles ENE, was discovered by John Davis in 1585. Although a number of its harbours were formerly frequented by whaling vessels, details of anchoring conditions are in most cases lacking. The hamlet of Pangnirtung is the only permanent settlement in the sound, but there is an Inuit fishing camp at Kipisa.

98 The shores of Cumberland Sound rise steeply from the sea, reaching a height of about 2500 feet (762 m) on the SW side and about 6000 feet (1829 m) on the NE side, which is much more rugged. Greater heights are found inland and extensive snow fields and glaciers exist, but the coastal areas are snow-free in summer. The extensive **Penny Ice Cap**, rising to nearly 7000 feet (2134 m), lies about 50 miles NE of the head of the sound.

99 Both sides of the sound are heavily indented. On the NE side the inlets have the character of true fiords: they are narrow submerged gorges with deep wall-like sides. On the SW side many of the inlets have a rather different character; instead of well-defined valleys, there are wide bays, filled with numerous islands and rocky patches. The channels between the islands and the western shore afford a nearly continuous inside passage for boats with **local knowledge**.

100 In June the larger and deeper fiords in Cumberland Sound are usually open and the **ice** in the exposed central area is beginning to disintegrate. The Cumberland Sound ice does not move out as a rule until some time in July. Sheets of rotting shore-fast ice may persist until well into July in the shallower inlets and in the island-studded bays at the head of the sound and along its SW shore.

101 **Caution**. — In most years thick first-year and possibly some **multi-year ice** is brought south to Davis Strait on the Baffin Island Current. Floes, varying in size from a few feet (metres) to more than 1.5 miles, block the lower reaches of Cumberland Sound and obstruct the movement of local ice until about the beginning of August. **Icebergs** of considerable size may

also enter from Davis Strait, moving NW from Cape Mercy to the vicinity of Kekerten Island before crossing the sound and passing seaward again along the SW shore. Some become grounded in the shallow waters along this coast and off the Leybourne Islands and Hozier Islands.

102 Winds with an easterly component tend to drive ice from Davis Strait into Cumberland Sound, especially SE winds which can pack the entire sound to its head with floes. NE winds drive the ice hard against the SW coast sometimes to a considerable distance NW of Blacklead Island. South winds will pack it against the NE shore, while north and particularly NW winds clear the sound. In calms and periods of light winds, ice in the sound will drift back and forth with the tidal stream.

103 The most favourable months for shipping are August and September, although there are records of floes and close pack being encountered all through August and, conversely, of the sound being free of ice until well into October.

104 Ice usually begins to form in late September and early October and in the shallower bays and sheltered inlets may form as a single sheet. In most parts of the sound, however, strong winds and tidal streams tend to break up the early ice, and the solid cover does not form until November or early December. The consolidated sheet may contain ice from Davis Strait, pans of rafted local ice and possibly some stranded bergs, all cemented together by new ice late in the season. Between the land-fast ice and this sheet of consolidated ice, the strong tidal streams build up a formidable barrier of very rough ice. Off Cape Mercy and in some of the deeper channels, the strong tidal streams usually keep the surface ice-free throughout the winter.



105 **Caution**. — The **tidal stream** is reported to run into the sound on the NE side of the entrance and out on the SW side. It is very strong in the vicinity of Cape Mercy and in the narrowest part of the sound between Kaxodluin Island and Nuvuk Point, 25 miles within the entrance.

Entrance to Cumberland Sound — SW side

106 **Finger Land** *(64°28'N, 65°11'W)*, which lies close west of Christopher Hall Island *(previously mentioned)*, is capped by a snow field. The coast is indented with inlets separated by peninsulas and headlands with elevations of about 1500 feet (457 m). The small islands east and NE of **Jackson Island** have a greatest elevation of about 200 feet (61 m).

107 **Neptune Bay** has fiord-like shores and several arms; the southernmost is **Angmallik Harbour**. The entrances to the arms of the bay appear free from obstructions.



108 **Caution**. — It is reported that the narrow east approach to Neptune Bay is **obstructed** by **islets**, some possibly **uncharted**, lying off the south coast of Jackson Island.

109 **Kaxodluin Island** *(64°49'N, 65°29'W)*, about 1000 feet (305 m) high, is the northernmost of a chain of islands rising sheer in the entrance to **Littlecote Channel**. **Ugjuk Island** *(not named on the chart)* is the southernmost of the chain, close off **Moodie Island**.



110 **Caution**. — The bottom of Littlecote Channel is reported to be **boulder**-strewn.

Chart 7136

Entrance to Cumberland Sound — NE side

111 **Cape Mercy** *(64°53'N, 63°32'W)*, the NE entrance point to Cumberland Sound, rises from the sea in cliffs over 457 m high. A large inlet 6 miles NW of Cape Mercy has shores rising to over 305 m except at the heads of the bays.

112 A former *DEW Line* **landing beach** is on the south shore near the head of **Tapittarialik** *(64°57'N, 63°39'W)*, a small bay at the SE entrance of the large inlet. A *North Warning System (NWS)* station, on a hilltop east of the landing beach, has replaced the *DEW Line* station.



113 **Caution**. — The *NWS* station is **unmanned**. There is an emergency shelter with telephone and motion-activated camera, but no supplies.

Chart 7051

114 The large inlet 11 miles NW of Cape Mercy has two broad rivers entering its head. The island on the west side of the entrance to **Aktijartukan Fiord** has steep shores and an elevation of 1000 feet (305 m).

115 **Nijadluk Harbour**, whose shores are backed by cliffs rising to over 1500 feet (457 m), is reported to be a good harbour but is open to the south.

116 **Nuvuk Point** *(65°05'N, 64°37'W)*, the west entrance point to **Abraham Bay**, rises rapidly to 1430 feet (436 m). The west shore of the bay is higher than the east. Good anchorage has been reported in Abraham Bay but the exact location is unknown. **Ujuktuk Fiord** extends north from Abraham Bay.

Cumberland Sound — West side

117 **Cape Edwards** *(64°54'N, 65°55'W)* is the NW tip of a peninsula joined to the mainland by a low, narrow isthmus. The NE shore of the peninsula is bold; the land

rises in the north part and on the west shore of **Sulut Bay** to 2000 feet (610 m). **Tawsig Fiord** is entered west of Cape Edwards.

118 **Harrison Point**, with a height of about 1000 feet (305 m), is the bold north point of **Kikiktaluk Island**. The southernmost 7 miles of the SW arm of **Ptarmigan Fiord** run between precipitous shores rising to 2000 feet (610 m).

119 **Blacklead Island** *(64°59'N, 66°12'W)* has a wedge-shaped contour with the high end to the north where it reaches about 400 feet (122 m) in the form of an isolated dome. South of the dome the island is low and rocky. The whaling station was abandoned about 1910.



120 There is a fairly safe **anchorage**, protected by rocks, in a small bay in the SE end of Blacklead Island. **Niante Harbour**, spacious, sheltered and surrounded by sheer cliffs about 1000 feet (305 m) high, affords good **anchorage** in 20 fathoms (37 m), clay, but local knowledge is advised.

121 **Chidliak Point** *(65°03'N, 66°38'W)* is the east entrance point to **Chidliak Bay**. The sides of the bay are of moderate height. At the head of the bay elevations of 1400 feet (427 m) are found.

122 Between Chidliak Point and Nuvujen Island, 24 miles north, the coast is somewhat lower than that to the SE.

123 **Utsusivik Island** and **Nimigen Island** are the southern most named islands of the extensive group which borders this stretch of coast.



124 **Caution**. — Above-water rocks, **underwater rocks** and **shoals** extend almost 5 miles east and ESE of Nimigen Island.

125 **Akuna Point** *(65°11'N, 66°46'W)* is the north point of a peninsula *(shown as an island on the 1973 edition of the chart)* with an elevation of 1400 feet (427 m) near its south end and connected to the mainland by a narrow isthmus. **Kangigutsak Island** *(not named on the chart)*, elevation 400 feet (122 m), lies close NW of Akuna Point.

126 **Maktaktujanak Island** lies in the approaches to **Robert Peel Inlet**. **Shakshukuk Island** and **Shakshukowshee Island** *(not named on the chart)*, close west, lie off the north entrance point of the inlet. The shores of Robert Peel Inlet reach elevations of 1400 feet (427 m); the cliffs are steep-to at the south end of the inlet where an escarpment reaches the sea. **Kipisa**, a seasonal Inuit fishing camp, is on the west shore of the inlet.



127 **Caution**. — River sediments have formed a delta and **shoal water** at the head of the west arm of Robert Peel Inlet.

128 **Nuvujen Island**, elevation 200 feet (61 m), and **Aupaluktut Island** *(65°24'N, 66°50'W)* are the outermost of the many islands lying in the approaches to **Ikpit Bay**.



129 **Caution**. — The entrance to **Brown Inlet** *(65°30'N, 67°10'W)* is filled with islands, islets, above-water rocks and dangerous **underwater rocks**; there may be others, as yet **uncharted**, within the inlet. There is a small **drying** alluvial flat on the south side of the south arm of the inlet, where two rivers enter, and a **sand bar** blocks the NW arm about 3 miles from its head.

130 **Irvine Inlet** *(65°37'N, 67°42'W)* is separated from Nettilling Fiord to the north by two groups of islands. The south group are named **Kaigosuiyat Islands** and the north group **Kaigosuit Islands**. **McKeand River** flows into the head of Irvine Inlet.

131 **Nettilling Fiord** extends NW for about 50 miles. The land along the fiord for some distance inland is rolling with hills up to 300 feet (91 m) high. From near the head of the fiord a 20-mile canoe route leads to **Nettilling Lake**. **Ekallulik (Ekallunk) Island**, **Auniakvik Bay** and **Livingstone Fiord** are named features on the north side of Nettilling Fiord.



132 **Caution**. — Nettilling Fiord is encumbered with islets, **drying rocks**, **rocks awash** and **underwater rocks**.





133 **Caution**. — The fiord is navigable by boats although strong **tidal streams** and **tide rips** make passage difficult; some passages should only be attempted at slack water.

134 Nettilling Fiord is usually **ice**-free from about July 20 to November 1; the fiord becomes navigable somewhat earlier than Cumberland Sound. The tidal streams in the narrower parts of the fiord keep passages almost ice-free throughout the winter, creating an ideal winter home for seals and a good hunting ground.

135 The **tidal range** in Nettilling Fiord is reported to be about 25 feet (7.6 m) at the entrance, decreasing to about 8 feet (2.4 m) at its head.

136 **Ivisa Island** and **Imigen Island** *(65°58'N, 66°58'W)* are in a group of islands lying north of the entrance to Nettilling Fiord. **Saunik Island** *(not named on the chart)* forms the NW part of Imigen Island. **Drum Islands**, low and rocky with the largest rising to about 200 feet (61 m), lie north of Imigen Island.

137 *Imigen Island (Index No. 4045)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

138 **Kangilo Fiord** is the NW arm of Cumberland Sound. **Tornait Bay** is on the west side of the fiord; **Tarrionituk (Freshwater) Lake** is 4 miles westward.

139 **Caution**. — Kangilo Fiord is filled with islands, islets, above-water rocks and dangerous **underwater rocks**.

140 **Bon Accord Harbour** *(66°18'N, 67°08'W)*, formed by a group of islands, was at one time the site of an Inuit settlement. **Kangerk Fiord** lies 4 miles north.

Cumberland Sound — East side

141 The coast from Nuvuk Point past **Queens Cape** *(65°10'N, 64°43'W)* to **Shomeo Point** is high and bold. **Wareham Island** lies midway along this stretch.

142 **Caution**. — A 12-fathom (21.9-m) **shoal patch**, reported in 1971, is 4 miles NW of Queens Cape.

143 Good **anchorage** is reported in **Kumlien Fiord**.

144 **Miliakdjuin Island**, 15 miles NW of Shomeo Point and the largest of a group of six islands, has a steep ridge with an elevation of 784 feet (239 m).

145 **Caution**. — There is evidence of strong **tidal streams** around the Miliakdjuin Island group.

146 An unnamed fiord can be entered NE of Miliakdjuin Island. A large river empties into the head of the fiord.

147 **Caution**. — **Shoal water** is at the head of the unnamed fiord.

148 **Kikastan Islands**, 500 to 600 feet (152 to 183 m) in elevation, are rugged and almost devoid of vegetation.

149 **Caution**. — Many of the islands are surrounded by **rocky ledges**, **shoals** or sand flats and the channels between them appear to be encumbered with above-water **rocks**.

150 **Kekerten Harbour** on **Kekerten Island** *(65°42'N, 65°49'W)*, the southernmost of the Kikastan Islands, is the site of an old whaling station abandoned about 1910. In 1985, Kekerten Island became a *Parks Canada* National Historic Site, later to become a Territorial Park within the *Nunavut Parks* system.

151 **Caution**. — **Underwater rocks** are reported to prevent the landing of cargo in Kekerten Harbour except at high water.

152 **Akulagok Island** and **Tuapait Island** *(neither island is named on the chart)* lie, respectively, close NW and 1 mile north of Kekerten Island.

153 The shores of **Kekertukdjuak Island**, elevation 2500 feet (762 m), consist mostly of high, steep cliffs. Along the SE coast, a low rocky ridge almost 0.8 mile wide lies below inland cliffs.

154 Two islets lie 3 miles NW of the NW side of Kikastan Islands.

155 **Kingnait Fiord** has steep shores reaching elevations of 3500 feet (1067 m) near its head. In places, inland valleys reach the fiord to form small bays and coves. Large silt-laden rivers flow down from the interior highlands to build deltas at intervals along the shores; the rivers deposit heavy loads of sediment. **Tuurngait (Kingnait Harbour)** *(66°02'N, 65°17'W)* has a steep broad valley at its head. A large river empties through the valley.

156 **Caution**. — **Storm-force winds** may occur in the upper region of Kingnait Fiord at times when the entrance is perfectly calm. These winds are so frequent that they give the southern part of the fiord a distinctly different climate from that of the northern part.

Chart 7150

157 **Brown Harbour** is formed within a small group of islands at the NW entrance to Kingnait Fiord. The former settlement of Tesseralik was abandoned in the 1960s.

Chart 7051

Pangnirtung Fiord

158 **Pangnirtung Fiord** appears to be deep. The silt-laden **Weasel River** flows into the head of the fiord.

159 **Caution**. — Pangnirtung Fiord **shoals** suddenly within 2 miles of its head.

Chart 7150

160 **Upajjana (Beacon Island)** *(66°05'N, 65°56'W)* is a low island lying off **Upajjanaup Kangia**, the SE entrance point of Pangnirtung Fiord. **Nasauya Point**, the NW entrance point, is a distinctive black bluff over 1000 feet (305 m) high.

161 **Caution**. — A **shoal** with a least depth of 12.1 feet (3.7 m) lies 6 miles SW of Upajjana.

162 **Caution**. — A **shoal area**, with least depths of 17 feet (5.2 m), lies across the entrance to Pangnirtung Fiord. Several **drying shoals** lie within 0.5 mile of the shore east and NE of Nasauya Point.

163 Pangnirtung Fiord is generally clear of **ice** by the end of July; after this date ice from the high concentration which prevails in Cumberland Sound until late August seldom drifts back into the fiord. The recommended period for resupply is late August or early September.

164 **Caution**. — **Katabatic winds** are an unwelcome feature of Pangnirtung Fiord. These winds, often with very little warning, blow down off Penny Ice Cap and, compacted between the sides, are funneled

through the fiord with great violence from the north and NE. On occasions ships at anchor off the settlement of Pangnirtung are forced to proceed to the more open waters of Cumberland Sound. **Fog** is frequent in this area from mid-August to mid-November.

165 *(For present and forecast **weather conditions**, visit:* https://weather.gc.ca/*.)*

166 *(Chart 7150, 1965 Edition, does not depict modern Pangnirtung.)*

167 The hamlet of **Pangnirtung**, population 1425 *(2011)*, is in Pangnirtung Fiord. It has a small airstrip and is an access point to ***Auyuittuq National Park of Canada***. **Mount Duval** rises east of the hamlet. **Kolik River** flows into the fiord on the NW side opposite the hamlet.

168 Satellite-based **telecommunications**, including the internet, connect Pangnirtung hamlet with other northern communities and to population centres to the south. Transportation to Pangnirtung is by boat in summer or by aircraft year-round.

169 Pangnirtung has a post office, nursing station and a detachment of *Royal Canadian Mounted Police*. A *Northern Store* and a *Pangnirtung Inuit Co-operative* store provide groceries, clothing and dry goods. Both stores have *Automated Teller Machines*, with limited banking services available.

170 Accommodations are available at *Auyuittuq Lodge*, an *Inns North* facility. *Canadian North* and *First Air Ltd.* offer daily air transportation from Iqaluit. Several stores sell locally made clothing and art.

171 An **aeromarine radiobeacon** *(66°08'37"N, 65°43'55"W)* transmits on 218 kHz, identification *Morse* "YXP" (— • — — — • • — • — — •).

172 **Caution**. — A **drying shoal bank** lies from the shore up to 0.3 mile north off the hamlet of Pangnirtung.

173 The average **tidal range** in the fiord is reported to be from 14 to 16 feet (4.3 to 4.9 m). **Tidal streams** run at an average rate of 2 knots.

174 **Caution**. — **Tidal streams** run at about 3 or 4 knots while the shoal bank north of the settlement is drying or covering.

175 *Aulatsivik Point (Index No. 4031)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

176 The **landing beach** at Pangnirtung, in the bay close east of the small cape at the settlement, has a dredged approach channel and basin protected to the east by a 1000-foot (305-m) long causeway-breakwater. A small-craft ramp is on the west side of the causeway-breakwater at the basin. Barges are used to lighter containers and freight ashore and are off-loaded by forklift at the beach. Good gravel roads run from the beach to and around the settlement.

177 There is a small craft harbour with a **wharf** and slips. The harbour can be accessed at low tide using the Pangnirtung Small Boat Harbour Ranges.

178 The recommended **anchorage** for dry cargo vessels is about 0.6 mile NW of the settlement landing beach in about 30 fathoms (55 m) but there is a sharp drop-off and holding is poor.

179 **Anchorage** with good holding is available about 0.6 mile WSW of the hamlet in about 25 fathoms (46 m).

180 A tank farm is on the shore east of the causeway-breakwater. Tankers moor 0.6 mile from the shore, with stern lines to the drying shoal, and pump direct to the tanks through 3800 feet (1158 m) of floating hose. Stern lines can only be secured two hours either side of low water. Hoses can only be set or recovered one hour either side of high water.

181 **Caution**. — In view of the possibility of **sudden gales**, vessels should remain at immediate readiness to move.

Chart 7051

Head of Cumberland Sound

182 Between Pangnirtung Fiord and Clearwater Fiord, 35 miles NW, the coast is bordered by innumerable islands, mostly desolate masses of granite rising to as much as 1500 feet (457 m). In the SE part of this stretch general elevations on the coast are of the order of 2000 feet (610 m) with much greater heights a short distance inland; in the NW part, towards the head of the sound, the height of the land decreases. Over most of the distance from Pangnirtung Fiord to Clearwater Fiord a sheltered route between the islands and the coast to the NE, or through the islands themselves, can be followed by small craft.

183 **Caution**. — The **tidal stream** runs through all the channels with great strength, causing violent **eddies** and **tide rips**.

184 The two larger islands of the group lying 9 miles WNW of Nasauya Point are the **Sanigut Islands** *(66°10'N, 66°20'W)* which rise to over 800 feet (244 m). **Aupaluktok (Beacon) Island** is at the SE end of the group.

185 **Usualuk Mountain** rises to nearly 1500 feet (457 m) on the peninsula NW of the Sanigut Islands. **Quickstep Harbour** is at the south end of the peninsula.

186 **Caution**. — Quickstep Harbour has many islets, **drying rocks** and **rocks awash** in its approaches.

187 **American Harbour**, on the NW side of the above-mentioned peninsula, is surrounded by hills and is reported to have a depth of 25 fathoms (46 m) and a mud bottom.

188 **Caution**. — American Harbour has a **rock awash** and a dangerous **underwater rock** in the vicinity, and **shoals** in one place to 6 fathoms (11 m).

189 A large river flows into the channel separating **Kekertelung Island**, elevation about 1400 feet (427 m), from the mainland to the NE. The river brings down sediment which forms broad flats near its mouth.

190 **Nunatak Island** *(66°28'N, 66°59'W)*, elevation 1000 feet (305 m), and an unnamed island close to the NE with an elevation of 1400 feet (427 m) lie in the mouth of **Shark Fiord**. The SE shore of Shark Fiord, NE of the unnamed island, is fairly low with elevations of about 400 feet (122 m). The NW side and the shores of the narrow NW arm rise precipitously to over 1800 feet (549 m).

191 **Clearwater Fiord** is surrounded by rough, lake-strewn country whose moderate elevations, decreasing to 200 feet (61 m) near the head of the fiord, are in marked contrast to the impressive heights around Pangnirtung Fiord.

192 *Clearwater Fiord (Index No. 4040)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

193 **Shilmilik Bay** *(66°35'N, 67°22'W)* has a broad valley and a sand plain at its head. **Ranger River** and an unnamed river flow into **Millut Bay**.

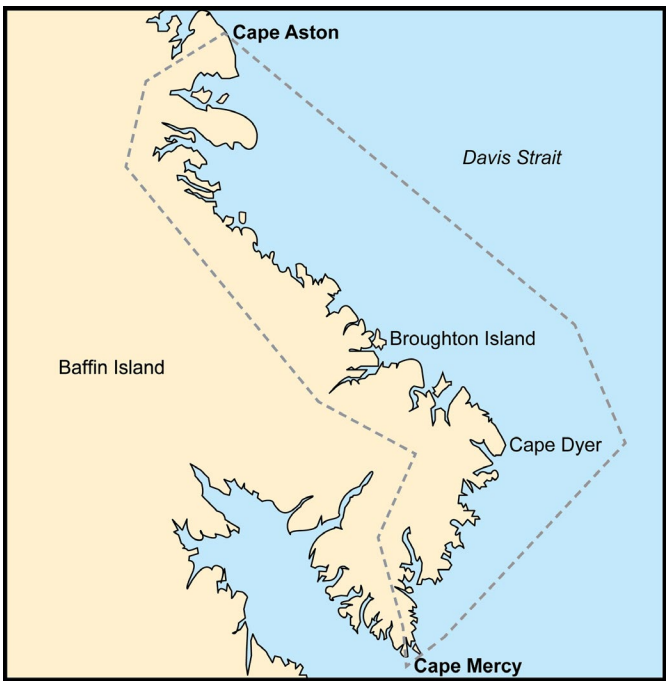
194 **Caution**. — The rivers bring down sediment and cause sand flats and **shallow water** at the head of Millut Bay.

195 Outside Millut Bay the water is reported to be very deep; within the bay the bottom slopes gradually so that **anchorage** in any suitable depth can be obtained. The surrounding hills shelter the bay from prevailing winds; little drift ice enters the bay.

Chapter 3

Davis Strait

Cape Mercy — Cape Aston



General

Charts 7010, 7051, 7052, 7053, 7170, 7171, 7180, 7181, 7184, 7185, 7193, 7194, 7195

1 This chapter covers the Canadian waters of northern Davis Strait.

2 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all Canadian waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

3 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

4 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

5 **Caution**. — Offshore **depth** information is taken from **track soundings** and **reconnaissance surveys**. A 5-fathom (9.1-m) **shoal**, position approximate and reported in 1954, exists 39 miles east of Kangeeak Point. Offshore dangers exist up to 20 miles east and 25 miles ESE of Cape Hooper. Inshore areas are **not surveyed**, except at former military landing areas or settlements *(see notes, Source Classification Diagrams and cautions on charts)*.

6 *Qikiqtarjuaq (Index No. 3980)* is a reference port and *Cape Dyer (Index No. 3995)*, *Kivitoo (Index No. 3970)* and *Cape Hooper (Index No. 3960)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

7 **Caution**. — There is evidence of strong **tidal streams** off all the headlands and amongst the numerous islands along this coast.

8 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/*.)*

9 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/. *For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784.*)*

10 Thick Baffin Bay pack ice, brought south by the current on the west side of Baffin Bay, is usually prevalent all the way along the coast in July and early August but breaks up and disperses by the last week in August or early September.

11 *(For general **ice conditions** in Davis Strait, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html.*)*

12 The **magnetic compass** is reasonably stable in this area. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada, for more information.)*

Cape Mercy to Cape Dyer

13 The many inlets between Cape Mercy *(64°53'N, 63°32'W, described in Chapter 2)* and Cape Dyer, 117 miles NNE, are mostly almost vertical above water and steep-to below.

Charts 7051, 7052

Leopold Island to Clephane Bay

14 **Leopold Island** *(64°58'N, 63°23'W)*, 5 miles NE of Cape Mercy, is a rugged island with deep glaciated valleys. **Saxe-Coburg Island** is 2 miles SSE.

15 **Caution**. — **Shoals**, extending about 1 mile offshore, entirely surround Saxe-Coburg Island.

16 **Hoare Bay** is entered between Leopold Island and Cape Micklesham, on Nuvuktik Island, about 40 miles to the NNE. Named islands in Hoare Bay are **Muingmak Island**, elevation 1050 feet (320 m); **Ilikok Island**, elevation 500 feet (152 m); **Kekertuk Island**, with steep cliffs and an elevation of 1090 feet (332 m), and **Kekertaluk Island** *(65°32'N, 63°12'W)*, which has an elevation of about 1000 feet (305 m).

17 **Kairolik Fiord**, entered 4 miles SW of Kekertaluk Island, has shores 500 to 1000 feet (152 to 305 m) in elevation. **Nallussiaq Fiord**, 6 miles to the north, has fairly low shores which rise gradually to 500 feet (152 m); the island 2 miles within its entrance has the same elevation. Several streams enter the head of Nallussiaq Fiord through wide, deep valleys.

18 **Touak Fiord** extends NNW between sheer cliffs rising to over 4000 feet (1219 m) with adjoining snow fields. The fiord appears to be generally free from obstructions.

19 **Caution**. — Sediment from rivers has caused **shallow water** near the head of Touak Fiord.

20 **Exaluin Fiord** *(65°40'N, 62°54'W)* penetrates northward between high cliffs and has an ice field near its head.

21 **Nuvuktik Island**, about 1000 feet (305 m) high, **Akuglek Island** and **Angijak Island**, elevation 1061 feet (323 m), have sheer cliffs and steep-walled bays and fiords. **Cape Micklesham**, the south end of Nuvuktik Island, is a lofty and distinctive promontory. The mainland peninsula 5 miles NW of the cape is a high, steep-sided finger of rock terminating in a pointed headland with an elevation of 500 feet (152 m).

22 The shores of **Sakiak Fiord** *(65°42'N, 62°45'W)*, **Ingnit Fiord** and **Inglis Bay** are not so steep as those of the neighbouring inlets; the land around them is less steep but still rugged.

Chart 7052

Clephane Bay to Cape Dyer

23 **Clephane Bay** has almost vertical shores rising to over 3400 feet (1036 m) except where streams from the neighbouring snow fields drain into the bay through broad valleys. The largest of the islands in the mouth of the bay has a maximum elevation of 1447 feet (441 m).

24 **Cape Walsingham** *(66°02'N, 61°58'W)*, discovered by Davis in 1585, is the bold tip of a peninsula which rises to 1391 feet (424 m). Cape Walsingham has a light brown colour which contrasts with the grey of most of the coast.

25 **Caution**. — A dangerous **underwater rock** *(not shown on the chart)* is reported to lie about 5 miles off Cape Walsingham. This area, known as the "southwest fishing" and formerly a favourite whaling ground, has the reputation of being dangerous.

26 The shores of **Exeter Sound**, entered north of Cape Walsingham, are mostly steep or nearly vertical with elevations of 3000 to 4000 feet (914 to 1219 m). **Mount Raleigh**, north of **Totnes Road** where Davis anchored in 1585, rises to 5410 feet (1649 m) and is pyramidal in shape. **Mermaid Fiord** *(66°14'N, 62°44'W)* is the SW arm of Exeter Sound. The large island in the mouth of Mermaid Fiord, and the smaller one 2 miles NE of it, have

elevations of about 2000 and 490 feet (610 and 149 m), respectively.

27 **Caution**. — Rivers flowing into Totnes Road and into Mermaid Fiord have laid down considerable stretches of **drying** alluvial flats and mud banks near their mouths.

Charts 7170, 7171

Cape Dyer

28 **Cape Dyer** *(66°37'N, 61°16'W)*, the east tip of Cumberland Peninsula and of Baffin Island, is a high and prominent rock formation reported to be easily identifiable from its resemblance to a castle or tower. The island 1 mile north of the cape has an elevation of about 150 feet (46 m). An abandoned airstrip, a former **beaching area** and anchorage are 8 to 10 miles westward of the cape, in Sunneshine Fiord.

29 *Cape Dyer (Index No. 3995)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

30 **Caution**. — Very strong **tidal streams** have been reported close inshore near the cape.

31 The **conspicuous installations** *(2006)* of a former *Distant Early Warning (DEW) Line* station and a *North Warning System (NWS)* station are on high ground 3.5 miles NNW of Cape Dyer. The *DEW Line* structures consist of two large parabolic lattice antennas, a group of buildings, and one oil tank. These are due to be demolished by 2013. The *NWS* station has a **conspicuous radome**, mounted on a tower and equipped with an aircraft warning **light**, and has two communications domes and several buildings. A road, no longer maintained, leads from these structures down to a former **landing beach** on the NE side of Sunneshine Fiord about 7 miles from the entrance. Part way along the road, there is an abandoned weather station, also due to be demolished, and the abandoned airstrip.

32 **Mooneshine Fiord**, the south arm of **Exeter Bay**, has high bold entrance points but its shores elsewhere are relatively low and sloping. The head of Moonshine Fiord is separated from the east arm of Totnes Road by a low divide.

33 **Camel Island** *(66°31'N, 61°22'W)*, in the approaches to Sunneshine Fiord, has two humps; **Castle Island** has a much-broken top giving it a castle-like appearance. From the east these islands and **Bear Island** blend with the mainland and are difficult to distinguish visually but can be identified readily by radar.

34 The shores of **Sunneshine Fiord** rise steeply from the water's edge; extensive glaciers are to the west and north.

35 Local land-fast **ice** grows to an average thickness of 2.4 m during the winter; it usually breaks up by mid-July. However, because the Baffin Bay pack ice comes close along this shore during its southerly drift, the fiord is seldom clear before the first week of August. The recommended time for any ship activity is mid-August.

36 **Caution**. — The slightest **east wind** tends to push any ice into the fiord.

37 The **tidal stream** flows east on the flood and west on the ebb at 2 to 3 knots. Ice is brought into Sunneshine Fiord on the flood, following along the NE shore; on the ebb the ice tends to pass along the SW shore.

38 Dry cargo vessels, when the *DEW Line* station was active, would **anchor** 1500 feet (457 m) west of the landing beach in 20 fathoms (37 m). Tankers moored 600 feet (183 m) off and perpendicular to the beach, with stern lines out to deadmen anchors on the shore. The holding is considered fair with a rock and sand bottom.

39 The channelling effect of the high shores can produce gusty winds of high velocity very quickly. These usually blow along the axis of the fiord.

40 **Caution**. — In view of the possibility of **sudden gales** vessels should remain at immediate readiness to move. **Ice**, too, may necessitate a move.

41 **Caution**. — **Submarine cables** are laid south of the anchorage area.

42 The former **landing beach** had been cleared of large rocks and boulders to produce an excellent natural landing area about 200 feet (61 m) wide at the shoreline with a gradient of about 1:6. Minor grading of loose gravel pushed up by wave action was required annually to prepare the beach for barge operations. There is ample gravel at the beach to prepare ramps for unloading and reloading heavy equipment. Barges were loaded to maximum draught and beached at any stage of the tide. The former roads from the beach have a steep gradient.

43 **Caution**. — **Composition** of the bottom and **depth contours** can be altered by **ice** action from year to year.

Cape Dyer to Kangeeak Point

Charts 7052, 7010

44 **Caution**. — Most of the **depth** information on the charts referred to in this section is from **track soundings** and **reconnaissance surveys**. Most of the **inshore** areas are **not surveyed**.

45 Much of the information on Broughton Channel *(shown on Chart 7184)* is based on controlled surveys in 1961.

Chart 7052

46 From Cape Dyer *(66°37'N, 61°16'W, previously described)* to Kangeeak Point, 115 miles NW, the NE coast of Baffin Island is mostly high and bold. This coast is indented by numerous long fiords. Within a few miles of the sea, elevations of over 3000 feet (914 m) are found in many places, and some 20 miles west of Cape Dyer snow-capped mountains reach about 5000 feet (1524 m). Farther NW, the coast is backed 40 to 50 miles inland by Penny Ice Cap. The ice cap rises to over 6000 feet (1829 m) and occupies a considerable part of Cumberland Peninsula. Along most of this section of the coast depths increase rapidly offshore.

47 **Caution**. — A 5-fathom (9.1-m) **shoal**, position approximate and reported in 1954, lies about 39 miles east of Kangeeak Point. Except for the possible shoal there are no known offshore dangers.

48 **Caution**. — **Ice** is usually thick along this part of the coast in July and early August, but it clears by the last week in August or early September. Navigation is generally possible throughout September although **icebergs** and **pack ice** may be met at any time.

Cape Dyer to Durban Harbour

49 Elevations of over 3000 feet (914 m) rise less than 2 miles inland along this stretch of coast and a snow field lies farther inland.

50 A small bay about 10 miles NNW of Cape Dyer affords **anchorage** with shelter from SW winds.

51 The shores of the small fiord entered 15 miles NNW of Cape Dyer are saw-toothed ridges rising to over 3000 feet (914 m).

52 A promontory rises to 3650 feet (1113 m) on the north side of the small fiord. This headland, nearly vertical on its north, south and NW sides but less steep on the east-facing side, separates the small fiord from a slightly larger fiord 4 miles NW.

Chart 7180

53 The slightly larger fiord is bordered by many small alluvial fans, and its head is fed by melt water from a large glacier.

54 **Reid Bay** is bordered by cliffs rising to over 2000 feet (610 m), with talus and alluvial fans at the water's edge. The channel south of the large island in the entrance to the bay appears to be obstructed but that to the north is clear.

55 **St. Roch Harbour** *(66°55'N, 62°06'W)*, at the head of Reid Bay, is at the mouth of a stream flowing over flat land; from **air photos**, there appears to be a good landing place.

Chart 7181

56 **Aggijjat (Durban Island)** *(67°05'N, 62°11'W)* has several rounded peaks with a maximum elevation of 2315 feet (706 m). Two nearly vertical headlands form the island's NE and SE ends, and its sides slope steeply up from the sea except in an area west of a small point about halfway along the south shore of the island.

57 **Durban Harbour** is sheltered to the north by Aggijjat and to the west by **Amittuarjuk (Block Island)**. The south shore of Durban Harbour rises steeply to high hills with elevations of 2500 feet (762 m). A low point marks the SW end of the harbour.

58 **Caution**. — A **shoal spit**, about 2 miles within the east entrance of Durban Harbour, extends about 0.8 mile from the south shore of the harbour. The shoal has a least depth of 23 feet (7 m).

59 **Caution**. — Thick Baffin Bay **pack ice**, drifting with the tidal stream, has been encountered in August in Durban Harbour. Refuge from an advance of pack ice from the east is available through the channels leading west from the harbour.

60 The **tidal range**, mean tides, in Durban Harbour is estimated to be about 3 feet (0.9 m); spring tides range 5 or 6 feet (1.5 or 1.8 m).

61 **Caution**. — The **tidal stream** in the middle of the harbour is reported to reach a maximum of 4 knots; counter currents have been noted along the north shore.

62 **Anchorage** in 20 to 30 fathoms (37 to 55 m) with very good holding can be found either off the south shore of Aggijjat, west of the small point, or on the opposite side of the harbour in similar depths.

63 Aggijjat is the site of a *DEW Line* station abandoned in 1963. Abandoned buildings and **oil tanks** near the east end of Aggijjat, at an elevation of 2160 feet

(658 m), are **conspicuous**. *Aboriginal Affairs and Northern Development Canada (AANDC)* has assumed responsibility for cleanup of this site.

64 Two former **landing beaches** are on the south shore of Aggijjat, within 1 mile west of the small point. They were, respectively, 225 and 120 feet (69 and 37 m) long with gradients of 1:8 and 1:9. There are no obstacles in the approaches to these beaches and sea and surf had little effect on unloading operations.

Chart 7180

Durban Harbour to Broughton Island

65 An inlet south of **Padloping Island** is entered between Aggijjat and Padloping Island. **Paurngaut (Paugnang Island)** *(67°03'N, 62°29'W)*, **conspicuous** among the islands in the inlet, is nearly vertical except on its south side, which is steep.

66 **Caution**. — A dangerous **underwater rock** is near the south side of the entrance to this inlet, about 1.7 miles NNE of the west end of Aggijjat.

67 Two fiords extend south from the inlet south of Padloping Island; **Southwind Fiord** is the east one and **Boas Fiord** is the other. Both have steeply sloping or nearly vertical shores rising from 3000 to 4000 feet (914 to 1219 m). Both are fed by small glaciers and streams from the surrounding snow fields.

68 **Caution**. — Southwind Fiord and Boas Fiord have **drying** alluvial flats at their heads.

69 **Paallavviup Kisarvinga (Delight Anchorage)** *(67°02'N, 62°44'W)*, the site of a former weather station, is a bay at the SE end of Padloping Island.

70 **Anchorage** may be obtained within 0.5 mile of the shore of Paallavviup Kisarvinga but the shelter is not good. Landings can be made on a beach of sand and small boulders near the head of the bay. A low, lake-strewn valley leads from the head of the bay to the NW side of Padloping Island.

71 **Ice** is reported to break-up here about July 15, freeze-up is reported to be about October 16.

72 The **tidal range**, spring tides, is about 5 feet (1.5 m) at Paallavviup Kisarvinga.

73 **Nuvuttiq (Cape Searle)** *(67°14'N, 62°28'W)*, the NE tip of **Qaqulluit (Qaqaluit Island)** close north of Padloping Island, is prominent and sheer with two tower-like summits. Many thousands of sea birds nest in its cliffs.

74 **Caution**. — Dangerous **underwater rocks** lie offshore around Qaqulluit. A **bar**, with a least depth of 2 feet (0.6 m), is reported to block the channel between Qaqulluit and Padloping Island.

75 **Merchants Bay** is entered between Nuvuttiq and a mainland peninsula 11 miles to the west. Most of the east coast of this peninsula is steep and rocky with cliffs in places; the coast is relatively low near the north end of the peninsula. A small rocky island 2 miles off the NE part of this coast has an elevation of about 30 feet (9.1 m).

Charts 7180, 7052

76 **Duck Islands**, a group of small islands, and three large islands with bold, steep shores, lie in the south part of Merchants Bay.

Charts 7052, 7053

77 **Padle Fiord** *(66°55'N, 63°25'W)* and its unnamed south branch run between steep shores with elevations of 1500 feet (457 m) for most of their length. Cliffs with talus are common. **Padle River** discharges into the head of Padle Fiord, and a braided, glacier-fed river flows into the head of the south branch.

78 **Caution**. — From **air photos**, the water at the entrance to the south branch appears to be **shallow**.

79 The islets *(67°21'N, 63°11'W)* close off the NW side of the mainland peninsula on the west side of Merchants Bay are low. **Kangiqtugaapiruluk (Kangert Fiord)**, a fiord on the west side of the mainland peninsula, has mostly steep shores, with cliffs in several places, rising to over 2500 feet (762 m). Several streams enter the fiord near its head. Kangiqtugaapiruluk ends in a very steep-sided narrow valley running almost to the head of Padle Fiord.

80 **Qikiqtalujjuaq** *(67°19'N, 63°35'W, unnamed on the charts)*, an island on the north side of **Qikiqtaalujjuap Ikirasanga (Canso Channel)**, has a greatest elevation of 2500 feet (762 m) in its eastern half. The north coast of the island is mostly cliffs, with relatively low islands lying just offshore.

81 **Caution**. — A dangerous **underwater rock** is 2.5 miles north of the NW point of Qikiqtalujjuaq.

82 **North Pangnirtung Fiord** *(67°09'N, 64°17'W)* is entered between a moderately high point to the SE and a nearly vertical headland with an elevation of about 1000 feet (305 m) to the NW. The east side of the fiord rises steeply to 2500 feet (762 m) and the west side is formed by cliffs with elevations of over 3500 feet (1067 m); the land on both sides of the upper reach rises rapidly to very high snow-capped mountains, and **Penny Ice Cap** lies 15 miles west of the head of the fiord. Although much sediment is carried by glacier-fed rivers into North Pangnirtung Fiord,

the movement of icebergs indicates that there is very deep water to within about 1 mile of the head.

83 **Coronation Fiord**, the south arm of **Maktak Fiord**, runs between cliffs rising to an elevation of over 5000 feet (1524 m) near its head; the cliffs are cut with many ravines. **Coronation Glacier** is at the head of the fiord. The shores of Maktak Fiord are somewhat less steep except near its head.

84 **Caution**. — The upper 5-mile stretch of Maktak Fiord is almost filled with **drying** alluvial flats.

Chart 7184

Broughton Island

85 **Broughton Island** *(67°34'N, 63°54'W)* is relatively low compared to other offshore islands in this area. The Inuit settlement of Qikiqtarjuaq, a *North Warning System* station and an airstrip are on the island.

86 The navigation season is mid-July to mid-October. Until the Baffin Bay pack ice moves south, usually late September, there is a tendency for this ice to jam in the narrows at the north end of Broughton Channel.

87 *Qikiqtarjuaq (Index No. 3980)* is a reference port in *Canadian Tide and Current Tables, Volume 4*.

88 The **tidal stream** here reaches a maximum of about 1 knot.

89 **Cape Broughton** *(67°39'N, 63°56'W)* and most of the NE coast of Broughton Island are formed mainly of cliffs along the sea or a short distance inland, while most of the south and west coasts are lower and more gently sloping.

90 **Broughton Channel** separates Broughton Island from the mainland to the west; an unnamed island lies in the south entrance of the channel. **Broughton Harbour** lies between the unnamed island and the mainland to the west.

91 **Caution**. — The north entrance to Broughton Channel is **shallow**. A **shallow bar** extends NNW from the unnamed island. Deep-draft vessels enter the channel or the harbour from the south.

92 An **aeromarine radiobeacon** *(67°33'43"N, 64°01'03"W)* transmits on 237 kHz, identification *Morse* "YJI" (— • — — • — — — • •), from a tower 1 mile NNE of the airstrip on the west side of Broughton Island.

93 There is an aeronautical rotating **light** near the north end of the airstrip.

94 An **anchorage** in the NW part of Broughton Harbour, in about 14 fathoms (25.6 m) over sand, gravel and mud, is sheltered except from south or SE winds. **Anchorage** with shelter from all but north winds can be found in Broughton Channel up to 1.8 miles NNE of the unnamed island, in about 30 fathoms (55 m) with good holding in mud, sand, shells and occasional boulders.

95 **Caution**. — Large masses of **ice** sometimes break off from the Broughton Channel jam and drift south into the anchorage area, forcing vessels to leave. When this danger exists, masters should be prepared to get quickly under way.

96 A *Distant Early Warning (DEW) Line* station on the east summit of Broughton Island has been replaced by an **unmanned** *North Warning System (NWS)* station. The *NWS* station has a **conspicuous radome**, with an aircraft warning **light**, mounted on a tower. Two prominent communications domes are at ground level along with a small building.

97 *(Chart 7184, 1964 Edition, does not depict modern Qikiqtarjuaq.)*

98 **Qikiqtarjuaq**, population 520 *(2011)*, is midway along the west coast of Broughton Island, north of the airstrip.

99 The settlement **landing beaches** are in a natural cove at the settlement. Two fork-equipped front-end loaders are used to handle containers and freight during sealift operations. A landing beach at the SW end of the cove is normally used, but the beach at the NE end is sometimes used, depending on wind and ice conditions.

100 **Caution**. — The cove is sometimes filled with drift **ice**. When there is no ice in the north end of Broughton Channel, **north winds** can cause swells up to 5 feet (1.5 m) in the cove.

101 **Caution**. — A **submarine cable** runs 300 feet (91 m) NNE from the SW entrance point of the cove to an **underwater crib**. The crib has a depth of 20 feet (6 m) over it.

102 A small artificial harbour is about 0.3 mile NNW of the aeronautical light. Two breakwaters shelter the harbour; to the north and west is a dog-leg structure 630 feet (192 m) long; to the south, a 150-foot (46-m) straight breakwater projects west from shore. The harbour is entered from the south. There is a **landing beach** and a floating wharf for small craft.

103 The former *DEW Line* **landing beach**, 1.2 miles south of the aeronautical light, is an excellent sandy beach about 100 feet (30 m) wide. The beach can be worked at all stages of the tide and is never affected by wind or swell. *(Two oil tanks, shown on the 1964 Edition of Chart 7184, no longer exist.)* This beach was once used to

land settlement cargoes. The settlement and the beach are connected by gravel roads.

104 **Caution**. — On occasion, the *DEW Line* beach is blocked by **ice**.

105 Bulk **oil** deliveries to the settlement are made direct from tankers through a 4-inch (10.2-cm) floating hose to a shore fitting at the *DEW Line* beach. Tankers moor about 0.2 mile off the beach, with stern lines to the shore. The tank farm is inland of the airstrip.

106 Satellite-based telecommunications, including the internet, connect Qikiqtarjuaq with other northern communities and to population centres to the south.

107 The hamlet has a nursing station, a *Royal Canadian Mounted Police (RCMP)* detachment and a Post Office. The *RCMP* handles Customs issues. *(For information on Customs reporting procedures, see "Regulations" section in Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada and visit:* https://www.cbsa-asfc.gc.ca/menu-eng.html*.)*

108 There is a *Northern* store and a *Tulugak Co-op* store; both sell food, clothing and dry goods in limited quantity. *Tulugak Co-op* operates an *Inns North* hotel. Accommodation can also be found at *Siku Hotel* and at *Tuniq Shelter*, a hostel. Qikiqtarjuaq is an entry point to *Auyuittuq National Park of Canada*.

109 *First Air* and *Kenn Borek Air* offer scheduled flights and charters, and *Air Nunavut* and *Unaalik Aviation* offer charters only, from Iqaluit.

110 An automated meteorological station is at Qikiqtarjuaq.

111 **Kingnelling Fiord**, entered south of Broughton Harbour, is bounded on the north by sloping cliffs rising from 1500 to 2000 feet (457 to 610 m). On the south are higher cliffs; inland elevations rise rapidly to about 4000 feet (1219 m). Several streams from snow fields to the south and west cut through the cliffs to drain into the fiord.

Charts 7052, 7053

Broughton Island to Kangeeak Point

112 For 20 miles NW of Broughton Island, the coast rises in steep slopes or cliffs to about 3000 feet (914 m). This section is indented by several unnamed inlets. The largest of these *(67°44'N, 64°21'W)*, midway along this stretch, is bordered by cliffs and talus. **Quajon Fiord**, entered 12 miles SSW of Kangeeak Point, has steep slopes and cliffs along its shores.

Chart 7185

113 **Idjuniving Island** *(67°54'N, 64°45'W)* has two peaks near its east end and one lower peak near its west end; the land between is relatively low and level.

114 **Caution**. — Both **Kekerturnak Island** and the island 1.4 miles SW of it have **drying rocks** 0.3 mile off their SE shores.

115 **Kangeeak Point** is comparatively low and flat but provides shelter from north and NW winds. **Kivitoo**, now a seasonal hunting camp, was at one time a whaling station. From 1916 to 1927, a small trading post operated here.

116 A *DEW Line* station and airstrip established at Kivitoo were abandoned in the 1960s. Inuit living in a settlement near the *DEW Line* station were relocated to Qikiqtarjuaq at the same time. An unmanned *NWS* station is on a hilltop 1.5 miles NW of the abandoned settlement. A **conspicous radome** with an aircraft warning **light**, mounted on a tower, and two prominent communications domes and a small building make up the *NWS* station.

117 The condition of the **beacon**, about 1.5 miles SW of Kangeeak Point, is unknown *(2011)*.

118 *Kivitoo (Index No. 3970)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

119 **Anchorage** may be obtained about 0.8 mile WSW of the islet 2 feet (0.6 m) high close SE of Kivitoo, in 20 to 30 fathoms (37 to 55 m) with good holding. This berth is exposed to winds from NE and east; **ice**, when present, enters the anchorage on the flood tide with winds from those directions.

120 **Caution**. — A **shoal**, with a rock 1 foot (0.3 m) high on it, lies 0.5 mile SW of the anchorage.

121 **Tidal streams** in the anchorage area run east on the ebb and west on the flood at rates of up to 0.7 knot.

122 The former **landing beach**, very soft and muddy, has a gradient of 1:18. The entire shoreline is covered with large boulders extending up to 300 feet (91 m) offshore. A ramp, no longer maintained, was formed by bulldozing gravel over the boulders near the shore.

123 **Caution**. — **Composition** of the bottom and **depth contours** can be altered by **ice** action from year to year.

Kangeeak Point to Cape Aston

Chart 7053

124 Compared with the high land to southward, elevations between Kangeeak Point *(67°58'N, 64°44'W)* and Cape Henry Kater, 80 miles NNW, are moderate over most of the area, with smaller and fewer snow fields and glaciers.

125 **Caution**. — The coast is bordered with numerous islands, **underwater rocks** and **shoal areas** and the bottom is highly irregular. Most **depths** are based on **track soundings** and **reconnaissance surveys**, it is likely that there are **uncharted dangers** even in surveyed areas.

126 Land-fast **ice** between Kangeeak Point and Cape Henry Kater is reported to extend as much as 80 miles from the shore; the large numbers of islands and above-water or **shoal** rocks in Home Bay aid its formation. Icebergs grounded off Cape Henry Kater largely prevent the Baffin Bay pack ice from entering the bay. The greater part of the land-fast ice is very rough; smooth ice is found only in the bays. Freeze-up occurs about the second week in October.

Kangeeak Point to Cape Hooper

127 **Narpaing Fiord** is 12 miles west of Kangeeak Point. The fiord has relatively low shores near its entrance but its upper reaches are bordered by cliffs rising to over 2000 feet (610 m). The largest of the rocky islands in the mouth of the fiord has an elevation of about 720 feet (219 m).

128 **Alikdjuak Island** *(68°04'N, 65°28'W)*, elevation 1800 feet (549 m), has moderately high cliffs on its east and NW coasts. **Manitung Island** rises from steep and rugged coasts to about 1200 feet (366 m) near its north end. A small island close to the east has elevations over 1400 feet (427 m). **Nedlukseak Island**, elevation 1200 feet (366 m), is characterized by many rock knobs.

129 **Caution**. — **Shoal water** is reported to extend about 2 miles north and east of the Manitung Island group.

130 The outer part of **Okoa Bay** has shores of moderate elevation, the inner part runs between high cliffs backed by snow fields. The bay ends at the face of a large glacier extending from the Penny Ice Cap.

131 **Nedlukseak Fiord** *(67°55'N, 66°22'W)* extends south from **Brodie Bay**. The shores of the fiord are high, with cliffs, and rise to about 4000 feet (1219 m).

132 **Kekertaluk Island** has cliffs along its shores in most places. An elevation of 780 feet (238 m) is near its NE end, and the island has a maximum elevation of 2200 feet (671 m). The unnamed island close to the west rises to 1000 feet (305 m). Two fiords can be entered south of the unnamed island. The eastern fiord shoreline has cliffs, reaching over 3500 feet (1067 m), with talus. The western fiord has steep shores but lower land around its head; extensive snow fields cover the high land to the west and SW.

133 **Confederation Fiord** *(68°10'N, 67°19'W, not named on the chart)* lies 12 miles WNW of Kekertaluk Island. The fiord is nearly blocked 11 miles from its entrance by a large glacial moraine, but continues another 8 miles inland between 4000-foot (1219-m) cliffs. **Mount Viewforth** *(not named on the chart)*, a **conspicuous** cliff rising to 4775 feet (1455 m), is about 9 miles south of the south entrance point to Confederation Fiord.

Charts 7193, 7053

134 The shores of **Nudlung Fiord** are relatively low compared with most of the fiords to eastward; **Nudlung Island** lies in the mouth of the fiord. **Pilektuak Island**, 7 miles ESE of Nudlung Island, has a prominent, slightly concave cliff on its north side.

Cape Hooper

135 On **Cape Hooper** *(68°24'N, 66°36'W)*, there is a *NWS* station and an abandoned airstrip. Nearby, two bays provide anchorage. The first, known as the upper anchorage, is the small inlet in the NE side of Cape Hooper; the lower anchorage is in **Tanner Bay** *(Chart 7053)*. **Rock Island** lies 1 mile south of the cape.

136 Break-up of local **ice** occurs about the first week in August; ice conditions then depend upon the winds. The area is seldom completely clear of ice until the Baffin Island pack ice has passed to the south. Freeze-up usually occurs about the third week in October.

137 The **tidal stream** in the upper anchorage is reported to be very small; in the lower anchorage rates of up to 2 knots have been recorded.

138 *Cape Hooper (Index No. 3960)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

139 **Fog** is likely in August.

140 **Caution**. — **Depths** in the approaches to Cape Hooper are from **reconnaissance surveys**. Depths are very **irregular** and soundings cannot be relied upon to give warning of the proximity of dangers. A 6-fathom (11-m) **shoal depth**, position approximate and

reported in 1957, lies about 20 miles east of Cape Hooper; an 8-fathom (14.6-m) **shoal patch** lies 7 miles farther SSE. A dangerous **shoal**, position approximate and reported in 1955, lies about 8.5 miles ESE of Cape Hooper. A **shoal depth** of 48 feet (14.7 m) was reported in 2025 about 4.5 miles NE of Cape Hooper. The low islet 4.5 miles ESE of Cape Hooper has **rocks awash** extending up to 1 mile west of it. A **shoal** with dangerous **underwater rocks** lies 1.8 miles east of Rock Island, and an area of **shoals** and **foul ground** lies 1 mile farther SE. **Shoal depths** of 13 feet (4 m) are up to 0.7 mile south of Cape Hooper.

141 **Caution**. — Positions of **soundings** are based on ranges and bearings of the low islet 4.5 miles ESE of the cape. Although this islet is reported to be **out of position** on the chart in relation to the rest of the land, it should be used for fixing when in its vicinity. Pilektuak Island and the small ones near it are also reported to be **out of position** on the chart.

142 **Beacons** are on the north, west and south shores of the upper anchorage and on the north shore, and on an islet close to the west shore of the lower anchorage. The condition of these beacons is unknown *(2011)*.

143 The upper **anchorage** is well protected except from NE winds and seas. Winds from this direction, when there is no ice outside the anchorage, can cause a sea which breaks on the beaches. **Anchorage** can be obtained in the NW corner of the lower anchorage, a little over 0.2 mile from the beach in about 30 fathoms (55 m). Vessels should be prepared for strong variable winds from the west.

144 **Caution**. — The **bottom** in both anchorages is hard and rocky and holding is **poor**.

145 Two former **landing beaches** are in the upper anchorage; the main beach is at the west end of the inlet, SE of the abandoned airstrip, the other is 0.15 mile NE of the abandoned airstrip. They are composed of sand and gravel and can be worked at all stages of the tide. Gravel roads, no longer maintained, run from both beaches to the *NWS* station site.

146 **Caution**. — A **shoal** with a least depth of 10 feet (3 m) lies 0.1 mile ESE of the main beach.

147 The *NWS* station has a **conspicuous radome**, with an aircraft warning **light**, mounted on a tower. Two prominent communications domes are at ground level along with a small building.

148 **Caution**. — The Cape Hooper *NWS* station is **not manned**. There is an emergency shelter with a telephone and a motion-activated camera, but no supplies or services.

Charts 7194, 7053

Ekalugad Fiord

149 **Satigsun Island** *(68°33'N, 66°41'W)* is the easternmost of the many islets and above-water and underwater rocks which lie in the south part of **Home Bay** in the approaches to **Ekalugad Fiord**. **Kekertal Island** lies in the mouth of Kangok Fiord. The north shore of Kangok Fiord rises steeply to an ice field about 0.5 mile inland; the SW arm of Kangok Fiord is named **Iqalualuit Fiord**.

Chart 7195

150 A shipping corridor runs southwest from the entrance of Ekalugad Fiord past the west side of Kekertal Island, then west to the head of Kangok Fiord.

Charts 7194, 7053

151 **Florence Point** is the SW entrance point of Ekalugad Fiord. Both sides of the fiord rise sharply and provide excellent protection from all winds except those along its axis. A prominent peninsula separates the two arms at the head of the fiord; the south arm is **Najjuttuuq Fiord**, the north **Sarvalik Fiord**. The land at the head of the latter is low. **Kangursiit Bay** *(68°45'N, 68°57'W)* indents the south shore of Ekalugad Fiord 6 miles from its head.

152 Ekalugad Fiord is usually free of ice in the last part of August.

153 **Caution**. — **Pack ice** and **icebergs** may be encountered outside Ekalugad Fiord at any time during the navigation season.

154 **Anchorage** may be obtained in about 35 fathoms (64 m) 0.3 mile off the shore of **Qarmartalik Cove** *(68°44'N, 68°40'W, not named on the chart)*, 5 miles east of the entrance to Kangursiit Bay. The holding ground is reported to be fair to good. A stream enters the head of the cove.

155 **Caution**. — The head of Qarmartalik Cove is **shoal** for almost 0.2 mile off the mouth of the stream.

156 There is a sand and gravel beach with a usable length of about 135 feet (41 m), width of 45 feet (14 m) and gradient of 1:15, east of the mouth of the stream in Qarmartalik Cove. Boats should not land elsewhere owing to heavy mud deposits. At low tide larger boats will ground short of the beach.

157 A short period of observation showed a mean **tidal range** of 3.5 feet (1.1 m) in the anchorage; the **tidal stream** was slight.

158 A glacier reaches the shore about 0.5 mile south of the solitary islet close off the south shore, 3 miles east of Qarmartalik Cove.

159 **Caution**. — The approaches to Ekalugad Fiord both north and south of Satigsun Island are characterized by a very uneven bottom. Two steep-to **rocks awash** lie 7.5 miles WNW of Satigsun Island on the south edge of the channel, and a **shoal depth** of 9 fathoms (16.5 m) lies 0.8 mile farther NW. A **shoal area**, position approximate, with a least depth of 7 feet (2.1 m) lies 3.5 miles east of the NE point of Kekertal Island, and two small islets *(68°38'N, 67°44'W)* lie 1.5 miles NNE of the same point. A **shoal** with depths under 13 feet (4 m) extends 0.8 mile from the south shore of the channel about 8 miles WNW of Florence Point.

160 **Caution**. — It is reported that **fixes** obtained from one shore of the fiord do not agree on the chart with those obtained from the opposite shore.

Ekalugad Fiord to Arguyartu Point

161 Ekalugad Fiord is separated by a long narrow island from **Kangirlugag Fiord** *(68°48'N, 68°10'W, not named on the chart)*, 2 miles north.

162 **Caution**. — A **rock awash** is in the centre of the channel joining the two fiords at the west end of the long narrow island.

163 Kangirlugag Fiord is separated from **Rocknoser Fiord**, 2 miles north, by **Akuliaqattak Peninsula** *(neither of the two features is named on the chart)*. A series of high peaks are on the peninsula.

164 **Ilutalik Island** is the NW island of the group that lies SE of the entrance to Pitchforth Fiord.

165 **Pitchforth Fiord** has low cliffs along the outer half of its south shore but farther west the land is higher. The east part of the north shore of the fiord has gentle slopes; the west part has high cliffs, and a glacier reaches the sea 8 miles within the entrance. A stream flows into the head of the fiord through a small sand flat. Three fairly prominent ice fields are close south and SW of the fiord.

166 **Arguyartu Point** *(69°01'N, 67°43'W)* is the end of a peninsula capped in its west part by an extensive snow field.

167 **Kingittuq Island** *(not named on the chart)* is 2 miles east of Arguyartu Point. It is the only named island in the group lying off the point.

168 **Caution**. — There is evidence of **shoals** in the vicinity of the Kingittuq Island group.

Chart 7053

Arguyartu Point to Cape Henry Kater

169 **Alexander Bay** is bounded on its north side by Henry Kater Peninsula. The south shore of the bay is low near Arguyartu Point but its elevation increases gradually to NW to 2100 feet (640 m) near the entrance to Tingin Fiord, where moderately high cliffs rise gradually to ice fields. The largest of the islands in Alexander Bay, 7 miles NNW of Arguyartu Point, has an elevation of about 1300 feet (396 m) with steep cliffs.

170 **Tingin Fiord** *(69°09'N, 68°40'W)* divides into two main arms. **Nallulik Fiord** *(not named on the chart)*, the north arm, has nearly vertical sides rising to over 2500 feet (762 m). The sides of the south arm and its branches rise steeply to extensive ice fields.

171 **Caution**. — Both arms of Tingin Fiord have low, stream-fed valleys and **drying** alluvial flats at their heads.

172 The south entrance point of **Itirbilung Fiord** is composed of whitish cliffs varying from 500 to 1500 feet (152 to 457 m) in elevation. The shores of the fiord are formed by high steep cliffs rising to large ice fields. Glacial tongues extend in places from the ice fields to the water's edge. **Argvagtut River** *(not named on the chart)*, which enters the north shore of the fiord about 6 miles within the entrance, appears to have a good landing place at its mouth *(69°18'N, 68°03'W)*. The river flows SE'ward along a long, low valley and appears to be almost silt-free at its mouth; this is probably the good watering place which has been reported in this vicinity.

173 **Cape Henry Kater** *(69°08'N, 66°37'W)* is low but two small hummocks rise about 4 miles inland, the highest to 585 feet (178 m).

174 The **tides** here are reported to rise not more than 8 feet (2.4 m) at spring tides.

175 It is reported that snug **anchorage** can be obtained in the lee of Cape Henry Kater sheltered from ice drifting south past the cape.

Cape Henry Kater to Cape Aston

176 The south coast of **Henry Kater Peninsula** is quite low for about 16 miles west of the cape, and of moderate elevation from there to Itirbilung Fiord. **Niaqurnak Point**, 10 miles west of Cape Henry Kater, is steep with an elevation of about 500 feet (152 m), and was formerly the site of an Inuit camp. There are sandy beaches along the shores of the bays to east and west of the point. The islet in the eastern bay has an elevation of about 10 feet (3 m).

177 **Alexander Bank** *(69°06'N, 64°46'W)* and **Isabella Bank** are about 40 miles east and 23 miles NE of Cape Henry Kater, respectively.

178 **Caution**. — Alexander Bank and Isabella Bank have **not** been completely **examined** and their limits are not known. Alexander Bank has a **least depth** of 25 fathoms (46 m), Isabella Bank has **least depths** of 10 and 20 fathoms (18.3 and 37 m). Another **shoal area**, 13 miles SE of Cape Henry Kater, has a **least depth** of 58 feet (17.7 m).

179 **Caution**. — Because of the shoal water, numerous **icebergs** ground off Henry Kater Peninsula; as well, **thick pack ice** may be encountered.

180 The NE coast of Henry Kater Peninsula has stretches of low, steep-faced shelf alternating with sandy, sloping beaches. Inland there are low, rolling hills with many streams, and raised beaches are noticeable in several places. Farther west along this shore cliffs rise to 2000 feet (610 m) close to the sea, increasing in height towards McBeth Fiord.

181 **Aulitiving Island** *(69°33'N, 67°20'W)*, in the SE part of **Isabella Bay**, rises to more than 1300 feet (396 m) near its west end from a coast which is mostly low. **Arctic Harbour** is on the south coast of the island.

182 **Aulitivik Island** has dark cliffs 800 to 1000 feet (244 to 305 m) high along its east and south shores and numerous high summits inland. Its western end rises to 2500 feet (762 m). **d'Iberville Bay**, on the north side of the island, has been used as an anchorage.

183 **Caution**. — The waters surrounding d'Iberville Bay have many above-water rocks; there may be **uncharted underwater rocks** as well; the approaches to the bay are difficult and dangerous.

184 The unnamed island *(69°42'N, 67°38'W)* lying off the NE shore of Aulitivik Island has an elevation of about 700 feet (213 m). The largest islet off the east shore of Aulitivik Island rises to about 245 feet (75 m).

185 **McBeth Fiord** is flanked at its entrance by cliffs between 2500 and 3000 feet (762 and 914 m) in elevation, and cliffs or very steeply sloping shores continue almost to the head of the fiord where **McBeth River** enters through a sandy flood plain. The high land on the north and south sides of the fiord is covered by snow fields; a number of glaciers descend to the fiord. The bay formed by a small peninsula on the north shore of the fiord, 2 miles from its head, is very shallow.

186 **Caution**. — The **magnetic compass** is erratic in McBeth Fiord. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

187 The coastal cliffs decrease in elevation NE of the entrance to McBeth Fiord, and the north shore of Isabella Bay becomes increasingly low and flat towards Cape Raper.

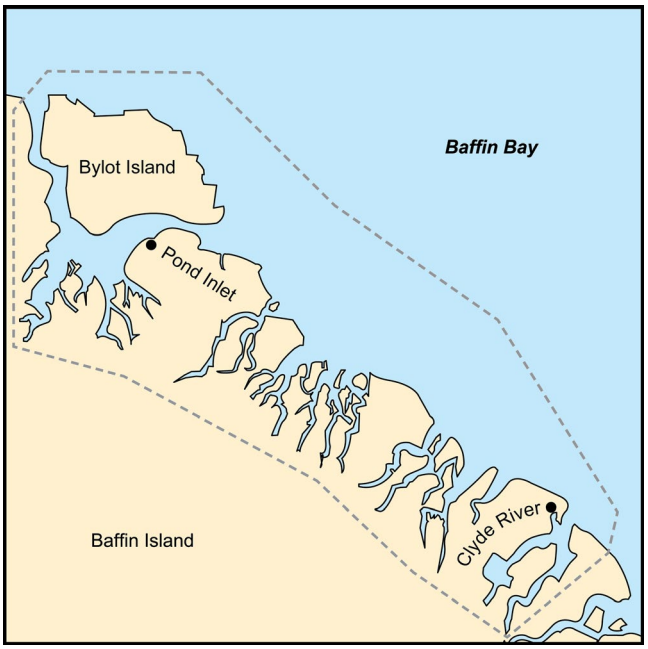
188 **Cape Raper** *(69°45'N, 66°58'W)*, which has an elevation of 400 feet (122 m), is reported to be difficult to identify.

189 **Caution**. — **Shoal depths** of 28 and 33 feet (8.5 and 10.1 m) are 5 miles SW and 2 miles south of Cape Raper.

190 Between Cape Raper and Cape Christian, 55 miles NNW, the coast of Baffin Island is low. A bluff about 500 feet (152 m) in elevation rises about 2 miles north of Cape Raper. **Cape Aston** *(70°00'N, 67°13'W)* is low and insignificant.

Chapter 4

Baffin Bay
South part



General

Charts 7000, 7053, 7212, 7565, 7566

1 **Baffin Bay** lies between Kalaallit Nunaat (Greenland) and the NE coast of Baffin Island, the east coast of Devon Island and the SE coast of Ellesmere Island. The boundary between Davis Strait and Baffin Bay is a line between Kalaallit Nunaat (Greenland) and Baffin Island drawn on 70°N; the boundary between Baffin Bay and Smith Sound is a line drawn between Cape Isabella, on Ellesmere Island, and Kap Alexander, Kalaallit Nunaat (Greenland).

2 This chapter describes the NE coast of Baffin Island, from Cape Aston to Navy Board Inlet.

3 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all Canadian waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

4 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

5 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

6 *Clyde River (Index No. 3940)*, *Koluktoo Bay (Index No. 5790)*, *Milne Inlet (Head) (Index No. 5791)* and *Pisiktarfik Island (Index No. 5795)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

7 *(For general **weather conditions** in Baffin Bay, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For current weather and forecasts, visit:* https://weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*

8 *(For information on ice and currents in Baffin Bay and a general description of the climate of Arctic Canada, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For current **ice conditions** visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

9 **Caution**. — The **magnetic compass** is erratic throughout the area described in this chapter. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada, for more information.)*

Cape Aston to Cape Hunter

Chart 7053

Cape Aston to Kangiqtugaapik (Clyde Inlet)

10 From Cape Aston *(described in Chapter 3)* to **Cape Hewett**, elevation 503 feet (153 m), the coast of Baffin Island is low. A sand bar, enclosing a shallow lagoon, lies along much of the coast. The sand bar is breached by the sea in a few places and many streams discharge into the lagoon.

11 **Caution**. — There appears to be **shallow water** along this sector for some distance offshore.

Chart 7565

Kangiqtugaapik (Clyde Inlet)

12 **Kangiqtugaapik (Clyde Inlet)** is entered between **Nuvuruluk (Halliday Point)** *(70°20'N, 68°04'W)* and Cape Christian, 13 miles NNW.

13 Nuvuruluk is low, as are **Nuvuttiapik (Bute Island)** and **Kintyre Point** *(a former name)*. From seaward Nuvuruluk, Nuvuttiapik and Cape Hewett, 7 miles to the SE, appear as three islands. Nuvuruluk is reported to show up well on radar.

14 **Anchorage** is reported between Nuvuttiapik and the coast to the SE.

15 **Pilukuvik (Ailsa Island)**, **Upirngivik (Burns Island)** and **Uvingajuq (Sanda Island)**, in the entrance to Kangiqtugaapik, are reported to be bare, rocky and difficult to distinguish from seaward; they appear first as low streaks of lighter brown against the background of the surrounding terrain.

16 The south end of Upirngivik and the NW shore of Nuvuttiapik provide good radar targets for entering or leaving Kangiqtugaapik.

17 **Aarruja (Black Bluff)**, which rises to 479 m at the SE entrance to Patricia Bay, is the southern end of a series of hills. Aarruja is easily recognized as it is the highest feature in the area and its black cliffs are prominent from the south.

18 **Govan Point** *(70°21'N, 68°39'W)*, the SW entrance point to **Patricia Bay**, has an elevation of 305 m. **Suluraup Qikiqtanga (Steel Island)** lies 2.5 miles to the SSW and **Siqumaliqiat (Casey Islands)** are 2 miles farther SSE.

19 Aarruja and Govan Point show up well on radar.

20 **Ice** in Patricia Bay breaks up about mid-July and the bay is normally clear of ice by the end of July. However, in strong southerly winds Baffin Bay pack ice has been known to drift into the bay in late August. Mid-August is regarded as the ideal resupply time and there are seldom any problems in the bay after this date.

21 The prevailing winds are usually from north or NW; the high land back of Patricia Bay affords good shelter. **Fog** is prevalent during the navigation season; it is worst in the evening and early morning and as many as 10 days with fog have been recorded in August.

22 *Clyde River (Index No. 3940)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

23 An automated weather station, known as *Clyde A*, is at the head of Patricia Bay. *(For **climate** normals and averages for Clyde A, visit:* https://climate.weather.gc.ca/*.)*

24 An **aeromarine radiobeacon** at the head of Patricia Bay *(70°29'09"N, 68°31'01"W)* transmits on 256 kHz, identification *Morse* "YCY" (— • — — — • — • — • — • — —).

25 The settlement of **Clyde River**, population 935 *(2011)*, is on the west shore at the head of Patricia Bay. Satellite-based **telecommunications**, including the internet, connect Clyde River with other northern communities and to population centres to the south. Transportation to the settlement is by ship or boat in summer or by aircraft year-round.

26 *Quluaq School*, a health center, and a *Northern Store* outlet, with an *Automated Teller Machine (ATM)*, serve the community. A detachment of *RCMP* provides security and customs services.

27 Tourism, community micro businesses, arts and crafts, and export development form the economy. Potential exports include halibut and shrimp, clams and seal and caribou meat. Residents rely on wildlife harvesting for much of their food and clothing.

28 Clyde River airport, with a gravel runway 3501 feet (1067 m) long, supports regular flights to Iqaluit and Pond Inlet.

29 Fresh water is not available at the settlement.

30 **Anchorage** with very good holding in 37 to 46 m over sand, mud and gravel, and with protection from all except southerly winds, can be obtained at the head of Patricia Bay.

31 **Caution**. — **South winds** may cause a **heavy sea** in Patricia Bay.

32 The settlement **landing beach** is on the west side of Patricia Bay near its head. A gravel spit projecting 90 m from the shoreline has been constructed to enable barges to work cargo at all stages of the tide.

33 **Caution**. — The water is very **shallow** near the landing beach and there are many large **underwater rocks** and **boulders**. Barges should approach on a straight course in line with the spit, taking special care to avoid the many underwater boulders off the outer end of the spit on both sides of the approach.

34 **Oil tanks**, on shore near the landing beach, and a satellite dish receiving antenna, 0.2 mile NNW from the oil tanks, are **conspicuous** from within Patricia Bay. Radio **towers**, to the NNE and to the south of the satellite antenna, are marked by air obstruction **lights**.

35 Resupply vessels should not rely on shore-based equipment for the movement of supplies off the beach.

36 Tankers moor stern to the beach, with stern lines out to shore anchors set back about 30 m from the shoreline at the settlement. Oil is pumped to shore through 610 m of floating hose.

Chart 7053

37 The shores of Kangiqtugaapik are steep throughout most of its length, with elevations of over 762 m; the land behind the shores is high, reaching 1661 m north of **Kimmiaqtaqtujuq (Cormack Arm)** *(70°04'N, 70°02'W)*. A few glaciers reach the water on the SE side of Kangiqtugaapik towards its head. **Clyde River** enters the head through a flat, bare expanse of sand and gravel. A steep-sided promontory, projecting from the south shore of the inlet 11 miles SW of Govan Point, has a shallow-headed bay on its SW side. **Boiler Creek** *(not named on the chart)* empties into Kangiqtugaapik through a deep, wide valley 5 miles NE of Kimmiaqtaqtujuq.

38 **Inugsuin Fiord** extends south and SW from Kangiqtugaapik. **Qikiqtaaluk (Qikirtaaluk Island)**, the largest of the group encumbering the mouth of Inugsuin Fiord, has a central, prominent peak with an elevation of 353 m. **Naujaalik (Naujaalik Island)** *(70°12'N, 68°35'W)*, 1 mile NW, has an elevation of 152 m. The shores of the middle reaches of the fiord are steep, in some places precipitous, and rise to over 1219 m. They are backed by snow-capped mountains reaching elevations of more than 1524 m. Near the entrance and near the head of the fiord the shores are somewhat lower, with an elevation of about 762 m. There are glaciers on the north side and several descend valleys on the SE side of Inugsuin Fiord but only one appears to reach the sea, at a point 7 miles from the head of the fiord where moraines project into the channel.

39 **Caution**. — A **drying rock** and a **shoal depth** of 18.2 m lie off the NW side of Inugsuin Fiord about 8.8 miles from its head.

Chart 7565

Cape Christian to Niaqurnaaluk (Cape Eglinton)

40 **Cape Christian** is low. **Umiujaq (Agnes Monument)** *(70°31'N, 68°12'W)*, an island which rises abruptly on all sides to a flattish top, has an elevation of 12 m. Umiujaq is steep-to, with the 5.5 m contour line within 14 m of the shore; there are no apparent dangers in its vicinity.

41 The **tidal stream** at Cape Christian is reported to be from 1 to 2 knots, flowing northerly with the rising tide and southerly when the tide is falling. In Patricia Bay the tidal stream is negligible. Tides in Patricia Bay are reported to rise to almost 2.4 m above chart datum at spring tides.

42 **Caution**. — There is **no protection** whatsoever from winds, sea, or ice. Baffin Bay **pack ice** often moves tight to the shore.

43 Between Cape Christian and Cape Hunter, 107 miles NW, the coast is generally low near the sea until the latter cape is approached, when the mountains come close to the shoreline. The coast is backed 5 to 25 miles inland by mountains attaining 914 to nearly 1829 m; in many cases the mountains are capped by permanent snow fields. A number of long fiords indent the coast, their sides being relatively low near the sea but increasing rapidly in height and steepness towards their middle reaches.

44 **Niaqurnaaluk (Cape Eglinton)** *(70°47'N, 69°26'W)* is a 152 m bluff. From the north this bluff and two hills on the coast within about 5 miles ESE appear as three round-topped islands standing out against the lower coastal land.

45 The coast between Cape Christian and Niaqurnaaluk, 28 miles NW, is a low plain crossed by numerous streams. The coast has low cliffs, rising somewhat higher than Niaqurnaaluk, and a sandy beach. Low hills lie about 5 miles inland from Cape Christian but approach close to the shore at Niaqurnaaluk. **Sledge Pointers** are two peaks with an elevation of 610 m. **Tasialuk (Ayr Lake)**,

drained by **Kuugaaluk (Kogalu River)**, is fiord-like with precipitous sides rising to over 914 m in its SW part and with ice fields close to its shores.

46 **Caution**. — There is **shallow water** offshore along this stretch of coast. West of the mouth of Kuugaaluk, there is an islet and an **underwater rock** with a depth of 0.9 m.

47 **Caution**. — A **drying** alluvial flat lies 2 miles east of Niaqurnaaluk. A dangerous **underwater rock** is reported to lie about 1.6 miles east of Niaqurnaaluk.

48 A small bay *(70°47'N, 69°23'W)* on the east side of Niaqurnaaluk is reported to afford good **anchorage**.

Niaqurnaaluk to Cape Hunter

49 The sides of **Arviqtujuq Kangiqtua (Eglinton Fiord)**, over most of its length, consist of cliffs or steep talus. The cliffs in the outer part of Arviqtujuq Kangiqtua are of moderate elevation. In its inner part the fiord passes between magnificent peaks from 1219 m to more than 1524 m in elevation, most of which are covered with snow and ice. In places towards the head of the fiord, glaciers, now receding, have pushed moraines far out into the channel.

50 **Fog** is prevalent in Arviqtujuq Kangiqtua in the summer; it usually forms in the evening and disperses by the following afternoon.

51 **Caution**. — **Depths** shown inshore of the surveyed shipping corridor are based on **reconnaisance surveys** and **track soundings**. There is **shallow water** at the head of Ravenscraig Harbour off the mouth of **Esquimaux River**.

52 **Ravenscraig Harbour** *(70°42'N, 69°43'W)*, formerly much used by whalers, is entered east of a steep headland 8 miles SW of Niaqurnaaluk, and affords good **anchorage** in 21.9 m. At the NE entrance point and near the head of the harbour, isolated hills rise above the shoreline to elevations of 171 and 427 m, respectively. The shores of the harbour are solid rock and a low islet guards the entrance.

53 **Erik Point** *(70°53'N, 69°53'W)*, the NW end of the peninsula separating Arviqtujuq Kangiqtua and Kangiqtualuk Uqquqti (Sam Ford Fiord), is steep-to with an elevation of 346 m.

54 **Kangiqtualuk Uqquqti (Sam Ford Fiord)**, a fiord entered west of Erik Point, extends SW through a very mountainous region for about 22 miles then SSW for a further 37 miles to its head *(not shown on the chart)* where **Sam Ford River** enters through a wide expanse of sand and gravel. The SE and east shores of the fiord are formed of cliffs, rising to over 1219 m and broken by valleys, increasing in height towards the middle reaches of the fiord but becoming less steep and high in the upper 20 miles. **Kangiqtualuk Agguqti (Walker Arm)** *(70°31'N, 71°38'W)* branches from the main arm of the fiord about 30 miles within the entrance, running west for 8 miles then SSW for 20 miles between high, steep sides. Glacier tongues reach the waters of Kangiqtualuk Agguqti in several places and a river empties into its head. **Swiss Bay** is a small bay on the east shore of Kangiqtualuk Uqquqti opposite the entrance to Kangiqtualuk Agguqti; from the head of Swiss Bay, a low valley called **Atagulisaktalik** leads to Arviqtujuq Kangiqtua.

55 **Heimen Bay** indents the west shore of Kangiqtualuk Uqquqti for 2 miles about 7 miles from its head. **Qikiqtakuluk (Heimen Island)**, a low island, and another smaller island lie off Heimen Bay.

56 **Depths** of over 732 m are found in Kangiqtualuk Uqquqti as far as 7 miles SSW of Swiss Bay. Depths in Kangiqtualuk Agguqti vary from 183 to 732 m.

57 **Caution**. — **Hecla and Griper Bank** *(71°10'N, 69°30'W)* was surveyed in 1988. The **least depth** found was 9.5 m, 12 miles NNW of Erik Point.

58 The shore of **Remote Peninsula** between the NW entrance point of Kangiqtualuk Uqquqti and **Qaqulluit Nuvua (Cape Come Again)**, 12 miles NNW, is low and sloping.

59 **Caution**. — There are several **underwater rocks** and **shoal water** close offshore along this portion of coast.

60 **Pilattuaq (Scott Island)** *(71°07'N, 71°10'W)*, in the middle of Scott Inlet, has precipitous cliffs all around except on part of its SW coast where the shore is steep and broken; there is a very high waterfall near by. At the island's NE point the cliff is smooth and vertical. This is probably the point which Parry in 1820 described as "a remarkable dark perpendicular cliff, forming the most conspicuous and singular object we have seen upon this coast".

61 The SE shore of **Scott Inlet** is formed by steep cliffs. The NW shore is comparatively low for about 7 miles within the entrance, then increases in height with cliffs in most places.

62 **Qikiqtaaluk (Sillem Island)** *(70°57'N, 71°49'W)*, an island which separates the outer parts of Gibbs Fiord and Clark Fiord, has precipitous or very steep shores except on part of its SW side, and a number of glaciers reach the water on its NE side. A rocky islet off the SW end of Qikiqtaaluk has an elevation of 122 m.

63 The SE shore of **Gibbs Fiord** is high and very steep to its head, 15 miles SW of Qikiqtaaluk. The land is lower at the head of Gibbs Fiord and there are bare expanses of sand and gravel at the mouths of **Erik River** and **Tay River**.

64 The water in Gibbs Fiord continues deep to its head. The north and NW shores of **Clark Fiord** consist of precipitous cliffs in most places. **Bruce Mountains** rise to the NW.

65 **Refuge Harbour** *(70°53'N, 71°15'W)*, on the east side of Gibbs Fiord, affords good **anchorage** in 27.4 m and there are two good **anchorages** in 27.4 m at the head of Gibbs Fiord off the mouths of Erik River and Tay River. **Anchorage** may also be obtained in 37 m off the mouth of the stream that enters the NW side of Scott Inlet 6 miles within the entrance. This is the site of a former Inuit camp.

66 **Caution**. — **Underwater rocks** lie close off, and about 2.5 miles SW of Qaqulluit Nuvua. A dangerous **underwater rock** was reported to lie in the fairway of Clark Fiord about 1 mile NE of the north extremity of Qikiqtaaluk, however more recent soundings in this area do not confirm this danger.

67 Between the NW entrance point of Scott Inlet and **Talluruti Tulliit (Cape Adair)** *(71°30'N, 71°34'W)*, a cape 17 miles NNW, the coast is mostly low and sloping with numerous streams and a sandy foreshore. Talluruti Tulliit, elevation 457 m, has cliffs, especially on its north side. There are headlands of moderate height. Pilattuaq is reported to be visible from close off Talluruti Tulliit.

68 Spring **tides** at Talluruti Tulliit rise to 2.6 m above chart datum; neap tides rise to 2.1 m.

69 About 6 miles NW of Talluruti Tulliit, a glacier-fed river draining a lake enters the sea and discolours the water for 1 mile offshore. This part of the coast is relatively low but near **Cape Hunter** *(71°40'N, 72°30'W)*, the end of a low triangle of alluvium, the mountains come down to the shore.

Cape Hunter to Cape Macculloch

70 The coast between Cape Hunter and Cape Macculloch, 70 miles NW, is broken by numerous long, branching fiords. High, snow-capped mountains rise a few miles inland and in places reach the coast to terminate in high cliffs.

71 **Caution**. — **Depths** shown inshore of the surveyed shipping corridor are based on **reconnaissance surveys** and **track soundings**. Offshore the **bottom** is **uneven**. **Shoals** and banks on which icebergs may ground are in various locations up to 20 miles offshore along this stretch of the coast.

72 The offshore part of the shore-fast **ice**, which covers all the fiords and extends for some distance offshore, tends to break up in June or early July, leaving the fiords still covered with fast but rotting ice to a line joining the outer points of the coast. The average navigation season in this area for strengthened ships without icebreaker escort appears to be between late July and early October, but the dates may vary by up to 3 weeks in exceptional years.

Cape Hunter to Cape Cargenholm

73 **Dexterity Harbour** is entered between Cape Hunter and **Robin Point** *(71°40'N, 72°45'W)* on Dexterity Island. Along the east shore of the harbour there is a narrow coastal plain. A river, with sandbanks at its mouth and a low rocky peninsula close westward, enters the SE part of the harbour. **Dexterity Island** is sloping on the north and east sides, and very steep on the west and south sides; its SE end rises to 701 m, and **Barkla Point**, its NW end, has an elevation of about 457 m.

74 It is reported that good **anchorage** can be obtained in 14.6 m, sand, abreast the middle of Dexterity Island where a **sand bar** with a **least depth** of 11 m crosses Dexterity Harbour, and that there is **anchorage** in 27.4 m within the bar. Whaling ships formerly anchored on either side of the harbour according to the wind, but preferred the east side.

75 *(Soundings, based on a reconnaissance survey in 1967, show a **least depth** of 22 m down the centre of the harbour. It is possible, therefore, that the "sand bar" described above takes the form of spits projecting from both sides.)*

Dexterity Fiord

76 **Gandolf Head** *(71°30'N, 72°51'W)* is the NE entrance point of Dexterity Fiord. The northernmost 15 miles of this fiord run between steep cliffs whose faces are peeling like the skins of an onion; Gandolf Head is remarkable in this respect. For the next 5 miles the fiord runs through a region of wide valleys surrounded by gently sloping hills, then it is again bounded by high cliffs. At the head of the fiord there are **conspicuous** terraces.

77 **Adams Island**, which forms the west side of the outer part of Dexterity Fiord, is mountainous with coasts that are high and precipitous except at a few points. **Ratcliffe Arm** *(71°28'N, 73°05'W)* indents the NE coast of Adams Island and continues as a flat-floored valley, almost cutting it in two.

78 **Bergesen Island**, separated from Dexterity Island and Adams Island by **Isbjorn Strait**, has a high, steep coast except at its south end and near its north end where a low neck crosses the island. **Cape Carmichael** and **Cape Lord Rutherford** are its NW and NE extremities; the latter is a prominent headland.

79 **Caution**. — An **uncharted shoal** of 25 m lies 2 miles NW of Cape Carmichael. Isbjorn Strait has a small group of above- and below-water **rocks** near its centre and soundings indicate an **irregular bottom**.

80 **Lemming Harbour** *(71°33'N, 73°22'W)*, at the south end of Bergesen Island, is where the ship *Isbjorn* obtained anchorage in 1937.

81 **Caution**. — A dangerous **underwater rock** lies close south of the entrance to Lemming Harbour, and 12.8 and 7.3 m **shoals** are up to 1.7 miles SSW.

82 **Paterson Inlet**, entered between Cape Carmichael and Cape Cargenholm, 8 miles NW, extends SSE to **Bergy Bar** at the south end of Adams Island.

83 **Caution**. — The south side of the west entrance to Bergy Bar is fringed with **underwater rocks** and there is evidence of **shoal water** extending from Adams Island on the north side of the entrance. Stranded icebergs have been seen on Bergy Bar.

84 **Dymond Islands** *(71°37'N, 73°30'W)*, and two low rocky islands 3.5 miles WNW of them, lie in the outer part of Paterson Inlet.

85 An islet lies 2.5 miles SSE of the Dymond Islands. **Stirks Islands**, off the NW part of Adams Island, are a group of islets and rocks rising to about 46 m. **Styrmann Islands**, 2 miles to the SSW, consist of a large island and a smaller one rising to 488 and 168 m, respectively. A low rock and an islet 9 m high lie, respectively, 0.7 and 2.5 miles NNW of Styrmann Islands.

86 **Tromso Fiord** *(71°12'N, 73°40'W)* extends SSW from Paterson Inlet between steep shores. Its head is separated from **Lethbridge Lakes** by a narrow bar.

87 **Royal Society Fiord**, entered west of **Pollock Head**, extends SSW between dark, steep cliffs, often with talus at their bases. **Seal Bay**, the most northerly of the bays on the west side of Royal Society Fiord, has shores that are only moderately steep and there are some signs of vegetation on them. **Samson Point** *(71°26'N, 74°01'W)* is the south entrance point of **Leaf Bay** which has moderately steep shores. **Kentra Bay**, 7 miles to the south, has a low, sandy north shore and a sandy delta at its head from which a long, flat valley extends several miles inland. At the head of Royal Society Fiord there is a river and delta, and at the end of the river valley, about 12 miles from the head of the fiord, there is a **conspicuous** snow-domed mountain.

Cape Cargenholm to Cape Macculloch

88 **Cape Cargenholm** *(71°46'N, 73°35'W)* rises at its south end to 439 m. Cape Jameson (Ragged Point) lies 21 miles NNW.

89 **Caution**. — A bank about 10 miles NNE of Cape Cargenholm with a **least depth** of 19 m extends in a NE direction for about 10 miles. Another bank about 4 miles east and SE of Cape Jameson (Ragged Point) with a **least depth** of 10 m extends to 11 miles offshore. **Depths** from 18 m to over 100 m exist between Cape Jameson (Ragged Point) and Nova Zembla Island. A **shoal** of 12 m lies 2.5 miles NE of Nova Zembla Island.

90 **Maud Harbour** *(71°45'N, 73°40'W)*, entered west of Cape Cargenholm, has steep, gullied sides with debris near the water and a sandy beach at its head. Moraines extend from a glacier near the entrance, leaving a channel about 0.2 mile wide. **Anchorage** can be obtained between the glacier and the head of the harbour in 14.6 to 27.4 m over sand and mud.

91 **Caution**. — The anchorage is safe except from **north winds**. The whaler *Maud* was caught here by **ice** and crushed in 1892.

92 **Drever Arm** *(71°40'N, 74°08'W)* has steep sides, broken only where glaciers have carved narrow valleys, and is almost blocked by a glacier 4 miles from its head.

93 **Buchan Gulf** is entered SE of **The Bastions** which rise steeply to over 457 m. The head of **Feachem Bay**, on the north side of the gulf, is formed of alluvium from glacial streams. **The Mitres**, 5 miles SW, is a rugged cape rising to 610 m. **Livingstone Island**, near the middle of the gulf, rises to about 564 m and is very precipitous on its east and south sides.

94 **Cambridge Fiord**, entered south of Livingstone Island, is the only fiord that passes through the coastal mountains to the interior plain. It is enclosed for the most part by precipitous shores whose elevations decrease towards the head of the fiord. **Rannoch Arm** *(71°30'N, 75°00'W)* has very steep shores on its SW side, moderately steep shores with some vegetation elsewhere. The *Isbjorn* of about 155 net tons obtained anchorage in **Omega Bay**, 4 miles to the south. **Aird Point**, 5 miles farther SE, is a precipitous headland. **Keel River** enters the NW side of Cambridge Fiord at **Keel Bay**, 2 miles from the head of the fiord.

95 **Caution**. — **Shallow water** is evident off the mouth of Keel River. There is deep water 1.3 miles east of the river's mouth.

96 **Quernbiter Fiord**, entered west of Livingstone Island, is flanked by steep cliffs. The highest, **Executioner Cliffs**, rise almost vertically to about 1097 m.

97 **Suilven Island** *(71°41'N, 74°46'W)*, on the south side of the entrance to Quernbiter Fiord, has a craggy crest with an elevation of 457 m. **Quernbiter River** is one of two small rivers which flow through an alluvial valley into

the head of the fiord. **Icy Arm**, entered 2 miles west of Suilven Island, runs between steep shores rising to over 1067 m.

Chart 7566

98 For about 4 miles north of The Bastions the coast is formed by an alluvial plain, then, as far as **Cape Jameson (Ragged Point)**, it is rocky and low. Between Cape Jameson (Ragged Point) and the south entrance point of Coutts Inlet, the coast rises steeply to 762 m and mountains rise a few miles inland to 1219 m.

99 **Caution**. — There is an islet off Cape Jameson (Ragged Point), and **depths** as shallow as 10.2 m lie up to 8 miles east and SE of the cape.

100 **Round Island** *(72°09'N, 74°39'W)*, 8 miles NW of Cape Jameson (Ragged Point), has steep shores and an almost flat summit with an elevation of about 314 m.

101 **Caution**. — Several above-water and **underwater rocks** lie close off the east end of Round Island.

102 **Nova Zembla Island** is steep-sided except near **Cape Antrobus** where there are gentle slopes. There is reported to be a good anchorage near Cape Antrobus in 12.8 to 14.6 m, sand, but its exact location is not known.

103 **Coutts Inlet** runs mostly between shores which rise precipitously from the water or are very steep and fronted by talus. A delta extends across the head of the inlet; towards the head, the mountains decrease in height and have gentler slopes.

104 The sides of **Qiajivik (North Arm)** *(72°07'N, 75°49'W)* are precipitous throughout its length and elevations of 1524 to 1829 m are found close inland. The arm is blocked at two points near its head by glaciers.

105 **Cape Coutts**, a prominent headland rising to 457 m, is 10 miles NE of the entrance to Qiajivik. Between the two features, the coast is precipitous except for one valley where a river enters the sea. From Cape Coutts to **Cape Macculloch** *(72°29'N, 75°09'W)*, 15 miles NNW, the coast is low with a sandy beach but is backed by high land a few miles inland. Four glacial streams entering the sea between these capes discolour the water for some distance offshore.

106 From Cape Macculloch past **Cape Bowen**, elevation about 305 m, and on to **Cape Weld** *(72°35'N, 75°46'W)* and Kangiqługaapik (Erik Harbour), there are a few cliffs separated by low land and sandy beaches, and high land continues a few miles inland.

Pond Inlet

Chart 7212

107 **Pond Inlet** is entered between Cape Weld, where a glacier reaches the sea, and Niaqunnguut (Cape Graham Moore), the SE tip of Bylot Island, 17 miles to the NNW. Pond Inlet forms the eastern end of **Tasiujaq (Eclipse Sound)**.

108 The whole area from Pond Inlet to Navy Board Inlet is covered every winter by a continuous sheet of shore-fast **ice** which attains a thickness of about 1.5 to 1.8 m. First melting comes along the shorelines, particularly at the mouths of rivers and in the inlets and bays. At the same time the open tongue of the "North Water" creeping south opens the entrance to Pond Inlet, and the open water gradually spreads westward until a general break-up *in situ* of the ice in Tasiujaq takes place. Later, the ice retreats southward in Navy Board Inlet, and once the general break-up occurs any ice left here tends to drift south into the west end of Tasiujaq. The latter area is almost always the last to become clear of ice. Generally, the ice of western Pond Inlet and Tasiujaq breaks up about the middle of July and, once broken up, can melt within a few days if conditions are favourable. Occasionally a westerly wind packs the ice into the narrows of Pond Inlet, forming a temporary barrier, but this seems relatively rare. The break-up pattern is fairly well established and is relatively unhindered, as the ice involved is almost entirely local ice of one year's growth. Little ice comes in during the open season from either Baffin Bay or Lancaster Sound, for the reason that by the time the local ice breaks up, the parts of those waters close to the entrances of Pond Inlet and Navy Board Inlet are usually already ice-free.

109 **Caution**. — **Winds** and strong **currents** drive **ice** back and forth in western Tasiujaq and in and out of the outer parts of Milne Inlet itself, until the ice finally melts.

Pond Inlet — North side

110 **Bylot Island**, which forms the north shore of Pond Inlet and Tasiujaq, is dominated by **Byam Martin Mountains**, which rise to over 1829 m. Most of the interior of the island is capped by ice fields. *(See Sailing Directions booklet ARC 400 — General Information, Northern Canada, Chapter 3, for a general description of Bylot Island.)*

111 Bylot Island, part of ***Sirmilik National Park of Canada***, is a **Migratory Bird Sanctuary**. Except in cases

of emergency, a permit from the *Canadian Wildlife Service* of *Environment Canada* is required to enter this sanctuary. *(See Sailing Directions booklet ARC 400 — General Information, Northern Canada, Chapter 1, for more information.)*

112 **Niaqunnguut (Cape Graham Moore)** *(72°52'N, 76°04'W)* is a rocky headland rising 0.8 mile inland to 305 m; there is a low area close west of the cape from which there is a gradual slope to the high land of the interior. **Sannirut (Button Point)**, 1.5 miles to the SW, is a flat spit 6 to 9 m above sea level. The land behind the point rises to a plateau; **Mount St. Hans** is the highest part. The low ends of both Niaqunnguut and Sannirut show up well on radar.

113 It is reported that good **anchorage** can be obtained in or near the entrance to the bay west of Sannirut.

114 **Caution**. — There is **no protection** at the Sannirut anchorage from sea or ice in winds from SE to SW.

115 About 8.5 miles west of Sannirut the low foreland ends and the mountains fall steeply to the sea. **Narsarsuk Glacier** and **Kaparoqtalik Glacier** are prominent. A small bay at the foot of Kaparoqtalik Glacier has cliffs of 244 to 274 m on each side and low land at its head.

Pond Inlet — South side

116 **Kangiqługaapik (Erik Harbour)** *(72°32'N, 76°04'W)* has steep shores rising to 762 m.

117 Good **anchorage** is reported in the SW part of Kangiqługaapik, near its head, in 14.6 to 18.3 m.

118 **Caution**. — The anchorage is **exposed** to northerly winds and ice, and bergs which occasionally break off from the glacier may make the harbour **unsafe** for an extended stay.

119 It was reported *(1974)* that good **anchorage**, well protected from north winds and seas, is available for small craft up to about 15 m in length, in a "new" bay in the SW part of Kangiqługaapik, formed by the considerable recession of the glacier. There are small icebergs grounded at the extreme head of the newly-formed bay but these are no threat in a north wind.

120 **Guys Bight**, 10 miles WNW of Kangiqługaapik, lies at the mouth of a valley about 2 miles wide where a muddy river with a bar across its entrance flows into the sea. Good **anchorage** is reported here in 12.8 to 14.6 m over mud and sand, but it is exposed to winds from NW to SE.

121 The coast between Guys Bight and Qikiqta (Beloeil Island), 15 miles WNW, is backed by high land which reaches 1585 m a few miles inland.

122 **Qikiqta (Beloeil Island)** *(72°46'N, 77°26'W)* is a prominent island of solid rock with no vegetation. **Igarjuaq (Mount Herodier)**, about 1 mile WSW, is a long, sharp, prominent ridge running east and west which appears conical from those directions. **Mount Morin**, 3.5 miles SE, is a steep east-west ridge which looks like a sharp peak and rises to 1219 m.

123 **Albert Harbour**, which should be entered from the east, is surrounded by dark, barren hills broken on the SE side by a low terrace of sand and gravel along the shore. It was used extensively by whalers towards the end of the 19th century, and is reported to be the best harbour in Pond Inlet with good shelter in all winds.

124 **Caution**. — There is little protection from **ice** which may drift in.

125 **Caution**. — There are above-water and **underwater rocks** in the west entrance to the harbour and **foul ground** extends over 0.1 mile off the south shore about 1 mile east of the east end of Qikiqta.

126 The best **anchorage** is reported to be 0.15 to 0.2 mile inside the west entrance of Albert Harbour in 37 m with good holding over mud.

127 The harbour is normally **ice-free** from early August to the end of September.

128 **Fresh water** is available from a brook on the south side near the east entrance.

129 From Albert Harbour past **Janes Creek** to **Black Point** *(72°42'N, 77°58'W)*, 9 miles SW, the coast is relatively low consisting of a line of hills rising from the water to about 61 m. The high interior mountains recede several miles from the shore.

130 **Caution**. — A 13.1 m **shoal** lies 0.4 mile WNW of Black Point.

131 The hamlet of **Pond Inlet**, population 1549 *(2011)*, stands on Black Point. The old part of the hamlet is on the west side of Black Point on a low strip of ground about 0.5 mile long and 91 m wide. Newer construction is on higher ground rising inland. A radio tower near the hamlet carries an air obstruction **light**.

132 With the construction phase completed in 2021, The Pond Inlet Marine Infrastructure built for the community is composed of the east and west breakwaters, a laydown area, a sealift ramp, a small craft float and a shoreline access surface preparation connecting all these components. The *Department of Economic Development and Transportation* will operate the facilities.

133 Satellite-based **telecommunications**, including the internet, connect Pond Inlet with other northern communities and to population centres to the south. Transportation to Pond Inlet is by boat or ship in summer or by aircraft year-round. Bulk supplies are delivered by sea each summer.

134 There is a *Northern Stores* outlet and an *Arctic Co-operative* store and Anglican and Roman Catholic Missions. Schools provide elementary through high school classes and *Nunavut Arctic College* offers adult education. A nursing station provides medical and dental care. Police services and customs are provided by a detachment of *RCMP*, and there is a meteorological station. The community looks to the growth sectors of government, tourism and businesses involving arts and crafts and wildlife harvesting for future economic development.

135 **Caution**. — This part of Pond Inlet is normally ice-free from the second or third week in August to the end of September, but **ice** and **icebergs** may be driven by **winds** and **currents** into the anchorage area at any time during the navigation season.

136 The prevailing winds at the hamlet in summer are NE *(25 per cent)* and SW *(10 per cent)*, and it rarely blows hard. Visibility is usually good; **fog** occurs in summer on not more than 3 or 4 days per month; it may persist for 2 days. *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/*.)*

137 The **tidal range** is reported to be from 0.9 to 2.1 m. The **tidal stream** is reported to run westward when flooding and eastward when ebbing at a rate of about 2 knots.

138 An airstrip with a gravel runway 4006 feet (1221 m) long accommodates scheduled air service with Iqaluit and other northern settlements. *First Air* and *Kenn Borek Air* are carriers.

139 An **aeromarine radiobeacon** *(72°42'35"N, 77°57'03"W)* transmits on 374 kHz, identification *Morse* "YIO" (— • — — • • — — —).

140 An aeronautical rotating **light** is shown at the airstrip. A radio tower close by carries an air obstruction **light**. Several other radio towers are in the vicinity.

141 Vessels usually **anchor** in 18.3 to 46 m from about 0.3 to 0.5 mile off the old portion of the settlement. From this berth the water shoals gradually to the shore where there is a sandy beach.

142 **Caution**. — **Shallow water** and **underwater boulders** are reported close offshore a short distance SW of the beach.

143 **Caution**. — The anchorage is completely **exposed** to winds from most directions and a heavy swell sometimes enters from Baffin Bay. A NE **current** of 1 to 2 knots, which flows continuously through the anchorage, carries a constant danger from **ice floes**. A vessel must remain at immediate readiness to move.

144 **Salmon River**, which drains **Utsuk (Utuk Lake)** *(not named on the chart)*, enters the sea about 2 miles SW of the hamlet. Coal is found about 4 miles up the river.

145 **Caution**. — Salmon River has a broad **shallow** mouth and has formed a **shallow** sand **bank** which extends about 1 mile offshore. The shore between Pond Inlet and the river is fronted by **shoals** and **underwater boulders**.

Tasiujaq

East part of Tasiujaq — North side

146 *(The soundings on Chart 7212 in Tay Sound, Milne Inlet and the outer part of Tremblay Sound are based on controlled surveys in 1964 and 1966. The remainder of the soundings on Chart 7212 are based on **track soundings** and **reconnaissance surveys**.)*

147 **Sermilik Glacier** *(72°55'N, 78°12'W)* and **Aktineq Glacier**, drained by **Aktineq Creek**, are prominent landmarks on the south coast of Bylot Island; their tangents are useful for fixing. **The Castle Gables**, east of Sermilik Glacier, is an alp-like mountain rising to 1478 m with serrated ridges and three major jagged crests. **Mount Thule**, elevation 1768 m, rises NW of Sermilik Glacier. West of Sermilik Glacier the mountains recede from the sea leaving a low coastal plain which is about 15 miles wide at **Dufour Point** *(72°45'N, 79°34'W)*, the SW extremity of Bylot Island.

East part of Tasiujaq — South side

148 The south shore of Tasiujaq, from Pond Inlet SW and south past **Tunnuujaaqtalik (Tunuiaqtalik Point)** *(72°34'N, 78°27'W)* to Oliver Sound, consists of a gravel plain with an elevation of about 30 m rising in height towards the SE. This relatively low land, in which rivers and brooks have cut deep gorges, falls steeply to the sea.

149 **Caution**. — A dangerous **underwater rock** lies about 1 mile NNW of Tunnuujaaqtalik.

150 Good **anchorage** is reported off the islet close south of **Eqeperiaqtalik Point** in 57 m. **Patricia River** is a small stream with a delta at its mouth. Coal is found a few miles up the river.

Oliver Sound

151 **Oliver Sound** is entered NE of **Qorbignaluk Headland** *(72°22'N, 78°36'W)*, which is said to be the most prominent feature on the south shore of Tasiujaq. The north shore of the sound has an elevation of about 30 m over its outer 15 miles, then rises to about 914 m for the remaining distance to the head. The land on its south shore is much higher, rising to over 914 m a short distance within the entrance. **Stevenson Inlet** is the NW'ern and **Dufour Inlet** *(not named on the chart)* is the SE'ern of the three which penetrate the south shore of Oliver Sound.



152 **Caution**. — Oliver Sound is reported to be very deep, especially the inner 13 miles, but the head appears to be **shallow**.

Tay Sound

153 **Qimivvik (Emmerson Island)** *(72°23'N, 78°54'W)* and **Mumiksaa (Frechette Island)** lie in the mouth of **Tay Sound**. **Beacon Reefs**, the highest with an elevation of 10.7 m, lie close west of Qimivvik.



154 **Caution**. — **Shoals** are reported to extend a considerable distance NW and west from the NW end of Qimivvik. It is reported that the passage between Qimivvik and Mumiksaa may be blocked by a **shoal**. The channel between Mumiksaa and the mainland to the SW is **obstructed** and **unnavigable**.

155 Tay Sound is bordered, except at its south end, by vertical rocky cliffs, rising to 610 m, intersected at intervals by deep narrow ravines. At its south end it is bordered by a gently sloping plain. The site of a former Inuit camp, on the west side of the sound about 11 miles south of Mumiksaa, is marked by bleached whale bones and rocks which have, from a distance, the appearance of tents.

156 **Paquet Bay** *(72°00'N, 78°25'W)*, the east branch of Tay Sound, has not been sounded, but because of its fiord-like nature is probably deep.



157 **Anchorage** over a clay bottom, but open to west and NW, can be obtained NW of the unnamed peninsula which protrudes from the east side of Tay Sound, 10 miles from the head of the sound.

158 A bay on the SW side of Tay Sound, 5 miles west of the unnamed peninsula, has a black sand beach on its south shore, close east of a small stream. This beach can be approached closely and affords a fairly good landing.

159 Both Tay Sound and Paquet Bay are protected from **ice** drifting in from Tasiujaq and are clear throughout the navigation season.

White Bay

160 **White Bay** is entered between **Qunnillaaluk (Cape Knud Jorgensen)** *(72°24'N, 79°20'W)*, elevation 610 m, and **Tuqqajaat (Cape Hatt)**, a steep promontory 10 miles NW. **Mount Emma** rises to about 457 m near the junction of the two arms of the bay. A small bay close south of Tuqqajaat is said to be a snug harbour with depths in its east arm between 6 and 13 m.



161 **Caution**. — **Track soundings** through the entrance of the small bay indicate **shoal depths** of 3.4 m on its east side and 1.5 m on its west side.



162 **Caution**. — The channel east of **Aulattivik (Curry Island)** is reported to have five **underwater rocks** or **shoals** on the east side of the entrance off Qunnillaaluk, and a large **shoal** near the west entrance point. Because soundings in the bay are from a **reconnaissance survey**, there may be other **uncharted dangers**.

Milne Inlet

163 **Milne Inlet** is entered beween Imiliit (Ragged Island) and Athole Point *(72°31'N, 80°30'W)*, 6.5 miles west.

164 **Imiliit (Ragged Island)** has cliffs on its east coast where it rises to over 457 m and a gravel beach at its south end. The larger of the islands off its NE coast has an elevation of 152 m.



165 **Caution**. — **Drying rocks** are close west of the south end of the channel between Imiliit and Baffin Island.



166 **Caution**. — An **isolated rock** that dries 0.6 m and a 5.5 m **shoal patch**, reported in 1956 (position approximate), are 4 miles NNE and 5.5 miles ENE, respectively, of the NE point of Imiliit. In 2008, a **shoal depth** of 8.9 m was discovered 12.7 miles ENE of the same point.



167 **Anchorage** can be obtained in the bay on the west side of Imiliit *(see Anchorage Areas Table)*. ***There are very few anchorage areas in Milne Inlet with satisfactory depth and holding ground***.

168 The outer part of **Angmaraaluit Kangiqlunga (Eskimo Inlet)** *(72°11'N, 79°57'W)* runs between sedimentary walls rising to 762 m on the west and about 457 m on the east side. The shores of the inner 3 miles are lower. **Angmagraluit Mountain**, on the west side of the inlet near the entrance, is over 427 m in elevation and is described as "rising like a tremendous wall over a low foreland".

BAFFINLAND IRON MINES AT MILNE INLET (2014)



169 **Caution**. — There is a 0.9 m **shoal** 1.8 miles from the head of Angmaraaluit Kangiqłunga.

Chart 7513

170 **Ipitalik Peninsula** lies 7 miles SSW of the entrance to Angmaraaluit Kangiqłunga, and **Tikerakdjuak Mountain** rises 3 miles farther south. The bay on the east side of Ipitalik Peninsula is named **Deep Cove**; the one farther east, **Milky Bay**.

171 **Caution**. — **Lone Shoal**, with a **least depth** of 1.8 m, lies 1.2 miles WNW of Ipitalik Peninsula.

172 **Anchorage** can be obtained NW of Lone Shoal *(see Anchorage Areas Table)*.

173 **Caution**. — **Low Island** *(72°14'N, 80°39'W)* has **shoal water** extending SSE from it.

174 **Stephens Island** is steep-sided and rocky.

175 The west side of Milne Inlet, from Athole Point to **Fairweather Bay**, is formed by a wall of sediments rising to a fairly flat plateau with an elevation of 488 m. The sharp point 1 mile NE of the entrance to Fairweather Bay is named **Razorback Point**. **Uvajo Mountain** rises to about 488 m a few miles SW of Fairweather Bay.

176 **Bruce Head** *(72°04'N, 80°32'W)* is a bold promontory and the end of a high rocky peninsula which rises abruptly from the sea on both sides. **Poirier Island** lies east of Bruce Head off the mouth of the **Tugaat River**.

177 **Caution**. — **Koluktoo Bay** has an extensive delta and **drying** alluvial flats in its NW corner where **Robertson River** enters. Light aircraft have been able to land on the delta.

178 *Koluktoo Bay (Index No. 5790)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

179 As the prevailing winds in summer are generally NW to north, Koluktoo Bay offers the best shelter in Milne Inlet. **Anchorage** can be obtained in 49 m, clay, off the south entrance to the bay, east of dome-shaped **Tununek Mountain**, and also inside the bay in its SW part *(see Anchorage Areas Table)*.

180 **Naujan Escarpment**, a wall with an elevation of 366 m, and **Cape Kwaunang** *(71°59'N, 80°44'W)* are on either side of the entrance to the upper part of Milne Inlet, named **Assomption Harbour**. Naujan Escarpment is a breeding place for gulls. **Krag Mountains**, with elevations of 914 m or more, lie about 10 miles SE.

181 **Anchorage** in 55 m is available at the head of Milne Inlet off the mouth of **Phillips Creek** *(see Chart 7513 inset – Assomption Harbour)*. The camp site of *Baffinland Iron Mines Corporation* is on the east side of the head of the inlet.

182 *Milne Inlet (Head) (Index No. 5791)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

Table 4.1 — MILNE INLET ANCHORAGE AREAS

Position	Depth (under keel)	Bottom Type	Winds
72°13.3'N 80°17.7'W (Milky Bay)	100 m	Clay	5-10 knots
72°13.3'N 80°17.7'W (Milky Bay)	35 m	Rocky	—
72°28.15'N 80°00.1'W (Ragged Island)	77.4 m	Rocky	25 knots
72°01.8'N 80°44.2'W (Koluktoo Bay)	30 m	Clay	15-20 knots
71°53.7'N 80°54.5'W (Assomption Harbour)	57 m	Clay and small rocks	10 knots
72°34.5'N 80°27.2'W (Pisiktarfik Island west)	70 m	Rocky	20-25 knots
72°34.2'N 80°20.9'W (Pisiktarfik Island east)	126 m	Mud and small rocks	20 knots
72°15.0'N 80°38.4'W (Low Island north)	110 m	Clay	10 knots
72°12.7'N 80°29.8'W (Lone Shoal)	37 m	Clay	15 knots
72°45.5'N 77°24.7'W (Albert Harbour)	74 m	Clay and small rocks	10 knots

Tremblay Sound

183 **Tremblay Sound** is entered between Athole Point and **Alfred Point** *(72°35'N, 80°34'W)* which rises close inland to 366 m.

184 **Caution**. — **Pisiktarfik Island**, east of Alfred Point with an elevation about 122 m, has a **drying rock** 0.6 mile off its NW end.

185 *Pisiktarfik Island (Index No. 5795)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

186 **Anchorage** is available north of Pisiktarfik Island, and also between the island and Alfred Point *(see Anchorage Areas Table)*.

187 **Caution**. — A **shoal depth** of 20.1 m is near mid-channel, off the point projecting from the east shore of Tremblay Sound, 8 miles within the entrance. There are **shoals** under 3.7 m within 4 miles of the head of the sound.

188 On the NW side of Tremblay Sound the mountains generally rise from the water's edge to 671 m, but in places there is a narrow beach and foreshore. **Alpha River** flows into the west side of the sound through a deep valley between high mountains; about 7 miles from the river mouth the flat-topped **Bellevue Mountain** rises to 701 m. **Beta River** and **Gamma River** enter the sound near and at its head, respectively.

Navy Board Inlet

189 **Navy Board Inlet** runs along the west side of Bylot Island, joining Tasiujaq to Lancaster Sound.

190 **Caution**. — **Depths** in Navy Board Inlet on *Chart 7212* are based on **track soundings** and **reconnaissance surveys**.

191 **Ice** concentrations in Navy Board Inlet are normally less than 1/10 from the third week in August to the end of September but up to 5/10 cover has occasionally been observed during this period.

Navy Board Inlet — South side

192 The south entrance to Navy Board Inlet lies between Dufour Point *(previously described)*, on Bylot Island, and **Lavoie Point** *(72°44'N, 80°14'W)*, 12 miles west at the mouth of a large river.

193 The east shore of Navy Board Inlet from Dufour Point northward almost to **Canada Point** *(73°17'N, 80°46'W)* is low, rounded sandstone hills. At Canada Point there is a narrow coastal plain backed by hills. The east shore of the inlet is cut by numerous streams, most with a delta at the mouth.

194 **Caution**. — **Shoal water** extends up to 1 mile off the east shore of Navy Board Inlet.

195 **Anchorage** has been obtained in the bay off the mouth of the large braided stream 10 miles ESE of Canada Point.

196 The west shore of Navy Board Inlet from Lavoie Point NNW to **Low Point** *(73°09'N, 80°35'W)* is low and

broken by a number of streams. An islet is just offshore at Low Point.

197 **Caution**. — **Shoal depths** under 1.2 m and **drying** alluvial flats extend 2 miles off the mouths of the **Mala River** and the river close north of it.

198 The coast rises a short distance inland to about 762 m between Low Point and the mouth of a braided stream 13 miles NW.

Navy Board Inlet — North side

199 The west shore of Navy Board Inlet is of moderate elevation between the braided stream 13 miles NW of Low Point and **Bluff Head** *(73°41'N, 81°26'W)*, a **conspicuous** headland 25 miles north.

200 The **buildings** on Bluff Head *(2002)* are a former iceberg research radar station.

201 **Adams Island** lies 3 miles north of Bluff Head.

202 **Caution**. — **Rocks** with 8.4 and 11.2 m over them lie 2 miles east and 0.5 mile SW, respectively, of Adams Island. **Shoals** with depths as shallow as 16.3 m lie between 2 and 4 miles ESE of the same island.

203 The east shore between Canada Point and Tay Bay, 13 miles north *(described below)*, is backed by mountains.

204 **Caution**. — Midway along this stretch, a stream entering Navy Board Inlet through a wide valley has **shoal water** off its mouth.

205 North of Tay Bay, the mountains rise sharply from the sea in several places and there are occasional beaches of clay and gravel. A good **landing beach** is reported to exist on the north side of an old glacial river mouth about 6 miles north of Tay Bay. The NW extremity of Bylot Island consists of a wide, low, gravel plain.

206 **Wollaston Islands** *(73°43'N, 80°55'W)* consist of loose masses of limestone rocks with low, vertical cliffs and flat tops. The largest rises to 61 m, the others to 15 or 18 m.

207 **Caution**. — **Passage** between these islands is **not recommended**.

208 **Anchorage** can be obtained south of the Wollaston Islands.

209 **Caution**. — **Tide rips** have been reported in the vicinity of the Wollaston Islands and across the entrance to Navy Board Inlet.

Tay Bay

210 **Tay Bay** *(73°29'N, 80°44'W)*, entered 8 miles south of the Wollaston Islands, has low entrance points; a braided stream entering from the north has built a delta which reduces the width of the entrance to about 0.25 mile. It is reported that the entrance cannot be seen from the middle of Navy Board Inlet. The NE and SW sides of the bay rise to rocky mountains with an elevation of about 732 m, and from the head of the bay a glacial moraine slopes up to an inactive glacier. The water in the bay is often muddy.

211 Depths of 37 to 44 m exist in the middle of Tay Bay over an area about 0.3 mile long and 0.25 mile wide.

212 **Caution**. — A wide **shoal area** fringes the head of the bay and narrow **shoal belts** extend from the NE and SW shores. **Shoal depths** of less than 18.3 m are reported to extend 1.25 miles into Navy Board Inlet from the south side of the entrance to Tay Bay, and a small spit projects from a position about 1.5 miles north of the entrance.

213 **Anchorage** can be obtained in the middle of the bay, about 0.7 mile within the entrance, in 42 m over a muddy clay bottom which affords only fair holding. Tay Bay is not considered a safe anchorage for other than small vessels because of the limited area and unreliable holding ground.

Bylot Island — East and north coasts

Niaqunnguut to Cape Fanshawe

214 **Cape Burney** *(73°05'N, 76°15'W)*, 14 miles NNW of Niaqunnguut *(previously described)*, is steep and high.

215 **Caution**. — The wide bay about 6 miles NW of Cape Burney is fronted by **shallow water**.

216 From the north entrance of the wide bay to **Cape Walter Bathurst**, 8 miles NNW, the headlands are rocky with elevations of 152 to 305 m, and there are beaches at the heads of the small bays.

217 **Bathurst Bay**, at the foot of a wide, stream-braided river valley, offers shelter from offshore winds.

218 **Cape Byam Martin** *(73°29'N, 77°08'W)* has steep cliffs.

219 **Caution**. — A **rock awash** is reported to lie about 0.3 mile off Cape Byam Martin.

Chart 7220

220 **Caution**. — In 1940, twenty-five **icebergs**, in a cluster as if they were **stranded**, were observed about 45 miles NE of Cape Byam Martin. A short distance west of this position depths of over 732 m are found.

Chart 7212

221 **Possession Bay** has a low shore at its head and hills rising to 762 m about 1.5 miles inland. A depth of 44 m is reported in the bay

222 **Caution**. — A **shoal depth** of 9.1 m is close off the SE entrance point. Parry reported a **shoal depth** of 25.6 m, sandy bottom, 0.1 mile off the beach.

223 The **tidal rise** is from 1.8 m above chart datum at neap tides to 2.4 m at spring tides in this area.

Cape Fanshawe to Navy Board Inlet

224 Between **Cape Fanshawe** and **Cape Liverpool** *(73°40'N, 78°06'W)*, 18 miles WNW, the coast is low with a continuous beach; the high land of Bylot Island rises a few miles inland. At Cape Liverpool the beach is in the form of a bar with lagoons enclosed behind it. Between Cape Liverpool and the east end of Maud Bight the coast continues to be low.

225 **Caution**. — A **shoal depth** of 17 m is about 1 mile SE of Cape Liverpool.

226 The south shore of **Maud Bight** is flat-topped cliffs, rising to about 152 m, fronted by a beach.

227 **Caution**. — Very deep water is reported off Maud Bight but sparse soundings suggest **shoal depths** between 24 and 27 m about 2 miles offshore and 1 mile off the coast to the WNW.

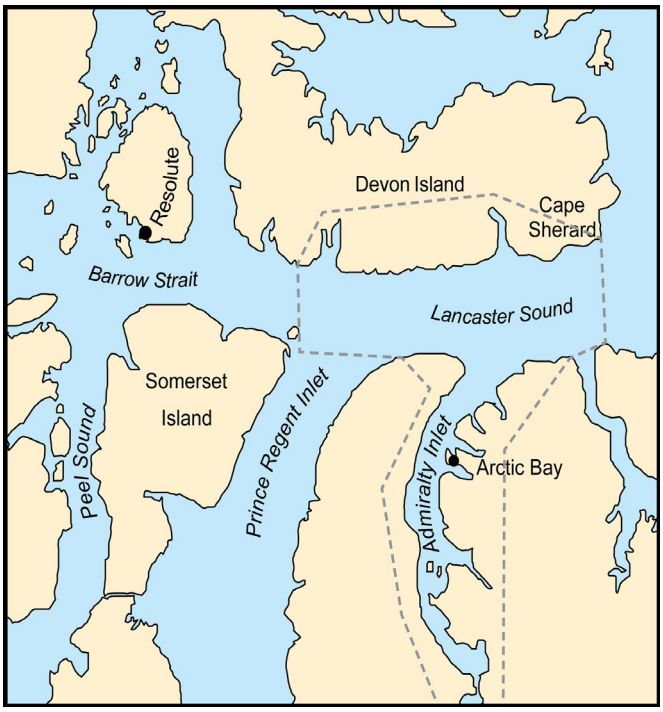
228 **Anchorage** in 12.8 m has been obtained off Maud Bight, apparently near the shore.

229 Cliffs up to 152 m in height occur along the coast between Maud Bight and **Cape Hay** *(73°44'N, 79°58'W)*, which has an elevation of 183 m. Between Cape Hay and the NE entrance point to Navy Board Inlet *(previously described)* the coast consists of cliffs of moderate height with land rising to 1067 m a few miles inland.

Chapter 5

Parry Channel

East part (Lancaster Sound and Admiralty Inlet)



General

Charts 7220, 7292, 7512, 7568, 7569

1 **Parry Channel** is the great waterway which leads west from Baffin Bay to the Beaufort Sea and the Arctic Ocean, separating the Queen Elizabeth Islands to the north from the remainder of the Canadian Archipelago to the south.

2 Lancaster Sound, the east entrance to Parry Channel, and Admiralty Inlet, which leads south from Lancaster Sound, are described in this chapter.

3 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

4 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

5 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

6 **Caution**. — Except for Admiralty Inlet, the **depths** on the charts covering the area described in this chapter are based partly on controlled surveys made between 1960 and 1978 and partly on **reconnaissance surveys** and **track soundings**. Within Admiralty Inlet, controlled surveys were carried out in 1961, in Strathcona Sound and Victor Bay; the remainder of the information on charts of this inlet is based on **reconnaissance surveys** and **track soundings**.

7 **Caution**. — Most of the inshore waters of all the areas described in this chapter have **not** been **sounded**.

8 There are no known dangers, except close inshore, either in Lancaster Sound or the east part of Barrow Strait.

9 *Dundas Harbour (Index No. 5430), Strathcona Sound (Index No. 5860)* and *Arctic Bay (Index No. 5865)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

10 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/.*)*

11 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*

12 **Ice** in Lancaster Sound clears generally between end June and mid-August. As a rule, west to NW winds hasten the clearing while south to SE winds delay it.

13 *(For general **ice conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

14 **Caution**. — The **magnetic compass** is erratic in eastern Lancaster Sound and southern Admiralty Inlet; it is unusable in other areas described in this chapter. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

Lancaster Sound — East part

Chart 7220

15 **Lancaster Sound** is entered from eastward between Cape Hay *(73°44'N, 79°58'W)* on Bylot Island *(described in Chapter 4)* and Cape Sherard, 53 miles north. The sound extends west for 165 miles to its junction with Barrow Strait at a line joining Prince Leopold Island to Cape Hurd, on Devon Island, 28 miles to the north.

16 Lancaster Sound may be approached from the east from Baffin Bay or from the south through Pond Inlet, Tasiujaq and Navy Board Inlet.

17 The usual route is to follow the west coast of Kalaallit Nunaat (Greenland) northward to about 74°N, then steer westward to make a landfall about 10 miles southward of Cape Sherard, taking advantage of the north-flowing current off the west coast of Kalaallit Nunaat (Greenland) and avoiding the heavy ice which usually hugs the Baffin Island coast. The broad east entrance to Lancaster Sound is likely to be open at an earlier date than the route through Tasiujaq . Vessels entering Lancaster Sound normally favour the north side, avoiding the east-flowing current on the south side and usually encountering less ice.

North side — Cape Sherard to Dundas Harbour

18 **Devon Island**, which forms the north side of Lancaster Sound, rises in its east part to elevations of over 1829 m, some 50 miles inland, and is covered in its higher parts with a large permanent ice cap. Along most of the south shore of the island the land rises steeply from the sea. *(For a general description of Devon Island see Sailing Directions booklet ARC 400 — General Information, Northern Canada.)*

19 **Cape Sherard** *(74°36'N, 80°13'W)*, the SE end of Devon Island, is a low stony point. The land behind the cape consists of coastal lowland rising in terraces to a steep-faced mountain ridge a few miles inland. There is a sandy beach along the east side of the cape and a small bay close west of it. The coast in the vicinity of Cape Sherard does not show up well.

20 **Hope Monument**, 3 miles NW of Cape Sherard, is a black conical peak rising to 450 m. From the SE it is a prominent landmark but care should be taken not to confuse it with another conical peak 5 miles NNE.

21 A group of islets lie close offshore 6 miles WSW of Cape Sherard.

22 **Caution**. — An **uncharted shoal**, with a depth of 4.4 m, lies 0.5 mile south of the islets. **Shoal depths** of under 20 m lie within 1 mile of the shore in this vicinity.

23 The coast between Cape Sherard and Cape Warrender, 26 miles WSW, consists of low land 3 to 4 miles wide. **Cunningham Mountains** rise steeply to 1219 m NW of the coastal plain. Three large glaciers descend from the mountains in this area, spreading out over the foreland to reach the sea in low ice cliffs.

24 **Cape Warrender** *(74°28'N, 81°46'W)* is a prominent headland which rises from a narrow, rugged foreshore to an elevation of 1122 m about 2 miles inland. The coast between the cape and the entrance to Dundas Harbour is formed of low cliffs backed by a narrow strip which slopes moderately to steeply crested ridges.

Chart 7292

Dundas Harbour

25 A large **conspicuous** glacier approaches the sea 3 miles east of the entrance to Dundas Harbour. **Johnson Bay**

(74°31'N, 82°22'W), 1 mile east of Dundas Harbour, is the site of the abandoned community of **Dundas Harbour** and a former *RCMP* post.

26 **Caution**. — There are many **underwater boulders** off the **landing beach** at the head of Johnson Bay, but landing is possible in good weather.

27 **Dundas Harbour** is entered between **Morin Point**, relatively low, and **Lemieux Point**, whose shores are steep.

28 **Inglefield Hill**, close SSE of Morin Point, an **unnamed peak** 0.6 mile to the ENE of the point, and **Monty Peak**, 0.7 mile farther NNE, are **conspicuous** from SE. Monty Peak has an elevation of 650 feet (198 m). From SW these peaks may not stand out against the higher land close behind them.

29 *Dundas Harbour (Index No. 5430)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

30 **Ice** in the outer part of Dundas Harbour is reported to clear usually by the end of June with the inner part clearing later. The normal navigation season is from early August to the last part of September.

31 **Caution**. — **Ice** from Lancaster Sound may enter the harbour at any time.

32 The shores on both sides of the outer part of Dundas Harbour rise steeply to over 1600 feet (488 m). The west shore of the inner part of the harbour is comparatively low but backed by high, steep hills. The north end of the harbour is formed by a broad glacial valley where braided streams drain glaciers to the north.

33 **Caution**. — **Depths** in the outer part of the harbour are irregular with pinnacles rising abruptly from deep water. **Shallow water** fringes both shores and the head of the harbour.

34 **Caution**. — **Rock shoals** with depths less than 5 fathoms (9.1 m), some of which dry, extend up to 0.6 mile south and up to 0.3 mile west and north of Morin Point; an **isolated shoal** with a charted depth of 2 fathoms (3.7 m), 0.7 mile NW of Morin Point, has an actual depth of 1.5 fathoms (2.8 m) over it. A **shoal patch** with a charted depth of 7 fathoms (12.8 m), 0.5 mile NNE of Morin Point, has an actual depth of 6.6 fathoms (12.1 m).

35 **Anchorage** may be obtained in 32 fathoms (58.5 m), gravel, 1 mile north of Inglefield Hill. **Anchorage** is also available 0.25 mile from the shore in the SE part of the harbour, and again near the west shore, close south of the point where the harbour turns NNW.

36 There is a suitable **landing beach** in the SE part of the harbour.

Chart 7568

Dundas Harbour to Cape Bullen

37 **Croker Bay**, entered 9 miles west of Dundas Harbour, has a large glacier on its east side, 17 miles within the entrance, and another at its head. The south part of the bay is bounded by coastal plains composed of raised beaches; the shores of the north part rise steeply to over 488 m.

38 **Caution**. — A considerable number of **icebergs** calve from the glaciers in Croker Bay.

39 **Caution**. — A shelf of **shallow water** extends for 4 miles east of **Cape Home** *(74°32'N, 83°36'W)*, and for 1.5 miles east of **Cape Rosamond**. A **shoal depth** of 1.1 m lies 1 mile offshore, SE of Cape Rosamond. Another **shoal area**, with a depth of 2.1 m, lies near mid-channel, 3.8 miles NNE of Cape Rosamond.

40 Within the southern part of Croker Bay, mid-channel depths generally exceed 200 m.

41 **Caution**. — The northern part of Croker Bay has **not** been **sounded**.

42 A few miles west of Cape Home, the coastal plain narrows and steep cliffs backed by hills rising to 549 m approach the coast. At **Cape Bullen** *(74°30'N, 84°54'W)* there is a triangular area of coastal plain 0.4 mile wide backed by steep, level-topped cliffs of horizontally-bedded sedimentary rock rising to 515 m.

Charts 7220, 7568

South side — Adams Island to Admiralty Inlet

43 Between Adams Island *(73°44'N, 81°27'W, described in Chapter 4)* and Cape Charles Yorke, the NW end of **Borden Peninsula**, most of the shore consists of beaches backed by cliffs 122 to 183 m high broken by a number of ravines, most with streams. South of the cliffs the land rises to rolling country with elevations of 183 to 244 m, and 12 miles to the south the land rises to 914 m.

44 **Cape Charles Yorke** *(73°44'N, 82°49'W)* is the **Charles Yorke River** delta, flanked on either side by a series of raised beaches.

45 **Caution**. — **Shoal water** extends for more than 1 mile offshore for at least 12 miles east of Cape Charles Yorke, and **drying** alluvial flats are reported to lie close west of the cape.

Admiralty Inlet — East side

Chart 7568

46 **Admiralty Inlet** extends south from Lancaster Sound for 140 miles. Easter Sound joins the south end of Admiralty Inlet with Berlinguet Inlet, which trends WSW towards Bernier Bay in the Gulf of Boothia. Berlinguet Inlet is separated from Bernier Bay by a low isthmus 4 miles wide.

47 Over the 9-year period 1964-73, Admiralty Inlet was free of **ice** as far south as Adams Sound by early August on 5 years and by mid-August on 7 years; on one of the 9 years the inlet was clear by the end of July, and one year it was not clear until the end of August. On 7 of the 9 years freeze-up took place by October 8.

Cape Charles Yorke to Strathcona Sound

48 **Cape Joy** *(73°39'N, 83°13'W)*, 7 miles SW of Cape Charles Yorke, is a low gravel promontory formed by the delta of a large braided stream.



49 **Anchorage** can be obtained in **Aqiarurnak Bay**, close eastward of Cape Joy, 0.4 mile from the head of the bay, in 37 m.



50 **Caution**. — **Shoal water** extends for some distance offshore both NE and west of Aqiarurnak Bay, and an **underwater** ridge, only **partly examined** and with a least known depth of 18.3 m, lies 1.5 miles offshore and has to be crossed in the approach to the Aqiarurnak Bay anchorage.

51 Between Cape Joy and Elwin Inlet, moderately steep cliffs close to the sea are backed a few miles inland by land rising steeply to over 610 m. Halfway along this stretch a river enters the sea through a deep gorge.

52 **Elwin Inlet** *(73°25'N, 83°45'W)* has steep shores rising to over 610 m, broken by ravines and small glacial valleys where a few streams enter. A braided stream, flowing through a larger glacial valley, is at the head of the inlet. A few rock islets lie near the head of the inlet; the water in its lower reaches is reported to be very deep. **Hartz Mountains** rise to 975 m about 7 miles east of Elwin Inlet. **Nautilus Mountain** *(73°26'N, 84°05'W)*, on the west side of the inlet, is flat-topped with an elevation of 610 m.

53 A river enters the sea through a narrow valley at the SW entrance point of Elwin Inlet; otherwise the coast from this inlet to Baillarge Bay is formed of steep cliffs with an elevation of 610 m.

54 **Ship Point** *(73°23'N, 84°45'W)*, the SW entrance point to Baillarge Bay, is a steep, saddle-topped headland with an elevation of 488 m. The shores of **Baillarge Bay** are steep except at its head where two braided streams enter. A stream forming a small delta flows through a steep-sided valley 5 miles within the entrance on the south side of the bay. **Depths** in the bay are reported to range from 549 m at the entrance to 128 m about 0.8 mile from the head.



55 **Anchorage** can be obtained 0.45 mile off a delta at the head of Baillarge Bay in 55 m.

56 The coast between Ship Point and Cape Strathcona, 12 miles SW, is high except in the central part of this stretch. The coast is fronted by a continuous beach.

Chart 7512

Strathcona Sound

57 **Strathcona Sound** is entered between **Cape Strathcona** *(73°13'N, 85°10'W)*, elevation 305 m, and **Graveyard Point**, 4 miles to the south, a steep point which rises to 427 m.

58 *Strathcona Sound (Index No. 5860)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

59 **Ice** in Strathcona Sound normally starts to break up in mid-July, freeze-up normally takes place early in October.

60 A prominent hill with an elevation of 690 m is 3.5 miles NE of Cape Strathcona.

61 The shores of Strathcona Sound for 10 miles within the entrance are backed by high limestone cliffs broken by ravines. The cliffs give way to gently sloping hills for 8 miles, then form again and continue to the head of the sound. With few exceptions, the only low land lies at the mouths of ravines and rivers. **Silt Point** is at the mouth of **Strathcona River**, midway along the north shore of the sound.

62 **Nanisivik** *(73°02'N, 84°33'W)*, an abandoned settlement in Strathcona Sound, was developed to support a mine that produced zinc and lead concentrate. The mine closed in 2002. There is an abandoned airstrip on high ground 6 miles south of the former settlement.



63 A usable **wharf** is near the former mine site. The face of the wharf consists of sheet steel cells filled with gravel and faced with heavy tires. The wharf deck and the causeway connecting it to the shore are formed of gravel fill.

64 The wharf has a least depth of 7.5 m; a vessel 176 m in length has berthed.



65 **Caution**. — The preferred approach to the wharf is from the east so as to berth port side to with

bows west. This is because of a **shoal area** just west of the wharf that restricts an approach from the west. Also, the prevailing NW wind makes departure easier when berthed bows west. **Ice**, driven into the sound from the west, may compel a ship to get out quickly.

66 **Anchorage** berths are 2.5 miles ENE and 5 miles east of the wharf. **English Bay** *(73°05'N, 84°13'W)* is also reported to provide good anchorage.

67 **Caution**. — **Lone Island**, on the south side of English Bay, has **Lone Island Shoal** projecting west from it for almost 1 mile.

Graveyard Point to Adams Sound

68 **Victor Bay**, entered between Graveyard Point and **Victor Point** *(73°09'N, 85°24'W)*, has moderately steep shores with hills rising a short distance inland to 427 m.

69 **Caution**. — **Foul ground** extends off Victor Point for 1 mile.

70 Temporary **anchorage**, exposed to northerly winds and ice, may be obtained near the head of Victor Bay in 21.9 m.

71 **Uluksan Peninsula** separates Victor Bay from Adams Sound.

72 **Caution**. — From Victor Point SSW to Adams Sound, the west coast of Uluksan Peninsula is fronted by a narrow **shoal area**.

Adams Sound and Arctic Bay

73 **Adams Sound** is entered between **Cape Cunningham** *(72°58'N, 85°35'W)*, which rises to 366 m a short distance inland, and the SW point of Uluksan Peninsula, 4 miles to the NNE. The south coast of this peninsula is formed by the **St. Georges Society Cliffs** which rise to 183 m. The shores of Adams Sound are high and steep over most of its length, ranging from 457 to 610 m in elevation.

74 **Arctic Bay** is on the north shore of Adams Sound. A meteorological station is at the hamlet of the same name.

75 *Arctic Bay (Index No. 5865)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

76 The **tidal stream** in the bay is slight.

77 **Ice** begins to break up about mid-July; freeze-up normally takes place early in October.

78 **Caution**. — **Ice floes** in Admiralty Inlet may delay the opening of the navigation season.

79 **Oulouksione Point**, the NW entrance point to Arctic Bay, rises gradually to a flat summit.

80 **Caution**. — A **shallow spit** extends 0.4 mile SE of Oulouksione Point.

81 **Holy Cross Point** is the SE entrance point to Arctic Bay; it is relatively low. A stone **cairn** surmounted by a cross is on the point.

82 **Caution**. — A **shoal sounding** of 8.2 m is 0.5 mile NNE of the cross.

83 **King George V Mountain**, on the east side of Arctic Bay, is **conspicuous**. **Marcil Lake** drains into the SE part of Arctic Bay.

84 **Anchorage** with excellent holding may be obtained in the NW part of Arctic Bay.

85 The hamlet of **Arctic Bay**, population 823 *(2011)*, is named after the whaling vessel *Arctic* (Captain William Adams) which first visited the bay in 1872. Satellite-based **telecommunications**, including the internet, connect Arctic Bay with other northern communities and to population centres to the south. Transportation to Arctic Bay is by boat or ship in summer or by aircraft year-round. A school, an Anglican church, a *Northern Store* outlet, a local *Co-op* store, post office, *RCMP* detachment and a nursing station serve the community.

86 Hunting, trapping and handicrafts and some wage employment form the economic base for the hamlet. Soapstone is quarried nearby.

87 There is a good gravel **landing beach** in front of the hamlet.

88 A **breakwater** projecting offshore in front of the hamlet protects a small-craft **anchorage**.

89 Tankers anchor with stern lines to shore and use floating hose to transport oil products to the tank farm east of the hamlet.

90 Water is available by tank truck.

91 An airstrip 3935 feet (1199 m) long at Arctic Bay allows air connections with Resolute and Iqaluit.

92 **Johnston Harbour** *(72°58'N, 84°56'W)*, entered 3 miles ESE of Arctic Bay, is a good, well-sheltered harbour. A **cairn** stands on its south entrance point.

93 **Caution**. — **Underwater rocks** extend from the north side of the entrance to Johnston Harbour.

94 At the mouth of **Adams River**, on the north shore of the sound 10 miles from its head, there is a **conspicuous** waterfall. A prominent hill, lying 5 miles SW of the head of Adams Sound, rises to an elevation of 884 m.

95 **Caution**. — A **shoal** with depths less than 1.8 m extends the full width of Adams Sound about 3 miles from the head.

96 A **magnetic anomaly** exists in Adams Sound, caused by the high ore content of its precipitous sides, however, the magnetic compass is useless in all of the area described in this chapter.

Chart 7568

Adams Sound to Yeoman Island

97 From Cape Cunningham to Levasseur Inlet, 22 miles south, the coast is high and steep, rising to 610 m a short distance inland. The coast is broken by several rivers, some with deltas at their mouths; **Eqalulik River** flows through a steep valley and has built a large delta.

98 **Qikirtaukkat Islands** *(72°54'N, 85°42'W)* lie close offshore 4 miles SSW of Cape Cunningham. **Peter Richards Islands** are 10 miles farther SSW, the larger of the two with an elevation of 61 m.

99 **Caution**. — **Shoal rocks** *(position approximate)* are reported to lie between Peter Richards Islands and **Pirujiningit Islands**, 3 miles ESE, and dangerous **underwater rocks** lie north and south of the latter islands.

100 **Levasseur Inlet** *(72°35'N, 85°35'W)* has generally low shores. A river flows through a wide valley at its head.

101 **Caution**. — An extensive **shallow ledge** with less than 0.9 m over it is reported to lie in the area between Eqalulik River and Levasseur Inlet. The sides of Levasseur Inlet are fringed by a narrow band of **shallow water**. **Stephens Headland** is low and flat; **air photos** indicate that **shallow water** extends NW from the headland for a considerable distance.

102 The coast from Stephens Headland to Nauyat Cliff, 11 miles SE, is sloping and rises 1 mile inland to over 366 m. **Siurartujuq Point** is the south entrance point to **Red Valley** which is wide and U-shaped.

103 **Caution**. — **Shoal water** extends offshore for 3 miles between the north entrance point to Red Valley and Nauyat Cliff.

104 **Nauyat Cliff** *(72°24'N, 85°10'W)*, composed of sedimentary rock, rises 1 mile inland to 488 m.

105 **Fleming Inlet**, separated from **Fleming Lake** by a waterfall, is bounded by shores rising to over 305 m except where streams, running through deep ravines, have formed small deltas at their mouths. Numerous islets and above-water rocks lie off the NW and SE sides of **Davids Island**, which has an elevation of over 183 m. The sides of **Fabricius Fiord** rise to over 366 m except at its head where a braided stream enters. **The Saw Teeth Hills** have elevations of 366 m.

106 The shores of **Moffet Inlet**, which bounds the east side of **Steensby Peninsula**, have elevations of 122 m for 17 miles within its entrance and 61 m from there to its head.

107 **Ebenezer Harbour** is a small cove on the west side of Moffet Inlet 5 miles within the entrance. **Moffet River** discharges into the head of the inlet through an alluvial delta.

108 **Caution**. — At the head of Moffet Inlet, the shores are quite low and fronted by **shoal water** on both sides.

109 **Bartlett Inlet** *(72°14'N, 84°40'W)*, on the east side of Moffet Inlet, affords **anchorage** for small craft in 37 m, mud and sand, 0.1 mile off the north side near the entrance.

110 **Caution**. — A **shoal** is reported to lie in the centre of the entrance to Bartlett Inlet.

111 **Saneruarsuk Islands** and **Yeoman Island**, with elevations of 122 and 183 m respectively, lie west of the north end of Steensby Peninsula. **Nuvua Island** is close west of Yeoman Island.

112 **Caution**. — A group of islets extend up to 3 miles south of the Saneruarsuk Islands. A **shoal patch**, with a dangerous **underwater rock**, lies 5 miles SW of Yeoman Island.

Admiralty Inlet — West side

Cape Crauford to Yellow Valley

113 **Cape Crauford** *(73°44'N, 84°51'W)*, the NW entrance point of Admiralty Inlet, is a promontory 14 m high backed by a cliff. About 4 miles west of the cape, the land rises to 488 m and is mostly covered by a snow field.

114 The **tidal stream** off the cape attains a rate of 1.5 knots.

115 **Caution**. — The coast for up to 7 miles NW and SSW of Cape Crauford is fringed by a **shoal ledge** extending more than 1 mile offshore.

116 The west side of Admiralty Inlet from Cape Crauford south for 85 miles is composed of castellated cliffs 366 to 549 m in elevation, broken only by numerous valleys. Several ice fields lie a few miles inland along the northern 40 miles of this stretch. South of 72°30'N, the elevation of the shore gradually decreases.

117 **Turner Cliffs** *(72°57'N, 86°30'W)*, elevation 366 m, about 50 miles SSW of Cape Crauford, border the shore for several miles. **St. Patrick Canyon**, formed by

a large river, is 2 miles wide. Close to the south, **Giants Castle** rises sheer from the inlet to over 305 m.

118 **Vista River** enters the inlet 7 miles south of Giants Castle through a valley 4 miles wide; close to the south, cliffs rise to over 305 m. **Kakiak Point** *(72°40'N, 86°40'W)* is low but prominent on an otherwise smooth coastline.

119 **The Gallery**, a series of steep cliffs rising to over 183 m, starts 6 miles SSE of Kakiak Point and extends to 3.5 miles NNW of the mouth of **Kuuruluk River**. **Yellow Valley**, 10 miles farther south, is formed by a river which has cut through a plateau with an elevation of 91 m.

Inner part of Admiralty Inlet

120 On the east shore, the NW part of Steensby Peninsula from its north end to **Inuunnaq Point** *(72°00'N, 86°02'W)*, 18 miles SW, is low with many ponds. **Iglorsuit Island** has an elevation of 61 m.

121 **Caution**. — The NW part of Steensby Peninsula is fronted by numerous islets and above-water rocks. **Uncharted underwater rocks** are likely.

122 **Tikigakjuak Point**, 17 miles SSE of Iglorsuit Island, is a low bluff forming the south side of **Sunday Bay**. The **Inungnait Hills** rise behind the middle of this stretch to 152 m.

123 The coast, from Tikigakjuak Point past **Prudhomme (Prud'homme) Point** and **Igludjat Islands** *(71°38'N, 84°55'W)* to the head of Admiralty Inlet, continues to be low. The exceptions are the flat-topped **Tadlukotit Hills**, which rise to 229 m, and the head of **Jungersen Bay** where the land rises to over 244 m. **Magda River** enters Jungersen Bay east of Igludjat Islands, and **Jungersen River** flows into the bay.

124 **Caution**. — The east side of Admiralty Inlet, from a position abreast the Inungnait Hills to its head and including the bay east of Igludjat Islands, is **shallow**.

125 The west shore of Admiralty Inlet from Yellow Valley to its head is generally low. The coast rises to 183 m a few miles inland, with low cliffs in places. Several rivers, with deltas at their mouths, enter the inlet; the only named one is **Tikiraq River**. The SW 15 miles of the Admiralty Inlet coast is very low with many ponds.

126 **Pusingnajojaq Hill** *(72°05'N, 86°27'W)*, 12 miles south of Yellow Valley, is a **conspicuous** flat-topped, steep-sided hill with an elevation of 210 m. **Kingarut Hill**, elevation 213 m, is 31 miles farther SSE. **Shimik Island**, at the head of Admiralty Inlet, is low.

Easter Sound

127 The west side of Easter Sound is low with many small lakes and ponds inland, while the east side rises to over 61 m. **Imek Point** *(71°17'N, 84°51'W)*, the SW entrance point, is low.



128 **Caution**. — The **tidal streams** in Easter Sound are strong.

Berlinguet Inlet

129 The shores of **Berlinguet Inlet**, particularly the SE part, are low. Berlinguet Inlet is encumbered by numerous islets at **Ikirasak Narrows**. **Fall River** enters the east end of the inlet and **Berlinguet River** enters the north shore 15 miles WSW of the narrows. **Bell Bay** *(71°00'N, 84°54'W)* extends south from the east end of Berlinguet Inlet; it also has low shores. Bell Bay has **Nuvuruaq Point** in its NW part. **Saputing River** and **Zigzag River** enter the SW and SE parts of Bell Bay.



130 **Caution**. — Saputing River and Zigzag River appear to have **shoal water** at their mouths.

Lancaster Sound — West part

South side — Cape Crauford to Cape York

131 The coast from Cape Crauford *(73°44'N, 84°51'W, previously described)* to Cape York, 36 miles west, consists mostly of a low plain 0.25 mile wide backed by cliffs of horizontally-bedded sedimentary rock rising to 488 m. A few rivers enter the sea through steep valleys. From Cape Crauford to close west of **Stanley Point**, a low point 6 miles NW formed by the outfall of a small stream, cliffs rise in places sheer from the sea to 366 m. **Sargent Point**, 18 miles west of Stanley Point, is a low tongue of land backed by steep cliffs rising to 488 m. Midway between these points a snow field lies a short distance inland.



132 **Caution**. — **Shoal water**, extending up to 1 mile offshore, fronts the coast from Cape Crauford to close west of Stanley Point, and in two areas between Stanley Point and Sargent Point.

133 *(Cape York and Prince Regent Inlet are described in Chapter 6.)*

North side — Cape Bullen to Cape Hurd

134 From Cape Bullen *(74°30'N, 84°54'W, previously described)* to Cape Hurd, 83 miles west, the coast throughout most of this stretch is notable for its high cliffs of horizontally-bedded sedimentary rock with regularly

spaced projecting masses of rock resembling buttresses. Most of the cliffs are fronted by talus in their lowest parts and there is usually a narrow foreshore. The land rises behind the cliffs to over 610 m NW of Cape Bullen and there are extensive snow fields; farther west the elevations are lower. A number of streams have cut gorges and ravines through the high land and formed deltas in the bays and inlets. Several of the inlets afford good shelter except from southerly winds.

135 **Cuming Inlet** *(74°35'N, 85°00'W)*, entered west of Cape Bullen, is bordered by steep shores reaching almost 610 m; a large river enters through a low valley at its head. A **conspicuous** narrow glacier falls steeply to the sea close west of Cuming Inlet and another glacier is 4 miles inside the inlet on its west side.

136 **Caution**. — A **rock which dries** 0.2 m lies 0.5 mile offshore in Cuming Inlet, 4.2 miles NNW from Cape Bullen. There are patches of **shoal water** on both sides of the inlet caused by deltas at the mouths of streams.

137 **Anchorage** has been obtained 10 miles within the entrance to Cuming Inlet.

138 Most of the peninsula between Cuming Inlet and Powell Inlet is covered by a snow field with an elevation of over 610 m.

139 **Powell Inlet** *(74°35'N, 85°28'W)* has cliffs on both sides rising to 610 m, fronted in the inner part of the inlet by a narrow strip of low land. Several streams with deltas at their mouths flow into the west side of the inlet and a small glacier approaches the sea 2.5 miles within the east side. A group of four islets, with elevations up to 16 m, lie off the west side of Powell Inlet 2 miles from its head. A river enters the head of the inlet through a wide valley.

140 The eastern 3 miles of the coast between Powell Inlet and Burnett Inlet is formed by cliffs, buttressed with talus, rising almost directly from the sea. In the middle section of this stretch a coastal plain 1 mile wide lies between the cliffs and the sea; the plain narrows to the westward. The central part of the peninsula between the two inlets rises to 631 m. Deep gorges descend from an ice field towards the shore.

141 **Cape Pyramid** *(74°28'N, 86°07'W)*, the east entrance point of **Burnett Inlet**, has a conical peak with an elevation of 305 m that makes a good landmark. The shores of Burnett Inlet are moderately steep; rivers enter the inlet through a low valley at the head. Depths are reported to decrease gradually towards the shores.

142 Temporary **anchorage** can be obtained in Burnett Inlet in 55 m, mud and pebbles, near the west shore 2.5 miles within the entrance, but it is exposed to southerly winds.

143 The peninsula between Burnett Inlet and Stratton Inlet rises to high, ice-covered tableland.

144 **Stratton Inlet** *(74°32'N, 86°40'W)* has a conical hill at its eastern entrance much lower in elevation than that in Burnett Inlet.

145 **Caution**. — The head of Stratton Inlet appears to be **shallow**; two streams have built deltas there. Two other streams with deltas enter the west side of the inlet.

146 The coast between Stratton Inlet and Hobhouse Inlet rises steeply to 366 m and is backed by a snow field near its central part.

147 The shores of **Hobhouse Inlet** *(74°28'N, 87°02'W)* are lower than in the adjoining inlets, rising gradually to 244 m except on the east side of the entrance to the inner arm where they rise steeply to 305 m.

148 **Caution**. — The entrance to the inner arm of Hobhouse Inlet is constricted by a **shoal spit** projecting more than halfway across from the west side, and by **shoal water** along the east shore.

149 At the entrance to the inner arm, the deepest water is found near the east side where there is 7.3 m.

150 Exposed **anchorage** can be obtained in the outer part of Hobhouse Inlet in 37 to 73 m; small craft can find well-sheltered **anchorage** near the shores of the inner part; depths of 5.5 m are in the middle of the inlet.

151 **Blanley Bay** *(74°30'N, 87°25'W)* has generally steep shores rising to 549 m. A braided stream flows through a valley at its head. Glaciers reach the water close west of the western entrance of Blanley Bay, and also on its west side 3 miles within the entrance.

152 The peninsula between Blanley Bay and the unnamed inlet 5 miles west is capped by a large snow field. The unnamed inlet has high, steep sides and the east side of the entrance is fronted by a strip of low land. A braided stream enters at the head of the unnamed inlet, and several glaciers approach the water on the east side.

153 **Caution**. — The coast between the unnamed inlet and Fellfoot Point, except in the approaches to Graham Harbour, has a band of **shoal water** extending up to 1 mile offshore.

154 **Graham Harbour** *(74°30'N, 88°11'W)* has an alluvial spit extending from its east shore 0.5 mile within the entrance.

155 **Caution**. — **Shoal water** is found off both sides of the entrance to Graham Harbour.



156 **Caution**. — **Shelter** in Graham Harbour is reported to be **inadequate** for satisfactory anchorage.

157 **Fellfoot Point**, a large low delta formed by a braided stream, is backed 1.5 miles inland by steep cliffs rising to over 305 m.

158 **Maxwell Bay** has mainly steep shores rising to more than 305 m except at the heads of its inlets and the mouths of a few small rivers. The islands in the NE part of the bay are of moderate elevation, the largest rising to 122 m.



159 Small vessels can obtain **anchorage** east of the largest island.



160 The **tidal stream** in Maxwell Bay floods at 0.5 knot and ebbs at 0.2 knot.

Chart 7569

161 **Cape William Herschel** *(74°35'N, 89°12'W)* is a coastal lowland 0.5 mile wide backed by steep cliffs with land rising to 400 m a short distance inland.



162 **Caution**. — **Shoal water** extends 1.5 miles off Cape William Herschel.

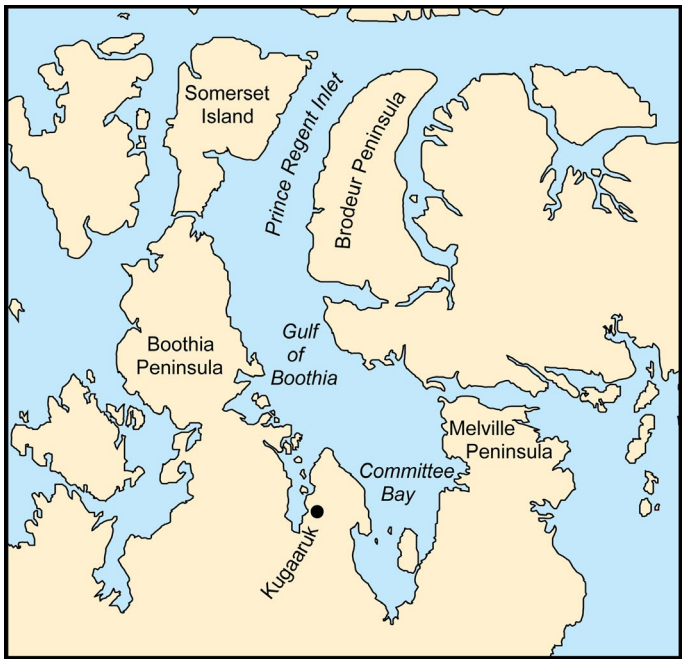
163 The coast between Cape William Herschel and Cape Hurd, 12 miles WSW, has an elevation of over 305 m, and a large snow field, the most westerly on the south coast of Devon Island, lies a few miles inland. A small, almost landlocked bay, halfway along this stretch, is surrounded by land reaching elevations of 213 m.

164 **Cape Hurd** *(74°32'N, 89°59'W)* is low but the land rises to 366 m 1 mile to the NE.

Chapter 6

Prince Regent Inlet

Gulf of Boothia — Committee Bay



General

Charts 7502, 7552, 7568, 7569, 7575, 7578

1 Prince Regent Inlet, Gulf of Boothia and Committee Bay form an inlet which extends over 400 miles from Lancaster Sound south to Rae Isthmus at the base of Melville Peninsula. The border between Prince Regent Inlet and the Gulf of Boothia is a line joining Possession Point, at the SE end of Somerset Island, to Cape Kater on Brodeur Peninsula. The south limit of the Gulf of Boothia is a line joining Cape Chapman, at the north end of Simpson Peninsula, to Cape Miles on Melville Peninsula.

2 Bellot Strait leads westward from the north part of the Gulf of Boothia to Franklin Strait, but is seldom navigable for more than 2 or 3 days at a time without icebreaker assistance. Access to Foxe Basin from the Gulf of Boothia is possible through Fury and Hecla Strait, but because of ice conditions in both the gulf and the strait this route is rarely navigable by vessels other than icebreakers.

3 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

4 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

5 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

6 **Caution**. — The **depths** in Prince Regent Inlet and Gulf of Boothia are based on **reconnaissance surveys** and ships' track soundings. Much of this area is not surveyed to modern standards. A spot

sounding survey through the ice, with a grid spacing of about 1 mile, was made in 1984 and some additional inshore depths were obtained. Soundings on charts of Bellot Strait and approaches are based on controlled and uncontrolled surveys made between 1957 and 1959. Committee Bay was surveyed between 1984 and 1992; these were reconnaissance surveys with 2 km between soundings.



7 A surface **current** enters Prince Regent Inlet between Prince Leopold Island and Cape Clarence and flows down the west side of the inlet. Part of this current turns northward along the eastern side of the inlet, and the remainder continues southward through the Gulf of Boothia and eastward through Fury and Hecla Strait.

8 *Fort Ross (Index No. 5930)* is a reference port and *Port Leopold (Index No. 5905)* and *Pelly Bay (Index No. 5985)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

9 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/*.)*

10 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*

11 *(For general **ice conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*



12 **Caution**. — The **magnetic compass** is unusable in Prince Regent Inlet and Gulf of Boothia and erratic in Committee Bay. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

Prince Regent Inlet

Charts 7568, 7575

13 The water is deep through the north and middle parts of **Prince Regent Inlet**. Farther south depths decrease gradually on the eastern side of the inlet.



14 **Caution**. — An area of **discoloured water** is reported to lie about 25 miles SE of Whaler Point.

Chart 7568

Prince Regent Inlet — East side

15 **Brodeur Peninsula** forms the east side of Prince Regent Inlet; the peninsula rises steeply from the sea to elevations of about 305 to 366 m in the north, decreasing to 152 m towards the SE end of the inlet.

16 **Cape York** *(73°48'N, 87°00'W)*, on the NW part of Brodeur Peninsula, is formed by the delta of **Saaqu River**. The cape is low and does not show up well on radar. **Eardley Bay** lies at the seaward end of a prominent valley which penetrates the land southward for 8 miles.

17 The coast between Cape York and Jackson Inlet, 45 miles SW, is formed of flat-topped cliffs rising to 366 m. These are broken in places by narrow valleys, and by a wide low area at **Peak Valley** where a few small rivers enter the inlet. Several high peaks rise near the coast at this place. About 10 miles NE of Jackson Inlet there is a beach on the south shore of an indentation in the coast.

18 The shores of **Jackson Inlet** *(73°18'N, 88°47'W)* are generally steep with an elevation of about 274 m. Exceptions are its head, where **Jackson River** flows through a low valley, and its south entrance point which is formed by a river delta. A dark rocky hill at the west end of the south entrance appears as an island from a distance.

19 From Jackson Inlet to Port Bowen the coast continues to be high and steep except for a small low area close NE of the NE entrance to the port.

20 **Port Bowen** *(73°13'N, 88°58'W)*, where Parry wintered with *Fury* and *Hecla* in 1824-1825, has steep shores rising to over 213 m except where a few streams have built deltas. **Stoney Island** *(not shown on the chart)* lies midway along the north side of the port.



21 **Caution**. — Port Bowen is reported to be generally deep but a 2.1 m **shoal** lies close off the south entrance point. A **shoal** with **drying rocks** joins Stoney Island to the north shore and a **shoal area** extends about 91 m off the SE point of the island.



22 Limited but well-sheltered **anchorage** can be obtained in **North Cove** in 7.3 to 9.1 m.

23 Spring **tides** rise 1.9 m above chart datum and neaps rise 1.5 m at Port Bowen.

24 **Mount Cotterell**, elevation 274 m, rises south of a small bay. A stream flows through a deep valley into the bay.

25 **Port Neill** *(73°09'N, 89°07'W)* has a steep bluff about 213 m high on the south side of the entrance, and has rivers entering through a wide valley at the head of the bay. **Point Neill**, the north entrance point, is low and sandy.

26 **Caution**. — A **shoal spit** with depths of 5.5 to 14.6 m extends about 0.3 mile off the south entrance point of Port Neill.

27 Well-sheltered **anchorage** can be obtained in the NW part of Port Neill in about 37 m, mud, with very good holding. It was believed by Parry that, between the end of the spit off the south entrance point and Point Neill, the depth did not exceed 18.3 to 25.6 m, thus forming a sort of bar which would serve to break any heavy sea from westward.

Chart 7575

28 The coast between Port Neill and an unnamed inlet 6 miles SSW is backed by high land with a few low areas where streams flow into the sea. The north entrance to the unnamed inlet is marked by a **conspicuous** peak with an elevation of about 213 m; the peninsula within the entrance rises to over 91 m. **Mount Sherer** *(72°58'N, 89°09'W)*, elevation 244 m, is flat-topped and prominent. About 3 miles SSW of the mountain a low uncharted island lies at the mouth of a wide braided stream.

29 The unnamed inlet entered 10 miles SSW of Mount Sherer has moderately sloping shores which reach elevations of 183 m on its north side and about 61 m on its south side with no cliffs.

30 **Caution**. — **Shoal water** is off the entrance to the unnamed inlet, curving in a wide arc from its SW entrance point. About 1.5 miles north of the west end of the south side of the inlet, there is a **shoal depth** of 7 m from which shallow water extends NE to the shore.

31 Between the inlet described above and **McBean Bay** *(72°38'N, 89°35'W)* the coast is low.

32 **Caution**. — This section of shoreline is bordered by **shallow water**. A **shoal depth** of 16.5 m lies about 2 miles off the entrance to McBean Bay, and the bay itself appears from **air photos** to be **shallow**.

33 From McBean Bay for 29 miles south to **Cape Kaye**, the low north entrance point to Fitzgerald Bay, the coast is relatively low and composed of raised beaches backed by numerous ponds and small lakes.

34 **Caution**. — This 29-mile stretch is bordered by a band of **shoal water** which reaches a width of over 2 miles near Cape Kaye; the 183 m contour line gradually diverges from the shore until at Cape Kaye it lies 13 miles off.

35 **Brodeur River**, wide and shallow with a large delta at its mouth, enters the sea about halfway along this stretch.

36 **Caution**. — A **shoal depth** of 4 m lies 3 miles west of Cape Kaye.

37 **Fitzgerald Bay** has low shores; an islet near its head is also low.

38 **Caution**. — A **shoal depth** of 5 m lies 2 miles SW of Cape Kaye. **Shallow water** lies off Fitzgerald Bay. **Depths** in the outer part of Fitzgerald Bay are **irregular**. Elsewhere within the bay **shoal depths** as little as 9 m lie up to 7 miles west of the islet. **Shoal spits** lie 7.5 and 4 miles SW of the islet and extend 2.5 and 1.1 miles, respectively, from the south shore of the bay; icebergs ground on these spits.

39 **Cape Kater** *(71°57'N, 90°04'W)* is formed by the delta of the Kater River.

40 **Caution**. — Cape Kater and the coast north and south of it are bordered by **shallow water**.

Chart 7569

Prince Regent Inlet — West side

41 **Cape Clarence** *(73°54'N, 90°10'W)*, the NE end of **Cape Clarence Peninsula** and of **Somerset Island**, rises abruptly from the sea to over 274 m. The plateau at the summit of the peninsula has an elevation of about 305 m.

42 **Port Leopold** is entered between **Whaler Point**, which is low and composed of shingle, and **Cape Seppings**, a bold limestone point with an elevation of 326 m, **conspicuous** from southward. Whaler Point is difficult to distinguish against the higher background of Cape Clarence Peninsula. The east and west shores of the harbour are backed by high cliffs; the head is formed by the low isthmus separating Cape Clarence Peninsula from Somerset Island, and is fronted by a shingle beach. There is no settlement here but a cabin may still exist on the NE shore.

43 *Port Leopold (Index No. 5905)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

44 The water in Port Leopold has a dangerous-looking light tinge from the limestone that forms the bottom. **Depths** shoal gradually from about 55 m on the eastern side of the entrance to a depth of 11 m about 1.7 miles north. There is a depth of 7.3 m at the head of the bay.

45 **Anchorage** can be obtained in about 24 m in the middle of Port Leopold about 1 mile NNW of Whaler Point. Northerly winds are reported to blow violently over the isthmus at the north end of the harbour so that shelter here is indifferent.

46 **Caution**. — The harbour may be full of **ice** at any time during the months of August and September.

47 Between Port Leopold and Elwin Bay, 20 miles SSW, the coast consists of a wall of limestone cliffs rising to about 366 m and broken in two places by deep ravines. Near Elwin Bay the cliffs are less steep.

48 **Elwin Bay** *(73°32'N, 90°55'W)* has shores consisting of steep bluffs except at its head where the **Elwin River**, a large braided stream flowing through a wide valley, enters the bay.

49 **Caution**. — An above-water gravel spit extends westward from the north side of Elwin Bay with a string of above-water and **underwater rocks** just south; the west side of the bay is very **shallow**.

50 Between Elwin Bay and Batty Bay the cliffs are lower and more broken than farther north, and a few small deltas project from the mouths of deep gorges. The water is deep along this shore of Prince Regent Inlet, the 200-m line lies less than 3 miles offshore. **Mount Rosamond** has a rounded dome.

51 **Batty Bay** *(73°14'N, 91°25'W)*, where Captain W. Kennedy in *Prince Albert* wintered in 1851-1852, offers good shelter for small vessels. A narrows between two river deltas, 3.5 miles within the entrance, separates the main bay from its head. The north shore of the bay is marked by several tent rings and the ruins of stone huts.

52 **Caution**. — The main bay is divided into inner and outer parts by a **shoal** about 2 miles within the entrance. The shoal extends from a low point on the north shore almost to the south shore. A narrow channel with depths of 5.5 to 9.1 m runs between the north-south shoal and another **shoal** fronting the south shore. Inside these shoals, depths increase to over 20 m east of the narrows. The head of the bay is mostly **shallow**.

53 Two stone **cairns** about 2.1 m high stand in a NW/SE line near the south entrance point of the bay.

54 The **tidal range** in Batty Bay is from 1.2 to 2.1 m.

Chart 7575

55 From Batty Bay SSW to Fury Beach, the coast is steep with an elevation of about 274 m; it is cut by a few small valleys. **Two Rivers Bay** *(73°02'N, 91°36'W, not named on the chart)* is 14 miles SSW of Batty Bay. About 8 miles SSW of Two Rivers Bay, an unnamed river flows into Prince Regent Inlet through a wide valley.

56 **Fury Beach** *(72°48'N, 91°56'W)*, where Parry's *Fury* was forced ashore and near which she was abandoned in 1825, is close south of a river delta.

57 Between Fury Beach and Fury Point a low, narrow coastal strip is backed by cliffs with hills rising to about 244 m a short distance inland. **Fury Point** is a steep bluff rising behind the low coastal strip to an elevation of over 152 m.

58 **Creswell Bay** has outer and inner parts separated by a narrow spit which projects north from the south side of the bay. The north shore of the bay is low and backed by high land reaching 274 m near its east and west ends. **Creswell River** and several smaller rivers flow into the bay from the north. **Union River** *(not named on the chart)*, which drains **Stanwell-Fletcher Lake**, enters the head of the bay through a low rocky area. The south shore of the inner part of the bay consists of low limestone hills and ridges interspersed with lakes and ponds. The south shore of the outer part is backed by cliffs which rise to a tableland with an elevation of about 213 m.

59 **Caution**. — Creswell Bay has wide **shoal areas** projecting from its north and south shores, and **shoal water** borders and extends 1.5 miles NNE of the narrow spit. **Spot soundings** of 11 to 50 m were recorded centrally within the bay, west of the spit.

60 **Cape Garry** *(72°28'N, 93°25'W)*, with an elevation of about 30 m and composed of raised beaches, is the south entrance point of Creswell Bay. Behind the cape, a summit of high land rises to 244 m. A braided stream flows through a wide gorge to the south of Cape Garry. **Cape Clara**, on the south side of the gorge, is low. **Cape Esther** is on the south side of **Fearnall Bay**; a rounded summit rises to 188 m behind the cape.

61 Between Cape Esther and Possession Point, 25 miles SSW, the shore continues to be formed mainly of raised beaches; the high land recedes from the coast. **Lang River** is one of several rivers, each with a delta, which enter the sea along this stretch.

Chart 7552

62 **Hazard Inlet** *(72°02'N, 94°10'W)* is entered SE of **Mount Oliver**, a limestone hill with an elevation of 138 m, and west of **Ditchburn Point**.

63 **Caution**. — **Shoals** restrict the entrance to Hazard Inlet. The shores of the inlet are low and fringed with **shallow water**. **Spot soundings** of 7 m were recorded in the entrance and up to 35 m centrally within the inlet.

64 **Possession Point** is the low end of a peninsula about 30 m in elevation, composed mainly of raised beaches. An islet is 1 mile NE of Possession Point.

Bellot Strait and approaches

65 **Bellot Strait** separates Somerset Island from the Murchison Promontory of Boothia Peninsula, and connects the Gulf of Boothia with Franklin Strait. The east entrance of the strait lies between Long Island and Smellie Point, 2.5 miles SW. The west entrance lies between Leask Point and Hepburn Point about 2 miles south. The strait is 18 miles long. Its width, in its eastern part, is reduced to 1.3 miles between Fox Island and Brands Island and is further reduced, in its fiord-like central and western parts, to between 0.8 and 0.4 mile.

66 **Caution**. — **Depths** along the centre line of the sounded approach channel through Brentford Bay, and in the eastern part of the strait are between 17 and 100 m.

67 Depths are derived from **controlled surveys** made in 1957 except for both the eastern and western approaches which are from uncontrolled surveys.

68 **Historical note**. — Bellot Strait is named after Lieutenant Bellot of the French Navy who discovered it in 1852 when serving with Commander W. Kennedy in *Prince Albert*, one of the vessels employed in the search for Franklin. The *RCMP* schooner *St. Roch* passed through the strait from west to east in 1942. In September 1957 Bellot Strait was navigated in both directions by the icebreaker *HMCS Labrador*, and from west to east by three vessels of the *United States Coast Guard*. Since then there have been a number of passages of the strait including one made in 1975 by two unescorted vessels with no problems from ice.

69 **Caution**. — **Tidal streams** run with great strength through Bellot Strait, the east-going stream being stronger than the west-going stream. The maximum observed strength of the current is about 8 knots. Usually the current runs to the westward from about 2 hours before until 4 hours after high water at Fort Ross and to the eastward from about 2 hours before until 4 hours after low water. However, **anomalous conditions** have been reported when the periods of slack water, corresponding to the predicted times of high and low water, appear to be interchanged. In the vicinity of Magpie Rock, at the eastern end of the strait, the currents are highly variable; 7 to 8 knot westerly currents have been reported on the north side of the channel at the same time that equally strong easterly currents were flowing on the south side. Mariners should exercise extreme caution in this area.

70 **Caution**. — The strong tidal streams in Bellot Strait tend to break up the **ice** early and keep the strait open late, but it is rarely open from end to end for more than two or three days at a time. At any time during the navigation season, easterly winds may bring **ice** into Brentford Bay where the current will carry it into the eastern end of the strait and cause an ice jam there; westerly winds may bring **ice** in from Franklin Strait or Peel Sound and fill the western entrance, also causing an ice jam there or towards the centre of the strait. Such ice jams probably last 3 or 4 days or until there is an appreciable change in wind direction.

71 Passage of Bellot Strait should, if possible, be made stemming the tidal stream and it should be timed to pass Magpie Rock near slack water. This will aid in maintaining a position in the deep-water channel at this critical point and also permit a reduction of speed to avoid damage if ice is encountered.

East approaches to Bellot Strait

72 **Brentford Bay** lies between Possession Point *(71°59'N, 94°03'W, previously described)* and Cape Farrand *(Chart 7575)*, 15 miles to the SSE. The islands and shores in the outer part of the bay are of limestone formation and generally low and rolling. The inner sections of the bay, including the entire western shore, are composed of dark crystalline rocks forming a much higher and more rugged landscape that rises gradually westward, on Boothia Peninsula, to over 305 m.

73 **Caution**. — The **bottom** in Brentford Bay is **irregular**. A **shoal** with a depth of 5 m over it lies 3 miles south of Possession Point; an isolated **shoal depth** of 17.4 m lies centrally on the approach channel through the bay 3 miles south of Brown Island. **Shoal water** abounds in the vicinity of the Grimble Islands and extends for 1.3 miles north and 3 miles NW of the NE island of the group, ending in **shoal patches**, with least depths of 14.9 and 11.6 m, on the south side of the channel.

74 **Ice** breaks up in Brentford Bay in the last part of July, freeze-up occurs in early October.

75 **Caution**. — **Easterly winds** may at any time fill Brentford Bay with quantities of **thick ice** from Prince Regent Inlet and the Gulf of Boothia.

Charts 7575, 7552

76 **Murray Bay**, **Wilson Bay**, **Nudlukta Inlet** and an unnamed bay indent the south shore of Brentford Bay.

77 **Caution**. — Murray Bay, 4 miles wide and with a shelving bottom, has **spot shoal depths** of 24 m 1.5 miles offshore decreasing to 11 m 0.5 mile from

its head. Wilson Bay has an island lying across its entrance. Nudlukta Inlet, which has a rugged west shore and a low rolling east shore, is **obstructed** by islands and has **irregular depths**.

78 In the unnamed bay, mid-channel spot soundings from 61 to 165 m were found near the entrance, decreasing to 57 m near the head.

79 The southernmost and largest island of **Grimble Islands** *(71°51'N, 94°08'W)* has a series of **conspicuous** rock formations which appear from a distance as pillars in line along its centre. The atoll-shaped NE island is very low and a poor radar target; the two small islands 1.5 miles to the WNW are low but stand out clearly on radar.

Chart 7552

80 **Smellie Point**, on the west shore of Brentford Bay, is low and rocky and backed by steeply rising land.

81 M'Clintock obtained anchorage in **Levesque Harbour**.

82 **Brown Island**, 2 miles WSW of Possession Point, has an elevation of 20 m, is sand-coloured, and consists of sand and clay. Its south shore is distinguishable by low but steep cliffs, deeply gouged vertically. The islet 1.2 miles SE of Brown Island is low, sandy-coloured and flat.

83 **Caution**. — An **obstruction** is 0.3 mile west of the SW corner of Brown Island. Previously a **shoal** had been reported between 0.1 and 0.3 mile further west.

84 **Long Island** *(71°58'N, 94°15'W)* is dark-coloured and rocky with rock outcrops and gravel beaches. The SE shore of the island consists of steps formed by two lines of low cliffs which give a distinct double echo on radar. **Brands Island** is dark and rocky and slightly higher in its south and central elevations than in the north. At times Brands Island is difficult to distinguish against the dark background.

85 The east shore of **Depot Bay** is comparatively low; the west shore rises more steeply to about 122 m. The former *Hudson's Bay Company* post of **Fort Ross** was abandoned in 1948 due to the difficulty in resupply because of ice. Two buildings still exist *(2011)*. M'Clintock's **cairn** is on the top of a hill.

86 *Fort Ross (Index No. 5930)* is a reference port in *Canadian Tide and Current Tables, Volume 4*.

87 **Anchorage** can be obtained in Depot Bay in 12.8 to 20.1 m over mud and gravel.

88 **Caution**. — **Shelter** is only good with westerly winds; at other times the bay is likely to fill with **drift ice**. The bay can be entered safely by following the sounded tracks, but dangers *(previously described)* exist west of Brown Island, and a **shoal depth** of 8.2 m is south of the west entrance point.

89 **Port Kennedy** *(72°02'N, 94°20'W)* afforded **anchorage** to M'Clintock in *Fox*, in 1858, in depths varying from 11.9 to 20.1 m. M'Clintock wintered here in 1858-1859 and reported that Port Kennedy was well sheltered, but it is probable that the entrance is often blocked in summer by the heavy ice from Bellot Strait. **Fox Islands** *(72°00'N, 94°23'W)* lie 1 mile SW of the mouth of Port Kennedy.

90 *(The west approaches to Bellot Strait are described in Sailing Directions booklet ARC 403 — Western Arctic.)*

Bellot Strait

91 Bellot Strait separates Somerset Island and **Murchison Promontory**, the north end of Boothia Peninsula. The strait is fiord-like with shores that are generally bold and steep-to, rising on both sides to elevations of 274 to 305 m. In the eastern half of the strait the shores are alternately cliffs and steep slopes, with the north shore generally higher and steeper. About 2.5 miles west of Port Kennedy a coastal plain fronts the hills on the north shore and drops about 12 m to the water. There are several gravel beaches on the south shore of the east part of the strait. Westward of **Halfway Island** *(71°59'N, 94°51'W)*, sheer cliffs rise on both sides. **Zenith Point** is a low point on the south side of the strait 3.2 miles east of Halfway Island.

92 Pemmican Rock is a rocky islet 0.8 mile west of Leask Point *(both features are described in Sailing Directions booklet ARC 403 — Western Arctic)*, the NW entrance point to Bellot Strait.

93 A tripod **beacon tower** 9.1 m high, with a red **daymark** and a radar reflector, is on Pemmican Rock. The tower has an elevation of 17.7 m.

94 **Magpie Rock** *(72°00'N, 94°28'W)* is 0.4 mile off the NE end of Murchison Promontory at the SE entrance to Bellot Strait. Two small islets lie 0.2 mile SSW of Magpie Rock.

95 **Caution**. — Magpie Rock is **awash** at low water but due to the strong currents, it never uncovers. The rock extends over an area of about 45 m^2 and drops sharply on all sides to deep water. Soundings give **no warning**.

96 **Caution**. — Magpie Rock is marked by **violent tide rips** and **eddies** except at the very brief slack water periods.

97 **Caution**. — A large **shoal area** extending SE from the north shore of Bellot Strait has a 4.3 m **shoal patch** 0.4 mile NNW of Magpie Rock.

98 *Long Island range* **beacons** at the north end of Long Island, in line astern bearing 100°, lead in mid-channel past Magpie Rock to the deep water of Bellot Strait to the westward. The front beacon is a 9.1 m high tripod tower, the rear beacon is a 12.2 m high tripod tower. Each tower has a red and white vertically striped **daymark**. Approaching the strait from eastward, the rear tower is not visible until it bears 097°, almost on the line of the range.

99 *Bellot Strait range* **beacons**, near the NE end of Murchison Promontory, in line bearing 268½°, intersect with the *Long Island* range near Magpie Rock and mark the narrowest part of the passage. Each beacon consists of a 6.1 m tripod tower with a red and white vertically striped **daymark**. Approaching from eastward the rear beacon comes into view when the front bears about 278°. These beacons are difficult to see when there is snow on the ground.

100 **Caution**. — *Bellot Strait range* should be used as a reference, only. The 268½° range line **leads into danger** 0.5 mile west of Magpie Rock.

101 **Caution**. — The **channel width** between 20 m contours in Bellot Strait, when on the *Long Island range* at the *Bellot Strait range*, is **reduced** to 0.2 mile with **shoal depths** of 22 m close to the range lines. Mid-channel **depths** in the central and western parts of the strait vary between 35 and 380 m.

102 Vessels awaiting favourable conditions to make the westward passage through Bellot Strait may obtain temporary **anchorage** in about 25.6 m about 1.5 miles NNE of Magpie Rock, but little shelter is afforded here from ice or weather. Vessels waiting to make the eastward passage may find good **anchorage** in False Strait *(described in Sailing Directions booklet ARC 403 — Western Arctic)*, a small inlet close northward of the western entrance to Bellot Strait.

103 **Caution**. — Passage of Bellot Strait should not be undertaken in **reduced visibility** as the range beacons might not be seen. *(See remarks at the beginning of this section concerning tides and the timing of a passage.)*

104 **Caution**. — Bellot Strait can fill with ice in as little as two hours. **Ice reports** by local means or by the *Canadian Ice Service*, over 30 minutes old, should not be trusted.

105 **Caution**. — The direction of the **current** can be very **erratic** and a ship that is underpowered will, in all probability, find herself in great difficulty.

Gulf of Boothia

Charts 7575, 7502

106 From its border with Prince Regent Inlet, **Gulf of Boothia** extends south and SE for about 160 miles to its junction with Committee Bay.

107 **Boothia Peninsula**, which forms the west side of the gulf, rises from a rugged eastern coastline to elevations inland approaching 610 m. Towards the south the coast becomes flatter and the height of land decreases. The part of Baffin Island which bounds the NE side of the gulf is relatively low; the part of **Melville Peninsula** which bounds the SE side is hilly. *(See Sailing Directions booklet ARC 400 — General Information, Northern Canada for physiography of Boothia Peninsula and Baffin Island.)*

108 *(See remarks on **currents** at the beginning of this chapter.)*

Gulf of Boothia — East side

Chart 7575

109 Between Cape Kater *(71°57'N, 90°04'W, previously described)* and Morin Point, 37 miles to the south, the coast of Brodeur Peninsula is low, composed mainly of raised beaches with strand lines enclosing lagoons in the north section. **Mount Senecal** has an elevation of 152 m.

110 **Caution**. — **Shoal water** extends for about 1 mile offshore along this stretch of coast.

111 **Leah Point**, which forms the SW side of **Bourassa Bay**, is composed of sand bars. **Morin Point**, the NW entrance point of Bernier Bay, makes a poor radar target.

Chart 7502

112 **Bernier Bay** has low shores of raised beaches and strand lines, and is surrounded by low land. The mouth of **Janes Creek** is on the north side of the bay about 15 miles within the entrance; **Janes Hill** rises to 183 m about 7 miles to the north.

113 **Van Koenig Point** *(71°05'N, 89°32'W)* is low.

114 **Caution**. — Van Koenig Point is bordered by a **drying area** about 1 mile wide. Spot soundings show a **shoal depth** of 14 m about 5 miles WSW of the point.

115 **Thiboult Bay** lies between Van Koenig Point and Easter Cape, 11 miles SSE.

116 **Caution**. — Thiboult Bay has **least depths**, indicated by spot soundings, of 9 m in its central part. The south side of the bay is **foul** with depths of 2 m lying 1 mile offshore.

117 From **Easter Cape**, past **Cape Landry**, **Mathe Point** and **Kimakto Peninsula** to **Cape Godfred Hansen**, the coast is low with raised beaches. Numerous small lakes and ponds lie a few miles inland. Cape Landry is a delta.

118 **Caution**. — Offshore **shoals** are found in this area.

119 **Crown Prince Frederik Island** *(70°02'N, 86°50'W)* has a SW to NE depression running across the middle of the island and separating its NW part from its higher SE part. The SE part rises to over 90 m near **Point Kendall**.

120 A **beacon** with a radar reflector is on Point Kendall. The condition of this beacon is unknown *(2012)*.

121 **Caution**. — The channel separating Crown Prince Frederik Island from Baffin Island is reported to be **shallow** and is **obstructed** in places.

122 **Agu Bay**, north of Crown Prince Frederik Island, divides in two. **Foss Fiord** is the NW arm; **Nyeboe Fiord**, the NE arm, has high shores. The headland which separates the two arms has an elevation of 122 m. **Ivisarak Lake** flows into Nyeboe Fiord.

123 **Caution**. — Foss Fiord, surrounded by land which is mostly low, appears to be **shallow**.

124 **Cape Ejnar Mikkelsen** *(70°14'N, 86°34'W)* is the SE entrance point of Agu Bay. A **radar conspicuous** hill with an elevation of 549 m, 4 miles east of the cape, has been detected at 48 miles.

125 **Cape Appel**, 10 miles SE of Cape Ejnar Mikkelsen, is a prominent point with steep slopes rising to over 244 m. The coast between Cape Appel and **Cape Hallowell**, the NW entrance point to Fury and Hecla Strait *(described in Sailing Directions booklet ARC 401 — Hudson Strait, Hudson Bay and Adjoining Waters)*, is steep and rocky, rising to over 244 m a short distance inland.

126 From **Cape Englefield**, the SW entrance point to Fury and Hecla Strait, to Cape Miles, 30 miles south, the coast of Melville Peninsula is not very high but for the most part rises sharply from the sea to very irregular, bare rocky ridges and hills; these extend inland to **Prince Albert Hills**. The hills rise to elevations of about 457 m within a few miles of the sea and extend along the whole of the west side of Melville Peninsula.

127 **Brevoort River** flows into **Encampment Bay** through a maze of channels.

128 **Caution**. — A **shallow** sandy delta is at the mouth of Brevoort River.

129 **Cape Ellice** *(69°40'N, 85°31'W)* and **Cape Crozier**, 15 miles to the south, rise to 152 m about 1 mile inland. **Corrigal River** flows into **Franklin Bay**.

130 **Caution**. — Franklin Bay appears to be quite **shoal** at its head. The entrance to **Kidney Bay** and most of the shoreline of **Baker Bay** appear to be **shallow** and sandy.

131 **Cape Miles**, which marks the NE limit of Committee Bay, is low and flat.

Gulf of Boothia — West side

Charts 7575, 7502

Cape Farrand to Cape Allington

132 From Cape Farrand *(71°46'N, 93°41'W)* to Abernethy Bay, 58 miles SSE, the east coast of Boothia Peninsula is low with elevations generally less than 30 m within 0.5 to 2 miles of the shore. Barren hills with elevations from 152 m to over 305 m lie about 13 miles back from the coast at the north end of this stretch but close to within 2 miles at Abernethy Bay. The strip between the coast and the hills has innumerable lakes, ponds and streams.

Chart 7575

133 **Cape Farrand**, flat-topped and about 15 m in elevation, is composed of raised beaches, as is the coast for 7 miles to the south. **Rodwell Bay** *(not named on Chart 7575)* has **Cape Scoresby (Scoreby)** at the south end. Cape Scoresby and **Cape Heytesbury**, 6 miles farther south, are very low; they are the entrance points for **Menchikoff Bay**.

134 **Caution**. — There are extensive mud flats and **shoals** in Menchikoff Bay and **shoal depths** of 10 m or less extend 5 miles ENE of its head. **Babbage Bay** and **Cape Augherston**, which is at the mouth of a large river, are fronted by **shoal water**. **Stilwell Bay** is almost entirely **shallow**.

Chart 7502

135 The coast past **Cape Airy**, **Cape McDoual**, **Port Logan** and **Cape Nordenskiold** *(71°21'N, 92°57'W)* continues to be low, with raised beaches; it is backed by ponds and small lakes, as far as **Abernethy Bay**, 29 miles south of Cape Nordenskiold.

136 **Caution**. — **Shoal water** lines this section of coast. The arm of Abernethy Bay that extends NW to **Abernethy River** is **shallow**.

137 South of Abernethy Bay the character of the shore changes abruptly, becoming rounded and rocky and usually sloping up quite steeply from the water.

138 **Cape Palmerston** *(70°46'N, 92°40'W)* is rounded with an elevation of 91 m. **The Blairs** are a small group of low islands but **Arbuthnot Island**, with an elevation of about 60 m, and **Bowles Bay** provide good radar targets.

139 The peninsula on the NW side of **Ilaunnalik Bay**, at the entrance to **Agnew River**, has two islets off its north shore.

140 **Caution**. — The small inlet close south of **Cape Manson** is **shallow**.

141 **Elizabeth Harbour** was visited by Ross in *Victory* on September 6, 1829, at which time it was clear of ice. The entrance may be difficult to distinguish. The shores of the harbour rise steeply from the sea except at the mouths of two small streams. Low land at the head of the harbour separates the harbour from the sea to the SE. Ross reported that the water in the harbour shoals gradually to the sides. He estimated the range of spring **tides** as 2.4 m, and neap **tides** as 1.2 m.

Cape Allington to Lord Mayor Bay

142 The unnamed bay between **Cape Allington** *(70°35'N, 92°07'W)* and Cape St. Catherine, 15 miles SE, is fronted by **Pouncet Island**, elevation 130 m, elevation 61 m, and many islets.

143 **Caution**. — Strong **tidal streams** have been reported in the unnamed bay.

144 The shores of **Eclipse Harbour**, west of Susanna Island, are generally of moderate elevation and rocky. The narrow neck of land separating the harbour from the small inlet to the north is low. A muddy river flows into the head of Eclipse Harbour; the water in the harbour is discoloured.

145 Spring **tides** at Eclipse Harbour are estimated to rise 2.1 m above chart datum.

146 **Mary Jones Bay**, at the SW corner of the unnamed bay, has a **conspicuous** hill, elevation 152 m, at its south end.

147 **Caution**. — The entrance to Mary Jones Bay is encumbered by islands and **shoals**.

148 **Lax Island** *(70°22'N, 91°47'W)*, elevation 30 m, forms the NW side of **Lax Harbour** *(not named on Chart 7502)*. The north end of **Cape St. Catherine** is low.

149 **Eden Bay**, 4 miles south of Cape St. Catherine, has a stream at its head. **Martin Islands**, a group of low rocky islands with an elevation of 61 m, lie SE of the entrance to **Mundy Harbour**. **Gandy Island** and **Coutts Lindsay Island** have elevations of 30 and 61 m, respectively. A passage is reported between these islands and the mainland.

150 **Caution**. — **Tidal streams** are **strong** in the passage.

151 **Cape Margaret** *(70°09'N, 91°31'W)* is high and steep, rising to 194 m. An islet with an elevation of 4 m is 3 miles south of Cape Margaret.

152 **Caution**. — An unnamed **rock** which dries 1.2 m lies 3 miles SSE of Coutts Lindsay Island. A 7.3 m **shoal sounding** was found 1 mile west of this unnamed rock and a 20.1 m **shoal sounding**, 2.6 miles ESE. Extra caution is required in this vicinity as it is very likely that **shoal water** exists for a considerable distance all around the unnamed rock.

153 **Lady Parry Island**, 14 miles east of Cape Margaret, and a small island 2 miles farther east have elevations of 73 and 12 m, respectively. The largest of **Hecla and Fury Islands** has an elevation of 112 m.

154 **Victoria Harbour** *(70°09'N, 91°35'W)*, about 1 mile west of Cape Margaret, is where Ross wintered in 1831-1832.

155 **Copeland Islands**, in the mouth of **Thom Bay**, have an elevation of about 91 m. **Stanley River**, **Lord Lindsay River** and **Krusenstern Lake** flow into Thom Bay. **Maneetkalig Mountain** rises SW of the bay.

156 **Caution**. — There are **shoals** around many of the islands, and off the mouths of the rivers, in Thom Bay.

Lord Mayor Bay

157 **Cape North Hendon**, the north entrance point of **Lord Mayor Bay**, is rocky with an elevation of about 30 m. An islet, nearly joined to the mainland by a narrow drying area, lies close off the cape. **Sheriff Harbour** *(70°00'N, 91°58'W)*, where Ross wintered in 1830-1831, has a narrow sandy beach at its head and rocky islets at both its NE and SW entrances. Ross wintered in **Felix Harbour** in 1829-1830.

158 The NW coast of Lord Mayor Bay is about 122 m in elevation. The large island in **Netsiksiuvik Inlet** has an elevation of about 91 m.

159 **Boothia Isthmus**, the narrow neck of land between Lord Mayor Bay and Spence Bay *(see Sailing Directions booklet ARC 403 — Western Arctic)*, connects Boothia Peninsula to the mainland.

160 **Akuliarattak (Akuliakata) Point** *(69°43'N, 92°31'W)* is at the end of the peninsula on the north side of **Sagvak Inlet**. A valley at the head of Sagvak Inlet leads to **Middle Lake** and then to the community of Spence Bay *(see Sailing Directions booklet ARC 403 — Western Arctic)* over a track with a highest elevation of 91 m.

161 **Caution**. — Sagvak Inlet is much encumbered with above-water rocks about 5 miles within its entrance; **underwater rocks** are likely here as well.

162 The SW coast of Lord Mayor Bay reaches elevations of about 91 m. **Sons of the Clergy Islands** are mostly under 30 m high.

163 **Ross Peninsula**, which forms the SE coast of Lord Mayor Bay, has a greatest elevation of 152 m; **Cape Taylor** *(69°40'N, 91°28'W)* is its NW end.

164 **Astronomical Society Islands** are rocky, rounded, bare and uniform in height; they are higher on their west sides where they rise to over 213 m. **South Island** and **Pearson Island** both have elevations of about 91 m. From **air photos** there appears to be deep water close to the shores of Astronomical Society Islands and in the channels between them.

165 **Cape Kjer** *(69°42'N, 91°03'W)* is the NE end of an island about 30 m in elevation. The entrance to **Franklin Inlet** is encumbered with islands. **Kull Island**, 17 miles ESE of Cape Kjer, is the largest of the many islands lying off this shore; it is about 3 miles long with an elevation of 61 m.

Chart 7578

Pelly Bay

166 **Harrison Islands** *(69°20'N, 90°30'W)*, maximum elevation 213 m, form the NW side of **Pelly Bay**; **Hill Point**, on Simpson Peninsula, is the NE entrance point. A prominent hill 4 miles east of Hill Point makes a good radar target. A prominent ridge rises behind **Cape Chapman**, the north end of Simpson Peninsula.

167 **Caution**. — In 1956 Pelly Bay was virtually free of **ice** during the month of August, SW of the Harrison Islands – Helen Island chain. However, between August 19 and 24 there were large quantities of **pack ice** between this island chain and the coast of Simpson Peninsula. At the beginning of September **northerly winds** brought thick **pack ice** into Pelly Bay. This is said to be an annual occurrence, greatly limiting the open water season.

168 **Caution**. — A reported (2025) obstruction is 4.2 miles southwest from Hill Point and in the vicinity of *69°11'23"N, 89°32'42"W* at a depth of 6.8m which is shoaler than surrounding depths.

169 **Cape Berens** *(69°05'N, 90°38'W)*, in the NW part of Pelly Bay, is a rocky headland with an elevation of about 91 m. From the cape, **Halkett Inlet** extends 25 miles NW with shores rising to over 213 m.

170 From Cape Berens south for 28 miles to **Becher River**, which enters Pelly Bay through a sandy flood plain, the coast has an average elevation of 61 m.

171 **Caution**. — **Shoal water** extends offshore over the greater part of this area.

Chart 7502

172 **Euphemia Hill**, 15 miles WSW of the mouth of the Becher River, rises to 152 m.

Chart 7578

173 **De Stael Point** *(68°22'N, 90°16'W)* is a low point on the north side of the mouth of **Arrowsmith River**. The river flows through a wide flood plain into Pelly Bay, 15 miles SSE of Becher River. A number of small, muddy streams flow over the low, flat shoreline at the head of Pelly Bay. **Qikqiktajuak Island**, about 2.5 miles long with an elevation of over 30 m, lies in the head of the bay. **Parke Hills** rise to 366 m on the east side of the bay, 5 miles NE of the mouth of **Kellett River** *(68°20'N, 90°06'W)*.

174 **Simpson Peninsula** forms the east side of Pelly Bay. The peninsula is mostly low and composed of limestone with numerous raised beaches rising from its west shores. The coast is low and flat near the entrance to Pelly Bay. To southward, the coast of Pelly Bay changes to steep mud and shingle banks; an elevation of 91 m is 0.5 mile inland abreast the north point of Helen Island, and 3 miles inland abreast Login Bay. A shelter for boats is reported close south of **Nuvuaqjuk Point**, on the west coast of Simpson Peninsula at 68°50'N.

175 **Korvigdjuak Island** *(68°55'N, 90°00'W)* has a bold, steep headland at its NE end with an elevation of 274 m. **Helen Island** is reported to have two good boat harbours about midway along its east side.

176 **Caution**. — **Strong currents** are reported in the channel east of Helen Island.

177 The east coast of **Login Bay** is low, formed of numerous raised beaches; the west coast rises to 152 m.

178 **Caution**. — **Shoal water** appears to extend halfway across the entrance to Login Bay from the east side, and the head of the bay is **shallow**.

179 **St. Peter Bay**, 8 miles south of Helen Island, is surrounded by a necklace of islands. Good shelter for small

craft may be obtained in the bay. **Kugajuk River** flows into the north part of St. Peter Bay.

180 **Caution**. — St. Peter Bay contains many dangerous **underwater rocks** and **shoals**. There are dangerous **underwater rocks** with a minimum depth of 0.2 m in the mouth of Kugajuk River; a depth of 1.7 m is in the channel.

181 **Simik Island** *(68°32'N, 89°52'W)* and **Iglulik Island** are two islands of the group surrounding St. Peter Bay.

182 The northern approach to the hamlet of Kugaaruk (Pelly Bay) is north of Simik Island.

183 **Caution**. — There are dangerous **shoals** near this approach.

184 *Pelly Bay (Index No. 5985)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

185 *Simik Island range* **lights** *(2535, 2536)*, on the mainland NE of Simik Island, in line bearing 093° mark the route north of Simik Island.

186 *Pelly Bay range* **lights** *(2539, 2540)*, on the mainland SE of Simik Island, in line bearing 140° mark the route east of Simik Island.

187 The southern approach to the hamlet of Kugaaruk is through the passage along the SE side of Iglulik Island.

188 *Desgroseillers range* **lights** *(2537, 2538)*, on the mainland east of Simik Island, in line bearing 358° mark the route between two shoals, 0.6 mile SW of the hamlet.

189 **Kugaaruk (Pelly Bay)**, population 771 *(2011)*, is on the south entrance point of Kugajuk River. Satellite-based **telecommunications**, including the internet, connect Kugaaruk with other northern communities and to population centres to the south. Transportation to Kugaaruk is by boat in summer or by aircraft year-round.

190 The hamlet has a two-man *RCMP* detachment, a nursing station, a school, churches and post office. The only retail outlet is the *Kommiot Co-operative* store; the store also has an *ATM* and handles basic banking. Accommodation is available at *Inukshuk Inn*.

191 Kugaaruk is supplied by sealift, using *CCG* icebreakers because of the difficult ice conditions in Pelly Bay. Dry goods are landed at a ramp north of the hamlet, inside the mouth of Kugajuk River. Petroleum products are discharged from an anchorage in St. Peter Bay through a floating hose to a tank farm south of the hamlet.

192 An airstrip with a 5000-foot (1524-m) gravel runway is close east of the hamlet. *First Air*, with five scheduled flights a week, provides connections to Cambridge Bay, Gjoa Haven and Yellowknife.

193 An **aeromarine radiobeacon** *(68°32'06"N, 89°47'16"W)* near Kugaaruk transmits on 263 kHz with identification *Morse* "YBB" (— • — — — • • • — • • •).

194 A *North Warning System* station is on a 325 m hill 6.5 miles SSE of the hamlet. A **conspicuous radome** is mounted on a 30 m high tower; it has an air obstruction **light**. Two domes at ground level and a small building are nearby.

195 **Caution**. — The Pelly Bay *NWS* station is **not manned**. There is an emergency shelter with a telephone and a motion-activated camera but no supplies or services.

Committee Bay

Chart 7502

196 **Committee Bay** is entered between Cape Chapman *(69°17'N, 89°05'W, previously described)* and Cape Miles, 77 miles east on Melville Peninsula. The head of the bay is separated from Repulse Bay by Rae Isthmus, 35 miles in width.

197 **Caution**. — **Ice** conditions in the bay are such that there is no definable navigation season. Aerial reconnaissance has shown a limited amount of open water in July and August in parts of the bay, but the Inuit report it to be heavily encumbered with ice floes throughout the summer, and they do not use any type of boat in this area. They report that open water is so uncertain that they cannot depend upon food from the sea during the summer.

Committee Bay — East side

198 The east side of Committee Bay is backed by the barren, rugged Prince Albert Hills *(previously described)*.

199 **Hopkins Inlet** *(69°11'N, 85°15'W)*, 10 miles SSE of Cape Miles *(previously described)*, has a stream discharging into its head. Many rivers in the vicinity discharge through sandy deltas. The shores of **Bunn Inlet**, **Whiffen Inlet**, **McKenzie Inlet** and **Honeyman Island** are steep, rising to about 152 m.

200 **Caution**. — **Shoal water** is common in this area.

201 **Garry Bay** extends from **Cape Arrowsmith**, which is bluff and precipitous with an elevation of 122 m, to Cape Richardson, 20 miles SSW. **Gladman Island** and **Pomona Island** *(68°58'N, 85°14'W)*, with elevations of 122 and 91 m, are two of many islands in the bay, and **Blacks Inlet**, which indents its northern part, is one of several inlets.

202 **Caution**. — There are **shoals** in the inlets and between the islands in Garry Bay.

203 **Halkett Point** is the north entrance point of a large inlet at the south side of Garry Bay. Four streams discharge through shallow alluvial deposits into the head of the inlet; a short distance eastward the land rises to over 305 m.

204 **Cape Richardson** is at the end of a peninsula 152 m in elevation; **Cape McLoughlin** *(68°44'N, 85°36'W)* rises to 122 m.

205 **Caution**. — The shores of **Finlayson Bay** appear to be fronted by **shallow water**.

206 Two prominent hills with elevations of 366 and 347 m are, respectively, 4.5 miles and 10 miles south of Cape McLoughlin. **Mineau River**, draining a large area inland, enters Committee Bay through a low, flat section of the coast 13 miles south of Cape McLoughlin.

207 **Corcoran Point** is the north entrance point to **Fraser Bay**; two streams empty into the bay.

208 **Mackar Inlet** lies between the mainland and **Glen Island** *(68°24'N, 85°45'W)*, elevation 101 m.

209 **Cape Sibbald** rises to 274 m a short distance south of **W.G. Smith Bay**; a low, flat peninsula, with an abandoned airstrip crossing its south end, forms the NE side of the bay.

210 Between **Barnston Point** and **Cape Finlayson** *(68°14'N, 85°50'W)*, the coast becomes increasingly more rugged, reaching an elevation of 274 m at the cape itself. The head of **Selkirk Bay** is low; a stream flows into it through a delta.

211 The coast from **Cape Lady Simpson** to south of Tuktu Bay has an elevation of about 30 m, rising to 61 m a short distance inland. Five miles south of **Tuktu Bay** an unnamed river which drains **Folster Lake** reaches the coast. An island, 30 m in elevation and 1.4 miles long, lies 2 miles off the mouth of the unnamed river.

212 From the mouth of the unnamed river to the entrance to **Erlandson Bay** *(68°00'N, 86°04'W)* the coast is low. The peninsula with **Hamilton Point** at its north end has an elevation of 36 m.

213 **Caution**. — **Shoal water** extends for some distance offshore along this portion of coast.

214 **Wales Island** has a maximum elevation of about 61 m, rising from gently sloping beaches to a swampy, lake-strewn interior. Raised beaches are evident in all parts of the island.

215 **Caution**. — The shores of Wales Island are bordered by extensive **drying shelves** and **shallow water**. The channel between the island and the mainland is extremely **shallow** in places.

216 **Cape McTavish** *(67°41'N, 86°32'W)* and **Sabine Island**, 3 miles WNW of the mouth of **Matheson River**, are both under 30 m in elevation.

217 **Cape Watt**, the north point of a peninsula dividing the inner part of **Lefroy Bay**, has a maximum elevation of 91 m but the island close off the cape is low.

218 **Cowie Point**, although low, is somewhat higher than the adjoining coast. **Cape Simpson** is low and rocky.

219 Committee Bay, from Cowie Point to **Point Hargrave**, a rugged point 14 miles WSW, is fringed by numerous islands, and indented by a number of inlets. The named inlets are **Munroe Inlet**, **Cameron Inlet**, **Ross Inlet** and **Salt Lake**.

220 **Caution**. — The coast along this stretch is bordered by **shoal water** and all of the inlets are **shallow**.

221 **Sinclair Point** *(67°13'N, 87°12'W)* is at the north end of a low island; **Dease Peninsula** lies close to the ENE. There is a portage route from the head of Committee Bay across **Rae Isthmus** to Repulse Bay.

Committee Bay — West side

222 The land on the west side of Committee Bay is generally low, but **Ellice Hills** rise to 335 m about 5 miles inland from the SW side of the bay.

223 The east coast of **Simpson Peninsula** between Cape Chapman *(previously described)* and Clouston Points, 56 miles SSE, is low and flat with no distinguishing landmarks.

224 **Caution**. — **Shoal water**, up to 3 miles wide, lies off most of this portion of the Simpson Peninsula coast. Two islets lie 10 miles offshore 24 miles SE of Cape Chapman on a **shoal bank** 5 miles wide.

225 **Clouston Points** *(68°29'N, 87°50'W)* are two narrow points of mud and shingle with an elevation of about 30 m. **Cape James Anderson**, 16 miles to the south, is a low spit. The island 16 miles ENE of Cape James Anderson has an elevation of 29 m near its south end and decreases in height towards the north. The island 7 miles SE of the cape has an elevation of only 4 m.

226 **Cape Barclay** *(68°14'N, 88°09'W)* is a bluff with an elevation of about 30 m.

227 The ruins of a former *DEW-Line* station are about 3 miles north of Cape Barclay. Most of the structures have been removed. There is a disused airstrip near by.

228 The shores of **Keith Bay** are low and, except near Cape Barclay, are composed mainly of raised beaches.

229 **Caution**. — Keith Bay appears to be **shallow**, especially at the head of the bay.

230 The coast between **Sievright Point** and **Cape Beaufort** *(68°06'N, 88°16'W)*, both of which are low, is backed by numerous raised beaches. **Mount Mactavish** rises to 152 m 9 miles west of Cape Beaufort. The land continues to be low for a few miles south of **Colville Bay** with the Ellice Hills gradually approaching the coast.

231 Inland from **Cape Weynton** the land rises rapidly to about 274 m.

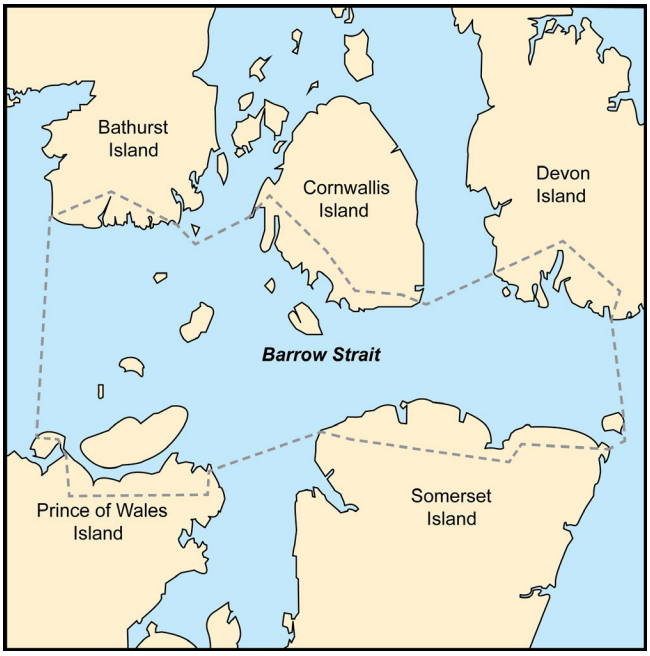
232 **Caution**. — From Cape Weynton to the head of Committee Bay the coast appears to be fringed by **shoal water**.

233 **Swanston Point** is low and formed of shingle and mud. **Cape Lady Pelly** is a rocky cape with three elevations in an east-west direction, the highest being about 213 m.

234 Large **tides** in this vicinity are reported to rise over 3.4 m above chart datum.

Chapter 7

Parry Channel
East part (Barrow Strait)



General

Charts 7511, 7527, 7569, 7570, 7935

1 **Barrow Strait** *(74°24'N, 94°10'W)* extends west for 170 miles from its border with Lancaster Sound, a line drawn between Prince Leopold Island and Cape Hurd, to its boundary with Viscount Melville Sound, a line joining Cape Cockburn, the SW corner of Bathurst Island, to Cape Berkeley on Prince of Wales Island 66 miles south.

2 **Historical Note**. — *Barrow Strait was named by Parry in 1819 after Sir John Barrow, Secretary of the Admiralty.*

3 *(For descriptive purposes the boundary between the east and west parts of Barrow Strait is a line drawn from Cape Martyr, 3 miles west of Resolute, to Pressure Point, the NW point of Somerset Island.)*

4 The north side of the east part of Barrow Strait is formed by the SW coast of Devon Island, the south entrance of Wellington Channel and the south shore of Cornwallis Island. The south side of the east part is formed by Prince Leopold Island and the north shore of Somerset Island.

5 The north side of the west part of the strait is formed by the south sides of Cornwallis Island and Bathurst Island and the intervening entrance to McDougall Sound; the south side comprises the north entrance to Peel Sound and the north side of Prince of Wales Island. Several large islands lie across the west part of Barrow Strait.

6 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

7 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

8 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

9 **Caution**. — Mid-channel **depths** in Barrow Strait usually exceed 100 m but become shoal in the area of the islands south of Intrepid Passage.

10 **Caution**. — **Depths**, in most areas, are based on **reconnaisance soundings** and **track soundings**. **Undiscovered dangers** may exist.

11 *(Consult Source Classification Diagrams on the charts for details of surveys.)*

12 **Caution**. — A **shoal depth** of 22 m lies 1.2 miles north of Garret Island; off the east sides of Lowther Island and Young Island **shoal depths** occur at a distance of 5 miles, and off the west side of Hamilton Island at a distance of 4 miles. **Shoal depths** of 24 m lie in mid-channel ENE and SW of Young Island. South of Bathurst Island, west of Intrepid Passage, **shoal depths** of 25 to 30 m extend up to 17 miles offshore.

13 The **tidal range**, large tides, at Cape Capel, at the SE end of Bathurst Island, is 1.6 m. At Hamilton Island, off the north shore of Prince of Wales Island, it is 0.8 m.

14 *Resolute (Index No. 5560)* is a reference port and *Rigby Bay (Index No. 5490)*, *Radstock Bay (Index No. 5500)*, *Beechey Island (Index No. 5510)*, *Cape Capel (Index No. 5600)* and *Hamilton Island (Index No. 5615)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

15 In Barrow Strait the surface **currents** are weak and predominantly eastward with a weak westward current on the north side.

16 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/*.)*

17 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*

18 *(For general **ice conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

19 The consolidated **ice** cover in Barrow Strait begins to fracture during the last week of June at the east end and break-up progresses slowly west through all the strait by the first week of August. New ice begins to form in the west end during the second week of September and spreads rapidly to the east end by the beginning of October. Consolidation of the ice in the west end of Barrow Strait normally occurs during the third week of October and spreads to the east end late in November.

20 **Caution**. — The **magnetic compass** is unusable in the area described in this chapter. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

Barrow Strait — SE part

Chart 7569

Prince Leopold Island to Pressure Point

21 **Prince Leopold Island** *(74°02'N, 90°05'W)*, 5 miles NNE of Cape Clarence *(described in Chapter 6)*, is flat-topped and surrounded by vertical cliffs with elevations of 244 to 427 m. A few shingle spits lie at the bases of the cliffs.

22 **Caution**. — **Shoal water** extends from the NE and SW ends of Prince Leopold Island.

23 Prince Leopold Island and a 5-kilometre wide sea area around it have been designated as a **Migratory Bird Sanctuary**. Except in cases of emergency, a permit from the *Canadian Wildlife Service* of *Environment Canada* is required to enter this sanctuary. *(See Sailing Directions booklet ARC 400 — General Information, Northern Canada, Chapter 1, for more information.)*

24 The north coast of **Somerset Island** is formed of steep slopes or cliffs of limestone which rise inland to a rolling plateau that attains an elevation of 372 m. In most places a low coastal strip of varying width borders the cliffs. Numerous river gorges cut through the hills to the coast.

25 **Caution**. — **Shoal water** extends 1 to 1.5 miles offshore along most of the Somerset Island coast. At Garnier Bay, **shoal water** extends offshore for 5 miles.

26 Between Cape Clarence and Cape Admiral M'Clintock, 16 miles NW, the coast is low, sloping inland to domed hills. Midway between **Rodd Bay** and Cape Admiral M'Clintock are two river deltas, and in this area the low coastal strip is about 2 miles wide.

27 **Cape Admiral M'Clintock** *(74°01'N, 91°05'W)* is a steep bluff, with a front of about 1 mile, rising from the

sea to 235 m. Between the cape and Garnier Bay, hills rise to 244 m a few miles inland.

28 The east and south shores of **Garnier Bay** are backed by limestone hills rising from 183 to 335 m. The west shore is comparatively low and composed of raised beaches. **Garnier River** and two other rivers enter the head of the bay through deep valleys.

29 **Caution**. — **Depths** in Garnier Bay are generally **shallow**, especially on the west side where 3.5 m and less are found as far as 1 mile offshore.

30 **Caution**. — Between Garnier Bay and **Irvine Bay**, a **shallow** inlet 8 miles NW, the coast is fronted with **drying bars** and lagoons.

31 The shores of Irvine Bay are composed mainly of raised beaches. A bluff rises 2 miles to the west.

32 **Cape Rennell** *(74°11'N, 93°28'W)* is a bold headland with cliffs rising almost vertically from the sea for 122 m to a maximum elevation of 178 m. The coast at **Gifford Point** is low but close behind it the land rises steeply.

33 The land on both sides of the entrance to **Cunningham Inlet** is low but backed, close inland, by cliffs. **Cunningham River** flows into the head of the inlet through a broad delta at the foot of a wide valley.

34 **Caution**. — The entrance to Cunningham Inlet is **obstructed** by a low peninsula. **Drying flats** extend from the peninsula, leaving a channel on the west side about 0.3 mile wide with a depth of only 0.6 m.

35 The east part of the coast between Cunningham Inlet and Cape Anne, 14 miles WSW, is a narrow coastal plain backed by cliffs with an elevation of 274 m; the west part is lower with a more gradual slope. **Cape Anne** *(74°06'N, 94°45'W)* is a broad low point with an elevation of 9 m formed by the delta of a large river; it is backed by raised beaches and hills rising to 152 m.

36 The coast between Cape Anne and Pressure Point is formed by a gently sloping plain with raised beaches varying in width from a few hundred metres to about 3 miles, backed by bluffs and rounded hills from 76 to 152 m in elevation. The coastal slope is cut by the shallow gullies of a number of small streams.

37 **Pressure Point** *(73°59'N, 95°18'W)*, the NE entrance point to Peel Sound *(described in Sailing Directions booklet ARC 403 — Western Arctic)*, is a rounded hill with a steep NW face rising to about 152 m from a narrow beach.

38 **Limestone Island**, 2 miles NNE of Pressure Point, is a **conspicuous** landmark rising steeply from the sea to 164 m. **Cape Swansea**, at the north end of the island, rises perpendicularly from the water.

39 **Caution**. — The channel between Limestone Island and Somerset Island is navigable but is reported to have a 3-knot **tidal stream** running through it.

40 **Caution**. — **Radar fixes** obtained from Cape Anne and Limestone Island are reported to be **unreliable**.

Barrow Strait — NE part

Cape Hurd to Cape Spencer

41 **Rigby Bay** *(74°34'N, 90°03'W)*, entered west of Cape Hurd, has steep sides rising to over 305 m on the east side and to about 152 m on the west. A stream enters the head of the bay through a wide valley.

42 **Caution**. — Rigby Bay is **shallow**. **Discoloured water** on the west side of the bay has been reported.

43 *Rigby Bay (Index No. 5490)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

44 **Table Hill** has an elevation of 305 m. A flat-topped hill with an elevation of 152 m rises near the west entrance to Rigby Bay and another is about 2 miles NW and 1 mile inland.

45 **Cape Eardley Wilmot**, 7 miles WNW of Rigby Bay, is prominent.

46 **Caution**. — A **shallow** inlet, close east of Cape Eardley Wilmot, is fronted by an islet. Dangerous **underwater rocks** and **shallow water** extend for several miles along the shore in both directions and almost 1 mile offshore.

Chart 7527

47 **Wallis Point** *(74°37'N, 90°38'W)*, a **conspicuous** headland, rises to 250 m 2.5 miles WNW of Cape Eardley Wilmot. A broad low valley lies close east of the point.

48 **Radstock Bay** is entered between Wallis Point and **Cape Liddon**, 8 miles west, the SE end of a prominent peninsula. **Depths** in the bay are fairly uniform and generally greater than 50 m except in the coves.

49 **Caution**. — Known dangers are **Palmer Shoal**, least depth 0.6 m, 5.5 miles NNW of Cape Liddon, and a **shoal rock** lying 0.3 mile farther NNE.

50 *Radstock Bay (Index No. 5500)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

51 **Ice** breaks up in Radstock Bay about the second week in July, freeze-up is in early November.

52 **Waldegrave Bluff** *(74°41'N, 90°53'W)* is the south tip of a peninsula, rising to over 274 m in its central part, which separates the small NE arm of Radstock Bay from the large north arm. **Kearney Cove**, at the head of the NE arm, has many streams entering it through an alluvial plain.

53 **Caution**. — A **shoal depth** of 10.4 m is in the entrance to Kearney Cove.

54 **Patrol Point**, low and flat, marks the SE entrance to the north arm of Radstock Bay. **Caswall Tower**, which marks the SW entrance, is a flat-topped isolated peak with a **conspicuous** bluff on its east face. From off Cape Eardley Wilmot the tower appears as an isolated, dark, flat dome standing out from the land around it, but rising no higher than the land behind it.

55 **Dealy Point** *(74°45'N, 91°07'W)* is a large, steep bluff; **Scallon Cove** is NW of the point.

56 **Caution**. — Scallon Cove has **shoal depths** under 10 m extending up to 0.3 mile from its shores.

57 The shores of the north arm of Radstock Bay, north of Dealy Point and of **Swansea Point**, are precipitous except where rivers discharging through steep-sided ravines have formed low deltas. At the head of the arm several braided streams enter through a broad low valley.

58 Two **landing beaches** in Radstock Bay are suitable for beaching barges. One, extending about 2 miles south of Caswall Tower, is composed of gravel and fragmented limestone and has a series of low raised beaches inland, providing ample space for discharged cargo. The second landing beach is north of Caswall Tower.

59 **Caution**. — Palmer Shoal and the **shoal rock** north of it encumber the south part of the second landing beach.

60 Vessels can obtain **anchorage** off either beach in Radstock Bay, noting the caution. A vessel has **anchored** about 0.5 mile north of Patrol Point in 49 m and reported excellent protection.

61 Cape Liddon and **Cape Ricketts** *(74°38'N, 91°17'W)* are the SE and SW corners of a peninsula that separates Radstock Bay from **Gascoyne Inlet**. The peninsula has high cliffs encircling its south part; these are highest in the east and slope down towards Cape Ricketts, a low spit backed by cliffs.

62 **Depths** in the north half of Gascoyne Inlet are mostly under 10 m. There are good **landing beaches** all along the west shore of the inlet.

63 **Caution**. — **Landing beaches** in the north half of Gascoyne Inlet are difficult to approach because of **shallow water**.

64 There are indications that Cape Ricketts deflects eastward-drifting **ice** into Gascoyne Inlet, causing it to retain its ice later than other inlets in this area.

65 **Cape Riley** *(74°41'N, 91°42'W)*, 7 miles WNW of Cape Ricketts, is a narrow, steeply-sloping strip of land backed by limestone cliffs rising vertically to a plateau.

66 **Erebus and Terror Bay** is entered between Cape Riley and Beechey Island.

67 **Caution**. — **Shoal water** extends from the east side of Erebus and Terror Bay and there are **shoal patches** under 10 m near the centre.

68 **Beechey Island**, prominent and easily recognizable, is connected to Devon Island by a gravel isthmus which is sometimes covered at high water. The summit of the island is a fairly flat plateau; a cairn near the SW side of the plateau, known as **Franklin's Cairn**, is reported to show up well. The NE shore of the island consists mostly of gently sloping beach. **Cape Riddle** *(74°43'N, 91°54'W)* is the SW point of Beechey Island.

69 *Beechey Island (Index No. 5510)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

70 **Historic note**. — Franklin's vessels are believed to have wintered in Erebus and Terror Bay in 1845-1846. The remains of the winter quarters of the Franklin Expedition are on one of a series of terraces in the north part of Beechey Island; a cenotaph surmounted by a ball and the Franklin Memorial, a large marble tablet, stand on an adjoining terrace. The wreck of HMS *Breadalbane*, a supply ship supporting the search for Franklin, is off Erebus and Terror Bay, 1 mile south of Beechey Island. The vessel sank in 1853, after being crushed by ice and the well-preserved wreck is of considerable historic interest.

71 **Anchorage** has been obtained in the NW part of Erebus and Terror Bay off the NE shore of Beechey Island. Holding is good.

72 **Caution**. — The anchorage is exposed to **sea** and **swell** from southward.

73 **Union Bay** lies between Beechey Island and a low point at the mouth of **Mary River**. The river runs through a deep valley in the escarpment that backs the low point.

74 **Cape Spencer**, at the SE entrance to Wellington Channel *(described in Chapter 8)*, is a prominent headland.

Chart 7569

Cape Hotham to Resolute Bay

75 **Cape Hotham** *(74°41'N, 93°28'W)*, the SE end of **Cornwallis Island**, is the south end of **Cape Hotham Escarpment**. The escarpment is a sharp ridge, with an

elevation of about 213 m, that runs parallel to the shore of Wellington Channel and stands out from the flat-topped hills farther inland.

76 **Caution**. — The ridge has a deep cleft near its south end and indications of a tremendous rock slide at its very tip; it is possible that **shoal underwater rocks** extend from Cape Hotham for some distance offshore.

77 **Cape Dungeness** is a prominent headland with a flattish top at an elevation of over 183 m, and a small alluvial promontory at its base. Behind the cape the land slopes to a featureless plateau. Two flat-topped hills rise near the coast a short distance east of the cape. The east hill, elevation 197 m, is more prominent.

78 **Assistance Bay** *(74°39'N, 94°18'W)* has the delta of **Marshall River** at its head. The bay affords **anchorage** in 7.3 to 14.6 m, mud, but is open to the south.

79 **Caution**. — There is a **sand bar** off the Marshall River delta.

80 The coast between Assistance Bay and Resolute Bay is backed by **Prospect Hills**. The hills rise to between 213 and 229 m from 1 to 2 miles inland.

Chart 7511

Resolute Bay

81 **Resolute Bay** is entered between **Prospect Point** *(74°39'N, 94°47'W)* and **Sight Point**, 2 miles NW. Both points are low shale beaches with higher land rising gradually behind them. The shores of the bay are generally low. **Mecham River** flows into the NE part of the bay; **Resolute Creek**, which drains **Resolute Lake**, flows into the west part. **Signal Hill**, elevation 194 m, rises about 0.6 mile NNE of the head of the bay.

82 The **ice** in Resolute Bay, which attains an average thickness of about 1.8 m, has usually been broken up by an icebreaker by early August. Thereafter, ice conditions in the bay depend upon wind direction; west through south to SE winds can fill the bay with drift ice. Landing operations may be curtailed by ice at any time, and vessels anchored in the harbour may have to move at short notice. The last icebreaker usually leaves late September. The resupply period is generally mid-August to mid-September. *(See also remarks on ice at the beginning of this chapter.)*

83 **Caution**. — The **tidal stream** flows easterly with the ebb tide and westerly with the flood. The stream in the bay is slight but a **rate** of 3 knots was estimated 1 mile south of Sight Point.

84 *Resolute (Index No. 5560)* is a reference port in *Canadian Tide and Current Tables, Volume 4*.

85 **Caution**. — **Shoals** encumber the full width of the entrance and outer part of Resolute Bay.

86 *Resolute Bay Range No. 4* **lights** *(2530, 2531)* are on the NE side of the bay. These lights in line bearing 023° mark a channel, 61 m wide with a least depth of about 10.1 m, through the shoals in the entrance to the bay. This is the main, or east entrance channel.

87 Two **beacons** on the NW shore of the bay, in line bearing 316°, form a range that intersects *Resolute Bay Range No. 4* and leads to the anchorage area in the NW part of the bay, in a least depth of 12.8 m. The front beacon is 12.2 m high and the rear 7.6 m high, each beacon is a red fluorescent **daymark** with a black vertical stripe mounted on a square skeleton tower. The reciprocal line of this range is marked by two similar **beacons** in the SE part of the bay, in line bearing 136°. The front beacon of this pair, 7.6 m high, is on a low islet, and the rear, 13.7 m high, is on the mainland.

88 An alternative, west entrance channel, marked by two **beacons** on the north shore, in line bearing 353½°, leads directly to the anchorage area. The front beacon is 8.6 m high, the rear 7.6 m. Each beacon is a red fluorescent **daymark** with a black vertical stripe mounted on a square skeleton tower.

89 **Caution**. — The alternative, west channel has **least depths** of less than 10 m.

90 **Caution**. — A **shoal depth** of 5.9 m is 61 m east of the west entrance **range line** and similar **depths** are reported to exist 122 m from both entrance range lines.

91 **Caution**. — Strict adherence to the **ranges** is necessary. There is **no dredged channel** and no dredging is done to maintain least depths along the ranges.

92 Ships drawing more than 8.5 m **anchor** in 27.4 to 31 m 1 mile south of Sight Point. Ships drawing less than 8.5 m **anchor** in 18 to 27 m in the central or north part of the bay.

93 **Holding** is **poor** in mud and shale, and vessels have dragged in strong winds; they should be ready to move at short notice.

94 The settlement at Resolute consists of three parts. The hamlet is in the NE corner of the bay below Signal Hill. **South Camp** *(a local name)* is on the west side of the bay to the north of Sight Point, near a **conspicuous tank farm**. South Camp has government research facilities and privately owned infrastructure. **North Camp** *(a local name)*, 3 miles NNW of Sight Point, consists of the airfield and supporting buildings, private businesses and government buildings, notably the *Polar Continental Shelf Program (PCSP)* buildings.

95 The hamlet of **Resolute**, population 214 *(2011)*, is on the NE shore of the bay. Satellite-based **telecommunications**, including the internet, connect Resolute with other northern communities and to population centres to the south. Transportation to Resolute is by boat in summer or by aircraft year-round.

96 The hamlet has all major services, include a post office, a detachment of *RCMP* and health care. A *Northern Store* outlet and *Tudjaat Co-operative* retail store offer fuel, limited banking facilities, groceries, clothing and hardware. Accommodation is available at the hamlet, at South Camp and at North Camp. *First Air* provides scheduled connections to Yellowknife, Montréal and Ottawa, as well as other northern destinations. *Kenn Borek Air* provides charter services.

97 There are two **landing beaches**. The first, known as MOT Beach, is near South Camp and is also used by tankers. The second beach, known as North Beach, is on the east side of Resolute Bay close south of the hamlet. During periods of ice congestion, MOT Beach can be worked in NW and north winds, North Beach during NE and SE winds. Fair to good roads link the beaches with the settlement and airfield.

98 Cargo ships carry barges and small tugs to self-lighter goods to shore. The barges are equipped with bow ramps and are off-loaded by forklift at the beach.

99 Two **beacons** east of the tank farm, on skeleton towers 3 m high, are in line bearing 271½°. Tankers moor about 230 m off MOT Beach, close north of this range line, with stern lines to bollards ashore. Oil products are pumped to a manifold on shore through floating pipelines.

100 The airport, at North Camp, has a gravel runway 6504 feet (1982 m) long.

101 An **aeromarine radiobeacon** *(74°44'49"N, 94°59'42"W)*, identification *Morse* "RB" (• — • — • • •) transmits on 350 kHz.

102 **Cape Martyr** *(74°41'N, 95°06'W)*, 3.5 miles WNW of Resolute Bay, is a **conspicuous** point which rises steeply from the sea to its summit then declines gradually to the NE'ward.

Barrow Strait — NW part

Resolute Passage

103 **Resolute Passage** *(74°42'N, 95°35'W)* separates Griffith Island, Somerville Island and Browne Island from Cornwallis Island; it is entered from the east between Prospect Point *(previously described)* and Cheyne Point on Griffith Island. From the west it is entered between Cape Rosse *(74°54'N, 96°19'W)* and the north end of Browne Island.

Chart 7570

104 **Griffith Island** *(74°35'N, 95°30'W)* is 6 miles south of Sheringham Point. The east side of the island is steep and rough. **Cheyne Point**, the SE end of the island, is a high, steep cliff rising to 201 m with an extensive rock slide of huge limestone boulders at its foot. Moderately steep cliffs extend 3 miles west of **Dobell Point**, the NE end of the island. The west and SW shores are low with raised beaches; the SW side rises gradually as a broad, barren plain to an upland plateau. **Dyers Cove**, in the NW part of the island, is bordered by gradually shelving sand beaches falling sharply into deeper water about 60 m from the high water line. A narrow valley is at the head of Dyers Cove.

105 **Caution**. — **Depths** in Dyers Cove have not been surveyed.

106 **Caution**. — **Discoloured water** was reported to extend 3 miles NE from Cheyne Point, and for a similar distance from the coast SW of Dobell Point.

Chart 7511

107 **Fournier Channel** separates Griffith Island from Somerville Island and enters the south side of Resolute Passage. **Somerville Island** *(74°44'N, 96°11'W)* has moderately steep sides, well-marked with raised beaches, and a level top.

108 Most of Resolute Passage and Fournier Channel have been surveyed. *(For details see Source Classification Diagram on the charts.)*

109 **Caution**. — Inshore areas have not been sounded.

110 **Allen Bay**, on the SW coast of Cornwallis Island, is entered between Cape Martyr and Sheringham Point, 8 miles NW. **Allen River** enters its NE arm. **Walrus Island** and several small islands lie in the centre of the bay.

111 **Caution**. — Allen Bay is **shallow**. **May Island**, 3 miles north of Cape Martyr, has a channel on it east side **obstructed** by **shoals** and islands. A **shoal patch** has been reported 1.5 miles WNW of May Island.

112 **Sheringham Point** *(74°45'N, 95°32'W)* is a striking cape well-contoured with lines of raised beaches. The southern side has a narrow beach, with deep water close offshore, suitable for boat landings.

113 **Caution**. — The east and west shores of Sheringham Point are fronted by underwater **boulders** and **rock ledges**.

114 Between Sheringham Point and Claxton Point, 7.5 miles NW, **Taylor River** and **Ward River** flow into Resolute Passage through **Becher Bay** and an unnamed inlet 3 miles NW.

115 **Caution**. — Islets, **drying** alluvial flats and **shoals** encumber the east side of Becher Bay and the west side of the inlet, both of which appear to be **shallow**.

116 **Claxton Point** is a long, **conspicuous** rocky point rising in tiers to about 9 m.

Chart 7935

117 **Cape Rosse** *(74°54'N, 96°19'W)* is the south end of a peninsula separating Intrepid Bay from Pioneer Bay; it is a low point rising gradually inland.

118 **Intrepid Bay** has steep sides rising over 90 m. **Coal River** flows into the head of the bay through low hills.

119 **Caution**. — Coal River has **shoal water** off its mouth.

120 **Browne Island**, 4 miles south of Cape Rosse, has precipitous cliffs on the southern half of its east side; the cliffs rise to 157 m. These cliffs decrease in elevation to the north to about 80 m. The land then slopes down uniformly to the tip of the promontory at the north end of the island. The west side of the island is steep but not precipitous; both east and west sides of the island are **conspicuously** terraced.

121 **Caution**. — **Air photos** indicate that **shallow water** lies off the NW side of the island.

122 **Pioneer Bay**, west of the Cape Rosse peninsula, has a low foreshore.

123 **Cape Airy** *(74°59'N, 96°35'W)*, composed of shingle, is the south end of a peninsula.

124 Between Cape Airy and Cape Capel, 21.5 miles west, McDougall Sound *(described in Chapter 8)* enters Barrow Strait.

Bathurst Island — South shore

125 Westward of Cape Capel there are low hills which rise, farther west, to 150 to 180 m, broken occasionally by several steep-walled inlets. West of Allison Inlet, the coast is a low sandy plain.

126 **Cape Capel** *(75°01'N, 97°58'W)* is a wide, flat promontory that rises gently to a summit with an elevation of 76 m. **Baker Island**, 4 miles east of Cape Capel, rises steeply on its south and NW sides to a fairly level summit; its NE coast rises gently.

127 *Cape Capel (Index No. 5600)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

128 **Fresh water** can be obtained from a brook about 2 miles west of Cape Capel; there is an excellent gravel **landing beach**.

Chart 7570

129 Between Cape Capel *(75°01'N, 97°58'W)* and the east entrance point of Bedford Bay, 8 miles west, the coast is very low; rounded hills border the coast, rising gradually beyond the bay.

130 The shoreline of **Bedford Bay** is gently sloped, but steep, shelving rocks, with cliffs in places, rise behind the beach. A prominent knob-shaped hill, 160 m high, is near the coast at the east end of the bay.

131 **Frazer Point** *(74°59'N, 98°39'W)* is a low spit. Behind the point, the land rises to a **conspicuous** rounded hill over 60 m high about 6 miles inland.

132 **Caution**. — **Shoal water** extends off the east entrance point of Bedford Bay and 0.8 mile off Frazer Point.

133 **Moore Island**, 2 miles SW of Frazer Point, is low and composed mainly of limestone.

134 **Garrett Island**, 15 miles SSW, is separated from Frazer Point by **Intrepid Passage**. The north and south sides of the island rise steeply to a rounded summit and a **spit**, with a **conspicuous** rise on its end, lies off the NW tip.

135 **Caution**. — The inshore waters around Garrett Island are **not sounded**. **Shoal water** is reported to extend about 1 mile off the north side where there is a depth of 22 m.

136 **Dyke Acland Bay**, 3.5 miles west of Frazer Point, has low shores rising to low hills. A small, low islet is in its central part.

137 **Caution**. — A long **underwater bar**, covered less than 3 m, extends 1 mile off the west entrance point of Dyke Acland Bay. Numerous **shoals** with depths less than 20 m extend across the entrance to the bay. Although entry into the bay requires extreme caution, depths ranging from 30 to 80 m exist within the major portion of the bay.

138 Dyke Acland Bay is usually free of **ice** during the latter part of August. Freeze-up begins the second week of September.

139 **Caution**. — The entrance to Dyke Acland Bay can be congested with **drift ice** during periods of southerly winds.

140 **Allison Inlet** *(75°03'N, 99°24'W)* has low land near its entrance but 2 miles east of its central part a

rounded limestone hill rises between 45 and 60 m. Farther inland similar hills rise to 150 m.

141 **Caution**. — Islets and a **drying bar** lie across the entrance to Allison Inlet. **Shoal water** extends almost 3 miles off the entrance to the inlet.

142 The **tidal range**, large tides, in Allison Inlet is 1.7 m.

143 **Caution**. — **Depths** within Allison Inlet are **unknown** but **shoaling** may have occurred where a river enters the head of the inlet.

144 Allison Inlet is usually free of **ice** during the latter part of August. Freeze-up begins the second week of September. Because the entrance is shallow and narrow, heavy drift ice cannot enter.

145 Cape Cockburn *(75°02'N, 100°22'W, described in ARC 403 — Western Arctic)*, the SW tip of Bathurst Island, marks the NE extremity of Viscount Melville Sound.

Barrow Strait — SW part

Prince of Wales Island — NE shore

146 *(The entrance to Peel Sound is described in Sailing Direction booklet ARC 403 — Western Arctic.)*

147 Between Lyons Point *(73°51'N, 97°11'W)*, the NE point of **Prince of Wales Island**, and Cape Hardy, 7 miles WNW, the coast is low. A braided stream reaches the sea through a wide valley, east of Lyons Point.

148 **Caution**. — **Shoals** and **drying** mud flats extend 0.5 mile offshore from the mouth of the braided stream.

149 **Edgeworth Island**, the largest of a group lying close north of Lyons Point, is mainly covered with raised beaches. It has a steep, rocky cliff 70 m high on its east side. The smaller islands in the vicinity are low. An irregularly-shaped island *(shown as a peninsula)* is 2 miles west of Lyons Point, close offshore.

150 At **Cape Hardy** a coastal plain of raised beaches is backed by steep cliffs rising to 370 m; the cliffs are broken by a narrow, steep-sided river valley.

151 **Bellot Cliff** *(73°54'N, 97°45'W)* is a **conspicuous** vertical cliff rising from a low peninsula to an elevation of 210 m.

Baring Channel and Russell Island

152 **Baring Channel** separates **Russell Island** from the north shore of Prince of Wales Island.

153 **Caution**. — There is only a **single line of soundings** between the east entrance of Baring Channel and Mecham Island. The soundings show a **minimum depth** of 26 m.

154 **Caution**. — In a normal year, **ice** in Baring Channel does not completely melt and significant amounts of **old ice** can usually be found. Break-up normally develops during the first week of August with freeze-up starting the third week of September. Thick **drift ice** from Viscount Melville Sound normally blocks the west entrance to the channel, but little of it enters the channel.

155 **Cape Walker** *(74°03'N, 97°37'W)*, on Russell Island at the east entrance to Baring Channel, is formed of red sandstone and rises sharply to 210 m. The cape marks the south end of a section of coast with cliffs which begins at Palmerston Point.

156 The coast is gently sloping with numerous parallel stream channels from south of Cape Walker 14 miles SW to an unnamed north-trending inlet. A **conspicuous** round, isolated hill rises 120 m on the peninsula west of the unnamed inlet. The south side of Russell Island behind the coast is flat-topped cliffs for 9 miles SW from Cape Walker.

157 **Mecham Island** is low, featureless and composed of raised beaches. The channel on its north side appears to be fairly deep with low shores.

158 **Cape Grant**, the west end of Russell Island, is a low point backed by raised beaches.

159 **Palmerston Point**, the NE tip of Russell Island, has a narrow fringe of low land backed by cliffs rising to 180 m about 2 miles inland.

160 The north side of Russell Island falls away from the heights of Palmerston Point toward Cape Grey where it rises again and becomes flat and moderately high before falling again toward Cape Grant.

161 **Addington Point**, 4.5 miles west of Palmerston Point, is inconspicuous. **Krabbé Point**, 14 miles farther WSW, consists of gravel and mud and is very low-lying.

162 **Caution**. — **Air photos** indicate a **shoal** extending about 0.3 mile north of Krabbé Point.

163 **Cape Grey**, 5 miles farther SW, is little more than 30 m high, flat-topped and has closely-spaced raised beaches.

164 The south shore of Baring Channel, between Bellot Cliff and Forsyth Point, 20 miles SW, rises steeply, at first, in an area cut by narrow ravines, and farther west rises more gently to 400 m inland.

165 **Forsyth Point** marks the west side of a braided stream valley.

166 **Caution**. — There are **shoals** off the mouth of the braided stream near Forsyth Point.

167 **Arabella Bay** is 5 miles west of Forsyth Point. The islands lying NW of the entrance to Arabella Bay are low.

168 **Caution**. — Arabella Bay is encumbered by **drying** mud flats.

169 The coast near **Emily Bay** becomes low.

170 **Cape Dundas** is a low point with closely-spaced raised beaches.

171 **Caution**. — An **uncharted shoal**, depth unknown, lies 3 miles north of Cape Dundas.

172 **Cape Berkeley** *(73°55'N, 100°15'W)*, the SW limit of Barrow Strait, is very low with raised beaches.

173 *(The east entrance of Viscount Melville Sound and the north entrance of M'Clintock Channel are described in ARC 403 — Western Arctic.)*

Offshore islands

174 **Hamilton Island** *(74°12'N, 99°11'W)* lies 12.5 miles north of Cape Grey. Its north coast is very low-lying.

175 **Caution**. — There is **shoal water** extending 0.5 mile north of Hamilton Island.

176 *Hamilton Island (Index No. 5615)* is a secondary port in *Canadian Tide and Current Tables, Volume 4.*

177 **Young Island**, 9 miles NE of Hamilton Island, is low and composed mainly of raised beaches, with the south part of the island rising to a ridge of limestone with a steep south slope.

178 **Caution**. — **Young Shoal**, with 13.4 m over it, lies 4 miles east of Young Island. **Shoal patches** with depths of 24 m lie 3 miles SW of the island and 7 miles ENE of the island in **Kettle Passage**.

179 **Lowther Island** *(74°33'N, 97°30'W)* is on the NE side of Kettle Passage. **Gourdeau Point** is the south end of the island, which slopes evenly down to the water. Lowther Island rises to its maximum height 5 miles NE of Gourdeau Point. At its northern end, the island rises to an elevation of 173 m. Another summit is NW of Gourdeau Point; otherwise low, gently sloping cliffs back most of the coastline.

180 The **tidal range**, large tides, is 1.5 m at Lowther Island.

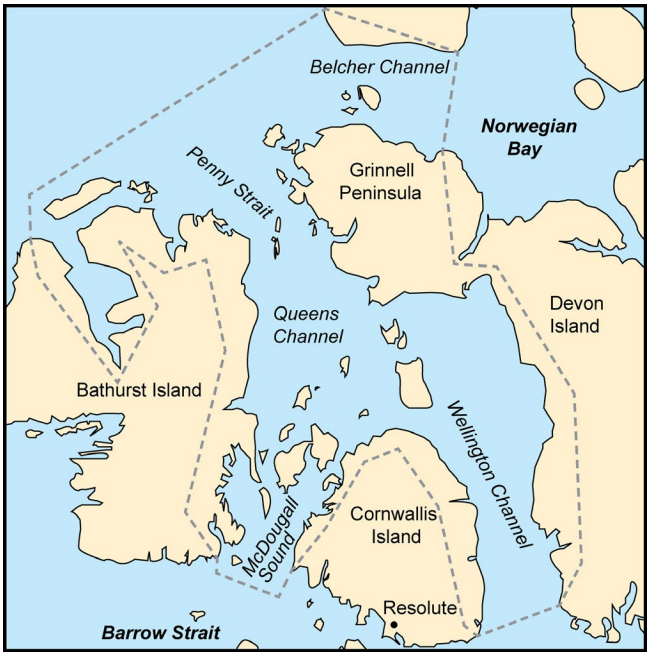
181 **Caution**. — **Lowther Shoal**, with 1.5 m over it, lies 9.5 miles ENE of Gourdeau Point.

182 **Hayes Channel** separates Lowther Island from Garret Island *(previously described)*.

Chapter 8

Barrow Strait — Norwegian Bay

North coast of Bathurst Island



General

Charts 7569, 7935, 7950, 7951, 7980

1 This chapter describes the channels leading north on each side of Cornwallis Island and around Grinnell Peninsula to Norwegian Bay.

2 Wellington Channel, Maury Channel, Couch Passage, Pioneer Channel and Sophia Channel lead up the east side of Cornwallis Island to join Barrow Strait to Queens Channel; McDougall Sound, Crozier Strait and Pullen Strait lead up the west side. From Queens Channel, Penny Strait and Belcher Channel lead to Norwegian Bay.

3 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

4 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

5 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

6 **Caution**. — **Depths**, in most areas, are based on **reconnaissance soundings**, **track soundings** or **spot soundings** through the ice. **Shoal depths** have **not** been **examined**. **Undiscovered dangers** may exist. *(For details, see Source Classification Diagram on the charts.)*

7 *Resolute (Index No. 5560)* is a reference port and *Beechey Island (Index No. 5510)*, *Cape Capel (Index No. 5600)*, *Little Cornwallis Island (Index No. 6578)*, *Airstrip Point (Index No. 6765)*, and *Northumberland Sound (Index No. 6780)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

8 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/*.)*

9 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*

10 *(For general **ice conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

11 **Caution**. — The **magnetic compass** is unusable in the area described in this chapter. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

Wellington Channel to Queens Channel

Charts 7569, 7950

12 **Wellington Channel** *(75°28'N, 93°12'W)*, between Devon Island and Cornwallis Island, is entered from Barrow Strait between Cape Spencer and Cape Hotham, 24 miles WSW. The channel is about 95 miles long by 16 miles wide. North of Cornwallis Island, the west side is formed by Baillie-Hamilton Island and Dundas Island. Maury Channel, Couch Passage and Pioneer Channel separate these islands and connect Wellington Channel to Queens Channel.

13 **Caution**. — **Depths** in Wellington Channel are **spot soundings** through the ice; **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*

14 The **tide** enters Wellington Channel from Barrow Strait and requires about one hour to travel to the north end of Penny Strait. The **tide** is mixed, mainly semi-diurnal, with a tidal range, large tides, of 2.7 m at the south end of Wellington Channel and 0.8 m at the north end of Penny Strait.

15 *Beechey Island (Index No. 5510)* is a secondary tidal port in *Canadian Tide and Current Tables, Volume 4*.

16 The **current** in Wellington Channel is predominantly southward into Barrow Strait, although a band of northward flow is found near the Devon Island shore. The southward flow is strongest on the west side where the current has a maximum velocity of about 1.5 knots on the flood. At about 2 hours before low water this current stops, and in some cases reverses.

Chart 7569

Wellington Channel — East side

17 Devon Island *(described in Chapter 5)* forms the east side of Wellington Channel. Between Cape Spencer and Dragleybeck Inlet, 50 miles north, the coast consists of gentle slopes interspersed by steep, low cliffs; it is cut by numerous small streams and reaches elevations of 300 m inland. North of Dragleybeck Inlet, the land is low-lying with raised beaches.

18 **Cape Spencer** *(74°46'N, 91°58'W)* rises to an elevation of 245 m. **Innes Point**, 2 miles NW, is a bluff rising to 183 m with low hills to the north.

19 **Lovell Point**, a wide delta, is 8 miles north of Innes Point. **Stuart Point** is 4 miles further north.

20 **Caution**. — Sediments from the river at Lovell Point have created **drying** flats and **shoal depths** extending from north of Innes Point to Stuart Point.

21 **Bowden Point** rises to 174 m with 150-m high cliffs extending NNE along the shores of **Clark Bay**.

22 **Cape McBain** *(75°05'N, 92°15'W)*, the north entrance point of Clark Bay, is low with an isolated hill 30 m in elevation near its end. **Bear Point** is east of Cape McBain.

23 **Griffin Inlet** has gradual slopes on its south side and cliffs on its east and north sides. **Sophia Cove**, the SE arm of the inlet, has an islet obstructing its entrance. **Cape Grinnell** is the north entrance point to Griffin Inlet.

24 The **tidal range**, large tides, is 2.6 m in Griffin Inlet.

25 **Cape Daniell** *(75°10'N, 92°24'W)* and **Bellot Point**, 2 miles NNW, are two steep headlands. The unnamed bay between Cape Grinnell and Cape Daniell, **Fitton Bay** and **Emery Bay** are all low and shelving at their heads with raised beaches.

26 **Helpman Head** *(75°14'N, 92°29'W)* rises steeply to an elevation of 184 m. The coast to the north is composed of low cliffs. **Domville Point** is a small delta.

27 **Macormick Bay** is reported to have depths of 11 m close off its entrance increasing to 18 m inside the bay. A beach on its NW shore is reported to be suitable as a **landing beach**. **Cape King**, on the south side of the bay, is a steep cliff. **Pim Point** is low and composed of alluvium; behind Pim Point, the land rises to an elevation of 152 m.

28 **Cape Osborn** *(75°26'N, 92°25'W)* is a bold, rounded headland with a remarkable rock mass on its south side that rises steeply to an elevation of 209 m.

29 **Eden Point** *(75°33'N, 92°12'W)* is 9 miles NNE of Cape Osborn. **John Brown Point**, 3.5 miles NE, is the south entrance point to Dragleybeck Inlet.

30 **Dragleybeck Inlet** *(75°36'N, 92°03'W)* is close south of an extensive delta. The basin is about 0.2 mile wide and 0.7 mile long.

31 **Caution**. — Dragleybeck Inlet is entered through a channel 100 m wide bordered on both sides by extensive **shoals**. **Drying** flats make up the large delta to the north.

32 **Caution**. — **Baring Bay** is reported to be **shallow** and exposed; its coast is composed of mud flats and lagoons.

33 **Providence Mountain**, 1 mile inland from the head of Baring Bay, is a flat-topped, cone-shaped hill that rises to an elevation of 170 m.

34 **Seal Island** *(75°51'N, 92°17'W)* is rounded, rocky and has an elevation of about 15 m. Its west side is steep; the east side is fronted by a long, flat beach.

Chart 7950

35 **Owen Point** *(75°59'N, 92°35'W)* is the end of a large delta. The point 3 miles NW of Owen Point is composed of mud flats and lagoons.

36 **Point Hogarth** *(76°10'N, 92°47'W)* is low. A prominent limestone embankment, north of Point Hogarth, has an elevation of about 6 m.

37 **Caution**. — **Shoal water** extends up to 5 miles offshore between Dragleybeck Inlet and Point Hogarth.

Wellington Channel — North side

38 **Prince Alfred Bay** is entered east of **Porden Point**. The east and west sides of the bay are low. **Sutherland River** enters the west side of the bay. The north side of the bay rises gently to the summits of **Douro Range**. The range has elevations in excess of 300 m and forms a striking feature along an otherwise low coast.

39 Parts of Prince Alfred Bay and some of the waters in the approaches have been surveyed to modern standards. *(For details, see Source Classification Diagram on the chart.)*

40 **Hornby Head** is 3 miles north of Porden Point. An isolated flat-topped hill, with cliffs on all sides rising to an elevation of 155 m, is 1.5 miles north of Hornby Head. A **conspicuous** hill, 3 miles NW of the head, rises to an elevation of 252 m. **Arthur Pass** crosses the isthmus between Devon Island and Grinnell Peninsula.

41 **Cape Simpkinson** *(76°16'N, 94°10'W)* is a gently sloping point. Between Porden Point and Cape Simpkinson the coast is low and rises gently to elevations of about 60 m. West of the cape the coast is steeper.

42 **Port Refuge**, a bay entered west of **Cape Hornby**, has steep sides but the coast at the head is lower. A low, narrow island lies off the east side of Port Refuge. Belcher, in 1853, found a depth of 20 m behind a low spit and considered the bay would make good winter quarters for small vessels. Small vessels have sheltered from ice behind this low spit.

Chart 7569

Wellington Channel — West side

43 Cornwallis Island *(described in Chapter 7)*, on the west side of Wellington Channel, is indented by several inlets. Between the inlets there are stretches of cliffs with uniform elevations. River deltas are smaller than those on the east side of the channel.

44 Cape Hotham *(74°41'N, 93°28'W)* forms the south limit of Cape Hotham Escarpment, which extends 14 miles north *(both features are described in Chapter 7)*.

45 **Barlow Inlet**, 4 miles north of Cape Hotham, breaks the escarpment and has steep sides rising to flat summits. A high gravel spit extends from the south side of the entrance and makes an excellent shelter for small craft. The delta of **Shellabear Creek** forms the head of the inlet.

46 **Caution**. — **Shoal depths** of 4.6 m are encountered over a **rock sill** in the entrance to Barlow Inlet; inside, depths exceed 37 m.

47 **Goodsir Creek** flows through a valley in Cape Hotham Escarpment 6 miles north of Barlow Inlet.

48 **Depot Point** *(74°55'N, 93°23'W)* is at the north end of Cape Hotham Escarpment. A prominent hill, topped by a **cairn** with a mast 6 m high, is west of the point; the hill rises to an elevation of 326 m. North of Depot Point, rounded hills, fronted by a beach, gradually replace the steep escarpment.

49 **Read Bay**, 8 miles north of Depot Point, has two rivers entering the head of the bay through deltas. The south side of the bay is low, backed by high land; the north side is steep.

50 **Sophia Lake**, 3 miles north of Read Bay, is in a steep-sided valley separated from the sea by raised beaches.

51 **Separation Point** *(75°08'N, 93°28'W)* is precipitous and forms the south side of a remarkable valley. **Petersen Point** forms the north side of the valley and is a low, flat point.

52 **Snowblind Bay** is considered the only place on the west side of Wellington Channel that can be entered by other than a small vessel. **Snowblind Creek**, at the head of the bay, drains **Laura Lakes**. South of the creek the cliffs are steep and low; northward they are higher.

53 **Caution**. — A **strong current** enters the north side of Snowblind Bay and moves **ice** in and out with every tide.

54 **Advance Bluff** *(75°16'N, 93°28'W)* rises steeply to an elevation of 170 m. A river valley breaks the cliffs 2 miles south of the bluff. **Cape Rescue**, 1 mile NNW of Advance Bluff, is steep and the land behind rises to an elevation of 185 m.

55 **Helen Haven**, an inlet with a sill across the entrance, is an excellent harbour; all thick ice grounds on the sill. A river enters the head of the inlet through a delta. The inlet is steep on its south side and rises gradually to level ground on its north side before rising again.

56 **Caution**. — The **sill** in the entrance to Helen Haven has a **least depth** of 1.8 m.

57 **De Haven Point**, the north entrance point to Helen Haven, has steep sides rising to an elevation of 60 m. Behind the point, a line of cliffs rise to 180 m or more.

58 **Decision Point** *(75°21'N, 93°38'W)* is a low shingle point extending seaward from the foot of a prominent, **radar conspicuous** hill. Between De Haven Point and Decision Point there are high cliffs; NW of Decision Point the hills are more rounded and the coast lower.

59 **Copeland Point** is a sand-and-gravel spit formed at the mouth of **Eleanor River**. Shelter for small vessels can be obtained behind the spit in estimated depths of 2.5 m.

60 **Cape Manning** *(75°28'N, 94°02'W)* is a low sand-and-gravel spit through which a stream enters the sea. A valley, 1 mile south, is described by explorers as "verdant". Between Copeland Point and Cape Manning the coast is moderately steep; from Cape Manning to Cape Phillips it is steep.

61 **Abandon Bay**, a slight indentation close NW of Cape Manning, has a shingle beach backed by two high bluffs with rounded summits.

62 **Cape Phillips** *(75°36'N, 94°18'W)* is a prominent headland rising to an elevation of 210 m about 2 miles inland.

Maury Channel

63 **Caution**. — **Depths** in Maury Channel are **spot soundings** through the ice; **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*

64 **Maury Channel**, between Cornwallis Island and Baillie-Hamilton Island, connects Wellington Channel to Queens Channel; the channel is about 7 miles wide.

65 The **tidal range**, large tides, is 2.2 m in Stuart Bay.

66 **Caution**. — An easterly **current** flows through Maury Channel at 0.5 to 3 knots.

67 For 6 miles west of Cape Phillips, the coast is low. **Stuart Bay** has a river delta at its east entrance point.

68 **Cape Gell**, the north end of Cornwallis Island, is a bold, precipitous headland, rising to an elevation of about 90 m. Two **cairns** are on the cape. **Lady Hamilton Bay** is on the west side of Cape Gell.

69 **Baillie-Hamilton Island** has steep sides or cliffs, a level top and a maximum elevation of 242 m. There are some areas of low ground near river outlets. The island appears featureless from the SE but tangents of its ends make good navigation marks.

70 Some of the waters around Baillie-Hamilton Island have been surveyed to modern standards. *(For details, see Source Classification Diagram on the chart.)*

71 **Washington Point** *(75°45'N, 94°17'W)*, the SE end of Baillie-Hamilton Island, is a steep-sided bluff rising to an elevation of about 150 m. Between Washington Point and **Le Vesconte Point**, 6 miles west, the shore is steep, marked by a few small deltas. **Graham Gore Point**, 4 miles NW of Le Vesconte Point, is the end of a low delta.

Chart 7950

Couch Passage — Pioneer Channel

72 **Caution**. — **Depths** in Couch Passage and Pioneer Channel are **spot soundings** through the ice; **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*

73 **Couch Passage**, between Baillie-Hamilton Island to the south and Dundas Island and Margaret Island to the north, connects Wellington Channel to Sophia Channel.

74 **Surprise Point** *(75°59'N, 94°30'W)*, the NE tip of Baillie-Hamilton Island, is a steep-sided promontory marked with very distinct horizontal rock layers. The north shore of Baillie-Hamilton Island is marked by numerous raised beaches, extending inland to elevations of about 100 m, and cut by short streams flowing through broad valleys. **Fitzjames Point**, the NW end of Baillie-Hamilton Island, is a remarkable bold, vertical headland with blocks of black rock jutting out of the snow and ice.

75 **Margaret Island** *(76°04'N, 94°46'W)* presents a bold flat-topped bluff from the east; **Cape Benjamin Smith** is the SE end of the island. Margaret Island has cliffs on all but its north side, which is a small, narrow, tapering peninsula.

76 **Caution**. — **Shallow water** lies off the east side of Margaret Island.

77 **Dundas Island** rises from steep cliffs to an almost uniform elevation in the interior. **Crozier Point**, its SW end, is formed of perpendicular cliffs with elevations of about 120 m. **Cape Collins** and **Point Little**, the NE and NW headlands, have elevations of about 100 and 180 m, respectively.

78 **Pioneer Channel**, between Dundas Island and **Sheills Peninsula**, connects Wellington Channel to Queens Channel.

79 **Cape Majendie** *(76°13'N, 95°02'W)* is a bold, precipitous headland at the SE corner of Sheills Peninsula with an elevation of 120 m. **Cape Becher**, the SW end of Sheills Peninsula, is at the end of a long sloping point rising inland to an elevation of about 210 m.

McDougall Sound to Queens Channel

Chart 7935

80 **McDougall Sound** *(75°10'N, 97°00'W)*, bounded on the east by Cornwallis Island and on the west by Bathurst Island, connects Barrow Strait with Queens Channel through Pullen Strait and Crozier Strait.

81 McDougall Sound is entered from the south between Cape Airy on Cornwallis Island and Cape Capel, 22 miles west. Its north limits are between Wentzal Headland and Wilkes Point, at the south entrance to Pullen Strait, and between Riddle Point and Brooman Point at the south entrance to Crozier Strait.

82 Both sides of McDougall Sound are composed of rounded hills, rising to moderate elevations, indented by bays and inlets.

83 Much of McDougall Sound, Crozier Strait and Pullen Strait have been **surveyed** to modern standards.

84 **Caution**. — **Depths** in the approaches to McDougall Sound are from **reconnaissance surveys**; **shoal depths** have **not** been **examined**. The east side of McDougall Sound between Cape Airy and Midshipman Bay and the west side between Baker Island, Cape Evans and Lacey Point are **not surveyed**. *(For details, see Source Classification Diagram on the chart.)*

85 The mean **tidal range** is 1 m and the tidal range, large tides, is 1.6 m in McDougall Sound.

86 **Caution**. — The **current** along the east side of the sound sets **continually** to the **north**, slacking only at about low water. On the **flood** the **current** appears to have a velocity of about 2 knots.

87 First-year **ice** covers McDougall Sound from November to July. Fracturing of this ice normally begins during the first week of August, with total ice concentration reducing to 6/10ths or less by the last week of the month.

88 New ice usually begins to form during the third week of September with consolidation of the ice cover occurring from north to south during the final days of October and the early days of November.

89 Considerable variation in break-up and freeze-up can occur from one season to the next.

90 **Caution**. — A small amount of **multi-year ice** will drift into the sound from Penny Strait and Queens Channel, coming through the restricted passage in Crozier Strait.

91 **Caution**. — McDougall Sound is considered dangerous for **small craft**, particularly along its east side, because of the **rapid movement** of **ice**.

McDougall Sound — East side

92 Between Cape Airy *(74°59'N, 96°35'W, described in Chapter 7)* and Stanley Head, 13 miles NNE, the coast is low and flat with innumerable raised beaches rising to hills of moderate elevation.

93 **Stanley Head** is a short peninsula forming the west side of **Graham Bay**.

94 **Caution**. — A dangerous **shoal** *(position approximate, not shown on the chart)* lies 2 miles NNE of Stanley Head.

95 **Midshipman Bay** is entered between an unnamed point 4 miles NE of Stanley Head and **Bond Point**, 2 miles farther NE. The bay is divided into two arms by a broad

peninsula, with an elevation of about 60 m, close inside its entrance. **Abbott River** and **Ellis Creek** enter the head of the south arm. Several islets lie inside the entrance to the bay and in the south arm. **Tadman Island**, 3 miles WSW of Bond Point, is low with enclosed lagoons.

McDougall Sound — West side

96 Baker Island *(75°01'N, 97°38'W)* is 4 miles east of Cape Capel *(both features are described in Chapter 7)*.

97 *Cape Capel (Index No. 5600)* is a secondary tidal port in *Canadian Tide and Current Tables, Volume 4*.

98 A good shingle **landing beach**, 4 miles north of Cape Capel, is backed by steep banks rising to 45 m.

99 **Freemans Cove** has a mid-channel depth of 15 m in its entrance increasing to over 50 m in the outer and middle parts of the cove. The west shore is low, rising to **Round Hill** 2 miles inland. West of Round Hill, another, more **conspicuous** sharp-peaked, dark hill contrasts against the light, sandy colour of surrounding hills. Two distinctive sharp-pointed peaks rise above the west shore at the head of the cove; nearby another striking peak has a flat top.

100 **Cape Evans** *(75°07'N, 97°36'W)* rises gently to rounded limestone hills.

101 **Caution**. — **Sand bars** lie offshore between Cape Evans and the point 4 miles north.

102 **Anchorage** has been obtained by an icebreaker about 3 miles WSW of Cape Evans in a depth of 27 m.

103 **Lacey Point** *(75°18'N, 97°53'W)* is the north end of a narrow peninsula. **Bass Point**, 4 miles north, is the east end of a broad peninsula with low, steep cliffs on its north side.

104 The large bay entered between Lacey Point and Bass Point has deep water and good **landing beaches**. **Anchorages** are available to provide shelter from all directions. Depths of 27 to 119 m exist in the bay.

105 **Daniell Point**, 4 miles north, is the east end of a broad peninsula of rounded hills with a steep bluff 0.1 mile inland.

106 **Caution**. — **Bateman Bay**, between Bass Point and Daniell Point, has **irregular depths** varying between 0.6 m, 1.4 miles NNW of Bass Point, and 256 m, 1.3 miles NW of the same point; the bottom is gravel and rock.

107 **Markham Point** *(75°27'N, 97°47'W)* is the south end of a hilly peninsula projecting 5 miles south from the coast.

108 **Caution**. — The bay between Daniell Point and Markham Point is **not sounded**.

109 **Gregory Peninsula**, 5 miles east, is hilly with elevations of about 90 m in its central part. **Brooman Point**, its south end, is rounded and less steep. An abandoned Inuit camp-site is on the point.

110 **Wood Island** *(75°27'N, 97°36'W)* has a moderately steep central ridge and divides the entrance of the bay between Markham Point and Gregory Peninsula into two channels; the west channel is the deepest. An islet lies 1.6 miles south of Wood Island.

111 **Neal Islands** *(75°19'N, 97°34'W)* is a large island, which is moderately steep on its north and east sides, and a small island to the SE.

112 **Caution**. — The smaller of the Neal Islands has a **shoal area** extending 2 miles SE from it. A **shoal** with 5.3 m over it lies 1 mile NW of the larger Neal Island; the bottom is sand and pebbles.

113 **Truro Island** *(75°17'N, 97°11'W)* is rounded and fairly high in its central part where it reaches an elevation of 128 m. The island has cliffs on its NE and SW sides. **Osmer Bay** separates the main island from **James Beer Peninsula** at its south end. This peninsula is low but an isolated hill rises to an elevation of 30 m.

114 **Caution**. — An area of **shallow water**, position approximate, extends about 1 mile south of Truro Island.

115 **Caution**. — The south side of **Akulliak Passage**, north of Truro Island, has **irregular depths** and is **not** fully **surveyed**.

Crozier Strait and approaches

116 **Little Cornwallis Island** *(75°30'N, 96°30'W)* separates Crozier Strait on its west side from Pullen Strait to the east. The island is low with numerous ponds and raised beaches.

117 **Polaris Bay**, on the SW end of Little Cornwallis Island, lies between **Riddle Point** and **Kingmik Point**. **Thomas Honey Island** is 1 mile WSW of Riddle Point.

118 The **tidal range**, large tides, is 1.7 m in Polaris Bay.

119 *Little Cornwallis Island (Index No. 6578)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

120 **Crozier Strait**, between Little Cornwallis Island and Bathurst Island, connects McDougall Sound to Queens Channel. The coast of Little Cornwallis Island, NE of **Royle Point** *(75°30'N, 97°02'W)*, is low and marshy. The west side of the strait is steep-sided, rising to elevations of about 90 m.

121 **Caution**. — Some near-shore areas in Crozier Strait are **not sounded**.

122 **Tidal streams** are diurnal on small tides and semi-diurnal on large tides. Between Kalivik Island and Bathurst Island, the flood sets 165° and the ebb 335° at 0.5 knot. Between Kalivik Island and Little Cornwallis Island, the flood sets 180° and the ebb 000° at 0.5 knot. The **current** sets to the south and is strongest on the west side at about 0.5 knot, therefore, the strongest flow occurs during the flood period and only occasionally reverses direction during the ebb.

123 **Caution**. — During the summer open water period **drift ice** in Queens Channel funnels south and can become jammed in the north end of Crozier Strait, in the vicinity of Kalivik Island and Milne Island. This jam periodically releases ice flows which make their way south through Crozier Strait into McDougall Sound.

124 **Kalivik Island** *(75°31'N, 97°17'W)* is 1.6 miles east of Bathurst Island. **Emikutailaq Island** lies 0.5 mile south.

125 **Caution**. — **Shoal depths** of 5 m extend 2.4 miles north from Kalivik Island.

126 **Milne Island**, 5 miles NE of Kalivik Island, is steep on its west side; its east side is composed of raised beaches.

127 **Caution**. — Several **shoal depths** lie in the centre of the channel between Milne Island and Little Cornwallis Island.

128 **Berkeley Passage**, between Milne Island and Crozier Island, is about 5 miles wide and has a fairly even bottom.

129 **Caution**. — **Depths** in Berkeley Passage are **spot soundings** through the ice; **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*

Pullen Strait and approaches

130 **Ikkaguaq Island** *(75°18'N, 96°37'W)*, in the south approach to Pullen Strait, has an elevation of 2 m. **Wentzal Headland**, 8 miles NE of Ikkaguaq Island, is the west end of **Marshall Peninsula** and attains an elevation of about 90 m.

131 An unnamed inlet is entered south of Wentzal Headland. Several islets lie in the entrance and in the bays of the inlet. **Rookery Creek** enters at the head of the inlet.

132 **Tigumiavik Harbour** *(75°25'N, 96°36'W)*, on the SE side of Little Cornwallis Island, is entered between **Lane Point** and **Thomas Work Island**.

133 **Anchorage** has been obtained 1.4 miles SE of Lane Point in about 85 m, mud bottom.

134 **Templeton Bay**, on the SE side of Little Cornwallis Island, has a fairly low west shore with a steep cliff rising to an elevation of 88 m about 4 miles from its head. The east side rises gently to a range of hills. **Watson Islands** are inside the entrance to Templeton Bay.

135 **Caution**. — **Shallow water** extends 1 mile NW from Watson Islands.

136 **Pullen Strait**, entered from the south between Wentzal Headland and **Wilkes Point**, separates the NE end of Little Cornwallis Island from the NW side of Cornwallis Island and connects McDougall Sound to Queens Channel.

137 **Caution**. — Some near-shore areas in Pullen Strait are **not sounded**.

138 **Caution**. — A **shallow sill** across the north approach to Pullen Strait has a depth of about 14 m over it.

139 **Tidal streams** are diurnal on small tides and semi-diurnal on large tides. Between Marshall Peninsula and Wilkes Point the flood sets 235° and the ebb sets 045° at 0.5 knot.

Queens Channel

Chart 7950

140 **Queens Channel** is bounded on the west by the NE side of Bathurst Island and on the east by Sheills Peninsula and the islands at the north entrance to Wellington Channel. Queens Channel is entered from the east through Maury Channel, Couch Passage and Pioneer Channel; from the south through Pullen Strait and Crozier Strait from McDougall Sound and from the north through Penny Strait between Sargent Point *(76°12'N, 97°30'W)* and Stewart Point, 32 miles ENE.

141 **Caution**. — **Depths** in Queens Channel are **spot soundings** through the ice; **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*

142 **Caution**. — The south part of Queens Channel is relatively **shallow** with a very uneven bottom. There are deep troughs in the north part but a 29 m **shoal depth** lies 10 miles east of Des Voeux Island.

143 **Caution**. — A **strong** southward **current** passes through Queens Channel. The southward-setting flood tide adds to this current and tidal effect is weakest at low water. This southerly flow is mainly responsible for the favourable ice conditions found in this and adjacent channels.

144 Queens Channel is usually covered with a consolidated sheet of first-year ice during winter and spring months. Break-up normally begins during the second week of June with the formation of a small **polynya** around Dundas Island; the polynya slowly expands. The ice in the channel is completely fractured by mid-July with mainly open water prevailing by mid-August.

145 **Caution**. — After break-up, ice conditions in Queens Channel depend upon the extent of the break-up of the ice barrier at the north entrance to Penny Strait. This **multi-year ice** represents a hazard to navigation. During cold summers, there will be no break-up of the ice barrier; this results in open water conditions persisting in Queens Channel. However, when break-up is extensive, considerable multi-year ice will drift into and block the west and south portions of the channel.

146 During the second week of September, new ice begins to form with consolidation of the ice cover occurring the third week of October.

147 *(For detailed information on present and predicted **ice conditions** in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

Queens Channel — South part

148 **Cape Austin** *(75°34'N, 95°35'W)* is very low but has two **cairns** on it; the cape is formed by a series of lagoons. **Disappointment Bay** lies 3 miles NE of Cape Austin and the coast in the vicinity is very low. Lady Hamilton Bay and Cape Gell, 7 miles NE, are described with Maury Channel. Between Cape Austin and Cape Gell, current-formed spits extend seaward.

149 **Caution**. — Thick **multi-year ice** has been observed aground at least 2 miles offshore along this coast.

150 **Houston Stewart Island** *(75°43'N, 95°28'W)* is low and almost covered by raised beaches with a maximum elevation of 87 m.

151 **Sophia Channel**, on the east side of Queens Channel, lies between Baring Island on its west side and Dundas Island and Baillie-Hamilton Island to the east.

152 **Caution**. — **Depths** in Sophia Channel are **spot soundings** through the ice and **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*

153 **Baring Island** *(75°56'N, 95°50'W)* is low and featureless with numerous raised beaches. **Cape Reid** is its north end.

154 **Caution**. — Although Baring Island has the appearance of offering landing strips, it is known to be **unsuitable** for landing **aircraft**.

155 **Fairholme Harbour**, at the SW end of Baring Island, lies between **Knox Point** and **Cape Blanky**, the south end of the island.

156 **Caution**. — An **isolated shoal**, reported to lie 1 mile west of Cape Blanky, was not found on the latest survey.

157 **Crozier Island** *(75°47'N, 96°33'W)* attains elevations of 66 m in its south part and 96 m toward the north end. There are low cliffs around the south and NE ends. A small island is 2 miles east of the north end of Crozier Island; it is low, mainly covered with raised beaches and attains an elevation of 30 m.

Queens Channel — West side

158 **Goodsir Inlet**, entered north of **Black Point** *(75°41'N, 97°21'W)*, has steep beaches on both sides with low cliffs near the middle of its south side. A braided stream enters the head of the inlet through **Polar Bear Pass**, a low marshy valley. At one time *The National Museum of Natural Sciences* had a research station on the north side of Polar Bear Pass, about 7 miles inland.

159 **Rapid Point** *(75°52'N, 97°33'W)* is a delta. **Scoresby Hills**, behind the point, rise to an elevation of 177 m.

160 **Caution**. — **Shoal water** is offshore of the delta at Rapid Point.

161 A small indentation, 6 miles north of Rapid Point, has a number of curving sand bars off it and the beach is flat and sandy.

162 **Reid Islet** *(76°00'N, 97°09'W)*, 7 miles off the coast of Bathurst Island, has an elevation of about 9 m.

163 **Caution**. — **Shoal water** extends 2 miles off the coast of Bathurst Island WNW of Reid Islet. **Shallow water** is reported to extend offshore further to the north.

164 **Airstrip Point** *(76°08'N, 97°27'W)* is the site of two abandoned aircraft landing strips. The winter strip ran parallel to shore at an elevation of 23 m and was 604 m long. The summer strip, at an elevation of about 85 m, was inclined at an angle of about 30° to the shore and had a length of about 305 m.

165 **Caution**. — The **condition** of these airstrips is **unknown**.

166 *Airstrip Point (Index No. 6765)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

167 **Cockscomb Peak**, 2.5 miles north of Airstrip Point, rises to an elevation of 111 m. **Sargent Point**, 1 mile north of Cockscomb Peak, is formed by the entrance of a small stream.

168 **Des Voeux Island** *(76°11'N, 96°57'W)*, with an elevation of about 35 m, lies about 7 miles off the coast of Bathurst Island.

Queens Channel — NE side

169 **Inglis Bay** *(76°20'N, 95°13'W)* is on the north side of Sheills Peninsula. **Robb Peninsula** projects south from the north side of Inglis Bay. **Dyer Island**, SW of Robb Peninsula, is fairly steep on its west side and rises to over 90 m. **Inglis Sound**, at the head of Inglis Bay, has fairly low, rounded land on both sides.

170 **Stewart Point** *(76°21'N, 95°23'W)* is rounded with an elevation of about 60 m.

Penny Strait

171 **Penny Strait**, between the west side of **Grinnell Peninsula** and the NE part of Bathurst Island, is the north extension of Queens Channel. It is entered from the south between Stewart Point and Sargent Point, 32 miles WSW; its north entrance is between Cape Sir John Franklin on the east and Cape Lady Franklin on the west. Both sides of Penny Strait are fairly high and rounded, becoming higher and steeper near its north entrance.



172 **Caution**. — **Depths** in Penny Strait are **spot soundings** through the ice; **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*



173 **Caution**. — Several islands and **shoals** encumber the strait. Although the water is generally deep, Penny Strait has a very irregular bottom.

174 A solid sheet of first-year **ice** usually covers Penny Strait during winter and spring months. Small tidal openings in the north part usually form in the second week of June and expand. The ice in the strait is completely fractured by the end of the month with mainly open water prevailing by the third week of July.

175 Conditions during the remainder of the navigation season are dependent upon the break-up of the ice barrier at its north entrance. During cold summers, the ice barrier will remain solid, thus leaving open water in the strait.



176 **Caution**. — When there is an extensive break-up, large volumes of **multi-year ice** will block Penny Strait for extended periods.

177 During the second week of September, new ice usually begins to form with a solid ice cover developing by the fourth week of October. Tidal openings in the north part of the strait can exist into December.



178 A non-tidal **current** toward the SE at about 0.5 knot has been observed. This flow is strongest on the west side.

Penny Strait — East side

179 Between Stewart Point *(76°21'N, 95°23'W)* and Barrow Harbour, 14 miles NW, the coast is moderately high and rounded.

180 An unnamed inlet, entered north of Stewart Point, is backed by a lake separated from the sea by an alluvial strip 0.15 mile wide. A high hill, with an elevation of 335 m, is 5 miles NE of Stewart Point.

181 **Mount Acland**, 9 miles NW of Stewart Point, rises to over 300 m.

182 **Arrow River** discharges through a delta 6.5 miles NW of Stewart Point.

183 **Bent Arrow Hill** is 4 miles NW of Arrow River.

184 **Assistance Islet** *(76°22'N, 96°13'W)*, 6 miles SW of Bent Arrow Hill, is dark brown in colour with an elevation of 14 m; it is difficult to see at a distance more than 2 miles.



185 **Caution**. — **Sylph Reef**, 3 miles north of Assistance Islet, has a depth of 1.2 m over it. Drift ice grounds on this shoal.

186 **Cape Allard** *(76°30'N, 96°08'W)* is a **conspicuous** flat-topped bluff rising to over 250 m. **Monument Bay**, north of Cape Allard, is an inlet 1 mile long with a valley at its head; streams flow through the valley to discharge into the bay.

187 **Sir John Barrow Monument**, a hill 1.5 miles NE of Cape Allard, rises about 300 m and is prominent from the south. The hill is steep, flat-topped and forms the south entrance point of Barrow Harbour.

188 **Barrow Harbour** *(76°33'N, 95°57'W)* is fairly low on its north side except at **Cape Cracroft** which has an elevation over 150 m. The south side of the harbour is precipitous, rising to 300 m about 0.5 mile inland. **Domville Island**, close within the entrance to Barrow Harbour on the south side, has an elevation of about 46 m. A **sill** across the entrance to the harbour has a least depth of 36 m. Depths of 45 to 136 m are encountered in the west part of the harbour between Domville Island and an unnamed peninsula on the north shore, 2.5 miles east; depths range from 29 to 80 m east of the peninsula.

189 **Caution**. — **Foul ground**, with dangerous **underwater rocks**, lies off the south entrance point west of Domville Island.

190 **Caution**. — **Westerly winds** tend to fill Barrow Harbour with **ice** during the summer season.

191 **Anchorage** can be obtained in 70 m, mud, about 0.3 mile west of the unnamed peninsula on the north shore of Barrow Harbour.

192 A small harbour on the west side of the unnamed peninsula has **landing beaches** that can be used without previous preparation.

193 **Caution**. — A **shallow** cove indents the south shore of Barrow Harbour, opposite the unnamed peninsula.

194 **Lyall Island**, 1 mile west of Cape Cracroft, has an elevation of about 60 m.

195 **Caution**. — A dangerous **underwater rock** lies in the channel between Lyall Island and Cape Cracroft.

196 **Sophia Bay**, NE of Lyall Island, has steep cliffs on its north shore that rise from the water to an elevation of about 245 m; elsewhere the shores are generally low.

197 **Fairholme Island**, 4 miles west of Cape Cracroft, has steep, rounded sides rising to a maximum elevation in its central part of 159 m. **Kerr Island**, 1 mile NW of Fairholme Island, has an elevation of about 80 m. **Toms Island**, 1 mile north of Kerr Island, has an elevation of about 30 m. **Cracroft Island**, 2 miles NW of Toms Island, has about the same elevation as Toms Island.

198 **Caution**. — A **shoal**, with several dangerous **underwater rocks**, lies 1 mile west of Cracroft Island and extends north toward the shore of Grinnell Peninsula.

199 **Hungry Bay**, 2 miles NE of Fairholme Island, has low shores.

200 **Caution**. — **Foul ground** is off the north side of Hungry Bay; the bay offers **poor shelter**.

201 Between Hungry Bay and Cape Sir John Franklin the coast is steep, rising to elevations of 180 to 330 m for the first 4 miles.

202 **Cape Sir John Franklin** *(76°44'N, 96°59'W)* projects west from a fairly high rounded coast with **Mount Percy** rising to an elevation of 300 m a short distance inland. **Pelham Bay**, north of the cape, has elevations of 150 m on its north and south sides but is low at its head.

203 **Spit (Kate) Island** *(76°50'N, 97°07'W)* has a rounded moderately steep coast with cliffs 116 m high at **Hyde Parker Point**, its south end. **Hornby Island**, 1 mile north, has an elevation of about 30 m. **Russell Island**, 3 miles NE of Hornby Island, has about the same elevation.

Northumberland Sound

204 **Caution**. — **Depths** in Northumberland Sound are **spot soundings** through the ice; **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*

205 **Northumberland Sound** indents Grinnell Peninsula at the NE end of Penny Strait and is entered between **Loney Point** *(76°49'N, 96°54'W)* and a small peninsula 2.5 miles NNE. **Mount Beaufort** *(not named on the chart)* is on the small peninsula; **Mount Britannia** is 2 miles north. **Wilson Cove**, close north of the small peninsula, has a narrow entrance. **Herbert Island**, in mid-channel close inside the entrance to Northumberland Sound, has an elevation of about 90 m. Small unnamed islands lie close east of Herbert Island and the small peninsula. **Mount Fitz Roy**, on the NE side of the sound, has an elevation over 210 m. The SW coast is fairly low and rounded.

206 *Northumberland Sound (Index No. 6780)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

207 **Hawker Bay**, the east arm of Northumberland Sound, is entered north of **Milne Peninsula** and has a small unnamed island off its north side. The south side of the bay, with steep cliffs, rises to an elevation of 290 m at **Mount Hawker**. The north side is steep, rising to an elevation of 244 m at **Mount Douglas**.

208 The south arm of Northumberland Sound is entered between **Giffard Point**, to the east, and **Pennell Point**, to the west *(neither feature is named on the chart)*, then trends east and SE toward its head. Cliffs form its south side and the land rises to an elevation of 290 m at **Mount Blanche**.

209 **Caution**. — **Spot soundings** indicate **shoal sills** across the entrances to the east and south arms of the sound with depths of about 12 and 11 m.

Penny Strait — NE approaches

210 **Crescent Island** *(76°59'N, 97°20'W)* has moderately steep sides with cliffs in its SE section. **Pioneer Island**, 3 miles SE, has no outstanding features and **Mount Stafford**, near the south end of Pioneer Island, is difficult to identify.

211 **Caution**. — A **shoal spot sounding** of 7.5 m has been reported about 1 mile east of Crescent Island.

212 **Village Bay**, east of Pioneer Island, lies on the south side of **Village Point**.

213 **Napier Bay** *(76°59'N, 96°30'W)* has two narrow inlets projecting into its south and east ends; the south side of the east inlet is a steep bluff. **Arran Mountain**, on the north side of Napier Bay, has an elevation of 229 m.

214 **Charles Island**, **Macdougal Island**, **Norah Island** and an unnamed island close east of it, all low and featureless, lie in the approach to Napier Bay.

215 **Caution**. — Charles Island is surrounded by **shoal water** and a **shoal area** lies 2.2 miles NE of the island.

216 The **tidal range**, large tides, is 0.8 m at Norah Island.

Penny Strait — Offshore islands

217 **Hyde Parker Island** *(76°29'N, 97°08'W)* has a low peninsula at its north end; **Samuel Peninsula**, which is also low, extends south from the island's west side. **Isle of Mists**, NW of Hyde Parker Island, has an elevation of about 90 m. **Perseverance Shoal** *(not named on Chart 7950)*, position approximate, lies 5 miles SE of Hyde Parker Island.

218 **Caution**. — Perseverance Shoal has a **depth** of 7.3 m over it.

219 The **tidal range**, large tides, is 1.3 m at Hyde Parker Island.

220 **John Barrow Island**, 3 miles north of Hyde Parker Island in the central part of Penny Strait, rises to an elevation of 113 m toward its north end. It is reported that suitable aircraft can make uphill landings on wheels almost anywhere on the smooth southern slope of this wind-swept island.

Charts 7950, 7951

Penny Strait — West side

221 **Cheyne Islands** *(76°18'N, 97°30'W)*, 3 miles east of Reindeer Bay, are three islands composed of alluvium with elevations under 9 m. **North Cheyne Island** is V-shaped with the open end to the north.

222 **Caution**. — The **passages** between Cheyne Islands are **shoal**.

223 **Reindeer Bay** is entered between two low, alluvial promontories. The land around the bay is marked by raised beaches 90 m in elevation.

224 **Caution**. — **Drying** alluvial flats and **shoals** extend off the south side of Reindeer Bay.

225 **Greenwich Hill** *(76°22'N, 97°47'W)* is dome-shaped and rises to an elevation of 122 m. **Paine Point**, 2 miles NE, is the entrance of **Green River**.

226 **Organ Heights**, between Paine Point and **Cape Kitson** 5 miles north, reach elevations of 110 m.

227 **Water Sound** separates Loney Island from Bathurst Island.

228 **Caution**. — Water Sound is **constricted** by a small islet and **shallow water** at its narrowest part.

229 **Loney Island** *(76°34'N, 97°58'W)* rises moderately steeply to elevations of 150 m; its shores show signs of having been subjected to considerable ice pressure with ridge upon ridge of gravel and limestone pushed up around the beach.

230 **Irving Island** is 1 mile east of Loney Island.

231 **Carey Harbour**, NW of Water Sound, has a steep peninsula on its north side rising to an elevation of 120 m. Scree from the peninsula forms the north shore of the harbour. **Saffron Hill**, 2.5 miles NW of the head of Carey Harbour, has an elevation of 178 m.

232 **Hooker Islands** *(76°37'N, 98°05'W)* are two islands composed of limestone; they show signs of being worn away by climate and ice pressure. The south island has an elevation of about 60 m.

233 **Kew Bay** is a slight indentation 4 miles west of Hooker Islands.

234 **Cape Lady Franklin** *(76°40'N, 98°27'W)* forms the NE side of a grey sandstone peninsula and rises in successive gentle slopes to an elevation of 90 m about 2 miles inland. The projecting NE point of the cape provides a good **landing place** for boats.

Bathurst Island — North coast

Charts 7951, 7980

235 **Caution**. — **Depths** are **spot soundings** through the ice and **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the charts.)*

236 The north coast of **Bathurst Island**, between Cape Lady Franklin and Acheron Head, 50 miles WSW, is deeply indented by Young Inlet and May Inlet and fronted by **Berkeley Islands**.

Chart 7951

237 **Berkeley Trough**, north of the Berkeley Islands group, has depths in excess of 500 m. **Grinnell Ridge**, with depths of less than 100 m, extends 50 miles west from Grinnell Peninsula on the north side of Berkeley Trough.

238 **Cracroft Sound** *(76°38'N, 98°40'W)* is on the south side of the Cape Lady Franklin peninsula. Two small inlets are on the south side of the sound. **Ricards Island**, off the entrance to the sound, slopes gently to an elevation of 60 m.

239 **Allard Island** *(76°38'N, 99°18'W)*, 3 miles SW of Ricards Island in the entrance to Young Inlet, rises gently to an elevation of 122 m. A small island lies off its NE end.

240 **Young Inlet**, entered between **Cape Sophia** and **Cape Mary**, penetrates 8 miles SE to **Emma Point**, a headland with cliffs rising to elevations between 150 and 180 m. South of Emma Point, the inlet divides into two south-trending arms. The coasts of the outer part of the inlet are generally low. Near its head the land rises more steeply to broad, rounded hills 150 to 200 m in elevation.

241 The island 2 miles west of **Annie Point** *(76°32'N, 99°04'W)* has an elevation of 30 m.

242 There are two small inlets 2 miles south of Cape Mary.

Sir William Parker Strait

243 **Sir William Parker Strait** separates the Berkeley Islands group from the north coast of Bathurst Island. The strait is entered from the east between **Webb Point** *(76°40'N, 99°28'W)* and Cape Mary.

244 **Caution**. — Sir William Parker Strait has **not** been **surveyed**.

245 **Harwood Island**, 3 miles west of Webb Point, lies near mid-channel and has an elevation of 30 m.

246 **Shamrock Bay**, between Cape Mary and **Morshead Point**, is bordered by rounded hills rising steeply to elevations between 90 and 120 m.

247 **Mount Edgecombe** *(76°34'N, 100°34'W)*, with an elevation of 152 m, is the most prominent hill along this part of Bathurst Island. The shore rises smoothly, in places steeply, to rounded hills between 90 and 150 m high. The hills are cut by ravines of meltwater streams.

248 **Francis Herbert Point** *(76°30'N, 100°59'W)* is low but the land behind it rises to 130 m.

249 **Sherard Osborn Island** *(76°42'N, 99°39'W)* rises gradually to an elevation of 150 m. The island is almost divided in two by **Cator Harbour** on its north side and an unnamed bay on its south side. **Ashington Point** is the east end of Sherard Osborn Island and **Harvey Point** its north end. The unnamed west end of the island is a small peninsula.

250 **Hosken Islands** are two islands close west of Sherard Osborn Island. The north island is connected to Sherard Osborn Island by a low, narrow isthmus, part of which can be **awash** at high water. The south island, separated from Sherard Osborn Island by a very narrow strait, rises steeply to two prominent hills with elevations of 150 m.

Chart 7980

251 **Helena Island**, the largest island of the Berkeley Islands group, is 20 miles long and parallels the north coast of Bathurst Island.

252 **Cape Halkett** is the east end of Helena Island. The island has a broad, fairly level summit with elevations of 200 to 280 m. The south coast is low in places with cliffs almost entirely of sand and limestone. **Devereux Point**, the north end of the island, rises steeply a short distance inland. The north coast is low in the vicinity of **Noel Point** and **Stafford Point**. **Mackay Point** has been described as "a flat plain formed of grey limestone with broken pieces cropping out in some places like ruined huts".

253 **Cape Robert Smart** *(76°36'N, 101°42'W)*, the west end of Helena Island, rises gradually to an elevation of about 150 m; cliffs form the coast SE of the cape. The island 1 mile NW from the cape has a domed summit with an elevation between 45 and 60 m. A smaller island, about 1 mile further west, is appreciably lower in elevation.

254 **Seymour Island** *(76°48'N, 101°16'W)* has an elevation of 28 m. Seymour Island and a 5-kilometer wide sea area around it have been designated as a **Migratory Bird Sanctuary**. Except in cases of emergency, a permit from the *Canadian Wildlife Service* of *Environment Canada* is required to enter this sanctuary. *(See Sailing Directions booklet ARC 400 — General Information, Northern Canada, Chapter 1, for more information.)*

255 **Caution**. — **Shoal water** extends 2 miles NE from Seymour Island.

May Inlet

256 **May Inlet**, entered between Francis Herbert Point and Acheron Head *(76°27'N, 101°54'W)*, penetrates the north coast of Bathurst Island for 25 miles to the entrance to Dundee Bight.

257 **Caution**. — **Depths** in May Inlet and its associated bays are **unknown**.

258 **Caution**. — The amount of **multi-year ice** in May Inlet increases from south to north.

259 **Mount Lockyer** *(76°27'N, 100°45'W)* rises to an elevation of about 250 m. **Grogan Morgan Range**, south of Mount Lockyer, forms the north side of Purcell Bay.

260 **Purcell Bay**, on the east side of May Inlet, is bordered by high ridges with elevations exceeding 200 m and numerous steep cliffs. **Kerswill Island**, with an elevation of about 90 m, and **Balcarres Island**, with an elevation of about 120 m, lie off the north entrance point to Purcell Bay and have some steep slopes. **Gambier Point** is the south entrance point to Purcell Bay.

Chart 7951

261 **Stuart Bay**, south of Purcell Bay, is entered between **Chubb Point** and **Palmer Point**. The bay has high, rounded ridges along its north side. **Jeffries Range** rises steeply from the south shore of the bay and attains elevations in excess of 250 m. **Stuart River** enters the head of the bay. Two small, unnamed islands lie in the north approach to Stuart Bay, 3 miles west and WNW of Chubb Point; the north island has an elevation of about 30 m and the south island an elevation of about 60 m.

262 **Stokes Range**, on the west side of May Inlet, is a hilly mass with rounded slopes and occasional cliffs; it attains a maximum elevation of 412 m.

Chart 7980

263 **Oliver Harbour** *(76°25'N, 101°22'W)* is a small inlet on the west side of the mouth of May Inlet; the land behind the harbour rises gradually.

264 **Phillips Island**, 8 miles SE of Oliver Harbour, is about 1 mile offshore and rises steeply to an elevation of about 160 m.

265 **Dampier Bay** has relatively low shores with several streams emptying into it head. **Lindsay Head**, 3 miles SE, is at the mouth of a small stream.

Chart 7951

266 **Thornton Point** *(76°09'N, 100°40'W)* is a slight projection at the foot of a 229 m hill.

267 **Caution**. — An islet and **shoal** lie 2 miles east of Thornton Point.

268 **Grant Point** *(76°07'N, 100°23'W)*, the NE end of a narrow, steep-sided peninsula, rises to an elevation of 146 m; its isthmus, near the west shore, is low.

269 **Dundee Bight**, entered east of Grant Point, trends 13 miles SSE then 6 miles NE; its shores are steep, rising to elevations of 200 to 250 m.

Chart 7980

270 **Ware Point** is 5 miles west of Oliver Harbour. Acheron Head is 3 miles further west.

Belcher Channel

Chart 7950

271 **Caution**. — **Depths** in Belcher Channel are **spot soundings** through the ice; **shoal depths** have **not** been **examined**. *(For details, see Source Classification Diagram on the chart.)*

272 **Belcher Channel**, 25 miles wide, separates the north side of Grinnell Peninsula from Cornwall Island *(77°37'N, 94°38'W)* and leads east to Norwegian Bay. The SW entrance lies between an unnamed point backed by Arran Mountain, close east of Macdougal Island *(previously described)*, and Cape Butler, 27 miles NNE on Cornwall Island. The channel is entered from the east, 33 miles distant, between Bruce Point, on Grinnell Peninsula, and the unnamed, rounded headland on Cornwall Island close east of Belcher Island.

273 **Caution**. — Belcher Channel has **low shores**; only Table Island and Exmouth Island provide good visual and radar navigation marks.

274 The **tidal range**, large tides, is 0.9 m in Bere Bay, on the south side of Belcher Channel.

275 Sparse observations indicate a westerly **current** flows through Belcher Channel on a rising tide and an easterly one on a falling tide, with rates between 0.4 and 0.8 knot.

276 **Caution**. — **Strong currents** have been reported over the shoal area north of Bruce Point.

277 Belcher Channel is covered with a solid **ice** sheet from November to June. Fracturing of the consolidated ice cover normally begins during the last week of July. By the third week of August concentrations have reduced to 6/10ths or less.

278 **Caution**. — **Multi-year ice** drifts into Belcher Channel from the west and is a significant hazard to shipping. In some years multi-year ice completely blocks the channel.

279 New ice usually begins to form during the first week of September with a consolidated ice cover forming by mid-October. Considerable variation in break-up and freeze-up can occur from year to year.

280 *(For detailed information on present and predicted **ice conditions** in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

Belcher Channel — South side

281 **Cape Briggs** *(77°04'N, 95°43'W)* is a delta, backed a short distance inland by hills over 150 m high.

282 **Cape Ogle**, 3 miles east of Cape Briggs, has a steep isolated bluff with an elevation of 150 m on its north side.

283 Two islands lie close offshore, 4 miles SE of Cape Ogle, off the mouth of **Lyall River**.

284 **Whitmore Point** is 7 miles SE of Cape Ogle. East of Whitmore Point, the coast rises abruptly to 90 m and further inland reaches elevations of 300 m.

285 **Princess Royal Island** has steep shores and a turret-shaped peak in its north part which has an elevation of 120 m.

286 **Bere Bay**, entered east of Princess Royal Island, has low shores; a river enters the head of the bay through a small delta. **Ensorcellement River** flows into the west side of the bay through a large delta.

287 **Bruce Point** *(76°56'N, 93°54'W)* is low. **Mount Parker**, elevation 244 m, is 8 miles south of the point.

288 **Caution**. — A large **shoal patch**, with a depth of 4 m 7 miles north of Bruce Point, extends north for some 10 miles from the NE corner of Grinnell Peninsula.

Belcher Channel — Offshore islands

289 **Table Island**, 6 miles north of Cape Ogle, attains a maximum elevation of 190 m at its north end; cliffs which make a good radar target form its north coast. The east and west sides of the island are comparatively low-lying and the interior is flat-topped. **Cape Ursula**, its south end, is formed of bold bluffs and attains an elevation of 168 m about 1 mile inland.

290 **Londesborough Harbour** is a small, sheltered inlet in the NW part of Table Island.

291 **Exmouth Island**, 2 miles west of Table Island, gives a good radar response and resembles a broad-brimmed hat in shape. **Milne Peak** has an elevation of 180 m; it is composed of red sandstone; the peak is capped by limestone 6 m thick.

292 **Ekins Island**, 2 miles south of Exmouth Island, has an elevation of about 12 m and is flat. A sloping beach of fine sand, with black mud beneath, is at the west end on the south side of the island.

293 **Caution**. — **Shoal ridges**, caused by ice scouring, occur some distance offshore of Ekins Island.

294 **Caution**. — A large **shoal patch**, with depths under 5 m, lies centrally in the east part of Belcher Channel.

Belcher Channel — North side

295 **Cape Butler**, on **Cornwall Island**, has a large delta 2 miles east.

296 **Caution**. — A **drying bar** and **shoals** are offshore, extending east from the delta.

297 North of Cape Butler, the west side of Cornwall Island is very low, rising gradually inland to elevations of about 180 m.

298 **Caution**. — **Shoal water** extends up to 3 miles offshore from the west coast of Cornwall Island.

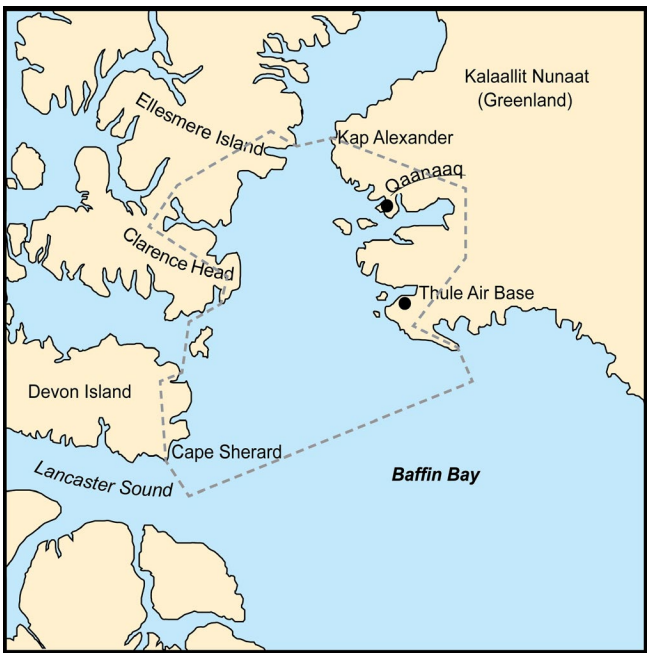
299 The south coast of Cornwall Island is low and featureless with the highest land 10 miles inland. **Cape O'Brien**, 10 miles east of Cape Butler, and **Pell Point**, 8 miles further east, are deltas. Low rounded cliffs occur close east of Cape O'Brien. **Mount Greenwich** *(77°33'N, 94°44'W)* attains an elevation of 175 m.

300 **Caution**. — **Shoal water** extends about 5 miles from the SE corner of Cornwall Island. **Belcher Island**, connected to Cornwall Island by a spit at its NW end, is low-lying and surrounded by **shoal water**.

301 *(For a description of the east coast of Cornwall Island, see Chapter 10. For description of the north coast of Cornwall Island, see Sailing Directions booklet ARC 403 — Western Arctic, Chapter 12, Hendriksen Strait.)*

Chapter 9

Baffin Bay
North part



General

Charts 7010, 7071, 7220, 7302, 7310

1 The north part of Baffin Bay is bounded on the west by the east coast of Devon Island and part of the east coast of Ellesmere Island, and on the east by part of the west coast of Kalaallit Nunaat (Greenland). The boundary between Baffin Bay and Smith Sound is a line joining Cape Isabella in Ellesmere Island to Kap Alexander in Kalaallit Nunaat (Greenland).

2 Nares Strait *(described in Chapter 11)*, with Smith Sound at the south end, leads from Baffin Bay north to the Arctic Ocean.

3 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all Canadian waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

4 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

5 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

6 **Caution**. — Most **depths** in the area described in this chapter are based on **track soundings** and **reconnaissance surveys**, and most of the inshore areas are **not surveyed**. *(For details, see Source Classification Diagram on the charts.)*

7 **Depths** in the central part of the north end of Baffin Bay are generally over 109 fm (200 m) although patches under 55 fm (100 m) are off the SE part of Ellesmere Island. There are no known offshore dangers.

8 *North Star Bay (Index No. 3670)* and *Thule (Index No. 3671)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

9 The **current** off the west coast of Kalaallit Nunaat (Greenland) sets NW along the coast from Kap York with a rate of about 7 miles per day and, as indicated by the distribution of icebergs, divides into two parallel streams. Off Kap Alexander the flow fans out to westward and slackens to about 5 miles per day although a set of up to 30 miles per day has been reported. *(See also Sailing Directions booklet ARC 400 — General Information, Northern Canada.)*

10 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/*.)*

11 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*

12 *(For general **ice conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

13 The usual **route** for vessels proceeding to the north end of Baffin Bay or to Lancaster Sound in the early part of the navigation season is to follow the Kalaallit Nunaat (Greenland) coast northward to the vicinity of Kap York in order to reach Smith Sound where there is an area of open or almost open water most of the year. In July in an average year this previously isolated area is joined by a belt of more or less open water extending up the west coast of Kalaallit Nunaat (Greenland) between the land-fast ice and the "middle pack" in the central part of Baffin Bay.

14 This route, known to whalers as the "**Northabout Passage**", may always be successfully traversed, if not in June, then in July or August. Passage along the west side of Baffin Bay can usually be made only after about the middle of August.

15 **Caution**. — The **magnetic compass** is erratic in the area described in this chapter. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

Baffin Bay — NW side

Charts 7220, 7310

Devon Island

16 Between Cape Sherard *(74°36'N, 80°13'W, described in Chapter 5)* and Cape Fitz Roy, 57 miles to the north, the east coast of Devon Island is backed by generally rounded coastal mountains. Visible peaks are rather low and near the sea. Inland, there is a continuous domed ice cap. The ice starts in most cases near the coast at elevations not much above 305 m, leaving very little ice-free land near the sea. The ice cap reaches an elevation of over 1829 m about 25 miles inland. A number of glaciers from the ice cap reach tidewater. *(For general information on the physiography of Devon Island see Chapter 3 of Sailing Directions booklet ARC 400 — General Information, Northern Canada.)*

17 Between Cape Sherard and Bethune Inlet, 13 miles north, the coast is low and rocky; glaciers reach the sea in the northern part.

18 **Bethune Inlet** *(74°53'N, 80°20'W)* penetrates the coast for 9 miles between Devon Island and Philpots Island.

19 **Caution**. — A **shallow bar**, which nearly dries, crosses the inlet about 6 miles within the entrance. The upper part of the inlet appears to be **shallow**.

20 **Philpots Island**, connected to Devon Island by a low isthmus, is generally low except in its NE part where a hill rises to 241 m. **Beatrice Point** is the south point of the island; **Cape Cockburn**, the east point, is the end of a low flat peninsula. **Cape Horsburgh**, the NE end of the island, is reported to appear from seaward as three rounded hills.

21 **Caution**. — **Foul ground** extends off Cape Horsburgh and the coast to southward for 3 or 4 miles.

22 **De Ros Islands** *(a local name, 74°48'N, 79°33'W)*, two islands 3 miles off the SE coast of Philpots Island, are rocky and dark coloured. The east island has an elevation of 9.5 m.

23 **Caution**. — The west island of De Ros Islands is reported to be **awash** most of the time. A **drying rock** lies close WNW of the west island. A **shoal area** with depths of 10 m or less extends up to 0.5 mile ENE of the east island. A **shoal depth** of 22.8 m lies 2.2 miles NE of the east island.

24 **Hyde Inlet**, entered between the north side of Philpots Island and **Hodgson Head**, 5 miles NW, has a large glacier along its west shore. About 4 miles NNE of Hodgson Head, a glacier reaches the sea on a 2-mile front.

25 The land behind **Cape Parker** *(75°14'N, 79°30'W)* rises to 402 m. The cape provides the best radar target in this area for a vessel approaching Lady Ann Strait from southward. **Bowles Bay**, 4 miles to the north, has a glacier at its head; other glaciers reach the sea south of **Johnson Point** and between Johnson Point and Raper Point. Cliffs are along the coast in the vicinity of these two points.

26 **Raper Point** *(75°27'N, 79°36'W)*, elevation 183 m, is the end of a small peninsula connected to Devon Island by a low isthmus. About 6 miles inland the ice-capped land rises to 610 m.

27 **Caution**. — Islets and **drying rocks** lie south of Raper Point and east of the small point 2 miles south of Raper Point.

28 **Caution**. — Grounded icebergs observed between Cape Parker and Raper Point indicate the possibility of **shoal water** off this part of the coast.

29 An unnamed inlet, entered between Raper Point and Cape Fitz Roy, has a large glacier at its head. The inlet has steep cliffs, rising to over 427 m, along its sides. The cliffs are broken by several small glaciers.

30 **Cape Fitz Roy** is the SE entrance point to Jones Sound. The cape is a steep-sided promontory with a flat top about 366 m in elevation.

Charts 7310, 7302

Jones Sound — East entrance

31 **Coburg Island** *(75°57'N, 79°26'W)*, 21 miles ENE of Cape Fitz Roy in the entrance to Jones Sound *(described in Chapter 10)*, separates **Lady Ann Strait** from **Glacier Strait**. The island is generally high with black, almost perpendicular walls of rock rising abruptly from the sea to sharp-peaked mountains. It is capped by a thick ice field from which numerous glaciers flow down to the sea. The island rises in its central part to 787 m; in its north part a **conspicuous** cone-shaped peak with an elevation of 823 m is visible for 35 miles.

32 **Marina Peninsula**, the SE end of Coburg Island, looks from a distance like an island. The peninsula has an elevation of 640 m.

33 **Caution**. — A **drying rock** lies north of the east end of the peninsula.

34 **Princess Charlotte Monument**, close to the east of Marina Peninsula, is a sharp, high pinnacle of rock which can be seen for 15 miles in good visibility.

35 **Caution**. — About five rocks, projecting well above water, are off the NW tip of Princess Charlotte Monument. Several dangerous **underwater rocks** are within this group. **Shoal depths** of 12.8 to 23.8 m have been found in the channel between these rocks and Marina Peninsula.

36 **Cambridge Point** *(75°48'N, 79°24'W)*, the south point of Coburg Island, separates bays to the north and west. In these bays there are beaches with considerable amounts of alluvium. **Cape Spencer**, on a peninsula which rises to about 488 m, is the SW point of the island. **Phillips Point** is the NE end of Coburg Island.

37 A large, detached above-water rock *(not shown on the charts)* lies close off the NW tip of the island.

38 **Caution**. — **Shoal depths** of 9.8 and 17.4 m lie 3.7 miles SSE and 6.8 miles SE, respectively, from Cambridge Point.

39 The **tidal rise** is reported to be 3 to 3.7 m above chart datum in this area.

40 ***Nirjutiqavvik National Wildlife Area*** *(NWA)* includes Coburg Island and a 10-km wide maritime zone surrounding the island. A permit from the *Canadian Wildlife Service* of *Environment Canada* is required to enter the wildlife area except for certain purposes. Activities such as hiking, canoeing, photography and bird watching can be carried out without a permit in most areas. *(See Wildlife Area Regulations at* https://laws-lois.justice.gc.ca/eng/regulations/ *for more information.)*

41 The north side of Glacier Strait from King Edward Point *(described in Chapter 10)* to Cape Norton Shaw, 43 miles NE, consists mostly of cliffs, rising in places to about 610 m. The cliffs are broken by several glaciers; the named glaciers are **Wilcox Glacier** *(76°11'N, 80°44'W)* and **Cory Glacier**. The coast is backed by a high ice cap pierced by mountain peaks.

42 **Stewart Islands** lie about 1.5 miles off Cory Glacier The larger of the two islands rises from steep cliffs to a plateau with an elevation of about 457 m. The smaller island is conical with an elevation of 152 m.

Ellesmere Island — SE coast

43 **Cape Norton Shaw** *(76°28'N, 78°24'W)*, the SE point of **Ellesmere Island**, is a steep headland rising to about 305 m with a low rock point at its base and a rocky islet close offshore. For 2.5 miles north of the cape the coast is bold, rugged cliffs.

Chart 7302

44 Much of the coastline between Cape Norton Shaw and Cape Isabella, 120 miles NNE, consists of glaciers with spreading tongues, some of which are probably resting on the sea bed. Between the glaciers, the coastal mountains present precipitous faces to the sea and frequently exceed

610 m in elevation. Inland, the land rises to ice caps pierced by sharp nunataks which may rise to more than 1219 m.

45 **Clarence Head** *(76°47'N, 77°47'W)*, 22 miles NNE of Cape Norton Shaw, appears from the NE as a high, rounded black headland. The head is backed by numerous tall peaks, many of which are snow-covered. **Mount Glentworth**, 7 miles NNW, is a double cone rising to 725 m. The west side of Baffin Bay in this vicinity is reported to catch the full strength of the current from the north, thus the sea ice is thin or absent.

46 **Cape Combermere** is precipitous, rising to over 701 m with glacial tongues on each side.

47 **Smith Bay** is entered between Cape Combermere and **Boger Point** *(77°18'N, 78°50'W)*, 21 miles NNW. Boger Point rises to about 457 m. Most of the shores of Smith Bay are bordered by glacial ice which pours down the mountains on either side. **Mittie Island**, in the south part of the bay, rises to a conical peak with an elevation of about 457 m; its west and south shores are low and shelving. The small island to the SW is tabular in shape with an elevation of 152 m.

48 **Cape Stokes** *(77°11'N, 79°10'W)*, on the south side of the entrance to Makinson Inlet, 17 miles NW of Cape Combermere, rises precipitously to more than 610 m and is flanked on both sides by a steep, broken, mountain wall. **Thorndike Peaks**, to the SW, have four main peaks rising from 701 m to nearly 1219 m.

49 **Caution**. — Several glaciers near Cape Stokes have moraine ridges to seaward, indicating relatively **shallow water** offshore.

50 **Makinson Inlet** and the small inlet which projects south from it, 12 miles within the entrance, are bordered by high, precipitous, frost-shattered mountains. These mountains are separated by numerous glaciers, many of which debouche tongues into the sea. **Bowman Island** *(77°15'N, 80°16'W)*, in mid-channel 15 miles west of the entrance, rises as a sharp spectacular spire to over 427 m.

51 **Caution**. — The **magnetic compass** is useless in Makinson Inlet. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

52 **Swinnerton Peninsula**, a tabular mass with an elevation of 366 m, divides the west end of Makinson Inlet into two branches. The SW branch penetrates a densely-ravined plateau with mountains seldom exceeding 610 m in elevation; there are few glaciers. The NW branch runs between mostly steep shores; there are deltas at the mouths of the numerous streams. Several glaciers reach the NW branch from the ice fields to the east.

53 Several glaciers discharge into **Boger Bay** *(77°20'N, 78°55'W)*, on the north side of the entrance to Smith Bay.

54 The coast for 6 miles NE of Boger Point is cliffs but farther north past **Cape Mouat** and on to Talbot Inlet it is formed by an almost continuous ice sheet. **Eskimo Bluff**, a 2-mile line of cliffs with an elevation of 287 m, breaks the ice sheet near its south end. **Inglefield Mountains** parallel the coast about 15 miles inland, stretching from Makinson Inlet to Talbot Glacier and rising to about 1524 m.

55 **Easter Island** *(77°49'N, 77°50'W)* is mostly ice-covered. Glaciers descend steeply to the sea and their tongues obscure the coastline in places. **Mount John Ross** rises to about 762 m in the NE part of the island near **Cape Hurd**. A small rocky island close south of Easter Island has an elevation of 152 m.

56 **Talbot Inlet** is entered between Cape Hurd and **Cape Faraday**, 10 miles east. A number of small glaciers terminate along the north shore of the inlet.

57 **Caution**. — **Talbot Glacier**, on the west shore of the inlet, produces large numbers of **icebergs**.

58 **Orne Island** *(77°52'N, 76°22'W)*, 5 miles east of Cape Faraday, has an elevation of about 152 m. **Goding Bay**, 7 miles to the north, has **Sparks Glacier** on its NW side. **Paine Bluff**, flat-topped with an elevation of more than 305 m, forms the east shore of Goding Bay. **Cape Dunsterville**, elevation about 183 m, appears from the east as a large flat-topped headland rising from the water; a short distance to the north the land rises to about 457 m.

59 The coast between Cape Dunsterville and **Lyman Glacier** *(78°03'N, 75°46'W)* is a narrow strip backed by cliffs which rise to about 213 m. Ice-covered land rises to over 610 m to westward. Midway between Lyman Glacier and Paget Point, an unnamed glacier reaches the sea.

60 **Caution**. — Lyman Glacier and the unnamed glacier to the north have brought vast amounts of **sediment** down to the sea. **Shallow banks** have formed along the shore abreast and to the south of these glaciers.

61 **Paget Point**, with steep cliffs, is the end of a flat-topped promontory rising to over 305 m.

62 **Cadogan Inlet** has **Cadogan Glacier** entering its head over a front of about 4 miles. **Stanfield Point** *(78°09'N, 76°00'W)*, 6 miles west of Paget Point, is a sharp, triangular hill, with an elevation of 277 m. Stanfield Point is flanked by the low land which fronts the south shore of the inlet. West of Stanfield Point, the south shore is formed of low ice cliffs. **Gale Point**, the NE entrance point of Cadogan Inlet, is formed of sandstone cliffs rising

to 411 m. The north shore of the inlet from Gale Point west for about 9 miles is formed by a line of cliffs about 305 m in elevation backed by high, ice-covered land. Between there and the head of the inlet a number of glaciers reach the water. **Crane Mountain**, elevation over 762 m, and **Mount Leeds**, elevation over 1707 m, rise 7 miles west and 7 miles north, respectively, of the head of the inlet.

63 Between Gale Point and Cape Isabella, 9 miles NNE, the coast is low and the cliffs recede from the shore. Raised beaches occur in the south part of this stretch; the north part is glacial outwash, containing many streams.

64 **Cape Isabella** *(78°20'N, 75°00'W)* is bare and flat-topped, rising precipitously from the sea to 244 m. The cape is composed of dark granite with light patches, by which it can be identified, and from the south it is very useful for tangent bearings. **Mount Bolton**, ice-mantled and dome-shaped, rises to over 762 m a few miles to the west.

Baffin Bay — NE side

Kalaallit Nunaat (Greenland)

65 From Kap York *(75°55'N, 66°25'W)* to Kap Alexander, 162 miles NNW, the coast of **Kalaallit Nunaat (Greenland)**, formerly known as **Grønland**, rises steeply from the sea to attain elevations of 914 to 1219 m and occasionally more a few miles inland. The shoreline is cut by several fiords of which the longest are Wolstenholme Fjord, Olrik Fjord and Inglefield Bredning. The inland ice cap is, in most places, quite near the shore and many glaciers extend to the sea. The coastal cliffs have layers that range in colour from almost white through pink and yellow to dark brown with intrusions of black. A few islands lie off the entrances to the fiords and Carey Øer, an isolated group, lie about 25 miles from the Kalaallit Nunaat coast.

66 At places along this coast the vegetation is comparatively luxuriant, with a thick growth of grass and numerous flowering plants. Many hares and some caribou are found in the interior of the country, and the coast is visited by numerous gulls, auks and eider ducks, some of which breed here. Numbers of seals congregate on the ice offshore in the spring and summer months; narwhal and beluga are also found in this region, and walrus can be encountered off the entrance to and in Wolstenholme Fjord and in the approaches to Inglefield Bredning.

67 Calm weather is frequent throughout the year, and the prevailing winds are generally light. The greatest average wind velocity is from the SE; the least is from the north. Storms may occur at all seasons; their direction is mostly from SE or south. Precipitation is slight throughout the year, but fog is frequent during the summer months. Mirages may often be observed during calm weather in spring and fall.

68 In calm weather, **ice** begins to form in the bays in the middle of September. By November a belt of ice has usually formed along the coast and attains its greatest width, 15 to 20 miles, in March and April. In May the ice begins to break up, and by the end of May or in the early part of June there is usually open water around the projecting capes and promontories, but masses of broken ice still drift along the coast as late as July.

69 The bays and sounds along this coast are open only in August and September, but outside them storms may break up the ice at any time. The sea is usually navigable in July to Kap Atholl *(76°23'N, 69°38'W)* and sometimes as far north as Kap Parry, 45 miles farther NNW. In August and September the coast is usually free of ice as far as Kap Hatherton in Smith Sound.

70 *(See Danish Charts 3100, 3130, 3200 and 3210 for further information. For information on ship reporting systems covering the waters of Kalaallit Nunaat (GREENPOS and KYSTKONTROL), see United States National Geospatial-Intelligence Agency (NGA) Pub. 180, Sailing Directions (Planning Guide) Arctic Ocean.)*

Kap York to Kap Atholl

71 **Kap York** is a bold, bluff headland with an elevation of about 442 m and dark, snow-capped cliffs. The cape is reported to be visible for 30 miles. A **monument**, erected in honour of R. E. Peary, stands on Kap York. The 18-m high monument is a granite column on a hexagonal base surmounted by a metal pyramid.

72 **De Dødes Fjord** and **Sidebriksfjord**, separated by **Akuliaruserssuak**, a peninsula, are entered north of Kap York.

73 The coast between Kap York and Parker Snow Pynt, 33 miles WNW, is a series of steep bluffs and precipitous cliffs, 305 to 610 m in elevation, separated by numerous small glaciers. In early summer, after the melting of the snow is well under way, microscopic plants growing in the snow produce the so-called red or pink snow which lends colour to the cliffs and inspired Sir John Ross to name them the **Crimson Cliffs**.

74 **Parker Snow Pynt** *(76°07'N, 68°36'W, not named on Chart 7302)* is the west end of a high land mass.

75 **Conical Rock** lies about 2 miles SW of Parker Snow Pynt. **Conspicuous**, the rock has an elevation of 348 m, and is dark, steep and sharp-pointed. There are no known dangers in the channel between Conical Rock and

the mainland, and vessels pass on either side depending on ice conditions.

76 **Caution**. — Areas of **magnetic disturbance** are found in the vicinity of Conical Rock and off Crimson Cliffs.

77 **Parker Snow Bugt** *(76°08'N, 68°40'W)* has hills at its entrance which rise in abrupt cliffs for nearly 549 m then rise less abruptly for another 305 m to the lower level of the inland ice cap. At the head of the bay there are two glaciers, divided by a sharp rocky hill 293 m in elevation, with their fronts ending against high steep banks of till. Numerous sea birds breed in the cliffs at the entrance to the bay. A settlement on the north side of the bay near its head is usually deserted in summer. A small islet close to the shore just within the south entrance point has a **beacon** on it.

78 Excellent **anchorage** is available in about 18.3 m, clay, at the head of Parker Snow Bugt about 0.15 mile offshore.

79 **Kap Dudley Digges** *(76°10'N, 68°48'W)* is a precipice about 244 m in elevation; the cape is clear of snow with yellowish vegetation at the top. Inland from the cape there are snow-capped peaks about 396 to 701 m in elevation.

80 **Pitugfik Gletscher** is **conspicuous**. Its face is a 3-mile long arc of low ice cliffs rising from the sea. Close north of the glacier there is an arched grotto about 6 m high close to the high water mark.

81 **Caution**. — Large **icebergs** frequently break off from the face of Pitugfik Gletscher and many are seen **aground** on **ledges** for miles on both sides of the glacier.

82 Good **anchorage** in 42 to 46 m, mud, can be obtained on the north side of the face of the glacier.

83 **Pingorssuit** *(not named on Chart 7302)* is a large ice-free plateau between Pitugfik Gletscher and Wolstenholme Fjord, entered 15 miles to the NW. This plateau is traversed by many deep clefts and rises from steep coastal cliffs to a maximum elevation of about 884 m in its central part. The cliffs on the SW side of the plateau, between Pitugfik Gletscher and Kap Atholl, contrast with those of Kap York; they lack a crowning ice cap. The glaciers of the Kap York cliffs are replaced here by narrow, grass-carpeted ravines. Little auks breed in the cliffs along this section of the coast, and numbers of small, grass-covered platforms and terraces at the foot of the cliffs are favourite summer camping places of the Inuit.

84 At **Quaratit**, the site of a former Loran station 5 miles SE of Kap Atholl, there is a **landing beach**; the water shoals gradually from a depth of 7 m, 0.5 mile offshore. The bottom near the beaching area is sand and gravel, with some small stones close to the waterline.

85 **Caution**. — Two flat **underwater rocks**, reported to lie in about 4.3 m of water 46 m from shore on the NW side of the landing beach, present the only known dangers.

86 **Caution**. — **Tonge Klippe**, a tabular **rock awash** about 0.05 mile long, lies parallel to the coast about 2.5 miles SSE of Kap Atholl. On a mountain side near this danger, a dark patch named **Pâ** is prominent.

Bylot Sund

87 **Kap Atholl** *(76°23'N, 69°38'W)* is the SE entrance point to **Bylot Sund** which leads to North Star Bugt.

88 **Caution**. — **Submarine cables** are laid through Bylot Sund. The sound is deep and clear of dangers.

89 The cliffs along the SE shore of Bylot Sund become less abrupt and lower towards North Star Bugt. The abandoned settlement of **Narssurssuk** stands on a delta at the mouth of a river valley. Within the valley green plains alternate with great boulders.

90 **Wolstenholme Ø**, which appears saddle-shaped from southward, rises to its highest elevation, 549 m, in its NE part near **Kap Travers**. **Dalrymple Rock**, off the NW part of the island, is sharp-pointed and conical.

91 **Caution**. — Local **magnetic disturbance** has been reported in the vicinity of Wolstenholme Ø. **Edderfugle Øer**, inhabited by numerous seabirds, consist of islets and rocks lying on a **shoal** 2 miles north of Wolstenholme Ø. An **uncharted** dangerous **underwater rock** lies midway between Edderfugle Øer and Wolstenholme Ø.

92 **Saunders Ø** *(76°34'N, 69°45'W)*, which rises steeply to an almost level top, has distinctive red- and yellow-banded cliffs, the breeding place for innumerable guillemots, gulls and stormy petrels. The NW part of the island is a huge, semi-detached mass of rock. Because the ice around Saunders Ø breaks up early it was formerly a rendezvous for whalers waiting for the water to open in the NW part of Baffin Bay.

93 **Manson Øer** *(76°39'N, 69°10'W)*, which lie on the north side of the entrance to Wolstenholme Fjord, are reported to have two low **uncharted** islands in their vicinity. A small low rock lies 1.2 miles south of **Avatdliarssuk**, the western island of Manson Øer. The area up to 5 miles south of these islands is **unsurveyed** and should be navigated with special caution.

Wolstenholme Fjord

94 **Wolstenholme Fjord**, entered between an unnamed slight point 13 miles NE of Kap Atholl and **Kap Abernathy** *(76°41'N, 69°15'W)*, 10.5 miles NNW, extends east about 15 miles to its head where two glaciers, **Knud Rasmussen Gletscher** and **Harald Moltke Brae (Sermerssuak)** are separated by a land mass which rises to almost 914 m.

95 **Caution**. — **Navigation** is **prohibited** in the inner 10 miles of Wolstenholme Fjord. Dangerous **underwater rocks** are reported off the south shore of the fiord about 3 miles NE of North Star Bugt, just outside the prohibited area.

96 Along the south side of the fiord, east of North Star Bugt, two large valleys extending from the shore to the inland ice are separated by a plateau which has the appearance of an oasis against the surrounding landscape.

97 The north shore is high and bold but not precipitous and is marked by **Salisbury Gletscher** and **Chamberlin Gletscher**; only the latter reaches the sea.

North Star Bugt

98 **North Star Bugt** *(76°34'N, 68°50'W)* is a bay on the south shore of Wolstenholme Fjord close within the entrance. The bay encloses the harbour at the port of **Pittufik**, serving **Thule Air Base** *(U.S.A.)*. The port has an airfield, a radio and meteorological station, a small natural harbour, an anchorage, and alongside berthing facilities. The bay is approached through Bylot Sund, which separates Wolstenholme Ø and Saunders Ø from the mainland to the SE.

99 **Caution**. — It is **prohibited**, under the laws of Denmark and the United States, to **transit**, **enter** or **exit** the defence area of Thule Air Base. With certain exceptions, permission is required from the Danish *Ministry of Foreign Affairs* and from the *U.S. Air Force Base Authority* for individuals to enter Thule Air Base and the surrounding defence area, including North Star Bugt. *(For more information, see* https://www.petersonschriever.spaceforce.mil/*.)*

100 *North Star Bay (Index No. 3670)* and *Thule (Index No. 3671)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

101 **Umanak (Dundas Fjeld)** *(76°34'N, 68°54'W, not named on Chart 7302)* is a **conspicuous**, dark, isolated **mountain** with a flat top. The mountain is at the end of a low peninsula on the north side of North Star Bugt. A **conspicuous cairn**, a monument to Knud Rasmussen near the east side of the summit, is reported to be visible for 10 miles. A second cairn near the middle of Umanak is reported to be visible for about 3 miles. Two white cairns are, respectively, 0.2 mile SE and 0.3 mile east of Rasmussen's cairn. The steep sides of the mountain are dangerous due to avalanches.

102 North Star Bugt is entered between Umanak and **Astro Pynt** *(not named on Chart 7302)*, a low point 0.9 mile SSE.

103 There are steep cliffs along the SE shore of the harbour; these terminate in a shallow bight into which a river called **Pitufgiup Kugssua (Pitufik)** *(not named on Chart 7302)* flows.

104 The former Danish settlement of **Dundas** is at the head of North Star Bugt. The former Inuit settlement of Thule once located here, including the church and hospital, has been moved 56 miles north to Qaanaaq, on the north shore of Inglefield Bredning.

105 **Caution**. — The harbour in North Star Bugt is unusable due to **ice** from the end of October to the beginning of July; icebreakers, stationed in the area, keep the harbour open for reinforced vessels during the navigation period from July to the end of October.

106 **Caution**. — **Drift ice** is abundant from July to October. **Icebergs** and **growlers** are present year-round. Normal ice movements vary with wind direction and velocity.

107 The least desirable wind is from the westward. With a westerly wind, the concentration of ice in the harbour increases, and at times small-craft operations must be halted. A westerly wind, with a velocity of 2 knots or more, is sufficient to form a line of ice southward from Umanak to the southern shore of Wolstenholme Fjord. Even light westerly winds can bring enough ice into North Star Bugt to necessitate a withdrawal of large vessels.

108 Northerly winds move ice out of North Star Bugt. Umanak prevents ice in Wolstenholme Fjord from entering the harbour, but a gradual accumulation usually occurs along the southern shore of the fiord as far westward as Wolstenholme Ø, hindering the entrance and departure of vessels.

109 Easterly winds, with a velocity of 2 knots or more, in combination with a falling tide, will clear the harbour of drift ice. Easterly winds of 10 to 15 knots alone will move drift ice out at any time and speed the spring break-up of large floes in the anchorage area. Easterly winds also accelerate the break-up of ice in Wolstenholme Fjord.

110 The maximum winter **ice thickness** observed in the harbour is recorded as 1.2 m.

111 The **flood stream** attains a maximum rate of 1.5 knots and flows into the harbour on the northern

side and out on the southern side where it joins the flood stream flowing eastward along the south side of the causeway extending from Astro Pynt *(76°33'N, 68°51'W)*.

112 A **tidal stream** off the former landing beaches south of Astro Pynt is estimated to flow in a southerly direction with a velocity of 1 to 2 knots during the rising tide.

113 The **ebb stream** attains a maximum rate of 1.5 knots; it flows into the southern side of the harbour from southward of the causeway and out on the northern side of the harbour.

114 **Wind direction** is variable, but generally prevailing from a westerly direction in June and July and shifting to easterly in September. Average winds are light, being 4 to 11 knots or less 82 per cent of the time.

115 September and October are the months in which the possibility of **storms** is greatest; storms are rare in July and August. Historically, wind direction during these storms has been mostly from the SE quadrant.

116 Visibility should be over 1 mile about 93 per cent of the time during June, July, August, and September. During a three-year period, visibility in these months was below 0.25 mile on 95 separate occasions because of fog or snow showers, with 32 instances occurring in July and only 3 in August. All snow showers occurred in September, however, light snow flurries may be encountered during July and August. During the month of October snow is almost a daily occurrence, but visibility is generally good.

117 **Cloud coverage** may be 8/10 to overcast about 59 per cent of the summer.

118 **Mean temperature** over a three-year period for the four months June - September was 1°C. During October the temperature drops quite rapidly to an average of about -11°C at the end of the month.

Thule Air Base

119 **Caution**. — It is **prohibited**, under the laws of Denmark and the United States, to **transit**, **enter** or **exit** the defence area of Thule Air Base. With certain exceptions, permission is required from the Danish *Ministry of Foreign Affairs* and from the *U.S. Air Force Base Authority* for individuals to enter Thule Air Base and the surrounding defence area, including North Star Bugt. *(For more information, see* https://www.petersonschriever.spaceforce.mil/*.)*

120 Vessels permitted to enter North Star Bugt should transmit an estimated time of arrival, well in advance, to the port of Pittufik.

121 The port facilities for the U.S. Air Force Base are on the south side of the harbour; the base itself is about 1 mile SE. The alongside berthing facilities are at the end of a causeway projecting WNW from Astro Pynt.

122 An aeronautical **light** is south of the airfield. A **conspicuous** mast is 4.5 miles east of Umanak, north of the airfield. The buildings near the airfield and a radar dome 0.8 mile north of it are prominent.

123 The **beacons** on the NW and SE shores of North Star Bugt may no longer be standing.

124 The holding is satisfactory under normal conditions at the **anchorage** berths in Bylot Sund but the bottom in many berths is rocky and provides poor holding in heavy weather.

125 **Caution**. — Most berths offer little protection from **strong winds** and none are protected from **ice** movement. A vessel should, therefore, be prepared to move immediately.

126 Permission to berth at North Star Bugt or to use the Bylot Sund anchorage must, as previously mentioned, be obtained from the *U.S. Air Force Base Authority*.

127 **Anchorage** is available in North Star Bugt, the best berth being under the steep cliff on the SE side where there is good holding in 12.8 to 18.3 m and shelter from the strong SE winds which are occasionally experienced here. **Anchorage** can also be found at the head of North Star Bugt, SSW of the former settlement of Dundas. Vessels of 80 m length and 5.5 m draught have anchored in North Star Bugt.

128 **Caution**. — **Submarine cables** are laid through North Star Bugt; their shore landing position is marked by a large sign "Submarine Cables — Do Not Anchor".

129 **Mooring buoys** for use by tankers are positioned off the end of a submarine pipeline that extends west from Astro Pynt. The end of the pipeline is marked by small buoys.

130 The **pier** on the SE side of North Star Bugt, connected to Astro Pynt by a causeway, has a berthing length of 305 m, a least depth alongside of 9.4 m, and a height above high water of about 2.1 m.

131 **Caution**. — There is **shoal water** west of the pier; the south side of the pier cannot be used for berthing because of **underwater rocks** and **shoal water**.

132 **Caution**. — When approaching the pier care should be taken not to be set by the **tidal stream** against the **rocks** at the end of the pier. **Silting** was reported in the area of the pier in 1968.

133 A number of hulks at the head of the bight SE of the pier were used as finger piers for handling cargo but are in poor condition.

134 **Caution**. — There is a dangerous **underwater wreck** 0.5 mile WNW of the hulks and **shoal water** between the wreck and the hulks; there are also **submerged concrete clumps** with less than 1.2 m over them close south of the hulks and up to 46 m offshore.

135 Two 20-ton mobile cranes and some forklifts are available from the base. A small tug is used to assist vessels berthing.

136 **Pilots** are not available but personnel of the harbour authorities assist vessels entering the port.

137 The air base offers communications, postal facilities and medical and dental facilities, as well as foodstuffs and fresh water. Arctic diesel fuel is available at the pier. Minor repairs can be made at the air base machine shops.

Charts 7302, 7071

Wolstenholme Fjord to Inglefield Bredning

138 **Carey Øer (Islands)** *(76°43'N, 72°53'W)* is an isolated group of islands 35 miles WNW of Saunders Ø in the mouth of Wolstenholme Fjord. The islands were discovered by Bylot and Baffin in 1616. They are now regularly visited by Danish vessels between early August and mid-September, the only period when they are accessible although the waters around them are never completely frozen over.

139 **Caution**. — The islands lie on **foul ground** and are not completely surveyed. They must, therefore, be approached with special caution and a vessel navigating among them is recommended to use a power boat for sounding ahead. Icebergs strand in the waters surrounding the islands.

140 **Historical note**. — Wordie, in 1937, explored some of the group and the surrounding waters; the following description is based mainly on his report.

141 The Carey Øer consist of six islands and a number of islets and above-water rocks. The islands have a luxuriant vegetation for the region and are frequented as breeding places by large numbers of eider ducks and guillemots. The islands are marked by boulder beaches, rising in terraces to a height of 43 m (141 feet) or more; above these, rookery cliffs rise to the flat summits.

142 **Caution**. — In the waters surrounding the islands there are numerous dangerous **underwater rocks** and **shoals** and **sudden changes of depth**, and in places **shelving shoal rock** extends from one island to another.

143 **Nordvest Ø**, the westernmost and largest island of the group, has the remains of an Inuit settlement near the south end of its east shore. The north shore of this island is fringed with islets and above-water rocks, and other islets and above-water rocks lie about 1 mile off its NE end.

144 **Caution**. — A **shoal** is reported to lie about 2 miles westward of Nordvest Ø, and a **rock awash** is 1.5 miles west of the island's south end.

145 **Isbjorne Ø**, the northern island of the two islands east of Nordvest Ø, is marked at its NE end by the massive **Dark Head**. **Mellem Ø**, the south island, has **The Tower**, a steep, dark hill, near its north end. *(None of these features are named on Chart 7302.)*

146 **Isbjorn Havn** *(not named on Chart 7302)* is in the SE end of the channel that separates Isbjorne Ø from Mellem Ø.

147 **Caution**. — **Breakers** have been observed in the NW part of the channel.

148 The vessel *Isbjorn* of the Wordie expedition obtained excellent **anchorage** in 18.3 m (60 feet) in Isbjorn Havn. The anchorage, with depths from 16 to 22 m (52 to 72 feet), is almost landlocked; it lies off a small bight, indenting the south shore of Isbjorne Ø, where there is a **cairn** surmounted by a staff. The harbour is said to afford shelter in all weathers with little swell and a weak tidal stream.

149 **Caution**. — Both shores of Isbjorn Havn are fringed with **underwater rocks**.

150 **Anchorage** can also be found in a bay at the SE end of Mellem Ø.

151 **Bulls Eye**, an islet *(not named on Chart 7302)*, lies about midway between **Fjerde Ø (Fire Ø)** and **Bord Ø**, and several islets are scattered in the area between Fjerde Ø, Bulls Eye and Mellem Ø. **Holloænderhatten**, an islet, lies about 2 miles east of Fjerde Ø.

152 **Bjørlings Ø**, the easternmost of the Carey Øer, rises to a height of 300 m (984 feet) and has a cairn on its summit.

Kap Abernathy to Inglefield Bredning

153 The coast between Wolstenholme Fjord and Inglefield Bredning is formed by a generally ice-covered peninsula whose west end is known as **Steensby Land**. There are a number of settlements with anchorages in the area, the largest of which is the relocated Thule (Qānāq), now known as Qaanaaq, on the north side of the entrance to Inglefield Bredning.

154 **Caution**. — An isolated **shoal patch**, with a least depth of 21 m (69 feet), and an isolated **shoal patch**, with a least depth of 22 m (72 feet), are about 5 miles offshore, 14 and 21 miles west of Kap Abernathy *(previously described)*.

155 **Moriusaq (Manûssak)** *(76°45'N, 69°52'W, not named on Chart 7302)* is an abandoned small settlement 9 miles WNW of Kap Abernathy.

156 **Anchorage** can be obtained here, 0.15 mile offshore, in a depth of 33 m (108 feet).

157 **Three Sister Bees**, three small flat islands, lie in the entrance to **Granville Fjord**.

158 **Caution**. — An **underwater rock ledge**, on which icebergs ground, extends off the southernmost island of Three Sister Bees.

159 Granville Fjord is bordered by mountains with ice-covered summits; two glaciers enter a basin at its head near the edge of the ice cap. **Kap Peary** *(76°50'N, 70°04'W)*, close within the east entrance to the fiord, is backed by **Drinkard Bluff**. **Iterdlugssuak** *(not named on Chart 7302)* is the site of a former settlement near the west entrance to the fiord.

160 **Caution**. — The water in Granville Fjord is discoloured with silt. Dangerous **drying rocks** *(shown as an underwater rock on Chart 7302)* are close east of Iterdlugssuak.

161 Between **Uvdlisaitunguak** *(76°48'N, 70°26'W, not named on Chart 7302)*, the west entrance point to Granville Fjord, and Kap Parry, 18 miles NW, the shoreline is backed by black cliffs. A remarkable feature of this part of the coast is a strip of low foreland from 1 to 3 miles wide, with numerous small lakes, narrowing to a point at Kap Parry.

162 **Drown Bugt**, a small inlet entered north of **Wechmar Næs**, is probably shallow. *(These features are not named on Chart 7302.)* It appears to be the inlet entered by Parry in a whaleboat, in 1894, "through a maze of half-submerged rocks to a small sheltered bight at the head of the north arm".

163 **Booth Sund** is entered between **Blackwood Næs** and **Hoppner Næs** *(76°56'N, 71°02'W)*. **Fitz Clarence Rock** *(not named on Chart 7302)*, 1 mile inside the south entrance to Booth Sund, is a **conspicuous**, bell-shaped, pointed rock over 107 m (351 feet) in elevation.

164 **Caution**. — **Shoal water**, on which icebergs ground, lies off Blackwood Naes. Booth Sund has a **sand bar**, **awash**, extending across its entrance.

165 **Kap Parry** *(77°01'N, 71°22'W)*, one of the most striking **landmarks** on the coast, is a high promontory presenting a vertical face to west and NW.

166 **Caution**. — The vicinity of Kap Parry is subject to sudden offshore **storms**. Low, fast-moving woolly clouds gathering over the cape usually give warning. Winter ice rarely forms off Kap Parry.

167 The **coast** from Kap Parry past **Kap Leiningen** to **Kap Radcliff** *(77°08'N 71°10'W)*, 7 miles NNE, is high and bold; vegetation is scanty and drifts of snow remain year-round under the crests of the cliffs.

Inglefield Bredning and approaches

168 **Northumberland Ø**, the largest of the three islands in the approaches to Inglefield Bredning, can be recognized from southward by a snow cap on its west end. The island rises steeply in light-coloured cliffs to a mass of brownish-red rock summits at elevations of up to 1097 m (3599 feet). The north and east sides of the island form a plateau penetrated by numerous broad valleys, nearly all containing glaciers. A number of these reach the sea, terminating in steep ice cliffs, but rarely calve icebergs. **Josephine Hoved** *(77°27'N, 72°20'W, not named on Chart 7302)* and **Kap Henson** are the NW and NE ends of Northumberland Ø. There are some small Inuit settlements on the south and SE sides of the island.

169 **Caution**. — **Foul ground**, its outer end **awash**, extends up to 2.5 miles from the SE side of Northumberland Ø. The foul ground is a continuation of a basalt causeway on the island which appears from seaward as a dark stripe in the rocks. A long **rock ledge**, on which icebergs ground, is reported to extend from the NW end of Northumberland Ø.

170 **Hakluyt Ø** *(77°25'N, 72°40'W)* rises gradually from its west side to a maximum elevation of over 421 m (1381 feet) in its NE part; a **cairn** is on the summit. There is a tableland about 1 mile long in the SE part of the island where grass and flowers grow luxuriantly in the summer.

171 **Herbert Ø** is separated from Northumberland Ø by a channel called **Ikerasak**. Herbert Ø is a steep-sided, flat-topped mass of variegated sandstone with three glaciers and a small ice cap on its north side. **Kap Lee** and **Bastion Pynt**, its west and east ends, are formed of bold, dark red sandstone cliffs. The small settlement of **Qeqertarssuaq** *(not named on Chart 7302)* lies about 3 miles NW of Bastion Pynt.

172 **Caution**. — A **shoal depth** of 16 m (52 feet) is found in Ikerasak. **Ikardloq** is a **drying rock** which lies close offshore about 2 miles NE of Kap Lee.

173 **Anchorage** can be obtained about 0.2 mile off Qeqertarssuaq in depths of about 20 m (66 feet) on an even, rocky bottom.

174 **Caution**. — **Foul ground**, on which icebergs frequently strand, borders the east end of Herbert Ø. Two **beacons** at Qeqertarssuaq, in line bearing 177°, lead through the foul ground to the anchorage.

South approaches

175 **Hvalsund**, the south approach channel to Inglefield Bredning and Olrik Fjord, is entered between Kap Parry and Northumberland Ø.

176 **Caution**. — **Magnetic disturbance** has been observed in the west part of Hvalsund.

177 **Barden Bugt**, into which several glaciers descend, lies between Kap Radcliff *(previously mentioned)* and **Kap Powlett**.

178 **Caution**. — The water in Barden Bugt is discoloured with silt. A dangerous **underwater rock**, on which the sea breaks, lies about 0.8 mile offshore midway along the south side of Barden Bugt; this is possibly the shallowest spot of an extensive **shoal area**. A **shoal**, partly **awash** and of unknown extent, stretches SW from Kap Powlett.

179 **Anchorage** can be found 1 mile within Barden Bugt off **Natsilivik** *(77°10'N, 70°52'W, not named on the charts)*, a winter settlement, in depths of 85 to 90 m (279 to 295 feet) over a soft bottom.

180 The coast between Kap Powlett and **Kap Trautwine** *(77°14'N, 70°15'W)*, 9 miles ENE, is a continuous line of vertical, multicoloured cliffs, some reaching elevations of over 610 m (2001 feet); there is no beach, foreshore or talus. Between Kap Trautwine and **Itilleq (Itivdlek)**, 10 miles east *(not named on Chart 7302)*, gnarled and veined gneiss takes the place of the stratified rocks, the cliffs change colour to grey and every break in the cliffs is occupied by a glacier.

North approaches

181 **Murchison Sund**, the north approach channel to Inglefield Bredning, is entered between Hakluyt Ø *(previously described)* and **Kap Robertson** *(77°48'N, 71°26'W)*, on the mainland coast to the NE.

182 **Caution**. — The **navigable width** of the sound is reduced to less than 3 miles by the foul ground *(previously described)* that extends from Herbert Ø and by **foul ground** lying off **Piulip Nunâ (Red Cliff Peninsula)**, the mainland peninsula to the NE of Herbert Ø. A vessel navigating Murchison Sund should keep in mid-channel.

183 Kap Robertson is the west end of a promontory on the NW side of Robertson Fjord. The promontory can be recognized by three glaciers on its south side which do not reach the sea.

184 **Robertson Fjord** is reported to have deep water which decreases only close to the shore. **Verhoeff Gletscher**, at the head of the fiord, is active and terminates in a wall of ice nearly 30 m (98 feet) in elevation. Remarkable granite peaks with sheer cliff faces 305 m (1001 feet) high rise to over 1219 m (3999 feet) at the edges of the glacier. **Meehan Gletscher** *(not named on Chart 7302)* also discharges into the fiord. **Siorapaluk (Igdluluarssuit)** *(not named on Chart 7302)*, the northernmost permanent Inuit settlement, with a population of about 68 *(2010)*, is on the north side of Robertson Fjord near the entrance. It is visited annually, normally in August, by a *Kalaallit Nunaat Administration* supply vessel.

185 **Anchorage** can be obtained about 0.1 mile off Siorapaluk *(77°48'N, 70°57'W)* in about 40 m (131 feet), sand, with poor holding.

186 **Caution**. — Numerous **icebergs** drift past the settlement, and **tidal streams** in the anchorage are strong.

187 **Kangeq (Iglunaksuak Pynt)** *(77°43'N, 70°42'W)*, the west end of the peninsula which separates Robertson Fjord and MacCormick Fjord, is a dark bluff.

188 **Caution**. — Kangeq is bordered by **foul ground** up to 4 miles offshore.

189 **MacCormick Fjord** is bordered by an almost continuous beach. Its barren north shore, which has a moderate slope, is cut by numerous ravines and capped by ice. The south shore is backed by a line of reddish-brown cliffs which, near the head, are interspersed with hanging glaciers, tongues of the central ice cap of Piulip Nunâ. The narrow **Sun Gletscher** *(not named on Chart 7302)*, at the head of MacCormick Fjord, terminates in a vertical face about 30 m (98 feet) high, and is bordered inland by steep black cliffs which rise 305 to 457 m (1001 to 1499 feet) above its surface.

190 **Kap Cleveland** *(77°34'N, 70°17'W)*, the west end of Piulip Nunâ, is a massive, light-coloured promontory rising to about 305 m (1001 feet). Between Kap Cleveland and **Kap Ackland**, 16 miles SE, the shore is composed of a crumbling, disintegrated sandstone and drift formation with a succession of deltas formed by glacial streams. Behind the shoreline the land rises gradually to an irregular series of hills which rise more steeply to the ice cap resting on their summits. The face of a glacier may be seen in almost every depression in the hills.

191 **Caution**. — **Foul ground**, formed by glacial deposits, extends up to 3 miles off this stretch of coast.

Qaanaaq (Thule or Qānāq)

192 **Qaanaaq (Thule** or **Qānāq)** *(77°28'N, 69°14'W)* had a population of about 650 in 2010. About 2 miles WNW of Kap Ackland, it can be identified by brightly-coloured buildings and a cluster of oil **tanks** on the beach at the settlement and, usually, by a line of icebergs stranded on the foul ground to the west.

193 The normal navigation season is from the end of July to the middle of September.

194 The **tidal stream** is strong when ebbing, weak when flooding.

195 Two **beacon ranges**, each consisting of a pair of triangular beacons, the rear point down, the front point up, are established; one pair is NW, the other SE of the oil tanks.

196 The intersection of the ranges formed by these beacons in line indicates an **anchorage** about 0.3 mile offshore, in a depth of 14.9 m (49 feet) with good holding. Larger vessels can anchor farther offshore. Some protection is afforded by grounded icebergs; a slight swell is frequently experienced.

197 **Caution**. — A **drying shoal** fronts the settlement, lying parallel to the shore about 0.1 mile off. A seaward projection of this shoal extends 0.2 mile offshore about 0.25 mile NW of the mooring berth.

198 Vessels can moor in the anchorage, bows SW, with a stern hawser to a rock on the shoal.

199 **Depths** increase rapidly from 4.6 m (15 feet), immediately seaward of the shoal, to 15.5 m (51 feet) about 0.2 mile farther seaward. In 1962 depths of 6.1 to 7 m (20 to 23 feet) were reported nearly 1 mile offshore in the approaches to Qaanaaq.

200 There is a sloping rock **landing beach** suitable for small craft and barges which can cross the shoal for about 6 hours, either side of high water, at large tides.

201 There is a medical clinic at Qaanaaq. No supplies are available.

Olrik Fjord

202 **Olrik Fjord**, entered between **Kangeq (Beaufort Bluff)** *(77°17'N, 69°06'W)*, a bluff with an elevation of 720 m (2362 feet), and Itilleq *(77°14'N, 69°28'W, previously described)*, with a glacier on the shore to eastward, is unique on the NW coast of Kalaallit Nunaat, being more like a river than a fiord.

203 **Caution**. — The **tidal streams** in the fiord are strong.

204 **Caution**. — A **shoal** is reported to extend south from the north side of Olrik Fjord about 13 miles within the entrance.

205 A narrows about 1 mile wide close east of this shoal, and a similar narrows 15 miles farther ESE, divide Olrik Fjord into three reaches; the inner and outer reaches are bordered by vertical cliffs and steep bluffs, the middle by rounded hills and ridges gradually increasing in height to the ice cap on either side. At its head the fiord is almost joined to Inglefield Bredning by Academy Bugt but is blocked by Leidy Gletscher.

Inglefield Bredning

206 **Inglefield Bredning**, entered between Kangeq *(77°17'N, 69°06'W)* and Kap Ackland, is bordered by promontories about 305 to 610 m (1001 to 2001 feet) in elevation.

207 **Caution**. — At a number of places the shore is broken by fiord-like depressions through which short glaciers discharge a limited number of small **icebergs**. The innermost part of the fiord is almost entirely occupied by large, very productive glaciers which are fronted by ice-scoured islands.

208 Between Kangeq *(77°17'N, 69°06'W)*, on the south shore, and **Inalugssuaq (Naujapaluk** or **Cape Lea)** *(77°21'N, 66°42'W)*, at the foot of a mountain 32 miles east, the coast consists for the first 10 miles of a succession of deeply-eroded cliffs and steep bluffs. The terrain then changes to a series of rounded hills whose rolling slopes provide pasture for caribou. **Hurlbut Gletscher** *(77°22'N, 67°59'W, not named on Chart 7302, not shown on Chart 7071)*, the only one along this stretch, protrudes from an ice cap through a narrow gorge in the cliffs and falls steeply to the sea. **Qingmiuneqarfik** *(not named on Chart 7302, not shown on Chart 7071)*, a small island composed of gneiss, lies 1 mile offshore about 7 miles WNW of Inalugssuaq.

209 **Caution**. — The **tidal stream** runs very strongly along the south shore of Inglefield Bredning, with many **eddies**.

210 **Academy Bugt** *(77°22'N, 66°37'W)* is bordered on its SW side by a continuous vertical cliff. The NE side is also bold but in places steep valleys give access to the high rolling plateau of **Nunatarssuaq**. **Leidy Gletscher** *(not named on Chart 7302)*, at the head of Academy Bugt, is the north arm of the glacier that enters the head of Olrik Fjord. Peary reported that violent summer squalls are common in this area.

211 The coast between Kap Ackland *(previously described)* and **Kap Tyrconnel**, 8 miles ENE, is a line of

grey sandstone cliffs. These are weathered into pinnacles and statue-like shapes that are striking in appearance; the cliffs rise sheer from the sea to an elevation of 791 m (2595 feet). A single glacier is about 6 miles ENE of Kap Ackland.

212 **Bowdoin Fjord** is entered between Kap Tyrconnel and **Kap Milne** *(77°30'N, 68°22'W)*. Kap Milne is formed of a series of picturesque red-brown cliffs called "**Castle Cliff**" *(not named on Chart 7302)* by Peary.

213 The **ice** in Bowdoin Fjord remains late and in a cold summer never clears completely.

214 A wide valley between steep mountains at the head of Bowdoin Fjord is filled with a glacier which is divided near the sea into two branches by an isolated, sharply defined mountain of striking baldness. **Bowdoin Gletscher**, the east branch, is in rapid motion and terminates in a low cliff 2 miles long. **Tugto Gletscher**, the west branch, does not reach the sea but sends a series of tongues which terminate near sea level in flat gravel plains. *(These glaciers are not named on Chart 7302.)*

215 **Anchorage** can be found in the cove in the NE end of Bowdoin Fjord. Peary erected his Arctic house at the head of the cove near the east edge of the glacier face. His vessel *Falcon* anchored in 27.4 m (90 feet), close offshore, with stern hawsers to the shore. **Anchorage** can also be found in Bowdoin Fjord off **Kangerluarsuk** *(not named on the charts)*, a very small settlement 2 miles within Kap Tyrconnel, about 0.1 mile offshore in 55 m (180 feet) with a windmill in line with a flagstaff bearing 205°. The soft bottom slopes steeply and the holding ground is not good.

216 The north shore between Kap Milne and **Hubbard Gletscher** *(77°31'N, 67°50'W)*, 6 miles east, is formed of red and grey sandstone cliffs. Hubbard Gletscher, which is not very active, reaches the sea in a line of blue ice cliffs about 1 mile long and from 30 to 46 m (98 to 151 feet) high. East of the glacier the shore is formed by cliffs of gneiss for about 7 miles, then, as far as **Hart Gletscher**, it consists of vertical cliffs behind which rise several striking peaks.

217 The south side of the head of Inglefield Bredning, east of Academy Bugt, is bold and glacier-free.

218 The east and NE sides form an almost continuous ice face; four great ice streams, **Heilprin Gletscher**, **Tracy Gletscher**, **Melville Gletscher** and Hart Gletscher, separated by precipitous nunataks, flow down from the inland ice to discharge great quantities of icebergs. The ice in the interior east of the head of the fiord has settled into a huge semi-circular basin.

219 **Josephine Peary Ø** *(77°38'N, 66°47'W)*, with almost vertical cliffs 480 m (1575 feet) high at its south end, lies off the face of Tracy Gletscher. **Harward Øer**, a group of two large islands and several islets, lie in the middle of the head of the fiord.

220 **Caution**. — **Shoal water** extends 1 mile SW from the northern island of Harward Øer and a dangerous **underwater rock** lies close off its west end.

221 **Anchorage** can be obtained in 28 m (92 feet), on a hard, even bottom with poor holding, about 0.15 mile off the very small settlement of **Qeqertat** *(not shown on Charts 7071 or 7302)*, on the south side of the west end of the largest of the Harward Øer. The marks for the berth are a warehouse in line with a cask on a mountain, bearing 073°, and the west extremity of the Harward Øer in line with a rock fissure on Josephine Peary Ø, bearing 348°. Large pieces of ice rarely enter the anchorage.

Kap Robertson to Kap Chalon

222 The coast between Kap Robertson *(previously described)* and Kap Chalon *(77°56'N, 72°15'W)*, 13 miles NW, is formed by cliffs alternating with indentations filled by glacier faces. **Kap Saumarez** is the end of a promontory separating **Morris Jesup Gletscher** from **Diebitsch Gletscher**; **Kap Powell** is between Diebitsch Gletscher and **Clements Markham Gletscher**. The abandoned settlement of **Neqe** is close ESE of Kap Saumarez.

223 **Caution**. — **Magnetic disturbance** has been observed about 3 miles SW of Kap Saumarez.

224 **Caution**. — Comparatively **shallow water** was reported in 1946 off the stretch of coast between Kap Robertson and Kap Chalon.

225 **Kap Chalon**, elevation about 579 m (1900 feet), is recognizable by a black trap dyke 9 to 15 m (30 to 49 feet) thick which runs along the south side of the cape from its extremity for 2 miles east to Clements Markham Gletscher, forming a huge retaining wall for a mass of stratified sandstone which rises above it to elevations of 305 to 366 m (1001 to 1201 feet). **Pitoravik** is the site of an abandoned settlement.

226 **Caution**. — Icebergs ground on a **bank** off Kap Chalon.

227 The region around Kap Chalon is the favourite spring walrus-hunting ground of the Inuit. The storms from the north, which are frequent here, do not permit the ice to remain for long, and on the constantly formed new ice the hunt goes on from the beginning of the light period until the spring seal hunt can begin. As the widening strip of open water reaches the cape with the advance of spring, the Inuit move SE to Robertson Fjord where for some time they have

been transporting their catch; from there they scatter to the various localities chosen for their summer residence.

Kap Chalon to Kap Alexander

228 The coast between Kap Chalon and Kap Alexander, 17 miles NW, is backed by **Prudhoe Land**, an immense area capped with ice from which numerous glaciers descend to the sea. In general the ice-free land consists only of a narrow fringe outlining the extremities of the projecting promontories.

229 **Sonntag Bugt** *(78°03'N, 72°27'W)* has three glaciers descending into it. The northernmost of these, **Childs Gletscher** *(not named on the charts)*, is used as a route to the inland ice.

230 **Caution**. — Local **magnetic disturbance** has been reported off the south part of the entrance to Sonntag Bugt.

231 **Radcliff Pynt** *(not named on Chart 7302)* is the extremity of a promontory which separates Sonntag Bugt from an unnamed bay to the NW into whose head an enormous glacier called **Storm Brae** *(not named on the charts)* descends.

232 **Sutherland Ø**, 2 miles SE of Kap Alexander, is composed of rough-grained sandstone and has an elevation of about 91 m (299 feet). **Depths** of 46 m (151 feet) have been found about 2 miles SW of the island.

233 **Kap Alexander** *(78°10'N, 73°02'W)*, the westernmost point of Kalaallit Nunaat, is said to be the steepest and highest cape in this region. It is composed of alternating layers of light yellow sandstone and dark columnar basalt, and extends about 3 miles west from Storm Brae, previously mentioned, and from a second glacier called Dodge Gletscher *(described in Chapter 11)*. A strong offshore wind, sometimes reaching gale force, usually exists near Kap Alexander. The formation of fast-moving woolly clouds over the outer end of the cape is said to give warning of storms.

234 Because of the frequency of storms around Kap Alexander, it is reported to be the only place in this part of Kalaallit Nunaat where the sea ice never freezes into a strong and persisting field.

Chapter 10

Jones Sound — Eureka Sound



General

Charts 7310, 7920, 7930, 7940, 7941, 7950

1 Jones Sound lies between Devon Island and Ellesmere Island. The sound was sighted and named by Bylot and Baffin in 1616 but not entered until 1852 when Inglefield penetrated about one-third of its length. Since 1948 the route through Jones Sound, Norwegian Bay and Eureka Sound has been used regularly by icebreakers, sometimes accompanied by a tanker, supplying the weather station at Eureka *(79°59'N, 85°57'W)* in Slidre Fiord.

2 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all waters described in this chapter. The primary objective of this system is to assist the master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

3 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

4 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

5 **Depths** in Lady Ann Strait, Glacier Strait and Jones Sound are partly from controlled surveys.

6 In 1983 additional surveys were carried out centrally within Jones Sound and, during 1981 and 1982, additional soundings were obtained along the usual tracks through Norwegian Bay, Eureka Sound, Greely Fiord and Tanquary Fiord.

7 **Caution**. — **Depths**, in other areas, are based on **reconnaissance soundings**, **track soundings** or **spot soundings** through the ice. **Shoal depths** have **not** been **examined**. **Undiscovered dangers** may exist. *(For details, see Source Classification Diagram on the charts.)*

8 *Cape Skogn (Index No. 6560)*, *Grise Fiord (Index No. 6570)*, *Bay of Woe (Index No. 6580)* and *Eureka (Index No. 6640)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

9 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/*.)*

10 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*

11 *(For general **ice conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

12 **Caution**. — The **magnetic compass** is unusable in the area described in this chapter. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

Jones Sound

13 Almost the whole of Jones Sound is surrounded by steeply-rising shores backed by mountainous terrain. On the NE side of the sound a highland zone of ancient rocks, forming the SE part of Ellesmere Island, extends northward and rises to an elevation of about 1372 m; westward of this the rocks are overlain by increasingly thicker strata of later sedimentary rocks which extend inland beyond the heads of the numerous fiords indenting the north side of the sound. Elevations decrease westward to about 457 m near Hell Gate. Sverdrup has aptly described the northern side of Jones Sound as “one perpendicular headland after another, with high bluffs and precipices falling straight down to the narrow strip of shore”.

14 The SE shore of Jones Sound is mainly formed of cliffs which, though steep, are not precipitous, and in many places there is a rough, narrow foreshore. Inland, the country is high and rugged, and the whole of this part of the coast is dominated by the great east Devon Island ice field which rises to over 1829 m about 20 miles inland. From this high land a number of large glaciers extend down to tidewater. Westward of Cape Sparbo *(75°49’N, 84°00’W)*, the SW side of Jones Sound is composed mostly of scree-banked, sedimentary cliffs marking the northern margin of the sedimentary plateau which forms the west part of Devon Island. Along this sector the inland plateau has elevations of about 305 to 549 m, and it is broken along the coast by the outlets of numerous flat-floored, outwash-filled valleys. At the west end of Jones Sound the rugged and snow-covered Colin Archer Peninsula rises steeply to about 549 m. *(For general information on the physiography of Devon Island and Ellesmere Island see Sailing Directions booklet ARC 400 — General Information, Northern Canada.)*

15 Relatively few **current** observations have been made in Jones Sound, but there appears to be a general eastward movement, at least of the surface layer of water, and a SE flow out through Lady Ann Strait. Recent observations indicate a general westward flow, inwards, through Glacier Strait but Inglefield, in 1852, reported an east-setting current of about 2 knots here when he passed through this passage, and it is probable that the strength and direction of the current depend largely on meteorological conditions in the vicinity.

16 In Jones Sound the **ice** generally begins to loosen in July and, under the influence of westerly winds, moves out into Baffin Bay. As a rule, it reaches a minimum by late August and early September although in bad years ice concentrations may remain high and the fiords on the Ellesmere Island coast may fail to open. Easterly winds tend to impede the flow of ice out of the sound, and under these conditions icebergs may drift in from Baffin Bay along the Ellesmere Island coast, at times even as far as the head of the sound. Otherwise, the north side of the sound usually gives better passage as local ice and the pack draining from Norwegian Bay move in greatest concentration along the Devon Island coast. Ice may begin to form again as early as the end of August but, as a rule, not until about mid-September. By the end of October the ice has consolidated for the winter. Both Glacier Strait and Lady Ann Strait may fill with icebergs and thick floes from Baffin Bay although Glacier Strait receives the greater amount and may sometimes be blocked most of the summer. In general, it may be said that icebreakers, entering through Lady Ann Strait and traversing Jones Sound, usually in the latter part of August, have made this part of the passage to Eureka Sound without serious difficulty, ice concentration at this period being usually reported as 5/10 or less, with occasionally an almost clear run as far as Hell Gate.

17 Although this region does not lie directly on any of the mean storm tracks, the wind and weather are influenced by **low pressure** centres moving into Baffin Bay and by lows moving into the archipelago from the

west at lower latitudes. Centres of high pressure which develop over the region usually move slowly and do not follow any well-defined track. During the navigation season the general circulation is light easterly in Jones Sound and northerly over Norwegian Bay. The mean pressure is close to 101.0 kPa.

18 From the general circulation, the **prevailing wind** in Jones Sound should be from an easterly direction, and from between north and NE in Norwegian Bay.

19 **Caution**. — Observational data from sites on shore illustrate the influence of **topography** on **wind direction** at all sites. Data from such sites on **wind speed** will also not be representative of conditions away from the coast where winds of **gale force** are probable on the average of one day per month in July and August, and two days per month in September.

20 July is the warmest month with the **mean temperature** around the shores just above 4°C. The mean temperature in August is a little cooler, and in September it is well below freezing. The highest temperature likely to be observed is slightly over 15°C in July, near 13°C in August and from 4 to 7°C in September. For the same three months the lowest probable temperatures are -1°C, -7°C and anywhere from -10°C in Jones Sound to -32°C at Eureka in late September.

21 Total annual **precipitation** over this route varies from 225 mm at the east end of Jones Sound to 64 mm at Eureka which has the least annual precipitation of any weather station in Canada. The months of July, August and September account for over half of the yearly total at Eureka with measurable precipitation normally falling on six days per month. In July and August the precipitation is usually in the form of rain on five of these six days, but in September it is almost always in the form of snow. In Jones Sound precipitation is likely on one day in two, with snow the more common form by early September.

22 Available data from Goose Fiord and Eureka indicate overcast conditions for 50 per cent of the time with the remainder divided equally between clear and partly cloudy. Due to local influences at both sites, these values give less cloudiness than would be encountered over the water. However, it does seem reasonable to infer that, except for portions of Jones Sound, this is one of the eastern Arctic routes with the least cloud.

23 Again, the data from the sites in the fiords give an average occurrence of **fog** only one or two days per month. The few reports from ships operating in these waters suggest that fog may be encountered on 40 to 60 per cent of the days but is quite variable from year to year and is most common in the Hell Gate and Norwegian Bay areas.

Jones Sound — South side

Chart 7310

Cape Caledon to Sverdrup Inlet

24 **Cape Caledon** *(75°39'N, 80°28'W)* is on the south side of Jones Sound 10 miles NW of Cape Fitz Roy *(described in Chapter 9)*. A wide glacier reaches the sea at Cape Caledon. A few miles to the south the land rises to over 975 m.

25 **Belcher Point**, 11 miles NW of Cape Caledon, is about 122 m in elevation and rocky; the large **Belcher Glacier** reaches the sea 3 miles SSW.

26 The coast between Belcher Point and **Ward Point** *(75°50'N, 82°22'W)*, 19 miles WNW, consists mostly of cliffs rising to over 488 m and fronted by a narrow coastal plain. The cliffs are broken by several glaciers, the largest being **Eastern Glacier**. West of Ward Point the cliffs become higher and the coastal strip a little wider, and steep, narrow valleys run up to a plateau. A few miles inland **Treuter Mountains** rise to over 1158 m.

27 **Brae Bay** has two small, low, flat-topped islands in its east part. **Sverdrup Glacier** enters the head of the bay.

28 **Caution**. — **Shallow water** extends a considerable distance off the shores of Brae Bay.

29 **Cape Hardy** *(75°49'N, 83°44'W)*, joined to Devon Island by a low isthmus, is a rocky headland with two 274 m hills; it is a prominent radar **landmark**. **Cape Sparbo**, about 4 miles west, rises to 183 m. A small bay on the south side of Cape Hardy shoals gradually towards its head.

30 **Anchorage** has been obtained off the NW entrance point of the small bay in about 40 m. **Anchorage** with better protection can be found in the north part of this bay in about 9.1 m.

31 **Caution**. — The small bay is **foul** along its south and west shores.

32 **Bear Bay** is the large bay contained between Cape Sparbo and Boat Point, about 90 miles west.

33 **Caution**. — Numerous dangerous **shoals**, with depths as little as 0.7 m, lie offshore in Bear Bay.

34 **Cape Skogn**, separated from Cape Sparbo by a slight bay with low land and ponds at its head, rises about 0.5 mile inland to 244 m.

35 *Cape Skogn (Index No. 6560)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

36 The coast from Cape Skogn to **Truelove Inlet** is low, rough and irregular with raised beaches backed by an escarpment of light-coloured sedimentary rocks rising to over 305 m. The north side of Truelove Inlet is formed by a low marshy peninsula, the south side rises precipitously to 366 m. **Cape Newman Smith** *(75°40'N, 85°05'W)*, the west entrance point, is low but backed 2.5 miles to the SE by land rising to 305 m.

37 **Caution**. — The inner part of Truelove Inlet is very **shallow**.

38 **Caution**. — **Shoal soundings** of as little as 7 m are found 2 miles off the coast between Cape Sparbo and Truelove Inlet, and there appear to be extensive **shoals** off the NE entrance point of the inlet. **Shoals** and **underwater rocks** fringe Cape Newman Smith and the coast for 8 miles to the SW.

39 **Firkin Point**, 8 miles SW of Cape Newman Smith, is a low point on the west side of a bay with low shores.

40 **Sverdrup Inlet** has generally steep shores fronted in places by a narrow coastal plain and a few river deltas.

41 **Caution**. — The greater part of Sverdrup Inlet is believed to be **shallow**.

Sverdrup Inlet to Cape Vera

42 The coast between Sverdrup Inlet and **Cape Svarten** *(75°37'N, 87°20'W)* consists of cliffs, reaching 366 m in elevation but becoming lower towards the cape, cut by a few small valleys and fronted in places by a narrow coastal plain.

43 **Nookap Island**, elevation about 70 m, and **Sukause Island**, a little lower, lie 4 miles WSW of Cape Svarten in the mouth of an inlet whose shores are formed by vertical cliffs with land rising to over 305 m a short distance inland. The inlet entered 8 miles WSW of Nookap Island has steep shores with elevations of more than 366 m broken by a few valleys and narrow coastal plains. The head of the inlet is formed by the low deltas and alluvial flats of several streams.

44 The west end of **Skruis Point** *(75°41'N, 88°46'W)* is low but the land 0.9 mile to the east rises to about 183 m.

45 **Caution**. — A **shoal** with a depth of 6.9 m lies 4 miles NW of Skruis Point, in the entrance to Thomas Lee Inlet *(75°35'N, 89°05'W)*.

46 **Thomas Lee Inlet** has shores formed by steep slopes or cliffs, rising to about 61 m on the east side and to over 366 m on the west side, alternating with river valleys and low areas.

47 **Caution**. — The head of Thomas Lee Inlet, where two large rivers enter, is **shallow**.

48 The coast from Thomas Lee Inlet to Boat Point *(76°00'N, 89°56'W)*, and the coast of **Sandhook Bay**, consist of cliffs from 213 to 244 m high fronted in places by low coastal strips.

49 **Boat Point** lies at the east end of an isolated, steep-sided hill, over 396 m in elevation, connected to the main part of Devon Island by a low isthmus with many ponds.

50 **West Fiord**, entered between Boat Point and the SE end of Colin Archer Peninsula, 9 miles NE, has three arms. **Viks Fiord**, the south arm, has four inlets of its own. Viks Fiord is generally bordered by high land, rising in places to over 305 m. Streams have formed alluvial plains at the heads of the inlets.

51 **Eidsbotn** *(76°10'N, 91°00'W)*, the middle arm of West Fiord, has shores formed mostly of steep cliffs from 244 to 305 m in elevation interrupted by steep-walled valleys and river deltas. Two small islands lie close within the entrance of Eidsbotn and ice fields lie north and south of its head. **Archer River** enters the north shore.

52 **Sandspollen**, the north arm of West Fiord, is separated from Eidsbotn by a narrow peninsula rising to about 183 m, and is bordered by land of moderate elevation except at the head where it is low.

53 **Caution**. — **Shoals** and **drying flats**, extending from both sides, partially obstruct the entrance to Sandspollen.

54 **Anchorage** has been obtained, over a mud bottom, about 2 miles ESE of the south entrance point of Sandspollen, and about 10 miles SE of Cape Vera.

55 **Cape Vera** *(76°14'N, 89°13'W)*, near the east end of Colin Archer Peninsula, is a steep point rising to over 305 m; it is useful for fixing.

56 *(Colin Archer Peninsula, Cape Hawes and Fram Sound are described later in this chapter.)*

Jones Sound — North side

57 The north shore of Jones Sound is indented by many long narrow fiords bordered by high steep cliffs with narrow beaches at their bases. The north shore east of Fram Fiord *(76°31'N, 81°19'W)* to King Edward Point consists of a fairly high plateau of ancient crystalline rocks. The plateau has an ice cap which calves icebergs in places. *(King Edward Point to Cape Norton Shaw is described in Chapter 9.)* West of Fram Fiord, the ice cap recedes from the coast and only a few glaciers reach the sea. The west part of this coast is formed of limestone and rises in abrupt cliffs and terraces inland.

Craig Harbour

58 **Craig Harbour** is the site of the former *RCMP* post transferred to Grise Fiord in 1956. The harbour is entered between the steep headland of **King Edward Point** *(76°08'N, 81°03'W)* and **Smith Island**, which rises steeply from the sea to an extensive plateau. **Cone Island**, about 1 mile to the west, is cone-shaped and reddish-brown in colour, making it an easily identifiable mark from the sea. A rock 15 m high is connected to the SW end of Cone Island by a low isthmus. A cairn is on the rock. **Starnes Point**, the NE entrance point of the harbour, is a headland formed of cliffs.

59 The harbour is flanked by limestone-capped granite hills separated from the sea by narrow raised beaches. A plain of glacial outwash at the head of the harbour extends inland to glacial tongues descending from the hills. The abandoned buildings of the former *RCMP* post stand in the NW part of the harbour.

60 The 18.3 m contour line lies about 1 mile from the head of the harbour; outside the 18.3 m line the water is deep in the area between Smith Island and the Ellesmere Island coast and in the approaches to the harbour.

61 **Caution**. — Within the 18.3 m contour line the water **shoals rapidly** and the **bottom** is **irregular**, with **foul ground** and many rocks and **underwater rocks** extending over 0.5 mile offshore. A **shoal patch** with a depth of 19.8 m lies 1 mile SE of the SE side of Smith Island.

62 **Caution**. — The shallow part of the harbour is nearly always filled with **drift ice** and **growlers**, and at each low water large pieces of ice usually ground in the cove at its head. Within the harbour, between Smith Island and the shore to the eastward, the floating **ice** is kept in motion by winds and changing tidal streams.

63 In the approaches to the harbour, **ice conditions** are more favourable and even when the entrance to Jones Sound is ice-filled there are usually many lanes of open water which may be navigated. The month of August is considered the best time of the year for navigation in this area.

64 The **tidal range** is about 3 m in Craig Harbour.

65 **Caution**. — **Strong tidal streams** are reported in this area.

66 **Anchorage** is available in about 59 m about 1.5 miles SW of the abandoned *RCMP* post, or for smaller vessels, about 0.3 mile nearer the shore.

67 **Caution**. — The anchorage is **exposed** with poor shelter from both **wind** and **ice**. The prevailing wind is north and **strong winds** are common in the area.

68 The usual **landing beach** is in front of the former *RCMP* post. Owing to the **underwater rocks** and **shallow water** in this area, supplies can be brought ashore only near high water.

Craig Harbour to Grise Fiord

69 The coast of the large bay entered between Starnes Point *(76°13'N, 81°06'W)* and **Lee Point**, 20 miles NW, consists mostly of a flat strip of land backed by cliffs and ice-covered high land rising to 1036 m. **Jakeman Glacier** enters the head of the bay.

70 **Caution**. — **Shoal depths** under 20 m extend almost 5 miles off the east shore of the large bay. Extra care should be used in the approaches to Fram Fiord and Starnes Fiord, as the **positions** of the **shoals** in this area are **uncertain**. A **shoal depth** of 1.9 m is 2.8 miles SE of Fairman Point.

71 **Fram Fiord** is entered between **Fairman Point** *(76°30'N, 81°17'W)*, the west end of a coastal plain, and **Anstead Point**, which has an elevation of 457 m. The fiord has steep shores, rising to over 610 m on the east side and to about 457 m on the west; two rivers enter through flat-bottomed valleys at the inner part and at the head.

72 **Caution**. — Sverdrup, who anchored in *Fram* in a small bay on the west side of Fram Fiord, reported that a **drying bank** extended a long distance up Fram Fiord and that there were several **underwater rocks** in the outer part of the fiord near the mouth, particularly on the west side. Depths of 32 m and less are reported to lie up to 3 miles south of Fairman Point, and **Lemieux Shoal** *(76°26'N, 81°35'W)* extends off and west of Anstead Point. Between Lemieux Shoal and the entrance to Starnes Fiord, **shoal water** extends 0.5 mile offshore.

73 **Starnes Fiord** has steep shores, rising as high as 914 m, broken by several river valleys and, in its outer part, a few glaciers. **Fielder Point** *(76°31'N, 82°08'W)*, elevation about 152 m, lies on the east side of the fiord close within the entrance.

74 **Caution**. — **Arctic Shoal**, **least depth** 2.8 m, lies near the middle of the entrance to Starnes Fiord.

75 **Caution**. — **Shoal water** fringes the shore in the vicinity of Lee Point, near the SW entrance to Starnes Fiord, and near Brume Point, 7 miles to the west. The coast along this stretch is formed by moderately steep cliffs with elevations of over 610 m fronted in places by a narrow foreland.

Grise Fiord

76 **Grise Fiord** *(76°35'N, 83°14'W)* is 15 miles west of Starnes Fiord. **Brume Point**, on the east side of the mouth of Grise Fiord, rises steeply to over 610 m a short distance inland. The islet near the west entrance point is low and rocky. The sides of the fiord at its entrance rise steeply to 762 m but farther inland they assume a more gentle slope and are cut by numerous valleys.

77 The **tidal range** is reported to be about 1.9 m in Grise Fiord.

78 *Grise Fiord (Index No. 6570)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

79 A **reconnaissance survey**, in 1983, found generally deep water centrally within Grise Fiord over an irregular bottom, as far as the narrows 15 miles inside the entrance. The narrows are formed by outwash plains approaching from NE and SW; the larger SW plain approaches mid-channel, and a stream cuts through the SW plain to form its own delta. Close beyond the narrows, centrally within the fiord, depths decrease to between 11 and 16 m. Near the head of the fiord depths vary between 8.9 and 46 m.

80 **Caution**. — Although both sides of the fiord appear to be steep-to, there are numerous **shoals** lying close off shore.

81 **Grise Fiord settlement**, population 130 *(2011)*, stands on a low, stony strip of land, on the shore east of Grise Fiord. Bare mountains rise abruptly to the rear.

82 A **conspicuous** sharp peak, elevation 610 m, 3 miles NNW of the settlement, has been seen at 50 miles.

83 Grise Fiord is Canada's northernmost Inuit community, and has a school and an Anglican church. Satellite-based **telecommunications**, including the internet, connect Grise Fiord with other northern communities and to population centres to the south. Transportation to Grise Fiord is by boat in summer or by aircraft year-round.

84 The community has a detachment of *RCMP* and a nursing station. The *Grise Fiord Inuit Cooperative Limited* operates a small hotel, retail store and post office. The store sells Inuit arts and crafts, but has very limited supplies of food and clothing. The *Hunters and Trappers Association* conducts tours and offers guides for exploration or hunting.

85 **Caution**. — Although the community welcomes visitors, there are **no repair** facilities and there is **no fuel** available for passing mariners.

86 The gravel airstrip at Grise Fiord is 1675 feet (511 m) long. Charter air service, to Resolute, is by Twin Otter aircraft only. Transportation to Iqaluit is by *Air Nunavut*, in Beechcraft King Air 200 aircraft.

87 An **aeromarine radiobeacon** near the east end of the airstrip transmits on 365 kHz, identification *Morse* "YGZ" (— • — — — — • — — • •). An aeronautical rotating **light** is near by.

88 Good **anchorage** can be obtained in 73 m, about 0.2 mile offshore.

89 The **tidal stream** flows NW across the anchorage on the flood and in the opposite direction on the ebb.

90 **Caution**. — The anchorage area is normally free of ice from mid-August to mid-September but **drift ice** and **icebergs** may be driven in at any time by wind or tide.

91 A good sand and gravel **landing beach** in front of the settlement can be used at all stages of the tide. Supply vessels provide their own lightering craft.

92 **Caution**. — North and south of the beach there are large **boulders**, covered at high water, extending 0.1 to 0.2 mile offshore.

93 Oil is pumped to the shore through 244 m of floating hose.

Grise Fiord to South Cape

94 The south coast of **Lindstrom Peninsula**, which separates Grise Fiord and Harbour Fiord, has steep cliffs, rising in places to 762 m, and the water close off appears to be deep. **East Cape** *(76°25'N, 83°42'W)*, the SE entrance point to Harbour Fiord, has an elevation of 610 m.

95 **Harbour Fiord**, where Sverdrup wintered in 1899-1900, is quite low on its east side while its west side rises to over 427 m; the land at its head has elevations of 610 m, gradually rising to 1219 m near the ice fields 5 miles to the north. **Landslip Island** has mainly steep shores, reaching an elevation of over 610 m, and a low alluvial point at its southern tip.

96 **Caution**. — The passage west of Landslip Island is **shoal**. **Skerries** *(76°24'N, 84°00'W)* are an extensive group of above- and **below-water rocks** lying to the south of Landslip Island.

97 *Fram* **anchored** in a small bay on the east side of Harbour Fiord close within the entrance in 55 m with stern lines to the shore. This anchorage was not considered to be very satisfactory as it was rather exposed and there was a fairly **strong tidal stream**, but no better anchorage could be found in the fiord.

98 Sverdrup concluded that the **tidal streams** were comparatively weak inside a curve from South Cape eastward almost to Fram Fiord, and consequently the winter ice remained longer here than in other areas along the north shore of Jones Sound.

99 **South Cape Fiord** is entered between the SW point of **Heim Peninsula** and **South Cape** *(76°18'N, 84°27'W)*, a precipitous bluff with an elevation of 376 m.

100 **Caution**. — **Shoal depths** under 20 m extend eastward of South Cape for almost 2 miles, and **shoal depths** under 30 m are 5 miles SE of the cape.

101 The shores of South Cape Fiord are generally steep, rising to over 366 m, but the west side has flat land with raised beaches over part of its length. **Sydkap Glacier** enters the head of the fiord and some smaller glaciers enter its west shore.

South Cape to Walrus Cape

102 The coast from South Cape past **Cape Waldegrave** *(76°18'N, 84°39'W)* to Baad Fiord consists of a series of steep headlands, rising to over 427 m, fronted by low coastal strips and a few large sand banks at the mouths of rivers.

103 **Caution**. — A **shoal depth** of 12.6 m is 8 miles SW of Cape Waldegrave. **Shoal water** under 30 m, on which ice grounds, is almost 6 miles off this stretch of coast.

104 Sverdrup and a party from *Fram* passed along this coast, in September, 1899, through a lane of open water between the land and a line of grounded ice hummocks offshore, and encountered a swift, westerly-flowing **current**.

105 **Baad Fiord** *(76°28'N, 86°30'W)* has steep shores with elevations of more than 610 m broken by several broad valleys. A steep, high promontory which forms the SW entrance point of the fiord is the most **conspicuous** cape in this area.

106 **Anchorage** has been obtained over a mud bottom 2 miles SSE of the SW entrance point of Baad Fiord.

107 A **reconnaissance survey**, in 1983, found **depths** of 60 to 70 m decreasing to 30 m in the broad outer part of Baad Fiord. About 9 miles from the head of the fiord, where its width becomes constricted, depths increase appreciably and become irregular.

108 **Muskox Fiord** has low areas on both sides of its broad outer part but the shores of its inner part rise steeply to over 305 m. A point topped by a sharp ridge with an elevation of 305 m projects from the low land on the SW side of the entrance to the fiord.

109 A **reconnaissance survey**, in 1983, found generally deep water centrally throughout the fiord.

110 **Caution**. — **Shoal water** is at the head of Muskox Fiord and in the vicinity of the island nearby.

111 **Caution**. — **Shoals** are offshore in the approaches to Baad Fiord and Muskox Fiord.

112 **Andersrag Beach** lies at the head of the bay between the SW entrance point of Muskox Fiord and Cape Storm.

113 **Cape Storm** *(76°21'N, 87°35'W)* is a rocky promontory which rises precipitously to 366 m from a low coastal strip. From the east the cape is conical in shape.

114 **Caution**. — **Shoal depths** of 1.5 m and 9.9 m are, respectively, 3 miles WNW and 4 miles WSW of Cape Storm.

115 **Bear Head**, the west entrance point of **Hourglass Bay**, is a steep bluff with an elevation of 366 m. The coast between Bear Head and Goose Fiord is steep with an elevation of about 366 m, and is intersected by a few steep-sided valleys.

116 **Gull Head** *(76°24'N, 88°35'W)*, the west entrance point of Goose Fiord, is a precipitous headland rising to 305 m with sharp ridges **conspicuous** from SE.

117 **Goose Fiord** lies between rounded hills which only occasionally exceed 305 m in elevation. In most places, at the bases of the hills there is a broad, shelving, gravel foreshore. At the head of Goose Fiord there are extensive mud-flats fronting a broad valley. **Olsen Island** *(named Olson Island on the chart)*, low and dark in appearance, rises to a flattened summit with an elevation of 61 m near its east end.

118 *Fram*, which wintered in Goose Fiord in 1900-1901 and again in 1901-1902, **anchored** in 27.4 m about 1.5 miles from the head of the fiord where there are fertile valleys. Ships have obtained anchorage close off the south shore of Olsen Island in 37 to 59 m.

119 **Walrus Fiord** *(76°30'N, 88°45'W)* is separated from Goose Fiord by a narrow peninsula. The peninsula, almost in two parts, has a low isthmus near its middle; it is joined to **Simmons Peninsula**, at the SW end of Ellesmere Island, by another isthmus. An islet in the central part of Walrus Fiord has an elevation of about 61 m.

120 **Caution**. — **Shoal water** extends west from Gull Head, on the east side of the entrance to Walrus Fiord, for a considerable distance and a **shoal depth** of 1.9 m lies in mid-channel.

121 **Walrus Cape** rises precipitously to over 305 m.

Jones Sound to Norwegian Bay

Chart 7930

Fram Sound

122 **Fram Sound**, entered from eastward between Walrus Cape and Cape Hawes, extends west as far as the entrance of Norfolk Inlet, and affords access to the south entrances of Hell Gate and Cardigan Strait, both leading to Norwegian Bay.

Fram Sound — South side

123 **Cape Hawes** *(76°18'N, 89°17'W)*, the NE end of Colin Archer Peninsula, rises steeply to 305 m about 0.5 mile inland, providing good tangents for fixing.

124 **St. Helena Island**, about 2 miles ESE of Cape Hawes, is a small but fairly prominent greyish mass with a flat-topped central core of stratified rock rising to 70 m. This core has been deeply cut by erosion into the appearance of an old castle; arches and grottoes have been carved out and, in places, there are long rows of pillars.

125 **Caution**. — **Pond Rock**, **drying** 2.8 m, lies 0.5 mile north of St. Helena Island.

126 **Historical note**. — St. Helena Island is a nesting place for numerous sea birds and it was here that Isachsen of the Sverdrup expedition found stone eider duck shelters of European type and advanced the view that the island might have been visited by people from the Norse colony in Kalaallit Nunaat during the Middle Ages.

127 **Caution**. — The **strong current** of the west part of Jones Sound always keeps the ice in motion about St. Helena Island and thus produces open water in its vicinity in early summer.

128 The north coast of **Colin Archer Peninsula** is formed of steep cliffs of sedimentary rock fronted in places by a narrow coastal lowland and backed by the snow-covered heights of the peninsula, rising to about 549 m. A large glacier which reaches the sea about 4 miles west of Cape Hawes, with the ice cap stopping slightly above it, makes a useful **landmark**. A second glacier enters the sea about 1 mile SE of **Alexander Baillie Point**, on the east side of a flat-bottomed alluvial valley.

129 **Caution**. — Much of this coast is fringed by **shallow water** under 10 m extending up to 0.5 mile offshore.

130 About 3 miles ESE of **Cape Lyons** *(76°24'N, 90°32'W)*, a flat-topped sugarloaf-shaped hill 305 m in elevation and dark in colour, forms a prominent feature.

131 **Norfolk Inlet**, entered between **Cape Arundell** and Cape Harrison, 4 miles NNE, has a delta and a wide valley at its head, and an island near its head. The land on the south side of the inlet is high and precipitous; on the north side it is generally lower and ascends less steeply. **Berkeley Bay** is on the north side of the inlet, 3 miles within the entrance.

132 *(Cape Harrison (76°28'N, 90°28'W), and the **shoals** lying off it, are described later.)*

Fram Sound — North side

133 **Bay of Woe** is on the south coast of Simmons Peninsula.

134 **Caution**. — Bay of Woe has **shoals** and **drying rocks** on the east side of its entrance and a patch of **shoal rocks** in mid-channel about 1 mile within the entrance. The coast between Bay of Woe and Cape Turnback is fringed with **shoal water**.

135 *Bay of Woe (Index No. 6580)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

136 **Cape Turnback** *(76°26'N, 89°14'W)* is formed of horizontally-stratified cliffs rising above talus slopes.

137 A gently-sloping beach where **landings** could be made is in the cove close east of Cape Turnback. A tracked vehicle should encounter no difficulties ashore and exits exist to Seal Cove and Cross Bay, to the NNW.

138 **Caution**. — **Shoal water** in the approaches to the cove is usually marked by grounded ice.

139 **Calf Island** has nearly vertical cliffs on its south and west sides and a fairly flat and level summit with a small ice cap.

140 **Rodberg Bay** is on the south coast of **North Kent Island**. The bay is entered between **Rococo Point** *(76°29'N, 89°47'W)*, which rises to about 183 m, and **Prince Edward Point**. Prince Edward Point is twice as high as Rococo Point and can be recognized by dark-coloured strata on the face of its cliffs.

Hell Gate

141 **Hell Gate**, a strait that runs from Fram Sound to Norwegian Bay, can be entered from the south through **East Sound**, on the east side of Calf Island, or through **Tver Sound** on the west side. Passage was first made through this strait in 1947, and it has been used regularly since then by icebreakers supporting supply vessels for Eureka.

142 Passage through Hell Gate has usually been accomplished during the last half of August and this is probably the best time of year to attempt it. **Ice**

concentration at this time has varied from less than 1/10 of scattered, broken ice to 10/10 polar ice, up to 3.7 m in thickness. About 60 per cent of passages have been made with relative ease, about 40 per cent only with difficulty. Up to the present time an icebreaker has always succeeded in forcing a passage over this part of the route to Eureka weather station, and it appears that the ice in Norwegian Bay, farther north, is liable to be a more serious menace than that in Hell Gate.

143 **Caution**. — Only **vessels strengthened for thick ice** can normally navigate in the waters of Hell Gate and, before attempting passage, **aircraft reconnaissance** of **ice conditions** should be made.

144 **Caution**. — A permanent south-going **current** exists in Hell Gate, strongest in the southern part where the strait narrows, and in the vicinity of Calf Island. Estimates of this current vary from 1.5 to 3.5 knots. It is sufficiently strong to prevent ice forming in the strait except along the shores, but it almost continually brings down ice into the strait from Norwegian Bay.

145 **Tidal streams** set both northward and southward with a rate of about 1 knot. Consequently the south-going flow, in combination with the permanent current, has the greater velocity. When the north-going tidal stream is at its maximum the direction of flow may be either north-going or south-going but at a very weak rate.

146 It has been conjectured that a gravel beach at **Seal Cove** *(76°28'N, 89°16'W)*, on the east side of East Sound opposite Calf Island, would make a good barge **landing beach**, although open to drift ice. The land slopes steeply to 30 m from the shoreline but could be negotiated by a powerful tracked vehicle. A small stream empties into the cove.

147 The NW entrance point of **Cross Bay** *(76°32'N, 89°30'W)* is a prominent cape with a light brown patch near the foot of its eastern slope.

148 **Caution**. — **Shoal depths** under 10 m obstruct the entrance to the north arm of Cross Bay.

149 It has been speculated that temporary **anchorage** might be obtained in the entrance to Cross Bay. This is the only possible anchorage in Hell Gate as elsewhere depths are generally too great and the currents too strong.

150 A stony airstrip, about 305 m long and about 2 miles SE of the NW entrance point to Cross Bay, can be used by ski-wheel Otter aircraft throughout the year. A winter strip, 1 mile farther south, was used in the spring of 1963 and 1964 by a ski-wheel DC 3 aircraft.

151 The NW corner of the river mouth on the east side of Cross Bay affords a good **landing beach** for barges. There are good camp sites and tracked vehicle routes in this area.

152 **Cape Donninghausen** *(76°34'N, 89°40'W)* is noted for its sharp, sloping point.

153 **Caution**. — **Shoal water** extends up to 0.4 mile off the east side of Hell Gate north of Cape Donninghausen.

154 The east coast of **North Kent Island**, which forms the west side of Hell Gate, is composed largely of steep walls of dark but varicoloured sediments rising to over 427 m. The island is topped by a high ice cap, and elsewhere is very bare and rugged with practically no vegetation. On its south and east sides, the island is generally steep and inaccessible but towards its north end it becomes low and relatively flat.

155 **Falk Point**, the SW entrance point of Hell Gate, is prominent and steep. At **Twin Rivers Point**, 4 miles NNW of Falk Point, two rivers enter Hell Gate through a wide valley. Between Twin Rivers Point and a glacier 2.5 miles north, the coast is a very dark brown colour, but from there to Ler Cove the cliffs are a light rusty brown.

156 **Ler Cove** *(76°40'N, 89°48'W)* is well protected from drift ice, and fast ice clears out early in the season. From **air photos**, there is a potential **landing beach** at the head of the cove and the terrain is suitable for camp sites and the operation of tracked vehicles. A valley runs to the ice cap from the head of Ler Cove.

157 **Blubber Point**, on the east side of Hell Gate 4 miles SE of Ler Cove, rises steeply from the water to 183 m. Between **Ren Bay**, 4 miles NE of Blubber Point, and **Mossviken Point** *(76°43'N, 89°27'W)*, 2.5 miles farther north, the coast is formed by a light brown cliff which diminishes in height to northward.

158 **Caution**. — **Moss Cove**, entered north of Mossviken Point, is mostly **shallow**. In 1963, the cove retained its ice cover when Hell Gate itself was ice-free.

159 The cliffs between **Gallery Point**, the north entrance point of Moss Cove, and Lands End, 6.5 miles north, have a reddish tinge for the southernmost mile and are separated from the shoreline by a sloping gravel beach. A good sand and gravel **landing beach** is on the south side of the point 2.5 miles south of Lands End.

160 **Lands End** *(76°51'N, 89°32'W)*, the NE entrance point of Hell Gate, is a low point which slopes up gently to a flat-topped ridge.

161 **Strom Point** *(76°42'N, 89°42'W)*, on the west side of Hell Gate near its mid-point, is reddish in colour and prominent from both north and south. **De Lacy Head**, 9.5 miles NNW on the west side of the north entrance to

Hell Gate, is formed by a river delta. Between Strom Point and De Lacy Head, the coast becomes progressively lower.

162 **Caution**. — **Shoal water** extends farther offshore between Strom Point and De Lacy Head.

163 The north coast of North Kent Island between De Lacy Head and Cape Burgoyne, 9 miles WSW, is mostly low.

164 **Caution**. — The north coast, between De Lacy Head and Cape Burgoyne, is fronted by **shoal water** with depths under 18 m almost 2 miles offshore.

Cardigan Strait

165 **Cardigan Strait**, which runs between North Kent Island and the NE part of Devon Island, was first navigated, in 1900, by *Fram*.

166 **Caution**. — There are **strong currents** in Cardigan Strait. The strait is usually free of ice in its southern sector from March until August due to the current.

167 **Caution**. — When the **ice** break-up occurs in Norwegian Bay and Jones Sound, Cardigan Strait will become impassable with 10/10 coverage. These conditions probably exist until freeze-up in October, and the amount of ice in the channel is dependent upon the general ice movements throughout the whole area. *(For detailed information on present and predicted **ice conditions** in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

168 **Caution**. — As is the case in Hell Gate, there is a **strong** south-going **current** in Cardigan Strait. **Tidal streams** set both north and south with maximum rates about equal to those in Hell Gate.

Cardigan Strait — East side

169 For 3 miles NW from Prince Edward Point *(previously described)* the west coast of North Kent Island is formed of steep, stratified cliffs, rising to a plateau about 305 m high, from slopes of rock debris. The cliffs, less steep, continue to within 3.5 miles of **Cape Burgoyne**, a low point at the NE entrance point of the strait. Several small glaciers almost reach the sea from the interior ice cap. Near Cape Burgoyne, the cliffs decrease in elevation and several small, gradually sloping valleys break the coastline.

Charts 7930, 7950

Cardigan Strait — West side

170 The west side of Cardigan Strait is formed by a stretch of the NE coast of **Devon Island** between Cape Harrison *(76°28'N, 90°28'W)* and Cape Pakington, 22 miles NW. **Depths** along the west side of Cardigan Strait are somewhat more shoal than along the east side.

Chart 7930

171 **Cape Harrison** has steep cliffs on both sides for a short distance. North of the cape, the coast drops sharply to a flat valley about 1 mile wide, rising abruptly again to **Brittania Cliffs**. The cliffs, over 305 m high, continue for 5 miles as far as **Stares Bay**. The bay is a wide bight with several streams discharging into it.

172 **Caution**. — **Shoal depths** of 5.5 m extend for almost 1 mile east of Cape Harrison.

173 **Caution**. — The 20-m contour is up to 1 mile offshore at Stares Bay. A **shoal depth** of 9.1 m is 0.6 mile offshore in the north part of the bay.

174 **Devil Island** *(76°30'N, 90°27'W)*, 2 miles north of Cape Harrison, has the shape of an oblique cone and rises to 122 m. The island is separated from Devon Island by a narrow strait which is kept open most of the year by the strong current. It has been speculated that temporary **anchorage** might be obtained in the bay west of Devil Island but the **strong currents** would make it untenable for a lengthy stay. Due to depths and currents in the strait itself, no other anchorage is available.

175 **Caution**. — Devil Island is surrounded by **shoal water**, especially on its west side.

Chart 7950

176 About 12 miles NW from Cape Harrison, the steep cliffs give way to gentle, undulating slopes penetrated by small valleys with streams. These slopes extend 6 miles farther NW to **Cape Derby** and **Cape Stanley**, near the NW end of the strait. Both capes are low and are at the outflows of streams, but the coast between them rises to 122 m. **Cape Pakington** is formed by the delta of a stream flowing through a small valley. **Blanche Mountain** rises to 366 m 6 miles south of Cape Pakington.

Norwegian Bay

177 **Norwegian Bay** *(77°30'N, 90°30'W)* is the sea area bounded to the south and east by Devon Island and Ellesmere Island, to the north by Axel Heiberg Island, and to the west by Amund Ringnes Island, Cornwall Island and Grinnell Peninsula.

178 **Caution**. — **Depths** in Norwegian Bay have been obtained by **spot soundings** through the ice and **shoal depths** have **not** been **examined**.

179 **Caution**. — Mariners proceeding into Norwegian Bay, and the passages and inlets beyond, are advised that many of the water features in this area are named "fiords" although the physical configuration of the adjacent land may not correspond with the generally accepted definition of a fiord. Consequently mariners should not assume that the deep obstruction-free water generally associated with steep-sided fiords can also be expected in water features which may be named fiords but do not possess the corresponding physical characteristics. The wide spacing of soundings in many such areas may also contribute to the illusion of deep obstruction-free waters.

180 The **tide** in Norwegian Bay is semi-diurnal. Most of the tide propagates from Jones Sound and traverses Norwegian Bay in a NW direction in about 20 to 30 minutes. The **tidal range** decreases dramatically from over 3 m in Jones Sound to about 1 to 1.6 m in Norwegian Bay.

181 The usual route from Hell Gate to Eureka Sound is through the passage between Graham Island and Bjorne Peninsula.

182 Passage through the east part of Norwegian Bay has usually been successfully accomplished in recent years during the last half of August and early September by supply vessels with **icebreaker support**.

183 **Caution**. — **Ice concentration** has varied from 6/10 to 10/10, generally of medium and large floes of first-year ice. Passage has rarely been made without considerable difficulty.

184 **Caution**. — **Soundings** indicate that the bottom in the east part of Norwegian Bay is **irregular**. A **shoal depth** of 11 m is 5 miles south of Graham Island, and other **shoal depths** are in mid-channel between Graham Island and Bjorne Peninsula.

Off-lying islands

185 **Graham Island** has **Cape Torrens** *(77°12'N, 90°08'W)* at its south end. Cape Torrens is a low, round point formed by a river delta.

186 **Caution**. — **Shallow water**, reported in 1973 and **shoal patches**, position doubtful, are up to 7 miles east, south and SW of the cape. **Shallow water** extends off the west shore of Graham Island for up to 5 miles.

187 The shores of Graham Island are generally low, rising to a tableland, and are cut by numerous streams; **Rancher River** is the largest. The NW part of the island rises more gradually than the SE, and raised beaches are well marked along the NW shore. The island is visible in clear weather from the north end of Hell Gate, when it appears very low and flat.

188 **Buckingham Island**, whose highest point is **Mount Windsor** *(77°12'N, 90°58'W)*, is SW of Graham Island.

189 **Caution**. — Graham Island and Buckingham Island are separated by a **shallow** strait.

Chart 7940

190 **Caution**. — **Shallow water**, reported in 1973, is close off the NE shore of Graham Island, and **shoal depths** of 3.7 m, 9.1 m and 12.8 m are in mid-channel between the NE shore and Little Bear Cape on Bjorne Peninsula. An 18.3-m **shoal depth** is 17 miles east of the mouth of Rancher River.

Norwegian Bay — East part

Chart 7950

Ellesmere Island — Lands End to Great Bear Cape

191 The coast between Lands End *(previously described)* and Okse Bay, 31 miles NE, is generally low and is cut by a network of short streams which have built deltas along the shore. When the land is snow-covered, it is difficult to determine where the ice ends and the land begins. Lands End is reported to be a useful radar target when proceeding south towards Hell Gate.

192 **Nordstrand Point**, 12 miles NE of Lands End, is a low spit, difficult to identify by radar.

193 **Caution**. — **Shoal water** extends up to 3 miles offshore between Nordstrand Point and an unnamed point 8 miles NE.

194 **Okse Bay** has low shores backed to southward by rounded hills rising to 183 m.

195 **Caution**. — A **shoal patch**, with a depth of 18 m, is west of the entrance to Okse Bay. Another **shoal patch**, with an **obstruction**, is in the middle of the entrance.

196 **Bird Island** *(77°12'N, 87°20'W)*, elevation about 61 to 91 m, lies off the entrance to **Bird Fiord**.

197 **Caution**. — An **obstruction** is between Bird Island and the shore to southward.

198 **Caution**. — A low islet *(not shown on the chart)* is in the narrowest part of the entrance to Bird Fiord. **Depths** on either side of the islet are **unknown**.

199 The land bordering Bird Fiord is bounded mostly by steep cliffs except for the outer part of the south shore where there are more gradual slopes.

200 **Blue Fiord**, with two low islands near its head, has steep cliffs on the south side and more gentle slopes on the north.

201 **Caution**. — **Shoal water** and **obstructions** lie offshore between Bird Fiord and Blue Fiord. Blue Fiord has **shoal depths** under 30 m along its length.

Charts 7940, 7950

202 The shores of the middle part of **Eids Fiord** are steep with elevations of 244 to 305 m, and a broad lowland extends east from its head.

203 **Caution**. — **Shoal water**, reported in 1973, and **obstructions** extend across the entrance to the fiord, and exists near mid-channel 2 miles within the entrance.

204 The shore between Eids Fiord and Great Bear Cape is low.

Bjorne Peninsula — West coast

205 **Bjorne Peninsula** is connected to the main part of Ellesmere Island by an isthmus about 14 miles wide between Eids Fiord and Baumann Fiord. The peninsula is, for the most part, rolling country of moderate elevation fronted in many places by a broad coastal belt of lowland.

Chart 7940

206 **Great Bear Cape** *(77°23'N, 87°45'W)* has a precipitous north face and a rounded south face rising to a sharp, high ridge. The **cape** forms a **conspicuous landmark** on an otherwise unremarkable stretch of coast. From southward, the cape appears as an island because of the low land behind it.

207 The coast between Great Bear Cape and Little Bear Cape *(77°40'N, 88°14'W)*, 18 miles NNW, is low and broken by numerous river deltas. **Little Bear Cape**, a low point formed by the delta of a small stream, is reported to be a fair radar target. The land east of the cape rises gradually to a small, steep-sided flat-topped hill about 4 miles from the sea.

208 **Caution**. — **Shoal depths** of 8 m and 2 m are, respectively, 3 miles SSW and 4 miles NW of Little Bear Cape. **Shallow water**, reported in 1973, lies 1 mile west of the low peninsula 5 miles north of Little Bear Cape. A large **shoal area** with depths of 15 to 20 m lies west of the same peninsula, near mid-channel.

209 **Goose Point** *(77°51'N, 88°12'W)* is low and reported to be difficult to distinguish visually from SW beyond 5 miles, but fairly easy to identify on radar. **Ammonite Mountain**, which rises 8 miles east of Goose Point, gradually increases in elevation to the SE.

210 **Caution**. — Numerous **shoals** off Goose Point, revealed by circular tidal "boils" in the sea ice and by icebergs, 0.5 to 0.7 mile offshore and apparently grounded, make this area dangerous to navigation.

Inlets in SW part of Ellesmere Island

211 **Baumann Fiord**, entered between Goose Point and Bear Corner of Raanes Peninsula, 19 miles NNE, extends SE between Bjorne Peninsula and **Svendsen Peninsula** for almost 60 miles and has numerous smaller inlets branching from it.

212 Sparse **spot soundings** suggest mid-channel **depths** greater than 100 m to the head of Baumann Fiord. Soundings of 71 m and 84 m are close east of a small island with an elevation of less than 30 m lying in mid-channel about 30 miles within the entrance.

213 The coast from Goose Point to **Schei Point** *(77°53'N, 86°49'W)*, a low point 18 miles east, is low and shelving. The low coast continues as far as a low point formed by a delta 15 miles SE of Schei Point, then rises in steep cliffs for a few miles.

214 **Hoved Island** has a maximum elevation of over 366 m near its SE end. **Gunnars Island**, to the SW, rises to about 183 m.

215 **Caution**. — A 7-m **shoal sounding**, reported in 1980, is west of Hoved Island.

216 **Blind Fiord** *(78°14'N, 86°16'W)*, which branches from the north shore of Baumann Fiord 10 miles east of Bear Corner, has low shores in its outer and inner parts, and high cliffs in its middle part.

217 Spot soundings in 1974 recorded deep water up the length of the fiord to a depth of 43 m on the east side 6 miles from the head.

218 **Caution**. — A **shoal depth** of 23 m lies 1.8 miles from the head of Blind Fiord.

219 **Trold Fiord**, discovered by Sverdrup in 1901, runs between walls of massive cliffs, rising sheer from the water in places, reaching elevations of 914 to 1219 m. The west side of the fiord is cut by deep, steep-sided canyons containing streams with small deltas at their mouths, but the canyons on the east side are less deep and the deltas are smaller and fewer in number. Spot soundings in 1974 recorded mid-channel depths in excess of 70 m.

220 **Caution**. — A 25 m **shoal patch** is in mid-channel just inside the entrance to Trold Fiord.

221 The unnamed inlet on the east side of Trold Fiord 11 miles within the entrance has two small islands near its mid point.

222 **Caution**. — **Spot soundings** suggest that the channel on the north side of the two small islands is **shoal**, but otherwise **depths** in the unnamed inlet are greater than 33 m.

223 The south entrance point to **Starfish Bay** *(78°12'N, 84°30'W)* is a rocky promontory with an elevation of about 91 m.

224 **Caution**. — **Spot soundings** indicate **foul ground** on the south side of the entrance to Starfish Bay, and suggest that a ridge, with a least depth of 23 m, lies across the entrance, with depths increasing to 333 m inside the bay.

225 **Spot soundings** suggest that the inlet entered 9 miles north of Starfish Bay has deep water inside.

226 **Caution**. — A **shallow ridge** lies across the entrance to this inlet, with a depth of 25 m on the north side shoaling to 5 m on the south.

227 **Caution**. — **Spot soundings** in Blind Fiord and in Trold Fiord were taken through the ice at intervals of about 1 mile.

228 **Troll Fiord**, entered 5 miles SSE of Trold Fiord, is bordered by high land except at its head where a deep valley extends inland. **Gryte Bay**, which has three low islands in its outer part, is separated from Troll Fiord by a peninsula which rises to 732 m and is joined to the mainland by a low isthmus.

229 A broad delta, at a river mouth, lies midway between Gryte Bay and **Svarte Fiord** *(77°40'N, 84°36'W)*. Svarte Fiord has land rising steeply to 610 m on the north side of its entrance and massive cliffs of the same elevation forming its SE shore.

230 The west part of the coast between Svarte Fiord and Vendom Fiord is cliffs, the centre part is low and cut by numerous gullies, and the east part is broken by a narrow inlet bounded by two ridges which rise to more than 457 m and extend NNE for many miles.

231 **Vendom Fiord** has high land on both sides of its entrance but is bordered throughout most of its length by low shores sloping gradually to rounded hills reaching elevations of between 305 and 610 m well back from the shore. **Meadow River** enters the fiord 11 miles from the head and a low island lies 5 miles from the head.

232 The NE shore of **Stenkul Fiord** *(77°25'N, 83°54'W)* is high, with cliffs; the SW shore is low with outcrops of sand, clay and lignite, the only known deposits in southern Ellesmere Island. **Sor Fiord** has an island in its mouth with an elevation of about 61 m; the fiord has low shores except near its east entrance where cliffs rise to over 244 m.

Chart 7950

Axel Heiberg Island — South coast

233 **Axel Heiberg Island**, which forms the north side of Norwegian Bay, was discovered, and its coast was traced, by Sverdrup's expedition during spring sledge journeys in 1900-1902. *(The SW and west coasts of Axel Heiberg Island are described in Sailing Directions booklet ARC 403 — Western Arctic.)*

234 **Cape Southwest** *(78°12'N, 92°02'W)* is a prominent headland rising steeply from the sea to an almost horizontal crest which runs about 4 miles NE before dropping gradually to the surrounding lowland. The lower slopes of the cape are banked by talus, the upper slopes are cut in almost horizontal strata.

235 The east shore of the open bay on the east side of Cape Southwest is low with deltas and raised beaches. East of this bay the low coast slopes northward to rounded rolling country backed by mountains and ice caps, from 8 to 10 miles inland, rising to 1219 m.

Chart 7940

236 **Surprise Fiord**, entered 21 miles east of Cape Southwest, has shores of moderate elevation rising to high hills a short distance inland.

237 **Caution**. — **Shallow water**, reported in 1973, lies inshore of two low islands in the inner part of Surprise Fiord.

Charts 7920, 7940

238 **Sherwood Head** *(78°08'N, 89°32'W)* is a low point which rises to a rounded hill a short distance northward. The hill is joined to the mainland by a sand-and-gravel ridge about 61 m in elevation. A **conspicuous**, dome-shaped mountain about 11 miles NNW of Sherwood Head rises to 911 m.

239 **Glacier Fiord**, entered between Sherwood Head and **Hyperite Point** *(78°09'N, 88°53'W)*, 7 miles east, has a small ice cap near its west side about 10 miles within the entrance. Three small tongues of ice descend towards the fiord from the ice cap. North of this the land rises gradually on either side to ice-capped mountains, exceeding 1524 m in elevation, from which glaciers descend between high cliffs.

240 A **beacon** erected on the rounded hill north of Sherwood Head in 1964 may no longer be standing.

241 **Anchorage** has been obtained 0.3 mile off the west shore of Glacier Fiord, 4 miles within the entrance, in 55 m, mud bottom.

242 **Sherwood Beach** *(78°13'N, 89°34'W)* is a good **landing beach** composed of mud and sand, with a gently sloping exit of sand, stones and mud with some dwarf willow and moss. The ridge behind the beach is level and well-drained. It has been speculated that the ridge would afford year-round landing for light aircraft.

Norwegian Bay — West part

Chart 7950

243 **Caution**. — Due to **ice conditions** to date, surface navigation is almost non-existent in these areas except in a few isolated channels in the south part during late summer and early fall. Generally there is very little break-up before freeze-up resumes. *(For detailed information on present and predicted **ice conditions** in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

244 The north coast of Devon Island between Cape Pakington *(76°41'N, 91°42'W)* and Arthur Fiord, 20 miles WSW, is irregular and marked by raised beaches. The land rises gently to **Haddington Range**, elevation 300 m, 5 miles inland and parallel to the coast. **Triton Bay** is 14 miles WSW of Cape Pakington.

245 **Arthur Fiord**, entered between **Cape Separation** and an unnamed point 5 miles south of Cape Disraeli, almost separates Grinnell Peninsula from the remainder of Devon Island to the SE. The fiord is about 2 miles wide and penetrates 13 miles SSW where it narrows considerably and trends 3 miles SE. Rounded cliffs rise to 240 m near the east entrance. The peak at the west end of Haddington Range is prominent and rises to 342 m close east of the fiord, 4 miles south of Cape Separation. Near the head of the fiord there are steep, rounded cliffs; elsewhere they are moderately steep. The hills of **Douro Range** reach 300 m east of the head of the fiord. The west side of the fiord is low except for **Discovery Mountain**, 5 miles inside the entrance, which rises to an elevation of 213 m. There are moderately high rounded hills including **Grave Mount** near its head. Several small islands lie near the head of the fiord.

246 North of Arthur Fiord, the coast is low with numerous raised beaches rising to moderately steep hills. Behind **Cape Disraeli**, the hills have an elevation of 210 m. **Wilmer Bay** is a minor indentation 4 miles NNE of Cape Disraeli. **Tucker Point**, on the south side of Wilmer Bay, is the delta of the **Tucker River**.

247 **Fielder Point** *(76°54'N, 93°37'W)* is a promontory with low islands lying close offshore. Another group of islands lie 1.5 miles SE of Fielder Point. *(See Chapter 8 for a description of the north coast of Grinnell Peninsula.)*

248 **Caution**. — An area of **shoal water** with depths under 20 m extends about 5 miles offshore midway between Tucker Point and Fielder Point and extends 11 miles north into the east entrance to Belcher Channel *(described in Chapter 8)*. **Shallow water**, reported in 1973, is 3.5 miles east of Fielder Point. A **shoal** with 9.5 m over it lies about 11 miles NE of Fielder Point.

249 **Cornwall Island** lies between Grinnell Peninsula and Amund Ringnes Island, from which it is separated by Belcher Channel *(described in Chapter 8)* to the south and Hendriksen Strait *(described in Sailing Directions booklet ARC 403 — Western Arctic, Chapter 12)* to the north. The interior of the island comprises rolling hills with elevations about 200 m. The east coast, between Belcher Island and Northeast Point *(both features described in Sailing Directions booklet ARC 403 — Western Arctic, Chapter 12)*, is low-lying.

250 **Cape Aberdeen** *(77°28'N, 93°32'W)* and **Gordon Head** are on the low-lying east side of Cornwall Island.

251 Mid-channel **depths** between the east side of Cornwall Island and Graham Island are in excess of 300 m.

252 **Caution**. — An **obstruction** and **shoal depths** of 9 m, 8.5 m and 9.1 m have been reported within 5 miles of the east side of Cornwall Island. Grounded icebergs indicate the existence of comparatively **shallow water** over a large area in this vicinity.

Eureka Sound

Chart 7940

253 **Eureka Sound**, entered from southward between Hyperite Point *(78°09'N, 88°53'W)* and Bear Corner, 17 miles east, extends northward between Axel Heiberg Island and Ellesmere Island for about 155 miles to Nansen Sound which, in turn, leads NW to the Arctic Ocean. Eureka Sound has an average width of between 4 and 6 miles.

254 Known mid-channel **depths** through the preferred channels of Eureka Sound exceed 100 m and are generally between 200 and 300 m, except for areas 4 miles SW and 10 miles NE of Stor Island *(78°59'N, 85°50'W)*, where least depths of 97 m and 47 m, respectively, have been recorded.

255 The **current** moves south from the Arctic Ocean through Nansen Sound and Eureka Sound at from 5 to 7 miles per day.

256 Because of this current, **ice** in Eureka Sound breaks up early and tends to stay in motion until late in the

fall. The solid ice cover in the central part of Eureka Sound during the winter is mainly first-year ice. Puddling begins early in Eureka Sound and by mid-July open water exists north of Stor Island. By mid-August, ice-free conditions exist from Stor Island to Slidre Fiord. By the end of the month the ice in the southern portions of Eureka Sound has broken up, along with the ice in Greely Fiord and southern Nansen Sound. In unfavourable years, Nansen Sound and Greely Fiord may remain ice-covered throughout the year, but in favourable years the ice may have broken up and almost completely melted, particularly in the southern parts, by the end of July.

257 **Caution**. — In the northern and southern reaches of Eureka Sound, more **multi-year ice** is present. The northern part of Nansen Sound generally supports a complete cover of **multi-year ice**, while the southern portion supports a slightly lower concentration.

258 The navigation period in Eureka Sound normally extends from mid-August through September. Freeze-up in Eureka Sound commences early in September. By the end of the month most movement in the channels is stopped by the formation of young ice. Final consolidation in the area adjacent to Stor Island does not occur until the first part of October, after which the entire area is completely consolidated for the winter.

Eureka Sound — South part

West side — Hyperite Point to May Point

259 Hyperite Point *(previously described)*, the SW entrance point to Eureka Sound, rises sharply from the water and can be identified by a prominent summit with an elevation of 600 m about 2.8 miles to the NNE.

260 **Ulvingen Island** forms the east coast of the outer part of **Wolf Fiord**. The island rises to a maximum elevation of 786 m in its north part and is separated from the mainland of Axel Heiberg Island by **Bear Strait**. The west coast of Wolf Fiord is steep, and is fronted by a number of small deltas and backed by ice-capped mountains. The east coast of the inner part of the fiord is a narrow alluvial strip backed by mountains capped with two small ice fields. At the head of Wolf Fiord there is a wide valley.

261 **Spot soundings** in 1974 suggest mid-channel **depths** in Wolf Fiord are up to 128 m. In Bear Strait the least recorded mid-channel depth was 71 m.

262 **Caution**. — A 7-m **shoal area** is on the west side of Wolf Fiord about 7 miles from its head, and a depth of 29 m is at its head.

263 **Skaare Fiord** *(78°51'N, 88°05'W)* is bordered on its west side by the steep high mountains of **Princess Margaret Range**, with ice fields rising to over 1707 m. The east side of the fiord, formed by the west coast of **Stolz Peninsula**, is steep, the SE part is formed by cliffs rising to over 762 m. About five miles from its head, the fiord narrows considerably.

264 **Spot soundings** in 1974 in Skaare Fiord recorded mid-channel **depths** ranging from 207 m in the entrance to 54 m about 7 miles from the head. Depths of 185 to 48 m were recorded in the inlet on the west side of the fiord 5 miles within the entrance.

265 **Caution**. — A **shoal depth** of 23 m is 4 miles from the head of Skaare Fiord, in the narrows.

266 The east coast of Stolz Peninsula, facing Eureka Sound, is high and rugged. **Whitsunday Bay**, entered on the west side of a rocky cape, has steep and mountainous shores except at its head where there is a deep valley. **Spot soundings** in 1974 recorded mid-channel **depths** in the bay of from 59 to 133 m.

267 **Stor Island** *(78°59'N, 85°50'W)* has cliffs on its SE side but the island becomes low with raised beaches on its north side.

268 **Fulmar Channel** leads around the west and north sides of Stor Island. The land on the west side of Fulmar Channel is high and rugged in the south part but a few miles north of Whitsunday Bay the hills recede and the shore becomes a relatively low coastal strip extending inland for 3 or 4 miles. Near **May Point** *(79°16'N, 84°54'W)* the coastal strip is wider.

269 **Caution**. — **Spot soundings** in 1974 recorded a 3-m **shoal** in the middle of the south entrance to Fulmar Channel and **shoal depths** of 12.8 to 14.6 m in mid-channel north of the point on the west side of Stor Island. Grounded icebergs were observed in the south entrance to Fulmar Channel. A **shoal depth** of 23 m was recorded 2.5 miles off the north shore of Stor Island.

270 **Spot soundings** in 1974 recorded a 47 m **depth** 2.7 miles SSE of May Point; this is the shallowest known *(2013)* mid-channel depth on the usual route through Eureka Sound.

East side — Bear Corner to Cape Chase

271 **Bear Corner** *(78°08'N, 87°32'W)*, the SW end of **Raanes Peninsula**, is low but rises to two raised-beach terraces at elevations of 21 m and 107 m, the upper one sloping to a **conspicuous** dyke at an elevation of 152 m about 1 mile inland. Three miles farther inland the terrain reaches an elevation of 305 m. The west slope of Bear Corner is cut by a **conspicuous** ravine with a stream.

272 A possible **landing beach** at the foot of the terraces is sandy and stone-covered with patches of shingle and some mud. The exit is steep but appears practicable for tracked vehicles. There is fairly deep water close inshore with 4.6 m 0.05 mile offshore and 73 m 0.15 mile offshore.

273 **Caution**. — **Depths** in Eureka Sound are from **spot soundings** taken through the ice at intervals of about 1 mile.

274 The shores of the inlet between Bear Corner and Hare Point rise to high land but there are no cliffs. **Spot soundings**, in 1974, suggest depths over 60 m to within 1 mile of the head of the inlet.

275 **Hare Point** *(78°13'N, 87°30'W)* is low and rounded with steep cliffs rising to 457 m behind the coast to the north. Between Hare Point and Trappers Cove, 21 miles NNE, the land rises a short distance inland to considerable elevations.

276 The shores of **Trappers Cove** rise steeply except at its head. Here, the land is formed by low hills fronted by a delta. **Spot soundings** in 1974 recorded mid-channel depths in this cove of over 66 m. North of Trappers Cove, the coast is formed by cliffs rising to 610 m and these are backed by higher land.

277 **Cape Chase** *(78°48'N, 86°38'W)*, the NW end of Raanes Peninsula, is a **conspicuous** point at the end of a sharp ridge with an elevation of 457 m.

Bay Fiord and SW approaches

278 The usual route through Eureka Sound northward of Cape Chase leads along the SE and east sides of Stor Island. **Holder Hills** rise a few miles inland of the south side of this channel.

279 **Bay Fiord**, indenting Ellesmere Island, is entered east of Stor Island. The fiord extends east for about 35 miles between shores, in the outer part, of moderate elevation. The north entrance point of the fiord is a rounded cape with sloping cliffs rising to a fairly level summit. **Hat Island** *(78°59'N, 84°55'W)*, in the middle of the entrance to the fiord, rises to 152 m. The largest and highest island of **Gretha Islands** has a sharp summit with an elevation of between 152 and 183 m.

280 **Spot soundings** suggest that mid-channel **depths** in Bay Fiord, including the channels on the north and south sides of Gretha Islands, are over 100 m.

281 **Strathcona Fiord** branches SE from Bay Fiord and is entered west of **Cape Pillsbury**, a low sloping point rising to a flat crest with an elevation of about 274 m. The SW shore of Strathcona Fiord is relatively low, rising gradually inland. **Huff Ridge** trends SW from the mid-part of this shore. The NE shore of the fiord has cliffs and rises to 152 m, and both shores of the inner part have extensive deltas. The east arm of Strathcona Fiord has low shores on both sides.

282 **Spot soundings** in 1974 in Strathcona Fiord suggest mid-channel **depths** of over 100 m except in the east arm where 38 m was recorded.

283 **Marie Island** *(78°52'N, 82°40'W)* is a small low island lying close off the south shore of Bay Fiord, 7 miles east of Cape Pillsbury. **Mount Bell** rises to the SSW.

284 **Augusta Bay**, at the SE end of Bay Fiord, has low rocky shores and extensive deltas. **Cape Ingrid**, between Augusta Bay and Irene Bay, rises to over 457 m.

285 The outer part of the west shore of **Irene Bay** rises to over 762 m a few miles inland; the head of the bay has a river entering through an extensive delta and is backed to the east by **Thumb Mountain**.

286 **Spot soundings** in Irene Bay suggest **depths** in mid-channel of over 90 m shoaling to 33 m near the head.

287 **Caution**. — **Spot soundings** indicate **shoal depths** of 12 m along the west side of Irene Bay.

Eureka Sound — North Part

West side — May Point to Butter Porridge Point

288 The west shore of Eureka Sound between May Point and Depot Point, 24 miles NNW, is low in the south part but rises gradually to steep coastal cliffs in the north part. At **Depot Point** *(79°37'N, 85°45'W)* two hills rise to 457 and 695 m 1 mile and 5 miles, respectively, south of the point. The west shore of the unnamed inlet entered west of Depot Point is low with extensive deltas; the north part of the east shore rises to over 305 m, the south part is lower.

289 **Caution**. — A **shoal depth** of 9 m is 1 mile NNW of the low island 4 miles from the head of the unnamed inlet. A **shoal patch** with a depth of 20 m is between the island and the west shore of the unnamed inlet.

290 The shores of **Mokka Fiord** *(79°35'N, 87°15'W)* are comparatively low. From the head of the fiord a deep valley flanked by steep cliffs leads to **Buchanan Lake**.

291 The south part of the coast between Mokka Fiord and Fair Cape, 15 miles north, is sloping; the north part is formed by high cliffs.

292 **Fair Cape** is a prominent headland which rises steeply from the sea to about 457 m and has vertical cliffs on its west side.

293 **Caution**. — A **shoal depth** under 14 m lies 1 mile off Fair Cape.

294 **Gibs Fiord** *(79°53'N, 87°15'W)* is steep and rugged on its east side, rising to over 305 m in the north part and becoming lower to southward; the west side of the fiord is sloping. **Spot soundings** in 1974 recorded **depths** in the fiord ranging from 80 to 230 m, and a depth of 54 m near the head.

295 **Caution**. — A **shoal depth** of 24 m is near the head of Gibs Fiord.

296 The west shore of Eureka Sound between Gibs Fiord and **Skraeling Point**, 9 miles NNW, slopes gradually up to high land 0.5 to 2 miles inland. Skraeling Point rises to a knobby hill about 305 m in elevation. The unnamed bay entered north of Skraeling Point has mostly low shores and a low isthmus at its head connecting Schei Peninsula to the main part of Axel Heiberg Island. **Spot soundings** in 1974 recorded depths of 38 m in the central part of the bay.

297 **Caution**. — **Shoal depths** of 5 m are found in the NW part of the unnamed bay.

298 The east coast of **Schei Peninsula** is sloped and has several small deltas; the terrain rises gradually inland.

299 **Butter Porridge Point** *(80°24'N, 87°38'W)*, the NW entrance point of Eureka Sound, is a low point which rises rapidly on the west to form a steep cliff, with an elevation of about 305 m, which overlooks the north coast of Schei Peninsula.

East side — Bay Fiord to Slidre Fiord

300 The east side of Eureka Sound between the north entrance point of Bay Fiord and the south entrance point of Vesle Fiord *(79°08'N, 84°00'W)*, 8 miles NNE, is formed of sloping cliffs rising to over 305 m.

301 The north entrance point of **Vesle Fiord** is a spit with raised beaches. The spit is backed by a steep mountain wall, the SW face of a mountainous block that exceeds 914 m in elevation. The shores of the outer part of Vesle Fiord are generally steep with cliffs reaching an elevation of 579 m in places; the shores of the inner part are much lower and the head is separated from Bay Fiord by a low isthmus. **Mount Low** and **Mount James** rise east and NE of the head of the fiord. **Edna Island** *(79°10'N, 84°18'W)*, small and low, lies in the mouth of the fiord; **Lois Island**, elevation over 152 m, lies in the central part.

302 **Spot soundings** in 1974 suggest mid-channel depths in Vesle Fiord of over 56 m.

303 **Caution**. — In the channels NE and SW of Lois Island, **shoal depths** of 13 m and 12 m, respectively, were recorded and near the head of Vesle Fiord there are **shoal depths** under 10 m. Depths recorded in the **shoal** north arm of the fiord ranged from 22 m near the entrance to 15 m near the head.

304 The east shore of Eureka Sound north of the entrance to Vesle Fiord is formed by cliffs over 305 m in elevation at the south end of this stretch. The cliffs gradually lose height to the northward. About 10 miles north of Vesle Fiord the cliffs give way to a coastal slope which rises gradually inland to hills about 305 m in elevation. This section of coast is cut by several rivers.

305 **Blue Man Cape** *(79°45'N, 86°20'W)* rises to a crest with an elevation of 305 m backed by higher land. A prominent isolated summit, rising to 360 m about 5 miles east of the cape, provides an excellent **landmark** when proceeding northward from May Point.

306 The east shore between Blue Man Cape and Hare Cape, 13 miles north, is backed by rugged, broken cliffs from 457 to over 610 m in elevation.

307 **Caution**. — A small inlet 5 miles north of Blue Man Cape has sloping shores and **shallow depths**.

Chart 7920

Slidre Fiord

308 **Slidre Fiord** is entered between the rugged and steep **Hare Cape** *(79°58'N, 86°25'W)* and a lower point with less steep slopes 2.5 miles to the north. The shores of the fiord, inside the entrance, are sloping and fronted by small deltas. There are extensive flats at the head of the fiord where **Remus Creek** and **Slidre River** enter. A few miles NE of Slidre Fiord, the prominent wall of **Black Top Ridge** rises to about 869 m.

309 **Eureka** is on the north shore of Slidre Fiord between **Station Creek** and **Black Top Creek**. A weather station is at the mouth of Station Creek and an airstrip is 1 mile NE of the weather station.

310 *Eureka (Index No. 6640)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

311 **Anchorage** can be obtained 0.3 to 0.4 mile off the weather station in about 85 m, mud.

312 **Depths** from the entrance of Slidre Fiord to the anchorage off Eureka are greater than 50 m.

313 **Caution**. — A 15-m **shoal patch** is about 3 miles SE of Eureka and there is **shoal water** farther into the fiord.

314 **Ice** breaks up in Eureka Sound and Slidre Fiord about mid-July and freeze-up occurs during the first two weeks in September.

315 **Caution**. — **Drift ice** and small **icebergs** from Eureka Sound may obstruct navigation and landing operations in Slidre Fiord.

316 The large, red *Polar Environmental Atmospheric Research Laboratory (PEARL)* building and several nearby parabolic antennas are **conspicuous** on the north entrance point of Slidre Fiord. The buildings and **tank farm**, farther east at the weather station, are also **conspicuous**.

317 The airstrip, known locally as **Fort Eureka**, has a gravel runway 4802 feet (1464 m) long and 150 feet (46 m) wide.

318 An **aeromarine radiobeacon** near the station transmits with identification *Morse* "YEU" (— • — — • • • —) on 205 kHz.

319 *(For **climate** normals and averages for Eureka, visit:* https://climate.weather.gc.ca/. *For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784.*)*

320 A **landing beach** is east of a small point below the weather station. The beach is clear of boulders.

321 Supply vessels use their own lightering craft to bring dry stores to the beach, where mechanized equipment is available for further transport. Tankers pump oil to pipelines at the shore.

322 *Eureka Weather Station* is operated by *Environment Canada* and the airstrip is operated by *Department of National Defence*. The weather station has transient accommodation for researchers conducting fieldwork or military personnel on training exercises. Ground transportation and lodging costs for civilian travellers are very high. Eureka has a permanent staff of eight personnel.

Chart 7941

Slidre Fiord to Nansen Sound

323 Between the north entrance point *(80°01'N, 86°30'W)* of Slidre Fiord and Iceberg Point, 18 miles north, the east side of Eureka Sound is bounded by the west coast of **Fosheim Peninsula**. The south part of this stretch rises steeply to high land a short distance inland. The north part rises gradually from 183 m, 1 mile inland, to 213 m, 5 miles inland.

324 **Iceberg Point**, the NE entrance point of Eureka Sound, is low and marked by many raised beaches.

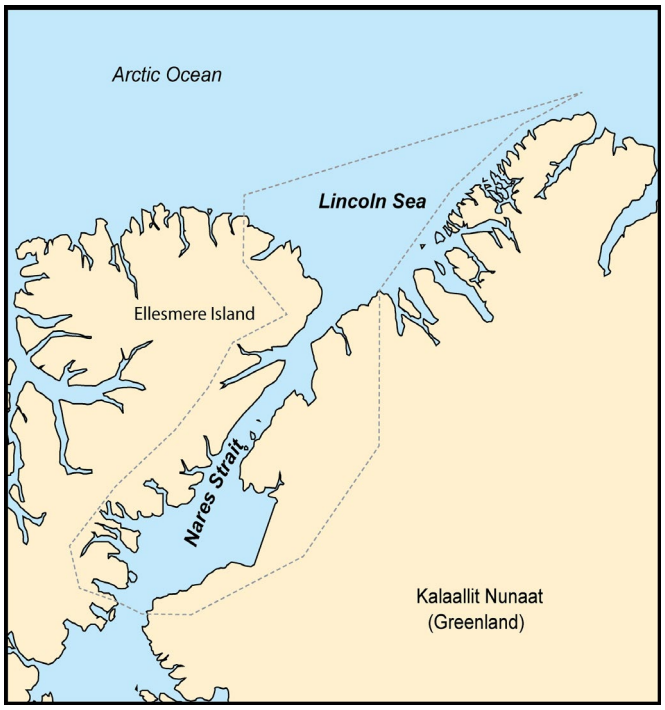
325 **Caution**. — Icebergs ground for some distance north and SW of Iceberg Point indicating comparatively **shallow water** in this vicinity.

326 *(Nansen Sound, Greely Fiord and Tanquary Fiord are described in Chapter 12.)*

Chapter 11

Nares Strait

Smith Sound — Lincoln Sea



General

Charts 7071, 7072, 7302, 7304, 7371

1 **Nares Strait** runs NNE between Ellesmere Island and Kalaallit Nunaat for nearly 300 miles, leading from the head of Baffin Bay to the Lincoln Sea and Arctic Ocean. The strait includes Smith Sound, Kane Basin, Kennedy Channel, Hall Basin and Robeson Channel. This waterway, which was first navigated by Nares in *Alert* in 1875-1876, has been navigated periodically by icebreakers, some with supplies for Alert, Canada's northernmost weather station. The Canadian icebreaker *Louis St. Laurent* reached the latitude of 82°47′N, in the Lincoln Sea, in 1971.

2 The NE coast of Ellesmere Island, from Beatrix Bay at the SW end of Archer Fiord to Wrangel Bay, is part of *Quttinirpaaq National Park of Canada*.

3 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all Canadian waters described in this chapter. The primary objective of this system is to assist the master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

4 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time*.

5 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

6 A controlled survey was carried out in Smith Sound in 1962. Surveys consisting of **spot soundings** through the ice at intervals of 1 mile to 3 miles were carried out in Robeson Channel and the Lincoln Sea and in some bays and inlets *(designated in the text)* between 1966 and 1975.

7 **Caution**. — **Depths**, in other areas, are based on **reconnaissance soundings** or **track soundings**. **Shoal depths** have **not** been **examined**.

Undiscovered dangers may exist. Most of the inshore waters, inlets and bays have **not** been **sounded**.

8 *Alert (Index No. 3765)* is a reference port and *Foulke Fiord (Index No. 3690)*, *Rensselaer Bay (Index No. 3710)*, *Thank God Harbour (Index No. 3735)*, *Cape Bryant (Index No. 3755)*, *Cape Sheridan (Index No. 3780)*, *Wrangel Bay (Index No. 3785)*, *Discovery Harbour (Index No. 3790)*, *Pim Island (Index No. 3840)* and *Cape Aldrich (Index No. 6735)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

9 *(For general **weather conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For present and forecast weather conditions, visit:* https://weather.gc.ca/*.)*

10 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*

11 *(For general **ice conditions** in this area, see Chapter 4 of Sailing Directions booklet ARC 400 — General Information, Northern Canada. For detailed information on present and predicted ice conditions in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

12 **Caution**. — The **magnetic compass** is erratic in the area described in this chapter. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

Smith Sound

Chart 7071

13 **Smith Sound**, entered between Cape Isabella *(78°20'N, 75°00'W)* and Kap Alexander *(78°10'N, 73°00'W, both described in Chapter 9)*, extends NNE for about 23 miles to its boundary with Kane Basin, a line joining Cape Sabine on Pim Island with Cairn Pynt (Point) on the Kalaallit Nunaat coast.

14 Both shores of Smith Sound are high but they differ greatly in aspect. The east shore, though consisting mostly of water-worn headlands, is backed by fertile land with tall grass in summer and much game and great numbers of sea birds. The west shore is high and backed by extensive ice fields reaching elevations of over 4920 feet (1500 m), with little animal life.

15 **Tidal current** observations on the east side in 1962 indicate a SW flow of 0.5 knot to 1.8 knots from high water to three hours after low water with a northerly flow of 1.5 knots during the remainder of the tide. On the west side, indications are of a south to westerly flow of 0.5 knot to 1 knot except for one hour after high water when the flow is 0.5 knot to NW. In the centre of Smith Sound a flow of 0.5 knot to 2 knots to SW is experienced with the ebb tide and a NE flow with a similar rate occurs with the flood tide.

16 Over the sound as a whole, there appears to be a net movement of surface water southward into Baffin Bay.

17 In winter, ice in the north and middle parts of Smith Sound usually is fast from shore to shore. The south end, which is part of the "North Water", often remains open throughout the year. The south limit of the solid sheet forms a bridge opposite Etah, Kalaallit Nunaat *(78°18'N, 72°21'W)* in the winter.

Smith Sound — West side

18 **Baird Inlet**, entered between Cape Isabella *(78°20'N, 75°00'W)* and Wade Point, 12 miles north, has mostly high and precipitous shores increasing in height westward. Near its head, ice-capped precipices rise to over 3282 feet (1000 m). **Ekblaw Glacier** discharges into the head of the inlet. **Wyville Thomson Glacier** descends to the south shore of Baird Inlet in separate lobes ending in ice cliffs. Farther west, **Tanquary Glacier**, with an ice cliff 2 miles wide, is bounded on its NW side by a high headland which rises steeply from the sea. **Baird Island**, a low rocky islet, lies 0.4 mile north of the high headland. The north side of the inlet is a high rock wall broken by four glaciers named, from west to east, **Small Glacier**, **Green Glacier**, **Allen Glacier** and **MacMillan Glacier**.

19 **Johan Peninsula**, which lies between Baird Inlet and Buchanan Bay *(78°58'N, 75°11'W)*, has a rough, irregularly eroded, glaciated coast and rises to about 3708 feet (1130 m) centrally in its south part.

20 **Caution**. — Baird Inlet is usually choked with **icebergs**.

21 **Wade Point** *(78°32'N, 74°57'W)* is a rounded knob rising to about 492 feet (150 m) with two prominent hills on the east shore. The point forms the east end of a narrow broken strip of ice-free land which lies between MacMillan Glacier and **Alfred Newton Glacier**, which reaches salt water as an ice lobe over 2 miles wide. Two small rocky islets are close offshore north of Alfred Newton Glacier; the larger is named **Leconte Island**.

22 **Cape Herschel** *(78°35'N, 74°35'W)* is at the end of a small peninsula which rises steeply on all sides

to a level summit, 1313 feet (400 m) in elevation, which is **conspicuous**. **Herschel Bay** lies on the west side of the peninsula.

23 **Caution**. — In 1904 *Neptune* struck an **uncharted underwater rock**, about 1 mile off Cape Herschel; a sounding of 70 fathoms (128 m) was obtained within 0.1 mile of the position of the vessel's striking. **Neptune Rock**, 2 miles north of Cape Herschel, appears from **air photos** to be a low island.

24 **Caution**. — An **uncharted underwater rock**, position doubtful, is about 5 miles NE of Cape Herschel off the entrance to Rosse Bay.

25 The west shore of **Rosse Bay**, north of Cape Herschel, is formed by **Leffert Glacier**. On the north side of the glacier the land rises precipitously to almost 5580 feet (1701 m).

26 **Caution**. — Rosse Bay is usually filled with **icebergs** from Leffert Glacier.

27 **Rice Strait** *(78°43'N, 74°43'W)* was navigated by Wordie in *Isbjorn* in 1937. The strait has a minimum width of about 0.25 mile and irregular, rocky walls which rise from 985 feet to 1970 feet (300 m to 600 m).

28 **Caution**. — Wordie reported very **strong tidal currents** in Rice Strait.

29 **Fram Haven**, where Sverdrup, in *Fram*, wintered in 1898-1899, is a bay about 0.75 mile long and 0.25 mile wide in the NW part of Rice Strait, sheltered by islets joined to the mainland by a glacier tongue. A small tongue of the glacier is at the head of the bay.

30 **Pim Island** is an eroded rock plateau rising to more than 1806 feet (550 m) from steep cliffs on all sides except the north where there is a rugged slope. Pim Island is difficult to identify as an island from SE because Rice Strait cannot be distinguished. **Cape Sabine** *(78°43'N, 74°07'W)*, its east end, is relatively low but easy to identify because, being formed of red syenite, it differs in colour from the headlands north and south of it.

31 *Pim Island (Index No. 3840)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

32 **Caution**. — Strong **tide rips** are reported in the vicinity of Cape Sabine.

33 **Payer Harbour** has shores of granite cliffs. A prominent hill rises about 1.5 miles west of the head of the harbour.

34 Nares, in 1875, found no bottom at 20 fathoms (37 m) close to the shore. MacMillan reported in 1923 that the bottom appeared to be covered with rocks, and he considered that the islands lying off the harbour would not afford shelter from either wind or ice.

35 **Brevoort Island** *(78°41'N, 74°07'W)*, a syenite rock about 492 feet (150 m) in elevation, is the outermost of a group of small islands SE of Payer Harbour.

36 Wordie considered that a vessel detained in this vicinity should wait near the north end of Rice Strait rather than at Payer Harbour on the east side of Pim Island.

Smith Sound — East side

Charts 7302, 7071

Kap Alexander to Hartstene Bugt

37 The bay north of Kap (Cape) Alexander *(described in Chapter 9)* has **Dodge Gletscher (Glacier)** *(78°11'N, 72°42'W)* at its head. Along the north side of the bay is a remarkable formation of even, table-topped rock terraces, rising one above the other like balconies. The terraces were named "**Crystal Palace Cliffs**" by Inglefield in 1852. They are now called **Crystal Palace Klipper**.

38 **Mac Cormick Fjord (McCormick Bay)** *(not named on Chart 7302)* is entered between the NW end of Crystal Palace Klipper and **Kap (Cape) Kenrick**, a prominent headland rising to 204 m (670 feet). Mac Cormick Fjord has a small harbour named **Pandora Havn** *(78°15'N, 72°41'W)*, about 0.25 mile wide, at its head. A **cairn** stands on Kap Kenrick and a second on the south shore of the fiord at the entrance to Pandora Havn.

39 **Caution**. — **Depths** in Mac Cormick Fjord shoal gradually from over 25.6 m (14 fms) in the middle of the entrance to about 11 m (30 feet) at the entrance to Pandora Havn. Icebergs strand on a **shoal**, partly drying, that extends from the south side of Kap Kenrick, and another **shoal** is off the NW end of Crystal Palace Cliffs *(the island shown here on Chart 7071 does not exist)*.

40 **Caution**. — Pandora Havn has **depths** of 9.1 to 12.8 m (30 to 42 feet) in the middle, shoaling gradually towards the shores. Close east of the head of the harbour, hills rise steeply in terraces to about 366 m (1200 feet).

41 **Anchorage** for small vessels can be obtained NE of a small projection on the south side of the harbour in 11.9 m (39 feet) over soft black mud with good holding. The shelter is good except from the west.

Hartstene Bugt and Foulke Fjord

42 **Hartstene Bugt (Bay)** *(not named on Chart 7302)*, entered between Kap Kenrick *(78°15'N, 72°46'W)* and Sunrise Pynt (Point), 4 miles NNW, has Foulke Fjord (Fiord) at its head. In the SE part of the bay there is a

waterfall of considerable height falling from a spur of **(Mount) Aubrey Bjerg** *(not shown on Chart 7302)*. The slopes here are reported to be green with vegetation in summer, and hares and reindeer are numerous.

43 **Caution**. — **Shoal water** extends from the east shore of Hartstene Bugt, midway between Kap Kenrick and Foulke Fjord.

44 **Foulke Havn** *(not named on the charts)*, a small inlet close south of the entrance to Foulke Fjord, is fronted by three small islands and has steep-to sides and a narrow gully at its head. A survey in 1962 found depths from 18.3 to 55 m (10 to 30 fathoms) in this harbour. The inlet is fully exposed to SW winds and open to any ice travelling up from the south. However, a schooner drawing 2.4 m (8 feet) has wintered here, hauled close inshore and moored to rocks, and sheltered somewhat by icebergs stranded off the entrance.

45 A small bay indents the north shore of Hartstene Bugt between **Sunrise Pynt (Point)** *(78°19'N, 72°50'W, not named on Chart 7302)* and **Jensen Pynt** *(not named on the charts)*, 1.5 miles ESE. The rocky shore of the bay has a small area of semi-permanent shore-fast ice, known as an icefoot, at its east end. **Anchorage** has been obtained here in 14.6 m (8 fms), excellent sand bottom, but the bay is open to south and west.

46 **Reindeer Pynt** *(not named on the charts)*, 2.5 miles ESE of Sunrise Pynt, is the north entrance point to Foulke Fjord.

47 **Caution**. — Close south of Reindeer Pynt are islets and above-water and **underwater rocks**. A cove 1.5 miles to the east has a flat bottom of **rocks**, **boulders** and gravel patches that is **underwater** except at the lowest tides.

48 **Foulke Fjord (Fiord)** is connected by a stream at its head to **Alida So** *(not shown on the charts)*, a lake fed by **Brother John Gletscher (Glacier)** *(not shown on Chart 7302)*. **Etah** *(78°18'N, 72°20'W, not named on Chart 7302)*, abandoned, was the northernmost part-time Inuit settlement on the west coast of Kalaallit Nunaat. Foulke Fjord has been the winter base of several expeditions.

49 *Foulke Fiord (Index No. 3690)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

50 The shores of Foulke Fjord rise from the water's edge to about 335 m (1100 feet). **Dodge Bjerg (Mountain)** *(not shown on Chart 7302)* rises on the north side of the inner part of the fiord to 762 m (2500 feet). The north shore of the inner part has a considerable amount of green, grey and reddish grass. A rock beach at the head of the fiord slopes gently to Alida So.

51 **Caution**. — A 2.4-m (8-foot) **shoal** lies 0.5 mile south of Jensen Pynt; a **rock** which dries 2.4 m (8 feet) lies 1 mile SSW, and an 11-m (36-foot) **shoal** lies 0.2 mile south of Reindeer Pynt. A detached 12.8-m (42-foot) **shoal patch** lies in the middle of the entrance to Foulke Fjord and a dangerous **underwater rock** lies 0.25 mile off the south side of the entrance. The islet off the promontory on the south side of the fiord is surrounded by **shoal water**. A vessel entering Foulke Fjord is advised to keep slightly north of mid-channel to avoid known dangers.

52 **Anchorage** can be found in the inner part of Foulke Fjord, about 0.05 mile off a small peninsula, in depths over 26 m (14 fms). The bottom along the axis of the fiord appears to be mud. The schooner *Bowdoin*, in 1933, moored to Reindeer Pynt. Bernier reported that the inner end of Foulke Fjord is one of the very few places in north Kalaallit Nunaat where a vessel could be beached for repairs.

53 **Caution**. — Foulke Fjord is one of the windiest places in Kalaallit Nunaat; **strong winds** blow off the ice cap almost continuously in winter. In clear weather there is usually a strong north wind; an overcast sky is often associated with SW or west winds but with calm conditions in the fiord.

54 The fiord is usually clear of **ice** from about July 31 to September 1.

Sunrise Pynt to Cairn Pynt

55 **Kap (Cape) Ohlsen** *(78°21'N, 72°49'W, not named on Chart 7302)*, 2 miles north of Sunrise Pynt, is a prominent projection of light reddish rock with precipitous cliffs close by.

56 **Littleton Ø (Island)**, separated from Kap Ohlsen by a channel with depths of over 27.4 m (15 fms), is prominent with steep sides and a flattish top; the island rises towards its SW end to about 183 m (600 feet). The island has been used as a repository for the records of various expeditions; some of the expeditions have erected **cairns**.

57 Brief observations of **currents**, during the period of ebb tide only, indicate a northward flow of 2 knots off Littleton Ø.

58 **Caution**. — **McGary Ø** *(not named on the charts)*, close NW of Littleton Ø, has an **underwater rock** close off its NW side. An above-water rock, with an **underwater rock** close SW of it, lies off the west end of the island. The passage between McGary Ø and Littleton Ø **shoals** gradually to 5.5 m (18 feet) and is encumbered by above-water and **underwater rocks** at its SW end. Because of drifting ice, a rock bottom and limited swinging room, this passage affords poor anchorage.

Chart 7071

59 **Life Boat Vig** *(78°22'N, 72°40'W, not named on the chart)*, a cove, is entered about 1.5 miles NE of Kap Ohlsen.

60 **Caution**. — Life Boat Vig is very **shoal**. The bottom changes suddenly within the entrance from black to yellow sand, and is studded with large **boulders**.

61 **Kap (Cape) Hatherton**, 7 miles NNE of Kap Ohlsen, is a bold rocky mass backed inland by undulating hills. The coast NE of the cape is reported to be studded with islets on which numerous sea birds nest. **Hatherton Bugt (Bay)**, between the cape and a peninsula 2 miles south, has a sandy bottom and beach.

62 **Caution**. — The SE shore of Hatherton Bugt is **shallow**, up to 0.4 mile offshore, with a string of islets marking the outer edge of the shallow water.

63 **Refuge Havn (Harbour)** *(78°30'N, 72°25'W)* is entered about 3 miles NNE of Kap Hatherton. Depths of 40 fms (73 m) have been found on the north side near the entrance and a least depth of 7 fms (12.8 m) has been carried to within 0.1 mile of its head.

64 **Caution**. — The east side of Refuge Havn is **shallow** and encumbered with **underwater rocks**.

65 **Anchorage** with good shelter has been found by a small vessel in the NW part of Refuge Havn in 8 fms (14.6 m).

66 The **ice** in Refuge Havn breaks up in August and the harbour freezes over in mid-September.

67 **Caution**. — **Strong winds** blow down the cove from the middle of August onwards.

68 **Cairn Pynt (Point)**, the SE entrance point of Kane Basin, is a square-faced headland of gneiss with a **cairn** on top.

Kane Basin

69 **Kane Basin** extends NNE from Smith Sound for about 110 miles to its border with Kennedy Channel, a line joining Cape Lawrence *(80°23'N, 69°26'W)* on Ellesmere Island to Kap Jackson on the coast of Kalaallit Nunaat. The west side of Kane Basin has many large bays and fiords which penetrate far into the high and largely ice-covered coast of Ellesmere Island. The east side, in contrast, has a fairly regular coastline; a large portion of this is the face of Humboldt Glacier. The south part of the east coast is bordered by a comparatively large area of ice-free land named Inglefield Land.

70 Kane Basin is less deep than the channels to the north and south of it. There is a least mid-basin depth of 34 fathoms (62 m) in the north part, 17 miles ESE of Cape M'Clintock *(79°59'N, 70°39'W)*. The east part of the basin is mostly unsounded. There are no known offshore dangers *(1984)*.

71 **Ice** forms from shore to shore in the basin each winter, the new ice cementing the remains of pack ice together, and pressure ridges are formed by the influences of wind and current.

72 Along many parts of the SE shore, the icefoot which forms around the basin provides favourable conditions for travel along a secure and level sledge road, above the grinding sea ice. The severe cold at the end of September freezes the water on the shore as the tide falls, forming a crust of ice which thickens and strengthens with each successive tide. By November, seen from offshore, it resembles a wall of ice which follows the contours of the coast and, although changing with the seasons, never entirely disappears. Where the shore is flat it may attain a width of as much as 300 feet (91 m).

73 The exposed capes on the west side of Kane Basin are subject to great ice pressure and ice piles up on the icefoot until a solid cliff is formed; the depth at the edge of such cliffs is reported never to be more than 6 feet (1.8 m).

74 No observations of **currents** are available for Kane Basin but, since there is a SW flow in Robeson Channel and Smith Sound, a similar flow can be expected in the basin especially on its west side.

Kane Basin — West side

75 **Cocked Hat Island** *(78°47'N, 74°34'W)*, a **conspicuous landmark** off the north coast of Pim Island *(previously described)*, rises from a flat base to a conical summit with an elevation of about 492 feet (150 m). **Rutherford Bay**, entered 2 miles to the west, has a glacier tongue almost a mile wide on its south shore and a valley extending northward from its head. The coast between the bay and **Cape Rutherford** is rugged and irregular.

76 **Caution**. — Rocky islets and **shoal water** are close inshore along this section.

Buchanan Bay — South side

77 **Buchanan Bay** is entered between Cape Rutherford and Cape Camperdown, 11 miles north. On the south sides of Buchanan Bay and its western extensions, Hayes Fiord, Jokel Fiord and Beitstad Fiord, the high land

is ice-covered and large glaciers fill all the valleys. Knud Peninsula and Bache Peninsula are free of ice.

78 Vessels supplying the former *RCMP* posts in Buchanan Bay usually arrived in August but rarely found open water and in 4 years out of 13 could not penetrate the bay.

79 The coast between Cape Rutherford and the entrance to Alexandra Fiord *(78°54'N, 76°00'W)* is rocky and relatively low in its east part, with many rocky islets close inshore. Towards the west the coast becomes higher and more rugged with steep cliffs fronted by a narrow strip of low rocks.

Chart 7371

Alexandra Fiord

80 **Alexandra Fiord** is bordered to the north by cliffs and talus backed by the mountains of **Thorvald Peninsula**. **Digarmulen Point**, the east end of Thorvald Peninsula, is a broad, rocky headland with steep sides.

81 The land on the south side of Alexandra Fiord is a little less steep than on the north and is backed by the massive rounded summits of Johan Peninsula ice cap. At the head of the fiord two large glaciers descend to within 1 mile of the water. The buildings of a former *RCMP* post, abandoned in 1963, are on the south shore of the fiord.

82 **Caution**. — Streams from the glaciers have formed deltas and **shoal water** at the head of Alexandra Fiord.

83 **Depths** in the outer part of the fiord are irregular. **Spot soundings** through the ice *(1975)* show depths in the inner part decreasing gradually west of the sounded area on *Chart 7371*, to 50 m north of the point 4.8 miles west of the abandoned post, and to 4 m at the head of the fiord.

84 **Skraeling Island** *(78°55'N, 75°40'W)*, with two summits, is the outermost of a string of islands and islets along the axis of the fiord. Rocky islets lie up to 0.4 mile off the north shore of Skraeling Island.

85 **Caution**. — Numerous above-water and **underwater rocks** lie up to 1 mile east and SE of the island. There is **foul ground** between Skraeling Island and the mainland to the south. A 1.8-m **shoal patch** was reported to lie 0.25 mile SW of the island but was not found in a subsequent search.

86 The unnamed island 0.7 mile west of Skraeling Island has a cone-shaped summit surmounted by a **cairn**.

87 **Caution**. — **Drying rocks** and **rocks awash** lie in mid-channel 1 mile WNW of the unnamed island.

88 **Anchorage** may be obtained about 0.25 mile north of the abandoned post in 35 m.

89 There is a former **landing beach** in front of the abandoned post.

90 **Caution**. — A **rocky bar**, parallel to the beach, is about 46 m offshore. Small craft can be beached only for a short period on either side of high water.

91 The approximate **tidal range** at Alexandra Fiord is 4.3 m.

Chart 7071

Buchanan Bay — North side

92 **Cape Camperdown** *(79°01'N, 74°33'W)*, at the SE end of Bache Peninsula, is a broad low point backed by cliffs exceeding 1500 feet (457 m) within 0.5 mile of the sea. The coastal cliffs decrease in height to the west. The site of an *RCMP* post, abandoned in 1933 because of the difficulty of access by sea, is 1 mile SE of Koldewey Point. The site is low, bare and stony and the cliffs to the rear rise to 1030 feet (314 m).

Hayes Fiord, Jokel Fiord and Beitstad Fiord

93 **Outer Island**, the largest of the islands lying in the mouths of Hayes Fiord and Flagler Bay, is rugged and rises to about 492 feet (150 m). **Weyprecht Islands**, to the NE, have steep, irregular shores and rough surfaces.

94 The south shore of **Hayes Fiord** *(79°02'N, 76°45'W)* is steep and high, becoming very precipitous to the west, and several small glaciers reach the water. **Mount Carey** rises to 4000 feet (1219 m). The north shore, formed by **Knud Peninsula**, consists of an almost unbroken line of precipitous cliffs, 1510 to 1970 feet (460 to 600 m) in elevation, becoming higher towards the west. **Mount Kola**, elevation 3430 feet (1045 m), is the highest land on the peninsula.

95 **Jokel Fiord** is a spectacular trough with mountain walls rising precipitously from the water to over 3938 feet (1200 m). **Sands Glacier** enters the west shore of the fiord about 5 miles within the entrance, the large **Stygge Glacier** enters Jokel Fiord at its head, and several unnamed glaciers enter from either shore.

96 **Haa Island** *(79°00'N, 77°38'W)*, elevation 520 feet (158 m), lies close off the high rocky cape which divides Jokel Fiord and Beitstad Fiord. Ruins of old Inuit dwellings have been found on the island.

97 **Beitstad Fiord** has precipitous walls, rising on either side to a flat-topped plateau at an elevation of 2955 feet (900 m). Three active glaciers reach the south shore of the fiord, the westernmost is **Bear Glacier**. The

land around the fiord is comparatively rich in vegetation and is fine game country.

98 **Caution**. — Many **icebergs** have been seen in Beitstad Fiord.

99 Mid-channel **depths** in Hayes Fiord range from 75 fathoms to 245 fathoms (137 m to 448 m); in Jokel Fiord from over 219 fathoms (401 m) in the entrance to 74 fathoms (135 m) near the head; and in Beitstad Fiord from 49 fathoms (90 m) near the entrance and head to 109 fathoms (199 m) in the central part.

100 **Caution**. — **Depths** are from **spot soundings** through the ice in 1975.

Flagler Bay

101 The entrance to **Flagler Bay** is between **Koldewey Point** and the east end of Knud Peninsula.

102 **Caution**. — Islands, islets, above-water rocks and **underwater rocks**, some of which are **uncharted** *(1984)*, encumber the entrance to Flagler Bay.



103 **Caution**. — Very strong **tidal currents** keep the entrance more or less ice-free from July to October, and there are sometimes open patches even in winter.

104 The east part of Knud Peninsula is irregular and rocky, rising steeply from the sea to over 985 feet (300 m). Midway along the north shore of the peninsula, there is a low area where two streams have built a delta, and from there to the head of Flagler Bay there are precipitous cliffs rising to over 1970 feet (600 m).

105 The north shore of the bay consists of precipitous cliffs about 985 feet (300 m) in elevation with talus at their bases, broken by a few ravines and increasing in elevation to the west. On the north shore, 3 miles from the head, there is a wide flat delta backed by cliffs rising to 1970 feet (600 m).

106 At the head of Flagler Bay, drying mud flats extend from the foot of a valley which continues inland for some 15 miles. A portage route, about 40 miles long, leads through the valley to Bay Fiord on the west side of Ellesmere Island. Expeditions which traversed this route, the most recent in 1938, reported that musk-oxen, caribou, arctic hare and ptarmigan were plentiful.

107 **Caution**. — **Spot soundings** through the ice *(1975)* suggest that mid-channel **depths** in Flagler Bay are **shoal**, ranging from 4 to 11 fathoms (7 to 21 m).

Bache Peninsula — East shore

108 **Cape Albert** *(79°03'N, 74°24'W)*, the SE end of Bache Peninsula, rises very steeply from lower slopes mantled with talus to about 1478 feet (450 m); its central part is divided by two large ravines into three turrets which form distinctive **landmarks** from the east. **Bache Peninsula**, composed of stratified rock, rises to a gently undulating tableland with an elevation approaching 1970 feet (600 m). From southward Cape Albert appears as the precipitous edge of this tableland.

109 The coast between Cape Albert and Cape Henry is formed by a line of massive cliffs displaying **conspicuous** horizontal strata in their upper parts. **Cape Henry** *(79°08'N, 74°35'W)* rises to over 985 feet (300 m). **Bartlett Bay** has shores of high cliffs and a broad valley at its head.

110 **Caution**. — **Shoal water** extends about 0.5 mile offshore from the head of Bartlett Bay.

111 **Victoria Head**, elevation 1729 feet (527 m), is a very prominent headland with cliffs, its lower part mantled by talus.



112 **Caution**. — There are indications of **strong tidal currents** off Victoria Head.

Princess Marie Bay

113 **Caution**. — **Depths** in Princess Marie Bay and its arms are taken from **spot soundings** through the ice at intervals of 1 mile *(1975)*. **Shoal depths** have **not** been **examined**. **Undiscovered dangers** may exist.

114 **Princess Marie Bay** is entered between Victoria Head and Cape Prescott, 12 miles north. **Depths** in Princess Marie Bay range from 20 to 71 fathoms (37 to 130 m); the inner half is deeper.

115 The south coast of Princess Marie Bay as far west as **Peary Bay** consists of cliffs of nearly horizontal rock layers reaching over 985 feet (300 m); the cliffs are cut by several deep ravines. The shores of Peary Bay are formed of high cliffs, lower on the west side. At its head, two streams have formed ravines and deltas. At **Cape Hunter** *(79°16'N, 76°03'W)* the shore is low and shelving. For about 5 miles west of the cape the shore continues to be low, backed by high land rising to about 1478 feet (450 m); from there almost to the head of Harmsworth Bay the shore is high and steep and broken only by a few ravines.

116 The land at the head of **Harmsworth Bay** is low but a short distance southwest it rises to over 1478 feet (450 m). The north side of the bay is low and backed by low cliffs with high cliffs rising a short distance inland to small ice caps 2310 feet (704 m) high. **Cape Baker** *(79°16'N, 77°17'W)* is low but backed by cliffs 500 feet (152 m) high.

An islet *(uncharted in 1984)* lies about 2 miles north of Cape Baker.

117 **Caution**. — Depths in Harmsworth Bay range from 19 fathoms (35 m) in the entrance to a **shoal depth** of 30 feet (9 m) halfway to the head.

118 **Sawyer Bay** has precipitous shores rising to between 1970 and 2955 feet (600 and 900 m), cut by a few ravines. **Benedict Glacier**, at the head of the bay, is backed to westward by high mountains. **Depths** in Sawyer Bay range between 23 and 57 fathoms (42 and 104 m); the deepest part is halfway to the head.

119 **Norman Lockyer Island**, on the north side of the entrance to Princess Marie Bay and in the mouth of Franklin Pierce Bay, is composed of grey limestone. The south face of the island is steep cliffs; the lower 300 feet (91 m) of the other shores are composed of a succession of raised beaches at intervals of 20 feet (6 m).

120 **Caution**. — **Walrus Shoal**, **depth unknown**, lies midway between Norman Lockyer Island and the mainland to the NE.

121 The east and west shores of **Franklin Pierce Bay** are composed of cliffs rising to 1478 feet (450 m); these cliffs continue inland as the walls of a broad valley at the head of the bay.

122 **Caution**. — Depths in Franklin Pierce Bay range from a **shoal depth** of 24 feet (7 m) north of Norman Lockyer Island through 25 fathoms (46 m) in the mid section to a **shoal depth** of 18 feet (5 m) near the head.

123 **Caution**. — **Shoals** and deltas extend from the head of Franklin Pierce Bay.

124 **Cape Harrison** *(79°22'N, 74°54'W)* is a massive headland, over 1478 feet (450 m) in elevation, with steep cliffs and talus. **Cape Field**, the SE end of **Cook Peninsula**, is the end of a sharp ridge with steep sides descending from tableland with an elevation of 1478 feet (450 m). The cape enters the sea as a sharp projecting point.

125 The shores of **Copes Bay**, for several miles within its entrance, are backed by cliffs reaching elevations of up to 1970 feet (600 m). In the inner part of the bay, high cliffs alternate with sloping shores. Elevations a few miles inland exceed 3940 feet (1200 m). **Parrish Glacier** enters the head of the bay.

126 **Depths** in the outer half of Copes Bay are between 18 and 35 fathoms (33 and 64 m), and in the inner half between 46 and 91 fathoms (84 and 166 m).

127 The south coast of Cook Peninsula rises in a massive line of cliffs with elevations in places of over 2463 feet (750 m); the coast is cut by deep ravines and in two places deltas have formed low points.

128 **Woodward Bay**, entered east of **Cape Stevens** *(79°19'N, 77°08'W)*, is divided into two broad arms at its head by a massive cape, exceeding 2955 feet (900 m) in elevation. An islet *(uncharted in 1984)* lies off the massive cape. **Sven Hedin Glacier** is at the head of the west arm. The shores of Woodward Bay are steep cliffs rising to over 1970 feet (600 m); the cliffs are cut by deep ravines ending at small deltas. An islet is reported to lie off the east entrance point of the bay.

129 **Caution**. — Depths in Woodward Bay range from 50 fathoms (91 m) in the entrance to a **shoal depth** of 30 feet (9 m) near the head.

Cape D'Urville to Cape Louis Napoleon

130 **Cape D'Urville** *(79°27'N, 73°55'W)* is 3 miles NE of **Cape Prescott**. A flat valley over a mile wide is between the two capes. Cape D'Urville is a steep bluff about 1478 feet (450 m) in elevation separated into two parts by a deep ravine. A fan-shaped delta extends seaward for about 0.25 mile. Peary wintered off this cape in *Windward* in 1898-1899, and erected a house ashore.

131 **Allman Bay** has steep cliffs along its shores rising to more than 1478 feet (450 m). There is a broad valley at its head extending to **John Evans Glacier**. Mud flats extend about 0.1 mile off a delta at the head of the bay.

132 The coast between Allman Bay and **Cape Hawks** *(79°32'N, 73°28'W)* is formed of high cliffs. Two deep valleys, with deltas at their ends, cut the cliffs. Cape Hawks has an elevation of over 1970 feet (600 m).

133 **Washington Irving Island** is easily identified, rising to rounded summits near both ends, the southern one being higher.

134 A vessel has obtained **anchorage** 1 mile NNE of Washington Irving Island in 35 fathoms (64 m), soft grey mud.

135 **Dobbin Bay** is entered between Cape Hawks and **Cape Louis Napoleon** *(79°37'N, 72°46'W)*, a steep, rounded headland 9 miles NE. **Mount Joy**, 3 miles to the north, has an elevation of about 2955 feet (900 m). **Cape Schott** and **Cape Hilgard**, on either side of Dobbin Bay near the entrance, have elevations of about 2463 feet (750 m). The wide bay SE of Cape Hilgard has high shores and two valleys converging at its head. **Prince Imperial Island** is low. The shores of Dobbin Bay are mostly steep but are cut by several ravines and deep valleys ending in small deltas. **Eugenie Glacier**, which enters the head of

the bay, is separated from a smaller glacier to the NE by a high headland *(79°49'N, 74°36'W)*.

136 **Depths** are from **spot soundings** through the ice, at intervals of about 0.5 mile, taken in Dobbin Bay in 1975. The least soundings in the channel west of Washington Irving Island and throughout the offshore areas of the bay were over 27 fathoms (49 m). The general range of soundings in the bay was between 55 and 109 fathoms (100 and 200 m).

137 **Caution**. — **Soundings** were **not taken** within 0.5 mile of the shore.

138 **Historical note**. — *Albert* and *Discovery*, of Nares' expedition, navigated Dobbin Bay in 1875 and 1876 assisted by blasting. The channel between Washington Irving Island and Cape Hawks was used for entry in 1875 and departure in 1876; in 1875 the vessels departed through a narrow lane along the NE shore. On both occasions icebergs and floes were drifting to and fro with the tidal currents.

Cape Louis Napoleon to Cape M'Clintock

139 The coast between Cape Louis Napoleon and Cape Knorr, 21 miles NE, is formed by the east coast of **Darling Peninsula**. About 30 miles to the NW, the snow-covered summits of **Victoria and Albert Mountains** rise to over 5910 feet (1800 m) in a series of isolated, cone-shaped peaks.

140 From Cape Louis Napoleon, with a height of 1970 feet (600 m), past **Joy Point**, with a height of 2955 feet (900 m), to **Hayes Point** *(79°40'N, 71°51'W)*, the shore is steep cliffs. Hayes Point, flat-topped with cliffs, is lower towards its east end.

141 **Gould Bay** has a broad valley on its west side, fronted by a wide delta, and mountains on its north side exceeding 2955 feet (900 m) in elevation. It is reported that the delta and valley are well-protected and it has been conjectured that the area might make a good landing strip for aircraft.

142 **Caution**. — Gould Bay, north of the delta, is **shallow**.

143 The coast between Gould Bay and Cape Fraser is formed of high, broken cliffs cut about midway by a deep valley. **Cape Fraser** *(79°43'N, 71°29'W)* is a bold, flat-topped headland easily distinguished from southward. A raised beach at the end of the cape, 250 feet (76 m) above the present sea level, makes Cape Fraser easy to identify as it is the only beach of this type in this vicinity.

144 **Maury Bay** *(79°45'N, 71°25'W)* is at the foot of a deep valley which extends NW through rugged mountains. The bay has a small delta at its head. *Alert* took shelter from a gale, here, in August 1876. **Cape John Barrow**, elevation about 1970 feet (600 m), is the north entrance point of Maury Bay.

Chart 7072

145 Between Cape John Barrow and Cape Knorr *(79°50'N, 71°16'W)*, the coast is precipitous and rugged, exceeding 1970 feet (600 m) in elevation. **Cape Knorr** rises to about 1970 feet (600 m) with steep sides and a sloping summit.

146 **Scoresby Bay** has generally steep shores broken by a few valleys except at its head where there is an extensive alluvial plain, a few feet above sea level. A number of streams flow through the plain. **Cape Malley**, on the south shore of the bay, has an elevation of 1500 feet (457 m). In the NW part of the bay there is a large delta formed by a stream, and there is a smaller delta on the north shore.

147 **Caution**. — **Spot soundings** through the ice in 1975 suggest that the depth in Scoresby Bay is generally more than 25 fathoms (46 m). Within 3 miles of the head, the bottom **shoals** to 30 feet (9.1 m) and less. A **bar** and a belt of flats lie off the alluvial plain.

Cape M'Clintock to Cape Lawrence

148 **Cape M'Clintock** *(79°56'N, 71°00'W)* is a massive headland which rises precipitously to about 2463 feet (750 m) a short distance inland.

149 The coast from Cape M'Clintock to Cape Collinson, 7 miles NNE, is formed by rugged mountains rising to 1478 feet (450 m) and separated by steep valleys. In **Joiner Bay** three streams have built small deltas. **Cape Collinson** reaches an elevation of about 2955 feet (900 m) with much higher land rising a short distance westward. The cape is cut by a deep ravine which gives it the appearance of twin rounded summits fronted by cliffs.

150 **John Richardson Bay** *(80°06'N, 70°21'W)* is bordered by land of great elevation and has large glaciers at the heads of its west and north arms. The north shore of the bay is broken by three broad, flat-bottomed valleys where braided streams have formed deltas.

151 **Caution**. — **Spot soundings** taken through the ice in John Richardson Bay, in 1975, ranged from 25 to 64 fathoms (46 to 117 m). A narrow band of **flats** lies off the deltas on the north shore.

152 **Cape Wilkes** is a massive castellated headland of nearly horizontal strata, the middle part consisting of almost sheer cliffs about 1478 feet (450 m) in elevation. From these cliffs the summit rises as a rugged pyramid to over 2955 feet (900 m), sloping steeply to northward. The coastal

mountains between Cape Wilkes and Cape Joseph Good are cut by a ravine and a valley where a stream has formed a delta about 0.5 mile wide.

153 **Cape Joseph Good** *(80°12'N, 70°11'W)* rises as a sheer wall to 3000 feet (914 m) on a 2 mile front. Inland the terrain is very rugged and mountainous with many peaks exceeding 3940 feet (1200 m) in elevation. Along the north side of the cape the cliff top is formed of reddish rocks overlying a grey and bluff formation.

154 **Rawlings Bay** and its inner part, **Radmore Harbour**, have generally mountainous shores cut by steep valleys. **Jolliffe Glacier** *(80°31'N, 71°01'W)*, which enters the head of the harbour with a face 1 mile wide, calves numerous small bergs.

155 **Historical note**. — Nares, entering Radmore Harbour in August 1876 with *Alert* and *Discovery*, found the spring tidal currents running with great strength and a large quantity of pack ice drifting into the harbour.

156 **Spot soundings** taken through the ice in Rawlings Bay and Radmore Harbour, in 1975, found **depths** ranging from 31 to 75 fathoms (57 to 137 m).

157 The coast between the entrance to Rawlings Bay and Cape Lawrence is high, with summits rising steeply to 3448 feet (1050 m), and cut by short, steep valleys with small deltas at their mouths. The lower parts of the cliffs are mantled with talus.

158 **Cape Lawrence** *(80°21'N, 69°36'W)*, the SW entrance point of Kennedy Channel, is a **conspicuous** castellated headland. The cape rises in steep cliffs from the sea to about 1970 feet (600 m) then slopes to over 2955 feet (900 m) about 3 miles inland.

Kane Basin — East side

Chart 7071

Cairn Pynt to Kap (Cape) Frederik VII

159 The SE part of Kane Basin is formed by **Inglefield Land**, stretching from Foulke Fjord *(78°18'N, 72°50'W)* to Humboldt Gletscher (Glacier) *(79°09'N, 65°30'W)*. Inglefield Land is an ice-free plain about 20 miles wide, except at its narrower SW and NE ends. The surface of Inglefield Land is comparatively level except in its east part where low hills alternate with valleys. It is traversed by a number of streams which drain from the interior ice. The coast is generally made up of almost vertical cliffs about 492 to 985 feet (150 to 300 m) in elevation. At one time this area supported a considerable number of caribou.

160 The coast from Cairn Pynt NE past **Cache Pynt (Point)**, **Force Bugt (Bay)** and **Kap (Cape) Grinnel** to **Kap (Cape) Ingersoll** *(78°39'N, 71°26'W)* is smoother than that to southward and has no glaciers.

161 **Rensselær Bugt (Bay)**, entered between Kap Ingersoll and **Kap (Cape) Leiper**, has high sandstone hills on both sides of its outer part and rounded hills covered with moss and grass at its head. Kane, in *Advance*, wintered in 1853 in a berth with a depth of 42 feet (12.8 m) between two islands in the bay; the vessel remained fast in the ice throughout the following year and was abandoned in 1855.

162 *Rensselær Bay (Index No. 3710)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

163 The **coast** from Kap Leiper to Kap (Cape) Agassiz, 60 miles ENE, is formed of a series of bold, steep headlands which drop down to the shore line, with long talus slopes reaching down to the icefoot at their bases. The summits of the cliffs reach more than 984 feet (300 m) in places.

164 **Bancroft Bugt (Bay)** lies between **Kap (Cape) Francis** and **Kap (Cape) Taney** *(78°48'N, 70°20'W)*. **Minturn Elv (River)**, estimated to be 0.75 mile wide at its mouth, discharges 9 miles farther east.

165 **Marshall Bugt (Bay)**, entered between a point called **Inuarfissuaq (Inuarfigssuaq)** and **Kap (Cape) Russel**, 2.5 miles NNW, has a group of small, steep-sided islands in the NE part of its outer section. The narrow inner part of the bay has a river at its head draining **September Søer (Soerne)**, a string of meltwater lakes *(not shown on the chart)*, to the eastward. **Hiawatha Gletscher** *(not shown on the chart)* lies SE of these lakes. Inuit are reported to camp in the vicinity of Marshall Bugt.

Kap (Cape) Frederik VII to Kap (Cape) Jackson

166 **Kap (Cape) Frederik VII** and **Kap (Cape) Wood** lie 6 and 10 miles NE of Kap Russell. **Kap (Cape) Kent** *(79°05'N, 68°30'W)*, 2 miles farther ENE, is a high headland. The icefoot at the base of Kap Kent is covered with rocks from the cliffs above. The mouth of **Wulff Elv (River)** lies 3 miles to the ENE.

167 **Dallas Bugt (Bay)** has several islets near its head. **Kap (Cape) Scott**, with an islet 0.3 mile offshore, rises to 500 feet (152 m).

168 **Advance Bugt (Bay)** *(79°08'N, 67°43'W)* is at the west end of an inshore island chain and is encumbered with islets. **Bonsall Øer (Islands)**, a chain of islands and islets about 5 miles long, front the coast about 10 miles ENE of

Advance Bugt. **Kap (Cape) Agassiz**, 3.5 miles farther ESE, is the NE end of Inglefield Land. A number of islets lie close off the cape and **McGary Øer (Islands)** lie 3 miles north, close off the south end of Humboldt Gletscher.

169 The east shore of **Peabody Bugt (Bay)** is filled by **Humboldt Gletscher (Glacier)**. With a front of 50 miles between Kap Agassiz and **Kap (Cape) Forbes** *(79°53'N, 64°10'W)*, the glacier is almost free of crevasses, and slopes down evenly into the bay. In most places the glacier front does not exceed 164 feet (50 m) in elevation, and in several places it runs smoothly down to the water and is easily accessible from a boat. The bergs which occasionally calve off Humboldt Gletscher look like huge pieces of polar ice and are never as high as those from the glaciers of Inglefield Bredning, Wolstenholme Fjord and Melville Bugt.

170 **Putdlerssuaq (Putlersuak Island)** lies off **Benton Bugt (Bay)**, an open bight between Kap Forbes and **Kap (Cape) Clay**. **Cass Fjord (Fiord)** is entered between Kap Clay and **Poulsen Klipper (Cliffs)** *(80°05'N, 64°57'W)*, cliffs with an elevation of about 600 feet (183 m). The NW shore of **Nygård Bugt (Nygaard Bay)** is formed by **Talilenguaq Klipper (Talilenguak Cliffs)** which extend as far as **Kap (Cape) Webster**.

171 **Wright Bugt (Bay)**, which lies between a point named **Nunatami** and Kap (Cape) Jackson *(80°03'N, 67°06'W)*, has **Troedsson Klipper (Cliffs)** rising to about 1200 feet (366 m) along its NW shore. In the vicinity of Kap Webster and Wright Bugt there is a remarkable formation of limestone cliffs with grey colours at their base and glowing red shales near their summits.

172 **Kap (Cape) Jackson** is the SW end of Washington Land *(described later in this chapter)* and the SE entrance point of Kennedy Channel. The cape appears flattish when viewed from a distance and the coast on either side is bluff and comparatively low.




173 **Caution**. — **Strong currents** are reported to flow around Kap Jackson.

Kennedy Channel

Chart 7072

174 **Kennedy Channel**, entered between Cape Lawrence and Kap Jackson *(both previously described)*, extends NE for 80 miles to the SW limit of Hall Basin, a line joining Cape Baird, on Ellesmere Island, to Kap Morton on Kalaallit Nunaat. There are several islands in mid-channel but no known offshore dangers.

175 The Ellesmere Island shore on the NW side of Kennedy Channel is a succession of high cliffs broken occasionally by ravines and backed by high mountains. Between Cape Lawrence and Carl Ritter Bay, about 40 miles NE, many of the coastal summits exceed 4925 feet (1500 m). A large part of Victoria and Albert Mountains, which lie at the base of Judge Daly Promontory, is permanently ice-covered. NE of Carl Ritter Bay, coastal elevations decrease and there are few summits over 2955 feet (900 m). The SE side of Kennedy Channel, formed by the coast of that part of Kalaallit Nunaat known as Washington Land, is formed of precipitous cliffs backed by mountains. Though lower than those on the Ellesmere Island coast, the mountains rise to over 2955 feet (900 m) in places, about 15 miles inland. Bessel Fjord (Bessels Fiord) joins Kennedy Channel about 6 miles SW of Kap Morton. There are extensive ice caps in the NE part of Washington Land. The glaciers from the ice caps on both sides of Kennedy Channel do not reach its shores except in Bessel Fjord (Bessels Fiord).

176 *(For detailed information on present and predicted **ice conditions** in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

177 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/*. For maps relating to general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784*.)*



178 **Tidal currents** flow parallel to the shoreline, SW on a rising tide, NE when it is falling. The predominant surface flow is to the SW and the strength of the SW-flowing tidal current is much increased with northerly winds. A net SW drift of the ice of 10 miles in 24 hours has been observed.

Kennedy Channel — NW side

179 Between Cape Lawrence *(previously described)* and **Cape L. Von Buch** *(80°53'N, 67°32'W)*, 38 miles NE, the coastal mountains rise from the sea in precipitous slopes broken by gullies and the occasional broad valley. Farther inland, higher peaks and broad ice-capped summits form a tangle of rugged terrain cut by a maze of steep-walled canyons, valleys and ravines.

180 **Carl Ritter Bay** *(80°55'N, 67°30'W)* is the only inlet on the west side of Kennedy Channel which might afford a small degree of shelter. The bay has flats and a large delta at its head extending offshore for about 0.5 mile. **Mount Rae** rises 3 miles to the west.

181 **Caution**. — A **shoal depth** of 48 feet (14.6 m) was found about 0.8 mile from the head of Carl Ritter Bay in 1975.

182 **Cape Back** is the NE entrance point of Carl Ritter Bay. The cape is a black cliff, with buttress-shaped formations, rising to 1970 feet (600 m) at the SW end of a nearly straight line of flat-topped coastal hills extending to Cape Defosse, 24 miles NE. The coast between these capes is formed of high, precipitous cliffs broken at regular intervals by ravines and small valleys with deltas at their mouths. Inland, the terrain consists of a confused mass of peaks, gradually decreasing in elevation to the NE.

183 **Cape Defosse** *(81°14'N, 65°42'W)* rises very steeply to almost 1970 feet (600 m); it marks the SW end of a line of coastal cliffs. A small open bay, 3 miles to the west, is backed by a narrow strip of low land. The bay is bordered to the east by the **Daly River** delta, 1.7 miles wide, at the foot of a distinctive valley. **Church Peak** *(81°15'N, 65°41'W)* is a rounded tabular summit rising to 2540 feet (774 m). The distinctive valley, together with Church Peak and the tangent of Cape Defosse, provide excellent marks for fixing.

184 The coast, between Cape Defosse and a broad river valley 9 miles NE, is an almost straight line of steep cliffs rising to about 985 feet (300 m), broken by a few ravines. Inland, there is a broad, undulating plateau. Close SW of **Cape Cracroft** a stretch of vertical cliffs extends for about 1 mile. Cape Cracroft, elevation 2500 feet (762 m), has a rounded summit and its steep seaward face is gashed with ravines.

185 **Cape Lieber** *(81°29'N, 64°29'W)* is a bluff headland rising to 2845 feet (867 m). **Cape Baird**, the NE end of **Judge Daly Promontory**, is a rounded and relatively low point which slopes steadily from the sea to a broad, flat summit with an elevation of about 493 feet (150 m). The cape is subject to great ice pressure when northerly winds bring down the heavy floes from Lincoln Sea, and diverts much of it into Lady Franklin Bay. **Pavy River** enters the sea south of Cape Baird.

Kennedy Channel — SE side

186 Long stretches of the SE shore of Kennedy Channel between Kap Jackson *(80°03'N, 67°06'W)* and Kap (Cape) Morton *(81°13'N, 63°28'W)* are formed by almost precipitous cliffs 985 feet (300 m) or more in elevation. The land behind the coast rises to about 1312 feet (400 m) in the southern part and to about 2624 feet (800 m) in the northern part. The southern part, **Washington Land**, is mostly free of ice, consisting of wide valleys and isolated mountains, whereas the northern part is more plateau-like and is partly covered with ice caps. Many sea birds of several species have been seen along this coast as well as seals, in the occasional patches of open water, and numerous polar bears. Musk-oxen and hares are found inland.

187 **Morris Bugt (Bay)** is entered between **Kap (Cape) Calhoun** *(80°05'N, 67°08'W)* and **Kap (Cape) Madison**. East of Kap Madison there are hills of 492 to 591 feet (150 to 180 m) elevation, and beyond these a large limestone plateau cut by a few deep valleys rises towards small ice fields some distance inland.

188 **Nicolaj Nielsen Kyst (Coast)**, the stretch of coast from Kap Madison past **Kap (Cape) Hamilton** to **Kap (Cape) Jefferson**, has a limestone foreshore, 1 mile or more in width.

189 **Caution**. — The Nicolaj Nielsen Kyst foreshore, 10 miles long, **uncovers** at low water and at high water appears as a collection of **shoals**, **underwater rocks**, above-water rocks and islands. An islet lies close south of Kap Jefferson; a **shoal** is reported to lie off the cape.

190 **Lafayette Bugt (Bay)**, entered between Kap Jefferson and **Kap (Cape) Independence** *(80°32'N, 66°47'W)*, a precipitous headland with an elevation of about 591 feet (180 m), has shores formed by steep mountains over 1312 feet (400 m) in elevation fronted by a low narrow foreshore. **Kap (Cape) Constitution** is a precipitous headland rising to about 1478 feet (450 m) within a short distance of the sea.

191 **Crozier Ø (Island)** has cliffs on its SW side rising to about 197 feet (60 m) and is lower on its NE side. **Franklin Ø (Island)** *(80°38'N, 66°46'W)*, light brown in colour, has steep sides, a flat top and sharply defined tangents. Ice applies great pressure against its north side, piling up to heights of 66 feet (20 m). **Hans Island** is sandy in colour with a cliff at its south end about 492 feet (150 m) in elevation. Crozier Ø and Franklin Ø are under Danish sovereignty; Hans Island is under Canadian sovereignty. All three islands are easily identified.

192 **John Brown Kyst** *(not named on the chart)* is the coastal strip between Kap Constitution and Kap (Cape) Bryan, 43 miles NE. **Kap (Cape) Resser** *(80°39'N, 66°09'W)*, elevation about 985 feet (300 m), is the south entrance point to **Aleqatsiaq Fjord (Alakratiak Fiord)**. **Graptolit Næsset** *(not named on the chart)* is the north entrance point to this fiord. Signs of ancient habitation have been found along the shores of the bight between Kap Constitution and Kap Resser. **Pentamerus Bjerge (Mountains)** is a range extending NE and east of Aleqatsiaq Fjord as far as **John Brown Iskappe (Ice Cap)**. Between

the ice cap and the shoreline to NW there is only a narrow strip of ice-free land.

193 **Fossil Bugt (Bay)** is a slight indentation in the coast extending a few miles either side of **Kap (Cape) Schuckert** *(80°49'N, 65°05'W)*. **Kap (Cape) Godfred Hansen** and **Kap (Cape) Ulrich** are the entrance points of an unnamed bay. **Kap (Cape) Field** lies 3 miles SW of **Kap (Cape) Bryan**. Kap Bryan, elevation about 1182 feet (360 m), is the west entrance point to Bessel Fjord (Bessels Fiord). The mountains around Kap Bryan are steep and the ice foot here is impassable due to large blocks of sea ice forced onto it. **Hannah Ø (Island)** *(81°09'N, 63°52'W)*, described "as an immense heap of pebbles and drift", appears to be the terminal moraine of a large glacier, now extinct.

194 *Alert* and *Discovery* **anchored** in 48 feet (14.6 m) on a bank extending off the east side of Hannah Ø.

195 **Caution**. — There was a very **strong current** over the bank east of Hannah Ø.

196 **Bessel Fjord (Bessels Fiord)**, entered between Kap Bryan and **Kap (Cape) Maynard**, runs between precipitous cliffs intersected by many ravines. Active glaciers discharge icebergs from several of these ravines.

197 **Caution**. — Many icebergs have been observed aground in the **shallow water** near the mouth of Bessel Fjord.

198 **Kap (Cape) Morton** *(81°13'N, 63°28'W)*, the north end of **Petermann Halvø (Peninsula)**, is a steeply rising promontory backed by a coastal ridge about 1970 feet (600 m) in elevation. **Joe Ø (Island)**, 2 miles north of the cape, is a mushroom-shaped islet of moderate height.

199 **Caution**. — There are indications of **shoal water** extending off the stretch of coast between Kap Maynard and Kap Morton.

Hall Basin

Charts 7304, 7072

200 **Hall Basin** extends from Kennedy Channel to the south limit of Robeson Channel, a line joining Cape Murchison on Ellesmere Island to Kap Lupton on the coast of Kalaallit Nunaat. The west shore of the basin is deeply indented by Lady Franklin Bay and the fiords extending SW and west from it; Petermann Fjord indents the SE corner of Hall Basin.

201 **Caution**. — There is an appreciable difference in geographic co-ordinates between *Chart 7072* and the more recently published *Chart 7304*. Wherever possible, *Chart 7304* is used as the reference chart.

202 Hall Basin appears to be deep. There are no known offshore dangers *(2013)*.

203 **Caution**. — A **shoal depth** of 27.4 m (15 fathoms) has been obtained 2 miles offshore on the east side of Hall Basin.

204 **Ice conditions** in Hall Basin depend much upon the wind and may change from day to day; they can vary greatly in different parts of the basin. Although the period from late August to early September is the best time for navigation, in some years the ice breaks up after the middle of July and begins to form again a month later. On the east side of the basin the ice generally drifts south, but there is some evidence of an anti-clockwise circulation.

Hall Basin — West side

Chart 7304

205 **Cape Murchison** *(81°45'N, 64°12'W)*, on the NW side of Hall Basin, has sides formed of cliffs and rises to 568 m 2 miles inland. **Watercourse Bay** *(not named on Chart 7304)*, a slight indentation in the coast between Cape Murchison and Distant Cape, 4 miles SW, has several ravines leading from its head, one of them containing a considerable outcropping of lignite.

206 **Lady Franklin Bay** is entered between **Distant Cape**, a rugged promontory about 150 m in elevation, and Cape Baird, previously described, 10 miles to the south.

207 **Caution**. — A **strong current** off Distant Cape delays the formation of ice until late in the autumn and breaks it up early in the spring.

208 **Caution**. — Lady Franklin Bay is rarely, if ever, completely clear of **ice** and is usually very **difficult to navigate** even in late August. North or NW winds may fill the bay with **thick pack ice** from the north at any time.

Discovery Harbour

209 **Discovery Harbour** is on the north side of Lady Franklin Bay west of Distant Cape. **Bellot Island**, with **Mount Campbell** *(not shown on Chart 7304)* rising to 640 m near the west end, is in the mouth of the harbour. **Breakwater Island** *(not named on Chart 7304)*, an islet, lies close off **Breakwater Point** *(81°43'N, 64°51'W)*, a low

point extending east from Bellot Island. The east entrance to Discovery Harbour lies between Breakwater Point and a small promontory on the mainland to the NNE. The west entrance is between Bellot Island and **Sun Cape** *(not named on Chart 7304)*, the NE end of **Sun Cape Peninsula**.

210 **Caution**. — A bar with a **least depth** of 18.3 m crosses the west entrance of Discovery Harbour.

211 *Discovery Harbour (Index No. 3790)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

212 The NW side of Discovery Harbour is mountainous and rugged with elevations of 450 to 950 m and is intersected by valleys and narrow passes through the hills. Several summits are marked with **cairns**. At the west end of the harbour there is a large flat plain. Two valleys, **Black Rock Vale** and **The Bellows Valley**, extend inland from the plain, the latter for about 15 miles between high cliffs. A wide shallow river drains **Heintzelman Lake** through Black Rock Vale. **(Lake) Alexandra Lake** drains into **Musk-ox Bay** *(not named on Chart 7304)*, near the middle of the NW side of the harbour. **Mount Ovibos** rises to about 760 m near the west entrance point.

213 **Caution**. — From observation of grounded ice, it is probable that the west part of Discovery Harbour is **more shallow** than the middle and eastern parts.

214 **Fort Conger**, the headquarters of the 1881-1883 Greely expedition and, later, the Peary expeditions, is on the NE shore of Discovery Harbour. A cove that breaks the otherwise precipitous shores here has a low shelving beach that provides a good **landing place**. The site used in 1875 by the *Discovery* party is near by. **Hogback (Hog Back) Mountain** rises to 884 m about 4 miles north.

215 *Discovery* **anchored** in 25.6 to 29.3 m off the cove with excellent protection from winds and ice. Good protection can also be obtained within Breakwater Point, and it has been conjectured that Musk-ox Bay, which has depths of 22 to 44 m at its head, would provide good anchorage.

216 Break-up of fast **ice** has varied from early July to mid-August, freeze-up is usually late August or early September, but Discovery Harbour is never entirely free of ice.

217 **Caution**. — The entrances to Discovery Harbour may be blocked at any time by sufficient **pack ice** from Lady Franklin Bay to prevent entry by icebreaker, but they are shallow enough to stop multi-year ice, from Nares Strait, from entering the harbour.

Conybeare Fiord

218 **Conybeare Fiord**, with high precipitous shores, is entered between **Cape Clear** *(81°38'N, 66°01'W)*, at the west end of Sun Cape Peninsula, and **Keppel Head**, 10 miles SW, a steep headland with an elevation of about 600 m. The rounded summit of **Mount Grinnell** rises to 850 m 3 miles west of Keppel Head.

219 **Sun Bay** *(not named on Chart 7304)* lies between Cape Clear and **Stony Cape**. **Sylvia Mountain** rises to over 600 m behind Stony Cape. **Miller Island**, castle-like with steep cliffs rising above a very narrow foreshore, has three main peaks; the highest, on its SE side, rises to about 450 m. **Lonesome Creek** enters the fiord SW of Miller Island.

220 **Caution**. — **Neptune Reef**, with an islet near its SW end, extends from the south shore of the fiord to within 0.5 mile of the west end of Miller Island. A 12.8 m **shoal** *(marked as 13 m on Chart 7304)* extends off the northernmost point near the west end of Miller Island.

221 **Eastwind Bay** *(81°37'N, 67°55'W, not named on Chart 7304)* is on the north shore of Conybeare Fiord 8 miles WNW of Miller Island; a stream, draining a wide valley, has formed a delta on the NE side of the bay.

222 **Ida Bay**, the west extension of the fiord, is entered south of a bold promontory rising to 878 m. Three small streams enter the low south shore of the bay. **Dodge River** flows through a wide valley into the SW part of the bay and **Ida River** flows through a wide valley into the head of the bay. The mouths of the two rivers are separated by land rising to 738 m.

223 **Chandler Fiord** *(81°34'N, 68°28'W)* has precipitous cliffs rising to 762 m and 610 m on its east and west sides, respectively. The cliffs on the west side are cut by several narrow gorges. There are no landing beaches in Chandler Fiord. **Ruggles River**, draining **Lake Hazen**, enters the head of Chandler Fiord through an icefoot about 7.6 m high.

224 The **anchorage** in Chandler Fiord is about 0.5 mile off the icefoot at the head in 55 m, mud, with excellent shelter. The water here contains much silt brought down by the Ruggles River. **Anchorage** can also be obtained farther off in 73 m where the water is less turbid.

225 The **tidal range**, in Chandler Fiord, appears from brief observations to be 1.4 m.

Chart 7072

Archer Fiord

226 **Archer Fiord**, entered between Keppel Head *(81°31'N, 66°45'W)* and Cape Baird, 20 miles east, is

enclosed throughout its length by precipitous cliffs which, near its head, rise to about 2955 feet (900 m). **Packdog Creek** enters the middle of the south shore of the fiord. **Bulleys Lump**, on the south shore near the head, is a sharp ridge running parallel to the shore for about 4 miles, rising to 2560 feet (780 m) in the centre and sloping down to sea level at either end.

227 **Simmons Bay** *(81°14'N, 69°42'W)*, on the north shore of the fiord opposite Bulleys Lump, has a small island with an elevation of about 492 feet (150 m) in its centre. **Murray Lake** drains into the head of the bay through a river flowing through a steep canyon.

228 **Ella Bay**, at the head of Archer Fiord, is nearly surrounded by high cliffs. A valley, also enclosed by cliffs, leads SW from its head for about 7 miles to the base of a large glacier.

229 **Beatrix Bay**, entered north of **Record Point**, has two streams entering its head, one of which drains **Carolyn Lake**. **Mount Neville** rises to 3500 feet (1067 m) a few miles NW of the head.

Hall Basin — East side

230 Between Kap Morton *(81°13'N, 63°28'W)* and **Kap (Cape) Lucie Marie**, a precipitous cape about 6 miles east, the south shore of Hall Basin is indented by a bight with steep cliffs except at its head where the land rises in terraces towards the ice-covered central portion of Petermann Halvø.

Petermann Fjord

231 **Petermann Fjord (Fiord)**, entered between Kap Lucie Marie and Kap Tyson, 13 miles NE, forms the west side of **Hall Land**. **Kap (Cape) Tyson** has an elevation of about 1478 feet (450 m); the land behind it slopes upward to a high plateau. **Offley Ø (Island)**, close offshore between Kap Tyson and a small point named **Cape Mary Cleverly**, is high and steep with a precipitous NE face about 492 feet (150 m) high.

232 On either side of Petermann Fjord, steep cliffs rise to ice-covered plateaus 2624 feet (800 m) or more in elevation; the ice from the plateaus occasionally projects as small glacier tongues over the cliffs. The projecting ice, when it breaks off, frequently carries with it masses of rock torn from the face of the precipice. The entire SW side of the fiord is lined by cliffs of alternating bands of light grey and dark limestone. On the NE side the cliffs start several miles SE of Kap Tyson and they appear to have more ice flowing over them.

233 From about 12 miles within the entrance, the fiord is entirely occupied by **Petermann Gletscher (Glacier)**, the longest glacier in Kalaallit Nunaat. The glacier extends 50 miles SSE to the Kalaallit Nunaat ice cap. The face of the glacier is low and it discharges few icebergs; the outer 40 miles is a floating glacial tongue with a comparatively smooth surface; the inner portion, beyond the head of the fiord, slopes gradually up to the inland ice and has many crevasses.

Kap Tyson to Kap Lupton

234 The middle section of the stretch of coast between Kap Tyson *(81°21'N, 61°42'W)* and Kap (Cape) Lupton, 20 miles north, is backed by an area of low land with occasional rounded hills. The low land extends east for about 20 miles to Newman (Newmann) Bugt (Bay). **Hauge Bjerge (Mountains)** border the south side of the low land.

Chart 7304

235 **Polaris Bugt (Bay)** is a slight bight in the east shore of Hall Basin between Kap Tyson and a low point, 12 miles north, where a braided stream has formed a broad delta.



236 **Thank God Havn (Harbour)**, 2 miles SSE of Kap (Cape) Lupton, was the winter quarters in 1871-1872 of Hall's expedition. *Polaris* **anchored** inside the line of the main ice flow, protected from the south-drifting ice by a small cape. A **tablet** erected at **Halls Rest**, at the end of the harbour, by the British Arctic Expedition of 1875-1876, marks the explorer's grave. The land behind the harbour consists of a very broken series of heights and depressions with elevations of 275 to 430 m.

237 *Thank God Harbour (Index No. 3735)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

238 **Kap (Cape) Lupton** *(81°41'N, 61°51'W)*, the NE entrance point to Hall Basin, is a **conspicuous** headland between 400 and 425 m in elevation. Here, the character of the coast changes; the low shore bordering Hall Basin gives way to the steep cliffs of Polaris Forland (Promontory).

Robeson Channel

239 **Robeson Channel** extends NE from Hall Basin for 50 miles to its junction with Lincoln Sea, a line joining Cape Sheridan *(82°29'N, 61°35'W)* on Ellesmere Island to Kap (Cape) Stanton on the coast of Kalaallit Nunaat.

240 The Ellesmere Island coast of Robeson Channel is formed over much of its length by high cliffs and talus, or by steep hills fronted by a narrow strip of beach. At the north end of the channel, towards Cape Sheridan, the cliffs give way to land sloping gently from the sea to hills of moderate elevation. The Kalaallit Nunaat coast is almost uniformly high and bold except where it is broken by Newman (Newmann) Bugt (Bay).

241 Except in a few places where the cliffs rise directly from the sea, the shoreline on both sides of the channel is usually fronted by a nearly continuous ragged-topped wall of accumulated ice from 5 m to more than 11 m high, pressed up by the pack onto the top of the original icefoot, forming an ice barrier. At the mouths of large ravines, this ice barrier is broken temporarily in summer by melt water, but these gaps are soon closed by the pressure of the ice pack. The debris brought down the valleys piles up within the ice barrier, forming a raised beach which attains considerable thickness in some places.

242 Robeson Channel appears to be deep throughout with no known dangers *(1984)*.



243 The predominant flow of the **current** in Robeson Channel is SW, sometimes attaining a rate of 2 knots, especially after north winds.

244 In summer and autumn the **ice** in Robeson Channel is subject to great pressure both from the current and from the momentum of the masses of ice from the Lincoln Sea. The pressure is greatest where the channel narrows abreast Polaris Forland. *(For detailed information on present and predicted **ice conditions** in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html*.)*

Robeson Channel — West side

245 **St. Patrick Bay** is entered between Cape Murchison and **Cartmel Point** *(81°48'N, 63°53'W, name misplaced on Chart 7304)*. The bay is surrounded by cliffs 450 m high in places, except at its head. A braided stream, flowing through a valley, has created a delta at the head of the bay. The bay might provide shelter from winds but it is open to the ice of Robeson Channel.

246 Between Cartmel Point and Cape Beechey, 11 miles NE, a narrow, rather low coastal strip is backed by undulating rounded hills less steep than most hills in this area. **Mount Beaufort** rises to a rounded summit over 300 m in elevation. **Cape Beechey** *(81°54'N, 63°08'W)*, rising to over 300 m, is prominent from the south.

247 The shore between Cape Beechey and Wrangel Bay *(82°00'N, 62°33'W)* is formed by **Black Cliffs** which rise precipitously from talus-mantled bases to an elevation of 601 m. **Wrangel Bay**, easily identified, is surrounded by cliffs except on its northern side where a stream, entering the bay through a valley, has formed a delta. Close eastward of the delta there is a small low peninsula. **Mount Parry** rises to over 550 m about 5 miles NNW of Wrangel Bay. Depths in the bay range from 119 m in the entrance to 90 m in the central part.



248 **Caution**. — Wrangel Bay has a **shoal sounding** of 21.9 m at its head.

249 *Wrangel Bay (Index No. 3785)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

250 **Cape Frederick VII** *(82°06'N, 61°57'W)* rises in overhanging cliffs direct from the sea to a small, almost flat summit at an elevation of 366 m. **Lincoln Bay** has cliffs on the SW side and lower land on the NW side where a stream enters from a shallow gorge. A depth of 49 m over a mud bottom has been found in the north part of the bay. Peary, in *Roosevelt*, found some protection from pack ice in Lincoln Bay.



251 **Caution**. — Indications of a **bar**, **depth unknown**, across the NE part of the entrance were observed in 1954.

252 **Cape Union**, 10 miles NE of Cape Frederick VII, is a prominent point which rises to 442 m. **Black Cape** *(82°21'N, 61°10'W)*, 7 miles farther north, is a dark, cone-shaped mountain standing alone; its east side rises steeply from the sea to 244 m, its west side is separated from the inland mountains by deep valleys.

253 Between Black Cape and Cape Sheridan, 6 miles NNW, the land loses its bold, rugged character and the cliffs disappear. The coastline in many places is made up of gravel ridges or mud slopes that stretch inland to the first range of hills, which rises to 183 or 213 m. **Cape Rawson**, midway along this coast, has an elevation of about 120 m.



254 A SW **current** of 1.5 knots to 2 knots has been observed in the vicinity of Black Cape.

255 **Cape Sheridan** *(82°29'N, 61°35'W)*, the NW entrance point of Robeson Channel, terminates in a low sloping point. **Sheridan River** flows into the Lincoln Sea nearby. In 1906, Peary erected a **cairn** about 1 mile from the end of the point at an elevation of about 120 m. **Mount Pullen**, which rises to about 500 m 6 miles SW of the cape, is a prominent **landmark**. Another low mountain, 2.5 miles NE of Mount Pullen, has an elevation of 391 m.

256 *Cape Sheridan (Index No. 3780)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

257 The thick polar **ice** becomes stranded at a distance of 0.05 mile to 0.1 mile from the shore in the vicinity of Cape Sheridan. The ice forms a border of unconnected masses from 6 m to more than 18 m in height, lying aground in depths from 14.6 to 21.9 m. *Alert* passed the winter of 1875-1876 between the ice barrier and the shore at **Floeberg Beach**, and not once in the 11-month period from early September to end July was an onshore gale experienced. *Roosevelt* wintered twice at Cape Sheridan, lying close off the cape itself. In navigating to and from Cape Sheridan the vessels waited until the heavy pack retreated enough to leave a narrow shore lead. Open water has been observed off Cape Sheridan from early July onward.



258 Observations in 1952 appeared to indicate a **tidal current** flowing NW on the ebb and SE on the flood off Cape Sheridan, the flow being strongest to SE, but this may have been due to the northerly winds prevailing at the time.

Robeson Channel — East side

259 From Kap Lupton *(previously described)*, north and NE past **Kap (Cape) Porter** *(81°46'N, 61°57'W)* and **Kap (Cape) Ammen** to Kap Sumner, the coast of **Polaris Forland (Promontory)** rises almost directly from the sea in steep cliffs with no foreshore; the only significant break is a low valley which reaches the coast near Kap Ammen. 8**(Mount) Chester Bjerg** rises about 4 miles NE of Kap Ammen.

260 **Kap (Cape) Sumner** is steep and moderately high, though much less so than the cliffs to SW. In summer the cape is bare of snow.

261 **Newman (Newmann) Bugt (Bay)** is entered between Kap Sumner and **Kap (Cape) Brevoort** *(81°59'N, 60°22'W)*, a high limestone cliff; the land above Kap Brevoort rises to over 500 m. Newman Bugt extends SE for more than 45 miles to a glacier at its head. **Reynolds Ø (Island)** *(not named on Chart 7304)* lies 20 miles within the entrance, and a group of islets lie 8 miles farther in. Abreast the group of islets, **(Mount) Kayser Bjerg** *(not named on Chart 7304)*, with a height of 1067 m, appears to be the highest peak on the SW side of the bay. **(Mount) Nina Bang Bjerg** and **Korsgård Bjerg (Mount Korsgaard)** *(neither mountain is named on Chart 7304)* stand on the NE side of Newman Bugt, opposite Kayser Bjerg. **Nyeboe (Nyboe) Land**, on the NE side of Newman Bugt, is a large, ice-free area that extends east to Sankt (Saint) George Fjord (Fiord).

262 Most of the coast from Kap Brevoort to Kap (Cape) Stanton, 28 miles ENE, consists of high cliffs rising in places almost directly from the sea. At all the points the ice is piled up in pressure ridges along the icefoot, forming an almost impassable barrier along the shore.

263 **Gap Dal (Skotrende** or **Valley)**, where a small stream enters the sea, is 6 miles NE of Kap Brevoort.

264 **Repulse Havn (Harbour)** *(82°06'N, 59°14'W)* is a small bay which appears larger from a distance because the low land fronting the hills around the bay cannot be distinguished from the sea ice. In 1900 Peary deposited a record in a 1.8-m tall **cairn** on one of the harbour's entrance points. **Drift Pynt (Punkt** or **Point)**, elevation about 180 m, is 5 miles ENE of Repulse Havn. **Depths** of 37 m have been found close off this section of the coast.

265 **Black Horn Klint (Cliffs)**, named for a remarkable black rock projecting from the cliffs, extend for about 4 miles along the coast near Drift Pynt. With no foreshore or even icefoot at their base, the cliffs rise precipitously from the sea to about 300 m. **Congress Højland (Highlands)** *(not named on Chart 7304)*, capped with snow, rise to over 900 m about 5 miles inland.

266 **Kap (Cape) Stanton** *(82°12'N, 57°16'W)* marks the NE extremity of Robeson Channel and the west entrance point of **Hand Bugt (Bay)**. **(Mount) Hall Bjerg**, the highest point of Congress Højland with an elevation of 1158 m, rises 6 miles to the south.

Lincoln Sea

267 **Lincoln Sea** extends from Cape Columbia, the north end of Ellesmere Island, on the west, to **Kap Morris Jesup**, the north end of Kalaallit Nunaat, on the east.

268 During most of the year, Lincoln Sea is filled with thick pack **ice**, consisting of close-packed polar floes consolidated by local ice, and an occasional ice island. In July or August the pack breaks up to a limited extent, though it never clears completely. Strong westerly winds in summer will move the pack off the Ellesmere Island coast and open a lead along the shore but easterly winds will rapidly bring the pack back again. In August the pack has been observed to open and close on this shore several times. In early September the Lincoln Sea is likely to freeze solid again.

269 The **tidal range**, large tides, is 0.5 m at Cape Aldrich near the west end of Lincoln Sea.



270 **Caution**. — **Depths** in Lincoln Sea have been obtained by **spot soundings** through the ice.

Cape Sheridan to Cape Belknap

271 The coast from Cape Sheridan *(82°29'N, 61°35'W)* to Cape Belknap, 6.5 miles WNW, is low and backed by a number of raised beaches. The land behind rises in moderate slopes to the hills near Mount Pullen. **Mushroom Point** *(not named on Chart 7304)* lies 3.5 miles WNW of Cape Sheridan. **Sickle Point** *(not named on Chart 7304)*, a narrow peninsula, lies 1.6 miles farther WNW.



272 **Caution**. — A **shoal depth** of 18.3 m is 1.25 miles off Mushroom Point.



273 The predominant **current** flow offshore along this coast appears to be to eastward.

274 **Dumbell Bay** *(not named on Chart 7304)*, entered between Sickle Point and Cape Belknap *(82°32'N, 62°17'W)*, consists of two parts: the outer part extends about 1.5 miles SW and narrows towards its head; from it, a narrow passage about 0.15 mile long and with a minimum width of about 69 m leads south into the inner part, known as **Alert Inlet**. **Alert Creek** enters the SE side of Alert Inlet. *(Neither of these last two features is named on the chart.)*



275 **Caution**. — **Spot soundings** in the outer part of Dumbell Bay indicate **depths** ranging from 21.9 to 101 m. Depths of 21.9 to 27.4 m lie up to 0.25 mile northward of the unnamed point 1 mile south of Cape Belknap. Depths in the passage between the outer and inner parts of Dumbell Bay range from 4.6 to 11 m but along a very crooked channel through this passage a depth of not less than 9.1 m can be maintained. In Alert Inlet, the few soundings taken suggest depths of 7.6 to 29.3 m. All bottom samples from Dumbell Bay were grey clay.

276 A good **landing beach** is at the head of the outer part of Dumbell Bay about 0.1 mile west of the entrance to the narrow passage described above. There is a shale beach 0.9 to 4.6 m in width (depth) from which the land slopes up gently to a raised beach at an elevation of 12 m. Landing craft have beached here without difficulty.



277 Ice conditions permitting, **anchorage** can be obtained north of the landing beach, about 0.2 mile offshore, in about 46 m.

Alert

278 ***Canadian Forces Station (CFS)* Alert**, the site of a *Canadian Forces* radio station, an *Environment Canada* weather station and an airstrip, is south of Cape Belknap, on the NW shore of Alert Inlet in Dumbell Bay. The station consists of a number of **conspicuous** buildings, radio masts and **conspicuous** storage **tanks**. The airstrip is on the NW shore of the outer part of Dumbell Bay.

279 *Alert (Index No. 3765)* is a reference port in *Canadian Tide and Current Tables, Volume 4*.

280 The land in the vicinity is a plateau with many ravines. To the NE, the land slopes gently down from about 150 to 75 m and then drops more steeply to the sea. To the south a chain of rounded hills, trending WSW to ENE, terminates at Mount Pullen *(previously described)*.

281 In August, **ice** coverage has varied from 1/10 to 10/10, changing rapidly from day to day in response to local weather conditions. Visits by icebreakers have been made. On almost every occasion ice in Dumbell Bay has caused difficulties. The maximum thickness in 1957 was 180 cm.

282 An **aeromarine radiobeacon** at Alert transmits on 305 kHz with identification *Morse* "LT" (• — • • —).

283 *(For present and forecast **weather conditions**, visit:* https://weather.gc.ca/*.)*

Cape Belknap to Cape Joseph Henry

284 **Cape Belknap** *(82°31'N, 62°17'W)* is a low spit, 6 to 9 m in height and very dark in appearance.



285 **Caution**. — **Shoal water** extends about 0.5 mile ESE from the cape.

286 **Black Cliffs (Cliff) Bay**, entered between Cape Belknap and **Cape Richardson** *(82°35'N, 63°00'W)*, trends 9 miles SW into Ellesmere Island.

287 **Cape Jolliffe** *(not named on Chart 7304)* is 4 miles WSW of Cape Belknap. **Jolliffe Bay** *(not named on Chart 7304)* lies on the east side of Cape Jolliffe.

288 **Williams Island** *(not named on Chart 7304)*, 3 miles west of Cape Belknap and 1.5 miles NE of Cape Jolliffe, has an elevation of about 30 m with cliffs on its north and south sides; the NE end of the island is gently sloping.

289 **Colan Bay** *(not named on Chart 7304)* is entered between Cape Jolliffe and **Cape Woollen** *(not named on Chart 7304)*, 1 mile west, at the north end of **Smith Peninsula** *(not named on Chart 7304)*. Cape Woollen is bold and rounded. Colan Bay leads south from Black Cliffs Bay and is constricted to about 0.1 mile wide 1.5 miles inside the entrance. South of this it widens to an inner harbour.

290 **Knot Bay** *(not named on Chart 7304)*, 2 miles south of Cape Richardson, forms the mouth of **Joiner Creek** *(not named on Chart 7304)*. Dark, precipitous cliffs, from which Black Cliffs Bay attains its name, rise almost sheer between Knot Bay and **Wood River**, 2 miles south. With elevations of 170 m, the cliffs have talus slopes at their base. **Oopik Island** *(not named on Chart 7304)*, close south of Wood River, is small, steep and rocky.

291 **Bowery Inlet** *(not named on Chart 7304)*, 2.5 miles south of Wood River, is a slight indentation in the west side of Black Cliffs Bay. **Egerton Lake** *(not named on Chart 7304)* is 1 mile west of Bowery Inlet.

292 **Hilgard Bay**, at the south end of Black Cliffs Bay, has raised beaches on its north side and cliffs rising to 450 m on its south side. **Hilgard River** *(not named on Chart 7304)* enters the head of the bay through a steep-sided valley. **Mount Hilgard** *(not shown on Chart 7304)*, 4 miles SW from the head of the bay, has triple peaks attaining elevations of 800 m.

293 **Patterson Bay**, 3 miles NW of Cape Richardson, has a wide valley leading west from its head. **Patterson River** *(not named on Chart 7304)* flows through the valley. **Mount Patterson** attains an elevation of 1052 m about 10 miles inland. **Cape Cresswell** is the north entrance point of Patterson Bay.

294 **Rowan Bay** is a small indentation NNW of Patterson Bay.

295 **Porter Bay** *(not named on Chart 7304)* is entered south of **Cape Delano** *(82°44'N, 63°40'W)*, on **Feilden Peninsula**. **Ayles Point** *(not named on Chart 7304)*, 1 mile SW of Cape Delano, is the dividing point between Porter Bay and its inner part, **Dana Bay** *(not named on Chart 7304)*.

296 **View Hill** *(not named on Chart 7304)*, 2.5 miles north of Cape Delano, attains an elevation of 279 m. **Hamilton Fish Peak** *(not shown on Chart 7304)*, 4 miles north of Cape Delano, attains an elevation of 250 m.

297 **Cape Joseph Henry** *(82°50'N, 63°35'W)*, the north tip of Feilden Peninsula, attains an elevation of 500 m and presents a bold, rugged appearance. A valley leads across Feilden Peninsula from the head of Dana Bay. A prominent summit named **Mary Peak**, 4 miles SW of the cape, attains an elevation of 668 m. **Mount Julia** *(not shown on Chart 7304)*, 2 miles south of Mary Peak, attains an elevation of 600 m.

298 From the vicinity of Dumbell Bay, Cape Joseph Henry appears as a very high foreland dropping abruptly to the water at the NE end of numerous high, sharp peaks.

Cape Joseph Henry to Cape Columbia

299 **James Ross Bay** is on the west side of Feilden Peninsula. The coasts of the bay are low, rising east to the mountains on Feilden Peninsula and west to those on **Parry Peninsula**. **James Ross River** flows into the west side of the bay from Grant Ice Cap, 22 miles inland. **Guide Hill** *(not shown on Chart 7304)*, 1 mile south of the south end of the bay, attains an elevation of about 300 m. **Gap Mountain**, 6 miles south from the head of the bay, attains an elevation of 991 m.

300 **Crozier Island**, in the entrance to James Ross Bay, attains its maximum elevation of 80 m at a rounded knob on its NW side; its shores are low.

301 **Cape Hecla** *(82°55'N, 64°54'W)*, the north end of Parry Peninsula, rises abruptly to a bold headland 300 m in elevation. The north side of the peninsula between Cape Hecla and **Bird Point** is a ridge with cliffs.

302 **Parker Bay**, entered between Bird Point and Hamilton Bluff *(82°51'N, 65°38'W)*, is on the west side of Parry Peninsula. **Sail Harbour**, on the east side of Parker Bay south of Bird Point, has low coasts. **Gable Cliff** *(not named on Chart 7304)* forms the east side of Parker Bay, south of Sail Harbour, and the hills behind the cliff attain elevations of 600 m. The west side of Parker Bay is generally low, rising a short distance inland to peaks of 600 m. The inner part of Parker Bay has bold shores or cliffs that decrease in elevation to the head where a braided stream enters the bay.

303 **Hamilton Bluff** has cliffs on its seaward face and rises steeply to a flat summit with an elevation of 300 m.

304 **Clements Markham Inlet**, entered between Hamilton Bluff and Cape Colan *(82°56'N, 66°23'W)*, trends 25 miles SW. A chain of low islands lie off the west side of the inlet. **Clements Markham River** enters the head of the inlet through a wide, low, alluvium-filled valley and is fed by **Barrier Glacier** and **Clements Markham Glacier** about 15 miles SW from the head of the inlet *(neither of the glaciers is named on Chart 7304)*.

305 For 1 mile SW of Hamilton Bluff, the east side of Clements Markham Inlet is low, rising inland to a sharp ridge over 600 m in elevation. Cliffs, interrupted by wide valleys, line the next 17 miles of coast. A bay, 11 miles SW of Hamilton Bluff, has a wide river delta at its head. The south side of the head of Clements Markham Inlet is formed by a low coastal plain. Farther south, **Grant Ice Cap** forms the north end of **United States Range**. A river, 2 miles from the head of the inlet, originates in **Piper Pass** *(not named on Chart 7304)*; the pass separates Grant Ice Cap from the remainder of United States Range.

306 **Cape Colan**, the NW entrance point of Clements Markham Inlet, is very low and lies at the NE tip of a rounded hill that rises to an elevation of 150 m.

307 The NW side of the inlet, between Cape Colan and the mountain with an elevation of 650 m 2 miles south, is low. **Mount Foster**, 6 miles SW of Cape Colan, attains an elevation of 975 m. Several streams with deltas projecting as low points enter this otherwise rugged, steep coast. A

narrow coastal plain commences west of the outermost island and gradually widens as the head of the inlet is approached. **Gypsum River** *(not named on Chart 7304)*, 6 miles from the head of the inlet, has a wide delta and leads across the coastal plain from a steep-sided valley on the west side of the inlet. A rounded hill, 3 miles from the head of the inlet, stands back from the shore and reaches an elevation of 700 m; its SE face is cut by deep gullies and ravines. Ice-capped mountains lie to the west.

308 **Arthur Laing Peninsula** separates Clements Markham Inlet from Markham Fiord *(83°06'N, 71°19'W)*.

309 Between Cape Colan and **Stuckberry Point** *(82°57'N, 66°46'W)*, the coast is low. **Point Moss** *(82°58'N, 67°09'W)*, the north extremity of a broad peninsula, has a line of steep cliffs about 0.5 mile long with elevations of 120 to 150 m; the remaining shores of the peninsula are low-lying and the crest of the peninsula is rounded. The bay between Stuckberry Point and Point Moss has low shores and two streams enter its head.

310 **Moss Bay** *(not named on Chart 7304)*, west of Point Moss, has low shores. The land rises to an elevation of 1000 m about 3 miles inland at **Mount Gladstone**.

311 Between Point Moss and **Good Point**, 11 miles WNW, an **ice shelf** extends 2 or 3 miles to seaward from the bluffs; it has pronounced ridges parallel with the coast and, in places, is scattered with debris.

312 A steep bluff fronts the coast between Moss Bay and the unnamed bay entered at 82°57'N, 66°06'W. The bluff rises as an almost sheer line of cliffs to elevations between 200 and 270 m. A ridge rises from the crest of the bluff south to **Mount Disraeli**. The east side of the unnamed bay has cliffs; the west side rises gradually from the ice shelf.

313 **Doidge Bay**, between Good Point and Stubbs Point *(83°02'N, 69°01'W)*, is obstructed by an ice shelf which generally does not protrude outside the entrance points. A low peninsula on the east side of the bay is mantled by ice and encloses a small cove on its north side. The west side of the bay rises gradually from Stubbs Point until near the head of the bay where mountains attain elevations of 1000 m. A river at the head of the bay enters through a delta at the mouth of a narrow valley.

314 **Giffard Peak**, a prominent feature on the east side of Doidge Bay, attains an elevation of 832 m; its NW face is precipitous and, with hills on either side of it, looks like a chair when viewed from the west. A second peak, similar in appearance but higher, is near the head of Doidge Bay.

315 **Stubbs Point** is the north end of a rounded hill with an elevation of 300 m.

316 **Parr Bay**, between Stubbs Point and Cape Aldrich *(83°07'N, 69°37'W)*, is divided into two arms by **Wood Point**. Streams forming deltas empty into the head of each arm. The shores of the bay are low but rise inland to rounded hills. West of the head of the bay the mountains are partially masked by ice and a glacier approaches to within 0.5 mile of shore.

317 **Cape Aldrich**, the most northerly point of Canada, is a low headland backed 1.5 miles inland by a steep bluff rising to elevations between 250 and 300 m. The cape is heavily mantled with ice and bounded by a narrow belt of shelf ice.

318 *Cape Aldrich (Index No. 6735)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

319 **Cape Columbia** *(83°07'N, 69°57'W, name misplaced on Chart 7304)*, 3 miles west of Cape Aldrich, is low. Cape Columbia is the westernmost point of Lincoln Sea.

320 *(For a description of Ellesmere Island west of Cape Columbia, see Chapter 12.)*

Lincoln Sea — East side

321 **Frankfield Bugt (Bay)** *(82°15'N, 56°30'W)*, east of Hand Bugt *(previously described)*, lies between an unnamed point to the west and **Rest Pynt (Punkt** or **Point)**.

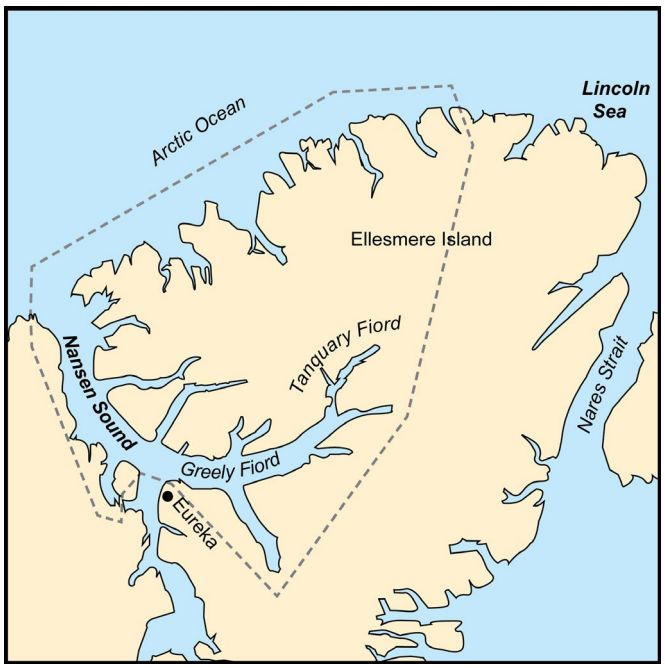
322 **Kap (Cape) Bryant** *(82°20'N, 55°11'W)* is the west entrance point of **Sankt (Saint) George Fjord (Fiord)**.

323 *Cape Bryant (Index No. 3755)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

324 *(See Danish charts and Danish Sailing Directions for a complete description of the coast of Kalaallit Nunaat adjacent to Lincoln Sea.)*

Chapter 12

Nansen Sound — Lincoln Sea



General

Charts 7072, 7304, 7920, 7941, 7954

1 Nansen Sound *(81°00'N, 90°35'W)*, including Greely Fiord and Tanquary Fiord, faces the south and SW coasts of a large lobe of northern Ellesmere Island. Nansen Sound itself faces the NE coast of Axel Heiberg Island. The interior portions of this waterway are icebound most of the year, with a short, highly variable navigation season in late summer or early autumn.

2 **Caution**. — The west part of Nansen Sound, together with the waters along the north coast of Ellesmere Island, are typically covered in consolidated, land-fast **multi-year ice** year-round. These waters are considered **unnavigable**.

3 *Northern Canada Vessel Traffic Services (NORDREG) Zone* covers all waters described in this chapter. The primary objective of this system is to assist the Master in the safe and expeditious conduct of the vessel by promulgating information on ice conditions, giving advice on routes and providing icebreaker support where available and considered necessary.

4 Traffic clearance requests and reports required by this system shall be addressed to *NORDREG CANADA*. Requests and reports may be passed through any *Canadian Coast Guard Marine Communications and Traffic Services (MCTS)* centre free of charge. All times shall be given in *Co-ordinated Universal Time (UTC)*.

5 *(For further information concerning this system consult Radio Aids to Marine Navigation, available at:* https://www.ccg-gcc.gc.ca/publications/mcts-sctm/ramn-arnm/index-eng.html*.)*

6 **Caution**. — **Depths** are from sparse and **uncontrolled soundings** through the ice and track soundings.

7 *Iceberg Point (Index No. 6660)*, *Greely Fiord (Index No. 6670)* and *Disraeli Fiord (Index No. 6730)* are secondary ports in *Canadian Tide and Current Tables, Volume 4*.

8 *(For present and forecast **weather conditions** in this area, visit:* https://weather.gc.ca/*.)*

9 *(For **climate** normals and averages for selected locations in this area, visit:* https://climate.weather.gc.ca/. *For maps depicting general weather patterns, visit:* https://natural-resources.canada.ca/maps-tools-and-publications/maps/atlas-canada/10784.*)*

10 Icebreaker navigation is sometimes possible into Nansen Sound from Eureka Sound during favourable years. Greely Fiord is navigable during late August and early September in most years, even though much of the area may remain ice-covered, but in unfavourable seasons, penetration is difficult. Freeze-up in Nansen Sound, Greely Fiord and other inlets adjoining the main channels commences early in September. By the end of the month most movement in the channels is stopped by the formation of young ice.

11 *(For detailed information on present and predicted **ice conditions** in this area, visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html.*)*

12 **Caution**. — The **magnetic compass** is unusable in the area covered by this chapter. *(See Chapter 1 of Sailing Directions booklet ARC 400 — General Information, Northern Canada for more information.)*

Nansen Sound

Chart 7941

13 **Nansen Sound** is entered from the Arctic Ocean between Cape Stallworthy *(81°23'N, 93°30'W, described in Sailing Directions booklet ARC 403 — Western Arctic)* and Lands Lokk Point, 21 miles NE, on **Kleybolte Peninsula**. The sound trends generally SE for 88 miles, with an average width of 15 miles. Nansen Sound joins Greely Fiord between **Iceberg Point** *(80°19'N, 86°22'W)* and the east entrance point of Hare Fiord.

14 Nansen Sound appears to be deep throughout.

15 The coast of Axel Heiberg Island, along the SW side of Nansen Sound, is generally much lower than elsewhere and without cliffs for a considerable distance. In this area the coast rises gently to rolling plateaux, with the mountains and ice caps lying some distance farther back.

16 **Caution**. — **Depths** in Nansen Sound are taken from sparse, **uncontrolled track soundings**.

17 The **tidal range**, large tides, is 0.5 m in Nansen Sound. *Iceberg Point (Index No. 6660)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

18 **Caution**. — The NW part of Nansen Sound is dominated by land-fast **multi-year ice** while in the SE part it is mainly first year-ice. The amount of multi-year ice present in the more southern areas is dependent upon the extent of break-up during the previous year.

19 The consolidated **ice** cover of Nansen Sound fractures east of a line from White Mountain on the south side, to Cape St. Andrew on the north side, normally during the first week of August and throughout the remainder of the sound during the last week of the month. Freeze-up of ice in the NW part of the sound usually begins during the first week of September and in the remainder of the area by the last week of September.

20 *(For more details on **ice conditions** in this area visit:* https://www.canada.ca/en/environment-climate-change/services/types-weather-forecasts-use/ice.html.*)*

Nansen Sound — SW side

21 Between Cape Stallworthy and the unnamed bay, 26 miles SE, the west side of Nansen Sound faces **Svartevaeg Cliffs**. At first the cliffs are low and broken by cirques but farther south they increase in elevation to 300 m. Rounded peaks, partially ice-covered, rise between 300 and 450 m behind the cliffs. A small glacier reaches the coast from the ice cap in the middle part of the cliffs, along with several other inactive ice masses. The small bay at the end of this section has low-lying shores and **conspicuous** raised beaches on its north side.

22 Between this bay and another, 32 miles SE, the coast is low-lying, rising gradually inland as a sloping coastal plain, with **conspicuous** raised beaches, cut by steep-sided stream beds and broken by occasional rounded hills. Rugged mountains and ice caps are 10 or 12 miles from the coast. **Lightfoot River** is the only named river along this coast.

23 The bay at the end of this section has steep cliffs on its west side with elevations between 180 and 250 m which decrease to the north. A small, steep-sided plateau, on the east side, rises abruptly 1.5 miles inland to an elevation of about 300 m. A low delta is at the head of the bay. The least depth recorded *(1974)* in this bay is 46 m.

24 The coast, for 10 miles SE to Stang Bay, is irregular and low-lying.

25 **Stang Bay**, with a low, double point on its east side, penetrates 4 miles SE, between low-lying shores, to a delta at its head. A small island lies close off its east side about 1.5 miles inside the entrance.

26 **Caution**. — **Shoals** NW and west of the small island have depths as shallow as 1.6 m over them. South of the island **depths** are reported *(1974)* to increase to 80 m.

27 **White Mountain** *(80°32'N, 89°26'W)* is the principal feature of the peninsula separating Stang Bay from Flat Sound, 8 miles SE. White Mountain has a dome-shaped summit rising precipitously to an elevation of 340 m from slopes of rock debris, above a narrow beach. Inland it slopes south into a broad-backed ridge about 150 m in elevation. The mountain is very prominent and has been seen from the east at a distance of more than 40 miles.

28 **Flat Sound**, entered 7 miles east of White Mountain, trends 23 miles south and SE and has Schei Peninsula on its east side. The shores are low with raised beaches rising to rolling hills, about 300 m in elevation, 4 or 5 miles inland. The north part of Flat Sound is reported to be fairly deep; a depth of 455 m is in the entrance.

29 **Caution**. — **Shallow water** surrounds the two low islands 13 miles inside the entrance to Flat Sound.

30 The head of Flat Sound has three shallow bays. These bays are separated by two long narrow peninsulas; to the west of the peninsulas lies a low island.

31 **Caution**. — The entrance to the north bay is **obstructed** by two small islands lying on a **shoal bank**. **Shoal depths** of 8.8, 5.5 and 7.3 m are in the south, centre and north bays, respectively.

32 **Schei Peninsula**, separating Flat Sound from Eureka Sound to the east, is connected to the east side of Axel Heiberg Island by a low, narrow isthmus. The north side of the peninsula is formed of low, irregular cliffs; the NW end rises gently to the SE, from the low point, over raised beaches to an elevation of 540 m, 5 miles inland.

33 **Butter Porridge Point** *(80°24'N, 87°38'W)*, the NE end of Schei Peninsula, is a low point which rises rapidly on the west to form a steep cliff with an elevation of about 300 m.

34 *(Eureka Sound, entered east of Butter Porridge Point, is described in Chapter 10.)*

Nansen Sound — NE side

35 **Lands Lokk Point** *(81°36'N, 91°55'W)*, the SW end of Kleybolte Peninsula, is the NE entrance point of Nansen Sound. **Bjare Strait** separates **Krueger Island**, to the south, from Kleybolte Peninsula. The principal features of the island are two groups of hills, with elevations over 450 m, separated by a low pass; the NW hill is conical and prominent.

36 Kleybolte Peninsula, in this vicinity, has elevations between 450 and 610 m where a mountain range reaches the coast. A glacier enters the north side of Bjare Strait from an ice field on Kleybolte Peninsula. A small island lies close offshore on the east side of the south entrance of Bjare Strait.

37 **Caution**. — An **uncharted islet** is reported to lie at the north entrance to Bjare Strait.

38 **Fjeldholmen Island** *(81°30'N, 91°54'W)*, 3 miles SW of Krueger Island, rises from steep cliffs about 300 m in elevation to a conical peak. A smaller island, 1 mile east, is rounded and no higher than 70 m. Both islands have prominent raised beaches.

39 **Audhild Bay**, entered between the SE end of Kleybolte Peninsula and a low rounded headland 7 miles SE, penetrates 15 miles NE from Nansen Sound. On the NW side of the bay three peninsulas, fronted by small islands, project from a low coastline. The coast rises steadily inland to elevations between 300 and 460 m. Several small islands lie near the head of the bay. The low land at the head of the bay rises north to rolling country partially covered by ice fields. A delta is at the east end of the bay.

40 The SE side of Audhild Bay is mostly very low and rises gradually inland over raised beaches. Steep cliffs curve along the inner 4 miles of this side.

41 **Caution**. — **Depths** in Audhild Bay are **unknown** *(2013)*.

42 An unnamed peninsula separates Audhild Bay from **Emma Fiord**, 6 miles SE. The fiord is entered between an unnamed bold, flat-topped headland *(81°22'N, 90°21'W)*, which rises steeply from banks of rock debris, and **Cape Coastguard**, 4 miles SE, a low indistinct point. The fiord trends 22 miles NE and then 10 miles ESE, reducing in width.

43 A **depth** of 357 m has been found in mid-channel 4 miles inside the entrance, otherwise depths in Emma Fiord are unknown.

44 The north shore of the outer part of the fiord is low and monotonous, backed by rolling uplands increasing in elevation to the NE. At the point where the fiord changes direction, a small bay penetrates the north coast for about 2 miles; an expanse of low deltas forms the head of the bay. The east entrance point of the small bay is a rounded peninsula backed by bold hills. The remainder of the north side of Emma Fiord has an irregular coastline with high cliffs alternating with low deltas. An extensive delta is at the head of the fiord.

45 The south shore of Emma Fiord, for 5 miles east of Cape Coastguard, comprises low, rounded hills which give way, farther NE, to rugged broken cliffs 457 to 610 m in elevation.

46 **Fire Bay**, 12 miles inside the entrance of Emma Fiord, has low shores and a delta at its head. For 8 miles farther east the coast of the fiord is bounded by a line of steep cliffs, the lower part mantled by talus. The cliffs vary in elevation between 183 and 366 m and are broken in places by deep valleys with deltas at their mouths. Rugged mountains lie to the south.

47 A small bay with an islet in its entrance lies on the south side of Emma Fiord, 11 miles ENE of Fire Bay; the small bay has a delta at its head and has steep, rounded hills on either side.

48 **Jugeborg Fiord** indents the west coast of **Hvitland Peninsula** and is entered south of Cape Coastguard. The outer 4 miles of the north coast has low hills with elevations of 150 m; to the east they rise steeply to elevations of 300 to 600 m. A ridge, with cliffs, reaches the coast 6 miles inside the north entrance. The south shore is quite low, but fronted by steep cliffs in places. Close inside the south entrance a rounded, north–south ridge projects north to form a low headland. A conical hill, on the south shore at the entrance of the narrow inner part, has an elevation exceeding 300 m and presents a precipitous face to the fiord. The narrow inner part of the fiord is low-lying.

49 **Caution**. — Several rivers in the inner part of Jugeborg Fiord have formed deltas and silt deposits.

50 **White Point** *(81°12'N, 90°14'W)*, 5 miles SW of Jugeborg Fiord, is the delta of a small stream. The south part of the west side of Hvitland Peninsula is mainly low, rising to elevations of 300 m 3 to 5 miles inland. Toward Otto Fiord the coast becomes gradually higher. Near the entrance to Otto Fiord, the coast is deeply ravined.

51 **Otto Fiord**, between Hvitland Peninsula and **Svartfjeld Peninsula**, penetrates the west coast of Ellesmere Island for 50 miles. On the north side of the fiord, an almost vertical, **conspicuous** rock pillar rises to an elevation of 760 m; it is lighter in colour than the surrounding rock and has steep talus at its base. The pillar stands close north of the cliffs between the north entrance point and **Lindström (Lindstroem) Creek** 9 miles east.

52 **Cape St. Andrew** *(80°55'N, 89°25'W)*, the south entrance point to Otto Fiord, is the low delta of **Spath Creek**. The cape is backed by cliffs which rise to elevations of 600 m between the cape and **Diener Creek**; thereafter the cliffs become broken and irregular. A prominent high cliff, rising to an elevation of 876 m, is 12 miles ENE of Cape St. Andrew.

53 **Degerbols (Degerböls) Island** *(81°04'N, 86°49'W)*, in mid-channel about 25 miles inside Otto Fiord, has cliffs on its south side and rises to a flat top with an elevation of 300 m; the land slopes steadily down to its low north end.

54 The north shore of Otto Fiord in the vicinity of Degerbols Island, and east to within 5 miles of the head of the fiord, has a low alluvial plain with several braided streams crossing it; to the north the alluvial plain is backed by mountains rising to elevations of 1000 m. A steep ridge commences 5 miles from the head of the fiord and continues along the north shore to Otto Glacier at the head; the ridge attains elevations of 600 m.

55 **Van Hauen Pass**, at the head of a small bay on the south side of Otto Fiord, is a low isthmus connecting Svartfjeld Peninsula to Ellesmere Island. The pass leads from Otto Fiord to Hare Fiord. The south shore of Otto Fiord, NE of Van Hauen Pass, rises gradually to elevations of 600 m; some peaks attain 900 m.

56 **Otto Glacier** and a smaller unnamed glacier are separated by a high rock nunatak at the head of Otto Fiord. Otto Glacier calves numerous massive icebergs.

57 The shore of Nansen Sound bordering Svartfjeld Peninsula is formed by cliffs, with deep ravines in places.

58 **Hare Fiord** is entered between Confederation Point *(80°38'N, 87°18'W)* and an unnamed point 5 miles ESE. The fiord runs 26 miles NNE and then turns ENE for 29 miles.

59 **Confederation Point**, the west entrance point of Hare Fiord, is formed by a smooth, curved line of cliffs, about 300 m in elevation. The cliffs slope down gradually to a wide delta 5 miles north.

60 The north coast of Hare Fiord, for 25 miles NE, rises gently to the base of steeper hills. These hills rise gradually over 600 m, 3 miles inland, and are cut by numerous gullies and ravines. There are numerous deltas. **Black Mountain** is the highest summit on Svartfjeld Peninsula.

61 The sharp ridges of Svartfjeld Peninsula, with elevations of 300 to 450 m, are breached by Van Hauen Pass extending across the peninsula to Otto Fiord. East of the pass, a low, rounded headland forms a small bay. Cliffs, with light coloured bases and dark tops, rise to elevations of 300 m on the north shore of the small bay. **Stepanow Creek** and an unnamed river form deltas along the shore. Farther east, near the head of the fiord, the cliffs become higher and steeper, rising to sharp, ice-mantled summits over 1200 m in elevation, a few miles inland. Several glaciers approach the fiord near its head; two of these glaciers reach tide water.

62 **Caution**. — Numerous deltas and glaciers cause **silting** near the head of Hare Fiord.

63 The east entrance point of Hare Fiord is low-lying but rises, close inland, to a hill with an elevation between 450 and 600 m. North of the point two wide deltas extend

from shore. Steep, broken cliffs, between 300 and 600 m in elevation, front the east side of the fiord for 10 miles north of these deltas. **Blue Mountains** rise inland to 900 m, with **Mount Schuchert** reaching an elevation of 1220 m; both features are ice-capped.

64 East of this section, at the turn point on the south shore, a large delta formed of glacial till and alluvium projects seaward and, 6 miles farther east, a glacier, with a low, inactive face, reaches the coast. A broad low peninsula, with a steep east side rising to rounded hills 90 to 120 m in elevation, projects into the fiord 2 miles east of the glacier.

65 A small island with an elevation of 80 m lies 1 mile west of the peninsula. Another small island is off the south shore 8 miles east of the peninsula.

66 East of the peninsula, the south coast increases in elevation toward the head of the fiord. The shore is backed by cliffs throughout. The east half of this section rises over 1500 m within a short distance of the shore. The upper summits are ice-capped and numerous glaciers descend toward the fiord, several of which reach tide water across large, terraced deltas; they appear to be inactive.

Greely Fiord

67 **Greely Fiord** is entered between Iceberg Point *(80°19'N, 86°22'W)* and the east entrance point of Hare Fiord, 17 miles NNW. Greely Fiord extends east and NE about 80 miles to Tanquary Fiord. The north coast of Greely Fiord rises to high ground close inland, but the south coast, except for the inner part, is low and flat.

68 **Spot soundings** through the ice in 1974 recorded depths of 86 m about 13 miles ENE of Iceberg Point. *(The 48-m patch 8 miles ENE of Iceberg Point was not found.)*

69 **Caution**. — A **shoal depth** of 27.4 m is about 0.4 mile offshore, 2 miles ENE of Iceberg Point.

70 *Greely Fiord (Index No. 6670)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

Greely Fiord — North side

71 The coast on the north side of Greely Fiord between Hare Fiord and Atwood Point, 29 miles east, is mostly high and bold. The coast rises inland to Blue Mountains and **Blackwelder Mountains**, but falls away to a low plain at Atwood Point.

72 **Black Stripe Head** *(80°32'N, 85°57'W)* gets its name from a **conspicuous** vertical stripe of black rock close west of it. The inlet entered east of Black Stripe Head has high steep bluffs on both sides of the entrance. Cliffs that border the sides of the inlet give way to a wide alluvial valley at the head.

Borup Fiord

73 **Borup Fiord** is entered between a low delta at **Atwood Point** and **Cape Brainard**, another low point 6 miles east. The west coast of the fiord is a low plain, narrowing to northward where **Etukashoo River** *(80°44'N, 83°42'W)* enters through a broad flat valley. The terrain on the east side of Borup Fiord rises evenly but steeply from the water to rounded hills. **Elsa May Island**, at the head of the fiord, is less than 30 m in elevation.

74 **Depths** across the entrance of Borup Fiord ranging from 132 to 238 m, and in mid-channel as far as Elsa May Island, depths are from 208 to 38 m.

75 **Caution**. — **Depths** are from **spot soundings**, taken through the ice in 1974, at 1-mile intervals. A **shoal sounding** of 28 m was recorded 0.6 mile WNW of Elsa May Island.

76 **Oobloyah Bay**, with a low island off its mouth, is bordered on the NW side by steep, broken cliffs and on the SE by relatively smooth terrain rising gradually to the rounded heights of **Neil Peninsula**. **Mount Ward**, **Mount Barrell**, **Van Royen Ridges**, **Krieger Mountains** and **Webber Glacier** lie NW, north and NE of Oobloyah Bay.

77 **Caution**. — **Spot soundings** indicate that mid-channel depths in Oobloyah Bay are fairly uniform. Depths range from a **shoal depth** of 25 m in the entrance through 61 m in the central part to a **shoal depth** of 14 m near the head. A **shoal depth** of 10.8 m was recorded east of the small island off the mouth of Oobloyah Bay; the deeper channel runs west of this island.

78 **Esayoo Bay** *(entrance: 80°40'N, 83°10'W)* is bordered on the NW side by low land near the entrance; the land becomes steep, with cliffs, in the inner part. The east shore rises gently to the rounded heights of **Elmerson Peninsula**. At the head of the bay two alluvium-floored river valleys converge around the base of precipitous **Mount Leith**; **Mount Burrill** rises farther NE. **Mount Davis** and **Mount Boggild** rise to the east of the head of the bay. **Jean Island** rises steeply to a flat summit with an elevation of about 244 m. Two islets lie close off the SW part of Jean Island.

79 **Spot soundings** through the ice in 1974 indicate that mid-channel depths in Esayoo Bay range from 53 to 124 m.

Greely Fiord — South side

80 The north side of **Fosheim Peninsula**, between Iceberg Point *(previously described)* and **Cape Lockwood** *(80°16'N, 84°04'W)* 24 miles east, rises gently from the sea to a rolling plateau with elevations varying between 183 and 457 m. In places there are gently sloping cliffs and raised beaches. **Mount Lockwood**, 6 miles east of Iceberg Point, has twin peaks prominent from northward.

Canon Fiord

81 **Canon Fiord** extends about 65 miles SE from Greely Fiord. The face of a large glacier is at the head of Canon Fiord. The coast of the outer part of the fiord rises gradually from the water, but cliffs, high mountains and glaciers are characteristic of the inner coast.

82 The outer west shore of Canon Fiord is relatively low and flat and marked by raised beaches, but elevations increase to southward and high land prevails from **Mount Bridgman**, 20 miles within the entrance, to the head of the fiord. **Sawtooth Range** rises SSW of **Cape With** *(79°56'N, 82°30'W)*. **Wolf Valley** opens onto the coast, 10 miles SSE of the cape, between 610 m elevations. A river has formed a delta at the foot of Wolf Valley. **South Bay** is 4 miles farther SSE; a braided stream reaches the fiord through a steep-sided valley at its head.

83 The east shore of Canon Fiord is low in the outer part but increases in elevation near **East Cape** *(80°07'N, 82°31'W)*. **Greenrock River** enters the fiord 7 miles SSE of East Cape. **Caledonian Bay**, 7 miles further SE, has a low island in its southern part; the bay is flanked on the north side by the eroded ends of NE-trending ridges and on the south by sharply rising terrain. **Danish River** flows through a valley at the head of Caledonian Bay and forms a large delta. From Caledonian Bay to the head of Canon Fiord, high land rises close to the coast; elevations of 1524 m and 1829 m occur 15 miles inland.

84 **Sparse soundings** from **reconnaissance surveys** suggest that depths in Canon Fiord are considerable.

Canon Fiord to Tanquary Fiord

85 The south shore of Greely Fiord between the low east entrance point *(80°20'N, 83°12'W)* of Canon Fiord and the entrance to d'Iberville Fiord, 32 miles ENE, rises gently from the sea to a broad, rolling plateau with occasional higher rounded hills.

86 In 1974 a **depth** of 86 m was reported about 5 miles NNW of the east entrance point of Canon Fiord.

87 The small bay 3 miles SSW of the entrance to d'Iberville Fiord has a waterlogged delta at its head. The delta extends eastward to the foot of a **conspicuous** glacier. The north entrance point *(80°30'N, 80°22'W)* of the small bay rises sharply to a prominent flat-topped peak.

88 **Cape Sudar** *(not named on Chart 7941)*, the north entrance point of **d'Iberville Fiord** *(80°34'N, 79°00'W)*, is a low cape which rises smoothly at first, then abruptly, to the pointed summit. From the west this feature appears as a razor-backed ridge, but from other directions it looks like a cocked hat.

89 The north shore of d'Iberville Fiord is low, rising to rounded hills a few miles inland. A small island lies close off the outer section of the north shore.

90 The outer part of the south shore of d'Iberville Fiord is low but increases in elevation to eastward. The inner south shore is high and massive, rising abruptly over 914 m to rounded summits cut by deep valleys and canyons. **d'Iberville Glacier**, inactive, fills the head of the fiord.

91 The south shore of Greely Fiord, NE of the north entrance point of d'Iberville Fiord, increases in elevation and steepness to the NE. The cliffs are cut by numerous ravines and have a narrow strip of talus at their bases.

92 **Antoinette Bay** is entered between **Kinley Point** *(80°51'N, 78°54'W)* and a slight point, 6 miles SSE, backed by a **conspicuous** dome-shaped summit. Kinley Point rises smoothly on its west side. To the ENE, the land rises steeply to a **conspicuous** sharp ridge that ascends over 450 m to **Mount Bayley**. The remainder of Antoinette Bay has bold, steep shores which rise precipitously to a rolling uplands deeply cut by steep-sided valleys and canyons. In general the terrain has a massive tabular appearance. The only low areas along the shores are deltas at the mouths of occasional valleys. **Antoinette Glacier** *(see Chart 7072)* enters Antoinette Bay; an unnamed glacier crosses the head of the bay from the south side, blocking the inner part of the bay. The isolated inner part is named **Lake Tuborg**.

93 On the north side of Greely Fiord, the coast between Cape Brainard *(80°32'N, 83°06'W)* and **Cape James**, a low point 40 miles NE, is bold throughout most of its length with steep cliffs cut in places by valleys with small deltas at their mouths. About 5 miles SW of Cape James the cliffs retreat from the coast and are fronted by deltas and a narrow strip of talus. At Cape James the land rises gradually.

Tanquary Fiord

Chart 7920

94 Kinley Point *(previously described)* is the east entrance point to **Tanquary Fiord**.

95 A **depth** of 71 m is in mid-channel west of Kinley Point and a depth of 36 m is NE of Cape Gleason *(81°09'N, 78°25'W)*. Otherwise, mid-channel depths in the fiord are generally greater than 100 m.

96 **Caution**. — A **shoal patch** with a depth of 12.4 m is in mid-channel off Bent Glacier *(81°19'N, 78°16'W)* and a **shoal patch** with a depth of 24 m, reported in 1973, is between Bent Glacier and Fishhook Point *(81°19'N, 77°35'W)*.

97 The west shore of Tanquary Fiord, north of Cape James, is formed by the steep eastern slopes of massive mountains with level summits; the slopes are cut by deep valleys and fronted by a series of deltas. **Flora Island** *(80°53'N, 79°17'W)* is low, dun-coloured and less than 30 m in elevation. Two miles to the north there is a broad delta at the mouth of a major valley.

98 **Rendezvous Bay**, 5 miles north of Flora Island, is bordered on its south side by a low peninsula rising to a rounded hill about 152 m high. The west side of the bay is backed by a **conspicuous** hill with an elevation of 762 m. The coast for almost 15 miles north of Rendezvous Bay is fronted by high cliffs with almost horizontal strata predominating.

99 **McKinley Bay**, entered north of **Cape Macoun** *(81°05'N, 79°03'W)*, rises on both sides to massive mountains. The head is separated from **Chapman Glacier** by a narrow strip of alluvium.

100 **Caution**. — A **shoal spit** extends east of Cape Macoun and a **shoal** is on the north side of McKinley Bay, inside the entrance.

101 The east shore of Tanquary Fiord is relatively smooth for much of its length, rising steeply to a broad rolling plateau. The coastal slope is cut occasionally by deep ravines.

102 **Cape Porsild** *(80°59'N, 78°57'W)*, 8 miles north of Kinley Point, is formed by a razorback ridge which rises steadily to a prominent small peak with an elevation of 753 m. From southward the cape has the appearance of a dragon's head. **Cape Gleason**, 12 miles NNE, is low. The coast for 7 miles SSW of Cape Gleason is high cliffs.

103 **Caution**. — Narrow strips of **shoal water** project from Cape Porsild and Cape Gleason.

104 **Fishhook Point**, 12 miles NE of Cape Gleason, is a gravel spit with an elevation of about 6.1 m.

105 **Caution**. — A **shoal depth** of 12.2 m is close off Fishhook Point.

106 A number of creeks enter the east side of the fiord between Fishhook Point and **Tanquary Camp** *(81°24'N, 76°54'W)*, 9 miles NE; these include **Silene Creek** *(81°21'N, 77°12'W, not named on Chart 7941)*, **Yellowstone Creek** *(81°23'N, 77°01'W, not named on Chart 7941)* and **May Creek** *(81°24'N, 76°55'W, not named on Chart 7941)*. At the delta of **Macdonald River** there is an airstrip capable of handling Hercules aircraft.

107 ***Quttinirpaaq National Park of Canada*** has a ranger station at the head of Tanquary Fiord. The station is open from May to August. Contact *Parks Canada* at https://parks.canada.ca/index for more information.

108 An icebreaker has obtained **anchorage** in 21.3 m close off May Creek.

109 At the head of Tanquary Fiord three major valleys converge at a large delta. **Redrock Creek**, **Rollrock River**, **Airforce River** and numerous other creeks and rivers flow into the head.

110 **Cape Fernald** *(81°07'N, 78°37'W)*, projecting into the west side of Tanquary Fiord, is the end of a rock peninsula with cliffs which forms the SE side of **Burke Bay**. The shore on the west side of Burke Bay is backed inland by high cliffs which gradually lose height for about 8 miles NNE along the coast.

111 **Caution**. — **Shoal water** extends off Cape Fernald and off the mouth of the large stream 4.5 miles north.

112 Between the large stream and Bent Glacier, the land rises gradually from the water to high rounded ridges backed by the ice-mantled slopes of **Osborn Range**. This range rises to over 2134 m about 10 miles inland. **Bent Glacier** is broken and inactive, and its south half is mantled with debris.

113 The shore on the west side of Tanquary Fiord, from Bent Glacier to the head, is overlooked by a massive mountain wall footed by talus. The sharp summits carry ice caps from which glacier tongues extend almost to the coast. **Gull Glacier** is the only named one.

114 **Caution**. — This stretch of coast is fronted by a number of **shoal patches**, with depths of 4.9 to 12.2 m up to 0.6 mile offshore.

Ellesmere Island — North coast

Charts 7072, 7304, 7954

115 **Caution**. — There is an appreciable difference in geographic co-ordinates between

Chart 7072 and the more recently published *Charts 7304 and 7954*. The latter two are used as reference charts wherever possible.

116 The north coast of **Ellesmere Island** from Lands Lokk Point *(81°36'N, 91°55'W)* to Cape Columbia *(83°07'N, 69°57'W)*, 198 miles eastward, is extremely rugged. The coast is broken by a series of wide, deep inlets; the longest is M'Clintock Inlet which extends more than 40 miles south between high, mountainous land. Between the inlets, broad peninsulas extend north to form the outer coastline. High bluffs and rounded mountains make up much of the coast. South of the coast is mostly alpine country partially buried by ice fields and glaciers.

117 **Caution**. — Consolidated **multi-year ice** in the fiords along the north side of Ellesmere Island remains unbroken in most years. The thickness of this ice has been measured from 270 to 430 cm. Open water leads develop in places along the shore each year under the influence of offshore winds.

118 **Caution**. — An ancient **ice shelf** once fronted much of the north coast of Ellesmere Island. The ice shelf has been breaking up since it was first documented by the British Arctic Expedition of 1875-1876. Unusually thick and extensive, and in places extending more than 6 miles offshore, the remnants of the ice shelf possess a striking "**ridge-and-trench**" topography and have elevations between 0.9 and 7.3 m (3 and 24 ft). **Drifting** ridge-and-trench ice occurs as a partial cover in the fiords, as discontinuous fenders and patches along the coast and as ice islands along the entire length of the coast.

119 **Caution**. — The north coast of Ellesmere Island, between Lands Lokk Point and Cape Colan, was surveyed in 1983. **Depths** were obtained by **spot soundings** through the ice. These soundings are **not incorporated** on the charts *(2013)*. The surveys indicate quite a deep shelf about 30 miles wide with the shelf edge occurring at a depth between 300 to 350 m (984 to 1149 ft). Several deep banks are separated by deep troughs which cross the shelf from several of the inlets.

120 The **tidal range**, large tides, is 0.5 m (2 feet) off the south shore of Kleybolte Peninsula *(81°33'N, 91°30'W)*.

Chart 7954

Lands Lokk Point to Phillips Inlet

121 Between Lands Lokk Point *(81°36'N, 91°55'W)*, the SW end of Kleybolte Peninsula, and Cape Bicknor, 105 miles NE, the coast is mostly very bold, especially in the NE part where high mountains rise close to the sea and long inlets penetrate far inland. The mountains decrease in elevation toward the SW where they become no more than bold hills SW of Phillips Inlet *(82°05'N, 86°10'W)*. Most of the outer capes are low-lying, particularly between Cape Bourne and Yelverton Bay.

122 Ice mantles the interior mountains and numerous glaciers reach tide water. Large patches of ridge-and-trench **ice** fringe much of the coast, but it is not so continuous, nor so wide, as it is east of Cape Bicknor.

123 **Cape Colgate**, 15 miles NE of Lands Lokk Point, rises to 460 m about 1 mile inland. **Cape Bourne** *(81°52'N, 90°35'W)*, 20 miles farther NE, is low-lying; it is backed, 1.5 miles inland, by steep, rounded hills with elevations of about 300 m. The coastline between the two capes is irregular, indented by several small bays separated by bold headlands. Inland, the higher parts of Kleybolte Peninsula are partially mantled by small ice caps. The coast in this section is fronted by a mostly flat shore of variable width; the shore is usually between 0.5 and 1 mile wide and backed by abrupt, steep-sided hills.

124 A small island, with an islet close north of it, lies 1 mile north of Cape Bourne. About 8 miles NE of the cape, the coast is penetrated by two irregular inlets extending about 10 miles south into rolling hill country; the west inlet is **Henson Bay**. The hills reach elevations over 300 m toward the heads of the inlets. Several islands and minor bays are in these inlets. To the SE of the inlets, the land rises to high, ice-capped mountains which probably exceed 900 m in elevation. To the south the land is mantled by gently sloping ice caps.

125 **Caution**. — Several small islands **obstruct** the entrance to Henson Bay and the east inlet. In 1968, great masses of ridge-and-trench **ice** were present around these islands.

Phillips Inlet

126 **Phillips Inlet**, 15 miles NE of Henson Bay, is entered between **Cape Armstrong** *(82°06'N, 88°03'W)* and **Cape Woods** *(82°13'N, 86°40'W)*, 11 miles NE. Both of the entrance points are low. Cape Armstrong is difficult to identify as land, ice and snow merge with a small area of ridge-and-trench ice. The inlet trends 8 miles SE and splits at a prominent headland, about 900 m in elevation, on the south shore. A south-trending branch of the inlet indents the coast for about 12 miles and maintains a width of more than a mile. The south side of Phillips Inlet is low as far as the south trending branch.

127 The main arm of Phillips Inlet continues east from the prominent headland, for 16 miles, with two subsidiary inlets along its south side. The south coast of Phillips Inlet is mostly high and precipitous in the vicinity of the two

subsidiary inlets. The inner end of Phillips Inlet itself then becomes narrow and turns south for its last 8 miles.

128 The shore on the east side of the south-trending branch is indented, about 3 miles south of the entrance, by a small bay with low ground at its head. High, broken crags back the shore of the small bay along its south side. The south-trending branch rounds a high headland projecting from the east shore south of the bay. On the opposite shore, two glaciers reach tide water; another glacier ends inland of a delta at the head of the inlet. Mountains rise to over 900 m on both sides of the inner portion of the south-trending branch.

129 Between the south-trending branch and the western of the two subsidiary inlets, 10 miles east, the south coast attains elevations over 900 m; there are two ice caps. A number of glacial tongues from the ice caps, all ending short of the water, are on the coast of the west side of the western subsidiary inlet. The land rises precipitously to over 800 m in elevation between the two subsidiary inlets; the single ice cap has one glacial tongue reaching tide water, in the eastern subsidiary inlet. The eastern subsidiary inlet is about 8 miles long and is separated from the inner end of Phillips Inlet by a high, steep-sided ridge descending to a low valley between the heads of the two inlets.

130 Near Cape Woods, the north coast of Phillips Inlet is low-lying but rises in cliffs to the SE until, at a point 9 miles inside the entrance, the cliffs reach an elevation over 760 m. At this point two glaciers join and push their combined faces into the inlet. The north side of the inlet, farther east, becomes increasingly mountainous. The mountains rise inland to elevations of 1300 m and are ice-capped. In this section several glaciers flow toward the inlet but only the eastern one reaches tide water. Several rivers flow over a coastal plain SE of the eastern glacier.

131 The narrow inner part of Phillips Inlet is bounded to the east by high, gullied mountain walls over 600 m in elevation; two braided rivers form an extensive delta at the head of the inlet.

132 Eight soundings were obtained through the ice *(1983)* in the main arm of Phillips Inlet; they indicate **depths** in excess of 178 m for the first 12 miles then decrease to 168 m near the head of Phillips Inlet.

133 The **tidal range**, large tides, is 0.3 m offshore from Cape Woods.

Cape Woods to Alert Point

134 Between Cape Woods and Alert Point, 17 miles NE, a wide bay indents the coast almost 8 miles, surrounded by low-lying coasts. A large glacier flows into the head of the bay; another, smaller glacier reaches tide water about 2 miles west of the head.

135 **Caution**. — In 1968, the bay was obstructed by ridge-and-trench **ice** to beyond its entrance. This ice is solid for the most part. The large glacier sends out masses of floating ice which merge with the ridge-and-trench ice in the bay.

136 The south shore of this bay is relatively low and bordered by steep, low cliffs which rise farther east. Elevations over 300 m occur about 1 mile inland.

137 The east side of the bay is bordered by a low strip of bare land 1 mile wide at the east entrance point, widening to about 4 miles near the head of the bay. The coast slopes gradually inland to the base of mountain country that forms the backbone of **Wootton Peninsula** *(not named on Chart 7954)* separating Yelverton Bay from Phillips Inlet. These mountains, over 900 m in elevation, are covered by ice fields.

138 **Cape Alfred Ernest** projects about 1 mile south, in the form of a hook, from the mid point of the east coast and forms a small bay about 1 mile square. The cape and shores of this small bay are low.

139 **Alert Point** *(82°28'N, 85°55'W)*, at the NW end of Wootton Peninsula, is low and rounded and covered by the NW end of an ice cap. For 9 miles east from Alert Point the land is entirely mantled by the ice cap; the coast is very indistinct. The ice cap terminates in a broad, low, ice-covered point projecting to the east from the north end of Wootton Peninsula.

Yelverton Bay

140 **Yelverton Bay** is entered between the ice-covered point at the NE end of Wootton Peninsula and Cape Evans, 21 miles NE. Yelverton Bay rapidly decreases to a width of 6 miles, about 10 miles inside the entrance, then divides into two branches on either side of Mitchell Point. The west branch is **Kulutingwak Fiord** *(not named on Chart 7954)*; the other is Yelverton Inlet.

141 **Caution**. — Yelverton Bay and Yelverton Inlet were surveyed in 1983 but the **soundings** are **not charted** *(2013)*. Widely-spaced **spot soundings** through the ice in Yelverton Bay indicate **depths** less than 100 m extending 7 miles off Alert Point and the west side of Yelverton Bay. A trough with depths in excess of 500 m passes along the centre of the bay and deep water is encountered close off its east side. A line of eight **spot soundings** through the ice along the centre of Yelverton Inlet indicate depths between 300 and 700 m.

Yelverton Bay — West side

142 In 1968, close inside the entrance on the west side of Yelverton Bay, the coast was encumbered by a mass of ridge-and-trench ice. Three ice islands of the same material were frozen into the middle of land-fast, multi-year ice in the entrance to Yelverton Bay. In 2010, the last of the multi-year ice broke up; Yelverton Bay is now covered with mainly **first-year ice**.

143 A rectangular bay indents the west coast of Yelverton Bay for 6 miles south from the west entrance point. Streams discharge into the rectangular bay over two large deltas. Wootton Peninsula, behind the head of the rectangular bay, is very low-lying and entirely mantled by ice at its north end; the ice cap approaches within 0.5 mile of the bay.

144 About 3 miles SE of the rectangular bay, there is a low-lying, irregular rocky cape. Rounded hills lie between 1.5 and 2.5 miles inland. Farther inland, the scattered, steep-sided hills increase in elevation to 700 m. Between the rocky cape and the entrance to Kulutingwak Fiord, 5 miles south, the coast is backed by two hills with rounded crests and steep cliffs facing Yelverton Bay.

145 Kulutingwak Fiord is entered between **Mitchell Point** *(82°17'N, 82°58'W)* and an unnamed point, 3 miles west. Opposite Mitchell Point, a large glacier enters Kulutingwak Fiord and sends out a mass of icebergs which effectively blocks the entrance. Another smaller glacier reaches tide water 2 miles south of Mitchell Point. The sides of Kulutingwak Fiord are high and steep; the west shore rises precipitously to ice-capped mountains with an elevation of 1822 m.

146 Kulutingwak Fiord trends 12 miles SSE before dividing into two arms. One arm extends 8 miles east and curves to the SE for its final 2 miles. A long lake in a narrow valley, extending SE from the head of this arm, is separated from the head of the arm by a delta. Two small glaciers approach the south side of the arm.

147 The second arm of Kulutingwak Fiord trends 2.5 miles west; at its head is a large glacier.

Yelverton Bay — East side

148 **Cape Evans** *(82°39'N, 82°16'W)* is at the NW tip of a broad lobe of ice. Between Cape Evans and the north entrance to Petersen Bay, 6 miles south, the outer coast is low-lying and mainly mantled by ice so only a few narrow strips of land project between the ice lobe and the sea. The ice lobe rises gradually inland to over 300 m. The ice lobe is pierced by nunataks, 5 miles inland, which rise to about 460 m.

149 **Petersen Bay** indents the coast for 7 miles. Entered between Hansen Point *(82°30'N, 82°33'W)* and an unnamed point, 5 miles NNE, the bay decreases in width to less than 1 mile at its head. The north coast of the bay is high and mountainous, rising to 760 m, with glaciers cutting through to the coast. A delta is at the head of the bay; the land beyond is the mouth of a low-lying, wide valley which continues toward the east. The south coast is low but rises steadily to mountains, partially mantled by ice caps and glaciers, which attain elevations of 1000 m.

150 **Hansen Point** is low and rounded. A large glacier, fed by two ice caps, reaches the water about 5 miles south of Hansen Point. The glacier face extends along a front of 4 miles beyond the general coastline. Between Hansen Point and the north side of the glacier, the coast is bold and rises to rounded, partially ice-mantled elevations between 250 and 370 m, which in turn rise to higher mountains farther inland. The glacier is bounded by steep cliffs on both sides; the cliffs are higher on the south side.

151 A serrated ridge over 900 m high, south of the glacier, forms the SE coast of Yelverton Bay. The north end of this ridge rises sharply to a bold, steep-sided cape, which when viewed from the NE, appears as a sharp-pointed mountain peak.

Yelverton Inlet

152 **Yelverton Inlet** extends about 36 miles SE from its entrance between Mitchell Point and an unnamed point, 5 miles NE. Mitchell Point rises precipitously to 1000 m.

153 The peninsula on the west side of Yelverton Inlet is very regular in outline. A mountain wall rises from about 600 m at Mitchell Point to about 1500 m at the inner end of the inlet. This wall is virtually unbroken except for a deep, trough-like valley which crosses the peninsula about 15 miles from Mitchell Point.

154 **British Empire Range**, on the north side of Yelverton Inlet, attains elevations in excess of 1500 m. The east side of Yelverton Inlet, for 10 miles inside the entrance, is steep and high. The coast rises abruptly to between 900 and 1000 m. A glacier, 3 miles wide, enters the inlet from the east 10 miles inside the entrance. In 1968, this glacier projected about 1 mile beyond the general shoreline. About 10 miles farther SE, another large glacier enters the inlet from the east. This glacier sends out a mass of large blocks of ice; these are so closely packed as to be in effect, a part of the glacier tongue. In 1968, the outer limit of this ice was about 2.5 miles offshore. In this vicinity, the NE shore is a narrow strip of low land backed immediately inland by a steep mountain wall; SE of this point, both coasts of the inlet become very high and mountainous, rising as massive, gullied walls to more than 1200 m. Two large and several

small glaciers enter the head of the inlet; a floating mass of ice extends NW from them.

Milne Fiord

155 **Milne Fiord**, entered between Cape Evans and **Cape Egerton** *(82°48'N, 81°33'W)*, 10 miles NE, trends 20 miles SSE and narrows gradually toward its head.

156 In 2013, the entire fiord was obstructed by **Milne Ice Shelf** *(not shown on Chart 7954)*.

157 The west coast of Milne Fiord is high and precipitous; elevations of 600 m are found SE of Cape Evans. An ice cap covers the high ground. Numerous glaciers descend from the ice cap through deep troughs in the cliffs; toward Cape Evans, the cliffs themselves become progressively overwhelmed by the ice cap. **Purple Valley** *(not named on Chart 7954)*, at the inner end of the west shore, forms a pass between Milne Fiord and Petersen Bay.

158 An ice cap also makes up the east coast of Milne Fiord for 3 miles south of Cape Egerton. At this point a steep-sided, flat-topped headland with elevations between 250 and 300 m projects through the ice. Immediately to the south, a large glacier enters Milne Fiord along a front 1.5 miles wide and merges imperceptibly with the ridge-and-trench ice. The remainder of the east coast of the fiord is high, steep cliffs, with elevations between 300 and 600 m.

159 **Milne Glacier** enters the fiord at its head and merges with the ridge-and-trench ice. The tongue of the glacier is floating and marked by several bands of debris.

160 Between Cape Egerton and Cape Bicknor, 1.5 miles NE, the coast is masked by an ice cap which covers the entire outer end of the peninsula separating Milne Fiord from Ayles Fiord.

161 **Cape Bicknor** *(82°49'N, 81°18'W)* is a steep bluff rising between 200 and 250 m and isolated by ice. A mass of gravel lies at its base.

Ayles Fiord

162 **Ayles Fiord** is entered between Cape Bicknor and an unnamed point 8 miles NE. The fiord extends 13 miles SE to a steep cape, with cliffs. An arm splits off the west side of the fiord at the cape. This arm trends 5 miles south; Ayles Fiord continues 10 miles ESE.

163 In 1968, **Ayles Ice Shelf** obstructed the entrance to the fiord. In 2005, the ridge-and-trench ice fractured off and became an ice island with an area of approximately 66 km^2.

Ayles Fiord — West side

164 The west coast of Ayles Fiord, for 9 miles SE of Cape Bicknor, is composed of high, broken cliffs reaching elevations between 300 and 600 m above the sea ice. In the north part the cliffs are overwhelmed by an ice cap.

165 In 1968, glaciers cut through the cliffs and a broad lobe extended 6 or 7 miles seaward. This lobe was probably grounded. About 9 miles inside the west entrance, a large glacier, 1.5 miles wide, entered the fiord and sent a floating tongue of ice almost to the opposite side. The ice from the glacier formed a confused pattern with the ridge-and-trench ice to the north.

166 The south arm of Ayles Fiord, entered about 6 miles farther south, has a glacier which reaches tide water on the west shore inside its entrance. The east coast of the arm is high, with cliffs. The arm has a braided delta at its head. A deep, trough-like valley extends inland from the delta.

Ayles Fiord — East side

167 On the north side of the east entrance point of Ayles Fiord, an active glacier, 1.5 miles wide, reaches the coast; its tongue has elevations between 3 and 12 m.

168 South of the east entrance point of Ayles Fiord, the east side of the fiord turns east into a small inlet which penetrates the coast for 4.5 miles. A glacier enters this inlet on the north side near the head. From the glacier to the head of this inlet, where there is a delta, the coast is high and precipitous, rising to about 600 m. The south side of the inlet is lower in elevation but still very steep. A sharp, high cape forms its south entrance point.

169 Five miles south, the SE-trending main arm of Ayles Fiord is entered between an unnamed point and a steep cape, with cliffs; an elevation of about 460 m is 1 mile south of the cape. The main arm of the fiord is about 1.5 miles wide and the shoreline has several small deltas. The central part of the south coast is low but elsewhere the land rises steeply to between 250 and 300 m.

170 **Cape Fanshawe Martin** *(82°55'N, 80°12'W)* is 2.5 miles NE of the entrance to Ayles Fiord; in the vicinity of the cape the land is bare and the low shore rises steeply to a prominent rounded summit over 600 m in elevation.

171 Between a point 3 miles NE of Cape Fanshawe Martin and Cape Richards, 4 miles farther NE, the coast is covered by a wide lobe of an ice cap. In places, short stretches of glacier-borne debris lie in front of the ice and the actual shoreline is difficult to determine. The ice rises gradually back from the coast and, 2 miles inland, a peak

with an elevation over 900 m projects through the ice. Toward Cape Richards the elevation of the lobe decreases.

172 In 1968, along this section of the coast, the ridge-and-trench ice was absent although more recent formations of land-fast, multi-year ice extended between 1 and 3 miles offshore.

173 **Cape Richards** *(82°59'N, 79°17'W)* has been described as "the usual projecting low spit, shelving gradually to the ice".

Charts 7954, 7072, 7304

M'Clintock Inlet

174 **Caution**. — There is an appreciable difference in geographic co-ordinates between *Chart 7072* and the more recently published *Charts 7304 and 7954*. The latter two are used as reference charts wherever possible.

175 **M'Clintock Inlet** *(82°45'N, 76°30'W)* is entered between Cape Richards and Cape Discovery, 14 miles east. The inlet trends 30 miles SE into Ellesmere Island. **Challenger Mountains** extend across the north end of Ellesmere Island and form both sides of M'Clintock Inlet. **M'Clintock Glacier**, at the head of M'Clintock Inlet, fills its head with a confused mass of floating glacial ice.

176 **Caution**. — A line of widely-spaced **spot soundings** through the ice was obtained in 1983 but the soundings are **not charted** *(2013)*. The soundings indicate depths of 180 to 700 m (591 to 2296 ft).

177 In 2013, land-fast, **multi-year ice**, with fragments of ridge-and-trench ice, filled the mouth of M'Clintock Inlet.

Chart 7954

178 **Bethel Peak** *(82°54'N, 78°55'W)* is an ice-capped summit with an elevation over 600 m; a steep-sided ridge with talus extends north from the peak and forms the east coast of an unnamed inlet. The west coast of this inlet has cliffs, backed by ice-covered mountains. Several glaciers descend from the mountains to the inlet.

179 **Bromley Island** attains its highest elevation, about 600 m, at **Bromley Peak**. Near the north end of the island, the peak has been described as "a remarkable looking black cliff". The NE, SE and SW sides of Bromley Island have steep cliffs; its north and south ends are low-lying.

180 Two inlets lead south from Bromley Island. **Maskell Inlet** *(not named on Chart 7954)*, to the west, has steep slopes on its west coast and a relatively low, narrow peninsula on its east coast. **Taconite Inlet**, to the east, has a low east coast and its west coast rises steeply to elevations of 450 m. **Taconite River** flows into the head of the inlet.

181 **Borup Point** *(82°56'N, 77°44'W)* is a precipitous cape with elevations exceeding 600 m.

Charts 7954, 7304

182 **Cape Discovery** *(83°00'N, 77°24'W)*, the east entrance point of M'Clintock Inlet, is bold with a steep west face that attains an elevation of 250 to 300 m. A glacier reaches tide water on the east side of the inlet about 8 miles SE of Cape Discovery.

Chart 7072

183 **Murphy Point** *(not named on Chart 7072)*, 7 miles SE of Borup Point on the west side of the inlet, is steep, rising to an elevation of 760 m (2493 ft); it marks a change in the trend of the coast from SE to SSE. The coast between Borup Point and Egingwah Bay, 3 miles SSE of Murphy Point, is mountainous, with individual peaks exceeding 1000 m (3280 ft).

184 **Egingwah Bay** *(not named on Chart 7072)* is a small indentation on the west side of M'Clintock Inlet. A wide valley extends west from the bay with **Egingwah Creek** *(not named on Chart 7072)* flowing through it. **Mount Ayles** *(not named on Chart 7072)*, on the south side of the valley and about 4 miles inland, attains an elevation of about 900 m (2952 ft). **Zebra Cliffs** *(not named on Chart 7072)* line the west side of M'Clintock Inlet south of Egingwah Bay and attain elevations of 450 to 600 m (1476 to 1968 ft).

185 **Ooblooyah Creek** *(not named on Chart 7072)*, 6 miles SSE of Egingwah Bay, flows into the west side of M'Clintock Inlet through a wide valley with **Ooblooyah Glacier** *(not named on Chart 7072)* at its head.

Charts 7304, 7072

186 An island, 6 miles SE of Ooblooyah Creek, lies close off the west shore and attains an elevation of about 150 m (492 ft). A glacier *(not shown on Chart 7072)* enters the west side of the inlet opposite the north end of the island.

187 **Ootah Bay** *(not named on Chart 7072)*, 15 miles SSE of Cape Discovery, enters the east side of M'Clintock Inlet between steep mountain walls; a tortuous pass leads from the head of the bay to Disraeli Fiord. **Crash Point** *(not named on Chart 7072)* is about 5 miles south of Ootah Bay.

Chart 7304

Cape Discovery to Cape Columbia

188 **Marvin Peninsula** separates M'Clintock Inlet from Disraeli Fiord. The coast east of Cape Discovery *(83°00'N, 77°24'W)* is low-lying, backed by rounded hills with

elevations of 300 m and rising to mountains with elevations of 900 m about 5 miles inland. **Rambow Hill**, 17 miles east of Cape Discovery, attains an elevation of 485 m. The summit of Rambow Hill is composed of very hard, dark-looking rock below which talus extends down to the ice. **Cape Alexandra** *(83°03'N, 74°39'W)*, the west entrance point to Disraeli Fiord, is a steep cliff with an elevation of 150 m rising to 450 m about 1 mile inland.

189 **Ward Hunt Island** *(83°06'N, 74°10'W)* attains its greatest elevation, 415 m, at conical-shaped **Walker Hill** near its NW end. When viewed from east or west, the high cone of Walker Hill is a very **conspicuous landmark**.

190 **Ward Hunt Ice Shelf** is off the north side of Marvin Peninsula and blocks the entrance to Disraeli Fiord. The ridge-and-trench ice terminates in the vicinity of Cape Albert Edward; it displays the characteristic ridge-and-trench appearance of older ice. In 2013, the east portion of the ridge-and-trench ice was disintegrating.

191 **Cape Albert Edward**, 10 miles east of Ward Hunt Island, is a high bluff with its east face formed by a cliff with an elevation of 332 m.

Disraeli Fiord

192 **Disraeli Fiord**, entered between Cape Alexandra and Cape Albert Edward, trends 23 miles SSE between the Challenger Mountains and terminates at **Disraeli Glacier**.

193 The **tidal range**, large tides, is 0.6 m in Disraeli Fiord. *Disraeli Fiord (Index No. 6730)* is a secondary port in *Canadian Tide and Current Tables, Volume 4*.

194 The inner 9 miles of Disraeli Fiord is choked by a great thickness of floating glacial ice from Disraeli Glacier and another large glacier on the east side of the fiord at the head.

195 **Caution**. — A few **uncontrolled** and widely-spaced **spot soundings** through the ice indicate **depths** from 135 to 293 m in Disraeli Fiord.

196 **Marvin Islands** are six islands in the entrance to Disraeli Fiord. The SW island attains an elevation of about 300 m and has steep NE and SW coasts. A large island close NE is composed of a number of rocky knobs which attain elevations of 200 m; **air photos** indicate a marked upwelling in the ice between the two islands, implying they may be connected by a low isthmus. Four small low-lying islands, covered with ice, lie north of the two main islands. Another island, 5 miles south of Marvin Islands, lies in the middle of Disraeli Fiord.

197 **Disraeli Creek** *(not named on Chart 7304)*, 5 miles SE of Cape Alexandra, enters the west side of the fiord through a wide valley. There is a narrow coastal plain to the north and south of the creek except for cliffs fronting the coast about 1 mile north and 0.5 mile south of the creek entrance. The hills north of Disraeli Creek are rounded, attaining elevations of 450 m. A peak, 4 miles south of Disraeli Creek and about 1.5 miles inland, attains an elevation of 1000 m and has a steep east face. A creek, 9 miles SSE of Disraeli Creek, has a wide delta and flows into the west side of the fiord through a wide valley; south of the creek the west coast of the fiord comprises rugged mountain walls with conical peaks rising over 900 m.

198 The coast on the east side of Disraeli Fiord is low and heavily mantled by ice for 7 miles SW from Cape Albert Edward. South of this low coast a precipitous cliff, east of Marvin Islands, rises almost sheer from the water and attains an elevation of 600 m a short distance inland; two glacial tongues approach within 0.2 mile of the fiord in this section. A wide valley, SE of Marvin Islands, meets the fiord at a large terraced delta. Between the wide valley and another wide valley 7 miles south of Marvin Islands, the mountains attain elevations of 600 m; to the south they are steeper and attain elevations of 900 m.

199 **Cape Nares**, 7 miles east of Cape Albert Edward, is the north tip of a massive hill which rises steadily to between 300 and 450 m; its east side is formed by almost vertical cliffs which are prominent from the east.

Markham Fiord

200 **Markham Fiord**, entered between Cape Nares *(83°06'N, 71°35'W)* and an unnamed point 4 miles east, lies between Challenger Mountains to the west and Arthur Laing Peninsula to the east. The fiord penetrates Ellesmere Island for 13 miles. A glacier at the head of the fiord reaches tide water; the outer 3 miles of the glacier is very flat and broken so the exact location of the head of the fiord is not known.

201 In 2008, **Markham Ice Shelf**, which blocked the entrance to the fiord, collapsed; the debris formed several ice islands. The large glacier that enters the south end of the fiord contributes some glacial ice.

202 A low, rounded island, mantled by ice, is close off the east side of Markham Fiord 6 miles south of Cape Nares. Another low island, 10 miles south of Cape Nares in the centre of the fiord, is almost completely mantled by ice; a smaller ice-mantled island lies close north of it.

203 South of the massive hill at Cape Nares, the west coast of Markham Fiord is low and ice-mantled for about 4 miles. The west coast then gradually increases in elevation with rounded mountains in the outer part; toward the head the mountains attain elevations of 900 m.

204 The east entrance point of Markham Fiord is a broad, rounded peninsula attaining an elevation of about

150 m; the east and west shores of this peninsula are low and almost concealed by ice. Between the east entrance point and a point 6 miles SW there are precipitous cliffs cut by V-shaped valleys; the mountains rise to elevations of 450 m. At the point where the trend of the coast alters to SE, a bold point rises between 90 and 120 m; the point has cliffs on its west side. A low, rounded island, almost completely covered by ice, lies 0.2 mile south of the bold point. A wide valley, east of this island, extends inland. At the head of the valley, **Mount Hornby** attains an elevation of 1186 m. Close south of the valley a pyramidal peak rises sharply at the water's edge to over 600 m.

205 **Mount Cooper Key**, elevation over 700 m, is the center and highest of 3 peaks facing the Arctic Ocean on the NW coast of Arthur Laing Peninsula *(described in Chapter 11)*. The snow-mantled mountains rise steeply from the sea.

206 Cape Columbia *(83°07'N, 69°57'W, described in Chapter 11, name misplaced on Chart 7304)*, the west limit of Lincoln Sea, is 11 miles east of Cape Nares.

207 *(The Canadian shoreline of Lincoln Sea is described in Chapter 11.)*

Trip Plan

Adapted from Transport Canada Publication TP 511E.

Fill out a trip plan for every boating trip you take and file it with a responsible person. Upon arrival at your destination, be sure to close (or deactivate) the trip plan. Forgetting to do so can result in an unwarranted search for you.

Trip Plan

Owner Information

Name: _____

Address: _____

Telephone Number: _____ Emergency Contact Number: _____

Boat Information

Boat Name: _____ Licence or Registration Number: _____

Sail: _____ Power: _____ Length: _____ Type: _____

Colour _____ Hull: _____ Deck: _____ Cabin: _____

Engine Type: _____ Distinguishing Features: _____

Communications

Radio Channels Monitored: HF: VHF: MF:

MMSI (Maritime Mobile Service Identity) Number: _____

Satellite or Cellular Telephone Number: _____

Safety Equipment on Board

Lifejackets *(include number)*: _____

Liferafts: _____ Dinghy or Small Boat *(include colour)*: _____

Flares *(include number and type)*: _____

Other Safety Equipment: _____

Trip Details — Update These Details Every Trip

Date of Departure: _____ Time of Departure: _____

Leaving From: _____ Heading To: _____

Proposed Route: _____ Estimated Date and Time of Arrival: _____

Stopover Point: _____ Number of People on Board: _____

Search and Rescue Telephone Number: _____

The responsible person should contact the nearest Joint Rescue Coordination Centre (JRCC) or Maritime Rescue Sub-Centre (MRSC) if the vessel becomes overdue.

Act smart and call early in case of emergency. The sooner you call, the sooner help will arrive.

JRCC Victoria (British Columbia and Yukon) 1-800-567-5111
+1-250-413-8933 (Satellite, Local or out of area)
727 (Cellular)
+1-250-413-8932 (fax)
jrccvictoria@sarnet.dnd.ca (Email)

JRCC Trenton (Great Lakes and Arctic) 1-800-267-7270
+1-613-965-3870 (Satellite, Local or Out of Area)
+1-613-965-7279 (fax)
jrcctrenton@sarnet.dnd.ca (Email)

MRSC Québec (Quebec Region) 1-800-463-4393
+1-418-648-3599 (Satellite, Local or out of area)
+1-418-648-3614 (fax)
mrscqbc@dfo-mpo.gc.ca (Email)

JRCC Halifax (Maritimes Region) 1-800-565-1582
+1-902-427-8200 (Satellite, Local or out of area)
+1-902-427-2114 (fax)
jrcchalifax@sarnet.dnd.ca (Email)

MRSC St. John's (Newfoundland and Labrador Region) 1-800-563-2444
+1-709-772-5151 (Satellite, Local or out of area)
+1-709-772-2224 (fax)
mrscsj@sarnet.dnd.ca (Email)

MCTS Trip Plan Service

Marine Communications and Traffic Services Centres provide a trip plan processing and alerting service. Mariners are encouraged to file Trip Plans with a responsible person. In circumstances where this is not possible, Trip Plans may be filed with any MCTS Centre by telephone or marine radio only. Should a vessel on a Trip Plan fail to arrive at its destination as expected, procedures will be initiated which may escalate to a full search and rescue effort. Participation in this program is voluntary.

See Canadian Radio Aids to Marine Navigation.

Other References

Information for the Protection of Right Whales:
https://www.dfo-mpo.gc.ca/fisheries-peches/commercial-commerciale/atl-arc/narw-bnan/index-eng.html

Meteorological data:
https://www.canada.ca/en/services/environment/weather.html

Marine Forecasts and Warnings for Canada:
https://weather.gc.ca/marine/index_e.html

Current Predictions (Data Viewer by DFO - MSDI Dynamic Current Layer):
https://gisp.dfo-mpo.gc.ca/apps/dataviewer/?locale=en

Customs:
https://www.cbsa-asfc.gc.ca/travel-voyage/pb-pp-eng.html

SAR:
Search and rescue (ccg-gcc.gc.ca)

Index

A

Aarruja 4-2
Abandon Bay 8-4
Abbott River 8-6
Abernethy Bay 6-8
Abernethy River 6-9
Abraham Bay 2-7
Academy Bugt 9-12
Adams Island (Dexterity Fiord) 4-5
Adams Island (Navy Board Inlet) 4-13
Adams River (Baffin Island) 5-5
Adams Sound 5-5
Addington Point 7-8
Admiralty Inlet 5-4
Advance Bluff 8-4
Advance Bugt (Bay) 11-10
Aggijjat 3-4
Agitator Reef 1-10
Agnes Monument 4-3
Agnew River 6-9
Agu Bay 6-8
Aiguille Shoal 1-10
Ailsa Island 4-2
Aird Point 4-6
Airforce River 12-7
Airstrip Point 8-8
Aktijartukan Fiord 2-7
Aktineq Creek 4-9
Aktineq Glacier 4-9
Akuglek Island 3-2
Akulagok Island 2-9
Akuliakata Point 6-10
Akuliaqattak Peninsula 3-10
Akuliarattak Point 6-10
Akuliaruserssuak 9-5
Akulliak Passage 8-6
Akuna Point 2-8
Alakratiak Fiord 11-12
Albert Harbour 4-8
Aleqatsiaq Fjord 11-12
Alert Creek 11-18
Alert Inlet 11-18
Alert Point 12-9
Alexander Baillie Point 10-8
Alexander Bank 3-11
Alexander Bay 3-10
Alexandra Fiord 11-6
Alexandra Lake 11-14
Alfred Newton Glacier 11-2
Alfred Point 4-12
Algerine Island 1-13
Algerine Passage 1-13
Alida So 11-4
Alikdjuak Island 3-8
Allard Island 8-12
Allen Bay 7-6
Allen Glacier 11-2
Allen Island 2-4
Allen River 7-6
Alligator Island 1-12
Alligators Teeth 1-13
Allison Inlet 7-7
Allman Bay 11-8
Alpha River 4-12
American Harbour 2-11
Amittuarjuk 3-4
Ammonite Mountain 10-12
Amor Smith Inlet 2-5
Anchorage Island 1-11
Anderson Channel 2-6
Andersrag Beach 10-7
Angijak Island 3-2
Angmagraluit Mountain 4-10
Angmallik Harbour 2-7
Angmaraaluit Kangiqłunga 4-10
Anna Maria Port 1-7
Annie Point 8-12
Anstead Point 10-5
Antoinette Bay 12-6
Antoinette Glacier 12-6
Apex Hill 1-15
Apex (village) 1-15
Aqiarurnak Bay 5-4
Arabella Bay 7-9
Arbuthnot Island 6-9
Archer Fiord 11-14
Archer River 10-4
Archibald Promontory 2-5
Arctic Bay 5-5
Arctic Bay (hamlet) 5-5
Arctic Harbour 3-11

Arctic Shoal 10-5
Arguyartu Point 3-10
Argvagtut River 3-10
Armshow River 1-14
Arran Mountain 8-11
Arrow River 8-9
Arrowsmith River 6-10
Arthur Fiord 10-14
Arthur Laing Peninsula 11-20
Arthur Pass 8-3
Arviqtujuq Kangiqtua 4-4
Ashington Point 8-12
Asiak Rock 2-5
Assistance Bay 7-5
Assistance Islet 8-9
Assomption Harbour 4-11
Astronomical Society Islands 6-10
Astro Pynt 9-7
Atagulisaktalik 4-4
Atwood Point 12-5
Aubrey Bjerg 11-4
Aubrey Island 1-13
Audhild Bay 12-3
Augusta Bay 10-16
Augustus Island 1-8
Aulattivik 4-10
Aulitivik Island 3-11
Aulitiving Island 3-11
Auniakvik Bay 2-8
Aupaluktok Island 2-10
Aupaluktut Island 2-8
Auyuittuq National Park of Canada 2-10
Avatdliarssuk 9-6
Axel Heiberg Island (Norwegian Bay) 10-13
Ayde Point 1-10
Ayles Fiord 12-11
Ayles Ice Shelf 12-11
Ayles Point 11-19
Ayr Lake 4-3

B

Baad Fiord 10-7
Babbage Bay 6-8
Bache Peninsula 11-7
Baffin Bay 4-1
Baffin Island 1-1
Baillarge Bay 5-4
Baillie-Hamilton Island 8-4
Baird Inlet 11-2
Baird Island 11-2
Baker Bay 6-8
Baker Island 7-7
Balcarres Island 8-13
Bancroft Bugt (Bay) 11-10
Barden Bugt 9-11
Baring Bay 8-3
Baring Channel 7-8
Baring Island 8-8
Barkla Point 4-5
Barlow Inlet 8-3
Barnston Point 6-12
Barrier Glacier 11-19
Barrow Harbour 8-9
Barrow Peninsula 1-4
Barrow Strait 7-1
Bartlett Bay 11-7
Bartlett Inlet 5-6
Bartlett Narrows 1-12
Basset Point 1-10
Bass Point 8-6
Bastion Pynt 9-10
Bate Islands 1-12
Bateman Bay 8-6
Bathurst Bay 4-13
Bathurst Island 8-11
Batty Bay 6-4
Baumann Fiord 10-12
Bay Fiord 10-16
Bay of Two Rivers 1-13
Bay of Woe 10-8
Beacon Island (Pangnirtung Fiord) 2-9
Beacon Island (Sanigut Islands) 2-10
Beacon Reefs 4-10
Bear Bay 10-3
Bear Corner 10-16
Beare Sound 1-3
Bear Head 10-7
Bear Island 1-3, 3-3
Bear Point 8-2
Bear Strait 10-15
Beatrice Point 9-2
Beatrix Bay 11-15
Beaufort Bluff 9-12
Beauty Bay 1-7
Becher Bay 7-7

Becher Peninsula 1-8
Becher River 6-10
Bedford Bay 7-7
Beechey Island 7-4
Beekman Peninsula 2-4
Beitstad Fiord 11-6
Belcher Channel 8-13
Belcher Glacier 10-3
Belcher Island 8-14
Belcher Point 10-3
Bell Bay 5-7
Bellevue Mountain 4-12
Bellot Cliff 7-8
Bellot Island 11-13
Bellot Point 8-2
Bellot Strait 6-5
Beloeil Island 4-8
Beluga Point 1-10
Benedict Glacier 11-8
Benoe Point 1-10
Bent Arrow Hill 8-9
Bent Glacier 12-7
Benton Bugt (Bay) 11-11
Bere Bay 8-14
Bergesen Island 4-5
Bergy Bar 4-6
Berkeley Bay 10-8
Berkeley Islands 8-11
Berkeley Passage 8-7
Berkeley Trough 8-11
Berlinguet Inlet 5-7
Berlinguet River 5-7
Bernier Bay 6-7
Bessel Fjord 11-13
Bessels Fiord 11-13
Best Point 1-15
Beta River 4-12
Bethel Peak 12-12
Bethune Inlet 9-2
Beveridge Island 1-13
Bigler Bay 1-3
Bird Fiord 10-11
Bird Island 10-11
Bird Point 11-19
Biserial Reefs 1-12
Bishop Island 1-13
Bjare Strait 12-3
Bjørlings Ø 9-9
Bjorne Peninsula 10-12
Black Bluff 4-2
Black Cape 11-16
Black Cliffs 11-16
Black Cliffs (Cliff) Bay 11-18
Black Horn Klint (Cliffs) 11-17
Blacklead Island 2-8
Black Ledge 1-15
Black Mountain 12-4
Black Point (Pond Inlet) 4-8
Black Point (Queens Channel) 8-8
Black Rock Vale 11-14
Blacks Inlet 6-11
Black Stripe Head 12-5
Black Top Creek 10-17
Black Top Ridge 10-17
Blackwelder Mountains 12-5
Blackwood Næs 9-10
Blanchard Island 1-6
Blanche Mountain 10-10
Blanley Bay 5-8
Blind Fiord 10-12
Block Island 3-4
Blubber Point 10-9
Blue Fiord 10-12
Blue Man Cape 10-17
Blue Mountains 12-5
Bluff Head 4-13
Blunt Peninsula 1-3, 2-3
Boas Fiord 3-5
Boat Point 10-4
Boger Bay 9-4
Boger Point 9-4
Boiler Creek 4-3
Bon Accord Harbour 2-9
Bond Point 8-5
Bonsall Øer (Islands) 11-10
Boothia Isthmus 6-9
Boothia Peninsula 6-7
Booth Sund 9-10
Borden Peninsula 5-3
Bord Ø 9-9
Borup Fiord 12-5
Borup Point 12-12
Bourassa Bay 6-7
Bowden Point 8-2
Bowdoin Fjord 9-13
Bowdoin Gletscher 9-13

Bowery Inlet 11-19
Bowles Bay 6-9, 9-3
Bowman Island 9-4
Brae Bay 10-3
Brands Island 6-6
Breakwater Island 11-13
Breakwater Point 11-13
Brentford Bay 6-5
Brevoort Harbour 2-5
Brevoort Island 2-5, 11-3
Brevoort River 6-8
Brewster Point 1-4
Brigus Island 1-12
British Empire Range 12-10
Brittania Cliffs 10-10
Brodeur Peninsula 6-2
Brodeur River 6-3
Brodie Bay 3-8
Bromley Island 12-12
Bromley Peak 12-12
Brook Island 1-12
Brooman Point 8-6
Brother John Gletscher (Glacier) 11-4
Broughton Channel 3-6
Broughton Harbour 3-6
Broughton Island 3-6
Browne Island 7-7
Brown Harbour 2-9
Brown Inlet 2-8
Brown Island 6-6
Bruce Head 4-11
Bruce Island 1-7
Bruce Mountains 4-5
Bruce Point 8-14
Brume Point 10-6
Buchanan Bay 11-5
Buchanan Lake 10-17
Buchan Gulf 4-6
Buckingham Island 10-11
Buerger Point 1-5
Bulleys Lump 11-15
Bulls Eye 9-9
Bunn Inlet 6-11
Burke Bay 12-7
Burnett Inlet 5-8
Burns Island 4-2
Burton Bay 1-14
Bute Island 4-2
Butler Bay 2-4
Butterfly Bay 2-4
Butter Porridge Point 10-17, 12-3
Button Point 4-8
Byam Martin Mountains 4-7
Bylot Island 4-7
Bylot Sund 9-6

C

Cache Pynt (Point) 11-10
Cadogan Glacier 9-4
Cadogan Inlet 9-4
Cairn Island 1-15
Cairn Pynt (Point) 11-5
Caledonian Bay 12-6
Calf Island 10-8
Cambridge Fiord 4-6
Cambridge Point 9-3
Camel Island 3-3
Camels Neck 1-12
Cameron Inlet 6-12
Camp Island 1-11
Canada Point 4-12
Canadian Forces Station (CFS) Alert 11-18
Canaille Point 1-11
Canon Fiord 12-6
Canso Channel 3-5
Cape Aberdeen 10-14
Cape Adair 4-5
Cape Admiral M'Clintock 7-2
Cape Agassiz 11-11
Cape Airy (Boothia Peninsula) 6-8
Cape Airy (Cornwallis Island) 7-7
Cape Albert 11-7
Cape Albert Edward 12-13
Cape Aldrich 11-20
Cape Alexandra 12-13
Cape Alfred Ernest 12-9
Cape Allard 8-9
Cape Allington 6-9
Cape Ammen 11-17
Cape Anne 7-3
Cape Antrobus 4-7
Cape Appel 6-8
Cape Armstrong 12-8
Cape Arnoux 2-4
Cape Arrowsmith 6-11

Cape Arundell 10-8
Cape Aston 3-11
Cape Augherston 6-8
Cape Austin 8-8
Cape Back 11-12
Cape Baird 11-12
Cape Baker 11-7
Cape Barclay (Committee Bay) 6-12
Cape Beaufort 6-13
Cape Becher 8-5
Cape Beechey 11-16
Cape Belknap 11-18
Cape Benjamin Smith 8-5
Cape Berens 6-10
Cape Berkeley 7-9
Cape Bicknor 12-11
Cape Blanky 8-8
Cape Bourne 12-8
Cape Bowen 4-7
Cape Brainard 12-5
Cape Brevoort 11-17
Cape Briggs 8-14
Cape Broughton 3-6
Cape Bryan 11-13
Cape Bryant 11-20
Cape Bullen 5-3
Cape Burgoyne 10-10
Cape Burney 4-13
Cape Butler 8-14
Cape Byam Martin 4-13
Cape Caldwell 1-11
Cape Caledon 10-3
Cape Calhoun 11-12
Cape Camperdown 11-6
Cape Capel 7-7
Cape Cargenholm 4-6
Cape Carmichael 4-5
Cape Carter 1-3
Cape Chapel 1-3
Cape Chapman 6-10
Cape Charles Yorke 5-3
Cape Chase 10-16
Cape Christian 4-3
Cape Christy 1-13
Cape Clara 6-4
Cape Clarence 6-3
Cape Clarence Peninsula 6-3
Cape Clay 11-11
Cape Clear 11-14
Cape Coastguard 12-3
Cape Cockburn (Devon Island) 9-2
Cape Colan 11-19
Cape Colby 2-3
Cape Colgate 12-8
Cape Collins 8-5
Cape Collinson 11-9
Cape Columbia 11-20
Cape Combermere 9-4
Cape Come Again 4-4
Cape Constitution 11-12
Cape Coutts 4-7
Cape Cracroft 1-3, 8-9, 11-12
Cape Crauford 5-6
Cape Cresswell 11-19
Cape Crozier 6-8
Cape Cunningham 5-5
Cape Daly 2-2
Cape Daniell 8-2
Cape Defosse 11-12
Cape Delano 11-19
Cape Derby 10-10
Cape Discovery 12-12
Cape Disraeli 10-14
Cape Donninghausen 10-9
Cape Dundas 7-9
Cape Dungeness 7-5
Cape Dunsterville 9-4
Cape D'Urville 11-8
Cape Dyer 3-3
Cape Eardley Wilmot 7-3
Cape Edwards 2-7
Cape Egerton 12-11
Cape Eglinton 4-3
Cape Ejnar Mikkelsen 6-8
Cape Ellice 6-8
Cape Englefield 6-8
Cape Esther 6-4
Cape Evans 12-10
Cape Evans (McDougall Sound) 8-6
Cape Fanshawe 4-14
Cape Fanshawe Martin 12-11
Cape Faraday 9-4
Cape Farrand 6-8
Cape Farrington 2-3
Cape Fernald 12-7
Cape Field (Ellesmere Island) 11-8

Cape Field (Kalaallit Nunaat) 11-13
Cape Finlayson 6-12
Cape Fitz Roy 9-3
Cape Forbes 11-11
Cape Francis 11-10
Cape Fraser 11-9
Cape Frederick VII (Ellesmere Island) 11-16
Cape Frederik VII (Kalaallit Nunaat) 11-10
Cape Garry 6-4
Cape Gell 8-4
Cape Gleason 12-7
Cape Godfred Hansen 6-8, 11-13
Cape Graham Moore 4-8
Cape Grant 7-8
Cape Grey 7-8
Cape Grinnel 11-10
Cape Grinnell 8-2
Cape Halkett 8-12
Cape Hallowell 6-8
Cape Hamilton 11-12
Cape Hardy (Jones Sound) 10-3
Cape Hardy (Prince of Wales Island) 7-8
Cape Harrison 10-10, 11-8
Cape Hatherton 11-5
Cape Hatt 4-10
Cape Haven 2-3
Cape Hawes 10-8
Cape Hawks 11-8
Cape Hay (Bylot Island) 4-14
Cape Hayes 1-3
Cape Hecla 11-19
Cape Henry 11-7
Cape Henry Kater 3-10
Cape Herschel 11-2
Cape Hewett 4-2
Cape Heytesbury 6-8
Cape Hilgard 11-8
Cape Hoey 2-4
Cape Home 5-3
Cape Hooper 3-8
Cape Hornby 8-3
Cape Horsburgh 9-2
Cape Hotham 7-4
Cape Hotham Escarpment 7-4
Cape Howe 2-4
Cape Hunter 4-5, 11-7
Cape Hurd (Devon Island) 5-9
Cape Hurd (Ellesmere Island) 9-4
Cape Independence 11-12
Cape Ingersoll 11-10
Cape Ingrid 10-16
Cape Isabella 9-5
Cape Jackson 11-11
Cape James 12-6
Cape James Anderson 6-12
Cape Jameson (Ragged Point) 4-7
Cape Jefferson 11-12
Cape John Barrow 11-9
Cape Jolliffe 11-18
Cape Jones 1-4
Cape Joseph Good 11-10
Cape Joseph Henry 11-19
Cape Joy 5-4
Cape Kater 6-3
Cape Kaye 6-3
Cape Kenrick 11-3
Cape Kent 11-10
Cape King 8-2
Cape Kitson 8-11
Cape Kjer 6-10
Cape Knorr 11-9
Cape Knud Jorgensen 4-10
Cape Kwaunang 4-11
Cape Lady Franklin 8-11
Cape Lady Pelly 6-13
Cape Lady Simpson 6-12
Cape Landry 6-8
Cape Lawrence 1-9, 11-10
Cape Lea 9-12
Cape Leiper 11-10
Cape Liddon 7-3
Cape Lieber 11-12
Cape Liverpool 4-14
Cape Lockwood 12-6
Cape Lord Rutherford 4-5
Cape Louis Napoleon 11-8
Cape Lucie Marie 11-15
Cape Lupton 11-15
Cape L. Von Buch 11-11
Cape Lyons 10-8
Cape Macculloch 4-7
Cape Macoun 12-7
Cape Madison 11-12
Cape Majendie 8-5
Cape Malley 11-9
Cape Manning 8-4

Cape Manson 6-9
Cape Margaret 6-9
Cape Martyr 7-6
Cape Mary 8-12
Cape Mary Cleverly 11-15
Cape Maynard 11-13
Cape McBain 8-2
Cape McDoual 6-8
Cape M'Clintock 11-9
Cape McLoughlin 6-12
Cape McTavish 6-12
Cape Melby 2-3
Cape Mercy 2-7
Cape Micklesham 3-2
Cape Miles 6-8
Cape Mills 1-6
Cape Morton 11-13
Cape Mouat 9-4
Cape Murchison 2-5, 11-13
Cape Nare 12-13
Cape Newman Smith 10-4
Cape Nordenskiold 6-8
Cape North Hendon 6-9
Cape Norton Shaw 9-3
Cape O'Brien 8-14
Cape Ogle 8-14
Cape Ohlsen 11-4
Cape Osborn (Frobisher Bay) 1-6
Cape Osborn (Wellington Channel) 8-3
Cape Pakington 10-10
Cape Palmerston 6-9
Cape Parker 9-3
Cape Phillips 8-4
Cape Pillsbury 10-16
Cape Poillon 1-9
Cape Porsild 12-7
Cape Porter 11-17
Cape Prescott 11-8
Cape Pyramid 5-8
Cape Rammelsberg 1-13
Cape Raper 3-11
Cape Rawson 11-16
Cape Reid 8-8
Cape Rennell 7-3
Cape Rescue 8-4
Cape Resser 11-12
Cape Richards 12-12
Cape Richardson 6-12, 11-18
Cape Ricketts 7-4
Cape Riddle 7-4
Cape Riley 7-4
Cape Robert Smart 8-12
Cape Rosamond 5-3
Cape Rosse 7-7
Cape Russel 11-10
Cape Rutherford 11-5
Cape Sabine 11-3
Cape Sarah 1-4
Cape Schott 11-8
Cape Schuckert 11-13
Cape Scoreby 6-8
Cape Scoresby 6-8
Cape Scott 11-10
Cape Searle 3-5
Cape Separation 10-14
Cape Seppings 6-3
Cape Sherard 5-2
Cape Sheridan 11-16
Cape Sibbald 6-12
Cape Simonton 2-4
Cape Simpkinson 8-3
Cape Simpson 6-12
Cape Sir John Franklin 8-10
Cape Skogn 10-3
Cape Sophia 8-12
Cape Southwest 10-13
Cape Sparbo 10-3
Cape Spencer 7-4, 9-3
Cape Spencer (Wellington Channel) 8-2
Cape St. Andrew 12-4
Cape Stanley 10-10
Cape Stanton 11-17
Cape St. Catherine 6-9
Cape St. David 2-6
Cape Stevens 1-7, 11-8
Cape Stokes 9-4
Cape Storm 10-7
Cape Strathcona 5-4
Cape Sudar 12-6
Cape Sumner 11-17
Cape Svarten 10-4
Cape Swansea 7-3
Cape Taney 11-10
Cape Taylor 6-10
Cape Torrens 10-11
Cape True 1-3

Cape Turnback 10-8
Cape Tyson 11-15
Cape Ulrich 11-13
Cape Union 11-16
Cape Ursula 8-14
Cape Vanderbilt 1-9
Cape Vera 10-4
Cape Waldegrave 10-7
Cape Walker 7-8
Cape Walsingham 3-2
Cape Walter Bathurst 4-13
Cape Ware 1-7
Cape Warrender 5-2
Cape Watt 6-12
Cape Webster 11-11
Cape Weld 4-7
Cape Weynton 6-13
Cape Wilkes 11-9
Cape William Herschel 5-9
Cape With 12-6
Cape Wood 11-10
Cape Woods 12-8
Cape Woollen 11-18
Cape York 6-2
Cardigan Strait 10-10
Carey Harbour 8-11
Carey Øer (Islands) 9-9
Carl Ritter Bay 11-11
Carolyn Lake 11-15
Carter Islands 1-14
Cartmel Point 11-16
Casey Islands 4-2
Cass Fjord (Fiord) 11-11
Castle Bay 2-4
Castle Cliff 9-13
Castle Island 3-3
Caswall Tower 7-4
Cator Harbour 8-12
Challenger Mountains 12-12
Chamberlin Gletscher 9-7
Chandler Fiord 11-14
Chapell Inlet 2-2
Chapman Glacier 12-7
Charles Francis Hall Bay 1-6
Charles Island 8-11
Charles Yorke River 5-3
Charybdis Reef 1-12
Chase Island 1-6
Chester Bjerg 11-17
Cheyne Islands 8-11
Cheyne Point 7-6
Chidliak Bay 2-8
Chidliak Point 2-8
Childs Gletscher 9-14
Christopher Hall Island 2-6
Chubb Point 8-13
Churchill's Thumb 1-13
Church Peak 11-12
Cincinnati Press Channel 1-11
Clarence Head 9-4
Clark Bay 8-2
Clark Fiord 4-5
Clark Harbour 2-4
Claxton Point 7-7
Clearwater Fiord 2-11
Clements Markham Glacier 11-19
Clements Markham Gletscher 9-13
Clements Markham Inlet 11-19
Clements Markham River 11-19
Clephane Bay 3-2
Clouston Points 6-12
Clyde Inlet 4-2
Clyde River 4-3
Clyde River (settlement) 4-2
Coal River 7-7
Coburg Island 9-3
Cocked Hat Island 11-5
Cockscomb Peak 8-9
Coffin Island 1-13
Colan Bay 11-18
Colin Archer Peninsula 10-8
Colville Bay 6-13
Committee Bay 6-11
Cone Island 10-5
Confederation Fiord 3-8
Confederation Point 12-4
Congress Højland (Highlands) 11-17
Conical Rock 9-5
Conybeare Fiord 11-14
Cook Peninsula 11-8
Copeland Islands 6-9
Copeland Point 8-4
Copes Bay 11-8
Corcoran Point 6-12
Cormack Arm 4-3
Cormack Bay 1-7

Cornelia Channel 1-8
Cornelius Grinnell Bay 2-4
Cornwallis Island 7-4
Cornwall Island 8-14, 10-14
Coronation Fiord 3-6
Coronation Glacier 3-6
Corrigal River 6-8
Cory Glacier 9-3
Couch Passage 8-4
Countess of Warwick Sound 1-3
Coutts Inlet 4-7
Coutts Lindsay Island 6-9
Cowie Point 6-12
Cracroft Island 8-10
Cracroft Sound 8-12
Craig Harbour (former village) 10-5
Crane Mountain 9-5
Crash Point 12-12
Crescent Island 8-10
Creswell Bay 6-4
Creswell River 6-4
Crimmins Island 1-14
Crimson Cliffs 9-5
Cross Bay 10-9
Crowell Harbour 1-11
Crowell Island 1-11
Crown Prince Frederik Island 6-8
Crozier Island 11-19
Crozier Island (Queens Channel) 8-8
Crozier Ø (Island) 11-12
Crozier Point 8-5
Crozier Strait 8-6
Crystal Palace Cliffs 11-3
Crystal Palace Klipper 11-3
Culbertson Island 1-12
Cumberland Sound 2-6
Cuming Inlet 5-8
Cunningham Inlet 7-3
Cunningham Mountains 5-2
Cunningham River 7-3
Curry Island 4-10
Cyrus Field Bay 2-3

D

Dallas Bugt (Bay) 11-10
Dalrymple Rock 9-6
Daly River 11-12
Dampier Bay 8-13
Dana Bay 11-19
Daniel Island 1-9
Daniel Island Harbour 1-9
Daniell Point 8-6
Danish River 12-6
Dark Head 9-9
Darling Peninsula 11-9
Davids Island 5-6
Davidson Point 1-15
Davis Strait 1-1
Dealy Point 7-4
Dease Peninsula 6-12
Deception Reef 1-15
Decision Point 8-4
De Dødes Fjord 9-5
Deep Cove 4-11
Deep Passage 1-13
Degerbols Island 12-4
Degerböls Island 12-4
De Haven Point 8-4
De Lacy Head 10-9
Delano Bay 1-8
Delight Anchorage 3-5
Depot Bay 6-6
Depot Point (Eureka Sound) 10-16
Depot Point (Wellington Channel) 8-3
De Ros Islands 9-2
De Stael Point 6-10
Des Voeux Island 8-9
Devereux Point 8-12
Devil Island 10-10
Devon Island 5-2
Devon Island (Cardigan Strait) 10-10
Dexterity Harbour 4-5
Dexterity Island 4-5
d'Iberville Bay 3-11
d'Iberville Fiord 12-6
d'Iberville Glacier 12-6
d'Iberville Rock 1-3
Diebitsch Gletscher 9-13
Diener Creek 12-4
Digarmulen Point 11-6
Disappointment Bay 8-8
Discovery Harbour 11-13
Discovery Mountain 10-14
Disraeli Creek 12-13
Disraeli Fiord 12-13

Disraeli Glacier 12-13
Distant Cape 11-13
Ditchburn Point 6-4
Dobbin Bay 11-8
Dobell Point 7-6
Dodge Bjerg (Mountain) 11-4
Dodge Gletscher (Glacier) 11-3
Dodge River 11-14
Dog Island 1-10
Doidge Bay 11-20
Dominick Island 1-6
Domville Island 8-9
Domville Point 8-2
Douro Range 8-3, 10-14
Dragleybeck Inlet 8-3
Drever Arm 4-6
Drift Pynt (Punkt or Point) 11-17
Drinkard Bluff 9-10
Drown Bugt 9-10
Drum Islands 2-8
Duck Islands 3-5
Dufour Inlet 4-10
Dufour Point 4-9
Dumbell Bay 11-18
Dundalk Point 1-9
Dundas 9-7
Dundas Fjeld 9-7
Dundas Harbour 5-3
Dundas Harbour (abandoned community) 5-3
Dundas Island 8-5
Dundee Bight 8-13
Durban Harbour 3-4
Durban Island 3-4
Dyer Island 8-9
Dyers Cove 7-6
Dyke Acland Bay 7-7
Dymond Islands 4-6

E

Eardley Bay 6-2
East Bluff 1-5
East Cape 12-6
East Cape (Jones Sound) 10-6
Easter Cape 6-8
Easter Island 9-4
Eastern Glacier 10-3
East Sound 10-8
Eastwind Bay 11-14
Ebenezer Harbour 5-6
Ebierbing Bay 2-4
Eclipse Harbour 6-9
Eclipse Sound 4-7
Edderfugle Øer 9-6
Eden Bay 6-9
Eden Island 1-12
Eden Point 8-3
Edgeworth Island 7-8
Edmund Point 1-8
Edna Island 10-17
Egerton Lake 11-19
Egglestone Bay 1-11
Egingwah Bay 12-12
Egingwah Creek 12-12
Eglinton Fiord 4-4
Eidsbotn 10-4
Eids Fiord 10-12
Ekallulik Island 2-8
Ekallunk Island 2-8
Ekalugad Fiord 3-9
Ekblaw Glacier 11-2
Ekins Island 8-14
Eleanor River 8-4
Elizabeth Harbour 6-9
Ella Bay 11-15
Ellesmere Island 9-3, 12-8
Ellice Hills 6-12
Ellis Creek 8-6
Ellis Island 2-2
Elmerson Peninsula 12-5
Elsa May Island 12-5
Elwin Bay 6-4
Elwin Inlet 5-4
Elwin River 6-4
Emerick Island 1-13
Emery Bay 8-2
Emikutailaq Island 8-7
Emily Bay 1-8, 7-9
Emma Fiord 12-3
Emma Point 8-12
Emmerson Island 4-10
Encampment Bay 6-8
Enchantress Island 2-4
English Bay 5-5
Ensorcellement River 8-14
Eqalulik River 5-6

Eqeperiaqtalik Point 4-9
Erebus and Terror Bay 7-4
Erik Harbour 4-8
Erik Point 4-4
Erik River 4-4
Erlandson Bay 6-12
Esayoo Bay 12-5
Eskimo Bluff 9-4
Eskimo Inlet 4-10
Esquimaux River 4-4
Etah 11-4
Etukashoo River 12-5
Eugenie Glacier 11-8
Euphemia Hill 6-10
Eureka Sound 10-14
Eureka weather station 10-17
Everett Mountains 1-8
Exaluin Fiord 3-2
Executioner Cliffs 4-6
Exeter Bay 3-3
Exeter Sound 3-2
Exmouth Island 8-14

F

Fabricius Fiord 5-6
Fair Cape 10-17
Fairholme Harbour 8-8
Fairholme Island 8-10
Fairman Point 10-5
Fairweather Bay 4-11
Falk Island 1-12
Falk Point 10-9
Fall River 5-7
False Haven 1-10
Farbusher Point 1-10
Faris Island 1-13
Feachem Bay 4-6
Fearnall Bay 6-4
Feilden Peninsula 11-19
Felix Harbour 6-9
Fellfoot Point 5-9
Fielder Point (Jones Sound) 10-5
Fielder Point (Norwegian Bay) 10-14
Field Island 1-7
Finger Land 2-7
Finlayson Bay 6-12
Fire Bay 12-4
Fire Ø 9-9
Firkin Point 10-4
Fishhook Point 12-7
Fitton Bay 8-2
Fitz Clarence Rock 9-10
Fitzgerald Bay 6-3
Fitzjames Point 8-5
Fjeldholmen Island 12-3
Fjerde Ø 9-9
Flagler Bay 11-7
Flat Sound 12-3
Fleming Inlet 5-6
Fleming Lake 5-6
Fletcher Channel 1-12
Fletcher Island 1-12
Fletcher Reefs 1-12
Floeberg Beach 11-17
Flora Island 12-7
Florence Point 3-9
Folly Reefs 1-12
Folster Lake 6-12
Force Bugt (Bay) 11-10
Forsyth Point 7-9
Fort Conger 11-14
Fort Eureka 10-18
Fort Ross 6-6
Fosheim Peninsula 10-18, 12-6
Foss Fiord 6-8
Fossil Bugt (Bay) 11-13
Foul Inlet 1-14
Foulke Fjord (Fiord) 11-4
Foulke Havn 11-4
Fournier Channel 7-6
Fox Islands (Brentford Bay) 6-6
Fram Fiord 10-5
Fram Haven 11-3
Fram Sound 10-8
Francis Herbert Point 8-12
Frankfield Bugt (Bay) 11-20
Franklin Bay 6-8
Franklin Inlet 6-10
Franklin Ø (Island) 11-12
Franklin Pierce Bay 11-8
Franklin's Cairn 7-4
Fraser Bay 6-12
Frazer Point 7-7
Frechette Island 4-10
Freemans Cove 8-6

French Headland 2-2
Frenchman Cove 2-3
Freshwater Lake 2-8
Frobisher Bay 1-1
Frobisher's Farthest 1-13
Fulmar Channel 10-15
Fury Beach 6-4
Fury Point 6-4

G

Gable Cliff 11-19
Gabriel Island 1-6
Gale Point 9-4
Gallery Point 10-9
Gambier Point 8-13
Gamma River 4-12
Gander Islet 1-9
Gandolf Head 4-5
Gandy Island 6-9
Gap Dal (Skotrende or Valley) 11-17
Gap Mountain 11-19
Gardiner Island 1-13
Garnier Bay 7-3
Garnier River 7-3
Garrett Island 7-7
Garry Bay 6-11
Gascoyne Inlet 7-4
Gay Island 1-12
George Henry Harbour 2-3
George Henry Island 2-3
Giants Castle 5-7
Gibbs Fiord 4-4
Gibs Fiord 10-17
Giffard Peak 11-20
Giffard Point 8-10
Gifford Point 7-3
Glacier Fiord 10-13
Glacier Strait 9-3
Gladman Island 6-11
Glen Island 6-12
Goding Bay 9-4
Gold Cove 1-4
Good Point 11-20
Goodsir Creek 8-3
Goodsir Inlet 8-8
Goose Fiord 10-7
Goose Point 10-12
Gordon Head 10-14
Gosling Islet 1-9
Gould Bay 11-9
Gourdeau Point 7-9
Govan Point 4-2
Graham Bay 8-5
Graham Gore Point 8-4
Graham Harbour 5-8
Graham Island 10-11
Grant Ice Cap 11-19
Grant Point 8-13
Granville Fjord 9-10
Graptolit Næsset 11-12
Grave Mount 10-14
Graveyard Point 5-4
Great Bear Cape 10-12
Greely Fiord 12-5
Green Glacier 11-2
Greenland 9-5
Green River 8-11
Greenrock River 12-6
Greenwich Hill 8-11
Gregory Peninsula 8-6
Gretha Islands 10-16
Griffin Bay 1-8
Griffin Inlet 8-2
Griffith Island 7-6
Grimble Islands 6-6
Grinnell Glacier 1-6
Grinnell Peninsula 8-9
Grinnell Ridge 8-11
Grise Fiord 10-6
Grise Fiord (settlement) 10-6
Grogan Morgan Range 8-12
Grønland 9-5
Gross Island 1-5
Gryte Bay 10-13
Guide Hill 11-19
Gulf of Boothia 6-7
Gull Glacier 12-7
Gull Head 10-7
Gunnars Island 10-12
Guys Bight 4-8
Gypsum River 11-20

H

Haa Island 11-6

Haddington Range 10-14
Hakluyt Ø 9-10
Halford Island 1-5
Halfway Island 6-6
Halkett Inlet 6-10
Halkett Point 6-12
Hall Basin 11-13
Hall Bjerg 11-17
Halliday Point 4-2
Hall Island 1-3
Hall Land 11-15
Halls Rest 11-15
Hamilton Bluff 11-19
Hamilton Fish Peak 11-19
Hamilton Island 7-9
Hamilton Point 6-12
Hamlen Bay 1-7
Hancock Harbour 1-13
Hand Bugt (Bay) 11-17
Hannah Ø (Island) 11-13
Hansen Point 12-10
Hans Island 11-12
Harald Moltke Brae 9-7
Harbour Fiord 10-6
Hare Cape 10-17
Hare Fiord 12-4
Hare Point (Eureka Sound) 10-16
Hare Point (Frobisher Bay) 1-10
Harmsworth Bay 11-7
Harper Islands 1-3
Harris Highlands 1-4
Harris Island 1-6
Harrison Islands 6-10
Harrison Point 2-8
Hart Gletscher 9-13
Hartstene Bugt (Bay) 11-3
Hartz Mountains 5-4
Harvey Point 8-12
Harward Øer 9-13
Harwood Island 8-12
Hatherton Bugt (Bay) 11-5
Hat Island 10-16
Hauge Bjerge (Mountains) 11-15
Hawker Bay 8-10
Hayes Channel 7-9
Hayes Fiord 11-6
Hayes Point 11-9
Hazard Inlet 6-4
Hecla and Fury Islands 6-9
Hecla and Griper Bank 4-4
Heilprin Gletscher 9-13
Heimen Bay 4-4
Heimen Island 4-4
Heim Peninsula 10-7
Heintzelman Lake 11-14
Helena Island 8-12
Helen Haven 8-4
Helen Island 6-10
Hell Gate 10-8
Helpman Head 8-2
Henderson Inlet 1-5
Henry Kater Peninsula 3-10
Henson Bay 12-8
Herbert Island 8-10
Herbert Ø 9-10
Herschel Bay 11-3
Hiawatha Gletscher 11-10
Hidden Bay 1-11
Hilgard Bay 11-19
Hilgard River 11-19
Hill Island 1-13
Hill Point 6-10
Hoare Bay 3-2
Hobhouse Inlet 5-8
Hodgson Head 9-2
Hogback Mountain 11-14
Hog Back Mountain 11-14
Holder Hills 10-16
Holloænderhatten 9-9
Holy Cross Point 5-5
Home Bay 3-9
Honeyman Island 6-11
Hooker Islands 8-11
Hope Monument 5-2
Hopkins Inlet 6-11
Hoppner Næs 9-10
Hornby Head 8-3
Hornby Island 8-10
Hosken Islands 8-12
Hourglass Bay 10-7
Houston Stewart Island 8-8
Hoved Island 10-12
Hozier Islands 2-6
Hubbard Gletscher 9-13
Hubbel Point 1-3
Hudson Island 1-3

Huff Ridge 10-16
Humboldt Gletscher (Glacier) 11-11
Hungry Bay 8-10
Hurlbut Gletscher 9-12
Hvalsund 9-11
Hvitland Peninsula 12-4
Hyde Inlet 9-2
Hyde Parker Island 8-11
Hyde Parker Point 8-10
Hyperite Point 10-13

I

Iceberg Point 10-18, 12-2
Icy Arm 4-7
Ida Bay 11-14
Ida River 11-14
Idjuniving Island 3-7
Igarjuaq 4-8
Igdluluarssuit 9-11
Iglorsuit Island 5-7
Igludjat Islands 5-7
Iglulik Island (Pelly Bay) 6-11
Iglunaksuak Pynt 9-11
Ikardloq 9-10
Ikerasak 9-10
Ikirasak Narrows 5-7
Ikkaguaq Island 8-7
Ikpit Bay 2-8
Ilaunnalik Bay 6-9
Ilikok Island 3-2
Ilutalik Island 3-10
Imek Point 5-7
Imigen Island 2-8
Imiliit 4-10
Inalugssuaq 9-12
Inglefield Bredning 9-12
Inglefield Hill 5-3
Inglefield Land 11-10
Inglefield Mountains 9-4
Inglis Bay (Davis Strait) 3-2
Inglis Bay (Queens Channel) 8-9
Inglis Sound 8-9
Ingnit Fiord 3-2
Innes Point 8-2
Innuit Head 1-15
Intrepid Bay 7-7
Intrepid Passage 7-7
Inuarfigssuaq 11-10
Inuarfissuaq 11-10
Inugsuin Fiord 4-3
Inungnait Hills 5-7
Inuunnaq Point 5-7
Ipitalik Peninsula 4-11
Iqalualuit Fiord 3-9
Iqaluit 1-14
Irene Bay 10-16
Irvine Bay 7-3
Irvine Inlet 2-8
Irving Island 8-11
Isabella Bank 3-11
Isabella Bay 3-11
Isbjorne Ø 9-9
Isbjorn Havn 9-9
Isbjorn Strait 4-5
Isle of Mists 8-11
Iterdlugssuak 9-10
Itilleq 9-11
Itirbilung Fiord 3-10
Itivdlek 9-11
Ivisa Island 2-8
Ivisarak Lake 6-8

J

Jackman Sound 1-5
Jackson Inlet 6-2
Jackson Island 2-7
Jackson River 6-2
Jakeman Glacier 10-5
James Beer Peninsula 8-6
James Ross Bay 11-19
James Ross River 11-19
Janes Creek 6-7
Janes Creek (Pond Inlet) 4-8
Janes Hill 6-7
Jaynes Inlet 1-11
Jean Island 12-5
Jeffries Range 8-13
Jensen Pynt 11-4
Jenvey Island 1-14
Joe Ø (Island) 11-13
Johan Peninsula 11-2
John Barrow Island 8-11
John Brown Iskappe (Ice Cap) 11-12
John Brown Kyst 11-12

John Brown Point 8-3
John Evans Glacier 11-8
John Richardson Bay 11-9
Johnson Bay 5-2
Johnson Point 9-3
Johnston Harbour 5-5
Johnston Island 1-6
Johnston Reef 1-14
Joiner Bay 11-9
Joiner Creek 11-18
Jokel Fiord 11-6
Jolliffe Bay 11-18
Jolliffe Glacier 11-10
Jones Tower 2-2
Jordan River 1-14
Josephine Hoved 9-10
Josephine Peary Ø 9-13
Joy Point 11-9
Judge Daly Promontory 11-12
Jugeborg Fiord 12-4
Jungersen Bay 5-7
Jungersen River 5-7

K

Kaigosuit Islands 2-8
Kaigosuiyat Islands 2-8
Kairolik Fiord 3-2
Kakiak Point 5-7
Kalaallit Nunaat 9-5
Kalivik Island 8-7
Kane Basin 11-5
Kane Channel 1-3
Kangeeak Point 3-7
Kangeq (Beaufort Bluff) 9-12
Kangeq (Iglunaksuak Pynt) 9-11
Kangerk Fiord 2-9
Kangerluarsuk 9-13
Kangert Fiord 3-5
Kangigutsak Island 2-8
Kangilo Fiord 2-8
Kangiqługaapik 4-8
Kangiqtualuk Agguqti 4-4
Kangiqtualuk Uqquqti 4-4
Kangiqtugaapik 4-2
Kangiqtugaapiruluk 3-5
Kangirlugag Fiord 3-10
Kangursiit Bay 3-9
Kap Abernathy 9-7
Kap Ackland 9-11
Kap Agassiz 11-11
Kap Alexander 9-14
Kap Ammen 11-17
Kaparoqtalik Glacier 4-8
Kap Atholl 9-6
Kap Brevoort 11-17
Kap Bryan 11-13
Kap Bryant 11-20
Kap Calhoun 11-12
Kap Chalon 9-13
Kap Clay 11-11
Kap Cleveland 9-11
Kap Constitution 11-12
Kap Dudley Digges 9-6
Kap Field 11-13
Kap Forbes 11-11
Kap Francis 11-10
Kap Frederik VII 11-10
Kap Godfred Hansen 11-13
Kap Grinnel 11-10
Kap Hamilton 11-12
Kap Hatherton 11-5
Kap Henson 9-10
Kap Independence 11-12
Kap Ingersoll 11-10
Kap Jackson 11-11
Kap Jefferson 11-12
Kap Kenrick 11-3
Kap Kent 11-10
Kap Lee 9-10
Kap Leiningen 9-10
Kap Leiper 11-10
Kap Lucie Marie 11-15
Kap Lupton 11-15
Kap Madison 11-12
Kap Maynard 11-13
Kap Milne 9-13
Kap Morris Jesup 11-17
Kap Morton 11-13
Kap Ohlsen 11-4
Kap Parry 9-10
Kap Peary 9-10
Kap Porter 11-17
Kap Powell 9-13
Kap Powlett 9-11
Kap Radcliff 9-10

Kap Resser 11-12
Kap Robertson 9-11
Kap Russel 11-10
Kap Saumarez 9-13
Kap Schuckert 11-13
Kap Scott 11-10
Kap Stanton 11-17
Kap Sumner 11-17
Kap Taney 11-10
Kap Trautwine 9-11
Kap Travers 9-6
Kap Tyrconnel 9-12
Kap Tyson 11-15
Kap Ulrich 11-13
Kap Webster 11-11
Kap Wood 11-10
Kap York 9-5
Katabatic winds 2-9
Kaxodluin Island 2-7
Kayser Bjerg 11-17
Kearney Cove 7-4
Keel Bay 4-6
Keel River 4-6
Keith Bay 6-13
Kekertal Island 3-9
Kekertaluk Island (Cape Hooper) 3-8
Kekertaluk Island (Hoare Bay) 3-2
Kekertelung Island 2-11
Kekerten Harbour 2-9
Kekerten Island 2-9
Kekertukdjuak Island 2-9
Kekertuk Island 3-2
Kekerturnak Island 3-7
Kellett River 6-10
Kendall Strait 1-5
Kennedy Channel 11-11
Kentra Bay 4-6
Keppel Head 11-14
Kerr Island 8-10
Kerswill Island 8-13
Kettle Passage 7-9
Kew Bay 8-11
Kidney Bay 6-8
Kikastan Islands 2-9
Kikiktaluk Island 2-8
Kimakto Peninsula 6-8
Kimmiaqtaqtujuq 4-3
Kingarut Hill 5-7
King Edward Point 10-5
King George V Mountain 5-5
Kingittuq Island 3-10
Kingmik Point 8-6
Kingnait Fiord 2-9
Kingnait Harbour 2-9
Kingnelling Fiord 3-7
Kinley Point 12-6
Kintyre Point 4-2
Kipisa (fishing camp) 2-8
Kittiwake Rocks 1-9
Kivitoo 3-7
Kleybolte Peninsula 12-2
Kneeland Bay 1-9
Knife Edge Mountain 1-8
Knot Bay 11-18
Knox Point 8-8
Knud Peninsula 11-6
Knud Rasmussen Gletscher 9-7
Kodlunarn Island 1-4
Kogalu River 4-4
Koldewey Point 11-7
Kolik River 2-10
Koluktoo Bay 4-11
Koodloo Point 1-13
Koojesse Inlet 1-14
Korsgård Bjerg 11-17
Korvigdjuak Island 6-10
Krabbé Point 7-8
Krag Mountains 4-11
Krieger Mountains 12-5
Krueger Island 12-3
Krusenstern Lake 6-9
Kudlago Island 1-14
Kugaaruk 6-11
Kugajuk River 6-11
Kull Island 6-10
Kulutingwak Fiord 12-9
Kumlien Fiord 2-9
Kungo Island 1-11
Kungo Reef 1-11
Kuugaaluk 4-4
Kuuruluk River 5-7

L

Labrador Head 2-5
Lacey Point 8-6

Lady Ann Strait 9-3
Lady Franklin Bay 11-13
Lady Franklin Island 2-3
Lady Hamilton Bay 8-4
Lady Parry Island 6-9
Lafayette Bugt (Bay) 11-12
Laird Peninsula 1-14
Lake Alexandra 11-14
Lake Hazen 11-14
Lake Tuborg 12-6
Lamb Point 1-14
Lancaster Sound 5-2
Lands End 10-9
Landslip Island 10-6
Lands Lokk Point 12-3
Lane Point 8-7
Lang River 6-4
Lapointe Rock 1-10
Laprade Reef 1-14
Laura Lakes 8-4
Lavoie Point 4-12
Lax Harbour 6-9
Lax Island 6-9
Leach Bay 1-9
Leaf Bay 4-6
Leah Point 6-7
Leconte Island 11-2
Lee Point 10-5
Leffert Glacier 11-3
Lefferts Island 1-3
Lefroy Bay 6-12
Leidy Gletscher 9-12
Lemieux Islands 2-6
Lemieux Point 5-3
Lemieux Shoal 10-5
Lemming Harbour 4-6
Leopold Island 3-2
Ler Cove 10-9
Lethbridge Lakes 4-6
Levasseur Inlet 5-6
Le Vesconte Point 8-4
Levesque Harbour 6-6
Lewis Bay 1-14
Leybourne Islands 2-6
Life Boat Vig 11-5
Lightfoot River 12-2
Limestone Island 7-3
Lincoln Bay 1-4, 11-16
Lincoln Sea 11-17
Lindsay Head 8-13
Lindstroem Creek 12-4
Lindström Creek 12-4
Lindstrom Peninsula 10-6
Little Bear Cape 10-12
Little Cornwallis Island 8-6
Littlecote Channel 2-7
Little Hall Island 1-3
Littleton Ø (Island) 11-4
Livingstone Fiord 2-8
Livingstone Island 4-6
Login Bay 6-10
Lois Island 10-17
Loks Land 1-3
Londesborough Harbour 8-14
Lone Island 5-5
Lone Island Shoal 5-5
Lone Shoal 4-11
Lonesome Creek 11-14
Loney Island 8-11
Loney Point 8-10
Long Island 1-15
Long Island (Brentford Bay) 6-6
Lord Lindsay River 6-9
Lord Mayor Bay 6-9
Lovell Point 8-2
Low Island 1-12, 4-11
Low Point 4-12
Lowther Island 7-9
Lowther Shoal 7-9
Luella Island 1-10
Lupton Channel 1-3, 2-2
Lyall Island 8-10
Lyall River 8-14
Lyman Glacier 9-4

M

Mac Cormick Fjord 11-3
MacCormick Fjord 9-11
Macdonald River 12-7
Macdougal Island 8-11
Mackar Inlet 6-12
Mackay Point 8-12
MacMillan Glacier 11-2
Macormick Bay 8-2
Magda River 5-7

Magpie Rock 6-6
Mair Island 1-15
Makinson Inlet 9-4
Maktak Fiord 3-6
Maktaktujanak Island 2-8
Mala River 4-13
Mandarin Passage 1-13
Maneetkalig Mountain 6-9
Manitung Island 3-8
Manson Øer 9-6
Manûssak 9-10
Marcil Lake 5-5
Margaret Island 8-5
Marie Island 10-16
Marina Peninsula 9-3
Markham Fiord 12-13
Markham Ice Shelf 12-13
Markham Point 8-6
Mark Island 1-12
Marshall Bugt (Bay) 11-10
Marshall Peninsula 8-7
Marshall River 7-5
Martin Islands 6-9
Marvin Islands 12-13
Marvin Peninsula 12-12
Mary Island 1-7
Mary Jones Bay 6-9
Mary Peak 11-19
Mary River 7-4
Maskell Inlet 12-12
Mathe Point 6-8
Matheson River 6-12
Matlack Island 2-2
Maud Bight 4-14
Maud Harbour 4-6
Maury Bay 11-9
Maury Channel 8-4
Maxwell Bay 5-9
May Creek 12-7
May Inlet 8-12
May Island 7-6
May Point 10-15
McAllister Island 1-12
McBean Bay 6-3
McBeth Fiord 3-11
McBeth River 3-11
McCormick Bay 11-3
McDougall Sound 8-5
McGary Ø 11-4
McGary Øer (Islands) 11-11
McKay Island 1-4
McKeand River 2-8
McKenzie Inlet 6-11
McKinley Bay 12-7
McLaren Island 1-15
McLean Island 1-6
M'Clintock Glacier 12-12
M'Clintock Inlet 12-12
Meadow River 10-13
Mecham Island 7-8
Mecham River 7-5
Meehan Gletscher 9-11
Mellem Ø 9-9
Melville Gletscher 9-13
Melville Peninsula 6-7
Menchikoff Bay 6-8
Merchants Bay 3-5
Mermaid Fiord 3-2
Meta Incognita Peninsula 1-5
Metela Island 1-11
Middle Lake 6-10
Midshipman Bay 8-5
Miliakdjuin Island 2-9
Milky Bay 4-11
Miller Island 11-14
Millut Bay 2-11
Milne Fiord 12-11
Milne Glacier 12-11
Milne Ice Shelf 12-11
Milne Inlet 4-10
Milne Island 8-7
Milne Peak 8-14
Milne Peninsula 8-10
Mineau River 6-12
Miner Point 1-14
Minturn Bay 1-8
Minturn Elv (River) 11-10
Misty Island 2-6
Mitchell Island 1-12
Mitchell Point 12-10
Mittie Island 9-4
Moffet Inlet 5-6
Moffet River 5-6
Mokka Fiord 10-17
Montcalm Point 1-10
Monty Peak 5-3

Monumental Island 2-3
Monument Bay 8-9
Monument Island 1-15
Moodie Island 2-7
Mooneshine Fiord 3-3
Moore Island 7-7
Morin Point 6-7
Morin Point (Devon Island) 5-3
Moriusaq 9-10
Morris Bugt (Bay) 11-12
Morris Island 1-3
Morris Jesup Gletscher 9-13
Morshead Point 8-12
Moss Bay 11-20
Moss Cove 10-9
Mossviken Point 10-9
Mount Acland 8-9
Mount Alden 2-3
Mount Aubrey 11-4
Mount Ayles 12-12
Mount Barrell 12-5
Mount Bayley 12-6
Mount Beaufort 8-10, 11-16
Mount Bell 10-16
Mount Blanche 8-10
Mount Boggild 12-5
Mount Bolton 9-5
Mount Bouton 2-4
Mount Bridgman 12-6
Mount Britannia 8-10
Mount Budington 2-3
Mount Burrill 12-5
Mount Campbell 11-13
Mount Carey 11-6
Mount Chester 11-17
Mount Cooper Key 12-14
Mount Cotterell 6-2
Mount Davis 12-5
Mount Dillon 2-2
Mount Disraeli 11-20
Mount Douglas 8-10
Mount Duval 2-10
Mount Edgecombe 8-12
Mount Emma 4-10
Mount Fitz Roy 8-10
Mount Foster 11-19
Mount Gladstone 11-20
Mount Glentworth 9-4
Mount Greenwich 8-14
Mount Grinnell 2-3, 11-14
Mount Hall 11-17
Mount Hawker 8-10
Mount Herodier 4-8
Mount Hilgard 11-19
Mount Hornby 12-14
Mount James 10-17
Mount John Ross 9-4
Mount Joy 11-8
Mount Julia 11-19
Mount Kayser 11-17
Mount Kola 11-6
Mount Korsgaard 11-17
Mount Leeds 9-5
Mount Leith 12-5
Mount Lockwood 12-6
Mount Lockyer 8-12
Mount Low 10-17
Mount Mactavish 6-13
Mount Morin 4-8
Mount Neville 11-15
Mount Nina Bang 11-17
Mount Oliver 6-4
Mount Ovibos 11-14
Mount Parker 8-14
Mount Parry 11-16
Mount Patterson 11-19
Mount Percy 8-10
Mount Pullen 11-16
Mount Rae 11-11
Mount Raleigh 3-2
Mount Rosamond 6-4
Mount Schuchert 12-5
Mount Seneca 6-7
Mount Sharat 1-14
Mount Sherer 6-3
Mount Stafford 8-10
Mount St. Hans 4-8
Mount Thule 4-9
Mount Viewforth 3-8
Mount Ward 12-5
Mount Warwick 1-3
Mount Windsor 10-11
Muingmak Island 3-2
Mumiksaa 4-10
Mundy Harbour 6-9
Munroe Inlet 6-12

Murchison Promontory 6-6
Murchison Sund 9-11
Murphy Point 12-12
Murray Bay 6-5
Murray Lake 11-15
Mushroom Point 11-18
Musk-ox Bay 11-14
Muskox Fiord 10-7

N

Najjuttuuq Fiord 3-9
Nallulik Fiord 3-10
Nallussiaq Fiord 3-2
Nanisivik (abandoned settlement) 5-4
Nansen Sound 12-2
Napier Bay 8-11
Napoleon Bay 1-4
Nares Strait 11-1
Narpaing Fiord 3-8
Narsarsuk Glacier 4-8
Narssurssuk 9-6
Nasauya Point 2-9
Natsilivik 9-11
Naujaalik 4-3
Naujaalik Island 4-3
Naujan Escarpment 4-11
Naujapaluk 9-12
Nautilus Mountain 5-4
Nauyat Cliff 5-6
Navy Board Inlet 4-12
Neal Islands 8-6
Nedlukseak Fiord 3-8
Nedlukseak Island 3-8
Neil Peninsula 12-5
Neptune Bay 2-7
Neptune Reef 11-14
Neptune Rock 11-3
Neqe 9-13
Nesters Islet 1-9
Nest Island 1-10
Netsiksiuvik Inlet 6-9
Nettilling Fiord 2-8
Nettilling Lake 2-8
Newell Sound 1-9
Newland Island 1-4
Newman Bugt (Bay) 11-17
Newmann Bugt 11-17
Newton Fiord 1-5
Ney Harbour 1-8
Niante Harbour 2-8
Niaqunnguut 4-8
Niaqurnaaluk 4-3
Niaqurnak Point 3-10
Nicolaj Nielsen Kyst (Coast) 11-12
Nijadluk Harbour 2-7
Nimigen Island 2-8
Nina Bang Bjerg 11-17
Nipper Rock 1-12
Nirjutiqavvik National Wildlife Area 9-3
Noble Inlet 1-5
Noel Point 8-12
Nookap Island 10-4
Norah Island 8-11
NORDREG (Northern Canada Vessel Traffic Services Zone) 1-1
Nordstrand Point 10-11
Nordvest Ø 9-9
Norfolk Inlet 10-8
Norman Lockyer Island 11-8
Northabout Passage 9-2
North Arm 4-7
North Camp (Resolute) 7-5
North Cheyne Island 8-11
North Cove 6-2
Northern Canada Vessel Traffic Services Zone (NORDREG) 1-1
North Foreland 1-3
North Kent Island (east coast) 10-9
North Kent Island (south coast) 10-8
North Pangnirtung Fiord 3-5
North Star Bugt 9-7
Northumberland Ø 9-10
Northumberland Sound 8-10
Norwegian Bay 10-10
Nouyarn Island 1-4
Nova Zembla Island 4-7
Nudlukta Inlet 6-5
Nudlung Fiord 3-8
Nudlung Island 3-8
Nunatak Island 2-11
Nunatami 11-11
Nunatarssuaq 9-12
Nuvua Island 5-6
Nuvuaqjuk Point 6-10
Nuvujen Island 2-8

Nuvuk Point 2-7
Nuvuktik Island 3-2
Nuvuruaq Point 5-7
Nuvuruluk 4-2
Nuvuttiapik 4-2
Nuvuttiq 3-5
Nyboe Land 11-17
Nyeboe Fiord 6-8
Nyeboe Land 11-17
Nygaard Bay 11-11
Nygård Bugt 11-11

O

O'Connell Reef 1-14
October Shoal 1-12
Offley Ø (Island) 11-15
Ogden Island 1-7
Okalik Bay 2-6
Okalik Island 2-6
Okoa Bay 3-8
Okse Bay 10-11
Old Squaw Islands 1-13
Oliver Harbour 8-13
Oliver Sound 4-10
Olrik Fjord 9-12
Olsen Island 10-7
Omega Bay 4-6
Ooblooyah Creek 12-12
Ooblooyah Glacier 12-12
Oobloyah Bay 12-5
Oogah River 1-8
Oopik Island 11-18
Ootah Bay 12-12
Opera Glass Cape 1-7
Organ Heights 8-11
Orne Island 9-4
Osbon Bay 1-3
Osborn Range 12-7
Osmer Bay 8-6
Otto Fiord 12-4
Otto Glacier 12-4
Oulouksione Point 5-5
Outer Island 11-6
Outer Peak Reef 1-12
Outremont Point 1-9
Owen Point 8-3

P

Pâ 9-6
Paallavviup Kisarvinga 3-5
Packdog Creek 11-15
Padle Fiord 3-5
Padle River 3-5
Padloping Island 3-5
Paget Point 9-4
Paine Bluff 9-4
Paine Point 8-11
Palmer Island 1-5
Palmer Point 8-13
Palmer Reef 1-14
Palmer Shoal 7-3
Palmerston Point 7-8
Pandora Havn 11-3
Pangnirtung Fiord 2-9
Pangnirtung (hamlet) 2-10
Pan Island 1-13
Paquet Bay 4-10
Parke Hills 6-10
Parker Bay 2-3, 11-19
Parker Snow Bugt 9-6
Parker Snow Pynt 9-5
Parr Bay 11-20
Parrish Glacier 11-8
Parry Channel 5-1
Parry Peninsula 11-19
Paterson Inlet 4-6
Patricia Bay 4-2
Patricia River 4-9
Patrol Point 7-4
Patterson Bay 11-19
Patterson River 11-19
Paugnang Island 3-5
Paurngaut 3-5
Pavy River 11-12
Payer Harbour 11-3
Peabody Bugt (Bay) 11-11
Peak Island 1-12
Peak Valley 6-2
Peale Point 1-14
Pearson Island 6-10
Peary Bay 11-7
Pelham Bay 8-10
Pell Point 8-14
Pelly Bay 6-10

Pelly Bay (hamlet) 6-11
Pennell Point 8-10
Penny Ice Cap 2-6, 3-5
Penny Strait 8-9
Pentamerus Bjerge (Mountains) 11-12
Perseverance Shoal 8-11
Peter Force Sound 1-4
Peterhead Inlet 1-14
Peter Ledge 1-13
Petermann Fjord (Fiord) 11-15
Petermann Gletscher (Glacier) 11-15
Petermann Halvø (Peninsula) 11-13
Peter Reef 1-13
Peter Richards Islands 5-6
Petersen Bay 12-10
Petersen Point 8-4
Peters Point 1-6
Phillips Creek 4-11
Phillips Inlet 12-8
Phillips Island 8-13
Phillips Point 9-3
Philpots Island 9-2
Pichit Island 1-14
Pichit Peninsula 1-14
Pike Island 1-10
Pike-Resor Channel 1-9
Pilattuaq 4-4
Pilektuak Island 3-8
Pilukuvik 4-2
Pim Island 11-3
Pim Point 8-2
Pingorssuit 9-6
Pink Lady Island 1-12
Pioneer Bay 7-7
Pioneer Channel 8-5
Pioneer Island 8-10
Piper Pass 11-19
Pirujiningit Islands 5-6
Pisiktarfik Island 4-12
Pitchforth Fiord 3-10
Pitoravik 9-13
Pittufik 9-7
Pitufgiup Kugssua 9-7
Pitufik 9-7
Pitugfik Gletscher 9-6
Piulip Nunâ 9-11
Point Hargrave 6-12
Point Hogarth 8-3
Point Kendall 6-8
Point Little 8-5
Point Moss 11-20
Point Neill 6-2
Poirier Island 4-11
Polar Bear Pass 8-8
Polaris Bay 8-6
Polaris Bugt (Bay) 11-15
Polaris Forland (Promontory) 11-17
Polaris Reef 1-15
Pollock Head 4-6
Pomona Island 6-11
Pond Inlet 4-7
Pond Inlet (hamlet) 4-8
Pond Rock 10-8
Pope Island 1-7
Popham Bay 2-6
Porden Point 8-3
Port Bowen 6-2
Porter Bay 11-19
Porter Inlet 1-14
Port Kennedy 6-6
Port Leopold 6-3
Port Logan 6-8
Port Neill 6-2
Port Refuge 8-3
Possession Bay 4-14
Possession Point 6-5
Potter Island 1-5
Poulsen Klipper (Cliffs) 11-11
Pouncet Island 6-9
Powell Inlet 5-8
Precipice Island 1-12
President's Seat 1-6
Pressure Point 7-3
Prince Albert Hills 6-8
Prince Alfred Bay 8-3
Prince Edward Point 10-8
Prince Imperial Island 11-8
Prince Leopold Island 7-2
Prince of Wales Island 7-8
Prince Regent Inlet 6-2
Princess Charlotte Monument 9-3
Princess Margaret Range 10-15
Princess Marie Bay 11-7
Princess Royal Island 8-14
Prospect Hills 7-5
Prospect Point 7-5

Providence Mountain 8-3
Prudhoe Land 9-14
Prud'homme Point 5-7
Prudhomme Point 5-7
Ptarmigan Fiord 2-8
Ptarmigan Island 1-13
Pugh Island 1-11
Pugh Point 1-11
Pullen Point 2-5
Pullen Strait 8-7
Purcell Bay 8-13
Purple Valley 12-11
Pusingnajojaq Hill 5-7
Putdlerssuaq 11-11
Putlersuak Island 11-11

Q

Qaanaaq 9-12
Qānāq 9-12
Qaqaluit Island 3-5
Qaqulluit 3-5
Qaqulluit Nuvua 4-4
Qarmartalik Cove 3-9
Qarsau Island 1-15
Qeqertarssuaq 9-10
Qeqertat 9-13
Qiajivik 4-7
Qikiqta 4-8
Qikiqtaalujjuap Ikirasanga 3-5
Qikiqtaaluk (Inugsuin Fiord) 4-3
Qikiqtaaluk (Scott Inlet) 4-4
Qikiqtakuluk 4-4
Qikiqtalujjuaq 3-5
Qikiqtarjuaq 3-6
Qikirtaaluk Island 4-3
Qikirtaukkat Islands 5-6
Qikqiktajuak Island 6-10
Qimivvik 4-10
Qingmiuneqarfik 9-12
Qorbignaluk Headland 4-10
Quadrifid Island 1-11
Quajon Fiord 3-7
Quaratit 9-6
Queen Elizabeth Foreland 1-3
Queens Cape 2-9
Queens Channel 8-7
Quernbiter Fiord 4-6
Quernbiter River 4-6
Quickstep Harbour 2-11
Quinn Reef 1-14
Qunnillaaluk 4-10
Quttinirpaaq National Park of Canada 12-7

R

Raanes Peninsula 10-16
Radcliff Pynt 9-14
Radmore Harbour 11-10
Radstock Bay 7-3
Rae Isthmus 6-12
Rae Point 1-8
Ragged Island 4-10
Rambow Hill 12-13
Rancher River 10-11
Ranger River 2-11
Rannoch Arm 4-6
Raper Point 9-3
Rapid Point 8-8
Ratcliffe Arm 4-5
Ravenscraig Harbour 4-4
Rawlings Bay 11-10
Razorback Point 4-11
Read Bay 8-3
Record Point 11-15
Redan Island 1-10
Red Cliff Peninsula 9-11
Redrock Creek 12-7
Red Valley 5-6
Refuge Harbour 4-5
Refuge Havn (Harbour) 11-5
Reid Bay 3-4
Reid Islet 8-8
Reindeer Bay 8-11
Reindeer Pynt 11-4
Remote Peninsula 4-4
Remus Creek 10-17
Remus Rock 1-13
Ren Bay 10-9
Rendezvous Bay 12-7
Rensselær Bugt (Bay) 11-10
Repulse Havn (Harbour) 11-17
Rescue Harbour 2-3
Resolute Bay 7-5
Resolute Creek 7-5
Resolute (hamlet) 7-6

Resolute Lake 7-5
Resolute Passage 7-6
Resor Island 1-10
Rest Pynt (Punkt or Point) 11-20
Reynolds Ø (Island) 11-17
Ricards Island 8-12
Rice Strait 11-3
Riddle Point 8-6
Rigby Bay 7-3
Robb Peninsula 8-9
Robert Peel Inlet 2-8
Robertson Fjord 9-11
Robertson River 4-11
Robeson Channel 11-15
Robin Point 4-5
Robinson Bay 2-2
Robinson Sound 2-5
Rock Island 3-8
Rocknoser Fiord 3-10
Rococo Point 10-8
Rodberg Bay 10-8
Rodd Bay 7-2
Rodwell Bay 6-8
Rogers Island 2-4
Rollrock River 12-7
Romulus Rock 1-13
Rookery Creek 8-7
Rosse Bay 11-3
Ross Inlet 6-12
Ross Peninsula 6-10
Round Hill 8-6
Round Island (Cape Jameson (Ragged Point)) 4-7
Rowan Bay 11-19
Royal Society Fiord 4-6
Royer Cove 1-7
Royle Point 8-6
Ruggles River 11-14
Russell Island 7-8, 8-10
Rutherford Bay 11-5

S

Saaqu River 6-2
Sabine Bay 1-3
Sabine Island 6-12
Sackville Point 1-10
Saffron Hill 8-11
Sagvak Inlet 6-10
Sail Harbour 11-19
Saint George Fjord (Fiord) 11-20
Sakiak Fiord 3-2
Sale Island 1-14
Salisbury Gletscher 9-7
Salmon River 4-9
Salt Lake 6-12
Sam Ford Fiord 4-4
Sam Ford River 4-4
Samson Point 4-6
Samuel Peninsula 8-11
Sanda Island 4-2
Sandhook Bay 10-4
Sands Glacier 11-6
Sandspollen 10-4
Saneruarsuk Islands 5-6
Sanigut Islands 2-10
Sankt George Fjord 11-20
Sannirut 4-8
Saputing River 5-7
Sarah Island 2-5
Sargent Point (Baffin Island) 5-7
Sargent Point (Penny Strait) 8-9
Sarvalik Fiord 3-9
Satigsun Island 3-9
Saunders Ø 9-6
Saunik Island 2-8
Sawtooth Range 12-6
Sawyer Bay 11-8
Saxe-Coburg Island 3-2
Scalene Island 1-10
Scallon Cove 7-4
Scaur Point 1-11
Schei Peninsula 10-17, 12-3
Schei Point 10-12
Scoresby Bay 11-9
Scoresby Hills 8-8
Scott Inlet 4-4
Scott Island 4-4
Scott's Fortress 2-2
Scylla Reef 1-12
Seal Bay 4-6
Seal Cove 10-9
Seal Island 8-3
Selkirk Bay 6-12
Separation Point 8-4
Sepiment Rocks 1-10
September Søer (Soerne) 11-10

Sermerssuak 9-7
Sermilik Glacier 4-9
Seymour Island 8-12
Shagstone Reef 1-15
Shakshukowshee Island 2-8
Shakshukuk Island 2-8
Shamrock Bay 8-12
Shark Fiord 2-11
Sharko Peninsula 1-3
Sheills Peninsula 8-5
Shellabear Creek 8-3
Shepard Island 1-4
Sherard Osborn Island 8-12
Sheridan River 11-16
Sheriff Harbour 6-9
Sheringham Point 7-6
Sherwood Beach 10-14
Sherwood Head 10-13
Shilmilik Bay 2-11
Shimik Island 5-7
Ship Point 5-4
Shomeo Point 2-9
Sickle Point 11-18
Sidebriksfjord 9-5
Sievright Point 6-13
Sight Point 7-5
Signal Hill 7-5
Silene Creek 12-7
Sillem Island 4-4
Silt Point 5-4
Simik Island (Pelly Bay) 6-11
Simmons Bay 11-15
Simmons Peninsula 10-7
Simpson Peninsula (east coast) 6-12
Simpson Peninsula (west coast) 6-10
Sinclair Point 6-12
Siorapaluk 9-11
Siqumaliqiat 4-2
Sir John Barrow Monument 8-9
Sirmilik National Park of Canada 4-7
Sir William Parker Strait 8-12
Siurartujuq Point 5-6
Skaare Fiord 10-15
Skerries 10-6
Skraeling Island 11-6
Skraeling Point 10-17
Skruis Point 10-4
Skua Point 1-9
Sledge Pointers 4-3
Slidre Fiord 10-17
Slidre River 10-17
Sliver Island 1-11
Small Glacier 11-2
Smellie Point 6-6
Smith Bay 9-4
Smith Channel 2-4
Smith Island 1-12, 10-5
Smith Peninsula 11-18
Smith Sound 11-2
Snowblind Bay 8-4
Snowblind Creek 8-4
Somerset Island 6-3, 7-2
Somerville Island 7-6
Sonntag Bugt 9-14
Sons of the Clergy Islands 6-10
Sophia Bay 8-10
Sophia Channel 8-8
Sophia Cove 8-2
Sophia Lake 8-3
Sor Fiord 10-13
South Bay 12-6
South Camp (Resolute) 7-5
South Cape 10-7
South Cape Fiord 10-7
South Island 6-10
Southwind Fiord 3-5
Sparks Glacier 9-4
Spath Creek 12-4
Spit (Kate) Island 8-10
Stafford Point 8-12
Staith Point 1-10
Stanfield Point 9-4
Stang Bay 12-2
Stanley Head 8-5
Stanley Point 5-7
Stanley River 6-9
Stanwell-Fletcher Lake 6-4
Stares Bay 10-10
Starfish Bay 10-13
Starnes Fiord 10-5
Starnes Point 10-5
Station Creek 10-17
Steel Island 4-2
Steensby Land 9-9
Steensby Peninsula 5-6
Stenkul Fiord 10-13

Stepanow Creek 12-4
Stephens Headland 5-6
Stephens Island 4-11
Sterry Tower Island 2-5
Stevenson Inlet 4-10
Stewart Islands 9-3
Stewart Point (Queens Channel) 8-9
St. Georges Society Cliffs 5-5
St. Helena Island 10-8
Stilwell Bay 6-8
Stirks Islands 4-6
Stokes Range 8-13
Stolz Peninsula 10-15
Stoney Island 6-2
Stony Cape 11-14
Storer Island 1-6
Stor Island 10-15
Storm Brae 9-14
St. Patrick Bay 11-16
St. Patrick Canyon 5-6
St. Peter Bay 6-10
Strathcona Fiord 10-16
Strathcona River 5-4
Strathcona Sound 5-4
Stratton Inlet 5-8
St. Roch Harbour 3-4
Strom Point 10-9
Stuart Bay (Maury Channel) 8-4
Stuart Bay (May Inlet) 8-13
Stuart Point 8-2
Stuart River 8-13
Stubbs Point 11-20
Stuckberry Point 11-20
Stygge Glacier 11-6
Styrmann Islands 4-6
Sugarloaf Hill 1-5
Suilven Island 4-6
Sukause Island 10-4
Suluraup Qikiqtanga 4-2
Sulut Bay 2-8
Sumner Island 1-4
Sun Bay 11-14
Sun Cape 11-14
Sun Cape Peninsula 11-14
Sunday Bay 5-7
Sun Gletscher 9-11
Sunneshine Fiord 3-3
Sunrise Pynt (Point) 11-4
Surprise Fiord 10-13
Surprise Point 8-5
Sutherland Ø 9-14
Sutherland River 8-3
Svarte Fiord 10-13
Svartevaeg Cliffs 12-2
Svartfjeld Peninsula 12-4
Svendsen Peninsula 10-12
Sven Hedin Glacier 11-8
Sverdrup Glacier 10-3
Sverdrup Inlet 10-4
Swansea Point 7-4
Swanston Point 6-13
Swinnerton Peninsula 9-4
Swiss Bay 4-4
Sybil Island 1-14
Sydkap Glacier 10-7
Sylph Reef 8-9
Sylvia Grinnell River 1-15
Sylvia Island 2-2
Sylvia Mountain 11-14

T

Table Hill 7-3
Table Island 8-14
Taconite Inlet 12-12
Taconite River 12-12
Tadlukotit Hills 5-7
Tadman Island 8-6
Tagliabue Mountain 1-4
Talbot Glacier 9-4
Talbot Inlet 9-4
Talilenguak Cliffs 11-11
Talilenguaq Klipper 11-11
Talluruti Tulliit 4-5
Tanner Bay 3-8
Tanquary Camp 12-7
Tanquary Fiord 12-7
Tanquary Glacier 11-2
Tapittarialik 2-7
Tarr Inlet 1-15
Tarrionituk Lake 2-8
Tasialuk 4-3
Tasiujaq 4-7
Tawsig Fiord 2-8
Tay Bay 4-13
Taylor River 7-7

Tay River 4-4
Tay Sound 4-10
Templeton Bay 8-7
Terra Nivea 1-5
Thank God Havn (Harbour) 11-15
The Bastions 4-6
The Bellows Valley 11-14
The Blairs 6-9
The Castle Gables 4-9
The Gallery 5-7
The Mitres 4-6
The Narrows 1-7
The Needle 2-5
Theron Reefs 1-12
The Saw Teeth Hills 5-6
The Tower 9-9
Thiboult Bay 6-7
Thomas Honey Island 8-6
Thomas Lee Inlet 10-4
Thomas Work Island 8-7
Thom Bay 6-9
Thompson Island 1-13
Thorndike Peaks 9-4
Thornton Point 8-13
Thorvald Peninsula 11-6
Three Sister Bees 9-10
Thule 9-12
Thule Air Base (U.S.A.) 9-7
Thumb Mountain 10-16
Tigumiavik Harbour 8-7
Tikerakdjuak Mountain 4-11
Tikigakjuak Point 5-7
Tikiraq River 5-7
Tingin Fiord 3-10
Toms Island 8-10
Tonge Klippe 9-6
Tongue Cape 1-7
Tookoolito Inlet 2-4
Tornait Bay 2-8
Totnes Road 3-2
Touak Fiord 3-2
Tracy Gletscher 9-13
Trappers Cove 10-16
Tremblay Sound 4-12
Treuter Mountains 10-3
Triton Bay 10-14
Troedsson Klipper (Cliffs) 11-11
Trold Fiord 10-12
Troll Fiord 10-13
Tromso Fiord 4-6
Truelove Inlet 10-4
Truro Island 8-6
Tuapait Island 2-9
Tucker Point 10-14
Tucker River 10-14
Tugaat River 4-11
Tugto Gletscher 9-13
Tuktu Bay 6-12
Tunnuujaaqtalik 4-9
Tunuiaqtalik Point 4-9
Tununek Mountain 4-11
Tupiuyak Island 2-6
Tuqqajaat 4-10
Turner Cliffs 5-6
Tuurngait 2-9
Tver Sound 10-8
Twin Rivers Point 10-9
Two Rivers Bay 6-4

U

Ugjuk Island 2-7
Ujuktuk Fiord 2-7
Uluksan Peninsula 5-5
Ulvingen Island 10-15
Umanak 9-7
Umiujaq 4-3
Union Bay 7-4
Union River 6-4
United States Range 11-19
Upajjana 2-9
Upajjanaup Kangia 2-9
Upirngivik 4-2
Usualuk Mountain 2-11
Utsuk 4-9
Utsusivik Island 2-8
Utuk Lake 4-9
Uvajo Mountain 4-11
Uvdlisaitunguak 9-10
Uvingajuq 4-2

V

Van Hauen Pass 12-4
Van Koenig Point 6-7
Van Royen Ridges 12-5
Vendom Fiord 10-13

Verhoeff Gletscher 9-11
Vesle Fiord 10-17
Victor Bay 5-5
Victoria and Albert Mountains 11-9
Victoria Bay 1-4
Victoria Harbour 6-9
Victoria Head 11-7
Victor Point 5-5
View Hill 11-19
Viks Fiord 10-4
Village Bay 8-11
Village Point 8-11
Vista River 5-7
Vivi Harbour 2-6

W

Waddell Bay 1-7
Wade Point 11-2
Waldegrave Bluff 7-4
Wales Island 6-12
Walker Arm 4-4
Walker Hill 12-13
Wallis Point 7-3
Walrus Cape 10-7
Walrus Fiord 10-7
Walrus Island 7-6
Walrus Shoal 11-8
Ward Hunt Ice Shelf 12-13
Ward Hunt Island 12-13
Ward Inlet 1-7
Ward Point 10-3
Ward River 7-7
Wareham Island 2-9
Ware Point 8-13
Washington Irving Island 11-8
Washington Land 11-12
Washington Point 8-4
Watercourse Bay 11-13
Water Sound 8-11
Watson Islands 8-7
Watts Bay 1-8
Wayne Bay 1-13
Weasel River 2-9
Webber Glacier 12-5
Webb Point 8-12
Wechmar Næs 9-10
Wedge Island 1-12
Wellington Channel 8-2
Wentzal Headland 8-7
West Fiord 10-4
Weyprecht Islands 11-6
W.G. Smith Bay 6-12
Whaler Point 6-3
Whiffen Inlet 6-11
Whiskukun Channel 1-12
Whiskukun Island 1-12
Whistler Point 1-10
White Bay 4-10
White Mountain 12-3
White Point 12-4
White Top Ledge 1-15
Whitmore Point 8-14
Whitsunday Bay 10-15
Wigle Islands 1-14
Wilcox Glacier 9-3
Wilkes Point 8-7
Williams Island 11-18
Williams Peninsula 2-3
Willows Island 1-4
Wilmer Bay 10-14
Wilson Bay 6-5
Wilson Cove 8-10
Winton Bay 2-5
Wiswell Inlet 1-4
Wolf Fiord 10-15
Wolf Valley 12-6
Wollaston Islands 4-13
Wolstenholme Fjord 9-7
Wolstenholme Ø 9-6
Wood Island 8-6
Wood Point 11-20
Wood River 11-18
Woodward Bay 11-8
Wootton Peninsula 12-9
Wrangel Bay 11-16
Wright Bugt (Bay) 11-11
Wulff Elv (River) 11-10
Wynne-Edwards Bay 1-6
Wyville Thomson Glacier 11-2

Y

Yellowstone Creek 12-7
Yellow Valley 5-7
Yelverton Bay 12-9

Yelverton Inlet 12-10
Yeoman Island 5-6
York River 1-6
York Sound 1-6
Young Bay 2-2
Young Inlet 8-12
Young Island 7-9
Young Shoal 7-9

Z

Zebra Cliffs 12-12
Zenith Point 6-6
Zigzag River 5-7