282
COAST GUARD

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
Commanding Officer
USCGC NORTHWIND
(WAGB-282)
CG Yard, Curtis Bay
Baltimore, MD 2122(

3123
14 October 1975

From: Commanding Officer, CGC NORTHWIND (WAGB-282)
To: Commander, CG Atlantic Area (Ao)

Subj: Arctic East, Summer 1975, Cruise Report

Ref: (a) COMDTINST 3123.13
(b) COMSCLANT OPORD 1-75 for Arctic East Operations

1. Forwarded herewith, pursuant to reference (a), is the report of subject cruise conducted in accordance with reference (b).

2. Arctic East 75 was, for NORTHWIND, basically an ice-breaker support mission. The ship was available on the west coast of Greenland for assistance to logistics support vessels but was not directly needed. At the one east Greenland supply operation, icebreaker support was needed and provided. All mission assignments were completed. Additionally, an air search of the west end of Koge Bay was conducted for the crash site of a J2F from CGC NORTHLAND lost in 1942, and the M.S. LOMUR was escorted through ice to the harbor at Angmagssalik at the request of the townspeople.

3. Adequate ice operations were conducted to determine that the re-configured bow of NORTHWIND is effective and that power from the new engines is adequate. A serious casualty was in the reliability of the radars. Of the three installed some worked some of the time but none worked all of the time. Fortunately, no operations were canceled or delayed due to the radars.

4. Arctic East 75 was a relatively short mission. Its different task assignments made it interesting and there was enough use of shipboard equipments to give all hands worth-while experience.

T. W. DRIGGERS

Encl: (1) 3 copies of Subject Cruise Report

Copy to:
COMDT (G-OOO) (4)
CCGDFIVE (1)
POLAR STAR (1)
POLAR SEA (1)
WESTWIND (1)
GLACIER (1)
BURTON ISLAND (1)
AVTRACEN (1)
CG Academy (1)
CG R&D Center (1)
CG OCEANOU (1)
MSCLANT (2)

143

TABLE OF CONTENTS

List of plates and photographs.....a-1

Chronological list of major events.....b-1,2

Chapter 1 - Ship Operations

Narrative Summary.....1-1-4
Port Information.....1-6
Special or Unusual Operations.....1-6
Deck Operations.....1-6,7

Chapter 2 - Air Operations

Pre-deployment Preparations.....2-1
Summary of Operations.....2-1
Maintenance Summary.....2-1
Flight Statistics.....2-2

Chapter 3 - Navigation

Pre-deployment Preparations.....3-1
Navigation practices, procedures, and problems.....3-1
Chart Evaluation.....3-1,2
Foreign Port Visits.....3-2
Graphic Display of Major Track Lines.....3-2

Chapter 4 - Communications and Electronics

Communications.....4-1-4
Electronics.....4-4-6

Chapter 5 - Science

Narrative.....5-1

Chapter 6 - Engineering

Pre-deployment Preparations.....6-1
Major or Unique Engineering Problems.....6-1,2
Fuel and Lubricating Oil Consumption.....6-2

Chapter 7 - Administration

Personnel General.....7-1
Morale/Discipline.....7-1,2
Service-wide Exams.....7-2
General Information.....7-2

Chapter 8 - Supply/Logistics

Pre-deployment Preparation.....8-1
Agent Cashier/Certifying Officer Functions....8-1
Clothing and Small Stores.....8-1
General Mess.....8-1,2
Ship's Exchange.....8-2
Transactions in Foreign Countries.....8-2
Fuel and Lubricating Oil Replenishment.....8-2
Personnel.....8-3

Chapter 9 - Medical

Pre-deployment Preparation.....9-1
Medical/Dental General.....9-1
Narrative of Interesting Cases.....9-1,2
Sanitation.....9-2

Chapter 10 - Public Relations

General.....10-1

Chapter 11 - Personnel Embarked

Permanently assigned Coast Guard personnel....11-1-4
Temporarily assigned Coast Guard Personnel....11-4
Members of Scientific parties.....11-4
Others.....11-4

CHRONOLOGICAL LIST OF MAJOR EVENTS

18 Jul 1975 - Completed shakedown training, chop COMSCLANT, underway en route Cruncher Island.

26 Jul 1975 - Arrived Cruncher Island, entrance to Sondrestrom Fjord, installed radar and radio beacons.

27 Jul 1975 - Departed Cruncher Island.

29 Jul 1975 - Arrived Thule Air Base pier.

15 Aug 1975 - Departed Thule for final time, having in the interim made four sorties:

1 to Kane Basin to test ice bow (3 days)

2 to Canadian coast for A/N site survey (2 and 3 days)

1 local area Air Force familiarization visit (one afternoon)

18 Aug 1975 - Arrived Sondrestrom.

19 Aug 1975 - Departed Sondrestrom.

20 Aug 1975 - Arrived Gronnedal.

21 Aug 1975 - Departed Gronnedal.

22 Aug 1975 - Transited Prince Christian Sound.

24 Aug 1975 - Arrived Kulusuk, awaiting tanker SIMARD.

26 Aug 1975 - Underway to break Icelandic M/V LOMUR into Angmagssalik, King Oscars Harbor, thence proceeding to Koge Bay for survey of CG aircraft crash site.

27 Aug 1975 - Arrived Koge Bay. Launched aircraft for search of west end of Koge Bay for crash site of J2F aircraft lost from CGC NORTHLAND in 1942. Search results negative. Departed for rendezvous with SIMARD.

29 Aug 1975 - Rendezvoused with SIMARD, escorted to Kulusuk mooring, then NORTHWIND anchored in Tautokajik Bay.

5 Sep 1975 - Tanker offload completed, escorted SIMARD clear of ice, chopped CAA, en route Halifax.

CHAPTER 1

SHIP OPERATIONS

1. Narrative summary. The major ship operations during this deployment included the establishment of radar and radio beacons at the entrance to Sondrestrom Fjord and later in the summer, the escort of the tanker supplying Kulusuk, Greenland (DYE-4).

a. To establish the Sondrestrom entrance beacons, NORTHWIND took the advice offered in WESTWIND's 1974 Cruise Report to have all beacon components aboard upon departure from CONUS. This enables system checkout, allows for any needed repairs and promotes installation planning.

(1) Prior to arrival at Sondrestrom NORTHWIND checked the radar beacon (with our radar, from the NORTHWIND bow), detected a defective P/A tube in the radio beacon (a spare was waiting at Cruncher), charged all batteries, fabricated battery connectors, prepared a heavy wooden box for transport of batteries in a sling under the helo, planned all loads for the AVDET ferry between NORTHWIND and the sites, and assigned personnel to each site with same rate backups on board charged with "gophering" additional items needed at the site and to be transported by the helo.

(2) Once anchored in Fishmasters Harbor the installation proceeded smoothly, in part due to an assist from the weather which permitted helo ops. Due to the close range of the sites just one helicopter was employed. Six persons with the ETCS in charge accomplished the radio beacon installation in five hours. Two men with gear were lowered to the radar beacon site on the helo hoist, completing that installation in two and a half hours. Continuous comms were maintained with both parties on FM.

(3) Several items which did not initially occur to us were asked for by the radio beacon work party. The mosquitoes were both large and numerous proving something of a distraction. The corpsman's one can of ~~insect~~ repellent was dispatched with the next flight. Additionally, rags, a broom, nylon line, spare socks (wet ground/cool climate) and spare radio were needed on site. While the Chief DC was included in the work party there was no need for any structural repairs to the hut. Future installations might benefit from a battery carrying box with lines rigged to a ring for attachment to the helo's hook, thus eliminating a lot of fumbling with the cargo net.

b. The second major operation was the resupplying of Kulusuk. As far as NORTHWIND was concerned very few problems were encountered. During our stay NORTHWIND

utilized both the southwestern entrance and the northwestern entrance to the site choosing whichever was more ice free. At first NORTHWIND anchored near MIRFAK off the site but later repaired to the anchorage in Tautokajik Bay, recommended by WESTWIND in her 1974 Cruise Report. Water depths were as indicated in WESTWIND's report and as deep 200 yards south of her sounding line. Due to the tanker's delay NORTHWIND remained anchored in this spot for a continuous week experiencing no problems due to the ice.

(1) Concerning the tanker operations two major problem areas exist in the annual resupply at DYE-4; the location and holding power of a mooring site for the tanker, and the susceptibility of the POL hose to sea ice interference, resulting in pumping cessation.

(a) Problem One.

1 USNS MIRFAK had laid the POL hose from Island B toward Island C and then snaked many lengths along the bottom to about Point A and then buoyed off the end (See POL Offload Area Chart page 1-5). When tanker SIMARD arrived on scene, he felt Point A was too close to the shoal water northeast of Island C and moored at Point B, about 300 yards northeast of Point A. He dropped two bow anchors and then backed down toward Island A, putting out two stern lines to the dead man on that island. These stern lines sagged into the water and were soon parted by sea ice. SIMARD then dropped his stern anchor and remained comfortably in this location for his duration of pumping. Point B is more sheltered from the sea ice movement, being in a lee of Island A, than is Point A.

2 Incidentally, Point B is the same approximate location as recommended by CGC WESTWIND in her 1974 Cruise Report with which we concur.

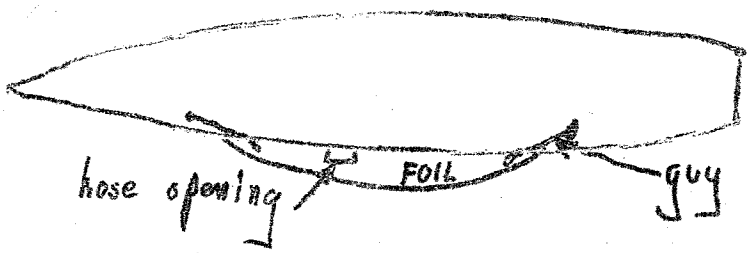
3 The site manager, lower camp, was considering other areas for future POL offloading. His scheme was to put line or chain barriers from Island C to Island B and from Island C to Point C; the barriers would theoretically keep out or restrict the sea ice from entering the enclosed area south of Island C, so that the POL hose could be readily led from Green Beach to Island C. He asked the feasibility of putting a dead man or mooring buoy on the sometimes exposed rock at Point D with a tanker anchoring about Point E and attaching to Point D. CO's MIRFAK, SIMARD, and NORTHWIND all considered this scheme too threatening to the tanker because of the proximity of the shoal water north of Island C. Further, such a barrier, if it held, might restrict the offloading of cargo by barges presently transiting that area.

4 Another location possibility is just west of the village of Kulusuk; 27 fathoms of water reaches almost to the shore. If a breasting barge were moored here, a tanker could probably easily come alongside outboard and pump across the barge. There might be two disadvantages to this: a long hose required and sea ice coming in through the narrow pass to the southwest.

(b) Problem Two.

1 The POL hose was laid out from Island B across a quite shoal area as shown by the solid line. Pumping was delayed several times by sea ice drifting onto the hose on this shoal. MIRFAK and NORTHWIND LCVP's tried to keep the hose clear of ice but were not always successful. We believe that if the hose were laid in the deeper water, as shown by dashed lines, the ice might pass over the hose and not affect pumping. Our LCVP noted that it was sometimes easier to move the sea ice by pulling or towing it than by pushing (down) on it.

2 While the hose is on the bottom in the deeper water, there is usually little danger from sea ice. Then, when the hose surfaces at the tanker, ice again enters the picture. The captain of the SIMARD suggested a wooden foil type of arrangement alongside at the waterline as sketched below.



3 The foil would deflect sea ice moving in either direction and would have an opening next to the hull so that the hose could emerge through it. The foil could be connected on deck by wire guys. His suggestion has considerable merit.

c. In addition to the two primary ship operations several other subsidiary events occurred.

(1) Thule harbor required no icebreaking this summer. NORTHWIND staged out of Thule on three occasions during 29 July to 15 August stay. Once to go north to the edge for tests with the new bow and twice to the Canadian side for some A/N site surveys. While in Thule NORTHWIND's helicopters flew to the villages of Qanak and Moriussaq with the Danish Liaison Officer at Thule enabling him to gain the acquaintances of the townspeople before the then upcoming tour of the Danish Queen. NORTHWIND devoted one

afternoon while in Thule to a "harbor cruise" for interested base personnel. NORTHWIND divers inspected the pier supports; this required two entire work days with two divers working and a third standing by.

(2) Upon our departure from Thule NORTHWIND proceeded to Sondrestrom where mail was picked up. A night of liberty indulged in and a conference held with MIRFAK on the upcoming Kulusuk operations.

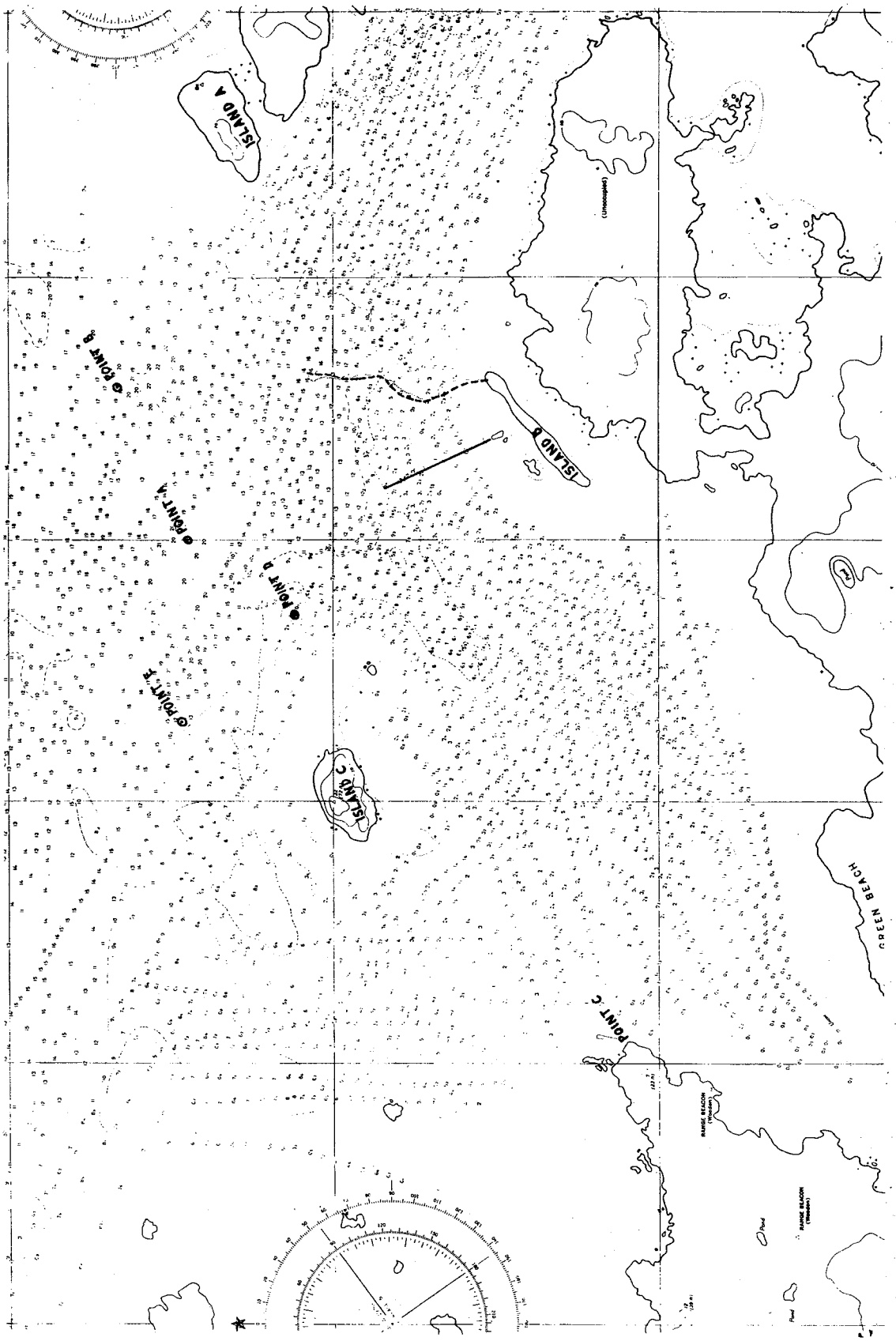
(3) NORTHWIND stopped for 24 hours at Gronnedal, the Danish Military HQ in Greenland for a courtesy visit 20-21 August. Due to a concurrent visit by several members of the Danish Parliament, traveling aboard a Danish Navy frigate, several of NORTHWIND officers were invited to an admirable lunch attended as well by the visiting M.P.'s, the wardroom of the frigate, and the officers of the HQ staff present in Gronnedal. This visit provided a much appreciated break in our Arctic routine; icebreakers on this mission in the future appear to be most welcome at Gronnedal and are encouraged by NORTHWIND to make the visit.

(4) En route from Gronnedal to Kulusuk, NORTHWIND transited Prince Christian Sound near Cape Farwell. The sound offers remarkable scenery and proved to be one of those events, like our first icebreaking in Kane Basin, that keeps the forecastle full of sailors and cameras.

(5) While waiting for the tanker SIMARD to appear, NORTHWIND broke the icelandic freighter LOMUR into Angmagssalik. This freighter was the fourth of five yearly resupply ships; its delay promoted a request for assistance by the townspeople. NORTHWIND heard that the ship was forestalled by the ice when her helo's were in Angmagssalik on a medical evaluation of an injured MIRFAK crewman and after hearing further of the situation agreed to assist as able. Once on scene NORTHWIND launched one helo to survey the ice. With minimal difficulty NORTHWIND broke the vessel through the six mile iceband and LOMUR was able to proceed into the harbor on her own.

(6) Once finished with LOMUR, NORTHWIND steamed south slowly to be off Koge Bay in the morning. A 1942 CG aircraft crash in the vicinity had resulted in the loss of two CG aviators. A man who had searched for them then, now a retired CG Captain, had described the terrain, and his 1942 walking search track which due to limitations of time and weather had not covered all reasonable possibilities. NORTHWIND was to search these now glacier covered areas in hopes of finding the wreckage and to in any case erect a memorial marker. As things turned out NORTHWIND's helicopters had an ideal day for the search but no wreckage was found. The marker was placed near the best estimate of the crash location.

POL OFFLOAD AREA KULUSUK, GREENLAND



CHAPTER 3

NAVIGATION

1. Pre-deployment preparations. This deployment was NORTHWIND's first operational mission in over two years. During that period the ship was in Yard for re-engining. All navigation equipment was removed during the Yard period and there was no publications maintenance. Therefore pre-deployment preparations consisted of establishing the ship's navigational capability, basically from "scratch", with no special emphasis on this mission other than correction of charts for the area of operation.

2. Navigation practices, procedures and problems.

a. Primary navigational means during this deployment consisted of Loran A and C, ADF, radar, fathometer and celestial. Both surface radars were frequently down; the air radar worked very well until it lost a part, then it was down for 26 days awaiting delivery of the part. The computer navigation system did not produce one fix during this deployment. The computer went out immediately upon our departure from Norfolk. The Omega would not lock on to signals. While capable technicians were onboard, their efforts were needed on what were judged higher priority projects, primarily radars and the ET storeroom.

b. No significant navigational difficulties were encountered, for NORTHWIND usually had at least two of the systems mentioned above, in addition to the fathometer, available for navigation at any one time.

c. Two items of navigational interest are worth additional note.

(1) First, the approach to the entrance to Sondrestrom Fjord is improved by the presence of a recently installed microwave station on the peak three miles northwest of the Cruncher Island radio beacon at 66°93'N 53°38.8'W. The installation mounts the peak and its bright colors make it very prominent.

(2) Secondly is the initial triggering of the Cruncher Island radar transponder. This was done using the commercial radar in NORTHWIND's arctic survey boat and is recommended as most user radars are commercial source types.

3. Chart evaluation. Overall charts of the areas visited by NORTHWIND during this deployment were quite satisfactory. Three comments are in order, however.

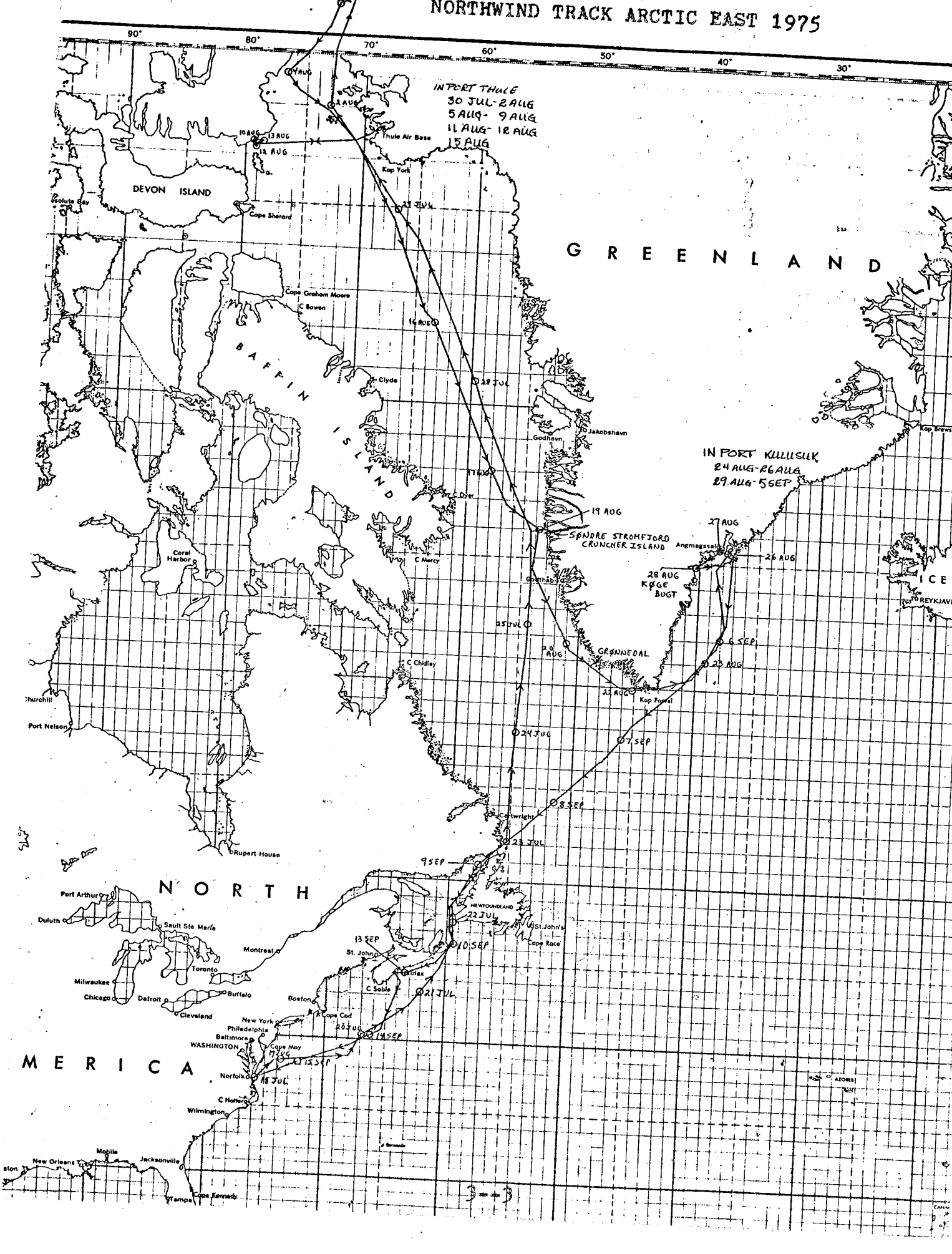
a. Frequently, back ordered charts are back ordered because they are of high usage or of critical areas. Alternate sources, such as other icebreakers or other countries hydrographic services, should then be consulted.

b. Great care should be exercised when changing charts, particularly when changing to charts printed by a different nation. In open water use of range and bearing to an object usually sufficed. In constricted waters it was, on occasion, necessary to experiment with the ranges and bearings until fix producing objects were obtained.

c. In some cases "C" category charts, which are not presently on the 1-PCL allowance, were necessary. This should be reviewed promptly after the vessel's itinerary is known.

4. Foreign port visits. NORTHWIND's only foreign port visit was at Halifax, N.S. Arrival and departure were made during daylight hours and no difficulties were experienced. Commercial harbor pilots are now compulsory at Halifax. Tugs are available but were not used. Berthing was provided at the Canadian Naval Station and their usual hospitality was enjoyed by NORTHWIND personnel.

5. Graphic display of major track lines. A graphic display of major track lines is shown on page 3-3.


NORTHWIND TRACK ARCTIC EAST 1975
90°
80°
70°
60°
50°
40°
30°
IN PORT THULE
30 JUL-2 AUG
5 AUG- 9 AUG
11 AUG- 12 AUG
15 AUG
Thule Air Base
Kap York
DEVON ISLAND
Cape Sherard
Cape Graham Moore
C Bowen
BAFFIN ISLAND
Clyde
Jakobshavn
Godhavn
C Dyer
C Mercy
Coral Harbor
Churchill
Port Nelson
C Chidley
Rupert House
GREENLAND
IN PORT KULUSUK
24 AUG-26 AUG
29 AUG-5 SEP
SØNDRE STROMFJORD
CRUNCHER ISLAND
Angmagssalik
KØGE BUGT
GRØNNEDAL
Kap Farvel
Cartwright
NORTH
Port Arthur
Duluth
Sault Ste Marie
Montreal
Toronto
Milwaukee
Chicago
Detroit
Buffalo
Cleveland
NEWFOUNDLAND
St. John's
Cape Race
St. John
Halifax
C Sable
Boston
Cape Cod
New York
Philadelphia
Baltimore
WASHINGTON
Cape May
Norfolk
C Hatteras
Wilmington
MERICA
Mobile
New Orleans
Jacksonville
Tampa
Cape Kennedy
AZORES
Bermuda
9 AUG
10 AUG
13 AUG
12 AUG
23 JUL
16 AUG
28 JUL
11 AUG
19 AUG
27 AUG
26 AUG
28 AUG
6 SEP
23 AUG
25 JUL
20 AUG
22 AUG
24 JUL
7 SEP
8 SEP
23 JUL
9 SEP
22 JUL
13 SEP
10 SEP
21 JUL
26 JUL
14 SEP
17 JUL
12 SEP
18 JUL

CHAPTER 5

SCIENCE

The oceanographic division of NORTHWIND consisted of an assigned MSO, MSTC, MST2 and SNMST. Standard weather observations were taken every six hours GMT when at least 25 miles from another weather reporting station; NOAA Form 72-1 was utilized for recording purposes. In addition, XBT readings were taken, measuring temperature with water depth, at the same interval when NORTHWIND was operating in waters where the depth exceeded 100 fathoms. A total of 90 XBT graphs was analyzed and recorded on NOAA Form 77-22/OCEANAV 3167/1. Secchi disc observations were recorded whenever the ship was hove to and weather and ice conditions permitted. Facsimile weather charts were obtained from Halifax, N.S., Washington, D.C., and Norfolk, VA. Approximately 90% of all charts received were from Halifax. Reception was only fair for the majority of the time, due to interference from weather conditions and ship's location. Reception of weather charts might be improved by the addition of a second receiver in the oceanography lab and a better antenna set up. However, the charts that were obtained aided in the prediction and advance warning of oncoming weather.

During the Arctic East deployment, eight cadets from the U.S. Coast Guard Academy were stationed on board as a part of their summer program. A series of Nansen casts were taken across Smith Sound from Cairn Point, Greenland to Cape Herschel, Canada. Temperature, salinity, and depth measurements were recorded from the water samples obtained. The oceanographic winch, A-frame, Nansen bottles, CTD, reversing thermometers and salinometers operated up to standard and provided good data.

In addition to the above programs, a Biological Sighting Program was carried out in accordance with COMLANTAREA INST 3161.3C.