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COMPILATION OF 1985 INDUSTRIAL ACTIVITIES IN THE CANADIAN BEAUFORT SEA

by

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PRINCIPAL CONTACTS FOR 1985 INDUSTRIAL INFORMATION

Company or Agency	Contact(s)
Arctic Transportation Limited	Chris Rideout
Chevron Resources Canada Limited	Bob Dryden
Dome Petroleum Limited	Ed Pessah Gary Price John Ward
Esso Resources Canada Limited	Evan Birchard Jim Irving Dennis Marier Ken McPeet Dalton Siebrasse
Geophysical Service Inc.	John Clink Matt Kimbell
Gulf Canada Resources Inc.	Keith Jones Jim McComiskey
LGL Research Associates Limited	Rolph Davis
Northern Transportation Company Limited	Ken Hnatiuk Keith Simpson
Western Geophysical Inc.	James Gibson

1.0 INTRODUCTION

Industrial activities in the Beaufort Sea region include: vessel movements; helicopter and fixed-wing flights; dredging; drilling; seismic and sounding surveys; and island/camp maintenance. Most of these activities are directly associated with the search for oil and gas; a few of the activities are in support of Distant Early Warning (DEW) sites, mining explorations and operations, and natural resource harvesting. Some of the vessel and aircraft movements are associated with research projects to assess the effects of industrial activities on the marine ecosystem.

Prior to 1980, information on industrial activities in the Canadian Beaufort Sea was recorded by the individual companies, but not compiled or presented in a summary report. For the years 1980 to 1984, industrial activity information for the Canadian Beaufort Sea (August to early September) was compiled, analyzed and mapped as part of a five-year study by the U.S. Minerals Management Service (USMMS) to assess the effects of industrial activities on bowhead whale behaviour (Richardson 1985). In 1985, the USMMS program focused on bowheads in Alaskan waters only, and no information was collected on industrial activities in the Canadian Beaufort Sea. As a result, in January 1986, the Department of Indian Affairs and Northern Development (DIAND) called for proposals to compile the relevant 1985 industrial activity information for the Canadian Beaufort Sea. The following report by ESL Environmental Sciences Limited presents the results of this requested study.

In general, the methods used by ESL to compile, tabulate and organize (format) the 1985 industrial activity information were the same as those established for the USMMS study (Richardson 1983). The major exceptions are that:

1. The time frame was expanded to include the entire period June 1 through December 31,
2. Available information on activities in "nearshore" areas (water depths less than 10 m) was also included,
3. Summary tables as well as maps were provided to indicate activity locations and intensity, and
4. Research flights were tabulated and mapped as separate activities.

In addition, all of the data have been entered onto 5.25 inch floppy diskettes for use on an IBM-PC (or compatible) microcomputer using the dBASE-III database management system. The diskettes are archived with the Northern Environment Directorate of the Department of Indian Affairs and Northern Development

(DIAND), Les Terrases de la Chaudiere, Hull, Quebec. The entered information includes activity type, time period, specific vessel or aircraft used and location of activity.

2.0 BACKGROUND

Petroleum exploration began onshore in the Canadian Beaufort region on a small scale in the 1950's, and did not extend offshore until 1972. This marine extension changed the nature and intensified the level of activities. Initially, marine activities centered on the construction of "surface-piercing" type islands for use as drilling platforms for land rigs. Fill material was delivered from off-site locations and barge camps were used to house personnel. Most island construction occurred during the open-water season and drilling followed subsequently during the winter and spring.

In the open water period of 1976, ships were first used as drilling platforms in the Canadian Beaufort Sea. These drillships were moored in deep-water harbours during the winter, proceeded to drill sites as soon as break-up was complete, conducted drilling-related activities until freeze-up, and then proceeded to deep-water ports for winter moorage.

In 1982 and 1983 respectively, two new types of drilling platforms were first used in the Canadian Beaufort Sea, i.e. the caisson-retained island and the mobile drilling platform supported by a sub-sea berm. Although both of these platforms still require a fill base, the volume of fill necessary is greatly reduced in comparison to that for the "surface-piercing" type islands. The construction of caisson-retained islands and sub-sea berms usually occurs during the open-water season; but once built, the drilling from these platforms can occur throughout all seasons of the year.

Other industrial activities that have occurred offshore since 1972 include: seismic (high intensity) and sounding (low intensity) surveys to locate gravel sources, identify shipping routes, and examine sediment materials for oil-producing formations; helicopter and fixed-wing aircraft to transport personnel (and sometimes supplies) between onshore and offshore sites; and, vessels to transport supplies (and sometimes personnel) between onshore and offshore sites.

In 1972, when industrial activities first expanded into marine waters, only shallow-water locations (depths less than 20 m) were involved; and most of the industrial sites were within

the Mackenzie estuary or near McKinley Bay (Fig. 1). Construction of "surface-piercing" type islands was limited to water depths of less than about 20 metres because of practical considerations, i.e. an arithmetical increase in the water depth involves an exponential increase in the volume of fill required. Issungnak is the deepest "surface-piercing" type island constructed in the Canadian Beaufort Sea with a water depth of 18 m. During the early period of marine exploration (1972-1976), Inuvik was the primary support base and much of the vessel traffic was along river channels.

The introduction of drillships into the Beaufort Sea region in 1976 expanded the geographic extent of the industrial area. The cost of operating a drillship in deep water was not so prohibitive as constructing large based "surface-piercing" islands and hence drilling activities quickly expanded into waters deeper than 20 m. The drillships were kept over-winter at deep-water ports, such as Pauline Cove (at Herschel Island) and McKinley Bay (Figure 1). The result was both vessel traffic earlier in the open-water season and over a much greater area than prior to 1976. Tuktoyaktuk became the primary support base after 1976 because it is closer to the offshore drilling sites than Inuvik.

The efficiency of "islands" as drilling platforms was dramatically increased with the advent of caisson-retained islands and mobile drilling platforms on sub-sea berms. Both methods significantly reduced the construction time and the required fill for each new platform. The introduction of hopper dredges, in 1981, also reduced the use of barges to transport fill material and hence the number of vessels needed for island construction. The increased efficiency due to these changes resulted in a direct increase in the number of active sites during the period 1982-1985. The number of marine wells drilled to total depth in the Mackenzie Delta-Beaufort Sea region was 13 for the three year period 1979-1981 and 23 for the subsequent three year period 1982-1984 (Canada Oil and Gas Lands Administration 1985; Department of Indian and Northern Affairs 1983).

3.0 METHODS

3.1 Scope

3.1.1 Spatial

The spatial scope for presentation of the 1985 industrial activities information is identical to that used by Richardson (1985) to summarize the 1980-1984 industrial activities (Figure 1). The study area is bounded to the west by Longitude 141 degrees West (U.S. Border); to the east by Longitude 127 degrees West (West Franklin Bay); to the south by Latitude 68.5 degrees North; and, to the north by Latitude 72 degrees North. The boundary of the "Mackenzie Estuary", the locator codes for offshore activitry sites, the location of 10 m and 50 m isobaths, and the names of prominent geographic features which are referred to in later sections of this report are also presented in Figure 1. Table 1 gives the full name or location for each of the activity site locator codes. Sites referred to more than twice were usually given an indicator code. Some of these sites were locations where drillships had to wait because of weather or ice to access specific drill sites, i.e. there was no drilling activity.

3.1.2 Temporal

The 1985 industrial activities information has been tabularized and mapped in 10 or 11 day intervals (to match the time periods summarized in Richardson (1985)) for the period from July 1 to September 30, and in monthly intervals for June, October, November and December. The original information was collected from industry and recorded on a daily basis.

3.2 Data Collection

To ensure that the 1985 industrial activity database satisfied the broadest possible range of requirements, a telephone survey of potential users was undertaken at the start of the program. The agencies and persons contacted are given in Appendix A. Relevant suggestions from these potential users were incorporated into the data collection procedures and final database format established by ESL.

FIGURE 1- BEAUFORT SEA STUDY AREA

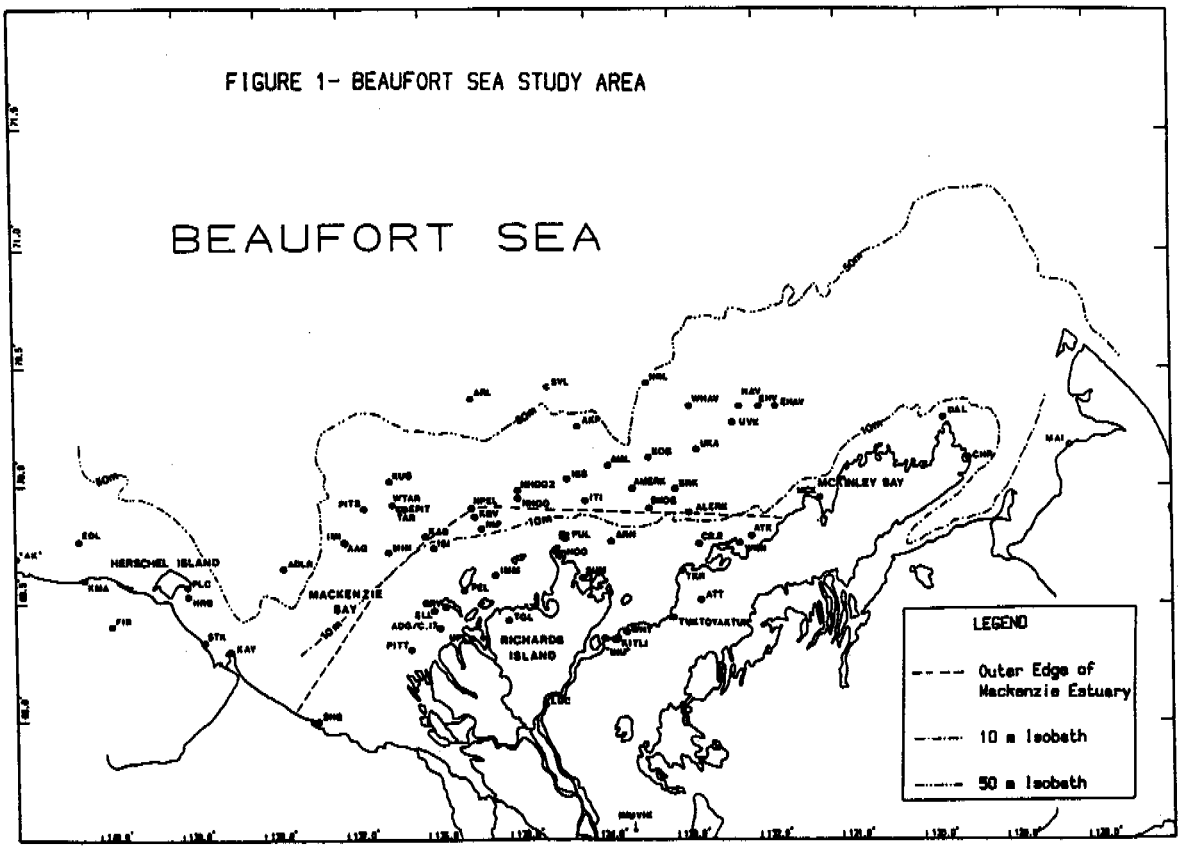


TABLE 1

LIST OF LOCATOR CODES FOR OFFSHORE SITES

LOCATION CODE	LOCATION
AAG	AAGNERK
ADG	ADGO
ADLR	ADLARTOK
AK	ALASKA
AKL	AKLAVIK
AKP	AKPAK
ALERK	ALERK
AMERK	AMERK
AML	AMAULIGAK
ARL	ARLUK
ARN	ARNAK
ATK	ATKINSON POINT
ATT	ATERTAK
C17	CAMP 17
CHR	CHAR POINT
CR.P	CRUMBLING POINT
DAL	DALHOUSIE AREA
EDL	EDLOK
EHAV	EAST OF HAVIK (70 20.0 NLAT; 131 47.0 WLONG)
EHV	EAST OF HAVIK (70 20.0 NLAT; 131 59.0 WLONG)
ELL	ELLICE ISLAND
EPIT	EAST OF PITSIULAK (69 54.0 NLAT; 136 16.0 WLONG)
ERK	URKSAK
FIR	FIRTH RIVER
GRY	GARRY ISLAND
HAV	HAVIK
HOO	HOOPER ISLAND
HRB	HERSCHEL BASIN
IMI	IMMIUGAK
IMM	IMMERK
INU	INUVIK
ISI	ISSIGAK
ISS	ISSUNGNAK
ITI	ITIYOK
KAD	KADLUK
KAY	KAY POINT
KBV	KAUBVIK
KITLI	KITTI
KMA	KOMAKUK

TABLE 1

LIST OF LOCATOR CODES FOR OFFSHORE SITES (continued)

LOCATION CODE	LOCATION
KOG	KOGYUK (N-67)
KUJ	KUGDJUK
LUC	LUCAS POINT
MAI	MAITLAND POINT
MCK	MCKINLEY BAY
MIN	MINUK
NHOO	NORTH OF HOOPER (69 56.7 NLAT; 134 53.2 WLONG)
NHOO2	NORTH OF HOOPER (69 58.7 NLAT; 134 53.2 WLONG)
NIP	NIPTERK
NPEL	NORTH OF PELLY (69 54.2 NLAT; 135 27.3 WLONG)
NRL	NERLERK
PEL	PELLY ISLAND
PITS	PITSIULAK
PITT	PITT ISLAND
PLC	PAULINE COVE
PUL	PULLEN ISLAND
SHG	SHINGLE POINT
SKOG	SOUTH OF KOGYAK (69 54.0 NLAT; 133 19.0 WLONG)
STK	STOKES POINT
SUM	SUMMER ISLAND
SURV	SURVEYOR
SVL	SIULIK
TAR	TARSIUT
TGL	TAGLU
TIG	TIGNIAK
TKR	TOKER POINT
TUK	TUKTOYAKTUK
UKA	UKALERK
UPL	UPLUK
UVK	UVILUK
WHAV	WEST OF HAVIK (70 20.0 NLAT; 132 49.0 WLONG)
WHT	WHITEFISH STATION
WRN	WARREN POINT
WTAR	WEST TARSIUT

All of the major oil and gas companies active in the Canadian Beaufort Sea region in 1985 were surveyed to determine:

1. The types and geographic extent of their industrial activities;
2. The format in which each company stored relevant information; and
3. The most efficient means for ESL study team members to access and obtain the information.

Contracting and consulting firms were also contacted if previous knowledge indicated that they might have additional industrial activity information for 1985. A list of the key contacts is provided in "Acknowledgments". The following sections present a brief summary, by activity type, of the format of the available information, the data collection method, and the completeness of the activity information.

3.2.1 Seismic and Sounding Activities

Seismic and sounding information is proprietary and hence specific information must be accessed from the company funding the surveys. If the funding company does not provide the specific survey information for whatever reasons, then only general information on locations and times of surveys and the name of the vessel shooting the surveys can be obtained from the geophysical companies conducting the seismic surveys.

The 1985 seismic information was obtained from the funding company's computer files. The collected information included date, time, vessel, latitude and longitude of the starting and ending points, line designation and number of shot points. The sounding surveys usually involved a much smaller area and a more intensive grid pattern than the seismic surveys. For 1985 sounding surveys, the location and size of the grid pattern (if available) was obtained.

3.2.2 Vessel Activities

Records of vessel movements are kept by the oil companies that fund each vessel activity. The level of detail and method of organization of the information varies from company to company. The information is stored either on daily vessel location sheets (which contain the vessel's location at a set time and the planned activities for the next 24 hours), daily vessel report forms or dispatcher's log sheets. The latter two types of records indicate location changes and occasionally the number of trips between two specific locations. The number of

1985 vessel trips between specific locations had to be extracted by the study team from the different companies' records in Calgary since this information was not yet available on computer files. Some interpretation was necessary when a vessel's location on a particular day did not correspond with the location expected according to the previous day's plan. The numbers of specific trips were tabulated by vessel per day.

Transport companies taking supplies to DEW line sites and communities keep records of the movements of their vessels. However, the study team could not obtain these records and hence the level of detail and the form of storage could not be determined. Upon request, ESL did receive a summary of these vessel movements which included the starting and ending locations, the starting and ending dates and the name of the vessel for each trip.

3.2.3 Aircraft Activities

As with vessel activities, records of aircraft movements are also kept by the oil companies that fund each activity. The information is stored in Calgary either in computer files or on standard flight forms. The 1985 aircraft activity information was extracted by study team members either from records in the Calgary offices or from computer summaries provided by the oil companies. It was not necessary to contact air charter companies. The number of flights between specific locations was tabulated by aircraft per day. This information is complete, i.e., every landing and take-off was recorded, even if the aircraft was only airborne for a few minutes and did not significantly change location.

Aircraft start and end points were frequently described by a facility or vessel present at that location, eg. Rig 3 or Camp 17, rather than by the geographic name. These descriptive "locators" were entered into the ESL database records. Locations for rigs and camps were provided by the oil companies, and vessel locations were obtained from the vessel records. The facility and vessel names were then replaced with the appropriate geographic name and the trips added to the appropriate flights (e.g., Tuktoyaktuk - Camp 17 flights are the same as Tuktoyaktuk - Adgo flights for the period that Camp 17 was at Adgo).

Previous marine mammal studies have reported that right whales, including bowhead whales, show little or no response (Payne et al. 1983; Richardson 1985) or only an occasional reaction (Ljungblad et al. 1983) to aircraft at or above 600 m.

To ensure compatibility with the previous MMS studies (Richardson 1985), ESL used 600 m as a cut-off point, i.e. only information on 1985 flights below an altitude of 600 m was recorded. ESL assumed that all flights for oil companies were at altitudes below 600 m and that all scheduled flights were at an altitude above 600 m.

3.2.4 Marine Mammal Research Activities

Consulting companies and government agencies were contacted to determine what 1985 research programs had been undertaken in the study area to monitor the effects of industrial activities on marine mammals (primarily bowhead and white whales). Only one identified 1985 research program involved the use of a research vessel (the "Sequel") which worked adjacent to the Yukon Coast. The majority of 1985 marine mammal research programs involved aircraft flights. Available information was collected on all research flights flown below 600 m. For systematic aerial surveys flown by ESL Environmental Sciences Limited, LGL Limited and PN Research Projects, the locations of all transect lines were obtained and recorded; however, information on reconnaissance and photogrammetry flights was not readily available and hence this type of information was not entered in the 1985 database. Some of this information will be reported elsewhere in 1986 or 1987 (pers. comm. R. Davis, LGL Limited).

3.3 Data Entry and Tabulation

ESL used the Ashton-Tate dBASE-III data management system to design a microcomputer database for entry and storage of all the relevant information on 1985 industrial activities. For each activity group (seismic, vessel, aircraft and research), a unique database structure was established to include all of the relevant information for that activity. The four dBASE-III files are entitled "VESSEL.DBF", "AIRCRAFT.DBF", "SEISMIC.DBF" and "RESEARCH.DBF". Their individual structures are presented in Table 2. The collected 1985 information was then standardized according to the activity format, and then entered into the appropriate activity data file using an IBM PC (or compatible) microcomputer. A complete copy of the 1985 industrial activity database has been provided to the Department of Indian Affairs and Northern Development for archiving. The information is stored on two 5.25 inch floppy diskettes. The data files can be accessed from the diskettes using dBASE-III on any IBM PC (or compatible) microcomputer.

TABLE 2

STRUCTURE OF DATA FILES FOR 1985 AIRCRAFT, RESEARCH, VESSEL AND SEISMIC ACTIVITIES

Structure for database: aircraft.dbf
Number of data records: 1484
Date of last update : 06/17/86

Field	Field Name	Type	Width	Dec
1	TIME	Character	17	
2	TIME_FRME	Numeric	17	
3	HELI_NME	Character	20	
4	NUM_TRIPS	Numeric	4	
5	STRT_CODE	Character	25	
6	STOP_CODE	Character	25	
7	STRT_LATDG	Numeric	2	
8	STRT_LATMN	Numeric	4	1
9	STRT_LONDG	Numeric	3	
10	STRT_LONMN	Numeric	4	1
11	STOP_LATDG	Numeric	2	
12	STOP_LATMN	Numeric	4	1
13	STOP_LONDG	Numeric	3	
14	STOP_LONMN	Numeric	4	1
** Total **			135	

Structure for database: research.dbf
Number of data records: 273
Date of last update : 06/17/86

Field	Field Name	Type	Width	Dec
1	TIME_FRAME	Character	20	
2	VESSEL_NME	Character	35	
3	NUM_TRIPS	Character	2	
4	STRT_LATDG	Numeric	2	
5	STRT_LATMN	Numeric	4	1
6	STRT_LONDG	Numeric	3	
7	STRT_LONMN	Numeric	4	1
8	STOP_LATDG	Numeric	2	
9	STOP_LATMN	Numeric	4	1
10	STOP_LONDG	Numeric	3	
11	STOP_LONMN	Numeric	4	1
12	TRANS_LENG	Numeric	5	1
13	TRANS_NUM	Character	5	
** Total **			94	

TABLE 2 (CONTINUED)

STRUCTURE OF DATA FILES FOR 1985 AIRCRAFT, RESEARCH, VESSEL AND SEISMIC ACTIVITIES

Structure for database: vessel.dbf
Number of data records: 1450
Date of last update : 06/09/86

Field	Field Name	Type	Width	Dec
1	TIME_FRAME	Character	17	
2	VESSEL_NME	Character	21	
3	NUM_TRIPS	Numeric	4	
4	STRT_CODE	Character	25	
5	STOP_CODE	Character	25	
6	STRT_LATDG	Numeric	2	
7	STRT_LATMN	Numeric	4	1
8	STRT_LONDG	Numeric	3	
9	STRT_LONMN	Numeric	4	1
10	MID1_LATDG	Numeric	2	
11	MID1_LATMN	Numeric	4	1
12	MID1_LONDG	Numeric	3	
13	MID1_LONMN	Numeric	4	1
14	MID2_LATDG	Numeric	2	
15	MID2_LATMN	Numeric	4	1
16	MID2_LONDG	Numeric	3	
17	MID2_LONMN	Numeric	4	1
18	MID3_LATDG	Numeric	2	
19	MID3_LATMN	Numeric	4	1
20	MID3_LONDG	Numeric	3	
21	MID3_LONMN	Numeric	4	1
22	STOP_LATDG	Numeric	2	
23	STOP_LATMN	Numeric	4	1
24	STOP_LONDG	Numeric	3	
25	STOP_LONMN	Numeric	4	1
** Total **			158	

Structure for database: seismic.dbf
Number of data records: 107
Date of last update : 06/17/86

Field	Field Name	Type	Width	Dec
1	TIME_FRAME	Character	20	
2	VESSEL_NME	Character	35	
3	STRT_LATDG	Numeric	2	
4	STRT_LATMN	Numeric	4	1
5	STRT_LONDG	Numeric	3	
6	STRT_LONMN	Numeric	4	1
7	STOP_LATDG	Numeric	2	
8	STOP_LATMN	Numeric	4	1
9	STOP_LONDG	Numeric	3	
10	STOP_LONMN	Numeric	4	1
11	LINE_SHOT	Numeric	5	
** Total **			87	

3.4 Computer Mapping

Computer-generated maps were produced by time period for each of the four industrial activity groups. The maps are presented in Section 5.0. A PASCAL program was written to convert the dBASE-III data files for each activity group into a format that could be read by ESL's plotting program. The necessary format includes the latitudes and longitudes of the start-points, mid-points (if any), and the stop-points for each trip; the number of times each trip was made; and the time period during which each trip was made. The additional "mid-point" locators are required only to delineate vessel movements, i.e. while aircraft in most cases fly directly to destination points, vessels frequently have to navigate between islands and around shallow areas to reach destination points. Vessel traffic in the river channels was not mapped; trips to Inuvik were mapped as far as the mouth of East Channel (see "INU" location on Figure 1).

From the converted activity file, the ESL plotting program was then used to read in the trip locators (i.e. start location, up to 3 mid-point locations and stop location) for each activity trip and, depending on the number of mid-points, divide up each activity trip into separate trip segments. The mid-point locators were required to distinguish different "legs" of vessel trips around islands and shallow areas. For example, a vessel trip with two mid-points would be divided up into three trip segments for plotting, and a trip with no designated mid-points would be divided up into only one trip segment start to finish.

The plotting routine would then write the latitude and longitude of the start-point and end-point of each unique trip segment into a check file called "Tripslist". "Tripslist" is used to check if the trip segment data being received has already been entered for a specific time period. If this is the case, a new record is not written but rather the field containing the number of trips for that segment is augmented by one. Each trip segment is plotted only once for each time period. The replotting of trip segments for the more frequent trips, such as from Tuktoyaktuk to drilling locations, can cause problems with the quality of final product, i.e. ink smears and paper tears can occur with multiple pen passes. This problem is remedied because the plotting program accesses the "Tripslist" file described above and hence only plots each unique trip once.

When all of the data for each activity has been received, the contents of the "Tripslist" file for each activity are then outputted to a printer. The hardcopy listing provides a means of checking the locations of all data plots and the number of times

each trip segment is used during each time period. The "Tripslist" data are then plotted using an Hewlett-Packard 7475A (or compatible) plotter for each activity by time period. The frequency of use of each trip segment is indicated by line thickness. Three frequency ranges (line thicknesses) are plotted on each map: 1-10 trips per time period, 11-50 trips per time period and greater than 50 trips per time period. The reader is cautioned that reporting time periods are different for some of the maps, i.e.. 10 days, 11 days, 30 days or 31 days, and care must be exercised in making direct comparisons between frequencies indicated on different maps. The types of activities occurring at activity sites have been indicated on the maps by different symbols.

4.0 DESCRIPTION OF 1985 INDUSTRIAL ACTIVITIES

Four oil companies (Chevron Resources Canada Limited, Dome Petroleum Limited, Esso Resources Canada Limited and Gulf Canada Resources Inc.), two geophysical companies (Geophysical Service Inc. and Western Geophysical Inc.), and two transport companies (Arctic Transportation Ltd. and Northern Transportation Company Limited) were active in the Beaufort Sea region during the time period June 01 - December 31, 1985 . In addition, three consulting firms (LGL Limited, ESL Environmental Sciences Ltd. and PN Research Projects) and one government agency (Department of Fisheries and Oceans, Western Region) conducted research programs on marine mammals in the area. At least four air charter companies (Aklak Air Limited, Kenn Borek Air Limited, Okanagan Helicopters Limited and Quasar Helicopters Limited) provided aircraft for the industrial and research projects; four companies (Aklak Air Limited, Kenn Borek Air Limited, Ram Air Charter Limited and Trans North Air Limited) maintained scheduled flights.

Most of the 1985 industrial activities occurred between the Alaska-Yukon border (Longitude 141 degrees W) and Baillie Islands (Longitude 127 degrees W), and from the shoreline north to Latitude 70 degrees 30 minutes N. Some research flights extended farther north. Most of the industrial activities were within or north of the Mackenzie estuary (see Fig. 1); the exceptions were some aircraft flights, vessel movements and seismic activities that extended farther to the east and/or west. Water depths at most of the active sites ranged from 5 to 50 m (see Fig. 1).

Ice conditions affected the level of most industrial activities in 1985. According to the Atmospheric Environment Service, the initial phase of the 1985 ice break-up proceeded more quickly than normal until mid June, when the winds changed direction and pushed large ice floes down into the industrial zone from the north. Large amounts of ice remained in the study area throughout July; hence activities that were dependent on open water availability (eg. seismic surveys and supply vessel movements) proceeded more slowly than usual.

The following sections summarize the 1985 industrial activities by type, i.e. seismic and sounding activities, site-specific activities, vessel activities, aircraft activities and marine mammal research flights.

4.1 Seismic and Sounding Activities

High-energy seismic and low-energy sounding activities occurred within the study area in 1985; most of these activities were during late July, August and September. At least five vessels, the "Arctic Surveyor", "GSI Explorer", "Frank Broderick", "Arctic Kiggiak", and "Western Anchorage" were active; see Appendix C for vessel specifications. The mapped locations of the lines and the latitude and longitude of each line are given in Section 5.1 and Appendix B.1, respectively, for lines in which information was provided. Some additional activities occurred in the study area for which details were incomplete: Western Geophysical Inc. conducted surveys, using the "Western Anchorage" in the westernmost part of the study area from August 31 through September 10, 1985 (no additional details were available at the time of interview); the "GSI Explorer" shot some lines not indicated on the maps or in the tables (detailed information was not readily available at the time of interview); and the "Arctic Kiggiak" shot some shallow seismic lines at Adlartok and at Immiugak (J. McComiskey, Gulf Canada Resources Inc., pers. comm.) but the survey dates were not available.

The first 1985 survey was a sounding survey started at Arnak on July 22 and completed on July 26. The first seismic survey was shot in August. Through August and September, most of the seismic activities were located within the central portion of the Mackenzie estuary (see Fig. 1 and Section 5.1). In September, some lines were shot farther east, in the area north and northeast of the Tuktoyaktuk Peninsula.

4.2 Site-specific Activities

Site-specific activities include dredging, island construction, berm construction, drilling and other (e.g. setting up and dismantling rigs, and island maintenance and clean-up). Dredging includes removing the surface layer of the sediment prior to construction of an island or berm and the digging of glory holes as well as the obtaining of fill material. The sites where dredging and drilling occurred in 1985 are described in this section. Vessel movements associated with the dredging and drilling activities are described in the next section (4.3 Vessel Activities).

Eight dredges (four trailing suction hopper, three clamshell bucket and one cutter suction) used ten borrow sites in 1985 to construct or rebuild five islands (Adgo, Arnak, Kaubvik, North Ellice, and Minuk) and two berms (Aagnerk and Amauligak). Three

glory holes were also dredged. Dredging started in mid July and continued through October. Additional information on 1985 dredging is reported in Sackmann et al. (1986).

Three drillships operated at four locations in the Beaufort Sea in 1985; the first drillship was on location on August 3rd and the last drillship left its drilling site on October 18th. Drilling from islands and from mobile drilling platforms on sub-sea berms occurred throughout the period June 01 - December 31, 1985. With the exception of Kaubvik, drilling occurred at all of the locations where islands or berms were constructed in 1985, as well as at Akpak, Amerk, Nerlerk, Nipterk, Taglu and West Tarsiut.

4.3 Vessel Activities

In 1985, most vessel movements were accounted for by 66 vessels including: six dredges, three drillships, four ice-breakers, one tanker, two seismic or sounding vessels and 50 supply vessels. Additional vessels (at least two dredges and three seismic or sounding vessels (see Sections 4.1 and 4.2)) were working in the area but information on their specific movements was not readily available at the time of interviews.

The level of vessel activity increased from June through September and then declined from September through December (see Appendix B.2). In June and early July, most vessel movements were associated with attempts to reach offshore locations where ice also forced some vessels to change locations. During the period late July - October, the majority of vessel movements were associated with dredges, although supply runs to offshore sites were also common. Most dredge movements were short (less than 20 km). In late October and November, many of the vessel movements were associated with the return of employees, equipment and supplies from offshore sites to Tuktoyaktuk in preparation for winter.

During June and July, the location of most vessel activity was either within or just north of the Mackenzie estuary; the prevailing ice conditions prohibited movements farther north or east. However, these areas opened up to vessel movements in August. In November and December, most vessel activity was concentrated in the west, around Herschel Island.

4.4 Aircraft Activities

A total of 18 aircraft (11 helicopters, six fixed-wing aircraft and one unknown craft) supported the oil and gas exploration. The helicopters included five Bell 212's, two Bell 206's, one Sikorsky 61, one Sikorsky 76 and one MBB BO105. The fixed-wing aircraft included five Twin Otters and one Caribou. All research projects were conducted from Twin Otters.

The frequency of 1985 aircraft activity increased from June through August, leveled off in August and September and declined in October, November and December (see Appendix B.3). The frequencies of activities in June and December were similar. In comparison to vessel activities, aircraft activities were more intense and the individual path lengths were usually longer during the same 1985 study period.

In general, the geographic area within which most flights occurred remained relatively constant throughout the study period and extended from west of Herschel Island to McKinley Bay (see Section 5.3 and Appendix B.3). In July and December, there were a few flights farther east. In August, September and October, some flights extended to more northerly locations as the ice receded and vessels were able to reach these northerly locations. In November and December there were no flights further west than Herschel Island.

The aircraft routes with the greatest number of trips were between Tuktoyaktuk and the various island drilling locations. During August-October, there were also many flights between Tuktoyaktuk and the various construction locations. In November, there was an increase in the number of flights between drilling sites and over-wintering sites.

4.5 Marine Mammal Research Activities

Eight 1985 marine mammal (bowhead, white whale or associated) research programs were identified. Seven programs involved aircraft surveys; the exception was a late August 1985 plankton (marine mammal food) study conducted by LGL Limited from the vessel "Sequel" along the Yukon coast. The vessel movements for this study have been included in Section 4.3 "Vessel Activities". Any of the aircraft surveys conducted at altitudes of 600 m or greater were not tabulated or mapped. The Department of Fisheries and Oceans conducted photographic surveys at an altitude of at least 915 m (hence the information was not tabulated) and also conducted seal surveys that were outside the

study area. LGL Limited conducted three bowhead surveys: a photogrammetry project for Sohio Alaska Petroleum Company, a late-September survey for Shell Oil Company (proprietary), and an extended MMS study into Canadian waters. ESL Environmental Sciences Limited conducted systematic and photogrammetric bowhead surveys for the Environmental Studies Revolving Funds in August and September. PN Research Projects conducted systematic white whale surveys in July (Norton and Harwood 1986).

The information collected and presented on these 1985 research programs included systematic (non-proprietary) survey data only, i.e. there was no data compiled on photogrammetry and reconnaissance flights. The latter data were either not complete (few locations indicated by latitude and longitude) for standardized presentation, or too difficult for the contractor to extract from field books, or proprietary. Of the systematic survey information that was obtained, occasional shifts were noted for some of the survey lines. Reasons for these shifts have not been identified.

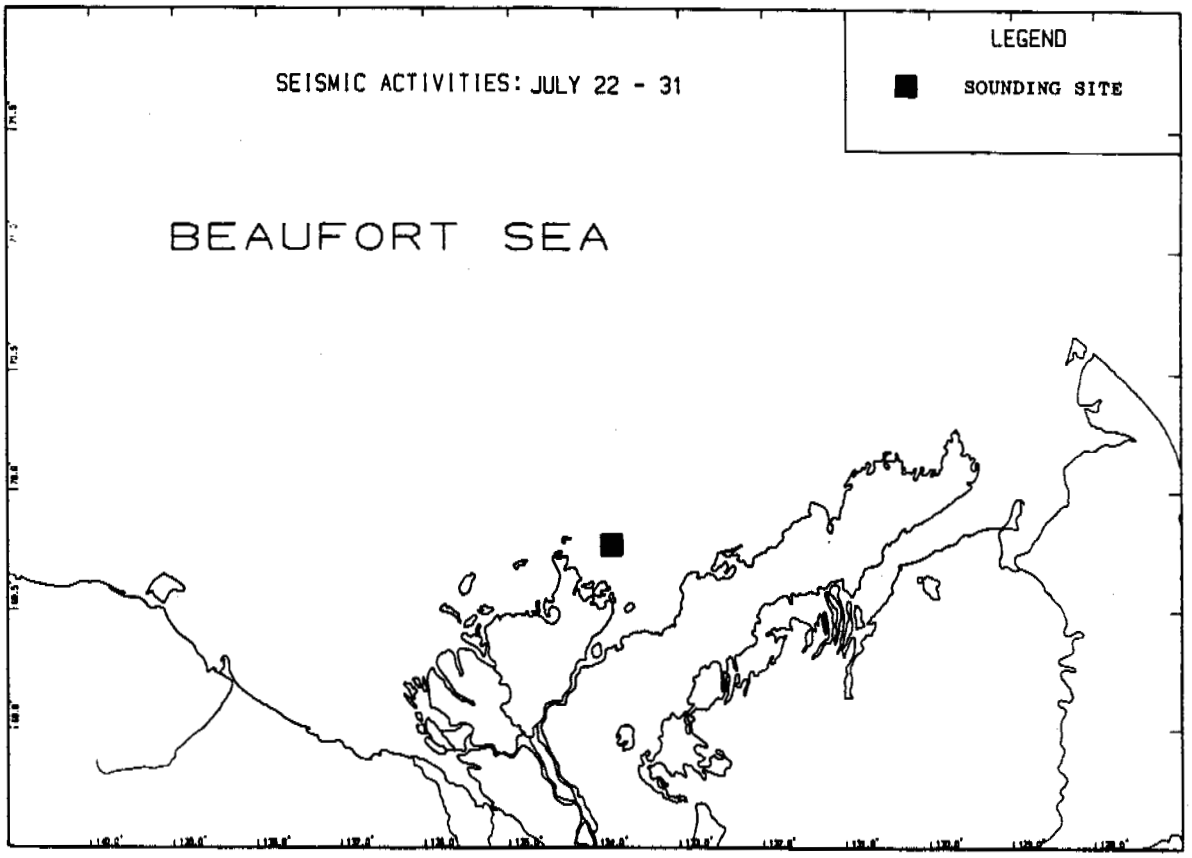
The first 1985 systematic aerial surveys commenced in the period July 1 - 10; known survey effort continued in varying degrees until the end of October. The earliest surveys were within the Mackenzie estuary and were undertaken to monitor white whales. The August and September surveys were to monitor bowhead whales and included estuarine areas and extensive offshore areas. In late September and early October, a few additional survey lines were also flown in the western third of the study area (W.R. Koski, LGL Limited, pers. comm.) but further details were proprietary at the time of interview.

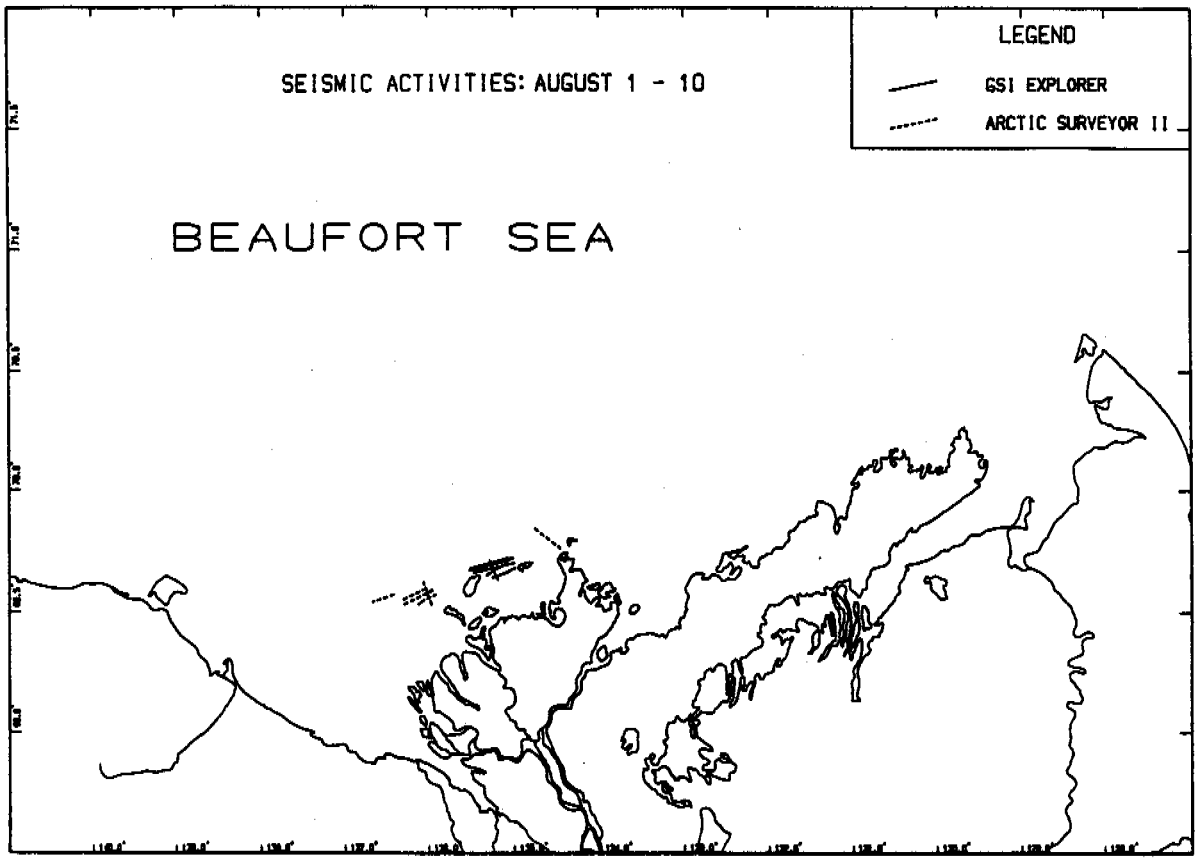
5.0 MAPS OF 1985 INDUSTRIAL ACTIVITIES

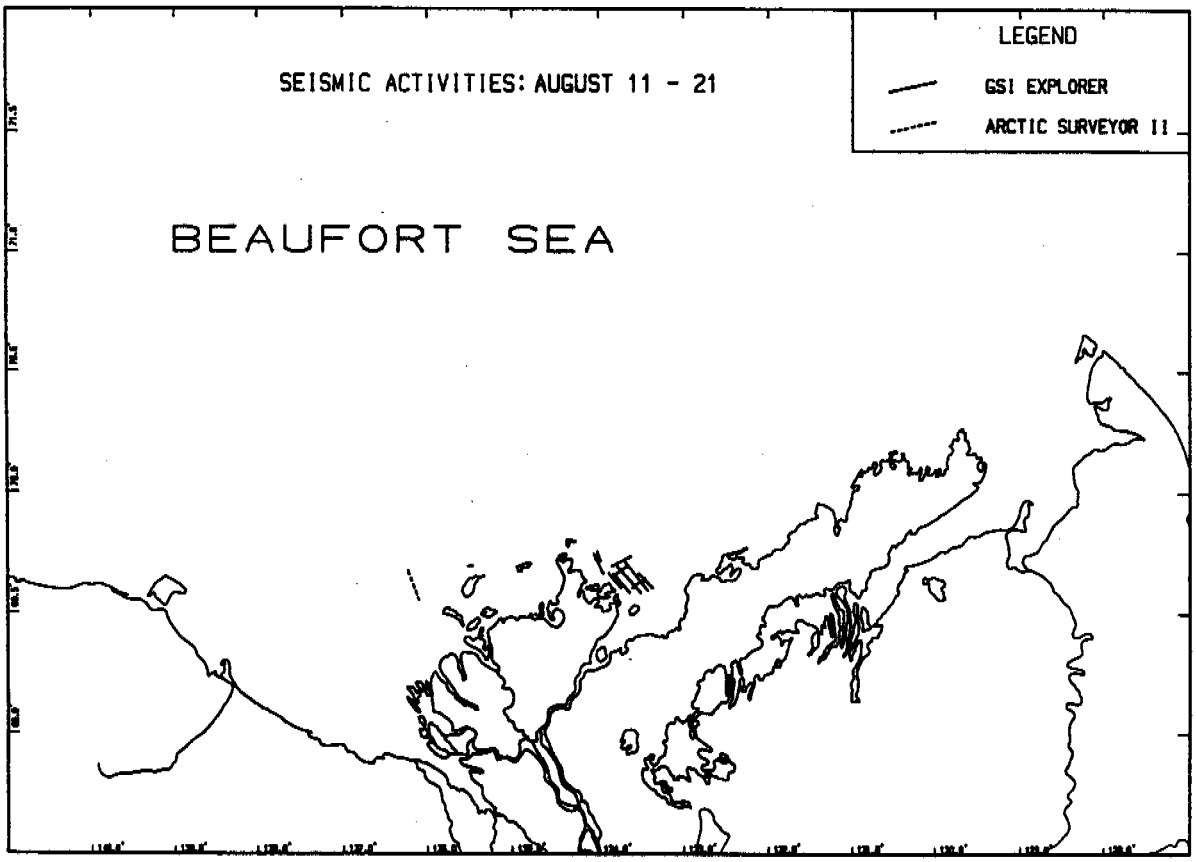
The following sections present the computer-drawn maps of 1985 industrial activities by activity type and period. Tabular summaries are presented in Appendix B. No maps are provided for time periods during which there were no industrial activities, however, a list is provided at the beginning of each activity section indicating all of the inactive periods.

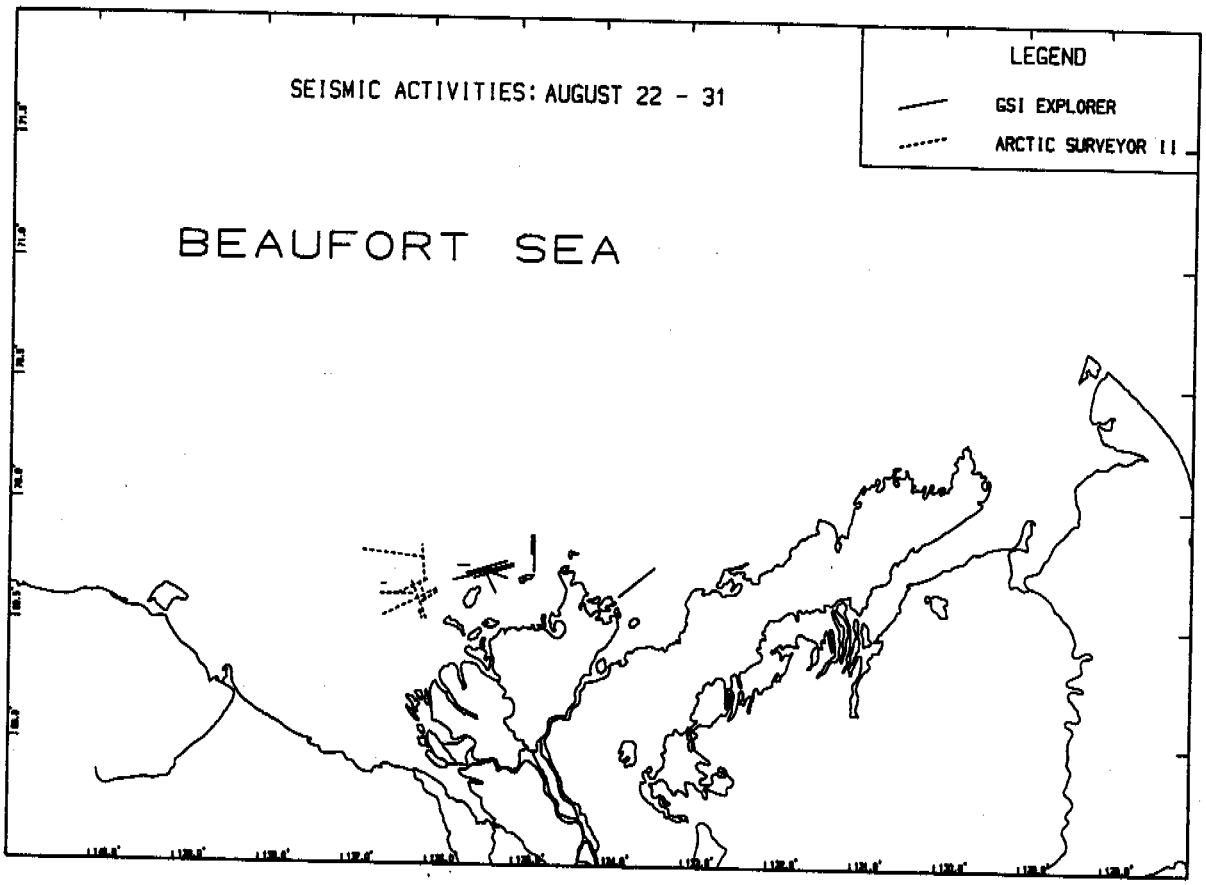
5.1 Seismic and Sounding Activities (1985)

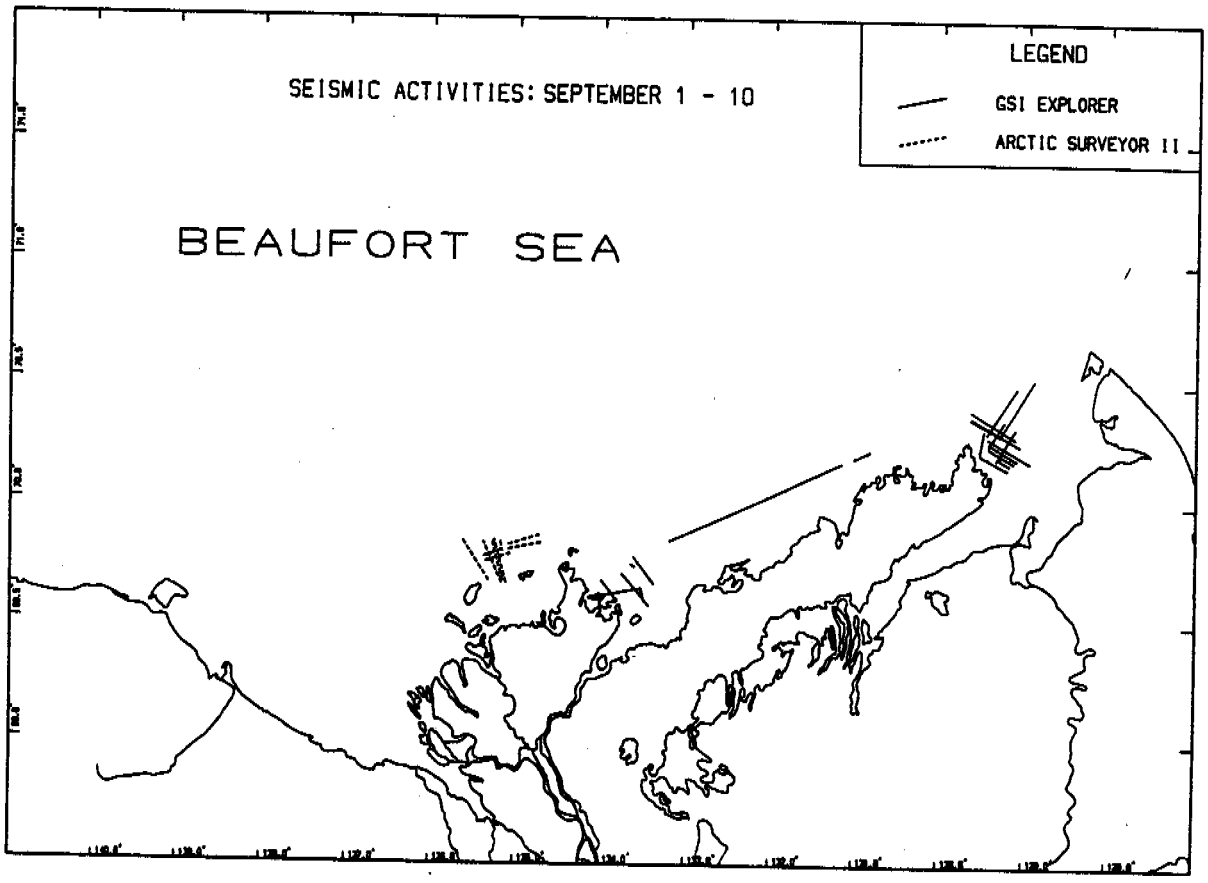
Note: There were no seismic activities for the 1985 reporting periods of June, July 1-10, July 11-21, July 22-31, October, November and December.

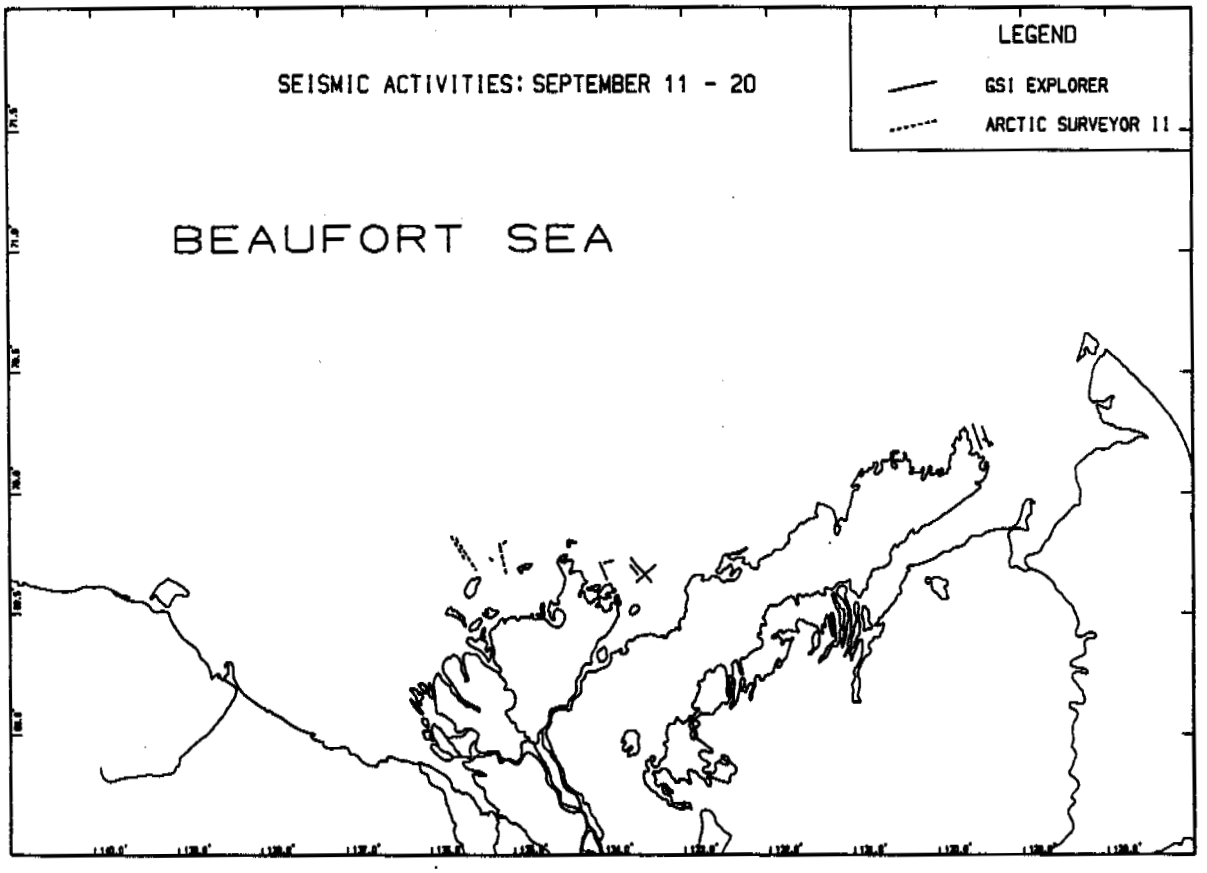

SEISMIC ACTIVITIES: JULY 22 - 31
LEGEND
SOUNDING SITE
BEAUFORT SEA

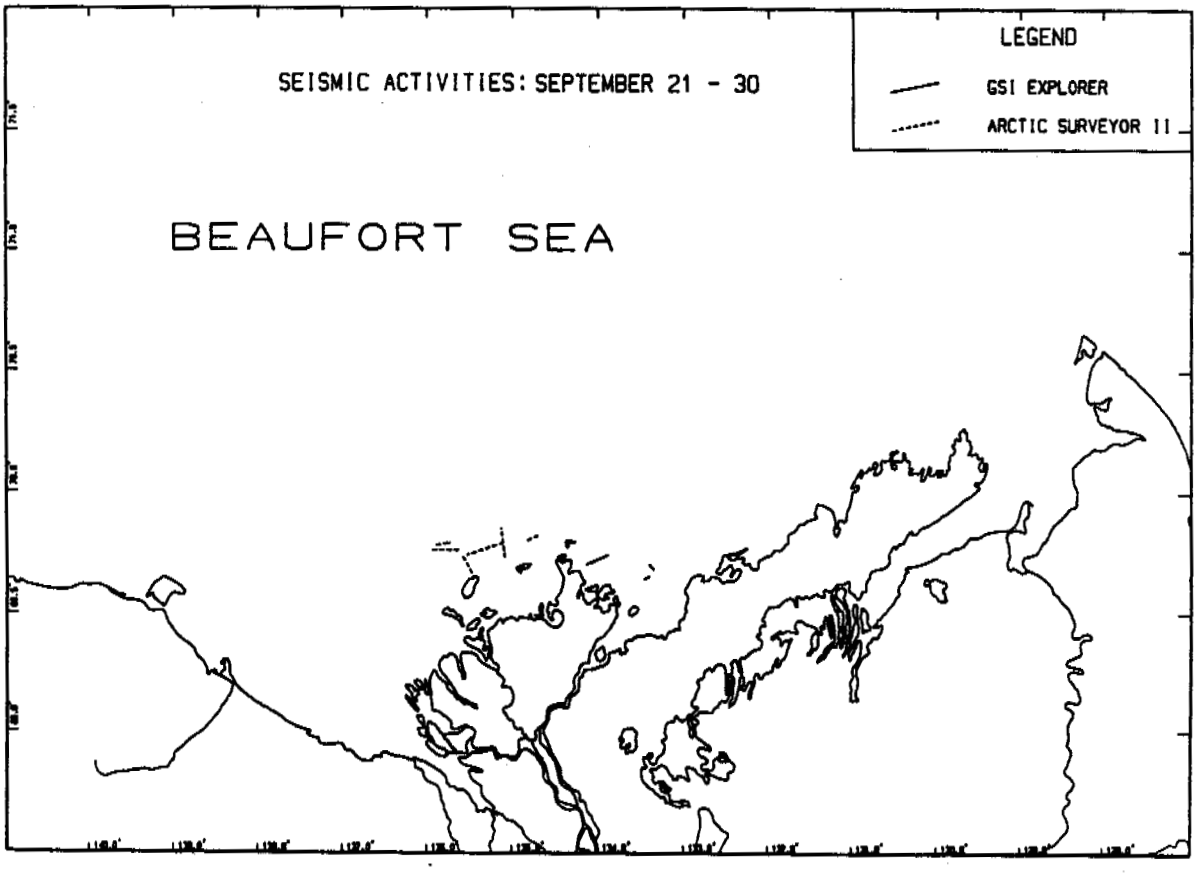

SEISMIC ACTIVITIES: AUGUST 1 - 10
LEGEND
GSI EXPLORER
ARCTIC SURVEYOR II
BEAUFORT SEA


SEISMIC ACTIVITIES: AUGUST 11 - 21
LEGEND
GSI EXPLORER
ARCTIC SURVEYOR II
BEAUFORT SEA


SEISMIC ACTIVITIES: AUGUST 22 - 31
LEGEND
GSI EXPLORER
ARCTIC SURVEYOR II
BEAUFORT SEA

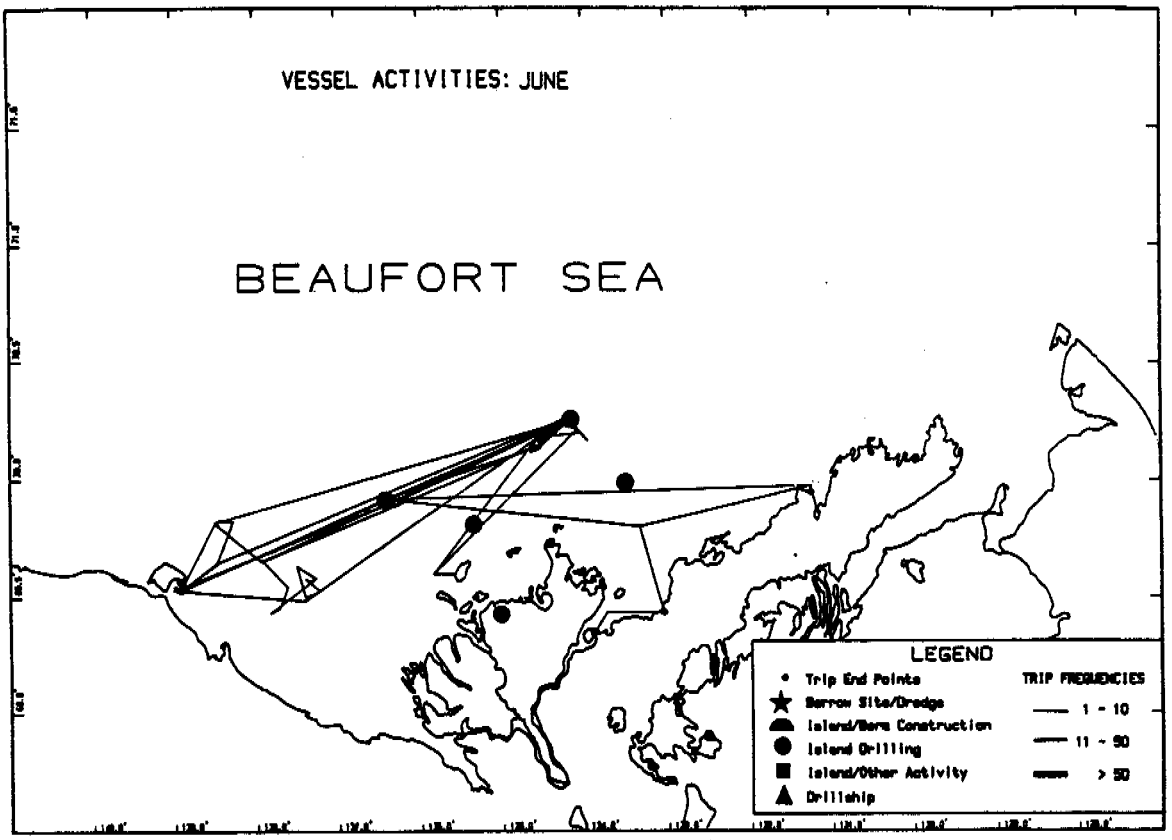

SEISMIC ACTIVITIES: SEPTEMBER 1 - 10
LEGEND
GSI EXPLORER
ARCTIC SURVEYOR II
BEAUFORT SEA

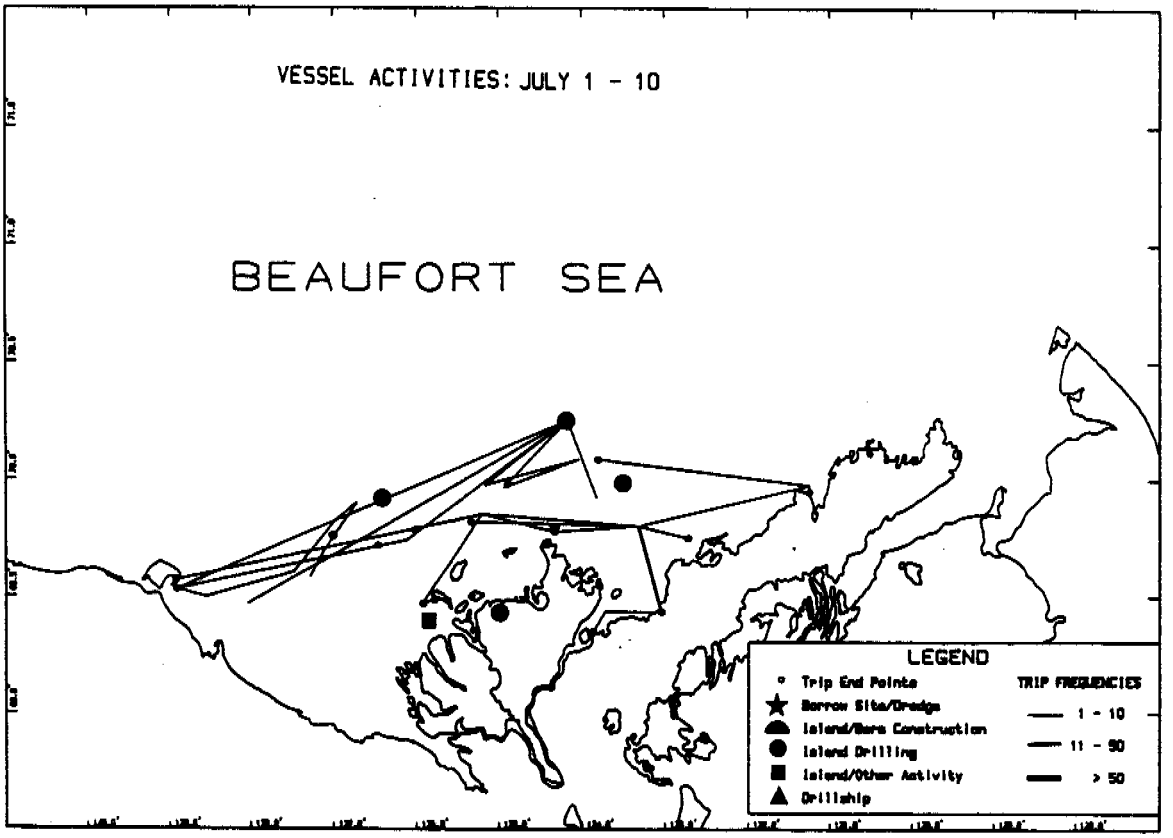

SEISMIC ACTIVITIES: SEPTEMBER 11 - 20
LEGEND
GSI EXPLORER
ARCTIC SURVEYOR II
BEAUFORT SEA

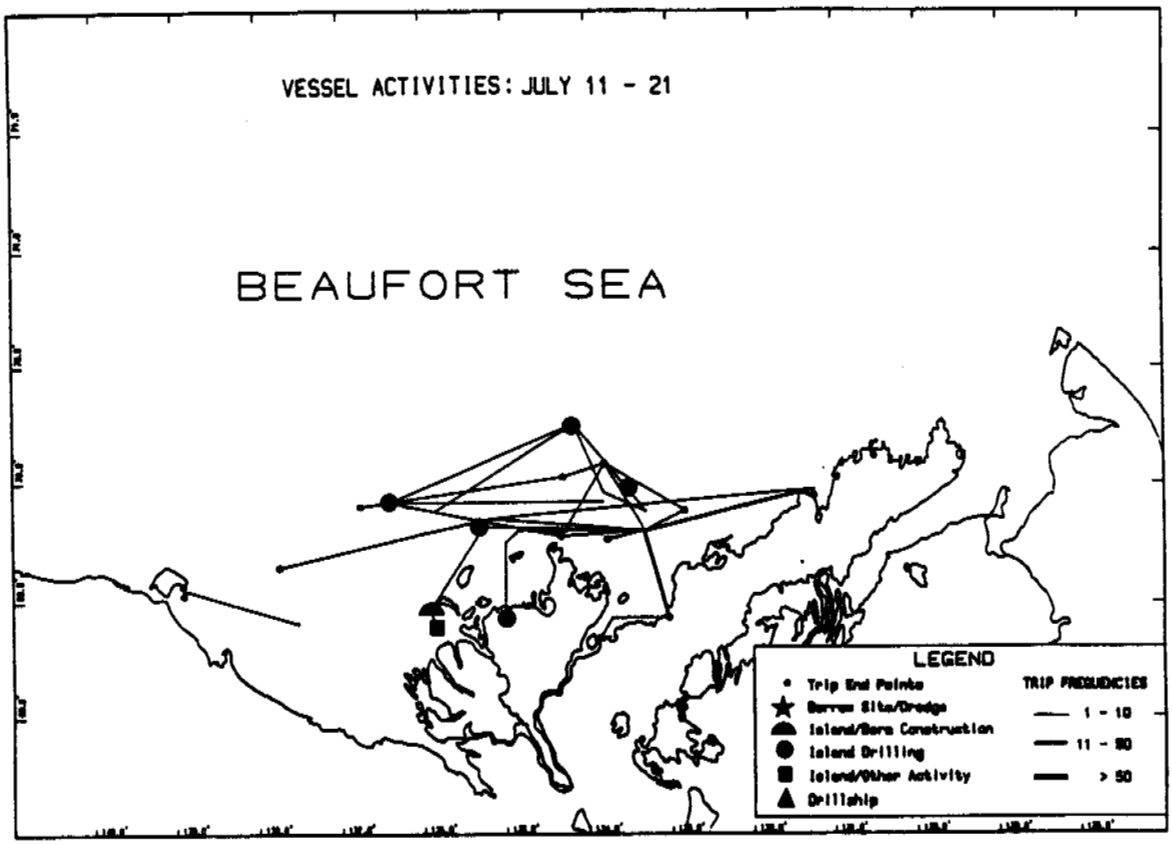

SEISMIC ACTIVITIES: SEPTEMBER 21 - 30
LEGEND
GSI EXPLORER
ARCTIC SURVEYOR II
BEAUFORT SEA

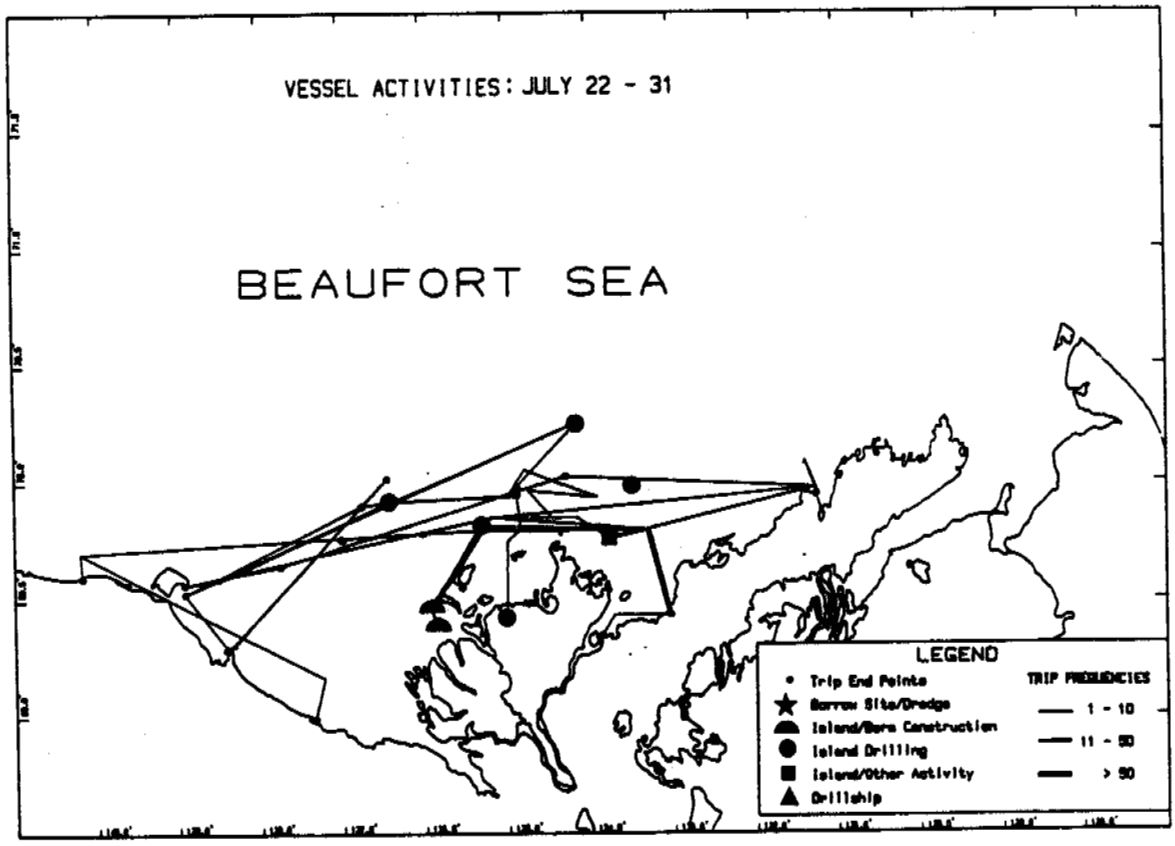
5.2 Vessel Activities (1985)

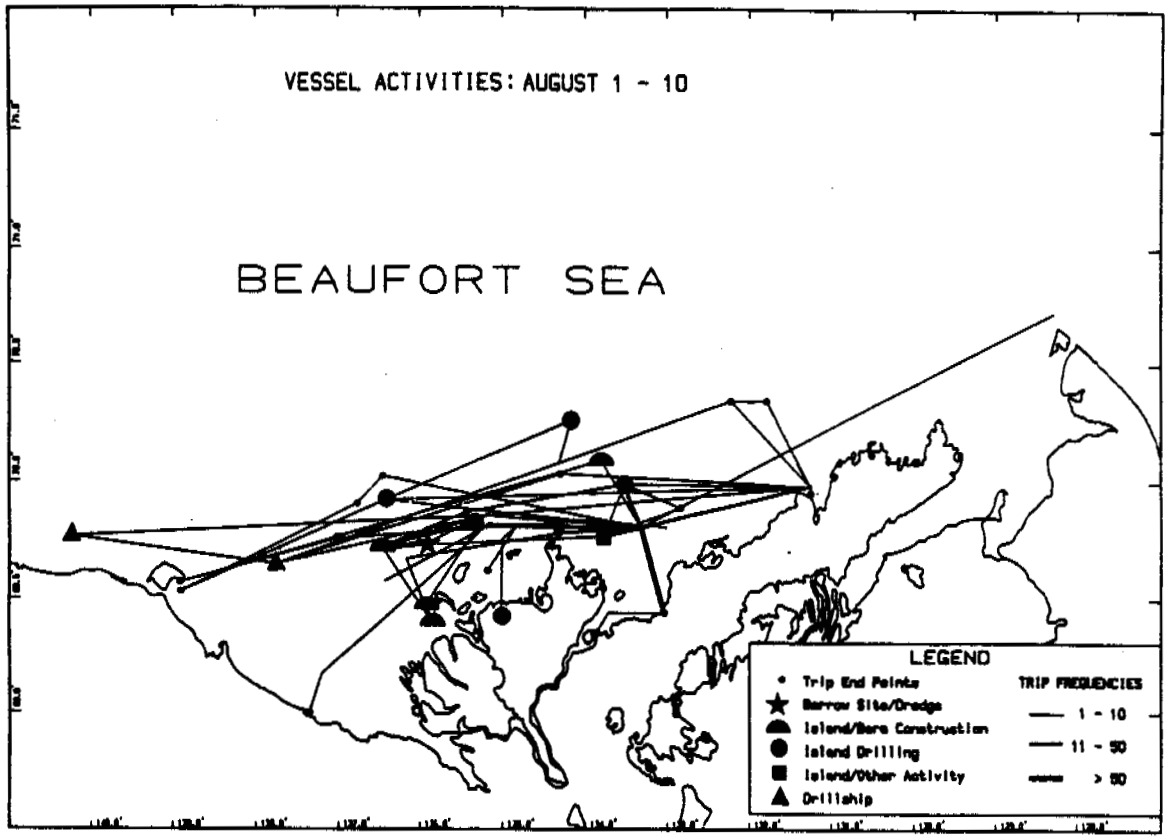
Note: There were vessel activities for all 1985 reporting periods.

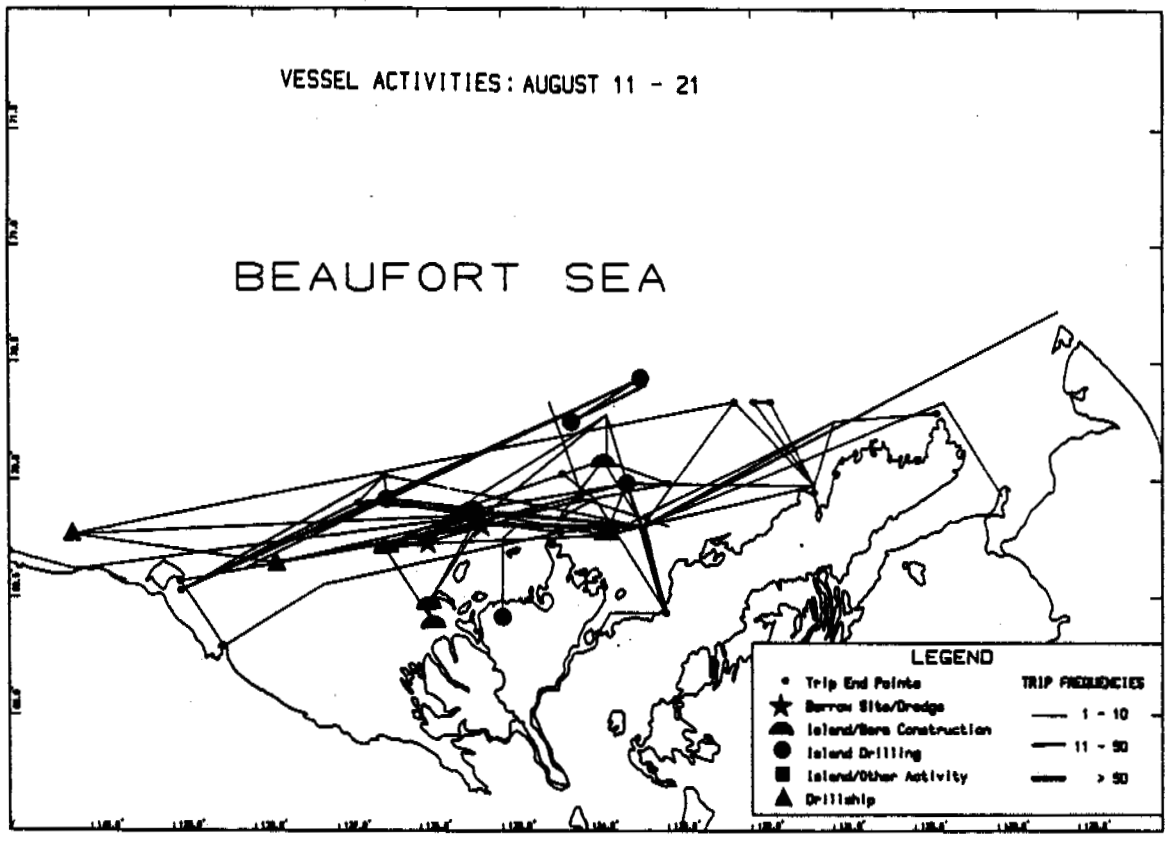

VESSEL ACTIVITIES: JUNE
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Bore Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

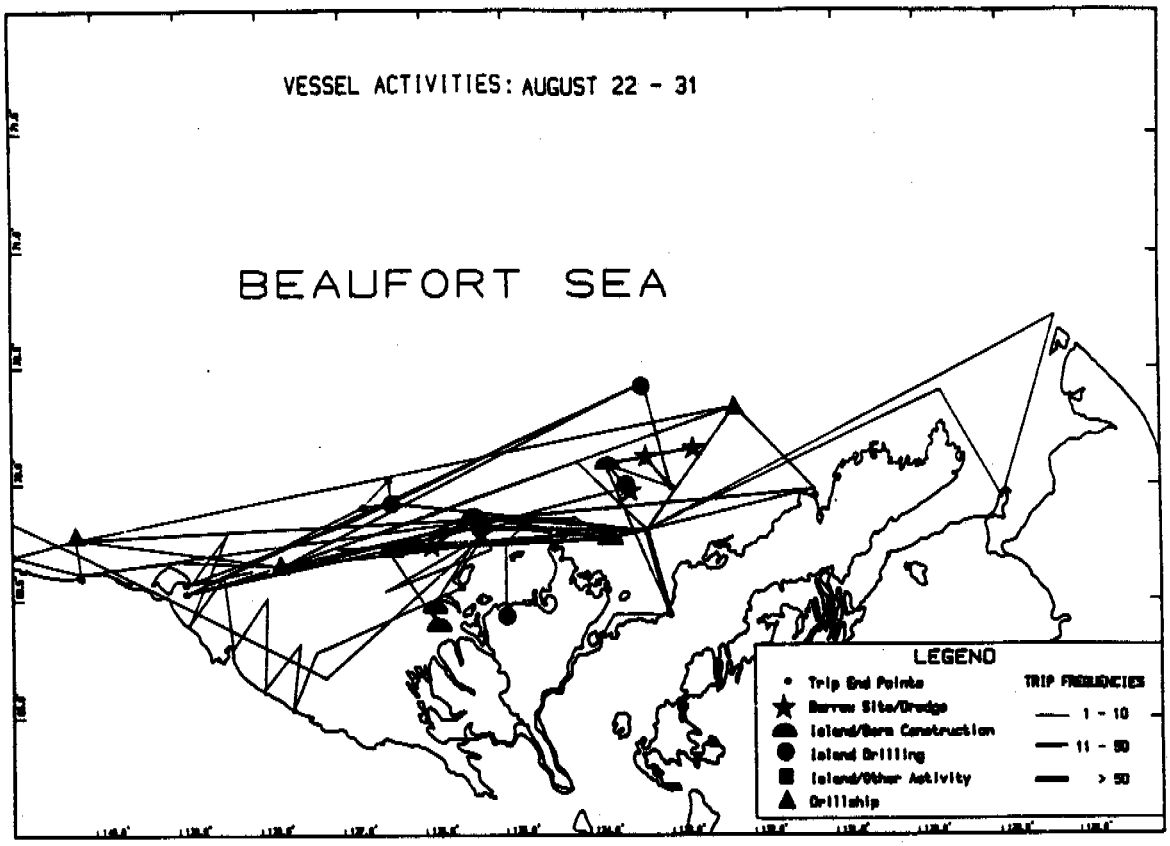

VESSEL ACTIVITIES: JULY 1 - 10
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Bore Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

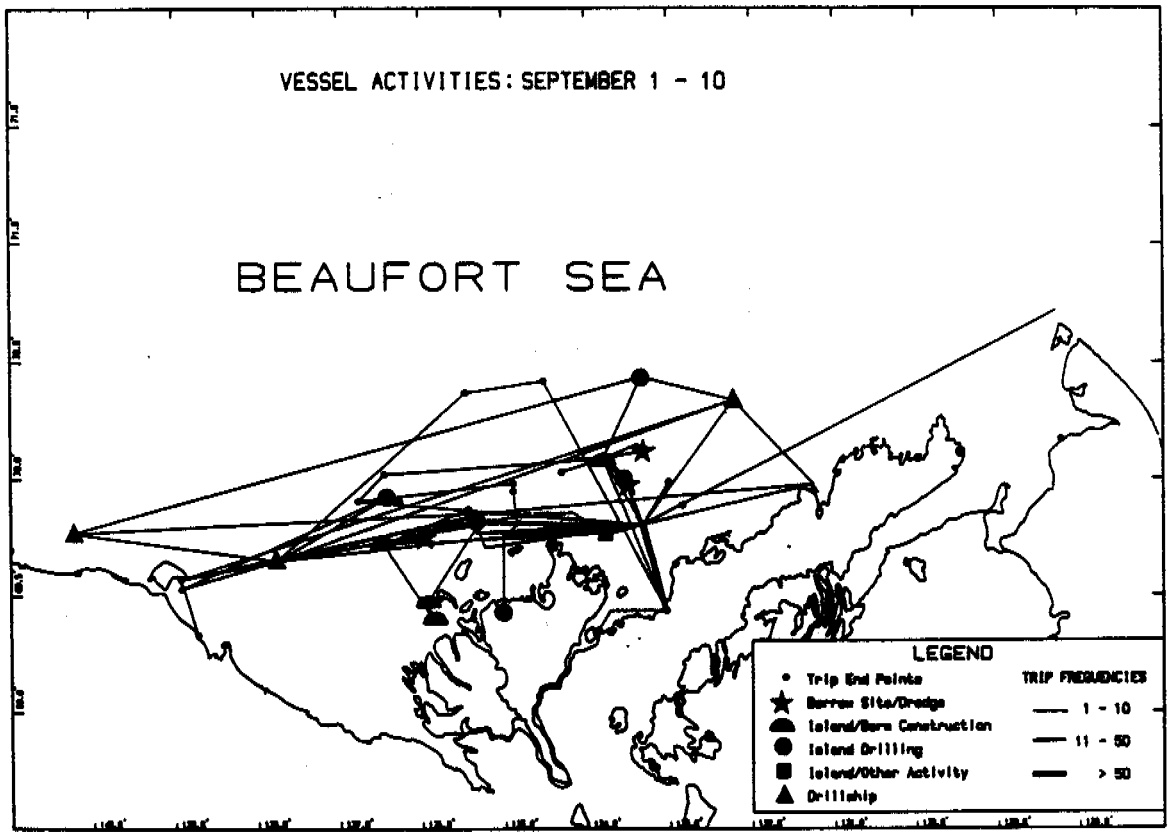

VESSEL ACTIVITIES: JULY 11 - 21
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Bore Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

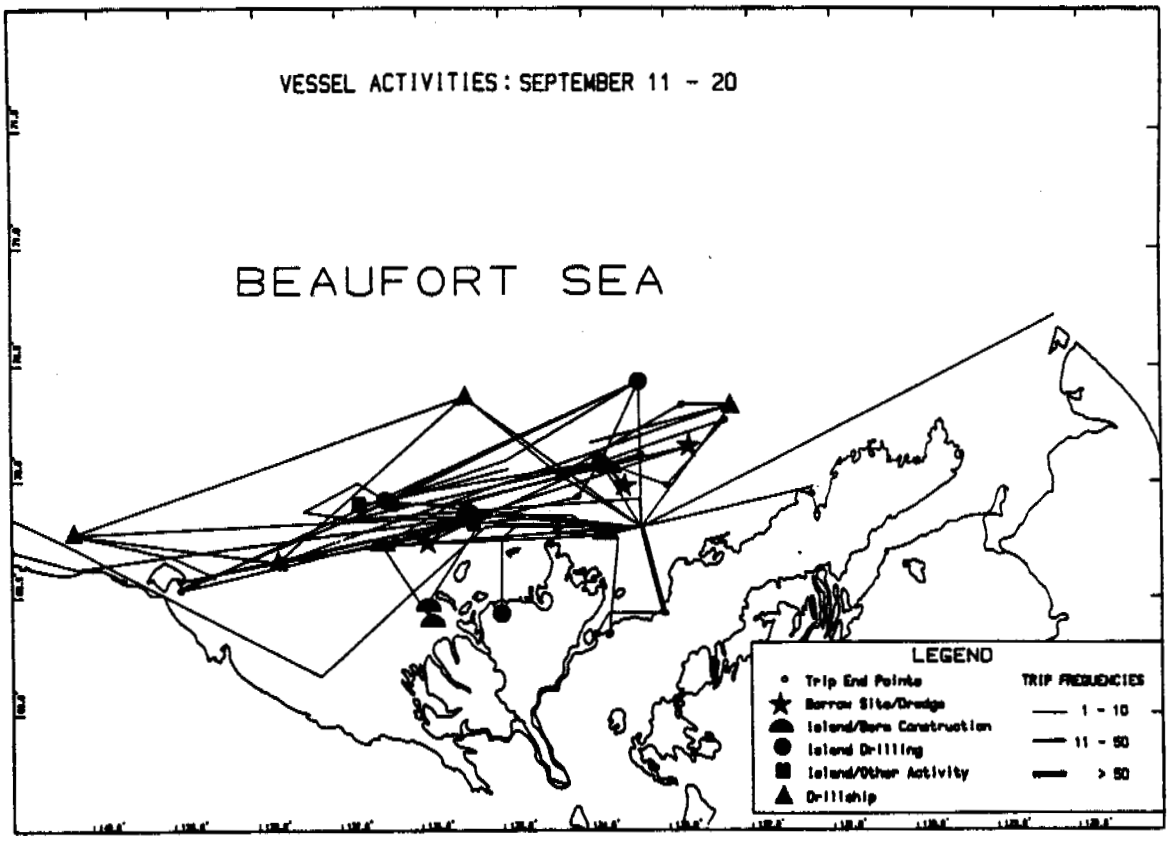

VESSEL ACTIVITIES: JULY 22 - 31
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Bore Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

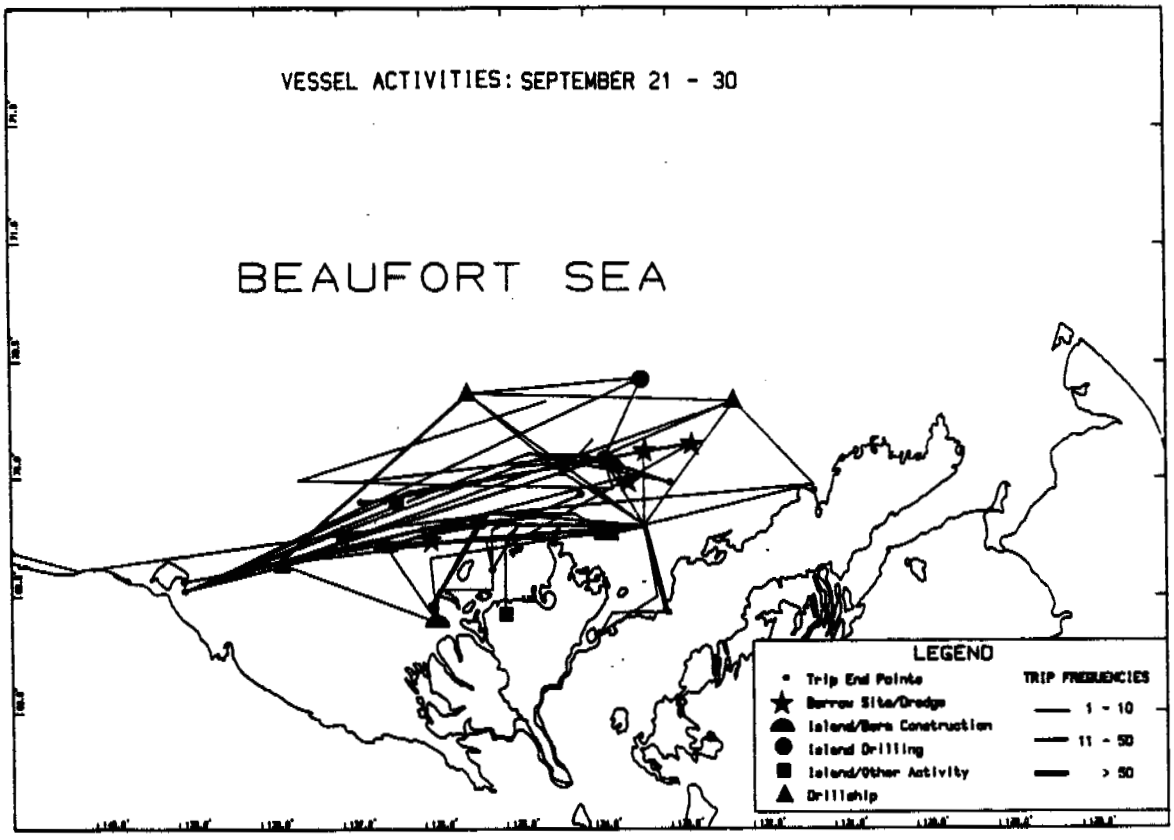

VESSEL ACTIVITIES: AUGUST 1 - 10
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Bare Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

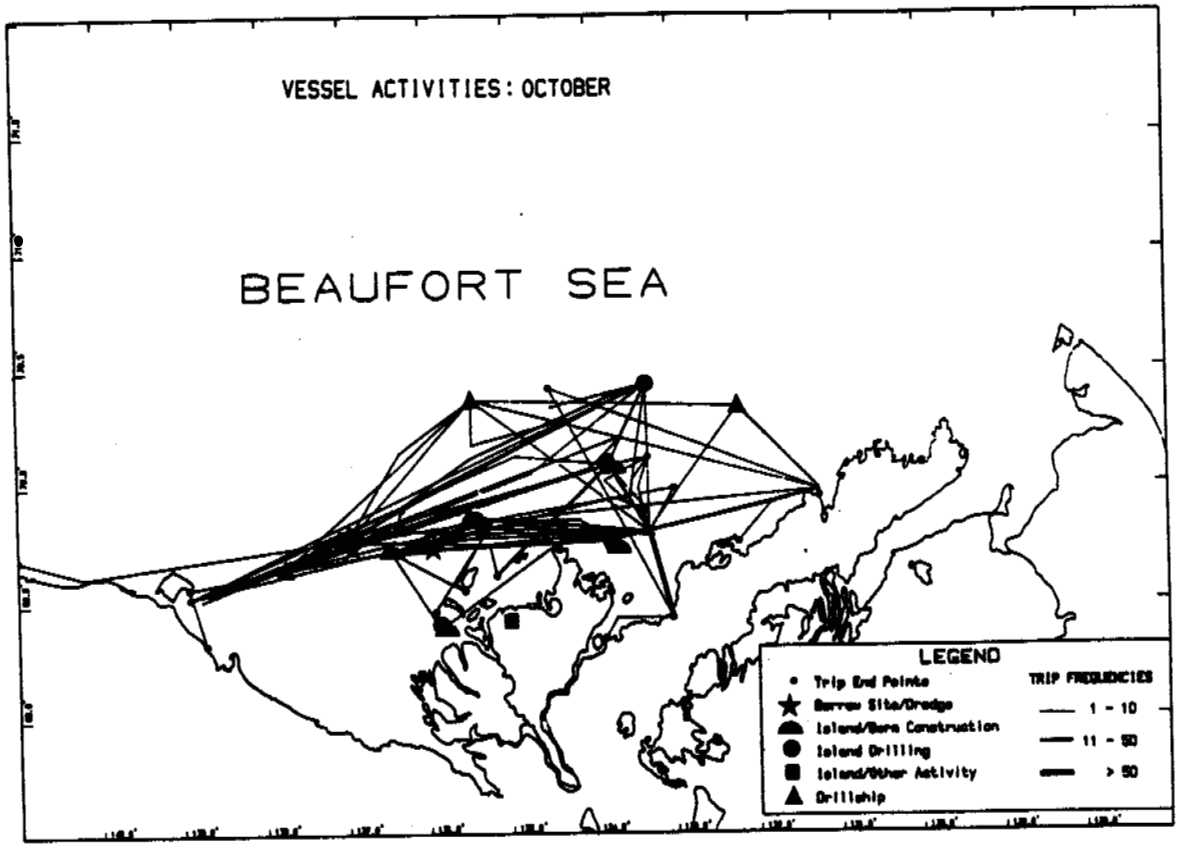

VESSEL ACTIVITIES: AUGUST 11 - 21
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Bare Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

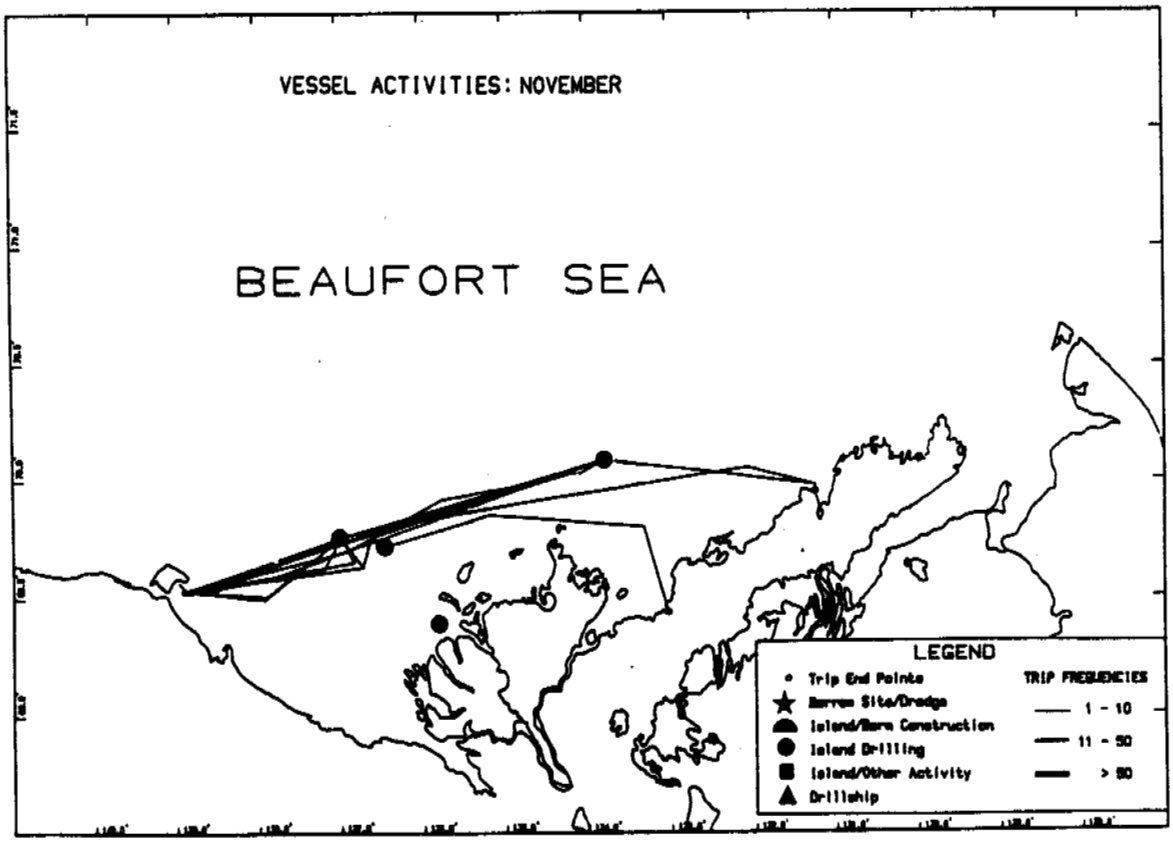

VESSEL ACTIVITIES: AUGUST 22 - 31
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Berm Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

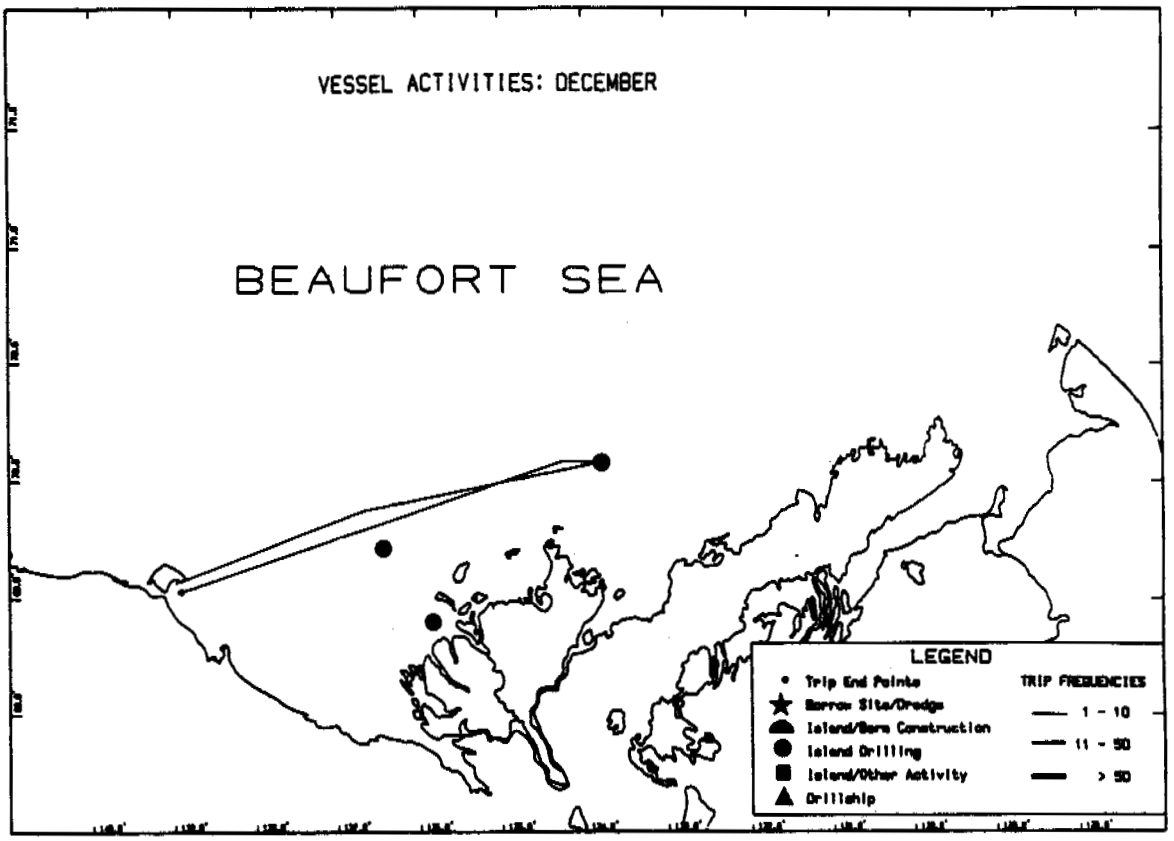

VESSEL ACTIVITIES: SEPTEMBER 1 - 10
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Berm Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50


VESSEL ACTIVITIES: SEPTEMBER 11 - 20
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Bore Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50


VESSEL ACTIVITIES: SEPTEMBER 21 - 30
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Bore Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

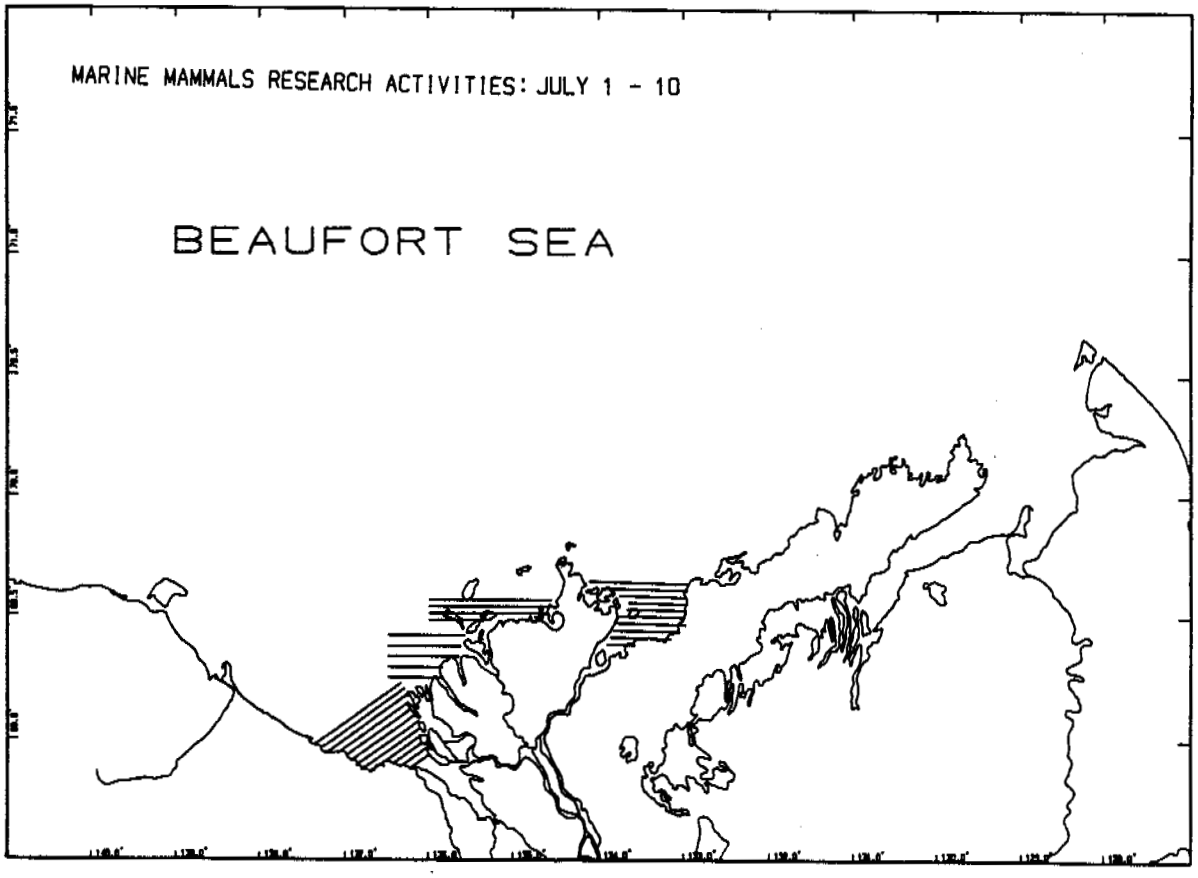

VESSEL ACTIVITIES: OCTOBER
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Berm Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

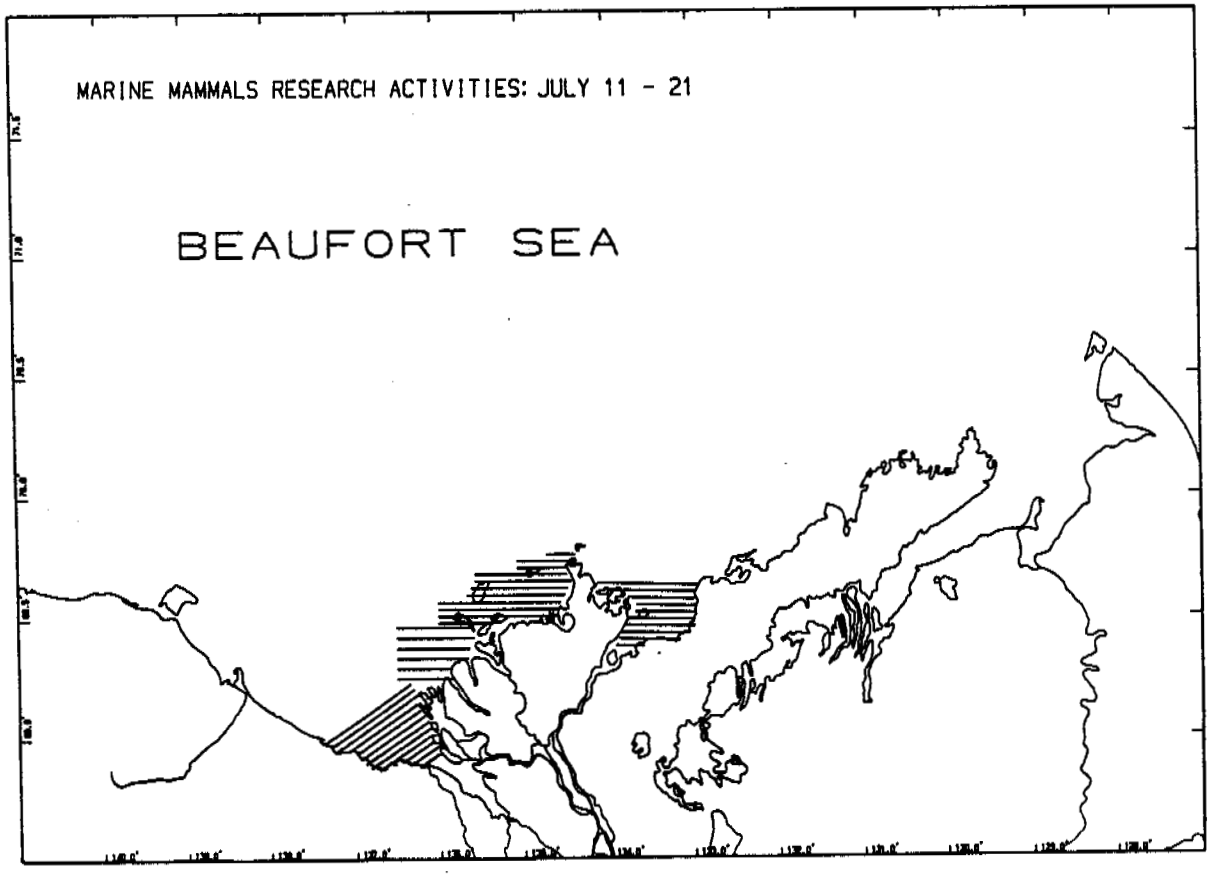

VESSEL ACTIVITIES: NOVEMBER
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Berm Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

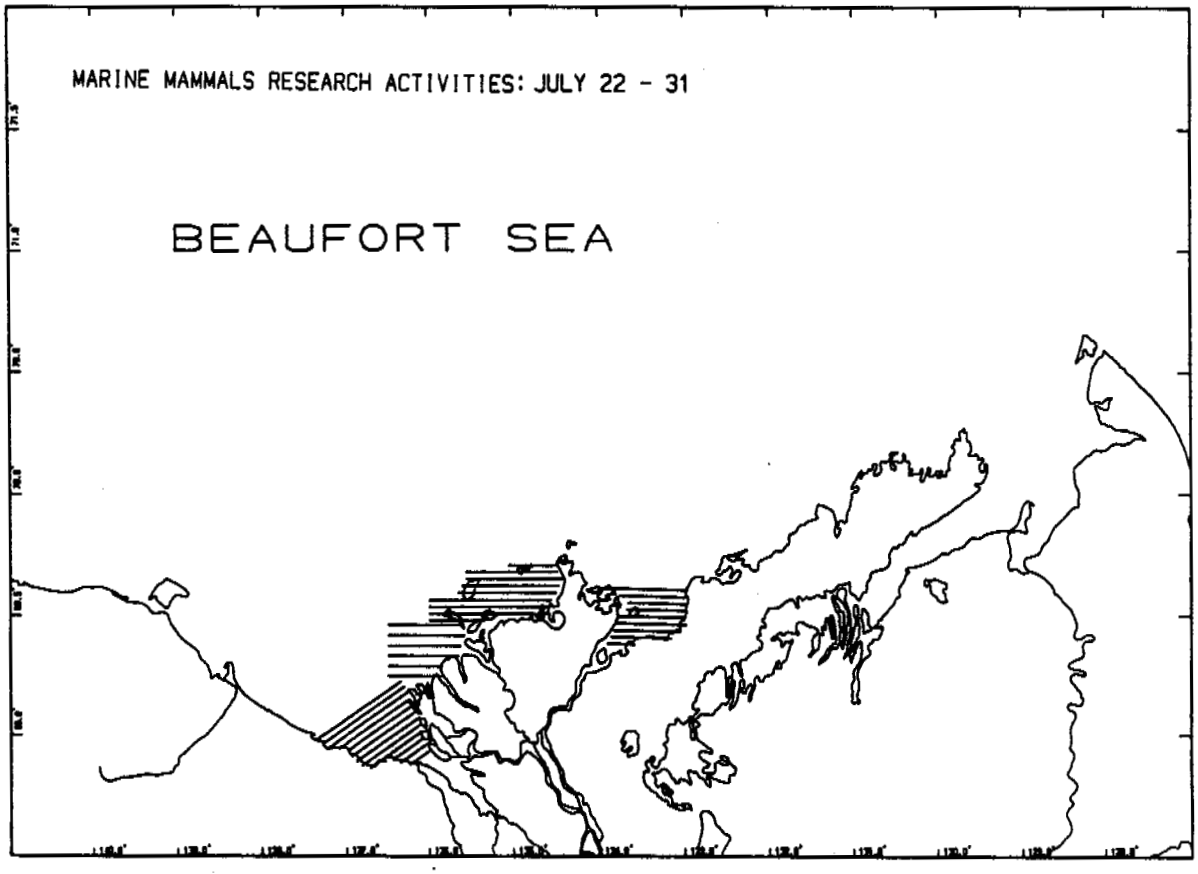

VESSEL ACTIVITIES: DECEMBER
BEAUFORT SEA
LEGEND
Trip End Points
Borrow Site/Dredge
Island/Berm Construction
Island Drilling
Island/Other Activity
Drillship
TRIP FREQUENCIES
1 - 10
11 - 50
> 50

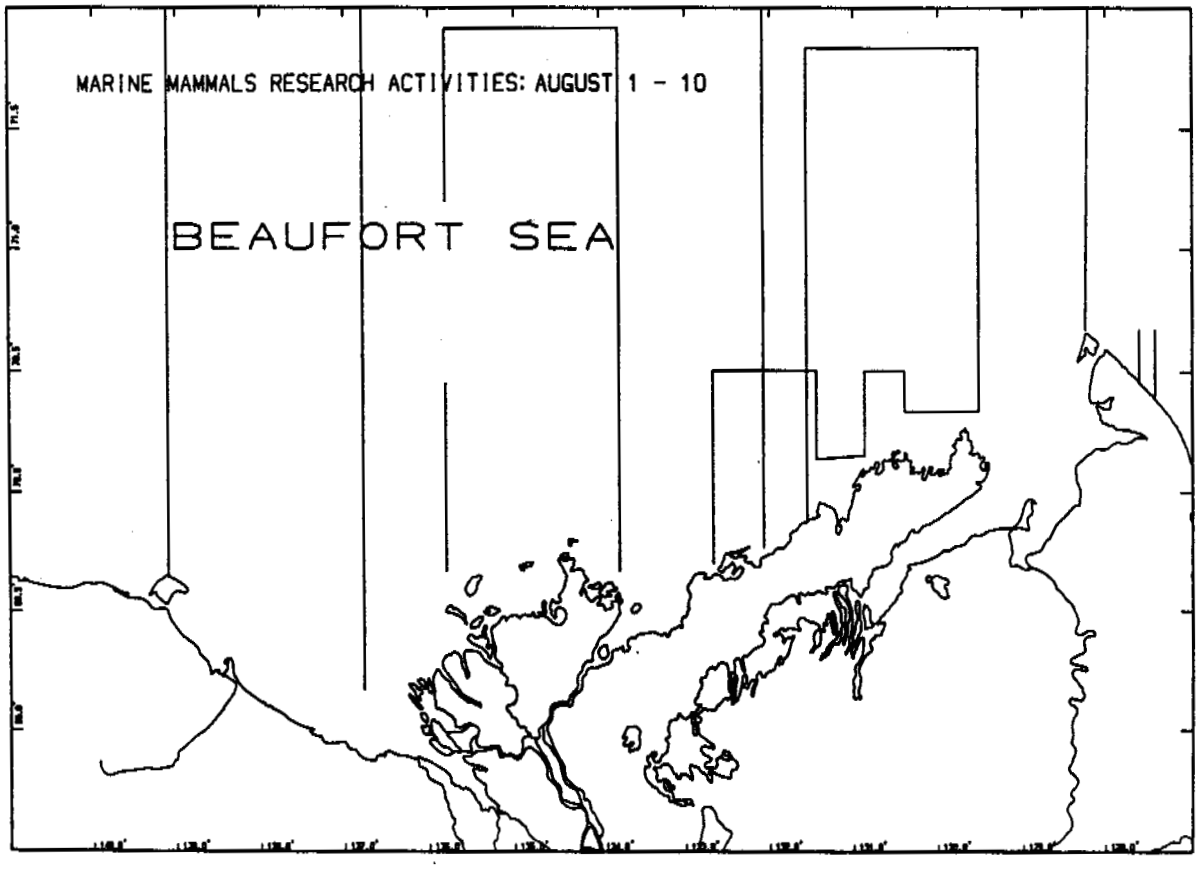
5.4 Marine Mammal Research Activities (1985)

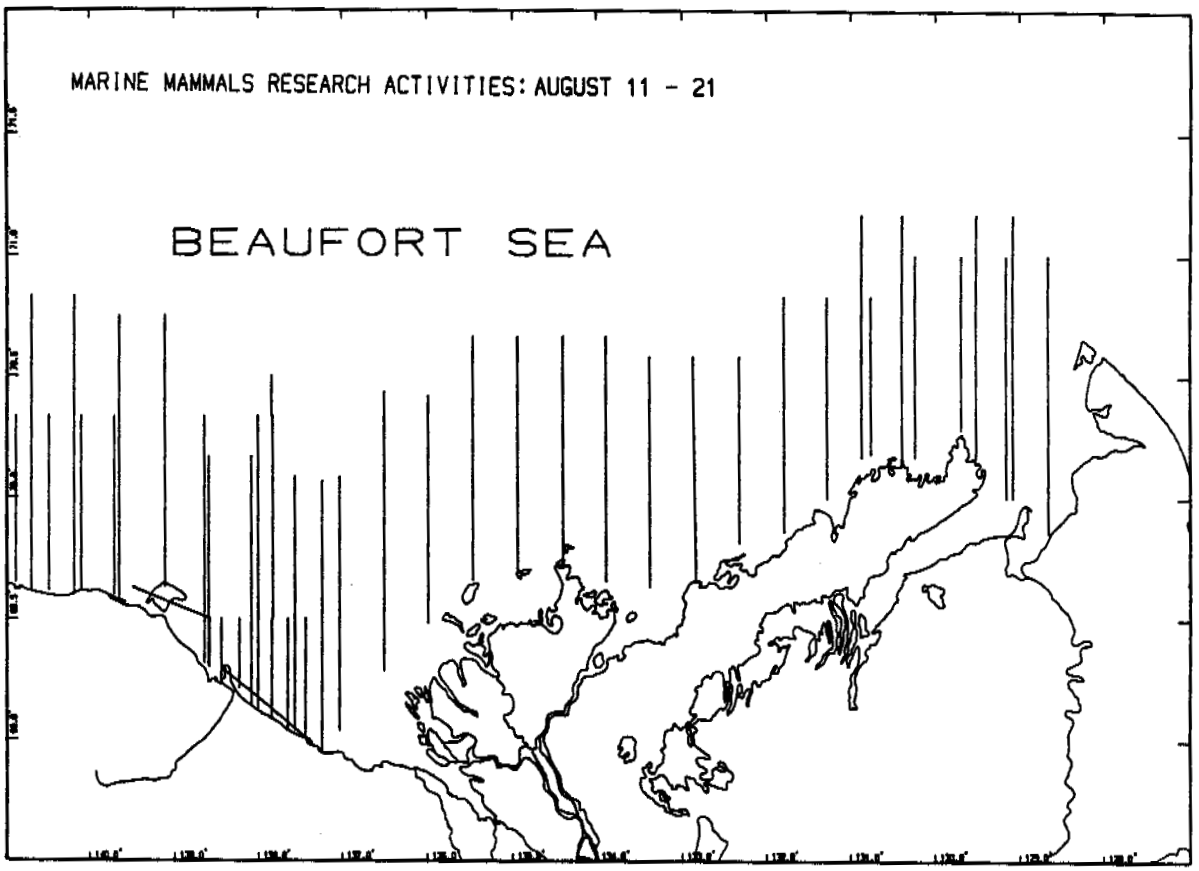
Note: There were no marine mammal (bowhead or white whale) research activities for the 1985 reporting periods of June, September 21-30, October, November and December.

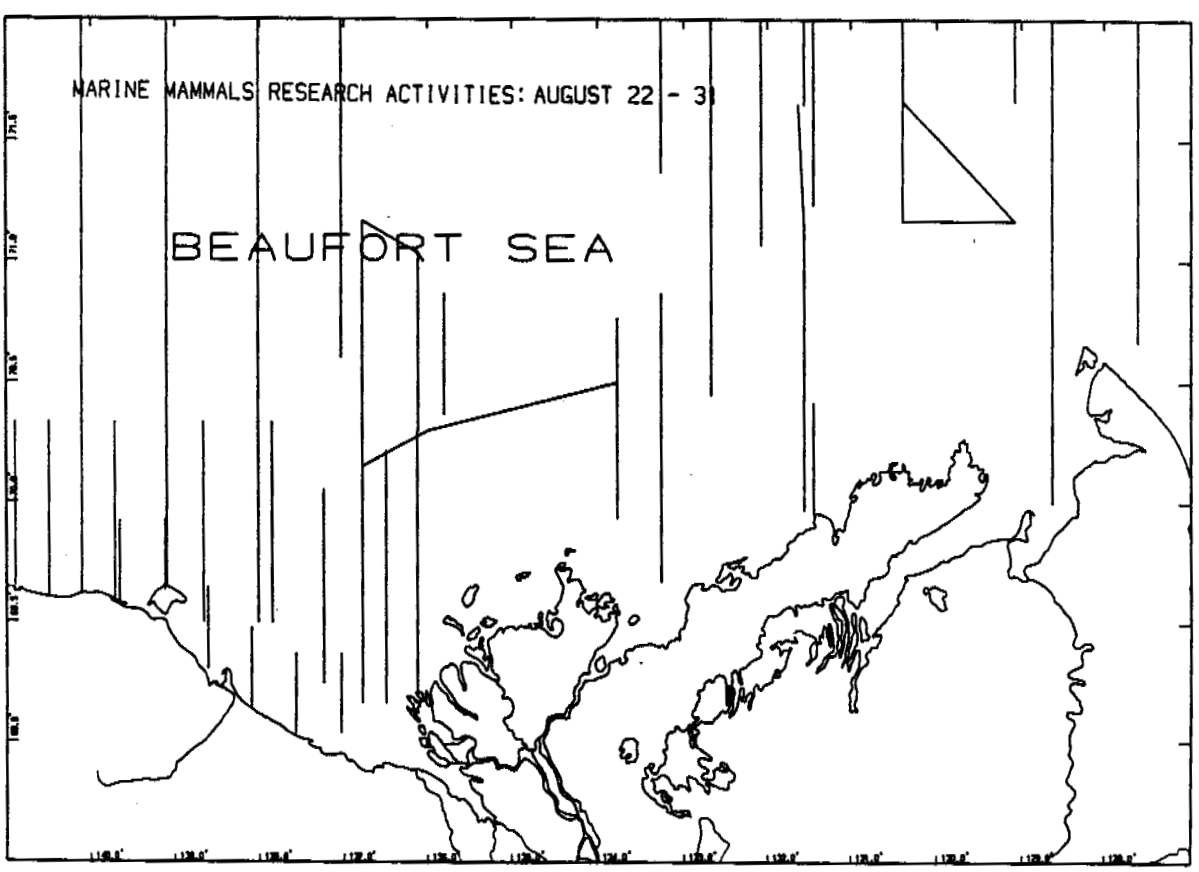

MARINE MAMMALS RESEARCH ACTIVITIES: JULY 1 - 10
BEAUFORT SEA

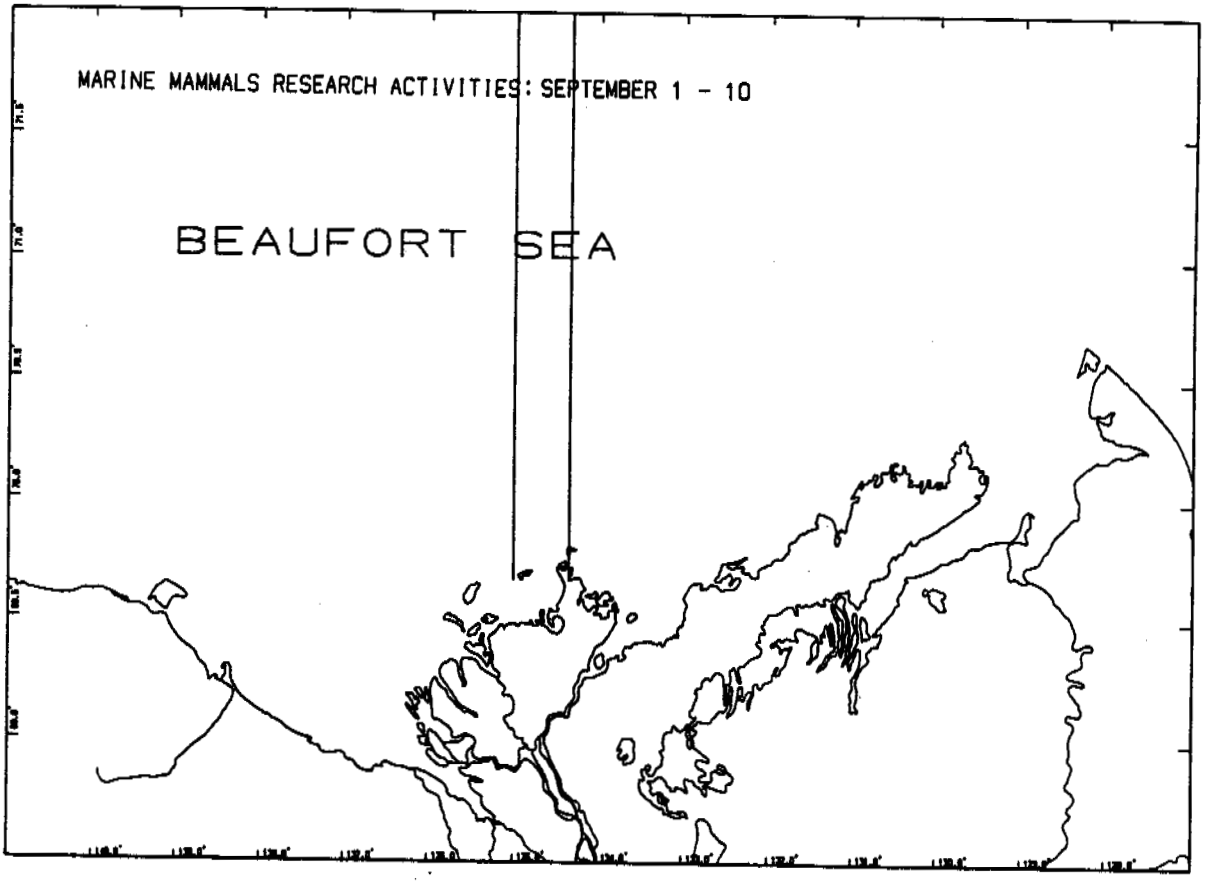

MARINE MAMMALS RESEARCH ACTIVITIES: JULY 11 - 21
BEAUFORT SEA

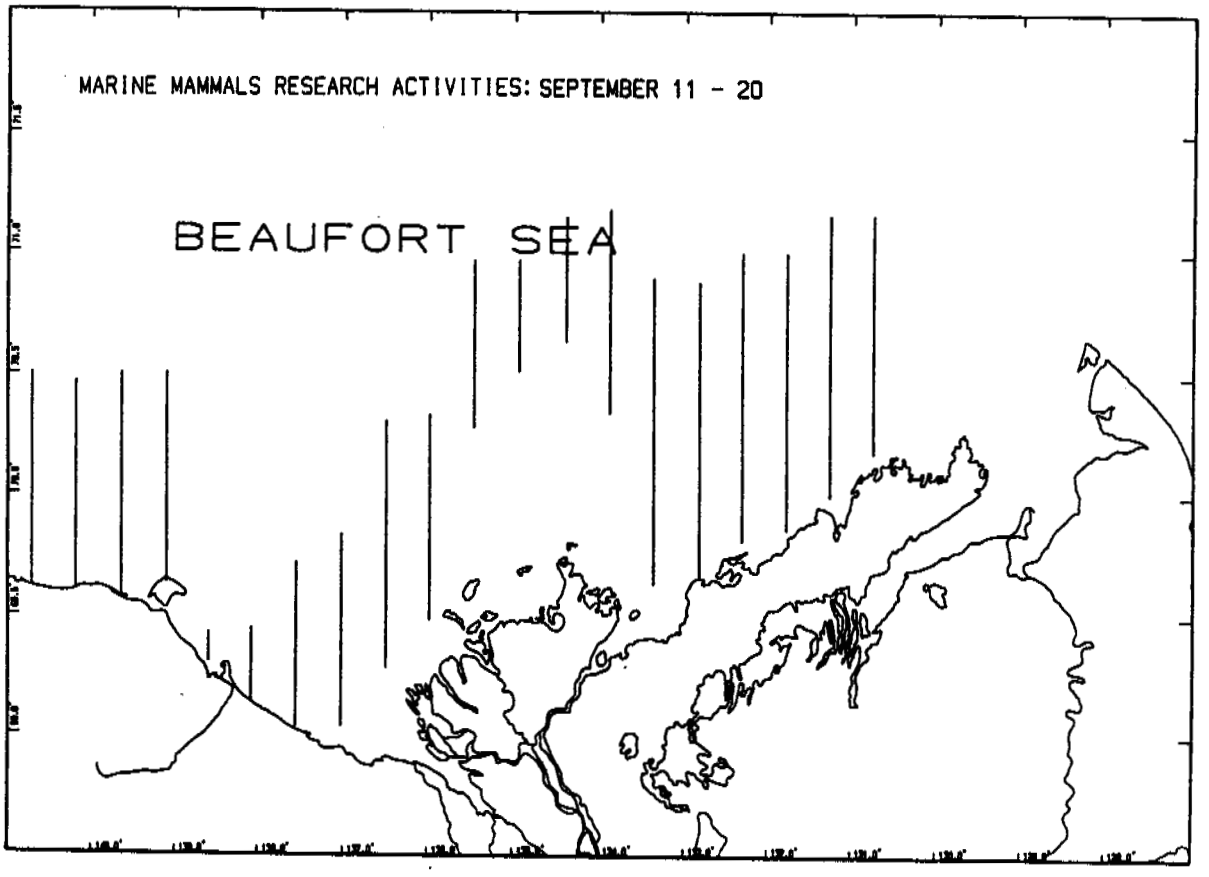

MARINE MAMMALS RESEARCH ACTIVITIES: JULY 22 - 31
BEAUFORT SEA


MARINE MAMMALS RESEARCH ACTIVITIES: AUGUST 1 - 10
BEAUFORT SEA


MARINE MAMMALS RESEARCH ACTIVITIES: AUGUST 11 - 21
BEAUFORT SEA


MARINE MAMMALS RESEARCH ACTIVITIES: AUGUST 22 - 31
BEAUFORT SEA


MARINE MAMMALS RESEARCH ACTIVITIES: SEPTEMBER 1 - 10
BEAUFORT SEA


MARINE MAMMALS RESEARCH ACTIVITIES: SEPTEMBER 11 - 20
BEAUFORT SEA

6.0 COMPARISON OF 1985 INDUSTRIAL ACTIVITIES WITH ACTIVITIES IN PREVIOUS YEARS

Year-to-year comparisons (1980-1985) of the locations and levels of industrial activities are possible only for the period August 01 - September 10. The principal source of information for industrial activities in the period 1980 to 1984 is Richardson (1985). There is very limited information concerning industrial activities prior to 1980. Complete data are available for the time period July 22 - 31 for one year only prior to 1985; the only information available for the other time periods is the location of the most active sites.

The location of the center of the main industrial zone (north or northeast of Richards Island) has remained relatively constant over the 1980-1985 period, although the specific active sites and the boundaries of the peripheral areas have changed from year to year. In 1980, activity extended as far east as the end of the Tuktoyaktuk Peninsula but did not extend beyond the western edge of Richards Island. In 1981, the eastern boundary was similar to that in 1980 but there was more activity farther to the west, eg. near Herschel Island. In 1982, 1983 and 1984, the main industrial zone was from Herschel Island to McKinley Bay. In 1985, the eastern boundary was again located near McKinley Bay; however, the western boundary was somewhat extended, i.e. there was frequent activity beyond Herschel Island, as far as halfway to the Alaska-Yukon border.

A brief summary of the relative intensity of industrial activity from year to year is provided below. The assessment is very general because of the following difficulties:

1. The database for some years was more complete than in other years, eg. when companies first start up programs in the Beaufort Sea, their records for the first year of operation are often incomplete.
2. In 1985, the study area was changed to include nearshore activities, i.e. in water depths less than 10 m.
3. Most fixed-wing aircraft and some vessels are not always dedicated to industrial work, eg. a particular aircraft may make one flight a week for an oil company and for the rest of the time make regular scheduled flights. A comparison of the number of aircraft or vessels used per time period over the years could therefore be biased.
4. The number of movements of a vessel or an aircraft often depends on the length of the trips. This limitation is more likely to apply to vessel movements than aircraft movements because vessels are slower and some operate continuously over their contract period. For example, if it takes a dredge one

hour to load and one hour to unload, that dredge can make six two-hour round trips or three six-hour round trips in a day. Yet either way the dredge would be working full time and the intensity of activity should be the same.

5. Information on the number of working hours per day per vessel or aircraft is not usually readily available.

For the period August 01 to September 10, the overall intensity of industrial activities in 1985 was somewhat less than that in 1983 and 1984 and not easily comparable to that in 1980, 1981 or 1982. The number of vessel and aircraft movements were about the same in 1985 as in 1983 and 1984. The level of 1985 seismic and sounding activity was noticeably less than in previous years. Also, the level of marine mammal research activity in 1985 appeared to be less than in previous years, but this may be misleading as the 1985 research database is incomplete.

The intensity of aircraft and vessel movements in October, November and December of 1985 may have been relatively high in comparison to the intensity for previous years (because of the extended 1985 drilling season). However, since there has been no compilation of previous year's activities for this particular time period, this can not be confirmed.

7.0 REFERENCES

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Payne, R., O. Brazier, E.M. Dorsey, J.S. Perkins, V.J. Rowntree and A. Titus. 1983. External features in southern right whales (Eubalaena australis) and their use in identifying individuals. p. 371-445 In: R. Payne (ed.). Communication and behaviour of whales. AAAS Selected Symposium 76, Westview Press, Boulder, CO. 643 p.

Richardson, W.J. (ed.). 1983. Behavior, disturbance responses and distribution of bowhead whales Balaena mysticetus in the eastern Beaufort Sea, 1982. Unpubl. LGL Ecol. Res. Assoc. Inc. rep. for U.S. Minerals Management Service, Reston, VA. 357 p.

Richardson, W.J. (ed.). 1985. Behavior, disturbance responses and distribution of bowhead whales Balaena mysticetus in the eastern Beaufort Sea, 1980-84. Unpubl. LGL Ecol. Res. Assoc. Inc. rep. for U.S. Minerals Management Service, Reston, VA. 306 p.

Sackmann, T., J.W. McDonald, P. Brouwer and L. Turney. 1986. Compilation of 1982-1985 dredging activities in the Canadian Beaufort Sea. A supplementary report. Unpubl. ESL Environmental Sciences Ltd. rep. for Environmental Protection Service, Yellowknife, N.W.T. 14 p.

8.0 APPENDICES

APPENDIX A

List of Agencies and Persons Contacted During User Survey

Agency	Person
Department of Fisheries and Oceans, Western Region - Winnipeg, Manitoba	Tom Strong
Department of Indian and Northern Affairs	Gordon Stewart Dale Longlitz
Environmental Protection Service - Yellowknife, N.W.T.	Glen Packman
Institute of Ocean Sciences - Sidney, B.C.	Brian Smiley
LGL Limited - King City, Ontario	John Richardson
U.S. Minerals Management Service	Cleve Cowles

APPENDIX B

TABLES OF 1985 INDUSTRIAL ACTIVITIES

The following appendices (B-1, B-2, B-3 and B-4) present tabular summaries of the 1985 industrial activities by activity type for active periods only.

Appendix B-1. Seismic and Sounding Activities (1985)

Note: There were no seismic activities for the 1985 reporting periods of June, July 1-10, July 11-21, July 22-31, October, November and December.

SEISMIC AND SOUNDING ACTIVITIES - AUGUST 1 - 10

VESSEL	END POINT 1		END POINT 2		LINE SHOT
GSI EXPLORER	69 42.6	135 17.4	69 37.8	135 11.4	86342
GSI EXPLORER	69 42.0	135 4.8	69 39.0	135 19.8	86117
GSI EXPLORER	69 38.4	135 15.0	69 39.6	135 6.0	86118
GSI EXPLORER	69 39.6	135 6.0	69 40.8	134 59.4	86118
GSI EXPLORER	69 39.6	135 28.8	69 42.0	135 0.0	86116
GSI EXPLORER	69 43.2	135 0.6	69 42.0	135 10.8	86115
GSI EXPLORER	69 42.0	135 10.8	69 40.2	135 31.8	86115
GSI EXPLORER	69 40.2	135 30.6	69 43.2	135 1.8	86114
GSI EXPLORER	69 40.8	135 31.2	69 43.2	135 4.8	86114
ARCTIC SURVEYOR II	69 31.8	136 7.8	69 32.4	136 6.0	86188
ARCTIC SURVEYOR II	69 32.4	136 6.0	69 34.2	135 55.2	86188
ARCTIC SURVEYOR II	69 31.8	135 58.2	69 37.2	136 4.2	86175
ARCTIC SURVEYOR II	69 31.8	136 18.0	69 35.4	135 57.0	86189
ARCTIC SURVEYOR II	69 34.2	136 25.8	69 32.4	136 40.8	86196
ARCTIC SURVEYOR II	69 50.4	134 45.6	69 45.6	134 28.2	86153
ARCTIC SURVEYOR II	69 33.0	136 18.6	69 35.4	136 4.8	86190

SEISMIC AND SOUNDING ACTIVITIES - AUGUST 11 - 21

VESSEL	END POINT 1		END POINT 2		LINE SHOT
GSI EXPLORER	69 41.4	135 31.8	69 41.4	135 28.8	86112
GSI EXPLORER	69 39.0	135 20.4	69 38.4	135 24.6	86117
GSI EXPLORER	69 36.0	133 37.2	69 38.4	133 28.2	86218
GSI EXPLORER	69 39.0	133 50.4	69 41.4	133 40.8	86217
GSI EXPLORER	69 43.8	133 38.4	69 41.4	133 51.6	86139
GSI EXPLORER	69 39.6	133 32.4	69 36.0	133 22.8	86220
GSI EXPLORER	69 35.4	133 26.4	69 42.6	133 42.6	86231
GSI EXPLORER	69 34.8	133 31.2	69 41.4	133 48.0	86233
GSI EXPLORER	69 39.6	133 50.4	69 34.8	133 39.0	86234
GSI EXPLORER	69 44.4	134 4.2	69 39.6	133 57.6	86165
GSI EXPLORER	69 45.0	134 1.8	69 42.6	133 59.4	86164
GSI EXPLORER	69 39.6	133 53.4	69 36.0	133 45.0	86235
ARCTIC SURVEYOR II	69 40.2	136 15.0	69 33.0	136 7.2	86178

SEISMIC AND SOUNDING ACTIVITIES - AUGUST 22 - 31

VESSEL	END POINT 1		END POINT 2		LINE SHOT
GSI EXPLORER	69 41.4	135 28.8	69 44.4	135 1.8	86112
GSI EXPLORER	69 42.0	135 32.4	69 45.0	135 1.8	86111
GSI EXPLORER	69 42.6	135 34.2	69 45.6	135 6.0	86109
GSI EXPLORER	69 43.8	135 18.6	69 42.6	135 31.8	86110
GSI EXPLORER	69 44.4	135 40.2	69 44.4	135 32.4	86108
GSI EXPLORER	69 42.6	135 20.4	69 37.8	135 13.8	86093
GSI EXPLORER	69 40.8	135 43.2	69 42.0	135 30.6	86172
GSI EXPLORER	69 43.2	135 21.0	69 41.4	135 6.0	86123
GSI EXPLORER	69 52.2	134 47.4	69 43.2	134 47.4	86131
GSI EXPLORER	69 52.2	134 49.2	69 47.4	134 49.2	86130
GSI EXPLORER	69 44.4	133 21.6	69 37.2	133 46.8	86224
ARCTIC SURVEYOR II	69 31.8	136 33.0	69 38.4	135 55.2	86192
ARCTIC SURVEYOR II	69 35.4	136 4.8	69 37.8	135 54.6	86190
ARCTIC SURVEYOR II	69 39.6	136 34.2	69 39.6	136 31.2	86193
ARCTIC SURVEYOR II	69 37.2	136 25.2	69 37.2	136 21.0	86191
ARCTIC SURVEYOR II	69 40.2	136 12.6	69 30.6	136 1.8	86177
ARCTIC SURVEYOR II	69 33.0	136 7.2	69 31.2	136 5.4	86178
ARCTIC SURVEYOR II	69 37.2	136 35.0	69 37.2	136 12.0	86191
ARCTIC SURVEYOR II	69 40.2	136 7.2	69 36.0	136 3.0	85259
ARCTIC SURVEYOR II	69 40.8	136 1.8	69 37.2	136 23.4	86194
ARCTIC SURVEYOR II	69 46.2	136 4.8	69 48.0	136 50.4	86137
ARCTIC SURVEYOR II	69 40.2	136 3.6	69 49.2	136 5.4	86101

SEISMIC AND SOUNDING ACTIVITIES - SEPTEMBER 1 - 10

VESSEL	END POINT 1		END POINT 2		LINE SHOT
GSI EXPLORER	70 10.8	128 57.6	70 16.8	129 27.0	86078
GSI EXPLORER	70 16.8	129 7.8	70 23.4	129 39.0	86247
GSI EXPLORER	70 21.6	129 39.6	70 15.0	129 4.8	86246
GSI EXPLORER	70 13.2	129 32.6	70 18.6	129 30.0	86084
GSI EXPLORER	70 19.2	129 7.8	70 11.4	129 21.0	86248
GSI EXPLORER	70 11.4	129 6.6	70 15.6	129 26.4	86077
GSI EXPLORER	70 21.0	129 15.6	70 15.0	129 26.4	86086
GSI EXPLORER	70 17.4	129 18.6	70 31.2	128 54.6	86085
GSI EXPLORER	70 29.4	129 6.6	70 18.0	129 27.6	86080
GSI EXPLORER	70 10.8	129 9.0	70 14.4	129 26.4	86076
GSI EXPLORER	70 10.2	129 12.0	70 12.0	129 20.4	86083
GSI EXPLORER	70 9.0	129 13.2	70 12.6	129 32.4	86082
GSI EXPLORER	70 21.6	129 37.8	70 15.0	129 4.8	86265
GSI EXPLORER	70 13.2	130 50.4	70 11.4	131 1.2	86270
GSI EXPLORER	70 10.2	131 10.2	69 50.4	133 12.0	85265
GSI EXPLORER	69 39.6	133 23.4	69 46.2	133 37.8	86229
GSI EXPLORER	69 36.6	133 51.6	69 40.2	134 0.0	86139
GSI EXPLORER	69 36.0	133 69.0	69 38.4	133 32.4	86227
GSI EXPLORER	69 42.0	133 45.6	69 34.2	133 27.0	86232
GSI EXPLORER	69 44.4	133 39.6	69 43.8	133 37.2	86230
GSI EXPLORER	69 38.4	133 32.4	69 35.0	133 30.0	86227
ARCTIC SURVEYOR II	69 48.0	135 5.4	69 49.8	134 40.8	86136
ARCTIC SURVEYOR II	69 49.2	135 5.4	69 51.6	134 44.4	86134
ARCTIC SURVEYOR II	69 39.6	135 10.2	69 49.8	135 22.8	86095
ARCTIC SURVEYOR II	69 40.2	135 19.2	69 50.4	135 37.8	86092
ARCTIC SURVEYOR II	69 46.2	135 22.2	69 48.0	135 9.6	86119
ARCTIC SURVEYOR II	69 45.0	135 21.0	69 46.8	135 4.8	86121
ARCTIC SURVEYOR II	69 49.8	135 10.8	69 47.4	135 9.6	86099
ARCTIC SURVEYOR II	69 39.6	135 7.2	69 50.4	135 15.0	86098
ARCTIC SURVEYOR II	69 40.2	135 9.6	69 50.4	135 16.8	86097

SEISMIC AND SOUNDING ACTIVITIES - SEPTEMBER 11 - 20

VESSEL	END POINT 1		END POINT 2		LINE SHOT
GSI EXPLORER	70 16.2	129 28.2	70 11.4	129 22.8	86264
GSI EXPLORER	70 10.8	129 28.8	70 13.8	129 31.8	86263
GSI EXPLORER	70 13.8	129 31.8	70 16.8	129 34.8	86263
GSI EXPLORER	70 12.0	129 20.4	70 13.2	129 27.6	86267
GSI EXPLORER	69 42.0	133 19.8	69 39.0	133 29.4	86266
GSI EXPLORER	69 39.0	133 29.4	69 37.8	133 33.6	86266
GSI EXPLORER	69 43.8	133 37.2	69 41.4	133 32.4	86230
GSI EXPLORER	69 42.6	133 59.4	69 38.4	133 54.6	86164
GSI EXPLORER	69 43.2	133 49.8	69 42.6	133 56.4	86162
GSI EXPLORER	69 39.6	133 32.4	69 42.0	133 37.8	85267
GSI EXPLORER	69 37.8	133 22.8	69 41.4	133 31.8	86765
ARCTIC SURVEYOR II	69 47.4	135 9.6	69 46.2	135 9.0	86099
ARCTIC SURVEYOR II	69 48.6	135 40.8	69 40.8	135 26.4	86090
ARCTIC SURVEYOR II	69 49.2	135 44.4	69 43.8	135 35.4	86089
ARCTIC SURVEYOR II	69 48.0	135 4.8	69 47.4	135 7.2	86120
ARCTIC SURVEYOR II	69 43.8	135 16.8	69 43.2	135 14.4	86122
ARCTIC SURVEYOR II	69 46.2	135 9.0	69 39.6	135 4.8	86099

SEISMIC AND SOUNDING ACTIVITIES - SEPTEMBER 21 - 30

VESSEL	END POINT 1		END POINT 2		LINE SHOT
GSI EXPLORER	69 44.4	133 54.0	69 42.0	134 9.0	86160
GSI EXPLORER	69 40.8	133 21.6	69 42.0	133 24.6	86228
GSI EXPLORER	69 39.0	133 25.2	69 38.4	133 28.2	86269
ARCTIC SURVEYOR II	69 49.2	134 43.2	69 48.0	134 50.4	85268
ARCTIC SURVEYOR II	69 47.4	135 7.2	69 44.4	135 32.4	86120
ARCTIC SURVEYOR II	69 43.8	135 35.4	69 39.0	135 27.6	86089
ARCTIC SURVEYOR II	69 43.8	135 6.0	69 51.0	135 8.4	86100
ARCTIC SURVEYOR II	69 45.6	135 39.0	69 45.6	135 57.6	86149
ARCTIC SURVEYOR II	69 46.8	135 54.0	69 47.4	135 44.4	86147

Appendix B-2. Vessel Activities (1985)

Note: There were vessel activities for all 1985 reporting periods.

VESSEL ACTIVITIES - JUNE

END POINT 1		END POINT 2		TRIPS
69 25.8	137 49.2	69 34.8	137 15.9	1
69 27.2	137 42.1	69 25.8	137 49.2	1
69 29.0	137 24.0	69 31.7	138 59.8	1
69 30.0	137 23.5	69 31.6	137 13.0	1
69 31.1	138 53.0	69 32.7	138 58.2	1
69 31.3	138 48.2	69 32.5	138 58.4	1
69 31.3	138 48.2	HERSCHEL BASIN		1
69 31.4	138 44.8	HERSCHEL BASIN		2
69 31.4	138 51.8	69 31.3	138 48.2	1
69 31.6	137 13.0	69 34.6	137 23.5	1
69 31.7	138 48.1	69 31.3	138 48.2	1
69 31.7	138 59.8	69 55.5	136 10.0	1
69 32.2	138 56.5	HERSCHEL BASIN		1
69 32.5	137 36.5	69 27.2	137 42.1	1
69 32.5	138 58.4	69 32.6	138 59.8	1
69 32.6	138 59.8	69 31.1	138 53.0	1
69 32.7	138 58.2	HERSCHEL BASIN		1
69 34.0	137 19.5	69 35.0	137 16.0	1
69 34.6	137 23.5	69 34.0	137 19.5	1
69 34.8	137 15.9	69 37.9	137 29.8	1
69 35.9	135 35.5	70 12.5	134 5.0	1
69 37.9	137 29.8	69 30.0	137 23.5	1
69 38.3	138 28.3	69 49.3	138 15.9	1
69 38.6	138 28.4	70 16.8	134 4.0	1
69 39.0	137 56.3	69 49.9	136 40.4	1
69 39.3	137 55.1	69 32.5	137 36.5	1
69 39.7	137 58.1	69 39.3	137 55.1	1
69 48.9	138 29.8	69 39.7	137 58.1	1
69 49.0	138 29.0	HERSCHEL BASIN		1
69 49.3	138 15.9	69 49.5	138 27.3	1
69 49.5	138 27.3	69 48.9	138 29.8	1
69 49.9	136 40.4	70 8.4	134 34.1	1
69 55.5	136 10.0	70 15.3	134 9.4	1
69 58.1	136 2.0	AKPAK		1
70 7.0	134 38.1	70 10.5	134 33.3	1
70 8.0	134 30.8	70 7.0	134 38.1	1
70 8.3	134 31.0	70 9.1	134 32.0	1
70 8.4	134 31.4	70 10.4	134 33.2	1
70 8.4	134 34.1	70 8.0	134 30.8	1
70 8.7	134 29.9	70 8.3	134 31.0	1
70 8.8	134 30.4	AKPAK		1
70 9.1	134 32.0	70 10.7	134 33.1	1
70 9.4	134 31.6	70 10.6	134 33.1	1
70 10.0	133 56.6	70 16.6	134 12.7	1
70 10.0	134 32.0	70 8.7	134 29.9	1
70 10.1	133 57.3	AKPAK		2
70 10.4	134 33.2	AKPAK		1

VESSEL ACTIVITIES - JUNE (continued)

END POINT 1	END POINT 2	TRIPS
70 10.5 134 30.6	70 10.0 134 32.0	1
70 10.5 134 33.3	69 29.0 137 24.0	1
70 10.6 134 33.1	69 35.9 135 35.5	1
70 10.7 134 33.1	70 11.9 134 1.6	1
70 10.9 134 26.7	70 12.1 134 29.1	1
70 11.9 134 1.6	70 10.0 133 56.6	1
70 12.1 134 29.1	AKPAK	1
70 12.5 134 5.0	70 17.0 134 11.9	1
70 14.7 134 14.1	AKPAK	1
70 14.8 134 4.6	AKPAK	2
70 15.0 134 5.4	AKPAK	1
70 15.3 134 9.4	AKPAK	1
70 16.6 134 12.7	70 15.0 134 5.4	1
70 16.8 134 4.0	AKPAK	1
70 17.0 134 11.9	AKPAK	1
AKPAK	69 39.0 137 56.3	1
AKPAK	69 49.0 138 29.0	1
AKPAK	70 8.4 134 31.4	1
AKPAK	70 9.4 134 31.6	1
AKPAK	70 10.5 134 30.6	1
AKPAK	70 10.9 134 26.7	1
HERSCHEL BASIN	69 31.4 138 51.8	1
HERSCHEL BASIN	69 31.7 138 48.1	1
HERSCHEL BASIN	69 38.3 138 28.3	1
HERSCHEL BASIN	69 38.6 138 28.4	1
HERSCHEL BASIN	69 58.1 136 2.0	1
HERSCHEL BASIN	70 14.7 134 14.1	1
HERSCHEL BASIN	PAULINE COVE	20
HERSCHEL BASIN	WEST TARSIUT	2
MCKINLEY BAY	TUKTOYAKTUK	4
TUKTOYAKTUK	INUVIK	4
TUKTOYAKTUK	WEST TARSIUT	1
WEST TARSIUT	70 8.8 134 30.4	1
WEST TARSIUT	AKPAK	1
WEST TARSIUT	MCKINLEY BAY	1

TOTAL NUMBER OF TRIPS 111

VESSEL ACTIVITIES - JULY 1 - 10

END POINT 1	END POINT 2	TRIPS
69 28.0 138 1.5	AKPAK	2
69 29.7 138 33.0	HERSCHEL BASIN	1
69 32.5 138 58.7	PAULINE COVE	1
69 35.0 137 16.0	69 41.2 137 7.4	1
69 36.1 137 28.2	69 29.7 138 33.0	1
69 41.2 137 7.4	69 53.8 136 43.0	1
69 44.4 136 6.6	AKPAK	1
69 49.6 136 57.9	69 36.1 137 28.2	1
69 53.8 136 43.0	69 49.6 136 57.9	1
69 57.8 134 56.0	70 5.0 134 2.0	1
69 58.5 135 9.5	AKPAK	1
70 5.0 134 2.0	69 58.5 135 9.5	1
AKPAK	69 55.3 133 49.0	1
AKPAK	69 57.8 134 56.0	1
AKPAK	HERSCHEL BASIN	1
CRUMBLING POINT	GARRY ISLAND	2
GARRY ISLAND	TUKTOYAKTUK	2
HERSCHEL BASIN	69 32.5 138 58.7	1
HERSCHEL BASIN	69 44.4 136 6.6	1
HERSCHEL BASIN	PAULINE COVE	2
MCKINLEY BAY	AMAULIGAK	1
NIPTERK	TUKTOYAKTUK	2
PAULINE COVE	PULLEN ISLAND	2
PULLEN ISLAND	TUKTOYAKTUK	2
TUKTOYAKTUK	CRUMBLING POINT	2
TUKTOYAKTUK	INUVIK	2
TUKTOYAKTUK	MCKINLEY BAY	3
TUKTOYAKTUK	PAULINE COVE	1
	TOTAL NUMBER OF TRIPS	39

VESSEL ACTIVITIES - JULY 11 - 21

END POINT 1	END POINT 2	TRIPS
69 24.4 137 31.3	69 32.9 138 52.6	1
69 25.0 137 32.1	69 24.4 137 31.3	1
69 32.9 138 52.6	HERSCHEL BASIN	1
69 52.7 133 18.0	AKPAK	1
69 53.0 135 51.0	AKPAK	2
69 55.3 133 49.0	WEST TARSIUT	1
69 57.6 133 48.7	69 52.7 133 18.0	1
70 13.3 134 14.5	AKPAK	2
ADLARTOK	MCKINLEY BAY	3
AKPAK	69 57.6 133 48.7	1
AKPAK	WEST TARSIUT	2
ALERK	TUKTOYAKTUK	1
AMAULIGAK	ALERK	1
AMAULIGAK	PULLEN ISLAND	2
AMAULIGAK	TUKTOYAKTUK	3
HERSCHEL BASIN	PAULINE COVE	3
INUVIK	TUKTOYAKTUK	8
ISSUNGNAK	AMAULIGAK	1
MCKINLEY BAY	TUKTOYAKTUK	17
NIPTERK	TUKTOYAKTUK	3
PITSIULAK	ISSUNGNAK	1
PULLEN ISLAND	TUKTOYAKTUK	3
PULLEN ISLAND	WEST TARSIUT	1
TAGLU	TUKTOYAKTUK	3
TUKTOYAKTUK	ADGO	1
TUKTOYAKTUK	ARNAK	2
WEST TARSIUT	PITSIULAK	1
	TOTAL NUMBER OF TRIPS	67

VESSEL ACTIVITIES - JULY 22 - 31

END POINT 1	END POINT 2	TRIPS
15 M. NORTH OF HOOPER	WEST TARSIUT	1
69 56.2 133 54.9	69 57.9 134 45.0	1
69 56.7 134 59.6	70 3.2 134 47.7	1
69 57.9 134 45.0	69 51.5 134 29.0	1
70 3.2 134 47.7	69 56.2 133 54.9	1
70 5.2 131 23.5	70 4.2 131 24.5	3
70 5.3 131 23.5	MCKINLEY BAY	3
70 12.5 134 16.5	69 56.7 134 59.6	1
ADGO	GARRY ISLAND	1
ADGO	PELLY ISLAND	1
ADGO	TUKTOYAKTUK	11
ADLARTOK	ISSUNGNAK	1
AKPAK	70 12.5 134 16.5	1
AKPAK	WEST TARSIUT	3
ARNAK	ADGO	1
ARNAK	MCKINLEY BAY	1
ARNAK	TUKTOYAKTUK	14
HERSCHEL BASIN	AKPAK	1
HERSCHEL BASIN	PITSIULAK	1
ISSUNGNAK	MCKINLEY BAY	1
KAY POINT	HERSCHEL BASIN	1
KOMAKUK	SHINGLE POINT	1
KUGDJUK	PITSIULAK	2
MCKINLEY BAY	70 5.2 131 23.5	2
MCKINLEY BAY	PAULINE COVE	1
MCKINLEY BAY	TUKTOYAKTUK	7
NIPTERK	ADGO	1
NIPTERK	TUKTOYAKTUK	3
PAULINE COVE	ADLARTOK	1
PAULINE COVE	WEST TARSIUT	2
PELLY ISLAND	TUKTOYAKTUK	1
PITSIULAK	KAY POINT	1
PITSIULAK	WEST TARSIUT	6
TAGLU	TUKTOYAKTUK	9
TUKTOYAKTUK	15 M. NORTH OF HOOPER	1
TUKTOYAKTUK	INUVIK	8
TUKTOYAKTUK	KOMAKUK	1

TOTAL NUMBER OF TRIPS 97

VESSEL ACTIVITIES - AUGUST 1 - 10

END POINT 1	END POINT 2	TRIPS
26'EAST OF HAVIK	MCKINLEY BAY	2
69 45.0 137 2.0	69 50.0 133 55.0	1
69 50.0 133 55.0	69 48.0 133 0.0	1
70 4.2 131 24.5	MCKINLEY BAY	4
70 4.2 134 19.1	AKPAK	2
ADGO	PULLEN ISLAND	1
ADGO	TUKTOYAKTUK	5
ADLARTOK	EDLOK	7
ADLARTOK	HAVIK	1
ADLARTOK	MCKINLEY BAY	2
ADLARTOK	TUKTOYAKTUK	5
AKPAK	WEST TARSIUT	5
ALERK	ARNAK	1
AMAULIGAK	TUKTOYAKTUK	3
AMERK	ALERK	1
AMERK	TUKTOYAKTUK	13
ARNAK	AMERK	1
ARNAK	MINUK	2
ARNAK	TUKTOYAKTUK	14
GARRY ISLAND	ADGO	1
HAVIK	26'EAST OF HAVIK	1
HERSCHEL BASIN	WEST TARSIUT	1
IMMERK	TUKTOYAKTUK	2
ISSIGAK	MINUK	67
ISSUNGNAK	ADLARTOK	3
KAUBVIK	AMERK	1
KAUBVIK	MINUK	3
KUGDJUK	PITSIULAK	7
KUGDJUK	TUKTOYAKTUK	3
MCKINLEY BAY	AMERK	2
MCKINLEY BAY	HAVIK	1
MCKINLEY BAY	ISSUNGNAK	3
MCKINLEY BAY	TUKTOYAKTUK	12
MINUK	ADGO	1
MINUK	TUKTOYAKTUK	7
NIPTERK	MINUK	1
NIPTERK	TUKTOYAKTUK	3
PAULINE COVE	69 45.0 137 2.0	1
PAULINE COVE	AMAULIGAK	1
PITSIULAK	HERSCHEL BASIN	1
PULLEN ISLAND	TUKTOYAKTUK	1
SHINGLE POINT	TUKTOYAKTUK	1
SURVEYOR	TUKTOYAKTUK	2
TAGLU	TUKTOYAKTUK	3
TUKTOYAKTUK	70 43.0 128 17.0	4
TUKTOYAKTUK	EDLOK	4
TUKTOYAKTUK	INUVIK	7

VESSEL ACTIVITIES - AUGUST 1 - 10 (continued)

END POINT 1	END POINT 2	TRIPS
TUKTOYAKTUK	ISSIGAK	1
TUKTOYAKTUK	MCKINLEY BAY	3
WEST TARSIUT	MCKINLEY BAY	1
WEST TARSIUT	TUKTOYAKTUK	1
	TOTAL NUMBER OF TRIPS	221

VESSEL ACTIVITIES - AUGUST 11 - 21

END POINT 1	END POINT 2	TRIPS
14' EAST OF HAVIK	MCKINLEY BAY	1
26'EAST OF HAVIK	14' EAST OF HAVIK	1
26'EAST OF HAVIK	MCKINLEY BAY	1
68 48.0 134 27.0	69 35.0 135 59.0	1
69 32.1 138 56.1	69 32.2 138 56.8	1
69 34.9 133 9.8	70 16.6 133 45.4	1
69 35.0 135 59.0	TUKTOYAKTUK	1
69 48.0 133 0.0	69 55.0 134 3.0	1
69 50.0 134 21.0	69 51.5 135 37.0	1
69 50.0 134 21.0	TARSIUT	1
69 51.5 135 37.0	70 16.6 133 45.4	1
69 51.5 135 37.0	AMAULIGAK	1
69 55.0 133 54.0	69 50.0 134 21.0	1
69 55.0 133 54.0	ISSUNGNAK	2
69 55.0 134 3.0	70 19.8 134 27.0	2
69 55.0 134 3.0	ISSIGAK	1
70 6.4 133 45.3	AMAULIGAK	1
70 16.6 133 45.4	70 6.4 133 45.3	1
70 16.6 133 45.4	NIPTERK	1
70 24.0 133 16.5	NERLERK	1
70 24.3 133 17.6	NERLERK	1
ADGO	CAMP 17	2
ADGO	NIPTERK	2
ADGO	TUKTOYAKTUK	2
ADLARTOK	EDLOK	10
ADLARTOK	TUKTOYAKTUK	13
AKPAK	70 24.0 133 16.5	1
AKPAK	70 24.3 133 17.6	1
AKPAK	NERLERK	1
ALASKA TRIP 1	TUKTOYAKTUK	1
AMAULIGAK	69 50.0 134 21.0	1
AMERK	ARNAK	6
AMERK	KAUBVIK	3
AMERK	MCKINLEY BAY	1
AMERK	TUKTOYAKTUK	21
ARNAK	DALHOUSIE AREA	1
ARNAK	KAUBVIK	4
ARNAK	MINUK	4
ARNAK	TUKTOYAKTUK	10
DALHOUSIE AREA	MCKINLEY BAY	2
DALHOUSIE AREA	TUKTOYAKTUK	1
EDLOK	HAVIK	2
EDLOK	TUKTOYAKTUK	6
HAVIK	TUKTOYAKTUK	2
HERSCHEL BASIN	KUGDJUK	1
HERSCHEL BASIN	WEST TARSIUT	3
ISSIGAK	KAUBVIK	1

VESSEL ACTIVITIES - AUGUST 11 - 21 (continued)

END POINT 1	END POINT 2	TRIPS
ISSIGAK	MINUK	85
KAUBVIK	MINUK	1
KAUBVIK	NIPTERK	5
KAY POINT	PAULINE COVE	1
KUGDJUK	PITSIULAK	3
KUGDJUK	TUKTOYAKTUK	1
KUGDJUK	WEST TARSIUT	1
MCKINLEY BAY	ARNAK	2
MCKINLEY BAY	HAVIK	1
MCKINLEY BAY	TUKTOYAKTUK	6
MINUK	ADGO	3
MINUK	TUKTOYAKTUK	3
NERLERK	69 37.5 138 6.7	1
NERLERK	HERSCHEL BASIN	1
NIPTERK	AMERK	1
NIPTERK	MINUK	2
NIPTERK	PULLEN ISLAND	1
NIPTERK	URKSAK	1
PITSIULAK	HERSCHEL BASIN	1
PITSIULAK	WEST TARSIUT	2
PULLEN ISLAND	KAY POINT	1
PULLEN ISLAND	TUKTOYAKTUK	2
TAGLU	TUKTOYAKTUK	3
TARSIUT	69 51.5 135 37.0	1
TUKTOYAKTUK	69 34.9 133 9.8	1
TUKTOYAKTUK	69 48.0 134 27.0	1
TUKTOYAKTUK	69 55.0 133 54.0	1
TUKTOYAKTUK	69 56.0 128 58.0	1
TUKTOYAKTUK	70 43.0 128 17.0	7
TUKTOYAKTUK	AMAULIGAK	1
TUKTOYAKTUK	INUVIK	6
TUKTOYAKTUK	KAUBVIK	1
TUKTOYAKTUK	NIPTERK	2
TUKTOYAKTUK	PAULINE COVE	2
TUKTOYAKTUK	PITSIULAK	3
TUKTOYAKTUK	WEST TARSIUT	5
URKSAK	AMAULIGAK	1
WEST TARSIUT	NERLERK	1
	TOTAL NUMBER OF TRIPS	287

VESSEL ACTIVITIES - AUGUST 22 - 31

END POINT 1	END POINT 2	TRIPS
69 1.6 137 38.0	69 16.6 137 20.4	1
69 7.3 137 57.8	69 18.8 137 32.4	1
69 10.0 137 14.0	ALASKA TRIP 2	1
69 16.6 137 20.4	PELLY ISLAND	1
69 17.7 138 20.9	69 30.5 137 55.7	1
69 18.8 137 32.4	69 1.6 137 38.0	1
69 23.4 138 53.2	69 36.2 138 27.1	1
69 30.5 137 55.7	69 7.3 137 57.8	1
69 32.2 136 30.0	ARNAK	1
69 34.7 138 50.4	69 47.1 138 24.7	1
69 36.2 138 27.1	69 17.7 138 20.9	1
69 37.5 138 6.7	PAULINE COVE	1
69 43.0 135 11.0	69 32.2 136 30.0	1
69 43.2 137 4.0	TUKTOYAKTUK	1
69 45.0 135 20.0	ARNAK	1
69 47.1 138 24.7	69 23.4 138 53.2	1
69 48.9 137 3.1	NERLERK	1
69 49.0 135 14.0	ARNAK	1
69 56.0 128 58.0	TUKTOYAKTUK	1
70 5.3 133 18.5	AMAULIGAK	2
70 43.0 128 17.0	69 56.0 128 58.0	2
ADGO	ARNAK	1
ADGO	TUKTOYAKTUK	1
ADLARTOK	ALASKA TRIP 1	1
ADLARTOK	EDLOK	9
ADLARTOK	HAVIK	3
ADLARTOK	HERSCHEL BASIN	2
ADLARTOK	KOMAKUK	1
ADLARTOK	MCKINLEY BAY	2
ADLARTOK	NERLERK	2
ADLARTOK	PULLEN ISLAND	2
ADLARTOK	TUKTOYAKTUK	9
ALASKA TRIP 1	EDLOK	1
ALASKA TRIP 1	TUKTOYAKTUK	2
AMAULIGAK	KOGYUK (N-67)	4
AMAULIGAK	UKALERK	2
AMAULIGAK	URKSAK	1
AMERK	AMAULIGAK	10
ARNAK	69 49.0 135 14.0	1
ARNAK	ISSIGAK	2
ARNAK	KAUBVIK	1
ARNAK	MINUK	12
ARNAK	NIPTERK	7
ARNAK	TUKTOYAKTUK	31
EDLOK	HAVIK	1
EDLOK	TUKTOYAKTUK	7
HAVIK	MCKINLEY BAY	4

VESSEL ACTIVITIES - AUGUST 22 - 31 (continued)

END POINT 1	END POINT 2	TRIPS
HAVIK	TUKTOYAKTUK	4
HERSCHEL BASIN	NERLERK	2
HERSCHEL BASIN	PITSIULAK	1
ISSIGAK	KAUBVIK	12
ISSIGAK	MINUK	90
KAUBVIK	69 45.0 135 20.0	1
KAUBVIK	MINUK	3
KAUBVIK	NIPTERK	2
KOMAKUK	EDLOK	1
KUGDJUK	WEST TARSIUT	1
MCKINLEY BAY	TUKTOYAKTUK	5
MINUK	ADGO	1
MINUK	AMERK	1
MINUK	HERSCHEL BASIN	1
MINUK	NIPTERK	5
MINUK	TUKTOYAKTUK	7
NERLERK	URKSAK	1
NIPTERK	69 43.0 135 11.0	1
NIPTERK	TUKTOYAKTUK	3
PAULINE COVE	69 34.7 138 50.4	1
PAULINE COVE	69 48.9 137 3.1	1
PELLY ISLAND	TUKTOYAKTUK	1
PITSIULAK	KUGDJUK	1
PITSIULAK	WEST TARSIUT	3
PULLEN ISLAND	MINUK	1
PULLEN ISLAND	TUKTOYAKTUK	3
TAGLU	TUKTOYAKTUK	3
TUKTOYAKTUK	69 10.0 137 14.0	1
TUKTOYAKTUK	70 5.0 134 7.0	1
TUKTOYAKTUK	70 43.0 128 17.0	5
TUKTOYAKTUK	AMAULIGAK	1
TUKTOYAKTUK	HERSCHEL BASIN	1
TUKTOYAKTUK	INUVIK	4
TUKTOYAKTUK	WEST TARSIUT	4
URKSAK	KOGYUK (N-67)	1
	TOTAL NUMBER OF TRIPS	316

VESSEL ACTIVITIES - SEPTEMBER 1 - 10

END POINT 1	END POINT 2	TRIPS
17 M. NORTH OF HOOPER	TUKTOYAKTUK	1
69 42.2 135 13.0	TUKTOYAKTUK	1
69 46.0 135 20.0	TUKTOYAKTUK	1
69 48.1 135 9.8	TUKTOYAKTUK	1
69 49.0 134 49.5	ARNAK	2
70 5.0 134 7.0	AMAULIGAK	1
70 8.8 133 22.5	KOGYUK (N-67)	1
ADGO	ARNAK	3
ADGO	MINUK	2
ADGO	TUKTOYAKTUK	2
ADLARTOK	ARLUK	1
ADLARTOK	EDLOK	5
ADLARTOK	HAVIK	3
ADLARTOK	HERSCHEL BASIN	3
ADLARTOK	MCKINLEY BAY	2
ADLARTOK	PULLEN ISLAND	2
ADLARTOK	TUKTOYAKTUK	6
ADLARTOK	WEST TARSIUT	1
AMAULIGAK	70 8.8 133 22.5	1
AMAULIGAK	AMERK	75
AMAULIGAK	KOGYUK (N-67)	3
AMAULIGAK	NERLERK	4
AMAULIGAK	TUKTOYAKTUK	5
AMERK	TUKTOYAKTUK	3
ARLUK	SIULIK	1
ARNAK	69 46.0 135 20.0	1
ARNAK	MINUK	4
ARNAK	NIPTERK	33
ARNAK	PULLEN ISLAND	2
ARNAK	TUKTOYAKTUK	20
EDLOK	TUKTOYAKTUK	3
HAVIK	MCKINLEY BAY	1
HAVIK	NERLERK	1
HAVIK	PAULINE COVE	1
HAVIK	TUKTOYAKTUK	7
HERSCHEL BASIN	PAULINE COVE	3
ISSIGAK	MINUK	23
ISSUNGNAK	AMAULIGAK	1
KAUBVIK	MINUK	4
KUGDJUK	AMAULIGAK	1
MCKINLEY BAY	TUKTOYAKTUK	6
MINUK	NIPTERK	6
MINUK	TUKTOYAKTUK	9
NERLERK	EDLOK	1
NIPTERK	69 42.2 135 13.0	1
NIPTERK	69 48.1 135 9.8	1
NIPTERK	TUKTOYAKTUK	4

VESSEL ACTIVITIES - SEPTEMBER 1 - 10 (continued)

END POINT 1	END POINT 2	TRIPS
PAULINE COVE	STOKES POINT	6
PAULINE COVE	TUKTOYAKTUK	5
PITSIULAK	17 M. NORTH OF HOOPER	1
PITSIULAK	KUGDJUK	1
PITSIULAK	TUKTOYAKTUK	4
PULLEN ISLAND	TUKTOYAKTUK	2
SIULIK	TUKTOYAKTUK	1
TAGLU	TUKTOYAKTUK	7
TUKTOYAKTUK	70 43.0 128 17.0	4
TUKTOYAKTUK	INUVIK	8
URKSAK	TUKTOYAKTUK	1
WEST TARSIUT	HERSCHEL BASIN	1
	TOTAL NUMBER OF TRIPS	304

VESSEL ACTIVITIES - SEPTEMBER 11 - 20

END POINT 1	END POINT 2	TRIPS
10 M. EAST OF PITSIULAK	WEST TARSIUT	1
16 M. NORTH OF PELLY	10 M. EAST OF PITSIULAK	1
36' WEST OF HAVIK	ISSUNGNAK	1
69 10.0 137 14.0	ALASKA TRIP 2	1
69 32.2 138 55.8	69 50.0 136 52.1	1
69 50.0 136 49.4	WEST TARSIUT	1
69 50.0 136 52.0	NERLERK	1
69 50.0 136 52.1	69 52.0 137 26.0	1
69 50.0 136 52.1	WEST TARSIUT	1
69 52.0 137 26.0	69 59.5 136 46.0	1
69 54.0 135 37.3	MINUK	1
69 55.4 133 19.9	69 50.0 136 49.4	1
69 57.4 135 55.6	WEST TARSIUT	1
69 59.5 136 46.0	WEST TARSIUT	2
70 5.3 134 57.3	WEST TARSIUT	1
ADGO	ARNAK	3
ADGO	MINUK	2
ADGO	TUKTOYAKTUK	8
ADLARTOK	ARLUK	1
ADLARTOK	EDLOK	5
ADLARTOK	HAVIK	4
ADLARTOK	PAULINE COVE	3
ADLARTOK	TUKTOYAKTUK	6
AMAULIGAK	69 50.0 136 52.0	2
AMAULIGAK	69 57.4 135 55.6	1
AMAULIGAK	ISSIGAK	1
AMAULIGAK	ISSUNGNAK	1
AMAULIGAK	ITIYOK	2
AMAULIGAK	TUKTOYAKTUK	2
AMAULIGAK	UVILUK	1
AMERK	AMAULIGAK	20
ARLUK	ISSUNGNAK	1
ARNAK	MINUK	4
ARNAK	NIPTERK	5
ARNAK	TUKTOYAKTUK	24
EDLOK	ARLUK	4
EDLOK	TUKTOYAKTUK	2
HAVIK	36' WEST OF HAVIK	1
HAVIK	70 10.0 133 56.0	1
HAVIK	TUKTOYAKTUK	5
HERSCHEL BASIN	69 56.0 134 3.0	1
HERSCHEL BASIN	NERLERK	2
HERSCHEL BASIN	PAULINE COVE	6
ISSIGAK	MINUK	30
KAUBVIK	ISSIGAK	2
KAUBVIK	MINUK	4
KITTI	ADGO	1

VESSEL ACTIVITIES - SEPTEMBER 11 - 20 (continued)

END POINT 1	END POINT 2	TRIPS
KOGYUK (N-67)	16 M. NORTH OF PELLY	1
MCKINLEY BAY	TUKTOYAKTUK	10
MINUK	ADLARTOK	1
MINUK	NIPTERK	3
MINUK	PULLEN ISLAND	2
MINUK	TUKTOYAKTUK	8
MINUK	UKALERK	1
NERLERK	70 5.3 134 57.3	1
NERLERK	AMAULIGAK	1
NERLERK	TUKTOYAKTUK	2
NIPTERK	TUKTOYAKTUK	6
PAULINE COVE	EDLOK	1
PULLEN ISLAND	ARNAK	2
PULLEN ISLAND	TUKTOYAKTUK	5
TAGLU	TUKTOYAKTUK	3
TUKTOYAKTUK	69 10.0 137 14.0	1
TUKTOYAKTUK	69 55.4 133 19.9	1
TUKTOYAKTUK	70 43.0 128 17.0	2
TUKTOYAKTUK	ALASKA TRIP 1	1
TUKTOYAKTUK	ARLUK	1
TUKTOYAKTUK	INUVIK	6
TUKTOYAKTUK	ISSUNGNAK	1
TUKTOYAKTUK	KOGYUK (N-67)	1
TUKTOYAKTUK	PAULINE COVE	3
TUKTOYAKTUK	WEST TARSIUT	3
UKALERK	69 54.0 135 37.3	1
URKSAK	AMAULIGAK	1
UVILUK	URKSAK	1
WEST TARSIUT	70 3.1 134 55.1	1
WEST TARSIUT	70 3.1 134 55.2	1
WEST TARSIUT	NERLERK	1
WEST TARSIUT	PITSIULAK	1
	TOTAL NUMBER OF TRIPS	245

VESSEL ACTIVITIES - SEPTEMBER 21 - 30

END POINT 1	END POINT 2	TRIPS
69 56.0 134 3.0	IMMERK	1
69 56.8 136 11.0	HERSCHEL BASIN	1
69 57.4 133 41.5	69 59.6 137 31.5	1
69 59.5 136 46.0	70 6.1 134 2.0	1
69 59.6 137 31.5	70 20.0 134 29.7	1
70 0.1 133 35.2	AMAULIGAK	1
70 3.1 134 55.1	AMAULIGAK	1
70 3.1 134 55.2	AMAULIGAK	1
70 5.7 134 31.8	HERSCHEL BASIN	1
70 5.8 134 1.3	URKSAK	1
70 6.1 134 2.0	70 6.4 134 44.3	1
70 6.4 134 43.5	AMAULIGAK	2
70 6.4 134 44.3	HERSCHEL BASIN	1
70 10.0 133 56.0	ISSUNGNAK	1
ADGO	IMMERK	1
ADGO	MINUK	1
ADGO	NIPTERK	1
ADGO	TUKTOYAKTUK	18
ADLARTOK	ADGO	1
ADLARTOK	ARLUK	15
ADLARTOK	HAVIK	1
ADLARTOK	TUKTOYAKTUK	4
ALASKA TRIP 1	MCKINLEY BAY	2
AMAULIGAK	69 56.8 136 11.0	1
AMAULIGAK	69 57.4 133 41.5	1
AMAULIGAK	70 5.8 134 1.3	1
AMAULIGAK	AMERK	4
AMAULIGAK	HERSCHEL BASIN	1
AMAULIGAK	KOGYUK (N-67)	16
AMAULIGAK	NERLERK	3
AMAULIGAK	TUKTOYAKTUK	3
AMAULIGAK	UKALERK	16
AMAULIGAK	URKSAK	2
ARLUK	HAVIK	3
ARLUK	ISSUNGNAK	4
ARLUK	TUKTOYAKTUK	5
ARNAK	ADGO	2
ARNAK	KADLUK	1
ARNAK	MINUK	2
ARNAK	TUKTOYAKTUK	14
HAVIK	MCKINLEY BAY	1
HAVIK	TUKTOYAKTUK	5
HERSCHEL BASIN	70 0.1 133 35.2	1
HERSCHEL BASIN	NERLERK	1
HERSCHEL BASIN	PAULINE COVE	2
IMMERK	ADLARTOK	1
INUVIK	ADGO	1

VESSEL ACTIVITIES - SEPTEMBER 21 - 30 (continued)

END POINT 1	END POINT 2	TRIPS
INUVIK	TAGLU	1
ISSIGAK	MINUK	138
ISSUNGNAK	ADLARTOK	1
ISSUNGNAK	HAVIK	3
ISSUNGNAK	TUKTOYAKTUK	1
KADLUK	ISSIGAK	1
KOGYUK (N-67)	TUKTOYAKTUK	4
MCKINLEY BAY	PAULINE COVE	1
MCKINLEY BAY	TUKTOYAKTUK	10
MINUK	MCKINLEY BAY	1
MINUK	NIPTERK	2
MINUK	TUKTOYAKTUK	22
NERLERK	ARLUK	1
NIPTERK	ARNAK	1
PITSIULAK	WEST TARSIUT	1
PULLEN ISLAND	MINUK	1
PULLEN ISLAND	TUKTOYAKTUK	2
TAGLU	TUKTOYAKTUK	4
TUKTOYAKTUK	IMMERK	1
TUKTOYAKTUK	INUVIK	3
TUKTOYAKTUK	PAULINE COVE	2
UKALERK	IMMERK	1
URKSAK	70 5.7 134 31.8	1
WEST TARSIUT	KOGYUK (N-67)	1
	TOTAL NUMBER OF TRIPS	354

VESSEL ACTIVITIES - OCTOBER

END POINT 1	END POINT 2	TRIPS
13 M. SOUTH OF KOGYUK	69 54.3 133 31.0	1
69 30.6 138 53.1	HERSCHEL BASIN	2
69 31.0 138 46.0	AAGNERK	1
69 43.5 137 39.5	AMAULIGAK	1
69 43.6 137 25.6	IMMIUGAK	1
69 45.6 137 0.6	70 8.4 136 21.0	1
69 46.9 133 14.6	69 48.0 135 13.1	1
69 47.3 136 50.3	AAGNERK	1
69 47.7 133 18.7	TUKTOYAKTUK	1
69 47.7 134 59.5	69 48.7 136 50.6	1
69 48.0 135 13.1	69 47.7 134 59.5	1
69 48.7 136 50.6	69 31.0 138 46.0	1
69 49.0 134 46.0	MINUK	2
69 51.0 134 44.0	ARNAK	1
69 51.0 135 12.0	TUKTOYAKTUK	2
69 52.6 133 18.2	69 56.6 133 43.2	1
69 53.1 135 48.5	HERSCHEL BASIN	1
69 54.3 133 31.0	70 1.0 133 51.0	1
69 56.2 133 32.8	NERLERK	1
69 56.6 133 43.2	HERSCHEL BASIN	1
69 59.2 133 26.5	TUKTOYAKTUK	1
70 1.0 133 31.2	KOGYUK (N-67)	2
70 1.0 133 51.0	KOGYUK (N-67)	1
70 3.0 134 44.4	NERLERK	1
70 4.2 134 1.9	HERSCHEL BASIN	1
70 6.8 135 28.6	AAGNERK	1
70 6.8 135 29.5	69 47.3 136 50.3	1
70 7.4 134 55.4	AMAULIGAK	1
70 8.4 136 21.0	ARLUK	1
70 10.4 135 27.0	70 17.7 134 7.3	1
70 11.5 133 40.0	70 4.2 134 1.9	1
70 12.0 133 39.6	HERSCHEL BASIN	1
70 17.7 134 7.3	ADLARTOK	1
70 20.0 134 29.7	NERLERK	1
70 23.0 133 45.3	70 6.8 135 28.6	1
70 23.0 133 45.7	70 6.8 135 29.5	1
AAGNERK	70 3.0 134 44.4	1
AAGNERK	TUKTOYAKTUK	2
AAGNERK	URKSAK	1
ADGO	PULLEN ISLAND	1
ADGO	TUKTOYAKTUK	21
ADLARTOK	AMAULIGAK	1
ADLARTOK	ARLUK	10
ADLARTOK	MCKINLEY BAY	1
ADLARTOK	MINUK	1
ADLARTOK	NERLERK	2
ADLARTOK	TUKTOYAKTUK	14

VESSEL ACTIVITIES - OCTOBER (continued)

END POINT 1	END POINT 2	TRIPS
ALASKA TRIP 1	MCKINLEY BAY	2
ALASKA TRIP 1	TUKTOYAKTUK	3
AMAULIGAK	69 46.9 133 14.6	1
AMAULIGAK	69 52.6 133 18.2	1
AMAULIGAK	69 53.1 135 48.5	1
AMAULIGAK	69 56.2 133 32.8	1
AMAULIGAK	AAGNERK	1
AMAULIGAK	HERSCHEL BASIN	4
AMAULIGAK	IMMERK	21
AMAULIGAK	KOGYUK (N-67)	3
AMAULIGAK	NERLERK	4
AMAULIGAK	TUKTOYAKTUK	1
ARLUK	69 45.6 137 0.6	1
ARLUK	70 10.4 135 27.0	1
ARLUK	MCKINLEY BAY	5
ARLUK	TUKTOYAKTUK	6
ARNAK	ISSIGAK	1
ARNAK	KAUBVIK	3
ARNAK	MINUK	23
ARNAK	NIPTERK	1
ARNAK	PELLY ISLAND	1
ARNAK	TUKTOYAKTUK	43
HAVIK	ARLUK	3
HAVIK	MCKINLEY BAY	1
HAVIK	TUKTOYAKTUK	1
HERSCHEL BASIN	69 43.5 137 39.5	1
HERSCHEL BASIN	70 7.4 134 55.4	1
HERSCHEL BASIN	AAGNERK	1
HERSCHEL BASIN	NERLERK	4
HERSCHEL BASIN	PAULINE COVE	6
IMMERK	AAGNERK	1
IMMIUGAK	AAGNERK	1
INUVIK	TUKTOYAKTUK	1
ISSIGAK	KAUBVIK	3
ISSIGAK	MINUK	163
KAUBVIK	MINUK	10
KAUBVIK	TUKTOYAKTUK	3
KOGYUK (N-67)	69 59.2 133 26.5	1
KOGYUK (N-67)	NERLERK	1
KOGYUK (N-67)	TUKTOYAKTUK	3
MCKINLEY BAY	SIULIK	1
MCKINLEY BAY	TUKTOYAKTUK	35
MINUK	69 51.0 134 44.0	1
MINUK	ADGO	1
MINUK	NIPTERK	6
MINUK	PULLEN ISLAND	1

VESSEL ACTIVITIES - OCTOBER (continued)

END POINT 1	END POINT 2	TRIPS
MINUK	TARSIUT	2
MINUK	TUKTOYAKTUK	35
NERLERK	69 43.6 137 25.6	1
NERLERK	70 11.5 133 40.0	1
NERLERK	70 12.0 133 39.6	1
NERLERK	70 23.0 133 45.3	1
NERLERK	70 23.0 133 45.7	1
NIPTERK	ISSIGAK	1
NIPTERK	TUKTOYAKTUK	6
PAULINE COVE	ADLARTOK	1
PAULINE COVE	STOKES POINT	2
PELLY ISLAND	MINUK	1
PULLEN ISLAND	ARNAK	1
PULLEN ISLAND	TUKTOYAKTUK	3
SIULIK	TUKTOYAKTUK	1
TUKTOYAKTUK	13 M. SOUTH OF KOGYUK	1
TUKTOYAKTUK	WARREN POINT	1
URKSAK	69 47.7 133 18.7	1
WARREN POINT	MCKINLEY BAY	1
	TOTAL NUMBER OF TRIPS	535

VESSEL ACTIVITIES - NOVEMBER

END POINT 1	END POINT 2	TRIPS
69 29.5 137 56.0	AAGNERK	1
69 30.3 137 54.8	AAGNERK	1
69 30.9 138 52.2	69 33.8 138 59.1	1
69 31.0 138 38.2	HERSCHEL BASIN	1
69 32.1 138 33.2	HERSCHEL BASIN	1
69 34.8 137 53.5	69 30.9 138 52.2	1
69 37.0 137 13.1	HERSCHEL BASIN	1
69 37.0 137 13.6	HERSCHEL BASIN	1
69 37.7 136 44.0	HERSCHEL BASIN	1
69 38.1 136 44.8	AAGNERK	2
69 39.0 136 50.0	HERSCHEL BASIN	1
69 42.0 136 54.0	69 55.0 135 47.0	1
69 45.3 136 38.3	69 37.7 136 44.0	1
69 49.0 136 17.0	70 2.9 132 4.6	1
69 55.0 135 47.0	69 59.9 134 27.4	1
69 59.9 134 27.4	AMAULIGAK	1
70 1.5 134 5.0	70 1.5 134 10.5	1
70 1.5 134 10.5	HERSCHEL BASIN	1
70 2.9 132 4.6	MCKINLEY BAY	1
AAGNERK	69 31.0 138 38.2	1
AAGNERK	69 32.1 138 33.2	1
AAGNERK	69 37.0 137 13.1	1
AAGNERK	69 37.0 137 13.6	1
AAGNERK	69 39.0 136 50.0	1
AAGNERK	69 49.0 136 17.0	1
AAGNERK	AMAULIGAK	2
AAGNERK	HERSCHEL BASIN	2
AMAULIGAK	69 34.8 137 53.5	1
AMAULIGAK	69 45.3 136 38.3	1
AMAULIGAK	70 1.5 134 5.0	1
HERSCHEL BASIN	69 29.5 137 56.0	1
HERSCHEL BASIN	69 30.3 137 54.8	1
HERSCHEL BASIN	69 42.0 136 54.0	1
HERSCHEL BASIN	AMAULIGAK	1
MCKINLEY BAY	AMAULIGAK	1
MINUK	TUKTOYAKTUK	3

TOTAL NUMBER OF TRIPS 41

VESSEL ACTIVITIES - DECEMBER

END POINT 1	END POINT 2	TRIPS
69 33.8 138 59.1	69 52.5 136 40.0	1
69 52.5 136 40.0	70 4.5 133 48.5	1
70 4.5 133 48.5	70 4.9 134 15.0	1
70 4.9 134 15.0	HERSCHEL BASIN	1
	TOTAL NUMBER OF TRIPS	4

Appendix B-3. Aircraft Activities (1985)

Note: There were aircraft activities for all 1985 reporting periods.

AIRCRAFT ACTIVITIES - JUNE

END POINT 1	END POINT 2	TRIPS
AKPAK	69 49.9 136 40.4	1
AKPAK	GARRY ISLAND	1
AKPAK	HOOPER ISLAND	6
AKPAK	WEST TARSIUT	14
AMERK	INUVIK	2
AMERK	PULLEN ISLAND	6
AMERK	TAGLU	9
ELLICE ISLAND	GARRY ISLAND	1
HERSCHEL BASIN	AKPAK	1
HERSCHEL BASIN	STOKES POINT	10
HOOPER ISLAND	GARRY ISLAND	1
HOOPER ISLAND	PAULINE COVE	1
INUVIK	69 49.9 136 40.4	1
KAY POINT	PAULINE COVE	1
KAY POINT	STOKES POINT	2
KOMAKUK	TUKTOYAKTUK	7
MCKINLEY BAY	HOOPER ISLAND	2
NIPTERK	ADGO	1
NIPTERK	AMERK	15
NIPTERK	INUVIK	2
NIPTERK	PAULINE COVE	2
NIPTERK	PELLY ISLAND	2
NIPTERK	PULLEN ISLAND	5
NIPTERK	TAGLU	36
PAULINE COVE	ADGO	1
PAULINE COVE	AKPAK	1
PAULINE COVE	GARRY ISLAND	1
PAULINE COVE	HERSCHEL BASIN	1
PAULINE COVE	KOMAKUK	1
PAULINE COVE	STOKES POINT	4
PELLY ISLAND	PULLEN ISLAND	3
PITT ISLAND	KAY POINT	1
PITT ISLAND	PELLY ISLAND	1
PITT ISLAND	STOKES POINT	2
PITT ISLAND	TUKTOYAKTUK	4
PULLEN ISLAND	TOKER POINT	3
STOKES POINT	HOOPER ISLAND	1
STOKES POINT	PULLEN ISLAND	1
STOKES POINT	WEST TARSIUT	1
TAGLU	ADGO	3
TAGLU	PAULINE COVE	1
TAGLU	PULLEN ISLAND	11
TAGLU	UPLUK	1
TUKTOYAKTUK	69 25.8 137 49.2	1
TUKTOYAKTUK	69 27.2 137 42.1	1
TUKTOYAKTUK	69 31.6 137 13.0	1
TUKTOYAKTUK	69 34.8 137 15.9	1

AIRCRAFT ACTIVITIES - JUNE (continued)

END POINT 1	END POINT 2	TRIPS
TUKTOYAKTUK	69 37.9 137 29.8	1
TUKTOYAKTUK	69 48.9 138 29.8	1
TUKTOYAKTUK	ADGO	15
TUKTOYAKTUK	AKPAK	115
TUKTOYAKTUK	AMERK	58
TUKTOYAKTUK	GARRY ISLAND	7
TUKTOYAKTUK	HERSCHEL BASIN	18
TUKTOYAKTUK	HOOPER ISLAND	17
TUKTOYAKTUK	NIPTERK	122
TUKTOYAKTUK	PAULINE COVE	72
TUKTOYAKTUK	PELLY ISLAND	11
TUKTOYAKTUK	PULLEN ISLAND	16
TUKTOYAKTUK	STOKES POINT	20
TUKTOYAKTUK	TAGLU	139
TUKTOYAKTUK	UPLUK	1
TUKTOYAKTUK	WEST TARSIUT	56
WEST TARSIUT	69 27.2 137 42.1	1
WEST TARSIUT	69 37.9 137 29.8	1
WEST TARSIUT	GARRY ISLAND	2
WEST TARSIUT	HERSCHEL BASIN	5
WEST TARSIUT	TAGLU	1
	TOTAL NUMBER OF TRIPS	854

AIRCRAFT ACTIVITIES - JULY 1 - 10

END POINT 1	END POINT 2	TRIPS
AAGNERK	AKPAK	1
AAGNERK	WEST TARSIUT	3
AMERK	NIPTERK	14
AMERK	PULLEN ISLAND	5
AMERK	TAGLU	1
GARRY ISLAND	HOOPER ISLAND	2
GARRY ISLAND	LUCAS POINT	1
GARRY ISLAND	STOKES POINT	1
HERSCHEL BASIN	FIRTH RIVER	2
HERSCHEL BASIN	STOKES POINT	2
HERSCHEL BASIN	WEST TARSIUT	3
ISSIGAK	MINUK	1
KOMAKUK	STOKES POINT	1
NIPTERK	ADGO	1
NIPTERK	GARRY ISLAND	1
NIPTERK	PAULINE COVE	11
NIPTERK	PULLEN ISLAND	5
NIPTERK	TAGLU	12
NIPTERK	TOKER POINT	1
PAULINE COVE	FIRTH RIVER	2
PAULINE COVE	GARRY ISLAND	2
PAULINE COVE	HERSCHEL BASIN	8
PAULINE COVE	KOMAKUK	1
PAULINE COVE	STOKES POINT	8
PELLY ISLAND	PULLEN ISLAND	1
PULLEN ISLAND	ADGO	1
PULLEN ISLAND	ATKINSON POINT	3
PULLEN ISLAND	GARRY ISLAND	1
STOKES POINT	ADGO	1
STOKES POINT	HOOPER ISLAND	1
STOKES POINT	LUCAS POINT	1
STOKES POINT	PULLEN ISLAND	1
TAGLU	ADGO	2
TOKER POINT	PELLY ISLAND	12
TUKTOYAKTUK	69 36.1 137 28.2	2
TUKTOYAKTUK	69 41.2 137 7.4	1
TUKTOYAKTUK	69 53.8 136 43.0	3
TUKTOYAKTUK	70 5.0 134 2.0	1
TUKTOYAKTUK	ADGO	11
TUKTOYAKTUK	AKPAK	59
TUKTOYAKTUK	AMERK	50
TUKTOYAKTUK	GARRY ISLAND	6
TUKTOYAKTUK	HOOPER ISLAND	8
TUKTOYAKTUK	MAITLAND POINT	6
TUKTOYAKTUK	NIPTERK	38
TUKTOYAKTUK	PAULINE COVE	14
TUKTOYAKTUK	PELLY ISLAND	1

AIRCRAFT ACTIVITIES - JULY 1 - 10 (continued)

END POINT 1	END POINT 2	TRIPS
TUKTOYAKTUK	PULLEN ISLAND	10
TUKTOYAKTUK	STOKES POINT	4
TUKTOYAKTUK	TAGLU	55
TUKTOYAKTUK	WEST TARSIUT	12
WEST TARSIUT	69 53.8 136 43.0	1
WEST TARSIUT	AKPAK	3
	TOTAL NUMBER OF TRIPS	398

AIRCRAFT ACTIVITIES - JULY 11 - 21

END POINT 1	END POINT 2	TRIPS
AAGNERK	STOKES POINT	1
AKPAK	HOOPER ISLAND	1
AKPAK	TOKER POINT	1
AMERK	GARRY ISLAND	1
AMERK	NIPTERK	2
AMERK	TAGLU	5
ARNAK	TAGLU	1
CHAR POINT	MAITLAND POINT	1
MAITLAND POINT	MCKINLEY BAY	1
NIPTERK	ATERTAK	1
NIPTERK	PULLEN ISLAND	2
NIPTERK	TAGLU	5
NIPTERK	UKALERK	1
PAULINE COVE	69 32.0 138 55.4	2
PAULINE COVE	AKPAK	1
PAULINE COVE	HERSCHEL BASIN	3
PAULINE COVE	STOKES POINT	14
PAULINE COVE	WEST TARSIUT	2
PELLY ISLAND	PULLEN ISLAND	1
PITT ISLAND	KAY POINT	1
STOKES POINT	HERSCHEL BASIN	1
STOKES POINT	KAY POINT	1
TAGLU	GARRY ISLAND	4
TAGLU	PULLEN ISLAND	1
TUKTOYAKTUK	69 32.0 138 55.3	2
TUKTOYAKTUK	ADGO	1
TUKTOYAKTUK	AKPAK	39
TUKTOYAKTUK	AMERK	50
TUKTOYAKTUK	ARNAK	1
TUKTOYAKTUK	GARRY ISLAND	12
TUKTOYAKTUK	HOOPER ISLAND	8
TUKTOYAKTUK	MAITLAND POINT	3
TUKTOYAKTUK	MINUK	3
TUKTOYAKTUK	NIPTERK	50
TUKTOYAKTUK	PAULINE COVE	10
TUKTOYAKTUK	PELLY ISLAND	3
TUKTOYAKTUK	PULLEN ISLAND	7
TUKTOYAKTUK	STOKES POINT	3
TUKTOYAKTUK	TAGLU	48
TUKTOYAKTUK	UPLUK	2
TUKTOYAKTUK	WEST TARSIUT	30
WEST TARSIUT	AKPAK	2
WEST TARSIUT	HOOPER ISLAND	1
	TOTAL NUMBER OF TRIPS	329

AIRCRAFT ACTIVITIES - JULY 22 - 31

END POINT 1	END POINT 2	TRIPS
ADGO	GARRY ISLAND	4
ADGO	HOOPER ISLAND	2
ADGO	UPLUK	9
AKPAK	LUCAS POINT	1
AMERK	ARNAK	2
AMERK	PULLEN ISLAND	1
AMERK	TAGLU	1
ARNAK	PULLEN ISLAND	3
HERSCHEL BASIN	WEST TARSIUT	1
MAITLAND POINT	MCKINLEY BAY	2
NIPTERK	ADGO	1
NIPTERK	AMERK	4
NIPTERK	ARNAK	1
NIPTERK	PULLEN ISLAND	1
NIPTERK	TAGLU	3
PELLY ISLAND	LUCAS POINT	1
PULLEN ISLAND	ADGO	1
PULLEN ISLAND	SUMMER ISLAND	1
TAGLU	ADGO	3
TAGLU	GARRY ISLAND	1
TAGLU	INUVIK	2
TAGLU	PULLEN ISLAND	2
TAGLU	UPLUK	1
TUKTOYAKTUK	70 4.2 131 24.5	6
TUKTOYAKTUK	70 4.7 131 24.0	2
TUKTOYAKTUK	70 5.3 131 23.5	1
TUKTOYAKTUK	ADGO	23
TUKTOYAKTUK	AKPAK	51
TUKTOYAKTUK	AMERK	34
TUKTOYAKTUK	ARNAK	19
TUKTOYAKTUK	GARRY ISLAND	1
TUKTOYAKTUK	HERSCHEL BASIN	15
TUKTOYAKTUK	MAITLAND POINT	1
TUKTOYAKTUK	NIPTERK	39
TUKTOYAKTUK	PAULINE COVE	1
TUKTOYAKTUK	PELLY ISLAND	4
TUKTOYAKTUK	PULLEN ISLAND	9
TUKTOYAKTUK	STOKES POINT	1
TUKTOYAKTUK	SUMMER ISLAND	1
TUKTOYAKTUK	TAGLU	41
TUKTOYAKTUK	TOKER POINT	2
TUKTOYAKTUK	UPLUK	6
TUKTOYAKTUK	WEST TARSIUT	35
UPLUK	PULLEN ISLAND	1
WEST TARSIUT	AKPAK	8
	TOTAL NUMBER OF TRIPS	349

AIRCRAFT ACTIVITIES - AUGUST 1 - 10

END POINT 1	END POINT 2	TRIPS
AAGNERK	ADGO	2
ADGO	ARNAK	1
ADGO	MINUK	3
ADGO	NIPTERK	1
ADGO	PULLEN ISLAND	1
ADGO	WHITEFISH STATION	1
ADLARTOK	HOOPER ISLAND	1
AKPAK	HERSCHEL BASIN	1
AKPAK	MCKINLEY BAY	3
AKPAK	WEST TARSIUT	9
AMAULIGAK	69 45.0 137 2.0	1
AMERK	ADGO	1
AMERK	ARNAK	1
AMERK	ISSIGAK	1
AMERK	MCKINLEY BAY	1
AMERK	NIPTERK	2
AMERK	PULLEN ISLAND	2
ARNAK	NIPTERK	1
EDLOK	ADLARTOK	8
EDLOK	HOOPER ISLAND	1
EDLOK	KOMAKUK	3
GARRY ISLAND	ADGO	5
GARRY ISLAND	KAY POINT	1
GARRY ISLAND	MINUK	1
GARRY ISLAND	PITT ISLAND	1
GARRY ISLAND	PULLEN ISLAND	1
GARRY ISLAND	TAGLU	1
HERSCHEL BASIN	AMAULIGAK	1
HERSCHEL BASIN	GARRY ISLAND	1
HERSCHEL BASIN	IMMIUGAK	4
HERSCHEL BASIN	PAULINE COVE	5
HERSCHEL BASIN	STOKES POINT	2
HERSCHEL BASIN	WEST TARSIUT	5
HOOPER ISLAND	GARRY ISLAND	2
ISSIGAK	ADGO	1
ISSIGAK	ELLICE ISLAND	1
ISSIGAK	GARRY ISLAND	1
ISSIGAK	TAGLU	1
KAY POINT	PITT ISLAND	1
MCKINLEY BAY	EDLOK	3
MCKINLEY BAY	HAVIK	3
MINUK	69 32.9 136 18.5	1
MINUK	ARNAK	1
MINUK	ISSIGAK	1
MINUK	NIPTERK	1
MINUK	PULLEN ISLAND	2
MINUK	TAGLU	2

AIRCRAFT ACTIVITIES - AUGUST 1 - 10 (continued)

END POINT 1	END POINT 2	TRIPS
MINUK	TUKTOYAKTUK	5
NIPTERK	TAGLU	5
NIPTERK	TUKTOYAKTUK	61
PAULINE COVE	AMAULIGAK	3
PULLEN ISLAND	MCKINLEY BAY	4
PULLEN ISLAND	TAGLU	2
TAGLU	ADGO	7
TUKTOYAKTUK	69 32.9 136 18.5	1
TUKTOYAKTUK	69 40.8 135 30.6	1
TUKTOYAKTUK	69 40.8 135 31.2	1
TUKTOYAKTUK	69 41.8 135 46.8	1
TUKTOYAKTUK	69 43.2 135 0.6	1
TUKTOYAKTUK	70 4.2 131 24.5	2
TUKTOYAKTUK	70 20.0 131 47.0	4
TUKTOYAKTUK	ADGO	44
TUKTOYAKTUK	ADLARTOK	30
TUKTOYAKTUK	AKPAK	45
TUKTOYAKTUK	AMAULIGAK	8
TUKTOYAKTUK	AMERK	7
TUKTOYAKTUK	ARNAK	3
TUKTOYAKTUK	EDLOK	13
TUKTOYAKTUK	GARRY ISLAND	10
TUKTOYAKTUK	HAVIK	1
TUKTOYAKTUK	HERSCHEL BASIN	12
TUKTOYAKTUK	HOOPER ISLAND	14
TUKTOYAKTUK	ISSIGAK	8
TUKTOYAKTUK	ISSUNGNAK	2
TUKTOYAKTUK	KOMAKUK	1
TUKTOYAKTUK	NERLERK	2
TUKTOYAKTUK	PAULINE COVE	5
TUKTOYAKTUK	PULLEN ISLAND	5
TUKTOYAKTUK	TAGLU	57
TUKTOYAKTUK	URKSAK	2
TUKTOYAKTUK	WEST TARSIUT	31
URKSAK	AKPAK	3
WEST TARSIUT	AMAULIGAK	4
WEST TARSIUT	GARRY ISLAND	1
WEST TARSIUT	HOOPER ISLAND	2
	TOTAL NUMBER OF TRIPS	502

AIRCRAFT ACTIVITIES - AUGUST 11 - 21

END POINT 1	END POINT 2	TRIPS
ADGO	AMERK	1
ADGO	ARNAK	15
ADGO	MINUK	4
ADGO	TAGLU	5
ADLARTOK	AKPAK	1
ADLARTOK	EDLOK	24
ADLARTOK	HOOPER ISLAND	1
AKPAK	HERSCHEL BASIN	1
AKPAK	PELLY ISLAND	1
AMAULIGAK	WEST TARSIUT	2
AMERK	ARNAK	15
AMERK	PULLEN ISLAND	4
AMERK	TAGLU	4
ARNAK	NIPTERK	4
ARNAK	PULLEN ISLAND	6
EDLOK	KOMAKUK	4
GARRY ISLAND	ADGO	1
GARRY ISLAND	ISSIGAK	1
HERSCHEL BASIN	AMAULIGAK	1
HERSCHEL BASIN	LUCAS POINT	2
HERSCHEL BASIN	PAULINE COVE	1
HERSCHEL BASIN	TARSIUT	1
HERSCHEL BASIN	WEST TARSIUT	5
ISSIGAK	ARNAK	2
ISSIGAK	PULLEN ISLAND	1
ISSIGAK	TAGLU	1
MINUK	ARNAK	4
MINUK	ISSIGAK	2
MINUK	PULLEN ISLAND	2
MINUK	TAGLU	3
NERLERK	ADLARTOK	3
NERLERK	AMAULIGAK	5
NERLERK	ARNAK	1
NERLERK	PELLY ISLAND	1
NIPTERK	69 35.4 133 26.4	1
NIPTERK	GARRY ISLAND	1
NIPTERK	TAGLU	10
NIPTERK	TUKTOYAKTUK	22
PAULINE COVE	STOKES POINT	1
PULLEN ISLAND	ADGO	1
PULLEN ISLAND	TUKTOYAKTUK	5
TAGLU	GARRY ISLAND	1
TUKTOYAKTUK	69 35.4 133 26.4	1
TUKTOYAKTUK	ADGO	39
TUKTOYAKTUK	ADLARTOK	22
TUKTOYAKTUK	AKPAK	24
TUKTOYAKTUK	AMAULIGAK	15

AIRCRAFT ACTIVITIES - AUGUST 11 - 21 (continued)

END POINT 1	END POINT 2	TRIPS
TUKTOYAKTUK	AMERK	52
TUKTOYAKTUK	ARNAK	34
TUKTOYAKTUK	EDLOK	7
TUKTOYAKTUK	GARRY ISLAND	2
TUKTOYAKTUK	HAVIK	4
TUKTOYAKTUK	HERSCHEL BASIN	13
TUKTOYAKTUK	HOOPER ISLAND	14
TUKTOYAKTUK	ISSIGAK	7
TUKTOYAKTUK	ISSUNGNAK	2
TUKTOYAKTUK	KAUBVIK	2
TUKTOYAKTUK	LUCAS POINT	2
TUKTOYAKTUK	MINUK	8
TUKTOYAKTUK	NERLERK	44
TUKTOYAKTUK	PELLY ISLAND	10
TUKTOYAKTUK	STOKES POINT	1
TUKTOYAKTUK	TAGLU	58
TUKTOYAKTUK	TARSIUT	1
TUKTOYAKTUK	UKALERK	1
TUKTOYAKTUK	URKSAK	3
TUKTOYAKTUK	WEST TARSIUT	37
URKSAK	AMAULIGAK	1
WEST TARSIUT	NERLERK	2
WEST TARSIUT	PAULINE COVE	1
WEST TARSIUT	URKSAK	1
	TOTAL NUMBER OF TRIPS	579

AIRCRAFT ACTIVITIES - AUGUST 22 - 31

END POINT 1	END POINT 2	TRIPS
AAGNERK	69 43.8 135 18.6	1
AAGNERK	ARNAK	1
AAGNERK	INUVIK	1
AAGNERK	NIPTERK	1
ADGO	MINUK	6
ADGO	NIPTERK	2
ADGO	TAGLU	3
ADLARTOK	EDLOK	14
ADLARTOK	HAVIK	2
ADLARTOK	HOOPER ISLAND	2
ADLARTOK	INUVIK	2
ADLARTOK	STOKES POINT	6
AMAULIGAK	AMERK	1
AMAULIGAK	KOGYUK (N-67)	11
AMAULIGAK	MINUK	1
AMAULIGAK	URKSAK	6
ARNAK	ADGO	1
ARNAK	NIPTERK	1
ARNAK	PULLEN ISLAND	2
EDLOK	INUVIK	1
EDLOK	KOMAKUK	16
GARRY ISLAND	ADGO	1
GARRY ISLAND	PULLEN ISLAND	1
GARRY ISLAND	TAGLU	1
HAVIK	MCKINLEY BAY	10
HAVIK	NERLERK	2
HERSCHEL BASIN	INUVIK	1
HERSCHEL BASIN	WEST TARSIUT	8
INUVIK	HAVIK	3
ISSIGAK	PULLEN ISLAND	2
KOGYUK (N-67)	HAVIK	1
MINUK	ARNAK	7
MINUK	NIPTERK	2
MINUK	PULLEN ISLAND	1
MINUK	TAGLU	6
NERLERK	KOGYUK (N-67)	1
NERLERK	URKSAK	3
NIPTERK	AKLAVIK	1
NIPTERK	ISSIGAK	3
NIPTERK	PULLEN ISLAND	2
NIPTERK	TAGLU	1
TUKTOYAKTUK	69 33.0 136 7.2	1
TUKTOYAKTUK	69 39.5 136 34.0	1
TUKTOYAKTUK	69 40.2 136 12.6	1
TUKTOYAKTUK	69 42.3 131 36.7	11
TUKTOYAKTUK	69 42.6 135 34.2	2
TUKTOYAKTUK	69 43.8 135 18.6	1

AIRCRAFT ACTIVITIES - AUGUST 22 - 31 (continued)

END POINT 1	END POINT 2	TRIPS
TUKTOYAKTUK	69 47.4 134 47.2	3
TUKTOYAKTUK	ADGO	31
TUKTOYAKTUK	ADLARTOK	27
TUKTOYAKTUK	AMAULIGAK	34
TUKTOYAKTUK	AMERK	1
TUKTOYAKTUK	ARNAK	43
TUKTOYAKTUK	EDLOK	16
TUKTOYAKTUK	GARRY ISLAND	7
TUKTOYAKTUK	HAVIK	25
TUKTOYAKTUK	HERSCHEL BASIN	15
TUKTOYAKTUK	HOOPER ISLAND	4
TUKTOYAKTUK	ISSIGAK	8
TUKTOYAKTUK	KOGYUK (N-67)	6
TUKTOYAKTUK	KOMAKUK	1
TUKTOYAKTUK	MINUK	31
TUKTOYAKTUK	NERLERK	46
TUKTOYAKTUK	NIPTERK	52
TUKTOYAKTUK	PAULINE COVE	1
TUKTOYAKTUK	PULLEN ISLAND	14
TUKTOYAKTUK	TAGLU	18
TUKTOYAKTUK	URKSAK	8
TUKTOYAKTUK	WEST TARSIUT	24
	TOTAL NUMBER OF TRIPS	570

AIRCRAFT ACTIVITIES - SEPTEMBER 1 - 10

END POINT 1	END POINT 2	TRIPS
ADGO	MINUK	11
ADGO	TAGLU	10
ADLARTOK	EDLOK	7
ADLARTOK	INUVIK	1
AMAULIGAK	ADGO	1
AMAULIGAK	AMERK	9
AMAULIGAK	ISSIGAK	2
AMAULIGAK	MINUK	5
AMAULIGAK	NERLERK	23
ARNAK	ADGO	6
ARNAK	AMAULIGAK	1
ARNAK	AMERK	4
ARNAK	MINUK	7
ARNAK	NIPTERK	16
ARNAK	PULLEN ISLAND	4
HERSCHEL BASIN	PAULINE COVE	5
HERSCHEL BASIN	STOKES POINT	3
HERSCHEL BASIN	WEST TARSIUT	8
HOOPER ISLAND	WEST TARSIUT	3
ISSIGAK	GARRY ISLAND	1
MCKINLEY BAY	HAVIK	3
MINUK	70 34.0 136 6.0	1
MINUK	INUVIK	3
MINUK	NIPTERK	7
NERLERK	HERSCHEL BASIN	1
NERLERK	INUVIK	2
NERLERK	MINUK	1
NIPTERK	70 34.0 136 6.0	1
NIPTERK	ADGO	5
NIPTERK	PULLEN ISLAND	4
NIPTERK	TAGLU	4
PAULINE COVE	STOKES POINT	1
TAGLU	ARNAK	2
TAGLU	INUVIK	3
TAGLU	MINUK	1
TUKTOYAKTUK	69 50.4 135 37.8	1
TUKTOYAKTUK	ADGO	29
TUKTOYAKTUK	ADLARTOK	20
TUKTOYAKTUK	AMAULIGAK	57
TUKTOYAKTUK	AMERK	12
TUKTOYAKTUK	ARNAK	44
TUKTOYAKTUK	EDLOK	10
TUKTOYAKTUK	GARRY ISLAND	1
TUKTOYAKTUK	HAVIK	37
TUKTOYAKTUK	HERSCHEL BASIN	10
TUKTOYAKTUK	HOOPER ISLAND	2
TUKTOYAKTUK	ISSIGAK	2

AIRCRAFT ACTIVITIES - SEPTEMBER 1 - 10 (continued)

END POINT 1	END POINT 2	TRIPS
TUKTOYAKTUK	KAY POINT	2
TUKTOYAKTUK	MINUK	39
TUKTOYAKTUK	NERLERK	34
TUKTOYAKTUK	NIPTERK	29
TUKTOYAKTUK	PAULINE COVE	3
TUKTOYAKTUK	PULLEN ISLAND	2
TUKTOYAKTUK	STOKES POINT	1
TUKTOYAKTUK	TAGLU	40
TUKTOYAKTUK	WEST TARSIUT	29
WEST TARSIUT	AMAULIGAK	1
	TOTAL NUMBER OF TRIPS	571

AIRCRAFT ACTIVITIES - SEPTEMBER 11 - 20

END POINT 1	END POINT 2	TRIPS
ADGO	INUVIK	4
ADGO	ISSIGAK	1
ADGO	MINUK	15
ADGO	NIPTERK	3
ADGO	TAGLU	12
ADLARTOK	ARLUK	2
ADLARTOK	EDLOK	12
ADLARTOK	INUVIK	1
ADLARTOK	NERLERK	1
ADLARTOK	PAULINE COVE	3
AMAULIGAK	69 50.0 136 52.1	1
AMAULIGAK	ADGO	1
AMAULIGAK	ISSIGAK	3
AMAULIGAK	ITIYOK	1
AMAULIGAK	MCKINLEY BAY	1
AMAULIGAK	NERLERK	3
AMAULIGAK	PITSIULAK	5
AMAULIGAK	WEST TARSIUT	8
AMERK	AMAULIGAK	2
ARLUK	HOOPER ISLAND	1
ARLUK	MCKINLEY BAY	1
ARNAK	ADGO	1
ARNAK	MINUK	7
ARNAK	NIPTERK	4
ARNAK	PULLEN ISLAND	1
EDLOK	KOMAKUK	2
EDLOK	PAULINE COVE	1
GARRY ISLAND	MINUK	3
GARRY ISLAND	NIPTERK	1
GARRY ISLAND	PULLEN ISLAND	2
HAVIK	ADLARTOK	2
HAVIK	MCKINLEY BAY	4
HAVIK	NERLERK	1
HERSCHEL BASIN	KAY POINT	1
HERSCHEL BASIN	PAULINE COVE	2
HERSCHEL BASIN	PELLY ISLAND	1
HERSCHEL BASIN	WEST TARSIUT	5
HOOPER ISLAND	UVILUK	1
ISSIGAK	ARNAK	1
ISSIGAK	MINUK	6
ISSIGAK	UKALERK	1
ITIYOK	UVILUK	1
MCKINLEY BAY	HOOPER ISLAND	1
MINUK	INUVIK	7
MINUK	NIPTERK	8
MINUK	PULLEN ISLAND	1
MINUK	TAGLU	1

AIRCRAFT ACTIVITIES - SEPTEMBER 11 - 20 (continued)

END POINT 1	END POINT 2	TRIPS
NERLERK	WEST TARSIUT	1
NIPTERK	AMAULIGAK	1
NIPTERK	TAGLU	3
PELLY ISLAND	PITT ISLAND	1
PITT ISLAND	KAY POINT	1
PULLEN ISLAND	PELLY ISLAND	1
PULLEN ISLAND	TOKER POINT	1
TAGLU	INUVIK	1
TUKTOYAKTUK	69 47.0 136 1.0	4
TUKTOYAKTUK	69 56.5 136 46.0	1
TUKTOYAKTUK	ADGO	34
TUKTOYAKTUK	ADLARTOK	24
TUKTOYAKTUK	AMAULIGAK	41
TUKTOYAKTUK	AMERK	2
TUKTOYAKTUK	ARLUK	6
TUKTOYAKTUK	ARNAK	36
TUKTOYAKTUK	EDLOK	6
TUKTOYAKTUK	GARRY ISLAND	2
TUKTOYAKTUK	HAVIK	35
TUKTOYAKTUK	HERSCHEL BASIN	8
TUKTOYAKTUK	HOOPER ISLAND	6
TUKTOYAKTUK	ISSIGAK	10
TUKTOYAKTUK	ITIYOK	1
TUKTOYAKTUK	MINUK	115
TUKTOYAKTUK	NERLERK	44
TUKTOYAKTUK	NIPTERK	34
TUKTOYAKTUK	PAULINE COVE	5
TUKTOYAKTUK	PELLY ISLAND	1
TUKTOYAKTUK	PITSIULAK	3
TUKTOYAKTUK	PITT ISLAND	2
TUKTOYAKTUK	PULLEN ISLAND	2
TUKTOYAKTUK	TAGLU	15
TUKTOYAKTUK	UKALERK	2
TUKTOYAKTUK	WEST TARSIUT	43
WEST TARSIUT	69 56.5 136 46.0	1
WEST TARSIUT	69 59.5 136 46.0	1
WEST TARSIUT	HOOPER ISLAND	1
WEST TARSIUT	ITIYOK	1
WEST TARSIUT	PAULINE COVE	1
WEST TARSIUT	PITSIULAK	1
	TOTAL NUMBER OF TRIPS	645

AIRCRAFT ACTIVITIES - SEPTEMBER 21 - 30

END POINT 1	END POINT 2	TRIPS
AAGNERK	ARLUK	2
ADGO	ARNAK	2
ADGO	GARRY ISLAND	3
ADGO	INUVIK	2
ADGO	MINUK	1
ADGO	PULLEN ISLAND	1
ADGO	TAGLU	7
ADLARTOK	ARLUK	5
ADLARTOK	HOOPER ISLAND	3
ADLARTOK	INUVIK	1
ADLARTOK	ISSUNGNAK	1
AMAULIGAK	70 6.1 134 2.0	1
AMAULIGAK	70 6.4 134 44.3	1
AMAULIGAK	AAGNERK	1
AMAULIGAK	NERLERK	12
AMAULIGAK	UKALERK	1
ARLUK	HAVIK	6
ARLUK	HOOPER ISLAND	1
ARLUK	ISSUNGNAK	2
ARLUK	MCKINLEY BAY	2
ARNAK	MINUK	3
ARNAK	PULLEN ISLAND	2
ARNAK	TAGLU	1
HAVIK	ADLARTOK	1
HAVIK	INUVIK	1
HAVIK	MCKINLEY BAY	3
HERSCHEL BASIN	70 6.1 134 2.0	1
HERSCHEL BASIN	ADLARTOK	1
HERSCHEL BASIN	IMMIUGAK	2
HERSCHEL BASIN	PULLEN ISLAND	2
HOOPER ISLAND	PAULINE COVE	1
HOOPER ISLAND	PITT ISLAND	1
IMMIUGAK	GARRY ISLAND	1
IMMIUGAK	PELLY ISLAND	1
ISSIGAK	ADGO	2
ISSIGAK	ARNAK	1
ISSIGAK	MINUK	8
MINUK	NIPTERK	8
NERLERK	LUCAS POINT	1
NIPTERK	ADGO	1
NIPTERK	ARNAK	1
NIPTERK	INUVIK	1
NIPTERK	TAGLU	3
PAULINE COVE	HERSCHEL BASIN	1
PAULINE COVE	IMMIUGAK	1
PELLY ISLAND	GARRY ISLAND	1
PULLEN ISLAND	GARRY ISLAND	2

AIRCRAFT ACTIVITIES - SEPTEMBER 21 - 30 (continued)

END POINT 1	END POINT 2	TRIPS
TAGLU	MINUK	2
TUKTOYAKTUK	70 6.1 134 2.0	6
TUKTOYAKTUK	70 6.4 134 44.3	3
TUKTOYAKTUK	70 10.0 133 56.0	3
TUKTOYAKTUK	AAGNERK	7
TUKTOYAKTUK	ADGO	43
TUKTOYAKTUK	ADLARTOK	39
TUKTOYAKTUK	AMAULIGAK	56
TUKTOYAKTUK	ARLUK	39
TUKTOYAKTUK	ARNAK	17
TUKTOYAKTUK	GARRY ISLAND	4
TUKTOYAKTUK	HAVIK	29
TUKTOYAKTUK	HERSCHEL BASIN	7
TUKTOYAKTUK	HOOPER ISLAND	9
TUKTOYAKTUK	IMMIUGAK	10
TUKTOYAKTUK	ISSIGAK	14
TUKTOYAKTUK	ISSUNGNAK	1
TUKTOYAKTUK	KOGYUK (N-67)	2
TUKTOYAKTUK	LUCAS POINT	9
TUKTOYAKTUK	MINUK	48
TUKTOYAKTUK	NERLERK	31
TUKTOYAKTUK	NIPTERK	16
TUKTOYAKTUK	PULLEN ISLAND	5
TUKTOYAKTUK	TAGLU	16
TUKTOYAKTUK	UKALERK	1
UKALERK	NERLERK	1
	TOTAL NUMBER OF TRIPS	525

AIRCRAFT ACTIVITIES - OCTOBER

END POINT 1	END POINT 2	TRIPS
AAGNERK	ADLARTOK	1
AAGNERK	ARNAK	1
AAGNERK	HERSCHEL BASIN	5
AAGNERK	IMMIUGAK	2
ADGO	GARRY ISLAND	6
ADGO	INUVIK	11
ADGO	MINUK	26
ADGO	PULLEN ISLAND	1
ADLARTOK	ARLUK	7
AMAULIGAK	AAGNERK	3
AMAULIGAK	ADLARTOK	1
AMAULIGAK	HERSCHEL BASIN	2
AMAULIGAK	IMMIUGAK	1
AMAULIGAK	NERLERK	27
ARLUK	HOOPER ISLAND	1
ARLUK	NERLERK	1
ARNAK	ADGO	17
ARNAK	GARRY ISLAND	5
ARNAK	INUVIK	4
ARNAK	ISSIGAK	4
ARNAK	KAUBVIK	2
ARNAK	MINUK	47
ARNAK	PULLEN ISLAND	2
GARRY ISLAND	INUVIK	1
HAVIK	ARLUK	1
HERSCHEL BASIN	ARLUK	2
HERSCHEL BASIN	GARRY ISLAND	2
HERSCHEL BASIN	HOOPER ISLAND	2
HERSCHEL BASIN	NERLERK	2
HERSCHEL BASIN	PAULINE COVE	19
HERSCHEL BASIN	STOKES POINT	8
INUVIK	ISSIGAK	1
ISSIGAK	MINUK	9
KAY POINT	PITT ISLAND	1
MCKINLEY BAY	ARLUK	1
MINUK	AAGNERK	1
MINUK	GARRY ISLAND	1
MINUK	INUVIK	2
MINUK	PELLY ISLAND	2
MINUK	PULLEN ISLAND	5
NIPTERK	ISSIGAK	1
NIPTERK	MINUK	1
PAULINE COVE	GARRY ISLAND	1
PAULINE COVE	HOOPER ISLAND	3
PAULINE COVE	KAY POINT	1
PAULINE COVE	KOMAKUK	1
PAULINE COVE	STOKES POINT	4

AIRCRAFT ACTIVITIES - OCTOBER (continued)

END POINT 1	END POINT 2	TRIPS
PITT ISLAND	PELLY ISLAND	1
PULLEN ISLAND	ISSIGAK	1
TOKER POINT	PULLEN ISLAND	1
TUKTOYAKTUK	69 37.0 137 13.6	1
TUKTOYAKTUK	AAGNERK	64
TUKTOYAKTUK	ADGO	173
TUKTOYAKTUK	ADLARTOK	49
TUKTOYAKTUK	AMAULIGAK	145
TUKTOYAKTUK	ARLUK	41
TUKTOYAKTUK	ARNAK	164
TUKTOYAKTUK	GARRY ISLAND	9
TUKTOYAKTUK	HAVIK	9
TUKTOYAKTUK	HERSCHEL BASIN	29
TUKTOYAKTUK	HOOPER ISLAND	14
TUKTOYAKTUK	IMMIUGAK	12
TUKTOYAKTUK	ISSIGAK	42
TUKTOYAKTUK	LUCAS POINT	17
TUKTOYAKTUK	MINUK	139
TUKTOYAKTUK	NERLERK	98
TUKTOYAKTUK	NIPTERK	2
TUKTOYAKTUK	PAULINE COVE	23
TUKTOYAKTUK	PELLY ISLAND	1
TUKTOYAKTUK	PULLEN ISLAND	7
TUKTOYAKTUK	STOKES POINT	6
TUKTOYAKTUK	TAGLU	2
	TOTAL NUMBER OF TRIPS	1299

AIRCRAFT ACTIVITIES - NOVEMBER

END POINT 1	END POINT 2	TRIPS
AAGNERK	AMAULIGAK	11
AAGNERK	GARRY ISLAND	5
AAGNERK	HERSCHEL BASIN	13
ADGO	ARNAK	5
ADGO	GARRY ISLAND	1
ADGO	INUVIK	7
ADGO	MINUK	76
AMAULIGAK	HERSCHEL BASIN	5
AMAULIGAK	MCKINLEY BAY	1
ARNAK	PULLEN ISLAND	1
GARRY ISLAND	HERSCHEL BASIN	7
HERSCHEL BASIN	HOOPER ISLAND	2
HERSCHEL BASIN	MINUK	1
HERSCHEL BASIN	PAULINE COVE	40
HERSCHEL BASIN	STOKES POINT	2
HOOPER ISLAND	PAULINE COVE	4
HOOPER ISLAND	PULLEN ISLAND	1
KAY POINT	PITT ISLAND	1
LUCAS POINT	GARRY ISLAND	1
LUCAS POINT	PAULINE COVE	1
MINUK	ARNAK	5
MINUK	GARRY ISLAND	5
MINUK	INUVIK	4
MINUK	MCKINLEY BAY	1
MINUK	PULLEN ISLAND	1
PAULINE COVE	AAGNERK	1
PAULINE COVE	AMAULIGAK	2
PAULINE COVE	GARRY ISLAND	1
PAULINE COVE	KAY POINT	1
PAULINE COVE	STOKES POINT	6
PELLY ISLAND	GARRY ISLAND	1
PELLY ISLAND	HOOPER ISLAND	1
PITT ISLAND	HOOPER ISLAND	1
TOKER POINT	ATKINSON POINT	1
TUKTOYAKTUK	69 30.3 137 54.8	2
TUKTOYAKTUK	AAGNERK	37
TUKTOYAKTUK	ADGO	193
TUKTOYAKTUK	AMAULIGAK	152
TUKTOYAKTUK	ARNAK	36
TUKTOYAKTUK	GARRY ISLAND	13
TUKTOYAKTUK	HERSCHEL BASIN	75
TUKTOYAKTUK	HOOPER ISLAND	6
TUKTOYAKTUK	LUCAS POINT	12
TUKTOYAKTUK	MINUK	144
TUKTOYAKTUK	PAULINE COVE	25
TUKTOYAKTUK	PELLY ISLAND	2
TUKTOYAKTUK	PULLEN ISLAND	3
TUKTOYAKTUK	STOKES POINT	4
	TOTAL NUMBER OF TRIPS	920

AIRCRAFT ACTIVITIES - DECEMBER

END POINT 1	END POINT 2	TRIPS
ADGO	ATERTAK	1
ADGO	GARRY ISLAND	1
ADGO	INUVIK	108
ADGO	MINUK	128
AMAULIGAK	70 34.0 128 20.0	1
AMAULIGAK	MCKINLEY BAY	2
ARNAK	ATERTAK	1
ATERTAK	MINUK	1
GARRY ISLAND	HERSCHEL BASIN	2
HERSCHEL BASIN	AMAULIGAK	3
HERSCHEL BASIN	HOOPER ISLAND	1
HERSCHEL BASIN	STOKES POINT	6
HERSCHEL BASIN	TUKTOYAKTUK	74
HOOPER ISLAND	GARRY ISLAND	2
INUVIK	HERSCHEL BASIN	1
MINUK	ARNAK	5
MINUK	INUVIK	7
MINUK	PULLEN ISLAND	1
PAULINE COVE	HERSCHEL BASIN	17
TUKTOYAKTUK	ADGO	159
TUKTOYAKTUK	AMAULIGAK	152
TUKTOYAKTUK	ARNAK	12
TUKTOYAKTUK	GARRY ISLAND	7
TUKTOYAKTUK	HOOPER ISLAND	4
TUKTOYAKTUK	MINUK	137
TUKTOYAKTUK	PAULINE COVE	5
TUKTOYAKTUK	PULLEN ISLAND	1
	TOTAL NUMBER OF TRIPS	839

Appendix B-4. Marine Mammal Research Activities (1985)

Note: There were no marine mammal (bowhead or white whale) research activities for the 1985 reporting periods of June, September 21-30, October, November and December.

RESEARCH AIRCRAFT - JULY 1 - 10

ACTIVITY	END POINT 1				END POINT 2				TRIPS
PN RESEARCH	68	55.8	136	0.7	68	52.6	136	14.5	2
PN RESEARCH	68	58.0	136	0.3	68	53.0	136	21.6	2
PN RESEARCH	68	58.9	136	5.1	68	53.8	136	26.6	2
PN RESEARCH	69	0.4	136	7.3	68	51.7	136	43.1	2
PN RESEARCH	69	2.4	136	7.1	68	52.2	136	49.2	2
PN RESEARCH	69	4.2	136	8.0	68	53.3	136	53.1	2
PN RESEARCH	69	5.6	136	11.1	68	54.5	136	56.5	2
PN RESEARCH	69	7.0	136	14.1	68	55.9	136	59.4	2
PN RESEARCH	69	8.5	136	16.5	68	56.5	137	5.3	2
PN RESEARCH	69	10.9	136	15.7	68	56.3	137	14.4	2
PN RESEARCH	69	12.2	136	18.3	68	57.8	137	16.4	2
PN RESEARCH	69	13.5	136	20.9	68	58.4	137	22.5	2
PN RESEARCH	69	14.8	135	50.7	69	14.8	136	30.0	1
PN RESEARCH	69	17.3	135	50.9	69	17.3	136	30.0	1
PN RESEARCH	69	19.9	135	39.0	69	19.9	136	30.0	1
PN RESEARCH	69	22.4	135	37.8	69	22.4	136	30.0	1
PN RESEARCH	69	25.0	135	34.8	69	25.0	136	30.0	1
PN RESEARCH	69	28.7	135	20.8	69	28.7	136	0.0	1
PN RESEARCH	69	30.4	134	35.9	69	30.4	136	0.0	1
PN RESEARCH	69	32.1	134	35.2	69	32.1	136	0.0	1
PN RESEARCH	69	33.8	134	34.0	69	33.8	136	0.0	1
PN RESEARCH	69	22.7	133	35.6	69	22.9	133	55.0	1
PN RESEARCH	69	24.2	133	9.5	69	24.6	133	52.5	1
PN RESEARCH	69	25.9	133	3.5	69	26.2	133	50.4	1
PN RESEARCH	69	27.6	132	59.2	69	28.0	133	47.9	1
PN RESEARCH	69	29.4	133	0.0	69	29.7	133	46.5	1
PN RESEARCH	69	31.1	132	58.8	69	31.4	133	40.8	1
PN RESEARCH	69	32.7	132	58.3	69	33.1	133	40.0	1
PN RESEARCH	69	34.4	132	59.7	69	34.9	133	46.0	1
PN RESEARCH	69	36.2	132	58.2	69	36.7	133	58.8	1
PN RESEARCH	69	37.8	132	56.9	69	38.5	134	7.7	1

TOTAL NUMBER OF TRIPS 43

RESEARCH AIRCRAFT - JULY 11 - 21

ACTIVITY	END POINT 1		END POINT 2		TRIPS
PN RESEARCH	68 55.8	136 0.7	68 52.6	136 14.5	1
PN RESEARCH	68 58.0	136 0.3	68 53.0	136 21.6	1
PN RESEARCH	68 58.9	136 5.1	68 53.8	136 26.6	1
PN RESEARCH	69 0.4	136 7.3	68 51.7	136 43.1	1
PN RESEARCH	69 2.4	136 7.1	68 52.2	136 49.2	1
PN RESEARCH	69 4.2	136 8.0	68 53.3	136 53.1	1
PN RESEARCH	69 5.6	136 11.1	68 54.5	136 56.5	1
PN RESEARCH	69 7.0	136 14.1	68 55.9	136 59.4	1
PN RESEARCH	69 8.5	136 16.5	68 56.5	137 5.3	1
PN RESEARCH	69 10.9	136 15.7	68 56.3	137 14.4	1
PN RESEARCH	69 12.2	136 18.3	68 57.8	137 16.4	1
PN RESEARCH	69 13.5	136 20.9	68 58.4	137 22.5	1
PN RESEARCH	69 14.8	135 50.7	69 14.8	136 30.0	1
PN RESEARCH	69 17.3	135 50.9	69 17.3	136 30.0	1
PN RESEARCH	69 19.9	135 39.0	69 19.9	136 30.0	1
PN RESEARCH	69 22.4	135 37.8	69 22.4	136 30.0	1
PN RESEARCH	69 25.0	135 34.8	69 25.0	136 30.0	1
PN RESEARCH	69 27.6	135 37.6	69 27.6	136 30.0	1
PN RESEARCH	69 28.7	135 20.8	69 28.7	136 0.0	1
PN RESEARCH	69 30.4	134 35.9	69 30.4	136 0.0	1
PN RESEARCH	69 32.1	134 35.2	69 32.1	136 0.0	1
PN RESEARCH	69 33.8	134 34.0	69 33.8	136 0.0	1
PN RESEARCH	69 35.6	134 30.6	69 35.6	135 39.1	1
PN RESEARCH	69 37.3	134 28.9	69 37.3	135 36.3	1
PN RESEARCH	69 39.0	134 26.2	69 39.0	135 33.5	1
PN RESEARCH	69 40.7	134 29.6	69 40.7	135 33.5	1
PN RESEARCH	69 42.3	134 30.2	69 42.3	135 3.5	1
PN RESEARCH	69 44.0	134 22.6	69 44.0	135 3.5	1
PN RESEARCH	69 45.7	134 23.4	69 45.7	134 43.2	1
PN RESEARCH	69 22.7	133 35.6	69 22.9	133 55.0	1
PN RESEARCH	69 24.2	133 9.5	69 24.6	133 52.5	1
PN RESEARCH	69 25.9	133 3.5	69 26.2	133 50.4	1
PN RESEARCH	69 27.6	132 59.2	69 28.0	133 47.9	1
PN RESEARCH	69 29.4	133 0.0	69 29.7	133 46.5	1
PN RESEARCH	69 31.1	132 58.8	69 31.4	133 40.8	1
PN RESEARCH	69 32.7	132 58.3	69 33.1	133 40.0	1
PN RESEARCH	69 34.4	132 59.7	69 34.9	133 46.0	1
PN RESEARCH	69 36.2	132 58.2	69 36.7	133 58.8	1
PN RESEARCH	69 37.8	132 56.9	69 38.5	134 7.7	1

TOTAL NUMBER OF TRIPS 39

RESEARCH AIRCRAFT - JULY 22 - 31

ACTIVITY	END POINT 1				END POINT 2				TRIPS
PN RESEARCH	68	55.8	136	0.7	68	52.6	136	14.5	1
PN RESEARCH	68	58.0	136	0.3	68	53.0	136	21.6	1
PN RESEARCH	68	58.9	136	5.1	68	53.8	136	26.6	1
PN RESEARCH	69	0.4	136	7.3	68	51.7	136	43.1	1
PN RESEARCH	69	2.4	136	7.1	68	52.2	136	49.2	1
PN RESEARCH	69	4.2	136	8.0	68	53.3	136	53.1	1
PN RESEARCH	69	5.6	136	11.1	68	54.5	136	56.5	1
PN RESEARCH	69	7.0	136	14.1	68	55.9	136	59.4	1
PN RESEARCH	69	8.5	136	16.5	68	56.5	137	5.3	1
PN RESEARCH	69	10.9	136	15.7	68	56.3	137	14.4	1
PN RESEARCH	69	12.2	136	18.3	68	57.8	137	16.4	1
PN RESEARCH	69	13.5	136	20.9	68	58.4	137	22.5	1
PN RESEARCH	69	14.8	135	50.7	69	14.8	136	30.0	1
PN RESEARCH	69	17.3	135	50.9	69	17.3	136	30.0	1
PN RESEARCH	69	19.9	135	39.0	69	19.9	136	30.0	1
PN RESEARCH	69	22.4	135	37.8	69	22.4	136	30.0	1
PN RESEARCH	69	25.0	135	34.8	69	25.0	136	30.0	1
PN RESEARCH	69	27.6	135	37.6	69	27.6	136	30.0	1
PN RESEARCH	69	28.7	135	20.8	69	28.7	136	0.0	1
PN RESEARCH	69	30.4	134	35.9	69	30.4	136	0.0	1
PN RESEARCH	69	32.1	134	35.2	69	32.1	136	0.0	1
PN RESEARCH	69	33.8	134	34.0	69	33.8	136	0.0	1
PN RESEARCH	69	35.6	134	30.6	69	35.6	135	39.1	1
PN RESEARCH	69	37.3	134	28.9	69	37.3	135	36.3	1
PN RESEARCH	69	39.0	134	26.2	69	39.0	135	33.5	1
PN RESEARCH	69	40.7	134	29.6	69	40.7	135	33.5	1
PN RESEARCH	69	42.3	134	30.2	69	42.3	135	3.5	1
PN RESEARCH	69	22.7	133	35.6	69	22.9	133	55.0	1
PN RESEARCH	69	24.2	133	9.5	69	24.6	133	52.5	1
PN RESEARCH	69	25.9	133	3.5	69	26.2	133	50.4	1
PN RESEARCH	69	27.6	132	59.2	69	28.0	133	47.9	1
PN RESEARCH	69	29.4	133	0.0	69	29.7	133	46.5	1
PN RESEARCH	69	31.1	132	58.8	69	31.4	133	40.8	1
PN RESEARCH	69	32.7	132	58.3	69	33.1	133	40.0	1
PN RESEARCH	69	34.4	132	59.7	69	34.9	133	46.0	1
PN RESEARCH	69	36.2	132	58.2	69	36.7	133	58.8	1

TOTAL NUMBER OF TRIPS 36

RESEARCH AIRCRAFT - AUGUST 1 - 10

ACTIVITY	END POINT 1		END POINT 2		TRIPS
LGL RESEARCH	70 20.0	139 6.3	72 0.0	139 6.3	1
LGL RESEARCH	69 39.0	139 6.3	70 20.0	139 6.3	1
LGL RESEARCH	70 39.0	136 47.1	72 0.0	136 47.1	1
LGL RESEARCH	71 16.0	133 46.8	71 55.0	133 46.8	1
LGL RESEARCH	71 12.0	135 48.7	71 55.0	135 48.7	1
LGL RESEARCH	71 55.0	133 46.8	71 55.0	135 48.7	1
LGL RESEARCH	70 9.0	136 47.1	70 39.0	136 47.1	1
LGL RESEARCH	70 46.0	133 46.8	71 16.0	133 46.8	1
LGL RESEARCH	70 23.0	135 48.7	70 27.0	135 48.7	1
LGL RESEARCH	69 10.0	136 47.1	70 9.0	136 47.1	1
LGL RESEARCH	69 40.0	133 46.8	70 46.0	133 46.8	1
LGL RESEARCH	69 40.0	135 48.7	70 23.0	135 48.7	1
LGL RESEARCH	71 40.0	129 31.4	71 50.0	129 31.4	1
LGL RESEARCH	71 50.0	131 33.8	71 50.0	129 31.4	1
LGL RESEARCH	71 39.0	131 33.8	71 50.0	131 33.8	1
LGL RESEARCH	71 34.0	132 5.2	72 0.0	132 5.2	1
LGL RESEARCH	71 10.0	129 31.4	71 40.0	129 31.4	1
LGL RESEARCH	71 9.0	131 33.8	71 39.0	131 33.8	1
LGL RESEARCH	71 4.0	132 5.2	71 34.0	132 5.2	1
LGL RESEARCH	70 30.0	132 41.2	69 42.0	132 41.2	1
LGL RESEARCH	69 46.0	132 5.2	71 4.0	132 5.0	1
LGL RESEARCH	69 53.0	131 33.8	71 9.0	131 33.8	1
LGL RESEARCH	70 8.0	131 26.9	70 30.0	131 26.9	1
LGL RESEARCH	70 9.0	130 52.7	70 30.0	130 52.7	1
LGL RESEARCH	70 20.0	130 24.2	70 30.0	130 24.2	1
LGL RESEARCH	70 20.0	129 31.4	71 10.0	129 31.4	1
LGL RESEARCH	70 30.0	131 26.9	70 30.0	132 41.2	1
LGL RESEARCH	70 9.0	130 52.7	70 8.0	131 26.9	1
LGL RESEARCH	70 30.0	130 24.2	70 30.0	130 52.7	1
LGL RESEARCH	70 20.0	129 31.4	70 20.0	130 24.2	1
LGL RESEARCH	72 0.0	128 12.0	70 40.0	128 15.0	1
LGL RESEARCH	70 27.0	127 36.7	70 40.0	127 36.7	1
LGL RESEARCH	70 24.0	127 25.5	70 40.0	127 25.5	1
LGL RESEARCH	72 10.4	130 0.0	72 10.4	125 24.0	1

TOTAL NUMBER OF TRIPS 34

RESEARCH AIRCRAFT - AUGUST 11 - 21

ACTIVITY	END POINT 1		END POINT 2		TRIPS
LGL RESEARCH	69 39.0	140 54.0	70 20.0	140 54.0	1
LGL RESEARCH	69 37.0	140 6.9	70 20.0	140 6.9	1
LGL RESEARCH	69 36.0	139 43.3	70 20.0	139 43.3	1
LGL RESEARCH	69 37.0	140 30.0	70 20.0	140 30.0	1
LGL RESEARCH	69 37.7	139 30.0	69 30.0	138 36.3	1
LGL RESEARCH	69 18.0	138 36.3	69 30.0	138 36.3	1
LGL RESEARCH	69 17.4	138 27.0	68 59.1	137 22.4	1
LGL RESEARCH	70 20.0	137 51.7	70 30.0	137 51.7	1
LGL RESEARCH	69 30.0	138 1.6	70 20.0	138 1.6	1
LGL RESEARCH	70 20.0	138 40.0	69 30.0	138 40.0	1
LGL RESEARCH	69 30.0	137 51.0	70 20.0	137 51.0	1
LGL RESEARCH	69 0.0	137 27.0	69 19.0	137 27.0	1
LGL RESEARCH	69 2.0	137 40.0	69 30.0	137 40.0	1
LGL RESEARCH	69 5.0	137 51.7	69 30.0	137 51.7	1
LGL RESEARCH	68 57.0	137 15.0	69 15.0	137 15.0	1
LGL RESEARCH	69 30.0	138 40.0	69 19.0	138 40.0	1
LGL RESEARCH	69 7.0	138 1.6	69 30.0	138 1.6	1
LGL RESEARCH	69 14.5	138 28.0	69 30.0	138 28.0	1
LGL RESEARCH	69 30.0	138 15.0	69 12.5	138 15.0	1
LGL RESEARCH	69 19.0	137 27.0	69 30.0	137 27.0	1
LGL RESEARCH	69 15.0	137 15.0	70 4.0	137 15.0	1
LGL RESEARCH	70 10.0	130 52.7	71 10.0	130 52.7	1
LGL RESEARCH	70 8.0	130 24.2	71 10.0	130 24.2	1
LGL RESEARCH	70 10.0	129 31.4	71 10.0	129 31.4	1
LGL RESEARCH	70 0.0	129 5.1	71 10.0	129 5.1	1
ESL RESEARCH	69 37.2	140 42.9	70 50.0	140 42.9	1
ESL RESEARCH	69 36.2	140 11.9	70 50.0	140 11.9	1
ESL RESEARCH	69 35.1	139 39.8	70 45.0	139 39.8	1
ESL RESEARCH	69 38.0	139 7.7	70 45.1	139 7.7	1
ESL RESEARCH	69 18.6	138 37.0	70 10.0	138 37.0	1
ESL RESEARCH	69 8.5	138 6.5	70 10.0	138 6.5	1
ESL RESEARCH	69 2.2	137 34.7	70 5.0	137 34.7	1
ESL RESEARCH	69 2.2	137 2.8	70 5.0	137 2.8	1
ESL RESEARCH	69 17.1	136 31.1	70 26.0	136 31.1	1
ESL RESEARCH	69 29.1	136 0.0	70 25.0	136 0.0	1
ESL RESEARCH	69 39.6	135 28.7	70 40.0	135 28.7	1
ESL RESEARCH	69 41.7	134 57.2	70 40.0	134 57.2	1
ESL RESEARCH	69 44.2	134 24.5	70 40.0	134 24.5	1
ESL RESEARCH	69 39.5	133 53.9	70 40.0	133 53.9	1
ESL RESEARCH	69 38.1	133 23.2	70 35.0	133 23.2	1
ESL RESEARCH	69 39.5	132 50.8	70 35.0	132 52.8	1
ESL RESEARCH	69 48.8	132 19.9	70 35.0	132 19.9	1
ESL RESEARCH	69 51.6	131 47.9	70 50.0	131 47.9	1
ESL RESEARCH	70 0.0	131 17.2	70 50.0	131 17.2	1

RESEARCH AIRCRAFT - AUGUST 11 - 21 (continued)

ACTIVITY	END POINT 1		END POINT 2		TRIPS
ESL RESEARCH	70 10.9	130 46.1	70 50.0	130 46.1	1
ESL RESEARCH	70 10.2	130 14.9	71 0.0	130 14.9	1
ESL RESEARCH	70 16.9	129 42.1	71 0.0	129 42.1	1
ESL RESEARCH	70 0.0	129 9.8	71 0.0	129 9.8	1
ESL RESEARCH	69 51.2	128 39.9	71 0.0	128 39.9	1
LGL RESEARCH	72 42.6	132 0.0	72 42.6	125 0.0	1
LGL RESEARCH	72 24.9	125 24.0	72 24.9	132 0.0	1
LGL RESEARCH	72 8.0	132 0.0	72 8.0	125 46.0	1

TOTAL NUMBER OF TRIPS 52

RESEARCH AIRCRAFT - AUGUST 22 - 31

ACTIVITY	END POINT 1				END POINT 2				TRIPS
LGL RESEARCH	70	20.0	138	1.6	72	0.0	138	1.6	1
LGL RESEARCH	70	20.0	139	6.3	72	0.0	139	6.3	1
LGL RESEARCH	70	20.0	140	6.9	72	0.0	140	6.9	1
LGL RESEARCH	69	39.0	140	54.0	70	20.0	140	54.0	1
LGL RESEARCH	70	20.0	140	30.0	69	36.0	140	30.0	1
LGL RESEARCH	69	37.0	140	6.9	70	20.0	140	6.9	1
LGL RESEARCH	70	20.0	139	43.3	69	36.0	139	43.3	1
LGL RESEARCH	69	39.0	139	6.3	70	20.0	139	6.3	1
LGL RESEARCH	70	20.0	138	40.0	69	30.0	138	40.0	1
LGL RESEARCH	69	30.0	138	1.6	70	20.0	138	1.6	1
LGL RESEARCH	70	20.0	137	51.7	69	30.0	137	51.7	1
LGL RESEARCH	71	22.0	133	16.3	72	0.0	133	16.3	1
LGL RESEARCH	70	36.0	137	2.7	72	0.0	137	2.7	1
LGL RESEARCH	70	48.0	136	7.2	71	2.0	136	7.2	1
LGL RESEARCH	71	2.0	136	7.2	71	10.0	136	47.1	1
LGL RESEARCH	70	39.0	136	47.1	71	10.0	136	47.1	1
LGL RESEARCH	71	22.0	133	16.3	71	52.0	133	16.3	1
LGL RESEARCH	70	22.0	135	48.7	70	52.0	135	48.7	1
LGL RESEARCH	70	18.0	136	7.2	70	48.0	136	7.2	1
LGL RESEARCH	70	9.0	136	47.1	70	39.0	136	47.1	1
LGL RESEARCH	70	9.0	136	47.1	70	18.0	136	0.0	1
LGL RESEARCH	69	12.0	136	7.9	70	18.0	136	7.9	1
LGL RESEARCH	70	13.0	136	30.0	69	10.0	136	30.1	1
LGL RESEARCH	69	10.0	136	47.1	70	9.0	136	47.1	1
LGL RESEARCH	70	3.0	137	15.0	69	15.0	137	15.0	1
LGL RESEARCH	69	40.0	133	16.3	70	52.0	133	16.3	1
LGL RESEARCH	69	56.0	133	46.8	70	46.0	133	46.8	1
LGL RESEARCH	70	18.0	136	0.0	70	30.0	133	47.0	1
LGL RESEARCH	71	40.0	131	26.9	72	0.0	131	26.9	1
LGL RESEARCH	71	40.0	129	5.1	72	0.0	129	5.1	1
LGL RESEARCH	71	40.0	128	38.3	72	0.0	128	38.3	1
LGL RESEARCH	71	40.0	130	24.2	72	0.0	130	24.2	1
LGL RESEARCH	71	39.0	131	33.8	72	0.0	131	33.8	1
LGL RESEARCH	71	34.0	132	5.2	72	0.0	132	5.2	1
LGL RESEARCH	70	27.0	132	41.2	72	0.0	132	41.2	1
LGL RESEARCH	71	14.0	131	26.9	71	40.0	131	26.9	1
LGL RESEARCH	71	10.0	130	24.2	71	40.0	130	24.2	1
LGL RESEARCH	71	10.0	129	5.1	71	40.0	130	24.2	1
LGL RESEARCH	71	10.0	128	38.3	71	40.0	128	38.3	1
LGL RESEARCH	71	10.0	130	24.2	71	10.0	129	5.1	1
LGL RESEARCH	71	9.0	131	33.8	71	39.0	131	38.0	1
LGL RESEARCH	71	4.0	132	5.2	71	34.0	132	5.2	1
LGL RESEARCH	70	57.0	132	41.2	71	27.0	132	41.2	1
LGL RESEARCH	69	57.0	131	26.9	70	25.1	131	26.9	1
LGL RESEARCH	70	0.0	128	38.3	71	10.0	128	38.3	1
LGL RESEARCH	69	58.0	131	33.8	71	9.0	131	33.8	1

RESEARCH AIRCRAFT - AUGUST 22 - 31 (continued)

ACTIVITY	END POINT 1		END POINT 2		TRIPS
ESL RESEARCH	69 35.1	139 39.8	69 55.1	139 39.8	1
ESL RESEARCH	69 38.0	139 7.7	69 55.5	139 7.7	1
ESL RESEARCH	69 18.6	138 37.0	69 38.6	138 37.0	1
ESL RESEARCH	69 8.5	138 6.5	69 28.5	138 6.5	1
ESL RESEARCH	69 2.2	137 34.7	69 22.2	137 34.7	1
ESL RESEARCH	69 2.2	137 2.8	69 22.2	137 2.8	1
LGL RESEARCH	72 0.0	127 36.7	70 40.0	127 36.7	1

TOTAL NUMBER OF TRIPS 53

RESEARCH AIRCRAFT - SEPTEMBER 1 - 10

ACTIVITY	END POINT 1				END POINT 2				TRIPS
LGL RESEARCH	72	0.0	135	0.8	71	2.0	135	0.8	1
LGL RESEARCH	71	10.0	134	21.3	72	0.0	134	21.3	1
LGL RESEARCH	71	2.0	135	0.8	70	32.0	135	0.8	1
LGL RESEARCH	70	40.0	134	21.3	71	10.0	134	21.3	1
LGL RESEARCH	69	40.0	134	21.3	70	40.0	134	21.3	1
LGL RESEARCH	70	32.0	135	0.8	69	40.0	135	0.8	1

TOTAL NUMBER OF TRIPS 6

RESEARCH AIRCRAFT - SEPTEMBER 11 - 20

ACTIVITY	END POINT 1		END POINT 2		TRIPS
ESL RESEARCH	69 37.2	140 42.9	70 30.0	140 42.9	1
ESL RESEARCH	69 36.2	140 11.9	70 28.0	140 11.9	1
ESL RESEARCH	69 35.1	139 39.8	70 30.0	139 39.8	1
ESL RESEARCH	69 38.0	139 7.7	70 30.0	139 7.7	1
ESL RESEARCH	69 18.6	138 37.0	69 25.6	138 37.0	1
ESL RESEARCH	69 8.5	138 6.5	69 26.6	138 6.5	1
ESL RESEARCH	69 2.2	137 34.7	69 43.0	137 34.7	1
ESL RESEARCH	69 2.2	137 2.8	69 50.0	137 2.8	1
ESL RESEARCH	69 17.1	136 31.1	70 18.5	136 31.1	1
ESL RESEARCH	69 29.1	136 0.0	70 20.0	136 0.0	1
ESL RESEARCH	70 17.0	135 28.7	70 58.0	135 28.7	1
ESL RESEARCH	70 31.0	134 57.2	70 58.0	134 57.2	1
ESL RESEARCH	70 38.4	134 24.5	71 8.7	134 24.5	1
ESL RESEARCH	70 20.7	133 53.9	71 10.5	133 53.9	1
ESL RESEARCH	69 38.1	133 23.2	70 53.6	133 23.2	1
ESL RESEARCH	69 39.5	132 50.8	70 52.7	132 50.8	1
ESL RESEARCH	69 48.8	132 19.9	71 0.0	132 19.9	1
ESL RESEARCH	69 51.6	131 47.9	71 0.0	131 47.9	1
ESL RESEARCH	70 0.0	131 17.2	71 9.3	131 17.2	1
ESL RESEARCH	70 10.9	130 46.1	71 9.3	130 46.1	1

TOTAL NUMBER OF TRIPS 20

APPENDIX C
Vessel and Aircraft Specifications

Vessel Specifications

Vessel Name	Vessel Type	Length(m)	Width(m)
Angus Sherwood			
Arctic Helios			
Arctic Ivik			
Arctic Kiggiak			
Arctic Mallik			
Arctic Pelly			
Arctic Sun		36.6	
Arctic Surveyor	Sounding vessel		
Arctic Taglu			
Arnak	Support vessel	9.9	3.1
Beaufort Sea Explorer	Type E		
Beaver St. Lawrence	Cutter suction dredge	46.3	9.1
Beluga			
Betty Coulter			
Bobby			
Cecelia Hall			
Cornelius Zanen	Trailing Suction Hopper	128.0	23.0
Damen Multikit	Support vessel	16.1	8.1
Explorer I	Drillship		
Explorer III	Drillship		
Explorer IV	Drillship		
Frank Broderick			
Geopotes IX	Trailing suction hopper	128.5	21.1
Geopotes X	Trailing suction hopper	135.0	21.6
Gordon Gill			
GSI Explorer	Seismic vessel		
Gulf Beaufort	Tanker		
Ignik			
Ikaluk	Class 4 supply vessel	78.9	17.2
Immerk	Support vessel	14.0	4.3
J. Mattson			
Johnny Hope			
Kalvik	Class 4 icebreaker	88.0	17.8
Kelly Hall			
Kigoriak	Class 3 icebreaker		
Knut Lang			
Larus			
Marilynn			
Marjory			

APPENDIX C (Continued)

Vessel Name	Vessel Type	Length(m)	Width(m)
McMurren			
Miscaroo	Class 4 supply vessel	78.8	17.2
Munaksee			
Nanabush			
Nanook			
Nutsukpok			
NWD-214			
NWD-216			
Orion Expediter			
Prospector			
Robert Lemur	Class 3 icebreaker	82.0	
Sarpik	Support vessel	20.1	4.9
Sea Eagle	Type pusher tug		
Sequel			
Supplier I	Class 2 supply vessel	80.0	18.0
Supplier II	Class 2 supply vessel	80.0	18.0
Supplier III	Class 2 supply vessel	80.0	18.0
Supplier IV	Class 2 supply vessel	80.0	18.0
Supplier V	Class 3 supply vessel		
Supplier VI	Class C supply vessel		
Supplier VII	Class A supply vessel		
Supplier VIII	Class D supply vessel		
Tarsiut			
Teal	Class A1(E)	39.6	
Terry Fox	Class 4 icebreaker	88.0	17.8
Tingneak	High speed crew boat		
Toga			
Tugger I	Class A tug	36.6	
Tugger II	Class C tug	46.0	
W.D. Gateway	Trailing suction hopper	127.2	19.5
Western Anchorage	Seismic vessel		
Widgeon	Class A1(E)	39.6	

APPENDIX C (Continued)

Aircraft Specifications

Call Letters	Aircraft Type	Load Capacity(kg)
AHD	Bell 212	2360
AHX	Bell 212	2360
BHF	Bell 212	2360
BPH	Bell 212	2360
DHC	Twin Otter	1941
GVV	Bell 206	709
IMN	Sikorsky 76	2132
IOJ	Twin Otter	1941
KBD	Twin Otter	1941
KBE	Twin Otter	1941
KBI	Twin Otter	1941
MFQ	Sikorsky 61	2270
NRD		
OKA	Sikorsky 61	2270
P21	Bell 206	709
RWX	Bell 212	2360
STV	MBB BO105	1224
VYZ	Caribou	?