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CANADA

**NON-CIRCULATING**  
THIRTIETH ANNUAL REPORT

Navigation Conditions on the Hudson Bay  
Route from the Atlantic Seaboard  
to the Port of Churchill

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SEASON OF NAVIGATION  
1958

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DEPARTMENT OF TRANSPORT  
HON. GEORGE HEES, Minister

Price 30 cents

JAN 6 1961



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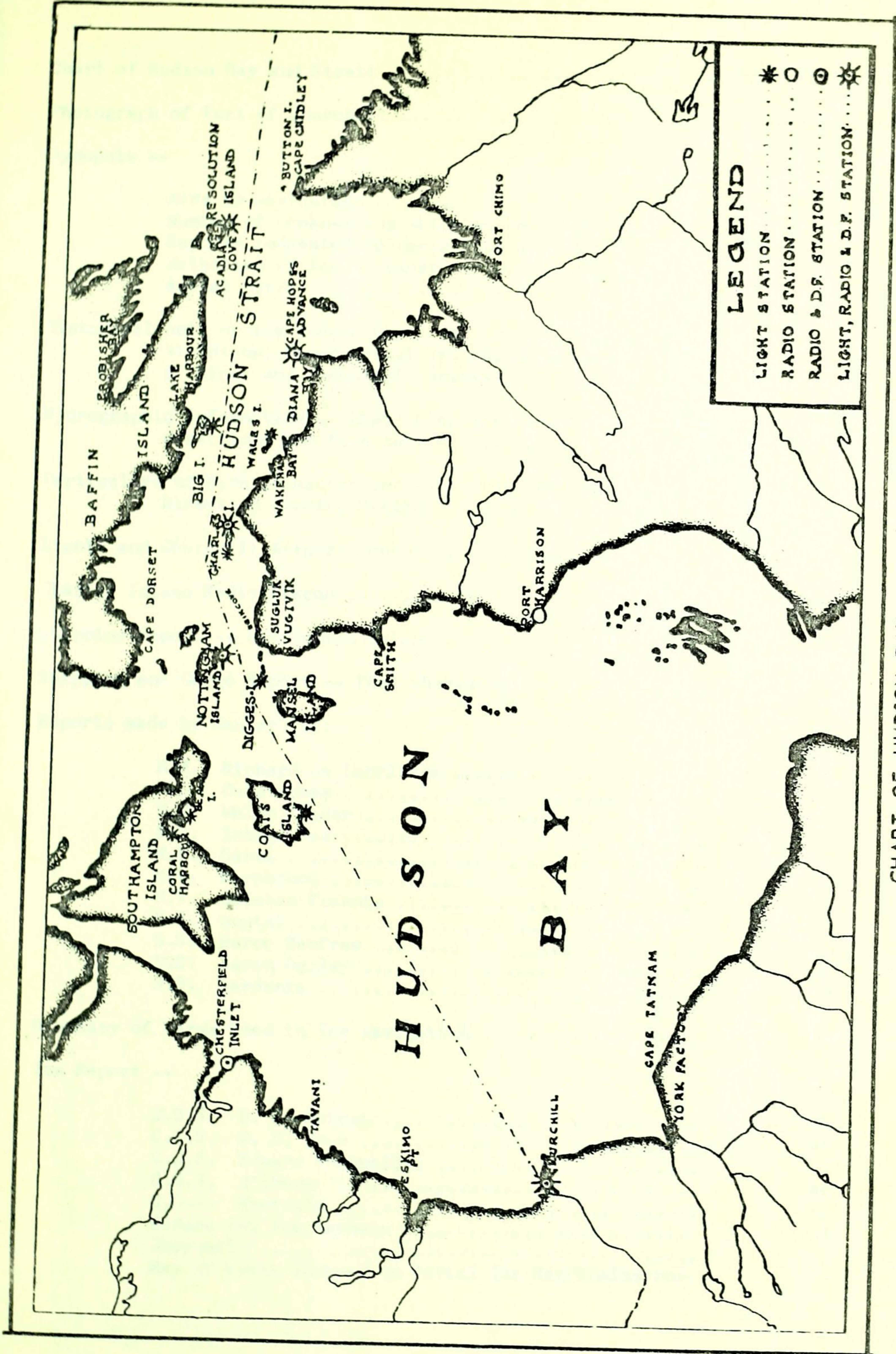
SEARCH OF INFORMATION

THE QUEEN'S PRINTER AND CONTROLLER OF STATIONERY  
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**LEGEND**

LIGHT STATION . . . . . \*

RADIO STATION . . . . . O

RADIO & D.F. STATION . . . . . ⊙

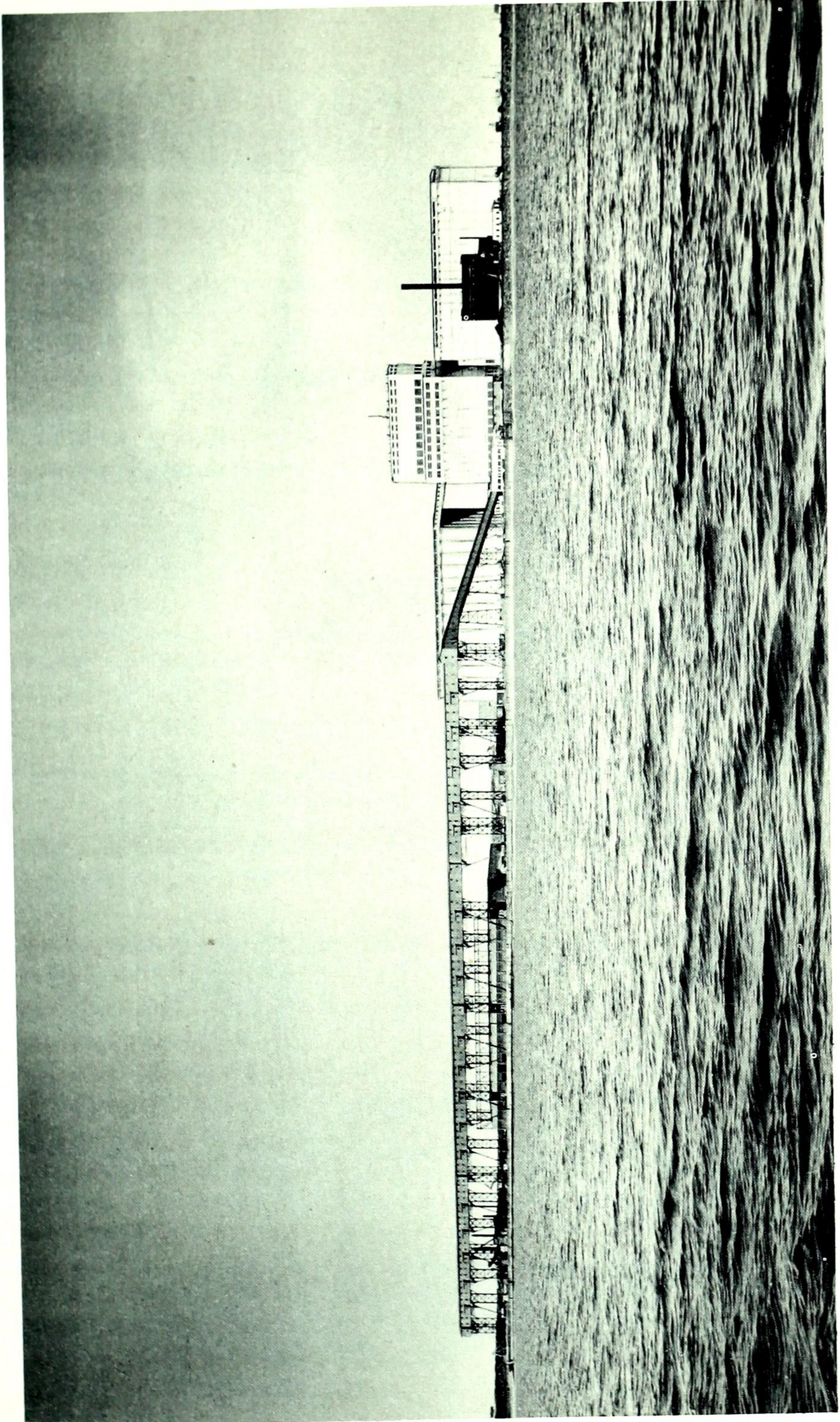
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CHART OF HUDSON BAY AND STRAIT

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CHURCHILL - GOVERNMENT ELEVATOR AND OVERHEAD CONVEYER FOR LOADING GRAIN IN BULK

(Courtesy National Harbours Board)

## AIDS TO NAVIGATION

### Radio

There are six marine coast stations on the Hudson Bay route, including three direction finding stations, and also three marine radio-beacon stations.

Detailed information regarding these aids to navigation will be found on pages 16 and 18.

### Lights

There are fourteen lights in Hudson Bay and Strait area, ten of which are unwatched. A list will be found on page 17 and their locations are indicated on the frontispiece chart. At Churchill, there is a light on top of the grain elevator building. A lighted buoy lies off the entrance and a range of day beacons marks the channel in.

### Hydrography

For available charts and hydrographic publications see pages 13 to 15.

## SHIPPING

Nineteen ships made one voyage, fifteen made two voyages and two made three voyages for a total of fifty-five voyages. Details will be found on pages 20 and 21.

### REPORTS MADE BY MASTERS OF VESSELS

For the benefit of mariners on the Hudson Bay route, reports and comments are invited from masters of vessels navigating these waters. The reports made in 1958 are reproduced in full, whether favourable or otherwise. Masters may be assured that their comments and suggestions are valued even if the Department finds itself unable to implement them immediately.

As mentioned in the last annual report, masters are no longer requested to submit, on Form MN-2-7, reports on the radar detection of ice. A final composite analysis, based on all reports received over the last several years, appears on page 59 et seq.

### AERIAL SURVEY

During the 1958 season, the annual aerial ice survey was conducted and the results communicated to masters of ships. The whole area of Churchill to Frobisher, including the west coast of Ungava Bay was covered.

In future, the ice survey will be the responsibility of the Meteorological Branch, to be planned in relation to weather information. However, Marine Services will continue to provide an Ice Information Officer for assistance to shipping.



## THE HUDSON BAY ROUTE

by

Dr. N. L. Nicholson

Geographical Branch, Department of Mines and Technical Surveys

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Toward the end of the sixteenth century the wave of overseas colonization stimulated various English adventurers to sponsor the search for a northwest passage to Asia.

The earliest of these voyages was made by Frobisher between 1576 and 1578 but he did not penetrate further west than the bay which now bears his name. Davis, from 1585 to 1587, just entered Hudson Strait and named Capes Chidley and Warwick. But it was not until 1610 that Hudson Bay and Strait were really "discovered" by the navigator whose name these features now bear. He sailed south along the eastern shore of the bay and was frozen in by November 1st. After wintering at the southeast corner of James Bay, he, and a few sick sailors, were cast adrift by his mutinous crew, never to be heard of again. Nevertheless, many of the principal points along the Hudson Strait route were named by him and have been retained to this day. Cape Hopes Advance, Digges Island, Cape Wolstenholme and Nottingham and Salisbury Islands are but examples of this. Sir Thomas Button entered the Strait and Bay in 1612, and to him we owe the names Button Islands, Resolution Island, Cary's Swan Nest and Cape Southampton. He wintered at the mouth of Nelson River, which he named after his mate who died there. Bylot and Baffin, in 1615, sailed through Hudson Strait to the northeast coast of Southampton Island naming Savage Islands, Cape Comfort and Mill Island. In 1619, the only British expedition to northern Canada discovered Churchill River. Under the command of Jens Munck, this expedition arrived early in September and wintered there. In 1631, rival interests sent Luke Foxe and Thomas James to explore the bay, Foxe entered Roes Welcome Sound and named Marble Island (though he called it Brooke Cobham) and returned to England. James sailed south naming Cape Henrietta Maria and Charlton Island, where he wintered, and, of course, the bay itself was later named for him.

Thus, within thirty years of Hudson entering the Strait and Bay, the main outlines of their coasts were known, the existence of many islands mapped and information on ice conditions and other navigational hazards, collected.

Meanwhile, two Frenchmen, Radisson and Groseilliers, had learned that the area around James Bay was rich in furs. They ultimately succeeded in persuading the English authorities of this and as a result a party was sent out in 1668. They built a fort on Rupert River, wintered there and returned to England the next summer with a full cargo of furs. This led to the incorporation of the Hudson's Bay Company in 1670, an organization which for nearly two hundred years was to be the chief agency in the development of the region around the Bay and Strait. By 1685 the company had established five posts on the Bay at the mouths of important rivers - Rupert House, Albany, Moose Factory, New Severn and Fort York. Churchill river was almost forgotten until its "rediscovery" in 1686. An attempt to establish a post there was made in 1689, but due to the war between France and England from 1690 to 1713, was soon discontinued and was not resumed until 1717. Few further discoveries were made around the coast of the bay. Ships entering it made immediately for the Company's posts, usually in late July

or early August, and left again in September. There was no object in their making the passage any earlier as the boat expeditions bringing furs from the interior of the country could not arrive at the coast depots before the end of July and, as soon as the imported supplies were landed and the export cargoes loaded, there was nothing to delay their return to Europe.

However, the search for the Northwest Passage was revived in the middle of the eighteenth century. Middleton's expedition of 1741-42 wintered at Churchill. He sailed up and named Wager Bay and Repulse Bay while Christopher, in 1762, explored Chesterfield Inlet, and in 1821, Parry proved conclusively that Southampton Island was not part of the mainland although it was not known to be separated from Coats Island until after 1860.

In 1860, the whaling industry shifted from the Norwegian Sea to Baffin Bay and Hudson Bay. Whalers often wintered in the Bay in order to start hunting early the following season and they accumulated much practical knowledge of navigation conditions there although it was frequently kept secret for commercial reasons.

In 1870, title to "Rupert's Land and the Northwest Territories" passed to Canada and interest turned to the possibility of using the Hudson Bay Route for purposes of commerce. In 1884, the government sent an expedition to the area to ascertain for what period of the year the straits were navigable. Scientific stations were established along it where ice observers spent the winter of 1884-85. Port Burwell was one of these and was named for the observer who established the station. Similar expeditions under Commander Wakeham, for whom Wakeham Bay is named, investigated earlier and later dates for navigation. These expeditions also surveyed the mouths of the Churchill and Nelson Rivers and carried out other scientific work. In 1903, another government expedition on similar work, wintered at Cape Fullerton.

But this sea route could be of little economic use to Canada until its terminus was connected to the southern part of the country. In 1908, a railway line from Hudson Bay Junction to The Pas was completed and, in anticipation of a terminus at Churchill, the townsite was laid out and lots granted. In 1909, the first permanent trading post along the sea route was established at Cape Wolstenholme and within the next few years other posts were opened on both sides of the Strait and along the west coast of Hudson Bay. Meantime, work had been progressing on the railway and by 1918, the track extended to 332 miles beyond The Pas. Work was then suspended until 1927, when Churchill was finally chosen as the terminus, but by 1929, the remaining 176 miles of track had been laid.

Although four freighters were unloaded at Churchill in 1928, and two in 1929, the harbour was not developed and the cargoes were entirely for local consumption. But by 1931, the port was substantially complete and two ships were cleared with full cargoes of wheat from western Canada. Thus Churchill was opened as a modern commercial port and the Hudson Bay route became a twentieth-century practical reality.

## HYDROGRAPHIC INFORMATION

The Canadian Hydrographic Service, Department of Mines and Technical Surveys, publishes a series of navigation charts and a volume of Sailing Directions covering Labrador and Hudson Bay. These are kept up to date and added to from time to time as new information becomes available.

The "Tide Tables for the Atlantic Coast of Canada", published by the Tidal Survey of the same Service, contains predictions for Diana Bay in Hudson Strait, the Port of Churchill and for Charlton Island in James Bay. Tidal differences for twelve localities in Hudson Strait, twelve in Hudson Bay and four localities in James Bay afford the times of high and low waters in these areas. The time of the turn of the tidal stream in the southern offing of Resolution and Nottingham Islands and information on the currents in Digges Sound are also given. An automatic tide gauge is operated at Churchill to assist in the improvement of the predictions.

### HYDROGRAPHIC PUBLICATIONS - HUDSON BAY AND STRAIT

#### Standard Charts -

- 4775 - Nain to Saglek Bay
- 4776 - Entrance to Saglek Bay to Button Islands
- 5000 - Hudson Bay and Strait
- 5348 - Hopes Advance Bay and Approaches
- 5349 - Hopes Advance Bay
- 5351 - Payne Bay and Approaches
- 5352 - Payne Bay and River  
Kyak and Tuvalik Bays
- 5400 - Cape Churchill to Egg River
- 5401 - Wakeham Bay  
Fisher Bay
- 5402 - Cape Prince of Wales to Cape Weggs  
Douglas Harbour
- 5403 - Pritzler Harbour to Cape Weymouth  
Balcom and Barrier Inlets  
Shaftsbury Inlet
- 5405 - Port Burwell and Approaches
- 5406 - Cape Tatnam to Fort Nelson
- 5407 - Anchorages in Hudson Strait  
Savage Harbour  
Charles Inlet
- 5408 - Cape Churchill to Churchill Harbour
- 5409 - Churchill Harbour to Hubbard Point
- 5410 - Coral Harbour and Approaches
- 5411 - Lower Savage Islands to Pritzler Harbour  
Pritzler Harbour
- 5412 - Erik Cove to Nuvuk Harbour including Digges Islands  
Erik Cove  
Digges Harbour  
Port de Laperriere  
Nuvuk Harbour
- 5414 - Rupert Bay
- 5415 - Mouth of Rupert River
- 5416 - Mouth of Moose River
- 5417 - Approaches to Nelson River
- 5418 - Churchill Harbour
- 5430 - Entrance to Chesterfield Inlet  
Chesterfield Anchorage
- 5449 - Hudson Bay, Northern Portion
- 5450 - Hudson Strait
- 5452 - Diana Bay
- 5459 - Resolution Harbour and Acadia Cove

- 5461 - Approaches to Koksoak River
- 5462 - Koksoak River Mouth
- 5464 - Diana Bay, Southern Portion
- 5467 - Leaf Bay and Approaches
- 5468 - Leaf Passage
- 5469 - Leaf Basin
- 5513 - Culbertson Island to Koojesse Inlet
- 5515 - Culbertson Island to Frobisher's Farthest
- 5516 - Koojesse Inlet and Approaches  
Koojesse Inlet

Provisional Charts -

- 5331 - Abloviak Fiord and Approaches
- 5398 - Eskimo Point to Dawson Inlet  
Eskimo Point
- 5399 - Egg Island to Eskimo Point
- 5410A - Munn Bay  
Snafu Beaches
- 5431 - Chesterfield Inlet - Black Rocks Point to  
Imilit Islands
- 5432 - Chesterfield Inlet - Imilit Islands to  
Dangerous Point
- 5433 - Chesterfield Inlet - Dangerous Point to East Point
- 5434 - Chesterfield Inlet - East Point to Promise Point
- 5435 - Chesterfield Inlet - Promise Point to Primrose  
Island
- 5436 - Chesterfield Inlet - Primrose Island to Cross Bay
- 5437 - Chesterfield Inlet - Cross Bay to Bowell Island
- 5438 - Baker Lake (Eastern Portion)  
Chesterfield Narrows  
Polaris Narrows  
Regina Narrows
- 5439 - Baker Lake
- 5440 - Wager Bay
- 5441 - Repulse Bay (Harbour Islands to Talun Bay)  
Talun Bay
- 5445 - Rankin Inlet - Vicinity of Thomson Island  
Melvin Bay Anchorage
- 5446 - Tavani and Approaches
- 5451 - Cape Dorset and Approaches
- 5453 - George River
- 5455 - Lake Harbour and Approaches  
Lake Harbour
- 5456 - Button Islands
- 5457 - Deception Bay
- 5458 - Sugluk Inlet
- 5470 - Belcher Islands
- 5471 - Port Harrison and Approaches
- 5473 - Little Whale River
- 5475 - Povungnituk Bay
- 5476 - Harbours and Anchorages - Hudson Bay and James Bay  
Winisk  
Bear Island  
Bear Island Landing Beach  
Cape Jones  
Great Whale River  
Entrance to Great Whale River  
Landing Beach, Cape Henrietta Maria  
Fort Albany
- 5521 - Resolution Island to Cape Mercy

- 5532 - Mill Island to Winter Island
- 5533 - Roes Welcome Sound (Chesterfield Inlet to Cape Munn)
- 5558 - Frozen Strait, Lyon Inlet and Approaches
- 5559 - Repulse Bay and Approaches

SAILING DIRECTIONS -

LABRADOR AND HUDSON BAY PILOT

TIDE TABLES -

TIDE TABLES FOR THE ATLANTIC COAST OF CANADA

NOTE:- Copies of the above charts and Sailing Directions are available for reference at the office of the High Commissioner for Canada, Canada House, London, England. Charts are issued at \$1.00 each, with the exceptions of charts 4775 and 4776 at \$1.25 each, chart 5415 at 75 cents, and charts 5410A, 5431, 5432, 5434, 5436, 5437, 5440, 5446, 5455, at 50 cents each. Charts may be obtained from Chart Distribution Office, Canadian Hydrographic Service, Department of Mines and Technical Surveys, 249 Queen Street, Ottawa, Canada. The Sailing Directions are sold at \$5.00 per copy and the Tide Tables at 25 cents per copy by the Publications Branch, Department of Public Printing and Stationery, Ottawa, Canada.

AIDS TO NAVIGATION IN HUDSON BAY AND STRAIT  
Radio Coast Stations

Station	Call Sign	Calling freq.(1)	Working freq.(2)	Latitude N	Longitude W	Hours of Service	Coast Charge
★ Resolution Island	VAW	500 Kc/s	484 Kc/s	61° 18' 30"	64° 53' 24"	Continuous during season of navigation	8¢ per word
★ Cape Hopes Advance	VAY	500 "	446 "	61° 05' 12"	69° 33' 24"	Continuous during season of navigation	" "
★ Nottingham Island	VCB	500 "	458 "	63° 06' 48"	77° 56' 18"	Continuous during season of navigation	" "
Churchill	VAP	500 "	420 "	58° 45' 42"	93° 54' 48"	Continuous during season of navigation	" "
Chesterfield Inlet	VBZ	500 "	420 "	63° 20' 05"	90° 42' 33"	Continuous during season of navigation	" "
Port Harrison	VAL	500 "	458 "	58° 27' 17"	78° 08' 29"	Continuous during season of navigation	" "

★ Direction Finding Station

- (1) All stations maintain a listening watch on 500 and 2182 Kc/s during the navigation season.
- (2) All stations except Resolution Island take and transmit bearings on 410 Kc/s after communication has been established on 500 Kc/s.
- (3) All messages relative to navigation are handled free of charge. The eight cent per word coast charge applies to all other traffic. For forwarding charges beyond Churchill enquire at any of the above stations or see Canada Rate Sheet, International List of Coast and Ship Stations.

L I G H T S

Location	Position		Longitude	Character	Elevation	Remarks
	Latitude	Longitude				
Resolution Island	61° 18' 28"	64° 53' 16"	Flashing	129 ft.	White square, wooden lantern on wooden skeleton base.	
Cape Hopes Advance	61° 04' 45"	69° 33' 30"	Flashing	270 ft.	Steel tower.	
Wales Island (U)	61° 51' 37"	71° 58' 19"	Flashing	280 ft.	Steel tower.	
Ashe Inlet (U)	62° 31' 40"	70° 33' 00"	Flashing	191 ft.	On wooden pole.	
East end of Charles Island (U)	62° 36' 28"	73° 56' 12"	Flashing	200 ft.	Steel tower. Radio beacon station (automatic responder beacon), radar reflector.	
West end of Charles Island (U)	62° 42' 30"	74° 40' 00"	Flashing	45 ft.	On wooden pole.	
Nottingham Island (U)	63° 05' 48"	77° 56' 55"	Flashing	86 ft.	Steel tower, radar reflector.	
Digges Island (U)	62° 35' 18"	78° 06' 42"	Flashing	91 ft.	Steel tower, aluminum, radar reflector.	
Mansel Island (U)	62° 25' 00"	79° 36' 00"	Flashing	46 ft.	Steel tower, radar reflector.	
Coats Island (U)	62° 10' 20"	83° 08' 00"	Flashing	41 ft.	On steel tower, painted buff, with 12 foot square white wooden day-mark and radar reflector on top.	
Coral Harbour (U)	64° 07' 33"	83° 15' 13"	Flashing	75 ft.	Steel tower, radar reflector.	
Bear Island (U)	64° 00' 30"	83° 13' 01"	Flashing	58 ft.	Red lantern on pole with tripod slatwork daymark at base.	
Chesterfield Inlet	63° 20' 06"	90° 42' 32"	Flashing	121 ft.	Light on top of radio tower.	
Churchill Harbour lighted bell buoy	58° 49' 48"	94° 06' 00"	Flashing	---	Black steel. Equipped with radar reflector.	
Churchill Harbour, Manitoba	58° 46' 35"	94° 11' 18"	Flashing	218 ft.	Red light on top of elevator pent-house.	

(U) Unwatched

BEACON - CHURCHILL AIRPORT

Approximate Position -- Latitude 58° 45' 30" N, Longitude 94° 03' 38" W.

Flash - every 10 seconds, 2.3 million candle power, 175 ft. above sea level.

AUTOMATIC RADIOBEACON STATIONS

Station	Frequency Kc/s	Characteristic	
Churchill	305	Transmissions continuous	..... --- Navigation season only
Chesterfield Inlet	341	Transmissions continuous	..... ... Open year round
Charles Island	298		..... --- Navigation season only

Charles Island beacon is unattended and is automatic in operation, being brought into operation by a radio signal from the ship desiring to obtain direction-finding bearings.

The radio operator on any ship wishing to use this beacon should transmit by radio two 10-second dashes, spaced 20 seconds apart, using A1 or A2 type of emission. The frequency of such transmissions must be 410 Kc/s. Approximately 50 seconds after this interrogation the beacon will transmit its characteristic for a period of 5 minutes.

In the event that the beacon is not heard, a period of 8 minutes from the end of the interrogation should be allowed to elapse before a second interrogation signal is sent.

Cape Hopes Advance (VAY) monitors this radio beacon daily and will provide any additional information required with regard to it.

Comments regarding reliability of response, range of the beacon and reliability of the bearings are invited and may be forwarded without charge to the Director of Telecommunications, Ottawa, through the Cape Hopes Advance station.



SHIPPING REPORT - RESOLUTION ISLAND

SEASON 1958

<u>Name of Vessel</u>	<u>Passed Resolution Island</u>	
	<u>Inward</u>	<u>Outward</u>
Richard de Larrinaga	July 23	July 31
Marco U. Martinoli	July 23	No report
Ouistreham	July 24	No report
Welsh Trader	July 24	No report
Sarek	July 25	No report
Integritas	No report	August 5
Ramon de Larrinaga	July 30	No report
Nordwind	July 31	August 8
Gloxinia	August 1	No report
Gardenia	August 2	August 13
La Estancia	August 2	No report
Fernbrook	No report	August 14
Capetan Yiannis	August 5	No report
North Devon	August 6	August 15
Noutsi	August 11	August 25
Baron Renfrew	August 12	August 22
Maria Angela Martinoli	August 13	No report
Cruzeiro Do Sul	August 14	No report
North Anglia	August 15	August 27
Esther Schulte	August 17	August 27
Camela Fassio	August 16	No report
Sils	August 18	August 28
Italsole	August 22	No report
Sarek	No report	August 30
Trompenberg	August 24	September 2
Baron Ogilvy	August 24	September 3
Richard de Larrinaga	No report	September 2
Cresta	No report	No report
Gloxinia	No report	No report
Zonnewijk	September 3	No report
Ramon de Larrinaga	September 3	September 14
Nordwind	September 4	September 12
Ouistreham	September 4	No report
Asteris	September 8	No report
Samos	September 8	September 29
Nyon	September 8	No report
North Devon	September 9	September 21
Anna C.	No report	September 21
Lord Tweedsmuir	September 11	Out without cargo
Farmsum	September 11	September 29
Gardenia	September 12	September 28
Fernbrook	September 13	September 21
Welsh Trader	September 13	No report
Cruzeiro Do Sul	September 13	No report
Carmela Fassio	September 19	September 29
Maria Angela Martinoli	No report	No report
Richard de Larrinaga	September 25	No report
Britsum	September 25	No report
Baron Ogilvy	No report	No report
Gloxinia	September 27	October 6
Anax	September 28	No report
Noutsi	September 29	October 9
Baron Renfrew	No report	No report
Leto	October 1	No report
Olga	October 1	October 14
Trompenberg	October 4	October 15

PARTICULARS OF GRAIN SHIPS USING THE PORT OF CHURCHILL DURING 1958

	Name	Nation- ality	Net Register Tonnage	Arrived	Sailed	Destination	Inward Cargo (Tons)	Outward Cargo Wheat in Bulk (Bushels)
m.v.	RICHARD DE LARRINAGA	British	3,031	July 26	July 27	U.K. for orders		353,733.4
m.v.	WELSH TRADER	British	2,974	July 26	July 31	U.K. for orders	2,049	339,733.3
m.v.	MARCO U. MARTINOLI	Italian	3,205	July 26	July 28	Amsterdam		350,940.0
s.s.	OUISTREHAM	French	4,326	July 27	July 29	U.K. for orders		375,200.0
m.v.	SAREK	Swedish	2,845	July 29	July 30	U.K. for orders		293,900.0
s.s.	INTEGRITAS	Italian	3,698	July 30	Aug. 2	Hull		383,600.0
m.v.	NORDWIND	German	4,721	Aug. 2	Aug. 5	London		410,666.7
m.v.	RAMON DE LARRINAGA	British	3,021	Aug. 3	Aug. 4	U.K. for orders		350,933.3
m.v.	GLOXINIA	British	4,254	Aug. 4	Aug. 7	U.K. for orders		364,566.7
s.s.	GARDENIA	British	2,463	Aug. 6	Aug. 9	U.K. for orders		223,440.0
m.v.	LA ESTANCIA	British	2,933	Aug. 6	Aug. 9	Liverpool and Manchester		333,386.8
m.v.	FERNBROOK	Norwegian	2,663	Aug. 8	Aug. 10	Norway		296,800.0
m.v.	NORTH DEVON	British	4,510	Aug. 9	Aug. 12	U.K. for orders		393,860.0
m.v.	CAPETAN YIANNIS	Liberian	6,216	Aug. 9	Aug. 14	Rotterdam		524,533.3
s.s.	NOUTSI	Liberian	4,310	Aug. 15	Aug. 21	U.K. for orders		373,333.3
s.s.	BARON RENFREW	British	2,109	Aug. 16	Aug. 18	U.K. for orders		255,733.4
m.v.	MARIA ANGELA MARTINOLI	Italian	4,290	Aug. 17	Aug. 19	Hull		382,666.7
m.v.	CRUZEIRO DO SUL	Liberian	5,280	Aug. 18	Aug. 20	Continent for orders		450,420.8
s.s.	NORTH ANGLIA	British	4,088	Aug. 21	Aug. 22	U.K. for orders		363,000.0
m.v.	CARMELA FASSIO	Italian	3,936	Aug. 21	Aug. 23	U.K. for orders		376,320.0
s.s.	ESTHER SCHULTE	German	2,852	Aug. 21	Aug. 23	Norway for orders		315,466.7
m.v.	SILS	Swiss	7,535	Aug. 22	Aug. 24	Antwerp		431,200.0
m.v.	ITALSOLE	Italian	4,189	Aug. 25	Aug. 26	Marseilles		375,886.7
m.v.	SAREK	Swedish	2,845	Aug. 26	Aug. 27	U.K. for orders		296,800.0
s.s.	BARON OGILVY	British	2,750	Aug. 27	Aug. 29	U.K. for orders		329,280.0
s.s.	TROMPENBERG	Netherland	4,470	Aug. 27	Aug. 30	U.K. for orders		365,866.6
m.v.	RICHARD DE LARRINAGA	British	3,031	Aug. 28	Aug. 30	U.K. for orders		354,666.6
m.v.	GLOXINIA	British	4,254	Sept. 1	Sept. 5	Hull		371,914.7
s.s.	CRESTA	Liberian	4,400	Sept. 1	Sept. 4	Glasgow		377,066.7
m.v.	ZONNEWIJK	Netherland	5,047	Sept. 5	Sept. 7	U.K. for orders		365,866.7
m.v.	RAMON DE LARRINAGA	British	3,021	Sept. 7	Sept. 10	U.K. for orders		354,666.7

m.v.	NORDWIND	4,721	Sept. 7	Sept. 9	Continent for orders	411,413.3	
s.s.	OUISTREHAM	4,326	Sept. 8	Sept. 11	U.K. for orders	377,066.6	
s.s.	ASTERIS	4,442	Sept. 12	Sept. 13	U.K. for orders	369,600.0	
m.v.	NORTH DEVON	4,510	Sept. 12	Sept. 14	U.K. for orders	410,666.7	
m.v.	NYON	2,894	Sept. 13	Sept. 15	U.K. for orders	332,266.7	
m.v.	ANNA C.	3,580	Sept. 13	Sept. 18	U.K. for orders	388,266.6	
m.v.	FERNBROOK	2,663	Sept. 16	Sept. 17	Norway	292,693.3	
m.v.	WELSH TRADER	2,974	Sept. 18	Sept. 22	U.K. for orders	339,733.3	
m.v.	CRUZEIRO DO SUL	5,280	Sept. 19	Sept. 21	Continent for orders	455,466.6	
s.s.	GARDENIA	2,463	Sept. 23	Sept. 24	U.K. for orders	224,000.0	
s.s.	FARMSUM	4,346	Sept. 24	Sept. 25	London	350,933.3	
s.s.	SAMOS	4,476	Sept. 24	Sept. 26	Trieste	377,066.6	
m.v.	CARMELA FASSIO	3,936	Sept. 25	Sept. 27	Rotterdam	376,320.0	
m.v.	MARIA ANGELA MARTINOLI	4,290	Sept. 26	Sept. 28	Avonmouth	388,266.6	
m.v.	RICHARD DE LARRINAGA	3,031	Sept. 29	Sept. 30	Manchester	358,400.0	
s.s.	BRITSUM	4,259	Sept. 30	Oct. 1	Hull	354,666.6	
s.s.	BARON OGILVY	2,800	Sept. 30	Oct. 3	U.K. for orders	330,400.0	
m.v.	GLOXINIA	4,254	Oct. 1	Oct. 3	U.K. for orders	372,666.3	
s.s.	ANAX	4,963	Oct. 2	Oct. 5	Continent	427,280.0	
s.s.	NOUTSI	4,310	Oct. 3	Oct. 5	Continent	380,800.0	
m.v.	LETO	3,175	Oct. 5	Oct. 7	London	347,200.0	
s.s.	BARON RENFREW	2,109	Oct. 5	Oct. 8	River Mersey Ports	251,133.3	
s.s.	OLGA	4,341	Oct. 7	Oct. 10	River Mersey Ports	179,200.0	
s.s.	TROMPENBERG	4,470	Oct. 8	Oct. 11	U.K. for orders	367,733.3	
TOTAL -						3,107	19,598,749.2

2

The largest number of voyages into Churchill, for one season, was established during 1958. Nineteen ships made one voyage, fifteen made two voyages and two made three voyages for a total of fifty-five voyages. This represents an increase of seven voyages over the previous high of forty-eight for the season of 1956 and an increase of 3,021,543 bushels of wheat carried out compared with the previous high of 16,577,206.2 bushels during 1957.

In addition, one vessel with part load carried 313,629 bushels of mixed feed oats for the United Kingdom and two vessels together carried 6,176.5 bushels of mixed feed oats and 4,770 bushels of No. 1 feed screenings for Montreal.

It should also be mentioned that two tank vessels, each of 6,400 net tons, discharged a total of 30,314 tons of petroleum products at the port of Churchill and one vessel in six trips from Rankin Inlet brought a total of 17,906 tons of nickel concentrates.

REPORT MADE BY CAPT. J. MEADE,  
MASTER, M. V. RICHARD DE LARRINAGA

I have recently returned from Churchill after making two voyages to this port. In my recent voyage, weather conditions were such as one may find in a sea such as the Mediterranean at this time of the year, with only the sight of three icebergs in the Hudson Strait.

On my first trip, when I entered the Strait on July 23rd, there was a good deal of drift ice covering the entrance between Cape Chidley and Resolution Island. The Strait itself, so far as I saw, was otherwise clear of ice except for three icebergs which we observed well away from our track. On the first occasion, we were escorted by the Icebreaker "Labrador". The course taken was from 5 miles south of Resolution to 15 miles north of Cape Hopes Advance. Thence between Cape Weggs and Charles Island to 5 miles north of Digges Island, near which point, "Labrador" left us. Before leaving, her Master advised me to steer for south of Cary's Swan Nest on Coats Island, as a report had been received that ice was observed off Mansel Island. We then steered for a point about 30 miles north of Port Churchill. We passed two fields of drift ice about 50 to 60 miles from Churchill. On our homeward voyage, commencing from Churchill on July 27th, all this drift ice had disappeared south, and we had an uneventful passage through the Strait passing only a few small bergs.

It will be seen that this year was extraordinary for its absence of large fields of heavy ice often encountered at that time of year. I noticed a very marked improvement in the ice patrol reports, and whenever possible, the track was under observation by the pilots of the patrol and then radioed to the ships. I lay off Resolution Island all day from 1000 hours on July 22nd until after midnight that night, and I found that I did not alter my position to any extent whatever.

While the Ice Patrol is doing a splendid work, I believe that we can all contribute to the safe navigation of the Strait and Bay by each vessel reporting at given intervals to the vessels coming up astern the ice conditions experienced by them. I have found this to be very helpful in the past and I think that it is the most helpful suggestion I can make.

REPORT MADE BY CAPT. G. GUERINET,  
MASTER, S. S. OUISTREHAM

We passed Resolution Island on the 23rd of July, 1958, day of opening. Two days before we received good information from Resolution Island, Port Churchill and the ice-breakers in survey, concerning weather and ice conditions and the best course to steer.

I have not much to say about our navigation, as, if we found some icebergs and growlers in Hudson Straits, the normal course to reach Port Churchill was free from ice fields or pack ice. Our main difficulty was dense fog. Received accurate bearing from Resolution W. Station. The radio beacon at Port Churchill is very useful too.

We found the same conditions on our way back and on this present trip (in strait and Hudson Bay from 4th September to 15th September).

REPORT OF M. V. WELSH TRADER,  
MASTER, CAPT. E. ATKINSON

1st voyage to Churchill, 1958

Loaded with general cargo the m. v. Welsh Trader sailed from the

Tyne on the 16th July, clearing the harbour and on passage at 1300 hours.

The voyage to Resolution Island was made in almost perfect conditions, following winds and no swell.

While in the Davis Straits, permission to enter the Hudson Straits on the 23rd July was requested of the N. B. McLean. Permission was granted along with the information that the Ice Information Officer was preparing an ice report which would be soon on the air. At this time the N. B. McLean was discharging cargo in Churchill.

The ice report, when it came on the 21st July, advised us of open pack ice in the Straits and also of ice in the Bay. The report of the 22nd July, informed us that from 70 degrees west to Resolution Island was very open drift ice and open water but from 70 west to 74 west there was open and close pack ice, denser to the north side of the Straits, and also advised us that the ice would tend to close on the south side and open on the north side. Capt. Atkinson decided to steer on the usual steamer route until ice was found and then determine a course. At this time the Labrador was escorting the Richard de Larrinaga westward some 60 miles ahead of us and said he would inform us of any ice he encountered but as he saw nothing he had nothing to report.

Passing Resolution at 0627 on the 23rd July, we continued to Churchill on the steamer track without seeing ice except for very odd pieces and a remarkably small number of icebergs.

Vessel anchored in Churchill Roads at 0340, 26th July and entered the harbour and was fast alongside at 0730. Work commenced at 1000 hours 26th July and vessel was discharged, fitted and loaded and sailed at 1830 on the 31st July. A very good turn around.

The voyage homeward was not so pleasant, much fog was experienced in the Hudson Bay, Hudson Straits and Davis Straits and strong winds and rough seas from Cape Farewell onward to London where vessel arrived at 0200, 15th August, 1958.

A small amount of drift ice was found during fog and a few bergs seen during the passage from Churchill to Resolution but otherwise we found open water.

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There is still the need for further Direction Finding Beacons of some type, especially on Button Islands and at Cape Churchill and a very definite need for at least a Radar Reflector at Mansel Island. I have always found that Mansel Island gives a very poor echo on the Radar and to get any contour of the coast on the Radar Screen, the land must be closed to five to six miles and as ice conditions will many times prohibit this, a Reflector is most necessary. In the past I have used the Reflector at Cary's Swan Nest and found it to show on the screen at 12 to 14 miles.

While we had good service from Resolution and Nottingham Islands in direction finding, we found that Churchill station could not for some reason use their Direction Finding set.

The work in the port could as usual be compared very favourably with any other port, but the need for more berths as loading and repairing and waiting berths is still there.

A more powerful and more seaworthy Tug-boat would be a great help to the port and to shipping.

(Signed) N. Thompson.

REPORT MADE BY CAPT. ISIDORO DE ROSA,  
MASTER, S. S. INTEGRITAS

As we think that this report may prove of interest in respect of possible future voyages, we have taken the liberty, besides the normal description of the voyage, to give some advice on the possible routes to be followed; in fact we have been able to see that what we had decided on this subject has always proved to be perfectly in agreement with what was later suggested to the ships (including ourselves) by the ice breaker on service there; incidentally, I may say that such service has proved to be very limited. In this connection, we have to point out that a vessel going to Port Churchill, when it comes to the question of information on the ice situation, will have to rely very little on the first reports which are issued by Halifax Station, as they are nearly always inexact and bearing an old date; on the contrary the reports issued by the coast stations mentioned here below, - which are located along the route to be followed by the ships, - are more exact, and at the same time they also issue a local bulletin for that particular moment, which proves to be useful for navigation purposes. Such stations are, in their order of succession: Resolution Island, Cape Hopes Advance, Nottingham Island and Port Churchill. Besides, an airplane of the Hudson Bay Company is on service for meteorological observations, and very recent information on ice and weather conditions may be obtained from this 'plane. Its registration letters are CFSAT, and it operates on 500 Kc. The operation base of the 'plane is Port Churchill, where inquiries are to be made as to whether the 'plane is on duty or not at the time. As a rule the 'plane takes off from Port Churchill in the morning and, keeping to the routes generally followed by the ships, reaches the Davis Strait and then returns.

However, we would state first of all that, contrary to the impression one may perhaps receive from this report, the voyage in itself presents no greater difficulties than a normal voyage to the St. Lawrence at the beginning of the season. It may also be that we were lucky in enjoying a very normal voyage, and we hope that the same may happen to those going there in future, but we have to warn the Captains that for the whole voyage, both outwards and homewards, they will be able to sleep in their cabins for one or two days only (this while in the ocean and weather permitting) and it is necessary to keep the radar always in operation by night even when there is no fog, but above all it is necessary to have somebody permanently on duty at the radar: in fact, whilst icebergs are picked up the same as vessels of a similar size, therefore at a fair distance, on the other hand floes of a small size, but nevertheless dangerous, appear on the screen at a short distance only. In the description of the voyage, we shall mention the reflectiveness of the places we have gone through, this being very useful both for establishing the ship's position, and for checking the route to be followed, particularly when taking into consideration any possible irregular working of the gyrocompass and the definite uselessness of the magnetic compasses in the places we shall mention. For the time being at least, one cannot rely in any way on the existing lighthouses, with the exclusion however of the one at Port Churchill. There is a radio beacon service, and one may rely on same, however taking always the necessary precautions as required by such service. It is a good rule always to have the engine ready for operation during the hours of poor visibility and by night. Furthermore, we have to add also the portion of navigation from Greenland to the opening of the Hudson Strait to the navigation section mentioned by you.

Ships passing in the vicinity of Cape Farewell have to consider the hour and the month of such passing, that is to say the time of sun light at which a ship will find herself in that area, as the coast is scattered with a large number of icebergs and floes. In the case of a fast ship which finds herself at about mid-day in the whereabouts of that Cape, whatever her route may be (east or west), it is possible for her to keep in view of the coast, especially during the months of July-August, but at not

less than 30 miles. At any rate it is advisable that in any other condition of weather and/or visibility the ship should sail at a distance of not less than 80 miles, at which distance we think the presence of ice (icebergs or floes) is unlikely. From the south of Greenland it is suggested to head for a point situated at about 100 miles east of Resolution Island, (at the entrance of the Strait), steering then to 20 miles approximately to south of same, this in order to avoid the shallow waters of the eastern side of Cape Chidley, where it is almost certain to find ice. From 100 miles west of Greenland (along the route) up to the steering point we have suggested, the navigation presents itself free from ice, whilst ice is found to be in existence instead from this point to the entrance of the Strait. The nature of this ice is such as to allow freedom of manoeuvre and maintenance of speed whenever visibility is good. In the Hudson Strait and to be exact between Resolution Island and Button Islands, it is possible to come across floating ice which however keeps near to the said islands unless a strong wind is blowing. However, if passing at 20 miles south of Resolution Island, ships will find only scattered floes and isolated icebergs. The coasts of both Resolution Island and Button Islands are good reflectors, and consequently it is possible also in case of fog to establish the ship's position at the maximum distance allowed by the radar. As floating ice is found in the Strait only occasionally, navigation may be considered to be free from ice until Charles Island; however, when there are winds blowing from east for several days in succession it is possible to find icebergs on the north side of the Strait up nearly to Charles Island. Consequently, if no special ice condition is prevailing, it will be advisable to head for Cape Hopes Advance and from there to direct course of ship parallel to the coast up to Charles Island. The portion from Cape Hopes Advance to Charles Island is formed of good-deflecting coast, and it will be thus possible to ascertain ship's position and to check the magnetic compasses. On arrival at Charles Island, one can pass either by the north side or the south side of the island, but it is necessary to keep in mind that floating ice may possibly be in existence there. In the vicinity of this island the magnetic compasses have no directing strength (swings of up to 180° have been observed). The eastern portion of the island offers a good radar target, whilst the western portion even at close range gives poor echoes, but in this portion of the island (north side) there are 3 small islands, which are very low and very near to the island's coast; these three small islands, which incidentally are not well shown on the chart, are picked up by the radar up to a distance of 10 miles. From north of Charles Island heading then for north of Digges Islands, the coast is found to give good echoes and can be followed under all conditions of visibility. Nottingham Island, north of Digges Islands, does not give an echo strong enough to be picked up when navigating at about 10 miles from Digges Islands. From Digges Islands the ship's course is generally directed to the south of Coats Island, passing north of Mansel Island, at a distance of approximately 8 miles. It should be borne in mind however that in the vicinity of Mansel Island the directive force of the magnetic compasses is non-existent and the island makes a poor radar target; beyond 10 miles it gives no radar echo even if visible, likewise the reflecting power of Coats Island is non-existent although charts show a radar reflector on the Cape of Cary's Swan Nest. From south of this island up to Port Churchill the route can follow a direct course, but as the receding of the ice takes place in the north west - south east direction, diagonally to the Bay, it would be advisable, unless special existing conditions prevent so doing, to follow a route which would lead from south of Coats Island to approximately 100 miles north or north east of Port Churchill, and from this point then head for Port Churchill. In this last portion too, the directive force of the magnetic compasses is abnormal, whilst the coast surrounding Port Churchill makes a good radar target. It should be kept in mind that the floating ice, which in Hudson Bay from the opening of the season remains south of the routes described above, may approach these if the wind blows from the south east for several days. At Port Churchill, loading is performed along a quay where only

3 ships can be berthed and which is equipped with endless band elevators. This quay lies in an almost parallel position to the direction of the river in which it is situated, and furthermore, with the exception of the pilot who, by the way, is also Surveyor, Port Warden etc., there are no difficulties in mooring and unmooring, in the absence of winds and at the stand of the tide, and more so as there is a tug for assistance in these operations. What has been said above applies to the return trip too. Possible dissimilarities with what has been stated above may be noticed during the outward voyage and will be of guidance for the return trip. We would add however that in the Hudson Strait the existence of isolated floating ice varies with the changing of winds, particularly if winds are predominant from the same direction for several days; however, we state again that the southern portion of the Strait should be nearly always free for navigation, seeing that, owing to the existing currents, the floating ice which enters the Strait from their eastern side remains as a rule in the northern half of the Strait, whilst between Big Island and Salisbury Island (still on the northern side) they keep very near to the coast and do not represent any danger to navigation in respect of ships bound for Port Churchill.

All that has been described above, besides illustrating our voyage, represents the summary of all the information we have obtained in person at Port Churchill, from the Secretary of the Hudson Bay Company and from the officer who has several years' experience on the subject and is in charge of the air survey relating to strictly maritime service.

REPORT MADE BY CAPT. GÖSTA NORDSTRÖM,  
MASTER, M. V. SAREK

The m. v. Sarek, owners Trafikaktiebolaget Grängesberg-Oxelösund, Stockholm, left Birkenhead on 18th of July on her first voyage to Churchill.

On the 24th of July we had our first radio contact with Resolution Island, receiving very useful QTG-service. Ice reports had been obtained the day before on CQ.

We had dense fog from Cape Farewell to Resolution Island, but could easily pick up on the radar the loose ice field NE of Cape Chidley as scheduled. We passed it in the darkness at dead slow speed for fear of missing growlers on the radar, the sea clutter being rather plentiful.

At 5 o'clock on Friday morning the 25th of July we passed Resolution Island at a distance of 10 miles, as recommended, and set course 10 miles off Cape Hopes Advance. We met a couple of very loose ice fields and a few bergs and growlers, but nothing to interfere with the navigation. The visibility was fine and smooth sea. We passed Cape Hopes Advance at 1430 that day and proceeded following the southern track given by the Canadian Government Ships. At 2200 that night we met the C. G. S. Labrador. She came up alongside and told us there was no ice ahead of us and that we could proceed at full speed following the track recommended. We did so and had no difficulties in finding our way although there was dense fog again from Mansel Island the whole Hudson Bay through to Cape Churchill. We saw the northern edge of the ice some 50 miles NE of Cape Churchill. We anchored close to the Fairway buoy at Churchill roads at 2300 the 27th of July.

We had throughout the whole passage of Hudson Strait and Bay very good assistance from the coastal radio stations and the patrol vessels, and ice reports given were very accurate. On our way back we had no problems at all. We sighted some bergs and growlers in the eastern part of the strait.



REPORT MADE BY CAPT. M. HENRIKSEN,  
MASTER M. V. FERNBROOK

On the 5th August, 1958 at 3.20 a. m., passed Resolution Island. As the weather was hazy and no astronomical observation had been taken for the last two days Resolution Radio Beacon was requested for radio-bearings. Unfortunately all radio beacons in Hudson Strait are equipped only with "QTG" service, vis. on request.

In order to protect the rudder and propellers from ice the vessel was well trimmed by the stern before entrance of Hudson Strait.

Between Cape Hopes Advance and Charles Island 3 big icebergs and several growlers were observed. As the icebergs and growlers were suspected to be present in this area a very sharp lookout was kept and the engines were ready to reverse in time from sunset till sunrise.

Arrived Port Churchill on the 8th August at 2.15 p. m. No ice had been observed on the voyage from Charles Island.

On 10th August at 2.05 p. m., left Port Churchill with a cargo of grain for Moss/Oslo.

More or less foggy weather was encountered during our travel between Churchill and Resolution Island. Constant vigilance is necessary in navigating. After passing Mansel Island icebergs are suspected.

One big iceberg was observed 21 miles east of Charles Island. This iceberg was sharp recorded on radar at a distance of 8 miles as the shape of an iceberg determines the echo recorded on radar - one can not depend on radar:- a well rounded iceberg may not give any echo. On 14th August at 2 p. m., passed Resolution Island.

In my opinion the following attempt will facilitate navigation in Hudson Strait:

- 1) A detailed ice report to be transmitted on request from, for example, Resolution Island for west-bound ships and from Nottingham Island for east-bound ships.

These stations must co-operate mutually with coast stations, Cape Hopes Advance, Charles Island, Big Island and also one ice patrol vessel placed near Foxe Channel and another stationed in entrance of Hudson Strait.

1 b) If possible the ice patrol vessels could place radar-reflectors on icebergs and growlers which one assumes are poor radar objects.

- 2) All radio beacons in Hudson Strait and Bay to transmit in foggy weather continuous signals and not as at present only on request.

- 3) It would be a good aid to navigation to have one radar-reflector placed on west coast of Mansel Island.

Also recommend use of Canadian Hydrographic Chart No. 5450 for navigating in Hudson Strait.

REPORT MADE BY CAPT. J. I. ASPIOTIS,  
MASTER M. V. CAPETAN YIANNIS

The m. v. "Capetan Yiannis" left the port of Hamburg in ballast on the 30th of July, 1958, bound for Port Churchill, Man.

Following the North of England route where the weather was mostly fair with sea condition mainly slight, she arrived 60 miles off shore Cape Farewell. From Cape Farewell to the entrance of Hudson Strait the weather was dense fog, with the sea temperature dropped from 62°F to 40°F near the entrance of Hudson Strait. On the 5th of August (0100 a. m.) we came in contact by radio with the C. G. S. MONTCALM which granted our entrance to the Strait, reporting that few icebergs were in sight and to keep the south route (22 miles south of Resolution Island). The checking of position was performed by D/F and later by radar. The entrance of Hudson Strait, at which we arrived abeam to Resolution Island at 1310 p. m. on the 5th of August was closed with dense fog and the only ways to collect information regarding to ice conditions were the Aerial Report (issued 5 days previously) and the ship's radar which spotted an iceberg at 1715, 6 miles to the starboard bow.

Following the instructions of the Ice Patrol Ship and having all this period dense fog we approached Cape Hopes Advance at 2105 of the same day at a distance of 14 miles off shore. Sea temperature 34°F. The sea was mainly slight. By keeping the south route on entering we passed Charles Island on the north side, due to a current existing from the Foxe Channel, having always a good eye to those islands (rather rocky) known as Outer Islands, as the inner waters are not sounded. At the Cape Moses Oats (Charles Island) the fog lifted. With a bright morning sun and clear sky we passed Charles Island always with a speed of 15 m. p. h., and entered Hudson Bay, after getting shore bearings frequently by D/F, radar and shore bearings.

From Mansel Island to Port Churchill we kept a straight course and no icebergs or even growlers were seen. (Magnetic disturbance was 214° at times). We arrived at Port Churchill Roads at 2130 p. m. on the 7th of August and we anchored  $\frac{1}{2}$  mile after passing the light buoy (the only one), as ordered on arrival by radio from Port Warden, for further instructions regarding berthing etc.

On the 9th of August (1630 p. m.) pilot boarded trying to berth the ship alongside the grain elevator, having a strong current against us on the river's mouth (Churchill River). We berthed at 1845 p. m. of the same day to the port side, ship heading to the river. Besides the ship's ropes and wires we also gave the ship's anchor's chain on dock for security (all ships exercise the same as this is a regulation of the port) due to strong ebb tide (5 miles strength, 14 feet high). As the only tug-boat available at this port is very weak, we used besides the ship's engine, the starboard anchor to berth by dredging the ship. We commenced loading on the 12th of August at 0800 a. m. and completed loading on the 14th at 1610 p. m. During the loading period the weather was fair. At 1750 the pilot boarded, ship being ready to sail. We left this port bound for the continent, with 6" by the stern. This was advised by Port Warden because the river's width is only 610 feet (ship is 518 feet). On leaving we had a slight tug assistance. We left on flood tide so to be able to turn the ship's stern by keeping two of the fore ropes well tight on wharf. After successful movements we left dock, proceeding to the entrance of the river with full speed ahead due to strong flood tide. We left pilot near the mentioned light buoy and ship was coursed straight up to Mansel Island. Only the sea was rough, with overcast sky. Sea temperature 32°F. Passed north of Mansel Island (10 miles off shore) and Digges Island (8 miles) no icebergs were seen.

This time we kept south of Charles Island. At the Cape Moses Oats five icebergs were in sight (two were spotted on radar's screen). Manoeuvring by keeping always the south route of the Strait we approached Cape Hopes Advance 6 miles off shore with another two icebergs in sight. On the way out we kept the mid channel route checking our position by radar and D/F frequently. On the way out we had of course icebergs in sight and spots on the radar screen, but not foggy weather at all as on entering the Strait.

From Cape Hopes Advance to the exit the sea was mainly slight with overcast sky, but the visibility was very good (up to 10 miles). Only one day after passing Resolution Island we met dense fog with rough sea up to Cape Farewell where this time we passed it 35 miles off shore with an iceberg in sight which was reported immediately to all ships in vicinity by radio.

REPORT MADE BY CAPT. G. S. FOLEMIS,  
MASTER, S. S. NOUTSI

The s. s. "Noutsi" sailed from Liverpool on July 3rd bound for Fort Churchill, Canada via North of Ireland. The course was set to pass 75 miles south of Cape Farewell and thence to a position 6 miles south of Resolution Island. The weather was clear and good.

The s. s. "Noutsi" passed Hatton Headland in a distance of 6 miles and we found a strong current setting to NNE. After passing Resolution Island we were proceeding slow speed through dense fog heading Cape Hopes Advance. With the aid of our radar we passed Capes Hopes Advance at a distance of 11 miles and following a south southern course, we passed 8 miles north of Charles Island. A strong S.W. current was noticed 20 miles north of Cape Prince of Wales.

After passing Charles Island we steamed between Mansel and Coats Islands. Though the radar was performing O. K. we could not get any target from these two islands. In Hudson Bay the weather was clear and the grain elevator was sighted from a distance of 20 miles.

At 1130 a. m. August the 15th we anchored one mile north of Churchill approach buoy according to instructions from Port Warden. At 3.50 p. m. of the same day the pilot boarded and at 17.20 we were berthed.

Though the ship was ready, loading did not commence before 08.20 a. m. on the 20th. Finished loading 10.10 a. m. on the 21st.

At 11.40 a. m. we were outside the harbour and pilot left.

On our return voyage we followed exactly the same course. The visibility was quite good through Hudson Strait and we met some big and small icebergs, in positions 62.07 N. 71.14 W. 61.50 N. 71.48 W., 61.51 N. 71.20 W., av. 61.08 N. 66.11 W.

In our inward and outward voyage we found a very good aid from the shore D. F. Station. The only difficulties which we found were the navigation warnings regarding the icebergs, owing to poor visibility, and maybe there are not enough observations by airplane to spot the icebergs.

REPORT MADE BY CAPT. D. WILSON,  
MASTER, S. S. BARON RENFREW

Report on voyage Hull/Port Churchill/Ipswich - First voyage

The vessel left Hull on the evening of the 1st August, 1958 and proceeded by the Pentland Firth to a position off Cape Wrath, from whence the great circle track was followed to Cape Farewell, Greenland, passing that point at a distance of 100 miles. On the night of the 4th a westerly wind freshened to gale force, 8 to 9, but moderated the following evening, and from then on mainly easterly winds prevailed. The longitude of Cape Farewell was reached on the early morning of the 9th and from there light westerly winds were met with for the following 24 hours, before shifting again to the east.

Between Cape Farewell and the entrance to the Hudson Strait no ice of any sort was sighted, and the visibility was good until some 70 miles east of Resolution Island, when dense fog developed. The vessel entered the Strait on D. F. bearings received from the station on that island, which was passed at a distance of 20 miles. The fog cleared shortly after this, but nothing of the land was seen. Poor visibility was again experienced that same night, but improved to five miles early the next morning. Four icebergs, duly reported, were sighted then, to the southeast of Charles Island, but no other ice was seen. Vessel's position had been ascertained by D. F. bearings from Cape Hopes Advance and continuous use of the echo sounder. Nothing was seen of Charles Island, and the bearings of the automatic radio beacon there were not very satisfactory, as the zeros were wide, but judging by the soundings obtained the vessel passed about eight miles northeast of it. The light on Nottingham Island was sighted that same evening and for the remainder of the run to Port Churchill the visibility remained good. No ice at all was seen in the Hudson Bay, and no undue disturbance of the magnetic compass was noted in the vicinity of Digges Island.

The vessel sailed from Churchill on the morning of the 18th, and about twenty-four hours of fog was encountered in the eastern part of the Hudson Bay, but this cleared before making the Strait entrance, and the visibility remained good until approaching Resolution Island, when it deteriorated to about 5 miles. Charles Island and Big Island were all sighted, as was the mainland on both sides of the northern part of the Strait, but nothing was seen of Resolution Island, which, as before, was cleared on D. F. bearings. A number of small bergs and growlers were noted on the east side of the Strait, and a medium sized berg off the east end of Resolution Island.

After clearing the Strait an easterly gale was encountered and this persisted for about two days, and on moderating left a heavy swell, which continued for the greater part of the run to the Irish coast. No further ice was seen.

The bearings received from the various D. F. Stations gave reliable results and the operators at the stations were helpful and co-operative. The stations are, however, too far apart and in some cases no cross can be obtained, as they are in alignment with the ship's position. There is also some inevitable delay in obtaining bearings, time being lost in having to first contact the station and then arranging for the signal to be sent. It is not always possible for this to be done immediately, and for this reason I think that radio beacons are to be preferred. The radio beacon at Port Churchill gave very good results. It was heard over 200 miles away and even at that distance a good zero was obtained.

The vessel arrived at Ipswich on the 4th September.

Report on voyage Flushing/Port Churchill/Liverpool-Second Voyage

After taking on oil fuel at Flushing the vessel sailed from that port on the morning of the 13th September, 1958. The route taken was by the English Channel to the Fastnet, and thence by the great circle track to a position 100 miles south of Cape Farewell, Greenland.

Favourable weather was experienced, and a good speed maintained for the first four days, but conditions deteriorated on the 17th, and from that date to the 22nd westerly gales prevailed. Further westerly gales were encountered on the 23rd, 27th and 28th, and the vessel did not enter the Hudson Strait until the early morning of the 29th. Gale force winds were again prevailing on the 1st October, after the vessel had cleared the Strait, starting from northeast but backing rapidly to northwest. This gale moderated next day, but on arriving off Churchill on the afternoon of the 3rd it returned with even greater force, and as a result the vessel was unable to enter the port until a. m. on the 5th.

Apart from occasional snow squalls the visibility during the passage of the Strait and Bay was moderate to good. The lights of Resolution and Digges Islands were sighted at about their stated range. A few small bergs and growlers were seen in the eastern part of the Strait, between Resolution and Big Islands, but this was the only ice seen.

The vessel left Churchill on the 8th October and, on the afternoon of the following day, a message was received from the Ice Patrol Vessel, N. B. McLean, advising the route south and east of Mansel Island and Coats Island. Later it was reported that there were strings of ice between Mansel Island and the mainland, and the position given. Speed was reduced in order to avoid arriving at this position before daylight. The first of this ice was encountered shortly after daybreak. The ice appeared to be fairly thick, and some of the strings of considerable length without a break, and a number of deviations of course had to be made to find a way through. The passages, however, gave reasonably good clearances, and little or no difficulty was experienced in avoiding contact once these leads were found. The last of the ice was cleared at midday when about 5 miles north of the centre of Digges Island, but there was then ice still in sight on the horizon to the north, and also along the full length of the coast of Digges Island.

The passage through the Strait was made without incident, no ice of any description being sighted. As on the inward passage the visibility was moderate to good. The automatic radio beacon on Charles Island was not in operation and the light on Resolution Island was extinguished, radio notice of these defects having been received. Frequent use was made of various D. F. Stations with good results. Reliable bearings were also obtained from the radio beacon at Churchill. A similar beacon at Hubbart Point or Cape Churchill would be of considerable assistance in making the port.

REPORT MADE BY CAPT. C. W. NOAKES,  
MASTER, S. S. BARON OGILVY

First voyage.

The following is a brief account of navigation conditions which I experienced during my last voyage to Churchill.

From the Bishops, vessel steered on a Great Circle course to pass 70 miles south of Cape Farewell encountering moderate to gale force SE to NE winds, thence direct to a position 18 miles due south of Resolution Island. Dense fog was encountered on this leg but the D/F station of this island was particularly helpful and bearings proved to be good. Vessel was kept on the northern side of the Strait, weather and visibility were very good, 6 icebergs and growlers were sighted. From Big Island I passed north of Charles and Mansel Islands when a 1 knot SE current was encountered and thence direct to Churchill. On this leg weather and visibility remained good but a SE current of 1 knot was experienced when approaching the port. On the return passage course was shaped direct to Mansel Island, weather and visibility good, no current or ice encountered. Passed north of Charles Island when a 1 knot easterly set was experienced, thence midway between Resolution and Button Islands making a southerly route of the Hudson Strait. Occasionally fog patches were encountered, no current observed but numerous bergs and growlers. From this latter position steered to pass 110 miles south of Cape Farewell. During this leg vessel had moderate visibility with westerly gales and thence good weather on a Great Circle course to the Bishops.

Whilst passing down the Hudson Strait homewards, pack ice was reported to have reached to north end of Nottingham Island and was slowly drifting southwards.

I found that the radio stations were very helpful in taking D/F bearings whenever asked, but range of lights poor, especially Resolution, Big, Nottingham, Mansel and Coats Islands which should be increased in power and range.

It appears from my observations that icebergs are more numerous on the southern side of the Strait and no ice was sighted in Hudson Bay at all.

Vessel entered the Strait 24th August and cleared homewards p. m. 1st September, 1958.

Second voyage.

The following is a brief report on the navigational and weather conditions encountered during the present voyage to Churchill.

Vessel entered the Hudson Strait, 5 p. m. Saturday, 27th September, passing  $9\frac{1}{2}$  miles south of Resolution Island when course was shaped on the northern side of the Strait to pass 17 miles off Rabbit Island. A favourable current of 1 knot was encountered, wind WNW 3/5 with snow flurries. From this position steered to pass Charles Island and Digges Island 9 miles to port, Mansel Island 11 miles to port, current westerly  $\frac{3}{4}$  knot, wind northerly 2, occasional snow showers. A course of  $244$  degrees was then steered and made good to the approaches of Churchill, current favourable 1 knot, wind NW 2 with snow flurries. The water tower north of the airport was first sighted, distance 21 miles, then the elevator at 19 miles. Course was then steered direct for the fairway buoy. Berthed on arrival 6 p. m. 30th September.

On the return passage steered to pass 8 miles north of Mansel Is-

land, current favourable  $\frac{1}{2}$  knot, wind southerly 4 with snow flurries. Thence passed Digges Island 9 miles to starboard, Charles Island 6 miles to starboard, easterly current  $\frac{1}{2}$  knot, wind east 3, clear weather. Course was then shaped on the southern side of the Strait to pass 35 miles north of Cape Hopes Advance and then 10 miles north of Goodwin Island. On this leg wind was NNE 3 till off Cape Hopes Advance and developed in 4 hours to force 8 and in a further 4 hours, force 10. Little indication was given of this storm, barometer 29.53 having fallen 0.07 in 36 hours, it then fell rapidly to 28.93, continuous snow was encountered throughout. When wind backed to the NW vessel made better headway and cleared the Strait 7 a. m. Monday, 6th October.

From these 2 voyages it would appear as open season advances, it is a decided advantage to enter on the north side of the Strait and pass out on the south side thereby gaining a favourable current. Changes in weather are rapid with little indication. A few icebergs and growlers were sighted in the Strait but none west of Charles Island. Ice reports indicated that pack ice had reached the south side of Nottingham Island and after vessel had cleared the Strait further reports indicated that it had reached Digges Island.

On this voyage Resolution Island light and Moses Oats light and D/F station were out of operation. I would suggest that the range of lights be increased as none sighted were under-estimated in range, if indicated as 8 miles that was the maximum in clear weather, that Resolution Island light be increased to at least cover the centre of the Strait and that a D/F station would be an advantage if based on the SE side of Coats Island on the 82nd meridian.

REPORT MADE BY CAPT. J. H. GRAY,  
MASTER, S. S. GARDENIA

First voyage: Tyne to Churchill

The s. s. "Gardenia" sailed from the River Tyne, on the 24th July and very good weather was experienced through the Pentland Firth and continued until about 300 miles from Resolution Island, where we encountered dense fog. I had very good assistance from Resolution Island D/F station and when I was able to fix my position by radar I found the D/F bearings had been very accurate.

Resolution Island was passed at 1525 hours on the 2nd August, distance  $6\frac{1}{2}$  miles in dense fog. Fog prevailed until we were off Charles Island and we then experienced a very good clear weather passage until arriving at Churchill on the 6th August.

During the whole of the passage through the Hudson Strait and Hudson Bay no ice of any kind was sighted, except for three targets seen on the radar, between Resolution and Charles Island, which no doubt were icebergs.

Loading at Churchill: We berthed alongside at 1210 hours on the 6th August, commenced loading at 0840 hours on the 7th August and completed at 0930 hours on the 9th August when we sailed for Barry and Swansea.

Churchill to Barry: Fine clear weather was experienced from Churchill to Charles Island but in the Hudson Strait the weather deteriorated and we encountered strong head winds which continued until we passed Cape Farewell. We arrived at Barry on the 25th August.

This passage was done in clear weather, but only two icebergs were sighted in the Hudson Strait. There seems to have been much less ice this season as, from experience, icebergs are usually numerous in the Hudson

Straits at this time of the season.

Second Voyage: Swansea to Churchill

We sailed from Swansea on the 2nd September, fine weather continued throughout the whole of the passage. Except for two or three bergs in the Hudson Strait no ice was encountered following the usual track north of Charles Island to Churchill.

Loading at Churchill: Vessel anchored off the fairway buoy 0536 hours on the 16th September but vessel was unable to berth until 0930 hours on the 23rd September, due to congestion in the port. Loading commenced 1053 hours on the 23rd and we completed at 2230 hours that evening. Bagging commenced at 0800 hours and we completed and sailed at 1550 hours on the 24th.

Churchill to Barry: Once again we experienced fine clear weather. No ice was sighted from Churchill to Charles Island and only four bergs were seen between Charles Island and Resolution Island. After passing Cape Farewell we had strong westerly winds for the remainder of the ocean passage and we arrived at Barry on the 8th October.

Having had experience on the Churchill run in 1953, 56 and 57, the ice and weather conditions experienced this season have been the best so far. But the same cannot be said of the port facilities, especially on the occasion of the s. s. "Gardenia's" second voyage to Churchill, when we had to remain at anchor, from the 16th to 23rd September, off the fairway buoy waiting for a berth to become available. The information I received at Churchill was that a vessel is berthed only when all her cargo is made available by the shipper. Under these circumstances the shipper could, if he desired, keep the vessel in the anchorage until her laytime expired, which could be very serious for the owners of the vessel.

I think some arrangements should be made for a lay-by berth where a vessel can be inspected and passed by the port authorities and the master can tender his Notice of Readiness, and then if necessary return to the anchorage.

Navigational Aids: So much has been said about lights in the past, that I can only confirm they are in the correct position, but too weak to be of any great assistance.

The D/F stations are very good and the personnel are most helpful and attentive, never failing to draw one's attention to any bearing that may be in doubt.

On each of my previous voyages, we tried to start the Responder Beacon on Charles Island, but without success. These last two voyages we were able to obtain a weak signal at 20 miles. This beacon's power should be increased. I also think that a beacon on Coats Island would be of great assistance in fixing a position, as more often than not a run from Churchill to Mansel Island is done on dead reckoning. The D/F beacon at Churchill was very good, our bearings, which we checked by visual bearings, proved to be very good. A beacon on Eskimo Point would be very helpful when approaching Churchill, whereby vessels could obtain a fix and have a fairly reliable position as on approaching Churchill one is usually well ahead of the estimated D. R. position.

Ice Patrol Air Survey: The information received from these surveys is, without doubt, the best assistance a vessel can receive, especially in the early part of the season. It was gratifying to receive these ice reports, although we were one of the late comers.



I hope these surveys continue and increased in frequency if possible.

Churchill Broadcasting Station: I think a little shipping and port news could be broadcast from this station. I was 6 days anchored in bay and the announcer only mentioned shipping once, when he remarked there were 5 ships anchored in the bay.

I think all ships have their private radios tuned to Churchill and most on board are wondering, as they approach Churchill, what ships are in port, which are due to arrive and those that are due to sail.

This information can be most helpful and interesting to vessels arriving at Churchill and I feel sure some of the local residents would be interested in shipping news.

In conclusion, I wish to express by appreciation for all the co-operation and assistance which I received, from all the various officials etc., during these voyages to Churchill.

GLOSSARY OF TERMS USED IN ICE NAVIGATION

- Growler ..... Smaller piece of ice than a bergy-bit, frequently appearing greenish in colour and barely showing above water. May originate both from sea-ice and from glacier ice.
- Hunmocked ice ..... Ice piled haphazardly one piece over another.
- Ice-blink ..... A typical whitish glare on low clouds above an accumulation of distant ice. It is especially glowing when observed on the horizon.
- Ice-field or Field of ice ... Area of pack-ice or drift ice, consisting of any size of floes, of such extent that its limits cannot be seen from the crow's nest.
- Ice-floe or Floe ..... A single piece of sea-ice, other than fast-ice, large or small, described if possible as "Light" or "Heavy" according to thickness  
Vast - over 10 km across  
Big - 1 - 10 km across  
Medium - 200-1000 m across  
Small - 10 - 200 m across
- Lead or Lane ..... A navigable passage through pack-ice or drift ice.
- Pack-ice or drift ice ..... Term used in a wide sense to include any area of sea-ice, other than fast-ice, no matter what form it takes or how disposed.
- Pancake ice ..... Pieces of newly-formed ice, usually approximately circular, about 30 cm to 3 m across and with raised rims, due to the pieces striking against each other, as the result of wind and swell.
- Rafted-ice ..... Type of pressure-ice or screw ice formed by one floe over-riding another.
- Slush or Sludge ..... An accumulation of ice crystals which remain separate or only slightly frozen together. It forms a thin layer and gives the sea surface a greyish or leaden-tinted colour. With light winds no ripples appear.
- Water-sky ..... Typical dark patches and strips on low clouds over a water area enclosed in ice or behind its edge. It is due sometimes to an open water area out of the limits of visibility.

ICE REPORT BY MASTER OF C.G.S. N. B. McLEAN

IN APPROACHES TO AND IN HUDSON STRAIT AND IN HUDSON BAY

SUMMER 1958

<u>Date</u>	<u>Time</u> (AST)		(R.T.: Radar Target)
July 2	0117	R.T. 51 51 N, 56 01 W.	
	0155	R.T. 51 55 N, 55 53 W.	
	0235	R.T. 52 00 N, 55 41 W.	
	0245	Two R.T. 52 02 N, 55 40 W.	
	0315	R.T. 52 06 N, 52 36 W.	
	0330	R.T. 52 08 N, 55 33 W.	
	0427	R.T. 52 10 N, 55 07 W.	
	0600	R.T. 52 30 N, 55 24 W.	
	0700	R.T. 52 36 N, 55 16 W.	
		2000	Two growlers at 55 20 N, 55 22 W.
July 4	1200	One large berg: 60 53 N, 63 00 W.	
	1730	One berg: 60 58 N, 63 35 W.	
		One berg: 61 10 N, 64 03 W.	
	2000	Two bergs: 61 19 N, 64 05 W.	
July 7	2130	One large berg: 61 18 N, 65 00 W.	
	2135	One large berg: 61 11 N, 65 16 W.	
	2215	One large berg: 61 16 N, 65 18 W.	
	2230	One large berg: 61 13 N, 65 24 W.	
	2250	One large berg: 61 26 N, 65 28 W.	
	2315	One large berg: 61 10 N, 65 33 W.	
July 8	0035	One small berg: 61 22 N, 66 11 W.	
	1100	One large berg: 61 24 N, 66 21 W.	
	1100	One large berg: 61 30 N, 66 18 W.	
	0125	One small berg: 61 19 N, 66 29 W.	
	0207	One small berg: 61 18 N, 66 44 W.	
	0425	One small berg: 61 18 N, 67 30 W.	
	0415	One medium berg: 61 25 N, 67 37 W.	
	0415	One large berg: 61 12 N, 68 11 W.	
	0615	One small berg: 61 12 N, 68 16 W.	
	0635	Two small bergs: 61 12 N, 68 16 W.	
July 9	1830	Ice report from N. B. McLean: Left Resolution Island at 2100 AST July 7 and steamed in clear water to position 61 30 N, 69 00 W course 270 true. No ice sighted. From last position to Cape Hopes Advance Radio Station, steamed through heavy close pack ice 8 to 10 tenths coverage, Course 235 true from Cape Hopes Advance Radio Station to 61 33 N, 70 37 W. close pack ice 6 to 9 tenths coverage extending as far as can be seen both sides of track. From last position steamed in clear water to 5 miles off Wales Island and thence to Charles Island. From position 61 33 N, 70 37 W, to longitude 70 30 W, edge of ice could be seen at horizon between 5 to 10 miles on north side thence lost sight of it. South side of track free of ice to shore. Sugluk and Ivugivik free of ice. All ships are requested to give acknowledgement of receipt. Dufour Master.	
July 15	1000	Anchored off Nottingham Island Radio Station, scattered strings of heavy ice, landing cove 3 to 5 tenths coverage of heavy ice.	
July 16		From position 62 08 N, 82 30 W, to 62 00 N, 83 01 W, steamed through widely scattered ice 1 to 3 tenths coverage.	
July 17	0650	Entering in ice field at position 59 43 N, 91 26 W, and steamed through to position 59 35 N, 92 10 W. Cleared ice at 0955; most of it is brash ice 3 to 8 tenths coverage. Ice extending as far as we can see on both sides of track. Course generally 254.	

(CST)

July 22 0237 In position 59 22 N, 92 33 W, entering in ice field and steamed through to position 59 30 N, 91 58 W, course 060 true, 2 to 3 tenths coverage brash ice. Ice in sight on both sides of track as far as we can see. Cleared ice at 0438 C.S.T.

(EST)

July 24 0800 N. B. McLean anchored off Nottingham Island Radio Station. No ice in sight. From last position 59 30 N, 91 58 W, to present position, no ice sighted on shipping track.

Aug. 3 1445 One large and two small bergs 10 miles NW of Radio Station Resolution Island.

1845 One growler medium at 61 23 N, 64 20 W.  
One growler small at 61 25 N, 84 20 W.

Aug. 4 1330 One large berg at 61 40 N, 64 30 W.  
One small berg at 61 46 N, 64 32 W.

Aug. 5 1125 One large berg at 64 41 N, 59 54 W.  
1215 One large berg at 64 28 N, 60 10 W.  
1325 One large berg at 65 30 N, 60 25 W.  
1540 One large berg at 65 32 N, 60 05 W.  
1630 One large berg at 65 40 N, 60 22 W.  
1820 One small berg at 66 00 N, 60 00 W.  
1900 One large berg at 66 06 N, 60 00 W.  
1930 One large berg at 66 11 N, 60 00 W.  
2000 One large berg at 66 15 N, 60 12 W.  
2015 One large berg: 66 18 N, 60 15 W.  
2135 One large berg: 66 29 N, 59 57 W.  
2150 Patch of loose ice: 66 31 N, 59 56 W.  
2200 One large berg: 66 34 N, 59 56 W.  
2205 One large berg: 66 34.5 N, 60 05 W.  
2230 One radar target: 66 39 N, 60 07 W.  
2245 One radar target: 66 42 N, 59 09 W.  
2255 One radar target: 66 44 N, 60 03 W.  
2315 One radar target: 66 48 N, 59 55 W.  
2330 One radar target: 66 51 N, 59 56 W.

Aug. 6 0045 One bergy bit: 67 05 N, 59 53 W.  
Three large bergs: 67 05 N, 60 25 W.  
0105 One large berg: 67 08 N, 59 56 W.  
0200 Three large bergs: 67 20 N, 59 32 W.  
Two small bergs: 67 22 N, 60 27 W.  
0230 One large berg: 67 26 N, 59 47 W.  
0320 Six bergs: 67 33 N, 60 20 W.  
0350 Two bergs  
& one growler: 67 35 N, 59 50 W.  
Three bergs: 67 33 N, 60 15 W.  
0400 Two bergs: 67 42 N, 60 20 W.  
Two bergs: 67 42 N, 59 55 W.  
0415 One large berg: 67 45 N, 59 56 W.  
One medium berg: 67 45 N, 60 00 W.  
Seven medium bergs: 67 49 N, 60 00 W.  
0500 One medium berg:  
Four large bergs: 67 50 N, 59 55 W.  
0550 One small berg: 67 55 N, 60 02 W.  
0630 One radar target: 68 07 N, 59 54 W.  
0700 Two radar targets: 68 11 N, 60 15 W.  
0745 One radar target: 68 20 N, 60 17 W.  
0800 Two radar targets: 68 23 N, 60 00 W.  
0825 Four growlers: 68 27 N, 60 00 W.  
0900 One radar target: 68 28 N, 60 05 W.  
1020 One radar target: 68 39 N, 60 05 W.  
1055 One radar target: 68 52 N, 59 55 W.  
1110 One radar target: 68 54 N, 60 05 W.  
1115 Five radar targets: 68 55 N, 60 10 W.

(EST)

Aug. 6 1145 One radar target: 68 57 N, 60 08 W.  
 1145 Two radar targets: 68 57 N, 60 08 W.  
 1155 One radar target: 68 01 N, 59 55 W.  
 1209 One radar target: 69 02 N, 60 00 W.  
 1238 Two radar targets: 69 06 N, 60 15 W. 69 07 N, 60 07 W.  
 1250 One radar target: 69 10 N, 60 00 W.  
 1255 Two radar targets: 69 11 N, 60 12 W. 69 12 N, 59 42 W.  
 1259 One radar target: 69 12 N, 60 00 W.  
 1303 One radar target: 69 13 N, 59 50 W.  
 1332 Two radar targets: 69 17 N, 60 20 W. 69 17 N, 60 10 W.  
 1346 Two radar targets: 69 18 N, 60 40 W. 69 18 N, 59 45 W.  
 1421 Three radar targets: 69 28 N, 60 40 W. 69 28 N, 60 50 W.  
 1500 Twelve large bergs: 69 37 N, 60 20 W. to 59 40 N.  
 1545 Three small bergs: 67 42 N, 60 15 W.  
 1600 One small berg: 69 43 N, 60 55 W.  
 From 1600 to 2400 hrs, position 69 43 N, 60 00 W, numerous icebergs and growlers sighted on each side of the course 000° T. to 71 11 N, 60 00 W.

Aug. 7 0012 One berg: 71 14 N, 60 07 W.  
 0100 One berg: 71 22 N, 60 35 W.  
 One berg: 71 22 N, 59 26 W.  
 One berg: 71 21 N, 59 43 W.  
 0120 Six bergs: 71 30 N, 60 35 W.  
 0150 One berg: 71 32 N, 60 05 W.  
 One berg: 71 32 N, 59 56 W.  
 0217 One berg: 71 37 N, 59 45 W.  
 0230 Two bergs: 71 38 N, 59 40 W.  
 0300 Three bergs: 71 41 N, 60 22 W.  
 Two bergs: 71 41 N, 60 27 W.  
 0330 Two bergs: 71 46 N, 60 06 W.  
 0342 One berg: 71 48 N, 60 03 W.  
 Two bergs: 71 48 N, 59 55 W.  
 0400 One berg: 71 52 N, 60 02 W.  
 0400 From 71 46 N, 60 06 W, to 71 52 N, 60 02 W, numerous bergy bits and growlers.  
 From 0400 to 0800 hours at position 72 35 N, 60 00 W, numerous bergs, growlers sighted on both sides of course 000° to 73 15 N, 60 00 W.  
 From 0800 to 1200 hours at position 73 15 N, 60 00 W, numerous bergs and growlers sighted on both sides of course 000° to 73 12 N, 60 00 W.  
 From 1200 to 1600 hours at position 73 12 N, 60 00 W, to 73 35 N, 60 00 W, loose brash ice 2/10 to 3/10 coverage with numerous bergs and R.T. throughout both sides of track from noon. From 73 35 N, 60 00 W, to 73 20 N, 60 47 W, brash ice 1/10 coverage with numerous bergy bits, bergs and R.T. throughout both sides of track.  
 2000 From 1600 to 2000 hours, position 73 50 N, 60 47 W, to 74 21 N, 62 27 W, steaming through ice 1/10 coverage and numerous bergs.  
 From 2000 to 2400 hours, position 74 21 N, 62 27 W, to 74 45 N, 64 00 W, steaming through loose ice 1/10 coverage to 2100. Then, steaming through ice field 1/10 to 3/10 coverage and numerous bergs and R.T.

Aug. 8 0400 From 0000 to 0400 hours, position 74 45 N, 64 00 W, to 75 04 N, 65 00 W, 1/10 to 3/10 coverage and from 75 04 N, 75 00 W, to 75 17 N, 65 36 W, 1/10 coverage with numerous bergs throughout the four hours on both sides of the track.  
 0800 From 0400 to 0800 hours, position 75 17 N, 65 36 W, steaming through ice 1/10 coverage and numerous bergs observed on Radar, to position 75 45 N, 67 26 W. Vis 0-1 mile in fog.

(EST)

Aug. 8 1200 From 0800 to 1200 hours, position 75 45 N, 65 36 W, steaming through loose scattered ice 1/10 coverage and numerous icebergs and radar targets to position 76 19.5 N, 69 40 W.

1425 From 1200 hours, position 76 19.5 N, 69 40 W, to anchorage, Thule, numerous bergs and growlers; also numerous bergs in Thule Harbour.

Aug. 9 From Thule, steaming through numerous icebergs and growlers to position 75 50 N, 69 48 W, 2000 hours.

2000 From 2000 hours, position 75 50 N, 69 48 W, loose rotten ice about 1/10 coverage on course 180° true, to lat. 75 40 N, long. 69 53 W. Then from last position on course True 130°, brash ice about 1/10 to 3/10 coverage to 75 18 N, 68 00 W, numerous bergs sighted, to 2400 hours.

Aug. 10 0000 From 0000 hours, position 75 18 N, 68 00 W, to 0400 position, 74 53 N, 66 00 W, brash and rotten ice 1/10 coverage.

0400 From last position, steaming through ice 1/10 to 5/10 coverage to 0800 hours, position 74 26 N, 63 50 W.

0800 From 0800 hours, position 74 26 N, 63 50 W, to 1200 hours, position 73 44 N, 63 40 W, steamed through brash ice 1/10 coverage and numerous bergs sighted.

1200 From 1200 hours, position 73 44 N, 63 40 W, to 1600 hours, position 73 16 N, 63 10 W, steamed through brash and rotten ice with heavy strings of pressure ice 1/10 to 2/10 coverage.

2000 From last position at 1600 hours to 73 32 N, 63 10 W, 2000 hours position, steamed through scattered ice 1/10 coverage.

2400 From 2000 hours position to 2400 hours position: 73 34 N, 63 38 W, steaming through heavy scattered ice from 1/10 to 3/10 coverage and few bergs sighted.

Aug. 11 0400 From position at 0000 hours, 73 34 N, 63 38 W, to 0400 hours position, 73 34 N, 64 20 W, brash and pressure ice at 3/10 to 5/10 coverage.

0800 From the 0400 hours position to 0800 position: 74 35 N, 65 40 W, brash ice of 3/10 to 9/10 coverage.

1200 From 0800 hours position, steaming through heavy ice 7/10 to 9/10 coverage to 1200 hours position: 73 35 N, 65 45 W.

1600 From position 73 35 N, 65 45 W, at 1200 hours, to 1600 hours position 73 36 N, 65 50 W, 9/10 coverage and heavy pressure ridging.

2000 From last 1600 hours position, steaming through ice of 9/10 coverage till 2000 hours position, 73 38 N, 65 34 W.

2400 From 73 38 N, 65 34 W, at 2000 hours, steaming through heavy ice coverage 9/10 till 2400 hours position: 73 40 N, 65 18 W.

Aug. 12 0400 From lat. 73 40 N, long. 65 18 W, to lat. 73 41 N, long. 65 10 W, heavy pressure ice 8/10 to 9/10 coverage. From lat. 73 44 N, long. 65 10 W, to lat. 73 54 N, long. 64 45 W, 1/10 to 5/10 coverage. From lat. 73 54 N, long. 64 45 W, to lat. 74 04 N, long. 65 04 W, clear water.

0800 From last position at 0444 hours, steaming through ice 1/10 to 8/10 coverage to position 74 20 N, 65 10 W, at 0800.

0910 From 74 20 N, 65 10 W, steaming through loose ice 1/10 coverage to 74 25 N, 66 24 W, then stopped ice field. Vis nil.

1200 True course: 300°.

1600 From 1200 hours position at 74 25 N, 66 24 W, to 1600 position at 74 30 N, 65 52 W, in fog, coverage by radar, 1/10 to 3/10. Various courses.

2000 From last position, steaming through scattered ice 1/10 coverage to 2000 position, 74 33 N, 66 30 W.

2400 From last 2000 hours position to 2400 hours position, 74 37 N, 67 11 W, scattered ice pans 1/10 coverage.

(CST)

Aug. 13 0400 From 0000 to 0400 hours with positions: 74 37 N, 67 11 W, to 74 40 N, 68 31 W, 1/10 to 3/10 coverage of heavy pressure

- Aug. 13 (CST) pan ice.
- 0800 From 0400 last position, steaming through ice 1/10 to 3/10 coverage to 0800 position: 74 42 N, 67 53 W.
- 1200 From lat. 74 42 N, long. 67 53 W, 0800 position to noon position on course 270°, lat. 74 30 N, long. 69 10 W, heavy drifting pans of ice, 1/10 coverage.
- 1600 From noon position to 1600 position 74 41 N, 71 00 W, 1/10 to 2/10 coverage of brash ice.
- 2000 At lat. 74 44 N, long. 73 50 W, strip of ice 1/10 coverage on each side of our course. From last position, scattered pieces of heavy drifting ice 1/10 coverage to 74 44 N, 74 40 W. Then ice field, heavy pressure ice 3/10 to 5/10 coverage to 2400 position at lat. 74 44 N, long. 75 19 W.
- Aug. 14 0400 From midnight last position to 0400 position at 74 44 N, 75 30 W, heavy pressure ice 1/10 to 2/10 coverage.
- 1200 Heavy polar 5/10 to 7/10 coverage. Stop at 0400 position.
- 1600 From lat. 74 52 N, long. 75 34 W, to 74 46 N, 75 57 W, on course 240° T. in dense fog. By radar, 3/10 to 1/10 coverage of polar ice.
- 2000 From last position to 2000 position at lat. 74 33 N, long. 76 40 W, steaming through 1/10 to 3/10 of ice on course 240° T.
- 2400 From 2000 position: 74 33 N, 76 40 W, to 2400 hours position: 74 25 N, 78 03 W, few R.T. spotted on both sides of course 235° T.
- Aug. 15 0400 From last midnight position to 0400 hours position: 74 19 N, 80 14 W, bergs and scattered ice on both sides of course 260° T. to a/b Cape Sherard.
- 0800 From Cape Sherard, scattered ice on north side of course 260° T. to 12 miles south of Cape Warrender and then on course 270°, ice on north side of course to 74 16 N, 82 38 W.
- 1200 At 0900, one berg, large at 78 18 N, 83 12 W. At 9.45 a/b Cape Home, string of loose scattered ice extending N. to S. and at 1130 two bergs at 74 12 N, 85 12 W.
- 1600 From last noon position: 74 16.5 N, 85 31 W, to 1600 hours position: 74 21 N, 88 14 W, on course 275° true, numerous bergs and scattered pans of ice.
- 2000 From 74 21 N, 88 14 W, to 2000 hours position: 74 26 N, 90 42 W, scattered ice 1/10 coverage to 74 23 N, 88 45 W, and then numerous bergs and scattered ice 1/10 coverage.
- 2400 From last position to 2400 hours position: 74 34 N, 90 42 W. Few pans of ice and scattered pieces of ice sighted on course 278° T.
- Aug. 16 From 74 34 N, 93 24 W, to enclosure of Resolute Bay: heavy scattered ice.
- (EST)
- Aug. 22 2000 From Resolute Bay: scattered ice on each side of course to 74 32 N, 93 06 W.
- Aug. 23 0400 From Cape William Herschel, 12 miles off to 74 21.5 N, 89 13 W, ice pack 1/10 coverage running in few R.T.
- 0845 11 miles off Stratton Inlet at 74 15 N, 86 49 W, ice patch of heavy close packed ice and a few drifting pieces.
- 0905 One large berg and bergy bits: 74 14 N, 86 45 W.
- 1115 One large berg: 74 12 N, 84 52 W.
- 1600 From 74 09.5 N, 84 20 W, to 74 05 N, 82 49 W, course 100° T. 097° Gyro, in dense fog. R.T. direct on both sides of the track.
- 2000 From 74 05 N, 82 49 W, in both sides of course 100° T. numerous icebergs and growlers and R.T. in fog patches to 73 55 N, 80 24 W.
- 2030 Two large bergs: 74 56 N, 80 05 W.
- 2035 One large berg: 74 45 N, 80 04 W.
- 2145 One large and one medium berg: 73 50 N, 79 34 W.
- 2305 One large and one small berg: 73 46 N, 78 40 W.

(EST)

Aug. 23 2330 One large and one small berg: 73 43 N, 78 15 W, and many bergs sighted on both sides of course 103° T.

Aug. 24 0400 From 73 47.5 N, 78 06 W, to 73 46 N, 77 35 W, on course 106° T. numerous bergs, large and small, on both sides of track. From 73 46 N, 77 35 W, to 73 27 N, 76 16 W, on course 128° T. numerous bergs, large and small growlers and bergy bits and broken pieces.

0800 From 73 27 N, 76 16 W, on both sides of course 128° T. to 73 01.5 N, 74 21 W, many bergs and growlers.

1200 From 73 01.5 N, 74 21 W, on course 128° several bergs and growlers sighted on both sides of course to 72 38 N, 72 40 W.

1600 From last position to 72 36 N, 72 05 W, numerous bergs on both sides of the track. 1300, ice sighted at 72 36 N, 72 05 W, trends to SE to 72 33 N, 71 42 W, numerous bergs scattered throughout, 1/10 coverage to 72 25 N, 70 54 W.

2000 From last position to 72 04 N, 69 20 W, steaming through 1/10 ice coverage, and from 69 20 W, steaming through ice 5/10 coverage to 72 02 N, 69 23 W.

2400 From 72 02 N, 69 23 W, steaming through polar ice 5/10 coverage to 71 52 N, 68 50 W.

Aug. 25 0400 From 71 52 N, 68 50 W, to 71 20 N, 68 45 W, steamed through polar ice 9/10 coverage.

0800 From 71 50 N, 68 45 W, steaming through polar ice 5/10 coverage to 71 46 N, 68 27 W.

1200 From 71 46 N, 68 27 W, steaming through polar ice 5/10 to 7/10 to 71 33 N, 67 52 W.

1600 From 71 26 N, 67 52 W, to 71 26 N, 67 33 W, steamed through ice 1/10 to 7/10 coverage, (polar ice).

2000 From 71 26 N, 67 33 W, steaming through ice 1/10 to 5/10 coverage to 71 21 N, 67 12 W.

2400 From 71 21 N, 67 12 W, steaming along edge of ice field to 71 33 N, 66 12 W. Then clear water to midnight position: 71 30 N, 65 47 W.

Aug. 26 0045 One bergy bit: 71 35 N, 65 35 W.

0115 One large berg: 71 24 N, 65 18 W.

0130 One small berg: 71 20 N, 65 12 W.

0300 One small berg: 71 06 N, 64 50 W.

0315 One large berg: 71 06 N, 64 35 W.

0445 One small berg: 70 49 N, 64 27 W.

0510 One medium berg: 70 45 N, 64 20 W.

0650 At 70 32 N, 63 45 W, end of strip of ice extending north-westward.

0730 Three bergs and pieces of ice at 70 28 N, 63 22 W.

1200 From 70 28 N, 63 25 W, several bergs and growlers sighted on both sides of course 155° T. to 69 55 N, 62 20 W.

1600 From 69 55 N, 62 20 W, several bergs and growlers on both sides of course 155° T. and from last position to 2000 hours position: 68 35 N, 60 49 W, few bergs sighted.

2400 From 68 35 N, 60 49 W, few R.T. sighted during watch to midnight position to 67 59 N, 60 03 W.

Aug. 27 0105 Three bergs: 67 48 N, 60 10 W

0400 One berg: 67 17 N, 60 10 W

Two bergs: 67 17 N, 59 50 W.

Two bergs: 67 16 N, 59 42 W.

0500 Five bergs in vicinity: 67 08 N, 60 00 W.

0600 Three bergs in vicinity: 66 58 N, 60 00 W.

0700 Eight bergs in vicinity: 66 50 N, 60 00 W.

0815 One large berg: 66 35 N, 59 23 W.

0830 One large berg: 66 32 N, 60 04 W.

1000 Two large bergs: 66 15 N, 60 06 W.

1130 One large berg: 65 57 N, 60 05 W.

Aug. 30 0400 One berg: 75 15 N, 60 10 W.



(EST)

Aug. 30 1730 One small berg: 61 18 N, 66 53 W.  
 1255 One radar target: 61 57.5 N, 72 07 W.  
 1340 One berg: 62 08 N, 71 56 W.

Sept. 2 1600 From 63 02 N, 78 16 W, to 1300 hours position 63 02 N, 78 38 W, edge of ice cuts away to NW as far as can be seen, 1/10 coverage of scattered ice.  
 2215 Edge of ice field at 63 03 N, 78 50 W.

Sept. 3 0400 At 0010, position 62 58 N, 78 10 W, to 0040 position 63 01 N, 78 06 W, pass through a string of loose scattered ice.  
 0645 At position 63 34 N, 77 42 W, in ice 1/10 coverage to strip of ice.  
 0800 From 63 47 N, 77 50 W, loose scattered ice 1/10 coverage to 63 49 N, 78 05 W. Strip of heavy ice extending from Mill Island to west then clear water to 1100 position: 64 10 N, 78 22 W. Strip of loose scattered ice extending from east to west, then scattered ice to noon position: 64 21 N, 78 26 W.  
 2000 From 64 21 N, 78 26 W, to 64 50 N, 78 39 W, steamed through scattered ice then ice drifted way to NW as far as can be seen. Then at 1845, at position 65 42 N, 79 02 W, edge of ice extending NW end and SWard for as far as can be seen.  
 2400 From 65 57 N, 79 10 W, steaming through ice 1/10 to 3/10 coverage to 66 28 N, 79 54 W.

Sept. 4 0400 From 66 28 N, 79 54 W, steaming through heavy polar ice 1/10 to 3/10 coverage to 66 28 N, 79 54 W.  
 0800 From 66 56 N, 80 25 W, steaming through heavy ice 1/10 to 5/10 coverage to 67 15 N, 80 35 W.  
 1200 From 67 15 N, 80 35 W, steaming through heavy ice 1/10 to 5/10 coverage to 67 37 N, 80 44 W, then clear water to noon position at 67 44 N, 80 44 W.  
 1600 From 67 56 N, 80 44 W, to 68 00 N, 80 44 W, steamed through scattered ice patch in fog. 1515 hours, at 68 14 N, 80 44 W, to 69 20 N, 80 46 W, scattered polar ice 1/10 to 3/10 coverage.  
 1800 At 68 20 N, 80 46 W, steaming through ice 3/10 coverage to 68 29 N, 80 52 W.

Sept. 5 0400 From 68 40 N, 80 51 W, to 68 36 N, 80 46 W, at 0400 hours passed several patches of ice.  
 0725 At 68 36 N, 80 46 W, steaming through ice 3/10 coverage to 68 16 N, 80 46 W.  
 1200 At 67 58 N, 80 46 W, string of loose scattered ice extending from east to west 1000 feet wide. 67 37 N, 80 38 W, loose scattered ice, 2/10 coverage. Edge of ice field extending west to 67 36 N, 80 38 W.  
 1600 Edge of ice field at 67 33 N, 80 36 W. From 1225 to 1425, string of scattered ice 200 feet wide to 67 12 N, 80 03 W.  
 1700 s. s. Maple Hill passed berg in position 62 21 N, 71 14 W, at 1630 Z. Passed berg in position 62 25 N, 71 24 W, at 1700 Z.  
 2000 From 66 57 N, 79 44 W, no ice sighted to 66 21 N, 79 00 W.  
 2400 From 68 15 N, 79 00 W, steaming through ice 1/10 coverage to 66 00 N, 79 00 W. From then along edge of ice field to 65 55 N, 79 00 W.

Sept. 6 0800 At 1030, position 64 10 N, 78 18 W, ice field about 2/10 to 4/10 coverage extending from Mill Islands in all directions as far as can be seen.  
 1500 Left edge of ice at position 63 52 N, 77 52 W. One berg at 63 56 N, 77 32 W.

Sept. 8 0015 One berg at 63 17 N, 75 49 W.

Sept. 25 2110 Rows Welcome Sound: From 65 37 N, 86 25 W, sailing along edge of ice field to 65 55 N, 85 44 W, then to 66 01 N, 85 38 W, then through heavy ice 5/10 coverage to 2400

(EST)

Sept. 25 2110 position 66 02.5 N, 85 37 W.

Sept. 26 0400 From 66 02.5 N, 85 37 W, to 66 05 N, 85 35 W, 5 to 6 tenths coverage; heavy rafted ice. From 66 05 N, 85 35 W, to 66 09 N, 85 30 W, 9/10 coverage. From 66 09 N, 85 30 W, to 66 12 N, 85 36 W, 6/10 to 8/10 coverage.

0545 From 66 12 N, 85 36 W, to 66 14.5 N, 85 40.5 W, steaming through from 9/10 to 10/10 coverage of heavy close pack ice.

1600 From 66 10.5 N, 85 39 W, to 66 12 N, 85 36 W, 6/10 to 8/10 coverage of heavy close pack ice.

2000 From position at 1600, steaming through heavy close pack ice 10/10 coverage to 66 19 N, 85 52 W.

2200 From 66 19 N, 85 43 W, steaming through heavy close pack ice 10/10 coverage to 66 21.5 N, 85 52 W.

Sept. 27 0400 Stopped in ice 9/10 plus covering (drifting) at position 66 21 N, 85 50 W.

0800 Stop at 66 20 N, 85 46 W, in heavy close pack ice 10/10 coverage.

1200 From position 66 20 N, 85 46 W, steaming through heavy close pack ice 10/10 coverage to 1200 position 66 15.5 N, 85 39 W.

1600 From 66 15.5 N, 85 39 W, to 1600 position 66 07.2 N, 85 39 W, heavy polar ice, close packed at 9/10 plus.

Oct. 11 1200 From entrance end of Digges Harbour east to 62 38.5 N, 77 57.5 W, loose drifting ice less than 1/10 coverage.

1600 From 62 38.5 N, 77 57.5 W, to 62 41.5 N, 77 57.5 W, loose scattered ice less than 1/10 coverage. South eastward to Digges Island anchor, Digges Passage full of loose scattered ice less than 1/10 coverage.

Oct. 13 No ice north of Digges Island. From anchorage to three miles off Digges Island to position three miles off Digges Island, steamed to position 62 38 N, 78 52 W, to 62 28 N, 78 45 W, to Digges Island anchorage by the south side. Edge of ice 10 miles north of Digges Island, then twenty miles due west off west end of Digges Island then to 62 32 N, 78 40 W, to 62 22 N, 78 48 W. From last position, ice stretching south westward toward Mansel Island. No ice east of long. 78 40 N, except for scattered drift pieces, also no ice south of lat. 62 22 N. This is ice patrol made by N. B. McLean, Oct. 12th.

1230 String of loose ice sighted from South Skerries to Fairway Island.

Oct. 17 At 1200, Oct. 12th, wind shifted to moderate southerly then south southeast until Oct. 17th which cleared ice in shipping track and around Digges Island. Oct. 17th, no ice in sight and wind still southerly.

ICE REPORT BY MASTER OF C.G.S. C.D. HOWE

NINTH EASTERN ARCTIC PATROL VOYAGE

SUMMER 1958

Date	Position		Size	Quantity	
	Lat. N.	Long. W.			
July 1	51.58	55.44	Medium	2	
	52.02	55.32	Large	2	
	52.25	55.18	Medium	1	
	52.31	55.09	Small (growlers)	1	
July 2	54.18	54.58	Large	1	
	55.11	55.11	Large	1	
July 4	60.45	62.55	Large	1	
	60.51	64.34	Large	1	
	60.01	64.44	Large	1	
July 5	61.20	66.32	Small	2	
July 14	From: 63.10	74.00	Close packed ice	8/10 coverage	
	to: 63.24	75.38			
	From: 63.24	75.38	Close packed ice	7/10 coverage	
	to: 63.34	75.50			
July 19	60.29	80.45	Strip of ice	3/10 coverage	
	From: 60.36	83.25	Strip of rotten ice	2/10 to 3/10 coverage	
	to: 60.37	83.54			
	From: 60.37	83.54	Ice field	4/10 coverage	
to: 60.34	85.47				
Aug. 2	61.16	65.50	Growler	1	
Aug. 3	64.41	60.30	Large	1	
	64.43	60.40	Large	1	
	65.10	59.28	Large	1	
	65.29	59.50	Large	1	
	66.18	60.00	Large	2	
	66.25	59.50	Large	2	
	66.35	59.50	Large	5	
	66.45	60.00	Large	2	
	Aug. 4	67.16	59.40	Large	1
		67.30	59.50	Medium	1
67.32		59.55	Medium	2	
67.51		59.55	Large and growlers	2	
67.54		59.55	Large	2	
From: 68.03		59.50	Large	5	
to: 68.13		59.50			
68.35		59.45	Large	2	
68.40		59.45	Large	4	
68.50		60.10	Large	6	
68.56		60.30	Large	10	
69.20		61.00	Large	3	
69.22		61.10	Large	1	
69.33		61.43	Large and growlers	3 and 2	
From: 69.45		62.11	Strings of ice	1/10 to 2/10 coverage	
to: 69.54		62.34			
69.58		62.45	Large	15	
From: 69.46		62.11	Large and growlers	12	
to: 70.20		62.11			
From: 70.34		64.05	Rotten ice	2/10 to 3/10 coverage	
to: 70.37	64.24				
Aug. 5	From: 70.37	64.24	Ice field	2/10 to 1/10 coverage	
	to: 71.05	65.27			
	From: 71.00	65.27	Scattered pans	Less 1/10 coverage	
	to: 71.35	66.40			

Date	Position		Size	Quantity	
	Lat. N.	Long. W.			
Aug. 5	From:	71.38	66.52	Ice	6/10 to 8/10 coverage
	to:	71.53	67.30		
	From:	71.53	67.30	Heavy ice	5/10 to 6/10 coverage
	to:	72.11	68.34		
	From:	72.11	68.34	Heavy ice	5/10 to 7/10 coverage
Aug. 6	to:	72.21	69.33		
	From:	72.21	69.33	Heavy ice	5/10 to 7/10 coverage
	to:	72.25	70.30		
	From:	72.49	72.05	Heavy ice	3/10 to 5/10 coverage
	to:	72.55	73.35		
	From:	72.55	73.35	Loose ice	2/10 to 1/10 coverage
	to:	73.18	75.30		
Aug. 7		73.35	76.50	Big	8
	From:	73.49	78.14	Scattered ice	85% open water
	to:	73.52	79.22		
	From:	74.05	80.53	Bergs and scattered ice	5
	to:	74.10	83.02		
Aug. 27		74.20	90.42	Large	1
	From:	74.43	78.07	Large bergs and growlers	18
	to:	75.24	78.55		
Aug. 28	From:	75.24	78.55	Large bergs and growlers	10
	to:	75.54	80.54		
	From:	75.55	81.26	Field of heavy ice	90% coverage
Sept. 1	to:	75.54	81.04		
	From:	75.57	80.16	Ice field and large bergs	15
	to:	75.11	78.48		
Sept. 5	From:	70.52	69.24	Drifted ice	3/10 coverage
	to:	70.28	68.13		
Sept. 5	From:	70.31	67.23	Heavy loose ice	6/10 to 8/10 coverage
	to:	70.32	66.45		
	From:	70.32	66.45	Heavy loose ice	4/10 to 6/10 coverage
	to:	70.21	66.21		

ICE REPORT BY MASTER OF C.G.S. EDWARD CORNWALLIS

FIFTH ARCTIC VOYAGE - SUMMER 1958

Position		Bergs	Growlers
Lat. N.	Long. W.		
53.13	55.21	1	
53.23	55.21	1	
53.22	55.26	1 small	
53.47	55.45	1 small	
54.36	56.27	1 large	
54.46	56.48	1 large	
54.48	56.49	1 large	
54.48	57.08	1 large	
58.34	60.54	1 large	
58.38	60.56	1 large	
59.35	62.00	1 large	
59.40	62.05	1 small	
59.33	62.24	1 small	
60.21	63.20	1 small	
61.17	65.34	1 large	
62.29	70.12	1 large	
62.25	70.50	1 large	
62.30	70.49	1 small	
62.26	71.00		1
62.30	71.13	1 large	
62.29	71.17		1
63.54	75.23	1 large	
63.43	75.07	1 large	
61.08	66.08	1 large	
58.25	62.40	1 large	
53.58	56.05	1 large	

ICE REPORT BY MASTER OF C.G.S. D'IBERVILLE

SUMMER 1958

Date	Time	Position		Remarks
		Lat. N.	Long. W.	
Aug. 6	12.10	66 58	57 30	1 large berg
	12.10	67 00	57 50	1 large berg
	15.00	67 13	58 05	1 medium berg
	15.50	67 25	58 05	1 small berg
	16.30	67 28	58 10	1 berg
	18.45	67 38	59 00	1 berg
Aug. 7	01.00	68 45	59 20	2 medium bergs
	01.30	68 50	59 15	Many growlers sighted in all directions in clear weather
	03.00	69 04	59 28	Many bergs and growlers sighted in all directions, clear weather
	05.00	69 15	59 35	Many bergs and growlers sighted in all directions, clear weather
	06.00	70 30	59 30	Many bergs and growlers sighted in all directions, clear weather
	12.30	70 30	60 55	Many bergs and growlers sighted in all directions, clear weather
	14.40	70 50	61 15	Many growlers and small bergs sighted in all directions
	18.30	71 28	60 52	Many bergs and growlers sighted in all directions, clear weather
	20.00	71 36	62 00	Bergs and scattered ice in all directions
	21.30	71 45	61 45	Many bergs and heavy ice floes
Aug. 8	24.00	71 47	61 20	Many bergs and heavy ice floes
Aug. 9	08-12	72 42	61 20	Many bergs and scattered ice in all directions
		to		
		72 46	61 14	
	12-16	72 46	61 14	
		to		
		72 53	60 48	Many bergs and scattered ice in all directions
	16-20	73 53	61 27	Scattered ice in all directions 3/10 coverage
	20-24	73 05	61 42	Bergs and open ice in all directions 5/10 coverage
Aug. 10	24-04	73 08	62 00	Bergs and open ice in all directions 4/10 coverage
	04-08	73 11	62 25	Bergs and open ice in all directions 4/10 coverage
	08-12	73 12	62 30	Bergs and close pack ice in all directions 8/10 coverage
	12-16	73 15	62 45	Growlers and close pack ice in all directions 8/10 coverage
	16-20	73 23	63 06	Bergs and ice in all directions 7/10 coverage
	20-24	73 35	63 40	Bergs and open ice in all directions 6/10 coverage
Aug. 11	24-04	73 38	65 00	Scattered ice in all directions coverage 2/10
	04-08	73 36	65 44	Close pack ice 10/10 coverage
	08-12	73 37	65 45	Close pack ice 9/10 coverage
	12-16	73 38	66 00	Close pack ice 9/10 coverage
	16-20	73 40	65 42	Close pack ice 9/10 coverage
	20-24	73 46	65 09	Heavy close pack ice 9/10 coverage
Aug. 12	24-04	74 01	64 55	Scattered and open ice 5/10 coverage
	04-08	74 16	66 00	Scattered and open ice 5/10 coverage

ICE REPORT BY MASTER OF C.G.S. D'IBERVILLE

SUMMER 1958

Date	Time	Position		Remarks
		Lat. N.	Long. W.	
Aug. 12	08-12	74 26	66 28	Scattered ice 2/10 coverage
	12-16	74 28	65 46	Scattered ice 2/10 coverage
	16-20	74 35	66 30	Scattered ice 2/10 coverage
	20-24	74 35	68 00	Scattered ice 1/10 coverage
Aug. 13	24-04	74 39	68 25	Scattered ice 3/10 coverage
	04-08	74 39	68 15	Scattered and open ice 6/10 coverage
	08-12	74 40	69 05	Scattered ice 3/10 coverage
	12-16	74 42	70 30	Scattered ice 3/10 coverage
	16-18	74 44	73 14	Scattered ice 1/10 coverage
	20-24	74 45	74 45	Scattered ice, few growlers and small bergs in all directions
Aug. 14	24-04	74 43	74 50	Heavy ice about 4/10 coverage
	04-08	74 43	74 50	Heavy ice about 4/10 coverage
	08-12	74 42	75 18	Heavy ice pans 3/10 coverage
	12-16	74 54	75 27	Heavy ice pans 3/10 coverage
	16-20	74 58	75 42	Scattered ice floes 2/10 coverage
	20-24	74 52	76 27	Scattered ice 1/10 coverage
Aug. 15	02.00	74 43	77 40	West edge of ice field
	08-12	74 15	81 15	Heavy ice floes north of Co. 250 about 3/10 coverage. All clear on south side
Aug. 18	13.20	74 36	94 44	Scattered ice 1/10 coverage
	14.50	74 34	93 28	Open water
	16.00	74 31	92 30	Scattered ice 1/10 coverage
	20.00	74 23	89 30	Scattered ice 1/10 coverage
	22.20	74 24	87 37	2 large bergs and several growlers
	24.00	74 22	86 12	1 large berg and several growlers
Aug. 19	02.00	74 21	84 42	Many bergs and growlers in all directions
	04.00	74 21	82 55	Many bergs and growlers in all directions
	08.00	73 33	79 53	Many bergs and growlers in all directions
	09.30	74 47	79 26	About 20 large bergs and few growlers
	11.00	75 07	78 44	Scattered ice stretching eastward as far as visibility permits 2/3 coverage. Several bergs and growlers
	13.45	75 41	79 41	Scattered ice in all directions 1/10 coverage
	16.00	75 56	81 02	Many bergs and growlers in all directions
	20.00	76 04	84 28	Many bergs and growlers in all directions
	24.00	76 19	88 00	Scattered ice about 2/10 coverage and several large bergs and growlers
	Aug. 20	04.00	74 28	89 55
08.00		77 01	89 42	Scattered open winter ice 5/10 coverage
12.00		77 27	89 16	Scattered ice 5/10 coverage
16.00		78 19	88 01	Scattered winter ice 1/10 coverage
20.00		78 53	85 42	Scattered ice 1/10 coverage
24.00		79 35	85 20	Scattered ice, heavy winter, 6/10 coverage
Aug. 22	16.00	79 52	86 32	From Eureka to present position, scattered ice 1/10 coverage

ICE REPORT BY MASTER OF C.G.S. D'IBERVILLE

SUMMER 1958

Date	Time	Position		Remarks
		Lat. N.	Long. W.	
Aug. 22	24.00	78 32	87 45	Open water from this position to this position
			to	
Aug. 23	04.00	78 32	87 45	Scattered ice 1/10 coverage
	08.00	77 04	89 48	
	12.00	76 23	89 16	Scattered ice from 1/10 to 3/10 coverage
	13.00	76 22	88 58	Ice end edge
	14.00	76 16	87 44	Many bergs and growlers in all directions
	20.00	76 02	82 56	Many scattered growlers in all directions
	24.00	75 52	80 50	Several bergs and growlers in all directions
Aug. 24	04.00	75 35	79 20	Many pieces of ice seen in radar steaming at slow speed
	08.00	74 59	79 00	Many pieces of ice seen in radar steaming at slow speed
	12.00	74 25	80 35	Very scattered ice with few bergs and growlers
Aug. 25	24.00	74 19	81 29	Many bergs in all directions
	12.00	73 32	76 29	About 50 bergs and growlers in all directions
	24.00	71 58	71 00	Scattered ice 2/10 coverage
	04.00	71 30	69 59	Steaming in open and scattered floes about 3/10 coverage
Aug. 26	08.00	71 14	68 55	Heavy close pack ice 8/10 coverage
	12.00	71 19	67 55	Heavy Polar ice from 6 to 9/10 coverage
	16.00	71 03	66 35	Edge of ice field
Aug. 27	24.00	69 43	63 57	Several large bergs and growlers
	04.00	69 04	62 34	About 20 bergs in all directions
	12.00	67 39	61 11	About 10 medium bergs and growlers in all directions
Sept. 9	18.20	61 57	66 56	1 berg
	19.30	61 51	66 30	1 berg
Sept.12	18.00	63 02	67 05	1 berg
	20.30	62 43	66 35	1 medium berg
	21.20	62 29	66 05	1 large berg
Sept.13	13.00	64 06	63 25	1 berg
	15.15	64 26	63 55	1 berg
	17.45	64 36	64 00	1 berg
	20.25	65 05	64 50	2 medium bergs
	24.00	65 25	65 40	1 growler
Sept.14	01.00	65 35	66 03	1 berg
	01.30	65 37	66 11	2 bergs
	03.00	65 52	66 00	1 berg
	03.30	65 55	66 03	1 berg
	04.00	65 52	66 20	1 berg
Sept.15	14.00	65 10	65 20	2 bergs
	19.00	64 30	63 50	1 berg



ICE REPORT BY MASTER OF C.G.S. MONTCALM

SUMMER 1958

Date	Time	Description of Ice	Position		
			Lat. N.	Long. W.	
July 15	0210	1 berg	51 46.8	56 09	
	0305	1 berg	51 52.6	55 59.5	
	0315	1 berg	51 46.2	55 37.8	
	0510	8 bergs	52 08	55 34	
	0920	1 berg	52 43.8	55 24.8	
	1040	1 berg	52 56.3	55 17.8	
	1120	4 bergs	53 02.7	55 44	
	1330	1 berg	53 26.4	55 40.5	
	1500	2 bergs	53 27.2	55 41.5	
	2020	1 berg	54 25.1	56 08.5	
	2105	1 berg	54 25.6	56 32.5	
	2230	2 bergs	54 41.4	56 37.5	
	July 16	0555	3 bergs	55 36	57 26
		0610	2 bergs	55 50	57 48
1105		1 berg	56 30	58 12	
1113		1 berg	56 35	58 08	
1130		1 berg	56 39	58 17	
July 17	0840	1 berg	58 59.5	60 42	
	0922	1 berg	58 03	61 30	
	1005	1 berg	58 13	61 48	
	1230	1 berg	58 46	61 08	
	1300	1 berg	59 08	60 30	
	1400	1 berg	59 10	61 40	
	1800	1 berg	59 36	62 02	
	2000	2 bergs	59 47	62 27	
	2000	1 berg	59 51	62 19	
	2115	1 berg	60 10	62 15	
July 18	2130	1 berg	52 49.2	63 23	
	0110	1 berg	59 50	63 30	
	0145	Few little ice	60 35	63 40	
	0215	Light field scattered ice of 2/10 coverage	60 38	63 41	
	0730	End of ice field	60 07	63 46	
	1015	Field of ice 2/10 coverage	61 01	64 19	
	1600	Field of ice 3/10 coverage	61 06	63 52.5	
	1745	End of ice field	61 00	64 18	
	July 19	1320	2 growlers	61 48	64 00
			1 berg	61 43	64 14
1400		2 bergs target 067° 6'	62 11	65 00	
1445		Growlers	62 11	65 00	
1600		From position - sighted 10 bergs and growlers -	62 20.5	65 29.3	
2015		to position -	62 38	66 25	
2205		Field of ice 4/10 coverage	62 46.2	66 47	
2400		Field of ice 4/10 coverage	62 47	66 58	
July 20		0400	Field of ice 4/10 coverage from - 62 47 N, 66 58 W to -	62 59	67 12
		0800	Field of ice 2/10 coverage	63 07	67 40
	0945	Field of ice 9/10 coverage	63 08.5	67 51	
	1200	Field of ice 4/10 coverage	63 05.8	67 39.7	
	1600	Field of ice 4/10 coverage	63 07	67 40.5	
	July 22	1200	Field of ice 9/10 coverage	63 09.6	67 53
1500		Field of ice 9/10 coverage	63 12.5	57 58.4	
1600		Field of ice 2/10 coverage	63 15	68 02.4	
July 23	1305	Field of ice 2/10 coverage	63 38.2	68 27.5	
	1550	Field of ice 10/10 coverage	63 10.9	68 55.5	

ICE REPORT BY MASTER OF C.G.S. MONTCALM

SUMMER 1958

Date	Time	Description of Ice	Position		
			Lat. N.	Long. W.	
July 23	1810	Heavy rafted 10/10 coverage	63 05	67 35	
	2255	1 berg	62 29	66 12	
July 24	0255	Radar target	61 57	65 43	
	0310	Small growlers	61 55	65 50	
	0610	1 berg	61 29.5	66 16	
	0930	1 berg	60 59	66 38	
	0945	1 berg	60 57.2	66 46.5	
	1320	3 bergs	60 17	67 37	
	1453	3 bergs	60 03.5	68 00	
July 28	2055	1 berg	60 01.6	69 07.6	
	2106	1 berg	60 00.5	69 05.8	
July 29	0605	1 berg	60 34	66 30	
	1215	1 berg	61 10	65 16	
Aug. 1	0620	1 berg	61 49	69 26	
	0800	1 growler	61 47	68 46	
	0945	1 growler	61 26	68 08	
	0240	Few growlers	63 04.5	67 30.2	
	0343	Field of ice 8/10 coverage	63 07	67 48.5	
Aug. 2	0350	Field of ice 5/10 coverage	63 09.4	67 52.5	
	0000	Piece of ice	63 32.8	68 22.8	
Aug. 6	0240	1 berg	61 50	71 47	
Aug. 30	0200	Field of ice 9/10 coverage	68 07	80 25	
	0715	End of ice field	68 34	80 50	
Sept. 4	1230	Scattered growlers	68 40.5	80 27.2	
	1255	Field of ice 8/10 coverage	68 38.2	80 20	
	1400	Field of ice 6/10 coverage	68 36.4	80 14.8	
	1415	Field of ice 3/10 coverage	68 36.2	80 12.5	
	1530	End of ice	68 38	79 52	
	1800	Field of ice 2/10 coverage	68 45	79 00	
	2034	Scattered ice 4/10 coverage	68 55	78 12	
	2130	Scattered ice 4/10 coverage	68 54	77 49	
	Sept. 7	0930	Field of ice 6/10 coverage	69 24.5	78 39.5
		1600	Field of ice 5 to 7/10 coverage	69 14	79 01.8
Sept. 8	1230	Field of ice 3/10 coverage	69 14	79 01.8	
	1600	Field of ice 3 to 5/10 coverage	68 56	80 01	
	1800	Field of ice 2/10 coverage	68 25	80 00	
	2400	Field of ice 2/10 coverage	68 48	78 34	
Sept. 9	0400	Field of ice 1 to 3/10 coverage	68 43.6	77 21.5	
Sept. 11	0015	Loose drift ice 2 to 4/10 coverage	68 48.5	77 29	
	0400	Loose drift ice 2 to 4/10 coverage	68 51.9	78 09.2	
Sept. 13	0000	Heavy field of ice 4/10 coverage	66 47	79 47	
	0400	Heavy field of ice 8/10 coverage	66 34.5	79 39.7	
	1200	End of ice	66 29	79 11	
	1600	Strings of ice 2 to 4/10 coverage	66 10	79 05	
Sept. 14	0000	Strings of ice 2/10 coverage	65 07.5	78 39	
	0400	Strings of ice 1 to 4/10 coverage	64 45	78 46.5	
	1032	Field of ice 6/10 coverage	64 09	78 26	
	1200	Field of ice 3/10 coverage	64 04	78 29	
	1600	Scattered strings of ice 3 to 4/10 coverage	63 49.8	78 01	
	1615	Field of ice 8/10 coverage	62 12	82 36	
	1640	End of ice	62 15	82 16	
	1715	Field of ice 8/10 coverage	62 09	82 00	
Oct. 22	1738	End of ice	62 11	81 52	
	1048	1 growler	63 57	75 08	
Oct. 25	2040	1 growler	62 48	71 58	
	0200	1 berg	62 02	67 39	

## HUDSON BAY ICE SUMMARY

SEASON 1958

During 1958 the Hudson Bay Route from longitude of Cape Chidley to Churchill was subjected to increased ice reconnaissance activity in support of marine shipping into the port of Churchill. This ice reconnaissance was carried out through the combined co-operation of RCAF 408 (R) Squadron, 435 (T) Squadron, 436 (T) Squadron, RCN Naval Weather Service, Marine Branch and Meteorological Branch of the Department of Transport.

The Marine Branch carried out their regular annual aerial ice survey in Hudson Bay and Hudson Strait between July 7th and August 27th, 1958. The Ice Information Officer, Capt. E. L. Kelso, conducted this survey assisted by two highly-trained Meteorological Branch Aerial Ice Observers. The survey was under the control of the Ice Information Officer who was responsible for the proper assembly and distribution of all ice information and replies to inquiries covering ice conditions as affecting shipping. The Ice Information Officer who maintained an office in the Federal Building at Churchill carried out liaison between ice reconnaissance personnel and ships' captains. The Meteorological Branch Aerial Ice Observers provided ice observations and gave support for the Ice Information Officer and the RCN Ice Forecast Office at Churchill. The RCN Ice Forecast Office issued Ice Advisory Messages and 48-hour Tactical Ice Forecasts between July 10th and July 31st, 1958. Twelve Aerial Ice Patrols were made in all, covering a distance of 14,096 nautical miles in 123 flying hours, each patrol being accompanied by the Ice Information Officer and the Meteorological Branch Ice Observers.

Another group of highly-trained Meteorological Branch Ice Observers based at Frobisher provided aerial ice observations in Hudson Strait, Ungava Bay, and Foxe Channel, for which the RCAF 408 (R) Squadron provided the aircraft and crews. Some of these aircraft were equipped with airborne radar which was used, when cloud obscured the ice, for ice observations. Ice Reconnaissance Operations from Frobisher supported the initial penetration of CGS C. D. Howe and CGS N. B. McLean on their respective resupply missions in Hudson Strait in early July, CGS Labrador while on escort duties in the Strait in mid-July, Hydrographic Survey of the shipping channel in Frobisher Bay and associated areas by CGS Baffin, and sealift operations both civil and military into Frobisher, N.W.T. Valuable break-up data in June, and freeze-up data in September, October and November was also obtained in Hudson Bay, Hudson Strait and Ungava Bay by Meteorological Branch Ice Observers on flights based from RCAF Station Rockcliffe with 408 (R) Squadron. In this section of the Hudson Bay Route, twenty-six flights totalling 28,750 nautical miles in 179.7 flying hours were completed. The RCN Ice Forecast Office provided Ice Advisory Messages and 48-hour Tactical Ice Forecasts for Hudson Strait from August 10th to October 5th, 1958.

Meteorological Branch Ice Observers also accompanied RCAF Transport Flights from Churchill to Resolute via Coral Harbour in May and October, 1958. Valuable break-up and freeze-up data was obtained on these flights.

Three specially trained Meteorological Branch Ice Observers assigned to CGS N. B. McLean, CGS Labrador and CGS C. D. Howe provided ship-board ice observations as well as completing aerial flights by helicopter as directed by the ships' Masters.

The attached description of ice conditions listed chronologically gives a historical record of the Hudson Bay Route as observed by the Meteorological Branch Ice Observers on 35 flights over the area.

HUDSON BAY and HUDSON STRAIT --1958--

(As prepared by Capt. E. L. Kelso, Ice Information Officer)

From Churchill, Manitoba, the first official Ice Patrol was completed on July 18th, 1958, whereby it was observed all heavy concentrations of ice within Hudson Bay lay to the south of the main Churchill Steamer Track, and numerous icebergs, growlers and heavy pieces were congested in the vicinity of the usual steamer departure position off Carys Swan Nest, Coats Island. But throughout the northern section of the Bay extensive open water was in evidence and continued within Fisher and Evans Straits to the western approaches of Hudson Strait, with only a few scattered patches with icebergs and growlers.

Observations within Hudson Strait ascertained the main body of heavy ice was situated in the northern sector, extending throughout as far east as Fritzier Harbour, and at one point blocked the Strait across taking shore on the south side at Cape Prince of Wales. It was also noted icebergs and growlers were most numerous in the north sector of the Strait, which conditions remained constant throughout the survey.

The eastern approach presented areas of loose pack ice extending across the Strait with the extreme northern edge situated at 6136N 6330W.

Frobisher Bay, apart from scattered icebergs and growlers, remained otherwise open to a line extending from Kneeland Bay to Royer Cove, but north of this line much heavy pack ice existed intermingled with numerous icebergs and growlers, which congested the extreme northern section of the Bay.

The western sector of Ungava Bay consisted of open water throughout, apart from scattered icebergs and growlers and very few loose-packed fields, but no ice hazard was sighted within this area which could not be controlled by careful navigation.

The second Aerial Patrol was planned to meet the first merchant vessel for Churchill at the eastern entrance of the Strait. On the outward flight, July 22nd, the extreme edge of the Hudson Bay pack ice was sighted on the Churchill track at 6000N 9245W, and indeed, as the survey progressed, this area remained persistent, varying only slightly in position with shift of wind. This particular area was closely watched and shipping made fully conversant, and advised to pass northward within the area of open water.

The vicinity of Carys Swan Nest, Coats Island, remained much the same as observed on flight one, which, in dark hours, particularly, would present a dangerous navigational hazard. Consideration was given to the suggestion that shipping for Churchill should pass north of Coats Island, navigating Evans and Fisher Straits, which was known to be open water, but this suggestion was deferred until the aerial patrol made the return flight, and had sighted this vicinity in finality, ahead of the first merchant vessels.

The southern sector of Hudson Strait showed improvement, the previously sighted area of heavy pack ice in the vicinity of Cape Prince of Wales had now decreased considerably, and much open water existed. But, in the northern sector of the Strait, heavy pack ice and many icebergs and growlers remained a menace throughout. Vessels were again advised to favour the south side of the Strait.

Frobisher Bay showed little improvement, as formerly observed, with the limits of all heavy concentrated ice situated north of a line Cape Ramelsberg to Frobisher's Farthest.

On the morning of July 23rd, fog and undercast prevented the aerial patrol from sighting the first merchant vessel, which was then being escorted

through the Strait by CGS Labrador, but by radio contact it was assured CGS Labrador and her charge were favouring the south side of the Strait.

A surprising development had now transpired in a matter of twenty-four hours in the vicinity of Carys Swan Nest, Coats Island, whereby almost complete disappearance of ice was in evidence, and all vessels were then advised via Nottingham Radio that this area was open.

As the aerial ice survey progressed further, areas were patrolled to meet the requirements of other shipping, and this included Cape Dorset, Foxe Channel and the southern sector of the Bay.

By August 7th, there were now signs of deterioration of ice, and on August 21st the final full coverage flight was made.

On August 21st, it was observed that the persistent ice edge off Churchill had now disintegrated and Hudson Strait consisted of open water throughout, with the exception of scattered icebergs and growlers.

Frobisher Bay, apart from icebergs, growlers and some scattered heavy pieces, was similarly open water. The only known area of heavy pack ice now remaining was situated within Foxe Channel, north of a line Leysen Point to Cape Dorset, and shipping for Foxe basin was advised accordingly.

A short reconnaissance was made on August 27th, to ascertain the limits of any remaining ice in the southern sector of the Bay and region of Winisk, but it was now evident ice fields were showing rapid signs of deterioration. Only a few loose-packed areas remained, and close to disintegration.

With this flight, the aerial ice patrol for the 1958 season was concluded and the Ice Information Office, Churchill, terminated as of August 29th, 1958.

#### OBSERVED ICE CONDITIONS IN HUDSON STRAIT - 1958.

(As prepared by Meteorological Branch, Ice Observers)

- June 5 Area observed from longitude 67 west to 70 west. Ice conditions 15 to 20 mile shore lead along Quebec coast. Fast ice in Diana Bay and Dry Bay. Remainder of area observed covered with close ice averages 8/10. Pressure ridges moderate. Few icebergs and bergy bits.
- June 7 Area observed west of line Cape Hopes Advance to Lower Savage Islands. Ice conditions - 10 mile wide shore lead along coast Baffin Island. 5 mile wide shore lead from Cape Hopes Advance to Cape Prince of Wales. Remainder of observed area close ice 8/10 coverage.
- June 20 Area observed west of line Big Island to Cape Prince of Wales ice conditions - close ice 9/10 coverage throughout.
- June 21 Area observed west of longitude 68 west to longitude 70 west. Ice conditions - south of latitude 6245 north close ice 9/10 coverage. North of latitude 6245 north broken ice 6/10 coverage.
- July 3 Ice conditions not observed due to fog and low clouds.
- July 5 Area observed west of a line from Big Island to Cape Prince of Wales. Ice conditions - 10 mile wide shore lead at Cape Prince of Wales increases to 40 miles wide at Digges Island. A 20 mile band

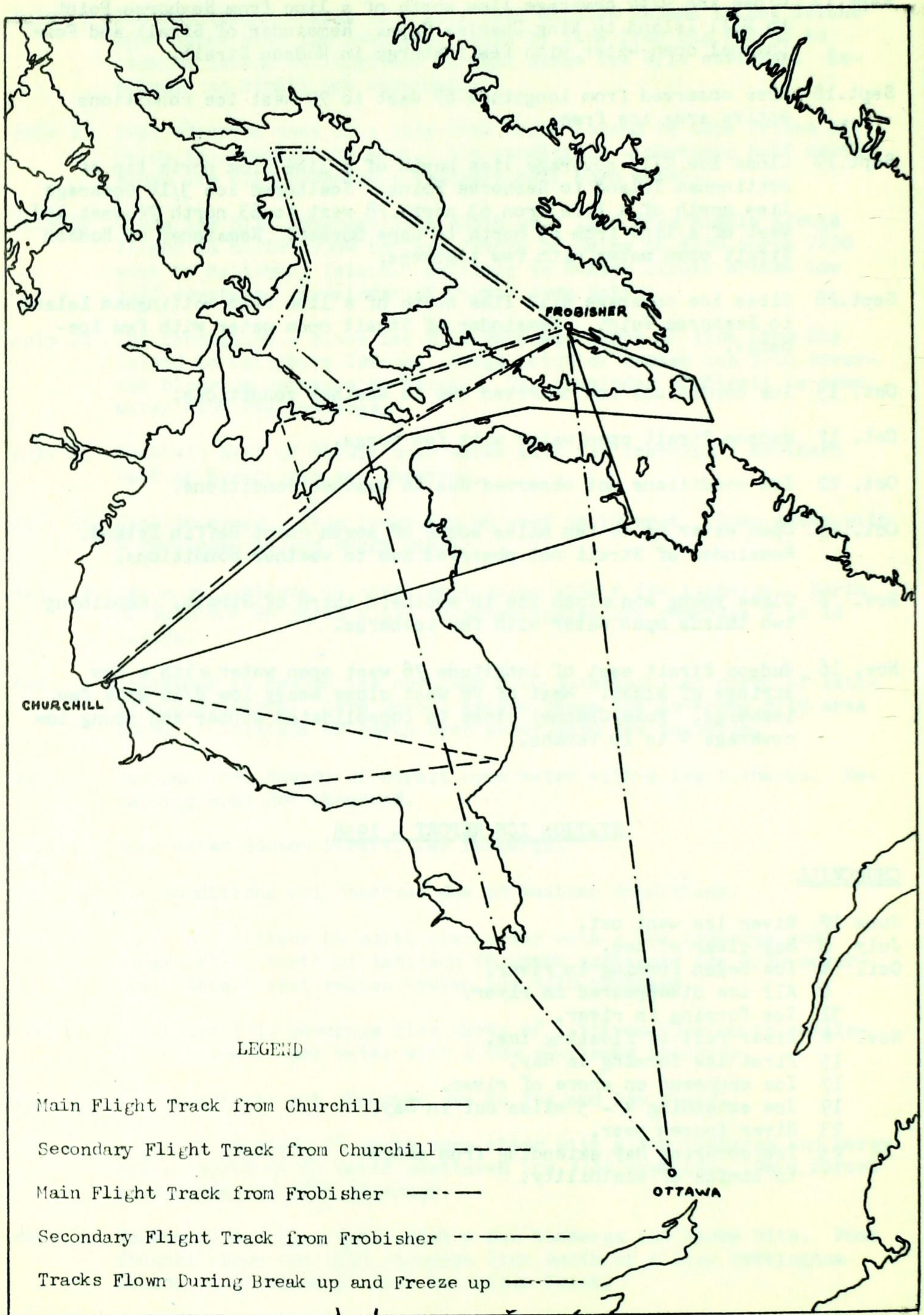
- of scattered ice 4/10 coverage extends north of lead. Remainder of Strait close ice 8/10 coverage.
- July 7 Ice conditions - east of a line from Akpatok Island to Big Island open water with few icebergs. West of line from Big Island to Akpatok Island to longitude 72 west close ice 8/10 coverage. Remainder to Strait not observed.
- July 13 Area observed west of a line Gray Goose Island to Cape Prince of Wales to longitude 78 west. Ice conditions - northern half mostly close ice 8/10 coverage. Southern half open water.
- July 17 Close ice 8/10 coverage lies north of a line from Middle Savage Island to 6120N 6930W to Cape Prince of Wales to 6250 north 7220 west to Salisbury Island. Entrance to Hudson Strait broken ice 5/10 coverage. Remainder of Strait open water.
- July 22 Ice conditions - close ice 9/10 coverage north of line from Big Island to Salisbury Island. Large patch of broken ice 5/10 coverage blocking entrance to Strait. The remainder of Strait is open water with few icebergs.
- July 23 Southern half of Strait open water with few icebergs. Northern half of Strait was not observed.
- July 26 Area observed - from longitude 66 west to 69 west. Open water with a few icebergs and bergy bits.
- Aug. 4 South of latitude 64 north open water with a few icebergs. North of latitude 64 north close to consolidated ice coverage 9 to 10 tenths.
- Aug. 7 Scattered to broken ice coverage 3 to 5 tenths lies north of latitude 6350 north. Cape Dorset region close ice coverage 8/10 area north of latitude 63 north open water with few icebergs.
- Aug. 8 Southern two thirds of Strait open water with a few icebergs. Remaining area not observed.
- Aug. 11 Open water Hudson Strait, few icebergs.
- Aug. 15 Ice conditions not observed due to weather conditions.
- Aug. 18 South of latitude 64 north open water with a few icebergs and bergy bits. North of latitude 64 north scattered ice 4/10 coverage. Cape Dorset region broken ice 7/10 coverage.
- Aug. 22 Close ice 9/10 coverage lies north of latitude 6350 north remainder of Strait open water with a few scattered icebergs.
- Aug. 23 Ice conditions not observed due to fog and low cloud.
- Aug. 25 South of latitude 64 north open water with a few icebergs and bergy bits. North of 64 north scattered ice 3/10 coverage. Cape Dorset area close ice 8/10 coverage.
- Aug. 31 Hudson Strait open water with a few icebergs and bergy bits. Foxe Channel close ice 9/10 coverage lies north of a line Nottingham Island to 63 north 81 west to Native Point.
- Sept. 3 Hudson Strait open water with a few icebergs and bergy bits. Foxe Channel close ice 9/10 coverage lies north of latitude 6320 north.

- Sept. 10 Hudson Strait not observed due to weather conditions. Foxe Channel broken ice 7/10 coverage lies north of latitude 6330 north.
- Sept. 13 Close ice 9/10 coverage lies north of a line from Seahorse Point to Mill Island to King Charles Cape. Remainder of Strait and Foxe Channel open water with few icebergs in Hudson Strait.
- Sept. 18 Area observed from longitude 67 west to 70 west ice conditions entire area ice free.
- Sept. 19 Close ice 9/10 coverage lies north of a line from north tip of Nottingham Island to Seahorse Point. Scattered ice 3/10 coverage lies north of a line from 63 north 78 west to 63 north 76 west and west of a line from 63 north to Cape Dorset. Remainder of Hudson Strait open water with few icebergs.
- Sept. 28 Close ice coverage 8/10 lies north of a line from Nottingham Island to Seahorse Point. Remainder of Strait open water with few icebergs.
- Oct. 15 Ice conditions not observed due to weather conditions.
- Oct. 17 Hudson Strait open water with few bergs.
- Oct. 22 Ice conditions not observed due to weather conditions.
- Oct. 23 Open water up to ten miles south of south coast Baffin Island. Remainder of Strait not observed due to weather conditions.
- Nov. 8 Close young and slush ice in southern third of Strait. Remaining two thirds open water with few icebergs.
- Nov. 16 Hudson Strait east of longitude 78 west open water with a few strings of slush. West of 78 west close heavy ice 8/10 with few icebergs. Foxe Channel close to consolidated winter and young ice coverage 9 to 10 tenths.

STATION ICE REPORT - 1958

CHURCHILL

- June 17 River ice went out.
- July 8 Bay clear of ice.
- Oct. 4 Ice began forming in river.  
6 All ice disappeared in river.  
31 Ice forming in river.
- Nov. 6 River full of floating ice.  
15 First ice forming in Bay.  
17 Ice anchored on shore of river.  
19 Ice extending 4 - 5 miles out in Bay.  
23 River frozen over.  
25 Ice covering Bay extending from shore to limits of visibility.





NATIONAL RESEARCH COUNCIL OF CANADA

RADIO AND ELECTRICAL ENGINEERING DIVISION

ABSTRACT

Reports on radar detection of ice, submitted by Hudson Bay Shipping, have been analyzed to determine the value of radar in reducing the navigational hazard in ice-infested waters. The seasonal change in ice conditions has been investigated and the most dangerous sections of Hudson Strait have been located. The efficiency of the ice hazard has been well defined and the most dangerous ice concentration is located in a 450-mile section of the Hudson Strait. Reports on the radar detection of all formations have established the danger zone of ice and the fact that ice is present at 4000 yards is present most of the time. Radar is a definite asset to the navigator provided it is equipped with an indication of the fluctuations in detecting small targets in sea clutter. Short ranges, under 10,000 yards, are preferred for the detection and tracking of dangerous ice which is being detected at a distance of 10,000 yards. A ship will encounter about 30 per cent less ice in a range for every 1000 yards. A ship will encounter about 30 per cent less ice in a range for every 1000 yards.

AN ANALYSIS OF RADAR ICE REPORTS  
SUBMITTED BY HUDSON BAY SHIPPING (1953-1957)

A.D. HOOD

OTTAWA, MARCH 1958

### ABSTRACT

Reports on radar detection of ice, submitted by Hudson Bay shipping, have been analyzed to determine the value of radar in reducing the navigational hazard in ice-infested waters. The seasonal change in ice conditions has been investigated and the most dangerous sections of Hudson Strait have been located. The limits of the ice hazard have been well defined and the maximum ice concentration is located in a 450-mile section of the Hudson Strait route. Reports on the radar detection of all formations have established the dangerous types of ice and the fact that sea clutter, in excess of 1000 yards, is present most of the time. Radar is a definite asset in ice navigation provided it is operated with an appreciation of its limitations in detecting small targets in sea clutter. Short ranges, under 10,000 yards, are preferred for the detection and tracking of dangerous ice, such as bergy bits and growlers. All formations of berg size were detected at a minimum range of 10,000 yards, and the leading edge of floes and field ice may be detected at ample range for evasive action. A ship will encounter about 50 per cent less ice in Hudson Strait during the latter half of the shipping season.

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### FIGURES

1. Hudson Strait Showing Location of Ice Detected by Ship's Radar and Reported during 1953-1957
2. Relationship between Maximum Detection Range and Radar Cross-sectional Area of Ice Formation
3. 20-foot Growler Undetected through Sea Clutter
4. Typical Cross Section of a Growler
5. Ice Density versus Longitude for 1953-57 Shipping Seasons
6. Loose Ice Field

AN ANALYSIS OF RADAR ICE REPORTS  
SUBMITTED BY HUDSON BAY SHIPPING (1953-1957)

- A.D. Hood -

INTRODUCTION

This is the fifth and final analysis of radar ice reports submitted by Hudson Bay shipping\*. The information is based on data submitted by masters of vessels using the Hudson Bay route into Port Churchill during the shipping seasons of 1953 to 1957, inclusive. Emphasis is placed on the data of 1956 and 1957 which was collected in somewhat greater detail than in previous years. Certain refinements in the ice report forms and the cooperation of masters in listing detailed information on the various ice formations encountered has been helpful in establishing the navigation hazard and assessing the ability of a commercial marine radar to assist in navigating ice-infested waters.

It has been established, from data submitted during the past five years, that radar is an invaluable aid in navigating Hudson Bay shipping lanes, but it may be dangerous if not wisely employed and its limitations appreciated. Numerous reports have been accumulated on ice formations that could not be detected by radar but were of sufficient size to cause severe damage to a ship. These formations are known as "growlers", and in sea clutter detection is difficult and in many cases impossible. The general appearance is deceptive since about nine-tenths of the volume is submerged and reports show that growlers approaching 100 tons in weight have remained undetected by radar. In the five-year ice survey, the general area of dangerous navigation in Hudson Strait has been well defined. The location of all ice formations reported during the survey period is shown on a copy of Chart 5000 (see Fig. 1). The 1957 reports show the same general concentration as in previous years. Of particular note is the almost complete absence of ice west of longitude 75°, and east of longitude 60°. Several large isolated bergs were reported in the Atlantic as far east as longitude 44°. However, these were all detected at long range, and this type of ice is not considered dangerous to a radar-equipped ship.

The 1957 data was forwarded by ten ships reporting 132 ice formations. Of these, 56 were suitable for radar analysis, and the graph of detection range vs. radar cross-sectional area is shown in Fig. 2. Data from the four previous seasons was included, giving a total of 265 formations, and the same general scatter was apparent in each season. Average detection ranges of all formations larger than bergy bits were reasonably close to theoretical expectations, but sea clutter is a predominant factor in detection of the smaller types of ice at close range. Sea clutter, in excess of 4000 yards, is not

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\* The four previous reports: ERB-330, 356, 394, 416

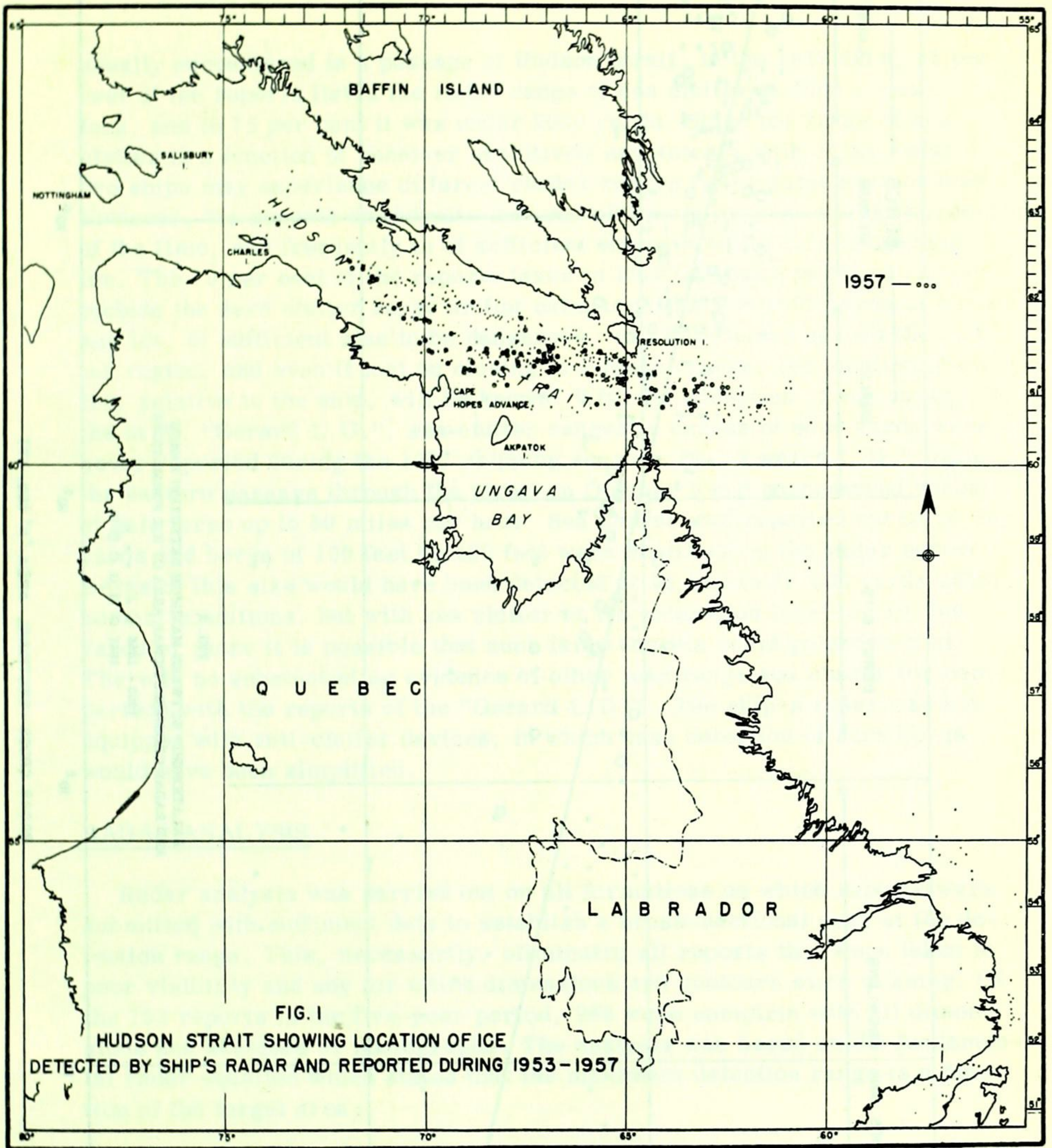


FIG. 1  
 HUDSON STRAIT SHOWING LOCATION OF ICE  
 DETECTED BY SHIP'S RADAR AND REPORTED DURING 1953-1957

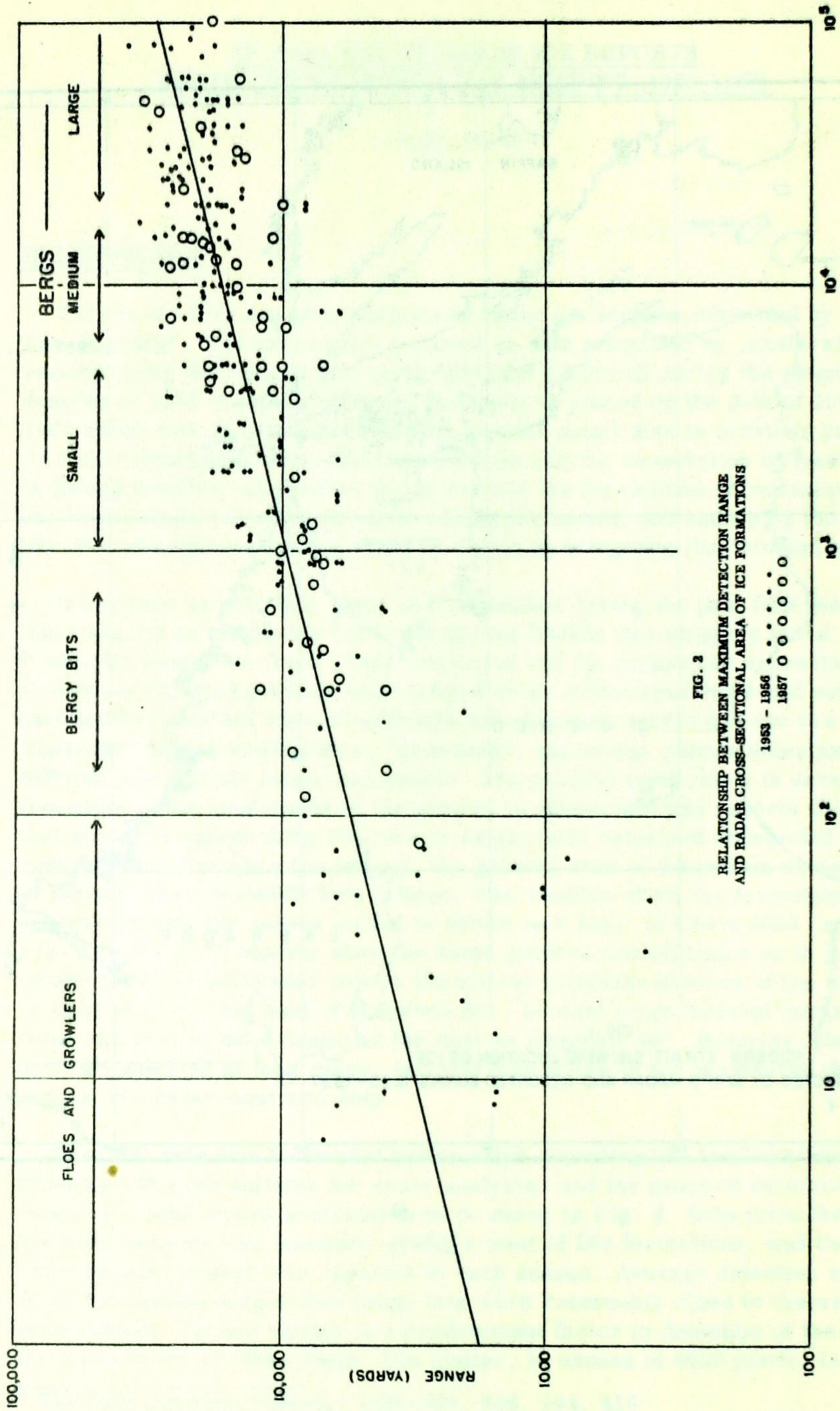


FIG. 2  
 RELATIONSHIP BETWEEN MAXIMUM DETECTION RANGE  
 AND RADAR CROSS-SECTIONAL AREA OF ICE FORMATIONS  
 1953 - 1956    •••••  
 1957    ○○○○○

usually encountered in a passage of Hudson Strait. In the 1957 data, 91 per cent of the reports listed the radar range of sea clutter at 4000 yards or less, and in 75 per cent it was under 2000 yards. Since the range of sea clutter is a function of receiver sensitivity and antenna gain of the radar, two ships may experience different clutter ranges in the same sea condition. However, the reports do indicate that sea clutter is present a large percentage of the time, and frequently is of sufficient strength to obscure dangerous ice. The 75 per cent of the reports taken in less than 2000 yards of clutter include the zero clutter range or flat calm condition. In 2000 yards of clutter, any ice, of sufficient size to be dangerous, will be detected beyond the clutter region, and even if lost on closing to a lesser range, the location of the ice, relative to the ship, will be known. With the exception of one voyage, by the M.V. "Gerard L.D.", sea-clutter ranges in excess of 4000 yards were never reported during the 1957 shipping season. The "Gerard L.D." made the eastern passage through the Strait on October 9 and encountered winds of gale force up to 50 miles per hour. Sea clutter was reported out to 16,000 yards and bergs of 100 feet by 400 feet were obscured on the radar screen. Bergs of this size would have been detected at 16,000 to 20,000 yards under normal conditions, but with sea clutter at the saturation level for 10,000 yards or more it is possible that such large targets could go undetected. There is no substantiating evidence of other long range sea clutter for comparison with the reports of the "Gerard L.D.". The ship's radar was not equipped with anti-clutter devices, in which case detection of such bergs would have been simplified.

#### RADAR ANALYSIS

Radar analysis was carried out on all formations on which reports were submitted with sufficient data to establish a cross-sectional area at the detection range. This, necessarily, eliminated all reports that were taken in poor visibility and any for which dimensions and contours were missing. Of the 752 reports in the five-year period, 265 were complete with all dimensions and sketches or photographs. The analysis was based on the fundamental radar equation which states that the maximum detection range is a function of the target area:

$$R^4 = K \times A,$$

where R is detection range and A is radar cross-sectional area of the target. K is a function of receiver sensitivity, antenna gain, power output, and frequency for a given radar, and the value may vary considerably for different makes and models. For the purposes of analysis, it was assumed that K was a constant for all radars, and that detection range was a direct function of radar cross section of the ice formation. The value of A is not necessarily that of the projected cross section of the ice, but some lesser value depen-

ding on the contours of the formation. For example, the value of A for a berg sloping away from the radar scanner is not equivalent to that of a sheer wall of ice of the same projected dimensions. However, ice formations are of such irregular shape that it is impossible to determine the effect of slope on the detection range. The detection range vs. radar cross-sectional area of each of the 265 formations is shown plotted in Fig. 2. There is considerable scatter but this is to be expected when the value of A must be estimated in many cases and the value of K is considered equal for all radars. The locus is the fourth-power curve from the radar equation, and while not necessarily the best fit it is theoretically of the correct slope. The section of the locus on which the average formation, of each ice category, will fall is also shown in Fig. 2. There is some overlapping in each case, and in view of the few reports no distinction can be made between floes and growlers.

The height of a ship's antenna has little bearing on the short radar ranges used in ice navigation. However, maximum radar range bears a direct relationship to antenna height, and consequently there is some variation between ballast and loaded conditions. From the reports of the 1956 and 1957 shipping seasons, the average antenna height was 56 feet for a loaded ship and 70 feet under ballast. The radar range equation can be used to calculate the difference in maximum range for the two conditions. A simplified equation for the distance to the radar horizon is:

$$0.8684 R = [2h]^{\frac{1}{2}},$$

where R is range, in nautical miles, and h is antenna height above sea level, in feet. From the above expression, the increase in detection range, for the average ship under ballast, is about 2500 yards. The lowest antenna height recorded, for a merchant ship navigating Hudson Strait, was 42 feet. This height is equivalent to a radar horizon of 18,000 yards and is considered more than ample for navigating ice-infested waters. Large bergs, detected at greater ranges, would not be fully illuminated by the radar beam but this has no bearing on safe navigation.

Anomalous propagation conditions have been found to exist in arctic waters and measurements have been taken in Hudson Strait. However, the changes in the refractive index are not considered sufficient to have any noticeable effect on the radar ranges used in ice navigation. Neither is there evidence to support the theory that pockets of cold air in the lee of an ice field may reduce radar ranges seriously.

#### GROWLERS IN SEA CLUTTER

The growler is recognized as the most dangerous ice formation that can be encountered in the navigation of ice-infested waters. It is usually of glacial



origin, being broken from large bergs, and is more prevalent in the vicinity of large bergs than elsewhere. The ice report forms require ice from 2 to 6 feet above the water level to be listed as "growlers", without restrictions on length and breadth. However, growlers are not to be confused with formations such as floebergs, that may be 6 feet high and 100 feet long. A typical growler is actually a miniature berg that projects a few feet out of the water or in some cases may be practically awash. To be certain of detection in sea clutter, a growler must have an echo amplitude greater than that of the clutter. The echo from a growler, at a given range, is a direct function of its radar cross section, whereas the echo from the sea clutter, at the same range, consists of the returns from all of the wave fronts in the area illuminated by the radar beam. Thus, the discrimination between growler echo and clutter echo has a direct relationship to the antenna beam width. From the ice reports, the antenna beam widths of the various radars varied from 1.6 to 3 degrees. Theoretically, assuming the radars are equivalent in other respects, the performance of the radar with the 1.6 degree antenna should be approximately four times better than that of the radar with the 3 degree antenna. Owing to variations in target area, radar equipment, and sea conditions it is not possible to say what improvement in growler detection range resulted from the use of radars with the narrower-beam antennas. A growler that is undetected at sea-clutter range normally has a cross-sectional area smaller than the combined areas of the wave fronts, and is obscured at the shorter ranges by the increased amplitude of the clutter. It is at this time that anti-clutter devices are extremely valuable. It is the function of the anti-clutter circuit to reduce the receiver gain immediately after the transmitter pulse and then increase it gradually, arriving at maximum sensitivity at maximum clutter range. At some finite range the growler echo is greater than the sea-clutter echo, and if the receiver is held below saturation level by an anti-clutter device, the growler can be detected. The only disadvantage of anti-clutter devices is that manual controls must be provided for various sea states, and these may be misadjusted to obscure targets that would normally be detected. Details on the detection of ice using anti-clutter devices were requested in the 1957 ice report forms, but only two ships reported that they were so equipped. It is assumed that anti-clutter devices are not standard equipment on the average merchant marine installation.

Analysis of all growlers reported in the five shipping seasons shows that the maximum radar cross section was 150 square feet, and some of the larger growlers could be reclassified as bergy bits. From Fig. 2, maximum detection range for a growler of this size is approximately 6000 yards. Under normal conditions, with sea clutter less than 2000 yards, any growler large enough to cause damage to a ship should be detected beyond the clutter region. However, to ensure safety in 2000 yards of sea clutter, continuous radar watch is a necessity, since a growler entering the clutter region undetected is almost certain to remain undetected. Fig. 3 is a photograph of

FIG. 3. 10' X 15' ICE

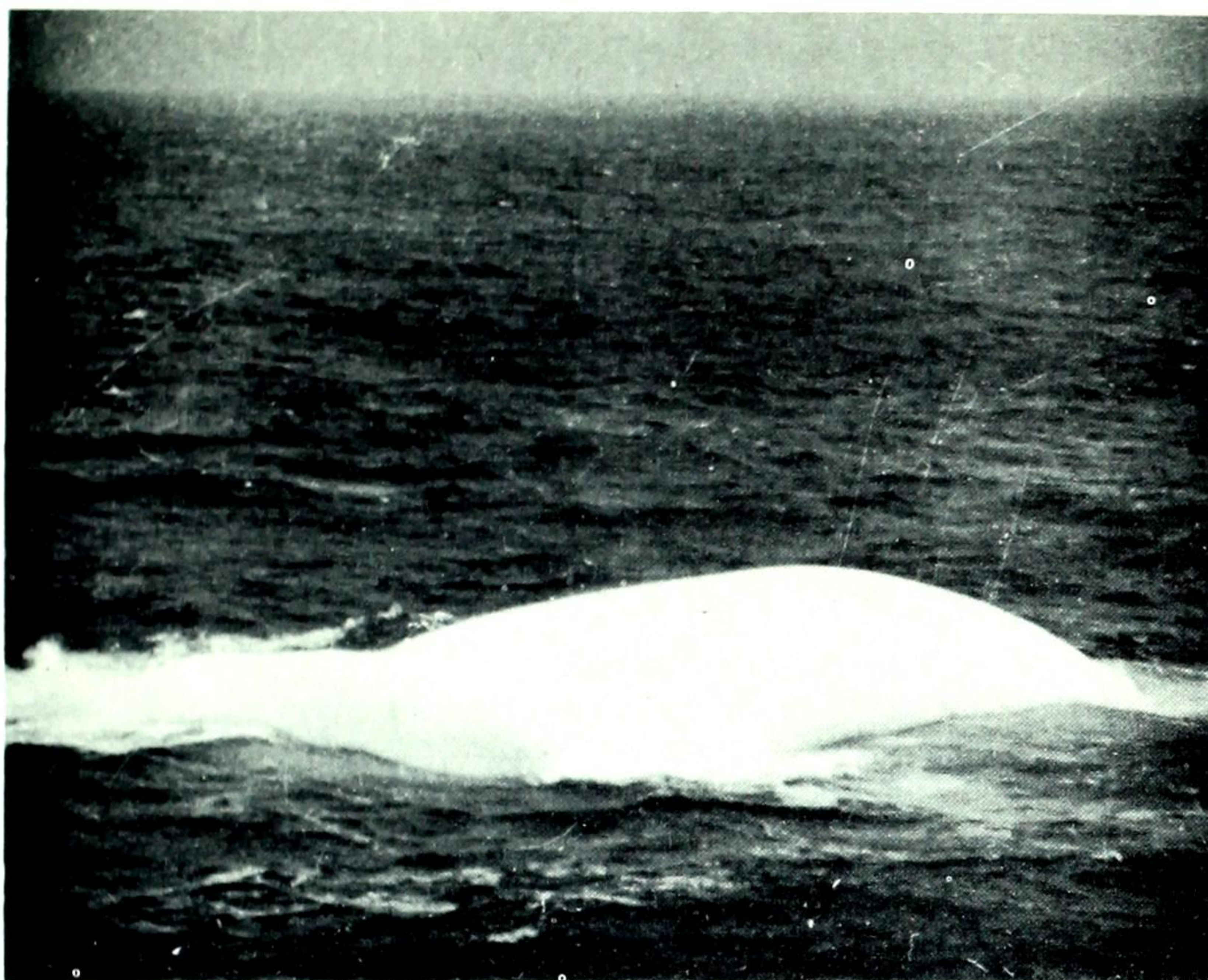


FIG. 3. 20-FOOT GROWLER  
UNDETECTED THROUGH SEA CLUTTER



FIG. 6. LOOSE FIELD ICE

a small growler that was not detected in 3000 yards of sea clutter. It projected 3 feet out of the water and was 20 feet long. A typical cross section of such a growler is shown in Fig. 4, assuming glacial ice 85 per cent sub-

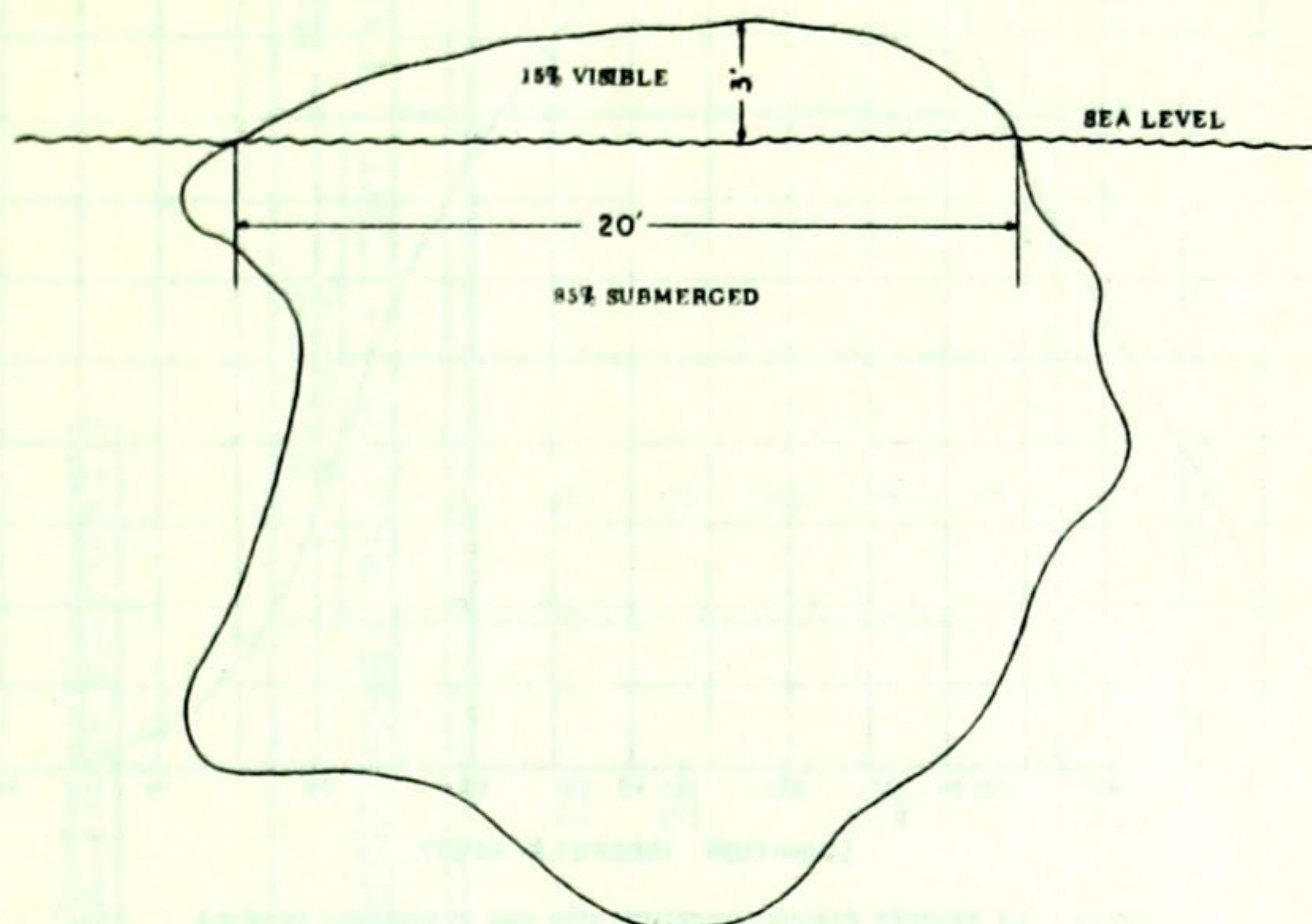


FIG. 4. TYPICAL CROSS SECTION OF A GROWLER

merged. For an average breadth of 15 feet, the volume of ice would be 5000 to 6000 cubic feet and the weight in excess of 100 tons. Growlers of this type are usually smoothly rounded by the action of the waves and consequently have very poor echoing properties. The detection range of this growler, in a calm sea, would be between 2000 and 3000 yards, and for a ship proceeding at ten knots this represents a warning time of 6 to 9 minutes. A growler of 100 tons is quite capable of inflicting severe damage to a ship. Of the 54 growlers reported, only 22 were detected by radar, and all contacts were made outside the clutter region or in calm water. There were no reports of growlers being detected within the clutter region, although several reports stated that contact was lost after the growler had entered the clutter region.

#### ICE CONCENTRATION IN HUDSON STRAIT

In the 1957 shipping season, the greatest concentration of ice was again located between the eastern approaches to Hudson Strait and Cape Hopes Advance. Fig. 5 is a graph of ice density vs. longitude for the shipping seasons of 1953 to 1957, inclusive. Data for this graph was taken from merchant vessels only. All reports from Canadian Government ships were omitted because they are engaged in coastal station supply and patrol work and are not normally concerned with traversing the Strait. From Fig. 5 hazardous ice conditions are seen to be confined to the area between longitude 74° west and longitude 59° west, a distance of 900 miles. Eighty per cent of the hazard, in this overall area, is centered about longitude 67° west, for approximately

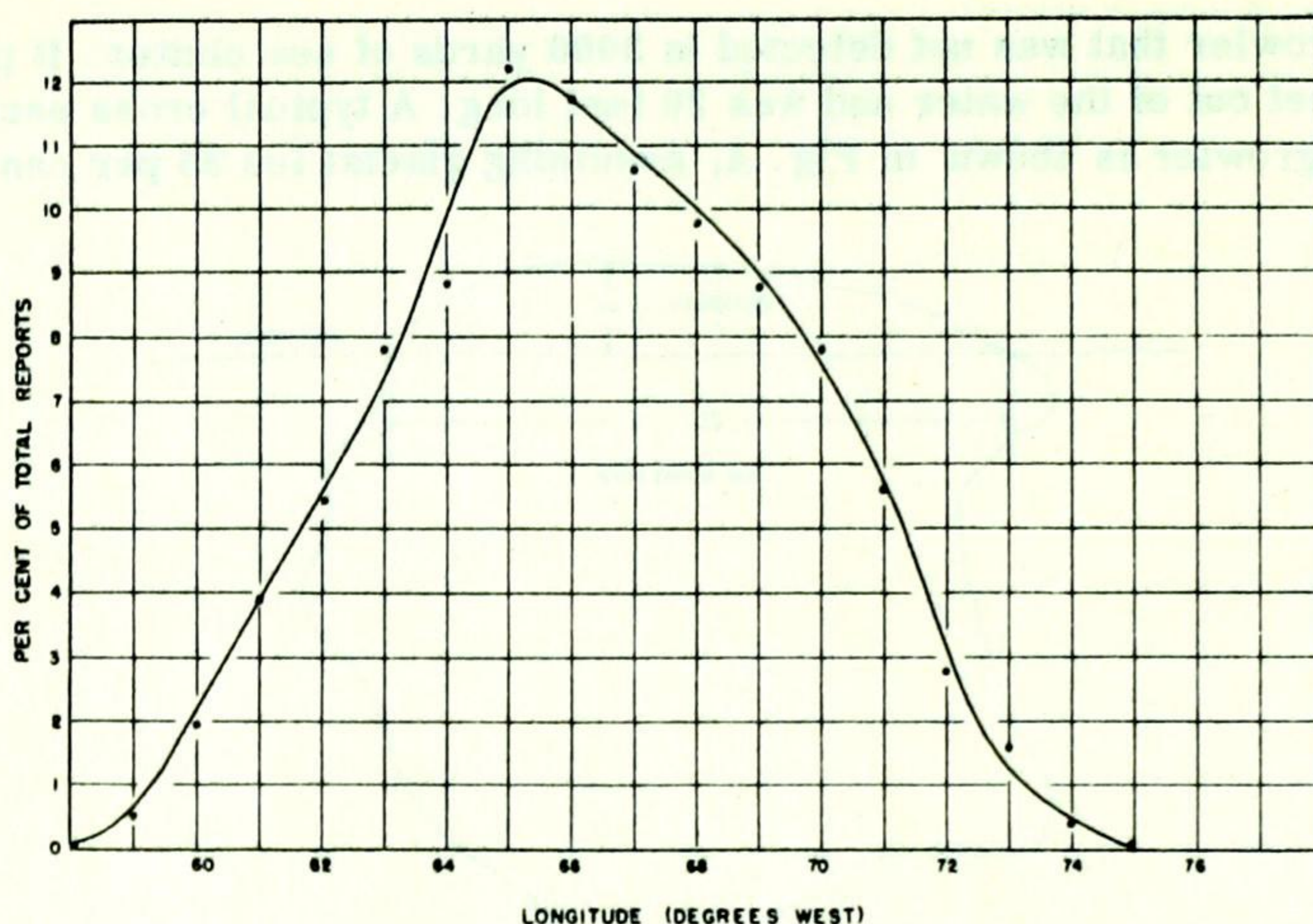


FIG. 3. ICE DENSITY VERSUS LONGITUDE FOR 1953-57 SHIPPING SEASONS

450 miles. This area of high ice concentration has appeared in the same general location for the past five years and may be considered the most dangerous section of the route to Port Churchill. Floes, both large and small, have appeared in the shipping lanes off Charles Island in the early part of the shipping season, but they have never seriously hampered navigation. They consist mostly of local ice, packed by the wind and tide, but sea ice moving out from Fox Channel is a contributing factor. Floes in this vicinity are rather exceptional and all vessels report ice-free shipping lanes from Charles Island to Port Churchill.

To assess the seasonal trend in the ice hazard, it is assumed that September 1 is the mid-point in the shipping season. A comparison of reports from ships navigating the Strait before and after September 1, and particularly reports from all ships that made two voyages during the season, indicates that 50 to 60 per cent less ice will be encountered in the latter half of the shipping season. The latest seasonal report of field ice or floes was on August 21, 1954, and the possibility of encountering this type of ice later in the season appears most unlikely.

A total of 752 ice formations were reported by 55 ships during the five seasons under survey. These are shown in Table I, under the seven ice classifications listed in the ice report forms. The large berg class predominated with 237 reports, and bergs of all sizes comprise 83 per cent of the total. This does not include the 148 reports taken in poor visibility and listed as radar targets. However, if classification of these reports were possible, it is assumed that the ratio would be the same. It is reasonable that berg formations should outnumber other types of ice because of their long detection ranges and the ease with which visible statistics can be taken. A berg, reported at 10 miles, may

TABLE I  
STATISTICAL DATA OF RADAR ICE DETECTION REPORTS

YEAR	SHIPS REPORTING	BERGS			BERGY BITS	GROWLERS	FLOES		RADAR TARGETS	TOTAL
		LARGE	MEDIUM	SMALL			HEAVY	LIGHT		
1953	13	55	41	24	7	12	2	0	0	141
1954	14	69	46	40	10	24	2	2	77	270
1955	8	47	36	5	4	5	3	2	19	121
1956	10	17	20	7	7	10	1	1	32	95
1957	10	49	39	7	7	3	0	0	20	125
TOTAL	55	237	182	83	35	54	8	5	148	752

be accompanied by bergy bits and growlers that would not be detected unless the ship closed to within a few thousand yards. Fig. 2 shows the detection ranges for all formations that were sufficiently complete for a radar plot, and 75 per cent of the total were reported at a detection range of 10,000 yards or less. This is considered to be the minimum detection range for small bergs.

Thirteen floes were reported, and all were detected at ranges greater than 4000 yards. Even in strong sea clutter the edge of a floe presents a sharp line of demarcation between ice and sea clutter, and consequently a packed floe is not considered a dangerous ice formation. "Field ice" or "pack ice" are terms commonly used to describe large areas of loosely packed ice that may be several miles in diameter. A number of these fields have been reported off Cape Hopes Advance and Resolution Island. They are usually formed early in the season, after the local ice break-up, and the ice is concentrated in huge fields or packs by the wind and tide. If sufficiently loose, the fields can be navigated and frequently lanes will be found that are reasonably clear of ice. Radar detection of field ice is not difficult since the ice has a tendency to dampen any sea clutter that may be present. When a ship is traversing an ice field the radar picture is similar to that for sea clutter but any large area of open water, such as a lane, can be easily distinguished. A photograph of loose ice is shown in Fig. 6. This picture was taken off Cape Hopes Advance by the master of the S.S. "Corcovado". Field ice of this type can be treacherous, particularly in changing weather conditions. Ice conditions can alter by the hour and it would be advisable for the master of a ship to know the extent of an ice field before entering a navigable lane. Since an ice field may extend for many miles, only prior survey by an icebreaker or an aircraft and ideal weather conditions can ensure against a ship being beset.

#### RADAR EQUIPMENT

In the five shipping seasons under survey, 55 sets of reports were submitted from 40 different ships. The names of the ships that reported in each season and the type of radar installation in use are shown in Table II. Table III is a list of the number of installations of each radar model with the associated power output. The "Akti Hill", in 1954, was the only vessel that submitted ice reports and was not equipped with radar. Twenty-one of the remaining 39 were equipped with Decca radar and the other 18 were divided among 6 manufacturers. The peak power output of all radars varied from 7 to 60 kilowatts, but the higher output is of little advantage in ice navigation where the shorter ranges are preferred. Antenna heights are listed in Table II, but in most cases it was not stated whether the given height was for loaded or ballast conditions. The only advantage of additional antenna height is in long-range detection of large bergs, and these are not considered dangerous to any ship navigating with radar. Several types of antennas were used with the various radar installations, and the beam widths varied from 1.6 to 3 degrees. It has been shown that improved discrimination with a narrow-beam antenna is an asset in detecting growlers in sea clutter, but there is not sufficient data available to determine the improvement in detection range that may be expected.

TABLE II

RADAR INSTALLATIONS

<u>1957</u>	<u>NAME OF SHIP</u>	<u>RADAR</u>	<u>MODEL</u>	<u>ANTENNA HEIGHT</u>		
				<u>BALLAST</u>	<u>NOT STATED</u>	<u>LOADED</u>
1	Cydonia	Decca	45		55	
2	Elstead	Decca	159		80	
3	Hallerwijk	Decca	159	56	-	42
4	Corcovado	RCA	CR-104A		87	
5	Clintonia	Decca	159		-	
6	Gerard L.D.	Sperry	MK2		75	
7	Camellia	Decca	12		50	
8	Gardenia	Decca	159	73	-	61
9	North Anglia	Decca	12	64	-	50
10	Fernglen	Decca	159		70	
<u>1956</u>						
1	North Anglia	Decca	12	64	-	50
2	Ittersum	RCA	CR-103		54	
3	Sylvaplana	RCA	CR-104		62	
4	La Sierra	Decca	159		65	
5	Irish Hazel	Marconi	MK-4		75	
6	Svanaas	Kelvin Hughes	2C		45	
7	Irish Elm	Marconi	MK-4		80	
8	Thistlemuir	Decca	45		56	
9	Fernland	Sperry	MK-2	86	-	75
10	Ranger	CAL-268	B		70	
<u>1955</u>						
1	Warkworth	Kelvin Hughes	1A		52	
2	North Anglia	Decca	12		50	
3	Irish Cedar	Marconi	MK-3		73	
4	Thistlemuir	Decca	159	65	-	56
5	Essex Trader	Decca	159		70	
6	Ranger	CAL-268	B		70	
7	Irish Elm	Marconi	MK-4		80	
8	La Hacienda	Decca	12		80	
<u>1954</u>						
1	Cairnavon	Decca	12		-	
2	C.D. Howe	Decca	12		-	
3	d' Iberville	Decca	12		75	

ANTENNA HEIGHT

<u>1954</u>	<u>NAME OF SHIP</u>	<u>RADAR</u>	<u>MODEL</u>	<u>BALLAST</u>	<u>NOT STATED</u>	<u>LOADED</u>
4	La Hacienda	Decca	12		74	
5	St. John	Decca	12		50	
6	Ravenshoe	Decca	12		70	
7	La Estancia	Decca	12		70	
8	Thistlemuir	Decca	159	65	-	56
9	Anna C	Decca	12		85	
10	Akti Hill	No Radar Installed				
11	Begonia	Decca	159		-	
12	N.B. McLean	CAL-268	-		60	
13	Ramillies	Decca	159		65	
14	Arundo	RCA	CR-103		80	
<u>1953</u>						
1	San Guisto	Decca	12		-	
2	C.D. Howe	Decca	12		-	
3	Warkworth	Kelvin Hughes	1A		-	
4	Arundo	RCA	CR-103		80	
5	Ranger	CAL-268	B		70	
6	Marine Fortune	Decca	159		-	
7	Begonia	Decca	159		-	
8	Italsole	Raytheon	EX-1197		-	
9	Irish Hazel	Marconi	MK-4		75	
10	North Anglia	Decca	12	64	-	50
11	Cairnavon	Decca	12		-	
12	Italterra	Kelvin Hughes	2A		-	
13	LaCumbre	CAL-268	B		-	

TABLE III

<u>RADAR</u>	<u>MODEL</u>	<u>NUMBER OF INSTALLATIONS</u>	<u>PEAK POWER OUTPUT (KW)</u>
Decca	12	9	7
Decca	45	2	20
Decca	159	10	7
RCA	CR-103	2	30
RCA	CR-104	2	40
Marconi	MK-3	2	40
Marconi	MK-4	3	50
CAL-268	B	3	30
Sperry	2	2	30
Raytheon	EX-1197	1	20
Kelvin Hughes	2C	3	60
No Radar	-	1	-
		<u>Total</u>	<u>40</u>



## WEATHER SUMMARY

### HUDSON BAY ROUTE 1958

The winter months were mild along the Hudson Bay route in 1958, with mean temperatures averaging about ten degrees above normal in January and March, and five degrees above normal in February.

There were deficiencies ranging to four degrees in April and again in June, while May temperatures were close to normal.

July mean temperatures were close to normal all along the route with excesses of one degree in Hudson Strait and deficiencies of one or two degrees in Hudson Bay. In August there were excesses of two to four degrees at each end of the Strait, but a four degree deficiency at Cape Hopes Advance. All reporting stations on Hudson Bay reported August mean temperatures normal to two degrees below normal. In September all stations on the route reported excesses of mean temperature with the greatest anomalies in the northern section of Hudson Bay and the eastern end of the Straits where Coral Harbour and Nottingham Island reported mean temperatures four degrees above normal. In October mean temperatures were near normal in Hudson Strait. Stations along the west side of Hudson Bay reported excesses of two degrees, but Coral Harbour experienced an October mean temperature seven degrees below normal and Port Harrison one of four degrees below normal.

Precipitation was above normal along the route in July. Churchill was the only exception and reported a fifty per cent deficiency, but elsewhere these excesses ranging to one hundred per cent.

In August precipitation continued to be above normal only in the northern part of Hudson Bay, while there were deficiencies averaging forty per cent in the central and southern sections of the Bay, and fifty per cent in Hudson Strait. The distribution of precipitation was similar in September with excesses of ten to ninety per cent being experienced at Nottingham Island, Coral Harbour and Chesterfield, while there were deficiencies ranging to eighty per cent in Hudson Strait and to thirty per cent at Churchill and Port Harrison. In October precipitation was below normal over the whole route, except for a sixty per cent excess at Resolution Island. Aside from this, deficiencies over the route ranged to seventy per cent, averaging forty per cent.

RESOLUTION ISLAND METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tenthhs of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
July												
1	1011.0	1002.7	38	33	NW	8 NNW	40	.30	2	3	10	10
2	1006.2	1006.4	39	34	NNW	38 NE	36	.15	3	1/2	10	10
3	1010.6	1018.3	38	35	NNE	22 NNW	25	.28	1/2	4	10	10
4	1021.7	1020.0	49	35	NNW	28 NW	32		7	8	10	8
5	1022.3	1021.6	52	40	NNW	24 SW	12		12	12	3	0
6	1017.3	1016.0	41	30	SW	5 SW	5		25	15	3	5
7	1012.9	1012.4	43	34	SW	2 SW	8		10	15	0	3
8	1009.4	1005.5	50	36	SW	5 E	10		15	12	3	2
9	1003.8	1011.3	39	35	SE	10 ESE	18	T	10	12	8	0
10	1013.2	1014.7	40	34	SW	15 SE	8		15	12	7	7
11	1004.3	998.1	40	37	NE	20 NE	20	.10	10	7	8	10
12	997.2	1005.2	39	35	NE	4 NE	8		1/8	10	10	6
13	1008.9	1009.2	45	36	SW	5 W	6		15	10	5	9
14	1012.2	1005.6	43	33	SW	2 NE	22	.37	2	6	0	10
15	992.3	998.4	41	34	E	30 SW	10	.05	1	4	10	9
16	1004.4	1010.1	39	34	SE	7 SE	8		15	12	4	0
17	1010.2	1007.5	49	35	SE	5 SE	2		15	15	1	7
18	1000.9	995.9	41	38	NNW	8 NW	8	.54	10	3	10	10
19	1001.9	1008.3	39	34	SE	5 NE	20	.29	1/2	1	10	10
20	1015.4	1019.2	43	35	NE	25 NE	25	T	1/8	8	10	10
21	1019.5	1017.8	46	39	NNE	20 NE	5		10	4	10	8
22	1014.0	1012.1	51	41	NE	5 NE	10		10	15	7	2
23	1009.5	1011.4	38	35	NNE	20 NNE	23	T	3	1/2	10	10
24	1015.3	1019.3	42	35	NE	35 NW	6		5	7	9	4
25	1021.2	1021.9	39	34	NNE	5 NE	9	.09	10	10	2	0
26	1022.0	1020.1	44	35	NE	8 NE	5		1/4	8	2	2
27	1014.7	1014.2	46	40	NE	8 NE	20	.09	10	10	3	10
28	1012.8	1008.6	43	38	NE	20 NE	25	.25	1/2	8	10	10
29	1004.3	1002.5	41	39	NNE	20 NNE	22	T	5	1/2	4	6
30	999.8	999.5	40	39	NNE	20 NE	10	.06	2	1/8	6	10
31	1000.1	1001.7	41	38	NNE	15 NE	18	.10	1/4	1/8	10	10
August												
1	1004.5	1007.0	41	39	NNE	16 NNE	16		1/2	1/8	10	-
2	1006.8	1008.0	40	39	NE	26 NE	30	T	1/4	1/8	10	9
3	1009.8	1011.2	41	39	NE	30 NE	30	T	45	3	10	8
4	--	1014.8	44	40	NNE	24 NNE	16		8	8	10	10
5	1015.4	1017.1	41	39	N	09 N	16	.04	2	1/2	8	10
6	1016.4	1018.3	42	37	NNE	26 NNE	24		1	8	10	9
7	1017.2	1017.1	41	37	NE	16 NNE	16		1/8	2	10	10
8	--	1015.4	43	40	--	- NNE	22		-	10	-	7
9	1012.8	1011.5	40	39	N	17 NNE	12		10	1/2	6	10
10	1010.9	1010.3	41	39	NE	10 NE	10	.12	2	5	10	10
11	--	1012.0	41	39	NNE	09 NE	07	T	5	1/4	10	9
12	1014.3	1015.1	39	36	NE	17 NE	16		0	7	10	10
13	--	1007.5	41	36	--	- NE	26		-	5	-	10
14	1004.7	--	40	38	ENE	30 --	-	.13	1	-	10	-
15	1016.2	1004.9	41	38	NNE	17 NE	22	.06	1	1/4	9	-
16	1004.8	1004.9	42	40	NNE	20 NE	22	.04	1/2	1/4	10	10
17	1007.2	1016.3	45	41	NNW	17 SW	03	.03	1/2	1/4	10	9
18	--	1004.4	40	37	--	- SW	03		-	1/4	-	10
19	--	1017.3	38	36	--	- ESE	16		-	1/4	8	9
20	1012.4	1007.7	41	36	NE	22 N	17	.01	1	5	9	8
21	1007.5	1009.5	42	40	NW	17 N	22	.03	5	1/2	10	8
22	1013.2	1012.2	42	40	NNE	31 NNE	35	.01	4	4	8	10
23	1010.4	1012.7	43	40	N	35 N	30	.32	1/2	5	9	10
24	1012.1	--	40	39	NE	35 --	-		5	-	8	-

RESOLUTION ISLAND METEOROLOGICAL REPORT - 1958

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	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm			am	pm	0730	1930
August												
25	1019.4	1015.6	41	39	N	17 N	16	T	1	1/8	8	10
26	1010.1	1006.7	-	-	NE	26 NE	30	.13	6	3	9	8
27	1006.0	1004.3	42	39	NE	04 Calm	0	.02	1/4	10	8	9
28	1006.6	1011.3	44	40	NNE	05 N	05	.06	5	8	10	8
29	1011.2	--	-	-	NW	01 --	-		1/4	-	9	-
30	1013.6	1013.0	43	34	SW	04 S	04	T	1/2	5	9	10
31	1013.8	1013.5	39	35	SW	10 Calm	0		4	4	8	10
September												
1	1011.4	--	40	37	NNE	13 --	-	.03	1/2	-	8	-
2	1013.4	--	41	34	NW	12 --	-		15	-	8	-
3	1018.9	1018.0	38	34	SW	02 SW	02	.07	15	15	7	0
4	1011.6	1009.4	38	36	NNE	09 NE	30	.03	200	4	5	10
5	1009.6	1011.6	39	37	NE	30 NW	26	.27	2	4	10	10
6	1011.9	1013.4	38	36	WNW	13 SW	09	T	8	25	9	1
7	1015.2	--	39	32	SW	07 --	-		1	-	10	-
8	1019.0	1018.7	35	33	NE	03 NE	04		1/8	8	10	8
9	1016.3	1014.7	39	35	NW	04 NW	07		10	10	10	8
10	1016.2	1016.1	36	34	N	04 SW	13		25	1	9	10
11	1017.7	1016.5	37	33	SW	04 SW	09		1 1/2	25	10	2
12	1012.4	1008.1	38	31	SW	03 SW	09		1/2	15	10	6
13	--	1005.8	40	31	--	- Calm	0		-	15	-	0
14	1007.5	1009.4	39	35	SW	10 SW	03		15	10	8	4
15	1007.4	--	39	34	SW	04 --	-	T	1/2	-	9	-
16	1006.3	--	-	-	SW	07 --	-		10	-	7	-
17	1007.3	1005.3	38	36	SW	10 WSW	30		10	8	8	6
18	1008.2	1010.1	36	34	SW	29 SW	22		3	5	10	8
19	1011.2	1009.9	-	-	SW	17 NE	04		1/4	10	9	10
20	1004.3	--	37	36	SSE	07 --	-	.05	8	-	8	-
21	1007.9	1013.9	40	35	NW	09 NE	13		11	15	8	9
22	1009.3	998.9	39	34	ENE	22 NE	22	.09	1/2	1/4	9	9
23	992.4	993.1	39	36	SE	09 SE	09	.10	8	5	10	10
24	999.3	1002.7	37	35	SW	04 Calm	0		8	1/8	7	9
25	1002.0	--	37	34	Calm	0 --	-		1/4	-	10	-
26	987.5	992.5	40	37	NNE	22 NW	25	.08	1/2	4	9	10
27	998.0	--	38	33	W	09 SW	17		1/8	15	8	2
28	1004.1	1006.5	38	32	SW	17 SW	16		15	10	6	7
29	1007.4	1008.1	39	32	SW	09 SW	13		10	10	8	4
30	1008.4	1010.5	33	32	SW	26 WSW	09	T	10	8	9	8
October												
1	997.1	988.3	38	31	NE	43 E	13	.21	1/4	2	10	10
2	977.3	--	35	33	SE	52 --	-	.06	1/4	-	9	-
3	999.1	1004.4	-	-	SW	35 SSW	26		5	10	6	2
4	--	994.5	33	28	--	- NE	22	.10	1	1/2	-	10
5	--	972.8	35	30	--	- NNW	35	.36	-	1/4	-	10
6	976.8	983.9	32	29	SW	30 SW	22	.25	1/4	3	10	10
7	989.2	991.4	31	28	WSW	43 SW	61	.05	10	10	3	8
8	998.6	1011.2	32	30	WSW	26 SW	26	.05	10	3	10	10
9	1016.3	1016.9	32	29	SW	09 SW	04		10	15	6	10
10	1015.6	1016.0	32	27	Calm	0 W	07		15	8	6	10
11	1015.6	1014.4	32	27	SW	04 Calm	0		15	15	8	0
12	1013.9	1012.7	32	25	W	04 W	07		8	10	9	8
13	1012.5	1014.7	28	24	WNW	09 SW	16	T	10	10	6	8
14	1013.9	1012.5	30	25	WSW	09 Calm	0	T	10	10	7	9
15	1013.6	1014.2	28	25	NW	04 Calm	0	.30	8	15	8	8
16	1010.9	1007.0	30	27	NNE	04 NW	05		15	15	6	2
17	--	1007.0	30	24	--	- NW	02	T	-	15	-	2

RESOLUTION ISLAND METEOROLOGICAL REPORT - 1958

<u>Date</u>	<u>Barometer</u>		<u>Temp.</u>		<u>Wind</u>			<u>Precip.</u> Total	<u>Vis.</u>		<u>Cloud Tenths of Sky Cover</u>		
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730	am 1930	pm		am	pm	0730	1930	
October													
18	1011.1	1013.3	31	26	E	09	NE	04	.12	8	5	5	8
19	1012.8	1012.3	30	26	WNW	04	NNW	13	.10	15	2	7	10
20	1014.2	--	25	22	W	09	--	-		8	-	4	-
21	1019.0	1020.4	28	23	SW	35	WSW	35		10	10	6	7
22	1014.5	--	28	25	WSW	22	--	-	T	10	-	10	-
23	1020.8	1026.4	30	27	SW	13	SW	13		15	15	9	0
24	1028.2	1025.9	33	31	SW	12	Calm	0		15	10	8	9
25	1024.0	1018.3	31	30	NW	04	SW	07		10	10	7	2
26	1012.7	1007.3	32	30	SW	12	WSW	35		10	10	2	6
27	1010.2	1016.7	27	24	SW	17	SW	13	.06	10	10	9	6
28	1015.2	1010.6	-	-	SW	26	SW	22	T	10	8	8	8
29	--	--	31	26	--	-	--	-	T	-	-	-	-
30	1005.7	1003.4	26	23	Calm	0	W	04	.04	10	10	7	2
31	--	1015.7	30	24	NNE	30	NE	25		$\frac{1}{2}$	15	8	8

CAPE HOPES ADVANCE METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip. Total	Vis.		Cloud Tenths of Sky Cover		
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730	am	1930 pm		am	pm	0730	1930	
July													
1	1008.3	999.9	36	29	E	15	NE	25	.69	$\frac{1}{2}$	8	10	10
2	1006.3	1010.1	36	30	NE	1.5	N	10	.43	8	6	10	10
3	1010.5	1017.3	35	31	NE	1.2	E	10	.19	0	0	10	10
4	1024.3	1024.7	40	30	SE	05	NW	15		10	15	10	7
5	1025.3	1023.7	43	33	WNW	10	W	20		15	15	2	0
6	1020.4	1017.1	44	36	W	25	W	25		15	15	5	3
7	1015.6	1010.0	56	37	W	15	S	06		15	15	1	8
8	1005.5	1001.4	71	49	SW	05	S	10		15	15	4	4
9	1005.6	1009.6	56	38	W	20	SW	12		15	15	2	4
10	1013.6	1009.8	59	36	SW	10	S	15	.01	15	15	2	6
11	997.7	995.7	61	36	S	18	NW	10	.27	15	4	10	10
12	998.0	1002.0	53	35	SW	08	W	10		15	15	4	5
13	1005.4	1008.4	55	40	S	10	Calm	0	.15	15	15	10	0
14	1011.2	994.7	54	36	SW	10	SE	30	.69	15	0	3	10
15	987.9	999.7	52	36	SSW	20	NW	10		15	15	6	6
16	1004.7	1006.9	53	39	SW	10	W	12		15	15	6	8
17	1007.6	1006.6	52	40	W	10	Calm	0		15	15	4	8
18	1003.2	998.5	44	36	W	15	NW	20	.02	15	8	4	10
19	999.1	1005.0	47	35	SW	5	SE	12		3	15	10	4
20	1011.3	1015.0	54	34	SE	12	SE	15		15	15	7	4
21	1016.2	1013.9	53	37	SE	08	S	10		15	15	9	6
22	1010.9	1008.5	50	38	S	10	SE	15		15	15	3	3
23	1007.1	1010.7	40	34	E	20	NE	12		8	10	9	10
24	1014.7	1018.4	45	32	NE	12	E	08		0	15	10	0
25	1019.7	1018.7	50	35	SE	10	E	10		15	15	0	0
26	1017.1	1015.2	55	35	E	10	SE	15		15	15	0	0
27	1012.0	1011.0	66	40	SE	12	SW	05	.05	15	15	10	0
28	1009.5	1005.2	57	43	Calm	0	Calm	0	.12	10	6	10	10
29	997.8	995.1	55	41	SE	26	SE	25	.02	1	$\frac{1}{2}$	7	10
30	997.8	999.9	48	38	SE	05	NW	04	T	0	0	10	10
31	1001.7	1005.0	41	36	W	10	W	05	.77	0	0	10	10
August													
1	1006.6	1005.1	51	38	W	08	NE	12	.02	0	0	10	10
2	1002.9	1003.6	41	36	NE	30	NE	25		0	0	10	10
3	1005.4	1007.3	41	35	E	20	E	25	.08	0	0	10	10
4	1008.7	1013.9	42	35	NE	30	E	20	.01	$\frac{3}{8}$	8	10	10
5	1016.8	1017.9	41	36	NE	5	E	08	.04	10	0	10	10
6	1017.8	1018.1	39	34	E	12	E	12	.04	10	10	10	10
7	1016.5	1016.2	39	35	E	12	E	07		5	0	10	10
8	1014.3	1013.0	40	35	E	15	E	15		0	8	10	10
9	1011.0	1010.7	43	35	E	12	SE	10	T	10	10	1	2
10	1010.4	1010.9	41	34	E	9	E	6		0	10	10	10
11	1010.0	1011.6	44	36	Calm	0	E	10		10	0	10	10
12	1011.5	1011.0	42	33	E	10	SE	20		0	0	10	10
13	1008.5	1002.7	42	32	ESE	20	SE	20	.06	15	0	8	10
14	1000.9	1001.9	40	35	E	30	E	10	.10	3	0	10	10
15	999.3	998.9	41	35	SE	30	SE	35		10	0	10	10
16	999.0	1005.6	39	34	SE	30	E	20	.15	0	0	10	10
17	1010.5	1013.2	49	34	E	08	NW	10	.02	0	10	10	9
18	1014.0	1014.5	56	38	W	04	S	12		15	10	5	6
19	1015.2	1012.3	51	37	SE	10	SE	20		10	10	9	4
20	1009.8	1010.1	39	32	SE	30	E	25	.01	0	0	10	10
21	1009.3	1011.1	40	34	E	15	NE	15	.16	0	8	10	10
22	1009.4	1010.6	39	35	NE	25	E	34	.12	1	0	10	10
23	1008.8	1012.7	37	34	NE	35	E	28	.17	0	2	10	10
24	1016.1	1021.2	46	33	W	10	Calm	0		10	15	10	1

CAPE HOPES ADVANCE METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tenths of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
August												
25	1020.2	1013.1	39	33	E	10 E	25	.03	10	0	10	10
26	1005.2	1003.2	40	34	E	30 E	15	.26	2	0	10	10
27	1003.9	1004.4	49	33	SW	08 E	12		15	15	7	4
28	1007.8	1010.2	50	36	E	02 SE	20	.04	10	10	8	10
29	1010.8	1012.6	46	35	S	10 Calm	0	.03	10	15	10	9
30	1013.5	1014.9	46	35	E	02 Calm	0		0	10	10	9
31	1014.1	1012.5	43	35	SW	15 NW	10	.02	15	15	2	0
September												
1	1011.2	1014.8	40	34	E	12 NE	10		5	10	10	9
2	1015.5	1017.1	42	35	W	12 NW	15		5	15	10	1
3	1019.2	1015.5	46	35	NE	02 SE	20		15	15	4	0
4	1008.3	1006.5	41	34	SE	20 E	30	.06	15	6	10	10
5	1008.0	1012.4	38	33	E	35 E	25	.03	1	6	10	10
6	1014.7	1015.3	44	33	NW	08 WNW	15		15	15	3	3
7	1016.2	1017.1	42	35	WNW	15 NW	15		15	10	6	2
8	1018.3	1018.4	40	32	NW	15 S	5		10	0	10	10
9	1017.1	1016.1	41	30	S	4 NW	6	.06	0	2	10	10
10	1016.3	1018.6	41	33	NNW	20 NW	20		2	8	10	10
11	1019.6	1016.0	44	33	NW	6 S	18		15	15	1	4
12	1008.6	1003.8	44	33	SE	25 SE	25		15	10	9	10
13	1002.9	1008.0	38	32	E	25 E	10		10	10	10	10
14	1010.1	1010.9	42	34	WNW	18 NW	15		15	8	1	10
15	1007.6	1008.8	42	34	NW	25 NW	22		10	15	2	1
16	1013.2	1014.5	41	33	NW	35 NNW	25	T	15	8	7	10
17	1012.2	1011.1	44	36	NW	35 NW	25	T	10	10	10	9
18	1013.0	1015.5	43	36	NNW	45 NW	12		10	15	10	10
19	1013.5	1006.7	46	34	W	12 SE	20		15	15	4	8
20	1002.8	1003.6	50	43	SW	15 W	10		12	10	7	10
21	1008.8	1010.4	43	36	WNW	8 SE	20		2	8	10	10
22	1001.7	992.5	48	35	SE	40 SE	20	.03	2	1	10	10
23	992.1	992.3	46	38	SW	15 W	11	.06	15	10	7	8
24	996.9	1000.2	45	35	W	15 S	4	.03	10	15	10	1
25	1001.5	992.7	39	32	E	10 E	25		1	0	9	10
26	990.8	997.0	37	33	E	20 NW	20	T	8	8	10	10
27	1000.0	1003.8	36	32	NW	20 NW	25		10	10	10	7
28	1005.9	1007.5	35	30	NW	16 NW	15	T	10	10	10	10
29	1009.1	1009.4	34	24	NW	18 NW	10		10	15	9	10
30	1010.4	1008.5	39	29	NW	10 Calm	0		10	10	10	10
October												
1	1011.2	976.5	38	30	E	12 SE	26	.10	5	9	10	10
2	973.9	989.9	-	28	W	33 NW	43	T	10	6	7	10
3	1001.1	1004.9	31	23	NW	30 SE	04		10	6	5	10
4	--	994.9	33	24	--	- E	22		-	8	-	10
5	--	987.6	29	25	--	- N	35	.36	-	1	-	10
6	985.0	991.8	30	24	N	52 N	35	.01	$\frac{1}{2}$	10	10	2
7	994.4	997.4	-	-	NW	26 NW	39	T	8	2	5	10
8	1005.5	1014.2	31	23	NW	39 SW	30	T	4	8	10	10
9	1018.8	1018.2	33	27	NW	26 NW	17	T	10	10	8	10
10	1017.0	1017.8	32	26	NW	17 NNW	22		10	15	8	10
11	1017.3	1016.3	34	26	NW	23 NW	22		10	2	8	8
12	1016.8	1017.6	32	22	NNW	26 NW	35	T	2	10	10	8
13	1018.2	1018.1	-	-	NW	35 NW	35		10	8	6	8
14	1015.8	1012.5	27	21	SW	07 SSW	04	T	10	5	7	10
15	1013.6	1014.2	28	22	NW	13 NW	04		15	10	8	8
16	1009.3	1004.5	32	31	SE	03 ESE	26	T	8	10	10	8
17	1003.6	1007.0	35	23	E	10 SE	04		10	15	6	4

CAPE HOPES ADVANCE METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tenth of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
1958 October												
18	1007.5	1011.1	31	22	SE	09 SE	07	.15	$\frac{1}{4}$	10	9	10
19	1014.1	1016.0	32	25	E	17 NW	22	.04	10	10	6	10
20	1019.1	--	28	21	NW	22 --	-	T	10	-	10	-
21	1025.2	1025.6	28	21	NW	26 WNW	15		8	10	8	9
22	1014.8	1012.9	31	19	NW	07 NW	19	T	10	8	5	10
23	1023.1	1030.2	29	24	NW	26 NW	26	T	10	10	10	8
24	1030.8	--	32	25	NW	13 --	-		10	-	5	-
25	1026.7	1021.1	33	25	NW	26 NW	17	.01	5	15	10	0
26	1016.0	1012.4	33	25	WNW	19 NW	35		10	8	10	8
27	1015.6	1021.5	29	20	NW	39 NW	22	T	4	8	10	10
28	1015.5	1011.3	33	20	W	10 NW	16	.02	10	10	7	8
29	--	--	32	24	--	--	--		--	--	--	--
30	1007.4	1004.5	29	18	N	10 SE	04	.07	$\frac{1}{8}$	3	9	10
31	999.8	--	30	20	NNW	17 --	-	.04	5	-	10	-

NOTTINGHAM ISLAND METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip. Total	Vis.		Cloud Tents of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	am		pm	0730	1930	
July												
1	1015.6	1017.7	55	40	NE	15 E	10		15	25	3	3
2	1017.7	1019.8	54	44	NE	10 NE	12	T	25	25	8	4
3	1019.4	1023.3	55	41	NE	10 NE	18		25	25	3	4
4	1028.3	1030.3	60	41	Calm	0 Calm	0		25	25	2	4
5	1029.8	1026.8	51	38	Calm	0 W	5		25	25	1	3
6	1023.8	1020.1	46	34	W	5 W	8	T	25	25	4	3
7	1013.2	1005.7	39	37	SW	27 SW	15	.92	10	1	9	10
8	996.6	995.0	37	35	SSW	14 SW	10	.21	$\frac{1}{2}$	0	10	10
9	1001.8	1006.5	39	32	SW	14 SW	16	.06	10	15	7	9
10	1007.9	1003.8	42	32	SSW	8 SE	10	.48	3	10	10	7
11	989.5	994.0	41	34	Calm	0 SW	15		0	0	10	10
12	994.6	996.5	38	33	SW	12 SW	20	T	0	$\frac{1}{2}$	10	10
13	1000.3	1005.9	41	34	SWS	10 SW	15	T	10	15	10	7
14	1004.0	991.9	50	36	S	25 NE	16	T	10	10	7	10
15	991.3	996.5	42	33	NW	12 SW	14	.06	$\frac{1}{8}$	5	10	9
16	998.4	1001.5	42	34	SW	24 SW	12	.07	1	15	10	8
17	1002.4	1004.9	42	35	SW	18 NW	6	.04	2	10	10	7
18	1008.4	1009.6	52	34	N	10 N	16		15	15	6	2
19	1004.7	1003.8	50	35	NW	15 NE	16		15	10	10	10
20	1007.1	1008.9	45	33	NE	18 NE	16	T	15	10	7	9
21	1010.8	1009.7	49	38	E	12 SE	4	.16	0	15	10	10
22	1007.3	1007.2	45	38	E	12 NE	18	.44	2	15	10	7
23	1011.2	1014.4	58	38	NE	16 Calm	0		25	15	3	0
24	1015.7	1016.2	57	37	Calm	0 E	6		15	25	0	0
25	1016.5	1014.0	57	38	E	10 E	14		25	15	2	10
26	1011.6	1009.4	58	43	NE	20 NE	18	T	15	15	6	7
27	1007.7	1009.8	46	43	SE	7 S	12	T	$\frac{5}{8}$	$\frac{1}{2}$	10	10
28	1008.8	1004.5	60	41	NE	10 NE	14	.28	15	15	3	10
29	991.9	986.7	51	45	NE	18 E	14	.45	0	1	10	10
30	996.1	1001.0	49	41	S	16 S	8		0	0	10	10
31	1002.3	1004.4	51	41	S	12 SE	11		$\frac{1}{2}$	15	10	8
August												
1	1004.0	1000.7	59	41	SE	12 E	22		25	25	1	1
2	998.7	999.2	49	40	NE	18 E	16	T	25	10	0	9
3	1002.3	1007.1	47	38	NE	20 NE	20		$\frac{1}{2}$	20	10	4
4	1011.5	1014.6	50	38	ENE	22 E	20		15	10	2	6
5	1018.1	1018.7	54	40	ENE	16 E	12		15	15	0	0
6	1019.6	1019.2	57	44	NE	6 ENE	12		15	15	6	0
7	1019.1	1017.9	60	46	NE	10 SW	5		15	15	4	1
8	1017.1	1016.0	57	40	Calm	0 NE	11		15	15	1	1
9	1015.1	1013.5	58	44	E	8 SW	4		15	15	0	6
10	1011.5	1010.4	60	44	Calm	0 WNW	5		15	15	3	9
11	1007.8	1007.8	50	43	W	4 SE	7	.07	15	10	9	9
12	1005.9	1007.5	59	46	SE	12 NE	14	T	8	10	10	10
13	1006.3	1004.5	48	37	NE	24 NE	20	T	0	10	10	9
14	1004.8	1004.9	48	40	E	20 NE	14	.21	10	5	10	10
15	1000.0	998.3	47	38	NE	18 ENE	24	.37	0	10	10	10
16	1004.0	1009.2	54	42	NE	22 ENE	20		10	15	9	4
17	1012.7	1014.0	54	44	Calm	0 S	3		15	15	10	1
18	1014.2	1012.9	52	39	NE	6 ENE	8	.09	15	15	2	10
19	1010.5	1009.4	50	44	E	10 NE	24	.15	8	10	10	10
20	1007.4	1008.2	45	39	NNE	22 NE	28		5	10	10	9
21	1010.0	1014.3	50	39	NE	20 ENE	10		10	15	10	8
22	1014.4	1014.5	53	43	NE	8 NE	16	.09	15	8	10	10
23	1015.3	1016.8	50	40	NE	16 NE	10	T	10	10	10	10
24	1017.7	1019.5	49	40	NE	14 NE	13	T	10	15	10	9



NOTTINGHAM ISLAND METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tentshs of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
August												
25	1018.7	1015.2	48	41	NE	14 NE	30	.04	10	10	10	10
26	1009.8	1006.7	43	39	NE	20 NE	24	.16	10	5	10	10
27	1005.3	1006.2	46	39	NE	6 N	4	T	$\frac{1}{4}$	15	10	8
28	1007.9	1009.8	48	39	Calm	0 NE	10		10	10	9	10
29	1011.8	1013.8	40	38	NW	14 NW	15		10	10	10	10
30	1015.8	1016.6	46	36	NW	10 NNW	8		10	15	10	3
31	1016.7	1016.8	50	32	Calm	0 N	5		10	15	8	4
September												
1	1016.3	1017.6	48	34	Calm	0 S	05		15	15	1	2
2	1019.0	1018.7	51	35	Calm	0 S	09		15	15	8	0
3	1017.2	1012.8	47	35	NE	09 NE	16		15	15	0	8
4	1007.8	1010.2	44	38	NE	22 NE	17		15	15	8	5
5	1014.8	1017.5	51	38	NE	10 Calm	0		15	15	7	6
6	1018.6	1017.6	48	34	Calm	0 SSE	04		15	15	8	6
7	1019.1	1020.1	47	35	Calm	0 NW	07		15	15	3	5
8	1020.2	1019.0	44	36	Calm	0 E	07		15	10	9	8
9	1019.5	1024.2	46	31	NE	10 NW	13		10	15	8	0
10	1022.3	1020.2	47	29	Calm	0 W	09	T	15	10	1	10
11	1016.8	1008.4	44	39	SW	17 S	26	.11	10	3	10	10
12	1001.5	999.4	44	39	SSE	17 ENE	13	.13	5	6	10	8
13	--	1011.6	50	37	--	- N	07		-	15	-	2
14	1014.4	1010.8	46	31	N	05 N	12		15	15	9	1
15	1014.2	--	43	31	N	12 --	-		15	-	7	-
16	1017.0	1017.8	44	37	W	12 W	12		10	10	7	8
17	1016.6	1014.1	43	38	W	14 SW	16		10	10	10	1
18	1015.5	1015.3	41	36	W	12 Calm	0	T	10	10	10	10
19	1010.2	1001.1	40	36	SE	12 E	14	T	10	10	8	10
20	999.3	1006.3	42	37	NE	07 NE	07	.11	1	10	8	10
21	1010.1	1003.4	40	33	NE	16 NE	22	.04	15	3	8	10
22	992.0	996.0	45	38	E	16 S	12	.60	3	$\frac{1}{4}$	8	9
23	986.0	987.8	41	37	SSE	10 SE	09	.02	6	3	10	10
24	995.2	1001.2	41	33	Calm	0 Calm	0	T	15	10	3	7
25	1000.6	995.8	39	33	E	03 NE	10	T	$\frac{1}{4}$	15	10	10
26	998.2	1002.7	40	33	NE	07 Calm	0	T	10	10	8	10
27	1004.9	1007.7	33	26	N	09 NW	09		15	15	7	10
28	1008.9	1010.0	31	25	Calm	0 N	07		15	8	8	8
29	1010.9	1012.0	32	24	N	07 N	05		15	15	10	10
30	1013.8	1010.0	30	26	N	06 NE	09		15	10	10	10
October												
1	929.7	976.3	34	27	NE	26 N	22	.25	20	0	10	10
2	977.4	991.1	32	22	NW	16 NW	24	.05	1	0	8	10
3	1002.1	1003.4	-	-	W	14 S	04		15	15	2	2
4	--	999.7	26	19	--	- Calm	0		-	15	-	7
5	--	1002.1	25	19	--	- NW	09		-	10	-	10
6	1002.5	1000.7	24	18	Calm	0 NW	10	T	10	2	10	10
7	1002.1	1007.8	-	-	NW	14 NW	16		10	10	10	10
8	1014.5	1019.4	30	21	NW	09 NW	12		10	10	10	2
9	1022.8	1024.5	33	29	NW	09 NW	09		10	10	8	10
10	1024.5	1024.8	22	18	NW	05 NW	10		1	$\frac{1}{2}$	9	10
11	1023.2	1031.9	32	27	NW	09 NW	10	T	6	10	10	8
12	1025.4	1028.0	29	22	N	10 NW	09		10	10	10	8
13	1026.7	1020.4	31	17	--	05 W	09	.10	10	$\frac{1}{2}$	2	9
14	1013.5	1012.8	30	24	S	19 Calm	0	T	$\frac{1}{2}$	1	9	10
15	1014.3	1010.2	29	24	S	16 SE	16		10	10	7	8
16	1005.4	1004.8	29	27	SE	09 S	09	.05	2	8	10	8
17	--	1001.7	30	21	--	- S	17	T	-	10	-	10

NOTTINGHAM ISLAND METEOROLOGICAL REPORT - 1958

<u>Date</u>	<u>Barometer</u>		<u>Temp.</u>		<u>Wind</u>			<u>Precip.</u>	<u>Vis.</u>		<u>Cloud Tents</u>	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
1958												
October												
18	1001.6	1011.6	32	25	SE 12	NE 09	.06	8	10	8	10	
19	1020.0	1023.7	32	21	Calm 0	Calm 0	.05	10	10	7	5	
20	--	--	27	24	--	--	-	-	-	-	-	
21	1027.9	1023.8	28	23	E 02	SE 10		10	10	8	10	
22	1015.5	1020.7	28	23	E 14	NE 04		10	10	10	10	
23	1027.7	1031.4	30	24	Calm 0	W 12	.05	10	1	10	8	
24	1032.8	1033.5	31	26	W 16	W 08	T	5	10	10	10	
25	1029.5	1025.5	32	25	SW 07	W 10	.05	10	5	0	8	
26	1018.1	1020.1	31	22	W 21	NW 19		10	10	10	8	
27	1025.2	1020.4	32	22	NW 09	SW 21		10	10	10	10	
28	1010.8	1013.0	32	22	SW 14	NW 07	T	$\frac{1}{2}$	1	10	8	
29	--	--	25	19	--	--	T	-	-	-	-	
30	1009.8	1004.9	24	19	Calm 0	E 12	.06	5	5	8	10	
31	1006.9	--	24	19	N 09	--	.07	$\frac{1}{2}$	-	9	-	

CHURCHILL METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip. Total	Vis.		Cloud Tents of Sky Cover		
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730	am 1930	pm		am	pm	0730	1930	
July													
1	1020.7	1023.7	38	31	NE	10	NE	15	T	3	20	10	4
2	1026.3	1028.2	43	30	NNE	8	NE	5		$\frac{1}{4}$	20	8	1
3	1029.5	1028.9	49	38	NNE	3	N	6		20	20	6	9
4	1030.1	1030.6	48	38	NE	6	ENE	16		20	20	8	0
5	1030.7	1029.0	45	34	NE	4	ENE	18		15	20	1	1
6	1027.7	1021.3	64	32	SSE	6	SSE	19		15	20	4	4
7	1014.7	1005.0	81	46	SW	17	WSW	20	T	25	20	2	7
8	1009.9	1014.9	57	48	NW	22	NNE	6		20	20	3	2
9	1015.2	1008.2	70	44	SW	10	WNW	4	.03	20	20	0	9
10	1002.0	1008.6	58	45	WNW	6	NNW	12	.04	10	20	10	6
11	1009.5	1007.0	60	48	NW	18	NW	16	.01	20	15	9	8
12	1005.4	1006.3	59	47	WNW	18	ENE	7		20	20	3	1
13	1004.1	1000.1	75	41	SSE	11	SSE	12	T	20	20	2	9
14	1003.1	1005.2	54	46	NNW	30	NW	20		20	20	4	9
15	1009.5	1007.3	66	44	WNW	20	W	14	T	25	20	1	8
16	1008.1	1010.4	60	49	NNE	10	ESE	8		20	20	6	6
17	1010.6	1008.9	74	47	SW	18	E	5		20	20	7	6
18	1011.5	1012.1	67	52	SW	9	N	4	T	20	20	9	3
19	1011.3	1007.6	77	47	SE	6	SE	25		20	20	8	6
20	1006.3	1002.3	72	52	SSE	11	ESE	20	.46	20	15	10	10
21	1007.4	1012.7	50	44	NE	17	ENE	18		15	20	9	9
22	1012.8	1007.9	60	40	SE	11	ESE	24	.23	20	5	9	10
23	1005.3	1005.8	45	41	ESE	25	E	15	.04	8	$\frac{3}{4}$	10	10
24	1003.6	1000.9	42	38	ENE	18	NW	13	.01	$1\frac{1}{4}$	15	10	9
25	1000.2	1002.4	44	37	N	2	NNW	12	.06	$\frac{3}{4}$	20	10	8
26	1002.2	1001.4	54	42	WNW	4	SSE	12	.05	4	$1\frac{1}{2}$	10	10
27	998.2	1001.3	55	43	WNW	8	Calm	0	T	10	15	10	9
28	998.8	999.6	57	47	S	5	NE	5	.01	20	$\frac{3}{4}$	8	10
29	1001.1	1000.7	54	44	N	6	NW	12	.12	15	15	9	7
30	998.0	997.9	63	50	WNW	18	N	6	T	20	20	7	1
31	995.4	989.8	76	51	SE	10	NW	8	.17	20	15	7	9
August													
1	994.7	1001.1	60	47	NNW	21	WSW	18	.02	15	10	9	10
2	1001.1	1008.3	57	51	NNW	6	NW	12	T	10	20	10	10
3	1010.9	1010.4	69	51	WNW	18	E	8	T	20	20	3	3
4	1009.5	1006.3	65	50	NE	5	ESE	19	.07	20	15	9	10
5	1003.3	1004.6	49	45	E	30	ENE	20	.04	15	15	10	10
6	1009.4	1016.5	48	41	ENE	32	ENE	18	T	10	12	10	10
7	1019.2	1016.4	53	43	NNE	7	NE	16	.02	15	10	9	8
8	1012.3	1009.3	52	46	SSE	18	SE	18	.40	15	3	10	10
9	1009.8	1009.6	70	47	SE	12	S	24	.06	$\frac{1}{4}$	8	9	10
10	1013.3	1012.4	67	47	NW	12	NNW	2	.07	12	20	3	6
11	1008.9	1005.7	65	52	W	8	Calm	0		10	20	3	9
12	1007.3	1009.9	55	48	NW	18	E	8		20	20	7	7
13	1006.1	1005.6	51	46	N	21	N	12	.12	20	20	6	5
14	1007.0	1013.7	54	44	N	20	N	12	.02	15	20	8	8
15	1011.8	1010.7	57	50	WNW	20	N	6		20	20	4	2
16	1008.8	1014.3	50	47	NNW	20	N	19	T	15	15	3	9
17	1015.1	1008.8	59	45	SSW	2	SSE	24	.46	12	10	10	10
18	998.9	998.2	70	52	SSW	12	W	20	.23	15	15	4	8
19	998.2	1005.3	48	45	NW	28	NW	34	.09	8	$\frac{1}{2}$	10	10
20	1009.8	1015.5	49	45	NNW	30	NNW	32	.02	1	15	10	9
21	1018.1	1020.4	52	47	NNW	20	NNE	18		20	20	2	8
22	1020.2	1020.0	52	46	NW	8	NE	6		20	20	1	1
23	1020.4	1018.8	56	43	Calm	0	E	13	.08	15	20	2	4
24	1017.1	1017.2	54	41	SE	12	NE	10	T	15	20	9	3

CHURCHILL METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip. Total	Vis.		Cloud Tents of Sky Cover		
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730	am 1930	pm		am	pm	0730	1930	
August													
25	1015.5	1013.7	47	42	NNW	20	N	19	T	15	10	10	9
26	1013.3	1011.5	47	42	E	3	NNE	8	T	15	15	8	10
27	1011.5	1013.6	48	41	NNE	10	NNW	6		20	20	10	3
28	1016.3	1018.3	51	44	N	8	ENE	8		20	20	3	3
29	1019.9	1019.4	54	35	S	5	E	12		15	20	6	8
30	1021.7	1020.7	50	36	W	3	ENE	13		15	20	8	1
31	1020.0	1014.8	55	34	S	10	SE	31		1/8	20	9	9
September													
1	1010.6	1005.1	53	39	SSE	18	SSE	18	.06	20	15	8	10
2	999.5	996.2	50	43	ESE	20	ENE	20	.12	15	1 1/2	9	10
3	999.3	1004.3	47	42	N	24	NNW	23	T	4	15	10	9
4	1007.6	1015.5	50	44	NW	24	NW	7	.01	10	20	10	7
5	1019.7	1018.0	50	38	W	8	ESE	20	.16	20	20	0	8
6	1013.8	1014.6	43	39	E	27	E	14	.20	6	1 1/4	10	10
7	1018.9	1019.3	43	40	ENE	20	ESE	18	T	15	15	10	10
8	1013.3	1014.5	45	40	ESE	9	NE	18	T	1/4	7	10	10
9	1023.2	1028.5	49	41	NNE	25	N	6		15	20	10	0
10	1027.5	1016.5	49	35	SW	9	S	25	.10	20	15	9	10
11	1008.5	1010.4	55	44	WSW	17	NW	17	.01	4	20	10	5
12	1014.8	1017.5	48	43	NW	25	WNW	15		20	20	10	3
13	1018.9	1014.8	44	39	N	10	ENE	20	T	20	20	7	10
14	1009.7	1013.2	43	37	E	31	ENE	30	.03	10	20	10	9
15	1019.4	1026.1	44	40	ENE	21	NE	4	T	15	20	10	5
16	1028.4	1023.1	50	31	SSW	14	SW	15		20	20	10	2
17	1020.2	1012.1	52	33	SSW	7	SSE	16		20	20	9	8
18	1003.7	995.7	60	42	SSE	27	SSW	18	.04	20	20	8	10
19	994.6	998.6	57	47	WSW	15	WNW	12	T	15	20	9	8
20	1001.4	997.1	47	35	W	10	NE	26	.42	15	15	1	10
21	986.6	984.6	45	43	NE	20	NW	20	.17	1/2	8	10	10
22	986.0	992.0	42	36	WNW	31	WNW	20	.05	10	15	10	8
23	996.7	1004.7	44	34	W	20	WNW	20		20	20	2	3
24	1009.0	1008.2	45	34	W	10	SE	6		20	20	2	9
25	1003.1	1003.2	53	34	Calm	0	Calm	0		20	20	9	7
26	1005.7	1007.4	57	35	WSW	10	NW	14	T	20	20	7	9
27	1012.6	1013.3	43	39	NNE	12	WSW	8	.01	15	12	10	10
28	1011.4	1012.0	44	35	WNW	10	NNW	7	T	20	20	9	6
29	1012.4	1011.9	40	35	NW	14	NE	17	.12	20	6	8	10
30	1013.6	1010.0	37	33	NNE	22	NNW	4	.11	15		7	4
October													
1	1010.2	1012.5	34	28	NNW	28	NW	25	T	15	15	9	7
2	1010.2	1006.8	38	29	WNW	10	E	10		15	20	9	7
3	1001.8	1001.2	37	25	SSW	4	NNW	29	.01	20	15	9	9
4	1008.1	1015.8	28	22	NNW	36	NW	15	T	15	15	8	9
5	1012.0	1005.8	40	17	SSW	2	ESE	11	.02	20	15	2	9
6	1001.3	1002.1	36	32	ESE	13	SE	6	.04	4	15	10	10
7	1003.1	1009.2	42	31	WSW	10	WNW	6	T	15	15	7	6
8	1012.2	1013.8	48	27	SSE	13	ESE	18		15	20	1	2
9	1016.2	1018.6	41	33	ESE	17	ESE	21		15	20	9	10
10	1019.4	1020.5	40	34	SE	20	SE	22		15	15	9	10
11	1019.2	1017.0	33	30	SE	15	SSE	8	.02	15	1	9	10
12	1020.9	1024.1	32	22	S	5	S	8	.03	15	15	8	9
13	1017.5	1011.0	38	28	SSE	21	W	13	T	10	15	10	10
14	1014.8	1016.4	37	32	W	20	NNE	9		15	20	9	10
15	1011.1	1008.9	36	31	W	6	E	6	T	15	20	10	9
16	1001.4	1001.4	36	27	SE	15	NW	24	.12	15	10	10	10
17	1010.4	1017.8	28	26	NW	35	NW	15	T	15	20	9	8

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Date	Barometer		Temp.		Wind			Precip. Total	Vis.		Cloud Tents of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	am		pm	0730	1930	
October												
18	1017.3	1018.3	32	23	NNW	14 ESE	18		20	20	7	9
19	1012.0	1003.7	36	27	SE	34 ESE	45	T	15	15	9	9
20	1001.0	1005.0	37	33	SE	35 SSW	9	.05	10	15	9	10
21	1011.0	1015.8	38	34	W	12 WNW	21		20	15	10	6
22	1018.7	1022.3	38	30	NNW	8 E	9	T	15	20	0	10
23	1023.3	1025.0	35	31	ESE	11 SE	16	.02	3	4	10	10
24	1026.6	1028.1	35	33	SE	16 SE	8	T	1	10	10	10
25	1029.3	1030.9	37	32	NW	5 NW	5	.02	5	10	10	10
26	1031.1	1030.0	37	31	W	11 SSW	8	T	15	20	10	0
27	1028.6	1022.6	47	31	SSW	15 SW	24		$\frac{1}{4}$	20	10	2
28	1020.0	1016.2	44	34	WSW	12 SW	10		20	15	3	6
29	1015.4	1016.4	42	31	NNW	20 SSE	6	T	20	15	10	10
30	999.6	1007.4	41	31	WNW	20 NW	42	.02	15	8	1	9
31	1022.5	1023.0	29	21	NNW	15 SE	8	T	15		10	10

CHESTERFIELD INLET METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip. Total	Vis.		Cloud Tents of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	am		pm	0730	1930	
July												
1	1022.0	1025.6	47	35	N	8 E	8		15	15	0	0
2	1026.0	1027.6	64	41	NW	16 Calm	0		15	15	0	1
3	1028.1	1027.9	66	44	NW	12 S	6		15	15	0	4
4	1030.5	1030.0	57	40	Calm	0 S	12		15	15	3	4
5	1029.2	1026.2	70	45	W	18 SW	20		15	15	0	3
6	1019.2	1012.6	52	42	SW	18 W	10	.07	15	15	8	10
7	1006.5	1000.9	51	39	Calm	0 S	12	.22	$\frac{1}{4}$	10	10	9
8	997.3	1003.8	54	39	NW	25 NW	15	T	15	15	10	9
9	1007.2	1005.9	54	38	NW	12 N	12		15	15	1	8
10	1002.4	999.6	52	40	W	10 NW	18		15	15	7	10
11	997.5	996.1	52	40	NW	26 W	28		15	15	10	10
12	996.6	998.0	56	38	NW	14 NW	18	T	15	15	2	4
13	999.4	998.3	51	39	W	12 SW	14	.17	15	10	7	10
14	998.6	999.2	54	39	NW	15 SE	6	T	15	15	0	9
15	998.4	999.7	53	41	NW	20 NW	24	T	15	15	9	5
16	1001.7	1002.1	53	41	NW	30 NW	20		15	15	9	2
17	1006.4	1008.1	63	45	NW	8 NW	10		15	15	9	3
18	1008.9	1008.6	62	46	W	12 SW	10	.06	15	15	6	6
19	1008.1	1007.5	63	43	NW	8 SE	6	T	15	15	8	5
20	1009.8	1011.1	47	39	E	6 SE	4		15	15	2	7
21	1012.7	1011.9	54	40	NW	10 N	6		15	15	7	7
22	1010.9	1012.1	48	39	NE	12 SE	8		15	15	10	9
23	1013.3	1014.6	50	39	NE	8 E	10		15	15	0	5
24	1014.2	1014.0	46	41	NE	12 NE	12		15	15	8	9
25	1012.2	1009.6	45	42	NE	14 NE	24	.72	15	8	10	10
26	1004.7	1004.0	43	41	NE	34 E	6	.17	6	$\frac{1}{4}$	10	10
27	1001.5	1001.4	42	38	S	4 E	10	.27	$\frac{1}{4}$	$\frac{1}{4}$	10	10
28	998.5	1000.5	42	40	NE	14 E	6	.01	$\frac{1}{4}$	0	10	10
29	999.4	993.7	50	39	N	5 N	20	.27	$\frac{1}{4}$	15	10	9
30	983.9	984.0	50	44	NW	22 NW	16	.14	10	15	10	10
31	987.2	991.2	55	43	NW	10 W	10	.02	15	10	10	8
August												
1	993.3	995.4	49	41	S	2 E	6		15	15	4	7
2	996.5	1000.0	56	45	N	10 N	12	.02	15	6	4	9
3	1003.6	1007.3	55	43	NW	8 S	8	T	8	15	10	8
4	1010.2	1013.5	45	41	S	5 SE	9	T	15	15	7	5
5	1014.8	1016.9	42	38	NE	6 E	8	T	$\frac{1}{4}$	$\frac{1}{4}$	10	10
6	1019.0	1020.6	49	40	E	8 E	8		15	15	9	4
7	1020.1	1017.9	51	42	N	6 SE	8		15	15	5	2
8	1015.8	1014.3	47	40	SE	9 SE	10		$\frac{1}{4}$	$\frac{1}{4}$		8
9	1014.5	1013.7	50	39	E	6 SE	6		12	15	1	2
10	1013.2	1010.2	60	41	Calm	0 SW	12	.13	15	15	1	10
11	1006.0	1003.4	50	43	SE	5 E	8	.03	$\frac{1}{2}$	15	10	9
12	1005.7	1004.5	53	42	N	14 Calm	0		15	15	1	3
13	1005.4	1006.6	49	39	NE	16 NE	24	.04	1	15	10	8
14	1009.5	1009.3	55	44	N	14 E	5	T	15	15	2	8
15	1009.3	1008.3	55	44	N	10 NE	20	.01	15	15	8	10
16	1009.9	1014.7	49	43	NE	20 NE	10	.04	8	15	10	9
17	1014.9	1012.3	45	41	E	3 SE	10	.04	15	15	10	7
18	1006.1	1001.6	44	41	E	18 E	34	.23	1	10	10	10
19	1002.6	1008.8	44	41	NE	34 NE	30	.27	4	10	10	10
20	1012.7	1015.7	53	43	NNE	24 NE	17		15	15	8	2
21	1018.3	1019.0	57	41	N	14 E	8		15	15	3	
22	1019.0	1019.4	50	40	N	8 E	2		15	15	2	3
23	1018.8	1019.4	50	41	Calm	0 S	6		15	15	7	6
24	1018.9	1019.0	48	39	N	8 NE	10	.03	15	15	8	8

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Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tenths of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
August												
25	1017.9	1016.9	45	42	NE	20 E	14	T	15	15	10	2
26	1015.5	1013.9	48	42	NE	15 NE	18		15	15	8	4
27	1012.6	1013.3	51	43	NE	14 NE	10		15	15	7	7
28	1015.0	1016.4	47	39	NW	10 S	4		15	15	8	8
29	1016.7	1017.0	54	40	NW	10 E	9		15	15	2	2
30	1018.9	1018.1	52	37	NW	6 SW	12		15	15	8	6
31	1016.9	1016.0	55	40	W	14 SSW	12		15	15	6	9
September												
1	1013.3	1011.8	46	41	S	23 S	22		15	15	10	10
2	1008.8	1008.8	44	41	SE	24 SE	30		15	15	9	6
3	1009.1	1009.6	45	40	E	18 NE	16		15	15	7	5
4	1010.1	1013.5	45	40	NE	15 NE	12		15	15	6	8
5	1019.0	1020.3	47	39	NE	04 E	4		15	15	4	0
6	1020.0	1018.9	55	38	NW	6 S	6		15	15	0	2
7	1020.2	1020.5	53	38	NW	6 SE	5		15	15	0	5
8	1019.6	1019.9	52	37	Calm	0 E	6		15	15	7	2
9	1023.3	1024.2	56	39	NW	12 NW	15		15	15	3	0
10	1022.7	1013.0	54	36	W	8 S	24	.05	15	15	5	10
11	999.8	996.9	49	41	W	10 W	15	.16	10	15	10	9
12	1004.6	1009.5	45	39	NW	36 N	30		15	15	8	5
13	1015.5	1017.1	43	36	N	10 Calm	0	.03	15	15	8	9
14	1018.7	1019.9	40	36	NE	18 NE	6	T	15	15	9	0
15	1020.4	1019.8	48	30	NW	12 W	15		15	15	0	6
16	1019.4	1016.2	51	35	SW	10 W	20		15	15	3	3
17	1014.0	1011.7	54	37	SW	10 S	14		15	15	7	5
18	1009.5	1001.8	42	40	S	10 SE	24	.28	15	10	10	10
19	993.5	994.3	42	41	E	17 E	20	.59	1	5	10	10
20	1002.5	1008.2	41	38	NE	23 E	28	.02	15	10	10	10
21	1005.1	996.0	38	35	E	32 NE	48	.43	15	4	10	10
22	982.5	979.6	41	35	E	32 NE	15	.38	1	1	10	10
23	982.5	990.3	39	36	N	14 NW	12	.06	5	15	10	8
24	997.0	999.3	39	34	W	10 NW	12	.04	15	1	10	10
25	1000.0	1001.8	39	33	N	8 NE	14	.02	3	15	7	9
26	1005.2	1008.9	37	33	N	8 N	10		15	15	10	8
27	1010.1	1009.2	36	28	N	8 S	8	T	15	15	9	9
28	1007.8	1010.1	37	33	NE	8 E	23	.06	15	10	9	10
29	1013.5	1015.6	33	30	NE	15 NE	5		15	15	10	3
30	1013.3	1008.8	33	30	W	8 SW	6	.05	15	15	10	9
October												
1	1005.4	1003.2	26	22	N	24 NW	28		15	15	10	6
2	1001.8	1002.9	22	18	NW	24 SW	12	.01	15	15	6	8
3	1000.0	996.6	24	18	Calm	0 NE	40	.12	15	0	10	10
4	1004.7	1007.0	24	15	N	24 NW	24	T	15	15	8	9
5	1007.0	1006.9	23	22	NW	18 W	8	T	15	15	10	10
6	1006.5	1005.9	30	14	W	4 SW	4		15	15	4	6
7	1005.7	1008.1	35	22	S	8 S	15		15	15	10	10
8	1011.7	1016.6	36	32	S	18 S	6		15	15	10	7
9	1019.8	1022.4	35	31	S	14 SSW	10	T	15	3	8	6
10	1023.2	1024.4	36	29	Calm	0 SSW	6	.02	12	15	8	10
11	1023.0	1022.6	35	32	SW	3 SE	10	T	15	6	10	10
12	1024.2	1024.7	36	32	E	12 SE	18	T	10	15	10	10
13	1017.9	1007.2	35	30	S	18 SE	24	.22	15	6	10	10
14	1004.1	1009.7	36	30	SW	18 N	2	.18	6	10	10	10
15	1007.9	1006.3	30	18	W	12 W	8	.01	15	15	7	6
16	1002.5	999.2	32	13	Calm	0 S	22	.25	15	1	4	10

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Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tenths of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
October												
17	1001.4	1003.9	27	15	WNW	36 W	32	.05	1	3/4	8	7
18	1011.0	1020.4	29	18	N	32 E	10		10	15	8	10
19	1021.5	1019.5	32	27	ESE	20 SE	24		15	15	10	10
20	1018.4	1018.8	33	30	SE	30 SE	30	.04	15	15	10	10
21	1015.4	1010.9	35	31	SE	30 S	14	.02	3	10	10	10
22	1015.5	1020.8	35	26	NW	12 SW	8	.01	1/2	15	5	10
23	1022.5	1026.2	33	31	S	12 SW	18	T	1	5	10	10
24	1028.3	1028.1	34	29	S	14 SW	12	T	2	5	6	10
25	1028.0	1025.6	33	27	W	6 SW	6		2	15	10	0
26	1025.2	1028.5	30	18	NW	26 N	8		15	15	3	5
27	1021.9	1013.9	33	15	S	18 NW	8		15	15	10	5
28	1016.4	1015.0	24	20	N	15 SW	5	.05	15	15	1	8
29	1013.6	1015.6	25	13	N	16 NE	8	.03	10	15	10	10
30	1002.4	1011.0	27	17	E	35 NNE	24	.03	1/2	1	10	10
31	1017.5	1022.0	14	13	WNW	18 N	14	T	15	15	8	7



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Date	Barometer		Temp.		Wind		Precip.	Vis.		Cloud Tenths of Sky Cover		
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm		Total	am	pm	0730	1930
July												
1	1011.0	1012.6	52	34	NW	8 N	23	T	2	15	10	9
2	1013.0	1014.6	54	41	NNW	22 NNW	26		15	15	7	8
3	1015.9	1016.9	56	41	NW	20 NW	16	.01	15	15	1	9
4	1023.8	1027.9	56	37	NE	16 NE	14		15	15	10	8
5	1029.9	1027.2	65	42	N	4 NW	18		15	15	9	2
6	1025.5	1021.9	67	43	N	6 Calm	0		15	15	6	7
7	1019.1	1014.1	67	34	NE	8 W	10		15	15	0	0
8	1009.2	1007.6	57	41	S	10 W	15	.11	15	12	0	9
9	1015.2	1017.9	47	38	W	14 SW	16		5	15	10	8
10	1015.7	1003.6	56	40	S	15 SE	20	.34	15	3	8	10
11	999.6	1003.5	48	41	W	13 WNW	14		3	10	10	10
12	1003.9	1003.8	43	38	SW	18 SW	18	.18	10	3	10	10
13	1010.0	1014.2	46	37	WSW	14 S	16	.05	1/8	15	10	7
14	1002.5	989.8	52	38	ESE	20 SW	26	.39	4	3/8	10	10
15	1000.2	1008.2	43	38	W	15 WSW	14	.01	1/2	3/8	10	10
16	1010.2	1009.9	44	35	SW	20 W	16	.16	15	3	9	10
17	1011.5	1012.5	47	36	W	4 WSW	16		1/8	15	10	2
18	1011.1	1008.8	54	40	W	5 NW	18		15	15	8	1
19	1009.4	1008.0	49	37	NNE	10 WSW	12	.36	2	15	10	10
20	1009.2	1012.1	48	39	SW	20 SSE	12	.15	4	12	10	10
21	1011.1	1007.7	59	43	Calm	0 SSE	4	.17	15	15	9	10
22	1006.1	1008.1	54	42	N	14 NW	14		3/4	15	10	10
23	1008.7	1014.4	49	40	NW	12 W	12		15	15	10	10
24	1015.6	1011.7	64	39	NW	2 ESE	16		12	15	0	4
25	1008.0	1005.5	72	52	ENE	22 SE	15		15	15	9	4
26	1004.8	1009.2	67	44	SE	22 SSW	10		15	1/8	9	10
27	1011.4	1011.6	56	43	SSE	16 SSW	12		1/8	15	10	3
28	1006.8	997.3	63	50	NE	8 S	12	.62	10	1/2	10	10
29	988.7	996.8	47	40	SSE	15 SW	10		0	1/8	10	10
30	1000.1	1002.7	49	40	S	6 W	14		8	15	10	1
31	1006.4	1007.8	55	40	SW	4 SSE	16		5	15	7	3
August												
1	1002.5	995.5	56	42	SSE	24 S	18	.53	15	0	9	10
2	995.2	998.7	43	40	S	10 SW	22	.02	1/2	1/4	10	10
3	1000.0	1003.2	43	40	S	12 SE	12	T	5	15	10	10
4	1007.4	1011.7	56	40	Calm	0 W	12	.03	1/4	15	10	10
5	1013.8	1013.4	56	46	W	5 N	8	T	1	2	10	9
6	1012.0	1010.3	63	51	NE	21 NE	25		15	15	6	2
7	1010.1	1010.0	63	49	NE	28 NE	20		15	15	8	2
8	1011.1	1009.5	66	51	NE	28 NE	13		15	15	9	5
9	1008.4	1008.1	63	54	NE	12 NE	16		15	15	5	8
10	1009.2	1010.4	58	45	NNE	13 NE	10		15	15	3	8
11	1011.2	1009.6	63	43	NNE	7 N	8		1/8	15	10	6
12	1007.7	1002.6	64	46	SSE	10 NW	14	.34	1/4	15	6	10
13	998.4	1002.5	55	46	NW	8 W	22	.26	3	8	10	10
14	1004.8	1000.5	48	41	W	6 N	17	.17	4	15	10	10
15	993.7	996.6	44	42	WNW	18 S	16	.08	2	1	10	10
16	997.9	1005.1	48	40	SE	13 SW	8		12	15	10	9
17	1010.7	1013.2	59	42	NNE	8 N	16		1/4	15	10	8
18	1014.9	1011.9	60	49	NE	7 SW	6		15	15	8	5
19	1007.4	1005.6	57	50	S	10 SE	15	.02	15	15	10	9
20	1002.0	1004.1	57	45	Calm	0 W	5	.12	10	8	10	10
21	1005.6	1006.8	51	44	Calm	0 W	5	.20	12	1	10	10
22	1006.6	1006.9	55	48	NE	15 NNE	12	T	3	15	10	9
23	1008.0	1010.1	57	48	N	8 WSW	12	.09	15	4	10	7
24	1013.4	1016.5	49	42	S	14 SE	16	T	1	15	10	10

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Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tents	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
August												
25	1009.8	996.7	49	42	E	20 NE	38	.51	12	4	10	10
26	996.5	999.4	43	39	SSE	28 SE	28	.02	2	7	10	10
27	999.8	1006.7	52	39	ENE	12 NW	12	.04	15	15	8	6
28	1010.9	1012.2	45	40	SW	8 SW	3	.04	$\frac{1}{2}$	15	10	9
29	1014.9	1017.3	49	41	NW	6 NW	7		15	15	10	6
30	1018.7	1017.9	51	37	Calm	0 NNW	10		15	15	5	5
31	1017.0	1013.6	51	37	N	4 N	18	T	15	15	7	6
September												
1	1013.4	1017.1	53	40	N	10 N	17		15	15	3	1
2	1020.2	1018.1	51	32	N	5 SW	12		$\frac{1}{4}$	15	0	0
3	1010.0	1000.9	49	43	SW	22 SW	24	.16	15	$\frac{1}{4}$	8	10
4	998.7	1001.3	42	39	WSW	16 S	20	.17	2	1	10	10
5	1005.4	1011.6	47	39	SE	12 NNE	5	T	3	15	10	9
6	1016.5	1016.5	50	38	N	8 NNE	5		15	15	2	7
7	1018.2	1020.3	51	39	NE	8 NE	3		15	15	7	1
8	1021.1	1017.7	52	32	NE	4 Calm	0		10	15	2	2
9	1015.6	1016.7	55	37	NE	9 N	14		15	15	7	5
10	1021.0	1024.1	50	37	E	20 N	12		15	15	1	0
11	1022.7	1015.2	47	31	N	4 SSW	8		$\frac{1}{8}$	15	3	10
12	1002.3	999.2	45	39	SE	20 WSW	14	.23	3	$1\frac{3}{4}$	10	10
13	999.9	1009.5	50	39	WNW	16 NW	16	.10	10	15	10	1
14	1014.2	1011.4	43	37	Calm	0 Calm	0	.04	3	15	8	10
15	1007.8	1015.4	47	36	N	12 NW	20		15	15	8	1
16	1025.2	1027.9	45	34	Calm	0 W	16		15	15	7	8
17	1027.3	1025.1	40	36	SW	15 SW	10	.02	15	15	10	10
18	1023.8	1019.3	39	34	S	9 SE	10		15	15	10	10
19	1010.6	1005.9	43	35	SE	16 S	14	.01	15	$\frac{1}{2}$	10	10
20	1005.4	1007.1	49	40	SE	18 SSE	8	T	0	8	10	10
21	1004.4	998.9	55	39	SE	12 SE	24	.14	$1\frac{1}{2}$	3	10	10
22	994.0	995.5	46	38	SE	10 SSW	20	.10	1	4	10	10
23	995.9	999.2	44	40	SW	18 SW	25	.02	15	8	5	10
24	1005.0	1007.1	42	38	SW	20 SW	10	.03	6	15	10	7
25	1001.0	989.6	40	33	E	5 NW	18	.11	12	10	10	10
26	997.2	1005.1	44	37	W	15 W	10	T	2	15	10	10
27	1007.4	1009.2	41	31	SW	8 WSW	10	.02	15	10	8	9
28	1010.3	1011.7	40	31	NW	6 W	10		15	15	6	7
29	1011.8	1012.4	40	34	W	2 SW	10	.07	8	15	8	10
30	1011.0	989.4	39	29	N	6 NE	37	.59	15	5	3	10
October												
1	971.6	985.2	39	31	SSE	14 SW	43	.10	3	$\frac{3}{4}$	10	10
2	999.2	1006.8	35	24	SW	26 WSW	29	.06	15	8	7	8
3	1009.1	1002.9	35	29	SW	17 SE	12	.03	15	5	6	10
4	993.1	995.6	33	24	NE	12 N	19	.05	15	4	7	10
5	1002.2	1005.2	34	24	NW	10 NW	13		12	12	6	10
6	1006.0	1006.4	32	25	W	07 NW	04	T	15	15	6	5
7	1008.1	1013.3	32	25	NW	05 SE	04		15	15	10	10
8	1018.6	1023.9	36	31	SW	04 SE	04		15	15	8	9
9	1024.6	1025.5	34	23	NE	10 N	09		15	15	8	1
10	1025.4	1024.9	34	22	N	05 NNW	10		15	15	8	0
11	1024.8	1024.9	36	29	NNE	16 --	-		12	8	10	8
12	1025.5	1028.5	33	21	N	10 N	10		8	15	-	6
13	1026.2	1025.4	31	23	NE	09 S	10		15	15	8	8
14	1010.9	1009.2	34	21	SE	10 N	04	.11	4	8	8	10
15	1014.4	1007.7	34	20	E	07 SE	12		15	15	8	8
16	--	1002.7	33	22	--	- NE	12		-	15	-	3
17	1004.8	1007.2	33	23	Calm	0 SW	12	.07	15	15	6	10

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Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tents of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
October												
18	1009.4	1009.7	31	12	WSW	06 N	03	.07	10	15	3	4
19	1017.6	1023.2	24	06	N	05 N	09		1/2	15	2	1/3
20	1026.5	1027.4	31	08	NNW	05 E	08	.76	15	15	9	6
21	1027.6	1020.7	36	11	NE	08 E	13		15	15	2	4
22	1012.1	1019.6	36	30	SSE	04 NW	09		15	15	10	10
23	1027.4	1032.0	32	23	Calm	0 W	04		15	10	2	8
24	1033.8	1034.6	36	22	NW	09 NNW	07		15	15	0	0
25	1033.7	1031.7	41	20	N	06 S	02		15	15	0	0
26	1027.4	1026.7	34	28	SSW	03 W	10		15	8	2	8
27	1028.7	1028.6	31	27	NW	08 SSW	02	T	3	12	10	10
28	1022.6	1018.3	35	30	S	16 S	10	.11	1	3/4	8	8
29	1011.7	--	34	29	S	11 --	-	.01	2	-	8	-
30	1009.1	994.7	34	23	N	10 ESE	16	.38	1	1/2	8	10
31	993.0	1010.5	34	14	N	26 WNW	10	.02	10	5	10	10

CORAL HARBOUR METEOROLOGICAL REPORT - 1958

Date	Barometer		Temp.		Wind			Precip. Total	Vis.		Cloud Tents of Sky Cover		
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730	am	1930 pm		am	pm	0730	1930	
July													
1	1020.9	1023.0	58	36	NE	23	NE	16		15	15	1	0
2	1024.1	1025.1	60	39	NNE	14	NE	20		15	15	0	1
3	1025.7	1027.9	59	39	N	14	NE	14		15	15	9	6
4	1031.0	1030.5	62	38	N	7	WSW	15		15	15	7	2
5	1030.1	1026.0	66	39	N	4	WNW	14		15	15	2	2
6	1023.1	1015.6	53	40	WSW	7	W	14	.08	15	15	2	9
7	1009.1	1002.7	47	37	W	9	S	5	T	15	5	10	10
8	995.9	997.6	50	38	Calm	0	NE	19	T	10	15	10	8
9	1000.8	1003.7	48	40	NW	18	NW	23		15	15	9	8
10	1003.8	1000.6	51	36	WSW	14	S	10		15	15	8	9
11	993.1	990.3	51	36	N	14	N	12	.04	15	15	4	8
12	989.8	993.0	50	39	NW	18	NW	14	.02	15	15	10	9
13	997.4	1000.6	53	37	NW	8	SW	20	.17	15	15	2	9
14	998.9	996.2	49	36	E	8	E	10	T	1	15	10	7
15	993.3	993.8	52	35	N	14	N	18	.04	15	15	8	7
16	995.7	997.6	47	37	NW	14	WNW	20	T	15	15	9	10
17	1000.8	1005.9	52	40	N	11	N	22	T	15	15	7	5
18	1011.7	1012.7	49	35	NE	4	S	10		15	15	9	9
19	1010.1	1008.4	57	39	Calm	0	NE	23	T	15	15	8	9
20	1010.6	1012.3	52	41	E	11	E	19		15	15	4	3
21	1012.5	1010.8	49	41	E	15	E	15	.05	15	10	7	9
22	1010.0	1011.2	56	39	E	10	E	21	.07	15	15	10	2
23	1014.3	1016.4	63	46	NE	16	SSW	5		15	15	1	3
24	1017.3	1016.7	64	40	N	12	SW	8		15	15	0	3
25	1015.7	1014.2	57	42	ESE	9	E	15	.19	15	15	9	10
26	1010.8	1008.2	50	44	E	25	E	16	.64	12	2	10	10
27	1004.9	1007.2	44	40	SE	15	S	8	.11	$\frac{1}{2}$	12	10	10
28	1005.5	1005.1	50	40	SE	16	SE	6	.05	$\frac{3}{4}$	$\frac{3}{4}$	10	10
29	996.8	985.0	50	45	ENE	20	E	21	.60	15	15	10	10
30	986.1	994.5	44	39	S	29	S	24	.02	$\frac{3}{4}$	$\frac{3}{4}$	10	10
31	996.0	999.8	42	39	SSE	26	S	18	.09	$\frac{3}{4}$	$\frac{3}{4}$	10	10
August													
1	999.5	999.0	57	39	SE	14	SE	22	.02	$\frac{1}{4}$	15	10	8
2	998.5	1000.5	58	43	ESE	17	ESE	14	.04	15	15	3	9
3	1003.9	1008.9	51	39	E	12	SE	12	.10	15	15	9	10
4	1013.0	1016.7	53	42	ESE	6	SE	17	T	15	15	10	5
5	1018.9	1020.6	58	39	ESE	16	SE	14		15	15	9	1
6	1021.4	1021.5	61	40	N	3	SSE	10		15	15	1	6
7	1021.7	1020.2	60	45	NE	6	SW	10		15	15	7	8
8	1018.8	1016.9	60	40	N	6	S	8		15	15	1	2
9	1016.6	1015.1	60	40	N	2	SSW	10		15	15	1	8
10	1013.0	1009.6	61	42	N	4	N	12	.15	15	15	8	7
11	1007.9	1005.7	48	43	SE	10	SE	15	.60	10	5	10	10
12	1002.0	1004.6	46	40	E	16	S	12	.36	5	8	10	10
13	1007.0	1007.7	53	39	E	23	E	26		15	15	9	8
14	1008.7	1009.1	51	44	NE	10	E	6	.07	15	8	9	10
15	1006.2	1003.4	46	42	NE	20	NE	36	.20	15	8	10	10
16	1008.7	1014.5	52	42	NE	28	E	14		15	15	9	8
17	1016.3	1016.2	55	38	NE	15	SW	4		15	15	2	3
18	1013.9	1011.6	49	36	ESE	12	SE	15	.34	15	10	8	10
19	1009.3	1011.3	50	43	E	21	E	21	.11	6	15	10	10
20	1011.4	1013.4	47	42	E	27	NE	18	.24	15	8	10	9
21	1015.4	1018.2	50	39	NE	18	E	11	.02	15	15	10	6
22	1019.4	1019.1	52	37	ENE	6	ENE	16		15	15	2	3
23	1019.4	1019.7	48	36	NE	14	ENE	11	.01	15	15	9	9
24	1019.5	1021.3	47	41	ENE	8	ESE	17	.10	15	12	10	10

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Date	Barometer		Temp.		Wind			Precip. Total	Vis.		Cloud Tents of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	am		pm	0730	1930	
August												
25	1020.5	1018.4	54	41	E	12 ENE	15		15	15	10	8
26	1014.8	1012.3	48	38	NE	20 ENE	15	T	15	15	8	9
27	1010.6	1011.4	44	36	NNE	19 ENE	12	.02	15	15	9	10
28	1013.3	1014.3	46	37	NE	9 NNE	8	T	15	15	9	8
29	1015.7	1016.4	46	31	NNW	13 NNW	8		15	15	3	9
30	1017.7	1018.5	51	34	N	11 NNE	10	T	15	15	7	3
31	1018.3	1017.1	48	33	Calm	0 SE	4	.01	15	15	8	6
September												
1	1017.2	1017.8	47	32	NNW	8 S	7			15	2	8
2	1018.8	1018.2	45	35	E	6 S	5		15	1 $\frac{1}{2}$	3	6
3	1016.6	1014.1	47	35	E	12 E	19		15	15	9	8
4	1010.5	1014.0	49	35	ENE	18 ENE	19		15	15	9	8
5	1018.6	1020.4	52	35	NE	19 W	5		15	15	5	4
6	1020.9	1018.4	49	31	NNW	6 SSW	12		15	15	7	4
7	1019.6	1019.7	49	32	NNW	12 SSE	8	T	15	15	6	3
8	1020.6	1020.6	46	37	NE	12 E	6		15	15	10	1
9	1023.4	1023.9	48	30	NW	4 W	12	T	15	15	3	9
10	1022.8	1017.9	55	32	SW	2 W	6	.04	15	15	6	10
11	1009.7	997.6	42	38	S	19 S	10	.64	3	0	10	10
12	997.4	1004.0	42	38	E	8 ENE	10	.02	0	15	10	9
13	1011.6	1016.7	46	35	N	17 NNE	10	T	15	15	5	1
14	1018.3	1019.5	41	34	ENE	8 NE	10	T	15	15	9	5
15	1018.8	1017.9	45	27	N	9 NW	4		15	15	1	8
16	1017.6	1017.5	47	35	WNW	12 NW	9		15	15	9	8
17	1015.8	1013.0	51	36	NW	8 W	9	T	6	15	10	3
18	1013.7	1012.0	43	38	WNW	10 S	7	.23	8	15	10	8
19	1005.5	1000.6	38	36	SSE	12 ESE	17	.36	1	8	10	10
20	1003.7	1010.9	40	32	ENE	20 E	14		15	15	5	4
21	1011.8	1003.8	38	29	E	20 E	27	.84	15	15	9	10
22	989.5	983.8	43	33	E	20 ESE	14	.07	10	3	10	10
23	982.4	988.6	41	36	ESE	10 E	12	.01	10	15	10	9
24	998.2	1002.8	43	34	NNE	4 ESE	8	T	15	12	9	9
25	1001.6	1000.6	35	32	E	12 E	16	T	15	12	10	9
26	1000.9	1006.8	38	28	N	15 NNE	8	T	15	15	9	9
27	1008.7	1009.6	35	26	N	5 NNE	8		15	15	3	1
28	1011.0	1012.6	32	21	NNE	7 SW	4	T	15	15	3	9
29	1014.4	1016.5	29	22	NNE	7 ENE	10		15	15	8	7
30	1016.3	1012.5	28	19	N	7 ENE	6	T	15	15	3	10
October												
1	1003.4	992.0	27	22	NE	15 NNE	30	T	15	15	10	10
2	988.5	996.6	25	16	N	30 NNW	30	T	15	15	9	4
3	1001.3	1001.8	24	11	SE	6 E	12	.15	15	15	10	3
4	1001.3	1002.5	21	15	E	12 N	16	.05	3/4	15	10	10
5	1003.2	1004.6	20	17	NNW	9 N	18	T	15	15	10	10
6	1005.0	1005.3	23	15	N	18 N	12		15	15	9	1
7	1007.1	1011.0	23	9	N	16 NW	3		15	15	3	2
8	1015.9	1020.3	31	13	NW	4 S	4	T	15	15	9	9
9	1023.8	1025.7	33	25	NW	5 S	2	T	15	15	10	10
10	1025.8	1026.0	35	21	WNW	5 NW	12	T	10	15	2	8
11	1025.3	1025.4	32	23	NW	6 WNW	6		15	15	10	6
12	1029.0	1031.0	26	11	N	3 NW	4		15	15	2	2
13	1026.9	1017.1	31	14	E	4 S	18	.12	15	3/4	9	10
14	1010.5	1012.4	29	24	SE	20 SE	8	.08	3	6	10	10
15	1010.2	1004.9	31	25	S	18 W	14	.05	4	5	10	10
16	1004.4	1005.1	24	8	N	12 N	8	T	15	15	2	9
17	1001.6	999.4	29	4	ESE	12 NW	12	.03	15	15	10	2

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Date	Barometer		Temp.		Wind			Precip.	Vis.		Cloud Tenths of Sky Cover	
	Mbs. 0730	Mbs. 1930	Max F°	Min F°	0730 am	1930 pm	Total	am	pm	0730	1930	
1958												
October												
18	1006.6	1018.7	27	1	E	14 N	16	T	15	15	4	2
19	1024.9	1027.4	25	14	ENE	16 E	12	T	15	15	9	10
20	1027.8	1028.0	26	21	E	6 SE	10	T	15	15	10	10
21	1026.7	1020.9	28	22	S	18 S	18	.04	15	3/4	10	10
22	1016.6	1022.7	27	11	ESE	14 NNE	10	.01	15	15	10	1
23	1027.5	1030.2	31	8	Calm	0 WSW	6	T	0	3	10	9
24	1033.2	1033.3	25	16	NW	4 NNE	3	T	1/4	1/4	10	10
25	1029.5	1025.9	33	15	Calm	0 NW	6	T	15	1/4	10	10
26	1019.2	1025.4	25	11	NNW	30 NW	12		15	15	5	1
27	1027.2	1015.6	32	3	NNW	6 WSW	12	T	15	0	4	10
28	1012.6	1015.1	20	4	N	12 NW	12	.01	15	15	2	3
29	1012.4	1014.9	20	-1	N	6 NNW	18	T	12	15	10	1
30	1010.6	1009.3	20	-4	NE	18 NNE	18	T	15	15	6	10
31	1013.4	1017.5	8	-1	NNW	8 NNW	12		15	15	1	1

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Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer		Temperature Air	Sea	Fog Hrs.	Vis. Mi.	Remarks		
June	1200	Sorel Sig. St.		ESE	1	2988		73			15	Cloudy and clear		
	2000	Quebec Bridge		Calm	0	2990		74			15	Fine and clear		
	29	0400	47 24	70 27	NNE	2	2990		54			15	Fine and clear	
		1200	Red Islet Light		SW	6	2992		53			15	Cloudy and clear	
	30	2000	48 54	67 48	E	4	2984		54	52		15	Cloudy and clear	
		0400	49 36.5	65 52.5	SE	3	2970		52	46		10	Overcast and clear	
1200		50 01	63 51	SE	3	2967		52	48	3	10	Overcast and showers		
2000		Natashquan Pt.		SW	1	2975		53	46	4	0	Dense fog		
July	0400	49 52.5	60 37	E	1	2980		48	47	8	0-2	Overcast and fog		
	1200	50 28	58 53	E	2	2990		50	50	3	10	Overcast and clear		
	2	2000	51 18	57 01	WSW	2	2986		49	48	4	0	Overcast and fog	
		0400	52 07	55 23	SE	1	2979		46	42	8	0-2	Thick fog and overcast	
	1200	53 28	55 04	SSE	5	2970		42	42	3	3-5	Overcast and light rain		
		2000	54 49	55 15	SE	6	2968		42	38	2	3-5	Overcast and fog patches	
	3	0400	55 23	55 23	E	6	2970		44	43	4	2-3	Overcast and rain and fog	
		1200	57 26	56 27	ENE	5	2974		43	42	4	1-3	Overcast and rain	
	2000	58 30	57 54	ENE	3	2980		42	42	4	4	0	Overcast and thick fog	
		0400	59 46	59 35	NE	5	2990		41	40	4	0-1	Overcast and thick fog	
	1200	60 42.5	59 35	NE	5	2990		37	26	2	10	10	Overcast and clear	
		2000	61 08	63 32.5	N	6	2998		36	30		10	10	Overcast and clear
	5	0400	61 20	65 04	ENE	6	3006		40	32		10	10	Cloudy and clear
		1200	Acadia Cove		NE	4	3012		50	34		15	15	Cloudy and clear
	2000	Acadia Cove			W	3	3011		46	36		15	15	Fine and clear
		0400	Acadia Cove		WNW	1	3002		35	35		15	15	Fine and clear
	1200	Acadia Cove			WSW	1	3000		46	36		15	15	Fine and clear
		2000	Acadia Cove		SW	1	2998		42	44		15	15	Cloudy and clear
	7	0400	Acadia Cove		W	1	2992		34	34		15	15	Cloudy and clear
		1200	Acadia Cove		NW	4	2987		34	34		15	15	Fine and clear
	2000	Acadia Cove			W	2	2985		41	34		15	15	Cloudy and clear
		0400	61 20	67 22	SW	4	2976		36	34		15	15	Cloudy and clear
	1200	Off Cape Hopes			SW	1	2966		44	33		15	15	Cloudy and clear
	2000	61 12	69 40	S	2	2959		56	40			15	15	Cloudy and clear

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Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature		Fog	Vis.	Remarks
						Air	Sea			
		°	'	True	Force	Hrs.	Mi.			
July 9	0400	61 29	70 22	W	2955	40	32		15	Cloudy and clear
	1200	61 54.5	71 48	SW	2968	38	34		15	Overcast and clear
	2000	Charles Island		W	2973	39	41	3	15	Cloudy and clear
10	0400	Charles Island		SW	2978	36	34		10	Cloudy and clear
	1200	Charles Island		SW	2979	41	34		5	Overcast and showers
	2000	Charles Island		ESE	2969	48	34		15	Cloudy and clear
11	0400	Charles Island		E	2942	38	34		3-5	Overcast and rain
	1200	Charles Island		SW	2930	42	36		15	Cloudy and clear
	2000	Off Sugluk Island		SW	2938	46	39		15	Cloudy and clear
12	0400	Sugluk		SW	2941	40	38		15	Cloudy and clear
	1200	Sugluk		SW	2942	44	39		15	Cloudy and clear
	2000	Sugluk		SW	2945	46	40		15	Cloudy and clear
13	0400	Sugluk		SSW	2950	42	38		10	Overcast with light rain
	1200	Sugluk		SSW	2966	46	38		15	Cloudy and clear
14	0400	Off Black Pt.		SW	2972	50	40		15	Cloudy and clear
	1200	Erik Cove		SSE	2966	36	38		10	Cloudy and clear
	2000	Erik Cove		SSE	2950	51	38		15	Cloudy and clear
15	0400	Yvugivik		NE	2921	41	39		10	Overcast and clear
	1200	Digges Island		NW	2923	38	38	1	6-8	Overcast and clear
	2000	Nottingham Island		WSW	2930	34	30	1	15	Overcast and clear
16	0400	62 43	79 47	SW	2938	38	36	1	0	Overcast and dense fog
	1200	62 01	82 55	SW	2946	36	34	2	10	Cloudy and clear
	2000	61 21.5	85 25	WSW	2958	38	36		15	Cloudy and clear
17	0400	60 42	87 53	W	2969	40	36		10	Cloudy and clear
	1200	59 58	90 30	WSW	2974	39	40		15	Cloudy and clear
	2000	59 25	92 47	SW	2978	50	38		15	Cloudy and clear
18	0400	Churchill, Man.		SE	2973	63	38		15	Cloudy and clear
	1200	Churchill, Man.		S	2978	57	57		10	Overcast and clear
	2000	Churchill, Man.		Calm	2981	63	60		15	Cloudy and clear
19	0400	Churchill, Man.		E	2984	72	44		15	Fine and clear
	1200	Churchill, Man.		SE	2982	55	59		15	Cloudy and clear
	2000	Churchill, Man.		S	2975	59	59		15	Cloudy and clear
	2000	Churchill, Man.		SSE	2972	70	52	3	15	Cloudy and clear



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Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature		Fog	Vis.	Remarks
						Air	Sea			
		°	'	True	Force					
July 20	0400	Churchill, Man.		SSE	2962	54	58		12	Cloudy and clear
	1200	Churchill, Man.		SSE	2960	66	60		15	Cloudy and clear
	2000	Churchill, Man.		SE	2958	58	56		3-5	Overcast and heavy rain
	0400	Churchill, Man.		E	2964	45	42		8	Overcast and showers
	1200	Churchill, Man.		E	2980	46	42		15	Overcast and clear
21	2000	Churchill, Man.		E	2984	47	52		15	Cloudy and clear
	0400	59 29.5	92 08	E	2986	34	37		15	Fine and clear
	1200	60 09.5	89 44	NW	2984	43	41	1	15	Cloudy and clear
	2000	60 50	87 18	NNE	2982	42	38	3	10	Overcast and clear
	0400	61 27	85 00	NNE	2979	39	39	4	0	Dense fog
22	1200	62 12	82 17.5	NE	2983	38	38	3	10	Cloudy and clear
	2000	62 46	79 36	NE	2989	40	38		15	Fine and clear
	0400	Off Nottingham		ENE	2988	36	35		15	Cloudy and clear
	1200	Nottingham Island		NW	2994	43	35		15	Fine and clear
	2000	Nottingham Island		E	2994	46	36		15	Cloudy and clear
23	0400	Nottingham Island		NNE	2993	40	37		15	Fine and clear
	1200	Nottingham Island		ENE	2994	48	36		15	Cloudy and clear
	2000	Nottingham Island		E	2988	42	39		15	Cloudy and clear
	0400	Sugluk		ESE	2983	56	39		15	Cloudy and clear
	1200	62 33	73 45	E	2986	40	34		10	Cloudy and clear
24	2000	62 37	72 59	ESE	2987	41	36		10	Cloudy and clear
	0400	62 37	73 03	ESE	2980	41	37		12	Cloudy and clear
	1200	Charles Island		E	2974	42	36		8	Cloudy and haze
	2000	Charles Island		ESE	2978	43	36		15	Cloudy and clear
	0400	61 54	71 32	ESE	2979	39	35		15	Cloudy and clear
25	1200	Diana Bay		NE	2974	42	40	7	2-3	Overcast and fog patches
	2000	Diana Bay		E	2968	50	42	3	10	Cloudy and clear
	0400	Cape Hopes Advance		E	2952	44	39		10	Cloudy and clear
	1200	Diana Bay		SE	2944	58	39	2	10	Cloudy and clear
	2000	Diana Bay		SE	2938	43	38	7½	5	Overcast and foggy
26	0400	Diana Bay		SE	2948	43	40	8	5	Overcast and fog and rain
	1200	Diana Bay		SE	2948	45	39	2	2-5	Cloudy and haze
	2000	Diana Bay		NW	2948	45	39	2	0	Cloudy and haze
	0400	Diana Bay		NW	2952	31	38	7	0	Overcast and fog
	2000	Diana Bay		NW	2952	31	38	7	0	Overcast and fog

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Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Fog	Vis.	Remarks
		° ' "	° ' "	True Force	Air	Sea	Hrs.	Mi.	
July 31	0400	Diana Bay		NW	2957	40	8	0-5	Overcast and fog patches
	1200	Diana Bay		WNW	2958	40	5	8	Overcast and haze
	2000	Diana Bay		N	2964	40		5	Overcast and rain
August 1	0400	Off Cape Hopes		W	2966	40	6	1/2-3	Overcast and fog
	1200	Off Cape Hopes		Calm	2970	42	7	2-3	Cloudy and fog
	2000	Off Hearn Island		SE	2966	40	3	1-6	Overcast and fog patches
2	0400	Off Hearn Island		E	2964	40	4	1-5	Overcast and fog patches
	1200	61 08.5	68 36	E	2960	26	8	8	Overcast and haze
	2000	61 18	66 04	E	2968	34	3	0	Overcast and fog
3	0400	61 25.5	60 40	E	2974	34	8	1/2	Overcast and fog and rain
	1200	61 30	65 54	E	2979	35	8	3	Overcast and haze
	2000	61 30	65 42	NE	2982	35	2	10	Overcast and clear
4	0400	61 26	65 34	E	2984	34		3-5	Overcast and rain
	1200	61 23	64 38	NNE	2990	34		10	Cloudy and clear
	2000	62 31	63 12	NE	2995	39		15	Cloudy and clear
5	0400	63 42	61 40	NE	2999	36	7	0	Overcast and dense fog
	1200	64 55	60 00	N	3008	42		15	Fine and clear
	2000	66 15	60 00	NNE	3012	41		15	Fine and clear
6	0400	67 42	60 00	NNW	3014	36		15	Fine and clear
	1200	69 03	59 55	N	3012	40	8	0	Thick fog
	2000	70 25	60 00	N	3009	40		15	Cloudy and clear
7	0400	71 52	60 00	NNW	3003	37	2	2	Overcast and drizzle
	1200	73 15	60 00	NW	2998	39	8	0	Overcast and dense fog
	2000	74 21	62 27	W	2987	33	8	10	Cloudy and clear
8	0400	75 17	64 36	NNE	2988	33	2	2	Overcast and fog patches
	1200	76 19.5	69 42	WNW	2998	33	8	0	Dense fog
	2000	Thule		NW	2992	35	6	0	Dense fog
9	0400	Thule		Calm	2992	36	4	3-10	Cloudy and clear
	1200	Thule		WSW	2993	41		15	Fine and clear
	2000	75 50	69 48	WSW	2993	37		15	Fine and clear
10	0400	74 53	66 00	Calm	2994	34		10	Fine and clear
	1200	74 44	63 40	Calm	2999	33	2	2-5	Cloudy and fog patches

METEOROLOGICAL REPORT C.G.S. N.B. McLEAN

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind		Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
				True	Force		Air	Sea			
August											
10	2000	73 32	63 10	NNW	3	2998	35	34	2	8-10	Cloudy and clear
11	0400	73 34	64 50	NW	4	2999	30	30	3	½-10	Cloudy and fog patches
	1200	73 36	65 45	NW	3	3001	32	30	1	15	Cloudy and clear
	2000	73 38	65 34	NNW	2	2999	37	30	5	15	Cloudy and clear
12	0400	74 04	65 04	NW	3	2992	34	32		10	Cloudy and clear
	1200	74 25	66 24	NNW	3	2990	36	31	7	0	Dense fog
	2000	74 33	66 30	NW	3	2991	28	29	8	0-½	Dense fog
13	0400	74 41	67 44	N	2	2996	30	30	6	0	Dense fog
	1200	74 39	69 10	E	3	2989	31	31	4	0	Dense fog
	2000	74 44	73 50	NE	4	2992	37	32	4	3-5	Overcast and fog patches
14	0400	74 44	75 30	Calm	0	2996	30	32	8	0	Overcast and fog
	1200	74 52	75 34	W	3	2999	31	31	4	0	Cloudy and fog
	2000	74 33	76 40	SW	3	3000	38	36	8	0	Dense fog
15	0400	74 19	80 14	W	2	3002	36	34	8 ½	1-15	Fog patches
	1200	74 16	85 31	W	1	3010	40	36		15	Fine and clear
	2000	74 26	90 42	WNW	2	3012	42	39		15	Cloudy and clear
16	0400	Resolute Bay		Calm	0	3014	56	39		15	Fine and clear
	1200	Resolute Bay		W	1	3014	54	40		15	Fine and clear
	2000	Resolute Bay		W	2	3008	44	40		15	Fine and clear
17	0400	Resolute Bay		Calm	0	3007	44	42		15	Fine and clear
	1200	Resolute Bay		S	1	3004	46	38		15	Fine and clear
	2000	Resolute Bay		NW	3	3002	50	41		15	Cloudy and clear
18	0400	Resolute Bay		Calm	0	3001	42	40		15	Cloudy and clear
	1200	Resolute Bay		Calm	0	3000	45	39		15	Cloudy and clear
	2000	Resolute Bay		W	1	3000	46	37		15	Cloudy and clear
19	0400	Resolute Bay		W	2	3000	38	36		15	Cloudy and clear
	1200	Resolute Bay		SW	2	3003	44	40		15	Fine and clear
	2000	Resolute Bay		Calm	0	3008	42	37		10	Overcast and clear
20	0400	Resolute Bay		Calm	0	3010	36	38		15	Fine and clear
	1200	Resolute Bay		W	2	3019	46	38		15	Cloudy and clear
	2000	Resolute Bay		WNW	2	3008	48	37		15	Cloudy and clear
21	0400	Resolute Bay		NW	1	3018	42	37		10	Overcast and light rain
	1200	Resolute Bay		N	3	3016	43	38		10	Overcast and clear

METEOROLOGICAL REPORT C.G.S. N.B. McLEAN

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer		Fog Hrs.	Vis. Mi.	Remarks
						Air	Sea			
August 21	2000	Resolute Bay		NE	1	3012	37		10	Overcast and clear
22	0400	Resolute Bay		NNW	1	3012	38		15	Cloudy and clear
	1200	Resolute Bay		WNW	3	3012	38		15	Cloudy and clear
23	2000	74 32	93 06	NE	3	3012	40		15	Cloudy and clear
	0400	74 21.5	89 13	E	5	3010	38	5	0	Overcast and fog
	1200	74 09.5	84 20	E	4	3017	40	7	0	Dense fog
24	2000	73 55	80 24	E	5	3016	35		2-10	Overcast with fog patches
	0400	73 27	76 16	ESE	1	3018	36		10	Cloudy and clear
	1200	72 38	72 40	ESE	1	3018	37		0	Cloudy and snow flurries
25	2000	72 02	69 23	NE	2	3019	32		5-8	Cloudy and clear
	0400	71 50	68 45	W	1	3017	32		1-3	Overcast and snow flurries
	1200	71 33	67 52	W	3	3018	31		2-4	Overcast and snow flurries
26	2000	71 21	67 12	NW	2	3016	32		10	Overcast and clear
	0400	70 57	64 33	NW	3	3014	33			Overcast with snow flurries
	1200	69 55	62 20	NW	2	3010	36		3-5	Cloudy and light snow
27	2000	68 35	60 49	N	2	3010	39		10	Cloudy and clear
	0400	67 18	60 00	NNE	2	3004	38		5	Cloudy and snow flurries
	1200	65 50	60 03	NE	4	2995	40		7	Cloudy and light rain
28	2000	64 37	60 48	NE	5	2984	44		8	Overcast and light rain
	0400	63 38	62 14	E	4	2976	41		10	Overcast and clear
	1200	62 07	63 36	E	3	2978	43		10	Overcast and clear
29	2000	61 21	65 14	WNW	2	2980	36		8	Overcast and clear
	0400	61 21	65 11	NNE	1	2983	36		4-5	Overcast and fog
	1200	Off Resolution Island		W	2	2984	36		0	Cloudy and dense fog
30	2000	61 23	65 19	Calm	0	2986	35		3	Cloudy and fog
	0400	61 20	65 08	SW	1	2990	35	8	0	Overcast and fog
	1200	Acadia Cove		W	2	2992	37	6	1/2	Overcast and fog
31	2000	61 12	67 45	NW	4	2990	36	3 1/2	0	Overcast and fog
	0400	Cape Hopes Advance		W	3	2992	38		15	Overcast and clear
	1200	Cape Hopes Advance		W	3	2992	38		15	Fine and clear
	2000	61 47	71 17	NW	5	2998	40		10	Overcast and clear
September 1	0400	Wakeham Bay		N	4	2986	39	2	4-5	Overcast, rain and fog

METEOROLOGICAL REPORT C.G.S. N.B. McLEAN

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer		Fog Hrs.	Vis. Mi.	Remarks
						Air	Sea			
September 1	1200	Wales Island		N	2	2989	41	3	5	Cloudy, rain and fog
	2000	62 43	74 55	WNW	3	2993	40		15	Overcast and clear
2	0400	77 02	77 02	W	2	2998	40		15	Cloudy and clear
	1200	63 02	78 16	SE	1	3002	36		15	Cloudy and clear
	2000	63 01	79 36	ESE	4	3000	44		15	Cloudy and clear
3	0400	63 13	77 06	E	3	2999	38	1½	15	Cloudy and clear
	1200	64 21	78 26	E	4	2998	34		15	Cloudy and clear
	2000	65 57	79 10	NE	2	2998	31		15	Cloudy and clear
4	0400	66 49	80 24	N	3	2996	32	1½	1½-1	Cloudy with fog
	1200	67 44.5	80 44	Calm	0	2996	35	4	1½-1	Cloudy with fog
	2000	Hall Lake		S	3	2991	36		15	Cloudy and clear
5	0400	68 36	80 46	S	2	2998	33		15	Cloudy and clear
	1200	67 36	80 38	SSE	2	3002	32	2½	15	Cloudy and clear
	2000	66 21	79 00	SE	1	3003	34		10	Cloudy and clear
6	0400	65 11.5	79 00	Calm	0	3003	32		15	Cloudy and clear
	1200	64 03	78 12	W	1	3002	33		15	Cloudy and clear
	2000	Cape Dorset		NW	2	3000	38		15	Cloudy and clear
7	0400	Cape Dorset		W	3	2998	34		15	Cloudy and clear
	1200	Cape Dorset		WSW	4	3000	35		15	Cloudy and clear
	2000	64 01	76 11	SW	4	3002	32	4	1½	Dense fog
8	0400	62 35	75 30	S	1	3005	39	5½	1½	Dense fog
	1200	Anchor Sugluk		NNE	1	3004	42		15	Cloudy and clear
	2000	Anchor Sugluk		NNE	1	3003	40		15	Cloudy and clear
9	0400	Anchor Sugluk		Calm	0	3001	39		15	Cloudy and clear
	1200	Anchor Sugluk		NNE	3	3002	40	2½	1-3	Cloudy with fog patches
	2000	Anchor Sugluk		N	3	3004	40		15	Overcast and clear
10	0400	Anchor Sugluk		NW	4	3005	39		8	Overcast and rain
	1200	Anchor Sugluk		N	1	3009	40		10	Overcast and clear
	2000	62 34	76 26	NW	2	3005	43		10	Overcast and clear
11	0400	62 50	77 49	SW	6	3000	44		10	Overcast and clear
	1200	62 30	79 10	SW	6	2985	42		10	Overcast and clear
	2000	62 20	80 34	SSW	8	2961	42	2	5	Overcast and fog patches

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Date	Time	Lat. N.		Long. W.		True	Wind	Force	Barometer		Temperature		Fog Hrs.	Vis. Mi.	Remarks
		o	'	o	'				Air	Sea	Air	Sea			
September															
12	0400	62	08	80	48		SSW	6	2943	40	42	40		5	Overcast and rain
	1200	62	02	82	40		WNW	3	2941	41	41	41	6	8	Cloudy and clear
	2000	61	48	84	18		NW	7	2957	40	41	40	4 $\frac{1}{2}$	5	Overcast and foggy
13	0400	62	08	80	48		SSW	6	2943	40	42	40		5	Overcast and rain
	1200	62	02	82	40		WNW	3	2941	41	41	41		8	Cloudy and clear
	2000	61	48	84	18		NW	7	2957	40	41	40		5	Overcast and foggy
14	0400	59	26	92	42		E	4	2985	43	43	43		5	Overcast and rain
	1200	59	18	93	23.5		ENE	7	2983	43	42	43		12	Overcast and clear
	2000	59	28	92	29		ENE	8	2990	43	44	43		10	Overcast and clear
15	0400	59	11	93	46		E	3	3001	42	42	42		2-5	Cloudy with showers
	1200						E	2	3003	49	45	49		10	Overcast and showers
	2000						SE	1	3017	49	47	49		10	Cloudy and clear
16	0400						S	4	3024	42	44	42		10	Overcast and clear
	1200						SSW	4	3024	43	44	43		15	Cloudy and clear
	2000						SSW	2	3014	52	45	52		15	Cloudy and clear
17	0400						SSW	4	3010	42	46	42		15	Cloudy and clear
	1200						SSW	4	2998	47	46	47		15	Cloudy and clear
	2000						SSW	1	2984	49	46	49		15	Cloudy and clear
18	0400						S	2	2970	42	45	42		15	Cloudy and clear
	1200						S	5	2948	51	46	51		10	Overcast and clear
	2000						SW	3	2938	56	48	56		10	Cloudy and clear
19	0400						W	4	2934	49	46	49		5	Overcast and rain
	1200						W	4	2939	59	47	59		15	Cloudy and clear
	2000						WSW	4	2948	57	46	57		15	Cloudy and clear
20	0400						WSW	4	2952	43	42	43	1 $\frac{1}{4}$	15	Cloudy and clear
	1200						SSE	4	2956	50	42	50		15	Fine and clear
	2000						E	3	2960	45	42	45		15	Cloudy and clear
21	0400						ESE	4	2956	41	40	41		0	Overcast and dense fog
	1200						SE	6	2949	41	42	41		10	Overcast and clear
	2000						SE	5	2945	51	44	51		10	Overcast and clear
22	0400						S	5	2936	45	43	45		0	Overcast, rain and fog
	1200						WSW	4	2927	43	42	43		1-3	Overcast and foggy
	2000						WSW	5	2929	42	40	42		10	Overcast and clear

METEOROLOGICAL REPORT C.G.S. N.B. McLEAN

Date	Time	Lat. N.		Long. W.		Wind True	Force	Barometer		Temperature		Fog Hrs.	Vis. Mi.	Remarks
		°	'	°	'			Air	Sea	Air	Sea			
September														
23	0400	59	02	82	14	SW	7	2924	41	40	41	10	10	Overcast and clear
	1200	59	09	83	20	WSW	9	2926	41	40	41	10	10	Cloudy and clear
	2000	59	11	84	14	W	8	2944	40	40	40	5-8	10	Overcast and haze
24	0400	59	14	84	55	W	6	2956	41	40	41	10	10	Cloudy and clear
	1200	60	08	86	27	W	5	2959	42	39	39	15	15	Cloudy and clear
	2000	61	20	87	40	NW	5	2956	38	38	38	15	15	Cloudy and clear
25	0400	62	36	88	30	N	3	2950	41	38	38	4	1-5	Cloudy and fog patches
	1200	Whale Point				NE	4	2951	38	40	40	5	3-5	Overcast and fog patches
	2000	65	24	86	26	NE	5	2959	32	32	32	10	10	Overcast and clear
26	0400	66	12	85	36	NNW	5	2960	30	39	39	10	10	Overcast and clear
	1200	66	10.5	85	39	N	3	2965	42	30	30	5	5	Overcast and snow flurries
	2000	66	19	85	43	WNW	3	2974	35	29	29	15	15	Cloudy and clear
27	0400	66	21	85	50	N	2	2974	25	29	29	10	10	Overcast and clear
	1200	66	15.5	85	39	NNW	3	2974	30	30	30	15	15	Overcast and clear
	2000	66	06	85	42	WNW	3	2977	28	29	29	10	10	Overcast and clear
28	0400	65	51	86	00.5	WNW	2	2978	28	29	29	10	10	Cloudy and clear
	1200	65	58	85	46	NNW	2	2981	28	29	29	15	15	Overcast and clear
	2000	65	37	86	16	NNE	3	2988	27	29	29	15	15	Cloudy and clear
29	0400	64	52.5	86	46.5	NNE	3	2988	28	34	34	10	10	Cloudy and clear
	1200	63	46	87	42	E	4	2992	32	40	40	15	15	Overcast and show flurries
	2000	63	01	86	16	E	3	2994	32	38	38	10	10	Overcast and clear
30	0400	63	21	83	55	NE	4	2992	31	34	34	15	15	Cloudy and clear
	1200	Coral Harbour				ENE	2	2993	30	35	35	15	15	Cloudy and clear
	2000	63	31	83	14	ENE	5	2988	34	37	37	15	15	Cloudy and clear
October														
1	0400	Coral Harbour				NE	5	2968	26	36	36	10	10	Overcast and clear
	1200	Coral Harbour				N	5	2945	29	36	36	5	5	Overcast and snow flurries
	2000	Coral Harbour				N	8	2924	29	34	34	10	10	Cloudy and clear
2	0400	Coral Harbour				NW	7	2919	29	35	35	10	10	Overcast and clear
	1200	64	02.5	83	19	NW	7	2923	27	34	34	10	10	Overcast and clear
	2000	63	16	81	15	NW	1	2942	25	30	30	10	10	Cloudy and clear
3	0400	63	01.5	80	10	NW	5	2954	24	33	33	10	10	Overcast and clear
	1200	Nottingham Island				W	3	2960	28	31	31	15	15	Cloudy and clear

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Date	Time	Lat. N.		Long. W.		Wind True	Force	Barometer		Temperature		Fog Hrs.	Vis. Mi.	Remarks
		°	'	°	'			Air	Sea	Air	Sea			
October														
3	2000	62	28	77	20	ESE	2	2960	29	32			15	Cloudy and clear
4	0400	Anchor		Sugluk		ENE	5	2952	26	37			10	Cloudy and clear
	1200	Anchor		Sugluk		S	2	2948	29	38			15	Cloudy and clear
	2000	Anchor		Sugluk		ENE	3	2950	31	37			3	Overcast with snow
5	0400	Anchor		Sugluk		SW	4	2950	25	36			10	Cloudy and clear
	1200	Anchor		Sugluk		W	4	2952	29	36			5	Overcast and snow flurries
	2000	Anchor		Sugluk		NW	4	2954	24	36			1	Overcast with snow
6	0400	Anchor		Sugluk		W	5	2952	24	34			1 1/2-5	Overcast and snow flurries
	1200	Anchor		Sugluk		W	5	2950	26	35			5-8	Overcast and snow flurries
	2000	Anchor		Sugluk		W	4	2952	26	34			5	Overcast and light snow
7	0400	Anchor		Sugluk		NW	4	2952	28	35			5	Overcast and snow flurries
	1200	Anchor		Sugluk		WNW	5	2960	28	35			1 1/2-3	Overcast and snow flurries
	2000	Anchor		Sugluk		W	3	2974	28	35			10	Overcast and clear
8	0400	Anchor		Sugluk		W	5	2984	26	34			10	Overcast and clear
	1200	Anchor		Sugluk		WNW	5	2994	30	35			10	Cloudy and clear
	2000	62	45	75	38	NW	5	3004	29	35			10	Overcast and clear
9	0400	64	00	76	10	NW	5	3003	32	31			10	Cloudy and clear
	1200	63	42.5	76	02	WSW	3	3009	33	33			5	Cloudy and snow flurries
	2000	62	32	77	40	W	3	3018	32	32			8	Overcast with light snow
10	0400	Anchor		Digges Island		WNW	1	3018	32	32			10	Overcast and clear
	1200	62	21.5	78	43	WNW	1	3019	34	33			15	Overcast and clear
	2000	Anchor		Digges Island		WNW	3	3018	31	31			10	Overcast and snow flurries
11	0400	Anchor		Digges Island		W	4	3012	32	32			10	Overcast and clear
	1200	62	38	77	57	NW	3	3015	33	33			2-8	Overcast and snow flurries
	2000	Anchor		Digges Island		NW	3	3015	30	31			5-10	Overcast and snow flurries
12	0400	Anchor		Digges Island		NNW	5	3017	30	32			0-2	Overcast and snow
	1200	Anchor		Digges Island		N	5	3021	27	32			15	Overcast and clear
	2000	Anchor		Digges Island		N	5	3026	27	30			15	Overcast and clear
13	0400	Anchor		Digges Island		NW	3	3028	27	31			10	Overcast and clear
	1200	62	30.5	78	19	SSW	5	3021	31	30			15	Cloudy and clear
	2000	Anchor		Digges Island		SSE	4	3004	30	31			1	Overcast and snow
14	0400	Anchor		Digges Island		SSE	6	2993	28	30			1-4	Overcast and snow
	1200	Anchor		Digges Island		SSE	5	2983	29	30			15	Overcast and clear



METEOROLOGICAL REPORT U.S.S. N.B. McLEAN

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer		Fog Hrs.	Vis. Mi.	Remarks
						Air	Sea			
October										
14	2000	Anchor	Digges Island	Calm	0	2987	30		15	Overcast and clear
15	0400	Digges	Island	SSE	4	2988	30		10	Fine and clear
	1200	Digges	Island	S	4	2985	30		10	Overcast and clear
	2000	Digges	Island	SSE	5	2976	30		15	Overcast and clear
16	0400	Digges	Island	SSE	5	2968	30		5	Overcast and light snow
	1200	Digges	Island	SSE	4	2962	32		5	Overcast and snow flurries
	2000	Digges	Island	SSE	3	2964	30		15	Cloudy and clear
17	0400	Digges	Island	SW	3	2960	32		15	Overcast and clear
	1200	Digges	Island	S	3	2959	32		15	Overcast and snow flurries
	2000	Digges	Island	SSE	5	2955	30		15	Overcast and clear
18	0400	Digges	Island	S	4	2951	32		10	Overcast and clear
	1200	Digges	Island	SW	5	2962	32		5	Overcast and snow flurries
	2000	Digges	Island	SE	2	2985	31		15	Cloudy and clear
19	0400	Digges	Island	E	4	3000	32		10	Overcast and clear
	1200	Digges	Island	N	4	3009	32		15	Overcast and clear
	2000	Digges	Island	NE	3	3013	32		10	Overcast and clear
20	0400	Digges	Island	NE	3	3014	33		15	Cloudy and clear
	1200	Digges	Island	N	3	3022	33		15	Overcast and clear
	2000	Digges	Island	NE	2	3026	33		15	Overcast and clear
21	0400	Digges	Island	NE	3	3026	32		10	Overcast and clear
	1200	Digges	Island	SE	4	3027	32		15	Overcast and clear
	2000	Digges	Island	SE	2	3014	31		15	Overcast and clear
22	0400	Digges	Island	Calm	0	2998	31		10	Overcast and clear
	1200	62 24.5	80 10	NW	3	2993	33		15	Overcast and clear
	2000	Cary's Swan Nest	a/b	N	3	3010	31		15	Overcast and clear
23	0400	62 13	85 50	SW	5	3019	34	6	1-3	Overcast and fog
	1200	62 28	88 42	SSW	5	3024	35	5	1-6	Overcast and fog patches
	2000	Rankin Inlet	Entrance	SSW	4	3024	34	4	3-5	Overcast and fog
24	0400	Off Marble	Island	SSW	4	3028	32	1	1-5	Cloudy and fog patches
	1200	Off Marble	Island	SSW	4	3030	33	1	1-5	Overcast and drizzle
	2000	62 38	90 41	SSW	3	3028	34	2	5	Overcast and foggy
25	0400	62 26	88 20	SSW	1	3030	34		3-5	Overcast and drizzle
	1200	62 14	85 54	SW	3	3032	35		10	Overcast and clear

METEOROLOGICAL REPORT C.G.S. N.B. McLEAN

Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Fog	Vis.	Remarks
		°	°	True	Air	Sea	Hrs.	Mi.	
October									
25	2000	Cary's Swan Nest		W	3025	32		2-3	Overcast and drizzle
26	0400	62 22	80 42	W	3014	33		5	Overcast and drizzle
	1200	62 38.5	78 08	WNW	3003	32		3-10	Overcast and snow flurries
	2000	62 35	75 21	WNW	3002	29		10	Overcast and clear
27	0400	62 40	73 44	NW	3007	28		10	Overcast and clear
	1200	62 12.5	72 24	NW	3014	27		15	Overcast and clear
	2000	Wakeham Bay		W	3010	26		15	Cloudy and clear
28	0400	61 17	69 49	SW	3004	27		1-10	Overcast and snow flurries
	1200	Off Hearn Island		WSW	2988	31		15	Cloudy and clear
	2000	Off Hearn Island		NW	2982	30		15	Cloudy and clear
29	0400	Off Hearn Island		NW	2984	32		15	Overcast and clear
	1200	Off Hearn Island		NW	2976	33		15	Overcast and clear
	2000	Theron Bay		NNW	2973	29		1-2	Overcast and snow flurries
30	0400	Theron Bay		WNW	2973	29		5-8	Overcast and snow flurries
	1200	Theron Bay		ENE	2969	30		2	Overcast and snow flurries
	2000	Theron Bay		SE	2963	28		5	Overcast and light snow
31	0400	Theron Bay		E	2959	26		5	Overcast and snow
	1200	Theron Bay		N	2948	28		2-5	Overcast and snow flurries
	2000	Theron Bay		NNW	2951	26		1-4	Overcast and snow flurries
November									
1	0400	Theron Bay		NNW	2962	24		1-5	Overcast and snow flurries
	1200	Theron Bay		NW	2987	23		8-10	Cloudy and clear
	2000	Theron Bay		NW	2989	23		8-10	Overcast and snow flurries
2	0400	Theron Bay		WNW	2984	20		10	Overcast and clear
	1200	Theron Bay		SSW	2970	22		15	Overcast and clear
3	0400	Theron Bay		Calm	2966	23		1-5	Overcast and intermittent snow
	1200	Theron Bay		NNE	2964	20		1-5	Overcast and snow flurries
	2000	Theron Bay		WNW	2970	26		15	Cloudy and clear
4	0400	Off Cape Hopes	65 57	NW	2975	24		15	Cloudy and clear
	1200	60 56	63 14	WNW	2974	25		5-10	Overcast and snow flurries
	2000	60 04	61 28	SW	2075	26		15	Overcast and snow flurries
	2000	58 50		SSE	2972	26		15	Cloudy and clear

METEOROLOGICAL REPORT C.G.S. N.B. McLEAN

Date	Time	Lat. N.		Long. W.		Wind	Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
		°	'	°	'			Air	Sea			
November												
5	0400	57	28	59	40	SW	2970	25	31		15	Cloudy and clear
	1200	56	15	57	48	SW	2974	33	32		15	Cloudy and clear
	2000	a/b Bulldog Island				SSW	2980	32	33		15	Fine and clear
6	0400	53	23	55	10	SSW	2982	35	34		15	Cloudy and clear
	1200	51	53	55	51.5	S	2988	41	36		15	Overcast and clear
	2000	50	52.7	57	54	S	2971	42	40		15	Overcast and clear
7	0400	50	27	58	38	S	2962	44	40		2-5	Overcast and rain
	1200	49	59.5	60	13	SW	2966	43	40		10	Overcast and clear
	2000	Off Carleton Pt.				W	2957	40	40		15	Overcast and clear
8	0400	49	46.5	65	23	NW	2960	35	41		15	Cloudy and clear
	1200	49	13	67	34	WNW	2985	34	37		15	Cloudy and clear

METEOROLOGICAL REPORT C.G.S. C.D. HOWE

Date	Time	Lat. N. °	Long. W. °	Wind True	Force	Barometer	Temperature	Vis. Mi.	Remarks
June 28	0400	Montreal		N	1	2976	60	12	Overcast and clear
	1200	Lake St. Peter		E	3	2984	72	12	Cloudy and sunny
	2000	Quebec		W	2	2986	74	15	Fine and clear
29	0400	Cape Salmon		Calm		2986	56	12	Cloudy and clear
	1200	48 47	67 59	W	3	2976	60	10	Cloudy and haze
	2000	49 33	65 56	ENE	4	2980	52	6	Cloudy and haze
30	0400	50 00	63 49	SE	3	2976	56	8	Cloudy and clear
	1200	51 00	61 36	SE	6	2971	52	6	Overcast and haze
	2000	50 10	59 31	SE	5	2972	51	5	Overcast and haze
July 1	0400	51 02	57 43	SE	5	2972	51	5	Overcast and haze
	1200	51 55	55 48	Calm		2982	56	10	Cloudy and sunny
	2000	53 13	54 58	ESE	3	2981	44	10	Cloudy and clear
2	0400	54 40	54 58	SSE	5	2968	44	0	Overcast and dense fog
	1200	55 38	54 58	SE	7	2965	44	1/2	Overcast and rain
	2000	56 30	55 00	SE	6	2967	45	3	Overcast and rain
3	0400	57 10	55 47	SE	3	2969	48	2-4	Overcast, rain, fog
	1200	58 00	56 57	E	6	2974	45	4	Overcast and rain
	2000	59 03	58 25	NE	5	2983	41	0	Dense fog
4	0400	60 12	60 01	NE	4	2995	40	0	Dense fog
	1200	60 53	62 29	N	6	3002	38	10	Cloudy and sunny
	2000	61 15	56 04	NNW	6	3008	46	15	Fine and clear
5	0400	61 40	67 33	Calm		3017	44	15	Fine and clear
	1200	62 30	69 43	NW	4	3018	50	15	Clear and sunny
	2000	Lake Harbour		W	3	3018	58	15	Clear and sunny
6	0400	Lake Harbour		NW	1	3008	52	15	Fine and clear
	1200	Lake Harbour		W	2	2996	66	12	Cloudy and sunny
	2000	Lake Harbour		NW	2	2995	61	15	Cloudy and clear
7	0400	Lake Harbour		NW	2	2989	52	15	Fine and clear
	1200	Lake Harbour		NW	3	2983	56	15	Cloudy and sunny
	2000	Lake Harbour		SE	2	2978	45	8	Overcast and rain
8	0400	Lake Harbour		SE	2	2965	42	8	Overcast and rain
	1200	Lake Harbour		SE	5	2954	44	13	Cloudy and sunny

METEOROLOGICAL REPORT C.G.S. C.D. HOWE

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer	Temperature	Vis. Mi.	Remarks
July 8	2000	62 09	69 36	SE	4	2948	43	12	Cloudy and clear
9	0400	62 13	70 17	SW	1	2947	37	15	Fine and clear
	1200	62 10	70 54	SW	3	2965	46	15	Cloudy and sunny
	2000	62 03	71 28	SE	3	2971	43	15	Cloudy and clear
10	0400	62 33	73 38	WSW	5	2975	46	15	Overcast and clear
	1200	62 27	74 56	SW	4	2970	44	13	Overcast and clear
	2000	Sugluk		WSW	3	2957	60	12	Overcast and clear
11	0400	Sugluk		SW	5	2932	41	15	Cloudy and clear
	1200	Sugluk		SW	7	2920	47	12	Cloudy
	2000	Sugluk		WSW	6	2933	52	12	Cloudy and clear
12	0400	Sugluk		SW	5	2932	41	15	Cloudy and clear
	1200	Sugluk		SW	4	2934	46	12	Cloudy and clear
	2000	Sugluk		SW	6	2938	46	12	Overcast and clear
13	0400	Sugluk		SW	6	2946	40	15	Overcast and clear
	1200	Sugluk		SSW	6	2957	48	12	Cloudy and clear
	2000	62 17	75 31	SSW	6	2957	48	12	Cloudy and clear
14	0400	63 24	75 38	SSE	2	2965	36	15	Cloudy and clear
	1200	63 40	76 04	SSW	3	2953	37	12	Cloudy and clear
	2000	63 47	75 56	SSW	4	2929	36	15	Overcast and rain
15	0400	Off Salisbury		NW	8	2896	36	15	Overcast and clear
	1200	63 55	76 08	W	7	2912	43	3	Cloudy and fog
	2000	63 49	75 44	SW	3	2928	46	15	Fine and clear
16	0400	63 30	75 38	SW	6	2935	34	0	Overcast and dense fog
	1200	62 47	76 48	SW	6	2945	40	12	Cloudy and sunny
	2000	Ivugivik		SSW	6	2953	40	15	Cloudy and clear
17	0400	62 06	78 31	SW	4	2955	41	3-0	Overcast, fog patches
	1200	60 50	78 57	SW	6	2965	39	0	Overcast and fog
	2000	58 25	79 14	SW	6	2974	42	15	Cloudy and clear
18	0400	58 25	78 18	WSW	2	2975	42	15	Cloudy and clear
	1200	58 25	78 13	W	5	2970	46	15	Clear and sunny
	2000	59 34	79 18	N	5	2971	37	2-5	Overcast, fog patches
19	0400	60 29	80 45	NW	2	2974	35	15	Overcast and clear
	1200	60 36	83 25	W	3	2970	39	0	Dense fog

METEOROLOGICAL REPORT C.G.S. C.D. HOWE

Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Vis.	Remarks
		°	°	True Force			Mi.	
July 19	2000	60 24	86 10	W	2969	41	12	Cloudy and clear
20	0400	60 06	89 04	W	2970	45	15	Fine and clear
	1200	59 35	91 35	S	2965	38	7	Cloudy and fog
21	2000	Churchill		SW	2957	52	2	Overcast, rain, fog
	0400	Churchill		E	2964	52	10	Overcast and clear
	1200	Churchill		E	2976	47	12	Overcast and clear
22	2000	Churchill		E	2980	51	15	Cloudy and clear
	0400	Churchill		Calm	2981	46	15	Overcast and clear
	1200	Churchill		SE	2972	59	15	Cloudy and sunny
23	2000	Churchill		SE	2967	54	10	Overcast and rain
	0400	Churchill		SE	2960	46	2	Overcast, rain, fog
	1200	Churchill		SE	2961	46	1	Overcast, rain, fog
24	2000	Churchill		SE	2962	45	0	Overcast, rain, fog
	0400	Churchill		NE	2956	46	1	Overcast, rain, fog
	1200	Churchill		NE	2948	41	8	Cloudy and clear
25	2000	Churchill		NW	2948	45	12	Cloudy and clear
	0400	Churchill		NW	2944	46	4	Overcast, drizzle
	1200	Churchill		N	2947	39	10	Fine and clear
26	2000	29 26	92 47	NE	2948	41	0	Dense fog
	0400	60 21	90 50	SE	2946	36	1/2	Overcast and fog
	1200	61 18	88 34	SE	2956	42	0	Cloudy and fog
27	2000	62 15	86 13	N	2959	42	0	Dense fog
	0400	63 14	83 13	NW	2957	44	0	Dense fog
	1200	Coral Harbour		S	2962	46	5	Cloudy, light fog
28	2000	Coral Harbour		Calm	2964	44	0	Dense fog
	0400	Coral Harbour		E	2960	43	0	Dense fog
	1200	Coral Harbour		SE	2958	46	0	Dense fog
29	2000	63 24	82 40	E	2956	43	10	Cloudy and clear
	0400	63 08	79 38	NE	2925	46	1-1/2	Overcast and rain
	1200	62 58	77 37	ENE	2905	45	2	Cloudy and fog
30	2000	Sugluk		SSW	2908	60	10	Cloudy and clear
	0400	Sugluk		SW	2933	52	15	Cloudy and clear
	1200	62 52	73 41	E	2945	46	10	Cloudy and clear

METEOROLOGICAL REPORT C.G.S. C.D. HOWE

Date	Time	Lat. N.	Long. W.	Wind	Parameter	Temperature	Vis.	Remarks
		°	°	True			Mi.	
July								
30	2000	Wakeham Bay		N	2949	44	8	Cloudy and clear
31	0400	Wakeham Bay		Calm	2951	42	0	Fog
	1200	Wakeham Bay		N	2954	58	10	Fine and clear
	2000	Wakeham Bay		ENE	2960	44	12	Cloudy and clear
August								
1	0400	61 17	68 56	Calm	2966	43	5	Overcast and haze
	1200	Koartak		NE	2964	47	6	Fine and clear
	2000	61 07	69 25	E	2963	43	0	Dense fog
2	0400	61 14	66 34	E	2963	39	0	Dense fog
	1200	61 27	64 23	E	2968	46	1/2	Overcast and fog
	2000	62 17	62 27	E	2984	43	0	Overcast and haze
3	0400	63 21	60 43	E	2996	43	15	Sunny and clear
	1200	64 51	59 50	Calm	3000	50	15	Fine and clear
	2000	67 02	59 50	NW	2995	40	15	Cloudy and clear
4	0400	67 46	59 50	NW	2995	36	0	Overcast and fog
	1200	69 10	60 50	Calm	3000	42	15	Fine and clear
	2000	70 20	63 30	NW	3006	38	8	Cloudy and haze
5	0400	71 00	65 27	Calm	3010	37	1/4	Overcast and fog
	1200	71 53	67 30	Calm	3014	48	10	Overcast and clear
	2000	72 21	69 33	W	3011	46	12	Overcast and clear
6	0400	72 49	72 05	N	3011	46	3-5	Overcast and fog
	1200	73 18	75 30	SE	3014	48	1	Overcast and fog
	2000	73 52	79 22	Calm	3012	42	0	Dense fog
7	0400	74 10	83 02	Calm	3005	38	8	Overcast and clear
	1200	74 13	88 48	E	2997	44	3	Overcast, fog, rain
	2000	74 33	94 19	NE	2995	38	0	Dense fog
8	0400	Resolute Bay		SE	2996	48	10	Overcast and clear
	1200	Resolute Bay		S	2999	47	15	Cloudy and clear
	2000	Resolute Bay		SW	3002	50	15	Cloudy and clear
9	0400	Resolute Bay		Calm	3004	46	15	Sunny and clear
	1200	Resolute Bay		Calm	3000	68	15	Sunny and clear
	2000	Resolute Bay		W	2997	55	15	Fine and clear
10	0400	Resolute Bay		Calm	2995	44	15	Sunny and clear

METEOROLOGICAL REPORT C.G.S. C.D. HOWE

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer	Temperature	Vis. Mi.	Remarks
August 10	1200	Resolute Bay		S	1	2998	49	15	Sunny and clear
	2000	Resolute Bay		S	1	2996	61	15	Sunny and clear
11	0400	Resolute Bay		Calm		2998	44	15	Sunny and clear
	1200	Resolute Bay		SE	2	3000	42	15	Sunny and clear
	2000	Resolute Bay		W	2	2999	47	15	Fine and clear
12	0400	Resolute Bay		Calm		2996	45	15	Sunny and clear
	1200	Resolute Bay		WNW	2	2998	55	15	Sunny and clear
	2000	Resolute Bay		NW	3	2997	48	15	Sunny and clear
13	0400	Resolute Bay		W	1	2996	41	15	Cloudy and clear
	1200	Resolute Bay		NNW	3	2995	51	15	Sunny and clear
	2000	Resolute Bay		NW	2	2995	51	15	Sunny and clear
14	0400	Resolute Bay		Calm		2996	50	15	Cloudy and clear
	1200	Resolute Bay		SE	1	2997	55	15	Sunny and clear
	2000	Resolute Bay		SSE	1	2999	54	15	Sunny and clear
15	0400	Resolute Bay		Calm		3004	42	15	Fine and clear
	1200	Resolute Bay		SE	1	3009	49	15	Sunny and clear
	2000	Resolute Bay		Calm		3013	50	15	Cloudy and clear
16	0400	Resolute Bay		Calm		3015	44	15	Sunny and clear
	1200	Resolute Bay		Calm		3012	46	15	Sunny and clear
	2000	Resolute Bay		NW	1	3005	49	15	Sunny and clear
17	0400	Resolute Bay		Calm		3001	47	15	Sunny and clear
	1200	Resolute Bay		S	2	3000	47	15	Sunny and clear
	2000	Resolute Bay		Calm		2998	44	15	Sunny and clear
18	0400	Resolute Bay		S	1	2997	42	15	Cloudy and clear
	1200	Resolute Bay		SW	2	2998	45	15	Cloudy and clear
	2000	Resolute Bay		SW	3	2999	47	15	Cloudy and clear
19	0400	Resolute Bay		NW	2	2999	42	15	Overcast and clear
	1200	Resolute Bay		S	3	3004	45	15	Fine and clear
	2000	Resolute Bay		S	1	3010	44	10	Overcast and clear
20	0400	Resolute Bay		Calm		2016	40	12	Fine and clear
	1200	Resolute Bay		NW	4	2021	47	15	Cloudy and clear
	2000	Resolute Bay		N	1	3020	47	15	Overcast and clear
21	0400	Resolute Bay		W	2	3018	45	5	Overcast and rain



METEOROLOGICAL REPORT C.G.S. C.D. HOWE

Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Vis.	Remarks
		° ' "	° ' "	True Force			Mi.	
August 21	1200	Resolute Bay		NW	3015	47	12	Overcast and clear
	2000	Resolute Bay		N	3011	47	12	Overcast and clear
22	0400	Resolute Bay		N	3010	43	15	Overcast and clear
	1200	Resolute Bay		NW	3010	48	15	Overcast and clear
	2000	Resolute Bay		NW	3013	44	15	Cloudy and clear
23	0400	Resolute Bay		Calm	3013	44	15	Cloudy and clear
	1200	74 37	94 46	SE	3016	43	15	Fine and clear
	2000	74 18	89 30	ESE	3017	40	0	Dense fog
24	0400	74 17	86 07	E	3019	33	15	Overcast and clear
	1200	74 26	82 46	Calm	3018	38	1	Overcast and fog
	2000	Dundas Harbour		WNW	3016	36	0	Overcast and fog
25	0400	73 49	84 11	Calm	3017	36	15	Sunny and clear
	1200	Arctic Bay		Calm	3016	47	10	Overcast and clear
	2000	Arctic Bay		N	3014	44	12	Cloudy and clear
26	0400	72 51	86 18	N	3015	42	15	Cloudy and sunny
	1200	73 28	84 58	NNE	3013	41	14	Cloudy and clear
	2000	74 18	80 35	ENE	3014	33	15	Cloudy and clear
27	0400	75 23	78 55	NW	3008	41	15	Sunny and clear
	1200	76 01	82 18	W	3005	41	15	Fine and clear
	2000	Grise Fjord		Calm	3002	44	15	Fine and clear
28	0400	75 55	81 26	Calm	3000	37	15	Sunny and clear
	1200	75 47	80 16	SW	2995	43	15	Fine and clear
	2000	74 27	79 14	SW	2990	41	15	Fine and clear
29	0400	73 22	81 06	Calm	2990	35	15	Sunny and clear
	1200	72 49	80 13	Calm	2987	39	15	Fine and clear
	2000	72 40	79 17	Calm	2979	40	15	Fine and clear
30	0400	Pond Inlet		Calm	2986	40	12	Overcast and clear
	1200	Pond Inlet		SW	2987	47	12	Overcast and clear
	2000	Pond Inlet		E	2989	42	15	Fine and clear
31	0400	Guys Bight		Calm	2991	37	15	Sunny and clear
	1200	72 27	73 55	Calm	2993	42	15	Fine and clear
	2000	71 16	70 43	Calm	2995	40	15	Fine and clear

METEOROLOGICAL REPORT C.G.S. C.D. HOME

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer	Temperature	Vis. Mi.	Remarks
September 1	0400	70 49	70 35	Calm		2994	35	15	Sunny and clear
	1200	70 42	69 53	NE	2	2995	40	10	Cloudy and clear
	2000	70 28	68 13	SE	3	2998	34	10	Overcast and clear
2	0400	Clyde River		Calm		3000	31	1/2	Overcast and fog
	1200	Clyde River		SW	3	2998	33	2	Cloudy and fog
	2000	Clyde River		E	2	2994	31	12	Overcast and clear
3	0400	Clyde River		Calm		2994	33	15	Cloudy and clear
	1200	Clyde River		W	1	2995	37	15	Overcast and clear
	2000	70 32	68 31	WSW	2	3001	38	12	Fine and clear
4	0400	Cape Christian		NE	2	2999	34	0	Dense fog
	1200	Cape Christian		SE	1	2990	37	2	Overcast and fog
	2000	Cape Christian		E	2	2991	32	2	Overcast and fog
5	0400	Cape Christian		SSW	1	2995	35	15	Cloudy and clear
	1200	70 32	67 15	Calm		2997	39	15	Fine and clear
	2000	70 21	66 21	SE	1	2988	35	4	Overcast and fog
6	0400	69 27	65 21	SE	2	2995	33	1/2	Clear, low fog
	1200	68 35	65 55	Calm		2987	35	2	Cloudy and fog
	2000	Ekaluse Fjord		NE	1	2985	42	12	Cloudy and clear
7	0400	68 45	68 30	NE	2	2996	42	15	Overcast and clear
	1200	68 24	66 42	E	1	2993	40	10	Cloudy and clear
	2000	68 17	65 29	E	3	2994	38	8	Overcast and fog
8	0400	Kivitoo		Calm		3000	39	15	Overcast and clear
	1200	67 52	64 11	SE	4	3001	37	1-5	Overcast and fog
	2000	Broughton Island		SE	2	3003	38	8	Overcast and fog
9	0400	67 31	64 04	SE	1	3004	38	10	Overcast and clear
	1200	67 02	62 43	W	3	3002	38	3	Overcast and fog
	2000	67 01	62 12	NE	2	2998	38	10	Overcast and clear
10	0400	66 33	61 12	N	7	2985	35	15	Cloudy and clear
	1200	Cape Dyer		NW	6	2971	43	15	Cloudy and clear
	2000	65 37	61 47	SSW	2	2976	41	15	Cloudy and clear
11	0400	64 47	63 48	NW	7	2980	41	15	Cloudy and clear
	1200	65 47	66 06	NW	3	2985	46	12	Overcast and clear
	2000	Pangnirtung		SW	2	2985	41	15	Cloudy and clear

METEOROLOGICAL REPORT C.G.S. C.D. HOWE

Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Vis.	Remarks
		° ' "	° ' "	True Force			Mi.	
September 12	0400	Pangnirtung		Calm	2980	42	10	Overcast and clear
	1200	Pangnirtung		Calm	2977	53	15	Cloudy and clear
	2000	Pangnirtung		SW	2974	45	15	Cloudy and clear
13	0400	Pangnirtung		Calm	2970	43	10	Overcast and clear
	1200	Pangnirtung		WSW	2967	48	15	Cloudy and clear
	2000	Pangnirtung		Calm	2964	43	15	Fine and clear
14	0400	64 56	64 42	Calm	2960	40	15	Cloudy and clear
	1200	63 36	63 00	NW	2965	41	15	Fine and clear
	2000	Brevoort Island		SE	2971	40	3	Overcast and rain
15	0400	Brevoort Island		SE	2970	41	7	Overcast and rain
	1200	62 34	63 32	ESE	2963	41	4	Overcast, light rain
	2000	62 31	66 13	N	2967	35	12	Cloudy and clear
16	0400	Peak Island		NW	2983	36	15	Cloudy and clear
	1200	Frobisher Bay		NW	2995	41	15	Cloudy and clear
	2000	Frobisher Bay		SW	2982	42	12	Overcast and rain
17	0400	Frobisher Bay		NW	2980	42	10	Overcast and clear
	1200	Frobisher Bay		NW	2967	41	15	Cloudy and clear
	2000	Frobisher Bay		NW	2966	42	15	Cloudy and clear
18	0400	Frobisher Bay		NW	2970	43	15	Overcast and clear
	1200	Frobisher Bay		NW	2970	46	15	Cloudy and clear
	2000	Frobisher Bay		NW	2977	40	15	Cloudy and clear
19	0400	Frobisher Bay		NW	2981	42	12	Overcast and clear
	1200	Frobisher Bay		NW	2972	44	15	Cloudy and clear
	2000	Frobisher Bay		SE	2965	41	15	Cloudy and clear
20	0400	Frobisher Bay		SE	2955	41	15	Cloudy and clear
	1200	63 39	68 28	Calm	2950	40	3	Overcast and rain
	2000	62 34	66 17	NE	2954	41	15	Overcast and clear
21	0400	61 52	67 21	Calm	2965	40	0	Fog
	1200	62 17	70 20	NW	2956	40	1	Fog
	2000	63 09	73 03	SE	2969	43	3	Fog
22	0400	64 04	75 58	SE	2945	37	1	Heavy rain
	1200	63 56	75 51	SE	2917	39	4	Overcast and rain
	2000	64 03	76 02	SE	2902	40	2	Overcast and rain

METEOROLOGICAL REPORT C.G.S. C.D. HOWE

Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Vis.	Remarks
		°	°	True Force			Mi.	
September 23	0400	64 08	76 16	SSW	2905	39	10	Overcast and clear
	1200	Cape Dorset		SE	2907	40	15	Cloudy and clear
	2000	Cape Dorset		Calm	2912	40	5	Overcast and fog
24	0400	63 56	75 31	E	2925	39	15	Cloudy and clear
	1200	63 02	72 42	E	2937	45	15	Cloudy and clear
	2000	62 15	70 02	ESE	2948	38	15	Cloudy and clear
25	0400	61 38	66 56	NE	2950	37	8	Overcast and clear
	1200	61 07	64 38	E	2945	39	1-5	Cloudy and fog
	2000	59 48	62 45	E	2924	37	15	Cloudy and clear
26	0400	58 35	61 02	ESE	2890	37	3	Heavy rain squall
	1200	57 23	59 37	ENE	2852	40	1-3	Overcast and rain
	2000	56 16	58 05	WNW	2869	45	5	Overcast and rain
27	0400	54 55	56 50	NW	2890	36	4-6	Overcast and rain
	1200	53 48	55 37	WNW	2919	39	2	Overcast and rain
	2000	52 11	55 27	WSW	2959	43	15	Cloudy and clear
28	0400	51 16	57 09	WSW	2975	44	15	Cloudy and clear
	1200	50 23	59 10	NW	2982	40	15	Overcast and clear
	2000	49 59	61 17	NE	2997	46	12	Overcast and clear
29	0400	50 00	63 23	NW	2960	45	15	Overcast and clear
	1200	49 42	65 35	W	2962	45	15	Cloudy and clear
	2000	49 08	67 34	WNW	2980	48	15	Cloudy and clear
30	0400	48 12	69 27	SW	3000	43	12	Overcast and rain
	1200	Abeam 114-B		SW	2992	48	15	Cloudy and sunny

METEOROLOGICAL REPORT C.G.S. EDWARD CORNWALLIS

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	True	Wind	Force	Barometer		Temperature		Fog Hrs.	Vis. Mi.	Remarks
							Air	Sea	Air	Sea			
July 10	2000	Quebec		NE	2	3010	76						Light wind, fine and clear
	0400	Cape Dogs		NE	1	2990	62	50				15	Light air, cloudy and clear
	1200	49 04 30	67 37 30	NE	4	2980	60	56					Moderate wind, overcast and clear
12	2000	49 48	65 17	E	2	2977	68	58					Light wind, fine and clear
	0400	50 00	62 45	Calm	0	2978	54	52		2		4	Overcast, hazy
	1200	50 00	60 09	Calm	0	2985	65	53		4		0	Cloudy and dense fog
13	2000	50 51	58 00	SE	4	2987	56	51		4			Moderate wind, dense fog, moderate swell
	0400	51 47	55 59	SE	1	2990	54	44		4		0	Light wind, dense fog
	1200	52 55	55 25	SSE	4	2986	56	45		8		0	Moderate wind, dense fog
14	2000	54 04	56 05	NNW	6	2992	46	44		5			Strong wind, overcast and fog
	0400	54 54 55	57 16	NNW	1	3002	44	42					Light wind, fine and clear
	1200	Cape Harrison		NW	2	3018	55	42					Light wind, fine and clear
15	2000	Cape Harrison		Calm	0	3015	58	47				12	Calm, cloudy and clear
	0400	Cape Harrison		S	2	2999	60	43				12	Moderate wind, cloudy and clear
	1200	55 25	57 08	SE	4	2988	48	43				12	Moderate wind, cloudy and clear
16	2000	56 30	57 48	S	6	2977	46	40					Strong wind, partly cloudy and clear
	0400	57 40	59 23	NNW	4	2963	44	42		1		4	Moderate wind, fog and rain
	1200	58 25	60 28	NNW	4	2985	42	38					Moderate wind, cloudy and clear
17	2000	59 29	62 04	Calm	0	2995	50	40				15	Calm, fine and clear
	0400	60 30	63 50	WSW	2	2995	36	36					Light wind, cloudy and clear
	1200	61 07	64 54	Calm	0	2992	48	33				15	Calm, fine and clear
18	2000	61 12	67 24	W	2	2986	42	34					Light wind, overcast and clear
	0400	61 32	70 32	WNW	2	2978	44	40					Light wind, cloudy and clear
	1200	Wakeham Bay		NE	4	2975	47	38					Moderate wind, fine and clear
19	2000	Wakeham Bay		NW	5	2965	50	38					Fresh wind, overcast and clear
	0400	Wakeham Bay		NW	4	2958	40	38			2		Moderate wind, overcast and fog
	1200	Wakeham Bay		SE	3	2957	48	38					Gentle breeze, cloudy and clear
20	2000	Wakeham Bay		SE	4	2970	47	39					Moderate wind, cloudy and clear
	0400	Wakeham Bay		SW	1	2987	41	38					Light wind, cloudy and clear
	1200	62 15	70 40	E	5	2997	35	36			1 1/2		Fresh wind, overcast and fog

METEOROLOGICAL REPORT C.G.S. EDWARD CORNWALLIS

Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Fog	Vis.	Remarks
		°	°	True Force		Air	Hrs.	Mi.	
July 20	2000	62 28	69 52	SE	3010	38	7		Moderate wind and foggy
21	0400	62 32	68 55	ESE	3013	36	1		Fresh wind, cloudy and clear
	1200	Lake Harbour		ESE	3015	52			Light wind, cloudy and clear
	2000	Lake Harbour		ESE	3010	44			Light wind, cloudy and clear
22	0400	Lake Harbour		Calm	3009	42			Calm, fine and clear
	1200	62 28	70 12	SE	2995	42			Light wind, fine and clear
	2000	62 32	73 24	SE	2990	38			Moderate wind, partly cloudy
23	0400	62 14	75 37 30	NE	2986	42			Light wind, cloudy and clear
	1200	Sugluk		E	2995	54			Moderate wind, cloudy and clear
	2000	Sugluk		NE	3003	54			Light wind, fine and clear
24	0400	Sugluk		SE	3004	43		15	Light wind, fine and clear
	1200	Sugluk		NE	3009	61		15	Moderate wind, fine and clear
	2000	Sugluk		ENE	3010	52			Light wind, fine and clear
25	0400	Sugluk		WSW	3010	50		15	Light wind, fine and clear
	1200	Sugluk		SSE	3009	62			Light wind, cloudy and clear
	2000	Sugluk		E	3005	63			Light wind, overcast and clear
26	0400	Sugluk		WSW	3000	58			Slight breeze, cloudy and clear
	1200	Sugluk		S	2992	70			Strong breeze, cloudy and clear
	2000	Sugluk		W	2990	68			Light wind, fine and clear
27	0400	Sugluk		SW	2985	60			Fresh wind, cloudy and clear
	1200	Sugluk		SW	2985	64			Fresh wind, cloudy and clear
	2000	Sugluk		SW	2990	50			Fresh wind, cloudy and clear
28	0400	Sugluk		WSW	2988	54		15	Light wind, cloudy and clear
	1200	Sugluk		NE	2980	66		15	Light wind, fine and clear
	2000	Sugluk		NE	2966	56			Fresh wind, overcast and rain
29	0400	Sugluk		SSE	2946	60			Fresh wind, overcast and rain
	1200	Sugluk		SSE	2925	66			Strong wind, overcast and clear
	2000	Sugluk		SW	2925	60			Strong wind, fine and clear
30	0400	Sugluk		SW	2948	50			Fresh wind, overcast and clear
	1200	Sugluk		SW	2955	60			Moderate wind, cloudy and clear
	2000	Sugluk		W	2961	58			Light wind, overcast and clear
31	0400	Sugluk		Calm	2967	46			Calm, overcast and clear
	1200	Sugluk		W	2971	59			Light wind, cloudy and clear

METEOROLOGICAL REPORT C.G.S. EDWARD CORNWALLIS

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
							Air	Sea			
July 31	2000	Sugluk		SE	2	2977	63	38			Light wind, cloudy and clear
August 1	0400	Sugluk		SW	2	2976	52	38			Light wind, cloudy and clear
	1200	62 36	77 10	ESE	4	2970	56	40			Moderate breeze, fine and clear
	2000	61 37	78 40	SE	4	2970	50	46			Moderate wind, overcast and clear
2	0400	60 25	78 52	SSE	2	2939	47	48	3		Light wind, dense fog and rain
	1200	59 55	77 38.5	SSW	4	2943	46	46	8		Moderate breeze, rain, overcast and fog
3	2000	Povungnituk		SSW	5	2950	48	46	4		Fresh breeze, overcast, rain and fog
	0400	Povungnituk		S	5	2952	45	50			Fresh breeze, cloudy and clear
	1200	Povungnituk		SE	4	2960	56	50			Moderate wind, cloudy and clear
	2000	Povungnituk		E	4	2966	54	50			Moderate breeze, overcast and drizzle
4	0400	Povungnituk		ENE	4	2975	50	50			Moderate breeze, overcast and clear
5	1200	Povungnituk		ENE	2	2985	60	50			Light wind, cloudy and clear
	2000	59 59	79 13	NNE	1	2999	49	46			Light wind, cloudy and clear
	0400	59 31	79 13	NNE	1	2999	56	50			Light wind, fine and clear
	1200	58 30	78 56	Calm	0	3000	55	45	2	3	Calm, cloudy and fog patches
6	2000	Port Harrison		W	2	3000	54	46			Light wind, overcast and clear
	0400	Port Harrison		E	4	2996	53	44			Moderate wind, overcast and clear
7	1200	Port Harrison		E	5	2992	60	45			Fresh breeze, cloudy and clear
	2000	Port Harrison		NE	5	2990	62	46			Fresh breeze, cloudy and clear
	0400	Port Harrison		NE	8	2989	52	46			Moderate gale, overcast and clear
8	1200	Port Harrison		NE	6	2988	60	46			Strong wind, cloudy and clear
	2000	Port Harrison		NNE	4	2990	62	46			Moderate wind, cloudy and clear
	0400	Port Harrison		ENE	5	2988	53	46			Fresh wind, cloudy and clear
	1200	Port Harrison		ENE	4	2992	60	46			Moderate wind, cloudy and clear
	2000	Port Harrison		NE	2	2990	65	46			Light wind, cloudy and clear

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Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind		Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
				True	Force		Air	Sea			
August 9	0400	Port Harrison			ENE	2	2988	58	46		Light wind, overcast and clear
	1200	Port Harrison			NE	2	2985	57	46		Light wind, cloudy and clear
	2000	58 28	79 06	NW	4	2985	56		46		Moderate wind, partly cloudy and clear
10	0400	58 41	82 16	NW	2	2988	45		44		Light wind, fine and clear
	1200	58 45.5	85 07	NW	3	2995	47		41		Gentle wind, fine and clear
	2000	59 02	88 08	Calm	0	3002	46		40		Calm, fine and clear
11	0400	59 14	90 17	Calm	0	2988	38	2	37	15	Calm, dense fog
	1200	59 28	92 34	Calm	0	2983	54	5	43	0	Calm, dense fog
	2000	Churchill		SSW	2	2979	59		52		Light wind, cloudy and clear
12	0400	Churchill		NNW	4	2980	56		46		Moderate wind, fine and clear
	1200	Churchill		N	5	2990	55		60		Fresh wind, fine and clear
	2000	Churchill		SE	2	2991	61		48	15	Light wind, fine and clear
13	0400	Churchill		NNW	4	2978	51		46		Moderate wind, fine and clear
	1200	Churchill		N	4	2980	56		58	15	Moderate wind, cloudy and clear
	2000	Churchill		NNW	4	2980	48		49		Moderate wind, cloudy and clear
14	0400	Churchill		NNW	5	2978	46		49		Fresh wind, cloudy and clear
	1200	Churchill		NNW	7	2990	51		56		Fresh gale, cloudy and rain
	2000	Churchill		N	4	3002	54		50		Moderate breeze, cloudy and clear
15	0400	Churchill		NW	5	2990	52		56		Fresh wind, overcast and clear
	1200	Churchill		NNW	4	2996	56		58		Moderate breeze, cloudy and clear
16	2000	59 04	93 00	N	2	2993	48		58		Light wind, moderate swell
	0400	59 21	89 57	NNW	6	2963	42		36		Strong wind, overcast and rain
	1200	59 37	87 44	ENE	5	2978	43		43		Fresh wind, cloudy and clear
	2000	59 49	85 00	NE	4	2986	38	6	41		Moderate wind, dense fog NE swell
17	0400	60 04	82 20	NE	4	2988	42	3	42		Moderate wind, cloudy and clear
	1200	60 07	79 24	E	2	2997	53		47		Light wind, fine and clear
	2000	Povungnituk		N	2	3001	54		50		Light wind, cloudy and clear
18	0400	Povungnituk		Calm	0	3002	56		40	15	Calm, overcast and clear
	1200	Povungnituk		S	2	3005	60		50		Light wind, overcast and clear



METEOROLOGICAL REPORT C.G.S. EDWARD CORNWALLIS

Date	Time	Lat. N.		Long. W.		Wind	Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
		°	'	°	'			Air	Sea			
August												
18	2000	Povungnituk				WNW	3002	54	53			Light wind, overcast and clear
19	0400	61 22 30	78 46			E	2987	50	53			Moderate breeze, overcast and clear
	1200	62 35	76 59			E	2988	45	38			Moderate breeze, overcast and rain
20	2000	Sugluk				NE	2985	50	45			Moderate wind, overcast and rain
	0400	Sugluk				Calm	2982	49	46			Calm, cloudy and clear
	1200	Sugluk				NE	2980	56	38			Light wind, cloudy and clear
	2000	Sugluk				NE	2983	45	37			Gentle wind, cloudy and clear
21	0400	Sugluk				NNW	2988	38	38			Light wind, cloudy and clear
	1200	Sugluk				NE	2993	49	38			Moderate wind, overcast and clear
22	2000	62 29	75 35			ENE	3002	42	39			Moderate wind, cloudy and clear
	0400	63 49	76 08			N	3004	42	40			Light wind, cloudy and clear
23	1200	Cape Dorset				NE	3010	60	31			Light wind, cloudy and clear
	2000	Cape Dorset				Calm	3012		31			Calm, cloudy with light rain
	0400	Cape Dorset				Calm	3013	41	30			Calm, overcast and rain
	1200	Cape Dorset				NE	3015	47	31			Light wind, cloudy and clear
24	2000	Cape Dorset				Calm	3019	49	31			Calm, overcast and light rain
	0400	Cape Dorset				Calm	3019	40	31			Calm, overcast and rain
	1200	Cape Dorset				Calm	3020	53	31	1		Calm, overcast and clear
	2000	Cape Dorset				Calm	3023	46	31	1		Calm, overcast and clear
25	0400	Cape Dorset				Calm	3023	42	32		15	Calm, fine and clear
	1200	Cape Dorset				Calm	3022	50	31		15	Light wind, fine and clear
	2000	Cape Dorset				E	3015	44	32			Light wind, fine and clear
	0400	Cape Dorset				NE	3008	44	32			Moderate wind, overcast and clear
26	1200	Cape Dorset				E	3000	40	32			Fresh wind, overcast and rain
	2000	Cape Dorset				ENE	2990	40	32			Fresh wind, overcast and drizzle
	0400	Cape Dorset				ENE	2982	39	32	1		Moderate wind, overcast and light rain
27	1200	64 00	76 00			ENE	2977	39	31	8		Moderate wind, overcast and fog
	2000	63 04	73 48			SE	2975	45	42		3	Light wind, overcast

METEOROLOGICAL REPORT C.G.S. EDWARD CORNWALLIS

Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Fog	Vis.	Remarks		
		° ' "	° ' "	True Force		Air Sea	Hrs.	Mi.			
August	28	0400	62 05	71 31	SE	2	2981	44	42	Moderate wind, cloudy and clear	
		1200	61 12	69 34	SE	4	2990	46	38	Moderate wind, cloudy and clear	
	29	2000	Diana Bay			SE	2	2991	44	38	Light wind, cloudy and clear
		0400	Diana Bay			SE	2	2993	42	38	Light wind, cloudy and clear
		1200	Diana Bay			E	1	2995	45	42	Light air, cloudy and clear
		2000	Diana Bay			ENE	1	3001	41	42	Light wind, cloudy and clear
	30	0400	Diana Bay			ENE	2	3001	39	57	Light wind, overcast and drizzle
		1200	Diana Bay			Calm	0	3004	45	38	Calm, dense fog
	31	2000	61 09	68 16	NW	2	3006	38	40	Light wind, dense fog	
		0400	60 54	64 57	NNW	2	3004	34	37	Light wind, fog patches	
1200		59 45	62 48	NW	4	3003	42	37	Moderate wind, cloudy and clear		
2000		58 17	60 59	E	5	3000	32	40	Fresh wind, fog patches		
September	1	0400	56 36	59 03	ESE	5	2977	40	40	Fresh wind, overcast and rain	
		1200	55 20	57 18	SE	6	2939	44	42	Strong wind, overcast and rain	
	2	2000	54 07	56 08	S	6	2938	54	44	Strong wind, heavy swell	
		0400	52 34 30	55 26	S	6	2968	53	48	Strong wind, fine and clear	
		1200	51 29½	56 33	SW	1	2980	54	48	Light wind, dense fog	
	3	2000	50 10	58 08	N	7	2978	54	56	Moderate gale, overcast and fog	
		0400	48 45	59 17	NW	6	2998	54	58	Strong wind, overcast and rain	
	4	1200	47 10	59 41	NW	7	3025	59	43	Moderate gale, cloudy and clear	
		2000	North Sydney		NNW	2	3038	58	62	Light wind, fine and clear	
		0400	North Sydney		WSW	2	3046	70	66	Light wind, fine and clear	
	5	1200	North Sydney		SSW	1	3046	70	66	Light wind, fine and clear	
		2000	45 46	60 01	SW	6	3035	72	64	Strong breeze, fine and clear	
		0400	44 52 50	61 58 50	SW	6	3025	65	62	Strong wind, cloudy and clear	

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Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer		Temperature		Vis Mi.	Remarks
						Max	Min	Max	Min		
July	1600	Buoy 106-B		Calm	0	2960	78	52			Cloudy, fog at distance
	2400	East Bic Island		NE	1	2957	52	52			Dense fog
	0800	49 20	66 57	NE	1	2957	58	54		5	Overcast and fog
	1600	West Point		NE	3	2959	62	54		5	Cloudy, fog at distance
31	2400	49 58	63 01	E	1	2955	54	54		5	Overcast, light rain
	0800	49 58	61 13	SE	2	2966	70	56		5	Sunny, fog patches
	1600	50 20	59 04	W	3	2965	70	56		10	Fine and clear
	2400	51 07	57 19	S	2	2960	56	56		10	Overcast and clear
August	0800	52 03	55 30	W	2	2955	66	43	45	1	Overcast and fog
	1600	53 21	55 31	N	4	2950	50	43	46	10	Cloudy
	2400	54 30	52 30	NW	4	2950	43	43	43	3	Overcast and fog
	0800	55 30	55 30	NE	2	2948	44	42	45	1	Overcast and fog
	1600	56 08	55 03	E	4	2955	45	42	46	2	Overcast and fog
	2400	57 00	54 12	E	4	2970	46	42	46	2	Overcast and foggy
	0800	57 30	53 35	E	9	2980	48	46	49	5	Overcast and foggy
	1600	57 54	53 03	NE	9	2985	49	46	49	2	Overcast and fog
	2400	58 25	52 20	E	8	2985	46	46	47	1	Overcast and fog
	0800	59 20	51 20	E	4	2987	46	42	42	2	Overcast and foggy
	1600	60 35	52 15	NE	4	2996	44	42	42	10	Overcast and clear
	2400	61 45	52 55	NE	1	3001	42	42	42	0	Dense fog
	0800	62 47	53 50	Calm	0	3010	42	38	45	0	Overcast and dense fog
	1600	64 15	55 12	W	2	3017	46	38	42	$\frac{1}{2}$	Cloudy and fog
	2400	65 25	56 13	NW	3	3020	40	38	42	$\frac{1}{2}$	Overcast and dense fog
	0800	66 45	57 25	N	4	3025	40	38	43	$\frac{1}{2}$	Cloudy and fog
	1600	68 04	58 35	N	4	3022	39	38	40	0	Overcast and dense fog
	2400	69 13	59 35	N	3	3015	40	38	38	8	Overcast
	0800	70 25	60 48	N	2	3010	40	30	39	3-10	Cloudy
	1600	71 35	62 00	N	3	3010	36	30	31	0	Cloudy and fog
	2400	71 47	61 20	NW	1	3005	31	30	31	2	Cloudy and foggy
	0800	72 02	61 02	Calm	0	3005	34	30	31	12	Cloudy and clear
	1600	72 09	60 45	W	2	3005	44	30	31	15	Cloudy and clear
	2400	72 33	60 35	W	2	3000	30	30	32	$\frac{1}{4}$	Dense fog

METEOROLOGICAL REPORT C.G.S. D'IBERVILLE

Date	Time	Lat. N.		Long. W.		True	Wind	Force	Barometer		Temperature		Vis.	Remarks
		°	'	°	'				Max	Min	Sea			
August 9	0800	72	46	61	14	NW		1	2995	32	27	33	14	Cloudy and clear
	1600	72	53	61	27	SE		1	2991	36	27	31	2-5	Overcast, light snow
	2400	73	08	62	00	E		1	2999	32	27	29	2-6	Cloudy, fog patches
10	0800	73	13	62	30	E		1	3007	35	30	29	2	Cloudy and fog
	1600	73	12	63	02	Calm		0	3014	40	30	29	8	Cloudy and foggy
	2400	73	35	63	40	N		1	3014	30	27	30	5	Overcast
11	0800	73	36	65	44	NW		3	3017	36	30		0	Dense fog
	1600	73	38	66	00	Calm		0	3016	36	30	30	0	Dense fog
	2400	73	46	65	09	NW		1	3014	30	30	29	15	Fine and clear
12	0800	74	15	66	00	Calm		0	3005	36	29	29	15	Clear and sunny
	1600	74	28	65	46	NW		3	3003	31	29	29	0	Overcast and fog
	2400	74	35	68	00	W		1	3000	29	29	30	0	Dense fog
13	0800	74	39	68	27	N		2	2998	31	29	30	10	Overcast and fog
	1600	74	42	70	30	E		2	3003	34	29	34	2-3	Overcast and fog
	2400	74	45	74	45	ESE		2	3007	30	29	36	2	Overcast and fog
14	0800	74	46	78	15	Calm		0	3013	30	30	32	0	Overcast, dense fog
	1600	74	54	75	75	NW		1	3014	32	30	32	0	Overcast, dense fog
	2400	74	52	76	27	SW		1	3015	30	30	32	0	Overcast, dense fog
15	0800	74	23	80	03	SW		2	3020	34	33	36	15	Fine and clear
	1600	74	18	85	05	Calm		0	3026	46	33	37	15	Fine and clear
	2400	74	27	90	19	W		2	3028	42	33	36	15	Fine and clear
16	0800	Resolute	Bay			Calm		0	3030	40	39	39	20	Fine and clear
	1600	Resolute	Bay			NW		1	3027	43	39	40	20	Fine and clear
	2400	Resolute	Bay			NW		2	3020	43	39	39	15	Fine and clear
17	0800	Resolute	Bay			NE		2	3018	48	39	37	15	Fine and clear
	1600	Resolute	Bay			Calm		0	3015	53	39	37	15	Fine and clear
	2400	Resolute	Bay			Calm		0	3008	40	39	38	15	Fine and clear
18	0800	Resolute	Bay			Calm		0	3015	40	38	39	20	Fine and clear
	1600	74	31	92	30	Calm		0	3013	50	38	39	15	Cloudy and clear
	2400	74	22	86	12	Calm		0	3012	38	38	36	15	Overcast and clear
19	0800	74	33	79	53	Calm		0	3016	40	38	38	15	Cloudy
	1600	74	56	81	00	W		1	3023	48	38	38	15	Fine and clear
	2400	76	19	88	00	Calm		0	3030	38	38	36	15	Cloudy and clear

METEOROLOGICAL REPORT C.G.S. D'IBERVILLE

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True	Force	Barometer		Temperature		Vis. Mi.	Remarks	
						Max	Min	Max	Min			Sea
August 20	0800	77 01	89 42	Calm	0	3035		34	33	35	Cloudy and foggy	
	1600	78 19	88 01	Calm	0	3035		40	33	35	Overcast and fog	
	2400	79 35	85 20	Calm	0	3035		36	33	33	Overcast and foggy	
	0800	Eureka			Calm	0	3034		48	38	37	Overcast and clear
	1600	Eureka			NW	2	3030		42	38	37	Fine and clear
21	2400	Eureka		NW	1	3027		48	38	32	Fine and clear	
	0800	Eureka		NW	1	3025		42	40	32	Fine and clear	
	1600	79 55	86 32	NW	1	3024		43	40	32	Fine and clear	
	2400	78 32	87 45	NW	2	3024		40	40	33	Cloudy and fog patches	
22	0800	77 04	89 48	Calm	0	3030		34	32	35	Cloudy	
	1600	76 12	86 12	ESE	3	3034		42	32	36	Cloudy and clear	
	2400	75 52	80 50	ESE	2	3034		32	32	36	Dense fog	
	0800	74 59	79 00	Calm	0	3035		30	30	36	Cloudy and foggy	
23	1600	Dundas Harbour		W	1	3033		42	30	36	Overcast and fog	
	2400	Dundas Harbour		Calm	0	3032		34	30	34	Dense fog	
	0800	73 55	79 07	Calm	0	3032		31	30	36	Cloudy and clear	
	1600	72 57	74 48	SE	1	3033		41	30	37	Cloudy	
24	2400	71 58	71 00	SE	1	3033		30	30	37	Overcast, dense fog	
	0800	71 14	68 55	Calm	0	3030		28	28	30	Cloudy and fog	
	1600	71 03	66 35	NE	3	3027		36	28	30	Cloudy and clear	
	2400	69 43	63 57	E	1	3021		33	28	36	Overcast and light snow	
25	0800	68 24	67 20	SE	2	3017		36	32	37	Overcast and occasional snow	
	1600	66 46	61 00	NE	3	3008		36	32	37	Overcast and clear	
	2400	65 14	60 51	NE	3	2999		38	32	37	Overcast, snow flurries	
	0800	63 35	61 35	SE	4	2990		40	38	41	Cloudy	
26	1600	62 15	63 19	SW	2	2992		48	38	41	Cloudy and fog at distance	
	2400	62 19	65 32	N	3	2993		38	38	39	Overcast and foggy	
	0800	Daniel Harbour		Calm	0	2995		30	37	34	Overcast	
	1600	Daniel Harbour		Calm	0	2998		47	37	34	Overcast and clear	
27	2400	Daniel Harbour		W	1	2995		42	37	34	Cloudy	
	0800	62 55	67 08	Calm	0	2995		45	36	34	Cloudy and clear	
	1600	61 48	66 14	W	4	3010		36	36	32	Overcast, light rain	
	2400	62 13	69 16	W	5	3000		40	36	39	Cloudy and clear	

METEOROLOGICAL REPORT C.G.S. D'IBERVILLE

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind		Barometer	Temperature		Vis. Mi.	Remarks
				True	Force		Max	Min		
August										
31	0800	62 36	73 20	W	6	3005	38	39	15	Overcast and clear
	1600	62 38	76 52	NW	3	3008	42	40	15	Cloudy and clear
	2400	62 28	80 10	NW	3	3007	41	39	20	Fine and clear
September										
1	0800	61 40	83 30	Calm	0	3010	48	42	0	Cloudy, dense fog
	1600	60 50	86 33	SW	2	3008	48	42	20	Cloudy and clear
	2400	60 08	89 22	SE	4	2991	40	42	12	Overcast and clear
2	0800	59 25	92 06	SE	6	2965	49	42	10	Overcast
	1600	Churchill		SE	7	2948	45	46	3	Overcast and rain
	2400	Churchill		SE	4	2950	42	44	4	Overcast and rain
3	0800	Churchill		SE	4	2961	61	44	8	Overcast, light rain
	1600	Churchill		SE	4	2970	54	44	12	Cloudy and clear
	2400	Churchill		NW	2	2977	45	44	10	Cloudy and clear
4	0800	Churchill		NW	2	2987	52	46	7	Cloudy, light rain
	1600	Churchill		NW	3	3003	52	46	12	Cloudy, sunny periods
	2400	Churchill		NW	1	3009	42	46	10	Cloudy
5	0800	Churchill		W	1	3015	58	47	15	Fine and clear
	1600	Churchill		N	1	3015	48	48	15	Cloudy and clear
	2400	Churchill		SE	3	3010	45	47	10	Overcast and clear
6	0800	Churchill		SE	4	3000	41	47	2	Overcast and rain
	1600	Churchill		ENE	3	3000	42	47	1	Overcast and rain
	2400	Churchill		ENE	8	3005	42	43	3	Overcast
7	0800	60 50	90 08	ENE	3	3019	40	42	15	Overcast and clear
	1600	60 46	87 18	NE	2	3026	43	45	15	Cloudy and clear
	2400	61 27	84 30	NE	2	3024	40	41	10	Cloudy
8	0800	62 06	81 39	Calm	0	3020	38	41	2	Cloudy and foggy
	1600	62 42	77 56	N	2	3016	48	45	10	Cloudy
	2400	62 32	74 32	SE	4	3015	37	43	5-10	Overcast
9	0800	62 18	71 13	Calm	0	3010	38	40	0	Overcast and foggy
	1600	62 06	67 58	Calm	0	3010	34	37	5	Overcast and foggy
	2400	62 25	61 05	NE	3	3007	35	35	8	Overcast
10	0800	62 23	68 14	Calm	0	3005	32	34	20	Fine and clear
	1600	Frobisher Bay		NW	6	3006	44	35	15	Cloudy and clear

METEOROLOGICAL REPORT C.G.S. D'IBERVILLE

Date	Time	Lat. N. o ' "	Long. W. o ' "	Wind		Barometer	Temperature		Vis. Mi.	Remarks	
				True	Force		Max	Min			
September											
10	2400	Frobisher Bay			NW	2	36	32	35	12	Fine and clear
11	0800	Frobisher Bay			SE	2	36	36	33	12	Cloudy and clear
	1600	Frobisher Bay			SE	2	44	36	33	15	Cloudy and clear
	2400	Frobisher Bay			SE	1	38	36	33	12	Fine and clear
12	0800	Frobisher Bay			SE	1	37	36	34	15	Fine and clear
	1600	63 12	68 02		SE	3	41	36	33	12	Fine and clear
	2400	62 13	65 02		SE	3	36	36	34	12	Fine and clear
13	0800	63 19	63 15		NE	4	43	35	39	15	Fine and clear
	1600	64 30	63 55		NW	7	43	35	40	15	Fine and clear
	2400	65 26	65 41		NW	2	42	35	38	15	Fine and clear
14	0800	Pangnirtung			NE	1	40	37	34	15	Fine and clear
	1600	Pangnirtung			SW	1	43	37	38	15	Cloudy and clear
	2400	Pangnirtung			NE	2	37	37	38	5	Snow flurries
15	0800	Pangnirtung			NE	3	33	32	37	5	Overcast and snow flurries
	1600	65 02	64 48		SE	4	34	32	37	10	Overcast
	2400	63 45	62 40		E	3	34	32	38	5	Occasional snow flurries
16	0800	62 12	61 25		NE	3	39	36	40	12	Cloudy
	1600	60 32	60 03		N	6	42	36	42	5-10	Cloudy, occasional snow
	2400	58 20	58 40		NW		38	36	42	5-8	Cloudy, occasional snow
17	0800	58 05	58 10		NW	9	40	38	42	15	Cloudy and clear
	1600	55 57	56 40		NW	8	42	38	42	12	Cloudy
	2400	54 24	56 10		W	7	39	38	42	12	Clear
18	0800	52 52	55 30		W	5	43	40	40	15	Clear
	1600	51 25	56 42		SW	8	52	40	41	15	Clear
	2400	50 26	58 44		W	2	50	40	52	15	Fine and clear
19	0800	49 57	61 07		N	2	61	46	51	15	Fine and clear
	1600	50 02	63 47		W	1	52	46	49	15	Fine and clear
	2400	49 25	66 10		SW	2	46	46	49	12	Fine and clear
20	0800	49 04	67 11		SW	2	60	48	48	15	Fine and clear
	1600	47 58	69 43		SW	4	55	48	47	15	Fine and clear
	2400	At anchor			W	2	54	48	48	12	Fine and clear
21	0800	At anchor			W	1	74	51	59	5	Fine and hazy
	1600	Tied up in Quebec			W	1	72	51	51	12	Fine and clear

METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind True Force	Barometer	Temperature Air Sea	Fog Hrs.	Vis. Mi.	Remarks
July 10	0400	Montreal		SW 1	3002	74		15	Fine and clear
	1200	Montreal		SE 2	3001	76		15	Fine and sunny
	2000	Ste. Croix		SE 2	2985	78		15	Partly cloudy
11	0400	Quebec		SW 2	2974	70		3	Overcast and rain
	1200	Quebec		SW 2	2966	83		10	Overcast
	2000	St. Jean, O.I.		SW 2	2965	78		10	Fine and clear
12	0400	White Island pier		Calm 0	2965	61		12	Partly cloudy
	1200	Senelles Point		W 2	2966	70		6	Cloudy and foggy
	2000	49 31	66 56	SW 3	2960	63		4	Overcast and foggy
13	0400	49 54.5	66 25.2	NNW 2	2961	59		12	Cloudy
	1200	50 02.5	64 57	W 2	2974	74		15	Partly cloudy
	2000	50 01	62 54.5	WNW 3	2980	60		15	Partly cloudy
14	0400	49 58.5	60 43	WNW 1	2992	60		20	Fine and clear
	1200	50 27	59 01.6	E 1	3000	76		15	Fine and sunny
	2000	51 08	57 22	Calm 0	2998	64		15	Fine and clear
15	0400	31 55.4	55 41.1	Calm 0	2990	48		15	Fine and clear
	1200	53 09.2	55 25.9	SE 2	2980	70		15	Fine and sunny
	2000	54 20	56 15	SE 3	2964	31		15	Overcast
16	0400	55 31.9	57 15	SW 3	2948	48	2	0	Cloudy
	1200	56 39	58 23	NNW 4	2955	43	4	1	Foggy, rain and overcast
	2000	57 32	59 16	N 4	2969	54		15	Cloudy
17	0400	58 23	60 17	NW 3	2970	50		15	Fine and clear
	1200	58 51	60 54	N 3	2965	50		15	Overcast
	2000	59 51	62 26	NNE 2	2955	44		12	Overcast
18	0400	60 35	63 28	NE 2	2945	39	4	5	Overcast, ice field
	1200	60 35	63 28	NE 2	2945	39	4	5	Overcast, ice field
	2000	61 09	64 29	NW 4	2925	40	12	0	Dense fog, ice field
19	0400	61 31.5	63 53.2	ENE 4	2935	40	16	1	Foggy and rain
	1200	62 06.2	64 56	SE 4	2950	44	20	1	Overcast and foggy
	2000	62 38	66 21	SE 3	2969	40	24	2	Overcast and rain and fog
20	0400	62 59	67 12	SE 2	2975	38	4	2	Overcast, rain and fog
	1200	63 05.8	67 39.7	SE 2	2986	43	12	2	Overcast and foggy
	2000	63 03	67 22	SE 4	2998	37	24	0	Dense fog



METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N.		Long. W.		True	Wind	Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
		°	'	°	'				Air	Sea			
July 21	0400	63	02	67	22	SE	1	3000	38	32	4	2	Overcast and foggy
	1200	63	05	67	18	SE	1	2999	42	30	12	0	Dense fog
22	2000	63	05.3	67	34	SE	1	2993	39	32	20	3	Foggy and overcast
	0400	63	07	67	28.5	SE	1	2987	42	32		0	Dense fog
23	1200	63	09.6	67	53	Calm	0	2982	42	30		10	Cloudy and sunny
	2000	63	34	68	24	Calm	0	2980	46	30		12	Fine and clear
24	0400	Frobisher Bay				Calm	0	2977	41	32		15	Partly cloudy
	1200	Frobisher Bay				W	1	2970	61	32		15	Cloudy and sunny
25	2000	62	52	67	07	SE	2	2980	45	32		15	Fine and clear
	0400	61	47.8	65	59.2	SE	2	2983	32	31	8	0	Dense fog
26	1200	60	24.6	67	11.4	ESE	3	2990	40	32	7 1/2	0	Dense fog, few bergs
	2000	Payne Bay		69	40.2	ENE	1	2995	43	32		12	Fine, clear
27	0400	59	59.2			ENE	1	2995	38	32		10	Cloudy
	1200	Payne Bay				ESE	2	2998	51	40		15	Fine and sunny
28	2000	Payne Bay				E	3	3000	44	36		15	Fine and clear
	0400	Payne Bay				E	2	2997	49	38		10	Partly cloudy
29	1200	Payne Bay				E	3	2995	52	42		15	Fine and sunny
	2000	Payne Bay				NE	3	2990	54	38		15	Fine and sunny
30	0400	Payne Bay				E	1	2984	49	41		10	Partly cloudy
	1200	Payne Bay				Calm	0	2982	57	41		15	Cloudy, sunny periods
31	2000	Payne Bay				Calm	0	2982	62	39		15	Fine and sunny
	0400	Payne Bay				Calm	0	2980	60	40		8	Overcast and rain
32	1200	Payne Bay				E	2	2971	52	40	4	3/4	Dense fog
	2000	60	00	69	27	Calm	0	2960	45	38	12	0	Dense fog
33	0400	60	21.7	67	08.2	E	4	2951	45	40	2	0.8	Dense fog and overcast
	1200	61	08	65	18	ENE	3	2951	44	34	8	0.8	Overcast and distant fog
34	2000	61	20	65	30	E	3	2949	40	33	8	0	Dense fog
	0400	61	20.5	66	48	E	4	2940	41	36	4	1-5	Distant fog
35	1200	61	38	70	54	NW	2	2950	46	36	8	1-5	Distant fog
	2000	Wakeham Bay				Calm	0	2955	64	38		15	Fine and clear
36	0400	Wakeham Bay				Calm	0	2950	45	38		10	Overcast and foggy
	1200	Wakeham Bay				SSE	1	2952	58	38	6	0	Partly cloudy and fog
37	2000	Wakeham Bay				SE	2	2959	59	38		15	Cloudy

METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N.	Long. W.	True	Wind	Force	Barometer	Temperature	Air	Sea	Fog	Vis.	Remarks
		°	°								Hrs.	Mi.	
August 1	0400	61 49	70 07	ESE	2	2963	42	36	42	36	3 1/4	0.5	Fog and light rain
	1200	61 45	67 18	Calm	0	2964	42	34	42	34	5	1.5	Overcast and rain
	2000	62 21	65 36	NE	5	2971	45	32	45	32	4	1-3	Fog
2	0400	63 10	67 53	ESE	3	2972	41	30	41	30	2	2	Distant fog
	1200	Frobisher Bay		SE	2	2973	42	30	42	30	4	8	Overcast
	2000	Frobisher Bay		SE	1	2978	42	32	42	32	4	5	Overcast and foggy
3	0400	63 07.2	67 37.2	ESE	5	2980	39	32	39	32	8	0	Overcast and fog
	1200	62 09	65 36	E	5	2986	38	32	38	32	9	0	Overcast and foggy
	2000	61 10	65 37	NE	5	2976	40	32	40	32	8	5	Overcast and foggy
4	0400	61 10	68 24	ENE	5	2972	40	34	40	34	8	1	Foggy and rain
	1200	61 51.5	70 02.9	E	2	2977	42	34	42	34	4	1	Foggy and rain
	2000	Diana Bay		ENE	2	2987	47	38	47	38	10	10	Overcast
5	0400	Diana Bay		ENE	2	2992	44	38	44	38	8	8	Overcast
	1200	Diana Bay		N	2	2995	44	38	44	38	1	1-8	Overcast and rain
	2000	61 08	70 04	N	3	3001	45	38	45	38	8	1	Overcast, foggy and rain
6	0400	61 41.5	71 58.7	Calm	0	3001	45	38	45	38	8	1-3	Overcast, foggy
	1200	Wakeham Bay		ESE	1	3004	48	41	48	41	8	1-3	Overcast, fog and rain
	2000	62 18.2	72 39.6	NW	2	3004	45	38	45	38	10	10	Cloudy
7	0400	62 26.2	75 18	SW	2	3003	43	38	43	38	10	10	Partly cloudy
	1200	Sugluk		ENE	2	2998	54	38	54	38	15	15	Fine and clear
	2000	Sugluk		ENE	2	2997	52	38	52	38	10	10	Cloudy
8	0400	Sugluk		ENE	3	2995	45	38	45	38	4 1/2	0	Heavy fog
	1200	Sugluk		ENE	2	2995	62	38	62	38	10	10	Fine and sunny
	2000	62 24	75 54	ENE	2	2990	52	38	52	38	15	15	Fine and sunny
9	0400	62 35.8	79 02	NE	2	2987	45	44	45	44	10	10	Fine and clear
	1200	62 06	82 47	NNW	2	2987	63	42	63	42	15	15	Fine and sunny
	2000	61 14	85 56	W	1	2987	56	44	56	44	15	15	Fine and sunny
10	0400	60 22	89 01.8	SSW	2	2987	49	44	49	44	15	15	Partly cloudy
	1200	59 34.5	91 46	SW	1	2986	51	38	51	38	15	15	Overcast, intermittent rain
	2000	Churchill		Calm	0	2983	62	44	62	44	15	15	Cloudy
11	0400	Churchill		Calm	0	2975	56	44	56	44	10	10	Overcast
	1200	Churchill		Calm	0	2965	70	48	70	48	15	15	Fine and sunny
	2000	Churchill		Calm	0	2962	64	48	64	48	15	15	Partly cloudy

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Date	Time	Lat. N. o ' "	Long. W. o ' "	Wind		Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
				True	Force		Air	Sea			
August 12	0400	Churchill			W	1	2963	54		10	Overcast
	1200	Churchill			NW	4	2974	54		15	Partly cloudy
	2000	Churchill			SSE	2	2975	54		15	Partly cloudy
13	0400	Churchill			SE	1	2964	51		10	Fine and clear
	1200	Churchill			NNW	2	2964	58		12	Overcast
	2000	Churchill			N	2	2962	54		15	Partly cloudy
14	0400	Churchill			NNW	2	2960	49		10	Overcast
	1200	Churchill			NNW	4	2977	50		7	Overcast
	2000	Churchill			NNW	3	2985	58		10	Overcast
15	0400	Churchill			NW	2	2983	57		15	Overcast and rain
	1200	Churchill			NW	2	2983	62		15	Fine and sunny
	2000	Churchill			Calm	0	2976	54		15	Cloudy
16	0400	Churchill			NW	3	2970	52		10	Partly cloudy
	1200	Churchill			NW	4	2982	50		10	Overcast
	2000	Churchill			NW	3	2987	48		10	Overcast
17	0400	Churchill			E	1	2987	49		10	Overcast
	1200	Churchill			S	2	2984	56		10	Overcast
	2000	Churchill			S	3	2967	56		4	Overcast and rain
18	0400	Churchill			SSE	4	2947	57		8	Overcast
	1200	Churchill			NW	2	2936	68		15	Fine and sunny
	2000	Churchill			W	4	2939	58		10	Overcast and rain
19	0400	Churchill			NNW	6	2940	52		7	Overcast and rain
	1200	Churchill			NW	6	2950	48	4	3	Overcast, rain and fog
	2000	Churchill			NW	5	2962	48	8	3	Overcast, rain and fog
20	0400	Churchill			NW	4	2970	47	8	7	Overcast and rain
	1200	Churchill			NW	4	2982	49	8	5	Overcast, rain and fog
	2000	Churchill			NW	4	2993	49		10	Overcast
21	0400	Churchill			NW	3	2995	45		10	Fine and clear
	1200	Churchill			NW	2	3003	54		15	Fine and clear
	2000	Churchill			NNW	2	3005	49		15	Fine and clear
22	0400	Churchill			NW	2	3004	58		10	Fine and clear
	1200	Churchill			N	1	3004	64		15	Fine and clear
	2000	Churchill			NE	1	3005	50		15	Fine and clear

METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N. o ' "	Long. W. o ' "	True Wind	Force	Barometer	Temperature Air Sea	Fog Hrs.	Vis. Mi.	Remarks
August 23	0400	Churchill		NNW	1	3005	50		10	Partly cloudy
	1200	Churchill		E	1	3005	58		15	Fine and sunny
	2000	Churchill		ESE	2	3001	55		15	Partly cloudy
24	0400	Churchill		SE	1	2998	47		8	Overcast and rain
	1200	58 56.8	93 56.5	E	3	2996	57	50	15	Fine and sunny
	2000	59 57	91 36	NE	3	2994	46	46	4	Overcast, distant fog
25	0400	60 54.5	89 17.7	NNE	5	2982	44	45	3	Overcast and rain and fog
	1200	61 55.5	86 56	NE	3	2986	46	40	8	Overcast and fog
	2000	62 49	84 31	NE	5	2986	42	36	4	Overcast and fog
26	0400	64 05.6	83 15.8	NE	3	2986	43	36	10	Overcast
	1200	Coral Harbour		NE	4	2979	49	36	15	Overcast
	2000	Coral Harbour		NE	3	2978	46	36	12	Overcast
27	0400	Coral Harbour		NE	2	2976	40	36	10	Overcast and rain
	1200	Coral Harbour		NE	3	2974	45	36	15	Overcast
	2000	63 29	82 56	ESE	4	2974	42	40	5	Overcast and fog
28	0400	63 13.3	81 10	NE	5	2972	40	37	7	Overcast and light rain
	1200	63 38	79 15	NNE	3	2973	40	42	8	Overcast and fog
	2000	64 25	78 46	N	4	2975	37	40	0	Overcast and dense fog
29	0400	65 27.2	78 56	NNW	3	2976	35	32	1	Overcast and fog and rain
	1200	66 30.8	79 42	N	2	2985	37	32	10	Overcast
	2000	67 39	80 09	NNW	1	2986	30	30	15	Cloudy
30	0400	68 17.2	80 39.1	NNW	1	2987	32	30	12	Partly cloudy
	1200	Hall Lake		N	1	2990	50	30	15	Overcast
	2000	Hall Lake		Calm	0	2990	45	30	15	Fine and clear
31	0400	Hall Lake		Calm	0	2990	41	30	15	Overcast
	1200	Hall Lake		N	1	2990	57	30	15	Cloudy, sunny periods
	2000	Hall Lake		Calm	0	2990	57	30	15	Fine and clear
September 1	0400	Hall Lake		Calm	0	2990	38	30	1	Partly cloudy and fog
	1200	Hall Lake		Calm	0	2993	40	30	15	Fine and clear
	2000	Hall Lake		Calm	0	2993	36	30	15	Fine and clear
2	0400	Hall Lake		Calm	0	2996	35	30	15	Partly cloudy
	1200	Hall Lake		Calm	0	2998	42	32	15	Fine and sunny

METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N.	Long. W.	Wind	Barometer	Temperature	Fog	Vis.	Remarks
		° ' "	° ' "	True Force		Air Sea	Hrs.	MI.	
September									
2	2000	Hall Lake		SSE	2998	53		15	Fine and sunny
3	0400	Hall Lake		SE	2995	34		15	Fine and clear
	1200	Hall Lake		SSE	2991	40		15	Fine and sunny
	2000	Hall Lake		SSE	2998	42		15	Cloudy
4	0400	Hall Lake		ESE	2995	39		10	Overcast
	1200	68 42.5	80 41.5	Calm	2994	38		15	Partly cloudy
	2000	68 54	78 20	Calm	2994	53		15	Fine and sunny
5	0400	Bray Island		Calm	2994	37		10	Cloudy
	1200	Bray Island		SW	3002	50		15	Cloudy
	2000	Bray Island		SW	3003	45		15	Overcast
6	0400	Bray Island		SW	2990	38		10	Partly cloudy
	1200	Bray Island		Calm	2993	58		15	Partly cloudy
	2000	Bray Island		W	2992	49		15	Overcast
7	0400	Bray Island		W	2987	38		12	Overcast
	1200	69 22	78 50.5	W	2993	44	4	1	Overcast and foggy
	2000	Rowley Island		W	2998	40		15	Fine and sunny
8	0400	Rowley Island		WSW	3000	36		10	Cloudy, intermittent rain
	1200	Rowley Island		Calm	3003	46		15	Cloudy, sunny periods
	2000	68 38.5	79 35	Calm	3005	43		15	Fine and sunny
9	0400	68 43.6	77 21.5	Calm	3005	37	1	5-10	Overcast and fog patches
	1200	Longstaff Bluff		MNW	3005	50		12	Partly cloudy
	2000	Longstaff Bluff		NW	3001	46		15	Cloudy
10	0400	Longstaff Bluff		NW	2998	42		10	Fine and clear
	1200	Longstaff Bluff		W	2990	47		15	Overcast
	2000	68 41	76 01	SW	2980	42		15	Cloudy
11	0400	68 51.9	78 09.2	W	2971	37		12	Fine and clear
	1200	68 43.3	81 01	SSW	2965	38		15	Overcast
	2000	Hall Lake		SE	2963	38	8	8	Overcast, rain and fog
12	0400	Hall Lake		ExN	2963	37		10	Overcast and rain
	1200	68 16.5	80 27.5	SE	2963	38		3	Overcast, rain and fog
	2000	67 16	79 56	SE	2969	38	8	3	Overcast, rain and fog
13	0400	66 34.5	79 39.7	E	2972	35	4	3-10	Overcast, rain and fog
	1200	66 29	79 11	N	2983	38		7	Overcast and rain

METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N.		Long. W.		True	Wind	Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
		°	'	°	'				Air	Sea			
September													
13	2000	65	38	78	50	NW	2	2986	38	32		15	Fine and sunny
14	0400	64	45	78	46.5	NNW	1	2988	35	32		15	Overcast
	1200	64	04	78	29	WNW	1	2991	39	32		10	Overcast
	2000	63	48	76	48	N	3	2989	36	34		15	Fine and sunny
15	0400	63	02	77	51	WNW	3	2986	35	38		10	Fine and clear
	1200	Nottingham Island				NNW	3	2986	38	34		15	Partly cloudy
	2000	Nottingham Island				NNW	3	2994	43	38		15	Partly cloudy
16	0400	63	02.3	78	00	NW	3	2995	45	38		10	Overcast
	1200	63	05	78	04	W	5	2995	42	38		15	Overcast
	2000	Eric Cove				WSW	2	3001	42	38		8	Overcast and rain
17	0400	Eric Cove				W	2	2998	42	40		8	Overcast
	1200	Eric Cove				W	2	2995	40	38	4	3	Overcast, rain and fog
	2000	Eric Cove				WSW	4	2993	46	40		10	Overcast
18	0400	Eric Cove				SSW	4	2992	42	40		10	Cloudy
	1200	Eric Cove				SW	4	2994	44	40		4	Overcast and rain
	2000	Eric Cove				SSE	3	2992	42	40		10	Fine and clear
19	0400	Eric Cove				SSW	5	2982	41	40		10	Fine and clear
	1200	Eric Cove				SSE	3	2965	42	39		15	Overcast
	2000	Eric Cove				S	2	2947	44	40		5	Overcast and rain
20	0400	Eric Cove				SSE	5	2938	43	40		10	Overcast and rain periods
	1200	Eric Cove				S	2	2945	46	40		8	Overcast and rain periods
	2000	Eric Cove				N	2	2959	40	40	8	0	Overcast and rain and fog
21	0400	62	38.6	77	29	NNE	3	2967	40	40		10	Cloudy
	1200	Nottingham Island				ENE	4	2969	36	39		15	Partly cloudy
	2000	Nottingham Island				ENE	6	2953	37	34	8	3	Overcast and fog and rain
22	0400	Nottingham Island				ENE	5	2928	42	34	8	2	Overcast and fog
	1200	Nottingham Island				SE	2	2915	42	34	8	0	Overcast, rain and fog
	2000	62	45	77	12	SE	2	2902	44	36	8	0-3	Overcast, rain and fog
23	0400	62	30.3	74	22	SE	2	2904	41	40		10	Partly cloudy
	1200	62	15.5	72	32	SE	2	2913	43	40		15	Overcast
	2000	61	16	69	56	SE	1	2919	42	34		15	Cloudy
24	0400	61	05.7	69	32.5	WSW	2	2928	42	38		10	Cloudy
	1200	Koartak				SW	2	2938	46	38		15	Overcast, rain periods

METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind		Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
				True	Force		Air	Sea			
September											
24	2000	Koartak			Calm	2941	41	38		15	Fine and clear
25	0400	Koartak			ENE	2948	41	38		10	Partly cloudy
	1200	Koartak			E	2942	42	38		2	Overcast, rain and dense fog
	2000	Theron Bay			E	2925	41	38		3	Overcast, rain and fog
26	0400	Theron Bay			NE	2912	41	38		10	Partly cloudy
	1200	Theron Bay			N	2925	39	37	4	2	Overcast, rain and fog
	2000	Theron Bay			NW	2934	40	38		10	Overcast
27	0400	Theron Bay			NW	2944	41	36		10	Overcast
	1200	Theron Bay			NW	2952	42	36		10	Cloudy and sunny periods
	2000	Theron Bay			NW	2956	36	36		10	Partly cloudy
28	0400	Theron Bay			NW	2960	38	36		10	Partly cloudy
	1200	Theron Bay			NNW	2964	38	36		12	Overcast
	2000	Theron Bay			NW	2968	36	36		10	Partly cloudy
29	0400	Theron Bay			Calm	2970	36	36		8	Overcast, snow flurries
	1200	61 24	70	28.5	WNW	2970	37	36		15	Partly cloudy
	2000	62 13	72	34	NW	2974	35	36		10	Overcast
	0400	62 23	75	22	W	2978	42	40		10	Overcast
	1200	Sugluk			Calm	2982	34	38		3	Overcast, intermittent snow
	2000	Sugluk			NE	2969	34	38		10	Overcast
October											
1	0400	Sugluk			NE	2933	35	38		10	Overcast
	1200	Sugluk			NE	2880	35	34	8	1/2	Foggy and snow
	2000	Sugluk			Calm	2863	34	36	8	1	Overcast and snow flurries
2	0400	Sugluk			WSW	2859	37	36		8	Overcast, snow and rain
	1200	Sugluk			WSW	2882	37	36		4	Overcast, snow period
	2000	Sugluk			WSW	2916	33	36		10	Cloudy
3	0400	Sugluk			W	2941	29	34	4	0-5	Overcast and snow
	1200	Sugluk			SW	2954	30	36		15	Overcast
	2000	Sugluk			NE	2954	38	36		10	Cloudy
4	0400	Sugluk			ENE	2944	29	36		10	Fine and clear
	1200	Sugluk			Calm	2938	32	36		15	Fine and clear
	2000	62 42	77	18	WNW	2940	30	36		10	Cloudy
5	0400	62 23	80	45	NW	2944	25	35		10	Overcast and light snow

METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	Wind		Barometer	Temperature		Fog Hrs.	Vis. Mi.	Remarks
				True	Force		Air	Sea			
October											
5	1200	61 45.5	84 04	NW	4	2956	29	36		15	Partly cloudy
	2000	60 51	87 17	NW	4	2964	29	34	8	5	Overcast and snow flurries
6	0400	59 54	90 25.8	SSW	2	2962	30	38		10	Fine and clear
	1200	59 20	93 16	SE	5	2948	38	36		10	Fine and clear
	2000	Churchill		SE	1	2949	41	37		10	Overcast
7	0400	Churchill		SSW	1	2950	39	37		10	Fine and clear
	1200	Churchill		SW	1	2960	42	36		15	Partly cloudy
	2000	Churchill		Cal <sup>m</sup>	0	2970	40	38		15	Fine and clear
8	0400	Churchill		SSE	1	2976	36	40		10	Fine and sunny
	1200	Churchill		SE	2	2980	47	40		15	Fine and sunny
	2000	Churchill		ESE	3	2985	41	39		15	Fine and clear
9	0400	Churchill		ESE	2	2990	40	38		10	Fine and clear
	1200	Churchill		ESE	3	2995	47	40		15	Partly cloudy
	2000	Churchill		ESE	3	2999	47	40		10	Overcast
10	0400	Churchill		SE	1	3001	43	42		10	Fine and clear
	1200	Churchill		SE	3	3005	39	38		10	Cloudy
	2000	Churchill		SE	3	3005	35	40		10	Overcast
11	0400	Churchill		SSE	3	3003	36	38		10	Overcast
	1200	Churchill		SSE	2	2996	37	38		5	Overcast and snow flurries
	2000	Churchill		S	1	2995	37	40		8	Overcast and snow
12	0400	Churchill		S	1	3001	34	38		10	Fine and clear
	1200	Churchill		S	1	3013	37	38		8	Overcast and snow flurries
	2000	59 10	94 00	S	1	3014	34	36		10	Overcast
13	0400	60 35	93 26	S	3	3000	35	36		8	Overcast and snow flurries
	1200	Eskimo Point		S	4	2975	35	38		3	Overcast and snow flurries
	2000	60 55	93 44	W	5	2964	37	36		5	Overcast
14	0400	60 56.5	93 24	WNW	6	2971	32	37		8	Partly cloudy
	1200	61 04	93 53	NW	5	2985	34	36		10	Partly cloudy
	2000	Eskimo Point		NW	1	2986	30	36		5	Overcast and snow flurries
15	0400	Eskimo Point		WNW	2	2982	31	36		10	Fine and clear
	1200	Eskimo Point		NW	2	2974	30	38		10	Overcast
	2000	Eskimo Point		NW	1	2970	28	36		12	Partly cloudy
16	0400	Eskimo Point		SSE	3	2954	37	38		1-10	Partly cloudy and snow



METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N.		Long. W.		Wind True	Force	Barometer		Fog Hrs.	Vis. Mi.	Remarks
		°	'	°	'			Air	Sea			
October												
16	1200	Eskimo Point				S	2	2945	38		8	Overcast and snow flurries
	2000	Eskimo Point				SW	3	2945	36		3	Overcast and snow flurries
17	0400	Eskimo Point				NW	7	2959	27		2-10	Partly cloudy and snow
	1200	61 04	93	38		NW	4	2983	24		10	Overcast
	2000	62 14.3	91	26		NW	6	2980	24		10	Cloudy, snow flurries
18	0400	62 14.3	91	18.3		NW	8	2965	25		6	Overcast and snow flurries
	1200	62 43	90	38		NNE	4	2992	34		10	Overcast
	2000	63 12	88	25.5		ESE	3	3006	31		10	Overcast
19	0400	62 34.8	86	57		E	3	3010	30		10	Cloudy
	1200	61 57	84	17		E	3	3010	34		15	Overcast
	2000	60 22	80	03		ENE	4	3017	29		10	Overcast and snow flurries
20	0400	62 40.8	78	01.5		NE	2	3020	29		10	Partly cloudy
	1200	62 50	77	06		NNW	2	3022	29		15	Overcast
	2000	64 07	76	17		N	4	3023	26		10	Overcast
21	0400	Cape Dorset				WNW	2	3025	29		10	Overcast
	1200	Cape Dorset				WNW	2	3026	28		15	Overcast
	2000	Cape Dorset				SE	1	3016	28		10	Partly cloudy
22	0400	Cape Dorset				SE	2	3002	30		10	Overcast
	1200	63 43	74	48		ENE	2	2995	26		15	Overcast
	2000	62 53	72	10		NE	3	2997	27		12	Cloudy
23	0400	62 22.5	69	56		N	4	3007	15		15	Fine and clear
	1200	Lake Harbour				NW	2	3025	31		15	Fine and sunny
	2000	62 13	69	48		NW	2	3035	30		10	Overcast and snow flurries
24	0400	61 18	69	36		WNW	2	3038	32		8-15	Cloudy and snow flurries
	1200	Hearn Island				WNW	3	3038	36		15	Fine and sunny
	2000	61 18	68	52		WNW	7	3027	30		10	Overcast and rain
25	0400	61 43.5	67	10		SE	2	3025	32		10	Cloudy
	1200	Acadia Cove				NW	3	3012	36		15	Cloudy and sunny periods
	2000	61 16	66	14		W	5	2996	34		15	Fine and clear
26	0400	61 12	68	24		WNW	6	2992	32		8	Overcast and rain
	1200	61 03.5	69	46.8		NW	4	2990	35		15	Cloudy, sunny periods
	2000	Theron Bay				NW	4	2990	37		5	Overcast and snow flurries

METEOROLOGICAL REPORT C.G.S. MONTCALM

Date	Time	Lat. N. ° ' "	Long. W. ° ' "	True Wind	Force	Barometer	Air Temperature	Sea	Fog Hrs.	Vis. Mi.	Remarks
October											
27	0400	Theron Bay		NW	6	2996	30	34		1-5	Overcast and intermittent snow
	1200	Theron Bay		NNW	5	3010	30	34		5-8	Overcast and intermittent snow
	2000	Theron Bay		WSW	3	3015	29	32		10	Overcast
28	0400	Theron Bay		NNW	4	3002	29	32		1-0	Overcast and light snow
	1200	61 02	68 51	SW	3	2987	32	32		15	Overcast
	2000	60 51	65 42	SW	5	2983	33	32		8	Overcast
29	0400	60 22.5	63 18.5	SW	3	2980	34	34		8	Overcast and light snow
	1200	59 31.8	61 57	SW	2	2980	38	32		15	Partly cloudy
	2000	58 31	60 46	SE	3	2976	34	34		15	Fine and clear
30	0400	57 28	59 23	SW	2	2969	32	34		15	Fine and clear
	1200	56 27	58 14	NW	2	2959	40	33		15	Partly cloudy
	2000	55 26	56 42	NW	2	2943	35	34		10	Overcast
31	0400	54 17.5	56 08.5	NW	2	2923	38	34		10	Cloudy
	1200	53 10	55 29	NNW	4	2929	40	34		10	Overcast
	2000	51 59	55 29.5	SSW	3	2940	34	34		15	Fine and clear
November											
1	0400	51 14	57 12.5	SE	1	2924	38	36		15	Cloudy
	1200	50 27.5	58 49.5	S	3	2900	40	37		6	Overcast, rain and fog
	2000	50 00	60 38	NW	4	2907	36	37		5	Overcast and rain
2	0400	50 01.3	63 26	NW	6	2953	38	41		16	Partly cloudy
	1200	49 38	65 55	WSW	5	2982	34	39		15	Overcast
	2000	48 47	68 14	SW	6	2969	39	42		15	Fine and clear
3	0400	Cape Salmon		SSW	1	2969	38	39		15	Fine and clear
	1200	At Quebec		SSW	1	2962	58	40		15	Fine and clear

CANADIAN GOVERNMENT ICEBREAKERS AND SUPPLY SHIPS

C.G.S. N.B. McLEAN

Twin screw steamship, steel icebreaker, built in 1930, by Halifax Shipyards Ltd., Halifax, N.S. Registered dimensions: 260.0 ft. length, 60.3 ft. beam, 28.8 ft. depth. Tonnage: gross, 3,254, net register, 1,171. The twin screws are driven by reciprocating engines having a total of 6,500 IHP. Vessel keeps continuous radio telegraph watch on 500 k.c. (international distress frequency) and is equipped for communication by radio telephone on 2,182 k.c. (distress and calling frequency), and 2,738 k.c. (ship to ship frequency). Diving equipment and salvage gear are carried on board.

C.G.S. C.D. HOWE

Steel twin screw steamship, strengthened for ice, cargo and passengers, built in 1950, by Davie Shipbuilding and Repairing Company, Ltd., Lauzon, P.Q. Registered dimensions: 280.5 ft. length, 50.2 ft. beam, 23.5 ft. depth. Tonnage: gross, 3,628, net register, 1,871. The twin screws are driven by reciprocating engines having a total of 4,000 IHP. Vessel keeps continuous radio telegraph watch on 500 k.c. (international distress frequency) and is equipped for communication by radio telephone on 2,132 k.c. (distress and calling frequency), and 2,738 k.c. (ship to ship frequency).

C.G.S. EDWARD CORNWALLIS

Steel twin screw steamship, strengthened for ice, cargo and passengers, built in 1949, by Canadian Vickers Ltd. Montreal, P.Q. Registered dimensions: 245.0 ft. length, 43.6 ft. beam, 18.1 ft. depth. Tonnage: gross, 1,965, net register, 916. Engine type: 3 cyl. Skinner Uniflow Steam. IHP 1400 @ 130 RPM. 3 boilers. Equipped with all Marconi radio equipment. Telegraph transmitter LTT 4; Emergency transmitter ME 100. Radiophone equipment CML6 (in wheelhouse). Two receivers in radio room: SMR3A and MFL 5. Marconi Direction Finder MDF 5. Also Kelvin Hughes radar, Henry Hughes Echo sounding equipment, and Henry Hughes Recording Receiver Type 3 -110 volts.

C.G.S. d'IBERVILLE

Twin screw steamship, steel icebreaker, built in 1952, by Davie Shipbuilding and Repairing Co. Ltd., Lauzon, P.Q. Registered dimensions: 290.8 ft. length, 66.8 ft. beam, 37.1 ft. depth. Tonnage: gross, 5,678, net register, 2,038. The twin screws are driven by Skinner Uniflow Steam reciprocating engines having a total of 10,800 IHP. Vessel keeps continuous radio telegraph watch on 500 k.c. (international distress frequency) and is equipped for communication by radio telephone on 2,182 k.c., 2,134 k.c., and 2,738 k.c. Transmitters being RCA model ET 8051, ET 8052 and 8043, output 250 watts, 300 watts, and 40 watts respectively with a Canadian Marconi, CM36 radio telephone unit. Pye TTC 351, VHF 121.5 and 121.9 megs.

C.G.S. MONTCALM

Twin screw steamship, steel icebreaker, built in 1957, by Davie Shipbuilding and Repairing Co. Ltd., Lauzon, P.Q. Registered dimensions: 208 ft. length, 48 ft. beam, and 18 ft. depth. Tonnage: gross, 2,017, net register, 768. The twin screws are driven by Skinner Uniflow steam reciprocating engines having a total of 4,000 IHP. Vessel keeps continuous radio telegraph watch on 500 k.c. (international distress frequency) and is equipped for communication by radio telephone on 2,182 k.c., 2,134 k.c. and 2,738 k.c. Transmitters being RCA model ET 8051, ET 8052 and 8043, output 250 watts, 300 watts and 40 watts respectively with Canadian Marconi CM36 radio telephone unit. Pye TTC 351, VHF 121.5 and 121.9 megs.

Each vessel is equipped with the most modern navigational equipment.