ARCTIC DATA COMPILATION AND APPRAISAL VOLUME 12
Beaufort Sea and Amundsen Gulf: Physical Oceanography – Temperature, Salinity, Currents, Water Levels, and Waves REVISED AND UPDATED TO INCLUDE 1914 THROUGH 1986

by

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1987

CANADIAN DATA REPORT OF HYDROGRAPHY AND OCEAN SCIENCES NO. 5

Canadian Data Report Of Hydrography and Ocean Sciences

Data reports provide a medium for the documentation and dissemination of data in a form directly useable by the scientific and engineering communities. Generally, the reports contain raw and/or analyzed data but will not contain interpretations of the data. Such compilations commonly will have been prepared in support of work related to the programs and interests of the Ocean Science and Surveys (OSS) sector of the Department of Fisheries and Oceans.

Data reports are not intended for general distribution and the contents must not be referred to in other publications without prior written authorization from the issuing establishment. The correct citation appears above the abstract of each report. Data reports are abstracted in *Aquatic Sciences and Fisheries Abstracts* and indexed in the Department's annual index to scientific and technical publications.

Data reports are produced regionally but are numbered nationally. Requests for individual reports will be filled by the issuing establishment listed on the front cover and title page. Out of stock reports will be supplied for a fee by commercial agents.

Regional and headquarters establishments of Ocean Science and Surveys ceased publication of their various report series as of December 1981. A complete listing of these publications is published in the *Canadian Journal of Fisheries and Aquatic Sciences*, Volume 39: Index to Publications 1982. The current series, which begins with report number 1, was initiated in January 1982.

Rapport statistique canadien sur l'hydrographie et les sciences océaniques

Les rapports statistiques servent de véhicule pour la compilation et la diffusion des données sous une forme directement utilisable par les scientifiques et les techniciens. En général, les rapports contiennent des données brutes ou analysées, mais ne fournissent pas d'interprétation des données. Ces compilations sont préparées le plus souvent à l'appui de travaux liés aux programmes et intérêts du service des Sciences et levés océaniques (SLO) du ministère des Pêches et des Océans.

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Les établissements des Sciences et levés océaniques dans les régions et à l'administration centrale ont cessé de publier leurs diverses séries de rapports en décembre 1981. Une liste complète de ces publications figure dans le volume 39, Index des publications 1982, du *Journal canadien des sciences halieutiques et aquatiques*. La série actuelle a commencé avec la publication du rapport numéro 1 en janvier 1982.

1987

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VOLUME 12

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PREFACE

These catalogues are produced by the Data Assessment Division at the Institute of Ocean Sciences and the Native and Regulatory Affairs Division at the Freshwater Institute. Joint government and industry contract projects have catalogued marine data sets, their focus being mainly on oceanography and fisheries. Data quality appraisals are included to assist in establishing the usefulness of given data for particular analyses or purposes. The ratings also determine the confidence that can be placed on interpretations incorporating those data.

The appraisals will assist in establishing priorities for incorporating the most useful data in the national Marine Environmental Data Service (MEDS) archives. Additional uses of the catalogues include the provision of the best available resume of marine data sources for research planning, environmental assessments, land use planning, regulatory approvals and operational procedures.

In the past, the pace of offshore development activity has emphasized the need to review the sufficiency and suitability of available scientific information for design, regulatory and planning purposes. The review is a three-stage process: 1) compilation and appraisal of the existing data sets; 2) analysis of the suitability of existing data sets for contributing answers to questions of concern; and, 3) analysis and interpretation of data and estimation of scientific confidence in the answer to the particular question. This report represents part of the results of the first stage for the physicial oceanographic data of the Canadian Beaufort Sea.

Brian Smiley and Larry de March Scientific Editors Arctic Data Compilation and Appraisal Series

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ABSTRACT

Birch, J.R., D.D. Lemon, D.B. Fissel and H. Melling, 1987. Arctic Data Compilation and Appraisal. Volume 12. Beaufort Sea and Amundsen Gulf: Physical Oceanography — Temperature, Salinity, Currents, Water Levels and Waves. Revised and updated to include 1914 through 1986. Can. Data Rep. Hydrogr. Ocean Sci. 5: 459 p.

This volume is one of a group of catalogues designed to compile and appraise marine data sets for the Canadian Arctic. For user convenience, the group has been organized with its subject matter divided into three general disciplines; physics, chemistry and biology. The Arctic has been arbitrarily divided into seven geographical areas, grouping where possible, major oceanographic regions. The format throughout has been structured to facilitate comparison among subjects and regions. With such a large undertaking it is not possible to provide all reports at once. This volume contains an updated 1914-1986 inventory of the physical oceanographic data (temperature-salinity, current-meter, water-level, and waves) for the Beaufort Sea and Amundsen Guif. It is an update of an earlier inventory by Cornford et al. (1982).

SOMMAIRE

Birch, J.R., D.D. Lemon, D.B. Fissel and H. Melling, 1987. Arctic Data Compilation and Appraisal. Volume 12. Beaufort Sea and Amundsen Guif: Physical Oceanography — Temperature, Salinity, Currents, Water Levels and Waves. Revised and updated to include 1914 through 1986. Can. Data Rep. Hydrogr. Ocean Sci. 5: 459 p.

Le présent volume fait partie d'une série de catalogues visant la compilation et l'évaluation des données sur le milieu marin de l'Arctique canadien. Pour la commodité des usagers, la série de catalogues est divisée en trois grandes disciplines: physique, chimie et biologie. L'Arctique a été arbitrairement divisé en sept régions géographiques en groupant si possible les principales régions océanographiques. La présentation a été structurée de façon à faciliter la comparaison entre les sujets et les régions. Toutefois, une telle entreprise ne permet pas de fournir tous les rapports en même temps. Le présent volume contient un inventaire mise à jour des océanographiques (température, salinité, courantomètre, niveau de l'eau et vagues) dans la mer de Beaufort et le golfe Amundsen. Il constitue une mise à jour d'un inventaire précédent préparé par Cornford et al. (1982).

ACKNOWLEDGEMENTS

This is an updated version of the original Beaufort Sea physical oceanographic inventory by Cornford et al. (1982). Much of the text in this report is verbatim from the original, as well as from another data inventory by Birch et al. (1985).

Many people and organizations provided information required for the inventory. In addition to those who were acknowledged in the original report (Cornford et al. 1982), thanks go to P. Wainwright of Arctic Laboratories, G.R. MacKenzie-Grieve of EPS and R.W. Macdonald of the Institute of Ocean Sciences. The data bases of the Marine Environmental Data Service in Ottawa and the National Oceanographic Data Centre in Washington provided much of the early station header information.

Within Arctic Sciences Ltd., D. Gilbert, B. Cann and S. Norton were responsible for word processing and report production, R. Chave for computer programming and D. Stover for drafting.

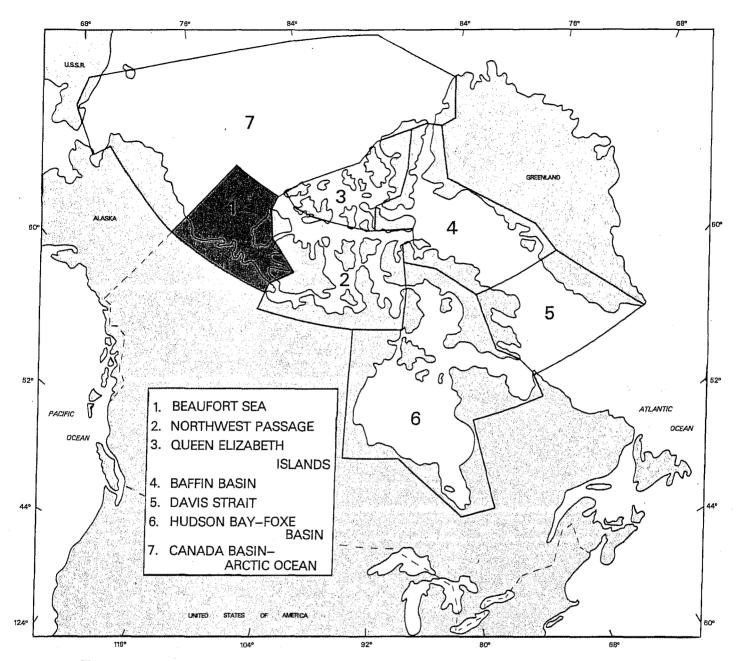
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- Northern Oil and Gas Action Plan (NOGAP)

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ARCTIC DATA COMPILATION
AND APPRAISAL
VOLUME 12
Beaufort Sea and Amundsen Gulf: Physical Oceanography



The area covered by this volume is shaded in the map above.

VOLUME 12: Beaufort Sea and Amundsen Gulf: Physical Oceanography, Temperature, Salinity, Currents, Water Levels and Waves

VOLUME ABSTRACT

This inventory contains a catalogue of physical oceanographic data collected in the Beaufort Sea and Amundsen Gulf between 1914 and 1986 inclusive. This is an update of the original inventory by Cornford et al. (1982). Times and locations of measurements are listed and displayed graphically for temperature-salinity, current-meter, water-level, wave and drifter data. Yearly plots showing the locations of all measurements are included as are indexes by area and measurement type. References and sources are listed for all data included in the inventory.

Key words: Amundsen Gulf, Beaufort Sea, currents, data, inventory, salinity, temperature, tides, water properties, wave

1. INTRODUCTION

In this report, the physical oceanographic data collected in the Beaufort Sea, Amundsen Gulf and the adjacent shoreward waters are catalogued. The information provided includes the times and locations of measurements, the parameters measured, and the type of instrumentation. The data themselves are not included, but sources for the data and any reports or references utilizing the data are cited wherever possible. This will enable potential users of the data to determine what is available in their area of interest, what data were collected using a specific measurement technique, and whether those data may be of value.

This updated version includes recent (1981-1986 inclusive) data not included in the original inventory of Cornford et al. (1982). The inventory has also been expanded to include wave data and other physical oceanographic data which were identified by the chemical, biological and other inventories completed subsequent to Cornford et al. (1982). Any other known omissions and errors have also been corrected. The data quality rating system has been changed slightly to be in agreement with the more recent inventories. In particular a rating of "0" now signifies the data are either wrong or of very limited value due to lack of documentation.

The original inventory identified over 80 distinct data sets. In preparing this update, approximately 117 additional data sets have been included, more than doubling the data base. Many of these data were obtained during biological and fishery-related surveys. The AIDJEX data, while identified in the earlier inventory, have been included here in full so as to make the data base more complete.

2. STUDY AREA

The study area includes that portion of the Beaufort Sea lying to the south of 75°N latitude, to the east of 141°W longitude and bounded on the south and east by the coastline of the Northwest Territories, Banks and Victoria Islands, as illustrated in Figures 1 and 2. The area includes Amundsen Guif, a large semi-enclosed basin of water freely connected to the Beaufort Sea to depths of 325 m.

The bathymetry of the area (Figure 2) is characterized by several distinctive features. A broad, shallow continental shelf borders the mainland coast and the west coast of Banks Island. The edge of the shelf lies between the 100 and 200 m isobaths and may be as far as 100 km from shore, with depths of less than 10 m being found as much as 30 km offshore. Depths increase rapidly over the continental slope. The depth gradient is particularly large from the 100 m to the 1,000 m isobath; beyond, the bottom depth increases more gradually with distance offshore over the continental rise, and eventually levels out at about 3,600 m in the relatively flat Canada Abyssal Plain.

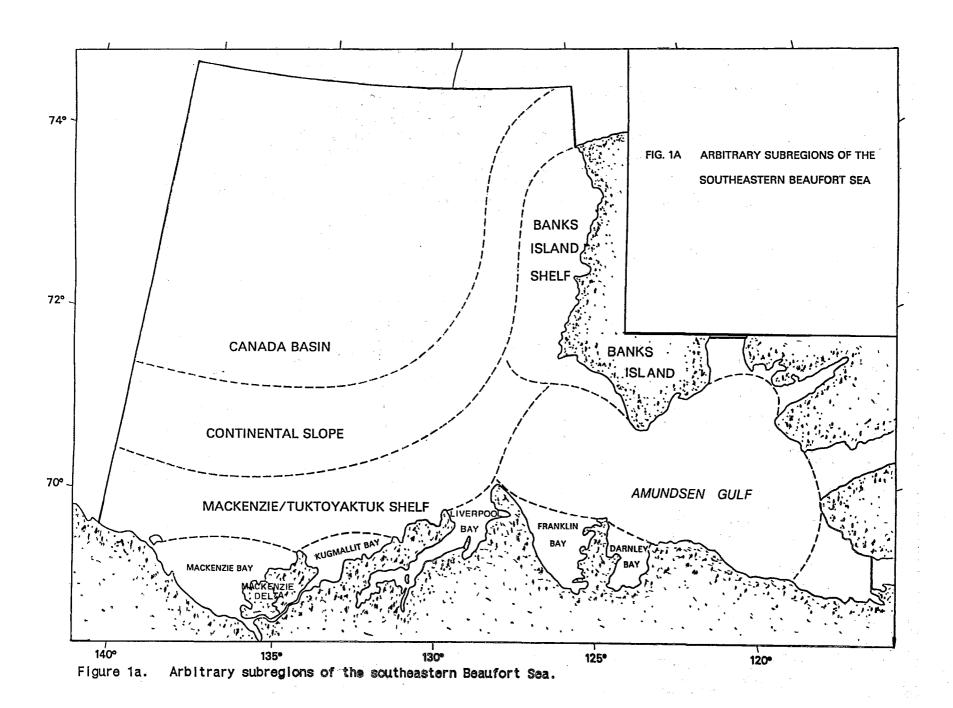
The shelf is interrupted in two places in the study area: In the west off Herschel Island, where the Herschel Canyon has depths of 100 m or more within 35 km of the coastline; and in the east, where a deep trough (325 m) connects Amundsen Gulf with the Beaufort Sea. Amundsen Gulf has depths in excess of 600 m, and relatively steep sides. A similar trough connects the Beaufort Sea with M'Clure Strait in the northeastern portion of the study area.

important factor in collecting Arctic oceanographic data is the An coverage. Where present in sufficient quantity and thickness, sea-lce sea-ice can provide a stable platform for the collection of oceanographic data (e.g. current and CTD data from ice island T-3 and from the AIDJEX However, sea-ice can often hinder data collection by studies). restricting ship operations in the summer months and by damaging subsurface instrumentation placed on and above the sea-floor. There are three major forms of sea-ice in the Beaufort Sea: landfast ice that is attached to the shore, extending to variable distances offshore; pack ice. which occupies the central portion of the Arctic Ocean, moving under the influence of winds and currents; and seasonal ice cover occurring between the landfast and pack ice during the winter months.

The landfast ice is a seasonal phenomenon, beginning to form in late September or early October. Deterioration of the landfast ice begins as early as March, when large leads form west of Banks Island with subsequent clearing from the western portions of Amundsen Gulf. In late May, land runoff begins to accumulate at the mouth of the Mackenzle River and, by late June, open water season has begun.

The pack ice is composed largely of multi-year ice as well as some first-year ice floes and ice islands. The pack ice often retreats offshore in the summer months; the variations in the extent of its retreat are illustrated in Figure 3. The seasonal pack ice cover forms in the fall and exists as highly concentrated but mobile ice floes throughout the winter and spring. Melting of the seasonal ice cover occurs through June to August.





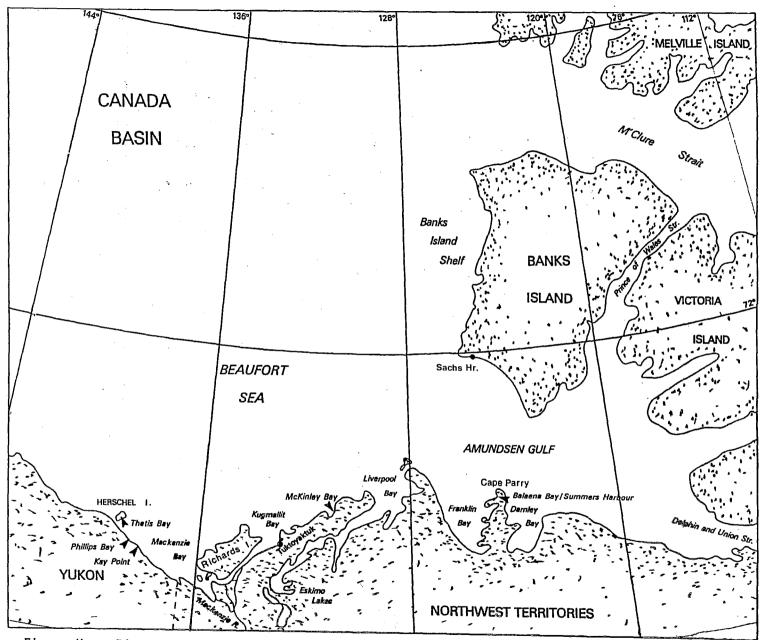
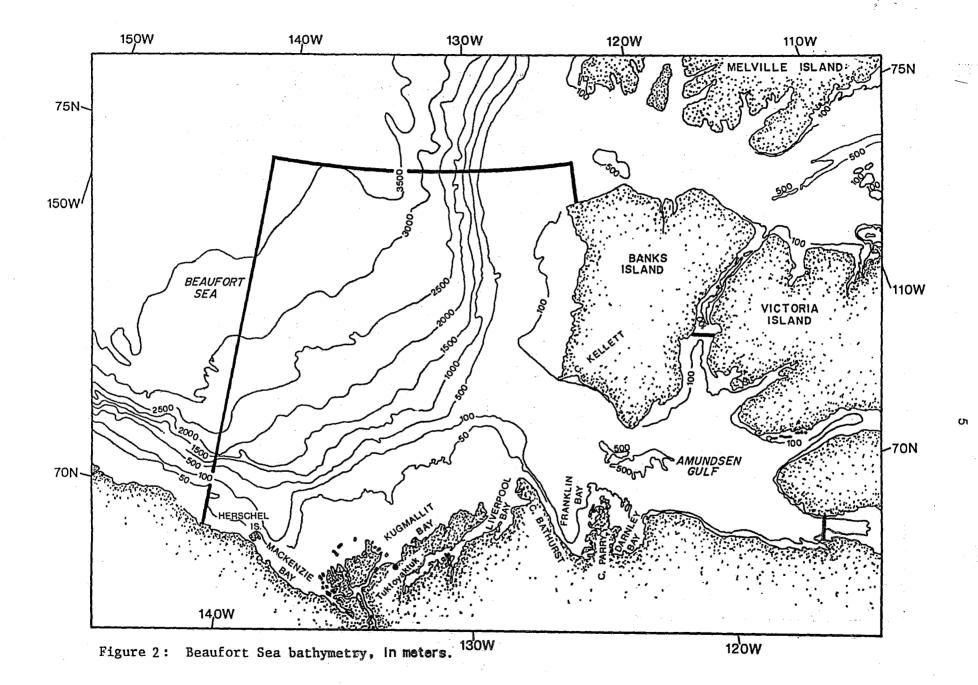


Figure 1b. Place names of the study area.



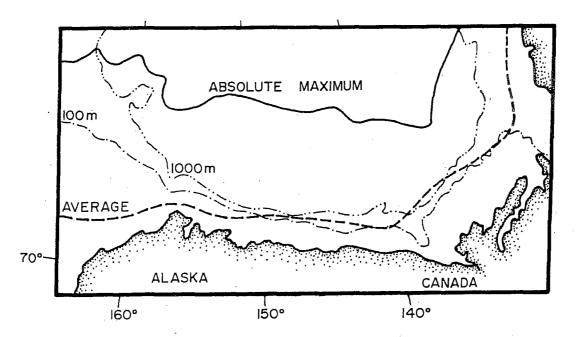


Figure 3. The average and maximum retreat of the pack-ice in summer.

The deep portions of the Beaufort Sea contain the three water masses which make up the Arctic Ocean (Coachman & Barnes, 1961). The surface layer of Arctic Water is below 0°C in temperature, quite dilute, and well mixed down to about 50 m. Salinity increases quickly with depth to 150 or 250 metres, at which depth the second water mass, the Atlantic Water is found. The Atlantic Water extends to about 900 m and has temperatures of about 0°C and salinities of 34.5 to 35.0 /oo. Below 900 m is the Bottom Water, with temperatures below 0°C and salinities between 34.93 and 34.99 /oo. In the areas of the Beaufort Sea where open water occurs in the summer, the near-surface portion of the Arctic Water becomes further diluted by melting ice and runoff, and is warmed by the sun. The Mackenzie River supplies a large volume of fresh water to the continental shelf, and its influence occasionally extends to the entrance of Amundsen Guif.

The surface circulation over the deeper portions of the Beaufort Sea is dominated by the Beaufort gyre which moves clockwise over the Canada Basin. Over the continental slope, and seaward of about the 50 m isobath, an easterly flow exists, termed the Beaufort Undercurrent by Aagaard (1984). The circulation on the continental shelf is much more complex and depends chiefly on the wind and the outflow of the Mackenzie River.

3. HISTORICAL BACKGROUND

3.1 EARLY HISTORICAL DATA

Information on the physical oceanography of the southeastern Beaufort Sea collected before the 1950's was usually incidental to other purposes, such as geographical exploration, and therefore tends to be less reliable

complete than later data collected expressly for oceanographic and research. The first oceanographic information was likely collected by the local inuit population in anecdotal form. When European ships began to enter the area in the 1850's, often in pursuit of whales, surface temperatures were sometimes measured and currents were deduced from observed ship drift under calm winds (Collinson, 1889; Cook, 1926; Bodfish, 1936). Scientific expeditions to the area were undertaken after the turn of the century, with the most notable of these being the expeditions led by Stefansson (1921) from 1913 to 1917. Since the primary scientific objectives disciplines, encompassed many information on currents and water properties was obtained. More recently, surface temperature and salinity data were collected by Captain Larsen of the R.C.M.P. using the vessel St. Roche in 1935 and 1937 (Tully, 1952), Figure 4.

3.2 POST-WORLD WAR II DATA

Following the Second World War, defence requirements led to several oceanographic cruises to the area using both Canadian and American the first time, sufficient oceanographic data, icebreakers. For consisting primarily of vertical profiles of temperature and salinity at many different locations, were collected to describe the circulation of the area. However, the description was based on indirect methods, either dynamic method (Fomin, 1964) or methods using the horizontal the distribution of water properties as tracers of water movements. measurements of currents were collected from the icebreaker cruises, but these were of such a short duration (from a single reading to a period of several hours) that the values could not be taken as being representative of the net circulation.

By the early part of the 1960's, large-scale oceanographic cruises to the area became increasingly rare. However, cruises in small vessels concentrated in the nearshore areas (often as part of biological studies) collected a considerable amount of shallow water temperature and salinity data (Figure 4).

During the early 1970's two large projects, AIDJEX and the Beaufort Sea Project, were responsible for large amounts of data being collected in the Canada Basin and Beaufort Sea, respectively. The AIDJEX (Arctic Ice Dynamics Joint Experiment) program focused on the Interaction of the ocean, sea-ice and atmosphere. The Beaufort Sea Project's goal was to provide the necessary environmental knowledge required to determine the conditions and restraints under which exploratory drilling would be allowed to commence in 1976.

In the late 1970's and continuing into the 1980's, most oceanographic surveys were carried out as part of the search for oil and gas in the Beaufort Sea. These programs made use of modern oceanographic instrumentation for the first time in this area, including self-recording current meters to provide long-term direct measurements of currents, and continuous profiling CTD (Conductivity-Temperature-Depth) probes. Both government and oil industry groups were involved in collecting data.

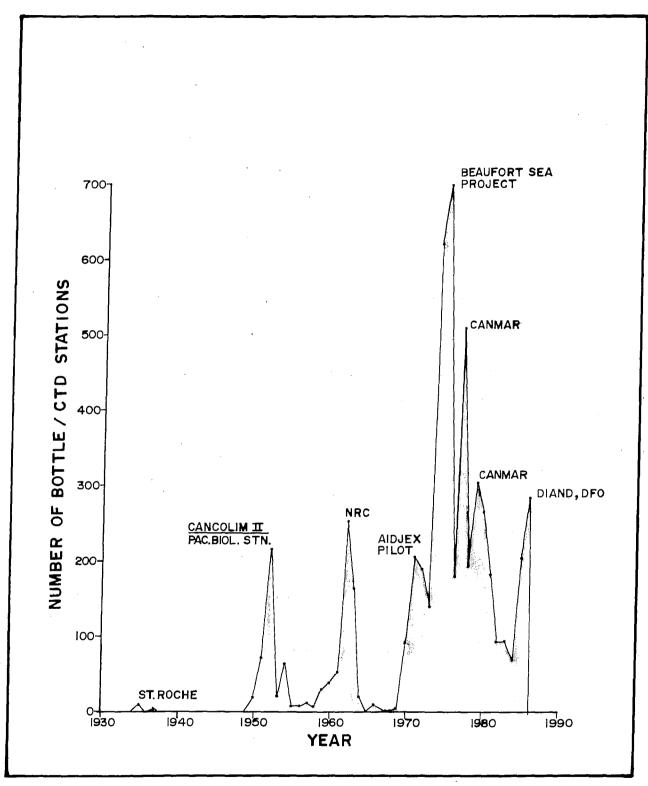


Figure 4. Level of oceanographic effort, based on the number of bottle-CTD stations per year. The primary vessels/agencies responsible for peaks in activity are indicated.

4. GENERAL REPORT LAYOUT AND USER INSTRUCTIONS

4.1 DATA SETS

In this catalogue, the data are organized in sets, where each set consists of data of a common type, usually taken on a single expedition or cruise by a single institution or organization. In some cases, where similar methods were used, more than one cruise has been assigned to the same data set. In those cases, letter suffixes have been used to differentiate different cruises. Thus, unless otherwise noted, all the data within a single set may be assumed to have been collected in a uniform manner and should conform to a common standard of measurement.

Each data set has been assigned an identification number of the form yy-nnnn, where yy = last 2 digits of the year in which data were collected and nnnn = order of identification for that particular data set, for that year. The data-set number is a unique identifier which applies throughout the entire series of ADCAP inventories; any set identified, for example, as 72-0009 is the same data set no matter where the reference to it is made. Gaps may appear in the sequence of data-set numbers in this inventory for a particular year, because each data set will not appear in every discipline and geographical area.

The identification numbers are often accompanied by the vessel and/or agency involved. Usually the agency refers to the one responsible for data collection, as this is often a better indicator of data quality than the name of the group which funded the project.

4.2 INVENTORY ORGANIZATION

Table 1 (Section 8) lists all the data sets in the inventory in order of data-set number. It provides a summary description of each set including the times, areas and methods of measurements. Table 1 also gives a listing, not necessarily complete, of concurrent measurements from other disciplines.

Geographical and measurement type indexes are in Section 10. The subareas in the geographical index are shown on the maps in Figures 1a and 1b. Section 10 also contains an index of references, ordered by data-set number. It is primarily an index of data reports, although ancillary papers analyzing or discussing the data are listed if they came to our attention.

Measurement locations are plotted in a series of maps in Section 9. Five different maps, all in Lambert Conformal Conic projection, have been used to plot stations. In most cases, the overall map of the entire study area is used, along with one or more of the larger-scale maps. The coastlines have been smoothed, and small islands removed, to avoid clutter. Map specifications and a key to the symbols on the maps are presented at the beginning of Section 9.

Detailed listings of the times and locations of individual measurements are in Section 11. There is a separate listing for each data type. The format of the listings is explained at the beginning of Section 11.

Data sets were rated according to the criteria in Section 5. The ratings are included in Table 1. Appendix 1 contains comments explaining the reasons for low ratings, and any other pertinent remarks concerning the data. The comments are ordered by data-set number.

Section 6 contains a general description of the extent of the data available in this area. Sections 6.1 and 6.2 describe their geographical and seasonal distribution. Section 6.3 tabulates instances of repeated measurements in the same area and groups data-sets where measurements were carried out simultaneously, in different areas, or by different agencies.

4.3 SAMPLE USE OF THE INVENTORY

A typical use of the inventory might be as follows:

- 1. Examine the maps in Section 9 for measurements during the year(s) of interest, and note the data-set number of interest.
- 2. Refer to Table 1 to find the dates, measurement methods, accuracies and data sources.
- If more specific information is required concerning the timing or location of individual measurements in the set, refer to the header listings in Section 11.
- 4. Consult the reference index in Section 10 for works referring to or using the data.

5. DATA RATING AND APPRAISAL

5.1 TYPES OF DATA

5.1.1 BOTTLE CAST DATA

These data consist of temperature and salinity measurements at discrete depths (ideally the international standard depths) obtained by means of reversing thermometers and sampling bottles. Temperature accuracies of $\pm 0.01^{\circ}\text{C}$ may be achieved by averaging two or more carefully read, well-calibrated thermometers. Some investigators have used hydrometers ($\pm 0.2^{\circ}$ /oo) and refractometers ($\pm 0.5^{\circ}$ /oo) for the determination of salinity. Up to 1960 salinity was usually obtained by titrating water samples drawn from the bottles; replicate titrations in the hands of a good operator could yield results precise to $\pm 0.01^{\circ}$ /oo. In the 1960's, salinometers measuring salinity via the conductivity of the sample replaced titrations. A precision of $\pm 0.003^{\circ}$ /oo can be obtained with the better instruments, although in the past, systematic errors of $\pm 0.02^{\circ}$ /oo or more could be introduced by variations in the standard water used to calibrate the instruments. New international standards for salinity should eliminate the latter source of error (Lewis, 1980).

5.1.2 CTD DATA

called STD (salinity-temperature-depth), STP (salinity-temperature-pressure), CTD (conductivity-temperature-depth) or CTP (conductivity-temperature-depth) or CTP (conductivity-temperature-pressure) profilers. Fundamentally, all are CTP devices; the variations in output and name depend solely upon the degree of internal data processing. All instruments perform the same basic function of measuring (more or less continuously) temperature and conductivity as a function of depth. The precision achievable with such devices depends upon the individual instrument. The best are capable of a precision of $\pm 0.005^{\circ}$ C and $\pm 0.005^{\circ}$ /oo, although accuracy in salinity, until recently, was limited to approximately $\pm 0.02^{\circ}$ /oo because of the inconsistencies in salinity standards and definitions (Walker and Chapman, 1973).

5.1.3 BATHYTHERMOGRAPH

The bathythermograph (BT) is a thermo-mechanical device which measures water temperature as a function of pressure. Its information is recorded as a trace, on a smoked-glass or gold-coated slide, which can be read to an accuracy of $\pm 0.2^{\circ}$ C and ± 2 m depth if the instrument is well calibrated. The BT was widely used in conjunction with bottle casts but has largely been superseded by the CTD. XBT's are the expendable variety. BT data have not generally been compiled, unless they were accompanied by other physical oceanographic measurements.

5.1.4 SELF-RECORDING CURRENT METERS

By the 1970's, oceanographers could practically and reliably place and recover self-recording current meters in the water column. Meters of this type generally record internally on magnetic tape (in some models photographic film or paper charts are used), or telemeter the data to a ship or to a shore receiving station. They generally provide time series of current speed and direction, and may have other sensors (for measuring temperature, pressure or conductivity) as well. Current speed and direction are usually measured by one of two methods: either by a propeller or rotor for measuring speed and a vane for direction sensing. or by the measurement of two orthogonal components of the current flow. Current components may be measured by dual-orthogonal propellers, or by electromagnetic or acoustic sensors. Directional reference is usually provided by a magnetic compass. Commonly used instruments employing the propeller and vane system are the Aanderaa, HydroProducts, Endeco and AMF (vector-averaging) current meters; those employing the component-measuring system are the Cushing and Marsh-McBirney instruments (electromagnetic), the Neil Brown (acoustic), and the Davis-Weller (orthogonal-propeller) instruments.

The precision and accuracy of current meters depend both on the design of the instrument, and on the environment in which it is used. Serious problems may be encountered if rotor-type meters are used in the wave zone. Calibration drift and sensor fouling can interfere with satisfactory operation of electromagnetic and acoustic sensors. The sampling frequency and integration period selected for the meter can also affect the accuracy of the record. In the Canadian Arctic, special

problems in direction measurement are encountered when using any type of current meter because of the proximity of the magnetic pole. Directional accuracies are generally degraded unless the current meter is oriented by rigid moorings to a fixed surface.

5.1.5 PROFILING CURRENT METERS

These current meters provide a series of point measurements of current speed and direction at several depths throughout the water column. Meters used for this purpose are generally of the propeller or rotor and vane design. Measurements usually are taken through the ice or from an anchored ship in shallow water. In water too deep for anchoring, a very good positioning system is required to correct for ship movements. Unless repeated profiles were taken so as to form a time series, this type of data was not generally catalogued.

5.1.6 RADAR OR AIRCRAFT-TRACKED DRIFTERS

This type of drifter usually consists of a float (with or without a drogue) and a radar reflector or visual marker. These devices can be tracked visually or by radar from shore or from a ship or aircraft. The accuracies achievable depend upon the tracking system used, and can be very good if a sophisticated system is available. Data of this type are often limited in their coverage in space and time, and may have gaps resulting from bad weather.

5.1.7 SATELLITE-TRACKED DRIFTERS

Satellite-tracked drifters are a comparatively recent invention, dating from the early 1970's. Widespread use of these devices began after the launch of the Nimbus VI satellite carrying the Random Access Measurement System (RAMS) in 1975. In early 1979, the TIROS-N satellite was launched, activating Service ARGOS which is now used to track all such devices.

Both RAMS and System ARGOS compute position from the Doppler shift of a signal transmitted from the buoy to the satellite. On each pass of the satellite, the position (and any other data being measured) is received and sent to a ground facility where the data are processed. The RAMS system produced positional accuracies of approximately ± 2 km whereas recent ARGOS positions are accurate to \pm 500 m or better.

5.1.8 AIRCRAFT AND SATELLITE-DERIVED SEA-SURFACE-TEMPERATURES

Aircraft and polar-orbiting satellites have been used to provide images of sea-surface-temperature (SST), based on the thermal infrared radiation received by the air-borne sensors. Such images are particularly useful in the Beaufort Sea since they help map the Mackenzie River plume and also pinpoint areas of upwelling. This technique has generally been used only within the last couple of years, often in conjunction with boat-based surveys. Such surveys will be identified in Table 1 as having airborne SST images available.

5.1.9 WATER-LEVEL GAUGES

Water-level data are produced mainly by visual observation of tide bv mechanical shore-mounted float-type gauges. pressure bottom-mounted gauges. Some early data consist only of observations of the times of high and low water levels. Pressure gauges may be self-contained, or they may consist of a pressure sensor connected The mechanical gauges record by to a shore-mounted recording device. means of a pen on chart paper. The data are usually digitized at hourly intervals, resulting in a record with a resolution of approximately ±1 cm, and an accuracy of the order of ± 5 to 10 cm. The resolution of the bottom-pressure gauges varies from a millimetre to a centimetre, depending upon the instrument type and range. Sampling intervals generally vary between 5 and 60 minutes. Bottom pressure gauges generally record total pressure, atmospheric plus hydrostatic. In order to extract the water level fluctuations due to changing atmospheric pressure (i.e. the inverted barometer effect), the atmospheric pressure must also be recorded. The Canadian Hydrographic Service (CHS) has collected most of the water-level data.

Water levels are referenced to the elevation of a nearby benchmark. Therefore different data sets may be compared in an absolute sense as long as they are referenced to the same benchmark. Water level data from different areas, referenced to different benchmarks, cannot be compared absolutely, since the relative elevation changes between different benchmarks is generally not known. One can determine a long-term average for each record and compare fluctuations about this average however.

5.1.10 WAVE RECORDERS

There are three basic types of wave-measuring devices for measurement from a single point:

- a) Surface-piercing instruments. These are fixed relative to the water level and measure surface motion using various methods such as the change in capacitance of a vertical wire.
- b) Pressure-measuring devices. Ocean waves produce measurable pressure fluctuations beneath them which, under proper conditions, can be related to wave height.
- c) Instruments which measure the vertical acceleration of the water surface. When integrated twice in time, the vertical acceleration yields sea-surface elevation relative to the mean.

in shallow water, types a) and b) are generally used, whereas type c) is more suited to deeper waters. Most wave-data in the Beaufort Sea have been obtained using Waverider acceleration-type buoys. This buoy, manufactured by Datawell of the Netherlands, follows the movement of the water surface and measures the vertical acceleration. Datawell specifies maximum errors of 1.5% (0.065 to 0.5 Hz range) and deviations from the zero of less than 0.5 m.

Surface following buoys are subject to damage and loss due to ice in the Beaufort Sea. Recently there has been more effort in obtaining wave data using bottom mounted pressure sensors such as those manufactured by Sea Data. The advantage of this method is that the instrument is away from the hazardous surface environment. These instruments also often record tidal and temperature data.

5.2 DATA RATING SCALE

5.2.1 RATING DEFINITIONS

The data appraisal in this inventory is intended to provide the reader with an indication of the quality of each data set and its suitability for comparison with other data sets. The appraisal was based primarily on documentation describing the methods used in collecting and processing the data and the investigator's estimate of their precision, accuracy and utility. Subsequent analyses of the data were also taken into account, e.g. if errors were found in a particular data set during a subsequent analysis, and the results were published, these results were used in the assessment. Note that a thorough appraisal, requiring investigation of the data and comparisons with other data sets, is beyond the scope of this report. In effect, in most cases we took the investigator's word for the quality of his data.

The information from the sources above was used to assign a numerical rating to each set. The rating system has five levels, defined as follows:

- O: Data were found to be wrong.
- 1: Data are suspect and probably not internally consistent; trends or patterns within the data are not likely real.
- 2: Data quality could not be determined due to insufficient support documentation.
- 3: Data are internally consistent patterns or trends within the data themselves are probably real, but comparison with other data sets may pose problems.
- 4: Data are internally consistent and exhibit sufficient standardization that comparison with other 4-rated data should be possible.

Justification for poor ratings, 0 or 1, are provided in the comments in Appendix 1.

5.2.2 ASSIGNMENT OF RATINGS

O RATING

A data set received a Q rating if serious deficiencies in technique, or significant systematic errors, occurred. A Q rating was also assigned if the documentation of the data set lacked essential information (e.g. the positions and times of measurements) which no longer exists.

For example, some data sets contain conductivity measurements but not temperature. Since it was not possible to compute salinity from this information, the data sets received ratings of Q.

1 RATING

A data set received a 1 rating if, either as part of a data report or in subsequent analysis and examination, the original or other investigators questioned the validity of the data without pinpointing specific errors. In general, a 1 rating was assigned if a data set exhibited an atypical distribution of values, or indicated unlikely physical processes, but contained no obvious errors. Such data sets require careful examination before use.

Such a case is 64-0003. The water-level data were considered suspect by Henry & Foreman (1977), and not used in their analyses. Accordingly this data set was assigned a rating of 1.

2 RATING

Ratings of 2 were given to data sets for which it was not possible to carry out an appraisal. Such cases include:

- (i) Proprietary data, whose existence is known, but about which no details are available.
- (ii) Data sets for which we were unable to obtain documentation but know that data were collected. These data sets are identified and wherever possible the title of the documentation is povided.

3 RATING

Data received a 3 rating if they were internally consistent within the precision of the methods used to collect the data. Precision refers to the degree of random fluctuation experienced when a measurement is repeated many times, while accuracy is the departure of the measurement (or the mean of a series made under controlled conditions) from the true

Note that this definition has been modified from that used in the original Beaufort Sea physical inventory (Volume 1 of the Arctic Data Compilation and Appraisal Series), in order to emphasize that data sets assigned a $\underline{0}$ rating are either wrong or of very limited value due to lack of documentation.

value. Because oceanographic data are normally taken without replication and under uncontrolled conditions, data taken with instruments of a certain precision will have the same (or poorer) level of accuracy. An exception is the case of a series of temperature-salinity measurements taken within a water body of stable, well-defined characteristics, in which case the mean of the series could provide a measurement more accurate than the precision.

Ratings of 3 were given to all data sets for which no evidence of errors beyond the precision given in Table 1 was found, but which did not satisfy each of the criteria required for a rating of 4 (see below). This is based on data reports and other publications; the actual data were not checked further. In some instances, the instrument and/or precision and accuracy were unknown, but the collecting agency used standardized methods; these data sets were generally awarded a 3 rating when there was no evidence suggesting deficiencies in the data.

Caution should be exercised when comparing two sets of 3-rated data, as their levels of precision may be quite different. The reader should consult both Table 1 and Appendix 1 for precision and error information.

4 RATING

Data received a rating of $\underline{4}$ if: they were measured to the precision available with modern methods described in Section 5.1; they had no evidence of systematic or other errors recorded in the documentation; and they were obtained using measurement instrumentation, methodology and techniques which provide data that can be related to national or international standards.

Since standards tend to change, ratings of $\underline{4}$ were only grudgingly awarded. In many cases, ratings of $\underline{3}$ were assigned because of lack of time and/or sufficient documentation to be certain that a rating of $\underline{4}$ was warranted. Some of these ratings may merit an increase to $\underline{4}$ after further study of the data has been made.

Of all the physical oceanographic data that were inventoried, the bulk of the data is temperature/salinity measurements. Until the early 1960's, water samples were collected by bottle cast and salinities were determined by titration. During most of the 1960's, salinities were generally determined using conductivity bridges. From the late 1960's on, instruments which measured conductivity and temperature in situ (CTDs) became the standard. Salinity was then computed from the temperature and conductivity values.

CTDs with Increased resolution have revealed gradations in salinity where previous chemical analyses indicated homogeneous water. Since both bottle and CTD data may have ratings of 3, caution must be used in any comparison.

Salinity determination depends on a standard. In the past this was $35^{\circ}/00$ Copenhagen water. However, variability in the standard and in the calibration of the instrumentation often resulted in systematic errors of $\pm 0.2^{\circ}/00$ or more.

A new, practical salinity scale has recently been adopted (Lewis, 1980). A conductivity ratio is measured (the conductivity of the unknown to that of a standard laboratory-produced sample) and waters of the same conductivity ratio at a given temperature and pressure are then defined to have the same salinity. This reduces systematic errors in salinity. However, most of the historical data remains subject to a $\pm 0.2^{\circ}$ /oo accuracy limitation.

Current-meter data were judged by the instrument characteristics, response, and the deployment methods. The main causes of low ratings are directional errors and contamination by mooring motion and wave-orbital velocities.

6. SUMMARY OF DATA COVERAGE

6.1 SPATIAL COVERAGE, INCLUDING DATA DISTRIBUTION MAPS

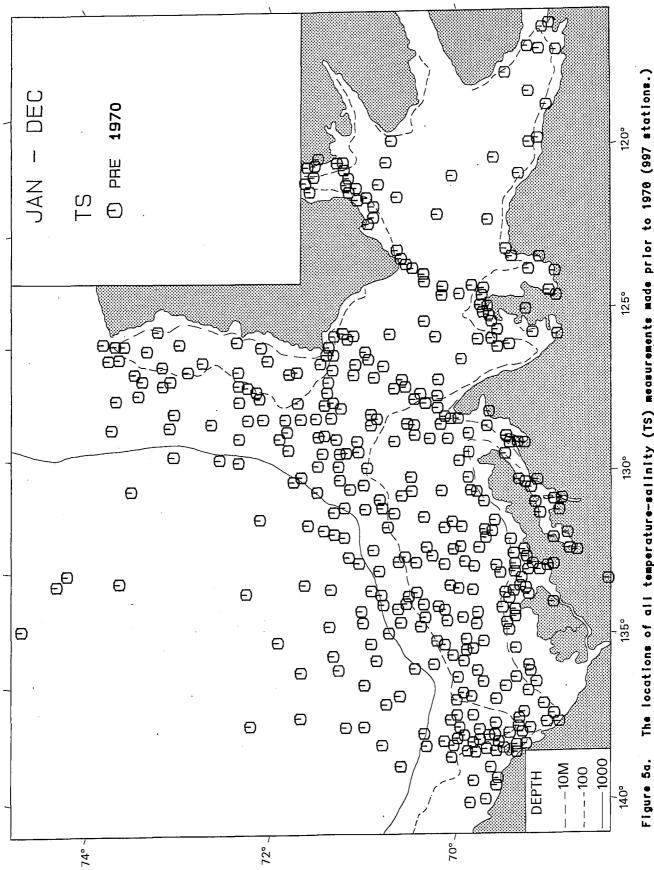
The locations of all measurements compiled to date are summarized for bottle/CTD (Figure 5), current-meter and water-level (Figure 6), and wave data (Figure 7).

The location maps of all temperature-salinity (TS) data have been split into pre-1970 (Figure 5a), 1970-1975 (Figure 5b) and post-1975 (Figure 5c). Prior to 1970, most temperature-salinity data were obtained using bottle casts. Standard depths at which data were collected were 0, 10, 20, 30, 50, 75, 100, 150, 200, 300, 400, 500, 600 m. Most of the post-1970 data were obtained using in-situ profiling instruments having vertical resolution on the order of centimetres.

The early bottle cast data (Figure 5a) are fairly evenly distributed, but with Amundsen Gulf and the Canada Basin having received the least attention. From 1970 on, emphasis was concentrated within the shelf and coastal waters off the Mackenzle Delta and the Tuktoyaktuk Peninsula (Figure 5b,c). The reason of course, was due to the hydrocarbon exploration activity on the shelf, and studies as to the effect of the Mackenzle River on shelf processes.

Areas of particularly intensive sampling include Herschel Canyon, Mackenzie Bay, offshore of Richards Island and Kugmallit Bay, and Tuktoyaktuk Harbour. Large quantities of temperature-salinity data are also available for the northwest sector of the Canadian Beaufort Sea. These data, obtained in the AIDJEX programs of 1970, 1971 and 1975-1976, were collected from the permanent pack ice over the deep water of the Arctic Ocean.

in contrast, fewer temperature-salinity data are available for Amundsen Gulf, the continental shelf to the west of Banks Island, and the broad zone over the continental rise which separates the continental shelf from the AIDJEX study areas of 1970 and 1975-1976. The shelf and slope waters west of Banks Island are particularly lacking in temperature-salinity data.



The locations of all temperature-salinity (TS) measurements made prior to 1970 (997 stations.)

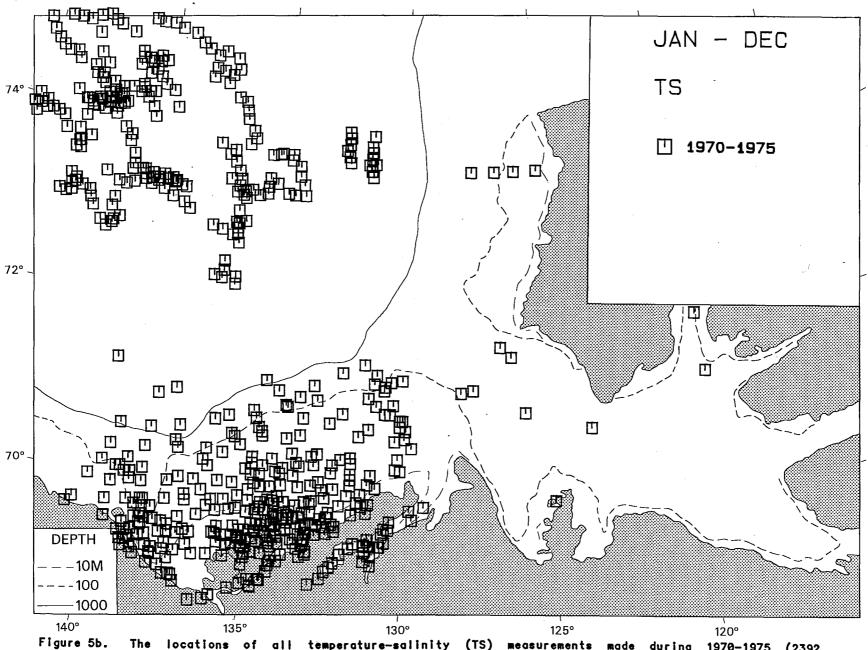
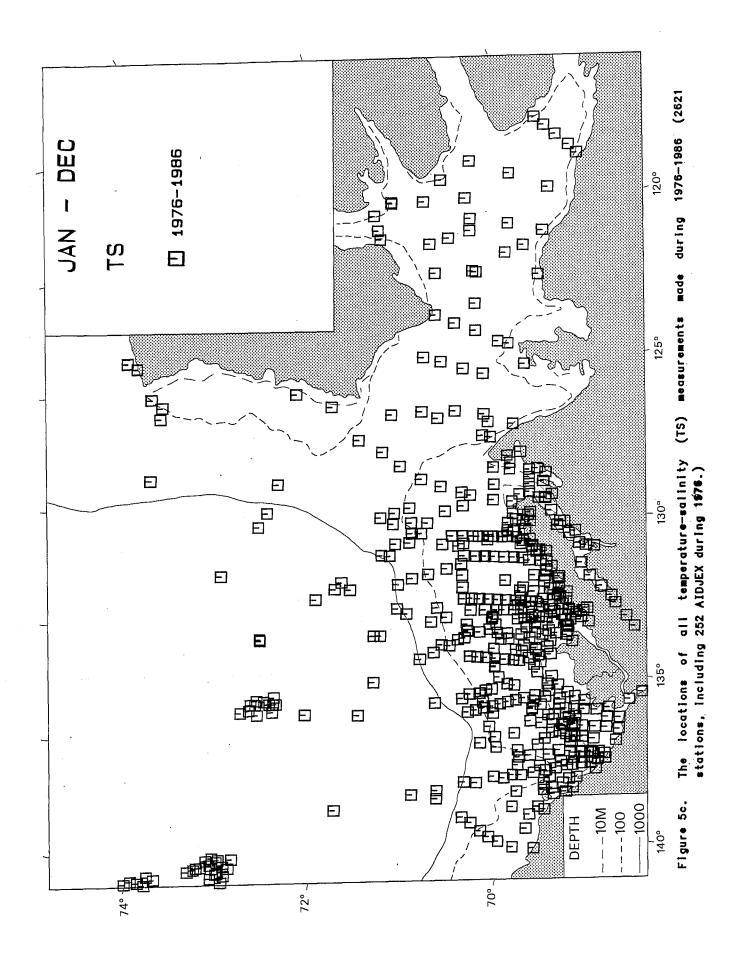


Figure 5b. The locations of all temperature-salinity (TS) measurements made during 1970-1975 (2392 stations, including 450 AIDJEX during 1975.)



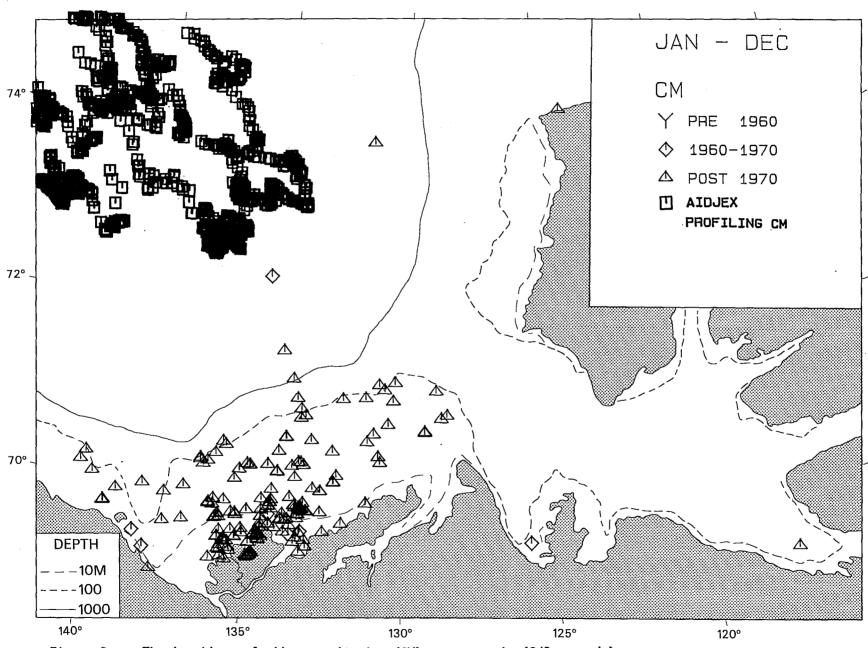
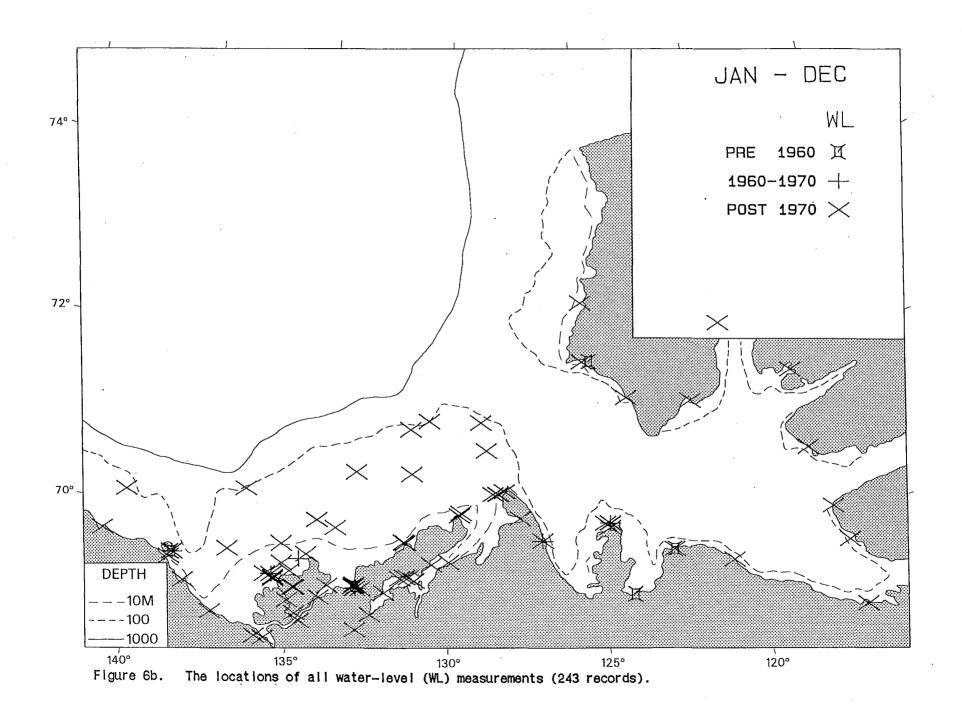


Figure 6a. The locations of all current-meter (CM) measurements (349 records).



The distribution of current-meter (CM) data (Figure 6a) follows the same general pattern as the temperature-salinity data. Nearly all current data are from the Tuktoyaktuk Shelf - Mackenzle Bay region and the Canada Basin. Areas with practically no current-meter data include Amundsen Gulf and the entire continental shelf bordering western Banks Island.

(WL) data (Figure 6b) have been obtained intermittently Water-level at one coastal location, Tuktoyaktuk, since 1961. At two other coastal stations, Cape Parry and Sachs Harbour, data have been collected since and 1972, respectively. The remaining water-level data were collected at temporary stations primarily since 1972. The station distribution is concentrated along the coastline between the U.S.-Canada and the eastern end of the Tuktoyaktuk Peninsula, but also extends border Amundsen Gulf to central western Banks Island. Water-level data around also been collected at offshore locations on the Tuktoyaktuk shelf using bottom-mounted pressure sensors. continental Very little water-level data have been collected along the northern half of the western coastline of Banks Island, in central Amundsen Gulf, or over the deep Canada Basin.

All existing wave data have been collected over the Tuktoyaktuk shelf and in Mackenzie Bay (Figure 7). This is primarily due to the stipulation by the Canadian government that the oil companies collect wave data near their drilling operations.

6.2 SEASONAL COVERAGE, INCLUDING BI-MONTHLY MAPS

A monthly station (Figure 8) and bi-monthly location maps (Figures 9, 10 and 11) demonstrate the seasonal and spatial distribution of available temperature-salinity, current-meter and water-level data.

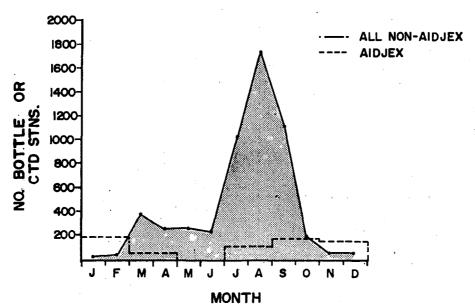


Figure 8. Monthly distribution of temperature—salinity stations, all years.

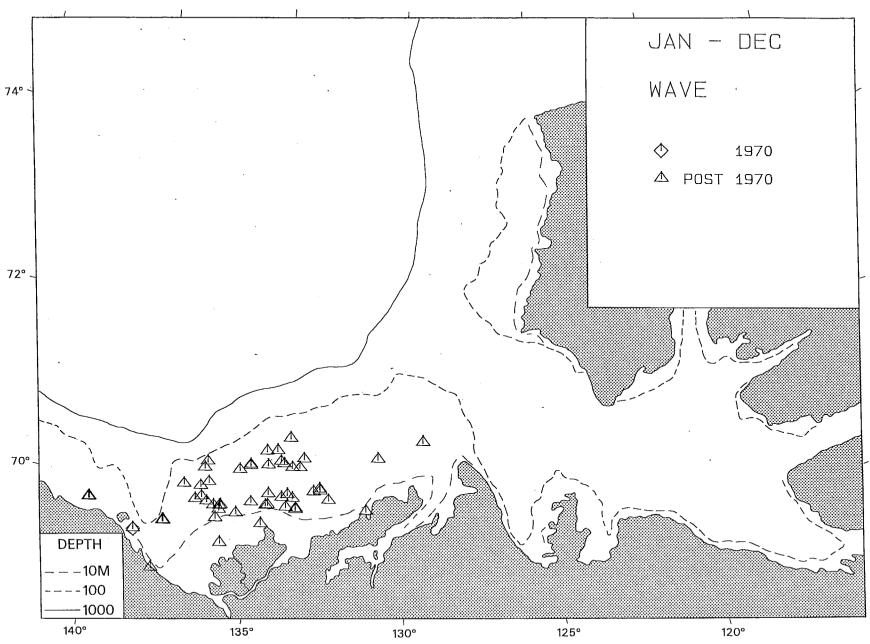


Figure 7. The locations of all wave measurements (55 records).

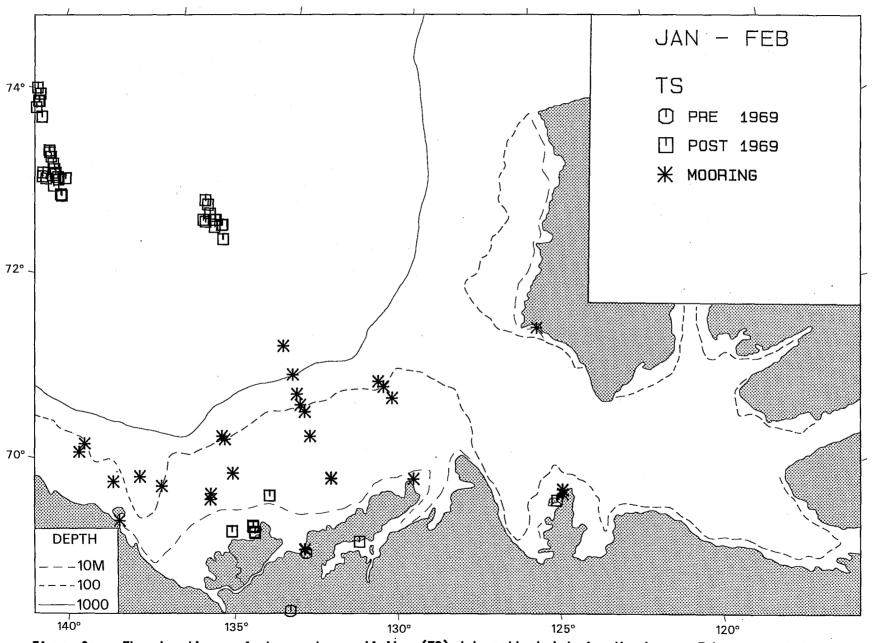


Figure 9a. The locations of temperature-salinity (TS) data collected during the January-February period, all years (239 stations, including 189 AIDJEX). Profile TS data are split as to pre and post 1969. TS data from moored instrumentation are located on the map using a star-like symbol.

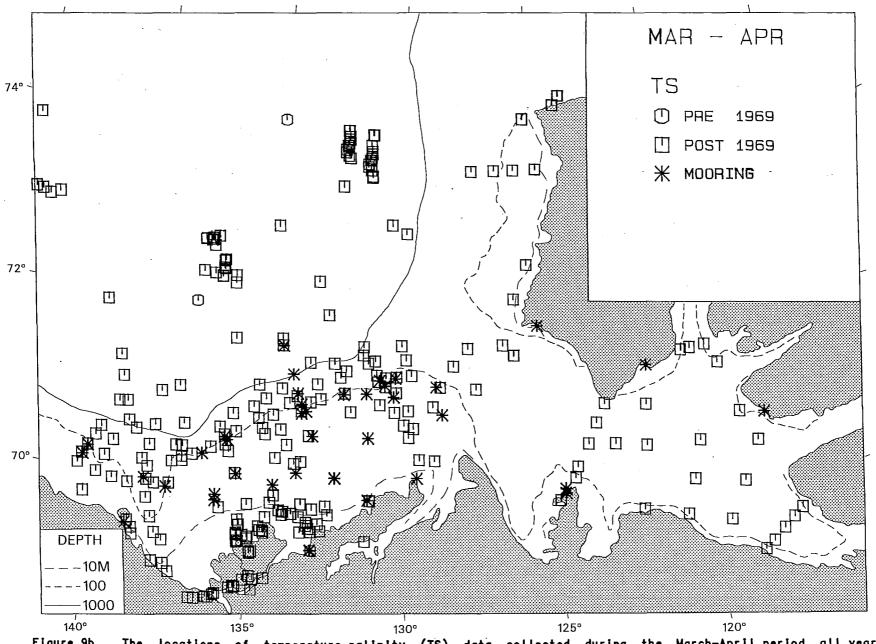


Figure 9b. The locations of temperature-salinity (TS) data collected during the March-April period, all years (698 stations, including 63 AIDJEX). Profile TS data are split as to pre and post 1969. TS data from moored instrumentation are located on the map using a star-like symbol.

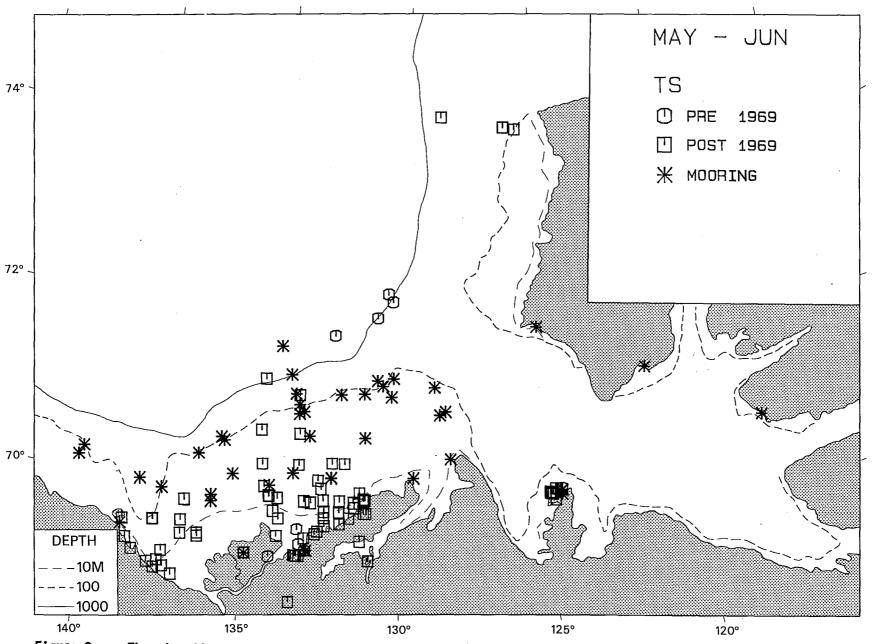


Figure 9c. The locations of temperature—salinity (TS) data collected during the May—June period, all years (489 stations, no AIDJEX). Profile TS data are split as to pre and post 1969. TS data from moored instrumentation are located on the map using a star—like symbol.

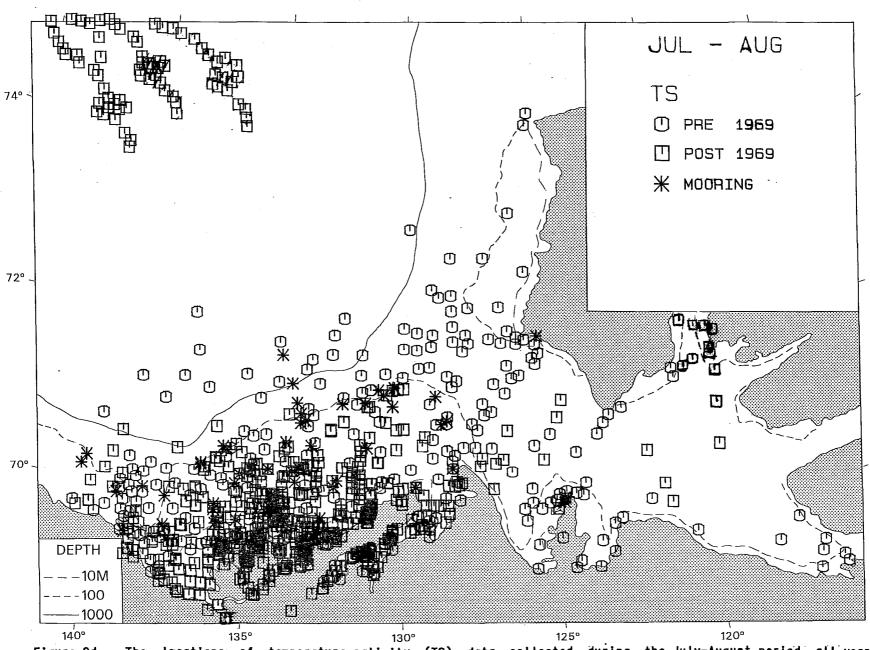


Figure 9d. The locations of temperature-salinity (TS) data collected during the July-August period, all years (2851 stations, including 118 AIDJEX). Profile TS data are split as to pre and post 1969. TS data from moored instrumentation are located on the map using a star-like symbol.

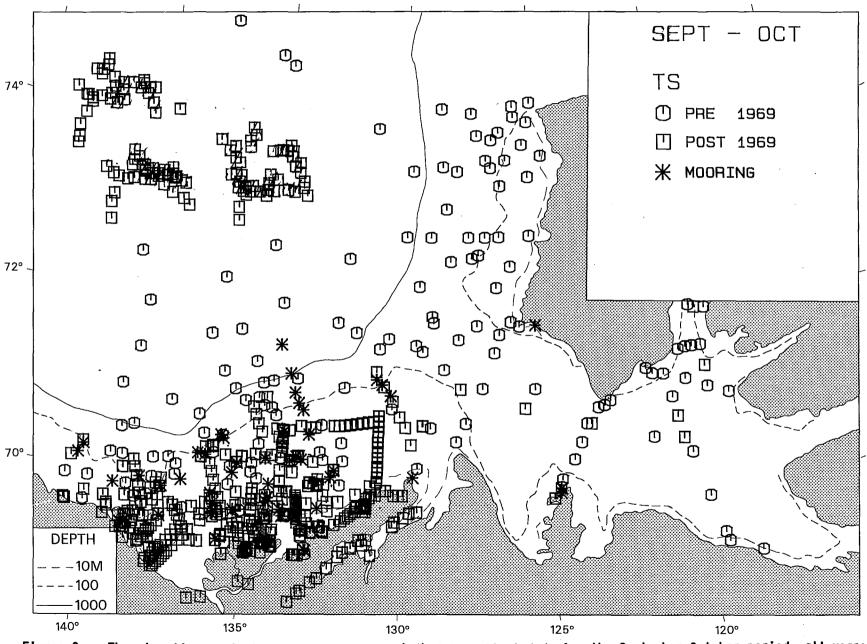


Figure 9e. The locations of temperature-salinity (TS) data collected during the September-October period, all years (1472 stations, including 177 AIDJEX). Profile TS data are split as to pre and post 1969. TS data from moored instrumentation are located on the map using a star-like symbol.

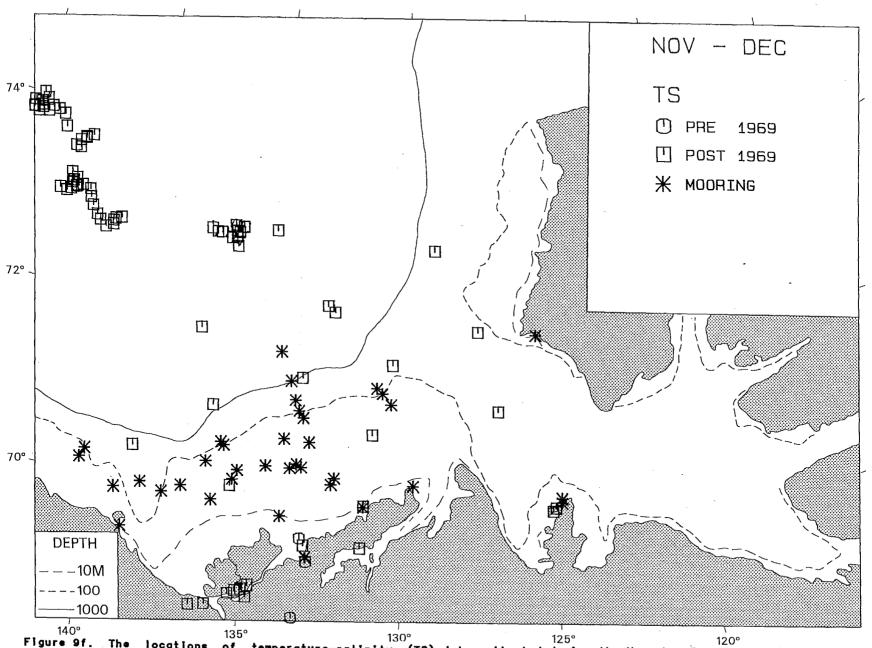


Figure 9f. The locations of temperature-salinity (TS) data collected during the November-December period, all years (285 stations, including 159 AIDJEX). Profile TS data are split as to pre and post 1969. TS data from moored instrumentation are located on the map using a star-like symbol.

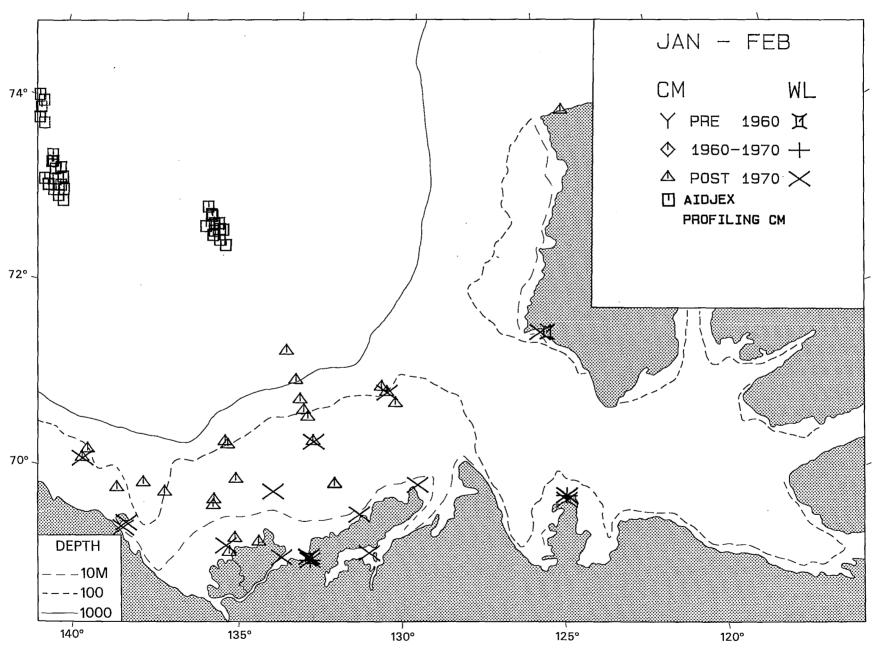


Figure 10a. The locations of all current-meter (CM) and water-level (WL) stations in place during the January-February period, all years (27 CM, 79 WL, 328 AIDJEX CM profiles).

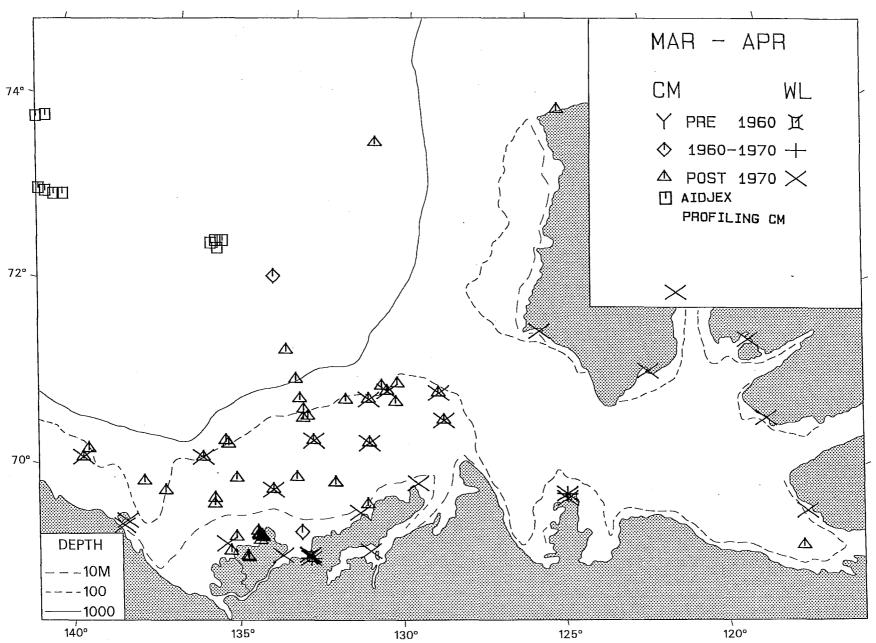


Figure 10b. The locations of all current-meter (CM) and water-level (WL) stations in place during the March-April period, all years (69 CM, 83 WL, 128 AIDJEX CM profiles).

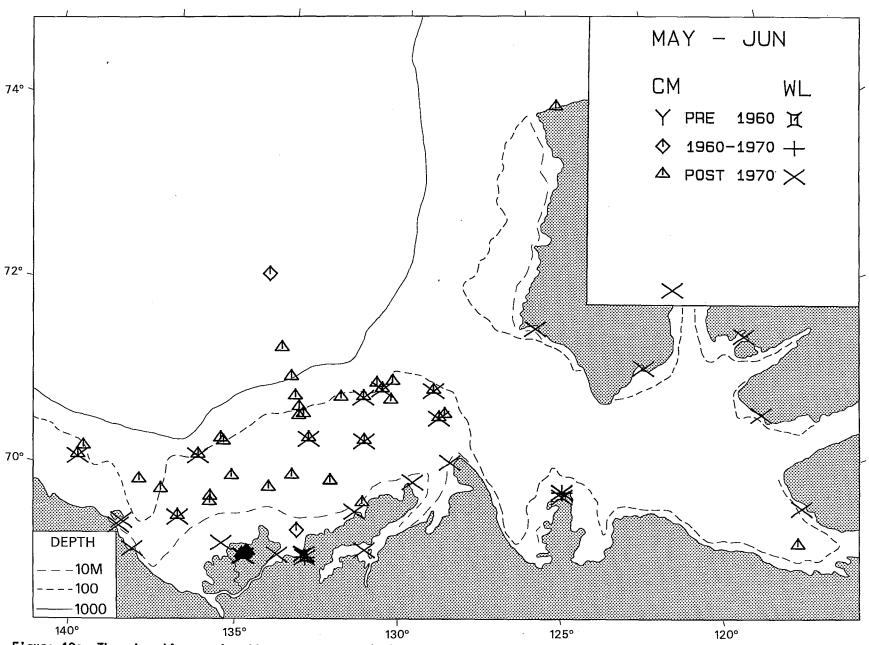


Figure 10c. The locations of all current-meter (CM) and water-level (WL) stations in place during the May-June period, all years (61 CM, 92 WL, 0 AIDJEX CM profiles).

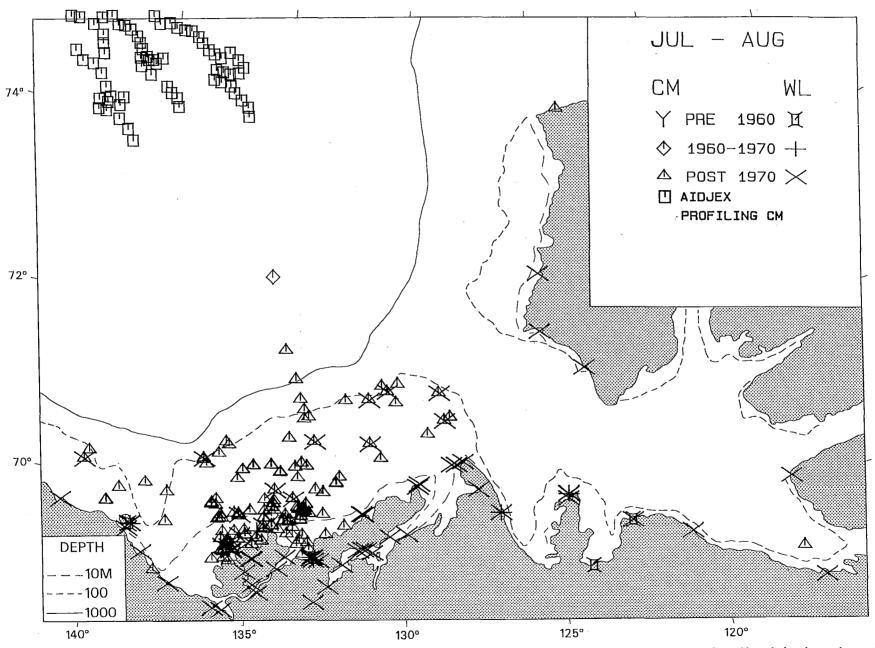


Figure 10d. The locations of all current-meter (CM) and water-level (WL) stations in place during the July-August period, all years (259 CM, 159 WL, 175 AIDJEX CM profiles).

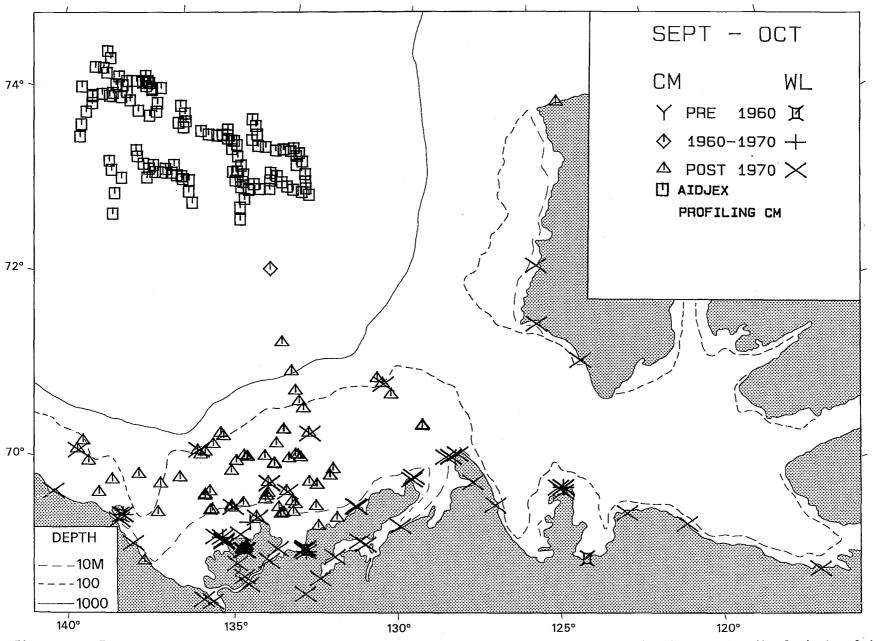


Figure 10e. The locations of all current-meter (CM) and water-level (WL) stations in place during the September-October period, all years (121 CM, 135 WL, 344 AIDJEX CM profiles).

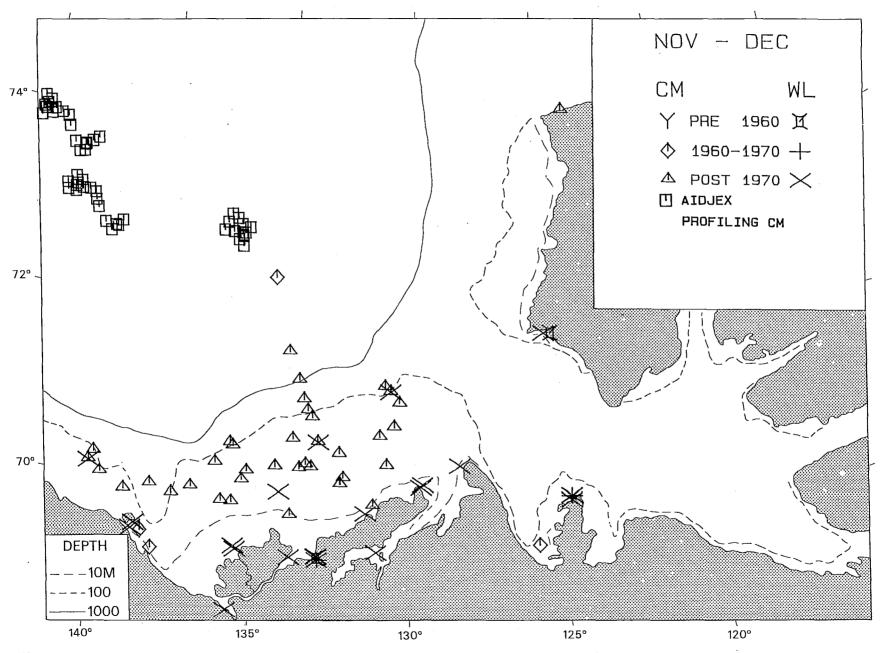


Figure 10f. The locations of all current-meter (CM) and water-level (WL) stations in place during the November-December period, all years (54 CM, 74 WL, 301 AIDJEX CM profiles).

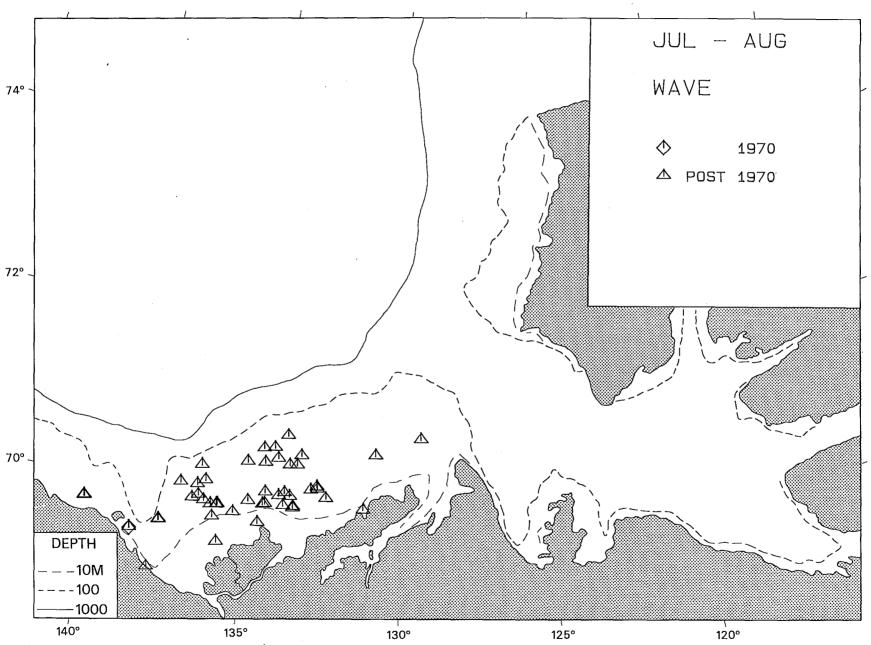


Figure 11a. The locations of all wave data collected during July-August, all years (48 stations).

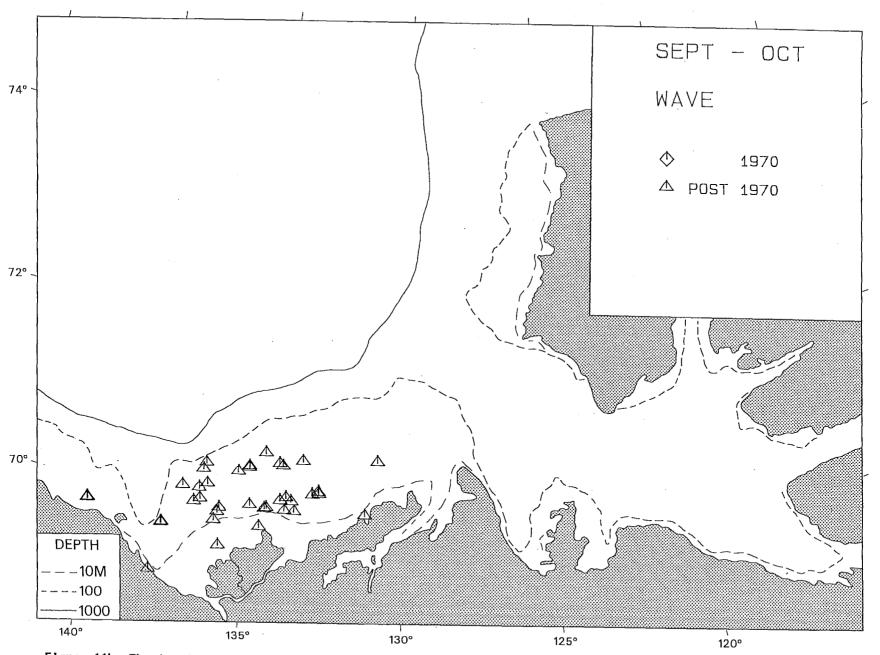


Figure 11b. The locations of all wave data collected during September-October, all years (37 stations).

TEMPERATURE-SALINITY DATA

The locations of TS profile data (bottle or CTD) are split as to pre and post 1969. TS data from moored instruments are located on the maps The number of salinity and temperature using a star-like symbol. measurements depends on the season in different ways in the various sub-areas of the Beaufort Sea. For example, extensive open water appears during the summer over the continental shelf from Herschel Island to the west coast of Banks Island, and the densest distribution of measurements is found at that time (Figures 8, 9d,e). The sparsest sampling in this area occurs from November though February (Figures 8, 9a,f) when the year's ice is forming and there is little daylight, and from April through June (Figures 8, 9c) when breakup occurs. A secondary maxima in measurements appears during March when the Ice Is used as a measurement platform. In favourable years, the spring measurement season may be Some data have been collected using aircraft in December (Figure longer. 9f).

Spring measurements are rare in areas where the ice cover is unstable such as the transition zone between the landfast and permanent pack ice off the Tuktoyaktuk Peninsula or in the western end of Amundsen Gulf.

In central and eastern Amundsen Gulf, essentially no data exist for the periods November to February and May to June.

Over the deep waters of the southeastern Beaufort Sea and Canada Basin, almost all of the available data were collected through the permanent polar sea-ice by the AIDJEX project. In the February to April period, data were collected in 1970 and 1971 as part of the AIDJEX pilot programs, while the main AIDJEX experiment of 1975-1976 included data collection within the study area from August 1975 to May 1976.

CURRENT-METER DATA

Current-meter data are available primarily for the continental shelf and slope off Mackenzie Bay and the Tuktoyaktuk Peninsula during the March through December period (Figure 10). Currents were most often measured during the July through October period, however. The only other source of current-meter data is the AIDJEX projects where the seasonal distribution matches that described above for the temperature-salinity data.

In the whole of Amundsen Gulf and west of Banks Island, only one mooring has been deployed.

WATER-LEVEL DATA

More water-level data are available for the summer and early autumn months than for other times of the year (Figure 10). The permanent stations at Tuktoyaktuk, Cape Parry and Sachs Harbour are susceptible to ice damage in the winter and spring months. The temporary coastal water-level gauges were usually operated only in the summer and early autumn months. Bottom mounted pressure sensors have provided offshore tidal data, particularly over the shelf, for most months of the year. As with TS and current, little water-level data exist for western Banks Island.

WAVE DATA

Wave data have been collected during the July through October period (Figure 11). The Beaufort Sea is generally covered with ice during the rest of the year. Even during the summer months, occasional intrusions of sea-ice can interfere with the collection of wave data.

6.3 EXTENDED TIME SERIES AND SYNOPTIC DATA

SYNOPTIC DATA SETS

In some years, the existence of two or more data sets collected at the same time provides a combined data set with near-synoptic coverage over a relatively large area. The combined data sets may improve coverage within a given area, extend coverage to a larger area or allow comparison of simultaneous processes in different areas. In the Beaufort Sea, possibilities for combinations are largely confined to temperature and salinity data collected during the open water season. Data sets were included only if their measurement periods overlapped significantly. The table below lists near-synoptic data sets by year and general area of coverage.

LIST OF NEAR-SYNOPTIC DATA SETS

<u>Year</u>	Data Set No.	Area(s)
1951	51-0001 51-0002	Tuktoyaktuk Shelf Amundsen Gulf
1952	52-0001 52-0002	Tuktoyaktuk Shelf Continental Slope
1954	54-0001 54-0002 54-0003	Tuktoyaktuk Shelf Amundsen Gulf, Banks Island Shelf Continental Slope
1960	60-0001 60-0002	Continental Slope Tuktoyaktuk Shelf
1970	70–0002 70–0003	Tuktoyaktuk Shelf Mackenzie Delta
1973	73–0002 73–0003	Mackenzie Bay, Tuktoyaktuk Shelf Liverpool, Kugmallit Bays
1974	74-0002 74-0003	Mackenzie Deita Tuktoyaktuk Shelf
1975	75-0002 75-0003 75-0004 75-0006 75-0012B 75-0025	Mackenzie Deita Tuktoyaktuk Sheif Canada Basin Tuktoyaktuk Sheif Kugmallit Bay Yukon Coast
1977	77-0001 77-0002 77-0003 77-0004 77-0009A 77-0035	Mackenzie Bay Tuktoyaktuk Shelf Amundsen Gulf Tuktoyaktuk Shelf Tuktoyaktuk Shelf Tuktoyaktuk Coastal and Liverpool Bay
1985	85-0017A 85-0032	Tuktoyaktuk Shelf Continental Slope
1986	86-0003 86-0008	Tuktoyaktuk Shelf Yukon Shelf

EXTENDED TIME SERIES

Repeated measurements in the same area may allow long-term trends to be detected and levels of variability to be estimated. With the exception of water-level data from the permanent tide gauges, such repeated measurements are available mainly for summer temperature and sailnity data; winter data of any sort are too sparse. Repeated measurements have been made in several areas. The table below lists the areas in which extended time series are available.

LIST OF EXTENDED TIME SERIES BY AREA

Mackenzie	Tuktoyaktuk		Tuktoyaktuk	Continental	Canada	Amundsen
Deita	Shelf		Harbour	Slope	Basin	Gulf
52-0001 * 70-0003 * 73-0002 74-0001 74-0003 74-0007 75-0001 75-0012 75-0012 75-0042 76-0003 76-0004 77-0001	52-0001 52-0002 * 54-0001 54-0002 55-0016 * 57-0012 58-0001 59-0002 60-0003 61-0001 * 69-0001 70-0002 * 73-0002 73-0002 74-0002 74-0007 74-0008 75-0006 75-0009 75-0012 76-0001 76-0001 76-0001 76-0001 79-0001 79-0001 79-0001 79-0001 79-0001 79-0009 80-0002	80-0025 81-0001 81-0002 81-0018 81-0027 82-0097 82-0118 83-0058 83-0065 83-0069 84-0044 84-0045 84-0045 85-0017 85-0032 85-0033 85-0037 86-0003 86-0004	61-0001 62-0002 62-0003 62-0004 63-0003 * 71-0001 * 75-0012 76-0004 76-0020 78-0031 80-0004 80-0041 81-0013 81-0029 82-0111 83-0058	50-0001 51-0002 * 54-0002 * 59-0001 59-0002 60-0001 60-0002 * 72-0001 * 79-0001 81-0001 * 84-0049 85-0032 86-0003 86-0010	56-0012 * 59-0001 * 69-0001 71-0003 * 75-0005 * 79-0001 81-0001	51-0001 51-0002 52-0001 53-0001 54-0003 * 57-0001 * 77-0003 * 82-0003

^{*} missing lines signify gaps of more than one year.

While conducting drilling operations on the continental shelf, Canmar has collected eleven years of current data, 1976-1986. The data are all from summer, and often of relatively short duration, however they are valuable because of the eleven-year coverage. At some of the drill sites, current data were collected over three or four consecutive summers. Fissel (1981) analysed the 1976-1979 data, but this analysis has not been extended to the full eleven-year set, particularly for examination of long-term trends and inter-annual variability. Moreover, the quality of the current meter data in the 1980's has improved due to the use of instrumentation and moorings better suited for use in the wave zone.

6.4 CONCLUSIONS

This inventory of Beaufort Sea oceanographic data will permit oceanographers and others to exploit more fully the existing data base. The inventory's coverage in space and time should allow investigators to decide how much of the data base pertains to their specific requirements and concerns, without having the data themselves in hand. There are several regions and seasons for which the data base is inadequate to describe the general circulation, in particular the region west of Banks Island. On the other hand, this inventory pinpoints valuable data sets worthy of further consideration.

7.0 REFERENCES

Aagaard, K., 1984. The Beaufort Current. In "The Alaskan Beaufort Sea", Ecosystems and environments. Academic Press, Orlando, Florida.

Acreman, J., G. Borstad, and B. Humphrey, 1980. Dome Petroleum experimental oil spill at McKinley Bay, N.W.T. Examination of ice biota. Rep. prepared by Arctic Laboratories Ltd. for Dome Petroleum Ltd., Calgary, Alta. 16 p.

Adams, W.A., 1974. Light Intensity under sea ice containing oil. Beaufort Sea Project G2b, Interim Report: Geological and biological observations at Balaena Bay, Cape Parry, N.W.T by Adams W.A. and M. Hincke. 16 p plus figures and Appendices.

Adams, W.A., 1975. Light intensity and primary productivity under sea ice containing oil. Beaufort Sea Project Tech. Rept. 29, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 44 Front St. W., Toronto, Ontario, M5J 1G2).

Albright, L.J., 1986. Bacterial dynamics within the lower Mackenzie River, its estuary and the southern Beaufort Sea. Can. J. Microbiol. (in press).

Allan, R.B. and G.R. MacKenzie-Grieve, 1983. Water quality and biological survey of Stokes Point and King Point, Yukon - Beaufort Sea Coast. Env. Canada, Env. Protection Service, Reg. Prog. Rep. No. 83-23. 70 p.

Alian, R.B. and G.R. MacKenzie-Grieve, 1984. Water quality and biological survey of the coastal waters near Stokes Point, Yukon - Beaufort Sea Coast. Environment Canada, Environmental Protection Service. Reg. Prog. Rep. No. 84-06. 39 p.

Aquatic Environments Ltd, 1975. Fisheries investigations in a coastal region of the Beaufort Sea. Arctic Gas Biological Report Series Vol <u>34</u>. Canadian Arctic Gas Ltd. and Alaskan Arctic Gas Ltd.

Aquatic Environments Ltd., 1977. Tuft Point and adjacent coastal areas fisheries project. Report to imperial Oil Ltd (unpublished manuscript). 152 p.

Archipelago Marine Research, 1985. A diver survey of herring spawning in the fingers area of Liverpool Bay, N.W.T. Unpub. rep. for DFO, Winnipeg.

Arctic Laboratories Ltd, 1985a. Data report for current meter measurements at Arnak, Summer 1985. Unpubl. rep. by Arctic Laboratories Ltd. for Esso Res. Canada Ltd. 46 p plus Appendices.

Arctic Laboratories Ltd, 1985b. Data report for current meter measurements at Nipterk, Summer 1985. Unpubl. rep. by Arctic Laboratories Ltd. for Esso Res. Canada Ltd. 73 p plus Appendices.

Arctic Laboratories Ltd, 1985c. Data report for wave amd water level measurements at Adgo, Summer 1985. Unpubl. rep. by Arctic Laboratories Ltd. for Esso Res. Canada Ltd. 59 p plus Appendices.

Atkinson, E.G. and J.W. Wacasey, 1976. Caloric values of zoobenthos and

phytobenthos from the Canadian Arctic. Fish. Mar. Serv. Res. Dev. Tech. Rep. 632. 24 p.

Bailey, W.B., 1955. Oceanographic reconnaissance in the Canadian Archipelago (1954). Fish. Res. Bd. Canada MSS Rept. Biol. Sta., No. 603. 145 p.

Balley, W.B., 1957. Oceanographic features of the Canadian Archipelago (1954). Fish. Res. Bd. Canada ($\underline{5}$)(14). pp. 731-769.

Barber, F.G., 1968. On the water of Tuktoyaktuk Harbour. Canada Dept. of Energy, Mines and Res., Mar. Sc. Br. MS Rpt. Ser No. 9, Ottawa. (unpublished manuscript).

Bauer, E., K. Hunkins, T.O. Manley, and W. Tiemann, 1980a. Arctic ice Joint Experiment 1975-1976, Physical Oceanography Report STD data - Camp Caribou Volume 1. Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY. Cu-8-80, Tech. Report No. 8. 99 p. plus unnumbered figures and tables.

Bauer, E., K. Hunkins, T.O. Manley, and W. Tlemann, 1980b. Arctic ice Joint Experiment 1975-1976, Physical Oceanography Report STD data - Camp Blue Fox Volume 2. Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY. Cu-9-80, Tech. Report No. 9. 98 p. plus unnumbered figures and tables.

Bauer, E., K. Hunkins, T.O. Manley, and W. Tiemann, 1980c. Arctic ice Joint Experiment 1975-1976, Physical Oceanography Report STD data - Camp Snowbird, Volume 3. Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY. Cu-10-80, Tech. Report No. 10. 73 p. plus unnumbered figures and tables.

Bauer, E., K. Hunkins, T.O. Manley, and W. Tlemann, 1980d. Arctic ice Joint Experiment 1975-1976, Physical Oceanography Report STD data - Camp Big Bear, Volume 4. Lamont-Doherty Geological Observatory of Columbia University, Pallsades, NY. Cu-11-80, Tech. Report No. 11. 72 p. plus unnumbered figures and tables.

Beak Consultants Ltd., 1975. Biological studies 1975. Beaufort Sea Rep. for Canadian Marine Drilling Ltd.

Beal, M.A., 1968a. The seasonal variation in sea level at Barrow, Alaska. In: Arctic drifting stations. Coordinated by J.E. Sater. Sponsored by Arctic Institute of North America. pp. 327-341.

Beal, M.A., 1968b. The use of light aircraft for oceanographic observations in the Arctic ice pack. In: Arctic drifting stations. Coordinated by J.E. Sater. Arctic Institute of North America. pp. 37-48.

Birch, J.R. and D.B. Fissel, 1982. Data report—shallow water, near-bottom current measurements in the southeast Beafort Sea, summer 1981. Arctic Sciences Ltd. report to Esso Resources Canada Ltd., Calgary, Alberta, January, 1982 (unpublished manuscript). 41 p.

Birch, J.R., D.B. Fissel, A.B. Cornford, and H. Melling, 1984. Arctic Data Compilation and Appraisal. Volume 7. Canada Basin-Arctic Ocean: Physical Oceanography - Temperature, Salinity, Currents and Water Levels. Can. Data Rep. Hydrogr. Ocean Sci. 5: (Vol. 7). 624 p.

Birch, J.R., D.B. Fissel, and G.R. Wilton, 1982. Subsurface current measurements near Tarsiut artificial island, August 1981 — September 1982. Unpublished data report by Arctic Sciences Ltd., Sidney, B.C. for Dome Petroleum Ltd., Calgary, Alberta. 31 p.

Birch, J.R., D.B. Fissel, and G.R. Wilton, 1984a. Physical oceanographic data report: Amerk 0-09 site, Beaufort Sea, Summer 1984, current-meter data. Unpublished report by Arctic Sciences Ltd., Sidney, B.C. for Esso Resources Canada Ltd., Calgary, Alberta. 72 p.

Birch, J.R., D.B. Fissel, and G.R. Wilton, 1984b. Physical oceanographic data report: Nipterk L-19/Kaubvik I-43 site, Beaufort Sea, Summer 1984, current-meter data. Unpublished data report by Arctic Sciences Ltd., Sidney, B.C. for Esso Resources Canada Ltd., Calgary, Alberta. 72 p.

Birch, J.R., E.C. Luscombe, D.B. Fissel, and L.F. Glovando, 1985. West Coast Data inventory and Appraisal. Volume 1. Dixon Entrance, Hecate Strait, Queen Charlotte Sound and Adjoining B.C. Coastal Waters: Physical Oceanography — Temperature, Salinity, Currents, Water Levels and Waves, 1903 through 1984. Can. Data Rep. Hydrogr. Ocean Sci. 37: Vol 1. Part 1, 302 p., Part 2, 265 p.

Birch, J.R., G.R. Wilton, and D.B. Fissel, 1982. Shallow water current measurements in the southeast Beaufort Sea — summer 1982 (including August 8 — 16, 1981 record from W. Atkinson site). Unpub. data report prepared by Arctic Sciences Ltd., Sidney, for Esso Resources Canada Ltd., Calgary. 66 p.

Bodfish, H.H., 1936. Chasing the bowhead. Harvard University Press, Cambridge, Massachusetts. 281 p.

Bond, W.A., 1982. A study of the fish resources of Tuktoyaktuk Harbour, southern Beaufort Sea coast, with special reference to life histories of anadromous coregonids. Can. Tech. Rep. Fish. Aquat. Sci. 1119. 90 p.

Bornhold, B.D., 1975. Suspended matter in the southern Beaufort Sea. Beaufort Sea Project Tech. Rep. 25b, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Borstad, G.A., 1985. Water colour and temperature in the southern Beaufort Sea: remote sensing in support of ecological studies of the bowhead whale. Can. Tech. Rep. Fish. Aquat. Sci. No. 1350. 68p.

Bradstreet, M.S.W. and D.B. Fissel, 1986. Zoopiankton of a bowhead whale feeding area off the Yukon coast in August 1985. Unpub. rep. by LGL Ltd., King City, Ontario and Arctic Sciences Ltd., Sidney, B.C. for Indian and Northern Affairs Canada. 155 p.

Brunskill, G.J., D.M. Rosenberg, N.B. Snow, G.L. Vascotto, and R. Wageman,

1973. Ecological studies of aquatic systems in the Mackenzie-Porcupine drainages in relation to proposed pipeline and highway developments. Can. Task Force on Northern Oil Development Envir. So. Comm. Vols. 1 and 2.

Bunch, J.N., 1974. Distribution and abundance of heterotrophic bacteria in the south Beaufort Sea. Part III b. p. 175-195. in: A series of four reports on the marine ecology of the Mackenzie Delta and Tuktoyaktuk peninsula region. Environmental-Social Committee, Northern Pipelines, Task Force on Northern OII Development Rep. No. 74-22.

Bunch, J.N., F. Dugre, and T. Cartier, 1983. Issungnak oceanographic survey. Part C: Microbiology. Rep. prep. for Esso Canada Resources Ltd., Gulf Canada Resources Inc. and Dome Petroleum Ltd., Calgary, Alta. 39 p.

Bunch, J.N. and R.C. Harland, 1974. Degradation of petroleum by a psychrotolerant marine flora from the Eskimo Lakes. Part I. p. 1-30. In: A series of four reports on the marine ecology of the Mackenzie Delta and Tuktoyaktuk Peninsula region. Environmental-Social Committee, Northern Pipelines, Task Force on Northern Oil Development Rep. No. 74-22.

Bunch, J.N. and R.C. Harland, 1976. Blodegration of crude petroleum by the indigenous microbial flora of the Beaufort Sea. Beaufort Sea Tech. Rep. No. 10. 52 p.

Burrell, D.C., P.J. Kinney, R.S. Hadley, and M.E. Arhelgar, 1970. Beaufort Sea environmental data, 1968-1969. Institute of Marine Science, University of Alaska. R70-20. 274 p.

Byers, S.C. and R.K. Kashino, 1980. Survey of fish populations in Kugmailit Bay and Tuktoyaktuk Harbour, Northwest Territories. Dobrocky Seatech Ltd., Victoria, B.C. Prepared for Dome Petroleum Ltd., Calgary, Alta. 78 p.

Cameron, W.M., 1952. Hydrography and oceanography of the southeast Beaufort Sea and Amundsen Gulf, Part I: Hydrographic and oceanographic observations in the Beaufort Sea, 1951. University of British Columbia, Institute of Oceanography. (unpub. manuscript).

Cameron, W.M., 1953. Hydrography and oceanography of the southeast Beaufort Sea and Amundsen Gulf, including Part II (appendices): hydrographic and oceanographic observations in the Beaufort Sea, 1952. University of British Columbia, institute of Oceanography (unpublished manuscript). 82 p.

Canadian Arctic Gas Study Limited, 1975. Fisheries investigations in a coastal region of the Beaufort Sea. P.C. Craig (Ed.). Arctic Gas Biological Report Series Volume 34.

Canadian Marine Drilling Ltd, 1977a. Environmental observations — summary. Prepared by Marex for Canadian Marine Drilling Ltd., Calgary, Alberta. January 1977. (Unpublished manuscript). Report number 275.

Canadian Marine Drilling Ltd, 1977b. Environmental observations in the Beaufort Sea - 1977. Canmar Technical Report, Canadian Marine Drilling Ltd., Calgary, Alberta. 8 volumes. (Unpublished manuscript).

Canadian Marine Drilling Ltd, 1979. Environmental data observations in the Beaufort Sea - 1979. Canmar Technical Report, Canadian Marine Drilling Ltd., Calgary, Alberta. 6 volumes plus supplement. (Unpublished manuscript).

Canadian Marine Drilling Ltd, 1980. Environmental observations in the Beaufort Sea - 1980, Water Column Data. Canmar Technical Report, Canadian Marine Drilling Ltd., Calgary, Alberta. (unpub. manuscript).

Canadian Oceanographic Data Centre, 1963. Cape Parry Area, N.W.T. No. 5, 1963 data record series. Canada, Canadian Oceanographic Data Centre, Dept. Energy, Mines and Res., Ottawa. 44 p.

Canadian Oceanographic Data Centre, 1964. Data record - Franklin and Darnley Bays, N.W.T. No. 2, 1964 data record series. Canada, Canadian Oceanographic Data Centre, Dept. Energy, Mines and Res., Ottawa.

Chambers, M. and G. Bradley, 1976. Part 2 - Physical and water quality studies. R.A. Owens (Ed.). Environmental Studies, Hans Bay region, N.W.T., 1976, Volume 1, Aquatic Studies. Report by F.F. Slaney and Co. Ltd. for Gulf Oll Canada Ltd. pp. 6-14.

Coachman, L.K. and C.A. Barnes, 1961. The contribution of Bering Sea water to the Arctic Ocean. Arctic(14). pp. 147-161.

Coachman, L.K. and J.L. Newton, 1972. Water and ice motion in the Beaufort Sea, spring 1970. AIDJEX Bulletin No. 12, Arctic ice dynamics joint experiment, Div. of Marine Res., University of Washington, Seattle, Wash.

Collinson, R., 1889. Journal of HMS Enterprise, on the expedition in search of Sir John Franklin's ships by Bering Strait, 1850-1855. S. Low, Marston, Searle and Riverton, London. Facsimile edition, 1976, AMS Press, New York, NY.

Cook, J.A., 1926. Pursuing the whale. A quarter-century of whaling in the Arctic. The Riverside Press, Cambridge, Massachusetts. 344 p.

Cornford, A.B., D.D. Lemon, D.B. Fissel, H. Melling, B.D. Smiley, R.H. Herilnveaux, and R.W. Macdonald, 1982. Arctic Data Compilation and Appraisal. Volume 1. Beaufort Sea: physical oceanography — temperature, salinity, currents and water levels. Can. Data Rep. Hydrogr. Ocean Sci. 5. 279 p.

Craig, P.C.(Ed.), 1975. Fisheries investigations in a coastal region of the Beaufort Sea. Arctic Gas Biological Report Series V <u>34</u>. Report by Aquatic Environments Ltd. to Canadian Arctic Gas Study Ltd. (unpublished manuscript).

Croasdale, K.R., 1970. The Beaufort Sea ice sampling project-1970 APOA report 2-1. Imperial Oil Ltd.

Davidge, D.A. and G.R. Mackenzie-Grieve, 1986. A follow-up water quality and biological survey of King Point and Stokes Point, Yukon - Beaufort Sea coast. Env. Canada, Env. Prot. Service, Draft Rep. Prog. Rep.

Dawson, W.B., 1920. Tidal investigations and results. In: Part C, Vol. X of Report of the Canadian Arctic Expedition, 1913-1918. Thomas Mulvey, printer to the King's Most Excellent Majesty, Ottawa.

De-Lange-Boom, B.R. and N. Hill, 1986. Data report for wave measurements at Amauligak I-65, summer 1986. Unpub. rep. by Arctic Laboratories Ltd., Sidney, B.C. for Beaudrill Ltd., Calgary, Alberta.

De-Lange-Boom, B.R. and B.A. Juszko, 1983. Beaufort Sea oceanographic program, summer 1983. Final data report by Arctic Laboratories Ltd. for Esso Res. Ltd. 40 p.

DeGraaf, D. and K. Machniak, 1977. Fisheries Investigations along the Crossdelta Pipeline Route in the Mackenzie Delta. (In:) McCart, P. 1977. Arctic Gas Biological Report Series Vol 39. Studies to determine the impact of gas pipeline development on aquatic ecosystems. Report by Aquatic Environments Ltd. for Can. Arctic Gas Study Ltd. 169 p.

Devenis, P.K., 1985. Guif 1984 Beaufort Sea drilling season. Environmental operating conditions: Pitsiulak A-05; Amauligak J-44; Akpak P-35; Tarsiut P-45 Summary Reports. Unpub. Rep. by Guif Canada Res. Inc.

Dewis, F.J., A.A. Levinson, and P. Bayliss, 1972. Hydrogeochemistry of the surface waters of the Mackenzie River drainage basin, Canada – IV. Boron – salinity – clay mineralogy relationships in modern deltas. Geochim. Cosmochim. Acta(36). pp. 1359–1375.

Dickins, D.F. and I.A. Buist, 1981. Oil and gas under sea ice, 1st draft - unpub. rep by D.F. Dickins Eng. (Dickins) and Dome Petroleum Ltd. (Buist). Vol. 1-262 p plus Vol. 2 (Appendices).

Dickins Assoc. Ltd., D.F., Arctic Laboratories Ltd. and J. Hellebust, 1981. Return to Balaena Bay. Long-term effects of a large scale crude oil spill under arctic sea ice, 1975 to 1981. Rep. prep. for Gulf Canada Resources Inc., Calgary, Alta. 127 p. plus appendix.

Diemand, D., E.M. Reimer, and J.V. Barrie, 1982. Ocean drifter studies of surface currents along the coasts of Newfoundland and Labrador and in the Beaufort Sea. St. John's: Centre for Cold Ocean Resources Engineering, 1982. (Data report — Memorial University of Newfoundland. Centre for Cold Ocean Resources Engineering)((C-CORE publication no. 82-3)). viii, 35 p., figures, tables.

Duval, W.S., 1977. Planktonic communities. In: F.F. Slaney and Co. Ltd. 1976 Summer aquatic studies: Arnak L-30 artificial Island site and Tuft Point borrow site. Rep. prep. for imperial OII Ltd., Calgary, Alta.

Envirocon Ltd, 1977. Isserk artificial Island, environmental baseline and monitoring study, 1977. Report by Envirocon Ltd., Calgary, Alberta for Imperial Oil Ltd., Calgary, Alberta, December 1977 (unpublished manuscript). 119 p plus appendices.

Erickson, P. and R. Pett, 1981. Concentrations of suspended particulate

material and dissolved oxygen in Tuktoyaktuk Harbour near dredging conducted by the Government of the Northwest Territories, June 16 - July 6, 1981. Arctic Laboratories Ltd. report to Water and Sanitation Section, Town Planning and Lands Division, Department of Local Government, Government of the Northwest Territories, Yellowknife, N.W.T. (unpublished manuscript). 71 p.

Erickson, P., D. Thomas, R. Pett, and B. De-Lange-Boom, 1983. Issungnak Oceanographic Survey, Part A: Oceanographic properties. Rep. prep. for Esso Resources Canada Limited, Gulf Canada Resources Inc., Dome petroleum Limited by Arctic Laboratories Limited, Inuvik, Northwest Territories. 194 p.

Fissel, D.B., 1981. An analysis of current meter data obtained at Canmar drillships, 1976-1979. Arctic Sciences Ltd. report to Dome Petroleum Ltd., Calgary, Aita. (unpublished manuscript).

Fissel, D.B. and J.R. Birch, 1982. An analysis of shallow water near bottom current measurements in the southeast Beaufort Sea, summer 1981. Arctic Sciences Ltd. report to Esso Resources Canada Ltd., Calgary, Alta. (unpublished manuscript). 49 p.

Fissel, D.B., J.R. Birch, and G.R. Wilton, 1984. Physical oceanographic data report: Nipterk L-19/Kaubvik I-43 site, Beaufort Sea, summer 1984, wave and water level data. Unpub. data report by Arctic Sciences Ltd. for Esso Resources Canada Ltd., Calgary, Alta. 89 p.

Fissel, D.B., D.N. Knight, and J.R. Birch, 1984. An oceanographic survey of the Canadian Arctic Archipelago, March-April 1982. Can. Contract. Rep. Hydrogr. Ocean Sci. 15. 415 p.

Fissel, D.B., G.R. Wilton, and D.N. Knight, 1981. Subsurface current measurements at Tarsiut and Uviluk drill sites January — August 1981. Unpub. data report by Arctic Sciences Ltd. for Dome Petroleum Ltd., Calgary, Alta. 50 p.

Fomin, L.M., 1964. The dynamic method in oceanography. Elsevier Oceanography Series Vol 2. Elsevier Publishing Co., Amsterdam, London and New York.

Foy, M.G. and S.I.C. Hsiao, 1976. Phytoplankton data from the Beaufort Sea, 1973 to 1975. Fish. & Mar. Service, Tech. Rep. No. 617. 44 p.

Fraker, M.A., C.D. Gordon, J.W. McDonald, J.K.B. Ford, and G. Chambers, 1979. White whale (Delphinapterus leucas) distribution and abundance and the relationship to physical and chemical characteristics of the Mackenzie estuary. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 863. 56 p.

Galbraith, D.F. and D.C. Fraser, 1974. Distribution and food habits of fish in the eastern coastal Beaufort Sea. Interim Rep. of Beaufort Sea Project Study B1 (Eastern), Beaufort Sea Project, Victoria, B.C. 48 p.

Galbraith, D.F. and J.G. Hunter, 1975. Fishes of offshore waters and Tuktoyaktuk vicinity. Beaufort Sea Project Tech. Rep. 7. 16 p plus appendices.

Gillie, R.D., 1985. King Point coastal zone sediment transport study. Contractor's final report on field operations. Unpub. rep. by Dobrocky Seatech Ltd., Sidney, B.C. for Geol. Survey of Canada. 30 p plus unnumbered Appendices.

Gillman, D.V. and A.H. Kristofferson, 1984. Biological data on Pacific herring (Clupea harengus pallasi) from Tuktoyaktuk Harbour and the Liverpool Bay area, Northwest Territories, 1981 to 1983. Can. Data Rep. Fish. Aquat. Sci. 485. iv plus 22 p.

Glovando, L.F. and R.H. Herlinveaux, 1981. A discussion of factors influencing dispersion of pollutants in the Beaufort Sea. Pacific Marine Sciences Report 81-4, Institute of Ocean Sciences, Sidney, B.C. (unpub. manuscript).

Grainger, E.H., 1974. Baseline study of the marine environment in the area of the Mackenzie Delta. Task Force on Northern Oil Development Rept. no. 74-22. Environmental social Committee Northern Pipelines. pp. 101-173.

Grainger, E.H., 1975. Biological productivity of the southern Beaufort Sea: the physical-chemical environment and the plankton. Beaufort Sea Project Tech. Rept. 12a, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Grainger, E.H. and J.E. Lovrity, 1975. Physical and chemical oceanographic data from the Beaufort Sea, 1960 to 1975. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 590.

Grainger, E.H., J.E. Lovrity, and M.S. Evans, 1977. Biological observations in the Eskimo Lakes, Arctic Canada. Physical, nutrient and primary production data, 1961-1976. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 685.

Griffiths, W., P. Craig, G. Walder, and G. Mann, 1975. Fisheries investigations in a coastal region of the Beaufort Sea (Nunaluk Lagoon, Yukon Territory). Chapt. II. In: P.C. Craig (Ed.). Fisheries investigatons in a coastal region of the Beaufort Sea. Biological Rep. Series, Vol. 34. Rep. Prep. by Aquatic Environments Ltd. for Canadian Arctic Gas Study Ltd. and Alaskan Arctic Gas Study Co. 219 p.

Griffiths, W.B., 1981. Characteristics of bowhead feeding areas. In: W.J. Richardson (Ed.). Behavior, disturbance responses and feeding of bowhead whales in the Beaufort Sea, 1980. Rep. Prep. by LGL Ecological Research Associates Inc. for U.S. Bureau of Land Management, Washington. pp 197-264.

Griffiths, W.B. and R.A. Buchanan, 1982. Characteristics of bowhead feeding areas. In: W.J. Richardson (Ed.), Behavior, disturbance responses and feeding of bowhead whales Balaena Mysticetus in the Beaufort Sea, 1980—81. Rep. prep. by LGL Ecological Research Associates Inc. for U.S. Bureau of Land Management, Washington. p 347—455.

Harwood, L.A. and G.A. Borstad, 1985. Bowhead whale monitoring study in the southeast Beaufort Sea, July-September 1984. Environmental Studies Revolving Funds Report No. 009. Ottawa. 99 p.

Hattersley-Smith, G.F., 1952. Beaufort Sea expedition, 1951. Arctic Circular $\underline{V(2)}$. pp. 12-13.

Healey, D.A., 1971. Oceanographic observations in the Beaufort Sea, July 15 to September 4, 1970. Dept. of Fish. and Forestry, Marine Services Branch, Pacific Region, Victoria (unpub. manuscript).

Heath, W.A. and D.J. Thomas, 1983. A study of the benthos and sediment chemistry at Tarsiut N-44 artificial island and substrate borrow areas in the southern Beaufort Sea - 1982. Rep. for Gulf Canada and Dome Petroleum Ltd. by Arctic Laboratories Ltd. 79 p plus appendices.

Heath, W.A. and D.J. Thomas, 1984. The impact of gravel dredging on benthic fauna near Herschel Island, Yukon Territory, 1981-1982. Rep. for Dome Petroleum Ltd. and Gulf Canada Resources Inc. by Arctic Laboratories Ltd. 74 p plus appendices.

Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).

Herlinveaux, R.H. and B.R. De-Lange-Boom, 1975. Physical oceanography of the southeastern Beaufort Sea. Beaufort Sea Project Tech. Rept. 18, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Herlinveaux, R.H., B.R. De-Lange-Boom, and G.R. Wilton, 1976a. Salinity, temperature, turbidity and meteorological observations in the Beaufort Sea: summer 1974, spring and summer, 1975. Pacific Marine Science Rept. 76-26, institute of Ocean Sciences, Patricia Bay, Victoria, B.C. (unpub. manuscript).

Herlinveaux, R.H., B.R. De-Lange-Boom, and G.R. Wilton, 1976b. Water movements in the Beaufort Sea: summer 1974, spring and summer, 1975. Pacific Marine Science Rept. 76-27, institute of Ocean Sciences, Patricia Bay, Victoria, B.C. (unpub. manuscript).

Hill, R.M., 1967. Observations on beluga whales trapped by ice in Eskimo Lakes, winter 1966/67. Unpub. rep. by Inuvik Research Laboratory, Dep. of Indian Affairs and Northern Development. 13 p.

Hillaby, B., 1977. Unpub. field notes of fisheries investigations at King Point Lagoon, Yukon Territory. For Dept. Fish. & Oceans, Vancouver, B.C.

Hodgins, D.O., O.J. Sayao, E.D. Kinsella, and P.W. Morgan, 1986 (in print). Nearshore sediment dynamics — Beaufort Sea. The 1986 Monitoring Program. Environmental Studies Revolving Funds, Ottawa. Report No. 054.

Hopky, G.A., D.B. Chiperzak, and M.J. Lawrence, 1986. Seasonal temperature, salinity and density data for the Canadian Beaufort Sheif: 1984-85. Can.

Data Rep. Fish. Aquat. Sci.

Huggett, W.S., M.J. Woodward, and A.N. Douglas, 1977. Data record of current observations Volume XVI: Beaufort Sea 1974 to 1976. Institute of Ocean Sciences, Patricia Bay, Sidney, B.C. (unpub. manuscript).

Huggett, W.S., M.J. Woodward, F. Stephenson, F.V. Hermiston, and A. Douglas, 1975. Near bottom currents and offshore tides. Beaufort Sea Project Tech. Rept. 16, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Humphrey, B., 1980. Dome/Canmar oil under ice experiment. Rep. by Arctic Laboratories Ltd. (Inuvik, N.W.T.) to Dome Petroleum Ltd., Calgary, Alberta (unpub. manuscript).

Hunkins, K., 1972. Water stress and ocean current measurements at Camp 200, 1971. AIDJEX Bulletin no. 12, Arctic ice dynamics joint experiment, Div. of Marine Res., University of Washington, Seattle, Wash. pp. 35-60.

Hunkins, K., 1974. Subsurface eddies in the Arctic Ocean. Deep-Sea Res.(21). pp. 1017-1033.

Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87p.

Ince, S., 1962. Winter regime of a tidal inlet in the Arctic and the use of air for the protection of wharf structures. International Conference on Coastal Engineering, Eighth, Mexico. pp. 521-532.

Jones, M. and R. Kendel, 1973. The Beaufort Sea gillnetting program in the vicinity of King Point, Yukon. Memorandum Report. Dept. of Environment, Fisheries and Marine Serv., Whitehorse, Y.T.

Jones, M.L. and J. Den Beste, 1977. Tuft Point and adjacent coastal areas fisheries project. Rep. prep. by Aquatic Environments Ltd. for Imperial Oil Ltd., Calgary, Alta. 152 p.

Kelly, W.J.B., 1967. Tuktoyaktuk Harbour - a data report. Canada Dept. Energy, Mines and Res. Mar. Sc. Br. MS Rep. Ser. No. 7. (unpub. manuscript).

Kendel, R.E., R.A.C. Johnston, U. Lobsiger, and M.D. Kozak, 1975. Fishes of the Yukon Coast. Beaufort Sea Project Tech. Rept. 6, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (Available from Micromedia Ltd., Information Access, 144 Front St., Toronto, Ontario, M5J 1G2).

Kinney, P.J., D.C. Burrell, M.E. Arhelger, T.C. Loder, and D.W. Hood, 1970b. Chukchi Sea data report: USCGC Northwind, July-August 1968: USCGC Staten Island, July-August 1969. University of Alaska, Fairbanks. R-70-23. 305 p.

Kozo, T.L. and R.Q. Robe, 1986. Modeling winds and open-water buoy drift along the eastern Beaufort Sea coast, including the effects of the Brooks

Range. Jour. of Geophys. Res. Vol. 91(No. C11). pp 13011-13032.

Kurfurst, P.J., 1984. Geotechnical investigations in the southern Beaufort Sea - Spring 1984, GSC open file No. 1078. 93 p.

Kusunoki, K., 1962. Hydrography of the Arctic Ocean with special reference to the Beaufort Sea. Contributions from the Institute of Low Temperature Science, series A, no. 17. Inst. of Low Temp. Sc., Hokkaido University, Sapporo, Japan. pp. 1-74.

Kusunoki, K., J. Muguruma, and K. Higuchi, 1962. Oceanographic observations at Fletcher's Ice Island (T-3) in the Arctic Ocean in 1959-60. Arctic Institute of North America. Research paper no. 22. pp 1-110.

Lafond, E.C., 1960. Arctic oceanography by submarines. U.S. Naval Inst. Proc. 86. pp. 90-96.

Larsen, M.A., 1945. Reports and other papers relating to the two voyages of the R.C.M. Police Schooner, St. Roch, through the Northwest Passage. Ottawa. 102 p.

Lawrence, M.J., J. Lacho, and S. Davies, 1984. A survey of the coastal fishes of the southeastern Beaufort Sea. Can. Tech. Rep. Fish. Aquat. Sci. 1220. 178 p.

Lemon, D.D. and D.M. Kowalski, 1982. Water column measurements at Canmar drillsites in the Beaufort Sea, 1976-1980. Unpub. rep. by Arctic Sciences Ltd., for the Institute of Ocean Sciences, Sidney. Vol. $1-100\,$ p plus appendices; Vol. $1-100\,$ p representation of the Institute of Ocean Sciences, unnumbered.

Lewis, E.L., 1980. The practical salinity scale 1978 and its antecedents. IEEE journal of oceanic engineering. Vol. OE-5(1). pp. 3-8.

Lyon, W., 1961. Ocean and sea-ice research in the Arctic Ocean via submarine. N.Y. Acad. Sci. Ser. 2 23(8).

Lyon, W., 1963. The submarine and the Arctic Ocean. Polar Record <u>11</u>(75). pp. 699-705.

Lyon, W., 1984. The navigation of Arctic polar submarines. Journal of Navigation (37). pp. 155-179.

Macdonald, R.W., M.E. McFarland, S.J. deMora, D.M. Macdonald, and W.K. Johnson, 1978. Oceanographic data report, Amundsen Gulf, August to September 1977. Institute of Ocean Sciences, Patricia Bay, Sidney, B.C. (unpub. manuscript). Pacific Marine Science Report 78-10.

Manley, T.O., 1981. Eddies of the western Arctic Ocean — their characteristics and importance to the energy, heat and salt balance. Ph.D. Thesis, Lamont-Doherty Geological Observatory, Columbia University, Palisades, N.Y. Also available as CU-1-81 Technical Report No. 1, Office of Naval Research, U.S. Dept. of the Navy, Contract NO0014-76-C-004 (unpub. manuscript).

Manley, T.O., 1981. Eddies of the western Arctic Ocean — their characteristics and importance to the energy, heat and salt balance. Lamont—Doherty Observatory of Columbia University, Palisades, NY. Doctoral dissertation and supporting material in CU-1-81. Tech. Report No. 1.

Manley, T.O., K. Hunkins, and W. Tiemann, 1980a. Arctic ice dynamics joint experiment 1975-76. Physical oceanography data report. Profiling current meter - Camp Caribou. Office of Naval Research, U.S. Department of the Navy, Contract N00014-76-C-004 (unpub. manuscript). Technical Report No. 4. 237 p.

Manley, T.O., K. Hunkins, and W. Tiemann, 1980b. Arctic lice dynamics joint experiment 1975-76. Physical oceanography data report. Profiling current meter data - Camp Blue Fox. Office of Naval Research, U.S. Department of the Navy, Contract N00014-76-C-004 (unpub. manuscript). Technical Report No. 5. 453 p.

Manley, T.O., K. Hunkins, and W. Tlemann, 1980c. Arctic ice dynamics joint experiment 1975-76. Physical oceanography data report. Profiling current meter data - Camp Snowbird. Office of Naval Research, U.S. Department of the Navy, Contract N00014-76-C-004 (unpub. manuscript). Technical Report No. 6. 455 p.

Manley, T.O., K. Hunkins, and W. Tiemann, 1980d. Arctic ice dynamics joint experiment 1975-76. Physical oceanography data report. Profiling current meter data - Camp Big Bear. Office of Naval Research, U.S. Department of the Navy, Contract N00014-76-C-004 (unpub. manuscript). Technical Report No. 7. 332 p.

Mann, G.J., 1974. Life history types of the least cisco (Coregonus sardinella, Valenciennes) in the Yukon Territory, North Slope, and Eastern Mackenzie River, Delta drainages. In McCart (Ed.): Life histories of three species of freshwater fishes in Beaufort Sea drainages, Yukon territory. Report by Aquatic Environment Ltd. for Arctic Gas. Biol. rep. ser. 18(3). 132 p.

Martin, L.C., V.A. Poulin, and G. Bradley, 1976. Lake and stream catalogue, Hans Bay region, N.W.T. Rep. prep. by F.F. Slaney and Co. Ltd. for Gulf Oil Canada Ltd., Calgary, Alta. 6 p. plus catalogue sheets.

McDonald, J.W. and L.C. Martin, 1976. A summer survey of the physical oceanography and water chemistry of the Mackenzie River Estuary, N.W.T., 1975. Report by F.F. Slaney to Imperial Oil Co. Ltd. (unpub. manuscript).

McLaren, P.L. and R.A. Davis, 1984. Distribution of bowhead whales and other marine mammals in the southeast Beaufort Sea, August - September 1983. Unpub. LGL Ltd. rep. for Dome Petroleum Ltd., and Gulf Canada Resources Inc., Calgary.

McNeill, M.R. and J.F. Garrett, 1975. Open water surface currents. Beaufort Sea Project Tech. Rept. 17, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Mel'nikov, I.A., 1976. Hydrobiological investigations in the central Arctic Ocean. Oceanology <u>16</u>(3). pp. 314-315.

Melling, H., 1983. Oceanographic features of the Beaufort Sea in early winter. Can. Tech. Rep. Hydrogr. Ocean Sci:(20). 131 p.

Melling, H. and E.L. Lewis, 1982. Shelf drainage flows in the Beaufort Sea and their effect on the Arctic Ocean pycnocline;. Deep Sea Res. Vol. 29(no. 8A). pp. 967-985.

Murphy, D.L., I.M. Lissauer, and J.C. Myers, 1983. Movement of satellite-tracked buoys in the Beaufort Sea (1979-1981). U.S. Coast Guard R&D Center, Avery Point, Groton, Conn. Rep. No. CG-D-30-83. 53 p.

Myers, R.M. and J.A. Kirby, 1982. Oceanographic monitoring at Tarsiut Island. Unpub. rep. by Canmar 0023P/0003P, November 29, 1982. Data Report 1982.

NORCOR Engineering & Research Ltd, 1975. The Interaction of crude oil with Arctic Sea Ice. Beaufort Sea Project Tech. Rept. 27, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2). 149 p plus appendices.

Nadeau, O.C., 1984. Field operations report and data synthesis for the Beaufort Sea Sediment Dynamics Project: 1983-1984. Unpub. rep. by Arctic Laboratories Ltd. for the Atlantic Geoscience Centre, Dept. Energy Mines and Res. 16 p plus unnumbered appendices.

Oceanographic Services Inc, 1970. Ice and current measurement program in the Beaufort Sea, spring 1970. Unpub. rep. by Oceanographic Services Inc. for Imperial Oil Ltd. Rep. No. 201-2.

Paquette, R.G. and R.H. Bourke, 1974. Observations on the coastal current of Arctic Alaska. J. Mar. Res. 32(2). pp. 195-207.

Percy, R., 1975. Fishes of the outer Mackenzie Delta. Beaufort Sea Project Tech. Rept. 8, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Acess, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Pett, R., J. Acreman, and G. Vickers, 1981. The Ice-flora and plankton near Issungnak artificial Island in the southern Beaufort Sea — a progress report. Arctic Laboratories Ltd., Inuvik, N.W.T. (unpub. manuscript). 44 p.

Pett, R.J., G.P. Vickers, J.C. Acreman, and A.G. Ethler, 1983. A seasonal study of the epontic and planktonic communities near the Issungnak artificial island and McKinley Bay in the Canadian Beaufort Sea. Rep. prep. by Arctic Laboratories Ltd. for Fisheries and Oceans Canada. 89 p. plus appendix.

Ratynski, R.A., 1983. Mid-summer ichthyopiankton populations of Tuktoyaktuk Harbour, N.W.T. Can. Tech. Rep. Fish. Aquat. Sci. 1218. iv plus 21 p.

- Richardson, W.J., 1986. Importance of the eastern Alaskan Beaufort Sea to feeding bowhead whales, 1985. W.J. Richardson (Ed.). Unpub. draft report by LGL Ecological Res. Assoc. and Arctic Sciences Ltd., for the U.S. Minerais Management Service. 327 p.
- Robe, R.Q., I.M. Lissauer, and J.C. Myers, 1983. Beaufort Sea drifting buoys 1983. Paper presented at 7th Annual Arctic Marine Oil Spill Program Technical Seminar, Tech. Serv. Branch, Environ. Prot. Serv., Edmonton, Alberta, Canada, June 12-14, 1984.
- Sergeant, D.E. and W. Hoek, 1974. Seasonal distribution of bowhead and white whales in the eastern Beaufort Sea. in: J.C. Reed and J.E. Sater (Ed.). The coast and shelf of the Beaufort Sea. Arctic institute of North America, Arlington, Virginia. pp. 705-719.
- Slaney, F.F. & Company Ltd, 1973a. Environmental impact assessment immerk artificial island construction, Vol. 11 environmental studies. Report to imperial Oil Ltd., January, 1973. (unpub. manuscript). 64 p. plus appendices.
- Slaney, F.F. & Company Ltd, 1973b. 1972 Environmental field program, Taglu Richards Island, Mackenzle Delta. Interim Report Part 6: Pollution Testing. Report to Imperial Oil Ltd., January, 1973. (unpub. manuscript). 4 p plus appendices.
- Sianey, F.F. & Company Ltd, 1973c. Preliminary assessment, aquatic resources, Tuktoyaktuk Harbour. Rep. prep. for Imperial Oll Ltd., Calgary. 12 p.
- Slaney, F.F. & Company Ltd, 1974a. Winter benthic and oceanographic surveys, offshore Mackenzie Delta, N.W.T. Report to Imperial Oil Ltd. (unpub. manuscript). 25 p. plus unnumbered appendices.
- Slaney, F.F. & Company Ltd, 1974b. Winter environmental program. Unark, Pelly and Garry Artifical Island Sites, East Mackenzie Bay, N.W.T. Report to Sunoco Ltd. Calgary, Alberta. (unpub. manuscript).
- Slaney, F.F. & Company Ltd, 1974c. 1972-1974. Environmental program Mackenzie Deita N.W.T. Volume 7: Environmental Quality. Report to imperial Oil Ltd., Guif Oil Ltd., Shell Canada Ltd., Canadian Arctic Gas Study Limited, May 1974. (unpub. manuscript). 24 p plus appendices plus references.
- Slaney, F.F. & Company Ltd, 1974d. 1972-1974. Environmental program Mackenzie Delta N.W.T. Winter Study Supplement. Report to Imperial Oil Ltd., Gulf Oil Ltd., Shell Canada Ltd., Canadian Arctic Gas Study Limited, May 1974. (unpub. manuscript). 82 p.
- Slaney, F.F. & Company Ltd, 1974e. Hydrology. Environmental Program, Mackenzie Delta, N.W.T., Canada, Volume 2. Imperial Oil Ltd., Gulf Oil Canada Ltd., Shell Canada Ltd., and Canadian Arctic Gas Study Ltd.
- Slaney, F.F. & Company Ltd, 1974f. Aquatic Resources. Environmental Program, Mackenzle Delta, N.W.T., Canada, Volume 6. Imperial Oli Ltd., Gulf Oll Canada Ltd., Shell Canada Ltd., and Canadian Arctic Gas Study Ltd.

- Slaney, F.F. & Company Ltd, 1975. Summer environmental program, Mackenzle River Estuary. Aquatic Studies <u>Vol. I</u>. Report to Imperial OII Ltd. (unpub. manuscript). 221 p.
- Slaney, F.F. & Company Ltd, 1976. 1975 Hydrology survey: Taglu, Richards Island, Mackenzie Delta, Northwest Territories. F.F. Slaney and Company, Vancouver, B.C.. (unpub. manuscript). 53 p plus unnumbered appendices.
- Slaney, F.F. & Company Ltd, 1977a. Environmental assessment of construction and construction support activities for the proposed ten year Beaufort Sea offshore exploration program, Volume 2. Report to Imperial Oil Ltd. (unpub. manuscript). 98 p.
- Slaney, F.F. & Company Ltd, 1977b. Biophysical data appendix, artificial island sites. Report to imperial Oil Ltd. (unpub. manuscript).
- Slaney, F.F. & Company Ltd, 1977c. 1976 summer aquatic studies, Arnak L-30 artificial island site and Tuft Point borrow site. Report to imperial Oil Ltd. (unpub. manuscript).
- Slaney, F.F. & Company Ltd, 1977d. Investigations of the aquatic resources of the Parsons Lake region and environmental impact assessment of the Parsons Lake gas development. Report to Gulf Oil Canada Ltd. 188 p plus unnumbered appendices.
- Steen, J., 1986. Oceanographic and environmental summary data report. Unpub. Rep. by Canadian Marine Drilling Ltd., Calgary.
- Stefansson, V., 1921. The Friendly Arctic. Greenwood Press, New York.
- Thomas, D.J., 1977. Dissolved and sediment concentrations of cadmium, chromium, copper, lead, zinc, nickel, iron and mercury at the Dome Tingmiark K-91 drillsite. Rep. prep. by Seakem Oceanography Ltd., Sidney, B.C. for Dome Petroleum Ltd., Calgary, Alberta. (unpub. manuscript). 14 p.
- Thomas, D.J., 1978a. Tingmiark K-91 and Kopanoar D-14: A chemical study one year after the occurrence of water flow, July 1978. Report by Seakem Oceanography Ltd., Sidney, B.C. for Dome Petroleum Ltd., Calgary, Alberta, 1978. (unpub. manuscript).
- Thomas, D.J., 1978b. Kaglulik A-75: A chemical study during a sustained water flow, July 1978. Report by Seakem Oceanography Ltd., Sidney, B.C. to Canadian Marine Drilling Ltd., Calgary, Alberta. (unpub. manuscript). 31 p.
- Thomas, D.J., 1978c. A baseline chemical survey at Tarslut A-25, July 1978. Report by Seakem Oceanography Ltd., Sidney, B.C. to Canadian Marine Drilling Ltd., Calgary, Alberta. (unpub. manuscript).
- Thomas, D.J., 1979a. Canmar-Summer's Harbour coaldusting operations, 1979. Environmental monitoring. Report by Arctic Laboratories Ltd. Inuvik, N.W.T. for Canadian Marine Drilling Ltd., Calgary, Alberta, December 1979. (unpub. manuscript).

Thomas, D.J., 1979b. A baseline chemical study at Kilannak A-77. Report by Arctic Laboratories Ltd. Inuvik, N.W.T. for Canadian Marine Drilling Ltd., Calgary, Alberta, December 1979. (unpub. manuscript).

Thomas, D.J., 1979c. Dome Petroleum-McKinley Bay dredging programme, Phase I. Geochemical baseline survey and environmental monitoring during 1979 operations. Report by Arctic Laboratories Ltd. Inuvik, N.W.T. for Dome Petroleum, Calgary, Alberta, November 1979. (unpub. manuscript).

Thomas, D.J., 1979d. The effect of discharged drilling fluid waste on primary productivity at Nerlerk M98. Report by Arctic Laboratories Ltd. Inuvik, N.W.T. for Canadian Marine Drilling Ltd., Calgary, Alberta. 31 p.

Thomas, D.J., 1980. Water quality measurements and dredge spoil monitoring at McKinley Bay, N.W.T., 1980. Rep. prep. by Arctic Laboratories Ltd., Inuvik, N.W.T. for Dome Petroleum Ltd., Calgary, Alberta. (unpub. manuscript). 41 p.

Thomas, D.J. and P.G. Berrang, 1982. Observations and water column measurements taken during the 1982 site surveys at Tingmlark K-91 and Kopanoar D-14. Unpub. report by Arctic Laboratories Ltd. for Dome Petroleum Ltd. 22 p.

Thomas, D.J., W.A. Heath, J.M. Koleba, B.M. Perry, and A.G. Ethler, 1982. A study of the benthos at Tarsiut N-44 artificial island and south Tarsiut borrow area 1980-1981. Progress rep. by Arctic Laboratories Ltd. for Dome Petroleum Ltd. 160 p.

Thomas, D.J., W.A. Heath, K.A. Thompson, and J.M. Koleba, 1981. An oceanographic study of Tuktoyaktuk Harbour N.W.T., 1980. Report by Arctic Laboratories, Inuvik, N.W.T. for Dome Petroleum Ltd., Calgary, Alberta, January 1981. (unpub. manuscript). 56 p plus appendices.

Thomas, D.J., R.W. Macdonald, and A.B. Cornford, 1982. Arctic Data Compilation and Appraisal. Volume 2. Beaufort Sea: Chemical Oceanography. Can. Data Rep. Hydrogr. Ocean Sci. 5. 243 p.

Thorndike, A.S. and T.O. Manley, 1980a. Updated position and ice velocity for the AlDJEX manned camps. CU-2-80, Technical Report No. 2, Office of Navai Research, U.S. Dept. of the Navy, Contract N00014-76-C-004. (unpub. manuscript).

Thorndike, A.S. and T.O. Manley, 1980b. Updated position and ice velocity for the AIDJEX manned camps. CU-3-80, Technical Report No. 3, Office of Naval Research, U.S. Dept. of the Navy, Contract N00014-76-C-004. (unpub. manuscript).

Timofeyev, V.T., 1960. Vodnye massy arkticheskogo basseine. Leningrad: Gidromet. Izdat. (University of Washington Library has a translated version). 190 p.

Tully, J.P., 1952. Oceanographic data of the western Canadian Arctic Region, 1935-37. J. Fish. Res. Bd. Canada <u>8</u>(5). pp 378-382.

- U.S. Naval Oceanographic Office, 1963a. Oceanographic data report, Arctic, 1958. U.S. Naval Oceanographic Office, Marine Sciences Dept., Washington, D.C. (unpub. manuscript). Informal Manuscript Rep. No. 0-26-63.
- U.S. Naval Oceanographic Office, 1963b. Oceanographic data report, Arctic, 1959. U.S. Naval Oceanographic Office, Marine Sciences Dept., Washington, D.C. (unpub. manuscript). Informal Manuscript Rep. No. 0-43-63.
- U.S. Naval Oceanographic Office, 1964. Oceanographic data report, Arctic, 1960. U.S. Naval Oceanographic Office, Marine Sciences Dept., Washington, D.C. (unpub. manuscript). Informal Manuscript Rep. No. 0-62-63.
- U.S. Navy Hydrographic Office, 1954. Oceanographic observations, U.S.S. Burton Island, 1950-1953. H.O. Pub. 618-C, U.S. Navy Hydrographic Office, Washington, D.C. (unpub. manuscript).
- U.S. Navy Hydrographic Office, 1956. Oceanographic survey results, Beaufort Sea area, summer 1954. U.S.S. Burton Island (AGB-1) and USCGC Northwind (WAGB-282). H.O. 15791, January 1956. U.S. Navy Hydrographic Office, Washington, D.C. (unpub. manuscript).
- U.S. Navy Hydrographic Office, 1959. Oceanographic observations, arctic waters. Task Force Five and Six, summer-autumn 1957 summer-autumn 1957. USCGC Eastwind (WAGB-279), USCGC Westwind (WAGB-281), USCGC Spar (WAGL-403), USS Atka (AGB-3), USS Eldorado (AGC-11). Oceanographic Survey Branch, Division of Oceanography, U.S. Navy Hydrographic Office, Washington, D.C., November, 1959. (unpub. manuscript).
- U.S. Navy Hydrographic Office, 1960. Oceanographic observations, arctic waters. Task Force Five and Six, summer-autumn, 1956. USS Requisite (AGS-18), USS Eldorado (AGC-11), USS Atka (AGB-3), USCGC Eastwind (WAGB-279). Oceanographic Branch, Marine Surveys Division, U.S. Navy Hydrographic Office, Washington, D.C., October, 1960. (unpub. manuscript).
- VIIks, G., 1973. A study of Globorotalia Pachyderma (Ehrenberg) = Globigerina Pachyderma (Ehrenberg) in the Canadian Arctic. Ph.D. Thesis, Dept. of Oceanography, Dalhousie University, Halifax, N.S.
- VIIks, G., 1979. Foraminifera in sediment from the Beaufort Sea and Parry Channel. Bedford Institute of Oceanography Data Series BI-D-76-1.
- VIIKS, G., F.J.E. Wagner, and B.R. Pelletier, 1979. The holocene marine environment of the Beaufort Sea. Geol. Surv. Can. Bull. 303.
- Wacasey, J.W., 1974. Biological oceanographic observations in the Eskimo Lakes, Arctic Canada. Zoobenthos Data, 1971-1973. Fish. Mar. Serv. Data. Rep. 41.
- Wacasey, J.W., 1975. Biological productivity of the southern Beaufort Sea: Zoobenthic studies. Beaufort Sea Tech. Rep. No. 12b. 39 p.
- Wagner, F.E., 1977. Recent mollusc distribution patterns and

palaeobathymetry, southeastern Beaufort Sea. Can. J. Earth Sci. <u>14</u>: . pp. 2013-2028.

Walker, E.R. and K.D. Chapman, 1973. Salinity-conductivity formulae compared. Dept. of Environment, Marine Science Directorate, Pacific Region, Victoria, B.C. Pacific Marine Science Report 73-5. 52 p.

Wong, C.S., W.J. Cretney, R.W. Macdonald, and P. Christensen, 1976. Hydrocarbon levels in the marine environment of the southern Beaufort Sea. Beaufort Sea Tech. Rep. No. 38. 113 p.

Wong, C.S., R.W. Macdonald,, R.D. Bellegay, and P. Erickson, 1981. Baseline data on chemical oceanography in the southern Beaufort Sea, 1974-5. Beaufort Sea Project Tech. Rept. 14, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

8. DATA INVENTORY TABLE 1 - SUMMARY LISTING OF DATA SETS

Table 1 summarizes the data sets included in this inventory, sequentially by data-set number. Water-property, moored current-meter, surface-drift, water-level and wave data are catalogued. BT data are not fully catalogued, however their existence has been noted in Table 1, and their general distribution may be deduced from the pattern of stations for a particular cruise, as they were usually collected at and along the track between stations. Over-the-side current measurements of short duration made with fixed-depth or profiling current meters have not been fully inventoried, however attempts were made to include all such data covering one tidal cycle or more.

Each column of the table contains the following information (symbols and abbreviations used in each column are explained as well):

Column 1 - Data Set I.D.

- contains the data-set identifier number, which is of the form yy-nnnn, where yy are the last two digits of the year in which the data set was collected, and nnnn is the sequential number of the data set for that particular year. (The series of data-set numbers applies to the whole set of inventories; gaps may appear in the sequence in any one inventory where data sets exist only in other areas or disciplines. A data set which appears in two or more areas or disciplines will have the same number in every case.) Data sets may be sub-divided by the addition of a letter at the end of the number. Sub-divisions have been used when different cruises have been grouped under one I.D. number, or when different programs were conducted on the same cruise. In the case of water-level stations, where data were collected at the same location intermittently or continuously over more than one year, one I.D. number has been used to represent the entire data set.

Column 2 - Ship or collecting agency

- contains the name of the ship (underlined), platform and/or agency

Column 3 - Dates of measurements

- gives the dates spanning the period during which measurements were taken in the area covered by the inventory. The year is given by the first two digits of the data set number in column 1, unless the measurement period spans the end of a year, in which case it is given explicitly. Question marks mean the dates could not be confirmed, generally due to poor/lack of documentation.

Column 4 - Quantity measured

- lists the physical parameters measured in the data set. a quantity followed by a ? means that reference to such measurement was made but no supporting details were available. Measurements identified as "Current" are Eulerian current measurements (made at a fixed location); "Current drift" refers to Lagrangian measurements. "Current profiles" are spot measurements at certain depths.

Column 5 - Instruments or methods used

- lists the instruments and methods used to made the measurements. The entries appear opposite the names of the quantities they measure. A question mark after the entry denotes an assumption, i.e. that the method used was not explicitly stated and an assumption was made from the standard practice at the time. A question mark alone means that the instrument used is unknown. In such cases, no estimates of precision and accuracy are given.

Column 6 - Estimate of data precision and accuracy

- lists the estimates of the precision (repeatability) and accuracy for each instrument opposite the entry for that instrument in column 5. For instruments of a digital nature, the precision specified is based on the resolution of the instrument. Where possible, estimates made by the original investigators are used. They are entered as two numbers of the form $\pm n_1$, n_2 where n_1 is the precision and n_2 the accuracy.

Where investigator's estimates were not available, the following special symbols and entries may have been used:

[±n₁, n₂]: standard oceanographic methods were used, which would normally result in these values. The techniques and precision/accuracy used in this context are:

BT [± 0.2 , 0.2C°]

Reversing [± 0.02 , 0.03C°]

thermometer

Salinity - [± 0.2 , 0.2°/oo]

Hydrometer

Salinity - [± 0.5 , 0.5°/oo]

Refractometer

Salinity - [± 0.02 , 0.04°/oo]

Titration

Salinity - [±0.01, 0.02°/00]

Bench salinometer [The make/model of salinometer is often unknown, but may be specified in Appendix 1]

High Quality [± 0.005 , 0.01C°], [± 0.005 , 0.02 $^{\circ}$ /oo] CTD/STD

 $\pm n_1$ @: manufacturer's specifications for that instrument.

 $\pm n_1$?: a questionable estimate, for reasons detailed in Appendix 1.

The column contains a '?' when no information was available and no reasonable assumption could be made.

Column 7 - Data rating number

- carries the data rating number assigned as explained in Section 5.

Column 8 - Area

- lists the areas in which the majority of the measurements in the data set were taken. (The areas are defined in Figure 1.)

Column 9 - Concurrent measurements

- lists known measurements in other disciplines taken as part of the data set. Further measurements may have been taken, but were not discovered while cataloguing the physical oceanographic data, and therefore cannot be listed. Unless otherwise specified (as sediment or ice for example), the medium within which the concurrent measurements were obtained is the water column.
- abbreviations for chemical and biological terms are given in Appendix

Column 10 - Source or reference

- lists a primary source or reference for the data set. Data sets held in the data banks at the Marine Environmental Data Service, Ottawa or at the National Oceanographic Data Centre, Washington D.C. are identified, respectively by the entries MEDS# and NODC# followed by the data bank's identity number. A MEDS number alone does not necessarily mean that the data are not stored at NODC. If MEDS does not have the data then a NODC number is given if they are stored there. Appendix 2 lists addresses and contacts for these sources. Other references and reports are listed in Section 10.3.

TABLE 1: SUMMARY LISTING OF DATA SETS.

			·		· · · · · · · · · · · · · · · · · · ·		. 4.1		
Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
									
14-0001	MV <u>ALASKA</u> , Can. Arctic Expedition	Apr.2- Aug.30	Water level Current	?		2 2		Plankton, fish, benthos	Dawson (1920)
14-0002	Can. Arctic Expedition	Dec.26 '14- Jan.30 '15	Water level	Staff	<u>+</u> 0.75,?cm	3	Cape Kellett (Banks Island)		Dawson (1920)
16-0002	MV <u>ALASKA</u> , Can. Arctic Expedition	Jul.1- Aug.20	Current	7		2	Mackenzie Bay	Fish, benthos	Dawson (1920)
53-0004	Canadian Hydrographic Service	July-Aug.	Water level	?		2	Tuktoyaktuk	944	MEDS WL Stn. #6485
55-0001	MV ST. ROCHE,	Aug.4-28	Temperature	Rev. therm.	[±.02,.03C*]	3	Tuktoyaktuk	Biological	Tully (1952)
	RCMP for Pacific Biol. Station	(surface) Salinity (surface)		Hydrometer	[±.2,.2*/]	3	Continental Shelf, Amundsen Gulf	collections	
7-0001	MV ST. ROCHE,	Aug. 17-18	Temperature	Rev. therm.	[±.02,.03C*]	3	Tuktoyaktuk	Biological	Tully (1952)
, est e	RCMP for Pacific Biol. Station	• •	(surface) Salinity (surface)	Hydrometer	[±.2,.2*/]	3	Continental Shelf, Amundsen Gulf	collections	
0-0 010	MV <u>ST. ROCHE</u> , RCMP	Aug.11-27, Sept.19 '40- Aug.13 '41	Current Water level	?		2 2	Beaufort Sea, Amundsen Gulf	Fish, mammals	Larsen (1945)
0-0001	USS <u>BURTON</u> ISLAND,	Aug. 19-23	Temperature	Rev. therm., BT	[±.02,.03C*] [±.2,.2C*]	3 3	Continental Slope	0 ₂ ,plankton hauls, sedi-	USNHO (1954) MEDS #318101530
	Scripps Inst. Oceanography		Salinity	Knudsen titration	$[\frac{1}{4}.02,.04^{\circ}]$, 3		ment, secchi	NODC #3150153
	and US Dept. of Defense				en e				ert in Ka
1-0001	USS <u>BURTON</u> <u>ISLAND</u> Scripps Inst. Oceanography and US Dept. of Defense	Sept. 14-21	Temperature Salinity	Rev. therm., BT Knudsen titration	[±.02,.03C°] [±.2,.2C°] [±.02,.04°/]	3 3 3	Continental Slope and Canada Basin	O ₂ ,plankton häuls, benthos, sediment	USNHO (1954) NODC #3158468

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

1	Pa	a	a	2

Data Set I.D.	Ship or Collecting agency	Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent megsurements	Source or reference
	.4								
51-0002	CGMV CANCOLIM II, Def. Res. Bd. and Pacific Biol. Station	Aug.20- Sept.15	Temperature Salinity	Rev. therm. Knudsen titration	[±.02,.03C*] [±.02,.04*/]	3 3	Amundsen Gulf, Beaufort Sea	Plankton	Cameron (1952) Hattersley-Smith (1952) MEDS #181351801
51-0004	Canadian Hydrographic Service	Aug.17- Oct.13	Water level	7		2	Amundsen Gulf	-	Canadian Hydrographic Service
52-0001	CGMV CANCOLIM II, Pacific Biol. Stn. for Dept. Nat'l Defense	Jul.18- Aug.31	Temperature Salinity	Rev. therm. Knudsen titration	±.02,.03C° ±.02,.1°/	3 1	Tuktoyaktuk Continental Shelf, Beaufort Sea	0 ₂ ,benthos, ptankton	Cameron (1953) MEDS ∮ 181352807
52-0002	USS <u>BURTON</u> <u>ISLAND</u> , Univ. of Washington	Sept.2-10	Temperature Salinity	Rev. therm., BT Knudsen titration	[±.02,.03C*] [±.2,.2C*] [±.02,.04*/]	3 3 3	Continental Shelves and Slopes	O ₂ ,SI,PO ₄ , pfankton, sediment secchi	USNHO (1954) NODC #3150400
52-0004	Canadian Hydrographic Service	Jul Oct.12	Water level	?		2	Amundsen Gulf, Tuktoyaktuk, Hershel Is.		Canadian Hydrographic Service
53-0001	USS <u>BURTON</u> <u>ISLAND</u> , (Scripps Inst. Oceanography)	Aug.8-26	Temperature Salinity	Rev. therm., BT Knudsen titration	[±.02,.03C*] [±.2,.2C*] [±.02,.04*/]	3 3 3	Amundsen Gulf, Prince of Wales Strait	O ₂ ,SI,PO ₄ PTankton, sediment	USNHO (1954) MEDS #31BI04300 NODC #3150430
53-0004	Canadian Hydrographic Service	Sept.6-8	Water level	?		0	Amundsen Gulf		Canadian Hydrographic Service
5 4-000 1	CCGS LABRADOR	Sept.6-14 JulOct.	Temperature Salinity Water level	Knudsen titration	[±.02,.03C*] [±.02,.04*/]	3 3 2	Continental Shelves and Slope, Amundsen Gulf		Boiley (1957) MEDS #180354189 NODC #1850172

Data Set I.D.	Ship or Collecting agency	Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
5 4-000 2	uss <u>Burton</u> <u>Island</u>	Aug.8-10, Sept.6-13	Temperature Salinity	Rev. therm. Knudsen titration	[±.0203C•] [±.02,.04•/]	3 3	Continental Slope, Tuktoyaktuk Cont. Shelf Amundsen Gulf	0 ₂ ,s1,P0 ₄	USNIHO (1956) MEDS #318124650 NODC #3150456
54-0003	USCGC NORTHWIND, Pac. Biol. Stn. for Dept. of Nat'l Defence	Aug.9-14, Sept.5-10	Temperature Salinity	Rev. therm. Knudsen titration	[±.02,.03C•] [±.02,.04•/]	3 3	Amundsen Gulf, NW Banks Island	0,,Si,PO ₄ , sediment, benthos	USNHO (1956) NODC ∯3150457
55-0001	USCGC NORTHWIND	Aug.27, Sept. 4	Temperature Salinity	Rev. therm. Knudsen titration	[±.02,.03C°] [±.02,.04°/]	3	Tuktoyaktuk Shelf (near Hershel Is.)	Transparency	MEDS #31NW05180 NODC #3150518
55-0002	Canadian Hydrographic Service	Jul.25- Aug.19	Water level	Temporary shore- based tide gauge	[±1. ? cm]	3	Amundsen Gulf		Canadian Hydrographic Service
55-0016	USS <u>BURTON</u> ISLAND	Aug.2	Temperature Salinity	?		2 2	Beaufort Sea		MEDS #318105180 NOOC #3150518
56-0001	USS <u>REQUISITE</u>	Jul.30- Aug.27	Temperature Salinity	Rev. therm. Knudsen titration	[±.02,.03C*] [±.02,.04*/]	3	Mackenzie Bay, Amundsen Gulf		USNHO (1960) MEDS #31RQ05480 NOOC #3150548
56-0004	Canadian Hydrographic Service	Jun.'56— Sept.'57	Water level	?	e e e e e e e e e e e e e e e e e e e	2	Tuktoyaktuk		MEDS WL Stn. #6485
56-0012	USSR Aircraft Landings, Sever—Series	Apr.14	Temperature Salinity	? ?		2 2	Canada Bastn		Timofeyev (1960)
57-0001	USCGC SPAR	Jul.17-23	Temperature Salinity	Rev. therm. Knudsen titration	[±.02,.03C*] [±.02,.04*/]	3 3	Amundsen Gulf	Transparency	USNHO (1959) NODC #3159570
57-0002	uss <u>atka</u>	Aug.3-18	Temperature Salinity	Rev. therm. Knudsen titration	[±.0203C*] [±.0204*/]	3 3	Tuktoyaktuk Continentai Sheif	Transparency	USN#10 (1959) MEDS #31AK05710 NODC #3150570
58-0001	USS <u>BURTON</u> <u>ISLAND</u> , Scripps Inst. Oceanography?	Sept.2-4	Temperature Salinity	Rev. therm., BT Knudsen titration	[±.02,.03C*] [±.2,.2C*] [±.02,.04*/]	3	Tuktoyaktuk Shelf and Continental Slope	Plankton hauls	USNOO (1963a) NODC #3150574
59-0001	Ice Island T-3	Jun.9- Sept.10	Temperature Salinity	Rav. therm., BT Knudsen titration	±.02.[.03]C° [±.2,.2C°] ±.01, ?°/	3 3 3	Canada Basin	02,5103	Kusunoki et al. (1962) Kusunoki (1962) MEDS \$511308010 NODC \$3150738

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
59-0002	USS <u>STATEN</u> ISLAND	Aug.10- Sept.3	Temperature Salinity	Rev. therm., BT Salinometer	+.03,[.03]C° [+.2,.2C°] [+.01,.02°/]	3 3 3	Tuktoyaktuk Cont. Shelf, Amundsen Gulf	Sediment	USNOO (1963b) NODC ∮3 150636
59-0004	Canadian Hydrographic Service	Sept.'59- Dec. '60	Water level	7		2	Tuktoyaktuk		MEDS WL Stn. #6485
59-0014	US Aircraft Landings	Winter	Temperature Salinity	Rev. therm. Knudsen titration?	[±.02,.03C*] [±.02,.04*/]	2 2	Beaufort Sea		Beal (1968a,b)
60-0001	USS <u>BURTON</u> <u>ISLAND</u>	Aug.16- Sept.19	Temperature Salinity	Rev. therm., BT Salinometer	[±.02,.03C*] [±.2,.2C*] [±.01,.02*/]	3 3 3	Canada Basin, Beaufort Sea	e.	USNOO (1964) NODC #3150667
60-0002	USCGC NORTHWIND	Oct.20-21	Temperature Salinity	Rev. therm. Salinometer?	[±.0203C°] ±.01, ? °/	3 2	Continental Shelves		Paquette & Bourke (1974) MEDS #31NW08410 NODC #3150841
60-0003	MV <u>SALVELINUS</u> , Arc. Biol. Stn. for Fish. Res. Bd. Can.		Temperature Salinity	Rev. therm. Knudsen titration	[±.02,.03C*] [±.02,.04*/]	3	(West) Mackenzi Bay	Fish,benthos, plankton,0 ₂	Grainger & Lovrity (1975)
61-0001	MV <u>SALVELINUS</u> , Arc. Biol. Stn. for Fish. Res. Bd. Can.		Temperature Salinity	Rev. therm. Knudsen titration	[±.02,.03C*] [±.02,.04*/]	3	Eskimo Lakes, Liverpool Bay, Kugmallit Bay	Fish, benthos, zooplankton, O ₂	Grainger & Lovrity (1975)
61-0002	Canadian Hydrographic Service	Summer 1961 to Present	Water level	Shore-mounted tide gauge	±1, 5 cm	3	Kugmallit Bay (Tuktoyaktuk)		On file at Tides & Currents, IOS
62-8801	MV <u>SALVELINUS</u> , Arc. Biol. Stn. for Fish. Res. Bd. Can.	Jul.15- . Aug.29	Temperature Salinity	Rev. therm. Knudsen titration	[±.02,.03C*] [±.02,.04*/]	3	Eskimo Lakes, Liverpool Bay, Amundsen Gulf	O ₂ , fish, Invertebrates, benthos	Grainger & Lovrity (1975) COCC (1963) MEDS #180462377
62-0002	National Research Council of Canada	Apr.27- May 6	Temperature Salinity	Thermistors(NRC) Autolab Sali- nometer	±.01,.02C* ±.01,.02*/	3 3	Kugmailit Bay	, ,	Kelly (1967) MEDS ∯180762447
62-0003	National Research Council of Canada	Nov.26- Dec.10	Temperatura Salinity	Thermistors(NRC), BT Wayne Kerr Port- able Salinemeter	±.1,.2C° ±.1,.5°/	3 1	Kugmallit Bay	£.	Kelly (1967) MEDS ∯180762448
62-0004	National Research Council of Canada	Dec.14 '62- May 1 '63	Temperature Salinity	BT Autolab Sali- nometer	±.1,.2C° ±.01,.02°/	3	Kugmailit Bay		Kally (1967) MEDS ∯180762449

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent megsurements	Source or reference
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63-0001	MV <u>SALVELINUS</u> , Arc. Biol. Stn.	Jun.21- Sept.9	Temperature	BT	[±.02,.03C*] [±.2,.2C*]	3 3	Amundsen Gulf	0 ₂ ,fish, invertebrates,	CODC (1964) Hunter & Leach (1983)
	for Fish. Res. Bd. Can.		Salinity	NIO Bridge Salinometer	[±.01,.02*/]	3		benthos	MEDS #180463002
63-0002	National Research	May 2-5	Temperature Salinity	Thermistors (NRC) Wayne Kerr Port-	±.01,.03C* ±.1,.5*/	3 3	Kugmallit Bay		Kelly (1967) MEDS ∦180763004,
	Council of		001111110	able Salinometer, RS-5 Portable	±.3,.5°/	3			#180763010
	Canada			Salinometer	±.3,.5°/••	3			
63-0003	CSS <u>RICHARDSON</u> , Canadian	Jul.26- Sept.16	Temperature Salinity	BT Autolab Sali-	±.1,.20° [±.02,.04°/]	3 3	Kugmallit Bay, Mackenzie		Kelly (1967)
	Hydrographic	Sept. 10	Water level	nometer	[1.02,.047.6]		Delta		MEDS #180763002
	Service				5. aa ama. 3	2			
64-0001	MV <u>SALVELINUS</u> , Arc. Biol. Stn.		Temperature Salinity	Rev. therm. Salinometer	[±.02,.03C*] [±.01,.02*/]	3 3	Amundsen Gulf (Cape Parry)	Fish	Hunter & Leach (1983) MEDS #180464001
64-0002	USCGC	Aug. 19	Temperature	Rev. therm. Salinometer?	[±.02,.03C*] [±.01,.02*/]	3 3	Tuktoyaktuk		AMOON STAROOMS
	<u>NORTHWIND</u>	•	Salinity	Sdinometers	[+.61,.62,00]	3	Continental Shelf		NODC #3150238
64-0003	Canadian	Jul .6-	Water level	Temporary shore-mounted	<u>+</u> ?, ? cm	- 1	Mackenzie Bay		Canadian
	Hydrographic Service	Sept.1	a .	tide gauge			(Garry Island)		Hydrographic Service
65-0001	Canadian	Jul.3-	Water level	Temporary shore-mounted	[<u>+</u> 1, 5 cm]	3	Mackenzie Bay		Canadian
	Hydrographic Service	Aug.31		tide gauge			(Garry Island)		Hydrographic Service
66-0001	Canadian	Jul .24 '66	Water level		±1, 5 cm	3	Amundsen		On file at Tides &
	Hydrographic Service	to present		tide gauge	•	-	Gulf (Cape Parry)		Currents, IOS
66-0002	Canadian	Jul .5-	Water, level		[±1, 5 cm]	3	Mackenzie Bay		Canadian
	Hydrographic Service	Aug.24	*	shore-mounted tide gauge		-	(Garry Island)		Hydrographic Service
66-0011	Inuvik	Nov.11 '66-				2	Eskimo Lakes	•	HIII (1967)
	Research Lab., DIAND	Jan.13 '67	Salinity	?	Tr.	. 2	•		•
69-0001	USS STATEN	Aug.8-10	Temperature		[±.02,.03C°] [±.01,.02°/]	3	Continental	0P0	Burrell et al.(1970)
•	<u>ISLAND</u>		Salinity	Salinometer?	[±.01,.02•/]	. 2 ,	Slope	0 ₂ ,P0 ₄ , ST, N ⁺	MEDS #31SI21750 NODC #3152175
69-0017	Arctic	Jul . 1-18	Temperatura	?	en la servició de la companya de la	2	Beaufort	Mamma 1s,	Sergeent & Hoek (1974)
	Biological Station						Coast. Mackenzie Bay	wave climate	

Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?-Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
70-0001	AIDJEX '70 Pilot Project	Mar.24-30	Temperature Salinity currents (under ice)	Rev. therm. Salinometer Braincon 316	±.01, ? C* ±.01. ? */ ± ?. ? cm/*	3 1 3	Canada Ba s i n		Coachman & Newton (1972) MEDS #314KI6778 NODC #3151677
70 -00 02	CSS <u>HUDSON</u> , Ati. Geosci. Centre, BIO, for Geol. Survey Can.	Aug.28- Sept.24	Temperature Salinity	Rev. therm. Salinometer	[±.02,.03C*] [±.01,.02*/]	3	Beaufort Sea	Plankton sediment benthos	VIIks (1973) MEDS ∮181069050 NODC ∮50833
70-0003	CSS <u>RICHARDSON</u> Atl. Geosci. Centre, BIO, for Geol.	Jul.15- Aug.25	Temperature Salinity	? Industrial Instru- ments Portable Salinometer	±.01, ? •/ •	2 2	Kugmallit Bay, Tuktoyaktuk Shelf	Mineralogy, sediment, benthos	Healey (1971) Dewis, Levinson, & Bayliss (1972) MEDS #180270013
	Survey Can.		Currents Surface drift	Hydro Products 450S Visual drifters	± ?, 15° @ ±0.1 n.m. positio	2 n 3			•
7 0-00 04	CSS <u>PARIZEAU</u> ?. Canadian Hydrographic Service	Jul.11- Sept.10	Water level	Temporary shore-based tide gauge	<u>+</u> 1, 5 cm	3	Amundsen Gulf, Mackenzie Bay, Herschel Is.		Henry & Foreman (1977
70-0005	Oceanographic Services Inc. for Imperial Oil Ltd.	Feb.23- Jun.1	Current (under ice)	Geodyne 102	2.5 cm/sec threshold	3	Mackenzie Bay, Kugmailit Bay, Franklin Bay	Ice motion	OSI (1970) Croasdale (1970)
70-0071	MEDS/Esso?	Aug.1-30	Wayes	Waverider	±1.5%,.5 m €	3	Near Herschel Island		MEDS File 98-1M
71-0001	MV <u>SALVELINUS</u> , Arc. Biol. Stn. for Fish.&Mar. Service Can.)	Jul.18- . Sept.1	Temperature Salinity	Rev. therm. Bissett-Berman 6230 Sallnometer	[±.02,.03C*] [±.01,.02*/]	3 3	Tuktoyaktuk Shelf, Liverpool Bay, Kugmallit Bay	Zooplankton, nutrients, O ₂ ,Chl.A, benthos	Grainger & Lovrity (1975) Hunter & Leach (1983) MEDS #180471002
71-0002	CSS <u>PARIZEAU,</u> Canadian Hydrographic Service	JulAug.	Water level	Temporary shore-based tide gauge	±1, 5 cm	2	McKinley Bay, Liverpool Bay, Eskimo Lakes	Sediment, benthos	Henry & Foreman (1977 Canadian Hydrographic Service

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
71-0003	AIDJEX'71 Pilot Study	Mar.16- Apr.7	Temperature Salinity Currents (under ice)	Rev. therm. Salinometer Savonius Rotor meter	[±.0203C*] ±.01, ? */ ± ?, ? cm/s	3 3 3	Canada Basin	and the second s	Hunkins (1972) MEDS 314K19470 NODC #3151974
71-0004	Arctic Biological Station for Fish.&Mar. Service Can.	Aug.19- Sept.9, Dec.15	Temperature Salinity	Rev. therm. Bisset-Berman 6230 Salinometer	[±.02,.03C°] [±.01,.02°/]	3 3	Eskino Lakes	O,,nutrients, Chi.A,pH,POC, secchi, plankton, benthos	Grainger, Lovrity & Evans (1977) MEDS #189471002
71-0018A	Freshwater Inst. for Task Force on Northern OII Development	Aug.23- Sept.11	Temperature Salinity	?		2 2	Mackenzie Bay	SO ₄ ,pH,O ₅ , metals, benthos	Brunskill et al.(1973)
71-0018B	Freshwater Inst. for Task Force on Northern Oll Development	Dec.11	Temperature Salinity	?		2 2	Mackenzie Bay	SO ₄ .pH.O ₂ , metals	Brunskill et al.(1973)
72-0001	Daihousie University (Helicopter), Atl. Geosci. Centre	Mar.21- Apr. 9	Temperature Salinity	Rev. therm. Salinometer	[±.02,.03C•] ±.01, ? •/	3 3	Beaufort Sea	Plankton	VIIks (1973) MEDS ∯182872072
72-0003	F.F.Slaney&Co. Ltd.for Imper. Oil,Shell,Gulf, & Canadian Arc. Gas Study Ltd.	Sept.10	Conductivity	Conductivity bridge	± ?. ? °/	0	Mackenzie Bay	pH, turbidity, SO ₄ ,TOC,Mg,Ca TH,EEHC,biota, sediment	Slaney (1973b, 1974e)
72 -0 004	MV <u>SALVELINUS</u> , Arc. Biol. Stn. for Fish.&Mar. Services Can.		Temperature Salinity	Rev. therm. Bisset-Berman 6230 Salinometer	[±.02,.03*/] [±.01,.02*/]	3 3	Eskimo Lakes, Liverpool Bay	Plankton, benthos,Chi.A, POC,O ₂ ,pH, nutrients	Grainger, Lovelty & Evans (1977) Hunter & Leach (1983) MEDS \$188472001
72-0006	MV ARCTICUS, F.F.Slaney&Co. Ltd.for Imper. Oll Ltd.	Jul.5- Aug.11	Temperature Salinity	Thermistor Conductivity cell	± ?, ? C° ± ?, ? °/	3 3	Mackenzie Deita (Harry & East Channels)	Benthos, fish, plankton, pH, SPM, CO, , major elements	Signey (1973g,b,1974c)

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
72-9997	MV ARCTICUS, F.F.Slaney&Co. Ltd. for Imperial Oll Ltd.	Jul.6- Sept.19	Temperature Salinity Current	Martek Instruments Ltd. TDC Meter SK 70 Helix meter	± ?, ? •/	3 3 3	East Mackenzie Bay, Mackenzie Delta	Plankton, fish, benthos, 0 ₂ , pH, CO ₂ , HCO ₃ , turbialty	Slaney (1973a)
72-0009	CSS <u>PARIZEAU</u> , Canadian Hydrographic Service	Jan.'72 to present	Water level	Shore-based tide gauge	<u>+</u> 1, 5 cm	. 3	Banks Island (Sachs Harbour)		On file at Tides & Currents, IOS
72-0010	Canadian Hydrographic Service	Jul.25- Oct.2	Water level	Temporary shore-based tide gauge	<u>+</u> 1, 5 cm	3	Kugmallit Bay, Mackenzie Bay, Liverpool Bay, Amundsen Gulf	+ ++ +- +- +	Henry & Foreman (1977)
72-8012	Freshwater Inst. for Fish. & Mar. Service, Aq.Env.Ltd?		Temperature Salinity	?		2 2	Mackenzie Bay	Benthos,pH, metals,fish,0 ₂	Brunskill et al. (1973)
72-0118	Aquatic Env. Ltd. for Can. Arctic Gas Study Ltd.	Jul.3- Aug.6	Temperature Salinity	?		. 2 2	Yukon Coastal	Fish	Mann (1974)
73-0001	F.F.Slaney&Co. Ltd. for Imperial Oil Ltd.	Mar.20-21	Temperature Salinity Current	ARA Thermistor Sproule Cell SK 70 Helix, drag	± ?, ? C° ± ?, ? °/ ± ?, ? cm/*	3 3 3	Mackenzie Bay	Oʻʻ,Si,pH, benthos,metals, plankton, turbidity	Slaney (1974a)
73 -00 02	MY NORTH STAR OF HERSCHEL ISLAND, Arc. Blol. Stn. for Fish.& Mar. Services Can.	Jul . 20-27	Temperature Salinity	YSI Model 33 S-C-T meter	± 7, .50° @ ± 7, .7°/ @	3	Continental Se Shelves, Mackenzie Bay	O, nutrients, Chi.A,POC, zooplankton, secchi,benthos	Grainger (1974) Grainger & Lovrity (1975) MEDS #180473002
73-0003A	Arctic Biological Station	Feb.24- Oct.1	Temperature Salinity	Rev. therm. Bissett-Berman 6230 Salinometer	[±.02,.03C*] [±.01,.02*/]	3 3	Eskimo Lakes	O,,nutrients, Chi.A,POC,pH, secchi depth	Grainger, Lovrity & Evans (1977) WEDS #180473001
73-00038	MV <u>SALVELINUS</u> , Arctic Biological Station	Jul.4- Sept.9	Temperature Salinity	YSI Model 33 S-C-T meter	± ?, .5C° @ ± ?, .7°/a. @	3 3	Eskimo Lakes, Kugmailit Bay, Liverpeol Bay	Nutrients, Chi.A, secchi depth	Grainger, Lovrity, & Evans (1977) Hunter & Leach (1983

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

Data Set I.D.	Ship or Collecting agency	Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
73-0004	Canadian Hydrographic Service, IOS	Jul.'73- Aug.'74	Water level	Temporary shore-based tide gauge,	[±1,5 cm]	3	Amundsen Guif, Liverpool Bay, Herschel Is.		Huggett et al. (1975) Henry & Foreman (1977)
	•			U.B.C. gauge, Offshore pressure gauge	± ?. ? cm ± ?, ? cm	2 3			
73-0016	F.F.Slaney&Co. Ltd. for Imperial Oil	Aug. 12-16	Temperature (surface) Salinity	?		2 2	Tuktoyaktuk Harbour	Benthos, fish, secchi	Slaney (1973c)
	Ltd.		(surface)	7		2			
73-0019	F.F.Slaney&Co. Ltd. for Imperial Oil Ltd.	May 20- Oct.6	Conductivity Water level	Cond. bridge Richards-type recorder	? [<u>+</u> 1,5 cm]	3 0	Mackenzie Deita	Turbidity,TOC, CoCO ₃ ,pH	Slaney (1974c,e,f)
73 -0 023	Aquatic Env. Ltd. for Can. Arctic Gas Study Ltd.	Jun.21,22; Jul.23, Aug.6,27; Sept.12	Temperature Salinity	? ?	and the second	2 2	Yukon Coast (Stokes Point Lagoon)	Fish	Mann (1974)
73-0034	Ice Island NP-22	1978	Temperature Salinity	?		2 2	Canada Basin		Mel'nikov (1976)
73 -0 125	Arctic Biological Station (Beaufort Sea Project)	Jul.21- Sept.9	Temperature Salinity	YSI model 33 YSI model 33	±.50° @ ±.7°/ @	3 3	Kugmallit Bay	Fish	Gaibraith & Fraser (1974) Gaibraith & Hunter (1975)
73-0126	Fish. & Mar. Service, Dept. Env.	Apr.9-15	Temperature	7		2	Yukon Coast	Fish	Jones & Kendel (1973)
7 4-0 001	F.F.Slaney&Co. Ltd. for Imperial Oil Ltd.	Mar.11- Apr.18	Temperature Salinity Current	YSI model 33 SCT meter Hydro—Products	± ?, .5C° @ ± ?, .7°/ @ ± ?, ? cm/s	3 3 2	Mackenzie Bay	SI,O,,PO,, NO,,HCO,, TOC,pH,SPM, plankton,bentho turbidity,	Slaney (1974a)

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TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
74-0002	MV <u>THETA</u> , Institute of Ocean Sciences	Aug.13- Sept.5	Temperature Salinity	Rev. therm. Autosal and Guldeline 8101- 8102 STD.	[±.02,.03C*] [±.01,.02*/]	3 3	Tuktoyaktuk Shelf, Mackenzie Bay	Turbidity	Herlinyeaux et al. (1976a,b)
				Bisset-Berman 6230 Salinometer	[± .01,.02°/.]	3		•	
			Current profiles	Hydro-Products Model 460	± ?, ? cm/s	2			
74-0003	MV ARCTICUS,	Jul.7→	Temperature	YSI SCT meter	± 7, .50° @	3	East Mackenzie	Plankton,02,	Slaney (1975)
	F.F.Slaney&Co. for Imperial	Sept.29	Salinity Current	UhidaaDaadusta 4054	± ?, .7°/ •	3	Bay	benthos, fish, pH,	•
	Oli Ltd.		Water level	HydroProducts 465A Staff	± 7, 7cm/s ± 7, 7 cm	2 2		alk,H,SI,NO ₃ , PO ₄ ,Ca,Mg,Cr,Pb, Cd,NI,SPM,ChI.A turbidity	
74-0004	Institute of Ocean Sciences	Aug.3- Sept.19	Surface and ice drift	Aircraft-tracked drogues	±500m position	3	Mackenzie Bay, Kugmallit Bay		MacNeill & Garrett (1975)
740005	Institute of	May 5-	Bottom	Aanderaa RCM4	±1 cm/sec	1	Tuktoyaktuk		Huggett et al. (1975)
	Ocean Sciences	NOV.16	currents Bottom	Aanderaa TG1	<u>+</u> 10° direction [<u>+</u> .3, 3 cm]	3	Shelf, Liverpool Bay,		Huggstt, Woodward & Douglas (1977)
			pressure Temperature Salinity	Aanderaa RCM4	± ?, .15 C° € ± .05, ?°/	3 3	Mackenzie Bay, Kugmallit Bay, Phillip∎ Bay		
7 4-8 007A	MV <u>THETA,</u> Arctic Biological Station	Jul.14- Sept.2	Temperature Salinity	Rev. therm. Bissett-Berman 6230 Salinometer	[±.02,.03C*] [±.01,.02*/]	3 3	Tuktoyaktuk Shelf, Beaufort Sea	Zooplankton, O ₂ ,Chl.A,POC, nütrlents,sedi- ment,benthos, secchi depth	Grainger & Lovrity (1975)
74-0007B	Arctic	Mar . 24-	Temperature	Rev. therm.	[±.02,.03C*]	3	Tuktoyaktuk	Plankton,0 ₂ ,	Knowles & Wisehart
	Biological Station	Apr.1, Jul.17- Sept.7, Dec.1	Salinity	YSI model 33	± 7, .1°/@	3	helf, Kugmallit Bay, Mackenzie Bay	POC,Chi.A,fish, nutrients, benthos	(1977) Hunter & Leach (1983)
74-0008	MY THETA.	Aug. 11-	Temperature		±.01,.02C*	3	Tuktoyaktuk	Nutrients,02	Wong et al. (1981)
	Ocean Chem., Inst. Ocean Sciences; Beaufort Sea Project	Sept.1	Salinity	Autolab 601 MK 111 Salinometo	±.003,.02°/ _• , er	3	Shelf,	Mackenzie Bay	McDonaid et al. (1987)
74-0009	F.F.Slaney&Co. Ltd. for Imperial Oil Ltd.	Jan.24, Apr.10	Temperature Current	Thermistor Sevonius roter meter	生 ?, ? C° ± ?, ? cm/s	2 2	Mackenzie Delto	o,,turbidity, so,,ci,HCO,,ca, pH,Mg,TH,TC,TC TIC,SPW,BOD,CCC) ,

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TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
									
74-0018A	Arctic Biological Station	Mar.1-2, May 24-25	Temperature Salinity	Rev. therm. Bissett-Berman 6230 Salinometer	[±.02,.03C*] [±.01,.02*/]	3	Eskimo Lakes	O,,Chi.A,POC, pH,PO,,NO,, NO,ST,secchi depth	Grainger, Lovrity, & Evans (1977)
74-90108	Arctic Biological Station	Jun.20	Temperature Salinity	Rev. therm. Bissett-Berman 6230 Salinometer	[±.02,.03C*] [±.01,.02*/]	3 3	Eskimo Lakes	O, Chi.A, POC, pH, PO4, NO, ST, secchi depth	Grainger, Lovrity, & Evans (1977)
74-0010C	Arctic Biological Station	Jul.2- Aug.23	Temperature Salinity	Rev. therm. Bissett-Berman 6230 Salinometer	[±.02,.03C*] [±.01,.02*/]	3 3	Eskimo Lakes	O, Chi.A, POC, pH, PO4, NO2, NO3, ST, secchi depth	Greinger, Lovrity, ≵ Evans (1977)
74-0011	Aquatic Env. Ltd.for Can. Arctic Gas Study Ltd: & Alaskan Arctic Gas Study Co.	Jul.8- Sept.21	Temperature Salinity	YSI model 33 S-C-T Meter	±?,.30° ±?,.1°/	3 3	West of Herschel Island	O,,POC,SI,pH, ptankton, TDN,TDP,Ca,Mg, Na,K,SO,,CI, HCO ₃ ,benthos	Craig (ed, 1975)
74-0019	F.F.Slaney&Co. Ltd. for Sunoco Ltd.	FebMar.	Temperature Salinity Currents	YSI model 33 S-C-T Meter Hydro-Products 465A	±?,.50° • ±?,.7°/ • ± ?, ? cm/s	3 3 2	(East) Mackenzie Bay	pH,HCO ₃ ,O ₂ , turbIdity;SPM, alk,Ni,Pb,Zn, Cr,Ca,Mg,CO ₂ , benthos	Sianey (1974b)
7 4-0 020	Freshwater Institute, Fish.& Mar. Service; Beaufort Sea Project	Mar.22- Sept.20	Temperature Salinity	Hach Kit Hach Chioride Kit Kahl 118 WA 300 Salinometer	?	1	Mackenzie Bay, Kugmallit Bay	Fish,0 ₂ ,pH, hardness, secchi depth	Percy (1975)
7 4-0 021	Dept. of Environment; Beaufort Sea Project	Apr.1- Sept.4	Température Salinity	YSI mode! 43 Telethermometer	±?,0.5℃ @ ±?,0.7°/ •	3 3	Mackenzie Bay	Fish,Co,Mn,Cd, O,,aik.,Pb, ph,PO,,NO,, Si,Ca-H,TH,Cl, SO,,Fe,TR,FR, Hg,Ca,Ni,Cr,Zn	Kendel et al. (1975)
74-0022	Aquatic Env. Ltd., Arctic Gas Study	Oct.1- Nov.11'74, Apr.2-5'75	Temperature Salinity	Mercury therm. Beckman RB 3Y147 Conductivity meter	± ?, 10° ± ?, ? °/	2 2	Mackenzie Deita	Fish samples, O.,pH,SPM, turbidity	Aquatic Environments Ltd. (1975)

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Data Set I.D.	Ship or Collecting agency	Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
74 -0 027 A	Dickins Assoc. Ltd., Arctic Labs Ltd.,& NORCOR Eng. Res.Ltd.; Beaufort Sea Project	Aug.'74- Jul.'75	Temperature Salinity	Thermistors Refructometer, YSI meter	±7,.05C° [±.5,.5°/] ±7,1°/	3 3 3	Balaena Bay (Franklin Bay)	plankton,HC, pH, CO ₂	NORCOR (1975), Dickins Assoc. Ltd, Arctic Labs Ltd. & J. Hellebust (1981)
74-0027B	CCIW: Beaufort Sea Project G2b	Sept .5-10	Temperature Salinity	Hydrolab multiparameter system	±?,.1C° ±?,.2°/	3 3	Balaena Bay (Franklin Bay)	O,,light transmission, pH,ORP,biology	Adams (1974)
7 4-0 126	Marine Environmentai Data Service	Aug.26-30	Waves	Waverider.	±1.5%, ±.5m @	3	Tuktoyatuk	·	Marine Environmental Data Service File #3-24
750001	Institute of Ocean Sciences	Mar.16- May 10	Temperature Salinity Temperature Salinity Current profiles Ice drift	8202-8201 CTD	± ?, .02C° ± ?, .02°/ ± ?, 1C° @ ± ?, 1°/ @ ± ?, ? cm/s ± ?, ? cm/s	3 1 3 3 3	Banks Island & Tuktoyatuk Cont. Shelves, Mackenzie Bay	Turbidity	Heriinveaux, de Lange Boom, & Wilton (1976a,1976b)
75-0002	MV <u>PANDORA II</u> , Arctic Marine Sciences, Inst Ocean Sciences	_	Temperature Salinity Current profiles	Guildline 8101-8202 CTD Rev. therm., Autosal Bench Sallnometer Hydro-Products Model 460	[±.001,.01C°] [±.001,.02°/] [±.02,.03C°] [±.01,.02°/] ± ?, ? cm/*	3 3 3	Tuktoyaktuk Sheif. Mackenzie Bay	Turbidity	Herlinveaux, de Lange Boom, & Wilton (1976a,1976b)
75-0003	Institute of Ocean Sciences	Jul.27- Sept.10	Surface drift	Aircraft-tracked drogues	±500 m position	3	Tuktoyaktuk Shelf		MacNelli & Garrett (1975)
75-0004	MV WILSON III, MV ARCTICUS, F.F.Slaney&Co. Ltd.,for Imper OII Ltd.	Aug.20	Temperature Salinity Current	YSI SCT meter Hydro—Produsta 465A	±?5°° • ±?7°/• ±?, ? cm/s	3 3 3	Mackenzi⊕ Bay, Kugmallit Bay	plankton,fish, 0,00,pH, atk,fCO3, CO-,H,SM,T-SPM F-SPM,V-SPM,T-I V-DS,CI,PO,Ca NO3,Mg,Cr,Cd, Pb,NI,SI,TC,TO TIC,ChI.A	(1976) Os,
75- 00 05A	AIDJEX Main Experiment	Apr.4,'75- Apr.25,'76	Temperature Salinity	Pleasey 9049 STD/CTD	±?,.05C° ±?,.04°/	3 3	Canada Basin		Sauer et al. (1980)

Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Агеа	Concurrent measurements	Source or reference
75-00058	AIDJEX Main Experiment	Apr.8,'75- Apr.22,'76	Current profiles	TSK	± ?speed ±6°direction	3	Canada Basin		Manley et al. (1980)
75-0005C	AIDJEX Main Experiment	?	Current	Hydro-Products	?.? cm/s	2	Canada Basin		NODC-hourly values
75-0006	MV <u>PANDORA II</u> , Ocean Chemistry, Institute of Ocean Sciences	Aug.5-23	Temperature Salinity	Rev. therm. Autolab 601 MK111	±.01,.02C° ±.003,.02°/	3	Tuktoyaktuk Shelf, Mackenzie Bay	O ₂ ,SPM,blota, sediment,PO ₄ , plankton,NO ₃ ,SI alk _t ,V, PAH,Hg	Wong et al. (1981) McDonald et al. (1987)
75-0007	Institute of Ocean Sciences	Jan.1- Sept.19	Currents (bottom) Water level	Aanderaa RCM4 Aanderaa TG1A, TG2A	±1 cm/sec, ±10° direction [±.3,3 cm]	,3	Herschel Is., Kugmallit Bay, Tuktoyaktuk Shelf		Huggett et al. (1975) Huggett et al. (1977) Henry and Foreman (1977)
75-0008	Canadian Hydrographic Service	Jul.10- Sept.19	Water level	Temporary shore-based tide gauges	±1,10 cm	3	Thetis Bay, Philiips Bay, Mackenzie Bay, Liverpool Bay, McKinley Bay		Canadian Hydrographic Service, Henry and Foreman (1977)
75-0009	MV <u>THETA</u> . Arctic Biol. Station	Aug.20- Sept.9	Temperature Salinity	Rev. therm. Bench Salinometer	[±.02,.03C*] [±.01,.02*/]	3	Tuktoyaktuk Cont. Shelf, West Mackenzie Bay	plankton, benthos,SPM	Bornhold (1975)
75-0010A	Arctic Biological Station	Feb.28-29	Temperature Salinity	Rev. therm. Bisset-Berman 6230 Salinometer	[±.02,.03C•] [±.01,.02•/]	3 3	Eskimo Lakes	O.,PO.,SI, NO.,CHI.A, pH,secchi depth, plankton,POC	Grainger, Lovrity and Evans (1977)
75-00108	Arctic Biological Station	Jun. 15– Jul. 21	Temperature Salinity	Rev. therm. Bisset-Berman 6230 Salinometer	[±.02,.03C°] [±.01,.02°/]	3 3	Eskimo Lakes	0,,P0,,S1, NO,,Chi.A, pH,secchi depth plankton,POC	Grainger, Lovrity & Evans (1977)
75-0011	F.F.Slaney&Co. Ltd.,for Imper. Oil Ltd.			Lambrecht therm. YSI SCT meter Stevens model 68 Hydro-Products	± ?, ? C° ± ?. ? °/ ± ?, ? cm/s	3 3 3 3	Taglu, Richards Is. (Mackenzie Delta)	02,pH,T-SPM, F-SPM,V-SPM,T-DS F-DS,V-DS,HCO3, CI,SO4,PO4, NO3,Cd,Fe,Ca, Mg,Cr,Pb,NI,As, Fe,TC,TOC,TIC, CO2,SM,BOD	Signey (1976) S.
75- 0 012A	MV <u>PANDORA II</u> , & Helicopter, Arctic Biol. Station	Apr.26- May 10 & Jun.17- Jul.17	Temperature Salinity	Rev. therm Bissett-Berman 6239 Salinometer	[±.02,.030°] [±.01,.02°/]	3	Tuktoyaktuk Cont. Shelf, Mackenzle Bay	piankton, benthos,0 ₂ Chi.A,PO ₄ , Si,sediment,NO ₃	Grainger & Lovrity (1975)

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
75-00128	Arctic Biological Station	May 10- Aug.25	Temperature Salinity	Rev. therm. Refractometer	[±.02,.03C*] ±7,1.0%	3	Tuktoyaktuk Cont. Shelf, Kugmallit Bay	Fish, benthos	Hunter & Leach (1983)
75 -0 024	Freshwater Institute, Fish.& Mar. Ser.;Beaufort Sea Project	Mar.8-18	Temperature Salinity	Hach Kit Hach chioride Kit, Kahl 118 WA 300 Salinometer	± ?, ? C° ± ?, ? °/	1	Mackenzie Bay, Kugmailit Bay	Fish, O ₂ ,pH, aik,secčhi depth	Percy (1975)
75-0025	Fish.& Mar. Ser.,Dept. of Environment, Beaufort Sea Project	May 5- Aug.9	Temperature Salinity	YSI model 43 Telethermometer YSI model 33 SCT meter	±?,.50° Q ±?,.7°/ Q	2 2	Mackenzie Bay to Kay Point	Fish O,,benthos, pH,aik,,TR,PO, acid Hy-PO,,TH, organic PO4,Fe, Ca-H,Si,Ci,SO, TKN,NH,,organic N,NO,,Hg,Cu,Ni, Cr,CO,Mn,Cd,Pb	Kendel et al. (1975)
75-0026	Norcor Engin— eering & Re— search Ltd. for Beaufort Sea Project	Apr.12-13, Dec.10	Temperature Salinity	YSI SCT meter	±?5C° ±?8°/	3 3	Cape Parry (Balaena Bay?)	HC,pH,CO ₂ , plankton,O ₂ , benthos	Norcor Engineering & Research Ltd. (1975) Dickins et al. (1981)
75-0028	Glaciology Div., Inland Waters Dir., D.O.E.	May 24- Jun.25	Temperature Sailnity	Hydrolabs TC-2	±7,.05C° ±7,.5°/	3 3	Franklin Bay (Balaena Bay)	pH,Chi,O ₂ ,Ca, Ci,Mg,NO ₃ ,PO ₄ , K,Na,SO ₄ ,aigde, plankton	Adams (1975)
75-0042	Aquatic Env. Ltd. for Can. Arctic Gas Study Ltd.	Jul.1- Sept.22	Temperature Salinity Water level	Thermometer Beckman RB4 Staff	± ?5C° ± ?. 5% ± ?. ? cm	3 3 3	Mackenzie Deita	Fish, benthos, O ₂ , metals, secchi depth SPM	De Greaf & Machniak (1977)
75-0043	Beak Consul- tants for Can. Mar. Drilling Ltd.	Jul.20	Temperature Salinity	?		2 2	Tuktoyaktuk Harbour	O ₂ ,pH,HC, matais,benthos, seals,turbidity	
75-0047	Arctic Biological Station	Jul . 10-28	Temperature	7		2	Beaufort Sea, Amundsen Gulf	· ,	Arctic Biological Station (field notes)
75-0050	F.F.Slaney&Co. Ltd. for Imperial Oil Ltd.	Jun.23- Aug.7	Temperature Water level			2 2		Fish, mommals, birds	Sianey (1976)

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or . reference
75-0146	Marine Environmental Data Service	Aug.8- Sept.6	Waves	Waver I der	±1.5%,±.5 m €	3	Tuktoyaktuk	-	MEDS FIIe #3-2M
76-0001	Canadian Marine Drilling Ltd.	Aug.9- Oct.12	Temperature Salinity Currents (subsurface) Wave	Bathythermograph? Hydro-Products950, Cushing Electro- magnetic Waverider	±?,.1C° ±1.5cm/sec,±11° ±4cm/sec ?	3 2 1	Tuktoyaktuk Cont. Shelf (Tingmiark & Kopanoar drili sites)	Turbidity	Canadian Marine Drilling Ltd. (1977a) Fissel (1981) Lemon & Kowalski (1982)
76-0002	Canadian Hydrographic Service	Jul.7- Sept.10	Water level	Temporary shore based tide gauges	±1, 5 cm	2	Eskimo Lakes, Mackenzie Bay, Banks Island Cont. Shelf, Amundsen Gulf		Canadian Hydrographic Service, Henry & Foreman (1977)
76-0003	MV ARCTICUS, MV J.S. KEEN, F.F.Slaney&Co., for Imperial Oil Ltd.	Jul.17- Sept.7	Temperature Salinity Current	YSI SCT meter YSI SCT meter Hydro-Products	± ?, .5C* @ ± ?, .7°/ @ ±1.5cm/sec,±11°	3 3 3	Kugmallit Bay (Arnak site & Tuft Point)	O ₂ , plankton, sédiment, fish, benthos, O ₂ , pH, HCO ₂ , H, T-SPM, F-SPM, V-SPM, CI, T-DS, F-DS, V-DS, PO_DNO ₂ , Ca, Mg, Cr, Cd, Pb, Ni, SI, TC, TOC, TIC	Slaney (1977b,c)
76-0004	MV ARCTICUS, F.F.Slaney&Co. Ltd. for Imperial Oil Ltd.	Apr.14, Aug.14— Sept.7	Temperature Salinity Current profiles	YSI SCT meter YSI SCT meter ?	± ?, .50° € ± ?, .7°/.; €	3 3 2	Tuktoyaktuk Cont. Shelf, Mackenzle Bay	Turbidity,0,, alk,,H,SM,CI, T-SPM,F-SPM,Cu, V-SPM,T-DS,Mg, F-DS,V-DS,Cr, Pb,Ni,Si,TC,Cd, TOC,TIC,Chi.A, sediment, benthos	Sianey (1977a)
76-0020	MV <u>SALVELINUS</u> , Arc. Biol. Stn.		Temperature Salinity	Rev. therm. Refractometer	[±.02,.03C*] ± ?, 1.0*/.,	3 3	Kugmallit Bay, Liverpool Bay, Mackenzie Bay	Fish, secchi depth	Hunter & Leach (1983)

Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?≕Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
76–0036	F.F.Slaney&Co. Ltd. for Gulf Oll Canada	Jun.24- Sept.19	Temperature Salinity	Thermometer YSI bridge	±?,.10° ± ?, ? °/	3	Eskimo Lokes	Turbidity, secchi depth, Chi.A.nutrients O,SPM,fish, bfrds,plankton, benthos, sound-ings	Martin, Poulin & Bradley (1975), Chambers & Bradley (1978), Slaney (1977d)
76-0123	MEDS	Aug.8- Oct.10	Waves	Wayerider	±1.5%,±.5m @	3	Tuktoyaktuk Cont. Shelf		MEDS FII: \$25-1M, \$50-1M
77-0001	Helicopter, F.F.Sioney&Co. Ltd.,for Freehwater Institute	Jul.4- Aug.11	Temperature Salinity	Hydrolob TC-2	±10° 0 ±1°/ 0	3 3	Mackenzie Bay	Turbidity,02, whole obs.	Fraker et al. (1979)
77-0002	Aquatic Env. Ltd. for Imperial Oli Ltd.	Jul.16- Sept.2	Temperature Salinity	Thermometer Beckman bridge, titration	± ?, ? C° ± ?, ? '/ ± ?, ? '/	3	Tuktoyaktuk Peninsula Coastline	Fish, benthos, turbidity,O., SPM,pH,plankton	Jones & Best (1977) Aquatie Environments Ltd. (1977)
77-0003	MV <u>PANDORA II</u> , Ocean Chemistry Institute of Ocean Sciences	Aug.11- Sept.6	Temperature Salinity	Rev. therm. Autolab Salinometer	±.01,.02C° ±.003,.02°/	3	Amundsen Gulf	O,, plankton, PO,,NO,,SI, SPI,Hg,sediment sampling	Macdonald et al. (1978)
77-6004	Conadian Marine Drilling Ltd.	Jul.10- Oct.22	Salinity Sub-surface currents	Hydrolab C/T Sensor, BT Cushing Electro- magnetic, Hydro- Products 950	± ?. 10° Q ± ?. 1°/ Q ±4 cm/sec ±1.5 cm/sec,±11°	3 3 1	Tuktoyaktuk Cont. Shelf	Turbidity	Consider Merina Drilling Ltd. (1977b), Lemon & Kewelski (1982), Flassi (1981) MEDS File #192-2,
			Waves	Waverider	±1.5%,±.5 m	3			₹193-34 (Waves)
77-0005	Canadian Hydrographio Service	Jul.5- Sept.11	Kater level	Temporary shore-based tide gauges	±1,10 cm	2	Amundsen Guif, Liverpool & Mackenzie Bays		Conadian Hydregrophic Service (Stn. 5499)
77 - 0009A	MY IMPERIAL IMMERK. Envirocon Ltd. for Imperial Oll Ltd.	Jul.26- Aug.29	Temperature Salinity Current profiles	YSI model 33 SCT meter Hydro-Products 960S	± 710° ± 77°/ ±3% accuracy	3 3 3	Tuktoyaktuk Cont. Shelf (Isserk Is.)	O ₂ , alk _t , NO ₂ , NO ₂ , NI ₃ , SPM PO ₄ , SI ² plankton secchi depth, benthos, fish, secchi depth, Chi.A	Envirocon Ltd. (1977)

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Data Set I.D.	Ship or Collecting agency	Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
77-0009B .	MV ARCTIC PELLY Imperial Oil Ltd.	Aug.11- Sept.16	Waves	Waverider	±1.5%,±.5 m @	3	Tuktoyaktuk Cont. Shelf (Isserk Is.)		MEDS Fil* #194-1. 194-1A
77-0010	CANMAR SUPPLIER V, Seakem Ocean., for Dome Petroleum Ltd.	Sept.12- Oct.4	Conductivity	Cond. bridge	?	0	Tuktoyaktuk Cont. Shelf (Tingmlark K-91 drili site)	Cd,Cr,Cu,Pb,Zn, Fe,Ni,Hg,Ca,Mg, Na,K,SO,Ba, suiphidé, sediment	Thomas (1977)
77-0020	Dept. Fisheries & Oceans (Pac. Region)		Temperature Salinity	?		2 2	Mackenzie Bay	Benthos, fish	Hillaby (1977)
77-0035	MV <u>SALVELINUS</u> , Arc. Biol. Stn.		Temperature Salinity	Rev. therm. Refractometer	[±.02,.03C*] ± ?, 1.0*/	3 3	Beaufort Sea Coastal Zone	Benthos, fish	Hunter & Leach (1983)
77-0123	MEDS/Gulf	Aug. 15- Oct. 10	Wayes	Waverider	±1.5%,±.5 m €	3	Tuktoyaktuk Cont. Shelf		MEDS File #190-2M #191-1M
78-0001	Canadian Marine Drilling Ltd.	Jul.15- Oct.10	Temperature Salinity Sub-surface currents Waves	Hydrolab CT Sensor? Hydro-Products 950 Wayerider	± ?. 10° € ± ?. 1°/ € ±1.5 cm/sec ±11° direction ±1.5%,±.5 m	2 2 1 3	Tuktoyaktuk Cont. Sheif, Mackenzie Bay (Ukalerk, Kopanoar & Kagluiik sites)	Turbidity	Fissel (1981) Lemon & Kowalski (1982) MEDS File #192-2 (Wave) #196-2
78-0002	MY CANMAR, SUPPLIER Y, Seakem Ocean. for Can. Marine Drilling Ltd.	Jul . 15-19, Sept . 23-24	Temperature Salinity	Applied Micro- systems CTD-12	±?,.06C° ±?,.04°/	3 3	Tuktoyaktuk Cont. Shelf (Tingmiark drill site)	Fe,Cu,Zn,Cd,Ni,Cr,Pb,Hg,Ba,Na,K,Mg,Ca,SO ₄ ,pH,O ₂ ,benthos;sediment,plankton	Thomas (1978a)
78-0018	Seakem Ocean. Ltd., for Can. Mar. Drilling Ltd.	Jul.20	Temperature Salinity	Applied Micro- systems CTD-12	±.005,.08C° ±.03,.04°/.,	3 3	Mackenzie Bay (Tarsiut drili site)	Plankton,Ca,Cu, sediment,SO,, zoobenthos,Fe, Zn,Cd,Ni,Cr,Pb, Hg,pH,Na,Mg,K	Thomas (1978c)
78-0019	Canadian Marine Drilling Ltd.	Jul .29-30	Temperature Salinity	Applied Micro- system CTD-12	±.006,.08C° ±.03,.04°/.,	3 3	Tuktoyaktuk Cont. Shelf (Kaglulik A-75 drill site)	Sediments,02, Fe,Cu,Zn,Cd,Ni, Cr,Pb,Hg,pH,Na, Mg,K,Ca,SO ₄	Thomas (1978b)
78-0031	Freshwater Institute	Jun.26-29, Sept.7-4	Temperature Salinity	YSI meter er Beckman RS5-3	±?,.5C° ±?7°/	3 3	Tuktoyektuk Peninsula Coastline	Metals,0,, Chi.A,alk,pH, fish,nutrients	Lewrence, Lacho & Davies (1984)

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
78-0113	MEDS/Gulf?	Aug. 4-13	Waves	Waverider	<u>+</u> 1.5%, <u>+</u> .5 m Q	1	Tuktoyaktuk Cont. Shelf		MEDS File #198-2M,
78-0114	Canadian Hydrographic Service	Jul.24- Aug.30	Water level	Aanderaa TG2A	[±.3, 3 cm]	3	Cape Parry		On file at Tides & Currents, IOS
79-0001	Institute of Ocean Sciences	Nov.25-30	Temperature Salinity	Guildline Model 8706-87102 CTD	±.00501C° ±.00502°/	4	Canada Basin		Melling (1983)
79-0002	Canadian Marine Drilling Ltd., US Coast Guard	Aug. 13- Oct. 15	Surface drift	Satellite- tracked drifters (RAMS)	±5 km position	. 3	Canada Basin		Murphy Lissauer and Myers (1983)
79-0003	Canadian Marine Drilling Ltd.	Jul .13- Oct .21	Temperature Salinity Currents	Sensor, CTD-12 Hydro-Products 950	±?,1C° € ±?,1°/ € ±1.5 cm/s,±11°	3 3 1	Tuktoyaktuk Cont. Shelf, Herschel Is.	Turbldity	Canadian Marine Drilling Ltd. (1979) Fissel (1981) Lemon & Kowalski (1982)
			Wayes	Marsh-McBirney Waverider	±4 cm/s ±1.5%,±.5 m	3			
79-0004	Canadian Marine Drilling Ltd.	Nov.27- Dec.16	Currents (under ice)	Drifting buoy carrying Aanderac RCM 4	±1 cm/s ±10° direction (relative)	3	Tuktoyaktuk Cont. Shelf		Canadian Marine Drilling Ltd.
79-8005	MV <u>ARCTIC</u> <u>HOOPER</u> , Arc.Lab.Ltd.for Can.Mar.Drill. Ltd.	May 21- Sept.19	Temperature Salinity	Applied Micro- systems CTD-12	±?,.04C° ±?,.08°/	3	Amundsen Gulf (Summer's Harbour)	Sediment,COD, transparency, SPM	Thomas (1979a)
79 -8 007	MV <u>CANMAR</u> <u>SUPPLIER</u> , Arc.Lab.Ltd.for Can.Mar.Drill. Ltd.	Jul .22	Temperature Salinity	Applied Micro- systems CTD-12	±?,.04C° ±?,.04°/	3 3	Tuktoyaktuk Cont. Shelf (Kilannak A-77 drill site)	Cr,Pb,Hg,sedi-	, Thomas (1979b)
79-0009	MV <u>CANMAR</u> <u>SUPPLIER V</u> . Arc.Lab.Ltd.fo Can.Mar.Drill. Ltd.	Sept.9 r	Temperature Salinity	Applied Micro- systems CTD-12	±.01,.04C° ±.03,.04°/.,	3	Tuktoyaktuk Cont. Shelf (Norierk M-98 drill site)	Plankton,SPM, Fe,Zn,Cu,Cr,Ni Pb,Cd,Cl, turbidity	Thomas (1979d)
79-0010	Arc.Lab.Ltd.fo Can.Mar.Drlll. Ltd.	r Sept.25–27	Temperature Selinity	Applied Micro- systems CTD-12	±704C° ±799°/	3 3	McKinley Bay	O ₂ ,SPM,pH, transparency	Themas (1979c)

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
79-0016	Canadian Hydrographic Service	Aug.'79- Aug.'80	Water level	Aanderaa TG2A	[±.3,3 cm]	3	Cape Parry		On file at Tides & Currents, IOS
7 9-0 026	Arc.Lab.Ltd.for Dome Petroleum Ltd., Oil Under Ice Study- Phase 1		Temperature Salinity Currents	Thermistor chains YSI 33 SCT Aanderda RCM-4	±7,.05C° ±7,.6 to 2.1°/ ±.3 cm/s	3 3 3	Tuktoyaktuk Cont. Shelf (McKinley Bay)	Benthos,HC, fish,sediment, aigae,birds, mammais,O ₂	Dickins & Bulst (1981) Humphrey (1980)
79-0037	Freshwater Institute	Jun.28 - Sept.16	Temperature Sailnity	Beckman RS5-3	±?,.5C° ±?,.7°/	3	Tuktoyaktuk Cont. Shelf	Chi.A,O ₂ , benthos;pH,aik, SPM,Ca,Fe,Mg,Na TDN,TDP,fish	
79-0120	MEDS/Gulf/Esso?	Aug.19- Oct.15	Wayes	Waver I der	±1.5%,±.5 m @	3	Tuktoyaktuk Cont. Shelf (Issungnak)	i .	MEDS FILE #198-2N
7 9-0 121	C-Core	September	Surface drift	Drift cards		3	Beaufort Sea	+ + + + + + + + + + + + + + + + + + +	.Diemand, Reimer & Barrie (1982)
30-0001	Canadian Marine Drilling Ltd., US CoastGuard	Aug.13- Oct.24	Surface drift	Satellite— tracked drogued drifters (Argos)	±1.2 km position	4	Tuktoyaktuk Cont. Shelf		Murphy, Lissquer & Myers (1983)
3 0-0 002	Canadian Marine Drilling Ltd.	Jul.2- Oct.3	Temperature Salinity Currents Wave	Hydrolabs CTD probe, Applied Micro- systems CTD-12 Hydro-Products, Marsh McBirney Waverider	± ?, .1C° ±.02 to .5C° ±.07 to 1.5°/ ±1.5 cm/s,±11° ±4 cm/s ±1.5,+.5 m •	3 3 1 3	Tuktoyaktuk Cont. Shelf		Canadian Marine Drilling Ltd. (1980) Lemon & Kowalski (1982) MEDS File #202 & #200-3M (Waves)
30-0003	MV BEAUFORT SEA EXPLORER; IMPERIAL ADOO; ZANEN F-15, Arc. Lab.Ltd. for Dome Petroleum Ltd.	Jul.4- Sept.26	Temperature Salinity	Applied Micro- systems CTD-12	±.01,.04C* ±.03,.09*/	3 3	McKinley Bay	O ₂ ,SPM,TOC, türbidity	Thomas (1930)
B 9-0 004	Arc.Lob.Ltd.for for Dome Petroleum	Jul.10-12, Aug.12-15, Aug.27- Sept.7, Sept.24-26	Temperature Salinity	Applied Micro- systems CTD-12	±.01,.03C° ±.03,.04°/	3 3	Tuktoyaktuk Harbour	O_,SPM,sedi- ments,benthos, transparency	Thomas et ei. (1981)

Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?-Unknown	precision and ra	ata iting imber	Area	Concurrent measurements	Source or reference
80-0011B	Canadian Hydrographic Service	Aug.'80- Jul.'81	Water level	Aanderaa TG2A	[±.3,3 cm]	3	Cape Parry	÷	On file at Tides & Currents, IOS
80-0016A	Dome Petroleum (Oll Under Ice Study, Phase 2)	Apr.3-13	Temperature Salinity Current	Thermistor chain, YSI 33 SCT YSI 33 SCT Aanderaa RCM-4	±7,.05C° ± ?, ? C° ±.6 to 2.1°/ ±.3 cm/s	1 1 3	McKinley Bay	Plankton,HC	Dickins & Buist (1981)
80-00168	Dome Petroleum (Oil Under Ice Study, Phs.2a)	Apr.26- May 3	Temperature Salinity Current Water level	Thermistor chain, YSI 33 SCT YSI 33 SCT Aanderaa RCM-4 Cushing EM Sounding line	±?05C° ± ?, ? C° ± .6 to 2.1°/ ± .3 cm/s +2cm/s threshold,+26 ±20 cm	1 3 3 3 3	McKinley Bay	Plankton,HC	Dickins & Buist (1981)
8 0-0 025	LGL for US Bureau Land Mgmt.(Bowhead Whale Study)	Aug. 14-27, Sept. 6	Temperature Salinity	Hydrolab system 8000	±?,.1°/	3	Cont. Shelf, Yukon Coast	Benthos,HC, fish,plankton, whale,obs.	Griffiths (1981) Griffiths & Buchanan (1982)
80-0028	Dome Petroleum Ltd.(Oll Under Sea Ice Study — Phase 3)	Jul.8	Temperature Salinity	YSI meter YSI meter	± ?, ? C° ± ?, ? °/	2 2	McKinley Bay	Plankton, fish, birds, mammals,	Dickins & Buist (1980)
80-0041	MV <u>ARCTIC DAWN</u> , Dobrocky Seatech Ltd.for Dome Petroleum	Sept.26	Temperature Salinity	YSI 33 SCT YSI 33 SCT	±?7°/ e	3	Kugmallit Bay	Fish	Byers & Kashino (1980)
89-0119	Freshwater Institute	Jul.2-7, Aug.1-6, Sept.6-10	Temperature Salinity	Beckman RS5-3 Beckman RS5-3	[±?,.50°] [±?,.7°/••]	3	Tuktoyaktuk Cont. Shelf (Richard's Is. Coastline)	Chi.A,O ₂ , pH,aik, SPM,TDN,TDP,Ca, Fe,Mg,Na,fish	Lawrence, Lacho & Davies (1984)
81-0001	Institute of Ocean Sciences	Mar.18- Apr.17, Mar.23- Aug.16	Salinity Sub-surface currents	Guildiine 8706 87102 CTD Aanderaa RCM 4 Aanderaa RCM-4	±.001003C° ±.00101°/ ±1 cm/s ±10° direction ± ?15C° ±.07,?°/	4 3 3 3	Canada Basin, Tuktoyaktuk Cont. Shelf, Banks Is. Shelf		Frezen Sea Research Group, Institute of Ocean Sciences
81-8602A	Arctic Sciences Ltd. for Dome Petroleum Ltd.	Jan.18- Aug.4	currents	Aanderaa RCH-4	±1 cm/s ±10° direction ± ?, .150° & ±.87.7°/.,	3 3	Tuktoyaktuk Cont. Shelf (Tarslut & Uviluk drill sites)		Conedien Merine Drilling Ltd. Flesel, Wilton & Knight (1981)

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Data Set I.D.	Ship or Collecting agency	Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
81-0002B	Arctic Sciences Ltd. for Dome Petroleum Ltd.		Current Temperature Salinity	Aanderaa RCM-4 Aanderaa RCM-4 Aanderaa RCM-4	±1 cm/s, ±10° ± ?, .150° ±.07.?°/	3 3 3	Tuktoyaktuk Cont. Shelf (Tarelut)		Birch, Fissel & Wilton (1982)
81-0002C	MV CANMAR EXPLORER II, III, and IV	JulOct.	Wave Current Temperature Salinity	Waverider Aanderaa, ACM2 CTD	±1.5%,±.5 m e ± ?, ? cm/s ± ?, ? C° ± ?, ? °/	2 2 2 2 2	Tuktoyaktuk Cont. Shelf (Irkaluk, Issungnak, Koakoak,Kopanoa Kenalooak, Kilannak)	Weather,sea state,sea sur- face tempera- tures r,	Wave-MEDS ∲196-2M ∲201,∲202, & ∲204; Canmar archive tape
81-0003A	Hellcopter, Arc. Lab. Ltd. for Esso, Gulf, & Dome	Mar.7-9	Temperature Salinity	Rev. therm. Salinometer	[±.02,.03C*] [±.01,.02*/]	3	Tuktoyaktuk Cont. Shelf	O,,SPM,HC,Zn, nütrients,Cu,Hg Cd,Cr,PO,,NO ₂ , Si,PAH,TÖC,POC, DOC,alk,,sedi- ment,plankton	Erickson et al. (1983)
81-00038	Helicopter, Arc. Lab. Ltd. for Esso, Gulf, & Dome	May 13-16	Temperature Salinity	Applied Micro- systems CTD-12	±.01,.03C* ±.03,.04*/	3	Tuktoyaktuk Cont. Shelf	Zn,Cu,Hg,Cd,Cr, O,,PO,,NO,, ST,SPM,PAH,TOC, DOC,POC,alk, plankton,	Erickson et al. (1983)
81-0003C	MV <u>SEQUEL</u> , Arc. Lab. Ltd. for Esso, Gulf, & Dome	Jul.24-26 Jul.24- Sept.23	Salinity	Applied Micro- systems CTD-12 Thermistor chain	±.01,.03C° ±.03,.04°/ ± ?, ?C°	3 3 2	Tuktoyaktuk Cont. Shelf	Zn,Cu,Hg,Cd,Cr, O,,PO,,NO,, S1,SPM,PAH,TOC, DOC,POC,alk,, plankton,bentho	Erickson et al. (1983)
81-0003D	Hellcopter, Arc. Lab. Ltd. for Esso, Gulf, & Dome		Temperature Salinity	Applied Micro- systems CTD-12	±.01,.03C° ±.03,.04°/	3 3	Tuktoyaktuk Cont. Shelf	Zn,Cu,Hg,Cd,Cr, O,,PO,,NO,, ST,SPM,PAH,TOC, DOC,POC,alk,, plankton,bentho	Erickson et al. (1983)
81-0006	Canadian Marine Drilling Ltd.	April	Under—ice currents	Drifting buoy carrying Aanderaa RCM-4	±1 cm/s ±10° direction (relative)	2	Beaufort Sea		Canadian Marine Drilling Ltd.
81-0013	Arc. Lab. Ltd. for Dept. of Local Govt. NWT	Jun.21- Jul.7	Temperature Salinity	Applied Micro-systems CTD-12	±.01,.03C° ±.03,.04°/	3 3	Tuktoyaktuk Harbour	SPM,02	Erickson & Pett (1981)
81-0015	Arc. Lab. Ltd. for Arctic Biological Stn.	May 15- Sept.26	Temperature Salinity	Applied Micro- systems CTD-12	[±.01,.03C*] [±.03,.04*/]	1	Tuktoyaktuk Cont. Shelf (Issungnak, drill site), McKinley Bay	Plankton, sedi- ment, O ₂ , Si, PO ₄ , NO ₃ , Chi.A, phaeo.	Pett, Acremon & Vickers (1981)

Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?≕Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
81-0016	Arctic Sciences Ltd. for Esso Resources	Aug.8- Sept.26	Currents (subsurface)	Endeco 105 & Aanderaa RCM-4	±2.6,5.4 cm/s, ±1, ±1cm/s,or2%,±10°	7• 3	Tuktoyaktuk Cont. Shelf (Alerk.		Birch & Flase! (1982)
	Canada Ltd.		Temperature	RCM-4	±.02,.15C*	3	Issungnak & W.Atkinson drii sites)	ı	
81-0017	Canadian Hydrographic Service	Jul.17- Nov.14	Water level	Temporary shore-based tide gauges	[± 1, 10 cm]	3	Tuktoyaktuk Cont. Shelf, Mackenzie Delta Cape Parry	•	On file at Tides & Currents, IOS
81-0018	MV <u>SEQUEL</u> , Arc. Lab. Ltd. for Dome Petroleum Ltd.	Sept.11-22	Salinity	Salinometer	[±.01,.02°/]	2	Tuktoyaktuk Cont. Shelf (Tarslut site), Herschel	Sediment,- benthos	Thomas et al. (1982) Heath & Thomas (1984)
81-0027	MV <u>SEQUEL</u> , LGL for US Bureau Land Mgmt. (Bowhead Whale Study)	Aug.1-25, Sept.6	Temperature Sailnity	Hydrolab system 8000	±?,.10° ±?1°/	3	Tuktoyaktuk Cont. Sheif & Slope, Kugmallit Bay	Benthos, fish, piankton, whale obs, secchi depth	Griffiths & Buchanan (1982)
81-0029	Dept.Fish.& Oceans (Fresh- water Inst.)	May 4- Jun.15	Temperature (surface)	7		2	Kugmallit Bay, Liverpool Bay	Fishery survey	Gilimon & Kristofferson (1984) Bond (1982)
81-0038	USCG, CANMAR	Oct.27- Nov.4	Surface drlft	ARGOS drifters	±1.2 km accuracy	3	Continental Slope	•	Murphy, Lissauer & Myers (1983)
82-0003	Arctic Sciences Ltd.,for Inst. of Ocean Sciences		Temperature Salinity	Guildline 8706 CTD	±.001,.01C* ±.001,.02°/	3 3	Amundsen Gulf, Pr. Wales Str.	Inorganic micro-nutrient	Fissel,Knight & Birch (1984)
82-0004	Institute of Ocean Sciences	Mar.28- May 2	Water level	TG2A,TG3A,TG5A, AML	[±.3,3.0 cm]	2	Amundsen Gulf		CHS
82-0006	Canadian Hydrographic Service	Aug.'82 Aug.'83	Water level	Aanderaa,AML	[±.3, 3.0 cm]	3	Cape Parry, Tuktoyaktuk, Sach: Harbour		On file Tides & Currents, IOS
82-0032	Dept.Fish.& Oceans	Jul.27- Aug.11	Temperature Sailnity	Applied Micro- systems CTD-12	[±.01,.04C*] [±.03,.09°/]	3 3	Kugmailit Bay	Plankton, flah	Ratyn*ki (1983) .
82-0050	USCG, CANMAR	Sept.9,'82- Jan.28'83	Surface drift	ARGOS drifters	±1.2 km accuracy	3	Beaufort See		Meiling (pers. comm.

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Data Set I.D.	Ship or Collecting agency	Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown	precision and re	Data ating umber	Area	Concurrent measurements	Source or reference
82-0093 A	Helicopter, Arc. Lab. Ltd. for Dome, Esso, & Gulf	Feb.19-23	Temperature Salinity	Applied Micro- systems CTD-12	±.01,.03C° ±.03,.04°/	3	Tuktoyaktuk Cont. Shelf (Issungnak 0-61)	Benthos, sedi- ment, metals, 02, nutrients, TOC, SPM, Chl.A, PAH	Erickson et al. (1983)
82-00938	Helicopter, Arc. Lab. Ltd. for Dome, Esso, & Gulf	Apr.15-16	Temperature Salinity	Applied Micro- systems CTD-12	±.01,.03C° ±.03,.04°/	3	Tuktoyaktuk Cont. Shelf (Issungnak 0–61)	Benthos, sedi- ment, metais, 0, nutrients, TOC, SPM, Chi.A, PAH	Erickson et al. (1983)
82 -0 094	MV <u>SEQUEL</u> , Arc. Lab. Ltd. for Dome&Gulf	Sept.3-5	Salinity (bottom water)	Salinometer	[±.01,.02°/]	4	Herschel Is.	Benthos, sediment	Heath & Thomas (1984)
82-0095	EPS Environment Canada	Aug.5-7	Temperature Salinity	YSI model 33 YSI model 33	± ?1C° @ ± ?, .7°/ @	3	King Point, Stokes Point (Yukon Coast)	Benthos, sedi- ment,pH,O ₂	Allan & Mackenzie- Grieve (1983)
82 -00 97	MV <u>SEQUEL</u> , Arc. Lab. Ltd. for Dome&Gulf	Jul .24-31	Salinity (bottom water)	?		2	Tuktoyaktuk Cont. Sheif (Tarsiut drill site)	Benthos, sediment	Heath & Thomas (1983)
82-0105	Dept. Fish. & Oceans, Pacific Region	Aug.12- Sept.6	Temperature	?		2	Yukon Coast	Fish	Unpub I ished
82 -0 110	Arc. Lab. Ltd. for Fish. & Oceans Can.	Feb.19- Jun.11	Temperature Salinity	?		2 2	Tuktoyaktuk Cont. Shelf	Plankton,Chl.A, nutrients,0 ₂	Pett et al. (1983)
82-0111	Freshwater Institute	Jun.2- Jul.6	Temperature (surface)	?		2	Kugmallit Bay, Liverpool Bay	Fisheries survey	Gillman & Kristofferson (1984)
82 -0 117	Arctic Sciences Ltd. for Esso	Aug.3- Sept.25	Current	DOWS VMCM, NB ACM,	Res:±.04cm/s,1.4 @ ±1 cm/s or 5%, ±5° 6	3	Isserk Shoal, Issungnak,		Birch, Wilton & Fissel (1982)
	Resources Canada Ltd.		Temperature	Endeco 105 DOWS VMCM,	±2.6,5.4 cm/s; ±1° ±.004,70° @	3	Kadluk		
			Wave	NB ACM Woverider	±?,.5C° @ ±1.5%,±.5 m @	3			
82 -0 118	MV CANMAR EXPLORER II, III, and IV	JulOct.	Temperature Salinity Waves Current	CTD CTD Waverlder Nell Brown ACM2, Aanderaa	± ?, ? C° ± ?, ? °/°, ±1.5%,±.5 m @ ± ?, ? cm/s	2 2 3 3	Nerierk, Orviiruk, Irkaiuk,Aiverk, Kenaloak&Tarsiut driil sites		MEDS File #196,#201, #204 CANMAR Archive tape Myers & Kirby (1982)

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
32–0119	MV CANMAR SUPPLIER II, Arc. Lob. Ltd. for Dome Petroleum Ltd.	Sept.18	Temperature Salinity	Applied Micro- systems CTD-12	±.01,.04C* ±.01,.04*/.,	3 3	Tuktoyaktuk Cont. Shelf (Tingmiark drill site)		Thomas & Berrang (1982)
83-0017B	Canadian Hydrographic Service	Feb.'83 Aug.'84	Water level	Aanderaa	[±.3, 3 cm]	3	Cape Parry, Tuktoyaktuk		On file at Tides & Currents, IOS
83-0027	LGL Ltd. for Dome Petroleum and Gulf	Aug.19- Sept.11	Temperature (surface?)	7		. 2		Turbidity, whale obs., birds	McLaren & Davis (1984)
83-0032	USCG, CANMAR	Aug.17- Oct.28	Surface drift	Satellite- tracked drifters	± ?, ? cm/s	3	Beaufort Sea		Robe Lissquer & Myers (1983)
83 -001 7	Inflatable boat, Environ— mental Protec- tion Service	Aug. 2-4	Temperature Salinity	YSI model 33 YSI model 33	± ?, .1,C° e ± ?, .7°/ e	3 3	Stokes Point	O ₂ ,sediment, benthos	Allan & Mackenzie- Grieve (1984)
83-0054	MV <u>SEQUEL</u> , Env.Protection Service	Jul.12-15	Temperature Salinity	?		2 2	Tuktoyaktuk Cont. Shelf, Kugmallit Bay	Sediment .	EPS (NW Territories)
83-0058	Arc. Lab. Ltd. for Fish.& Oceans Can., DIAND,Dome Petroleum and Gulf Oll	Aug.21,23, Oct.9	Temperature Salinity	Thermometer Salinometer	±.1,?C* [±.01,.02*/]	3 3	Tuktoyaktuk Cont. Shelf Kugmallit Bay, Liverpool Bay, Eskimo Lakes	Chi.A.secchi depth,SPM	Borstad (1985)
8 3-0 059	Simon Fraser University	Aug.23-31	Temperature Salinity	?		2 2	Cont. Shelf & Slope, Kugmallit Bay, Mackenzie Bay	SPM,Chl.A, bacteria	Albright (1986)
8 3-0 06 5	Arc. Lab. Ltd., for AGC	Jul.19- Aug.10	Temperature Salinity	Applied Micro- systems CTD-12	±?,.03C° ±?,.1°/	3 3	Tuktoyaktuk Cont. Shelf, KugmallIt Bay	SPM, turbidity, plankton, Chi.A	Nadeau (1984)
83-0067	Arc. Lab. Ltd. for Esso Res.Ltd.	Jul.30- Sept.9	Current Temperature Wave	Neil Brown ACM Neil Brown ACM Waverider	_ ±1 cm/s,±2° @ ±.5C° @ ±1.5%,.5 m @	3 3 3	Tuktoyaktuk Cont. Shelf (Kadluk & Amerk drill sites)		deLange Boom & Juszko (1983)
83-0068	Freshwater Institute	Jun.11-19, Sept.12-15	Temperature (surface)	?		. 2	Liverpool Bay	Fishery survey	Gillman & Kristofferson (1984)

Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown		Data rating number	Area	Concurrent measurements	Source or reference	
83-0069	CANMAR	Aug.2- Dec.31	Temperature Salinity Current Wave	AML CTD-12 AML CTD-12 NeII Brown ACM 2 Waverider	± ?, ? C° ± ?, ? °/,, ± ?, ? cm/s ±1.5%,.5 m @	2 2 2 2	Beaufort Shelf (Siuluk,Arluk, Aiverk,Natiak Havik,Nerlerk, & Uviluk drill sites)	Weather, ice conditions, sea state	CANMAR Archive tope	
83-0070	MEDS/Gulf, MacLaren Plan- search?	Aug.25- Sept.5	Wave Current?	Waverider	<u>+</u> 1.5%,.5 m e	9 2	Tuktoyaktuk Cont. Shelf (Pitsiulak drii site)	I	MEDS #207	
84-0017	ESL Env.Sci. Ltd. & G.A. Borstad Ltd.for ESRF & DIAND	Aug.22, Sept.8—12	Temperature (surface)	NOAA 7 satellite, (radiometer)	±?,1C*	3	Beaufort Sea, Amundsen Gulf	Mammals, turbidity	Harwood & Borstad (1985)	
84-0032	Freshwater Institute	Jul.7-26, Sept.7-10	Temperature Salinity	?		2 2	Beaufort Sea Coastal	Fish, plankton, secchi depth	Unpub I ished	
84-0043	Atlantic Geoscience Centre	Apr.1	Temperature Salinity	Guildline 122E CTD	±?,.01C° ±?,.025°/	3	Tuktoyaktuk Cont. Shelf	Sed. cores, transmissivity	Kurfurst (1984) Nadeau (1984)	
84-0044	MV <u>SEQUEL</u> , Arc. Lab. Ltd. for AGC Beaufort Sed. Dynamics Study	Jul . 10-21	Temperature Salinity	Guildline 122E CTD	±?,.01C° ±?,.025°/	3	Tuktoyaktuk Cont. Shelf	Sed. cores	Nadeau (1984)	
84-0045	Arc. Lob. Ltd. for Gulf	Aug.8- Sept.?	Current Wave Temperature Salinity	Arc.Lab.real-time Waverider Applied Micro- systems CTD-12	± ?, ? cm/s ± ?, ? cm ± ?, ? C° ± ?, ? °/	2 2 2 2	Tuktoyaktuk Cont. Shelf (Amauligak, Tarslut, drill site),Herschel Basin		Devenis (1985)	
84-0046	MV ARCTIC PELLY, MV NANA BUSH, Arctic Sciences Ltd. for Esso Resources Ltd.		Current Wave Water level	Neil Brown ACM Endeco 105 Waverider Sem Data 635-11	±1 cm/s,±5° Resol:±.04 cm/s,±1 ±1.5%,0.5 m e ±.01 m,.1 m e	.4° 3 3 3	Tuktoyaktuk Cont. Shelf (Amerk, Nipterk, Kaubvik drill sites)		Birch, Fissel & Wilton (1984c,b) Fissel, Birch & Wilton (1984)	
84-0047	Inflatable boat, EPS	Aug. 1-7	Temperature Salinity	YSI model 33 YSI model 33	± ?, .1 C° ® ± ?, .7°/ @	3 3	Stokes Point, King Point	Sediment, benthos	Davidge & Mackenzie- Grieve (1986)	
8 4-0 048	MV <u>CANMAR</u> EXPLORER	Jul.13- Oct.23	Current Temperature Salinity	Aanderaa, Neli Brown ACM-2 Applied Micro- systems CTD-12	[±1 cm/s,± 5°] ? ± ?, ? C° ± ?, ? °/	2 2 2	Beaufort Shelf (Natick,Siuluk, Arluk,Alverk & Havik drill sites)	Weather, ice conditions, sea state	CANMAR archive tape	

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Data Set I.D.	Ship or Collecting agency	Dates of measure- ments	Quantity measured	Instruments or methods used ?=Unknown	Extimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
84-0049	Twin Otter, Institute of Ocean Sciences	Mar.'84- Aug.'85 Apr.1-6	Current Temperature Salinity	Aanderaa Guildiine? CTD	+ ?, ? cm/s [+.001,.01C°] [+.001,.02°/]	2 2 2	Herschel Canyon W. M'Clure Str.	•	Perkin (pers. comm.)
85-0006	ESL Env.Sc. Ltd.,G.A. Borstad Ltd, Cascadia Res. Coll.,P. Res. Proj.,& Arctic Labs Ltd.for ESRF	Aug.18-25, Sept.12-18	Temperatur e	?		2	Beaufort Sea, Amundsen Gulf	Mammals, turbidity	ESL (Unpublished)
85-0007	LGL Ltd. for DIAND	Aug. 18-31	Temperature	Hydrolab 4021	±.1,.2C*	3	Mackenzie Bay	Nutrients,02, Chi.A,fish, turbidity	Bradstreet & Fissel (1986)
85-0014	Freshwater Institute	Jun.27- Aug.21	Temperature Salinity	? ?	٠.	2 2	Yukon Coast	Fish	Unpublished
85-0016	Simon Fraser University	Aug.26-27	Temperature Salinity	?		2 2	Kugmallit Bay	Chl.A,SPM	Albright (1986)
85-0017A	Freshwater Institute	Mar.24-27	Temperature Salinity	?		2 2	Tuktoyaktuk Cont. Shelf		Hopky, Chiperzak & Lawrence (1986)
85 -00 178	Freshwater Institute	May 17-19	Temperature Salinity	?		2 2	Tuktoyaktuk Cont. Shelf, Mackenzle Bay		Hopky, Chiperzak & Lawrence (1986)
85-00170	Freshwater Institute	Jul.18- Sept.12	Temperature Salinity	? ?	•	2 2	Cont. Shelf, Mackenzie Bay,	Plankton,Chi.A, secchi depth	Hopky, Chiperzak & Lawrence (1986)
85-0019	Archipelago Mar. Res., for Dept.Fish.& Oceans	Jul.12-16	Temperature Salinity	?		2 2	Liverpool Bay	Fish,plankton, benthos	Arch. Mar. Res. (1985
85-0029	Arc. Lab. Ltd. for Esso	Aug.26- Oct.14	Current	Neil Brown ACM-2 Inter Ocean S4	<u>+</u> ?, ? cm/s +.2,2%cm/s;+.5,2	• •	Tuktoyaktuk Cont. Shelf		Arctic Labs Ltd. (1985a,b,c)
	Res. Ltd.		Temperature Salinity	Aanderaa RCM-4 Aanderaa RCM-4S	[± ?, .15 C°] [± .07, ? °/]	3 3	(Nipterk,Arnak Taglu driil sites)	•	
		May 9- Oct.14	Water level	See Data 635-11 Aanderaa WLR5	+1,10 cm @ [±.3,3.8 cm]	3 9			
			Wave	See Data 635-11	± ?, ? cm	3			

plankton

Spedding (pers. comm.)

Arctic Laboratories

Beaufort Sea

Cont. Slope

MacLaren Plan-Summer search Ltd.for Esso Res. Ltd.

Aug. 24-28

MV <u>JP TULLY</u>, Arc. Lab. Ltd. & Env.Prot.

Serv.

Current

?

86-0005

86-0006

Data Set I.D.	Ship or Collecting agency	Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown	Estimate of data precision and accuracy	Data rating number	Area	Concurrent measurements	Source or reference
85-0030	Dobrocky Seatech Ltd.for Geol.Survey of Canada	Aug.24— Sept.16	Current Wave	Aanderaa, Sea Data 621,635 Sea Data 621,635	[± 1 cm/s, ± 5°] ± ?, ? ± ?, ?	2 1	King Point	Sediment, weather	GIIIIe (1985)
85-0031	LGL Ltd. &, Arctic Sciences Ltd. for DIAND	Sept.4-18	Temperature Salinity	Applied Micro- systems CTD-12	±.02,.5C° ±.03,.1°/	3	West Mackenzie Bay	Whale obs., plankton,secchi depth,Chi.A	Richardson (1986) Fissel et al. (1986)
B5- 0 032	Institute of Ocean Sciences (Ocean Physics Division	Mar.'85- Apr.'86 Mar.'85	Current Water level Temperature Salinity	Aanderaa RCM-4 Aanderaa TG's, AML TG 12 A's Guildline CTD	[± 1 cm/s, ± 5°] [±.3, 3 cm] [±.001,.005C°] [±.001,.01°/]	3 3 3 3	Beaufort Sea	Anemometers, ice-drift buoys nutrients,0,, tritium, AVFRR digital imagery	Melling (pers. comm.)
35-0033	CANMAR	Aug.10- Oct.10	Temperature Salinity Current Wave	CTD-12 CTD-12 NeII Brown ACM2 Waverider	± ?, ? C° ± ?, ?°/ ± ?, ? cm/s ± 1.5°/5m @	3 3 3 3	Beaufort Sea	Weather,ice conditions, sea state	CANMAR archive tape, Steen (1986)
5-0036	Helicopter, Institute of Ocean Sciences	Apr.23- May 3	Temperature Salinity	Guildline? CTD	[±.00101C*] [±.001,.02*/]	2 2	Off Banks Is.		Perkin (pers. comm.)
5-0037	Gulf Canada	JulSept.	Current Temperature Salinity	? Applied Micro- systems CTD-12	+ ?, ? cm/s [+.01,.10°] [+.001,.02°/]	2 2 2	Tuktoyaktuk Cont. Shelf		Gulf
36- 9 09 3	MV <u>IVIK</u> , Institute of Ocean Sciences	Sept.10-16	Temperature Salinity Current	Guildline 8706 & AML CTD's Aanderaa	[±.00101C*] [±.00102*/] ± ?. ? cm/s	3 3 3	Beaufort Sea	Nutrients, radium, tritium, particulates, productivity, sediment, hydro- carbon, acoustic profiling	Macdonald (pers. comm.)
36-0004	LGL Ltd. & Arctic Sciences Ltd.for DIAND	Aug.28- Sept.8	Temperature Salinity	Applied Micro- systems CTD-12	±.02,.05C° ±.03,.1°/	3	Beaufort Sea	Transmissivity, SST from satel- lite imagery, what study,	Fissei,Bradstreet & Moen (1987)

TABLE 1: SUMMARY LISTING OF DATA SETS (CONT'D)

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Page 2	8
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Data Set I.D.		Dates of measure— ments	Quantity measured	Instruments or methods used ?=Unknown		Data rating number	Area	Concurrent measurements	Source or reference
86-0007	MV <u>SARPIK</u> , Arc. Lob. Ltd., LGL Ltd,& Env.Pro.Ser.	Aug.19–22	?	?		2	Kugmallit Bay		Arctic Laboratories
86-0008	MV <u>ANNIKA</u> <u>MARIE</u> , LGL Ltd. Bowhead Whale Study	Sept.4-11	Temperature Salinity	Applied Micro- systems CTD-12	±.02,.20° ±.03,.04°/	3 3	East Alaska	Whale obs, secchi depth, plankton,Chl.A	Birch (pers. comm.)
86-0009	Seaconsult Marine Research Ltd.,ESRF Study	Aug.17- Sept.24	Currents Water levels Waves	Sea Data 635-12 Sea Data 635-11, 635-12 Sea Data 635-9, 635-11,635-12 & 6508-7	± 7, 7 cm/s ±1,10 cm • ±1,10 cm •	2 2 2	Mackenzie Bay	Sediment pore pressure	Hodgins et al. (In print)
86-0010	Institute of Ocean Sciences; Ice Motion Prog	Mareh .Apr.86- Aug.87	Temperature Salinity Current Temperature Salinity	Guildiine CTD Aanderaa Aanderaa Aanderaa	[.001,.005°C] [.001,.010°/psu ± 1 cm/s, ± 5° [± ?, .15 C°] [± .07. ?°/]	3 3 2 2 2 2	Beaufort Cont. Shelf & Slope	Nytrients,0 ₂ , O ¹⁸	Melling (pers. comm.
86-0011	Institute of Ocean Sciences	AprAug.?	Current Temperature Salinity	Aanderaa Aanderaa Aanderaa	[± 1 cm/s, ±5°] ± ?, ? C° ± ?, ? °/	2 2 2	Amundsen Gulf	Ambient noise using WOTAN	Former (pers. comm.)
86-0013	CANMAR	Summer?	7			2	Tuktoyaktuk Cont. Shelf		CANHAR
86-0014	Arc. Lab. Ltd. for Gulf Canada		Wave	Waverider	±1.5%,.5 m €	3	Beaufort Shelf (Amauligak?)		Gulf; de Lange Boom Hill (1986)

9. MAPS

This section contains maps showing the yearly distribution of temperature, salinity, current, water-level, wave, and surface-drift measurements. One overall map and up to four additional sub-maps are used (Figure 12). All are Lambert Conformal Conic projection with maps 1 through 5 having scales 1:4.68, 2.7, 1.78, 1.78 and 2.67 million, respectively.

Generally, temperature-salinity and any water-level stations are plotted together. If there were also current-meter data, then the first map will have only temperature-salinity, and the current and water-level data will be displayed on a second map. Wave data have usually been plotted with current and/or water-level data. The overall map generally contains all the stations; the sub-maps provide more details and several may be used to display station positions in one area.

For some data sets, exact locations are not known. A "?" on the first map is used to indicate the general area, if known.

The legend indicates the following data types:

CM - current-meter data

DRF - drifter data

TS - temperature-salinity data

WAVE - wave data

WL - water-level data

Under each category are listed the data sets and station symbols used in the plot. The identifier number is followed by the vessel/agency and the total number of stations located within the map boundaries, in brackets. Since some stations in a particular data set may be at the same location, the number in brackets may exceed the number of symbols on the plot.

The TS data are primarily profile data, however some moored instruments had temperature and/or conductivity sensors. In these cases, under TS in the legend, the data-set identifier is followed not by the vessel or agency, but by the word "mooring".

The coastlines have been smoothed and small islands removed. A minimum consecutive displacement of 0.07 inch is required for a new station to be plotted. This was implemented to prevent the plotter from wearing through the paper in heavily sampled locations. Vessel/agencies in the legend are abbreviations. Note that cruise station symbols may be different on two different maps.

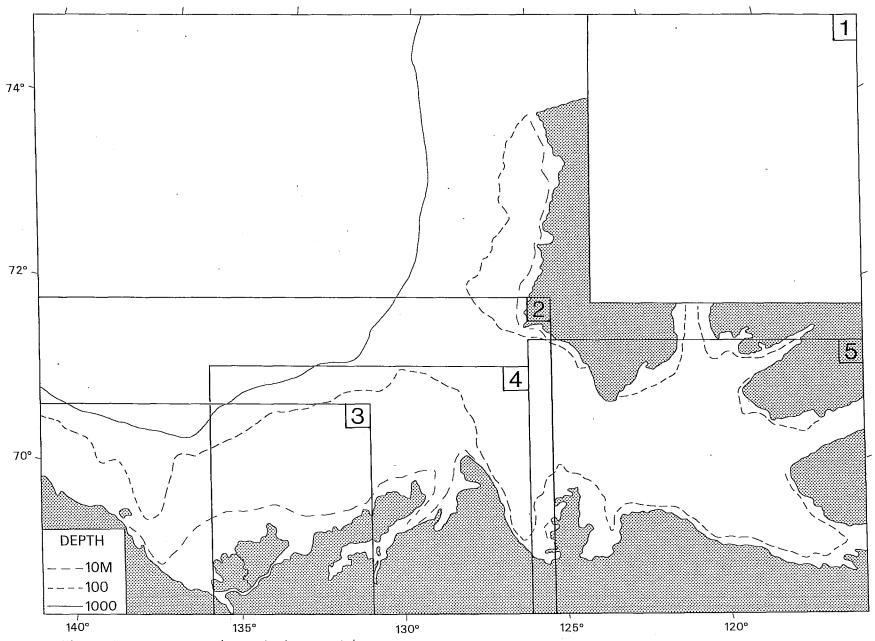
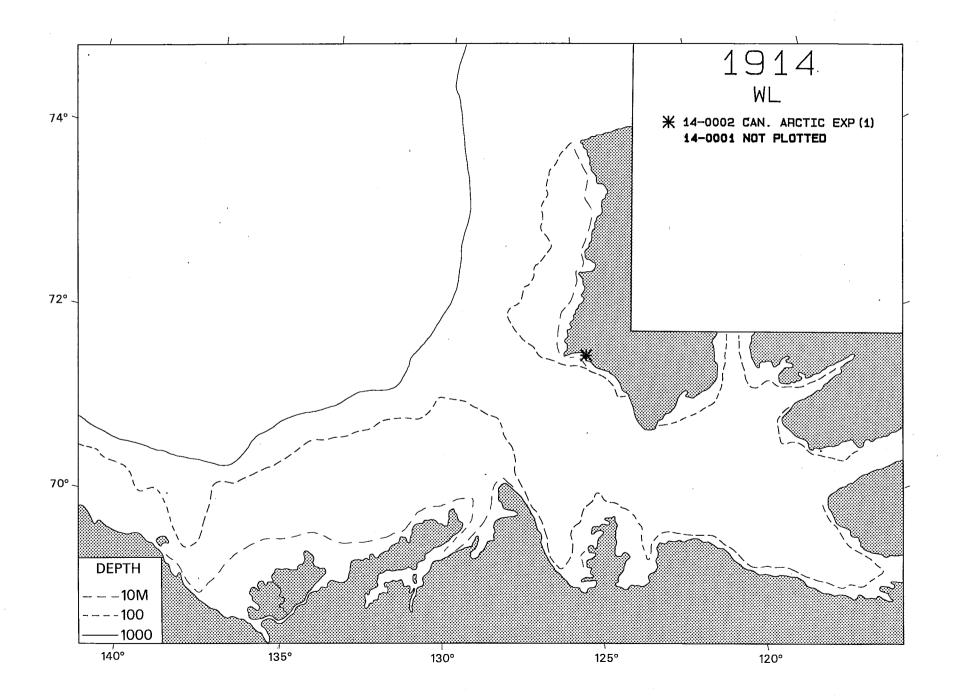
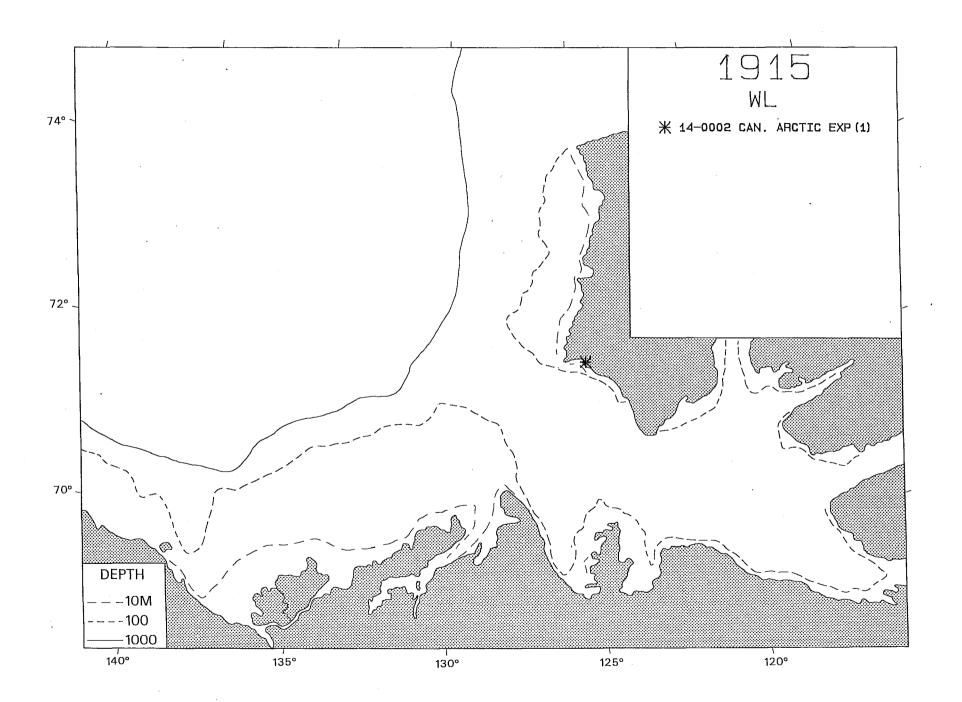
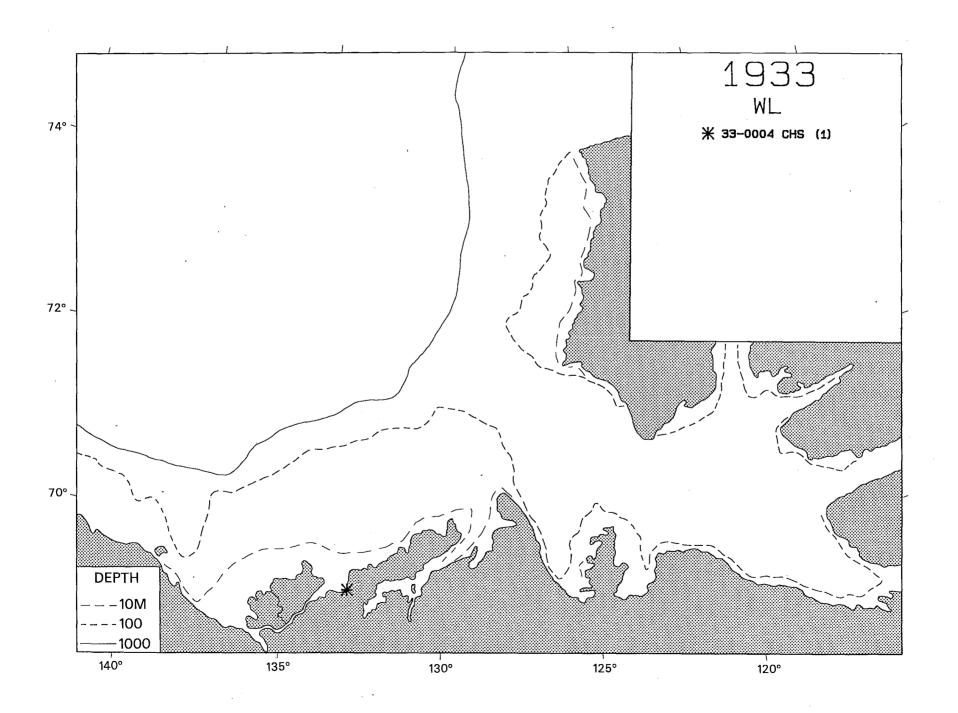
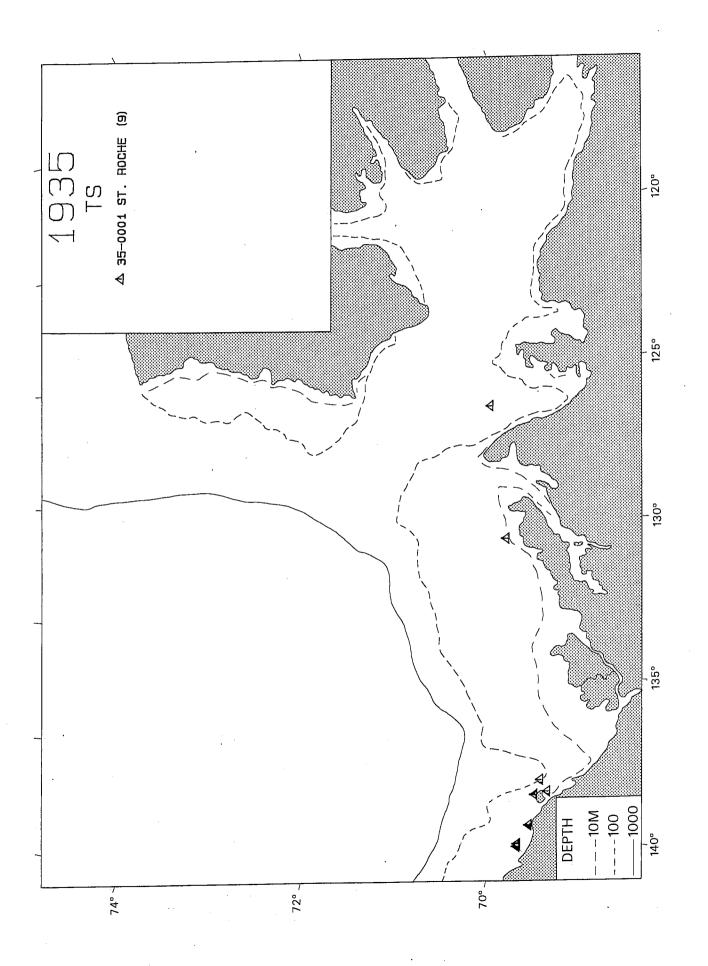


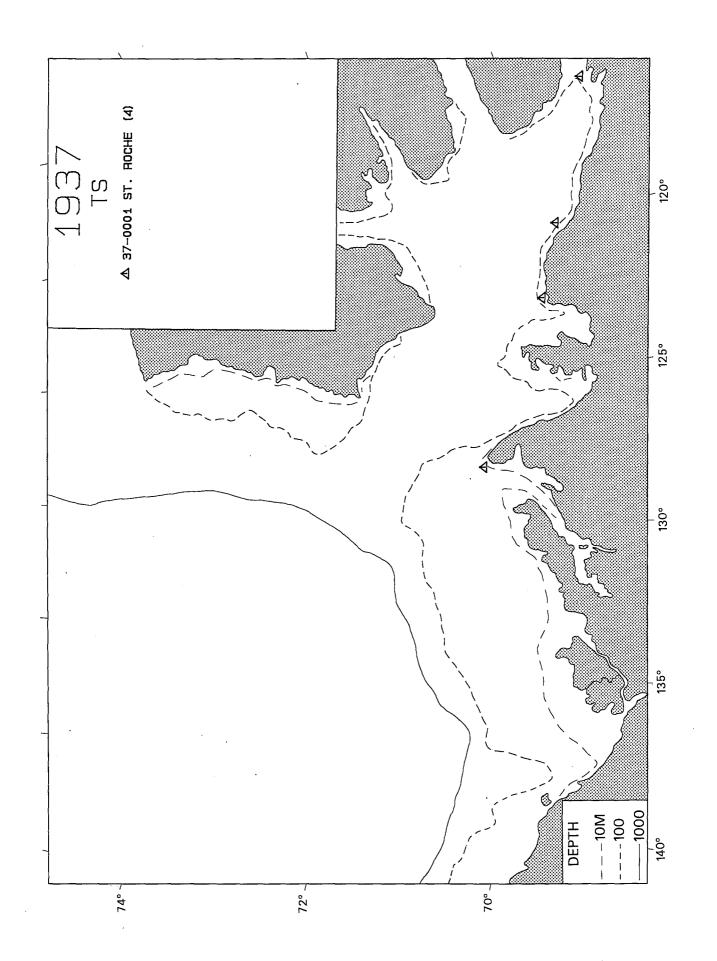
Figure 12. Maps used to plot station locations.

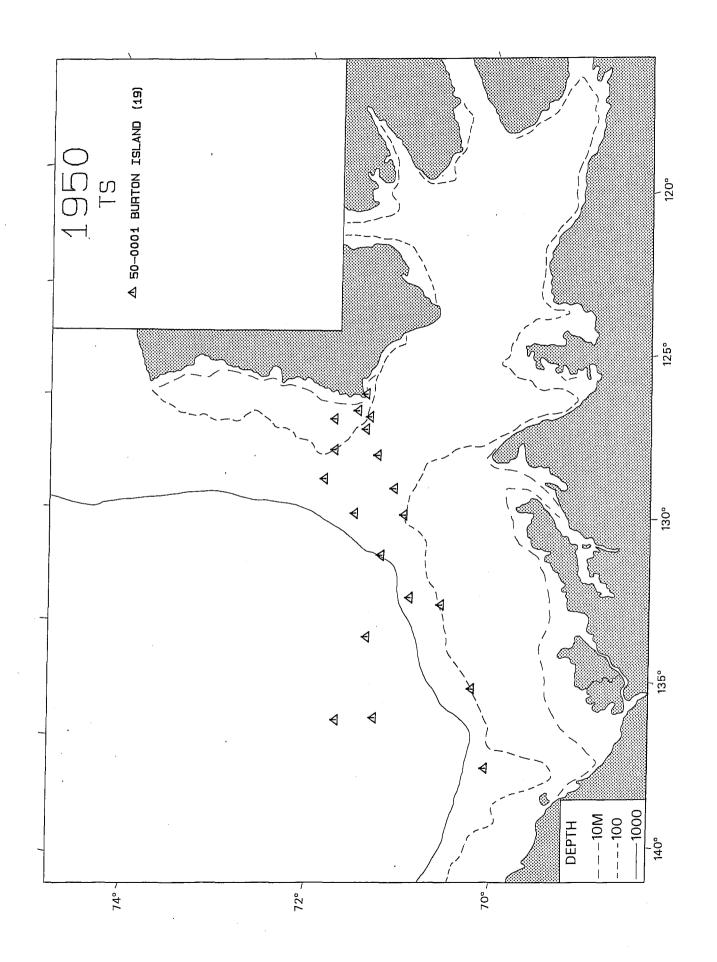


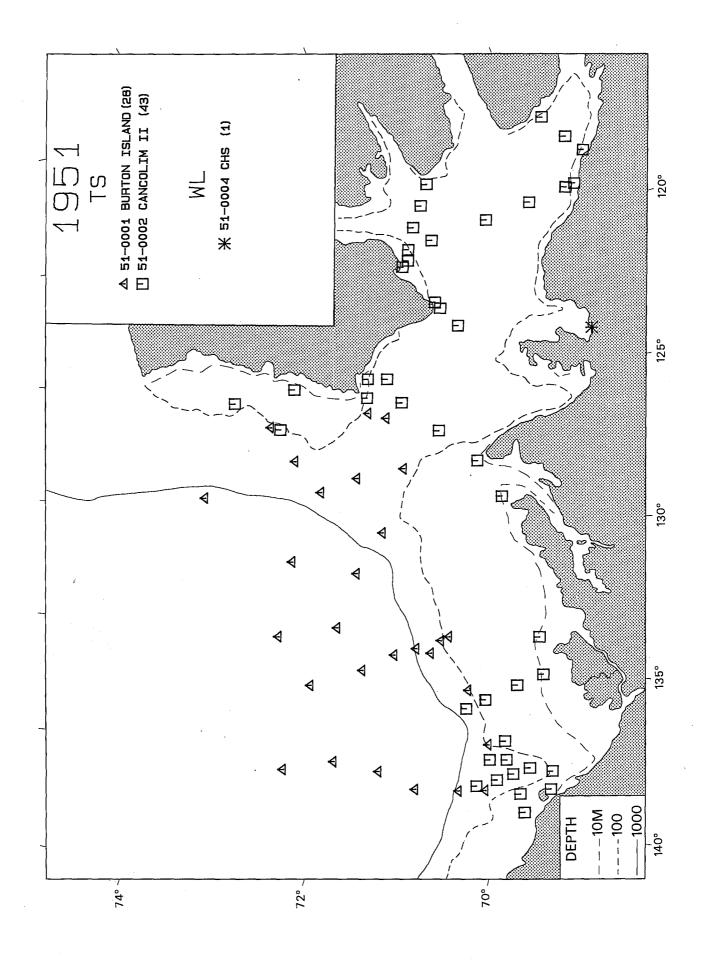


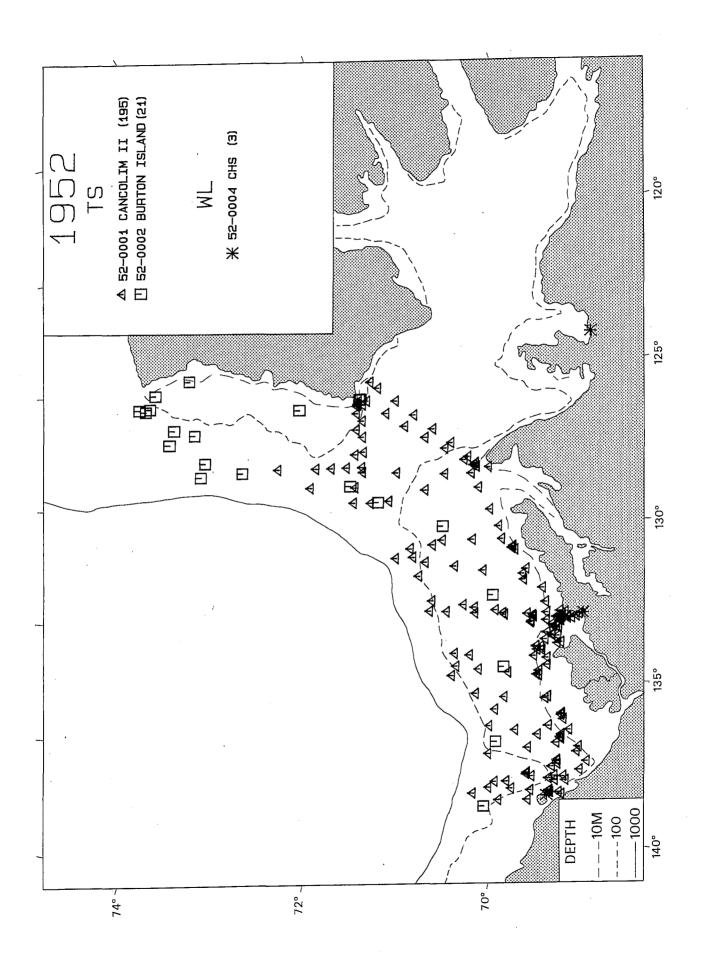


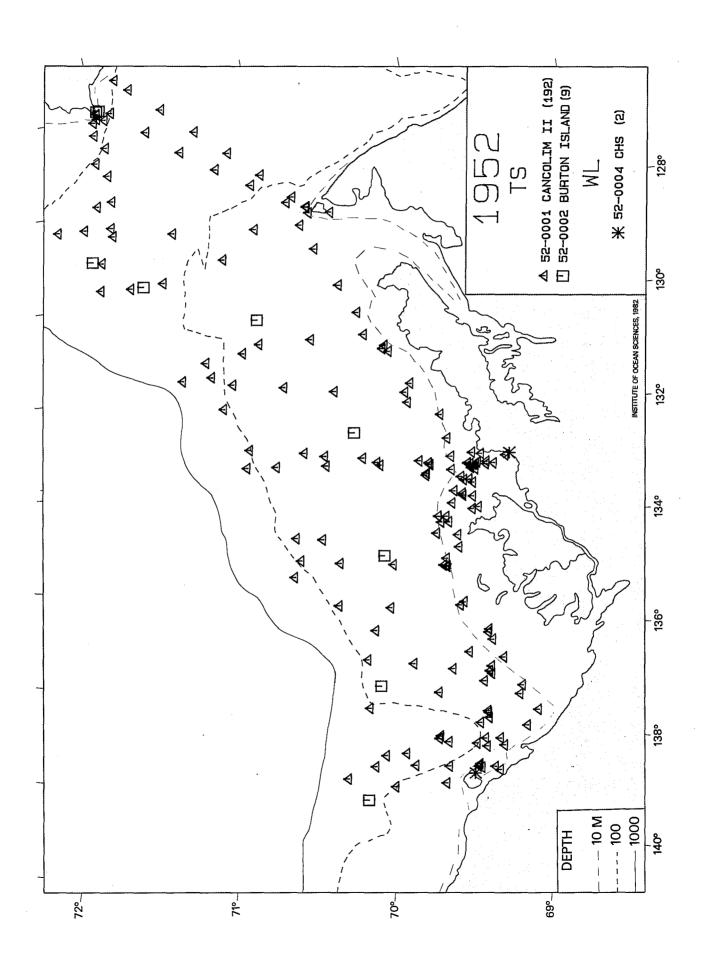


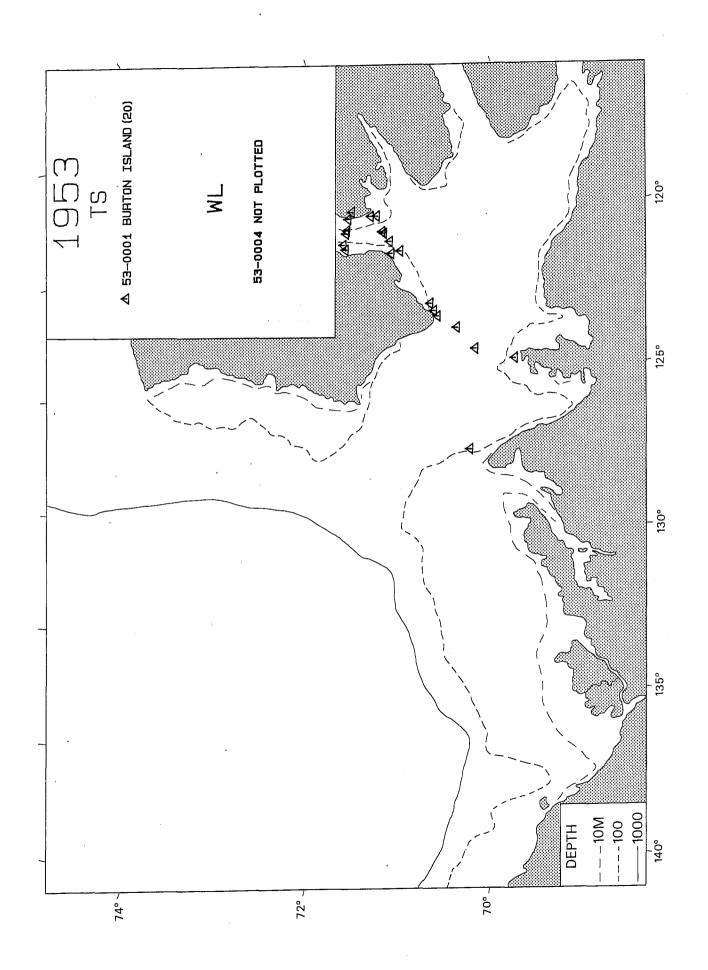


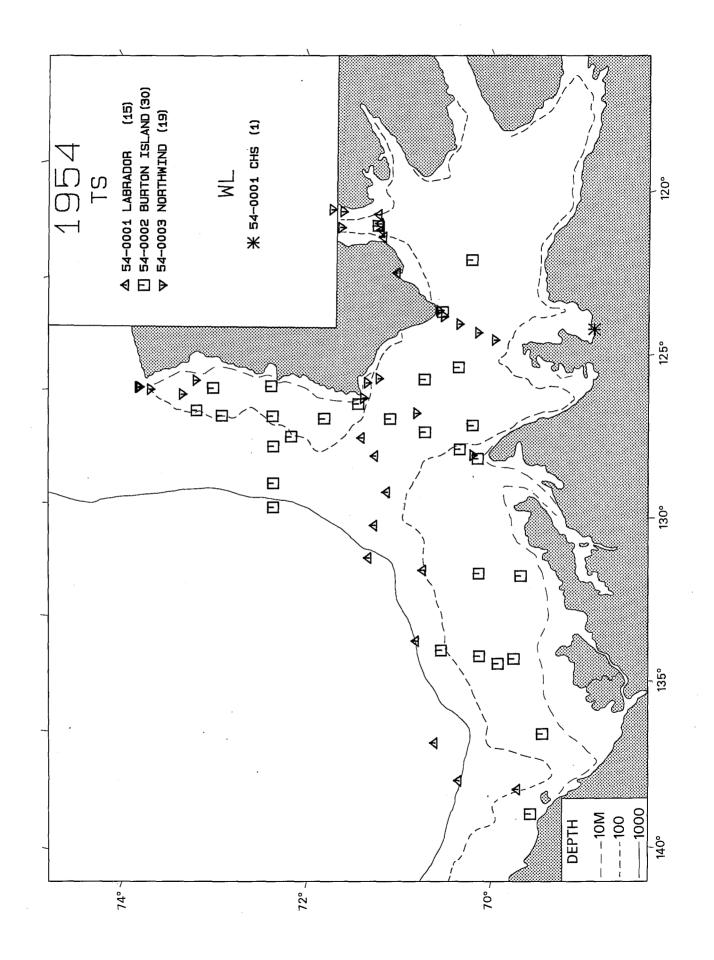


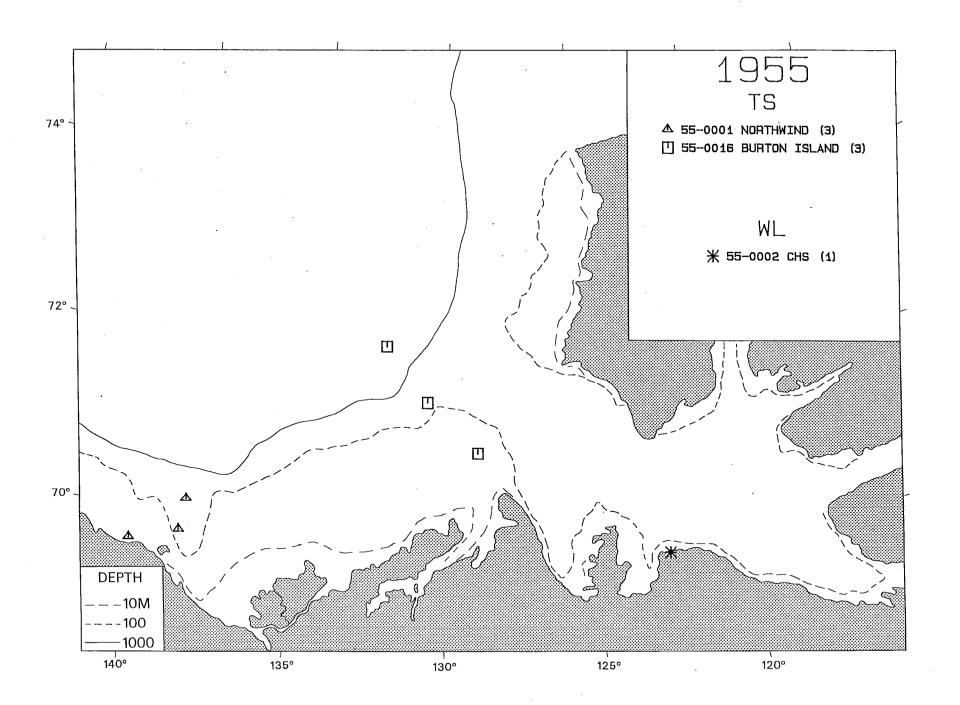


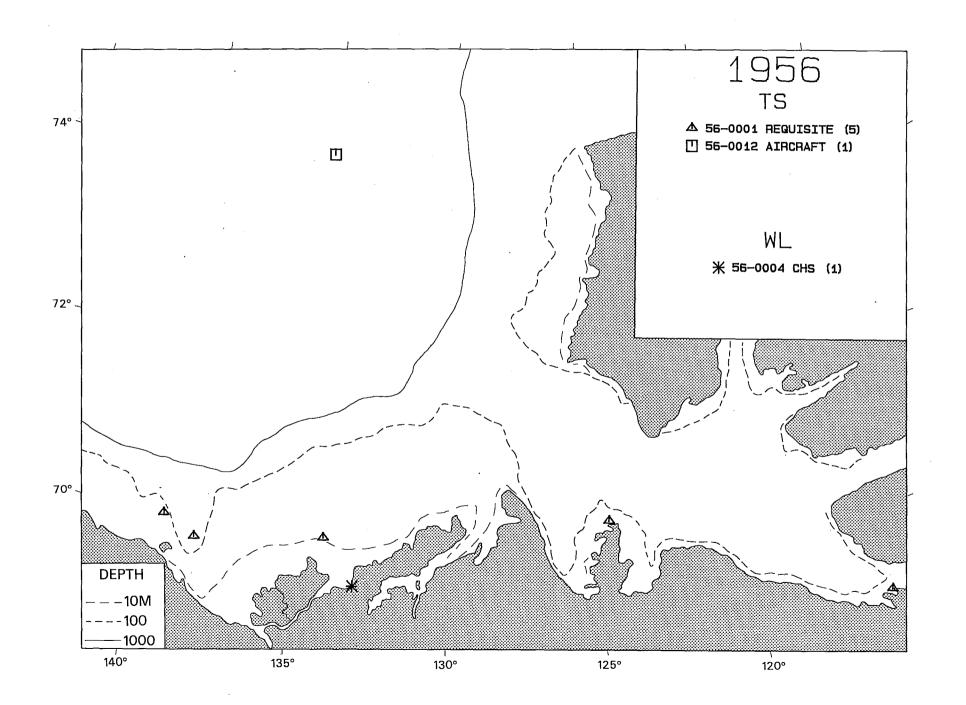


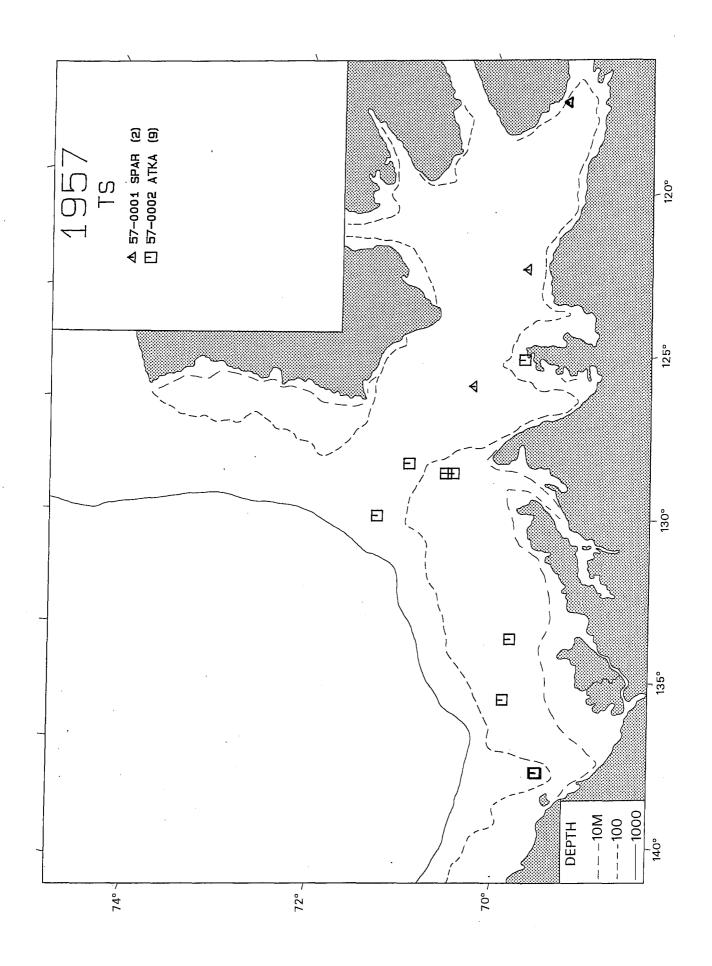


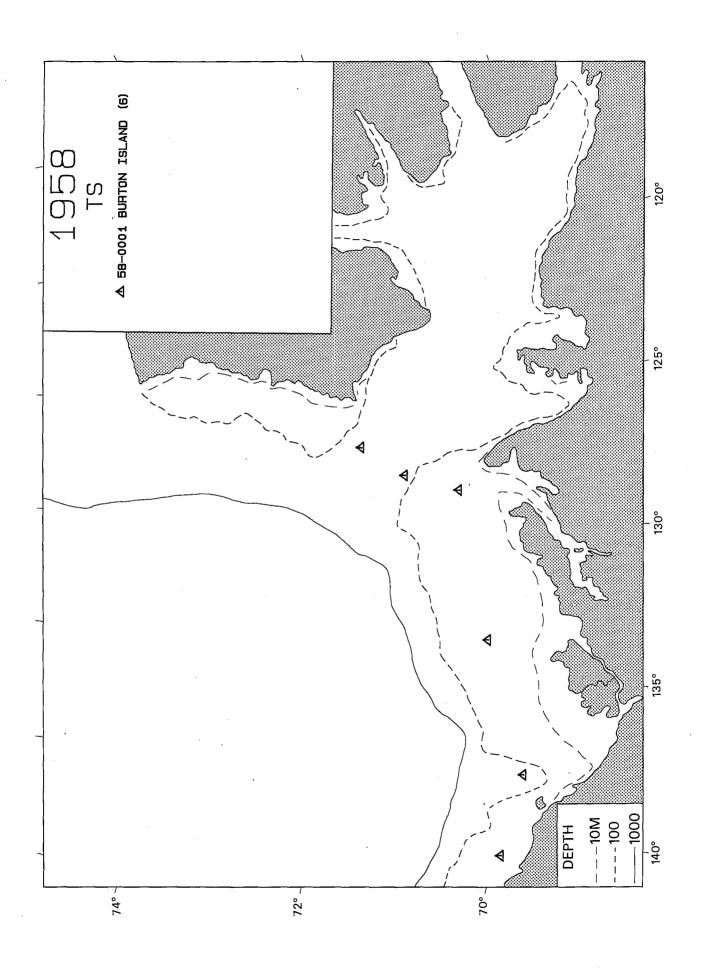


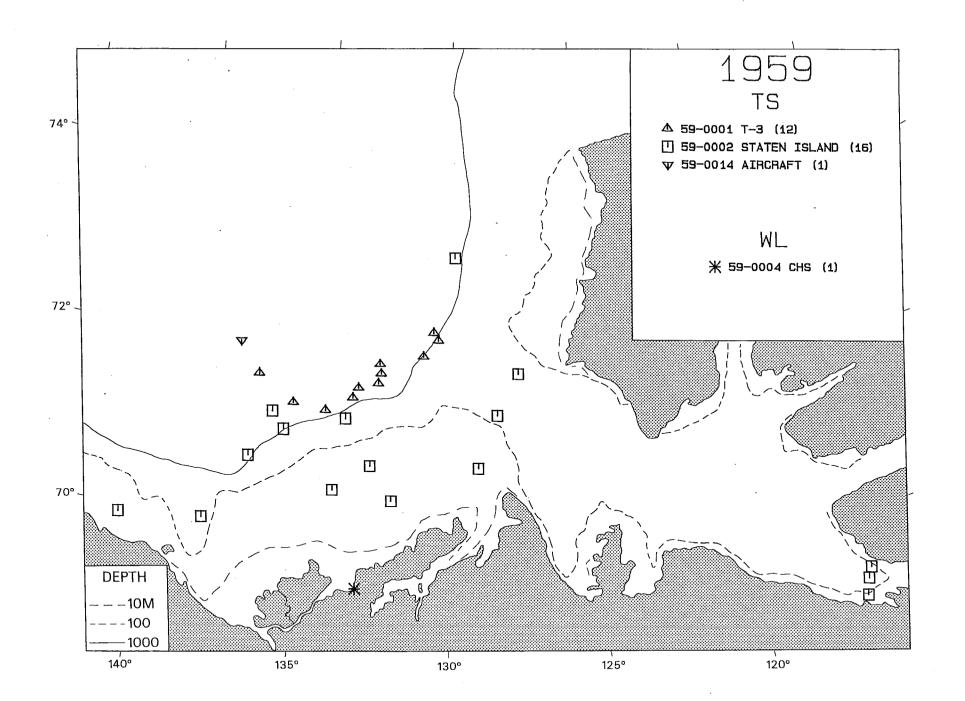


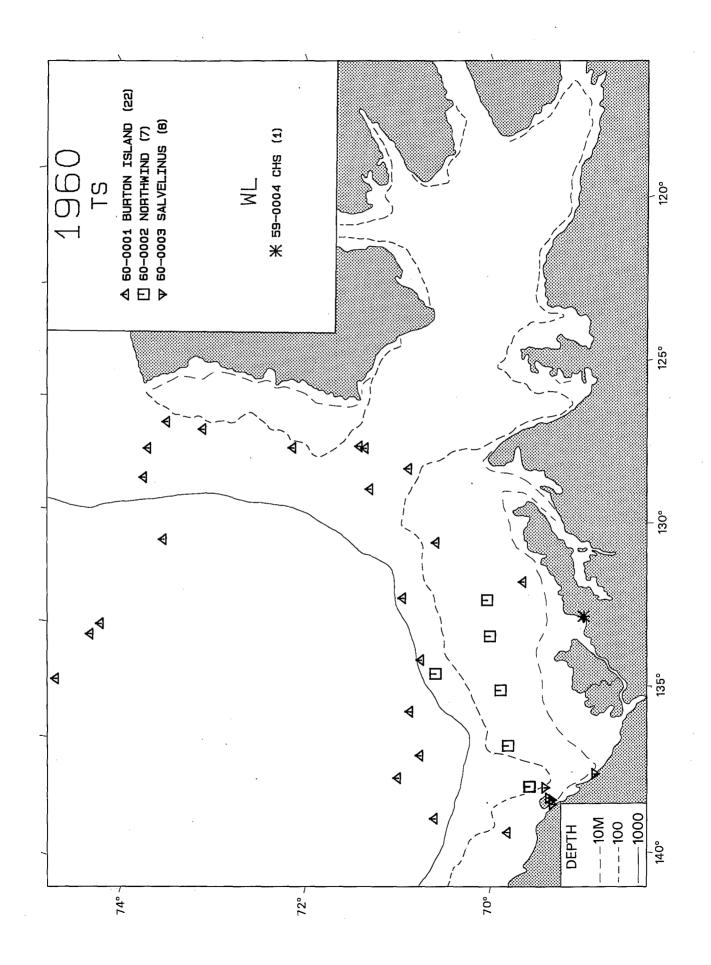


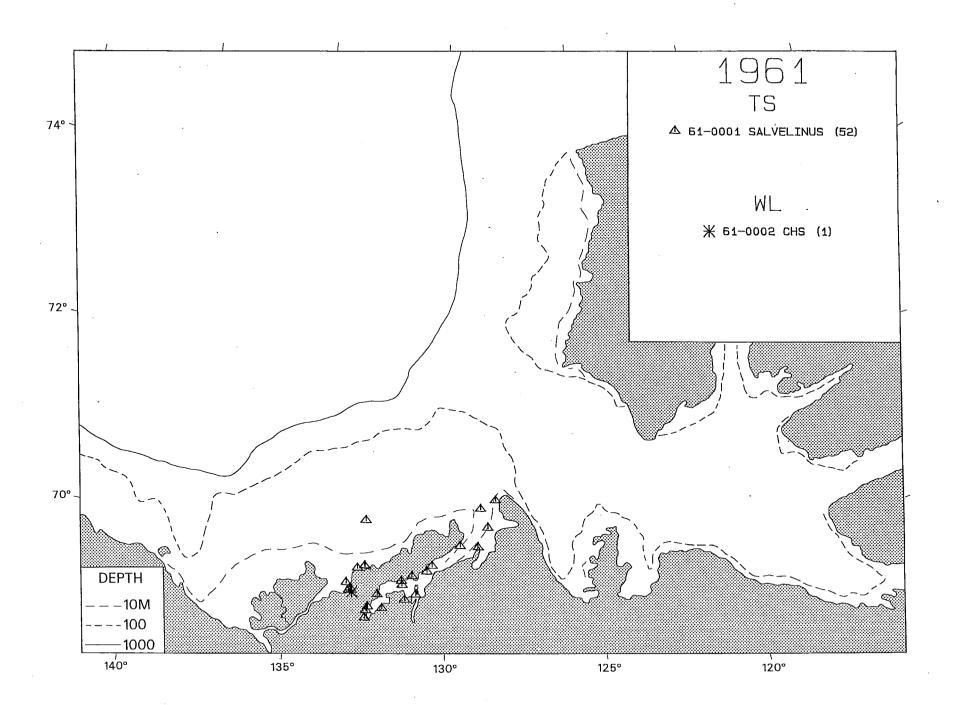


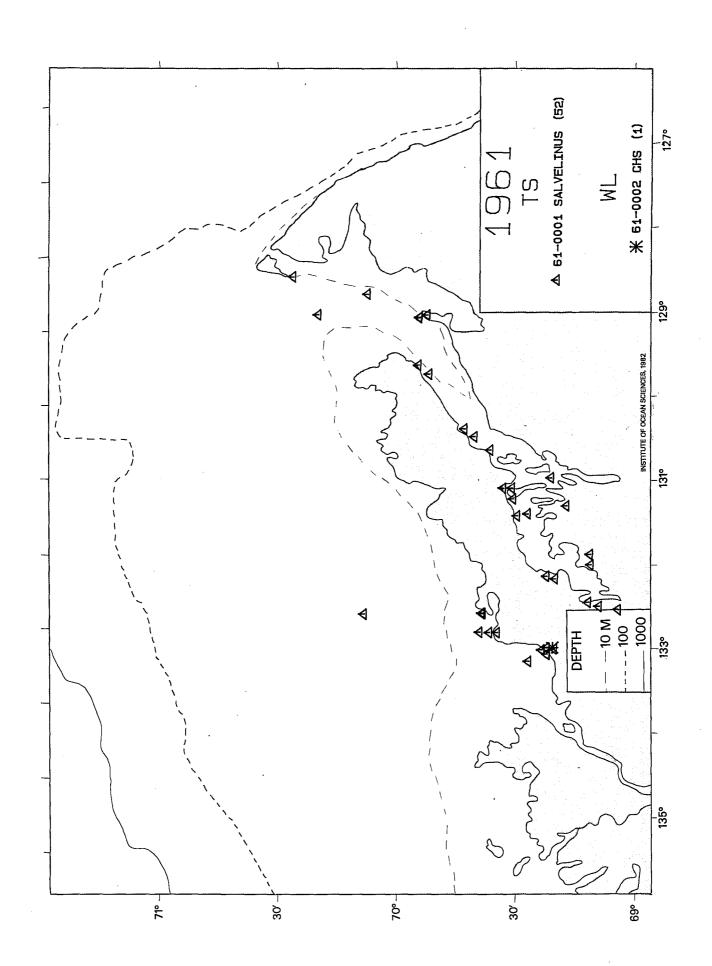


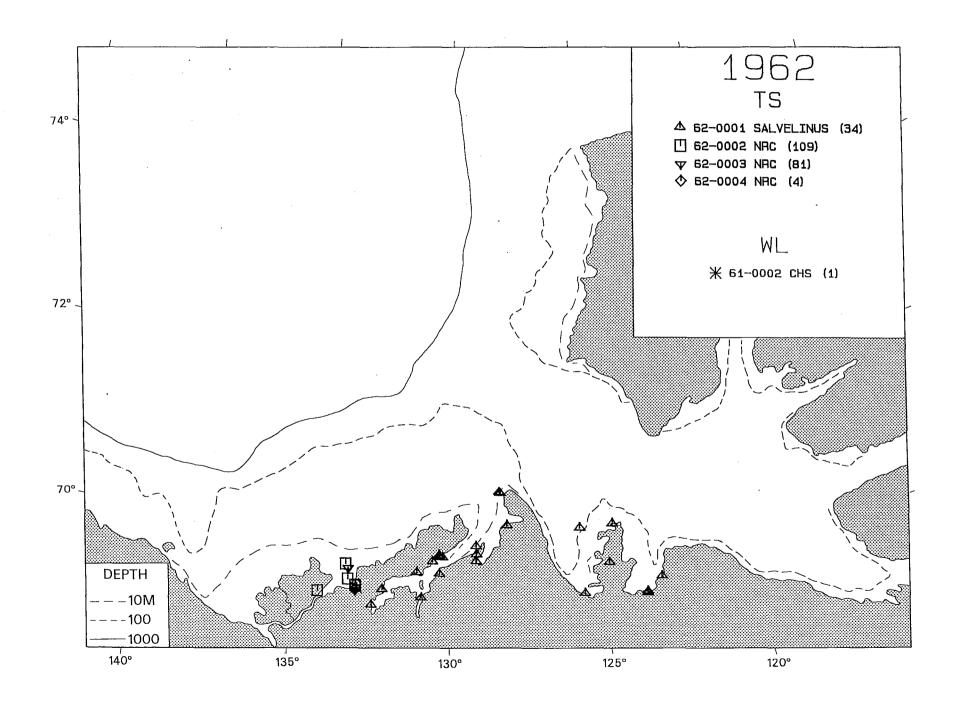


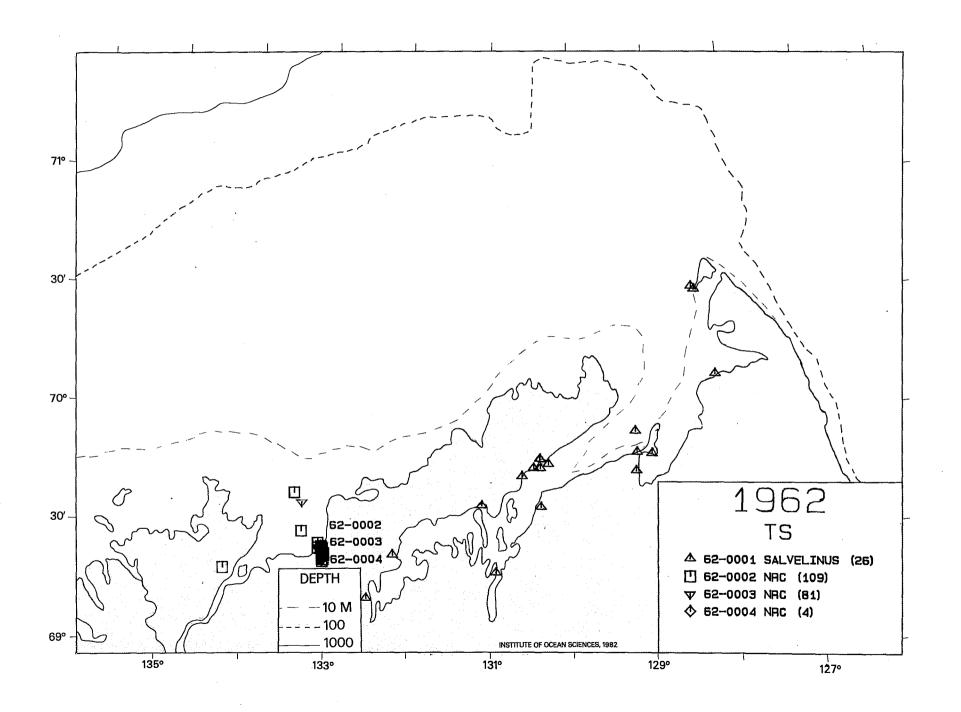


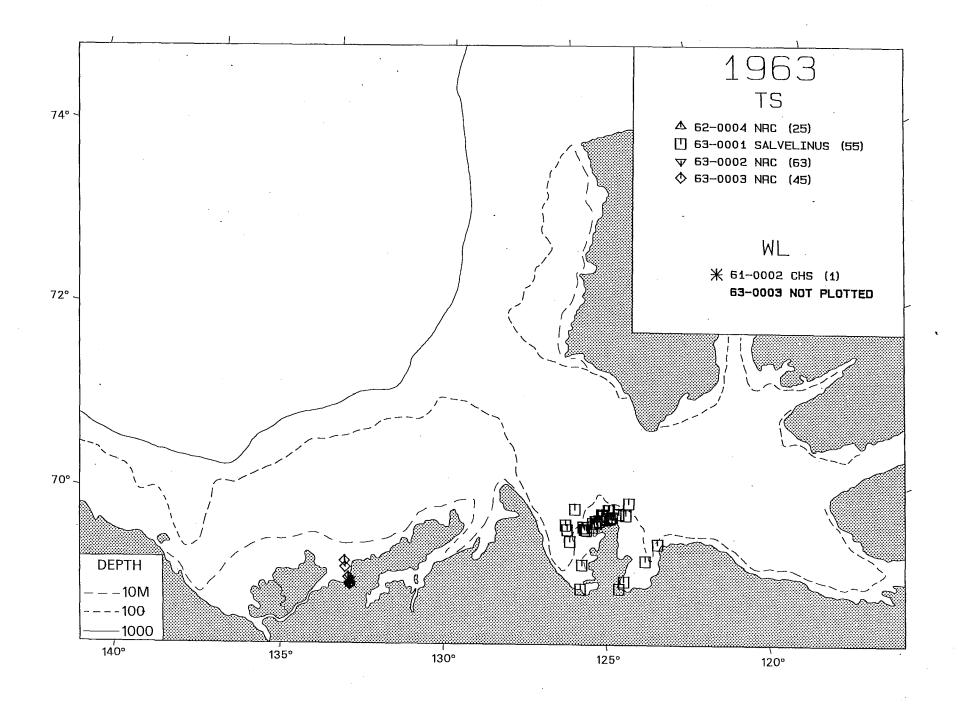


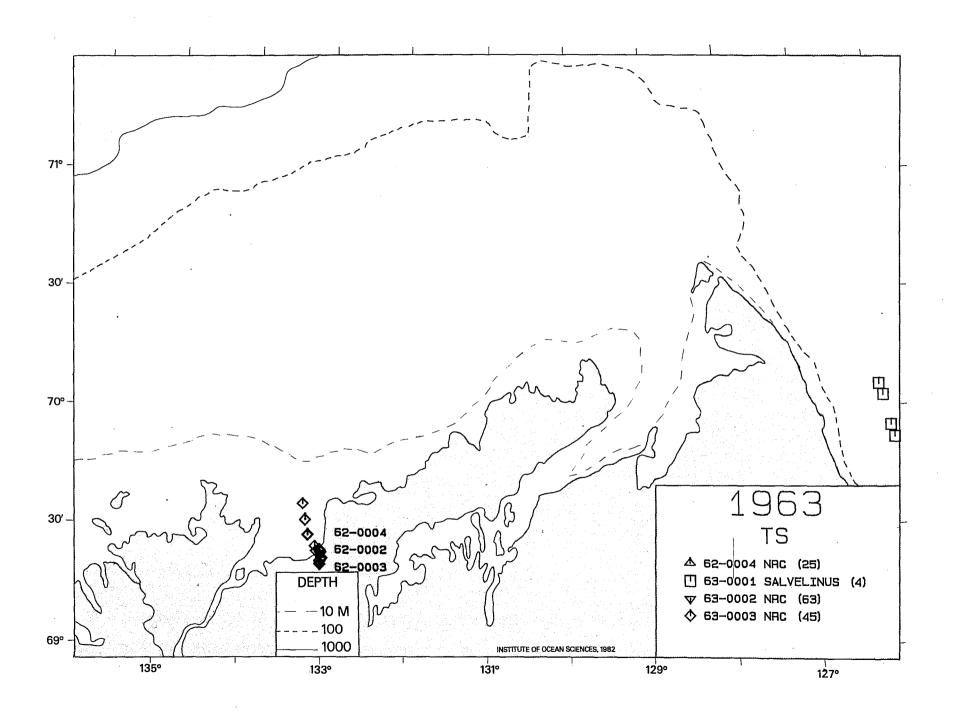


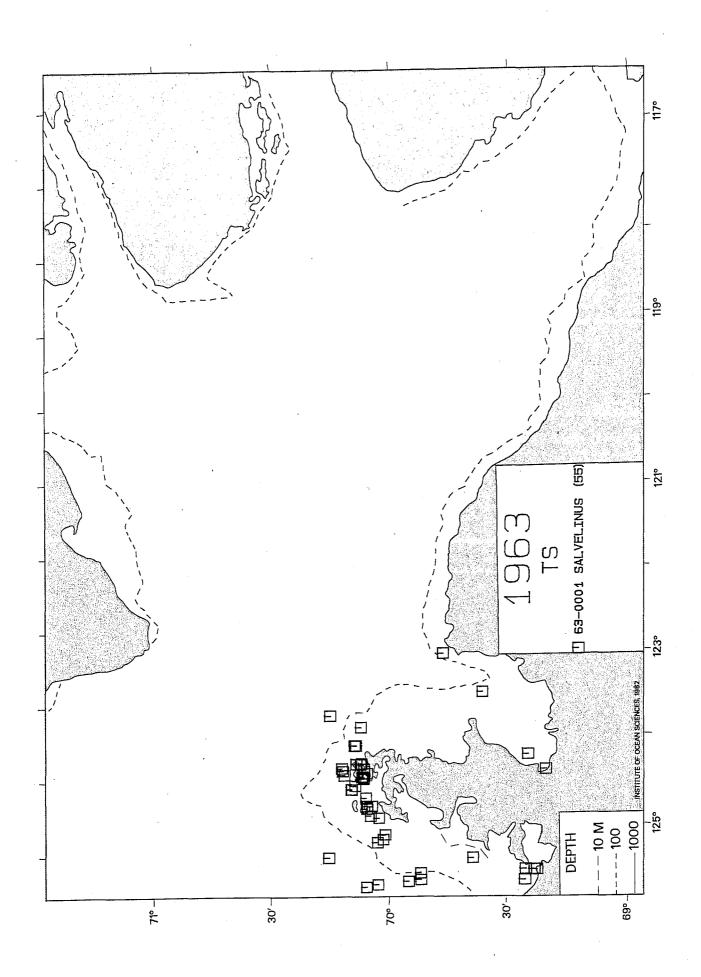


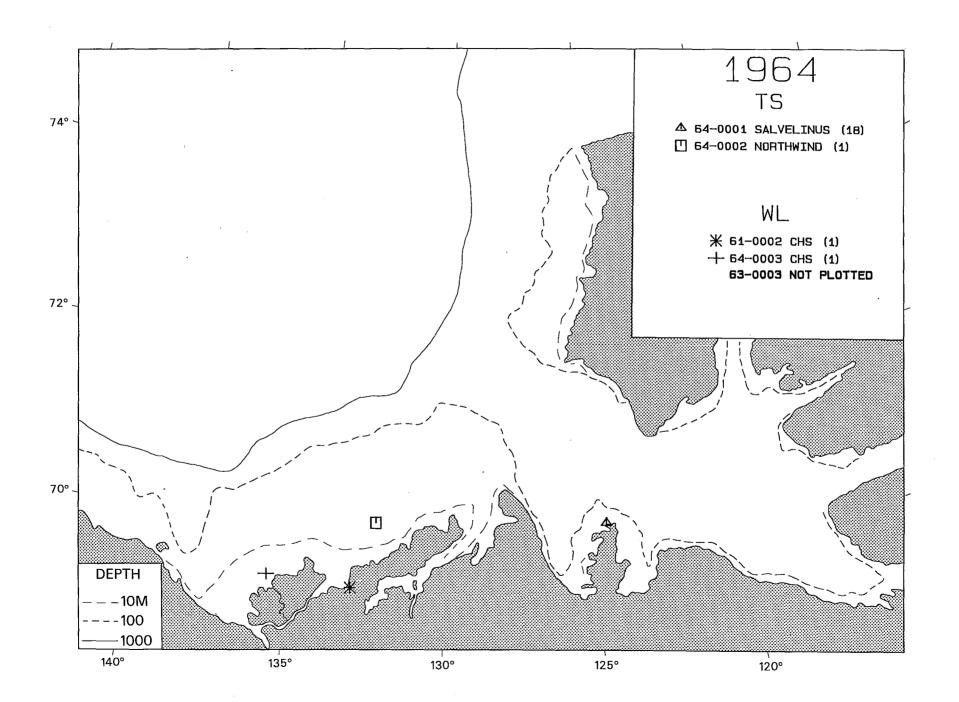


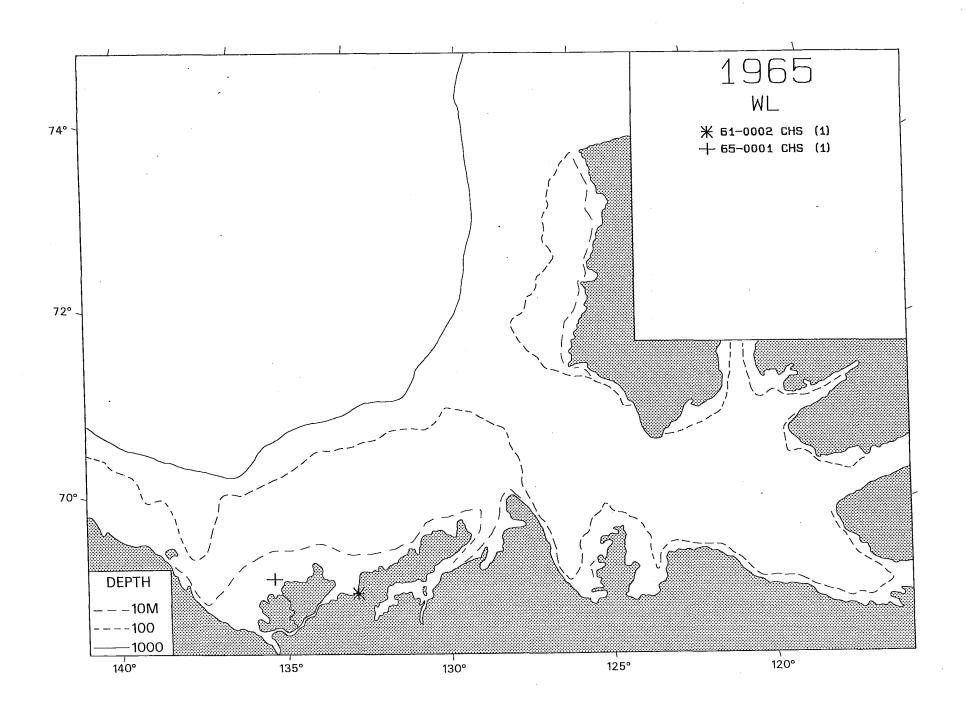


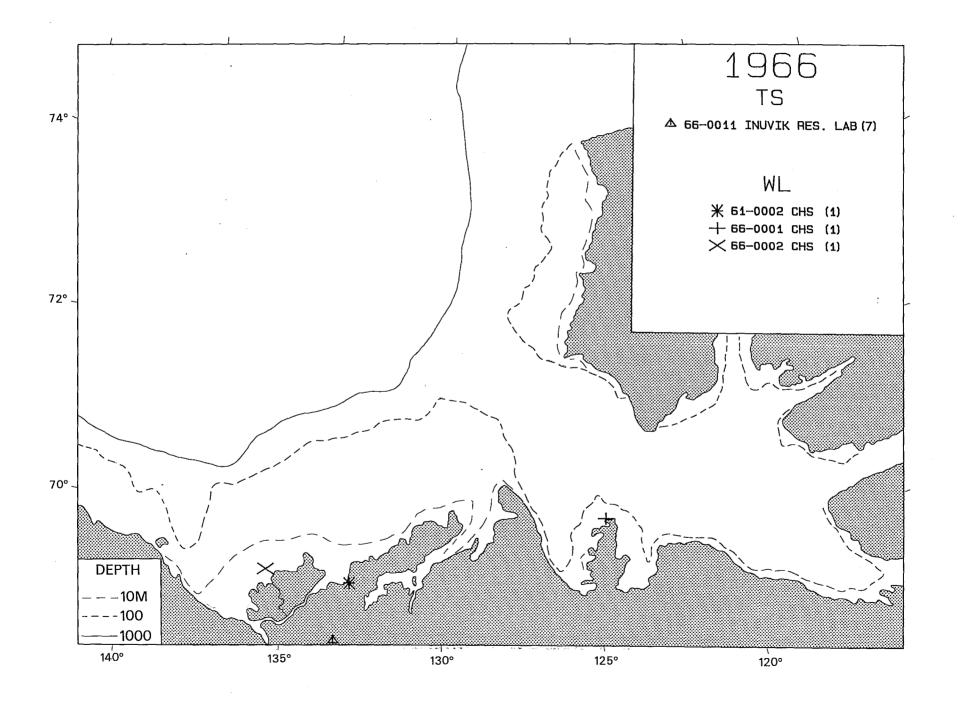


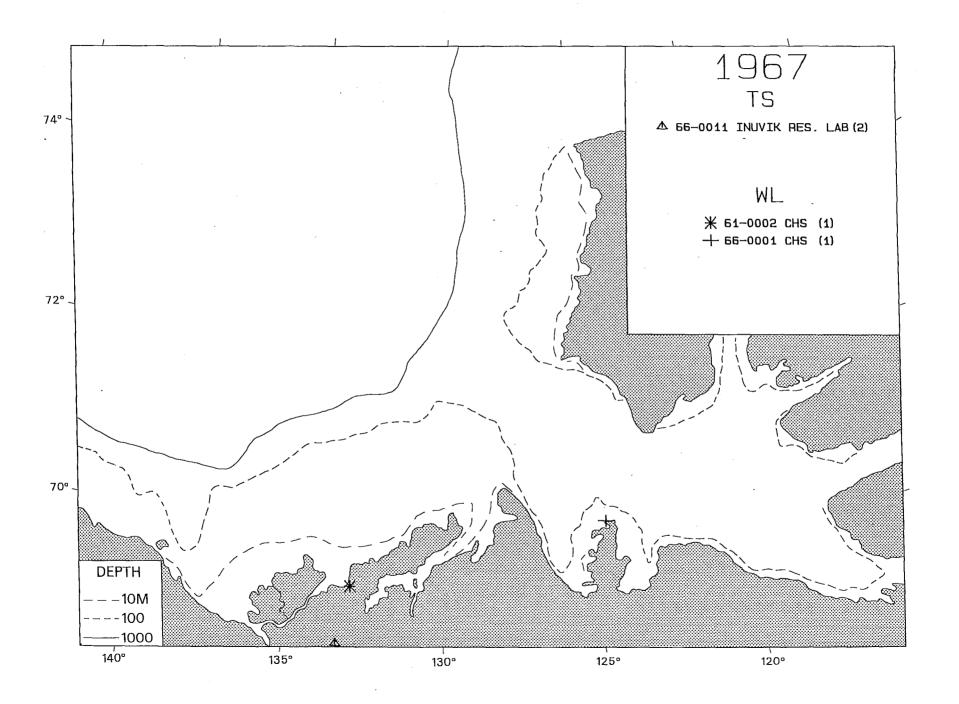


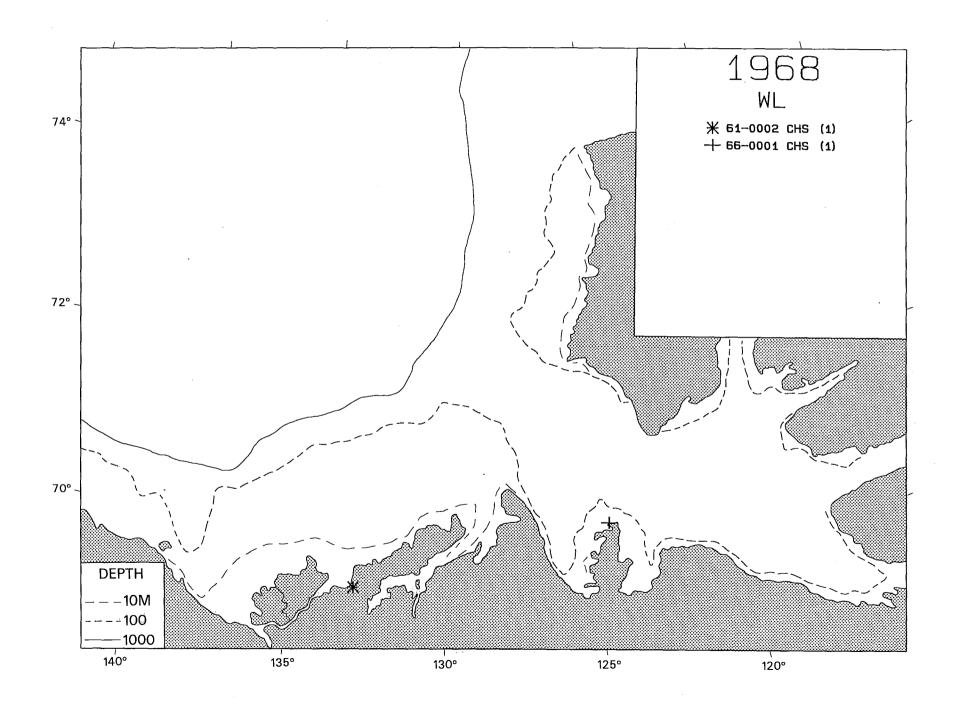


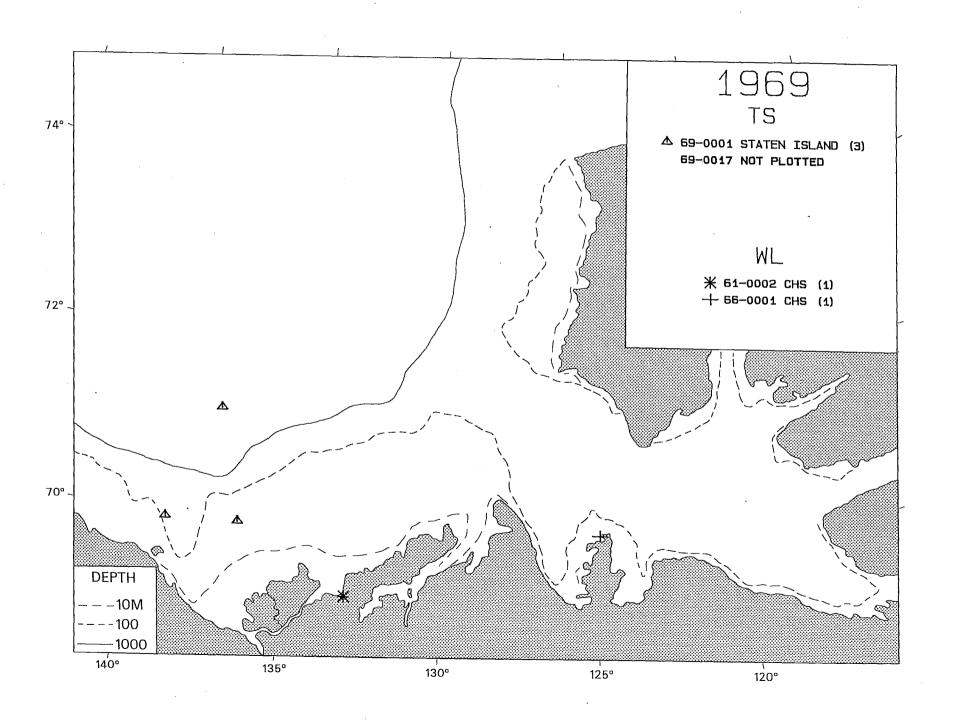


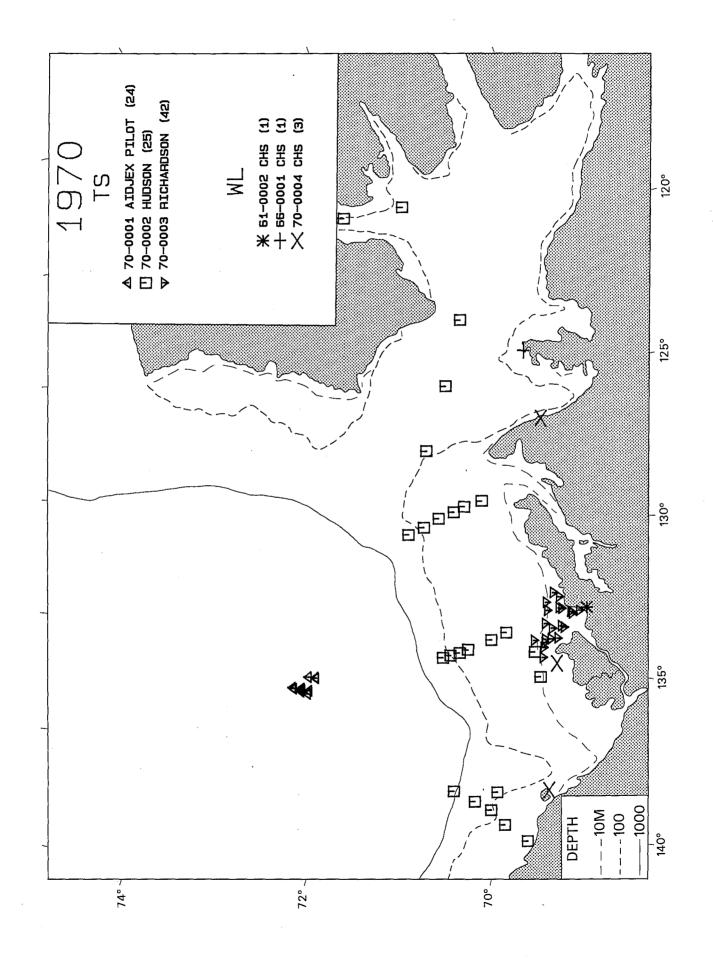


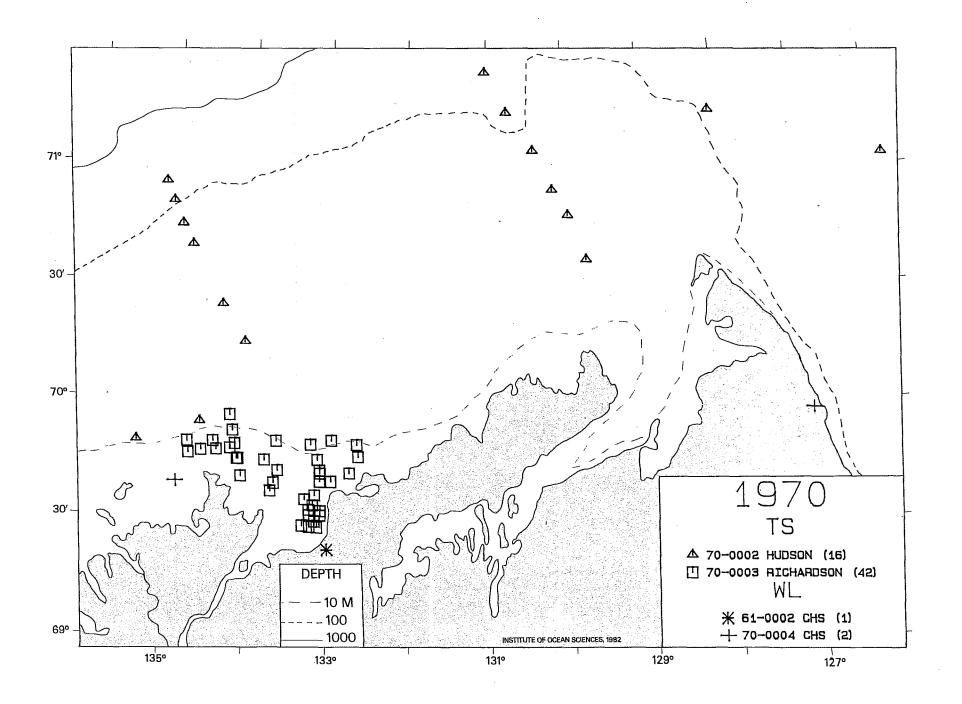


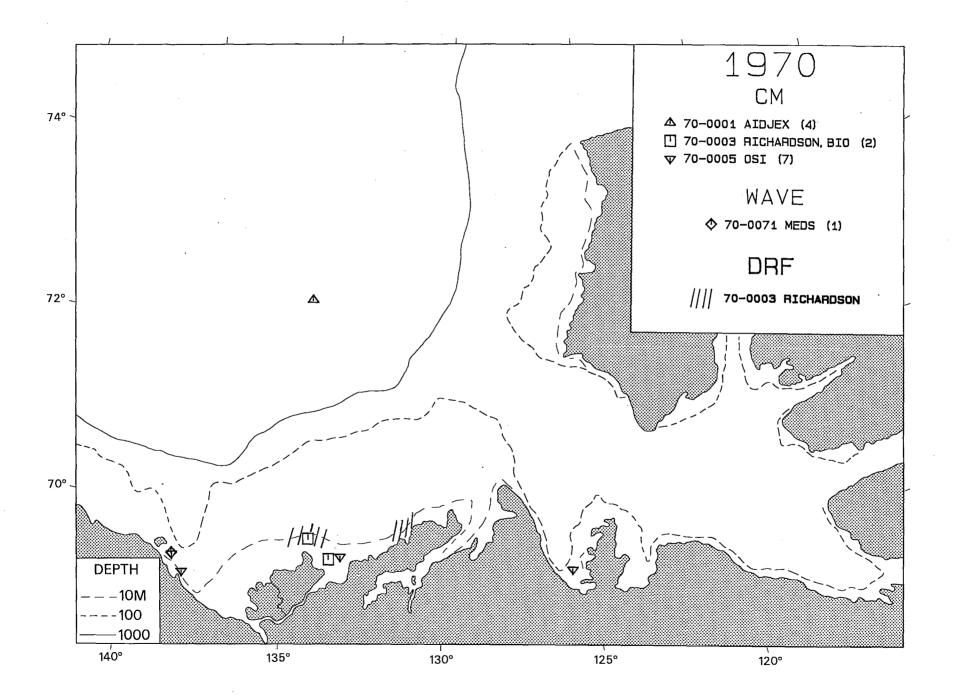


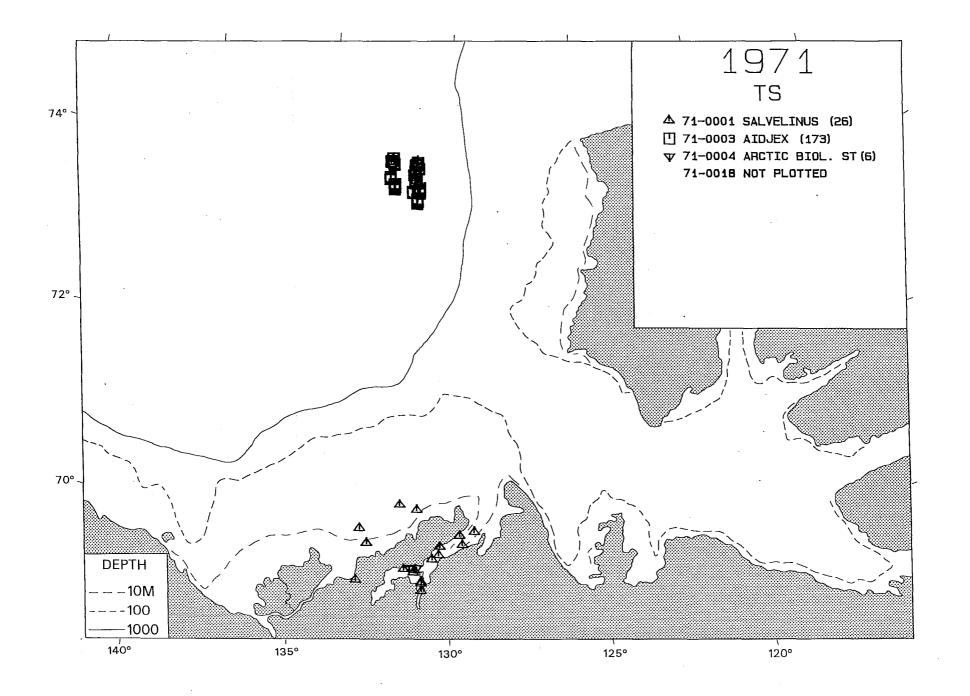


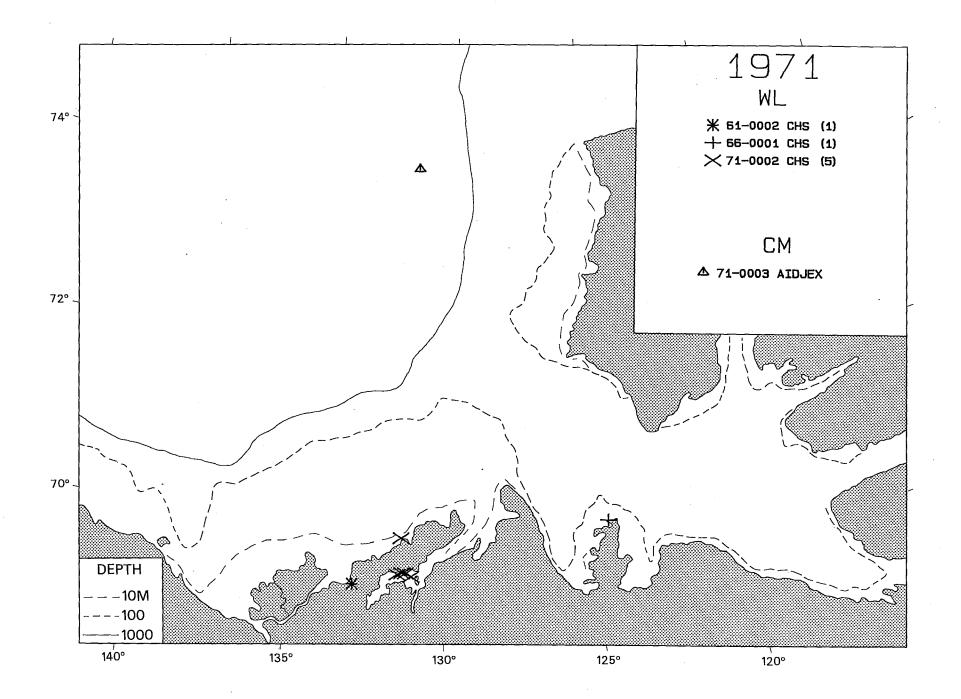


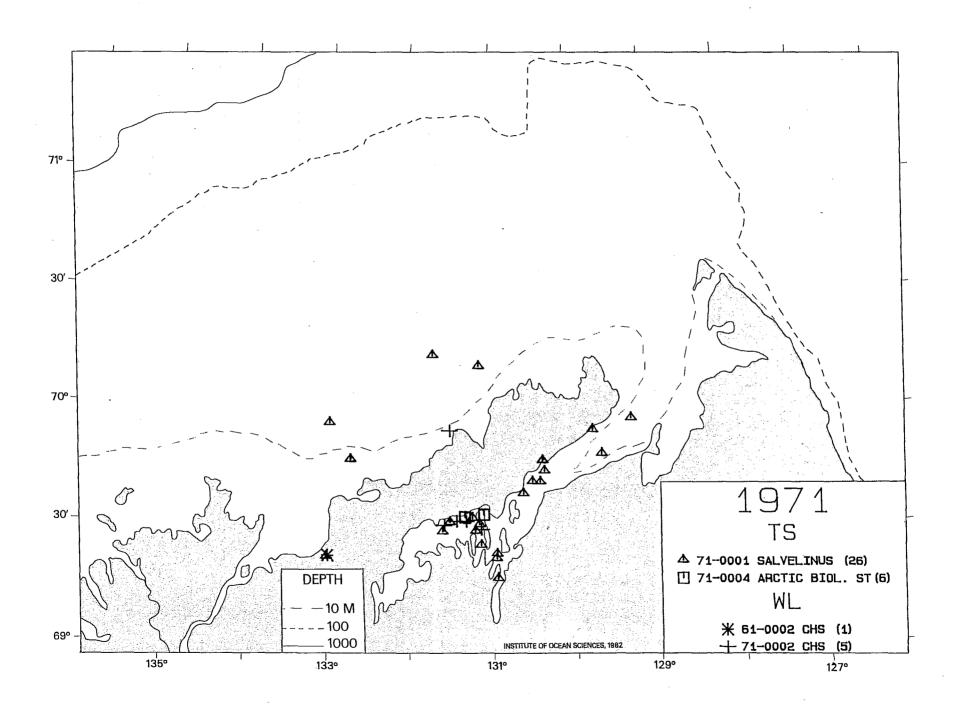


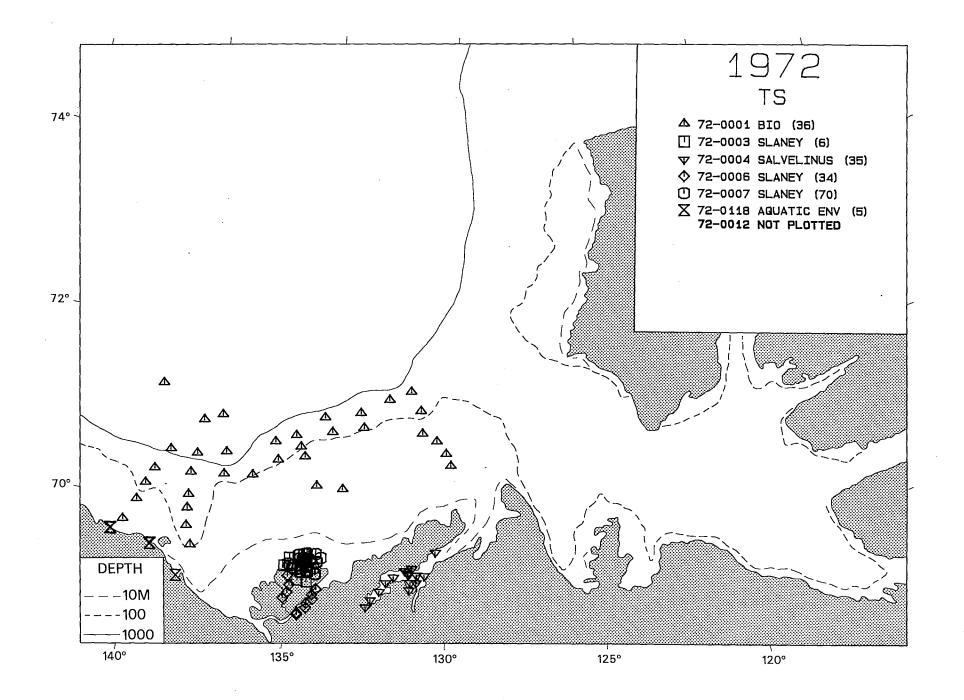


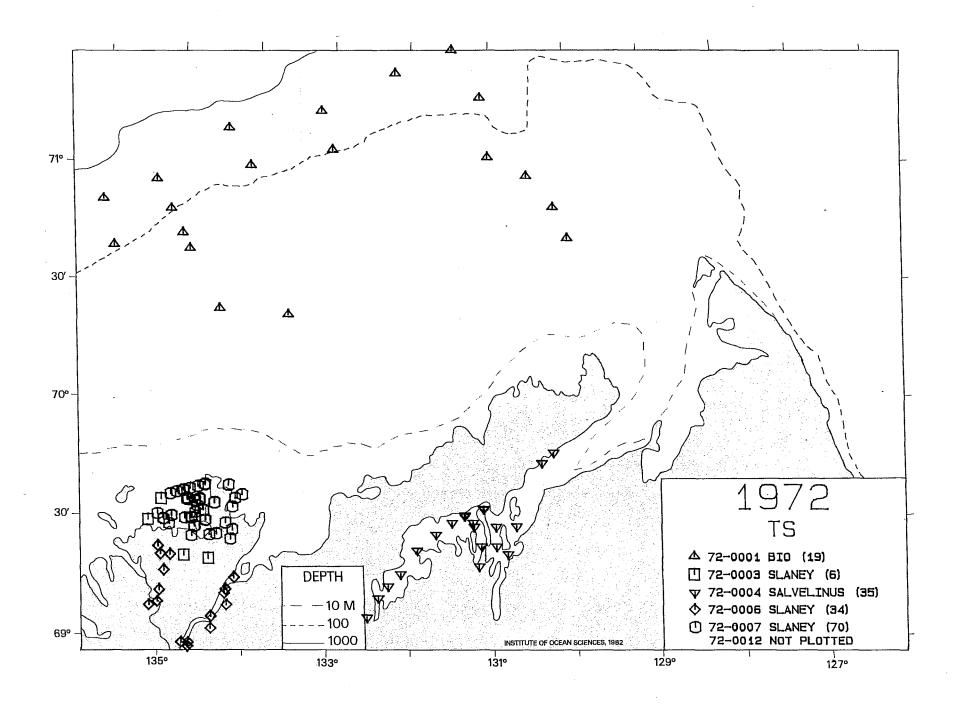


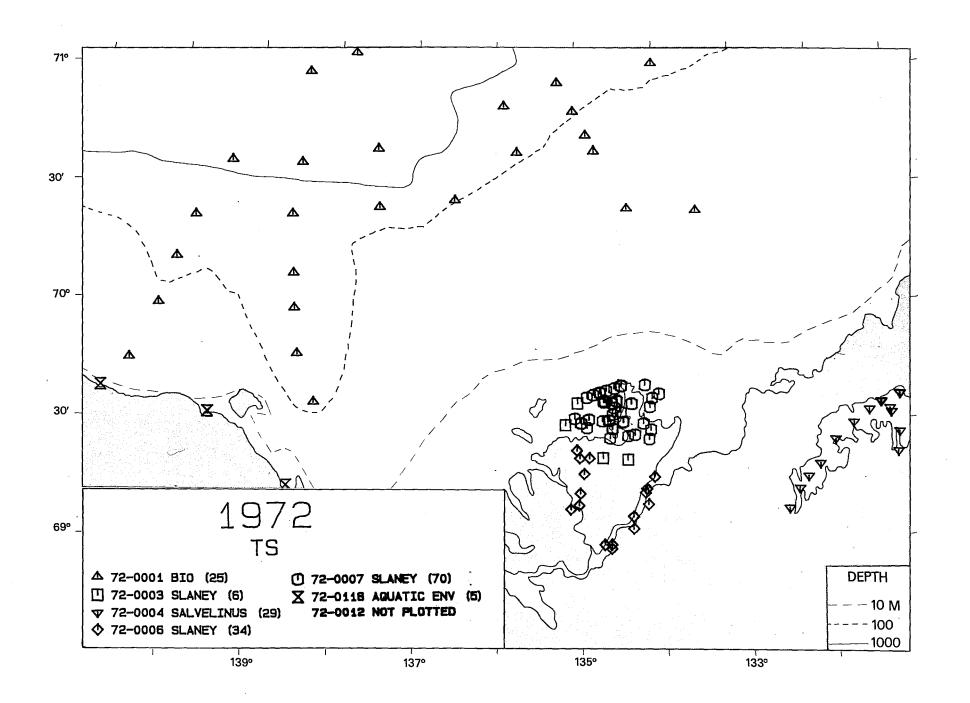


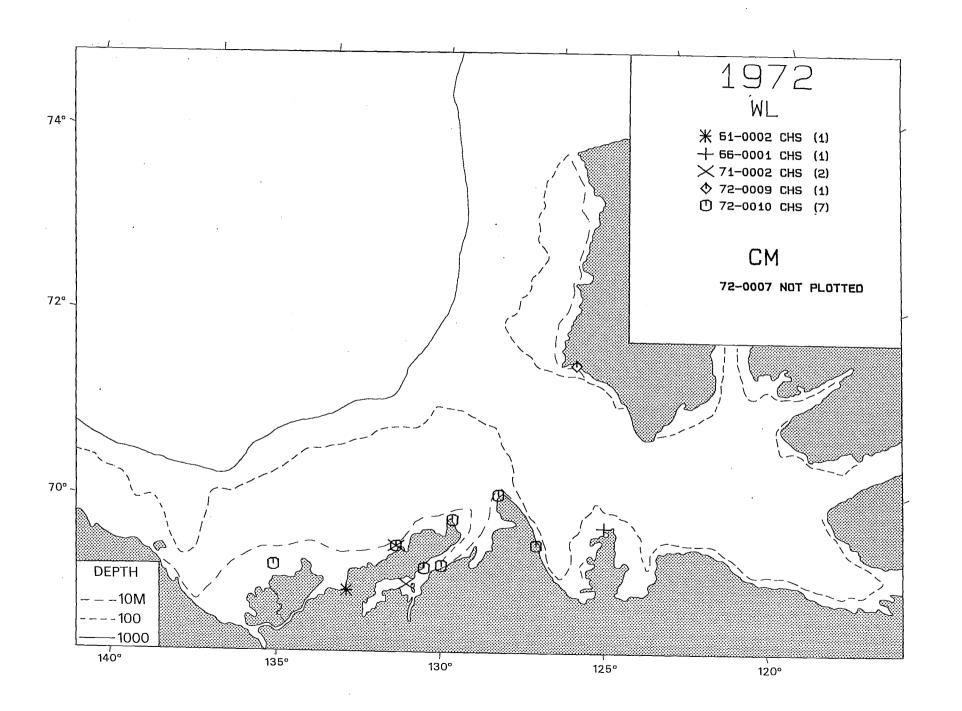


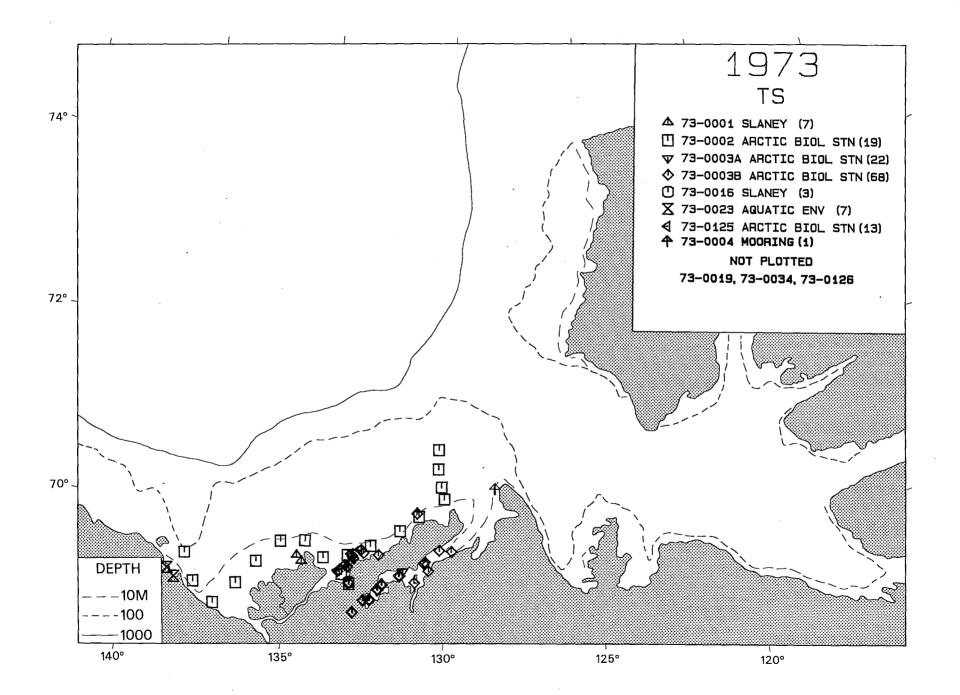


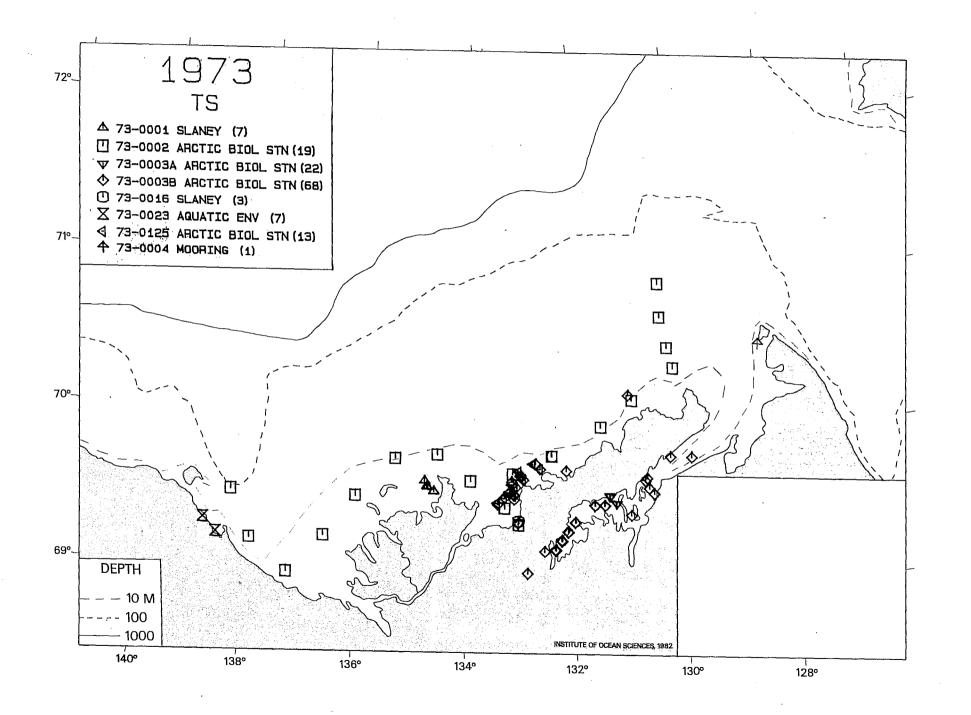


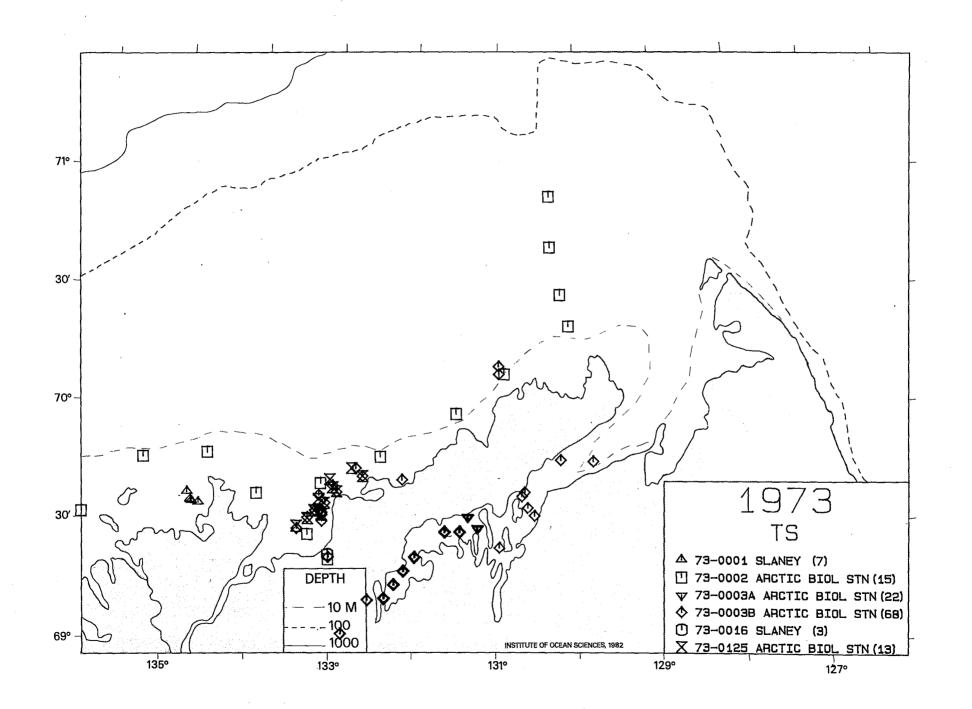


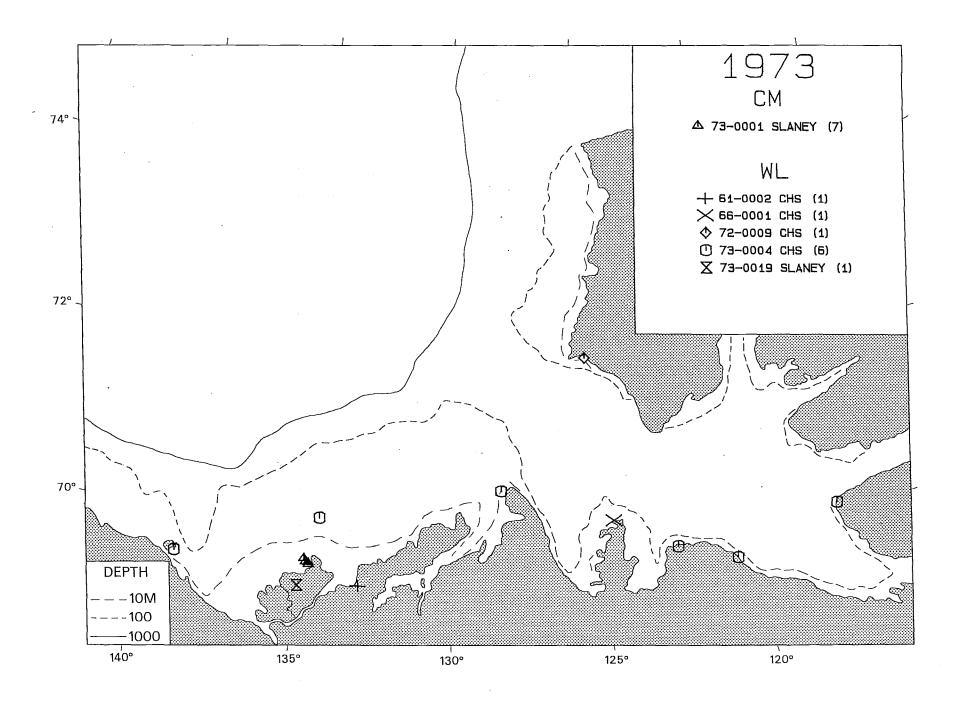


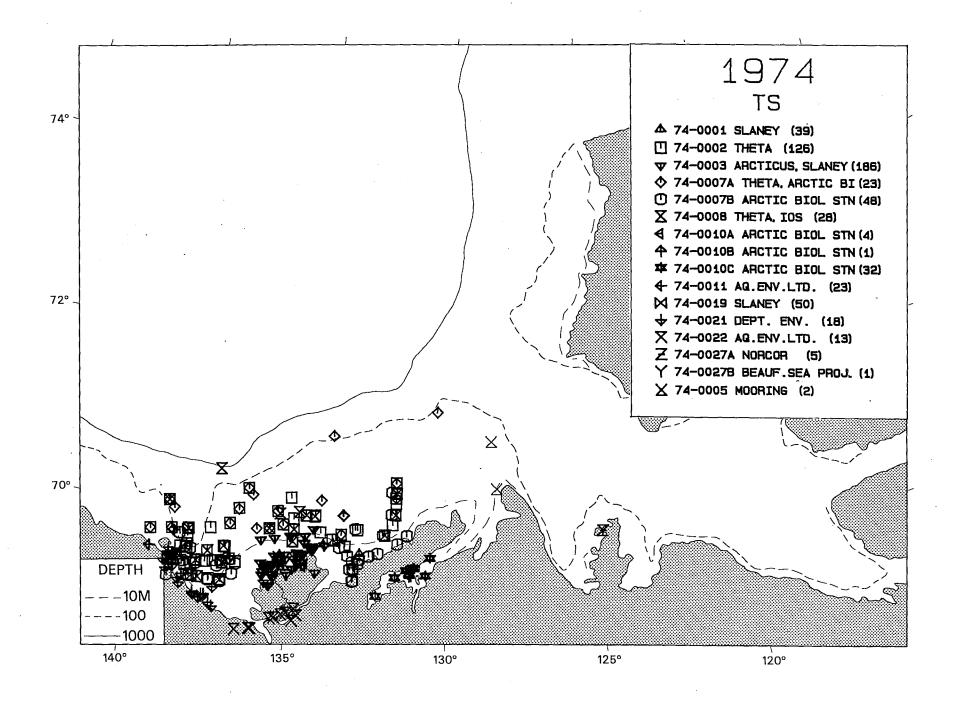


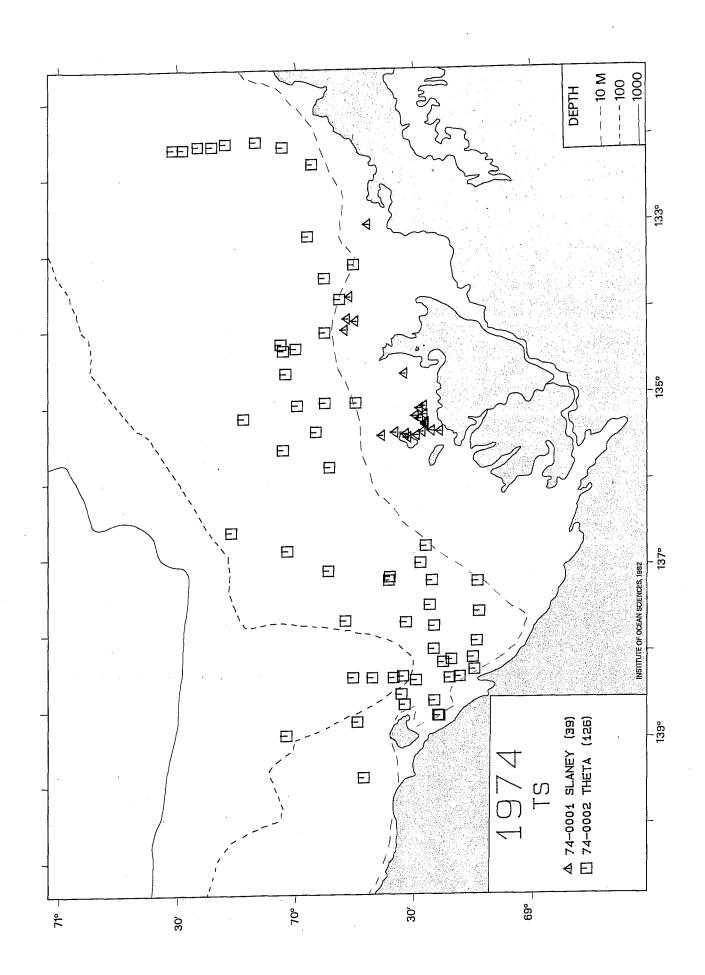


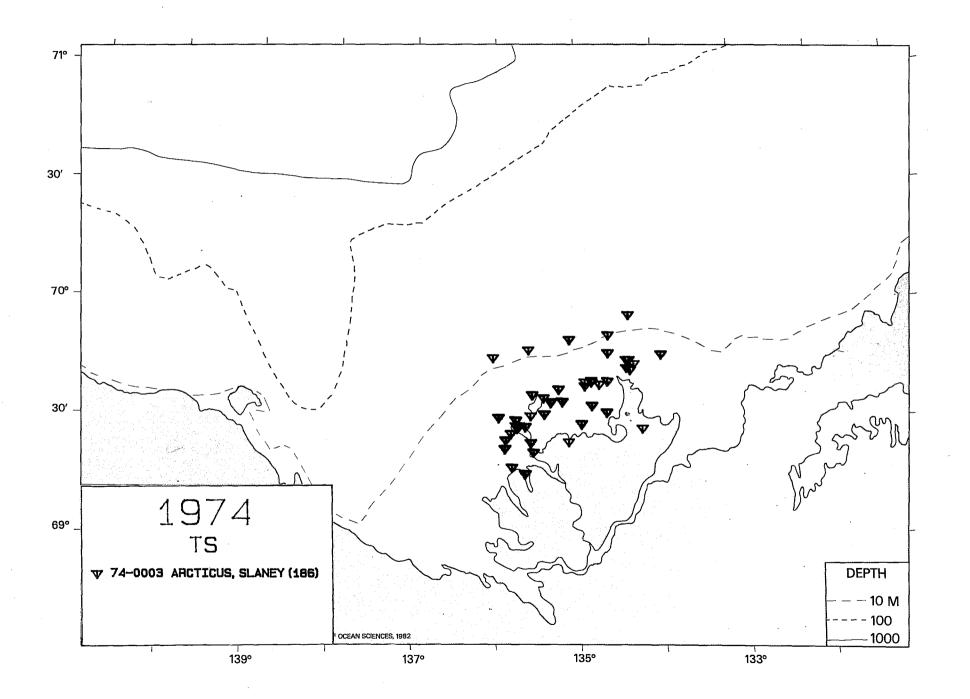


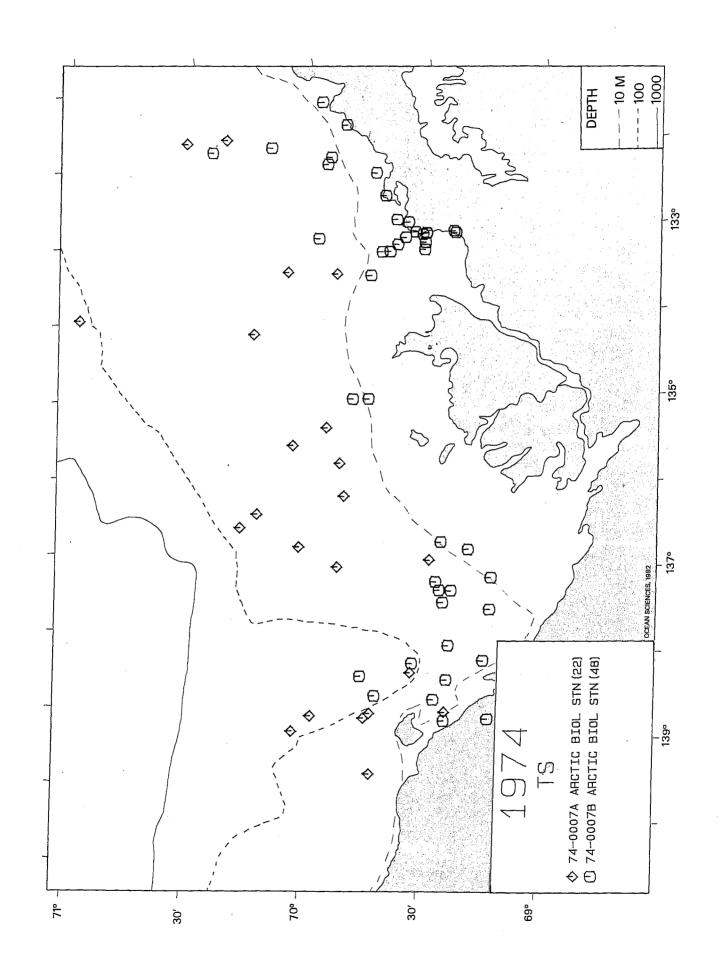


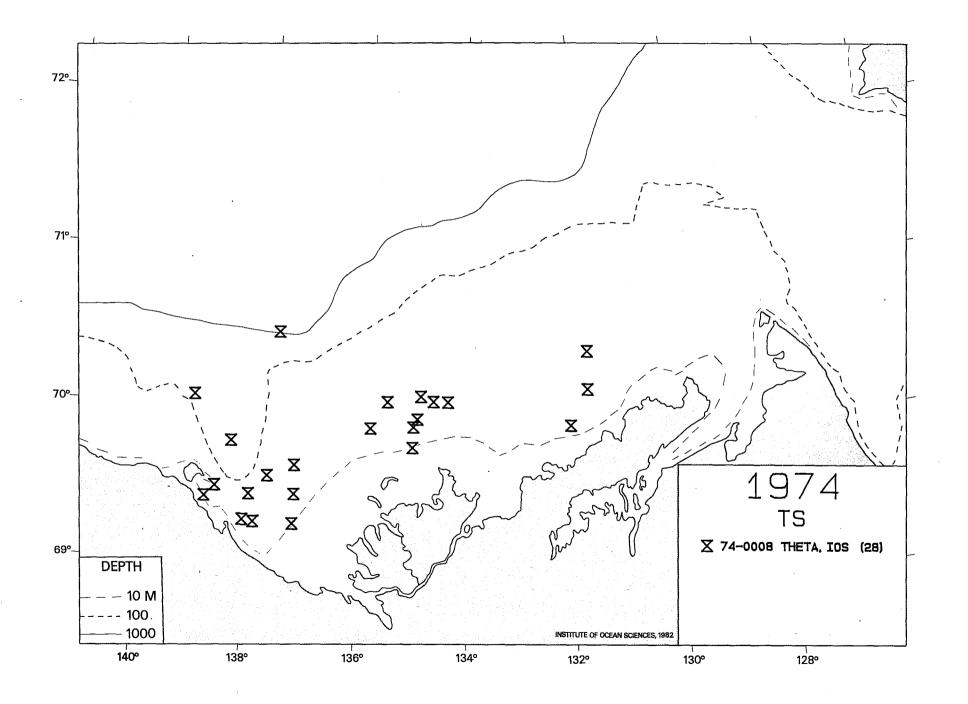


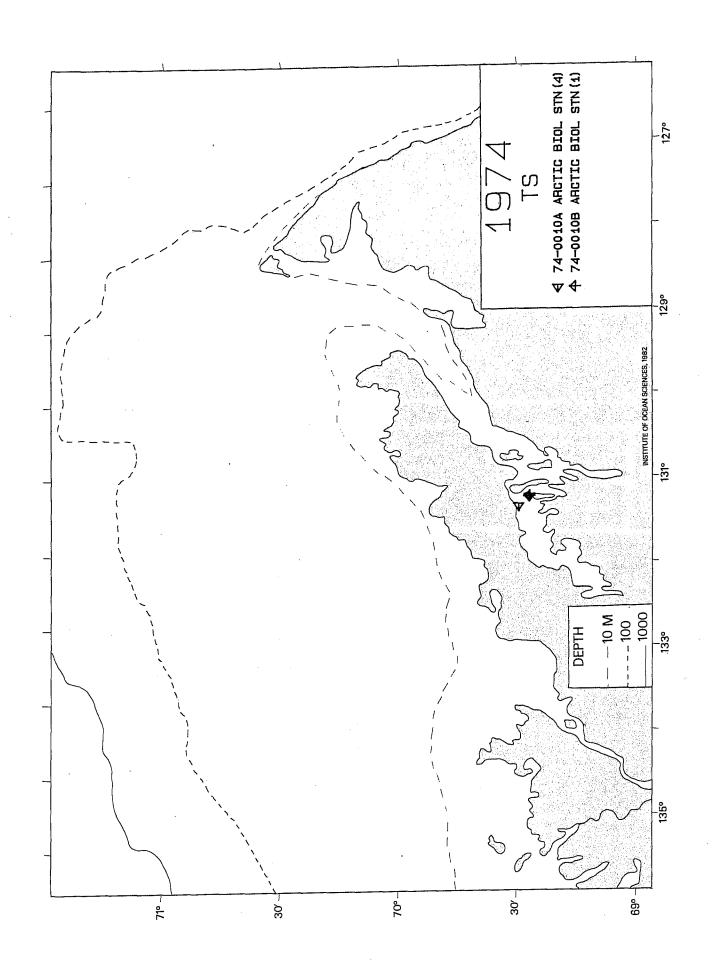


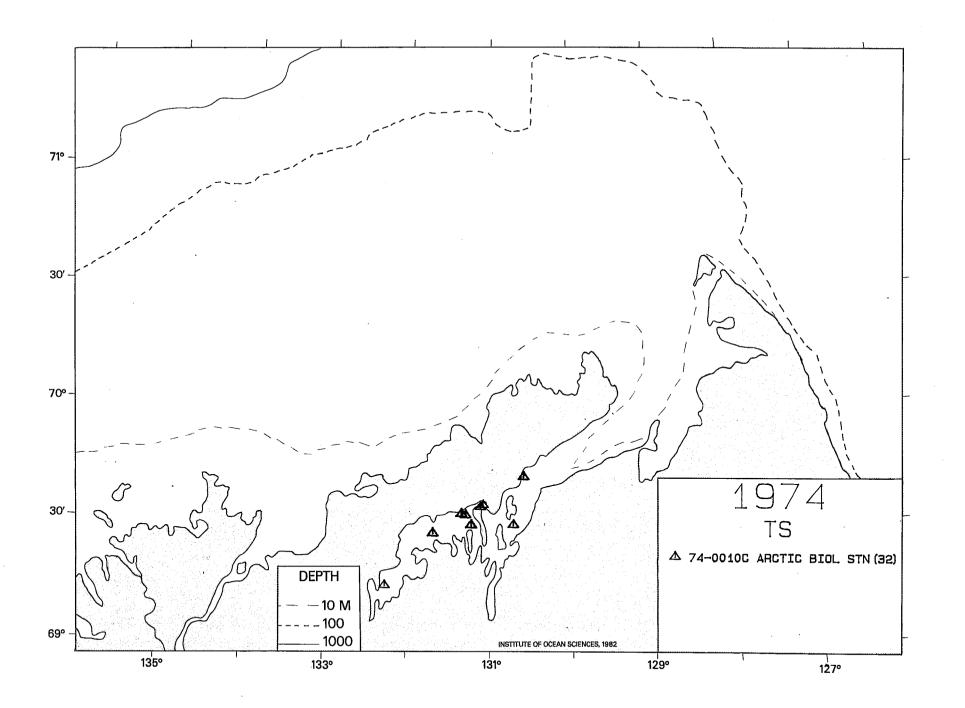


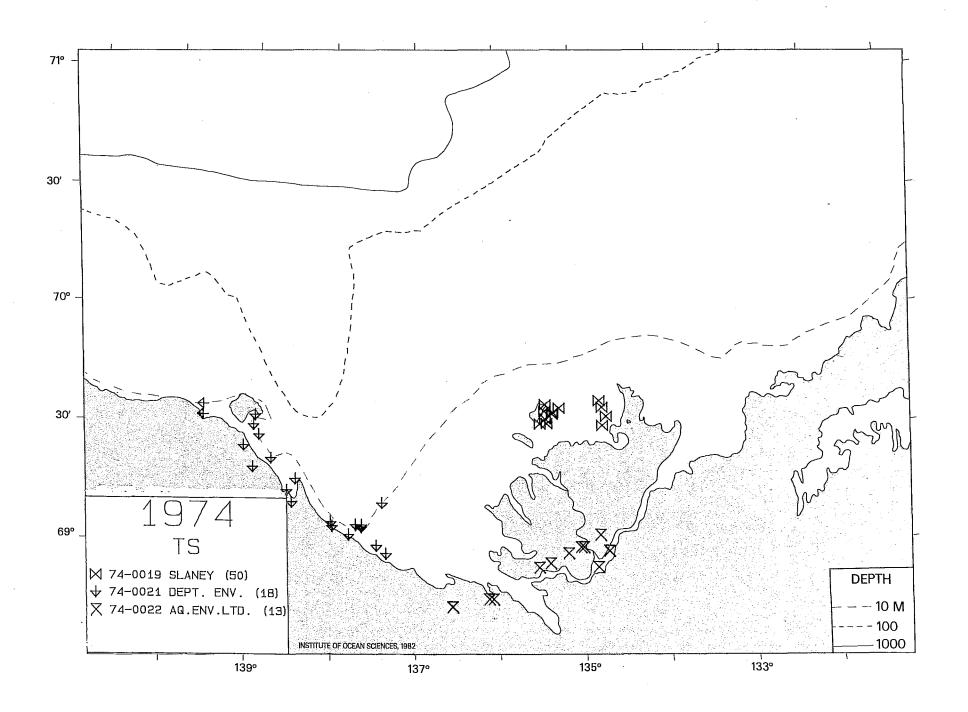


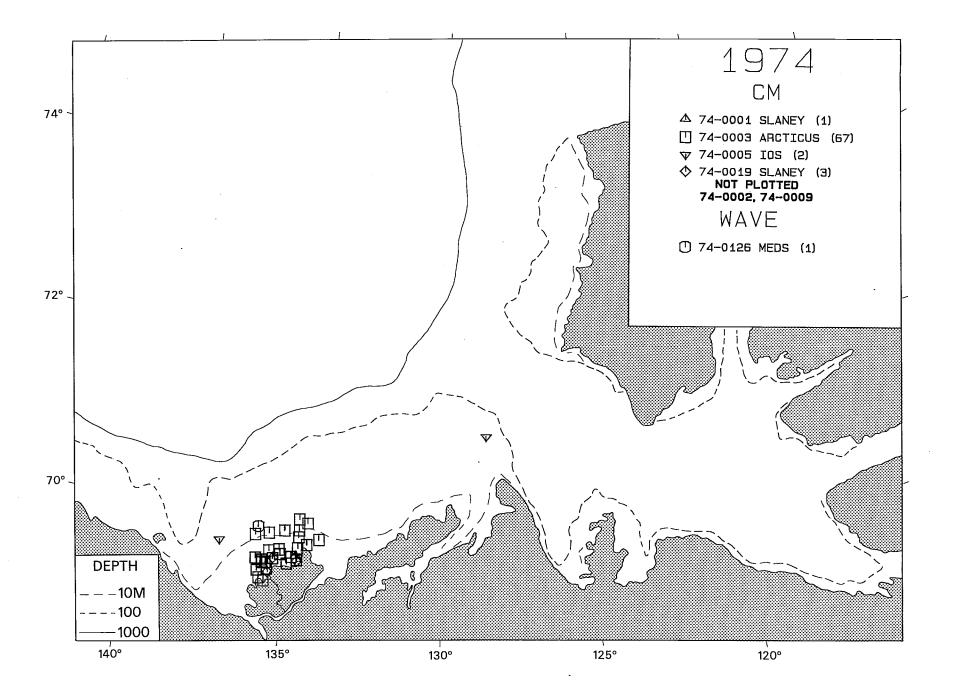


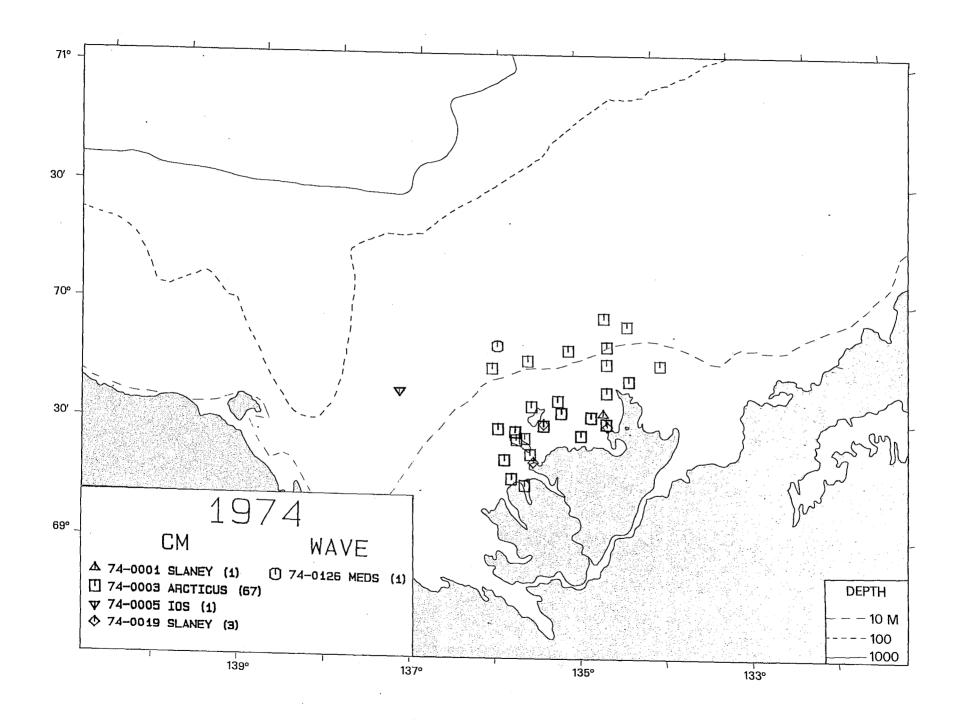


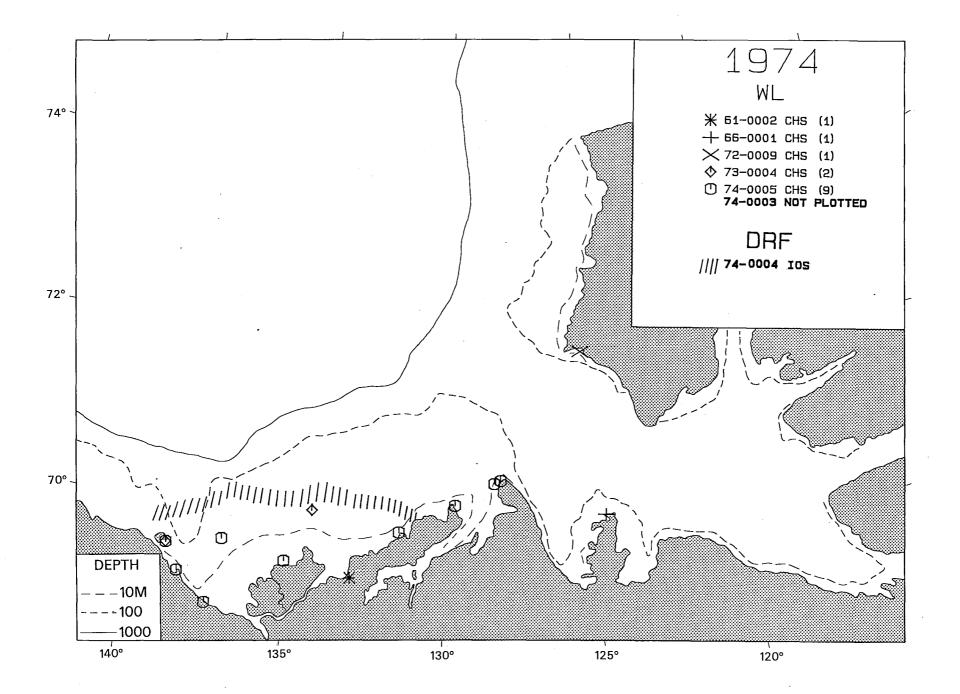


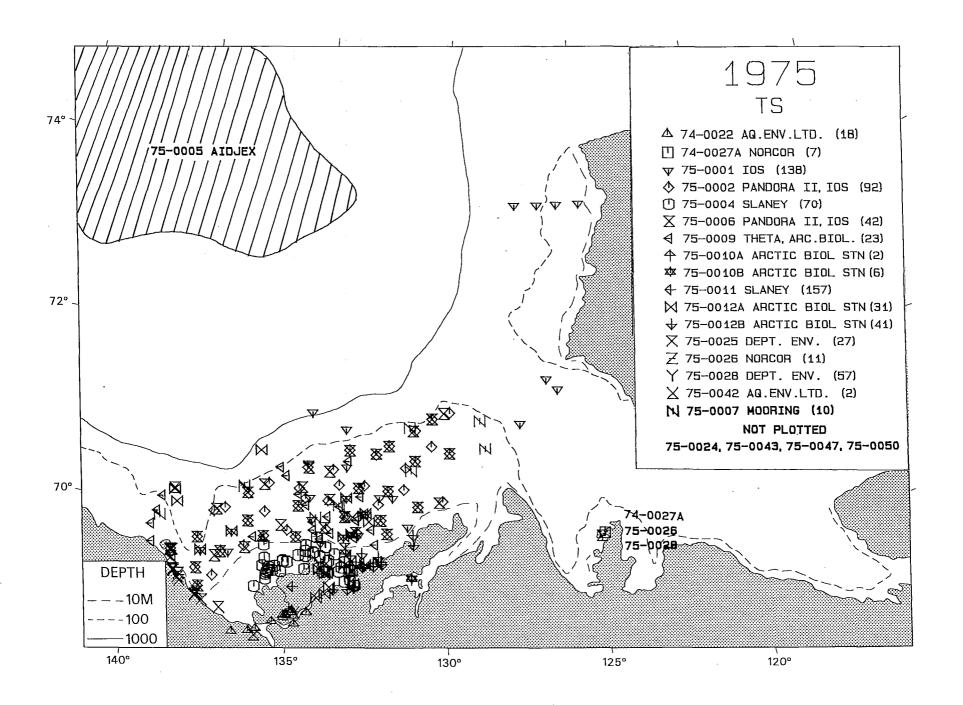


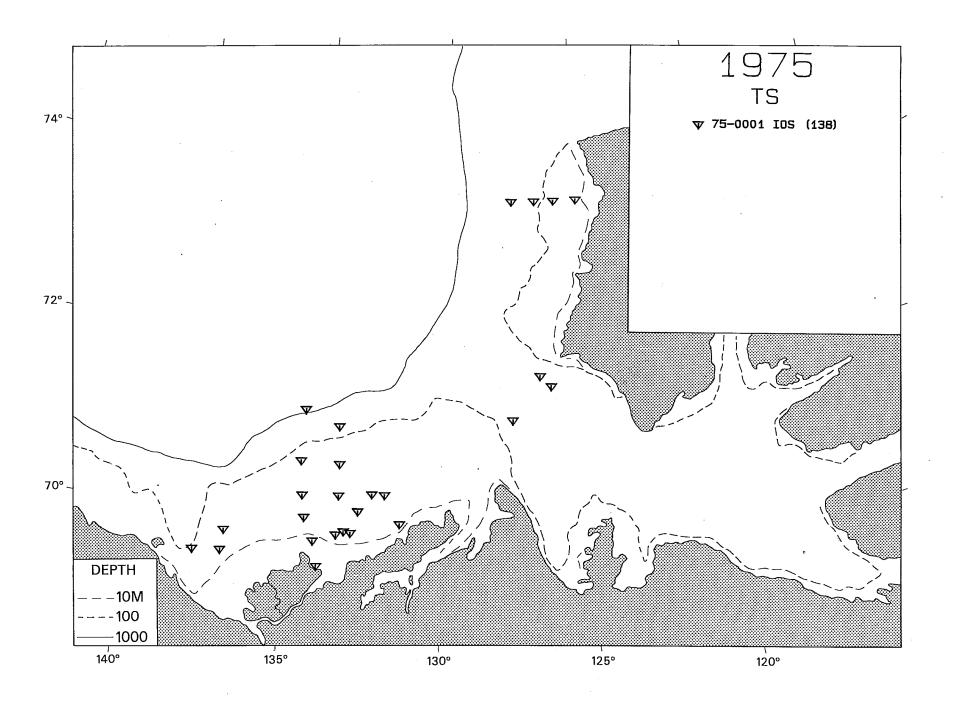


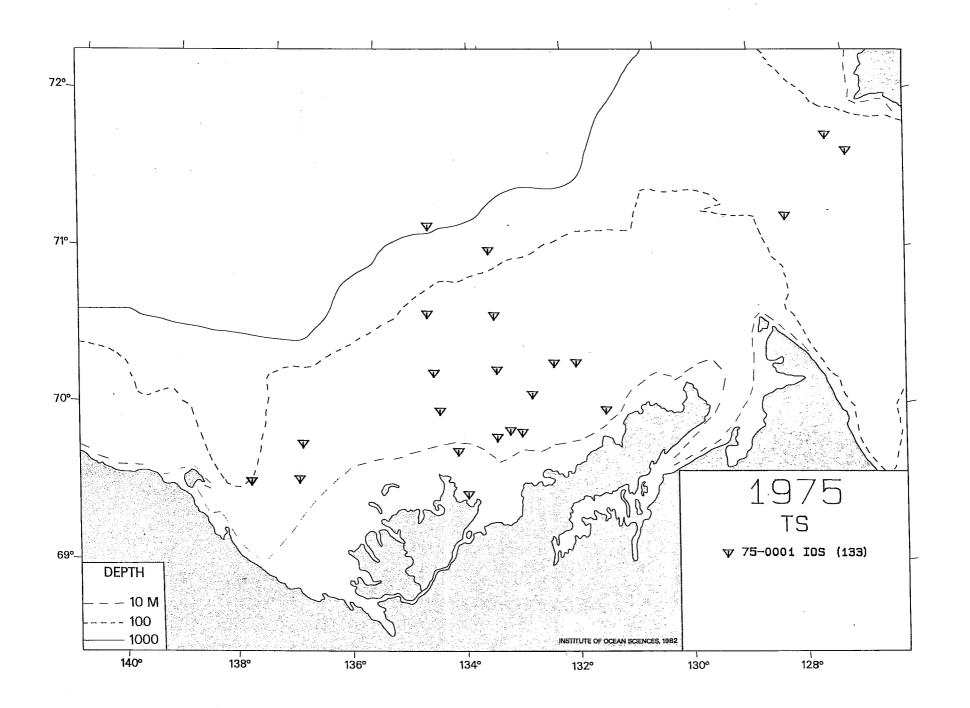


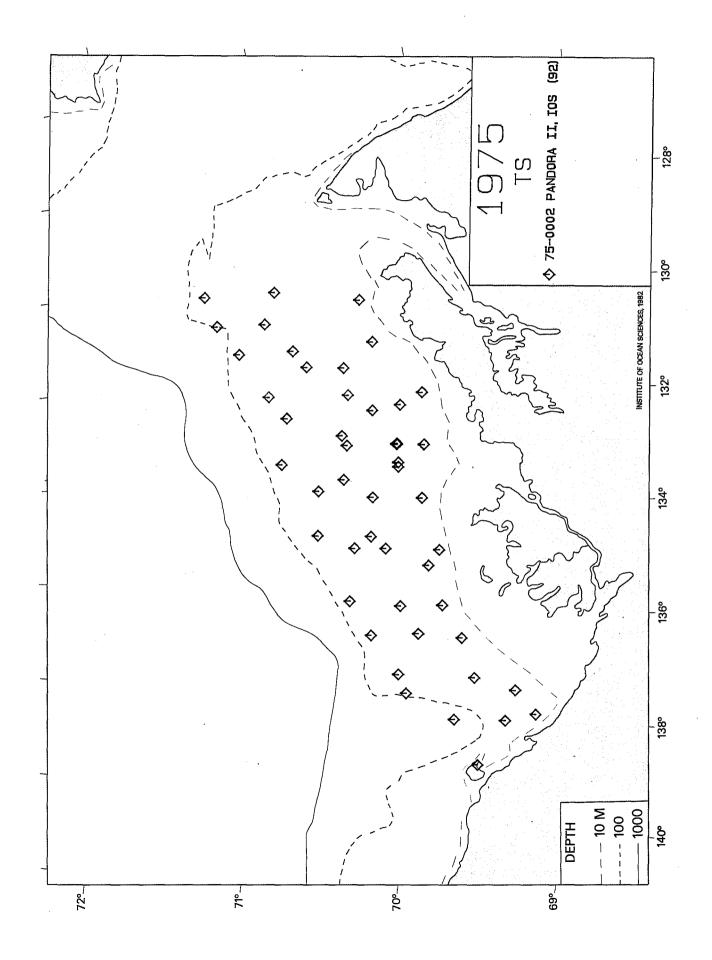


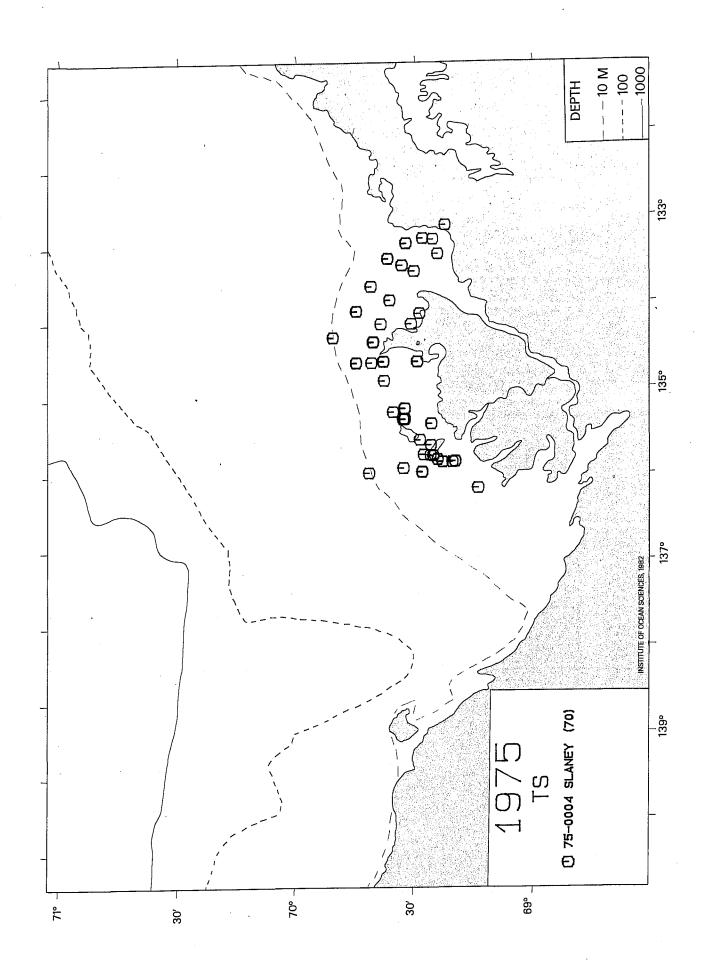


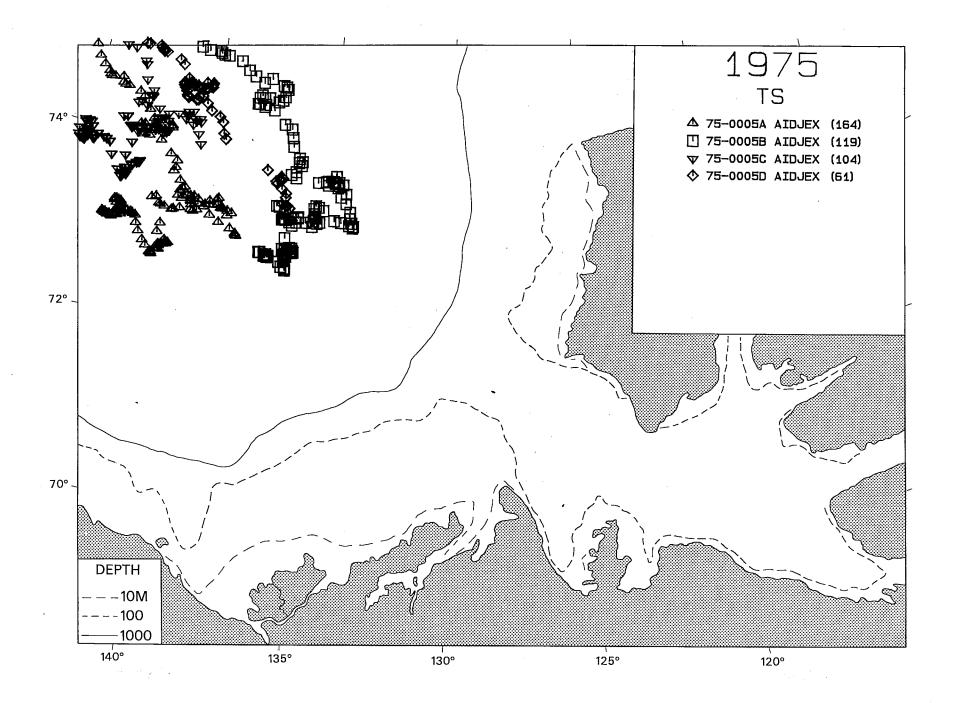


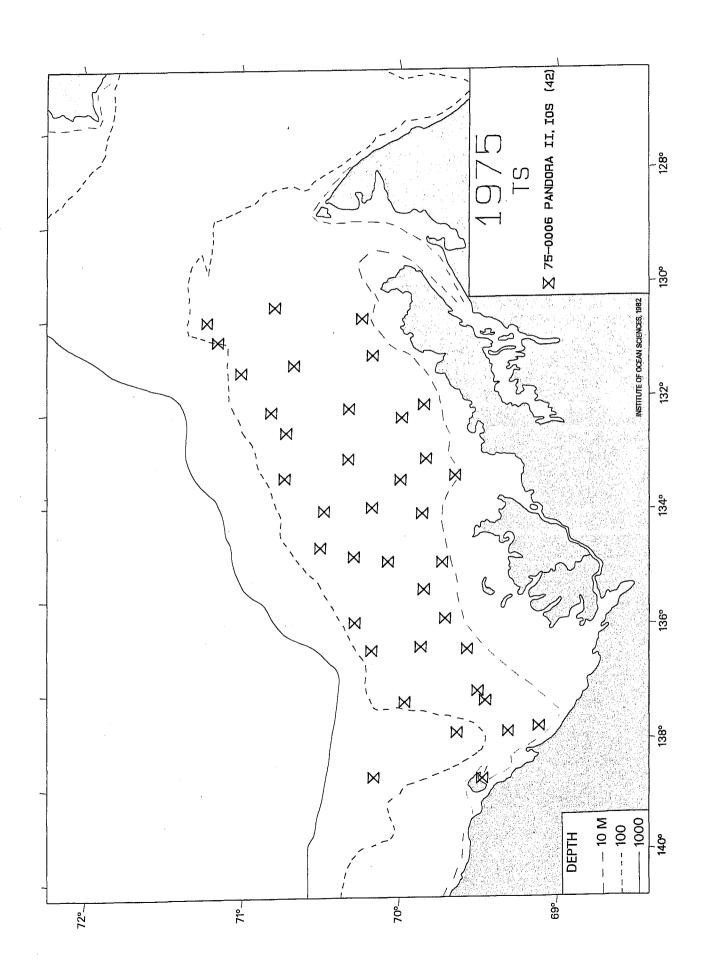


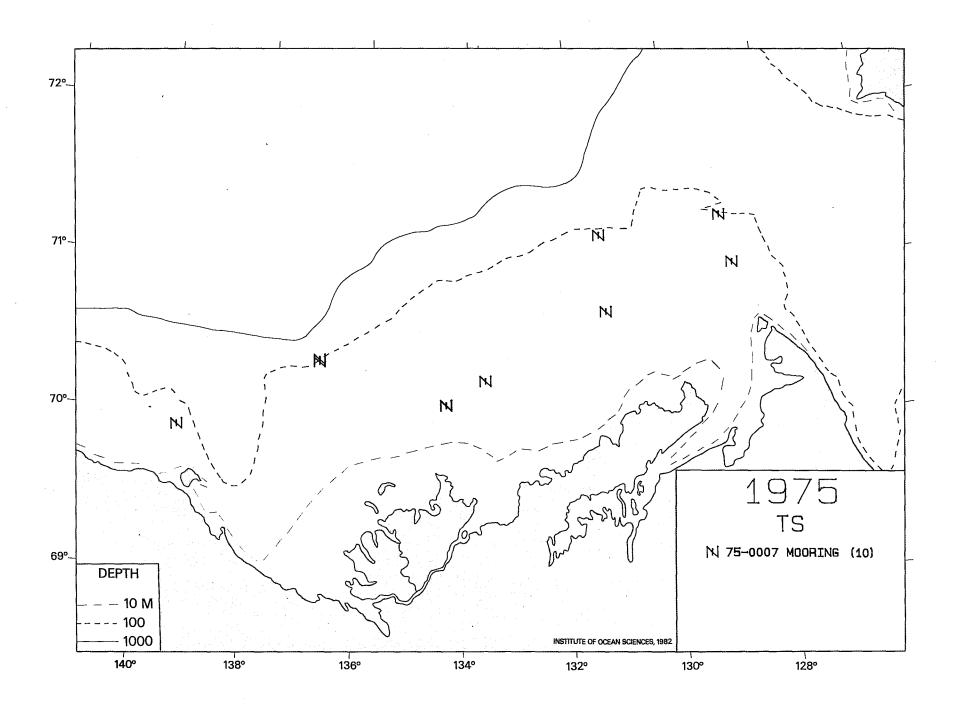


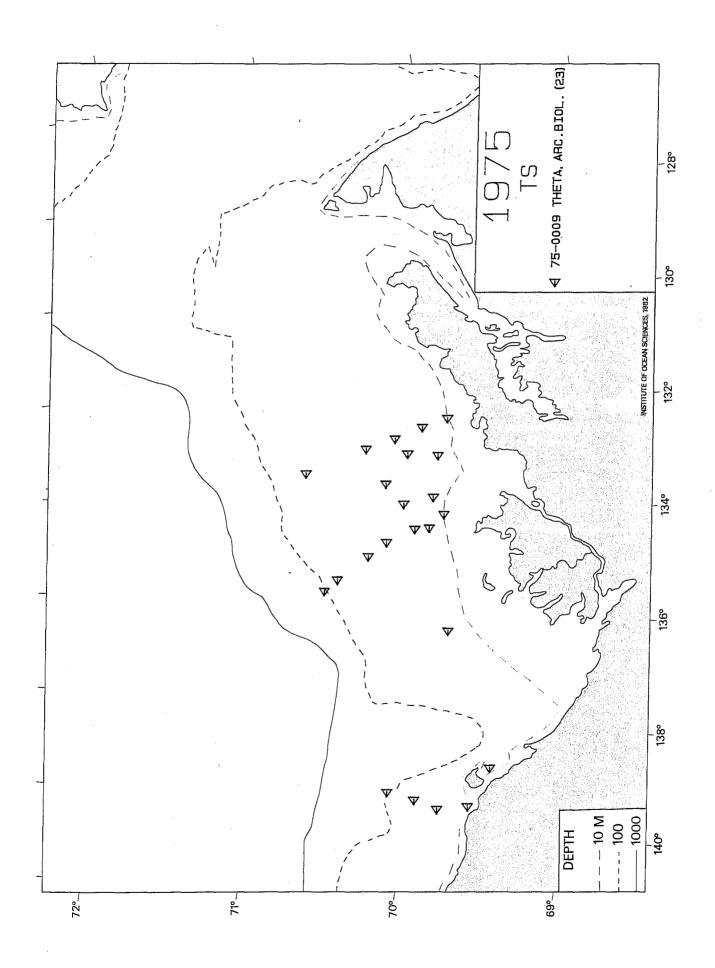


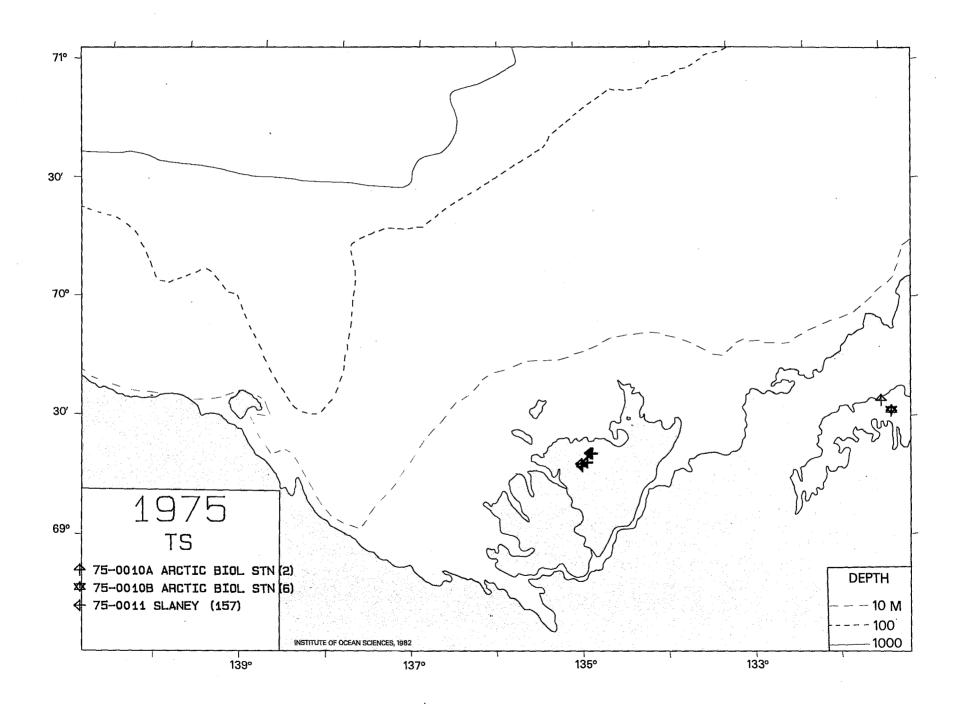


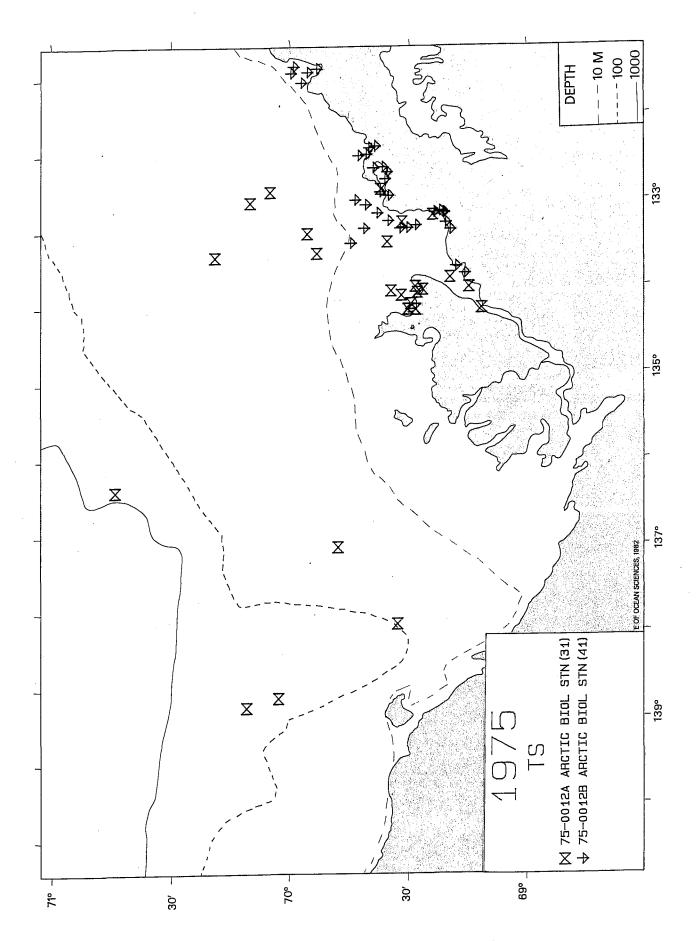




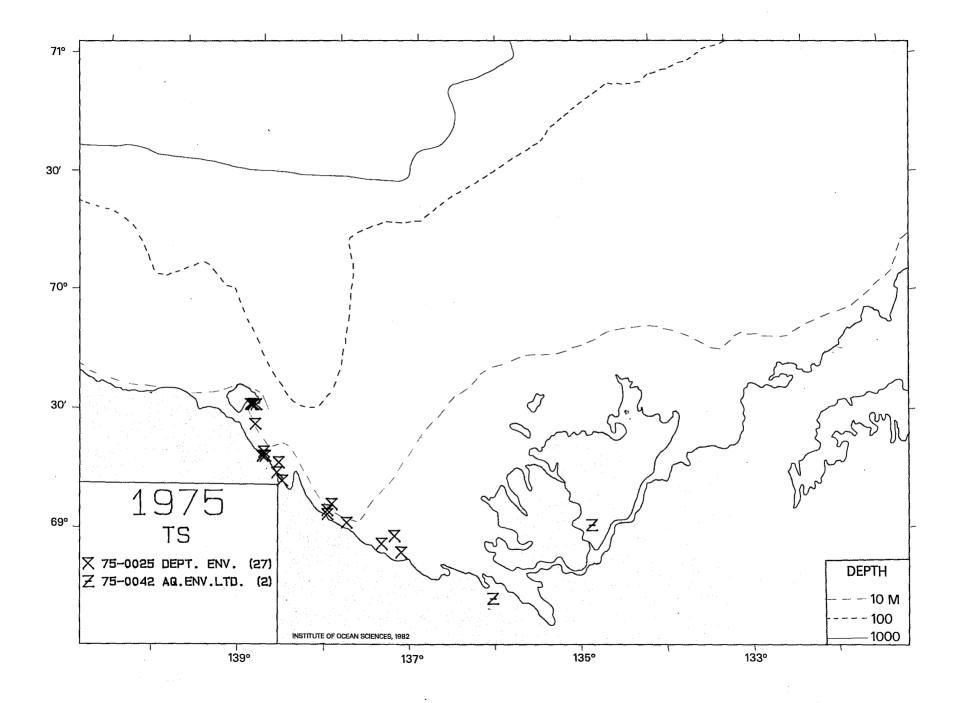


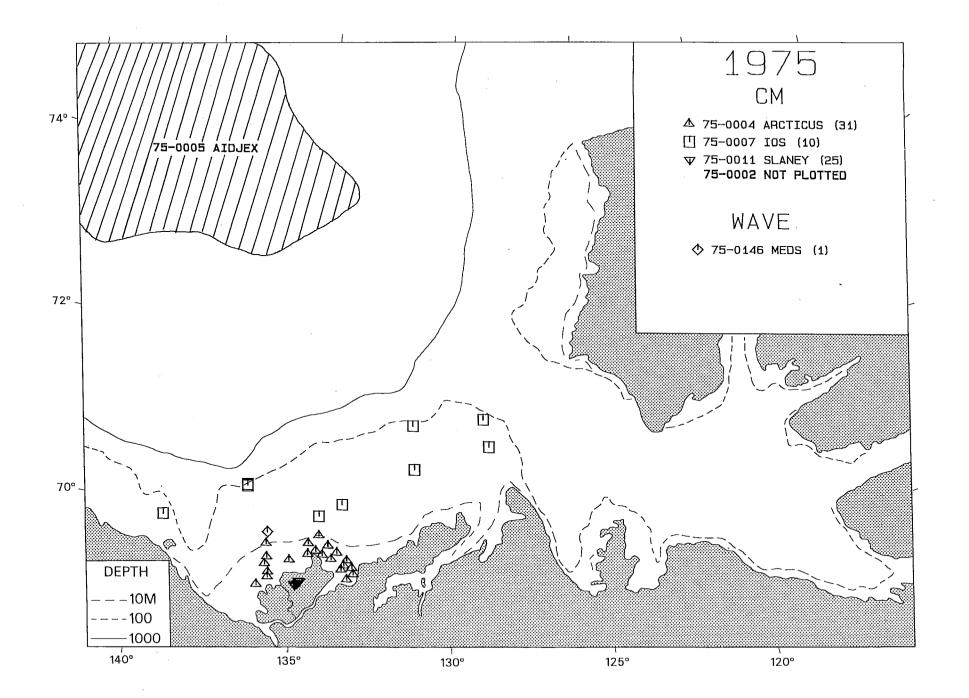


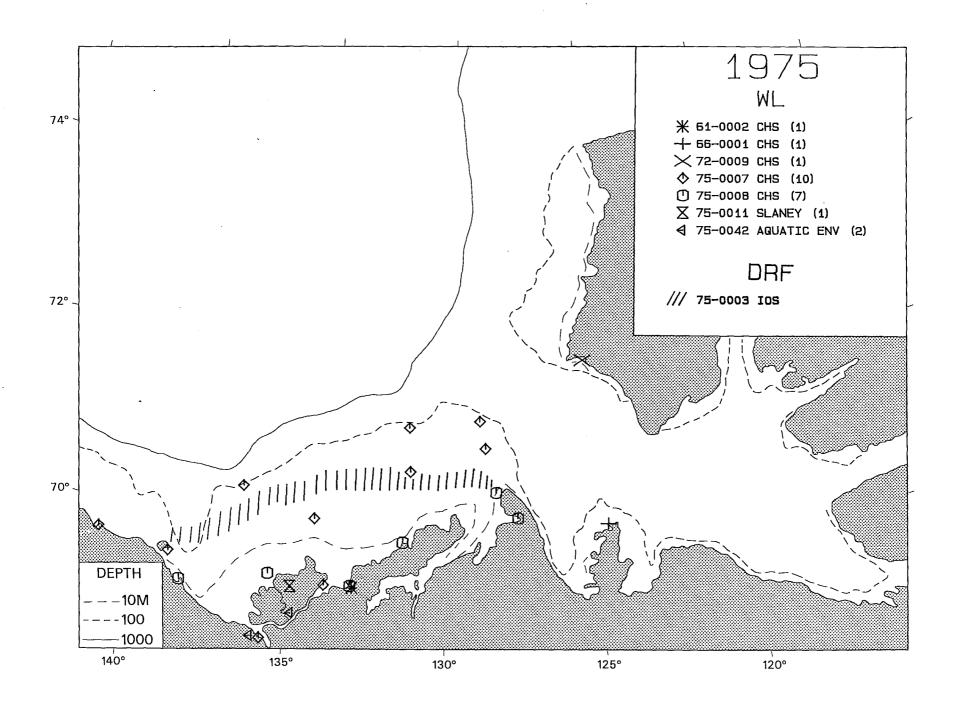


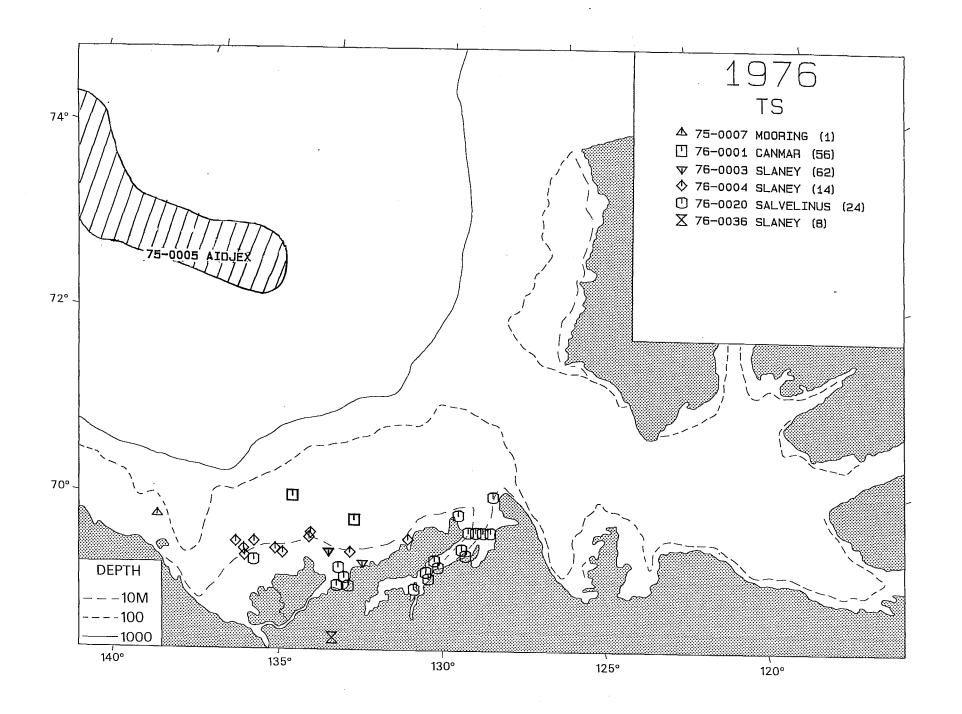


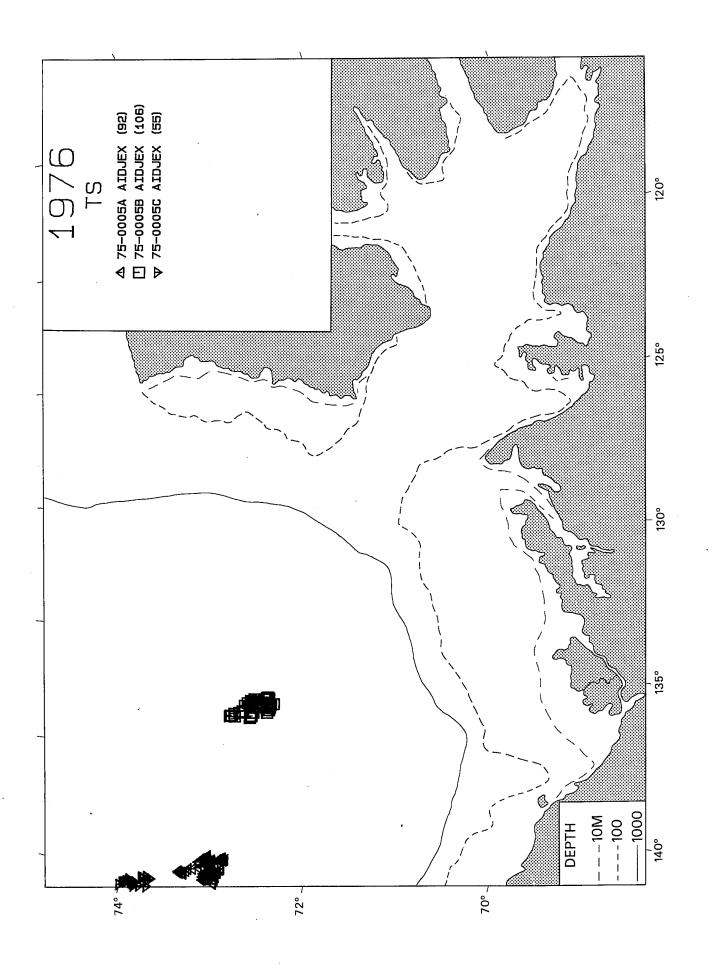
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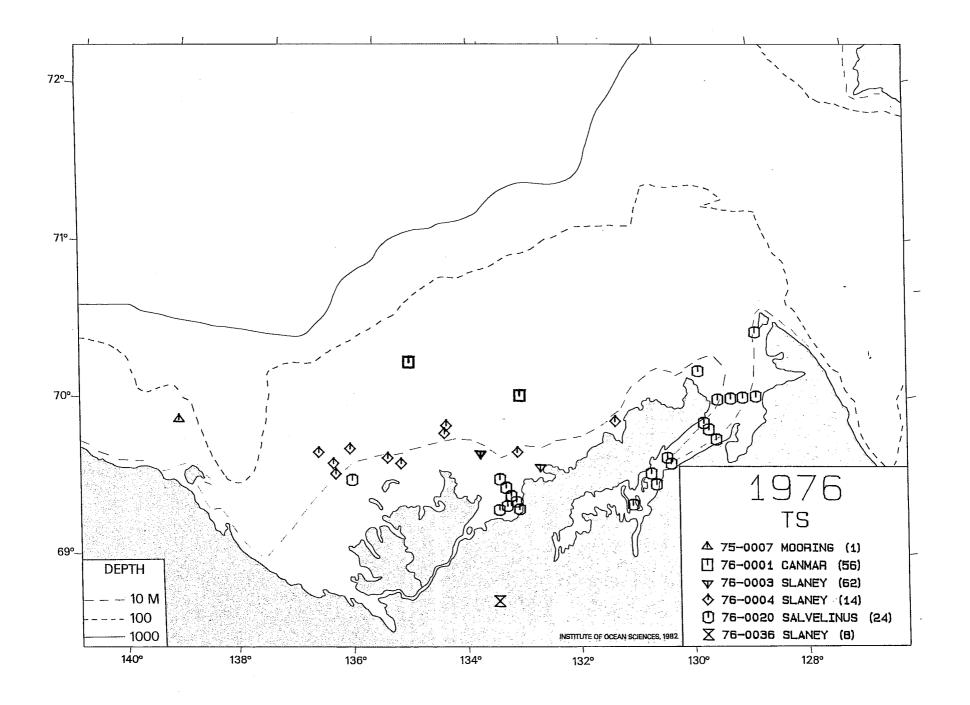


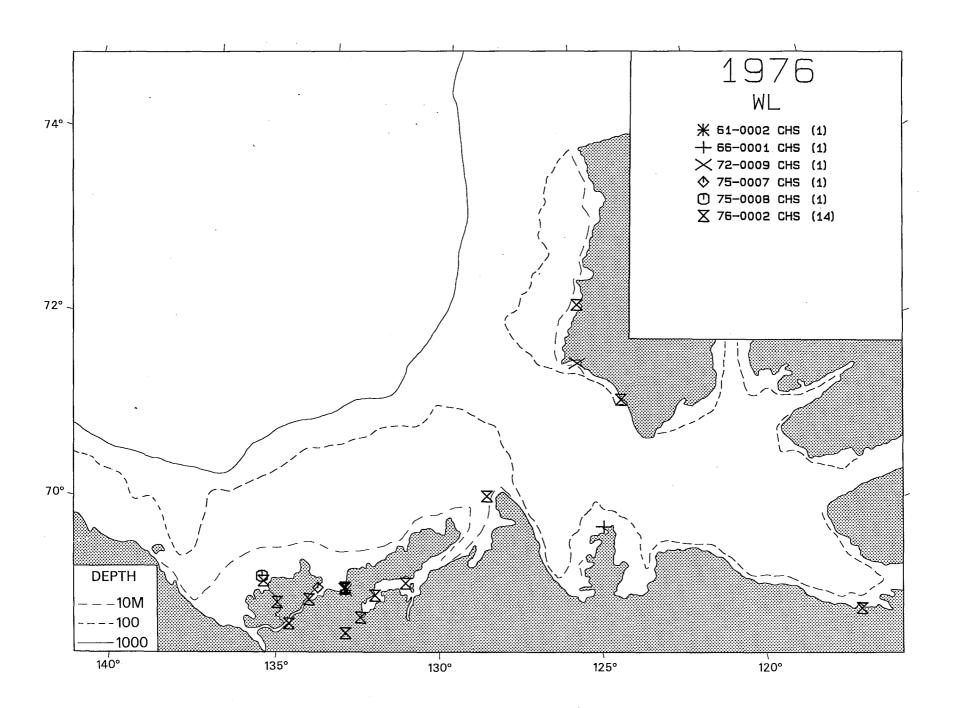


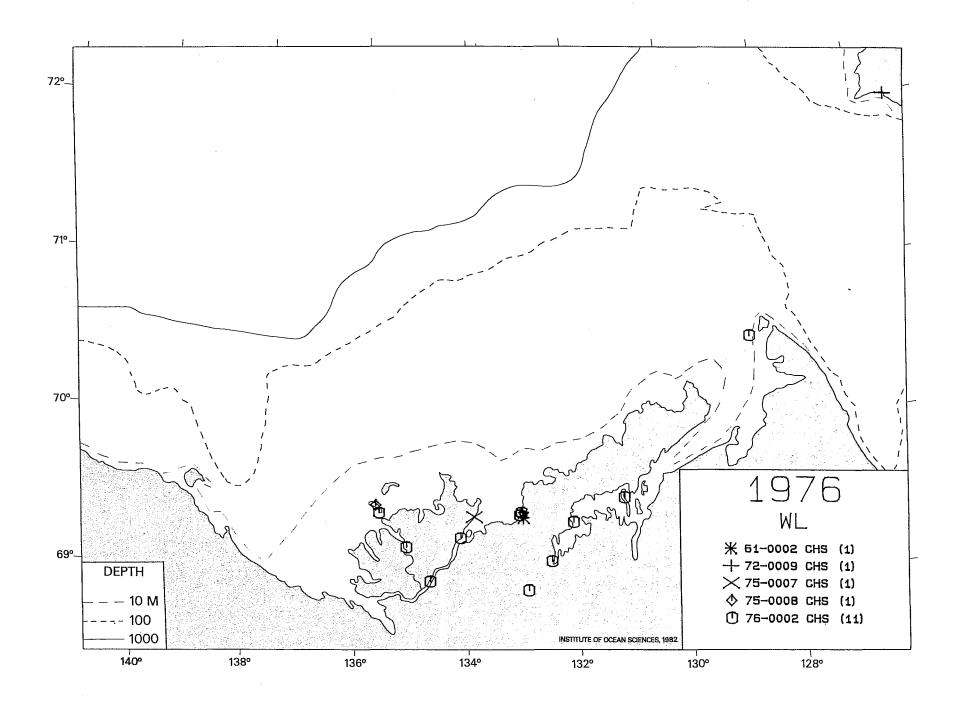


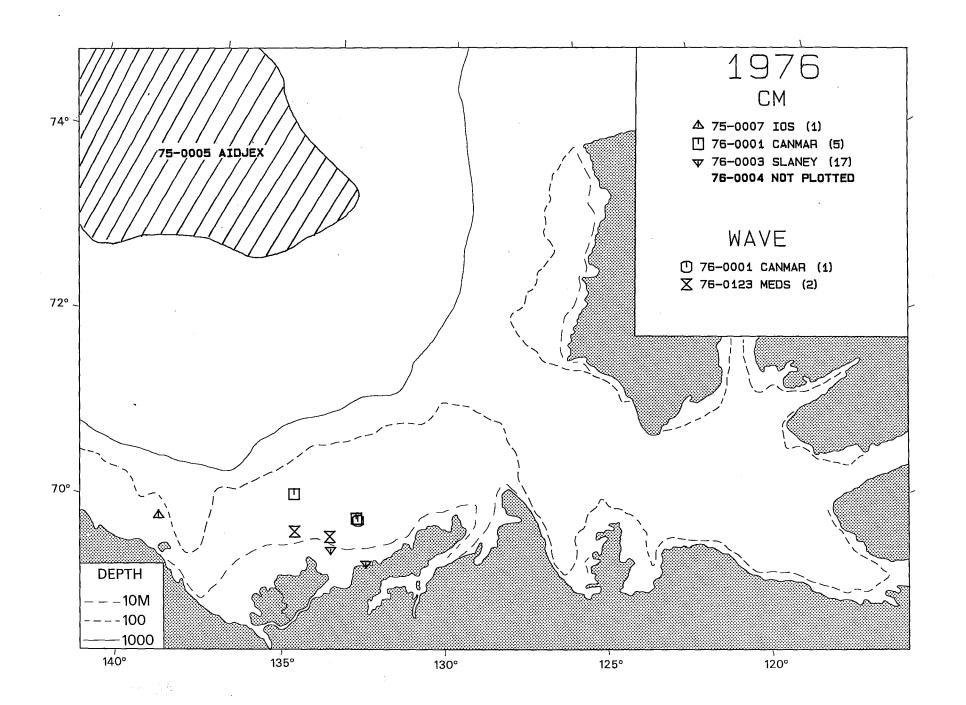


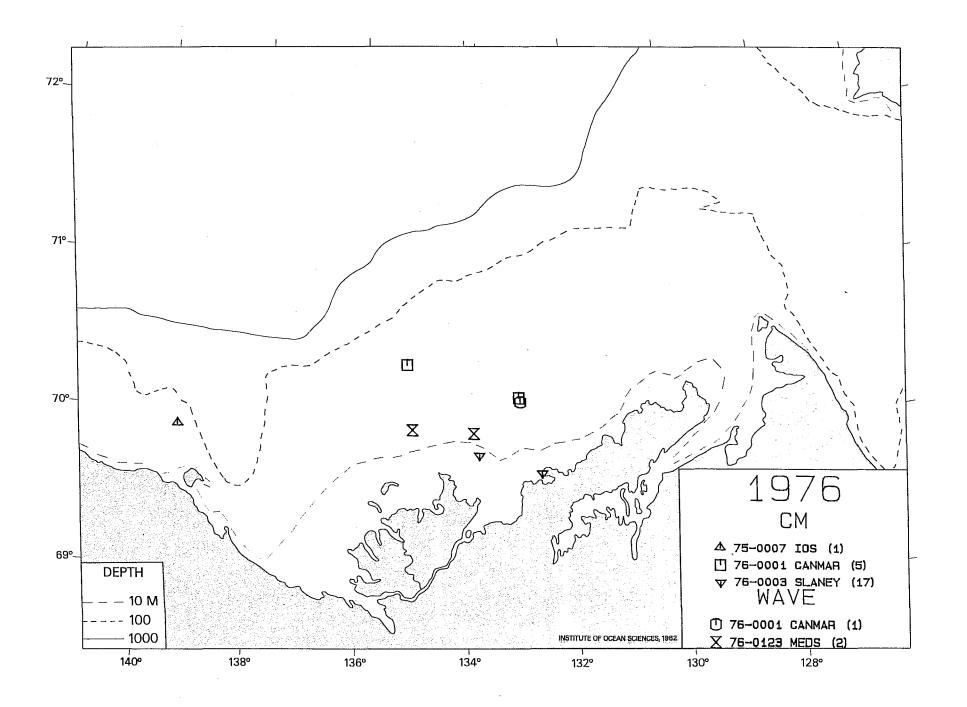


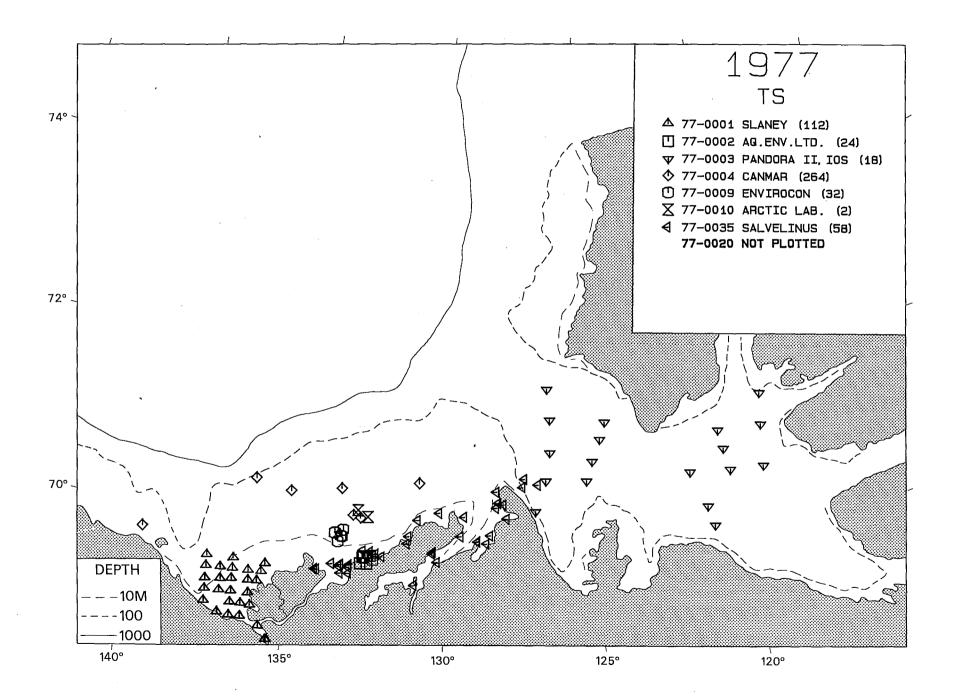


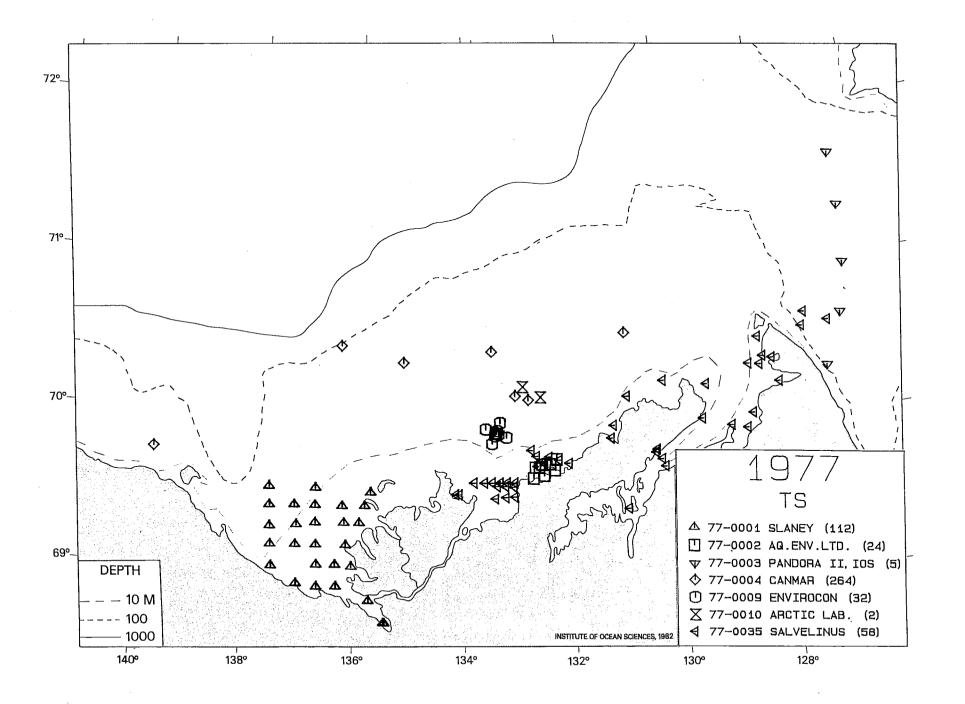


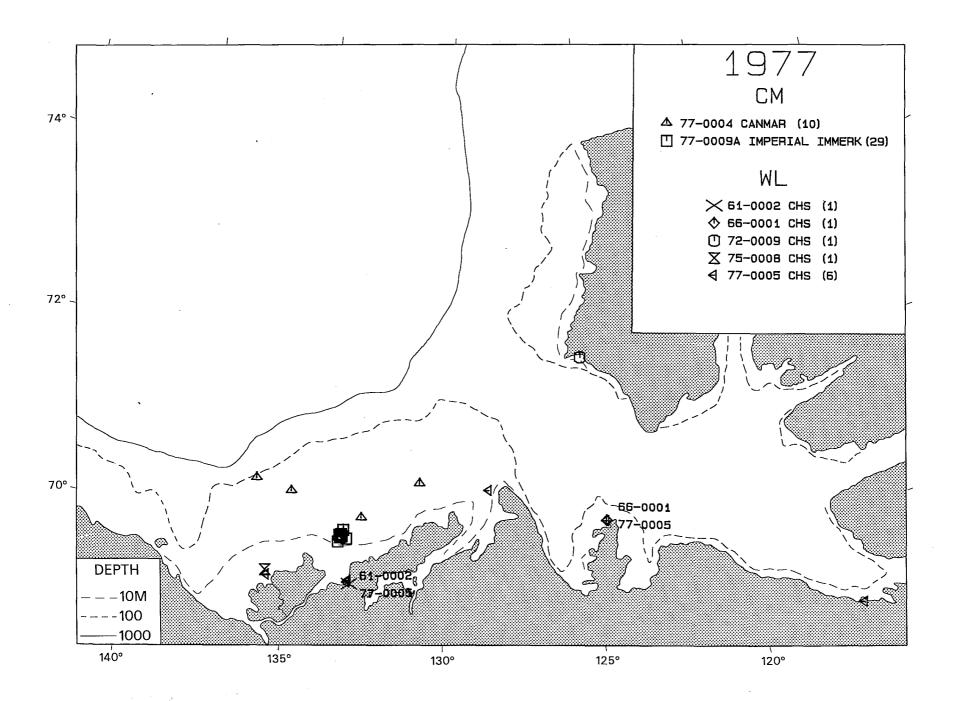


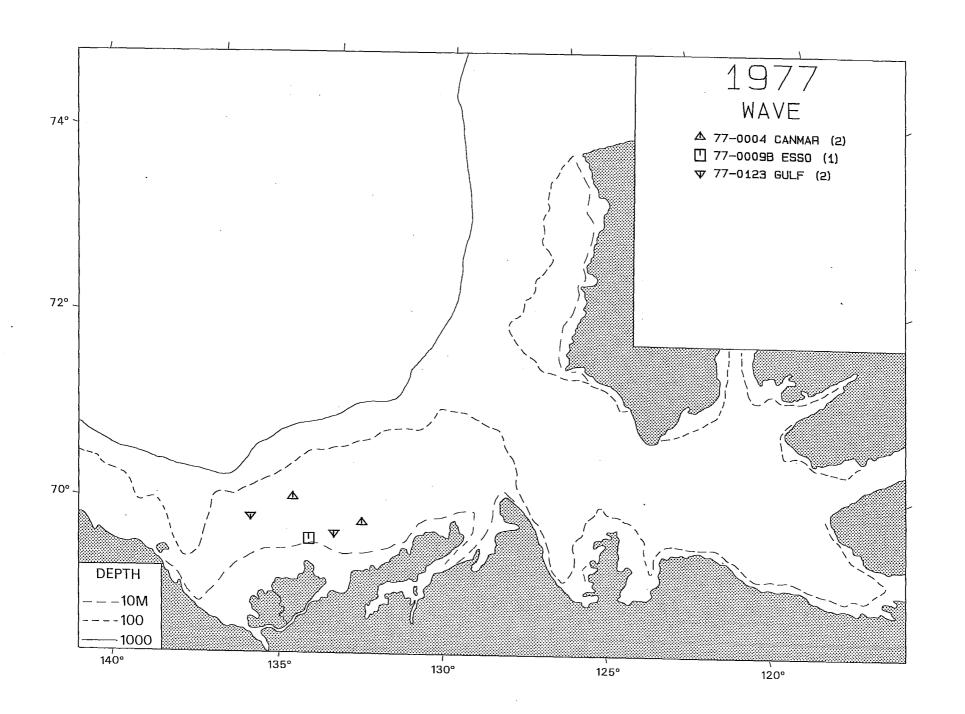


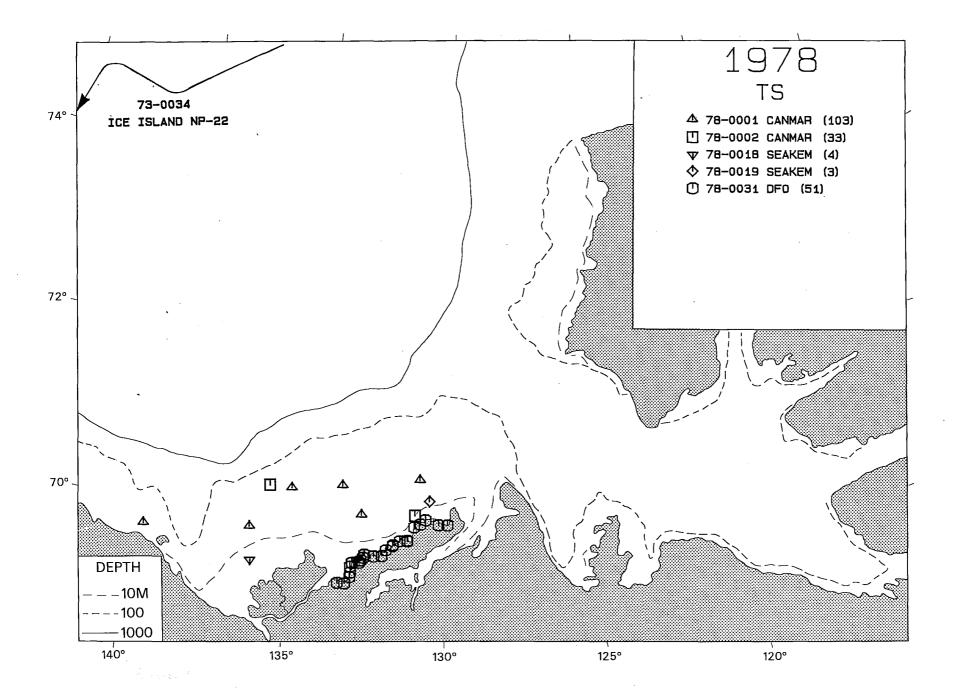


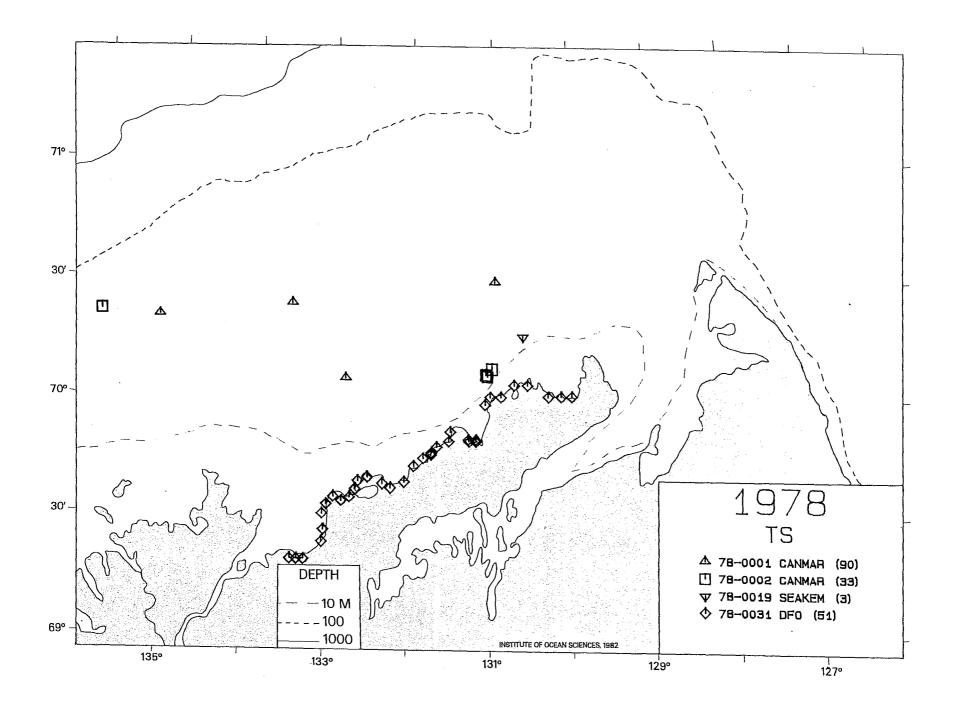


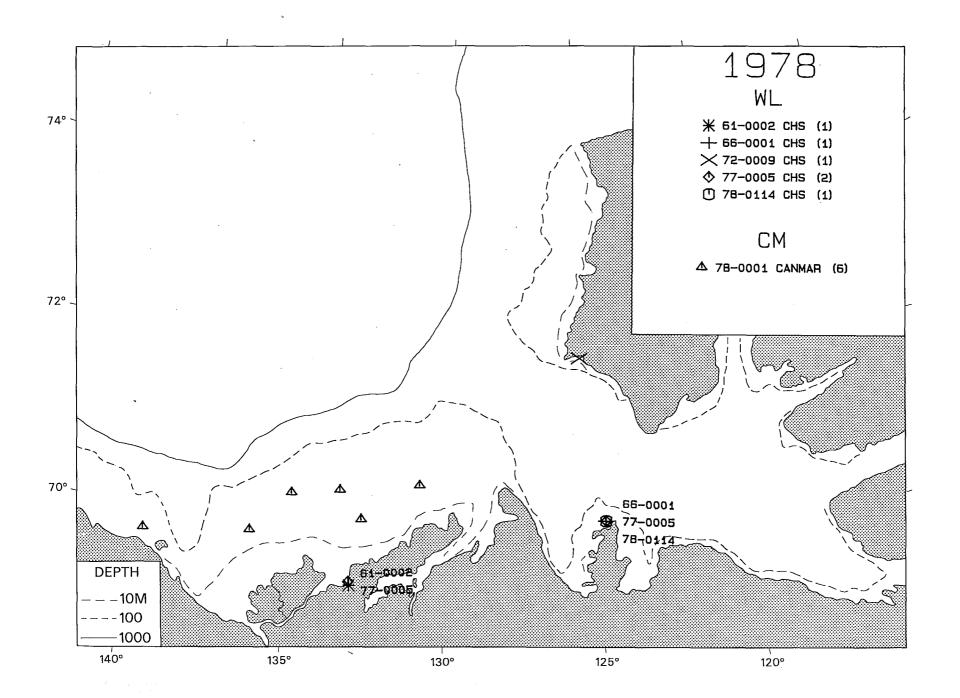


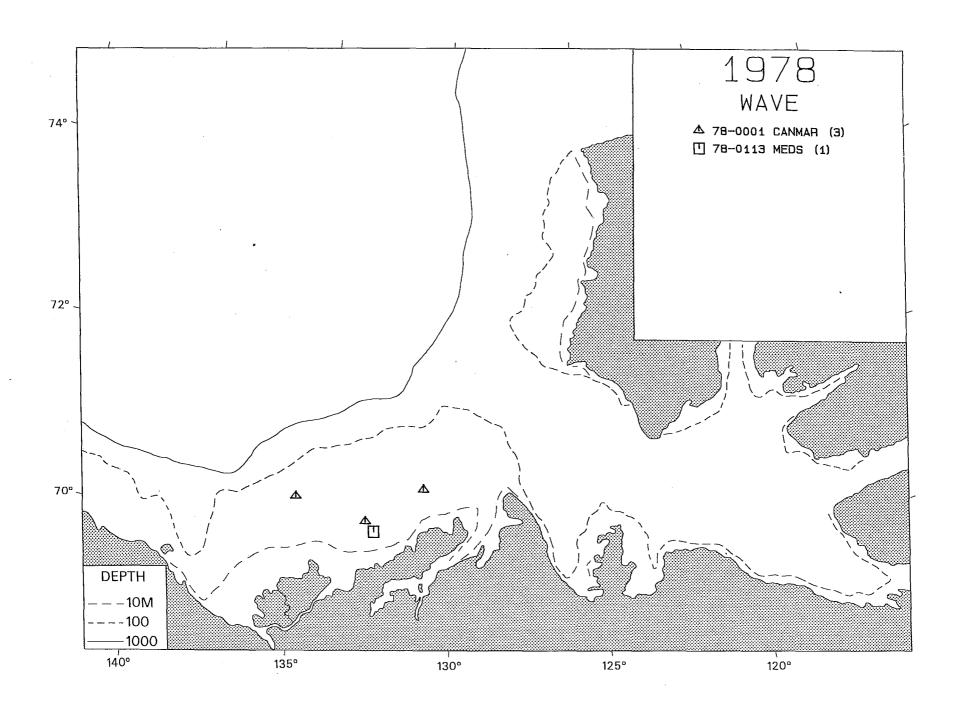


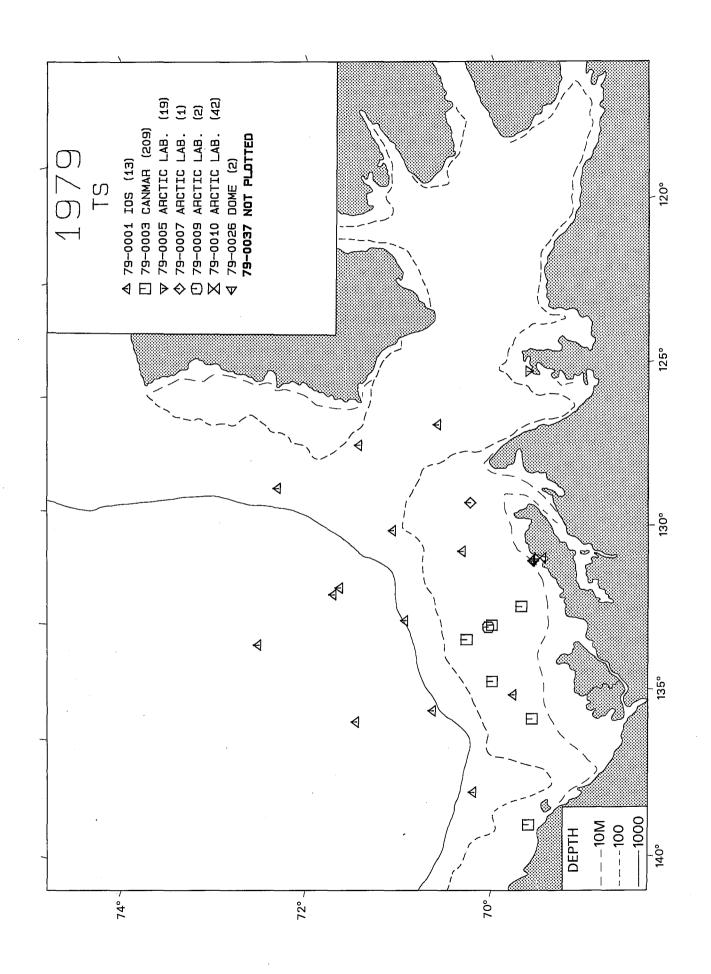


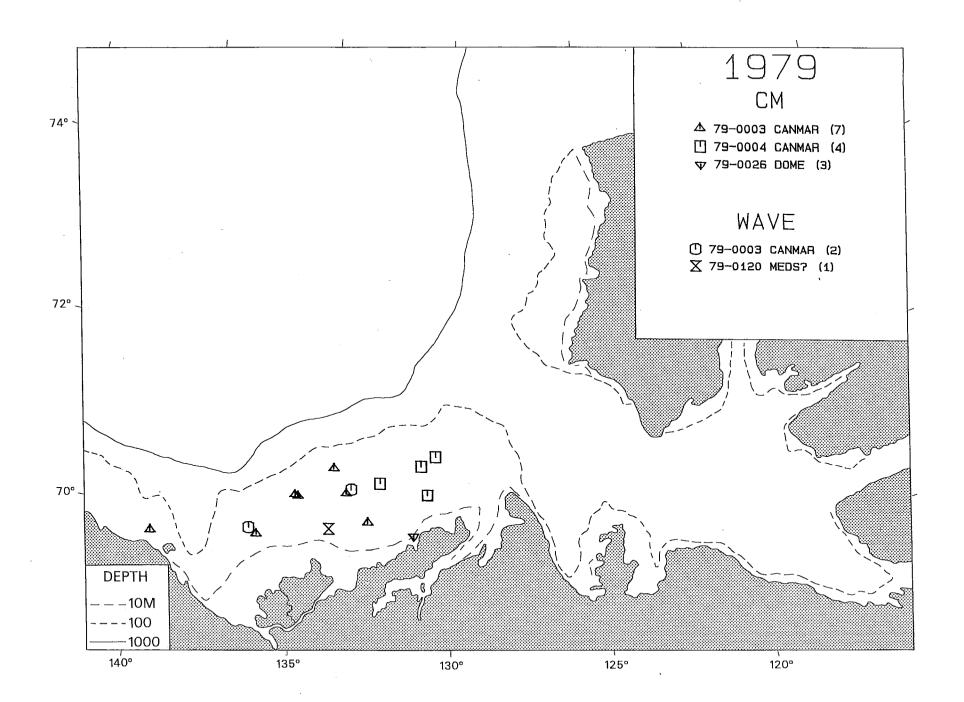


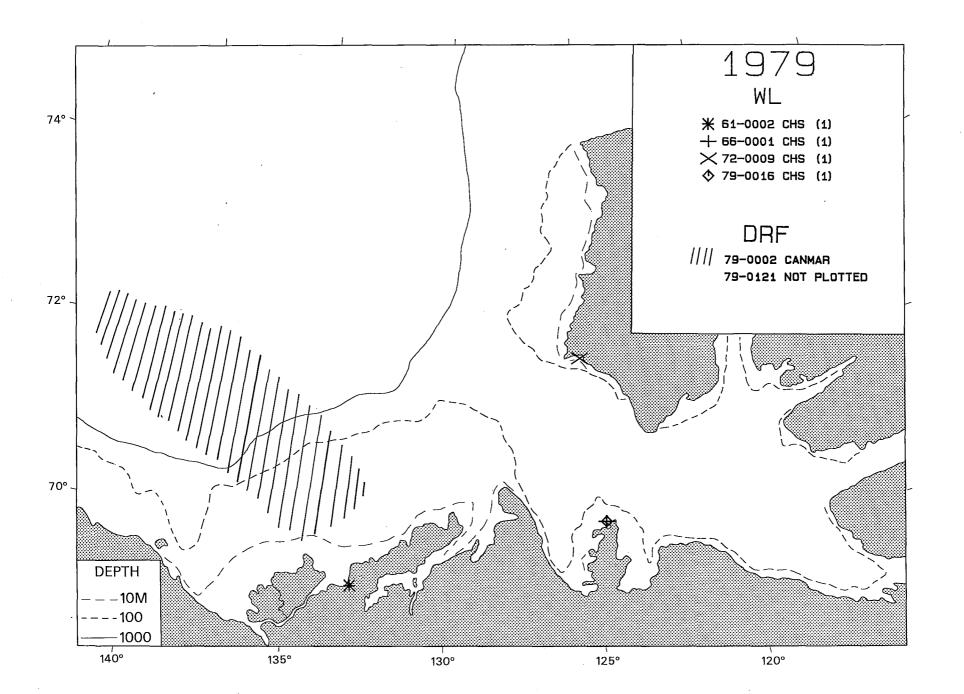


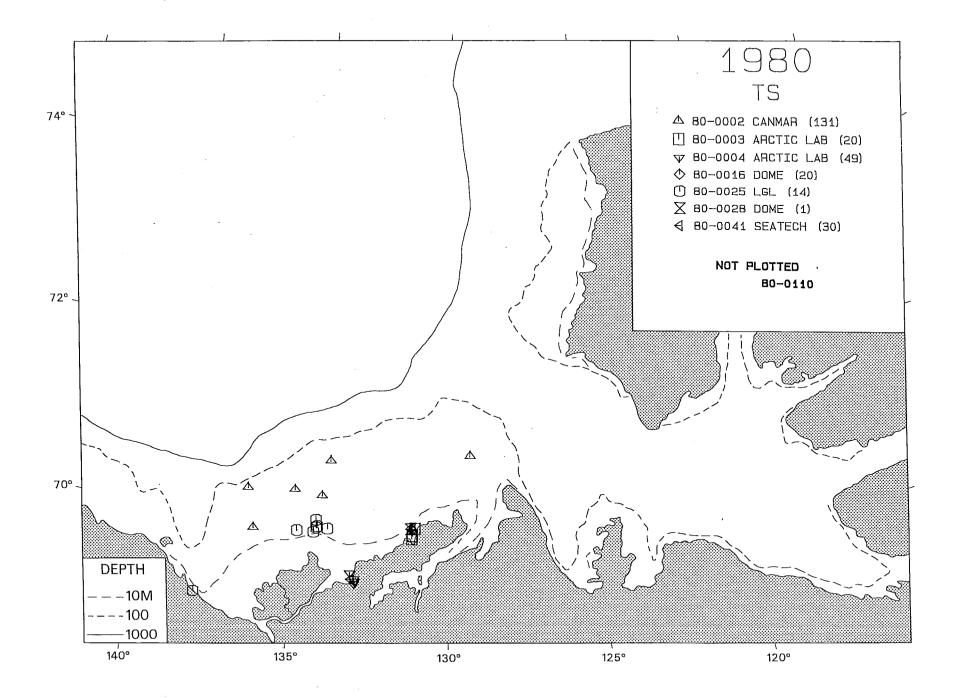


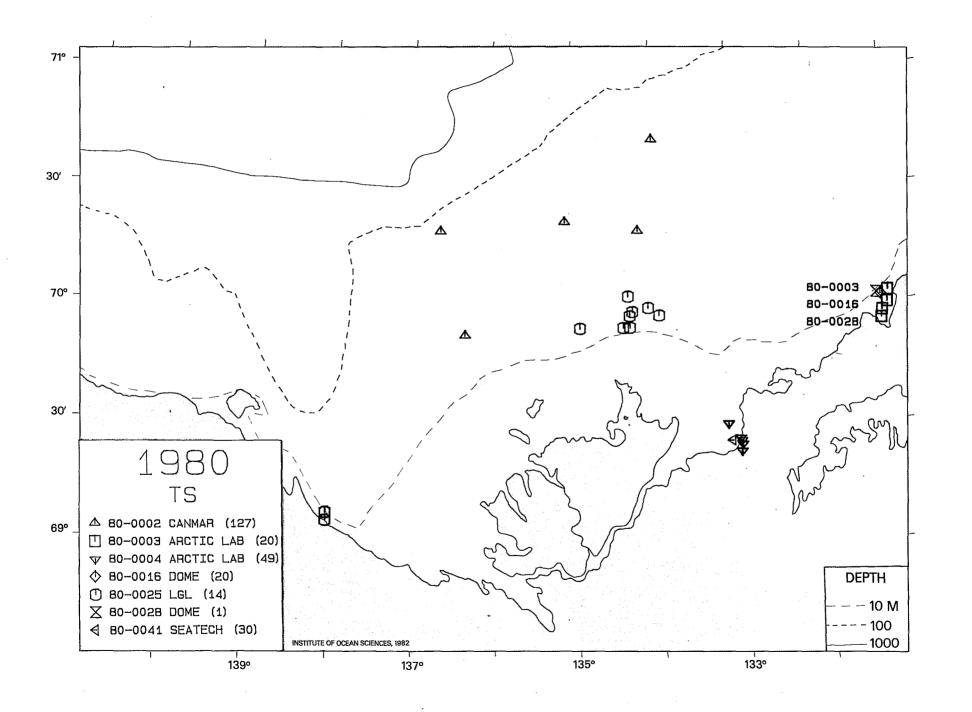


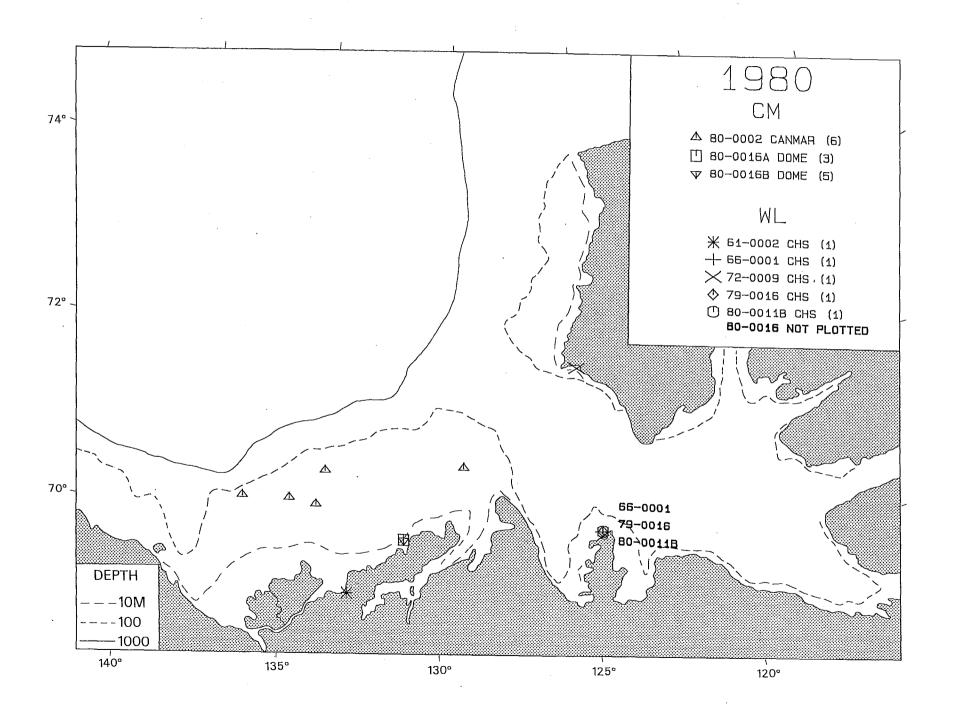


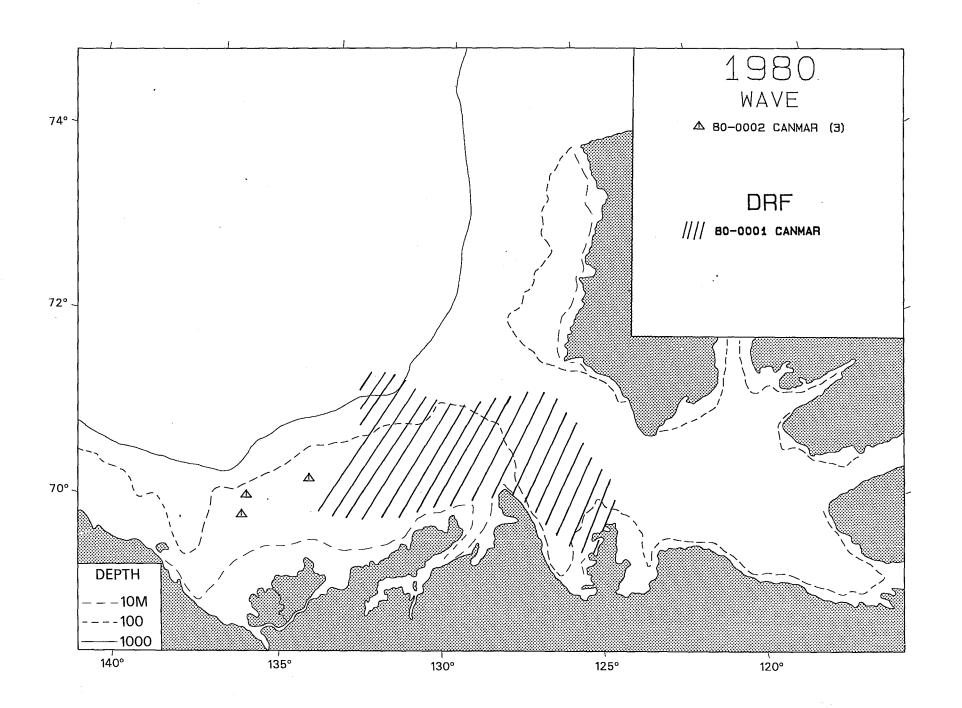


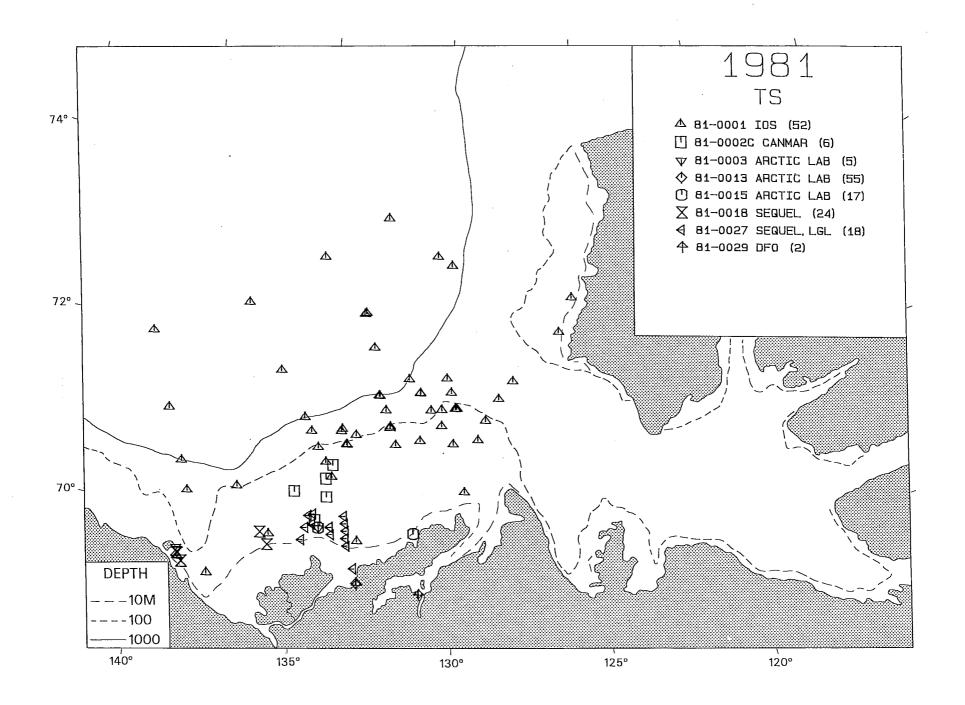


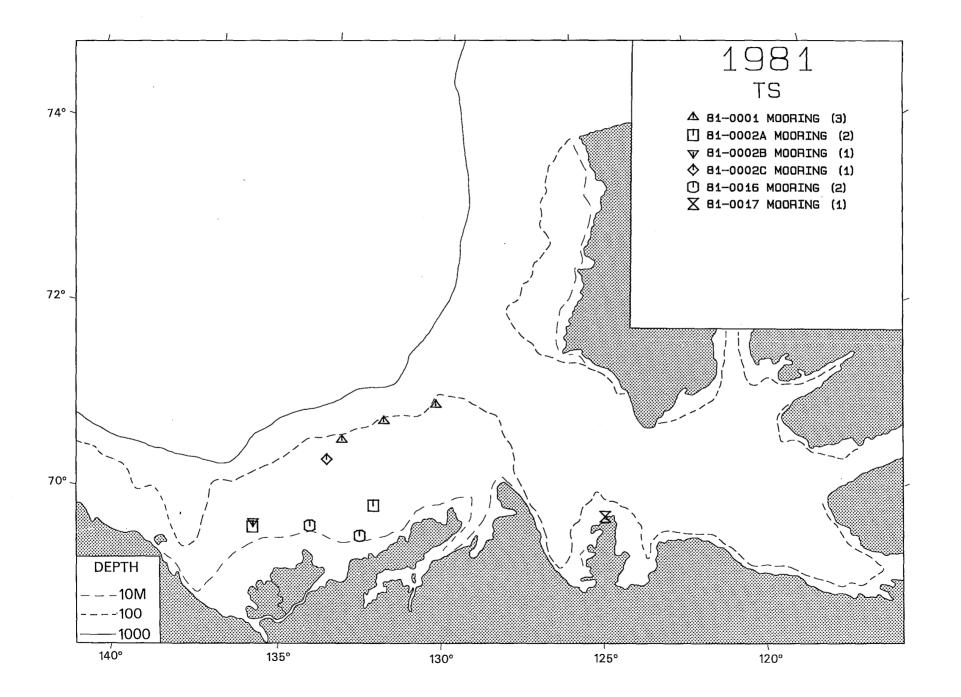


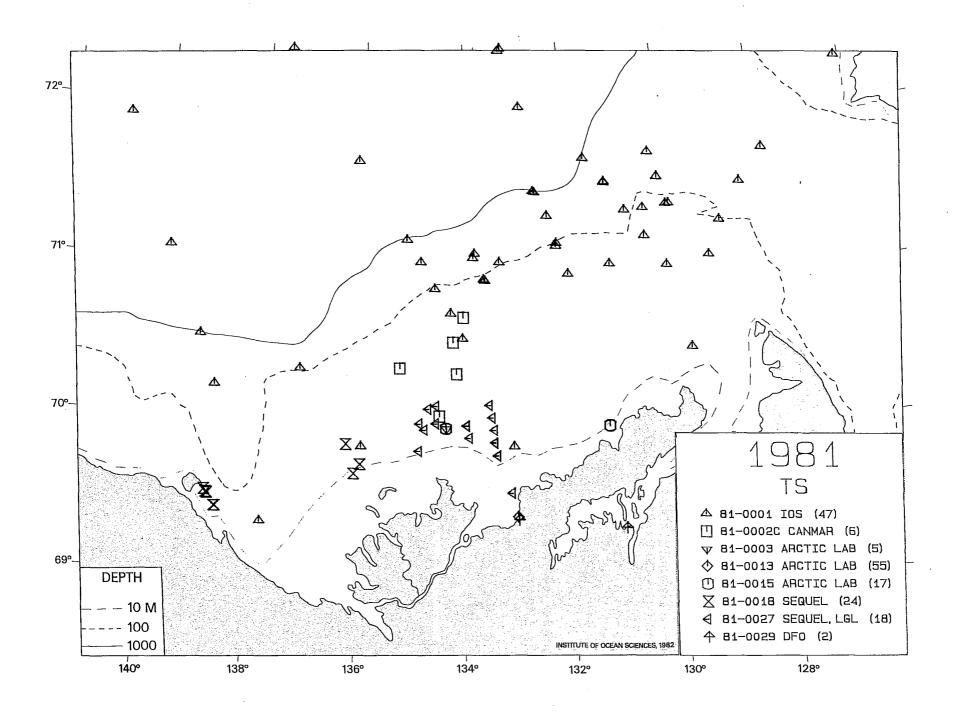


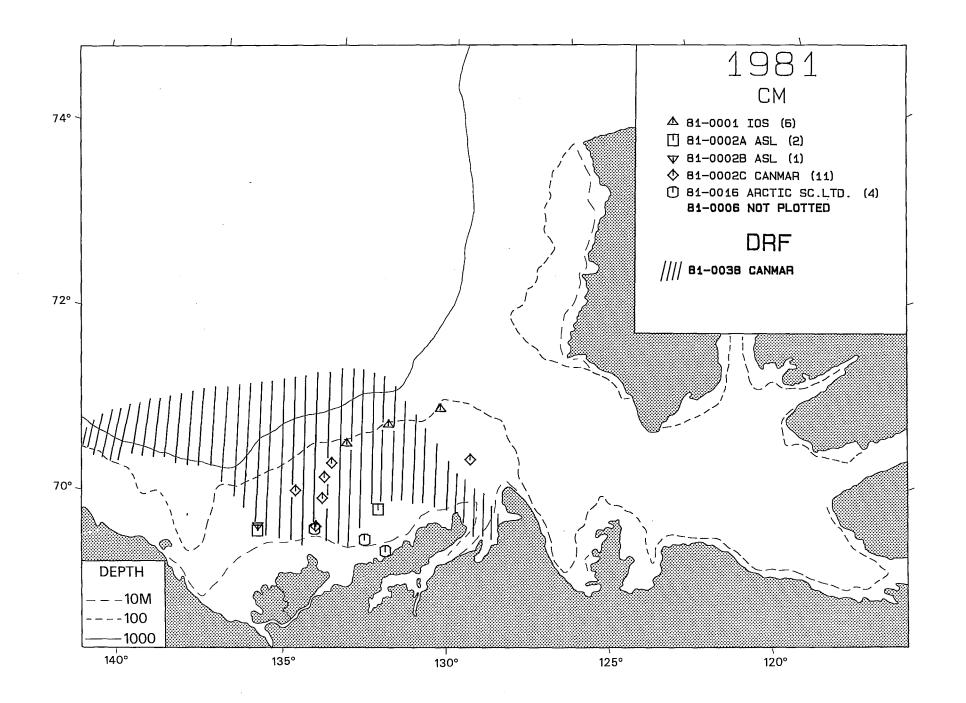


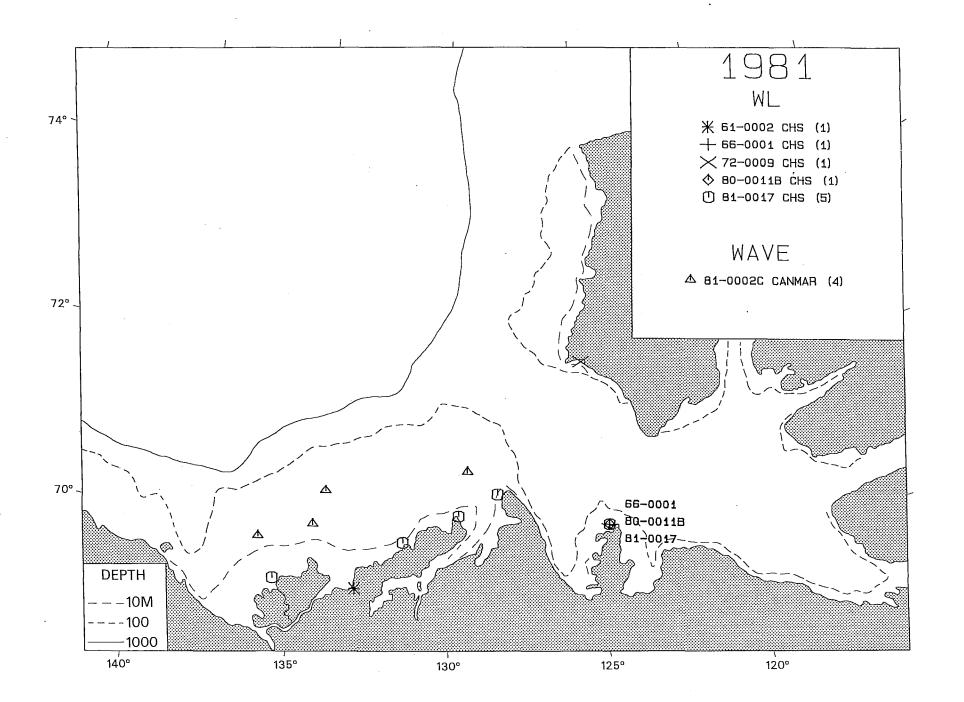


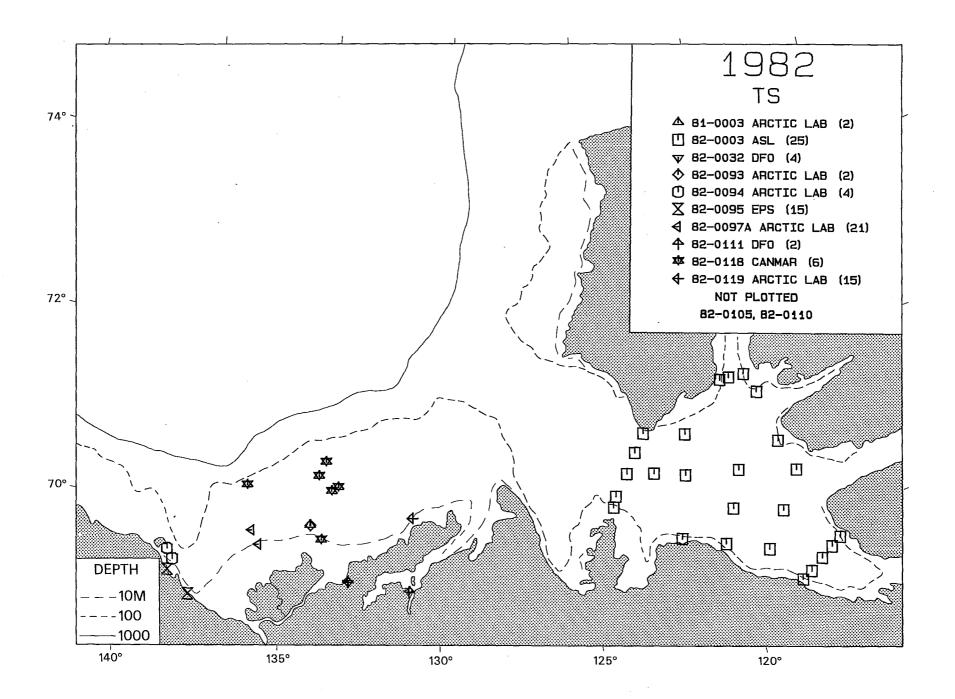


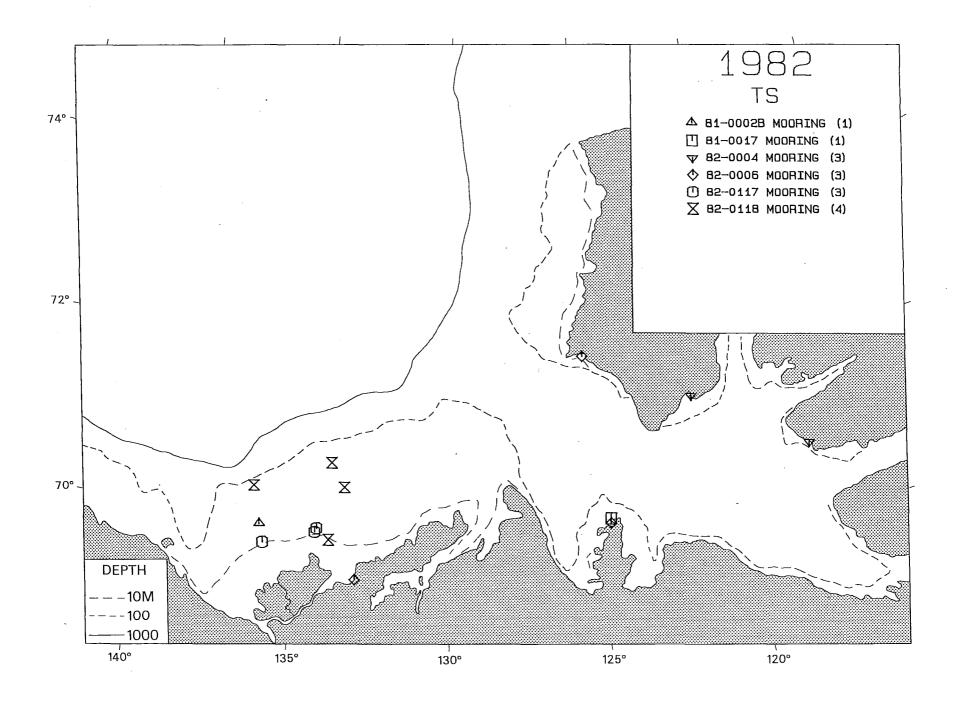


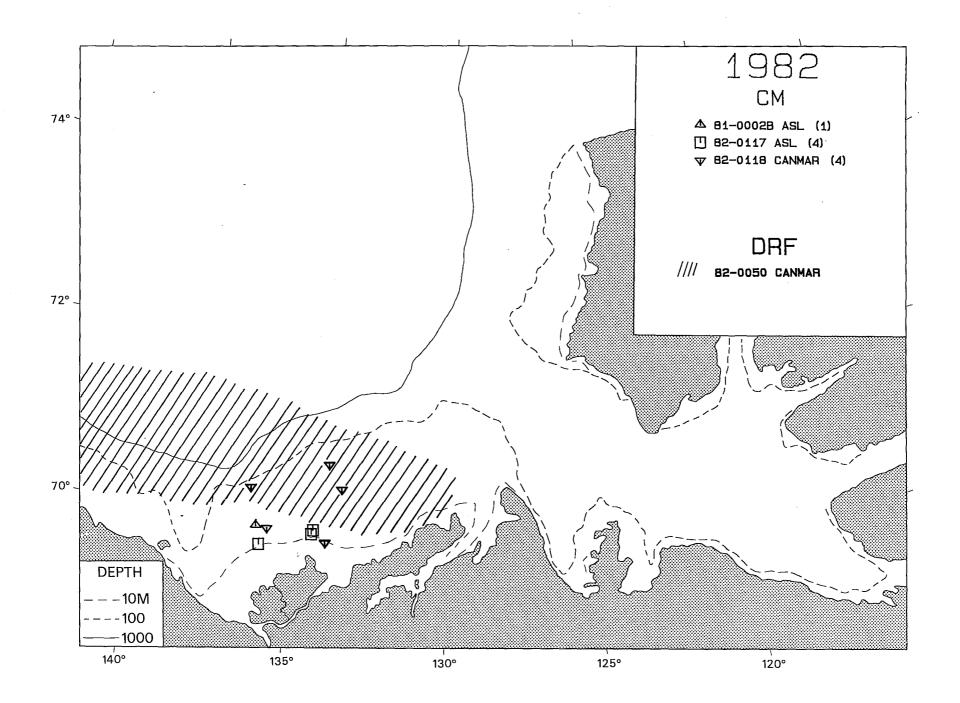


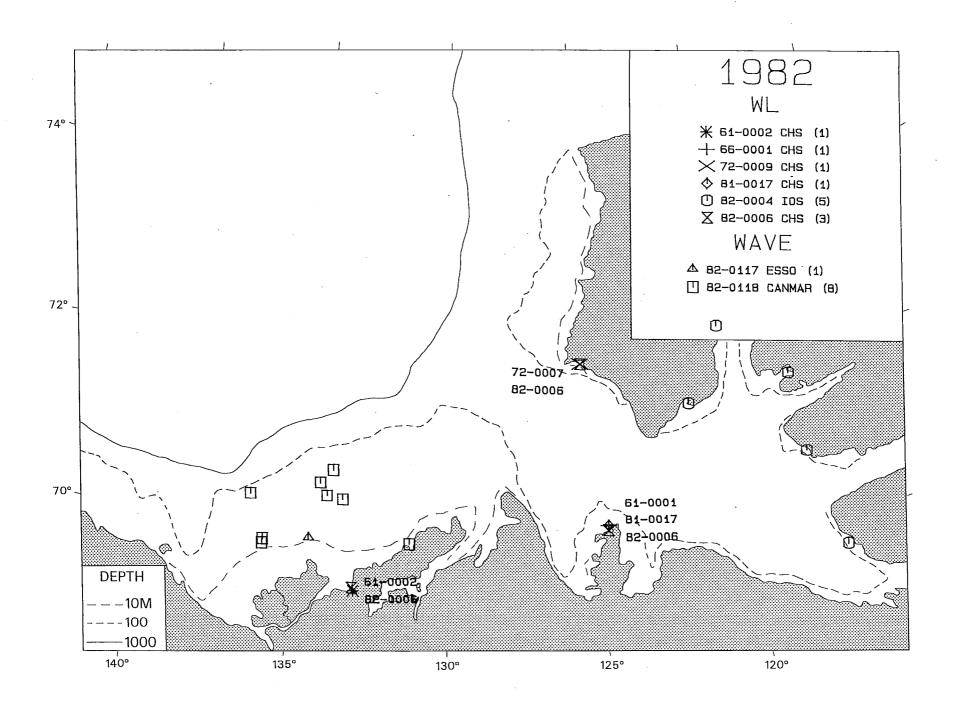


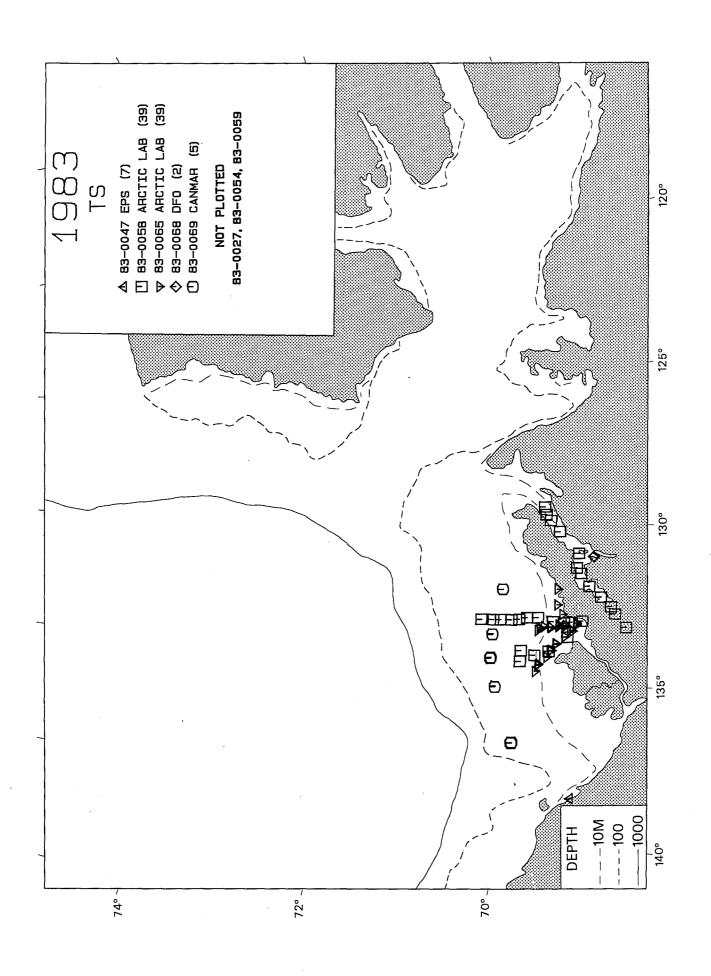


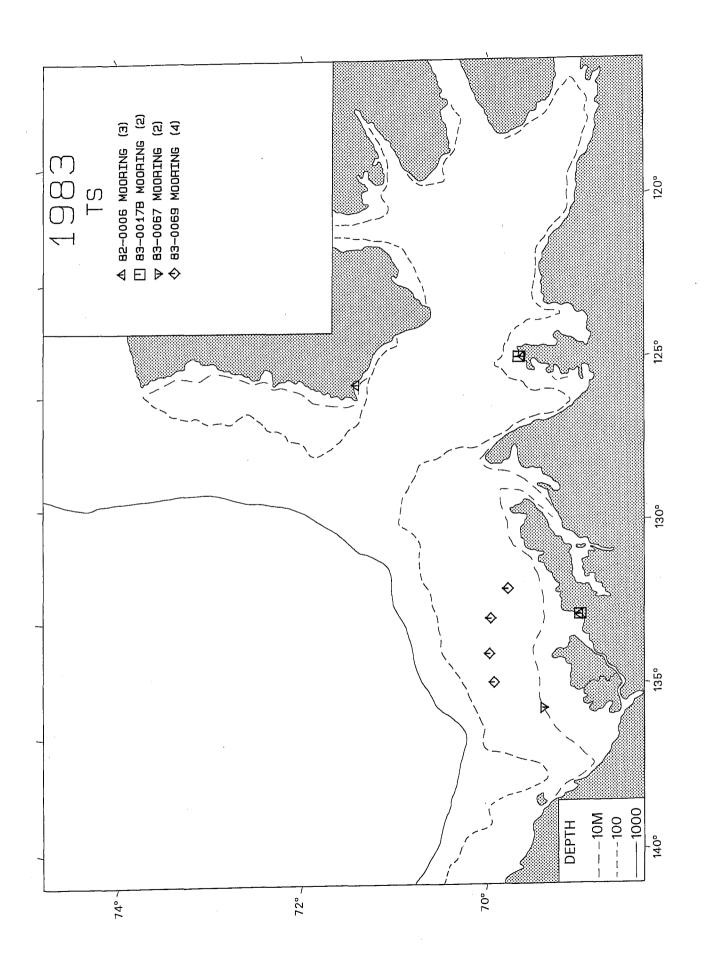


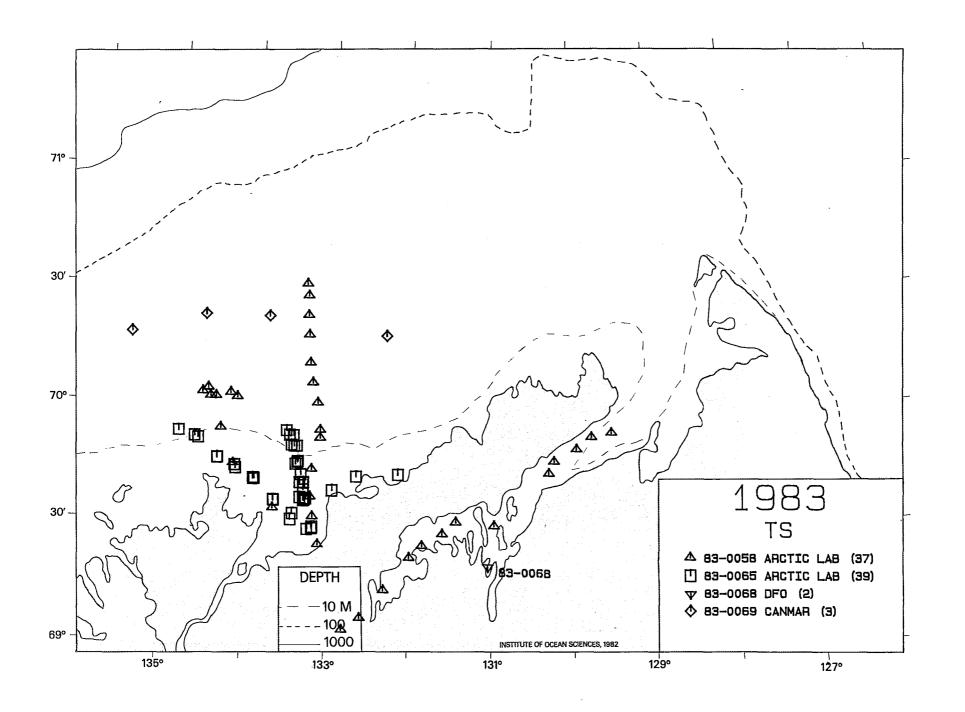


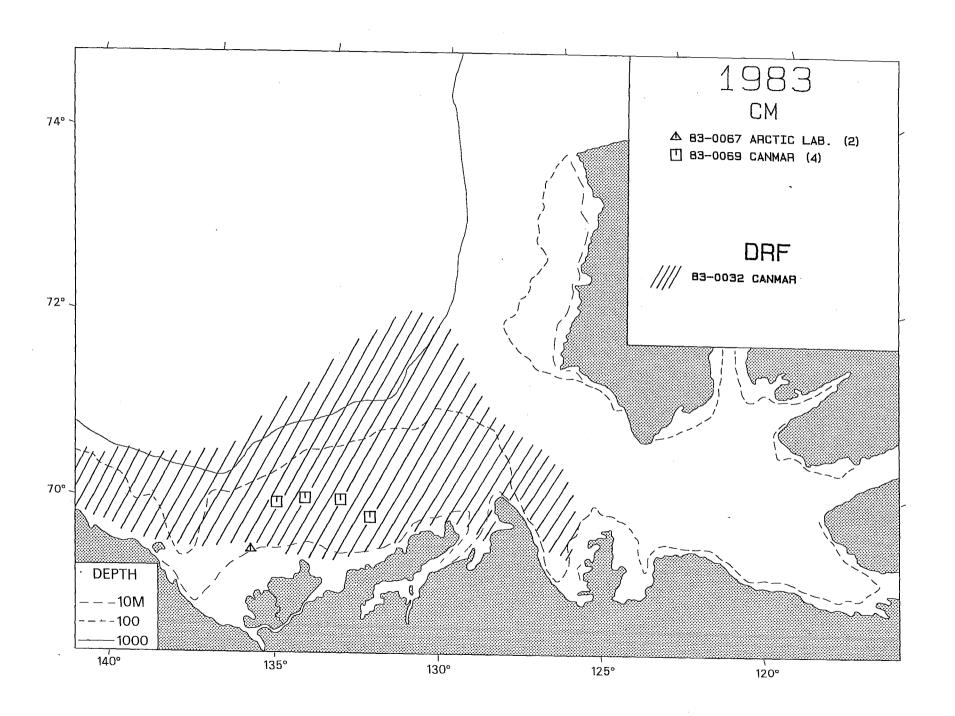


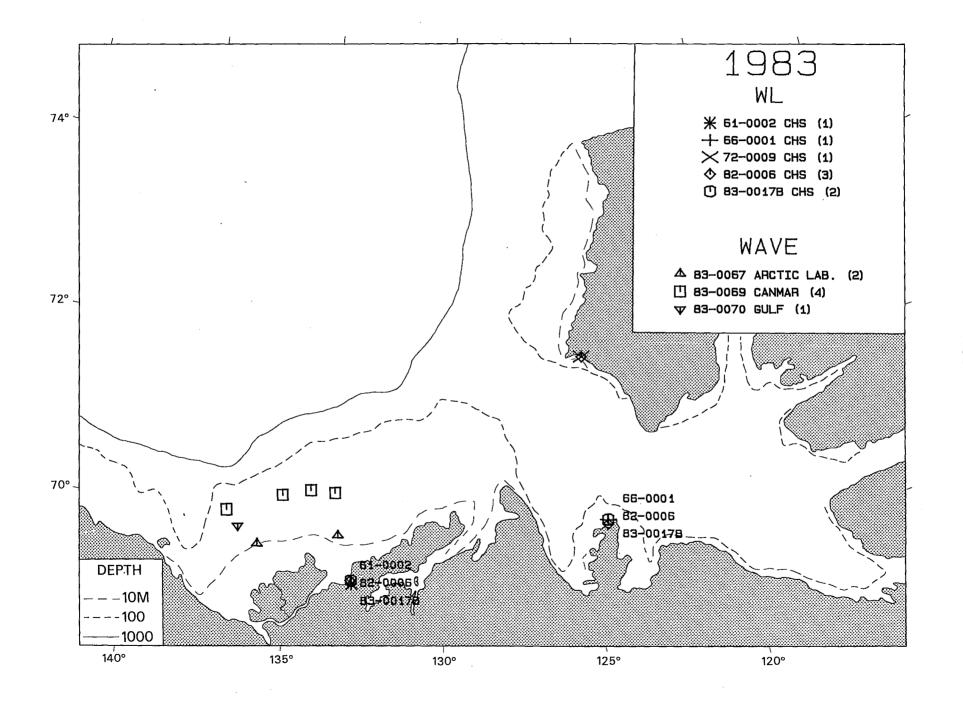


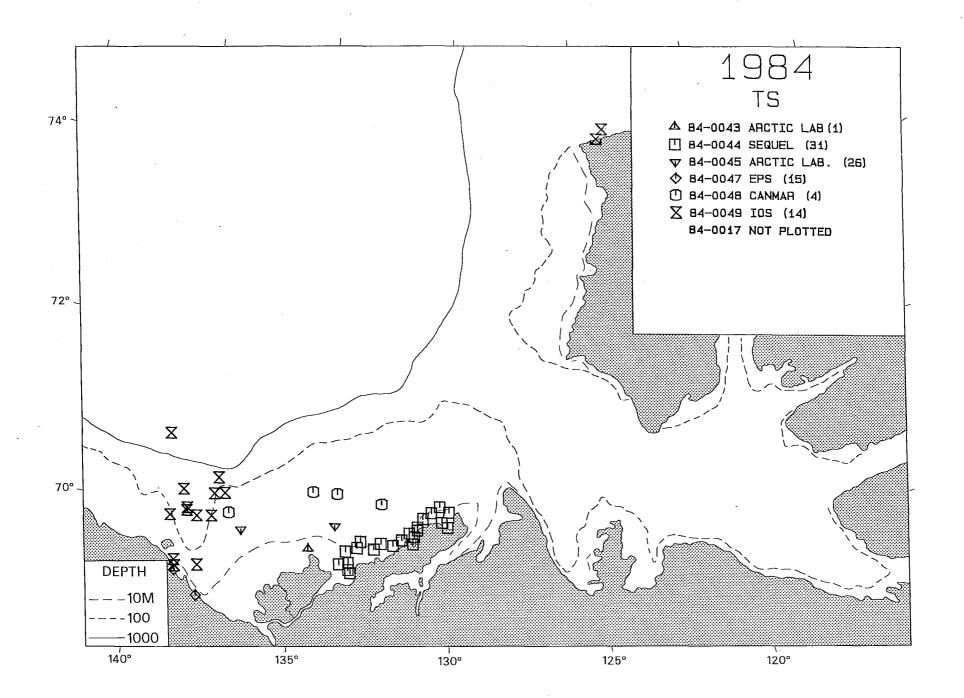


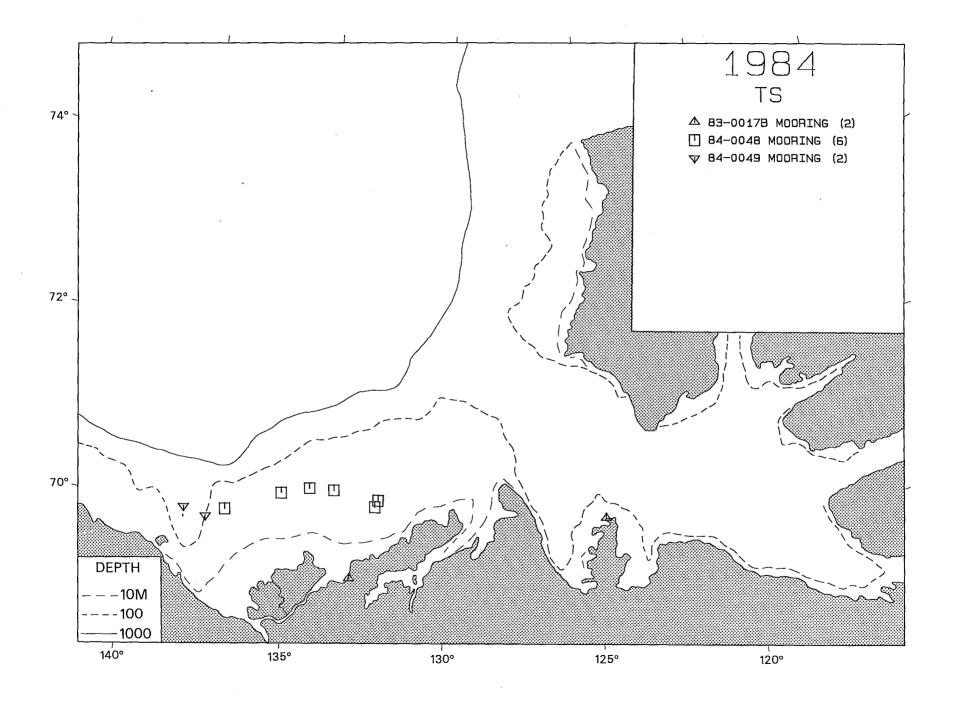


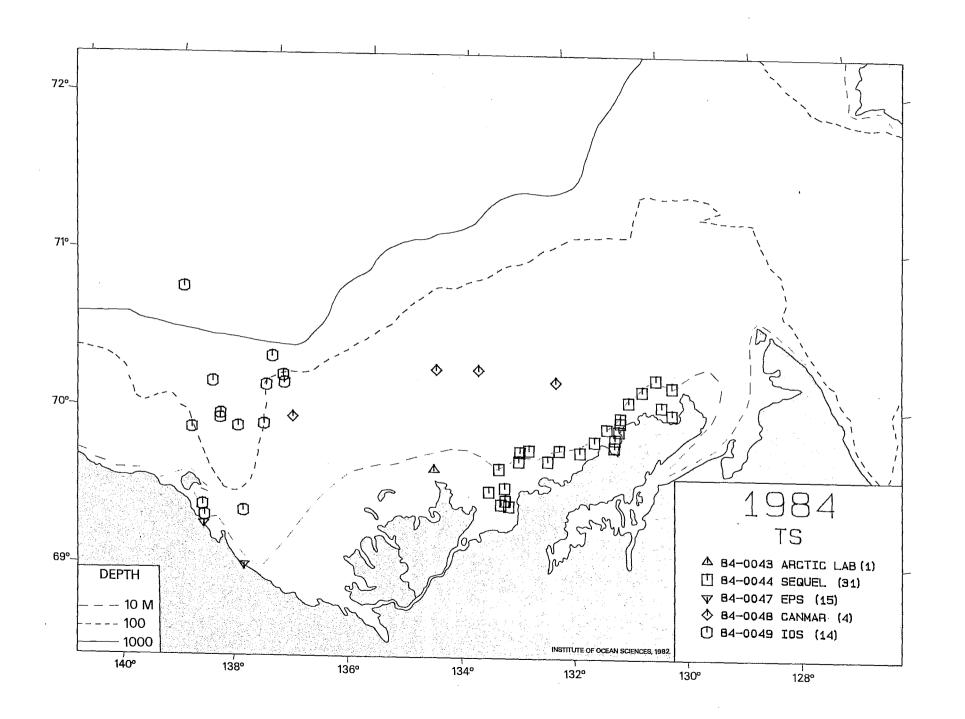


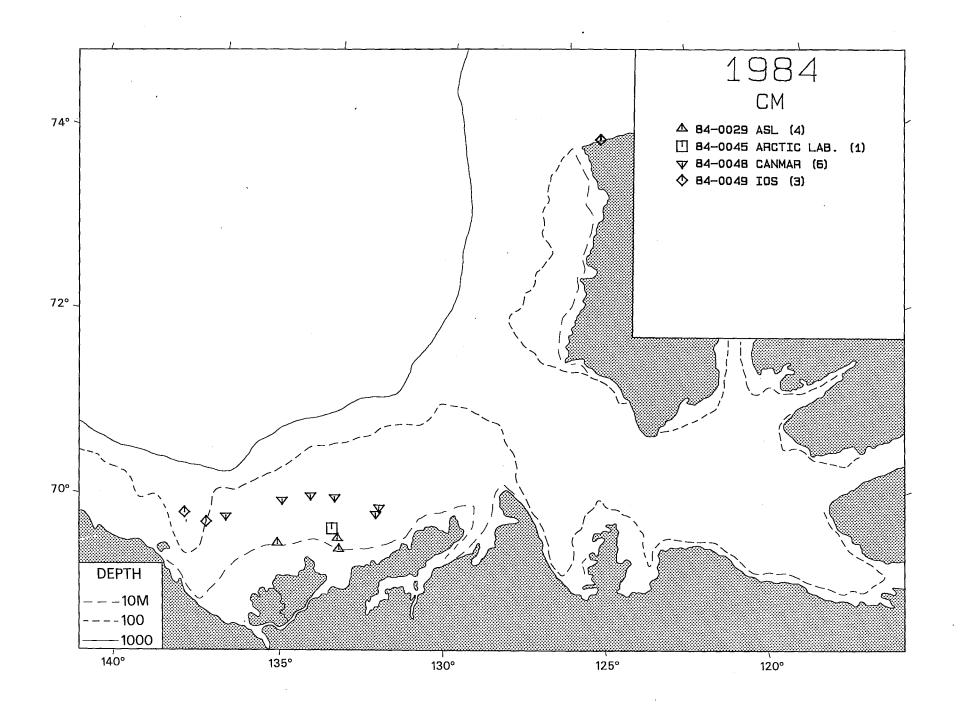


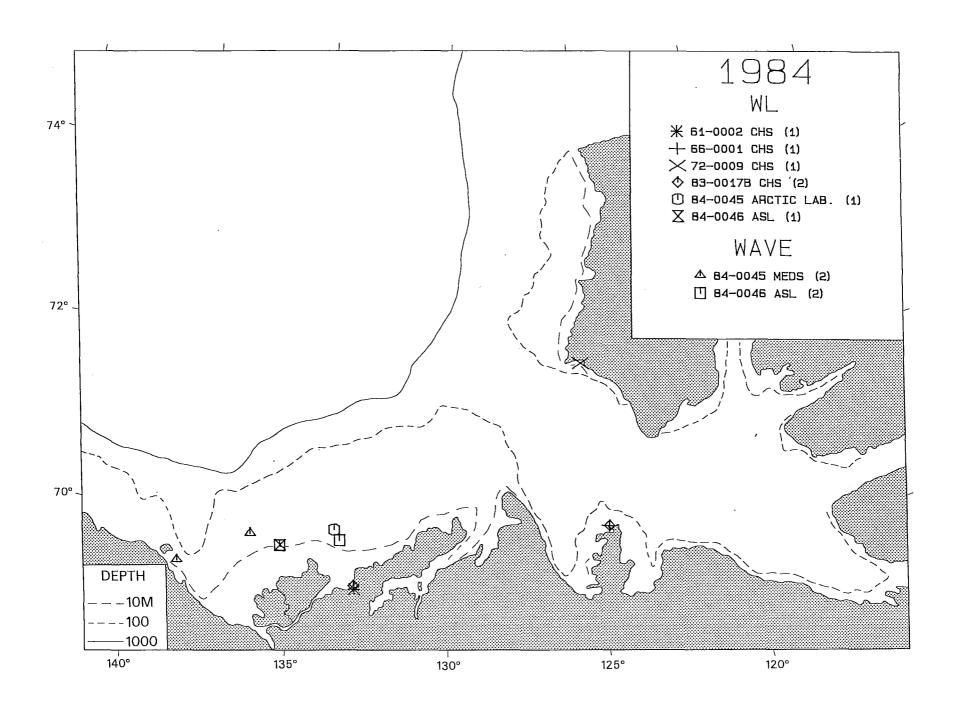


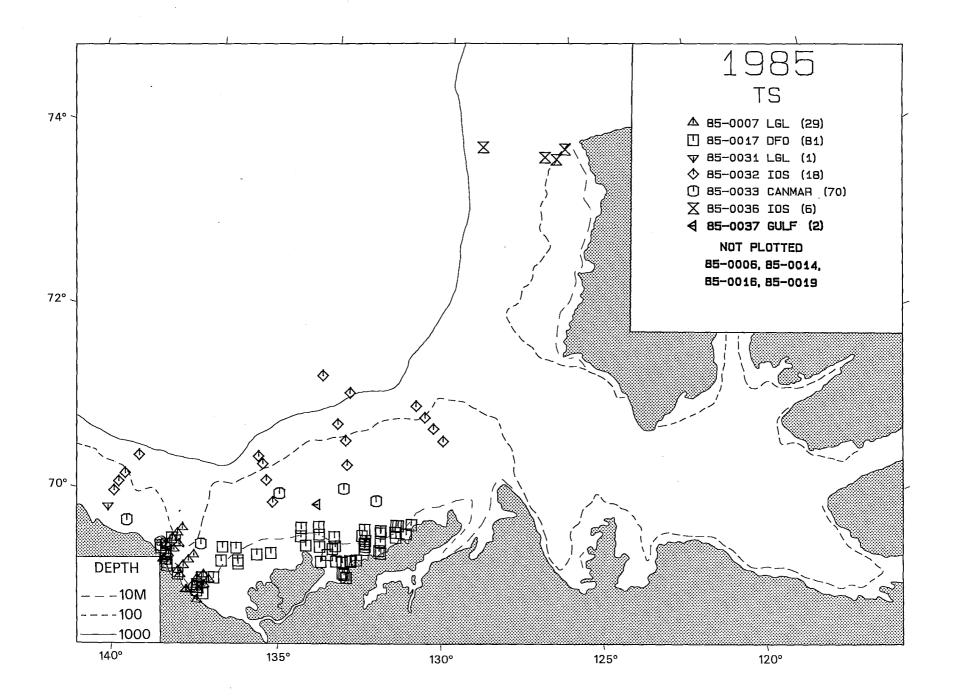


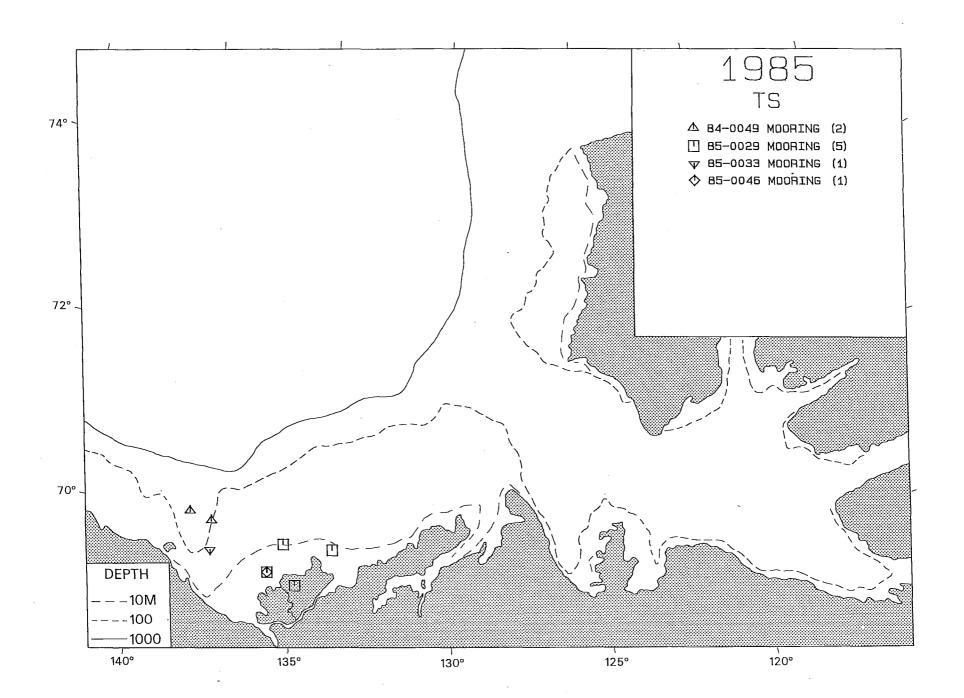


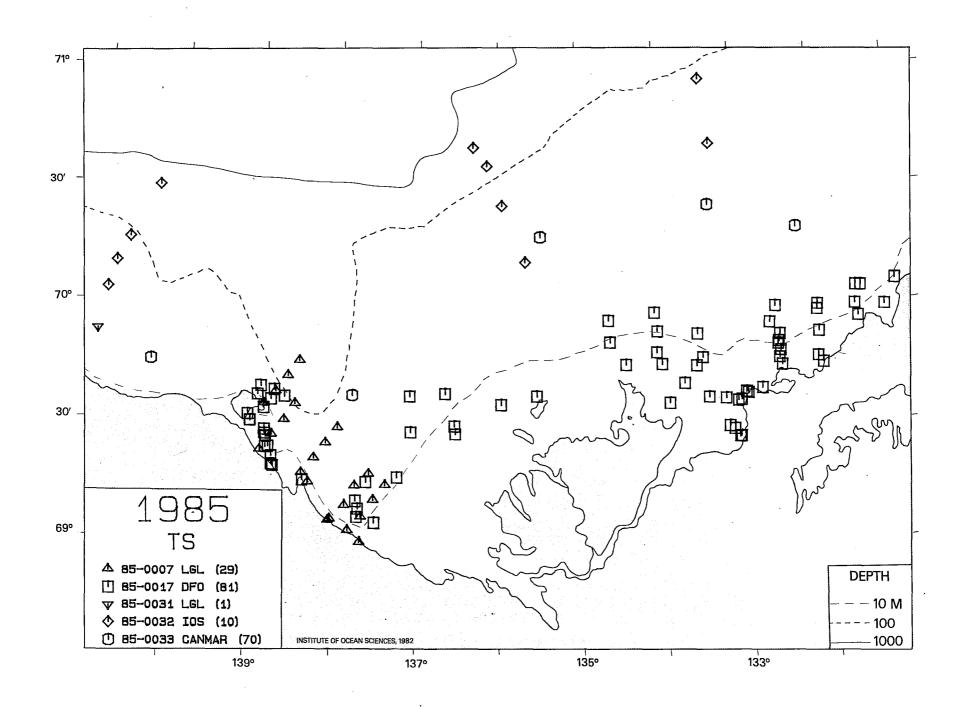


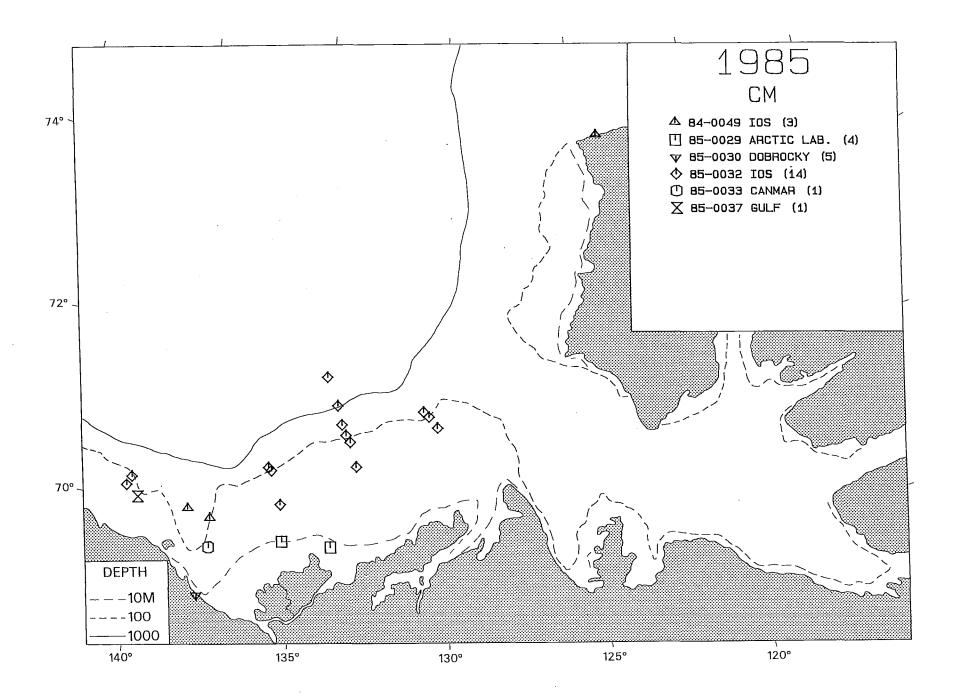


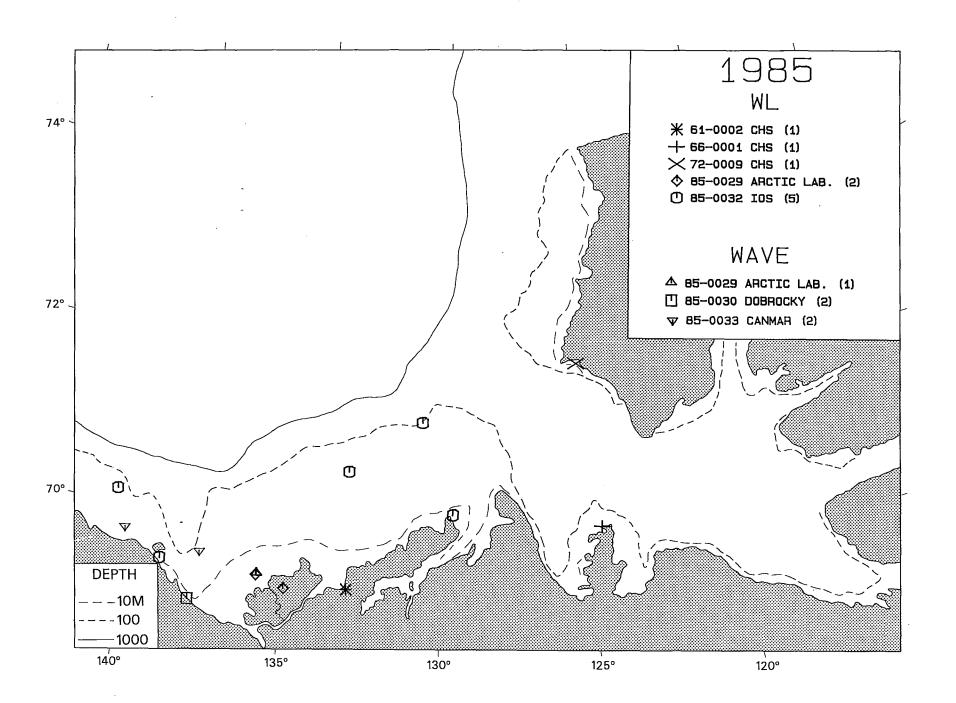


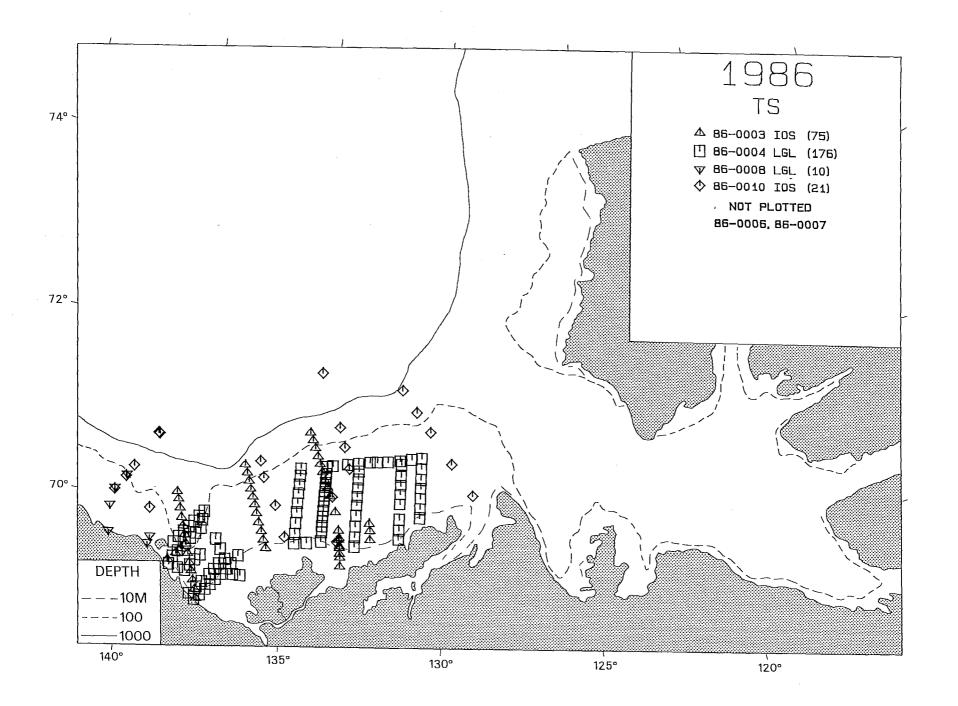


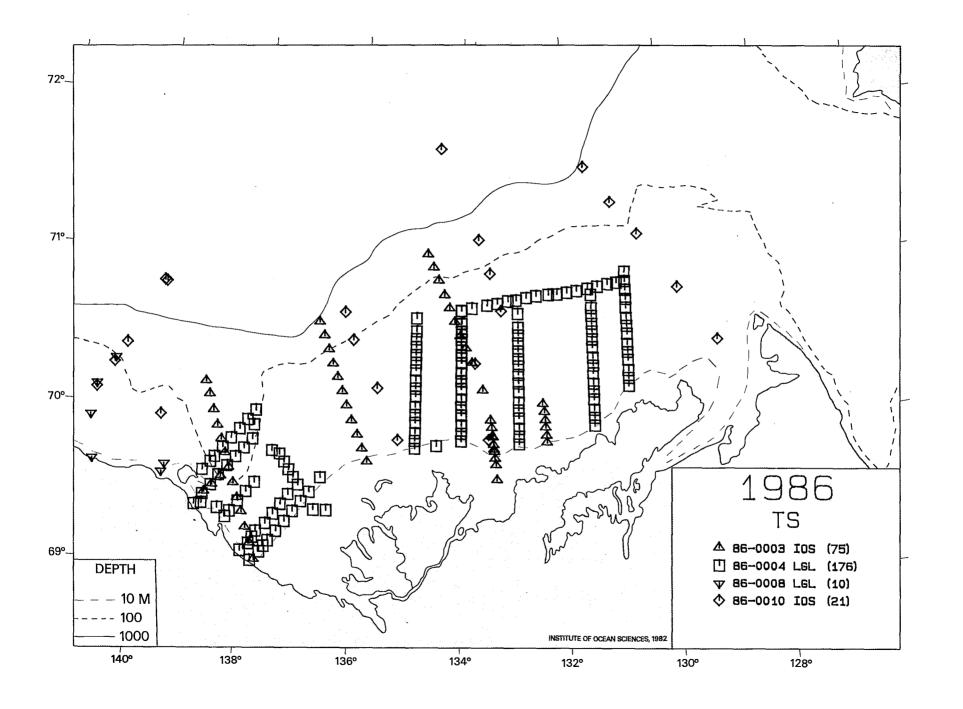


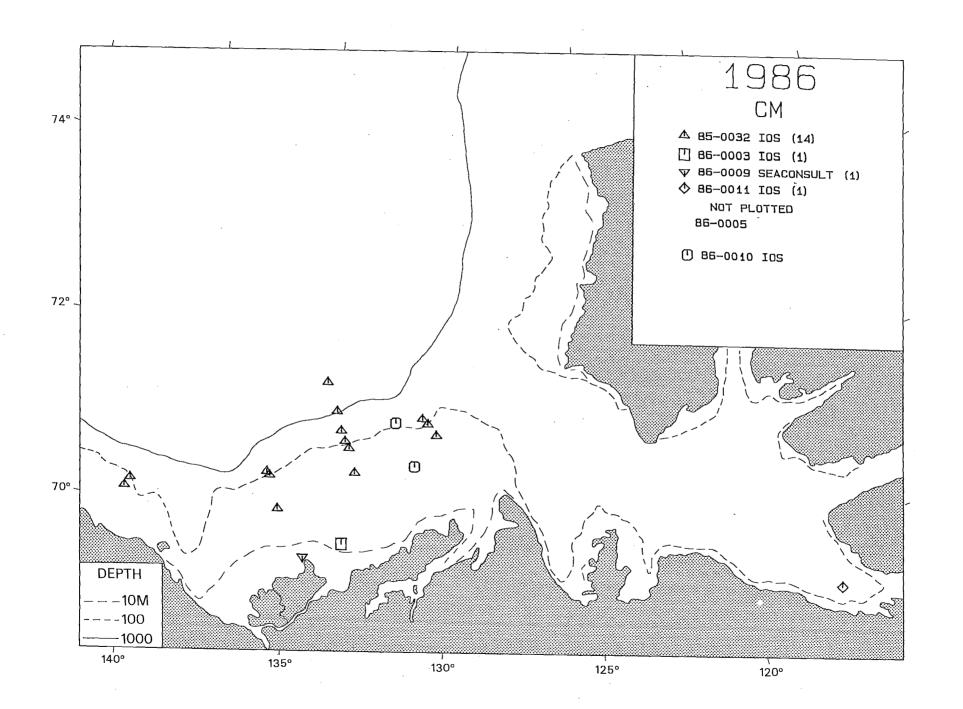


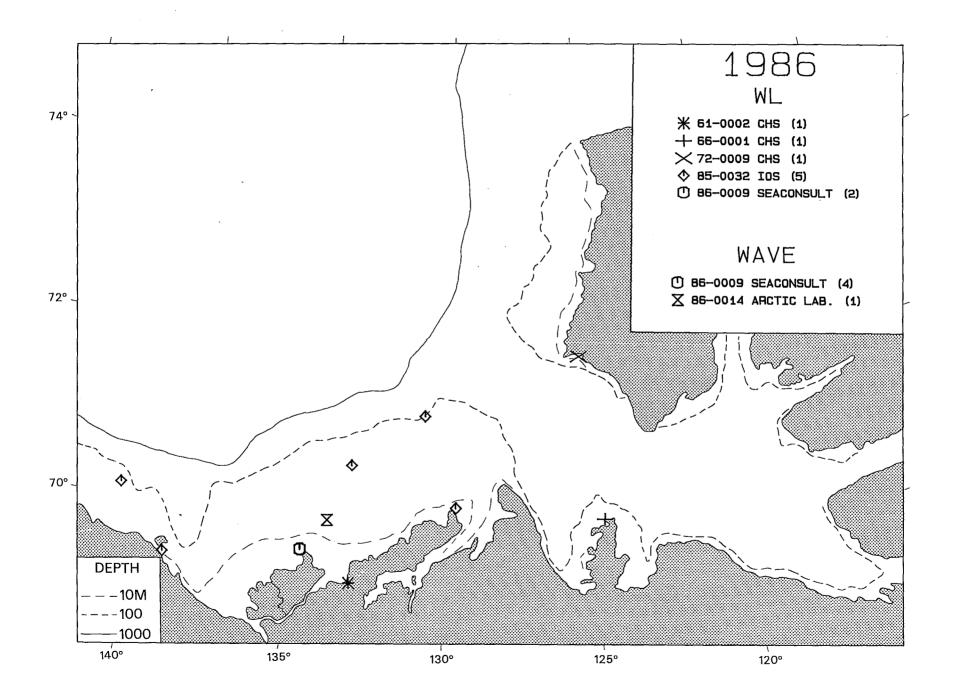












10. INDEXES

This section contains three indexes to the data sets. The first is a geographical index which provides a listing by sub-area. All data sets with any measurements in a particular sub-area (defined in Figure 1) are listed by I.D. number under that sub-area.

The second index classifies the data sets by measurement type, under the following headings:

Temperature . and salinity-bottle

: measurements at discrete points in the water column, using bottle casts

Profiles of temperature and salinity

: measurements made with a profiling instrument such as a CTD

Water levels, bottom pressure

: measurements from shore-based tide stations or bottom-pressure gauges

Eulerian currents

: measurements of current velocity at a fixed point with a current meter

Lagrangian drift paths

: measurements of circulation using free-floating drifters

Waves

: measurements of waves at a fixed point.

The third index lists references for each data set by number. The data-set number appears at the left-hand side of the page, with references listed to the right. The main references are listed, followed by other interpretive or analytical references, indented with respect to the main references. The list of interpretive or analytical references may not be complete.

10	. 1	GEOGRAPH I CAL	INDEX

THETIS/ PHILLIPS BAYS	MACKENZ I E BAY	KUGMALL IT BAY	MCKINLEY BAY	ESKIMO LAKES & LIVERPOOL BAY	AMUNDSEN GULF
35-0001 51-0002 52-0001 60-0003 73-0004 74-0005 74-0006 75-0002 75-0006 75-0007 75-0008 75-0009 85-0032	52-0001 60-0003 64-0003 65-0001 66-0002 66-0006 70-0004 70-0005 70-0071 72-0003 72-0006 72-0007 72-0010 73-0002 73-0002 73-0023 74-0001 74-0002 74-0003 74-0005 74-0019 74-0021 74-0021 74-0020 74-0022 75-0002 75-0008 75-0008 75-0008 75-0008 75-0008 75-0008 75-0009 85-0001 81-0018 82-0095 83-0047 84-0049 85-0007 85-0029 85-0030 86-0003	33-0004 56-0004 59-0004 61-0001 61-0002 62-0002 62-0003 62-0003 64-0003 65-0001 66-0002 70-0003 70-0005 71-0001 72-0010 73-0002 74-0001 74-0003 74-0002 74-0005 74-0006 74-0006 74-0007 75-0001 75-0001 75-0001 75-0002 75-0001 75-0002 75-0012 75-0012 75-0002 76-0003 76-0002 77-0002 77-0002 77-0002 77-0002 77-0002 77-0002 77-0003 81-0004 81-0013 81-0029 83-0065 84-0044 85-0017 86-0003	71-0002 75-0008 79-0010 80-0016	61-0001 62-0001 71-0004 72-0004 72-0010 73-0003 74-0010 75-0008 75-0010 76-0002 77-0005 77-0035 81-0029	35-0001 37-0001 51-0002 51-0004 52-0001 52-0004 53-0001 54-0002 54-0003 55-0002 56-0001 57-0001 57-0002 59-0002 62-0001 63-0001 64-0001 70-0002 70-0004 72-0010 73-0004 74-0027A 75-0026 75-0028 76-0002 77-0003 77-0005 77-0005 78-0114 79-0001 79-0005 80-0001 82-0003

BANKS ISLAND SHELF	CONTINENTAL CANADA SLOPE BASIN		WEST OF HERSCHEL ISLAND	TUKTOYAKTUK SHELF	
14-0002 50-0001 51-0002 52-0002 54-0003 72-0009 75-0001 81-0001 85-0036	50-0001 51-0002 52-0001 52-0002 54-0003 55-0001 55-0016 57-0002 58-0001 59-0001 59-0002 60-0001 60-0002 69-0001 70-0002 72-0001 74-0008 75-0012 79-0001 75-0012 79-0001 81-0001 81-0001 82-0118 85-0032 85-0036 86-0010	50-0001 51-0001 54-0002 55-0016 56-0012 59-0001 59-0001 70-0001 70-0002 70-0003 71-0003 72-0001 75-0005 79-0001 79-0002 80-0001 81-0006	35-0001 52-0001 54-0002 55-0001 56-0001 59-0002 60-0001 70-0002 72-0011 72-0118 74-0002 74-0007 75-0007 75-0009 75-0005 77-0004 79-0003 79-0004 85-0031 85-0032 85-0033 86-0008	35-0001 50-0001 51-0002 52-0002 54-0003 55-0016 56-0001 57-0002 58-0001 59-0002 60-0001 60-0002 60-0003 64-0002 70-0003 70-0004 71-0001 71-0002 72-0010 73-0001 73-0001 73-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 74-0001 74-0002 75-0002 75-0003 75-0006 75-0009 75-0146 76-0001 76-0003 76-0004 76-0020 76-0123	77-0004 77-0009B 77-0123 78-0001 78-0002 78-0018 78-0113 79-0001 79-0002 79-0003 79-0007 79-0009 79-0026 80-0001 80-0002 80-0004 80-0016 80-0025 80-0028 81-0015 81-0016 81-0015 81-0016 81-0018 81-0017 82-0117 82-0117 82-0118 83-0058 83-0065 83-0067 83-0069 83-0067 83-0069 83-0070 84-0044 84-0045 84-0046 84-0048 84-0048 84-0049 85-0033 85-0003 86-0004 86-0010 86-0014

10.2 MEASUREMENT TYPE

PROFILES OF TEMPER- ATURE & SALINITY	WATER LEVELS, BOTTOM PRESSURE	EULERIAN CURRENTS	LAGRANGIAN DRIFT PATHS	TEMPERATURE AND SALINITY —BOTTLE		WAVES
72-0007 73-0002 74-0001 74-0003 74-0011 75-0002 75-0004 75-0005 76-0001 76-0003 76-0004 77-0009 78-0001 78-0002 78-0018 79-0001 79-0003 79-0005 79-0007 79-0010 80-0002 80-0004 81-0001	14-0002 33-0004 51-0004 52-0004 54-0001 55-0002 56-0004 59-0004 61-0002 63-0003 64-0003 65-0001 66-0002 70-0004 71-0002 72-0009 72-0010 73-0004 73-0019 74-0005 75-0011 75-0002 75-0002 77-0005 75-0011 75-0042 76-0002 77-0005 78-0114 79-0016 80-0011 81-0017 82-0004 82-0006 83-0017 84-0045 84-0046 85-0029 85-0032 86-0009	70-0001 70-0003 70-0005 71-0003 73-0001 74-0001 74-0002 74-0003 74-0005 74-0019 75-0001 75-0001 76-0001 76-0003 77-0004 77-0009 78-0001 79-0003 79-0004 79-0026 80-0016 81-0001 81-0002 80-0016 81-0016 82-0117 82-0118 83-0067 83-0069 84-0029 84-0045 84-0049 85-0030 85-0032 85-0033 85-0037 86-0009	70-0003 74-0004 75-0001 75-0002 79-0004 80-0001	35-0001 37-0001 50-0001 51-0002 52-0001 52-0002 53-0001 54-0003 55-0001 55-0016 56-0001 57-0002 58-0001 59-0002 60-0001 60-0002 60-0001 62-0001 62-0001 63-0002 63-0001 63-0002 63-0003	64-0001 64-0002 64-0004 69-0001 70-0002 70-0003 71-0001 71-0004 72-0001 72-0004 73-0001 73-0003 74-0002 74-0008 74-0010 74-0020 75-0002 75-0006 75-0009 75-0011 75-0011 75-0012 75-0003	70-0071 74-0126 75-0146 76-0001 76-0123 77-0004 77-0009 77-0123 78-0001 78-0113 79-0003 79-0120 80-0002 81-0002 82-0117 82-0118 83-0067 83-0069 83-0070 84-0045 84-0046 85-0029 85-0030 85-0033 86-0009 86-0014
		86-0009 86-0011				

- 14-0001 Dawson, W.B., 1920. Tidal investigations and results. In: Part C, Vol. X of Report of the Canadian Arctic Expedition, 1913-1918. Thomas Mulvey, printer to the King's Most Excellent Majesty, Ottawa.
- 14-0002 Dawson, W.B., 1920. Tidal investigations and results. In: Part C, Vol. X of Report of the Canadian Arctic Expedition, 1913-1918. Thomas Mulvey, printer to the King's Most Excellent Majesty, Ottawa.
- 16-0002 Dawson, W.B., 1920. Tidal investigations and results. In: Part C, Vol. X of Report of the Canadian Arctic Expedition, 1913-1918. Thomas Mulvey, printer to the King's Most Excellent Majesty, Ottawa.
- 35-0001 Tully, J.P., 1952. Oceanographic data of the western Canadian Arctic Region, 1935-37. J. Fish. Res. Bd. Canada 8(5). pp 378-382.
- 37-0001 Tully, J.P., 1952. Oceanographic data of the western Canadian Arctic Region, 1935-37. J. Fish. Res. Bd. Canada 8(5). pp 378-382.
- 40-0010 Larsen, M.A., 1945. Reports and other papers relating to the two voyages of the R.C.M. Police Schooner, St. Roch, through the Northwest Passage. Ottawa. 102 p.
- 50-0001 U.S. Navy Hydrographic Office, 1954. Oceanographic observations, U.S.S. Burton Island, 1950-1953. H.O. Pub. 618-C, U.S. Navy Hydrographic Office, Washington, D.C. (unpub. manuscript).
- 51-0001 U.S. Navy Hydrographic Office, 1954. Oceanographic observations, U.S.S. Burton Island, 1950-1953. H.O. Pub. 618-C, U.S. Navy Hydrographic Office, Washington, D.C. (unpub. manuscript).
- 51-0002 Cameron, W.M., 1952. Hydrography and oceanography of the southeast Beaufort Sea and Amundsen Gulf, Part I: Hydrographic and oceanographic observations in the Beaufort Sea, 1951. University of British Columbia, Institute of Oceanography. (unpub. manuscript).
 - Hattersley-Smith, G.F., 1952. Beaufort Sea expedition, 1951. Arctic Circular $\underline{V(2)}$. pp. 12-13.
- 52-0001 Cameron, W.M., 1953. Hydrography and oceanography of the southeast Beaufort Sea and Amundsen Gulf, including Part II (appendices): hydrographic and oceanographic observations in the Beaufort Sea, 1952. University of British Columbia, institute of Oceanography (unpublished manuscript). 82 p.
- 52-0002 U.S. Navy Hydrographic Office, 1954. Oceanographic observations, U.S.S. Burton Island, 1950-1953. H.O. Pub. 618-C, U.S. Navy Hydrographic Office, Washington, D.C. (unpub. manuscript).
- 53-0001 U.S. Navy Hydrographic Office, 1954. Oceanographic observations, U.S.S. Burton Island, 1950-1953. H.O. Pub. 618-C, U.S. Navy Hydrographic Office, Washington, D.C. (unpub. manuscript).
- 54-0001 Bailey, W.B., 1955. Oceanographic reconnaissance in the Canadian

- Archipelago (1954). Fish. Res. Bd. Canada MSS Rept. Biol. Sta., No. 603. 145 p.
 - Bailey, W.B., 1957. Oceanographic features of the Canadian Archipelago (1954). Fish. Res. Bd. Canada (5)(14). pp. 731-769.
- 54-0002 U.S. Navy Hydrographic Office, 1956. Oceanographic survey results, Beaufort Sea area, summer 1954. U.S.S. Burton Island (AGB-1) and USCGC Northwind (WAGB-282). H.O. 15791, January 1956. U.S. Navy Hydrographic Office, Washington, D.C. (unpub. manuscript).
- 54-0003 U.S. Navy Hydrographic Office, 1956. Oceanographic survey results, Beaufort Sea area, summer 1954. U.S.S. Burton Island (AGB-1) and USCGC Northwind (WAGB-282). H.O. 15791, January 1956. U.S. Navy Hydrographic Office, Washington, D.C. (unpub. manuscript).
- 56-0001 U.S. Navy Hydrographic Office, 1960. Oceanographic observations, arctic waters. Task Force Five and Six, summer-autumn, 1956. USS Requisite (AGS-18), USS Eldorado (AGC-11), USS Atka (AGB-3), USCGC Eastwind (WAGB-279). Oceanographic Branch, Marine Surveys Division, U.S. Navy Hydrographic Office, Washington, D.C., October, 1960. (unpub. manuscript).
- 56-0012 Timofeyev, V.T., 1960. Vodnye massy arkticheskogo basseine. Leningrad: Gidromet. Izdat. (University of Washington Library has a translated version). 190 p.
- 57-0001 U.S. Navy Hydrographic Office, 1959. Oceanographic observations, arctic waters. Task Force Five and Six, summer-autumn 1957 summer-autumn 1957. USCGC Eastwind (WAGB-279), USCGC Westwind (WAGB-281), USCGC Spar (WAGL-403), USS Atka (AGB-3), USS Eldorado (AGC-11). Oceanographic Survey Branch, Division of Oceanography, U.S. Navy Hydrographic Office, Washington, D.C., November, 1959. (unpub. manuscript).
- 57-0002 U.S. Navy Hydrographic Office, 1959. Oceanographic observations, arctic waters. Task Force Five and Six, summer-autumn 1957 summer-autumn 1957. USCGC Eastwind (WAGB-279), USCGC Westwind (WAGB-281), USCGC Spar (WAGL-403), USS Atka (AGB-3), USS Eldorado (AGC-11). Oceanographic Survey Branch, Division of Oceanography, U.S. Navy Hydrographic Office, Washington, D.C., November, 1959. (unpub. manuscript).
- 58-0001 U.S. Naval Oceanographic Office, 1963a. Oceanographic data report, Arctic, 1958. U.S. Naval Oceanographic Office, Marine Sciences Dept., Washington, D.C. (unpub. manuscript). Informal Manuscript Rep. No. 0-26-63.
- 59-0001 Kusunoki, K., J. Muguruma, and K. Higuchi, 1962. Oceanographic observations at Fletcher's Ice Island (T-3) in the Arctic Ocean in 1959-60. Arctic Institute of North America. Research paper no. 22. pp 1-110.

Kusunoki, K., 1962. Hydrography of the Arctic Ocean with special reference to the Beaufort Sea. Contributions from the Institute of Low Temperature Science, series A, no. 17. Inst. of Low Temp. Sc., Hokkaldo University, Sapporo, Japan. pp. 1-74.

- 59-0002 U.S. Naval Oceanographic Office, 1963b. Oceanographic data report, Arctic, 1959. U.S. Naval Oceanographic Office, Marine Sciences Dept., Washington, D.C. (unpub. manuscript). Informal Manuscript Rep. No. 0-43-63.
- 59-0014 Beal, M.A., 1968a. The seasonal variation in sea level at Barrow, Alaska. In: Arctic drifting stations. Coordinated by J.E. Sater. Sponsored by Arctic institute of North America. pp. 327-341.

Beal, M.A., 1968b. The use of light aircraft for oceanographic observations in the Arctic ice pack. In: Arctic drifting stations. Coordinated by J.E. Sater. Arctic institute of North America. pp. 37-48.

- 60-0001 U.S. Naval Oceanographic Office, 1964. Oceanographic data report, Arctic, 1960. U.S. Naval Oceanographic Office, Marine Sciences Dept., Washington, D.C. (unpub. manuscript). Informal Manuscript Rep. No. 0-62-63.
- 60-0002 Paquette, R.G. and R.H. Bourke, 1974. Observations on the coastal current of Arctic Alaska. J. Mar. Res. 32(2). pp. 195-207.
- 60-0003 Grainger, E.H. and J.E. Lovrity, 1975. Physical and chemical oceanographic data from the Beaufort Sea, 1960 to 1975. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 590.

Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414: x + 87 p.

Grainger, E.H., 1975. Biological productivity of the southern Beaufort Sea: the physical-chemical environment and the plankton. Beaufort Sea Project Tech. Rept. 12a, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

61-0001 Grainger, E.H., J.E. Lovrity, and M.S. Evans, 1977. Biological observations in the Eskimo Lakes, Arctic Canada. Physical, nutrient and primary production data, 1961-1976. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 685.

Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87 p.

- 61-0002 Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, Institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).
- 62-0001 Canadian Oceanographic Data Centre, 1963. Cape Parry Area, N.W.T.
 No. 5, 1963 data record series. Canada, Canadian Oceanographic Data
 Centre, Dept. Energy, Mines and Res., Ottawa. 44 p.

Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414: x + 87 p.

Grainger, E.H., J.E. Lovrity, and M.S. Evans, 1977. Biological observations in the Eskimo Lakes, Arctic Canada. Physical, nutrient and primary production data, 1961-1976. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 685.

62-0002 Kelly, W.J.B., 1967. Tuktoyaktuk Harbour - a data report. Canada Dept. Energy, Mines and Res. Mar. Sc. Br. MS Rep. Ser. No. 7. (unpub. manuscript).

Barber, F.G., 1968. On the water of Tuktoyaktuk Harbour. Canada Dept. of Energy, Mines and Res., Mar. Sc. Br. MS Rpt. Ser No. 9, Ottawa. (unpublished manuscript).

Ince, S., 1962. Winter regime of a tidal inlet in the Arctic and the use of air for the protection of wharf structures. International Conference on Coastal Engineering, Eighth, Mexico. pp. 521-532.

62-0003 Kelly, W.J.B., 1967. Tuktoyaktuk Harbour - a data report. Canada Dept. Energy, Mines and Res. Mar. Sc. Br. MS Rep. Ser. No. 7. (unpub. manuscript).

Barber, F.G., 1968. On the water of Tuktoyaktuk Harbour. Canada Dept. of Energy, Mines and Res., Mar. Sc. Br. MS Rpt. Ser No. 9, Ottawa. (unpublished manuscript).

ince, S., 1962. Winter regime of a tidal inlet in the Arctic and the use of air for the protection of wharf structures. International Conference on Coastal Engineering, Eighth, Mexico. pp. 521-532.

62-0004 Kelly, W.J.B., 1967. Tuktoyaktuk Harbour - a data report. Canada Dept. Energy, Mines and Res. Mar. Sc. Br. MS Rep. Ser. No. 7. (unpub. manuscript).

Barber, F.G., 1968. On the water of Tuktoyaktuk Harbour. Canada Dept. of Energy, Mines and Res., Mar. Sc. Br. MS Rpt. Ser No. 9, Ottawa. (unpublished manuscript).

Ince, S., 1962. Winter regime of a tidal inlet in the Arctic and the use of air for the protection of wharf structures. International Conference on Coastal Engineering, Eighth, Mexico. pp. 521-532.

63-0001 Canadian Oceanographic Data Centre, 1964. Data record - Franklin and Darnley Bays, N.W.T. No. 2, 1964 data record series. Canada, Canadian Oceanographic Data Centre, Dept. Energy, Mines and Res., Ottawa.

Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87 p.

63-0002 Kelly, W.J.B., 1967. Tuktoyaktuk Harbour - a data report. Canada Dept. Energy, Mines and Res. Mar. Sc. Br. MS Rep. Ser. No. 7. (unpub. manuscript).

Barber, F.G., 1968. On the water of Tuktoyaktuk Harbour. Canada Dept. of Energy, Mines and Res., Mar. Sc. Br. MS Rpt. Ser No. 9, Ottawa. (unpublished manuscript).

Ince, S., 1962. Winter regime of a tidal injet in the Arctic and the use of air for the protection of wharf structures. International Conference on Coastal Engineering, Eighth, Mexico. pp. 521-532.

63-0003 Kelly, W.J.B., 1967. Tuktoyaktuk Harbour - a data report. Canada Dept. Energy, Mines and Res. Mar. Sc. Br. MS Rep. Ser. No. 7. (unpub. manuscript).

Barber, F.G., 1968. On the water of Tuktoyaktuk Harbour. Canada Dept. of Energy, Mines and Res., Mar. Sc. Br. MS Rpt. Ser No. 9, Ottawa . (unpublished manuscript).

Ince, S., 1962. Winter regime of a tidal inlet in the Arctic and the use of air for the protection of wharf structures. International Conference on Coastal Engineering, Eighth, Mexico. pp. 521-532.

- 64-0001 Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87 p.
- 66-0001 Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, Institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).
- 66-0011 Hill, R.M., 1967. Observations on beluga whales trapped by ice in Eskimo Lakes, winter 1966/67. Unpub. rep. by inuvik Research Laboratory, Dep. of Indian Affairs and Northern Development. 13 p.

- 69-0001 Burrell, D.C., P.J. Kinney, R.S. Hadley, and M.E. Arhelgar, 1970. Beaufort Sea environmental data, 1968-1969. Institute of Marine Science, University of Alaska. R70-20. 274 p.
 - Kinney, P.J., D.C. Burrell, M.E. Arhelger, T.C. Loder, and D.W. Hood, 1970b. Chukchi Sea data report: USCGC Northwind, July-August 1968: USCGC Staten Island, July-August 1969. University of Alaska, Fairbanks. R-70-23. 305 p.
- 69-0017 Sergeant, D.E. and W. Hoek, 1974. Seasonal distribution of bowhead and white whales in the eastern Beaufort Sea. In: J.C. Reed and J.E. Sater (Ed.). The coast and shelf of the Beaufort Sea. Arctic Institute of North America, Arlington, Virginia. pp. 705-719.
- 70-0001 Coachman, L.K. and J.L. Newton, 1972. Water and ice motion in the Beaufort Sea, spring 1970. AIDJEX Bulletin No. 12, Arctic ice dynamics joint experiment, Div. of Marine Res., University of Washington, Seattle, Wash.
- 70-0002 Vilks, G., 1973. A study of Globorotalia Pachyderma (Ehrenberg) = Globigerina Pachyderma (Ehrenberg) in the Canadian Arctic. Ph.D. Thesis, Dept. of Oceanography, Dalhousie University, Halifax, N.S.
- 70-0003 Healey, D.A., 1971. Oceanographic observations in the Beaufort Sea, July 15 to September 4, 1970. Dept. of Fish. and Forestry, Marine Services Branch, Pacific Region, Victoria (unpub. manuscript).
 - Dewis, F.J., A.A. Levinson, and P. Bayliss, 1972. Hydrogeochemistry of the surface waters of the Mackenzie River drainage basin, Canada IV. Boron salinity clay mineralogy relationships in modern deltas. Geochim. Cosmochim. Acta(36). pp. 1359—1375.
- 70-0004 Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, Institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).
- 70-005 Croasdale, K.R., 1970. The Beaufort Sea ice sampling project-1970 APOA report 2-1. Imperial Oil Ltd.
 - Oceanographic Services inc, 1970. Ice and current measurement program in the Beaufort Sea, spring 1970. Unpub. rep. by Oceanographic Services inc. for Imperial Oil Ltd. Rep. No. 201-2.
- 71-0001 Grainger, E.H. and J.E. Lovrity, 1975. Physical and chemical oceanographic data from the Beaufort Sea, 1960 to 1975. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 590.
 - Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87 p.

Grainger, E.H., 1975. Biological productivity of the southern Beaufort Sea: the physical—chemical environment and the plankton . Beaufort Sea Project Tech. Rept. 12a, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Wacasey, J.W., 1975. Biological productivity of the southern Beaufort Sea: Zoobenthic studies. Beaufort Sea Tech. Rep. No. 12b. 39 p.

- 71-0002 Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, Institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).
- 71-0003 Hunkins, K., 1972. Water stress and ocean current measurements at Camp 200, 1971. AIDJEX Bulletin no. 12, Arctic ice dynamics joint experiment, Div. of Marine Res., University of Washington, Seattle, Wash. pp. 35-60.
- 71-0004 Grainger, E.H., J.E. Lovrity, and M.S. Evans, 1977. Biological observations in the Eskimo Lakes, Arctic Canada. Physical, nutrient and primary production data, 1961-1976. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 685.
- 71-0018 Brunskill, G.J., D.M. Rosenberg, N.B. Snow, G.L. Vascotto, and R. Wageman, 1973. Ecological studies of aquatic systems in the Mackenzie-Porcupine drainages in relation to proposed pipeline and highway developments. Can. Task Force on Northern Oil Development Envir. So. Comm. Vols. 1 and 2.
- 72-0001 Vilks, G., 1973. A study of Globorotalla Pachyderma (Ehrenberg) = Globigerina Pachyderma (Ehrenberg) in the Canadlan Arctic. Ph.D. Thesis, Dept. of Oceanography, Dalhousie University, Hallfax, N.S.
- 72-0003 Slaney, F.F. & Company Ltd, 1973b. 1972 Environmental field program, Tagiu Richards Island, Mackenzie Delta. Interim Report Part 6: Pollution Testing. Report to Imperial Oil Ltd., January, 1973. (unpub. manuscript). 4 p plus appendices.
 - Slaney, F.F. & Company Ltd, 1974c. 1972-1974. Environmental program Mackenzie Delta N.W.T. Volume 7: Environmental Quality. Report to imperial Oil Ltd., Gulf Oil Ltd., Shell Canada Ltd., Canadian Arctic Gas Study Limited, May 1974. (unpub. manuscript). 24 p plus appendices plus references.
- 72-0004 Grainger, E.H., J.E. Lovrity, and M.S. Evans, 1977. Biological observations in the Eskimo Lakes, Arctic Canada. Physical, nutrient and primary production data, 1961-1976. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate,

Tech. Rept. 685.

Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414: x + 87 p.

Atkinson, E.G. and J.W. Wacasey, 1976. Caloric values of zoobenthos and phytobenthos from the Canadian Arctic. Fish. Mar. Serv. Res. Dev. Tech. Rep. 632. 24 p.

Wacasey, J.W., 1974. Biological oceanographic observations in the Eskimo Lakes, Arctic Canada. Zoobenthos Data, 1971-1973. Fish. Mar. Serv. Data. Rep. 41.

72-0006 Slaney, F.F. & Company Ltd, 1973a. Environmental impact assessment immerk artificial island construction, Vol. 11 - environmental studies. Report to imperial Oil Ltd., January, 1973. (unpub. manuscript). 64 p. plus appendices.

Slaney, F.F. & Company Ltd, 1973b. 1972 Environmental field program, Taglu Richards Island, Mackenzie Delta. Interim Report Part 6: Pollution Testing. Report to Imperial Oil Ltd., January, 1973. (unpub. manuscript). 4 p plus appendices.

Slaney, F.F. & Company Ltd, 1974c. 1972-1974. Environmental program - Mackenzie Delta N.W.T. Volume 7: Environmental Quality. Report to Imperial OII Ltd., Gulf OII Ltd., Shell Canada Ltd., Canadian Arctic Gas Study Limited, May 1974. (unpub. manuscript). 24 p plus appendices plus references.

- 72-0007 Slaney, F.F. & Company Ltd, 1973a. Environmental impact assessment immerk artificial island construction, Vol. 11 environmental studies. Report to imperial Oil Ltd., January, 1973. (unpub. manuscript). 64 p. plus appendices.
- 72-0009 Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).
- 72-0010 Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).
- 72-0012 Brunskill, G.J., D.M. Rosenberg, N.B. Snow, G.L. Vascotto, and R. Wageman, 1973. Ecological studies of aquatic systems in the Mackenzie-Porcupine drainages in relation to proposed pipeline and highway developments. Can. Task Force on Northern Oil Development Envir. So. Comm. Vols. 1 and 2.
- 72-0118 Mann, G.J., 1974. Life history types of the least cisco (Coregonus sardinella, Valenciennes) in the Yukon Territory, North Slope, and

Eastern Mackenzie River, Delta drainages. In McCart (Ed.): Life histories of three species of freshwater fishes in Beaufort Sea drainages, Yukon territory. Report by Aquatic Environment Ltd. for Arctic Gas. Biol. rep. ser. 18(3). 132 p.

- 73-0001 Slaney, F.F. & Company Ltd, 1974a. Winter benthic and oceanographic surveys, offshore Mackenzle Delta, N.W.T. Report to imperial Oil Ltd. (unpub. manuscript). 25 p. plus unnumbered appendices.
- 73-0002 Foy, M.G. and S.I.C. Hsiao, 1976. Phytoplankton data from the Beaufort Sea, 1973 to 1975. Fish. & Mar. Service, Tech. Rep. No. 617. 44 p.

Grainger, E.H. and J.E. Lovrity, 1975. Physical and chemical oceanographic data from the Beaufort Sea, 1960 to 1975. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 590.

Bunch, J.N., 1974. Distribution and abundance of heterotrophic bacteria in the south Beaufort Sea. Part III b. p. 175-195. In: A series of four reports on the marine ecology of the Mackenzie Delta and Tuktoyaktuk peninsula region. Environmental-Social Committee, Northern Pipelines, Task Force on Northern Oil Development Rep. No. 74-22.

Bunch, J.N. and R.C. Harland, 1974. Degradation of petroleum by a psychrotolerant marine flora from the Eskimo Lakes. Part I. p. 1-30. In: A series of four reports on the marine ecology of the Mackenzie Delta and Tuktoyaktuk Peninsula region. Environmental—Social Committee, Northern Pipelines, Task Force on Northern Oil Development Rep. No. 74-22.

Bunch, J.N. and R.C. Harland, 1976. Biodegration of crude petroleum by the Indigenous microbial flora of the Beaufort Sea. Beaufort Sea Tech. Rep. No. 10. 52 p.

Grainger, E.H., 1974. Baseline study of the marine environment in the area of the Mackenzie Deita. Task Force on Northern Oil Development Rept. no. 74-22. Environmental social Committee Northern Pipelines. pp. 101-173.

Sergeant, D.E. and W. Hoek, 1974. Seasonal distribution of bowhead and white whales in the eastern Beaufort Sea. In: J.C. Reed and J.E. Sater (Ed.). The coast and shelf of the Beaufort Sea. Arctic Institute of North America, Arlington, Virginia. pp. 705-719.

Wacasey, J.W., 1975. Biological productivity of the southern Beaufort Sea: Zoobenthic studies. Beaufort Sea Tech. Rep. No. 12b. 39 p.

73-0003 Grainger, E.H., J.E. Lovrity, and M.S. Evans, 1977. Biological observations in the Eskimo Lakes, Arctic Canada. Physical, nutrient

and primary production data, 1961-1976. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 685.

- 73-0003A Bunch, J.N. and R.C. Harland, 1974. Degradation of petroleum by a psychrotolerant marine flora from the Eskimo Lakes. Part I. p. 1-30. In: A series of four reports on the marine ecology of the Mackenzie Delta and Tuktoyaktuk Peninsula region. Environmental-Social Committee, Northern Pipelines, Task Force on Northern Oil Development Rep. No. 74-22.
- 73-0003B Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87 p.
- 73-0004 Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).

Huggett, W.S., M.J. Woodward, F. Stephenson, F.V. Hermiston, and A. Douglas, 1975. Near bottom currents and offshore tides. Beaufort Sea Project Tech. Rept. 16, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

- 73-0016 Slaney, F.F. & Company Ltd, 1973c. Preliminary assessment, aquatic resources, Tuktoyaktuk Harbour. Rep. prep. for Imperial Oll Ltd., Calgary. 12 p.
- 73-0019 Slaney, F.F. & Company Ltd, 1974c. 1972-1974. Environmental program Mackenzie Delta N.W.T. Volume 7: Environmental Quality. Report to Imperial Oil Ltd., Gulf Oil Ltd., Shell Canada Ltd., Canadian Arctic Gas Study Limited, May 1974. (unpub. manuscript). 24 p plus appendices plus references.

Slaney, F.F. & Company Ltd, 1974e. Hydrology. Environmental Program, Mackenzie Delta, N.W.T., Canada, Volume 2. Imperial Oil Ltd., Gulf Oil Canada Ltd., Shell Canada Ltd., and Canadian Arctic Gas Study Ltd.

Slaney, F.F. & Company Ltd, 1974f. Aquatic Resources. Environmental Program, Mackenzie Delta, N.W.T., Canada, Volume 6. Imperial Oil Ltd., Gulf Oil Canada Ltd., Shell Canada Ltd., and Canadian Arctic Gas Study Ltd.

73-0023 Mann, G.J., 1974. Life history types of the least cisco (Coregonus sardinella, Valenciennes) in the Yukon Territory, North Slope, and Eastern Mackenzie River, Delta drainages. In McCart (Ed.): Life histories of three species of freshwater fishes in Beaufort Sea drainages, Yukon territory. Report by Aquatic Environment Ltd. for Arctic Gas. Biol. rep. ser. 18(3). 132 p.

- 73-0034 Mel'nikov, i.A., 1976. Hydrobiological investigations in the central Arctic Ocean. Oceanology 16(3). pp. 314-315.
- 73-0125 Galbraith, D.F. and D.C. Fraser, 1974. Distribution and food habits of fish in the eastern coastal Beaufort Sea. Interim Rep. of Beaufort Sea Project Study B1 (Eastern), Beaufort Sea Project, Victoria, B.C. 48 p.

Gaibraith, D.F. and J.G. Hunter, 1975. Fishes of offshore waters and . Tuktoyaktuk vicinity. Beaufort Sea Project Tech. Rep. 7. 16 p plus appendices.

- 73-0126 Jones, M. and R. Kendel, 1973. The Beaufort Sea gillnetting program in the vicinity of King Point, Yukon. Memorandum Report. Dept. of Environment, Fisheries and Marine Serv., Whitehorse, Y.T.
- 74-0001 Slaney, F.F. & Company Ltd, 1974a. Winter benthic and oceanographic surveys, offshore Mackenzie Delta, N.W.T. Report to Imperial Oli Ltd. (unpub. manuscript). 25 p. plus unnumbered appendices.
- 74-0002 Herlinveaux, R.H., B.R. De-Lange-Boom, and G.R. Wilton, 1976a. Sailnity, temperature, turbidity and meteorological observatons in the Beaufort Sea: summer 1974, spring and summer, 1975. Pacific Marine Science Rept. 76-26, institute of Ocean Sciences, Patricia Bay, Victoria, B.C. (unpub. manuscript).

Giovando, L.F. and R.H. Herlinveaux, 1981. A discussion of factors influencing dispersion of pollutants in the Beaufort Sea. Pacific Marine Sciences Report 81-4, Institute of Ocean Sciences, Sidney, B.C. (unpub. manuscript).

Herlinveaux, R.H. and B.R. De-Lange-Boom, 1975. Physical oceanography of the southeastern Beaufort Sea. Beaufort Sea Project Tech. Rept. 18, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Herlinveaux, R.H., B.R. De-Lange-Boom, and G.R. Wilton, 1976b. Water movements in the Beaufort Sea: summer 1974, spring and summer, 1975. Pacific Marine Science Rept. 76-27, Institute of Ocean Sciences, Patricia Bay, Victoria, B.C. (unpub. manuscript).

- 74-0003 Slaney, F.F. & Company Ltd, 1975. Summer environmental program, Mackenzie River Estuary. Aquatic Studies <u>Vol</u>. <u>I</u>. Report to Imperial Oil Ltd. (unpub. manuscript). 221 p.
- 74-0004 McNeill, M.R. and J.F. Garrett, 1975. Open water surface currents. Beaufort Sea Project Tech. Rept. 17, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).
- 74-0005 Huggett, W.S., M.J. Woodward, and A.N. Douglas, 1977. Data record of

current observations Volume XVI: Beaufort Sea 1974 to 1976. Institute of Ocean Sciences, Patricia Bay, Sidney, B.C. (unpub. manuscript).

Huggett, W.S., M.J. Woodward, F. Stephenson, F.V. Hermiston, and A. Douglas, 1975. Near bottom currents and offshore tides. Beaufort Sea Project Tech. Rept. 16, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

74-0007 Grainger, E.H. and J.E. Lovrity, 1975. Physical and chemical oceanographic data from the Beaufort Sea, 1960 to 1975. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 590.

Grainger, E.H., 1975. Biological productivity of the southern Beaufort Sea: the physical-chemical environment and the plankton . Beaufort Sea Project Tech. Rept. 12a, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

74-0007A Foy, M.G. and S.I.C. Hslao, 1976. Phytoplankton data from the Beaufort Sea, 1973 to 1975. Fish. & Mar. Service, Tech. Rep. No. 617. 44 p.

Wacasey, J.W., 1975. Biological productivity of the southern Beaufort Sea: Zoobenthic studies. Beaufort Sea Tech. Rep. No. 12b. 39 p.

Bunch, J.N. and R.C. Harland, 1976. Biodegration of crude petroleum by the indigenous microbial flora of the Beaufort Sea. Beaufort Sea Tech. Rep. No. 10. 52 p.

74-0007B Gaibraith, D.F. and J.G. Hunter, 1975. Fishes of offshore waters and Tuktoyaktuk vicinity. Beaufort Sea Project Tech. Rep. 7. 16 p plus appendices.

Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414: x + 87 p.

Wacasey, J.W., 1975. Biological productivity of the southern Beaufort Sea: Zoobenthic studies. Beaufort Sea Tech. Rep. No. 12b. 39 p.

- 74-0007C Bunch, J.N. and R.C. Harland, 1976. Blodegration of crude petroleum by the indigenous microbial flora of the Beaufort Sea. Beaufort Sea Tech. Rep. No. 10. 52 p.
- 74-0008 Wong, C.S., W.J. Cretney, R.W. Macdonald, and P. Christensen, 1976. Hydrocarbon levels in the marine environment of the southern Beaufort

Sea. Beaufort Sea Tech. Rep. No. 38. 113 p.

Wong, C.S., R.W. Macdonald,, R.D. Bellegay, and P. Erickson, 1981. Baseline data on chemical oceanography in the southern Beaufort Sea, 1974-5. Beaufort Sea Project Tech. Rept. 14, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

- 74-0009 Slaney, F.F. & Company Ltd, 1974d. 1972-1974. Environmental program Mackenzle Delta N.W.T. Winter Study Supplement. Report to Imperial Oll Ltd., Gulf Oll Ltd., Shell Canada Ltd., Canadlan Arctic Gas Study Limited, May 1974. (unpub. manuscript). 82 p.
- 74-0010 Grainger, E.H., J.E. Lovrity, and M.S. Evans, 1977. Biological observations in the Eskimo Lakes, Arctic Canada. Physical, nutrient and primary production data, 1961-1976. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 685.
- 74-0011 Craig, P.C.(Ed.), 1975. Fisherles investigations in a coastal region of the Beaufort Sea. Arctic Gas Biological Report Series V <u>34</u>. Report by Aquatic Environments Ltd. to Canadian Arctic Gas Study Ltd. (unpublished manuscript).

Griffiths, W., P. Craig, G. Walder, and G. Mann, 1975. Fisheries investigations in a coastal region of the Beaufort Sea (Nunaluk Lagoon, Yukon Territory). Chapt. II. In: P.C. Craig (Ed.). Fisheries investigatons in a coastal region of the Beaufort Sea. Biological Rep. Series, Vol. 34. Rep. Prep. by Aquatic Environments Ltd. for Canadian Arctic Gas Study Ltd. and Alaskan Arctic Gas Study Co. 219 p.

- 74-0019 Slaney, F.F. & Company Ltd, 1974b. Winter environmental program.
 Unark, Pelly and Garry Artifical Island Sites, East Mackenzie Bay,
 N.W.T. Report to Sunoco Ltd. Calgary, Alberta. (unpub. manuscript).
- 74-0020 Percy, R., 1975. Fishes of the outer Mackenzie Deita. Beaufort Sea Project Tech. Rept. 8, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Acess, 144 Front St. W., Toronto, Ontario, M5J 1G2).
- 74-0021 Kendel, R.E., R.A.C. Johnston, U. Lobsiger, and M.D. Kozak, 1975. Fishes of the Yukon Coast. Beaufort Sea Project Tech. Rept. 6, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (Available from Micromedia Ltd., Information Access, 144 Front St., Toronto, Ontario, M5J 1G2).
- 74-0022 Aquatic Environments Ltd, 1975. Fisheries investigations in a coastal region of the Beaufort Sea. Arctic Gas Biological Report Series Vol 34. Canadian Arctic Gas Ltd. and Alaskan Arctic Gas Ltd.
- 74-0027 Dickins Assoc. Ltd., D.F., Arctic Laboratories Ltd. and J. Hellebust,

- 1981. Return to Balaena Bay. Long-term effects of a large scale crude oil spill under arctic sea ice, 1975 to 1981. Rep. prep. for Guif Canada Resources Inc., Calgary, Alta. 127 p. plus appendix.
- 74-0027B Adams, W.A., 1974. Light intensity under sea ice containing oil. Beaufort Sea Project G2b, Interim Report: Geological and biological observations at Baiaena Bay, Cape Parry, N.W.T by Adams W.A. and M. Hincke. 16 p plus figures and Appendices.
- 75-0001 Herlinveaux, R.H., B.R. De-Lange-Boom, and G.R. Wilton, 1976a. Salinity, temperature, turbidity and meteorological observatons in the Beaufort Sea: summer 1974, spring and summer, 1975. Pacific Marine Science Rept. 76-26, Institute of Ocean Sciences, Patricia Bay, Victoria, B.C. (unpub. manuscript).

Herlinveaux, R.H. and B.R. De-Lange-Boom, 1975. Physical oceanography of the southeastern Beaufort Sea. Beaufort Sea Project Tech. Rept. 18, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Herlinveaux, R.H., B.R. De-Lange-Boom, and G.R. Wilton, 1976b. Water movements in the Beaufort Sea: summer 1974, spring and summer, 1975. Pacific Marine Science Rept. 76-27, institute of Ocean Sciences, Patricia Bay, Victoria, B.C. (unpub. manuscript).

75-0002 Herlinveaux, R.H., B.R. De-Lange-Boom, and G.R. Wilton, 1976a. Salinity, temperature, turbidity and meteorological observators in the Beaufort Sea: summer 1974, spring and summer, 1975. Pacific Marine Science Rept. 76-26, Institute of Ocean Sciences, Patricia Bay, Victoria, B.C. (unpub. manuscript).

Herlinveaux, R.H. and B.R. De-Lange-Boom, 1975. Physical oceanography of the southeastern Beaufort Sea. Beaufort Sea Project Tech. Rept. 18, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Herlinveaux, R.H., B.R. De-Lange-Boom, and G.R. Wilton, 1976b. Water movements in the Beaufort Sea: summer 1974, spring and summer, 1975. Pacific Marine Science Rept. 76-27, Institute of Ocean Sciences, Patricia Bay, Victoria, B.C. (unpub. manuscript).

- 75-0003 McNeill, M.R. and J.F. Garrett, 1975. Open water surface currents. Beaufort Sea Project Tech. Rept. 17, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).
- 75-0004 McDonald, J.W. and L.C. Martin, 1976. A summer survey of the physical oceanography and water chemistry of the Mackenzie River Estuary, N.W.T., 1975. Report by F.F. Slaney to Imperial Oil Co. Ltd & (unpub. manuscript).

75-0005 Thorndike, A.S. and T.O. Manley, 1980a. Updated position and ice velocity for the AIDJEX manned camps. CU-2-80, Technical Report No. 2, Office of Naval Research, U.S. Dept. of the Navy, Contract N00014-76-C-004. (unpub. manuscript).

Thorndike, A.S. and T.O. Manley, 1980b. Updated position and ice velocity for the AIDJEX manned camps. CU-3-80, Technical Report No. 3, Office of Naval Research, U.S. Dept. of the Navy, Contract N00014-76-C-004. (unpub. manuscript).

75-0005A Bauer, E., K. Hunkins, T.O. Manley, and W. Tlemann, 1980a. Arctic Ice Joint Experiment 1975-1976, Physical Oceanography Report STD data - Camp Caribou Volume 1. Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY. Cu-8-80, Tech. Report No. 8. 99 p. plus unnumbered figures and tables.

Bauer, E., K. Hunkins, T.O. Manley, and W. Tlemann, 1980b. Arctic ice Joint Experiment 1975-1976, Physical Oceanography Report STD data - Camp Blue Fox Volume 2. Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY. Cu-9-80, Tech. Report No. 9. 98 p. plus unnumbered figures and tables.

Bauer, E., K. Hunkins, T.O. Manley, and W. Tiemann, 1980c. Arctic lice Joint Experiment 1975-1976, Physical Oceanography Report STD data - Camp Snowbird, Volume 3. Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY. Cu-10-80, Tech. Report No. 10. 73 p. plus unnumbered figures and tables.

Bauer, E., K. Hunkins, T.O. Manley, and W. Tiemann, 1980d. Arctic lice Joint Experiment 1975-1976, Physical Oceanography Report STD data - Camp Big Bear, Volume 4. Lamont-Doherty Geological Observatory of Columbia University, Palisades, NY. Cu-11-80, Tech. Report No. 11. 72 p. plus unnumbered figures and tables.

75-0005B Manley, T.O., K. Hunkins, and W. Tiemann, 1980a. Arctic ice dynamics joint experiment 1975-76. Physical oceanography data report. Profiling current meter - Camp Caribou. Office of Navai Research, U.S. Department of the Navy, Contract N00014-76-C-004 (unpub. manuscript). Technical Report No. 4. 237 p.

Manley, T.O., K. Hunkins, and W. Tiemann, 1980b. Arctic ice dynamics joint experiment 1975-76. Physical oceanography data report. Profiling current meter data — Camp Blue Fox. Office of Naval Research, U.S. Department of the Navy, Contract NO0014-76—C-004 (unpub. manuscript). Technical Report No. 5. 453 p.

Manley, T.O., K. Hunkins, and W. Tlemann, 1980c. Arctic ice dynamics joint experiment 1975-76. Physical oceanography data report. Profiling current meter data - Camp Snowbird. Office of Naval Research, U.S. Department of the Navy, Contract NO0014-76-C-004 (unpub. manuscript). Technical Report No. 6. 455 p.

Manley, T.O., K. Hunkins, and W. Tlemann, 1980d. Arctic ice

dynamics joint experiment 1975-76. Physical oceanography data report. Profiling current meter data — Camp Big Bear. Office of Naval Research, U.S. Department of the Navy, Contract NO0014-76—C-004 (unpub. manuscript). Technical Report No. 7. 332 p.

Manley, T.O., 1981. Eddles of the western Arctic Ocean — their characteristics and importance to the energy, heat and sait balance. Lamont-Doherty Observatory of Columbia University, Palisades, NY. Doctoral dissertation and supporting material in CU-1-81. Tech. Report No. 1.

75-0006 Wong, C.S., W.J. Cretney, R.W. Macdonald, and P. Christensen, 1976. Hydrocarbon levels in the marine environment of the southern Beaufort Sea. Beaufort Sea Tech. Rep. No. 38. 113 p.

Wong, C.S., R.W. Macdonald,, R.D. Bellegay, and P. Erickson, 1981. Baseline data on chemical oceanography in the southern Beaufort Sea, 1974-5. Beaufort Sea Project Tech. Rept. 14, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

75-0007 Huggett, W.S., M.J. Woodward, and A.N. Douglas, 1977. Data record of current observations Volume XVI: Beaufort Sea 1974 to 1976. Institute of Ocean Sciences, Patricia Bay, Sidney, B.C. (unpub. manuscript).

Huggett, W.S., M.J. Woodward, F. Stephenson, F.V. Hermiston, and A. Douglas, 1975. Near bottom currents and offshore tides. Beaufort Sea Project Tech. Rept. 16, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

75-0008 Huggett, W.S., M.J. Woodward, F. Stephenson, F.V. Hermiston, and A. Douglas, 1975. Near bottom currents and offshore tides. Beaufort Sea Project Tech. Rept. 16, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, Institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).

- 75-0009 Bornhold, B.D., 1975. Suspended matter in the southern Beaufort Sea.. Beaufort Sea Project Tech. Rep. 25b, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).
- 75-0010 Grainger, E.H., J.E. Lovrity, and M.S. Evans, 1977. Biological observations in the Eskimo Lakes, Arctic Canada. Physical, nutrient

and primary production data, 1961-1976. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 685.

- 75-0011 Slaney, F.F. & Company Ltd, 1976. 1975 Hydrology survey: Taglu, Richards Island, Mackenzle Delta, Northwest Territories . F.F. Slaney and Company, Vancouver, B.C.. (unpub. manuscript). 53 p plus unnumbered appendices.
- 75-0012 Grainger, E.H. and J.E. Lovrity, 1975. Physical and chemical oceanographic data from the Beaufort Sea, 1960 to 1975. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 590.

Grainger, E.H., 1975. Biological productivity of the southern Beaufort Sea: the physical-chemical environment and the plankton . Beaufort Sea Project Tech. Rept. 12a, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2).

75-0012A Foy, M.G. and S.I.C. Hsiao, 1976. Phytopiankton data from the Beaufort Sea, 1973 to 1975. Fish. & Mar. Service, Tech. Rep. No. 617. 44 p.

Wacasey, J.W., 1975. Biological productivity of the southern Beaufort Sea: Zoobenthic studies. Beaufort Sea Tech. Rep. No. 12b. 39 p.

Bunch, J.N. and R.C. Harland, 1976. Biodegration of crude petroleum by the indigenous microbial flora of the Beaufort Sea. Beaufort Sea Tech. Rep. No. 10. 52 p.

75-0012B Foy, M.G. and S.I.C. Hsiao, 1976. Phytoplankton data from the Beaufort Sea, 1973 to 1975. Fish. & Mar. Service, Tech. Rep. No. 617. 44 p.

Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87 p.

Wacasey, J.W., 1975. Biological productivity of the southern Beaufort Sea: Zoobenthic studies. Beaufort Sea Tech. Rep. No. 12b. 39 p.

- 75-0024 Percy, R., 1975. Fishes of the outer Mackenzie Delta. Beaufort Sea Project Tech. Rept. 8, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Acess, 144 Front St. W., Toronto, Ontario, M5J 1G2).
- 75-0025 Kendel, R.E., R.A.C. Johnston, U. Lobsiger, and M.D. Kozak, 1975.
 Fishes of the Yukon Coast. Beaufort Sea Project Tech. Rept. 6,
 Beaufort Sea Project, Dept. of the Environment, Victoria, B.C.

(Available from Micromedia Ltd., Information Access, 144 Front St., Toronto, Ontario, M5J 1G2).

75-0026 Dickins Assoc. Ltd., D.F., Arctic Laboratories Ltd. and J. Hellebust, 1981. Return to Balaena Bay. Long-term effects of a large scale crude oil spill under arctic sea ice, 1975 to 1981. Rep. prep. for Gulf Canada Resources Inc., Calgary, Alta. 127 p. plus appendix.

NORCOR Engineering & Research Ltd, 1975. The Interaction of crude oil with Arctic Sea Ice. Beaufort Sea Project Tech. Rept. 27, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 144 Front St. W., Toronto, Ontario, M5J 1G2). 149 p plus appendices.

- 75-0028 Adams, W.A., 1975. Light intensity and primary productivity under sea ice containing oil. Beaufort Sea Project Tech. Rept. 29, Beaufort Sea Project, Dept. of the Environment, Victoria, B.C. (available from Micromedia Ltd., Information Access, 44 Front St. W., Toronto, Ontario, M5J 1G2).
- 75-0042 DeGraaf, D. and K. Machniak, 1977. Fisheries investigations along the Crossdelta Pipeline Route in the Mackenzie Delta. (in:) McCart, P. 1977. Arctic Gas Biological Report Series Vol 39. Studies to determine the impact of gas pipeline development on aquatic ecosystems. Report by Aquatic Environments Ltd. for Can. Arctic Gas Study Ltd. 169 p.
- 75-0043 Beak Consultants Ltd., 1975. Biological studies 1975. Beaufort Sea Rep. for Canadian Marine Drilling Ltd.
- 75-0050 Slaney, F.F. & Company Ltd, 1976. 1975 Hydrology survey: Taglu, Richards Island, Mackenzle Delta, Northwest Territories . F.F. Slaney and Company, Vancouver, B.C.. (unpub. manuscript). 53 p plus unnumbered appendices.
- 76-0001 Canadian Marine Drilling Ltd, 1977a. Environmental observations summary. Prepared by Marex for Canadian Marine Drilling Ltd., Calgary, Alberta. January 1977. (Unpublished manuscript). Report number 275.

Fissel, D.B., 1981. An analysis of current meter data obtained at Canmar drillships, 1976-1979. Arctic Sciences Ltd. report to Dome Petroleum Ltd., Calgary, Alta. (unpublished manuscript).

Lemon, D.D. and D.M. Kowalski, 1982. Water column measurements at Canmar drillsites in the Beaufort Sea, 1976-1980. Unpub. rep. by Arctic Sciences Ltd., for the Institute of Ocean Sciences, Sidney. Vol. 1 - 100 p plus appendices; Vol. II - six volumes, unnumbered.

Henry, R.F. and M.G.G. Foreman, 1977. Numerical model studies of semi-diurnal tides in the southern Beaufort Sea. Pacific Marine Sciences Report 77-11, institute of Ocean Sciences, Patricia Bay, Victoria B.C. (unpub. manuscript).

- 76-0003 Slaney, F.F. & Company Ltd, 1977b. Biophysical data appendix, artificial island sites. Report to Imperial Oil Ltd. (unpub. manuscript).
 - Slaney, F.F. & Company Ltd, 1977c. 1976 summer aquatic studies, Arnak L-30 artificial island site and Tuft Point borrow site. Report to Imperial Oil Ltd. (unpub. manuscript).
- 76-0004 Duval, W.S., 1977. Planktonic communities. in: F.F. Slaney and Co. Ltd. 1976 Summer aquatic studies: Arnak L-30 artificial island site and Tuft Point borrow site. Rep. prep. for imperial Oil Ltd., Calgary, Alta.
 - Slaney, F.F. & Company Ltd, 1977a. Environmental assessment of construction and construction support activities for the proposed ten year Beaufort Sea offshore exploration program, Volume 2. Report to Imperial Oil Ltd. (unpub. manuscript). 98 p.
- 76-0020 Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87 p.
- 76-0036 Chambers, M. and G. Bradley, 1976. Part 2 Physical and water quality studies. R.A. Owens (Ed.). Environmental Studies, Hans Bay region, N.W.T., 1976, Volume 1, Aquatic Studies. Report by F.F. Slaney and Co. Ltd. for Gulf Oil Canada Ltd. pp. 6-14.
 - Martin, L.C., V.A. Poulin, and G. Bradley, 1976. Lake and stream catalogue, Hans Bay region, N.W.T. Rep. prep. by F.F. Slaney and Co. Ltd. for Gulf Oll Canada Ltd., Calgary, Alta. 6 p. plus catalogue sheets.
 - Slaney, F.F. & Company Ltd, 1977d. Investigations of the aquatic resources of the Parsons Lake region and environmental impact assessment of the Parsons Lake gas development. Report to Gulf Oil Canada Ltd. 188 p plus unnumbered appendices.
- 77-0001 Fraker, M.A., C.D. Gordon, J.W. McDonald, J.K.B. Ford, and G. Chambers, 1979. White whale (Delphinapterus leucas) distribution and abundance and the relationship to physical and chemical characteristics of the Mackenzie estuary. Canada Dept. of the Environment, Fisheries and Mar. Serv., Res. and Dev. Directorate, Tech. Rept. 863. 56 p.
- 77-0002 Aquatic Environments Ltd., 1977. Tuft Point and adjacent coastal areas fisheries project. Report to Imperial Oil Ltd (unpublished manuscript). 152 p.
 - Jones, M.L. and J. Den Beste, 1977. Tuft Point and adjacent coastal areas fisheries project. Rep. prep. by Aquatic Environments Ltd. for imperial Oil Ltd., Calgary, Alta. 152 p.

- 77-0003 Macdonald, R.W., M.E. McFarland, S.J. deMora, D.M. Macdonald, and W.K. Johnson, 1978. Oceanographic data report, Amundsen Gulf, August to September 1977. Institute of Ocean Sciences, Patricia Bay, Sidney, B.C. (unpub. manuscript). Pacific Marine Science Report 78-10.
- 77-0004 Canadian Marine Drilling Ltd, 1977b. Environmental observations in the Beaufort Sea 1977. Canmar Technical Report, Canadian Marine Drilling Ltd., Calgary, Alberta. 8 volumes. (Unpublished manuscript).
 - Fissel, D.B., 1981. An analysis of current meter data obtained at Canmar driliships, 1976-1979. Arctic Sciences Ltd. report to Dome Petroleum Ltd., Calgary, Alta. (unpublished manuscript).
 - Lemon, D.D. and D.M. Kowalski, 1982. Water column measurements at Canmar drillsites in the Beaufort Sea, 1976-1980. Unpub. rep. by Arctic Sciences Ltd., for the Institute of Ocean Sciences, Sidney. Vol. 1 100 p plus appendices; Vol. II slx volumes, unnumbered.
- 77-0009 Envirocon Ltd, 1977. Isserk artificial island, environmental baseline and monitoring study, 1977. Report by Envirocon Ltd., Calgary, Alberta for Imperial Oil Ltd., Calgary, Alberta, December 1977 (unpublished manuscript). 119 p plus appendices.
- 77-0010 Thomas, D.J., 1977. Dissolved and sediment concentrations of cadmium, chromium, copper, lead, zinc, nickel, iron and mercury at the Dome Tingmiark K-91 drillsite. Rep. prep. by Seakem Oceanography Ltd., Sidney, B.C. for Dome Petroleum Ltd., Calgary, Alberta. (unpub. manuscript). 14 p.
- 77-0020 Hillaby, B., 1977. Unpub. field notes of fisheries investigations at King Point Lagoon, Yukon Territory. For Dept. Fish. & Oceans, Vancouver, B.C.
- 77-0035 Hunter, J.G. and S.T. Leach, 1983. Hydrographic data collected during fisheries activities of the Arctic Biological Station, 1960 to 1979. Can. Data Rep. Fish. Aquat. Sci 414:. x + 87 p.
- 78-0001 Fissel, D.B., 1981. An analysis of current meter data obtained at Canmar drillships, 1976-1979. Arctic Sciences Ltd. report to Dome Petroleum Ltd., Calgary, Alta. (unpublished manuscript).
 - Lemon, D.D. and D.M. Kowalski, 1982. Water column measurements at Canmar drillsites in the Beaufort Sea, 1976-1980. Unpub. rep. by Arctic Sciences Ltd., for the Institute of Ocean Sciences, Sidney. Vol. 1 100 p plus appendices; Vol. 11 six volumes, unnumbered.
- 78-0002 Thomas, D.J., 1978a. Tingmiark K-91 and Kopanoar D-14: A chemical study one year after the occurrence of water flow, July 1978. Report by Seakem Oceanography Ltd., Sidney, B.C. for Dome Petroleum Ltd., Calgary, Alberta, 1978. (unpub. manuscript).

- 78-0018 Thomas, D.J., 1978c. A baseline chemical survey at Tarsiut A-25, July 1978. Report by Seakem Oceanography Ltd., Sidney, B.C. to Canadlan Marine Drilling Ltd., Calgary, Alberta. (unpub. manuscript).
- 78-0019 Thomas, D.J., 1978b. Kaglulik A-75: A chemical study during a sustained water flow, July 1978. Report by Seakem Oceanography Ltd., Sidney, B.C. to Canadian Marine Drilling Ltd., Calgary, Alberta. (unpub. manuscript). 31 p.
- 78-0031 Lawrence, M.J., J. Lacho, and S. Davles, 1984. A survey of the coastal fishes of the southeastern Beaufort Sea. Can. Tech. Rep. Fish. Aquat. Sci. 1220. 178 p.
- 79-0001 Meiling, H. and E.L. Lewis, 1982. Shelf drainage flows in the Beaufort Sea and their effect on the Arctic Ocean pycnocline;. Deep Sea Res. Vol. <u>29</u>(no. 8A). pp. 967-985.
 - Melling, H., 1983. Oceanographic features of the Beaufort Sea in early winter. Can. Tech. Rep. Hydrogr. Ocean Sci:(20). 131 p.
- 79-0002 Murphy, D.L., I.M. Lissauer, and J.C. Myers, 1983. Movement of satellite-tracked buoys in the Beaufort Sea (1979-1981). U.S. Coast Guard R&D Center, Avery Point, Groton, Conn. Rep. No. CG-D-30-83. 53 p.
- 79-0003 Canadian Marine Drilling Ltd, 1979. Environmental data observations in the Beaufort Sea 1979. Canmar Technical Report, Canadian Marine Drilling Ltd., Calgary, Alberta. 6 volumes plus supplement. (Unpublished manuscript).
 - Fissel, D.B., 1981. An analysis of current meter data obtained at Canmar drillships, 1976-1979. Arctic Sciences Ltd. report to Dome Petroleum Ltd., Calgary, Alta. (unpublished manuscript).
 - Lemon, D.D. and D.M. Kowalski, 1982. Water column measurements at Canmar drillsites in the Beaufort Sea, 1976-1980. Unpub. rep. by Arctic Sciences Ltd., for the institute of Ocean Sciences, Sidney. Vol. 1 100 p plus appendices; Vol. II six volumes, unnumbered.
- 79-0005 Thomas, D.J., 1979a. Canmar-Summer's Harbour coaldusting operations, 1979. Environmental monitoring. Report by Arctic Laboratories Ltd. Inuvik, N.W.T. for Canadian Marine Drilling Ltd., Calgary, Alberta, December 1979. (unpub. manuscript).
- 79-007 Thomas, D.J., 1979b. A baseline chemical study at Kilannak A-77. Report by Arctic Laboratories Ltd. inuvik, N.W.T. for Canadian Marine Drilling Ltd., Calgary, Alberta, December 1979. (unpub. manuscript).
- 79-0009 Thomas, D.J., 1979d. The effect of discharged drilling fluid waste on primary productivity at Nerlerk M98. Report by Arctic Laboratories Ltd. Inuvik, N.W.T. for Canadian Marine Drilling Ltd., Calgary, Alberta. 31 p.

- 79-0010 Thomas, D.J., 1979c. Dome Petroleum-McKinley Bay dredging programme, Phase I. Geochemical baseline survey and environmental monitoring during 1979 operations. Report by Arctic Laboratories Ltd. Inuvik, N.W.T. for Dome Petroleum, Calgary, Alberta, November 1979. (unpub. manuscript).
- 79-0026 Acreman, J., G. Borstad, and B. Humphrey, 1980. Dome Petroleum experimental oil spill at McKiniey Bay, N.W.T. Examination of ice biota. Rep. prepared by Arctic Laboratories Ltd. for Dome Petroleum Ltd., Calgary, Alta. 16 p.

Dickins, D.F. and I.A. Buist, 1981. Oil and gas under sea ice, 1st draft - unpub. rep by D.F. Dickins Eng. (Dickins) and Dome Petroleum Ltd. (Buist). Vol. 1 - 262 p plus Vol. 2 (Appendices).

Humphrey, B., 1980. Dome/Canmar oil under ice experiment. Rep. by Arctic Laboratories Ltd. (Inuvik, N.W.T.) to Dome Petroleum Ltd., Calgary, Alberta (unpub. manuscript).

- 79-0037 Lawrence, M.J., J. Lacho, and S. Davies, 1984. A survey of the coastal fishes of the southeastern Beaufort Sea. Can. Tech. Rep. Fish. Aquat. Sci. 1220. 178 p.
- 79-0121 Diemand, D., E.M. Reimer, and J.V. Barrie, 1982. Ocean drifter studies of surface currents along the coasts of Newfoundland and Labrador and in the Beaufort Sea. St. John's: Centre for Cold Ocean Resources Engineering, 1982. (Data report Memorial University of Newfoundland. Centre for Cold Ocean Resources Engineering)((C-CORE publication no. 82-3)). VIII, 35 p., figures, tables.
- 80-0001 Murphy, D.L., I.M. Lissauer, and J.C. Myers, 1983. Movement of satellite-tracked buoys in the Beaufort Sea (1979-1981). U.S. Coast Guard R&D Center, Avery Point, Groton, Conn. Rep. No. CG-D-30-83. 53 p.
- 80-0002 Canadian Marine Drilling Ltd, 1980. Environmental observations in the Beaufort Sea 1980, Water Column Data. Canmar Technical Report, Canadian Marine Drilling Ltd., Calgary, Alberta. (unpub. manuscript).

Lemon, D.D. and D.M. Kowalski, 1982. Water column measurements at Canmar drillsites in the Beaufort Sea, 1976-1980. Unpub. rep. by Arctic Sciences Ltd., for the Institute of Ocean Sciences, Sidney. Vol. 1 - 100 p plus appendices; Vol. 11 - six volumes, unnumbered.

- 80-0003 Thomas, D.J., 1980. Water quality measurements and dredge spoil monitoring at McKinley Bay, N.W.T., 1980. Rep. prep. by Arctic Laboratories Ltd., Inuvik, N.W.T. for Dome Petroleum Ltd., Caigary, Alberta. (unpub. manuscript). 41 p.
- 80-0004 Thomas, D.J., W.A. Heath, K.A. Thompson, and J.M. Koleba, 1981. An oceanographic study of Tuktoyaktuk Harbour N.W.T., 1980. Report by

Arctic Laboratories, Inuvik, N.W.T. for Dome Petroleum Ltd., Calgary, Alberta, January 1981. (unpub. manuscript). 56 p plus appendices.

80-0016 Acreman, J., G. Borstad, and B. Humphrey, 1980. Dome Petroleum experimental oil spill at McKinley Bay, N.W.T. Examination of ice biota. Rep. prepared by Arctic Laboratories Ltd. for Dome Petroleum Ltd., Calgary, Alta. 16 p.

Dickins, D.F. and I.A. Buist, 1981. Oll and gas under sea Ice, 1st draft - unpub. rep by D.F. Dickins Eng. (Dickins) and Dome Petroleum Ltd. (Buist). Vol. 1 - 262 p plus Vol. 2 (Appendices).

Humphrey, B., 1980. Dome/Canmar oil under ice experiment. Rep. by Arctic Laboratories Ltd. (Inuvik, N.W.T.) to Dome Petroleum Ltd., Calgary, Alberta (unpub. manuscript).

80-0025 Griffiths, W.B., 1981. Characteristics of bowhead feeding areas. In: W.J. Richardson (Ed.). Behavior, disturbance responses and feeding of bowhead whales in the Beaufort Sea, 1980. Rep. Prep. by LGL Ecological Research Associates Inc. for U.S. Bureau of Land Management, Washington. pp 197-264.

Griffiths, W.B. and R.A. Buchanan, 1982. Characteristics of bowhead feeding areas. In: W.J. Richardson (Ed.), Behavior, disturbance responses and feeding of bowhead whales Balaena Mysticetus in the Beaufort Sea, 1980-81. Rep. prep. by LGL Ecological Research Associates Inc. for U.S. Bureau of Land Management, Washington. p 347-455.

- 80-0028 Dickins, D.F. and I.A. Buist, 1981. Oil and gas under sea ice, 1st draft unpub. rep by D.F. Dickins Eng. (Dickins) and Dome Petroleum Ltd. (Buist). Vol. 1 262 p plus Vol. 2 (Appendices).
- 80-0041 Byers, S.C. and R.K. Kashino, 1980. Survey of fish populations in Kugmallit Bay and Tuktoyaktuk Harbour, Northwest Territories. Dobrocky Seatech Ltd., Victoria, B.C. Prepared for Dome Petroleum Ltd., Calgary, Alta. 78 p.
- 80-0110 Lawrence, M.J., J. Lacho, and S. Davies, 1984. A survey of the coastal fishes of the southeastern Beaufort Sea. Can. Tech. Rep. Fish. Aquat. Sci. 1220. 178 p.
- 81-0002A Fissel, D.B., G.R. Wilton, and D.N. Knight, 1981. Subsurface current measurements at Tarsiut and Uviluk drill sites January August 1981. Unpub. data report by Arctic Sciences Ltd. for Dome Petroleum Ltd., Calgary, Alta. 50 p.
- 81-0002B Birch, J.R., D.B. Fissel, and G.R. Wilton, 1982. Subsurface current measurements near Tarsiut artificial Island, August 1981 September 1982. Unpublished data report by Arctic Sciences Ltd., Sidney, B.C. for Dome Petroleum Ltd., Calgary, Alberta. 31 p.
- 81-0003 Erickson, P., D. Thomas, R. Pett, and B. De-Lange-Boom, 1983.

Issungnak Oceanographic Survey, Part A: Oceanographic properties. Rep. prep. for Esso Resources Canada Limited, Gulf Canada Resources Inc., Dome petroleum Limited by Arctic Laboratories Limited, Inuvik, Northwest Territories. 194 p.

Bunch, J.N., F. Dugre, and T. Cartier, 1983. Issungnak oceanographic survey. Part C: Microbiology. Rep. prep. for Esso Canada Resources Ltd., Gulf Canada Resources Inc. and Dome Petroleum Ltd., Calgary, Alta. 39 p.

- 81-0013 Erickson, P. and R. Pett, 1981. Concentrations of suspended particulate material and dissolved oxygen in Tuktoyaktuk Harbour near dredging conducted by the Government of the Northwest Territories, June 16 July 6, 1981. Arctic Laboratories Ltd. report to Water and Sanitation Section, Town Planning and Lands Division, Department of Local Government, Government of the Northwest Territories, Yellowknife, N.W.T. (unpublished manuscript). 71 p.
- 81-0015 Pett, R., J. Acreman, and G. Vickers, 1981. The ice-flora and plankton near issungnak artificial island in the southern Beaufort Sea a progress report. Arctic Laboratories Ltd., inuvik, N.W.T. (unpub. manuscript). 44 p.
- 81-0016 Birch, J.R. and D.B. Fissel, 1982. Data report-shallow water, near-bottom current measurements in the southeast Beafort Sea, summer 1981. Arctic Sciences Ltd. report to Esso Resources Canada Ltd., Calgary, Alberta, January, 1982 (unpublished manuscript). 41 p.

Fissel, D.B. and J.R. Birch, 1982. An analysis of shallow water near bottom current measurements in the southeast Beaufort Sea, summer 1981. Arctic Sciences Ltd. report to Esso Resources Canada Ltd., Calgary, Alta. (unpublished manuscript). 49 p.

81-0018 Heath, W.A. and D.J. Thomas, 1984. The impact of gravel dredging on benthic fauna near Herschel Island, Yukon Territory, 1981-1982. Rep. for Dome Petroleum Ltd. and Gulf Canada Resources Inc. by Arctic Laboratories Ltd. 74 p plus appendices.

Thomas, D.J., W.A. Heath, J.M. Koleba, B.M. Perry, and A.G. Ethler, 1982. A study of the benthos at Tarsiut N-44 artificial Island and south Tarsiut borrow area 1980-1981. Progress rep. by Arctic Laboratories Ltd. for Dome Petroleum Ltd. 160 p.

- 81-0027 Griffiths, W.B. and R.A. Buchanan, 1982. Characteristics of bowhead feeding areas. In: W.J. Richardson (Ed.), Behavior, disturbance responses and feeding of bowhead whales Balaena Mysticetus in the Beaufort Sea, 1980-81. Rep. prep. by LGL Ecological Research Associates Inc. for U.S. Bureau of Land Management, Washington. p 347-455.
- 81-0029 Bond, W.A., 1982. A study of the fish resources of Tuktoyaktuk Harbour, southern Beaufort Sea coast, with special reference to life histories of anadromous coregonids. Can. Tech. Rep. Fish. Aquat.

Sci. 1119. 90 p.

- Gillman, D.V. and A.H. Kristofferson, 1984. Biological data on Pacific herring (Clupea harengus pallasi) from Tuktoyaktuk Harbour and the Liverpool Bay area, Northwest Territories, 1981 to 1983. Can. Data Rep. Fish. Aquat. Sci. 485. Iv plus 22 p.
- 81-0038 Murphy, D.L., I.M. Lissauer, and J.C. Myers, 1983. Movement of satellite-tracked buoys in the Beaufort Sea (1979-1981). U.S. Coast Guard R&D Center, Avery Point, Groton, Conn. Rep. No. CG-D-30-83. 53 p.
- 82-0003 Fissel, D.B., D.N. Knight, and J.R. Birch, 1984. An oceanographic survey of the Canadian Arctic Archipelago, March-April 1982. Can. Contract. Rep. Hydrogr. Ocean Sci. 15. 415 p.
- 82-0032 Ratynski, R.A., 1983. Mid-summer ichthyopiankton populations of Tuktoyaktuk Harbour, N.W.T. Can. Tech. Rep. Fish. Aquat. Sci. 1218. iv plus 21 p.
- 82-0093 Erickson, P., D. Thomas, R. Pett, and B. De-Lange-Boom, 1983. Issungnak Oceanographic Survey, Part A: Oceanographic properties. Rep. prep. for Esso Resources Canada Limited, Gulf Canada Resources Inc., Dome petroleum Limited by Arctic Laboratories Limited, Inuvik, Northwest Territories. 194 p.
 - Bunch, J.N., F. Dugre, and T. Cartier, 1983. Issungnak oceanographic survey. Part C: Microbiology. Rep. prep. for Esso Canada Resources Ltd., Guif Canada Resources Inc. and Dome Petroleum Ltd., Calgary, Alta. 39 p.
- 82-0094 Heath, W.A. and D.J. Thomas, 1984. The impact of gravel dredging on benthic fauna near Herschel Island, Yukon Territory, 1981-1982. Rep. for Dome Petroleum Ltd. and Gulf Canada Resources Inc. by Arctic Laboratories Ltd. 74 p plus appendices.
- 82-0095 Allan, R.B. and G.R. MacKenzle-Grieve, 1983. Water quality and biological survey of Stokes Point and King Point, Yukon Beaufort Sea Coast. Env. Canada, Env. Protection Service, Reg. Prog. Rep. No. 83-23. 70 p.
- 82-0097A Heath, W.A. and D.J. Thomas, 1983. A study of the benthos and sediment chemistry at Tarsiut N-44 artificial island and substrate borrow areas in the southern Beaufort Sea 1982. Rep. for Gulf Canada and Dome Petroleum Ltd. by Arctic Laboratories Ltd. 79 p plus appendices.
- 82-0110 Pett, R.J., G.P. Vickers, J.C. Acreman, and A.G. Ethier, 1983. A seasonal study of the epontic and planktonic communities near the Issungnak artificial island and McKinley Bay in the Canadian Beaufort Sea. Rep. prep. by Arctic Laboratories Ltd. for Fisheries and Oceans Canada. 89 p. plus appendix.

- 82-0111 Bond, W.A., 1982. A study of the fish resources of Tuktoyaktuk Harbour, southern Beaufort Sea coast, with special reference to life histories of anadromous coregonids. Can. Tech. Rep. Fish. Aquat. Sci. 1119. 90 p.
 - Gillman, D.V. and A.H. Kristofferson, 1984. Biological data on Pacific herring (Clupea harengus pallasi) from Tuktoyaktuk Harbour and the Liverpool Bay area, Northwest Territories, 1981 to 1983. Can. Data Rep. Fish. Aquat. Sci. 485. iv plus 22 p.
- 82-0117 Birch, J.R., G.R. Wilton, and D.B. Fissel, 1982. Shallow water current measurements in the southeast Beaufort Sea summer 1982 (including August 8 16, 1981 record from W. Atkinson site). Unpub. data report prepared by Arctic Sciences Ltd., Sidney, for Esso Resources Canada Ltd., Calgary. 66 p.
- 82-0118 Myers, R.M. and J.A. Kirby, 1982. Oceanographic monitoring at Tarsiut Island. Unpub. rep. by Canmar 0023P/0003P, November 29, 1982. Data Report 1982.
- 82-0119 Thomas, D.J. and P.G. Berrang, 1982. Observations and water column measurements taken during the 1982 site surveys at Tingmiark K-91 and Kopanoar D-14. Unpub. report by Arctic Laboratories Ltd. for Dome Petroleum Ltd. 22 p.
- 83-0027 McLaren, P.L. and R.A. Davis, 1984. Distribution of bowhead whales and other marine mammals in the southeast Beaufort Sea, August September 1983. Unpub. LGL Ltd. rep. for Dome Petroleum Ltd., and Gulf Canada Resources Inc., Calgary.
- 83-0032 Robe, R.Q., I.M. Lissauer, and J.C. Myers, 1983. Beaufort Sea drifting buoys 1983,. Paper presented at 7th Annual Arctic Marine Oil Spill Program Technical Seminar, Tech. Serv. Branch, Environ. Prot. Serv., Edmonton, Alberta, Canada, June 12-14, 1984.
 - Kozo, T.L. and R.Q. Robe, 1986. Modeling winds and open-water buoy drift along the eastern Beaufort Sea coast, including the effects of the Brooks Range. Jour. of Geophys. Res. <u>Vol. 91</u>(No. C11). pp 13011-13032.
- 83-0047 Allan, R.B. and G.R. MacKenzle-Grieve, 1984. Water quality and biological survey of the coastal waters near Stokes Point, Yukon Beaufort Sea Coast. Environment Canada, Environmental Protection Service. Reg. Prog. Rep. No. 84-06. 39 p.
- 83-0058 Borstad, G.A., 1985. Water colour and temperature in the southern Beaufort Sea: remote sensing in support of ecological studies of the bowhead whale. Can. Tech. Rep. Fish. Aquat. Sci. No. 1350. 68p.
- 83-0059 Albright, L.J., 1986. Bacterial dynamics within the lower Mackenzie River, its estuary and the southern Beaufort Sea. Can. J. Microbiol. (in press).

- 83-0065 Nadeau, O.C., 1984. Field operations report and data synthesis for the Beaufort Sea Sediment Dynamics Project: 1983-1984. Unpub. rep. by Arctic Laboratories Ltd. for the Atlantic Geoscience Centre, Dept. Energy Mines and Res. 16 p plus unnumbered appendices.
- 83-0067 De-Lange-Boom, B.R. and B.A. Juszko, 1983. Beaufort Sea oceanographic program, summer 1983. Final data report by Arctic Laboratories Ltd. for Esso Res. Ltd. 40 p.
- 83-0068 Gillman, D.V. and A.H. Kristofferson, 1984. Biological data on Pacific herring (Clupea harengus pallasi) from Tuktoyaktuk Harbour and the Liverpool Bay area, Northwest Territories, 1981 to 1983. Can. Data Rep. Fish. Aquat. Sci. 485. iv plus 22 p.
- 84-0017 Harwood, L.A. and G.A. Borstad, 1985. Bowhead whale monitoring study in the southeast Beaufort Sea, July-September 1984. Environmental Studies Revolving Funds Report No. 009. Ottawa. 99 p.
- 84-0043 Kurfurst, P.J., 1984. Geotechnical investigations in the southern Beaufort Sea Spring 1984, GSC open file No. 1078. 93 p.
 - Nadeau, O.C., 1984. Field operations report and data synthesis for the Beaufort Sea Sediment Dynamics Project: 1983-1984. Unpub. rep. by Arctic Laboratories Ltd. for the Atlantic Geoscience Centre, Dept. Energy Mines and Res. 16 p plus unnumbered appendices.
- 84-0044 Nadeau, O.C., 1984. Field operations report and data synthesis for the Beaufort Sea Sediment Dynamics Project: 1983-1984. Unpub. rep. by Arctic Laboratories Ltd. for the Atlantic Geoscience Centre, Dept. Energy Mines and Res. 16 p plus unnumbered appendices.
- 84-0045 Devenis, P.K., 1985. Gulf 1984 Beaufort Sea drilling season. Environmental operating conditions: Pitsiulak A-05; Amauligak J-44; Akpak P-35; Tarsiut P-45 Summary Reports. Unpub. Rep. by Gulf Canada Res. Inc.
- 84-0046 Birch, J.R., D.B. Fissel, and G.R. Wilton, 1984a. Physical oceanographic data report: Amerk 0-09 site, Beaufort Sea, Summer 1984, current-meter data. Unpublished report by Arctic Sciences Ltd., Sidney, B.C. for Esso Resources Canada Ltd., Calgary, Alberta. 72 p.
 - Birch, J.R., D.B. Fissel, and G.R. Wilton, 1984b. Physical oceanographic data report: Nipterk L-19/Kaubvik I-43 site, Beaufort Sea, Summer 1984, current-meter data. Unpublished data report by Arctic Sciences Ltd., Sidney, B.C. for Esso Resources Canada Ltd., Calgary, Alberta. 72 p.
 - Fissel, D.B., J.R. Birch, and G.R. Wilton, 1984. Physical oceanographic data report: Nipterk L-19/Kaubvik I-43 site, Beaufort Sea, summer 1984, wave and water level data. Unpub. data report by Arctic Sciences Ltd. for Esso Resources Canada Ltd., Calgary, Alta. 89 p.

- 84-0047 Davidge, D.A. and G.R. Mackenzle-Grieve, 1986. A follow-up water quality and biological survey of King Point and Stokes Point, Yukon Beaufort Sea coast. Env. Canada, Env. Prot. Service, Draft Rep. Prog. Rep.
- 85-0007 Bradstreet, M.S.W. and D.B. Fissel, 1986. Zooplankton of a bowhead whale feeding area off the Yukon coast in August 1985. Unpub. rep. by LGL Ltd., King City, Ontario and Arctic Sciences Ltd., Sidney, B.C. for Indian and Northern Affairs Canada. 155 p.
- 85-0016 Albright, L.J., 1986. Bacterial dynamics within the lower Mackenzie River, its estuary and the southern Beaufort Sea. Can. J. Microbiol. (in press).
- 85-0017 Hopky, G.A., D.B. Chiperzak, and M.J. Lawrence, 1986. Seasonal temperature, salinity and density data for the Canadian Beaufort Shelf: 1984-85. Can. Data Rep. Fish. Aquat. Sci.
- 85-0019 Archipelago Marine Research, 1985. A diver survey of herring spawning in the fingers area of Liverpool Bay, N.W.T. Unpub. rep. for DFO, Winnipeg.
- 85-0029 Arctic Laboratories Ltd, 1985a. Data report for current meter measurements at Arnak, Summer 1985. Unpubl. rep. by Arctic Laboratories Ltd. for Esso Res. Canada Ltd. 46 p plus Appendices.

Arctic Laboratories Ltd, 1985b. Data report for current meter measurements at Nipterk, Summer 1985. Unpubl. rep. by Arctic Laboratories Ltd. for Esso Res. Canada Ltd. 73 p plus Appendices.

Arctic Laboratories Ltd, 1985c. Data report for wave amd water level measurements at Adgo, Summer 1985. Unpubl. rep. by Arctic Laboratories Ltd. for Esso Res. Canada Ltd. 59 p plus Appendices.

- 85-0030 Gillie, R.D., 1985. King Point coastal zone sediment transport study. Contractor's final report on field operations. Unpub. rep. by Dobrocky Seatech Ltd., Sidney, B.C. for Geol. Survey of Canada. 30 p plus unnumbered Appendices.
- 85-0031 Richardson, W.J., 1986. Importance of the eastern Alaskan Beaufort Sea to feeding bowhead whales, 1985. W.J. Richardson (Ed.). Unpubdraft report by LGL Ecological Res. Assoc. and Arctic Sciences Ltd., for the U.S. Minerals Management Service. 327 p.
- 85-0033 Steen, J., 1986. Oceanographic and environmental summary data report. Unpub. Rep. by Canadian Marine Drilling Ltd., Calgary.
- 86-0009 Hodgins, D.O., O.J. Sayao, E.D. Kinsella, and P.W. Morgan, 1986 (in print). Nearshore sediment dynamics Beaufort Sea. The 1986 Monitoring Program. Environmental Studies Revolving Funds, Ottawa. Report No. 054.

86-0014 De-Lange-Boom, B.R. and N. Hill, 1986. Data report for wave measurements at Amauligak I-65, summer 1986. Unpub. rep. by Arctic Laboratories Ltd., Sidney, B.C. for Beaudrill Ltd., Calgary, Alberta.

11. DATA INVENTORY TABLE 2 - LISTINGS OF MEASUREMENT LOCATIONS AND OTHER PARAMETERS

This section contains detailed listings of measurement locations and times for each of the data sets plotted on the maps in Section 9. Drifter data and other data at unknown locations may not be listed. There are separate listings for temperature-salinity, current-meter, water-level and wave data. Listings are ordered by data-set number and sorted by date. An explanation of the format appears at the start of each listing. Only data collected within the area of this inventory are listed here; measurements taken elsewhere may be found in the inventories for those areas.

 $\begin{aligned} & \left(\frac{\partial}{\partial x} - \frac{\partial}{\partial x} + \frac{\partial}{\partial x} - \frac{\partial}{\partial x} - \frac{\partial}{\partial x} - \frac{\partial}{\partial x} \right) \\ & \left(\frac{\partial}{\partial x} - \frac{\partial}{\partial x} \right) \end{aligned}$

11.1 TEMPERATURE-SALINITY DATA

The listings contain the following information:

AREA

General area of station.

STN

Station number; wherever possible it is the station number

assigned in the original data source.

LAT, LONG

In degrees and minutes.

YR MO Year Month

DY

Day

HR

Hour; GMT unless specified otherwise

CAST TO

Maximum depth of data, in metres. Zero value impiles a

surface measurement.

WATER DEPTH

in metres, if available

PARAM MEAS

Parameters measured - conductivity, salinity or temperature, indicated by an 'X'. An 'X' under S indicates that salinity was measured by techniques such as titration. Most recent measurements are of the water conductivity ('X' under C), and salinity is then computed using the pressure, temperature and conductivity values.

INSTR

Instruments type:

AAND - Aanderaa current meter APL - Applied Physics Lab. CTD

BECK - Beckman

BISS - Bisset Berman STD BOTT - bottle sample

CT12 - Applied Microsystems CTD-12

GLDL - Gulidline CTD HYD - Hydrometer

HYDR - Hydrolab CT meter

HYT - Hytech induction salinometer

INTO - Interocean CTD MART - Martec data logger

NB - Nell Brown RS5 - Beckman RS5

ST12 - Applied Microsystems STD-12, with transmissometer

TC-2 - Hydrolab TC-2 analogue meter
YSI - Yellow Springs Instruments Co.
4021 - Hydrolab 4021 digital meter
7 - Instrument type is unknown

INT(HR)

The time period between repetitive sampling at the same

station.

NO

The number of repetitive samples.

Blank entries generally indicate that this heading is inapplicable in this case. For example, the headings "INT HR" and "NO" are only used for repetitive casts. A '?' under a heading, such as water depth, means that this information was never entered into our data base. The information is often available however, usually in the reference our source cited in section 10.3.

BOTTLE/CTD	DATA SET	NUMBER:	35-	0001
YEAR : 1935	VESSEL	/AGENCY ·	ST.	ROCHE

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S 1	INSTR	INT NO HR
YUKON COAST YUKON COAST YUKON COAST YUKON COAST YUKON COAST MACKENZIE BAY MACKENZIE BAY TUK. SHELF AMUNDSEN GULF		69 45. 69 45. 69 40. 69 40. 69 38. 69 32. 70 17. 70 28.	140 45. 140 40. 140 40. 140 00. 139 00. 138 30. 138 50. 130 45. 126 20.	35 08 04 ? 35 08 05 ? 35 08 06 ? 35 08 08 ? 35 08 09 ? 35 08 14 ? 35 08 15 ? 35 08 16 ? 35 08 28 ?	0 ? 0 ? 0 ? 0 ? 0 ? 0 ? 0 ?	X	(BOTT (BOTT (BOTT (BOTT (BOTT (BOTT (BOTT (BOTT	

BOTTLE/CTD DATA SET NUMBER: 37-0001 YEAR:1937 VESSEL/AGENCY: ST. ROCHE

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO		HR	CAST TO (M)	WATER DEPTH (M)	RAM IEAS S	INSTR T	INT HR	NO
DOLPHIN-UNION AMUNDSEN GULF AMUNDSEN GULF BEAUFORT SEA		69 07. 69 39. 69 53. 70 36.	116 00. 120 28. 122 50. 128 20.	37 37 37 37	08 08	16 17 17 18	???	0 0 0	? ? ?	 X X X	X BOTT X BOTT X BOTT X BOTT		

BOTTLE/CTD DATA SET NUMBER: 50-0001 YEAR:1950 VESSEL/AGENCY: BURTON ISLAND

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM II MEAS C S T	NSTR INT NO HR
BEAUFORT SEA	34 35 36 37 38 39 40 41 42 44 45 46 47 48 49 50 51 53	70 19.00 70 36.00 71 03.00 71 31.00 71 38.00 71 49.00 71 57.00 72 02.00 71 54.00 72 18.00 72 18.00 72 25.00 72 04.00 71 45.00 71 24.00 71 24.00 71 38.00 72 03.00	138 24.00 135 50.00 133 05.00 130 02.00 129 06.00 127 55.00 126 58.00 126 17.00 126 32.00 126 33.00 127 41.00 128 45.00 130 01.00 131 29.00 132 55.00 134 26.00 137 16.00 137 32.00	50 08 19 08 50 08 19 14 50 08 19 19 50 08 20 00 50 08 20 06 50 08 20 08 50 08 20 11 50 08 20 14 50 08 20 14 50 08 21 20 50 08 21 23 50 08 22 02 50 08 22 05 50 08 22 16 50 08 23 04 50 08 23 20 50 08 23 20	? 365 ? 73 ? 137 ? 201 ? 298 ? 420 ? 420 ? 31 ? 71 ? 375 ? 34 ? 223 ? 365 ? 1865 ? 1865 ? 2050 ? 2360		BOTT BOTT BOTT BOTT BOTT BOTT BOTT BOTT

BOTTLE/CTD DATA SET NUMBER: 51-0001 YEAR:1951 VESSEL/AGENCY: BURTON ISLAND

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
BEAUFORT SEA	63 64 65 66 67 77 77 77 77 78 81 82 83 84 85 89 91 92	71 28.00 71 48.00 72 21.00 72 46.00 72 41.00 72 24.00 72 24.00 72 57.00 71 29.00 71 40.00 71 52.00 71 42.00 71 42.00 71 58.00 72 08.00 71 58.00 71 27.00 71 01.00	139 13.00 137 42.00 136 00.00 134 16.00 134 26.00 134 54.00 135 06.00 135 46.00 135 46.00 136 33.00 139 42.00 129 42.00 129 42.00 129 25.00 128 16.00 126 58.00 126 33.00 126 33.00 126 33.00 127 128 54.00 128 54.00 128 54.00 130 49.00 131 21.00 132 20.00 134 21.00 139 10.00 139 14.00 139 14.00 139 24.00	51 09 20 19 51 09 21 01	400 435 70 73 200 206 95 104 275 287 450 457 925 951 1555 1246 7 201 1417 2551 1556 2515 1580 2066 770 1024 400 420 200 212 130 135 190 193 410 426 173 182 350 374 470 549 1385 1408 1585 3035 1500 2000 1271 2633 1300 2213 1300 2213 1300 878	X X BOTT X X BOTT	

BOTTLE/CTD DATA SET NUMBER: 51-0002 YEAR:1951 VESSEL/AGENCY: CANCOLIM !!

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM INSTR MEAS C S T	INT NO HR
MACKENZ IE BAY BEAUFORT SEA AMUNDSEN GULF		71 52.00 72 51.00 73 21.00 72 41.00 71 53.00 71 39.00 69 37.00 69 24.00 69 14.00 69 23.00 69 29.00 69 54.00 70 24.00	138 49.00 138 14.00 138 15.00 138 32.00 138 49.00 139 08.00 139 08.00 139 08.00 137 30.00 137 30.00 137 13.00 126 12.00 127 13.00 127 13.00 128 15.00 129 13.00 120 13.00 120 13.00	51 08 20 06 51 08 20 09 51 08 20 12 51 08 20 14 51 08 20 16 51 08 21 02 51 08 21 10 51 08 21 10 51 08 21 10 51 08 21 11 51 08 22 11 51 08 25 03 51 08 25 03 51 08 25 03 51 08 25 03 51 08 26 11 51 08 27 00 51 09 01 06 51 09 01 08 51 09 01 12 51 09 02 00	? ?	10 115 1252 358 57 34 20 217 455 131 175 182 263 2185 182 3185 182 3185 182 3185 3185 3185 3185 3185 3185 3185 3185	X X BOTT X X BOTT	

	251		
AMUNDSEN GULF BEAUFORT SEA BEAUFORT SEA	71 18.00 120 53.00 51 09 02 03 71 23.00 121 28.00 51 09 02 07 71 19.00 121 16.00 51 09 03 01 71 13.00 120 08.00 51 09 03 07 71 06.00 119 25.00 51 09 03 09 71 00.00 118 43.00 51 09 03 12 71 04.00 122 48.00 51 09 04 19 71 01.00 123 01.00 51 09 04 21 70 50.00 123 40.00 51 09 05 01 70 23.00 129 27.00 51 09 06 00 69 48.00 135 12.00 51 09 12 00	? 120 ? 10 ? 32 ? 160 ? 153 ? 117 ? 10 ? 250 ? 539 ? 9	X X BOTT X X BOTT
BEAUFORT SEA	70 04.00 135 39.00 51 09 12 04	? 36	X X BOTT
BEAUFORT SEA	70 24.00 136 15.00 51 09 12 08	? 54 ? 731	X X BOTT X X BOTT
BEAUFORT SEA	70 36.00 136 38.00 51 09 12 11 70 15.00 138 12.00 51 09 15 19	? 751 ? 356	X X BOTT
BEAUFORT SEA	70 15.00 138 12.00 51 09 15 19	, 350	A V DOLL

BOTTLE/CTD DATA SET NUMBER: 52-0001 YEAR:1952 VESSEL/AGENCY: CANCOLIM !!

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S		INT NO HR
BEAUFORT SEA		69 39.60 69 39.60 69 39.60 69 39.60 69 39.60 69 48.30 69 45.50 69 45.50 69 47.60 69 47.30 69 49.30 69 69 69 69 69 69 69 69 69 69 69 69 69 6	133 12.50 133 12.50 133 12.50 133 12.50 133 12.50 133 12.50 133 12.50 133 12.50 133 13.50 133 13.50 134 45.00 134 45.00 134 45.00 134 45.00 134 45.00 134 45.00 134 58.00 133 10.80 133 02.20 133 02.20 133 02.20 133 11.10 133 12.50 133 12.50	52 07 19 05 52 07 19 15 52 07 19 20 52 07 19 20 52 07 20 01 52 07 20 01 52 07 20 01 52 07 20 07 52 07 20 10 52 07 20 10 52 07 20 10 52 07 21 10 52 07 21 10 52 07 21 11 52 07 22 11 52 07 22 11 52 07 25 17 52 07 27 28 18 52 07 27 28 01 52 07 30 01	~??????????????????????????????????????	555557777067755755770505533355755550	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	X BOTT X B B B B B B B B B B B B B B B B B B	

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BEAUFORT SEA BEAUF
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52 07 31 14 52 07 31 16 52 07 31 19 52 08 02 19 52 08 02 20 52 08 02 21 52 08 02 21 52 08 03 01 52 08 03 04 52 08 03 11 52 08 03 17 52 08 03 17 52 08 08 07 52 08 08 17 52 08 08 18 52 08 08 18 52 08 08 18 52 08 09 03
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777559951111220035567358238140192965773818846488888877636967486850792955088911609 24321722111220335637358336528401929677388188464888888776369674868507929955088911609 17771 2
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	4	253		
BEAUFORT SEA	71 49.50 129 33.30 72 00.00 128 59.00 72 30.00 129 00.00 71 55.00 128 29.00 71 32.00 128 32.00 70 42.80 128 31.00 70 39.20 128 17.40 70 41.40 128 14.40 70 47.40 128 03.20 71 00.40 127 38.90 71 13.40 127 16.00 71 38.60 126 50.80 71 51.20 125 52.80 71 56.80 125 52.20 71 58.30 126 02.80 71 59.00 126 54.00 72 01.10 129 33.20 71 31.30 131 30.00 71 11.80 131 36.00 72 01.10 129 33.20 71 31.30 131 30.00 71 11.80 131 36.00 70 52.20 131 41.20 70 33.00 131 47.40 70 13.30 130 56.20 70 05.00 132 02.00 69 58.00 133 25.00 69 53.80 134 30.00 69 50.80 135 05.70 69 43.70 135 49.60 69 32.30 136 18.60 69 32.90 137 12.60 69 32.30 136 18.60 69 32.90 137 12.60 69 33.30 137 58.80 69 34.00 138 22.00 69 58.00 133 11.70 69 57.00 133 11.70 69 57.00 133 11.70 69 57.00 133 11.70 69 57.00 133 11.70 69 57.00 133 11.70 69 57.00 133 11.70 69 57.00 133 11.00 70 12.20 138 58.00 70 12.20 138 58.00 70 12.20 138 58.00 70 12.20 138 58.00 70 12.30 136 18.60 69 32.90 137 51.80 70 03.80 139 18.80 69 44.50 139 09.00 69 44.50 139 09.00 69 48.30 139 18.80 69 44.50 139 09.00 69 48.30 139 18.80 69 44.50 139 09.00 69 48.30 139 18.80 69 44.50 139 09.00 69 48.30 139 18.80 69 44.50 139 09.00 69 48.30 139 18.80 69 44.50 139 09.00 69 39.40 136 41.00 69 30.00 137 52.60 69 39.40 136 41.00 69 30.00 137 52.60 69 39.90 138 24.20 69 39.40 136 41.00 69 30.00 137 52.60 69 39.90 138 24.20 69 39.90 138 24.20 69 39.90 138 24.20	52 08 21 01 06 21 06 21 06 21 06 21 06 21 06 21 06 21 06 21 08 21 18 22 00 01 18 22 01 18 22 00 01 18 22 01 18 22 00 01 18 22	??????????????????????????????????????	X X BOTTT X X X BOTTT X X X BOTTT X X X X BOTTT X X X X BOTTT X X X X X X X X X X X X X X X X X X

BOTTLE/CTD DATA SET NUMBER: 52-0002 YEAR:1952 VESSEL/AGENCY: BURTON ISLAND

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR IN MEAS H C S T	
BEAUFORT SEA	11 12 13 14 15 16 17 18	71 57.00 125 49.00 73 50.00 124 40.00 74 13.00 125 10.00 74 17.00 125 42.00 74 20.00 125 48.00 74 24.00 125 43.00 74 02.00 126 38.00 74 05.00 127 13.00 73 48.00 126 52.00	52 09 04 14 52 09 05 02 52 09 05 04 52 09 05 08 52 09 05 12 52 09 05 18 52 09 05 21	10 27 27 54 28 54 225 433 296 567 350 664 155 301 245 664 170 363	X X BOTT X X BOTT	

BOTTLE/CTD DATA SET NUMBER: 53-0001 YEAR:1953 VESSEL/AGENCY: BURTON ISLAND

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		INT NO HR
AMUNDSEN GULF PR. WALES STR. AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF	1234567890112341233456	71 38.00 71 31.00	127 33.00 124 35.00 124 10.00 123 24.00 122 57.00 122 45.00 120 32.00 120 09.00 119 46.00 119 11.00 120 02.00 119 32.00 120 13.00 120 13.00 120 13.00 120 13.00 120 13.00 120 13.00 120 13.00	53 08 08 05 53 08 09 00 53 08 09 05 53 08 09 11 53 08 09 14 53 08 09 19 53 08 10 00 53 08 11 10 53 08 11 12 53 08 11 12 53 08 15 15 53 08 25 08 53 08 25 10 53 08 25 12 53 08 25 12 53 08 25 00 53 08 25 12 53 08 25 12 53 08 25 00	150 188 60 69 400 429 446 487 148 190 21 21 23 24 45 50 ? ? 125 135 17 19 20 23 25 66 90 97 70 75 115 120 20 26 18 21 145 75 80	X X BOTT	

BOTTLE/CTD DATA SET NUMBER: 54-0001 YEAR:1954 VESSEL/AGENCY: LABRADOR

A Committee of the Comm							
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF BEAUFORT SEA		71 34.00 71 34.00 71 34.00 71 33.00 71 27.00 71 58.00 71 49.00 71 49.00 71 52.00 71 15.00 71 16.00 70 55.00 70 35.00 69 55.00	119 46.00 119 27.00 120 00.00 120 16.00 121 35.00 127 21.00 128 01.00 129 18.00 130 30.00 131 40.00 132 00.00 134 28.00 137 52.00 139 00.00 138 57.00	54 09 06 16 54 09 06 17 54 09 06 18 54 09 06 19 54 09 07 17 54 09 12 07 54 09 12 11 54 09 12 19 54 09 12 19 54 09 13 02 54 09 13 08 54 09 13 23 54 09 14 06	? 144 ? 88 ? 165 ? 119 ? 55 ? 399 ? 421 ? 320 ? 503 ? 1189 ? 274 ? 1006 ? 1573 ? 1006 ? 183	X X BOTT X X BOTT	

BOTTLE/CTD DATA SET NUMBER: 54-0002 YEAR:1954 VESSEL/AGENCY: BURTON ISLAND

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
BEAUFORT SEA AMUNDSEN GULF BEAUFORT SEA	2345656789 444789012334556789012345666666666666666666666666666666666666	70 44.00 70 52.00 71 00.00 71 36.00 71 36.00 73 36.00 73 36.00 72 57.00 72 57.00 72 57.00 72 57.00 72 57.00 72 57.00 72 57.00 72 57.00 71 39.00 71 16.00 70 70 38.00 70 38.00	125 00.00 123 05.00 123 10.00 129 50.00 121 26.00 125 22.00 126 06.00 125 14.00 126 27.00 127 36.00 129 55.00 127 14.00 126 42.00 127 12.00 127 48.00 128 08.00 129 55.00 127 12.00 127 48.00 128 08.00 129 00.00 129 00.00 120 42.00 121 42.00 122 48.00 123 42.00 124 46.00 134 46.00 134 57.00	54 08 08 08 54 08 09 16 54 08 09 21 54 08 10 05 54 08 10 06 54 09 07 01 54 09 07 11 54 09 10 17 54 09 11 10 54 09 11 10 54 09 11 10 54 09 11 12 54 09 11 12 54 09 11 12 54 09 11 12 54 09 12 01 54 09 12 10 54 09 12 12 54 09 12 12 54 09 13 00 54 09 13 11 54 09 13 13 54 09 13 23	30 197 254 92 97 449 250 25 80 169 129 4196 20 37 424 47 2	32 219 2337 1955 453 453 453 453 453 453 453 453 453 4	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT	

BOTTLE/CTD DATA SET NUMBER: 54-0003 YEAR:1954 VESSEL/AGENCY: NORTHWIND

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
BEAUFORT SEA AMUNDSEN GULF BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA	123456756789901233456 222223333353	70 45.00 71 22.00 71 46.00 71 54.00 71 57.00 74 19.00 72 05.00 72 01.00 71 03.00 71 03.00 71 00.00 70 50.00 70 38.00 70 27.00 74 26.00 74 26.00 73 58.00 73 48.00		54 08 09 15 54 08 09 21 54 08 10 02 54 08 10 05 54 08 12 22 54 08 14 02 54 09 05 13 54 09 06 15 54 09 07 02 54 09 07 03 54 09 07 03 54 09 07 08 54 09 07 08 54 09 09 19 54 09 09 19 54 09 10 11 54 09 10 13	40 400 100 25 10 30 280 40 90 40 650 2594 388 298 40 25 20	53 457 457 33 15 37 298 44 104 50 101 271 466 472 326 57 57 38 27	X	X BOTT X	

BOTTLE/CTD DAT YEAR:1955							
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATE TO DEPT (M) (M)	R PARAM INSTE H MEAS C S T	R INT NO HR
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA		69 51.00 70 12.00 69 40.00	0 138 41.00 0 138 35.00 0 140 15.00	55 08 27 ? 55 08 27 ? 55 09 04 ?	132 183 301 329 20 25	X X BOTT X X BOTT X X BOTT	<u>.</u>
ر المساحد والمساعد والما والمساعد والمساعد والمساعد والمساعد والمساعد والمساعد والمساعد والمساعد والمساعد				· .		شناور کنایی دنا شروی این اس میرود و در این انداره	
BOTTLE/CTD DATA YEAR:1955				ND			
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA	14 15 16	71 00. 71 33. 72 09.	128 53. 130 39. 132 10.	55 08 02 ? 55 08 02 ? 55 08 02 ?	? 37 ? 366 ? 1829	X X BOTT X X BOTT X X BOTT	
	·				· · · · · · · · · · · · · · · · · · ·		·
BOTTLE/CTD DATA YEAR:1956 V					·		
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
BEAUFORT SEA BEAUFORT SEA AMUNDSEN GULF AMUNDSEN GULF BEAUFORT SEA		69 02.00	115 55.00	56 07 30 00 56 07 31 00 56 07 31 22 56 08 04 03 56 08 27 21	150 168 10 12 15 18 20 20 50 69	X X BOTT X X BOTT X X BOTT X X BOTT X X BOTT	
والمراجع المراجع							
BOTTLE/CTD DATA YEAR:1956 VE		MBER: 56 GENCY: Al	-0012 RCRAFT				

LAT LON DEG MIN DEG MIN CAST WATER PARAM INSTR INT NO TO DEPTH MEAS HR (M) (M) C S T DATE AREA STN YR MO DY HR 56 04 14 ? ? ? X X CANADA BASIN 52 74 12. 134 56.

BOTTLE/CTD	DATA SET NUMBER:	57-0001
YEAR: 1957	VESSEL/AGENCY:	SPAR

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	TO [VATER P DEPTH (M) C	MEAS		INT NO HR
AMUNDSEN GULF AMUNDSEN GULF	*1 - * - #		125 33.00 121 49.00	57 07 17 ? 57 07 23 ?	394 350	421 350		(BOTT	

BOTTLE/CTD DATA SET NUMBER: 57-0002 YEAR:1957 VESSEL/AGENCY: ATKA

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA AMUNDSEN GULF BEAUFORT SEA BEAUFORT SEA		71 05.00 71 29.00 71 50.00 69 45.00 70 15.00 71 00.00 70 10.00 69 46.00 70 15.00	128 09.00 130 01.00 138 15.00 136 01.00 128 30.00 124 46.00	57 08 03 ? 57 08 03 ? 57 08 03 ? 57 08 04 ? 57 08 04 ? 57 08 14 20 57 08 16 ? 57 08 18 ? 57 08 18 ?	45 53 60 70 300 307 150 164 40 50 ? 44 30 ? 150 170 40 49	X X BOTT X X BOTT	

BOTTLE/CTD DATA SET NUMBER: 58-0001 YEAR:1958 VESSEL/AGENCY: BURTON ISLAND

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO. HR.
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA	35 36 37 34 33 32	71 26.00 71 55.00 70 25.00 69 50.00	129 00.00 128 30.00 127 30.00 134 00.00 138 15.00 140 58.00	58 58 58 58	09 02 11 09 02 16 09 03 00 09 03 14 09 03 21 09 04 06	30 150 150 41 150 40	? 177 402 48 172 ?	X X X X	X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 59-0001 YEAR:1959 VESSEL/AGENCY: ICE ISLAND T-3

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		INSTR	INT NO HR
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	123458A6A	71 23.00 71 57.30 71 44.00	130 30.00 130 25.00 130 57.00 132 27.00	59 06 09 22 59 06 11 01 59 06 11 23 59 06 18 00 59 06 30 19 59 07 05 21 59 07 09 20 59 07 13 21 59 07 23 22	15 980 882 890 660 680 340 780 1374 1480 1000 1027 15 1457 1372 1400 1265 ?	X X X X X X X X X X X X X X X X	BOTT BOTT BOTT BOTT BOTT BOTT BOTT BOTT	

CANADA BASIN					25.00								BOTT
CANADA BASIN CANADA BASIN	-				30.00 48.00							• • •	BOTT BOTT
CANADA DASTIN	10	7 1	43.00	130	40.00	59	US	09	22	2000	 ^	^	DOTT

BOTTLE/CTD	DATA SET	NUMBER:	59-0002	
YEAR: 1959	VESSEL	_/AGENCY:	STATEN	ISLAND

AREA		STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INS MEAS C S T	STR INT NO HR
BEAUFORT AMUNDSEN AMUNDSEN BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT	GULF GULF	13A 15A 16A 17A 37 36 35 22A 23A 225A 26A 27A 33 32	73 10.00 69 01.00 69 12.00 69 19.00 71 53.00 71 25.00 70 50.00 70 26.00 70 49.00 71 19.00 71 19.00 71 08.00 70 48.00 70 02.00 69 56.00	129 48.00 116 47.00 116 39.00 116 30.00 127 32.00 128 19.00 129 00.00 131 56.00 132 42.00 133 42.00 136 12.00 136 52.00 138 09.00 140 52.00	59 08 10 20 59 08 25 17 59 08 25 19 59 08 25 21 59 08 29 04 59 08 29 08 59 08 29 11 59 08 29 20 59 09 01 23 59 09 02 02 59 09 02 06 59 09 02 21 59 09 02 21 59 09 03 10 59 09 03 14		X X BC X X BC X X BC X X BC X X BC X X BO X BO	OTT OTT TT TT TT TT TT TT TT TT

BOTTLE/CTD DATA SET NUMBER: 59-0014 YEAR:1959 VESSEL/AGENCY: AIRCRAFT

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)		PARAM INSTR MEAS C S T	INT NO HR
BEAUFORT SEA	922	72 04.0	137 35.0	59 03?	?	?	вотт	

BOTTLE/CTD DATA SET NUMBER: 60-0001

YEAR:1960	VESSEL	AGENCY: BURTON IS	_AND		
AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER PARAL TO DEPTH MEA: (M) (M) C S	
BEAUFORT SEA CANADA BASIN CANADA BASIN CANADA BASIN	11 12 13 14 15 16 17 18 19 20 25 26 27 28 29 30 31 32	70 46.00 140 14.0 71 15.00 139 06.0 71 03.00 138 12.0 71 14.00 136 45.0 71 11.00 134 56.0 71 27.00 132 50.0 71 07.00 130 51.0 71 55.00 127 33.0 71 26.00 128 18.0 71 52.00 129 02.0 73 43.00 126 41.0 74 07.00 126 20.0 74 20.00 127 24.0 74 23.00 128 36.0 74 09.00 131 08.0 74 53.00 135 18.0 75 12.00 137 24.0 74 47.00 134 48.0	00 60 08 17 04 00 60 08 17 12 00 60 08 17 22 00 60 08 19 15 00 60 08 19 12 00 60 08 19 12 00 60 08 19 23 00 60 08 20 07 00 60 09 07 06 00 60 09 07 06 00 60 09 08 18 00 60 09 09 07 00 60 09 09 07 00 60 09 09 07 00 60 09 09 07 00 60 09 09 07 00 60 09 09 07 00 60 09 10 04 00 09 11 <td< td=""><td>1178 1600 X ? 1975 X 1744 1829 X 1496 1554 X ? 914 X 1200 1280 X 58 63 X 200 221 X 263 265 X 26 26 X 105 111 X 300 338 X 384 384 X 375 395 X 2600 2642 X 3350 3365 X 3500 3512 X 3306 3383 X</td><td>X BOTT X BOTT</td></td<>	1178 1600 X ? 1975 X 1744 1829 X 1496 1554 X ? 914 X 1200 1280 X 58 63 X 200 221 X 263 265 X 26 26 X 105 111 X 300 338 X 384 384 X 375 395 X 2600 2642 X 3350 3365 X 3500 3512 X 3306 3383 X	X BOTT

BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA	33 34 35 36	71 59.00 70 07.00	127 29.00 127 29.00 132 02.00 140 14.00	60 09 18 06 60 09 18 11 60 09 18 22 60 09 19 21	175 183 380 402 25 28 48 48	X X X	X BOTT X BOTT X BOTT X BOTT	
BOTTLE/CTD DATA		IUMBER: 6 'AGENCY: N	0-0002 ORTHWIND					
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	MEAS	INSTR T	INT NO HR
BEAUFORT SEA	13 14 15 16 17 18 19	70 06.00 70 16.00 70 27.00 70 31.00 69 47.20	138 38.00 137 25.00 135 39.00 133 54.00 132 42.00 138 38.00 135 21.00	60 10 20 ? 60 10 20 ? 60 10 20 ? 60 10 21 ? 60 10 21 ? 60 10 21 ? 60 10 21 ?	180 183 58 60 54 55 60 60 30 40 44 44 517 564	X X X X X X	X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT	
				<u></u>		——————		
BOTTLE/CTD DATA YEAR:1960 V	SET N ESSEL/	IUMBER: 6 AGENCY: S	0-0003 ALVELINUS					
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	MEAS	INSTR T	INT NO HR
MACKENZIE BAY	1005 1005 1010 1013 1020 1024 1036 1045	69 34.30 69 31.20 69 38.00 69 31.90 69 34.00 69 32.00	138 53.90 138 53.90 139 04.50 138 35.00 138 56.30 138 51.00 138 57.00 137 54.00	60 08 01 ? 60 08 02 ? 60 08 03 ? 60 08 06 ? 60 08 10 ? 60 08 11 ? 60 08 25 ? 60 08 31 ?	1 2 5 ? 7 9 76 91 4 4 7 8 20 36 22 22	X X X X X	X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT	
				والمناسب المعاملين إسرابي المعاسف المستعدد المستعدد	وصربين مجدد نب دعد ت		سرب دران سرب	
BOTTLE/CTD DATA YEAR:1961 V		UMBER: 61 AGENCY: SA	I-0001 ALVEL INUS					
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		INSTR T	INT NO HR
KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY LIVERPOOL BAY	1005 1008 1009 1010 1011 1012 1013 1015 1016 1017 1018 1020 1021 1073 1074 1079 1082	69 41.00 69 43.50 69 39.00 69 58.00 69 58.00 70 11.00 70 29.50 70 23.60 69 58.70 69 58.70 69 56.00 69 47.50 69 42.80	132 33.80 132 48.00 132 48.00 132 48.00 128 54.50 128 53.00 128 35.00 128 35.00 128 19.00 129 30.00 129 30.00 129 30.00 129 37.00 130 34.00 130 24.00 130 34.00 131 34.00 132 34.00	61 07 05 ? 61 07 06 ? 61 07 06 18 61 07 06 21 61 07 09 23 61 07 10 10 61 07 10 20 61 07 10 23 61 07 11 09 61 07 12 03 61 07 12 03 61 07 12 14 61 07 13 01 61 08 12 00 61 08 14 02 61 08 17 19 61 08 19 07	2 4 6 4 0 1 0 2 2 2 2 3 3 1 6 7 9 3 4 1 6 7 8 0 28 2 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT X	

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BOTTLE/CTD DATA SET NUMBER: 62-0001 YEAR:1962 VESSEL/AGENCY: SALVELINUS

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WAT TO DEI (M) (M	TH MEAS	INSTR T	INT NO HR
LIVERPOOL BAY AMUNDSEN GULF LIVERPOOL BAY LIVERPOOL BAY LIVERPOOL BAY AMUNDSEN GULF LIVERPOOL BAY LIVERPOOL BAY AMUNDSEN GULF LIVERPOOL BAY	0001 0005 0009 0010 9001 9001 9002 9004 9005 0017 0016 0019 0020 0025 0026 0028 9006 0032 0033 9007 0034 9008	69 49.30 130 19.00 69 47.00 130 19.00 69 37.00 130 19.00 69 48.00 130 13.00 69 37.50 131 02.60 69 50.50 129 07.00 69 50.00 128 56.00	62 07 19 ? 62 07 20 ?	12 6 ? 8 0 0 0 0 7 1 7 1 1 1 8 27 3	??? XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	(BOTT (BOTT (BOTT (BOTT (BOTT BOTT BOTT BOTT BOTT	

BOTTLE/CTD DATA SET NUMBER: 62-0002 YEAR:1962 VESSEL/AGENCY: NRC

AREA	STN	LAT DEG MIN DE	LON EG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR	INT HR	NO
KUGMALLIT BAY		69 24.90 13 69 24.30 13 69 24.70 13 69 26.90 13 69 26.90 13 69 26.60 13 69 26.80 13 69 26.80 13 69 26.80 13 69 26.60 13 69 26.60 13 69 26.60 13 69 26.80 13	20000000000000000000000000000000000000	62 04 27 22 200 19 62 04 27 200 11 17 18 19 62 04 28 15 17 18 11 17 18 18 11 17 18 18 11 17 18 18 11 17 18 18 11 17 18 18 11 17 18 18 11 17 18 18 11 17 18 18 11 17 18 18 11 17 18 19	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	128263858580566857799992356855299997973397737993937739925702727725995959	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	X BOTT X BOTT X BOTT X X X BOTT X X BOTT X X X X X X X X X X X X X X X X X X		

KUGMALLIT BAY	69 26.90 132 59.80 69 27.80 133 02.40 69 26.90 132 59.80 69 27.80 133 02.40 69 26.90 132 59.80 69 26.90 132 59.80 69 24.90 132 58.10 69 26.90 132 59.80 69 23.80 132 58.40 69 30.80 133 14.50 69 40.60 133 20.10 69 26.90 132 59.80 69 26.90 132 59.80 69 26.90 132 59.50 69 26.90 132 59.50 69 26.90 132 59.50 69 26.90 132 59.50	2 6 2 62 05 02 21 62 05 02 21 62 05 02 22 62 05 02 22 62 05 02 23 62 05 03 00 62 05 03 01 62 05 03 01 62 05 03 01 62 05 03 15 62 05 03 15 62 05 03 17 62 05 03 19 62 05 03 22 62 05 03 22 62 05 03 23 62 05 04 00 62 05 04 00	259599596689967669 ????????????????????????????????	X BOTT X
KUGMALLIT BAY	69 26.90 132 59.70 69 26.90 133 02.00 69 24.90 132 58.10 69 23.80 132 59.30 69 24.70 132 58.60 69 25.50 132 59.80 69 24.90 132 59.80 69 24.90 132 59.80 69 24.90 132 59.80 69 26.90 132 59.80 69 24.90 132 58.10 69 24.90 132 58.10	62 05 04 00 62 05 04 03 62 05 04 04 62 05 04 04 62 05 04 05 62 05 04 05 62 05 04 18 62 05 04 19 62 05 04 23 62 05 04 23 62 05 05 00 62 05 05 00 62 05 05 00 62 05 05 00 62 05 05 01 62 05 05 01 62 05 05 05 62 05 05 00 62 05 05 00	995023950299999999558 121957????????????????????????????????????	X BOTT X

BOTTLE/CTD DATA SET NUMBER: 62-0003 YEAR:1962 VESSEL/AGENCY: NRC

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR		VATER DEPTH (M)	PARAN MEAS C S		INT NO HR
KUGMALLIT BAY		69 23.40 69 23.80 69 26.60 69 24.70 69 24.90 69 25.00 69 26.00 69 27.00 69 27.00 69 27.00 69 27.00 69 27.00 69 27.00 69 27.00 69 27.00 69 27.00 69 23.40 69 23.80 69 24.50 69 24.70 69 23.80 69 24.70 69 25.00 69 27.00 69 27.00	132 59.30 132 59.40 133 02.25 132 58.60 132 58.60 132 58.60 132 58.80 132 58.60 132 58.60 132 59.70 132 59.60 132 59.60 132 59.60	62 11 26 18 62 11 26 22 62 11 27 00 62 11 27 18 62 11 27 23 62 11 28 07 62 11 28 17 62 11 28 22 62 11 28 23 62 11 28 23 62 11 29 19 62 11 29 21 62 11 29 21 62 11 29 21 62 11 30 04 62 11 30 05 62 11 30 06 62 11 30 19 62 11 30 20 62 11 30 20	??????????????????????????????	7 21 17	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT	

		263		
KUGMALLIT BAY	69 24.70 132 58.6 69 23.80 132 59.4 69 24.50 132 58.6 69 25.90 132 58.6 69 26.30 132 59.4 69 23.40 132 59.4 69 23.40 132 59.4 69 24.90 132 58.6 69 24.90 132 58.6 69 24.90 132 58.6 69 24.70 132 58.6 69 24.70 132 58.6 69 24.70 132 58.6 69 24.70 132 58.6 69 25.00 132 58.6 69 24.70 132 58.6 69 25.10 132 58.6 69 26.20 132 59.2 69 26.20 132 59.2 69 26.20 132 59.2 69 26.10 132 58.6 69 26.20 132 59.2 69 26.20 132 59.2 69 26.10 132 58.6 69 26.20 132 59.2 69 26.10 132 58.6 69 26.20 132 59.2 69 26.20 132 59.2 69 26.30 133 02.0 69 25.10 132 58.6 69 26.00 132 58.6 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 26.00 132 58.8 69 25.00 132 58.8 69 25.00 132 58.8 69 25.00 132 58.8 69 25.00 132 58.8 69 25.00 132 58.8 69 25.00 132 58.8 69 25.00 132 58.8	62 12 02 12 02 12 02 12 02 12 02 12 02 12 03 19 03 19 19 10 00 62 12 04 00 00 62 12 04 17 8 9 00 62 12 05 02 12 05 02 12 05 02 12 05 02 12 05 02 12 05 02 12 05 02 12 05 02 12 05 02 12 05 02 12 05 02 06 02 12 05 02 02 06 02 12 05 02 02 06 02 12 05 02 02 06 02 12 05 02 02 06 02 12 05 02 02 06 02 12 05 02 02 06 02 12 05 02 02 06 02 12 05 02 02 05 02 02 05 02 02 02 02 02 02 02 02 02 02 02 02 02	??????????????????????????????????????	X

BOTTLE/CTD DATA SET NUMBER: 62-0004 YEAR:1962 VESSEL/AGENCY: NRC

AREA			LON G MIN	DA YR MC	ATE D DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
KUGMALLIT BAY	699 699 6999 6999 6999 6999 6999 6999	25.00 13 25.00 13 25.00 13 25.00 13 25.00 13 25.00 13 25.00 13 25.00 13	2 58.10 58.40 58.40 58.40 58.10 58.10 58.10 58.40 58.40 58.40 58.40 58.40 58.40 58.40	62 12 62 12 62 12 63 01 63 01 63 01 63 01 63 02 63 02 63 02 63 02 63 02 63 02 63 02 63 02 63 02 63 02	2 14 21 2 24 21 2 24 22 1 01 22 1 10 23 1 18 20 1 18 20 1 18 27 21 2 7 23 2 11 23	???????????????????	505005050505050 2050505050505050	X	X BOTT	

KUGMALLIT BAY	69 25.00 132 58.10 69 25.00 132 58.10 69 25.00 132 58.40 69 25.00 132 58.40	63 03 07 20 63 03 08 00 63 03 17 21 63 03 18 00 63 03 25 21 63 03 25 23 63 04 03 21 63 04 09 21 63 04 09 22 63 05 01 17	???????????????????????????????????????	55 X X X X X X X X X X X X X X X X X X	X BOTT
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BOTTLE/CTD DATA SET NUMBER: 63-0001 YEAR:1963 VESSEL/AGENCY: SALVELINUS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NÓ HR
AMUNDOSEN GULF AMUNDO	0001 0001 0001 0001 0001 0001 0001 000	70 09.02 70 09.02 70 09.02 70 09.50 70 09.02 70 09.	124 40.02 124 40.02 124 40.02 124 37.02 124 37.02 124 37.02 124 37.02 125 26.00 125 40.50 125 40.50 125 40.50 125 40.50 125 40.50 125 48.50 125 35.13 125 01.55 125 02.55 126 02.55 127 02.80 128 47.00 129 47.00 129 47.00 129 47.00 129 47.00 129 129 129 129 129 129 129 129 129 129	63 06 26 29 ????????????????????????????????	00485653230200001803804500016002857070555534440035400675 1838266028557070555534440036675	???????????????????????????????????????	xxxxxxxxx	X BOTT X	

BOTTLE/CTD DATA SET NUMBER: 63-0002 YEAR:1963 VESSEL/AGENCY: NRC

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)		PARAM MEAS C S	INSTR T	INT NO HR
KUGMALL IT BAY	111122223333344444555556666677777888889999911 22 33 44 55 66 77 8899	25.1000 25.1000 25.1000 25.1000 25.1000 25.1000 26.10000 26.1000 26.1000 26.1000 26.1000 26.1000 26.1000 26.10000 26.1000 26.1000 26.1000 26.1000 26.1000 26.1000 26.10000 26.1000 26.1000 26.1000 26.1000 26.1000 26.1000 26.10000 26.1000 26.1000 26.1000 26.1000 26.1000 26.1000 26.10000 26.1000 26.1000 26.1000 26.1000 26.1000 26.1000 26.10000 26.1000 26.1000 26.1000 26.1000 26.1000 26.1000 26.10000 26.1000 26.1000 26.1000 26.1000 26.1000 26.1000 26.10000 26.1000 26.1000 26.1000 26.1000 26.1000 26.1000 26.10000 26.1000 26.	132 58.60 132 59.40 132 59.20 132 59.80 132 58.60 132 58.60 132 59.20 132 59.20 132 59.40 132 59.40 132 59.40 132 59.40 132 59.40 132 58.60 132 59.40 132 58.60 132 59.40 132 58.60 132 59.40 132 59.40 132 59.40 132 59.40 132 59.40 132 59.60 132 59.50 132 59.50	63 05 02 16 63 05 02 16 63 05 02 17 63 05 02 17 63 05 02 19 63 05 02 19 63 05 02 19 63 05 02 19 63 05 02 22 22 22 22 22 23 00 63 05 02 22 23 05 02 22 23 06 03 05 02 22 23 00 63 05 02 22 23 00 63 05 03 05 03 01 63 05 03 05 03 01 63 05 03 05 03 04 63 05 04 15 63 05 04 17 77 77 78 63 05 04 21 17 77 78 63 05 04 21 18 8 63 05 04 22 11 77 77 8 63 05 05 05 05 05 05 05 05 05 05 05 05 05	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	937437949347374949373794937449374463346364346364346364643	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	X BOTT X X X X X X X X X X X X X X X X X X	

BOTTLE/CTD DATA SET NUMBER: 63-0003 YEAR:1963 VESSEL/AGENCY: NRC

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	I NT HR	NO
KUGMALLIT	BAY	69 30.80 69 27.10 69 27.00 69 26.60 69 26.50 69 26.00 69 25.60 69 26.00 69 24.90	133 08.60 133 00.20 132 59.60 133 02.20 132 59.30 132 58.30 132 57.90 132 58.80 132 58.80 132 58.60 132 58.60 132 58.60 132 58.90 32 58.90 32 59.50 32 59.40 32 59.50	63 09 13 23 63 09 14 00 63 09 14 01 63 09 14 20 63 09 15 15 63 09 15 15 63 09 15 16 63 09 15 16 63 09 15 18 63 09 15 18 63 09 15 21 63 09 15 22 63 09 15 23 63 09 15 23	???????????????????????????????????????	1335717195302564944457764449411952007753300	X	X BOTT X		

BOTTLE/CTD DATA SET NUMBER: 64-0001 YEAR:1964 VESSEL/AGENCY: SALVELINUS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
AMUNDSEN GULF AMUNDSEN GULF	0001 0001 0001 0001 0001 0001 0001 000	70 08.95 70 08.82 70 08.95 70 08.97 70 08.97 70 08.97 70 08.97 70 08.95 70 08.95 70 08.95	124 39.80	64 07 04 ? 64 07 05 ? 64 07 10 ? 64 07 25 ? 64 07 29 ? 64 07 29 ? 64 07 31 ? 64 08 05 ? 64 08 05 ? 64 08 05 ?	69392104362	???????????	X X X X X X	X BOTT X BOTT	

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AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF	0001 0001 0001 0001 0001 0001	70 08.95 124 40.2 70 08.10 124 39.6 70 08.95 124 39.9 70 08.95 124 40.2 70 08.95 124 40.2 70 08.95 124 39.9 70 08.95 124 40.2	0 64 08 08 ? 0 64 08 08 ? 0 64 08 08 ? 0 64 08 09 ? 0 64 08 10 ?	0 ? 0 ? 0 ? 0 ? 0 ? 8 ? 4 ?	X BOTT X BOTT X BOTT X BOTT X BOTT X X BOTT X X BOTT
West Control					

BOTTLE/CTD DATA SET NUMBER: 64-0002 YEAR:1964 VESSEL/AGENCY: NORTHWIND

AREA STN LAT LON PATE CAST WATER PARAM INSTR INT NO DEG MIN DEG MIN PR MO DY HR TO DEPTH MEAS TO MATER PARAM INSTR INT NO (M) C S T T TUK. SHELF 17 70 09.00 132 16.00 64 08 19 ? 18 20 X X BOTT

BOTTLE/CTD DATA SET NUMBER: 66-0011 YEAR:1966 VESSEL/AGENCY: INUVIK RES. LAB.

AREA	STN	LAT DEG M!N	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S	INSTR INT NO HR T
ESKIMO LAKES	. ^	68 46. 68 46. 68 46. 68 46. 68 46. 68 46. 68 46.	133 20. 133 20. 133 20. 133 20. 133 20. 133 20. 133 20. 133 20.	66 11 11 ? 66 11 17 ? 66 12 09 ? 66 12 12 ? 66 12 14 ? 66 12 23 ? 66 12 30 ? 67 01 04 ? 67 01 13 ?	0 33 0 33 0 33 0 33 0 33 0 33 0 33 33 33	x x	X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT

BOTTLE/CTD DATA SET NUMBER: 69-0001 YEAR:1969 VESSEL/AGENCY: STATEN ISLAND

AREA	STN	LAT DEG MIN	LON DEG MIN	Ϋ́R	DATE MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	T	INSTR	INT I	10
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA		71 19.50 70 05.50 70 01.00			08 08 08 09 08 10	18	? ?	1784 34 184	X X X	X	BOTT BOTT BOTT		

BOTTLE/CTD DATA SET NUMBER: 70-0001 YEAR:1970 VESSEL/AGENCY: AIDJEX PILOT

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY I	HR	CAST TO (M)	WATER DEPTH (M)	PAR ME C	INSTR T	INT HR	NO
BEAUFORT SEA	500	72 19.60 72 24.40 72 19.30 72 27.90 72 34.10 72 28.50 72 29.90 72 27.50 72 27.50	136 17.10 136 17.90 136 44.00 136 45.10 136 46.90 136 50.90 136 50.90 136 50.90 136 50.90 136 50.90 136 51.00 136 47.10 136 47.10 136 47.10 136 47.20 136 53.30 136 53.30	70 70 70 70 70 70 70 70 70 70 70 70 70 7	03 24 03 24 03 26 03 26 03 26 03 27 03 27 03 27 03 27 03 27 03 29 03 29 03 29 03 30 03 30	2012377700233777002221112222311700	498 500 500 500 500 500 500 500 500 500 50	???????????????????????????????????????	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT X		

BOTTLE/CTD DATA SET NUMBER: 70-0002 YEAR:1970 VESSEL/AGENCY: HUDSON

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S	INSTR T	INT NO HR
BEAUFORT SEA		70 08.40 139 15.90 70 37.00 139 29.00 70 22.00 139 42.00 70 10.30 139 52.60 69 59.30 140 15.70 69 42.00 140 38.00 70 41.30 134 41.50 70 26.50 134 17.50 70 17.00 134 00.00 70 57.40 135 03.40 70 52.40 134 57.00 70 46.50 134 57.00 70 46.50 134 50.00 71 26.80 130 53.90 71 16.60 130 37.60 71 07.00 130 17.80 70 56.80 130 03.60 71 07.00 135 20.00 69 56.50 134 33.00 69 56.50 134 33.00 69 51.00 135 20.00 71 15.80 127 57.60 71 02.00 125 44.00 70 49.80 123 30.50 71 20.00 119 24.00 71 59.00 119 30.00	70 08 28 19 70 08 30 19 70 08 30 23 70 08 31 00 70 08 31 02 70 08 31 04 70 09 06 16 70 09 06 18 70 09 06 19 70 09 08 01 70 09 08 02 70 09 12 22 70 09 14 15 70 09 14 19 70 09 14 19 70 09 14 21 70 09 14 21 70 09 14 21 70 09 14 21 70 09 18 15 70 09 19 08 70 09 23 13 70 09 24 05 70 09 24 15 70 09 24 15 70 09 24 15	? 210 ? 1426 ? 509 ? 54 ? 26 ? 26 ? 26 ? 45 440 ? 73 ? 313 ? 313 ? 313 ? 313 ? 313 ? 313 ? 315 ? 106 ? 73 ? 106 ? 73 ? 73 ? 73 107 ? 73 118	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 70-0003 YEAR:1970 VESSEL/AGENCY: RICHARDSON

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR		WATER PARAM DEPTH MEAS (M) C S	INSTR T	INT NO HR
KUGMALLIT BAY		69 30.50 133 05.30 69 30.60 133 10.90 69 30.80 133 16.20 69 32.20 133 16.50 69 33.50 133 11.10 69 34.60 133 02.90 69 36.00 133 08.50 69 37.50 133 14.60 69 38.60 133 07.10 69 39.50 133 40.00 69 44.20 133 03.20 69 42.20 132 55.40 69 44.40 132 41.50 69 45.20 132 37.40 69 48.60 132 37.40 69 48.60 132 35.90 69 51.70 132 554.70 69 51.50 133 10.10 69 47.70 133 05.20 69 42.20 133 03.60 69 45.00 133 03.60 69 45.00 133 03.60 69 34.80 133 11.50 69 31.90 133 07.20 69 33.50 133 37.50 69 41.50 133 37.50 69 41.50 133 37.50 69 41.50 133 37.50 69 44.70 133 34.50 69 51.20 134 04.00 69 51.20 134 06.40 69 54.60 134 02.00 69 47.40 134 04.00 69 51.70 134 22.70 69 49.60 134 20.10 69 51.70 134 42.00 69 58.50 134 10.60 69 51.70 134 42.70 69 49.60 134 40.90 69 48.40 134 40.90 69 48.40 134 40.90 69 47.40 134 04.70 69 50.00 134 09.90 69 51.30 134 12.80	70 07 15 21 70 07 15 22 70 07 15 22 70 07 15 23 70 07 16 00 70 07 16 01 70 07 16 01 70 07 16 01 70 07 16 02 70 07 19 17 70 07 19 18 70 07 19 19 70 07 19 20 70 07 19 20 70 07 19 21 70 07 19 23 70 07 19 20 70 07 19 23 70 07 19 20 70 07 19 23 70 07 19 20 70 07 19 21 70 07 19 23 70 07 20 00 70 07 22 15 70 07 23 15 70 07 24 18 70 07 24 18 70 07 24 18 70 07 24 18 70 07 24 18 70 07 24 18 70 07 24 18 70 07 24 22 70 07 24 21 70 07 24 22 70 07 24 22 70 07 24 23 70 07 27 19 70 07 27 19 70 07 27 19 70 07 27 19 70 07 27 23 70 07 27 23 70 07 27 23 70 07 27 23 70 07 27 19 70 07 27 19 70 07 27 19 70 07 27 19 70 07 27 19 70 07 28 00 70 08 25 15 70 08 25 15 70 08 25 17	?4433434456566942?07963579???50743??59????	???????????????????????????????????????	X BOTT X	

BOTTLE/CTD DATA SET NUMBER: 71-0001 YEAR:1971 VESSEL/AGENCY: SALVELINUS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
KUGMALLIT BAY TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF LIVERPOOL BAY MACKENZIE BAY ESKIMO LAKES	501 502 503 504 505 506 01 01 02 02 03 01	69 24.40 69 49.30 69 58.40 70 16.00 70 13.20 69 59.40 69 33.00 69 34.60 69 33.50 69 31.20 69 31.40 69 27.80 69 19.50	132 58.90 132 41.50 132 57.00 131 40.00 131 06.00 129 13.20 132 41.50 131 07.30 131 12.60 131 29.00 131 34.50 131 10.40 131 06.40 130 54.50	71 07 18 03 71 07 19 00 71 07 19 06 71 07 19 14 71 07 19 20 71 07 20 21 71 07 18 ? 71 07 23 ? 71 07 24 ? 71 07 25 ? 71 07 26 ? 71 07 29 ?	24 87 36 15 11 0 11 37 75 27 28 6	24 10 19 38 17 13 ? ? ?	X X X X X X X X	X BOTT X BOTT	

ESKIMO LAKES ESKIMO LAKES LIVERPOOL BAY LIVERPOOL BAY	01 69 04 69 01 69 07 69 04 69 02 69 02 69 03 69 04 69 04 69	25.60 25.60 43.70 50.70 56.70 49.20 40.80 43.80 24.42	130 1 130 5 130 5 130 2 129 3 129 4 130 3 130 5	9.00 55.00 55.00 22.00 26.10 42.30 20.00 35.00 27.90 55.42	71 71 71 71 71 71 71 71 71	07 30 07 30 08 02 08 04 08 06 08 07 08 07 08 09 08 09 08 09 08 09 08 16 09 01	???????????	15 10 15 47 10 13 65 15 250	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT
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BOTTLE/CTD DATA SET NUMBER: 71-0003 YEAR:1971 VESSEL/AGENCY: AIDJEX

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST W TO D (M)	ATER EPTH (M)	PARAM MEAS C S	INSTR T	INT HR	NO
BEAUFORT SEA BEAUF		74 02.70 73 52.60 73 59.60 74 01.60 73 51.00 74 00.00 73 57.40 73 57.40 73 49.40	131 20.60 132 20.000 131 22.000 131 22.	71 03 18 14 71 03 18 14 71 03 18 19 71 03 18 19 71 03 18 19 71 03 18 19 71 03 19 00 71 03 19 05 71 03 19 05 71 03 19 05 71 03 19 14 71 03 19 14 71 03 19 14 71 03 19 19 71 03 19 19 71 03 20 00 71 03 20 00 71 03 20 00 71 03 20 05 71 03 20 14 71 03 20 14 71 03 20 14 71 03 21 00 71 03 21 05 71 03 21 05 71 03 21 05 71 03 21 14 71 03 21 14 71 03 21 14 71 03 21 14 71 03 21 14 71 03 21 14 71 03 21 19 71 03 22 00 71 03 22 00 71 03 22 00 71 03 22 14 71 03 21 19 71 03 22 14 71 03 22 19 71 03 22 19 71 03 23 00 71 03 22 19 71 03 23 00 71 03 22 19 71 03 23 00	50000000000000000000000000000000000000	???????????????????????????????????????	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT X X X X X X X X X X X X X X X X X X		

ERALPORT SEA 73 65.40 132 23.00 71 03 23 05 500 7 X X BOTT BEALPORT SEA 73 65.80 131 28.60 71 03 23 05 500 7 X X BOTT BEALPORT SEA 73 65.80 131 28.60 71 03 23 05 500 7 X X BOTT BEALPORT SEA 73 65.80 131 28.60 71 03 23 05 500 7 X X BOTT BEALPORT SEA 73 65.80 131 28.60 71 03 23 05 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 14 500 7 2 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 14 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 14 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 14 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 14 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 19 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 19 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 19 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 23 19 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.90 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 26.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 26.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 26.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 26.00 71 03 24 05 500 7 X X BOTT BEALPORT SEA 73 65.00 132 26.00 71 03 24 05 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 05 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 05 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 05 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 25 10 500 7 X X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 25 10 500 7 X X X BOTT BEALPORT SEA 73 65.00 132 28.00 71 03 25 10 500 7 X X X BOTT BEALPORT SEA 73 65.00 132 28.00			271			
BEAUFORT SEA	BEAUFORT SEA	73 46.80 131 31.60	71 03 23 05	500	? X	X BOTT
BEALPORT SEA 73 63.00 031 26.90 71 03 23 14 500 7 X X BOTT BEALPORT SEA 73 65.00 132 26.90 71 03 23 14 500 7 X X BOTT BEALPORT SEA 73 44.90 131 32.00 71 03 23 18 500 7 X X BOTT BEALPORT SEA 73 55.00 132 27.00 71 03 23 19 500 7 X X BOTT BEALPORT SEA 73 55.90 131 32.00 71 03 24 00 500 7 7 X X BOTT BEALPORT SEA 73 65.70 131 30.00 71 03 24 00 500 7 7 X X BOTT BEALPORT SEA 73 65.70 131 30.00 71 03 24 00 500 7 7 X X BOTT BEALPORT SEA 73 54.70 132 25.00 71 03 24 00 500 7 7 X X BOTT BEALPORT SEA 73 54.70 132 25.00 71 03 24 05 500 7 7 X X BOTT BEALPORT SEA 73 54.00 132 26.80 71 03 24 05 500 7 7 X X BOTT BEALPORT SEA 73 50.40 132 26.80 71 03 24 05 500 7 7 X X BOTT BEALPORT SEA 73 50.40 132 26.80 71 03 24 05 500 7 7 X X BOTT BEALPORT SEA 73 50.40 132 26.80 71 03 24 14 500 7 7 X X BOTT BEALPORT SEA 73 62.00 131 22.00 7 10 03 24 19 500 7 7 X X BOTT BEALPORT SEA 73 62.00 131 25.00 7 10 03 24 19 500 7 7 X X BOTT BEALPORT SEA 73 62.00 131 25.00 7 10 03 24 19 500 7 7 X X BOTT BEALPORT SEA 73 62.00 13 25.00 7 10 03 24 19 500 7 7 X X BOTT BEALPORT SEA 73 49.70 131 25.10 7 10 03 24 19 500 7 7 X X BOTT	BEAUFORT SEA	73 55.80 132 26.60	71 03 23 05	500	? X	X BOTT
EEAJPORT SEA 73 44:80 131 32:00 71 03 22 19 500 7 X X BOTT BEAJPORT SEA 73 61:90 131 32:00 71 03 22 19 500 7 X X BOTT BEAJPORT SEA 73 63:90 132 27:00 71 03 22 19 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 27:00 71 03 24 00 500 7 X X BOTT BEAJPORT SEA 73 62:70 131 25:00 71 03 24 00 500 7 X X BOTT BEAJPORT SEA 73 62:70 131 25:00 71 03 24 00 500 7 X X BOTT BEAJPORT SEA 73 62:00 132 25:00 71 03 24 05 500 7 X X BOTT BEAJPORT SEA 73 62:00 132 25:00 71 03 24 05 500 7 X X BOTT BEAJPORT SEA 73 62:00 132 26:00 71 03 24 05 500 7 X X BOTT BEAJPORT SEA 73 62:00 132 26:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 131 28:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 131 28:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 62:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 62:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 62:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 71 03 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 23:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 25:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 25:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 25:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 63:00 132 25:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 60:00 132 25:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 60:00 132 25:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 60:00 132 25:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 60:00 132 25:00 7 10 24 14 500 7 X X BOTT BEAJPORT SEA 73 60	BEAUFORT SEA	73 53.00 131 26.90	71 03 23 14	500	? X	X BOTT
EBALPORT SEA 73 53:50 132 27:00 71 03 23 19 500 7 2 X X BOTT BEALPORT SEA 73 63:70 131 25:00 71 03 24 00 500 7 X X BOTT BEALPORT SEA 73 52:70 131 25:00 71 03 24 00 500 7 X X BOTT BEALPORT SEA 73 54:70 131 25:00 71 03 24 00 500 7 X X BOTT BEALPORT SEA 73 43:40 131 25:00 71 03 24 06 500 7 X X BOTT BEALPORT SEA 73 43:40 131 25:00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 52:40 132 25:00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 52:40 131 25:00 71 03 24 10 500 7 X X BOTT BEALPORT SEA 73 52:40 131 25:00 71 03 24 14 500 7 X X BOTT BEALPORT SEA 73 52:40 132 23:00 71 03 24 14 500 7 X X BOTT BEALPORT SEA 73 52:40 132 23:00 71 03 24 14 500 7 X X BOTT BEALPORT SEA 73 52:40 132 23:00 71 03 24 14 500 7 X X BOTT BEALPORT SEA 73 52:40 132 23:00 71 03 24 14 500 7 X X BOTT BEALPORT SEA 73 52:40 132 23:00 71 03 24 19 500 7 X X BOTT BEALPORT SEA 73 42:70 131 25:10 7 10 32 24 19 500 7 X X BOTT BEALPORT SEA 73 42:70 131 25:10 7 10 32 24 19 500 7 X X BOTT BEALPORT SEA 73 43:40 131 16:30 7 11 03 24 19 500 7 X X BOTT BEALPORT SEA 73 43:70 131 16:30 7 11 03 24 19 500 7 X X BOTT BEALPORT SEA 73 43:70 131 16:30 7 11 03 24 19 500 7 X X BOTT BEALPORT SEA 73 43:70 131 16:30 7 11 03 24 19 500 7 X X BOTT BEALPORT SEA 73 43:70 131 16:30 7 11 03 24 19 500 7 X X BOTT BEALPORT SEA 73 43:70 131 16:30 7 11 03 24 19 500 7 X X BOTT BEALPORT SEA 73 43:70 131 16:30 7 11 03 24 19 500 7 X X BOTT BEALPORT SEA 73 43:70 131 16:30 7 11 03 25 05 500 7 X X BOTT BEALPORT SEA 73 43:70 131 16:30 7 11 03 25 05 500 7 X X BOTT BEALPORT SEA 73 41:00 131 16:30 7 11 03 25 05 500 7 X X BOTT BEALPORT SEA 73 41:00 131 16:30 7 11 03 25 05 500 7 X X BOTT BEALPORT SEA 73 40:00 131 16:30 7 11 03 25 05 500 7 X X BOTT BEALPORT SEA 73 40:00 131 16:30 7 11 03 25 05 500 7 X X BOTT BEALPORT SEA 73 40:00 131 16:30 7 11 03 25 05 500 7 X X BOTT BEALPORT SEA 73 40:00 131 16:30 7 11 03 25 05 500 7 X X BOTT BEALPORT SEA 73 40:00 131 16:00 7 10 03 25 05 500 7 X X BOTT BEALPORT SEA 73 40:00 131 16:00 7 10 03 25 05 500 7 X X BOTT BEALPORT SEA 73 40:00 131		73 44.90 131 32.00	71 03 23 19	7. 7. 2	? X	X BOTT
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BOTTLE/CTD DATA SET NUMBER: 71-0004 YEAR:1971 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PAF ME C	RAM EAS S	INSTR T	INT NO HR
ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES	508 510 508 508 510 508	69 34.80	131 04.00 131 18.00 131 18.00 131 04.00	71 71 71	08 26 08 28 09 06	17 17 18 18 19	18 49 20 20 50 20	22 57 24 25 65 22	X X X X X		X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT	. •

BOTTLE/CTD DATA SET NUMBER: 72-0001 YEAR:1972 VESSEL/AGENCY: BEDFORD INST. OCEANOGRAPHY

AREA .	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO . HR
BEAUFORT SI BEAUFORT SI BEAUFORT SI	EA EA EA EA	70 44.70 70 52.70 71 00.90 71 33.20 71 05.80 71 20.90 70 58.30 70 50.90 70 44.80 70 40.90 69 45.30 69 59.90 70 11.90	129 53.80 130 04.10 130 24.00 131 20.10 130 53.50 130 58.50 135 12.30 135 00.20 134 50.80 134 44.80 140 29.50 140 10.40 139 59.00	72 03 21 20 72 03 21 22 72 03 22 17 72 03 24 19 72 03 25 00 72 03 25 16 72 03 27 17 72 03 27 20 72 03 27 22 72 03 27 23 72 03 31 17 72 03 31 19 72 03 31 21	????????????	68 49 30 75	X X X X X X X X X X X X X X X X X X X	X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 72-0003 YEAR:1972 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO	E DY	HR	CAST TO (M)	WATER DEPTH (M)		RAM IEAS S	T	INSTR	INT HR	NO
MACKENZIE DLTA MACKENZIE DLTA MACKENZIE DLTA MACKENZIE DLTA MACKENZIE BAY MACKENZIE BAY	7 7 7 4 8 9	69 22.5 69 22.5 69 22.5 69 23.0 69 31.5 69 37.0	134 24. 134 24. 134 24. 134 42. 135 09. 135 00.	72 72 72 72	08 09 09 09	08 26 09 09 09 10	?????	?????	?????	X X X X X			?????		

BOTTLE/CTD DATA SET NUMBER: 72-0004 YEAR:1972 VESSEL/AGENCY: SALVELINUS

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AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		NSTR INT NO HR	,
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BOTTLE/CTD DATA SET NUMBER: 72-0006 YEAR:1972 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		INSTR T	INT NO HR
MACKENZIE DLTA	A2344567897BBBBBBBBBAAAAAAABBBBBBBBBBBBBBBBBBBB	5.3.2	135 01. 134 59. 134 552. 134 559. 134 559. 134 560. 135 061. 134 210. 134 211. 134 211. 134 12. 134 37. 134 559. 134 401. 134 57. 134 57. 134 550. 134 550. 134 550. 134 59. 134 550. 134 550.	72 07 05 ? 72 07 06 ? 72 07 06 ? 72 07 06 ? 72 07 09 ? 72 07 09 ? 72 07 09 ? 72 07 11 ? 72 07 14 ? 72 07 14 ? 72 07 15 ? 72 07 15 ? 72 07 16 ? 72 07 17 ? 72 07 18 ? 72 07 18 ? 72 07 17 ? 72 07 18 ? 72 07 18 ? 72 08 02 ? 72 08 03 ? 72 08 03 ? 72 08 04 ? 72 08 05 ? 72 08 07 ? 72 08 07 ? 72 08 07 ? 72 08 07 ? 72 08 07 ? 72 08 07 ? 72 08 07 ? 72 08 08 ? 72 08 07 ? 72 08 08 7 72 08 08 ? 72 08 08 ? 72 08 10 ? 72 08 10 ? 72 08 11 ?	???????????????????????????????????????	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	??????????????????????????????????????	

BOTTLE/CTD DATA SET NUMBER: 72-0007 YEAR:1972 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO	DY	HR	CAST TO (M)	WATER DEPTH (M)		RAM EAS S	Т	INSTR	INT HR	NO
MACKENZIE BAY	A11 A12 5D SS A13 A1 A1 SS	69 37.20 69 37.00 69 36.90 69 37.50 69 37.20 69 37.20 69 37.50	134 40.60 134 35.00 134 41.00 134 41.20 134 40.60 134 40.60	72 72 72 72 72 72	07 07 07 07 07	06 06 07 07 07 08 08	???????	213333333	213333333	X X X X X X X		XXXXX	MART MART MART MART MART MART MART MART		·

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MACKENZ I E BAY	7777182855577736680660E3844C1S5065900E77737760B5668489501S335506741122345666789112	69 37.40 134 31.50 69 39.00 134 00.30 69 41.20 134 28.00 69 30.40 134 34.80 69 32.00 134 37.00 69 32.50 134 37.00 69 33.90 134 33.50 69 34.00 134 33.20 69 35.70 134 53.40 69 36.70 134 38.90 69 39.50 134 43.50 69 39.50 134 43.50 69 39.50 134 43.50 69 39.50 134 43.50 69 39.50 134 43.50 69 39.50 134 43.50 69 39.50 134 43.50 69 39.50 134 43.50 69 37.20 134 40.60 69 37.20 134 40.60 69 37.50 134 26.90 69 36.90 134 35.00 69 36.90 134 26.90 69 37.50 134 26.90 69 31.90 134 26.90 69 32.10 134 26.90 69 37.40 134 31.50 69 31.90 134 26.90 69 31.90 134 26.90 69 31.90 134 26.90 69 31.90 134 26.90 69 31.90 134 26.90 69 31.90 134 26.90 69 31.90 134 26.90 69 31.90 134 26.90 69 31.90 134 26.90 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 37.00 69 32.10 134 26.90 69 31.90 134 35.00 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 35.00 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 35.00 69 31.90 134 35.00 69 32.10 134 26.90 69 31.90 134 35.00 69 32.10 134 40.60 69 37.40 134 31.50 69 38.80 134 57.70 69 39.50 134 43.50 69 37.40 134 31.50 69 37.40 134 31.50 69 37.40 134 31.50 69 37.40 134 31.50 69 37.40 134 31.50 69 37.40 134 31.50 69 37.40 134 31.50	72 07 09 72 07 09 72 07 10 72 07 12 72 07 12 72 07 12 72 07 20 72 07 20 72 07 20 72 07 20 72 07 20 72 08 02 72 08 10 72 09 10 72 09 10 72 09 11 72 09 12 72 09 12 72 09 13 72 09 14 72 09 15 72 09 17 72 09 19	???????????????????????????????????????	3331212222334414431212332412223423423211142231232212433??????????	333121222233344144312123324122234232111422312332212433??????????	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	X X X X X X X X X X X X X X X X X X X

BOTTLE/CTD DATA SET NUMBER: 72-0118
YEAR:1972 VESSEL/AGENCY: AQUATIC ENV.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		INSTR T	INT NO HR
YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL	CLAR NANAL PHIL NANAL	69 38. 69 33. 69 15. 69 33.	140 49. 139 30. 138 31. 139 30.	72 07 03 ? 72 07 13 ? 72 07 18 ? 72 08 06 ?	2.0 2.0 4.0 4.0 1.5 1.5 1.5 1.5	X X X	X ? X ? X ? X ?	

BOTTLE/CTD DATA SET NUMBER: 73-0001 YEAR:1973 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S		NSTR	INT N HR	10
MACKENZIE BAY	6C Al1 5D 7B SS Al2 Al3	69 39.50 69 37.20 69 36.90 69 35.70 69 37.50 69 37.20	134 40.00 134 35.00 134 33.20 134 41.00 134 40.60	73 73 73 73 73 73	03 20 03 20 03 21 03 21 03 21 03 21 03 21	??????	????????	5333433	X X X X X	X X X X X			

BOTTLE/CTD DATA SET NUMBER: 73-0002 YEAR:1973 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S		INT NO HR
KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY TUK. SHELF KUGMALLIT BAY KUGMALLIT BAY MACKENZIE BAY	526 527 528 529 531 543A 5533 5336 5336 5336 5336 5336 5412	69 30.00 69 50.00 70 01.00 70 11.00 70 23.00 70 31.00 70 43.00 70 56.00 69 43.00 69 40.00 69 40.00 69 48.00 69 48.00 69 17.00 69 02.00	131 26.00 130 50.00 130 01.00 130 07.00 130 07.00 130 14.00 130 14.00 133 06.00 133 53.00	73 07 20 16 73 07 20 21 73 07 22 21 73 07 23 01 73 07 23 15 73 07 23 19 73 07 23 23 73 07 23 23 73 07 24 00 73 07 24 04 73 07 24 23 73 07 26 03 73 07 26 06 73 07 26 19 73 07 27 18 73 07 27 23	75709145534658953400 115534658953400 390	76995344 34	Χ	X YSI X YSI	

BOTTLE/CTD DATA SET NUMBER: 73-0003A YEAR:1973 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR	INT NO HR
ESKIMO LAKES	508 515 508 515 508 515 508 515 508 515 508 515	69 34.80 69 32.00 69 34.80 69 34.80 69 32.00 69 34.80 69 32.00 69 34.80 69 32.00 69 34.80	131 18.00 131 11.00 131 18.00 131 18.00 131 11.00 131 18.00 131 11.00 131 18.00 131 11.00 131 18.00 131 11.00	73 02 24 02 73 05 20 20 73 05 21 00 73 06 21 17 73 06 26 22 73 06 28 15 73 07 05 17 73 07 07 20 73 07 11 19 73 07 19 17 73 07 19 22	240009000000	23 47 224 41 24 41 23 43 42 42	X X X X X X X X X X X X X X X X X X X	X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 73-0003B YEAR:1973 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER PARAM INSTR INT NO TO DEPTH MEAS HR (M) (M) C S T
ESKIMO LAKES ESKIM	12346561234551243651234665123466513456023348850237047 EEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE	69 31.00 131 24.00 69 31.00 131 35.00 69 24.50 131 57.00 69 21.00 132 19.00 69 14.00 132 19.00 69 14.00 132 19.00 69 31.00 131 24.00 69 31.00 131 57.00 69 24.50 131 57.00 69 21.00 132 05.00 69 17.50 132 12.00 69 17.50 132 12.00 69 17.50 132 12.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 131 25.00 69 21.00 132 05.00 69 24.50 131 57.00 69 21.00 132 12.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 132 19.00 69 17.50 132 12.00 69 14.00 132 19.00 69 14.00 132 19.00 69 17.50 132 12.00 69 31.00 131 57.00 69 24.50 131 57.00 69 21.00 132 05.00 69 14.00 132 19.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 132 50.00 69 14.00 132 19.00 69 17.50 132 12.00 69 13.50 132 50.00 69 13.50 132 50.00 69 13.50 132 50.00 69 13.50 132 50.00 69 14.00 132 19.00 69 31.00 131 24.00 69 31.00 131 24.00 69 31.00 131 25.00 69 31.00 131 25.00 69 31.00 132 50.00 69 13.50 132 50.00 69 13.50 132 50.00 69 14.00 132 19.00 69 31.00 131 24.00 69 31.00 131 25.00 69 31.00 131 25.00 69 31.00 131 25.00 69 31.00 132 50.00 69 13.50 133 55.00 69 31.00 133 55.00 69 38.00 133 55.00 70 13.00 130 55.00 69 48.50 129 45.00	73 07 04 17 73 07 04 20 73 07 04 22 73 07 04 23 73 07 05 02 73 07 05 02 73 07 05 01 73 07 10 15 73 07 10 15 73 07 10 20 73 07 10 22 73 07 10 23 73 07 10 24 73 07 24 15 73 07 24 17 73 07 24 21 73 07 24 21 73 07 24 21 73 07 24 21 73 07 24 21 73 08 02 17 73 08 02 17 73 08 02 17 73 08 02 17 73 08 12 17 73 08 12 17 73 08 12 17 73 08 12 20 73 08 12 20 73 08 12 20 73 08 12 20 73 08 12 20 73 08 24 15 73 08 24 17 73 08 24 17 73 08 25 02 73 08 25 02 73 08 25 02 73 08 29 21 73 08 29 21 73 08 29 21 73 08 29 21 73 08 29 22 73 08 29 21 73 08 29 21 73 08 29 21 73 08 29 21 73 08 29 21 73 08 29 21 73 08 29 21 73 08 29 22 73 08 29 22 73 08 29 21	60 62 X X YSI 40 48 X X YSI 12 14 X X YSI 15 18 X X YSI 10 12 X X YSI 10 12 X X YSI 10 12 X X YSI 110 12 X X YSI 110 12 X X YSI 110 12 X X YSI 111 15 18 X X YSI 115 19 X X YSI 116 18 X X YSI 117 7 X X YSI 118 20 7 X X YSI 119 7 X X YSI 119 7 X X X YSI 119 19 X X X X X YSI 119 19 X X X X YSI 119 19 X X X X X YSI 119 19 X X X X X X X X X X X X X X X X X

LIVERPOOL BAY KUGMALLIT BAY KUGMALLIT BAY LIVERPOOL BAY LIVERPOOL BAY LIVERPOOL BAY KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY	028 008 019 030 031 033 035 002 009 003	69 35.00 69 41.00 69 35.00	132 57.00 132 40.00 130 38.00 130 34.00 130 29.00 130 36.00 133 04.50 132 05.90 133 09.70	73 08 19 73 08 20 73 08 23 73 08 23 73 08 23 73 08 23 73 08 23 73 08 25 73 09 01 73 09 02 73 09 09	??????????	70996820022	??????????	X X X X X	X	YSI YSI YSI YSI YSI YSI YSI YSI
KUGMALLIT BAY	011		133 07.00		?	2	?	X	X	YSI

BOTTLE/CTD DATA SET NUMBER: 73-0016 YEAR:1973 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	TO DEPTI	R PARAM H MEAS C S	INSTR T	INT NO HR
TUK. HARBOUR	1	69 25.	133 00.	73 08 12 ?	0 ?	X	X ?	
TUK. HARBOUR	2	69 25.	133 00.	73 08 16 ?	0 ?	X	X ?	
TUK. HARBOUR	3	69 25.	133 00.	73 08 16 ?	0 ?	X	X ?	

BOTTLE/CTD DATA SET NUMBER: 73-0023 YEAR:1973 VESSEL/AGENCY: AQUATIC ENV.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INS MEAS C S T	TR INT NO HR
YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL	PHIL PHIL STOK BS STOK STOK STOK	69 15. 69 15. 69 20. 69 20. 69 20. 69 20. 69 20.	138 31. 138 31. 138 46. 138 46. 138 46. 138 46. 138 46.	73 06 21 ? 73 07 20 ? 73 07 23 ? 73 07 23 ? 73 08 06 ? 73 08 27 ? 73 09 12 ?	2.0 2.0 2.5 2.5 6.0 3.5 3.5 3.5 3.5 3.5	X X X X X X X X X X X X	????????

BOTTLE/CTD DATA SET NUMBER: 73-0125 YEAR:1973 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATE TO DEPT (M) (M)			INT NO HR
KUGMALLIT BAY	23459 1907 108293 11	69 35. 69 36. 69 34. 69 32. 69 47. 69 45. 69 41. 69 38. 69 35. 69 36. 69 39.	133 05. 133 10. 133 15. 133 23. 132 43. 132 35. 132 54. 133 03. 132 57. 133 05. 132 59. 133 10. 133 07.	73 07 21 ? 73 07 23 ? 73 07 25 ? 73 07 26 ? 73 08 02 ? 73 08 02 ? 73 08 06 ? 73 08 17 ? 73 08 20 ? 73 08 25 ? 73 09 01 ? 73 09 09 ?	222222222222222222222222222222222222222	X X X X X X X X X X	X YSI X YSI	

BOTTLE/CTD DATA SET NUMBER: 74-0001 YEAR:1974 VESSEL/AGENCY: FF SLANEY & CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	I NT HR	NO
MACKENZIE BAY	101 104 105 107 1116 117 1130 1130 1133 1138 1139 1138 402 403 1139 402 204 207 210 210 210 210 210 210 210 210 210 210	69 28.30 69 28.70 69 29.90 69 31.50 69 31.50 69 31.60 69 31.60 69 31.40 69 30.80 69 31.40 69 30.80 69 31.00 69 32.80 69 33.70 69 36.40 69 39.30 69 39.30 69 39.30 69 39.30 69 36.40 69 36.50 69 36.50 69 36.50 69 36.50 69 36.50	135 22.00 135 17.50 135 13.00 135 12.80 135 16.90 135 10.10 135 04.00 135 02.00 135 16.00 135 16.60 135 16.20 135 16.20 135 05.50 135 08.60 135 11.00	74 03 11 ? 74 03 13 ? 74 03 13 ? 74 03 14 ? 74 03 15 ? 74 03 15 ? 74 03 15 ? 74 03 15 ? 74 03 16 ? 74 03 17 ? 74 03 17 ? 74 03 17 ? 74 03 19 ? 74 03 19 ? 74 03 19 ? 74 03 19 ? 74 03 20 ? 74 03 20 ? 74 03 20 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 22 ? 74 03 21 ? 74 04 03 22 ? 74 03 21 ? 74 04 03 22 ? 74 03 21 ? 74 04 03 22 ? 74 03 24 ? 74 04 04 09 ? 74 04 12 ? 74 04 14 ? 74 04 14 ? 74 04 14 ? 74 04 18 ?	23333332233332222233334444567892685003322	789268500332	X X	X Y Y S I		

BOTTLE/CTD DATA SET NUMBER: 74-0002 YEAR:1974 VESSEL/AGENCY: THETA

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER PARAM INSTR INT NO TO DEPTH MEAS HR (M) (M) C S T
MACKENZIE BAY	\$01 \$02 \$03 \$04 \$05 \$06 \$07 \$08 \$09 \$10 \$11 \$11 \$11 \$11 \$11 \$11 \$11 \$11	69 40.60 137 11.30 70 07.20 134 37.10 69 48.90 133 17.90 69 52.80 133 43.30 69 56.90 134 07.50 70 07.70 134 20.00 70 07.20 134 20.70 70 08.20 134 15.00 70 04.50 134 18.80 69 40.40 137 08.80 69 36.00 137 41.50 69 36.00 137 41.50 69 36.00 137 41.50 69 36.00 137 41.50 69 35.90 137 41.60 69 35.90 137 41.60 69 35.90 137 41.60	74 08 12 00 74 08 13 00 74 08 13 14 74 08 13 22 74 08 13 23 74 08 14 03 74 08 15 02 74 08 15 14 74 08 15 23 74 08 16 05 74 08 16 06 74 08 16 08 74 08 16 09 74 08 16 09 74 08 16 10 74 08 16 11	? 47 X X BOTT ? 33 X X BOTT ? 15 X X BOTT ? 15 X X BOTT ? 17 X X BOTT ? 35 X X BOTT ? 35 X X BOTT ? 34 X X BOTT ? 35 X X BOTT ? 35 X X BOTT ? 35 X X BOTT ? 65 X X BOTT

137 41.50 74 08 16 12 7 35 X 8 8 8 137 41.50 74 08 16 12 7 65 X X 8 8 8 137 41.50 74 08 16 12 7 65 X X 8 8 8 137 41.40 74 08 16 13 7 665 X X 8 8 8 137 41.40 74 08 16 13 7 665 X X 8 8 137 41.40 74 08 16 15 7 65 X X 8 8 137 41.40 74 08 16 15 7 65 X X 8 8 137 41.40 74 08 16 15 7 65 X X 8 8 137 41.30 74 08 16 15 7 65 X X 8 8 137 41.30 74 08 16 18 7 65 X X 8 8 137 41.30 74 08 16 18 7 65 X X 8 8 137 41.30 74 08 16 18 7 65 X X 8 8 137 41.30 74 08 16 18 7 65 X X 8 8 137 41.30 74 08 16 20 7 65 X X 8 8 137 41.40 74 08 16 22 7 65 X X 8 8 137 41.60 74 08 16 22 7 65 X X 8 8 137 41.60 74 08 16 22 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.60 74 08 17 00 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 137 41.50 74 08 17 10 7 65 X X 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 7 65 X X 8 8 8 8 8 8 8 8 7 6 7 X 8 8 8 8 8 8 8 8 8 7 6 7 X 8 8 8 8 8 8 8 8 7 6 7 X 8 8 8 8 8 8 8 8 8 7 7 7 8 X X 8 8 8 8

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TUK. SHELF MACKENZIE BAY	\$46 \$47 \$48 \$49 \$551 \$552 \$553 \$554 \$555 \$556 \$557 \$560 \$601 \$603 \$660 \$660 \$660 \$660 \$660 \$660 \$660	70 12.00 70 19.70 70 20.00 70 26.90 70 33.40 70 23.20 69 56.60 70 04.40 70 18.00 70 18.00 70 06.90 69 56.20 70 05.40 70 05.40 70 05.40 70 05.40 69 27.00 69 36.30 69 32.80 69 59.70	131 41.60 131 41.80 131 42.80 131 42.80 131 42.80 133 27.10 133 27.10 135 10.20 135 10.20 135 34.30 135 47.90 136 36.30 136 50.20 137 04.70 139 08.20 139 08.00 138 55.70 139 36.70 139 36.70 139 36.70 139 36.70 138 48.50 138 21.00 136 58.10	74 08 26 21 74 08 26 23 74 08 27 00 74 08 27 02 74 08 27 03 74 08 27 15 74 08 28 02 74 08 28 03 74 08 28 23 74 08 29 04 74 08 29 05 74 08 30 13 74 08 30 14 74 08 30 14 74 08 31 05 74 08 31 03 74 09 01 03 74 09 01 15 74 09 01 19 74 09 02 15 74 09 02 21 74 09 03 02	???????????????????????????????????????	26 35 35 37 41 21 22 55 55 7 24 7 97 7 128 20 31	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT
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BOTTLE/CTD DATA SET NUMBER: 74-0003 YEAR:1974 VESSEL/AGENCY: ARCTICUS,FF SLANEY & CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
MACKENZ IE BAY	23 23 23 23 23 23 23 24 21 21 21 21 21 21 21 21 21 21 21 21 21	69 18.60 69 18.60 69 18.60 69 18.60 69 24.10 69 24.50 69 27.20 69 32.20 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 32.70 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90 69 30.90	135 37.60 135 37.60 135 37.60 135 37.60 135 31.50 135 37.60 135 37.60 135 37.60 135 37.60 135 56.90 135 57.60 135 57.70 135 56.90 135 37.60 135 37.60	74 07 07 74 07 08 74 07 10 74 07 11 74 07 11 74 07 11 74 07 12 74 07 12 74 07 13 74 07 13 74 07 13 74 07 14 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 17 74 07 17 74 07 17 74 07 17 74 07 17 74 07 18 74 07 18 74 07 19 74 07 20 74 07 20 74 07 21 74 07 21	???????????????????????????????????????	111111111111111111111111111111111111111	22262266122266322225	X X X X X	X Y Y S I	

NZ IE BAY	18 69 33.80 11 13 69 35.90 11 14 69 31.20 11 15 69 36.60 11 15 69 20.20 11 15 69 21.20 11 15 69 24.50 11 15 69 27.00 11 15 69 27.00 11 16 69 27.00 11 17 69 38.60 11 18 69 37.00 11 18 69 37.00 11 18 69 37.00 11 18 69 38.60 11 18 69 38.60 11 19 69 38.60 11 19 69 38.60 11 11 12 69 38.70 11 11 12 69 35.90 11 11 12 69 35.00 11	103.570 103	74 07 222 74 08 02 74 08 02 74 08 03 74 08 05 74 08 05 74 08 05 74 08 06 74 08 06 74 08 06 74 08 07 74 08 08 74 08 08	???????????????????????????????????????	322111111611111111111415111111111111111164353642113221236111115	30011?00?600100000000000000001000000115??64950640110000000??0505	
CENZ IE BAY	25 69 26.50 13 27 69 30.90 13 28 69 35.90 13 13 69 38.60 13 20 69 38.50 13 20 69 38.50 13 24 69 38.50 13 47 69 37.90 13 48 69 32.20 13 5 69 32.20 13 11 69 42.00 13 12 69 35.90 13 14 69 37.00 13 15 69 37.00 13 16 69 37.00 13 17 69 44.80 13 18 69 38.80 13	33.40 33.40 33.40 33.50 34.30 34.30 34.30 35.50 36.30 37.70 38.50 38	74 08 06 74 08 06 74 08 07 74 08 07 74 08 07 74 08 07 74 08 07 74 08 07 74 08 07 74 08 08	???????????????????????????????????????	11111111643536421132212361111	262115??64353642113222236??	X Y31 X Y31 X Y31 X Y31 X X Y31 X X Y31 X X Y31 X X Y31 X X Y31 X X X X X X X X X X X X X X X X X X X

MACKENZIE BAY
23 69 18.60 135 37.60 69 32.20 135 52.30 26 69 25.00 135 52.30 27 69 48.70 133 57.40 38 69 53.70 134 36.30 39 58.80 134 20.30 39 59 52.70 135 56.90 30 69 32.20 135 56.90 30 69 32.20 135 56.90 31 69 42.00 134 37.10 31 69 35.90 134 48.70 32 69 37.00 135 10.40 33 69 37.00 135 12.80 34 69 37.00 135 52.30 35 69 37.00 135 56.90 36 69 37.00 135 52.30 37 69 40.00 135 37.40 38 69 33.80 135 23.50 39 69 30.60 135 37.40 30 69 32.90 135 56.90 30 69 25.00 135 52.30 30 69 31.20 135 56.90 30 69 31.30 135 52.30 30 69 31.30 135 52.30 30 69 31.30 135 37.40 30 69 30.20 135 51.60 30 69 30.60 135 37.40 30 69 30.20 135 51.60 30 69 30.90 135 52.30 30 69 30.90 135 52.30 30 69 30.90 135 51.60 30 69 30.90 135 51.60 30 69 30.90 135 51.60 30 69 31.80 135 37.60 30 69 31.80 135 37.60 31 69 18.60 135 37.60 32 69 31.80 135 23.50 33 69 18.60 135 37.60 34 69 31.80 135 23.50 35 69 31.80 135 23.50 36 69 37.00 135 10.40 37 69 40.00 135 12.80 38 69 33.80 135 23.50 39 69 31.80 135 23.50 30 69 31.80 135 23.50 30 69 31.80 135 23.50 31 69 31.80 135 23.50 32 69 40.00 134 37.10 33 69 18.60 135 37.60 34 69 37.00 135 10.40 35 69 37.00 135 10.40 36 69 37.00 135 10.40 37 69 30.20 135 43.30 38 69 37.00 135 10.40 39 69 37.00 135 10.40 30 69 37.00 135 10.40
74 08 21344 08 224 08 224 08 226 26 26 26 26 26 26 26 26 26 26 26 26
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2232624342536421135222235226322123225253432222222???????????????????????
X X X X X X X X X X X X X X X X X X X

BOTTLE/CTD DATA SET NUMBER: 74-0007A YEAR:1974 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO D		CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	I NT HR	NO
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA	14 9 12 29 30 22 23	70 09.00 71 22.00 71 02.00 70 17.00 69 55.00 69 46.00 70 01.00	130 24.00 133 56.00 136 26.00	74 74 74 74	07 2 07 2 08 0 08 0 08 1	4 19 5 19 19 2 19 2 23 19 19 19	32 110 260 50 24 75 220	34 111 267 52 25 79 226	X X X X X	X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT		

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BEAUFORT SEA	5446 55446 55446 555448 5555555555555555	70 33.40 70 23.20 59 56.60 70 18.00 70 08.10 59 56.20 70 21.20 70 05.40 59 47.40 59 44.90 59 27.00 59 36.30 32.80	131 42.80 131 42.00 133 27.10 134 10.20 135 34.30 135 47.80 136 36.30 136 50.20 137 04.70 139 08.20 138 55.70 139 36.70 138 48.50 135 21.00 136 58.10	74 08 27 15 74 08 27 17 74 08 28 03 74 08 29 05 74 08 30 05 74 08 30 13 74 08 31 05 74 08 31 14 74 09 01 03 74 09 01 15 74 09 01 19 74 09 02 00 74 09 02 02 74 09 02 15 74 09 02 19	35 35 18 50 40 205 35 40 200 26 50 20 120	41 37 21 54 40 43 202 97 30 55 31 126 20	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT X BOTT
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BOTTLE/CTD DATA SET NUMBER: 74-0007B YEAR:1974 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S	INSTR INT NO HR)
MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY KUGMALLIT BAY MACKENZIE BAY KUGMALLIT BAY MACKENZIE BAY	001 002 003 004 001 002 003 004 005 006 003 005 007 009 010 011 015 016 017 018 019 020 021 022 023 024 025 026 032 032 032 033 034 035 036 037 037 037 037 037 037 037 037 037 037	69 39.00 133 02.00 69 41.00 133 12.00 69 43.00 133 12.00 69 45.00 133 12.00 69 33.95 133 06.33 69 33.55 132 59.60 69 34.13 133 11.65 69 26.10 133 00.30 69 36.10 132 59.10 69 36.35 132 59.60 69 36.35 132 59.60 69 41.00 132 48.67 69 33.55 132 59.60 69 49.00 132 25.00 69 49.00 138 25.00 69 45.77 132 13.50 69 45.17 132 13.50 69 27.00 138 25.00 69 27.00 138 25.00 69 27.00 138 25.00 69 27.00 137 20.00 69 27.00 137 20.00 69 27.00 137 20.00 69 27.00 137 20.00 69 27.00 137 10.00 69 27.00 137 33.00 69 28.00 136 50.00 69 17.00 137 10.00 69 17.00 137 10.00 69 17.00 137 10.00 69 18.00 138 10.00 69 17.00 137 14.00 69 18.00 138 50.00 69 53.00 135 00.00 69 53.00 135 00.00 69 53.00 135 00.00 69 53.00 135 00.00 69 53.00 135 00.00 69 53.00 135 00.00 69 53.00 135 00.00 69 53.00 135 00.00 69 57.00 132 00.00 69 58.50 131 18.35 70 01.00 133 05.00 69 38.07 132 50.90 69 38.48 132 50.93 69 33.95 133 06.33 69 35.00 133 05.00	74 03 24 ? 74 03 28 ? 74 03 28 ? 74 04 01 ? 74 07 17 ? 74 07 22 ? 74 07 29 ? 74 07 29 ? 74 07 29 ? 74 07 29 ? 74 07 29 ? 74 07 29 ? 74 08 15 ? 74 08 21 ? 74 08 21 ? 74 08 22 ? 74 08 22 ? 74 08 22 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 23 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 27 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 26 ? 74 08 27 ? 74 08 26 ? 74 08 26 ? 74 08 27 ? 74 08 26 ? 74 08 27 ? 74 08 26 ? 74 08 27 ? 74 08 26 ? 74 08 27 ? 74 08 26 ? 74 08 27 ? 74 08 27 ? 74 08 27 ? 74 08 27 ? 74 08 26 ? 74 08 27 ? 74 08 27 ? 74 08 26 ? 74 08 27 ? 74 08 28 ? 74 08 28 ? 74 08 29 ? 74 08 29 ? 74 08 20 ? 74 08 20 ? 77 ? 74 08 20 ? 77 ? 74 08 20 ? 77 ? 74 08 20 ? 77 ? 74 08 20 ? 77 ? 74 08 20 ? 77 ? 74 08 20 ? 77 ? 74 08 20 ? 77 ? 74 08 20 ? 77 ? 77 ? 77 ? 77 ? 77 ? 77 ? 77 ? 7	??????????????????????????????????????	X X X X X X X X X X X X X X X X X X X	X YSI X YSI X YSI X YSI X YSI X YSI X YSI X YSI X YSI X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 74-0008 YEAR:1974 VESSEL/AGENCY: THETA, IOS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
BEAUFORT SEA	12711111139035868123446814555670 55670	70 07.30 70 07.20 69 36.00 69 36.00 69 36.00 69 36.00 69 36.00 69 36.00 69 36.00 69 26.70 69 28.60 69 29.50 69 29.50 69 18.10 69 29.50 69 18.00 69 49.20 70 00.30 69 58.20 70 24.50 70 24.50 70 09.10 70 69 56.20 70 31.50	137 11.30 134 37.10 134 20.70 137 41.00 137 41.00 137 41.00 137 41.00 138 23.10 138 05.40 138 38.00 138 38.00 138 38.00 137 10.30 137 10.30 137 53.50 135 00.10 134 59.50 134 55.00 132 01.60 131 41.80 131 41.80 131 41.90 134 51.40 135 29.30 137 35.70 139 08.00	74 08 12 01 74 08 13 00 74 08 14 15 74 08 17 00 74 08 17 06 74 08 17 12 74 08 17 19 74 08 17 19 74 08 18 20 74 08 19 03 74 08 21 20 74 08 23 15 74 08 23 15 74 08 23 15 74 08 23 15 74 08 25 14 74 08 26 17 74 08 26 06 74 08 27 02 74 08 27 02 74 08 27 02 74 08 27 02 74 08 27 02 74 08 27 02 74 08 27 02 74 08 27 02 74 08 30 06 74 08 30 16 74 08 30 16 74 08 30 05	40 255 555 555 555 575 555 575 565 160 30 915 124 120 30 30 50 50 50 50 50 50 50 50 50 50 50 50 50	57	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT	

BOTTLE/CTD DATA SET NUMBER: 74-0010A YEAR:1974 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S	INSTR	INT NO HR
ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES	515 508 508 515	69 34.80 69 34.80	131 11.00 131 18.00 131 18.00 131 11.00	74 03 01 22 74 03 02 21 74 05 25 00 74 05 25 21	40 48 10 15 17 18 27 28	X X X	X BOTT X BOTT X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 74-0010B YEAR:1974 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR	INT NO HR
ESKIMO LAKES	515	69 32.00	131 11.00	74 06 20 22	()		X	х вотт	

BOTTLE/CTD DATA SET NUMBER: 74-0010C YEAR:1974 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR		WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
ESK I MO LAKES	508551055510555555555555555555555555555	69 34.80 131 18.00 69 34.80 131 18.00 69 32.00 131 11.00 69 36.50 131 04.00 69 32.00 131 11.00 69 34.80 131 18.00 69 32.00 131 11.00 69 34.50 131 15.00 69 32.00 131 11.00 69 34.80 131 18.00 69 32.00 131 11.00 69 32.00 131 11.00 69 32.00 131 11.00 69 32.00 130 40.00 69 34.00 130 32.00 69 32.00 131 15.00 69 34.80 131 18.00 69 34.50 131 15.00 69 34.50 131 15.00 69 34.50 131 15.00 69 34.50 131 15.00 69 34.50 131 15.00 69 34.50 131 15.00 69 34.50 131 15.00 69 34.00 130 32.00 69 34.00 130 32.00 69 34.00 131 39.00 69 34.00 131 39.00 69 34.80 131 18.00 69 36.50 131 04.00 69 34.80 131 18.00 69 36.50 131 04.00 69 34.80 131 18.00 69 34.80 131 18.00 69 34.80 131 18.00 69 34.80 131 18.00 69 34.80 131 18.00 69 34.80 131 18.00 69 34.80 131 18.00 69 34.80 131 18.00 69 34.00 130 32.00	74 07 02 23 74 07 12 01 74 07 12 19 74 07 17 16 74 07 17 16 74 07 17 21 74 07 27 16 74 07 27 16 74 07 27 16 74 07 27 19 74 07 31 17 74 07 31 17 74 07 31 23 74 08 03 14 74 08 03 18 74 08 07 18 74 08 07 22 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 18 74 08 07 19 74 08 08 17 74 08 17 74 08 17 15 74 08 17 15 74 08 17 15 74 08 17 19 74 08 22 15 74 08 22 19 74 08 23 16	230 340 340 370 405 400 400 400 400 400 400 400 400 40	244 347 579 2047 3204 60 105 105 105 105 105 105 105 105 105 10	**********************	X BOTT X	

BOTTLE/CTD DATA SET NUMBER: 74-0011 YEAR:1974 VESSEL/AGENCY: AQ.ENV.LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
YUKON SHELF	ABABABBABAABCCABABBAB	69 33.50 69 33.40 69 33.50 69 33.50 69 33.50 69 33.50 69 33.50 69 33.50 69 33.50 69 36.00 69 36.00 69 36.50 69 37.50 69 37.50 69 37.50	139 33.00 139 33.00	74 74 74 74 74 74 74 74 74 74 74 74 74 7	07 12 07 20 07 29 07 29 08 01 08 06 08 08 08 13 08 18 08 18 08 25 08 26 08 26 09 08	???????????????????????????????????????	010000000000052000000	???????????????????????????????????????	××××××××××××××××××××××××××××××××××××××	X YSI X YSI X YSI X YSI X X YSI X X YSI X X YSI X X YSI X X YSI X X YSI YSI X X YSI X Y YSI X X Y Y YSI X X Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	

BOTTLE/CTD DATA SET NUMBER: 74-0019 YEAR:1974 VESSEL/AGENCY: FF SLANEY & CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	TO D	ATER PARAN EPTH MEAS (M) C S		INT NO HR
MACKENZIE BAY	P012 P03 P04 P05 P07 P08 P09 P112 P013 P014 P05 P09 P112 P013 P014 P015 P015 P015 P016 P016 P016 P016 P016 P016 P016 P016	69 34.10 69 35.80 69 37.30 69 39.80 69 30 69 30 69 30 60 60 60 60 60 60 60 60 60 60 60 60 60 6	135 23.50 135 23.50 135 23.50 135 23.50 135 23.50 135 23.50 135 24.50 135 23.50 135 23.50 135 23.50 135 23.50 135 23.50 135 23.50 135 23.50 135 23.50 134 40.00 134 42.00 134 42.00 134 44.00 134 44.00 134 44.50 135 22.50 135 24.20	74 02 ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	1111110111111111100111111001111100111113143299222110	1111110111111111110011111110011111101111	X X X X X X X X X X X X X X X X X X X	

BOTTLE/CTD DATA SET NUMBER: 74-0021 YEAR:1974 VESSEL/AGENCY: DEPT. ENV.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO		HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT HR	NO
MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY		69 02.00		74 74 74	04 04 04	????	?????	6 4 11 15 15	6 4 11 18 50	X X X X X	X YSI X YSI X YSI X YSI X YSI		

MACKENZ IE BAY	69 12.50 137 22.00 69 06.50 137 37.00 69 15.00 138 31.00 69 07.00 137 41.00 69 06.50 137 58.00 69 20.50 138 56.00 69 00.00 137 19.00 69 04.50 137 46.00 69 18.00 138 25.00 69 34.00 138 55.00 69 26.00 139 03.00 69 29.00 138 52.00	74 07 15 ? 74 07 16 ? 74 07 17 ? 74 07 18 ? 74 07 30 ? 74 07 31 ? 74 08 08 ? 74 08 15 ? 74 08 16 ? 74 08 24 ? 74 09 02 ? 74 09 04 ?	00000000000	????????????	SY X SY X
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BOTTLE/CTD DATA SET NUMBER: 74-0022 YEAR:1974 VESSEL/AGENCY: AQ.ENV.LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT HR	NO
MACKENZIE DLTA	27 21 28 16 30 18 21 27 28 20 22 22 22 29 11 15 17 18 18 18 24 17 89 10 24 30 10 24 30 30 30 30 30 30 30 30 30 30 30 30 30	68 49.00 69 02.00 68 58.00 68 57.00 68 57.00 68 47.00 68 47.00 69 01.00 69 03.00 69 04.00 69 05.50 69 02.00 69 05.50 69 07.00 68 57.00 68 58.50 68 58.50 68 47.00 68 49.00 68 49.00 68 49.00 68 51.00 68 52.00 69 04.50	136 32.00 136 06.00 135 00.00 134 40.00 135 22.00 134 58.00 135 30.00 136 03.00 136 03.00 137 46.00 137 46.00 138 40.00 139 10.00 130 130 130 130 130 130 131 10.00 131 10.00 132 10.00 133 10.00 134 10.00 135 10.00 136 11.00 136 11.00 137 12.00 138 11.00 139 12.00 130 130 130 130 130 130 130 130 130 130	74 10 01 ? 74 10 01 ? 74 10 04 ? 74 10 04 ? 74 11 04 ? 74 11 06 ? 74 11 06 ? 74 11 07 ? 74 11 08 ? 74 11 09 ? 74 11 09 ? 74 11 11 ? 75 04 02 ? 75 04 02 ? 75 04 02 ? 75 04 04 ? 75 04 04 ? 75 04 04 ? 75 04 04 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ? 75 04 05 ?	000000000000000000000000000000000000000	202201200	X X X X X X X	X BOTT X		

BOTTLE/CTD DATA SET NUMBER: 74-0027A YEAR:1974 VESSEL/AGENCY: NORCOR

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO		HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
BALAENA BAY		70 02. 70 02. 70 02. 70 02. 70 02. 70 02. 70 02. 70 02. 70 02. 70 02.	124 54. 124 54. 124 54. 124 54. 124 54. 124 54. 124 54. 124 54. 124 54.	74 74 74 75 75 75 75	12 01 02 03	?????????	?????????	??????????	??????????		??????????	

289

70 02. 70 02. 124 54. 124 54. 75 06 75 07 BALAENA BAY BALAENA BAY

BOTTLE/CTD DATA SET NUMBER: 74-0027B YEAR: 1974 VESSEL/AGENCY: BEAUF.SEA PROJ.

DEG MIN

STN **AREA** LAT LON DATE CAST WATER PARAM INSTR INT NO YR MO DY HR TO DEPTH MEAS (M) (M) C S

HR

70 02. ? FRANKLIN BAY 124 54. 74 09 10 ? Х X HYDR

DEG MIN

BOTTLE/CTD DATA SET NUMBER: YEAR: 1975 VESSEL/AGENCY: 75-0001 los

BEAUFORT BEAUFORT SEA

SOB

69 56.80 133 25.00

			290		21 X	X CTD
SEA A A A A A A A A A A A A A A A A A A	88888888888888888888888888888888888888	69 56.80 133 25.00 69 56.80 133 58.10 69 56.80 133 58.10 69 56.80 133 58.10 69 56.80 133 58.10 69 56.80 133 58.10 69 56.80 133 58.10 69 56.80 133 58.10 69 56.80 133 58.10 69 56.80 133 58.10 69 56.70 137 58.10 69 36.70 137	75 04 27 75 16 7 18 9 0 1 2 2 2 2 0 0 1 1 2 3 4 5 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	221112121212121212121212121216666666666	CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

BOTTLE/CTD DATA SET NUMBER: 75-0002 YEAR:1975 VESSEL/AGENCY: PANDORA II, IOS

YEAR: 1975	4 LOOLL/	AGENCY: PANDORA II,	103					
AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. SHELF	CNM S16 CNM S17 CNM S18 S19 S20 CNM S21 CNM S22 CNM S23 S24 CNM S25	70 40.90 134 45.20 69 57.70 135 16.00 70 53.20 132 28.00 71 18.90 130 36.50 70 09.20 132 14.60 69 34.20 138 55.00 69 34.20 138 55.00 69 34.20 138 55.00 69 34.20 138 55.00 69 34.20 138 55.00 69 34.20 138 55.00 69 22.00 137 30.00 70 03.90 137 30.00 70 03.90 137 41.50 70 07.30 137 20.50 69 51.90 136 00.00 70 08.00 136 03.00 70 26.50 134 58.90 70 10.60 132 58.90	75 08 06 19 75 08 07 17 75 08 08 02 75 08 10 00 75 08 10 00 75 08 10 21 75 08 10 21 75 08 10 21 75 08 10 21 75 08 11 15 75 08 13 00 75 08 13 13 75 08 13 20 75 08 13 13 75 08 13 20 75 08 14 05 75 08 14 05 75 08 14 17 75 08 14 21 75 08 14 21 75 08 14 21 75 08 15 00 75 08 15 10 75 08 15 10 75 08 15 10 75 08 15 10 75 08 15 10 75 08 15 10 75 08 16 02 75 08 16 02 75 08 16 00 75 08 16 00 75 08 16 00 75 08 16 00 75 08 16 00 75 08 16 00 75 08 16 00 75 08 16 01 75 08 16 11 75 08 16 11 75 08 16 11 75 08 16 11	?????	15505550005770070770007707070707077700700	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	

	SHELF SHE SHELF SHELF SHELF SHELF SHELF SHELF SHELF SHELF SHELF SHELF SH	\$34456788888888888888888888888888888888888	69 43.80 69 38.00 69 38.00 69 25.00 69 13.50 70 09.99 70 09.99	136 36.00 137 19.20 138 04.00 137 55.00 133 25.00 133 25.00	75 08 21 75 08 21 75 08 22 75 08 22 75 08 23 75 08 24 75 08 24	??????????????????????????????????????	10 30 124 500 20 20 20 20 20 20 20 20 20 20 20 20 2	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	X GLDL
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BOTTLE/CTD DATA SET NUMBER: 75-0004 YEAR:1975 VESSEL/AGENCY: FF SLANEY & CO. LTD.

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AREA	STN		LON G M!N	DA' YR MO	TE DY I	HR		WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT N HR	10
MACKENZIE BAY KUGMALLIT BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY KUGMALLIT BAY	29 30 57 33 46 11 10 67 83 77 77 77 78 62 52 62 78 11 11 22 66 73 74 77 77 77 77 77 77 77 77 77 77 77 77	69 29.90 13 69 30.60 13 69 30.60 13 69 41.70 13 69 42.10 13 69 42.20 13 69 42.20 13 69 42.20 13 69 32.90 13 69 32.90 13 69 35.70 13 69 35.70 13 69 35.10 13 69 35.10 13 69 36.10 13 69 37.10 13	544.70 449.550 449.550 449.550 449.550 449.550 449.550 449.550 440.	75 07 75 08 75 75 75 75 75 75 75 75 75 75 75 75 75 7	08 09 09 01 11 11 11 11 11 11 11 11 11 11 11 11	???????????????????????????????????????	111113371115554555221934305545655561111	631313471125554555241154307545555540374	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	XX X X X X X X X X X X X X X X X X X X		

BOTTLE/CTD DATA SET NUMBER: 75-0006 YEAR:1975 VESSEL/AGENCY: PANDORA II,10S

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AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
TUK. SHELF TUK. SHELF	1324567891135670122567013345678911356722222333333333344424444444444444444444	70 15.00 139 04.30 70 00.40 135 28.20 70 40.70 134 42.90 70 54.00 132 28.20 71 18.90 130 36.50 70 09.20 132 14.60 69 33.50 138 55.50 69 34.70 137 29.40 70 05.40 137 36.60 69 51.80 136 00.30 70 27.50 134 53.10 70 01.70 134 03.10 70 20.90 133 56.50 70 39.50 134 00.50 70 39.50 134 00.50 70 00.30 133 01.20 70 30.00 133 01.20 70 30.00 133 02.00 70 00.70 132 00.30 70 29.40 132 02.20 70 59.60 132 03.30 70 19.60 131 02.30 70 50.30 131 09.40 71 10.50 131 15.40 70 22.90 130 19.40 71 10.50 131 15.40 70 22.90 130 12.30 69 49.00 133 20.80 69 53.70 134 57.80 70 14.40 134 58.20 70 26.30 136 08.50 70 19.30 136 33.40 69 42.70 136 33.60 69 37.80 137 19.50 69 44.70 138 07.10 69 25.00 138 02.00 69 13.50 137 54.00	75 08 05 07 75 08 05 19 75 08 05 20 75 08 07 17 75 08 08 03 75 08 08 16 75 08 09 19 75 08 13 02 75 08 13 14 75 08 13 14 75 08 14 15 75 08 15 02 75 08 15 02 75 08 15 02 75 08 15 02 75 08 16 03 75 08 16 03 75 08 17 14 75 08 17 22 75 08 18 02 75 08 18 02 75 08 18 02 75 08 18 02 75 08 18 02 75 08 18 02 75 08 18 10 75 08 19 02 75 08 19 02 75 08 19 02 75 08 20 10 75 08 20 10 75 08 20 10 75 08 21 16 75 08 21 16 75 08 21 16 75 08 22 00	30 55 60 70 20 15 50 70 20 817 50 10 20 817 50 10 10 10 10 10 10 10 10 10 1	X	

TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF	48 48 48 48 48	70 09.99 70 09.99 70 09.99	133 25.00 133 25.00 133 25.00 133 25.00 133 25.00) 75 08 23 11) 75 08 23 12) 75 08 23 13	23 2 2 25 2 3 25 2	8 X 8 X 8 X 8 X	X BOTT X BOTT X BOTT X BOTT X BOTT	
BOTTLE/CTD DAY			5-0009	IC BIOL. STN.				
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WAT TO DEP (M) (M	TH ME		NO
TUK. SHELF HERSCHEL IS. HERSCHELF TUK. SHELF	189	70 05.00 70 15.50 70 22.50 70 34.00 69 36.80 69 48.50 69 57.60 70 08.20 69 50.50 70 13.00 70 24.30 70 08.20 70 24.30 70 02.80 69 53.10 69 56.70 69 58.30 69 59.50 70 09.30	134 09.00 134 26.00 134 41.60 134 58.30 135 26.00 135 39.00 139 32.80 139 31.20 139 25.40 138 47.80 136 18.90 132 43.60 132 55.00 133 01.00 133 23.00 133 23.00 133 23.00 133 49.99 134 24.50 133 58.00 133 34.80	75 08 20 23	10 13 23 26 40 40 50 57 62 66 153 155 12 34 35 50 53 150 187 72 76 17 19 30 42 50 60 60 65 20 21 8 11 0 17 0 36 0 53	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT	
BOTTLE/CTD DATA YEAR:1975	A SET NU VESSEL/A	MBER: 75 GENCY: ARG	-0010A CTIC BIOL.	STN.				
AREA	STN	LAT DEG MIN I	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	MEAS		0
ESKIMO LAKES ESKIMO LAKES	515 6 508 6	69 32.00 1 69 34.80 1	31 11.00 31 18.00	75 02 28 03 75 02 28 05	40 48 20 24	X X	X BOTT X BOTT	
BOTTLE/CTD DATA YEAR: 1975 V	SET NUM	BER: 75-	0010B TIC BIOL.	STN.		بندي که است است حصی		-
AREA		LAT EG MIN DI	LON EG MIN		CAST WATER TO DEPTH (M) (M)	MEAS		

ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES 69 32.00 131 11.00 69 32.00 131 11.00 69 32.00 131 11.00 69 32.00 131 11.00 69 32.00 131 11.00 69 32.00 131 11.00

75 06 15 22 75 06 27 01 75 07 03 02 75 07 09 18 75 07 15 15 76 07 21 19 X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT

48 X 37 X 49 X 43 X 48 X 40 X

BOTTLE/CTD DATA SET NUMBER: 75-0011 YEAR:1975 VESSEL/AGENCY: FF SLANEY & CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
MACKENZIE DLTA	121 188 188 188 188 188 188 188 188 188	69 69 69 69 69 69 69 69 69 69 69 69 69 6	134 57.20 134 57.20	75 04 11 75 05 31 150 06 01 120 08 150 06 02 08 14 10 08 06 06 02 08 150 06 07 75 06 06 07 75 06 06 07 75 06 06 07 75 06 06 07 75 06 06 07 75 06 07 75 06 07 75 06 07 75 06 07 75 06 07 75 06 07 75 06 07 75 06 07 75 06 07 75 06 07 75 06 07 75 06 08 08 12 22 22 23 80 13 13 16 16 17 75 06 12 12 12 12 12 12 12 12 12 12 12 12 12	000000000000000000000000000000000000000	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	**************************************	XX BOTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	

## WACKENZ IE DLTA	20000000000000000000000000000000000000	75 06 17 15 15 15 06 17 15 15 06 17 15 15 06 17 17 15 06 17 17 15 06 17 17 15 06 17 17 15 06 17 17 15 06 17 17 15 06 17 17 15 06 17 17 15 06 17 17 15 06 17 17 15 06 18 18 16 17 17 18 08 18 16 18 19 11 14 14 15 15 06 18 18 19 11 14 17 17 18 08 18 16 18 19 19 11 19 19 19 19 19 19 19 19 19 19	000000000000000000000000000000000000000	??????????????????????????????????????	X BOTT X X BOTT X BOTT X X X X X X X X X X X X X X X X X X
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MACKENZIE DLTA	18	69	22.00	134 57.20	75	09 27	21	0	?	Χ	X BOTT
MACKENZIE DLTA	18	69	22.00	134 57.20	75	09 28	21	0	?	Χ	X BOTT
MACKENZIE DLTA	18	69	22.00	134 57.20	75	09 29	09	0	?	Χ	X BOTT

BOTTLE/CTD DATA SET NUMBER: 75-0012A YEAR:1975 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. SHELF TUK. SHELF MACKENZIE BAY TUK. SHELF MACKENZIE BAY TUK. SHELF MACKENZIE BAY TUK. SHELF	BD4 BD4 562 1D4 5634 5634 5661 5605 5605 5606 6007 6007 6007 6007 6007	69 56.80 69 36.70 69 35.00 69 35.00 69 59.00 70 22.80 70 13.20 69 27.00 69 40.00 69 52.30 70 06.00 69 23.30 69 15.60 70 49.00 69 32.30 69 31.80 69 34.30 69 32.30 69 34.30 69 34.30 69 34.30 69 35.90	137 58.00 133 05.00 133 19.00 133 10.00 133 24.30 132 44.20 133 01.00 132 40.00 137 02.60 132 37.00 138 56.00 133 47.00 134 54.50 134 10.00 136 22.00 133 57.00 134 09.00 134 09.40 134 09.00 134 09.00 134 09.00 134 09.00 134 09.00 134 09.00 134 09.00 134 09.00 134 09.00 134 09.30 133 57.00 134 09.30 134 09.30 133 58.50 133 55.00	75 04 26 ? 75 05 02 ? 75 05 05 22 75 05 09 ? 75 05 09 ? 75 05 09 ? 75 05 09 ? 75 05 09 22 75 05 09 22 75 05 10 ? 75 06 17 14 75 07 12 00 75 07 12 00 75 07 13 16 75 07 13 20 75 07 13 16 75 07 13 20 75 07 13 16 75 07 14 21 75 07 14 21 75 07 14 21 75 07 15 18 75 07 16 18 75 07 17 18 75 07 17 18 75 07 17 18 75 07 18 13	20 20 75 1 0 23 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 30 31 31 31 31 31 31 31 31 31 31	3 14 26	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT	

BOTTLE/CTD DATA SET NUMBER: 75-0012B YEAR:1975 VESSEL/AGENCY: ARCTIC BIOL. STN.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
KUGMALLIT BAY TUK. SHELF	003 005 006 007 008 009 012 013 014 015 016 017 018 019 020 023 104 025 026	69 38.10 69 22.70 69 22.90 69 23.80 69 22.90 69 23.80 69 21.70 69 19.50 69 19.50 69 39.30 69 38.80 69 40.20 69 42.40 69 42.40 69 43.80	133 13.70 133 09.70	75 05 10 ? 75 07 07 ? 75 07 07 ? 75 07 08 ? 75 07 10 ? 75 07 19 ? 75 07 19 ? 75 07 20 ? 75 07 26 ? 75 07 26 ? 75 07 29 ? 75 07 29 ? 75 08 04 ? 75 08 05 ? 75 08 05 ?	12111133222221112422	????????????????????	X X X X	X BOTT	

TUK. SHELF TUK. SHELF KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF KUGMALLIT BAY	028 029 105 107 108 109 030 031 032 033 034 110 111 112 115 116 117 118 119 120	69 40.90 69 43.20 69 25.15 69 41.20 69 48.20 69 54.10 69 56.50 70 00.70 69 58.20 69 24.50 69 27.35 69 31.50 69 33.70 69 44.00	132 14.00 132 58.60 132 57.50 133 08.50 133 18.67 131 09.90 131 09.90 131 09.60 131 17.40 131 59.80 132 59.80 132 59.10 132 59.10 132 59.70 133 08.60 133 08.60 133 09.50 133 09.50 133 09.50 132 47.00	75 08 08 75 08 08 75 08 13 75 08 13 75 08 15 75 08 15 75 08 16 75 08 16 75 08 17 75 08 17 75 08 17 75 08 18 75 08 18 75 08 20 75 08 24 75 08 24 75 08 25 75 08 25	????????????????????????	213880222 27 9595565587	???????????????????????????????????????	X X BOTT X BOTT X X BOTT X X BOTT X X BOTT X X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X X BOTT
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BOTTLE/CTD DATA SET NUMBER: 75-0025 YEAR:1975 VESSEL/AGENCY: DEPT. ENV.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)		ARAM INSTR MEAS S T	INT NO HR
YUKON COAST	BCDEFG4471000 1114 B15455140ABCCCB5125	69 22.00 69 17.00 69 08.00 69 05.00 69 02.00 69 07.00 69 07.00 69 07.00 69 06.50 69 21.00 69 21.00	138 56.00 138 45.00 137 58.00 137 58.00 137 10.00 137 19.00 137 58.00 137 58.00 137 58.00 137 58.00 137 58.00 137 58.00 138 46.00 138 52.00 138 52.00 138 52.00 138 44.00 138 31.00 138 34.00 138 47.00 138 47.00 138 47.00 138 47.00 138 47.00 138 47.00 138 47.00 138 44.00	75 05 ? ? ? 75 05 ? ? ? 75 05 ? ? ? 75 05 ? ? ? 75 05 ? ? ? 75 07 16 ? 75 07 17 ? 75 07 17 ? 75 07 17 ? 75 07 17 ? 75 07 17 ? 75 07 17 ? 75 07 17 ? 75 07 17 ? 75 07 20 ? 75 07 21 ? 75 07 23 ? 75 07 23 ? 75 07 23 ? 75 07 23 ? 75 07 23 ? 75 07 24 ? 75 08 04 ? 75 08 04 ? 75 08 04 ? 75 08 07 ? 75 07 ? 75 0	577524330350324032212532356	577612433333003243322XXXXXXXXXXXXXXXXXXXXXXXX	X YSI X YSI	

BOTTLE/CTD DATA SET NUMBER: 75-0026 YEAR:1975 VESSEL/AGENCY: NORCOR

AREA	STN	LAT DEG MIN	LON DEG MIN	ΥR	DAT MO	E DY	HR	CAST TO (M)	WATER DEPTH (M)	PAR ME C		INSTR	INT HR	NO
FRANKLIN BAY FRANKLIN BAY FRANKLIN BAY FRANKLIN BAY	CC1 CC1 CC1 CC1	70 00.00 70 00.00 70 00.00 70 00.00	125 00.00 125 00.00 125 00.00 125 00.00	75 75	04 -	13	18 22 02 06	180 180 180 180	? ? ? ?	X X X)) }	151		

BOTTLE/CTD DATA SET NUMBER: 75-0028 YEAR:1975 VESSEL/AGENCY: DEPT. ENV.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	TO D	ATER EPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
FRANKL IN BAY	BH1234567776767677777777772446811A777234468BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB	70 00.00 70 00.00	125 00.00 125 00.00	75 05 244 ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	357800890898099949588358076922588978967897679780769080319	???????????????????????????????????????	**************************************	X TC-22 X X X X X X X X X X X X X X X X X X X	

BOTTLE/CTD DATA SET NUMBER: 75-0042 YEAR:1975 VESSEL/AGENCY: AQ.ENV.LTD.

AREA STN LAT LON PEG MIN PEG MIN YR MO DY HR CAST WATER PARAM INSTR INT NO HR MCKENZIE DELT CAMP1 68 46.8 136 00.0 75 07 02 ? 0 ? X X BOTT MACKENZIE DELT CAMP2 69 04.9 134 49.5 75 07 06 ? 0 ? X X BOTT

BOTTLE/CTD DATA SET NUMBER: 76-0001 YEAR:1976 VESSEL/AGENCY: CANMAR

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜÜ	111111111111111111111111111111111111111	70 10.60 132 58.90 70 10.60 132	76 08 09 02 76 08 25 04 76 08 25 04 76 08 26 05 76 08 28 04 76 08 29 04 76 08 29 04 76 08 30 02 76 08 31 02 76 09 01 03 76 09 02 04 76 09 03 02 76 09 01 03 76 09 01 03 76 09 01 02 76 09 11 02 76 09 13 06 76 09 14 03 76 09 19 01 76 09 13 06 76 09 14 03 76 09 23 03 76 09 24 02 76 09 25 03 76 09 28 04 76 10 05 05 76 10 10 05 76 10 10 05 76 10 11 03 76 10 12 04 76 10 13 00 76 08 15 03 76 08 18 06 76 08 18 06 76 08 19 04 76 08 08 19 04 76 09 01 03 76 09 01 03 76 09 02 00 76 09 03 05 76 09 04 02 76 09 03 05 76 09 04 02 76 09 07 02 76 09 07 02 76 09 07 02 76 09 07 02 76 09 07 02 76 09 07 02 76 09 08 03 76 09 08 03 76 09 08 03 76 09 08 08 76 09 08 08 76 09 08 08 76 09 08 08 76 09 08 08 76 09 08 08 76 09 76 09	00000000000000000000000000000000000000	30 30 30 30 30 30 30 30 30 50 50 50 50 50 50 50 50 50 50 50 50 50	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X BOTT X BOTT X X X BOTT X X X BOTT X X X BOTT X X X X X X X X X X X X X X X X X X	

BOTTLE/CTD DATA SET NUMBER: 76-0003 YEAR:1976 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT HR	NO
KUGMALLIT BAY	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3.33.30.30.30.30.30.30.30.30.30.30.30.30	34.580 34.580 34.580 36.830	76 07 18 7 ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	666556776766558888889098889788888988997788888078807710666676688545666988898 1	6665577767665599999990888897989108009878898088908888666766885456669999908	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		

KUGMALLIT BAY KUGMALLIT BAY	S05 S10	69 69		45.10 45.10	76 76	09 04 09 04	?	8 7	8 8	X X	X YSI X YSI
KUGMALLIT BAY	E03 F10		48.50 48.50		76 76	09 05 09 05	?	9	9	X	X YSI X YSI
KUGMALLIT BAY KUGMALLIT BAY	W03	69 69	48.50	 	76 76	09 05	?	9 9	9	χ̈́	X YSI
KUGMALLIT BAY	W10	69	48.50		76	09 06	?	8	9	X	X YSI

BOTTLE/CTD DATA SET NUMBER: 76-0004 YEAR:1976 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY TUK. SHELF MACKENZIE BAY	E10 H47 H47 G42 W15 NN NGK NPK PKQ MNK ERN KDK	69 56.00 69 56.00 70 00.00 70 00.00 69 59.00 69 59.00 69 44.00 69 46.00 69 47.00 69 49.00 69 49.00	131 12.00 131 12.00 134 23.00 134 23.00 135 13.00 135 28.00 136 25.00 136 45.00 136 28.00 136 28.00 137 28.00	76 04 14 ? 76 08 14 ? 76 08 15 ? 76 08 16 ? 76 08 30 ? 76 08 30 ? 76 09 01 ? 76 09 02 ? 76 09 03 ? 76 09 05 ? 76 09 07 ?	? 12 112 119 ?????????????????????????????	?2119??????????????????????????????????	X X X X X X X X X X X X X X X X X X X	X YSI X YSI	

BOTTLE/CTD DATA SET NUMBER: 76-0020 YEAR:1976 VESSEL/AGENCY: SALVELINUS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATE TO DEP (M) (M	S	INT NO HR
MACKENZIE BAY KUGMALLIT BAY LIVERPOOL BAY	009 010 011 012 013 014 015 016 017 020 021 022 023 024 025 026 027 028 029 030 031 032	69 38.50 69 35.35 69 32.20 69 29.90 69 28.20 69 27.67 69 27.67 69 42.75 69 45.05 69 51.00 69 53.00 69 57.55	133 16.60 133 11.00 133 05.50 133 15.50 133 24.30 130 57.00 130 12.00 130 19.50 129 19.50 129 23.42 129 27.20 129 32.20 129 14.50	76 07 19 ? 76 07 19 ? 76 07 19 ? 76 07 19 ? 76 07 20 ? 76 07 20 ? 76 07 23 ? 76 07 31 ? 76 08 03 ? 76 08 03 ? 76 08 06 ? 76 08 06 ? 76 08 06 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 10 ? 76 08 19 ? 76 08 19 ? 76 08 24 ?		X BOTT BOTT	

BOTTLE/CTD DATA SET NUMBER: 76-0036 YEAR:1976 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO		HR	CAST TO (M)	WATER DEPTH (M)	PARA MEAS C S		! NT HR	NO
ESKIMO LAKES	光光光光光光	68 52. 68 52. 68 52. 68 52. 68 52. 68 52. 68 52.	133 26. 133 26. 133 26. 133 26. 133 26. 133 26. 133 26. 133 26.	76 76 76 76	07 07 07 07 08 09	24 01 02 19 31 10 11	????????	2.0 2.0 2.0 2.0 2.0 2.0 2.0	7.5 7.5 7.5 7.5 7.5 7.5 7.7 7.7	X X X X X X	X YSI X YSI X YSI X YSI X YSI X YSI X YSI		

BOTTLE/CTD DATA SET NUMBER: 77-0001 YEAR:1977 VESSEL/AGENCY: FF SLANEY SLANEY CO. LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S	INSTR	INT NO HR
MACKENZ IE BAYY	12356790123467823123456789012345678901222222222222222222222222222222222222	68 51.20 68 51.20 68 56.60 69 04.20 69 11.70 69 11.70 69 12.07 69 12.07 69 22.07 69 26.00 69 27.30 68 55.70 69 20.10 69 69 69 69 69 69 69 69 69 69 69 69 69 6	135 42.50 136 17.90 137 01.00 136 39.20 136 39.20 137 30.00 137 30.00 137 31.30 137 31.30 138 42.00 137 32.50 137 33.40 137 33.40 137 33.40 137 33.40 138 42.00 137 33.40 138 42.00 137 33.40 138 42.00 137 33.40 138 42.00 138 42.00 139 136 42.00 137 33.40 138 42.00 138 42.00 138 42.00 139 136 42.00 137 33.40 138 42.00 138 42.00	77 07 04 ??? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 04 ?? 77 07 07 19 ?? ?? 77 07 19 ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??	1422217124813746414222212712481137423664412114222 1422217124813746404000000000000000000000000000000000	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	22222222222222222222222222222222222222	

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	305		
MACKENZ IE BAY	6 69 04.50 136 19.00 77 07 25 ? 8 69 04.20 136 39.20 77 07 25 ? 9 69 02.90 137 28.30 77 07 25 ? 10 69 12.00 136 07.50 77 07 25 ? 11 69 11.70 136 40.20 77 07 25 ? 12 69 11.40 137 02.80 77 07 25 ? 13 69 11.00 137 30.00 77 07 25 ? 14 69 20.70 135 53.10 77 07 25 ? 15 69 20.50 136 10.00 77 07 25 ? 16 69 20.10 136 10.00 77 07 25 ? 17 69 19.00 137 02.20 77 07 25 ? 18 69 17.90 137 31.30 77 07 25 ? 18 69 27.30 135 47.10 77 07 25 ? 20 69 26.80 136 42.20 77 07 25 ? 21 69 26.80 136 42.20 77 07 25 ? 22 69 26.60 137 05.00 77 07 25 ? 23 69 26.00 137 33.40 77 07 25 ? 24 69 33.20 137 33.40 77 07 25 ? 24 69 33.60 136 42.00 77 07 25 ? 25 69 32.60 135 40.80 77 07 25 ? 26 69 32.60 136 42.00 77 07 25 ? 27 68 42.90 135 25.30 77 08 04 ? 28 69 35.20 135 42.50 77 08 04 ? 29 68 55.70 136 38.80 77 08 04 ? 4 68 55.70 136 38.80 77 08 04 ? 4 68 55.70 136 39.20 77 08 04 ? 4 68 55.70 136 39.20 77 08 04 ? 2 68 51.20 135 42.50 77 08 04 ? 3 68 56.10 136 17.90 77 08 04 ? 4 69 04.20 136 39.20 77 08 04 ? 10 69 12.00 136 07.50 77 08 04 ? 11 69 11.70 136 40.20 77 08 04 ? 12 69 11.40 137 02.80 77 08 04 ? 13 69 11.00 137 30.00 77 08 04 ? 14 69 20.70 135 53.10 77 08 04 ? 15 69 20.50 136 10.00 77 08 04 ? 16 69 20.90 137 28.30 77 08 04 ? 16 69 20.70 135 53.10 77 08 04 ? 17 69 19.00 137 02.80 77 08 04 ? 26 69 32.60 135 40.80 77 08 04 ? 27 69 04.20 136 39.20 77 08 04 ? 28 69 11.40 137 02.80 77 08 04 ? 29 69 02.90 137 28.30 77 08 04 ? 20 69 26.90 136 12.20 77 08 04 ? 21 69 11.40 137 02.80 77 08 04 ? 22 69 26.60 137 01.00 77 08 04 ? 23 69 26.00 136 01.00 77 08 04 ? 24 69 32.60 135 40.80 77 08 04 ? 25 69 33.60 136 42.00 77 08 04 ? 26 69 32.60 135 40.80 77 08 04 ? 27 69 04.20 136 39.20 77 08 11 ? 28 69 11.00 137 02.20 77 08 04 ? 29 69 20.00 137 28.30 77 08 04 ? 20 69 26.90 136 12.20 77 08 04 ? 21 69 20.00 136 07.50 77 08 04 ? 22 69 26.60 137 01.00 77 08 04 ? 23 69 20.00 137 22.00 77 08 04 ? 24 69 32.60 135 40.80 77 08 04 ? 25 69 33.60 136 40.00 77 08 04 ? 26 69 32.60 135 40.80 77 08 11 ? 26 69 32.60 135 40.80 77 08 11 ? 26 69 32.60 136 07.50 77 08 11 ? 27 69 04.	21271248113742366411211422221271248113742222127124811374 3000710001107323664415114222212712481137323664421142222127124811373	22222222222222222222222222222222222222

BOTTLE/CTD DATA SET NUMBER: 77-0002 YEAR:1977 VESSEL/AGENCY: AQ.ENV.LTD.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HF	CAST TO (M)	DEPTH	PARAM MEAS C S		INT NO HR
TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF	6 8 5 7	69 42.10 69 43.30		77 07 16 77 07 16 77 07 17 77 07 17 7	000000000000000000000000000000000000000	? ? ?	X X X	X BOTT X BOTT X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 77-0003 YEAR:1977 VESSEL/AGENCY: PANDORA II, IOS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WAT TO DEP (M) (M	TH MEAS		INT NO HR
AMUNDSEN GULF	14 15 16 17 19 20 21 22 23 24 25 26 27 28 29 30 31 32	71 14.10 71 02.70 70 48.40 70 35.50 70 16.50 70 36.50 71 17.20 71 37.40 70 36.00 70 12.40 69 59.50 70 34.30 71 01.70 71 22.40 70 34.50 70 49.10 71 01.80	124 32.50 124 44.80 125 02.60 125 15.90 126 59.70 126 27.50 126 25.70 126 25.70 121 46.90 121 19.10 121 09.20 119 19.00 119 12.00 119 04.30 120 26.00 120 40.60	77 08 11 15 77 08 11 10 77 08 11 06 77 08 11 02 77 08 14 08 77 08 14 12 77 08 14 16 77 08 14 12 77 08 14 12 77 08 14 12 77 08 14 22 77 08 12 13 77 08 21 13 77 08 21 19 77 08 29 16 77 08 29 22 77 08 30 02 77 09 06 17 77 09 06 23	300 33 330 34 300 31 240 25 100 12 300 34 450 46 450 47 500 53 370 39 350 37 320 33 150 168 100 120 300 32 250 27 170 188	500 X X X X X X X X X X X X X X X X X X	X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 77-0004 YEAR:1977 VESSEL/AGENCY: CANMAR

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S T	INSTR	INT NO HR
TUK. SHELF	©©©©©©©©©©©©®®®	69 45.40 69 45.40 69 45.40 69 45.40 69 45.40 69 45.40 69 45.40 69 45.40 69 45.40 70 09.10 70 09.10	139 44.60	77 10 06 ? 77 10 06 ? 77 10 08 ? 77 10 09 ? 77 10 10 ? 77 10 11 ? 77 10 13 ? 77 10 14 ? 77 10 15 ? 77 10 18 ? 77 10 18 ? 77 07 21 ? 77 07 22 ? 77 07 23 ?	30 30 30 30 30 30 30 30 30 30 30 30	34 34 30 30	X X	BOTT BOTT BOTT BOTT BOTT BOTT	

07 25 ? 30 30 X X X B 07 26 ? 30 30 X X B 07 27 ? 30 30 X X B 07 14 ? 30 30 X X B 07 14 ? 30 30 X X B 07 31 ? 30 30 X X B 08 02 ? 30 30 X X B 08 03 ? 30 30 X X B 08 06 ? 30 30 X X B 08 07 ? 30 30 X X B 08 08 ? 30 30 X X B 08 11 ? 30 30 X X B 08 11 ? 30 30 X	44.10 132 132 44.10 132 132 132 132 132 132 132 132 132 132	70 09.10 70 09.10	33333333333333333333333333333333333333	┞┞┞┞┞┡ ╫┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩┩	
??????????????????????????????????????	77 07 24 77 07 25 77 07 26 77 07 27 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 08 08 90 07 77 08 08 91 07 77 77 77 77 77 77 77 77 77 77 77 77 77	132 44.10 77 07 26 132 44.10 77 07 26 132 44.10 77 07 28 132 44.10 77 07 14 132 44.10 77 07 31 132 44.10 77 08 01 132 44.10 77 08 01 132 44.10 77 08 03 132 44.10 77 08 03 132 44.10 77 08 03 132 44.10 77 08 03 132 44.10 77 08 09 132 44.10 77 08 11 132 44.10 77 08 11 132 44.10 77 08 11 132 44.10 77 08 11 132 44.10 77 08 13 132 44.10 77 08 11 132 44.10 77 08 13 132 44.10 77 08 13 132 44.10 77 08 13 132 44.10 77 08 13 132 44.10 77 08 20 132 44.10 77 08 21 132 44.10 77 08 22 132 44.10 77 08 23 132 44.10 77 08 23 132 44.10 77 08 23 132 44.10 77 08 23 132 44.10 77 08 23 132 44.10 77 08 23 132 44.10 77 08 23 132 44.10 77 08 28 132 44.10 77 08 28 132 44.10 77 09 05 132 44.10 77 09 05 132 44.10 77 09 03 132 44.10 77 09 03 132 44.10 77 09 03 132 44.10 77 09 03 132 44.10 77 09 03 132 44.10 77 09 03 132 44.10 77 09 09 132 44.10 77 09 09 132 44.10 77 09 09 132 44.10 77 09 09 132 44.10 77 09 02 132 44.10 77 09 02 132 44.10 77 09 03 132 44.10 77 09 03 132 44.10 77 09 03 132 132 44.10 77 09 03 132 132 132 132 132 132 132 132 132 132	70 09.10 132 44.10 77 07 24 70 09.10 132 44.10 77 07 25 70 09.10 132 44.10 77 07 27 70 09.10 132 44.10 77 07 27 70 09.10 132 44.10 77 07 28 70 09.10 132 44.10 77 07 30 70 09.10 132 44.10 77 07 31 70 09.10 132 44.10 77 08 01 70 09.10 132 44.10 77 08 02 70 09.10 132 44.10 77 08 02 70 09.10 132 44.10 77 08 03 70 09.10 132 44.10 77 08 06 70 09.10 132 44.10 77 08 06 70 09.10 132 44.10 77 08 07 70 09.10 132 44.10 77 08 08 70 09.10 132 44.10 77 08 08 70 09.10 132 44.10 77 08 08 70 09.10 132 44.10 77 08 10 70 09.10 132 44.10 77 08 11 70 09.10 132 44.10 77 08 11 70 09.10 132 44.10 77 08 12 70 09.10 132 44.10 77 08 12 70 09.10 132 44.10 77 08 14 70 09.10 132 44.10 77 08 15 70 09.10 132 44.10 77 08 16 70 09.10 132 44.10 77 08 16 70 09.10 132 44.10 77 08 17 70 09.10 132 44.10 77 08 18 70 09.10 132 44.10 77 08 18 70 09.10 132 44.10 77 08 22 70 09.10 132 44.10 77 08 22 70 09.10 132 44.10 77 08 23 70 09.10 132 44.10 77 08 22 70 09.10 132 44.10 77 08 22 70 09.10 132 44.10 77 08 23 70 09.10 132 44.10 77 08 23 70 09.10 132 44.10 77 08 23 70 09.10 132 44.10 77 08 23 70 09.10 132 44.10 77 08 24 70 09.10 132 44.10 77 08 23 70 09.10 132 44.10 77 08 26 70 09.10 132 44.10 77 08 26 70 09.10 132 44.10 77 08 27 70 09.10 132 44.10 77 08 27 70 09.10 132 44.10 77 09 02 70 09.10 132 44.10 77 09 03 70 09.10 132 44.10 77 09 03 70 09.10 132 44.10 77 09 03 70 09.10 132 44.10 77 09 03 70 09.10 132 44.10 77 09 04 70 09.10 132 44.10 77 09 06 70 09.10 132 44.10 77 09 02 70 09.10 132 44.10 77 09 02 70 09.10 132 44.10 77 09 02 70 09.10 132 44.10 77 09 02 70 09.10 132 44.10 77 09 02 70 09.10 132 44.10 77 09 08 70 09.10 132 44.10 77 09 08 70 09.10 132 44.10 77 09 08 70 09.10 132 44.10 77 09 08 70 09.10 132 44.10 77 09 08 70 09.10 132 44.10 77 09 08 70 09.10 132 00.70 00.	3 70 09.10 132 44.10 77 07 24 3 70 09.10 132 44.10 77 07 25 3 70 09.10 132 44.10 77 07 26 3 70 09.10 132 44.10 77 07 27 3 70 09.10 132 44.10 77 07 14 3 70 09.10 132 44.10 77 07 31 3 70 09.10 132 44.10 77 07 31 3 70 09.10 132 44.10 77 07 31 3 70 09.10 132 44.10 77 08 01 3 70 09.10 132 44.10 77 08 01 3 70 09.10 132 44.10 77 08 03 3 70 09.10 132 44.10 77 08 03 3 70 09.10 132 44.10 77 08 03 3 70 09.10 132 44.10 77 08 03 3 70 09.10 132 44.10 77 08 03 3 70 09.10 132 44.10 77 08 06 3 70 09.10 132 44.10 77 08 08 3 70 09.10 132 44.10 77 08 10 3 70 09.10 132 44.10 77 08 10 3 70 09.10 132 44.10 77 08 10 3 70 09.10 132 44.10 77 08 11 3 70 09.10 132 44.10 77 08 11 3 70 09.10 132 44.10 77 08 13 3 70 09.10 132 44.10 77 08 13 3 70 09.10 132 44.10 77 08 13 3 70 09.10 132 44.10 77 08 13 3 70 09.10 132 44.10 77 08 13 3 70 09.10 132 44.10 77 08 15 3 70 09.10 132 44.10 77 08 16 3 70 09.10 132 44.10 77 08 16 3 70 09.10 132 44.10 77 08 16 3 70 09.10 132 44.10 77 08 16 3 70 09.10 132 44.10 77 08 16 3 70 09.10 132 44.10 77 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BOTTLE/CTD	DATA SET	NUMBER:	77-0009
YEAR: 1977	VESSEL	_/AGENCY:	ENV I ROCON

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. SHELF FELF FELF FELF FELF FELF FELF FELF	1123 1124 1122 0223 2923 10223 20224 20224 20224 20224 20221 20221 20221 20224 20224 20224 20224 20222 20222 20222	69 54.30 69 56.30 69 57.40 69 56.60 69 56.40 69 56.50 69 56.50 69 56.60 69 56.60 60	133 22.60 133 24.30 133 26.10 133 21.70 133 33.10 133 22.10 133 21.80 133 21.10	77 07 26 17 77 07 27 15 77 07 27 19 77 07 27 21 77 07 28 ? 77 07 28 12 77 07 28 18 77 07 28 18 77 07 29 14 77 07 30 10 77 07 30 13 77 07 30 15 77 07 30 15 77 07 30 23 77 07 30 15 77 07 30 23 77 07 31 13 77 07 31 12 77 07 31 13 77 08 25 14 77 08 25 17 77 08 26 10 77 08 26 11 77 08 26 16 77 08 29 07 77 08 29 07 77 08 29 16 77 08 29 16 77 08 29 16 77 08 29 16 77 08 29 16 77 08 29 17 77 08 29 16 77 08 29 17 77 08 29 16 77 08 29 17	111111111111111111111111111111111111111	133622233320423226 1111111111111111111111111111111111	X X X X X X X	X YSI X X X X X X X X X X X X X X X X X X X	

BOTTLE/CTD DATA SET NUMBER: 77-0010 YEAR:1977 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO		HR	CAST TO (M)	DEPTH	PARAM MEAS C. S		INT NO HR
TUK. SHELF TUK. SHELF		70 14.0 70 10.0	132 50.0 132 30.0	77 77	09 09	?	? ?	?	?	X X	BOTT BOTT	

BOTTLE/CTD DATA SET NUMBER: 77-0035 YEAR:1977 VESSEL/AGENCY: SALVELINUS

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
LIVERPOOL BAY LIVERPOOL BAY LIVERPOOL BAY LIVERPOOL BAY LIVERPOOL BAY LIVERPOOL BAY	002 003 004 005 007 008	70 19.30 69 26.50	128 02.00 128 02.00 128 08.00 128 16.70 128 29.50 130 55.50 130 21.80	777777777777777777777777777777777777777	07 21 07 22 07 22 07 22 07 22 07 26 07 26	???????	0356904	? ? ? ? ? ? ? ?	X X X X X	BOTT X BOTT X BOTT X BOTT X BOTT X BOTT X BOTT	

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LIVERPOOL BAY LIVERPOOL BAY	013 014	69 55.10 70 00.60	128 36.20 128 28.50	77 07 27 77 07 27 77 07 27	? ?	5	? ?	X X BOTT X X BOTT
AMUNDSEN GULF AMUNDSEN GULF	016 021	70 37.70 70 33.80	127 20.00 126 53.00	77 07 28 77 07 29	?	240 335	? ?	X X BOTT X X BOTT
LIVERPOOL BAY LIVERPOOL BAY	102 024	70 21.90 70 32.40	128 12.50 127 24.20	77 07 31 77 08 04	?	4 16	?	X X BOTT X X BOTT
LIVERPOOL BAY	030 031		128 16.50 127 55.80	77 08 05 77 08 08	?	6 0	?	X X BOTT X X BOTT
LIVERPOOL BAY	032 032	69 59.70 69 59.70	129 26.70 129 26.70	77 08 08 77 08 10	?	7 7	? ? ?	X X BOTT X X BOTT X X BOTT
LIVERPOOL BAY LIVERPOOL BAY TUK. SHELF	115 033 034	69 48.80 70 12.60 70 14.80	130 20.20 129 20.00 130 09.30	77 08 09 77 08 10 77 08 10	? ? ?	0 6 8	? ?	X X BOTT X X BOTT
TUK. SHELF TUK. SHELF TUK. SHELF	035 036	70 09.50 69 53.80	130 51.30 131 11.20	77 08 10 77 08 10 77 08 12	; ?	5 0	? ?	X X BOTT X X BOTT
TUK. SHELF TUK. SHELF	037 122	69 58.70 69 45.80	131 08.00 132 10.70	77 08 12 77 08 13	? ?	5 0	?	X X BOTT X X BOTT
TUK. SHELF TUK. SHELF	038 123	69 45.40 69 45.60	132 10.70 132 12.80	77 08 13 77 08 13	?	0	?	X X BOTT X X BOTT
TUK. SHELF TUK. SHELF	124 125	69 44.60 69 44.20	131 59.40 131 58.40	77 08 13 77 08 13	?	0	?	X X BOTT X X BOTT
TUK. SHELF TUK. SHELF	039 041	69 44.30 69 47.10 69 45.30	132 06.70 132 21.80 132 29.50	77 08 14 77 08 14 77 08 14	? ? ?	0 0 8	? ? ?	X X BOTT X X BOTT X X BOTT
TUK. SHELF TUK. SHELF TUK. SHELF	042 043 044	69 45.30 69 46.50 69 47.50	132 32.30 132 35.90	77 08 14 77 08 14 77 08 14	? ?	0 8	? ?	X X BOTT X X BOTT
TUK. SHELF TUK. SHELF	045 046	69 48.20 69 49.00	132 38.00 132 39.80	77 08 14 77 08 14	? ?	Ŏ 9	?	X X BOTT X X BOTT
TUK. SHELF TUK. SHELF	047 048	69 49.80 69 43.50	132 41.50 132 35.00	77 08 14 77 08 16	?	0	?	X X BOTT X X BOTT
KUGMALLIT BAY KUGMALLIT BAY	049 050	69 31.90 69 31.80	133 01.10 133 05.00	77 08 20 77 08 20	?	4 0	?	X X BOTT X X BOTT
KUGMALLIT BAY KUGMALLIT BAY	051 052	69 31.70 69 31.60	133 11.00 133 16.70	77 08 20 77 08 20	?	0	?	X X BOTT X X BOTT X X BOTT
KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY	053 054 127	69 31.20 69 30.60 69 35.80	133 22.50 133 27.00 133 01.60	77 08 20 77 08 20 77 08 21	? ? ?	3 0 0	? ? ?	X X BOTT X X BOTT X X BOTT
KUGMALLIT BAY KUGMALLIT BAY KUGMALLIT BAY	128 129	69 36.00 69 36.00	133 01.00 133 11.10 133 20.40	77 08 21 77 08 21 77 08 21	? ?	0	?	X X BOTT X X BOTT
KUGMALLIT BAY KUGMALLIT BAY	131 132	69 32.70 69 32.00	134 02.60 134 00.30	77 08 23 77 08 23	? ?	0	? ?	X X BOTT X X BOTT
KUGMALLIT BAY KUGMALLIT BAY	055 056	69 37.30 69 37.30	133 00.50 133 09.00	77 08 23 77 08 23	?	6 0	?	X X BOTT X X BOTT
KUGMALLIT BAY KUGMALLIT BAY	057 058	69 37.30 69 37.30	133 17.00 133 25.70	77 08 23 77 08 23	?	5 0	?	X X BOTT X X BOTT
KUGMALLIT BAY KUGMALLIT BAY	059 060 133	69 37.30 69 37.30 69 32.80	133 34.40 133 46.00 134 06.50	77 08 23 77 08 23 77 08 25	? ? ?	5 0 2	? ? ?	X X BOTT X X BOTT X X BOTT
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BOTTLE/CTD DATA SET NUMBER: 78-0001 YEAR:1978 VESSEL/AGENCY: CANMAR

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		INSTR T	INT NO HR
TUK. SHELF	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	70 27.60 70 27.60 70 09.10 70 09.10	132 43.80 132 43.80	78 08 09 ? 78 08 09 ? 78 07 18 ? 78 07 22 ? 78 07 26 ? 78 07 27 ? 78 07 27 ? 78 07 30 ? 78 07 31 ? 78 08 01 ? 78 08 03 ? 78 08 03 ? 78 08 05 ? 78 08 10 ? 78 08 15 ? 78 08 17 ? 78 08 20 ?	50 63 50 63 30 30 30 30	X X X X X X X X X	X HYDR X HYDR	

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TUK.	SHELF	2	70	22.90	135	05.60	78	10 07	?	50	57	Χ	X HYDR
TUK.	SHELF	2	70	22.90	135	05.60	78	10 08	?	50	57	Х	X HYDR
TUK.	SHELF	2	70	22.90	135	05.60	78	10 09	?	30	57	Χ	X HYDR

BOTTLE/CTD DATA SET NUMBER: 78-0002 YEAR:1978 VESSEL/AGENCY: CANMAR

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. SHELF	2 1344654352256432223451187 1344654352256432223451187	70 10.60 70 10.60	130 58.90 130 58.90	78 07 15 10 78 07 15 11 78 07 15 13 78 07 15 22 78 07 16 02 78 07 16 02 78 07 16 10 78 07 16 15 78 07 16 15 78 07 16 15 78 07 16 15 78 07 16 18 78 07 16 18 78 07 16 18 78 07 16 18 78 07 17 01 78 07 17 01 78 07 17 10 78 07 17 13 78 07 17 15 78 07 17 15 78 07 17 15 78 07 17 12 78 07 17 12 78 07 17 21 78 07 17 23 78 07 18 04 78 07 18 04 78 07 18 04 78 07 19 ? 78 07 19 ? 78 07 19 22 78 09 23 20 78 09 24 16	329 329 329 226 329 226 331 326 332 322 333 332 333 333 333 333 333	27 33 31 31 30 29 27 34 30 27 55 55 55	××××××××××××××××××××××××××××××××××××××	X CT12 X CT12	

BOTTLE/CTD DATA SET NUMBER: 78-0018 YEAR:1978 VESSEL/AGENCY: SEAKEM

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR	
MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY	1 2 3 4	69 32.50 69 32.50 69 32.50 69 32.50	136 12.10 136 12.10	78 78	07 20 07 20 07 20 07 20	? ? ?	18 18 18 18	20 20 20 20	X X X	X CT12 X CT12 X CT12 X CT12		

BOTTLE/CTD DATA YEAR:1978	A SET N VESSEL/	JUMBER: 7 AGENCY: S	8-0019 EAKEM						
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY H			MEAS	INSTR T	INT NO HR
TUK. SHELF TUK. SHELF TUK. SHELF	1 1 1	70 20.4 70 20.4 70 20.4	130 30.7 130 30.7 130 30.7	78 07 29 1 78 07 29 2 78 07 30	21 3	32 32 32 30 31	X X X	X CT12 X CT12 X CT12	
BOTTLE/CTD DATA	A SET N	JUMBER: 7	8–0031 FO		<u></u>				
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY H			MEAS	INSTR T	INT NO HR
TUK. COASTLINE	123457061A8031A111111111111111111111111111111111	233	133 23. 133 18. 133 19. 134 19. 135 19. 136 19. 137 19. 138 19. 139 19. 131 19. 133 19. 134 19. 135 19. 137 19. 138 19. 139 19. 130 19. 130 19. 130 19. 130 19. 130	78 09 01 78 09 01 78 09 01 78 09 01 78 09 01 78 09 01 78 09 01 78 09 02 78 09 02 78 09 02 78 09 02 78 09 02 78 09 02 78 09 02 78 09 02 78 09 02 78 09 03 78 09 04 78 09 04 78 09 04 78 09 04 78 09 04 78 09 04 78 09 04	???????????????????????????????????????	??????????211132111145111221111333312222211111132			

EOTTLE/CTD DATA SET NUMBER: 79-0001 YEAR:1979 VESSEL/AGENCY: IOS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	MEAS	INSTR T	INT NO HR
CANADA BASIN	12041 11182367953	70 25.00 73 01.00 71 50.00 71 00.00 70 50.00 71 25.00 72 54.00 72 10.00 71 07.00 72 00.00 71 37.00 70 08.00 72 14.00	139 00.00 134 52.00 137 15.00 136 30.00 131 00.00 133 30.00 128 53.00 132 30.00 126 41.00 127 20.00 130 22.00 135 38.00 132 45.00	79 11 24 22 79 11 25 22 79 11 26 19 79 11 26 20 79 11 27 03 79 11 27 04 79 11 27 21 79 11 28 20 79 11 29 05 79 11 29 07 79 11 29 08 79 11 30 00 79 11 30 21	405	X X X X X X X X X X X X X X X X X X X	X GLDL X GLDL	

BOTTLE/CTD DATA SET NUMBER: 79-0003 YEAR:1979 VESSEL/AGENCY: CANMAR

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
HERSCHELL IS. HE	666666666666666666666666666666666666666	45.4040 45.4040404040404040404040404040404040404	139 44.60 139 44.60	79 08 15 22 79 08 27 201 79 08 23 23 79 08 23 23 79 08 24 01 79 08 24 01 79 08 28 21 79 08 28 21 79 09 07 01 79 09 08 16 79 09 08 16 79 09 08 16 79 09 10 16 79 09 18 21 79 09 18 21 79 09 12 18 79 09 25 18 79 09 27 10 79 07 10 79 07 10 79 07 14 21 79 07 14 21 79 07 14 21 79 07 14 21 79 07 18 19 79 07 28 19 79 07 28 19 79 07 28 19 79 08 01 79 08 01 79 08 01 79 08 01 79 08 07	3031506033000000000000000000000000000000	23 23	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X 4021 X 4021 X 4021 X X TC-2 X X TC-2 X X TC-2 X X X TC-2 X X X X X X X X X X X X X X X X X X X	

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BOTTLE/CTD DATA SET NUMBER: 79-0005 YEAR:1979 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	MEAS	INSTR INT NO HR T
AMUNDSEN GULF	1234561234567	70 06.00 70 05.40 70 06.40 70 07.30	125 02.00 125 02.50 125 04.10 125 04.20 125 00.00 124 59.00 125 01.20 125 03.00 125 01.50 125 03.50 125 03.50 125 03.50 124 53.20 125 00.50 125 00.70 124 57.60 124 57.60	79 05 21 ? 79 05 22 ? 79 05 23 ? 79 05 24 ? 79 05 24 ? 79 06 18 ? 79 06 18 ? 79 06 19 ? 79 06 19 ? 79 06 19 ? 79 06 19 ? 79 09 19 ? 79 09 19 ? 79 09 19 ? 79 09 19 ? 79 09 19 ? 79 09 19 ? 79 09 19 ? 79 09 19 ?	14 ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	X	CT12 CT12 CT12 CT12 CT12 CT12 CT12 CT12

BOTTLE/CTD DATA SET NUMBER: 79-0007 YEAR:1979 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST TO (M)	DEPTH	PARAM MEAS C S		INT NO HR
TUK. SHELF	1	70 46.20 129 21.4	79 07 22 08	25	25	X	X CT12	

BOTTLE/CTD DATA SET NUMBER: 79-0009 YEAR:1979 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	TO DEP	ER PARAM TH MEAS) C S	INSTR INT N HR T	Ю
TUK. SHELF TUK. SHELF		70 30.0 70 30.0	133 30.0 133 30.0	79 09 09 04 79 09 09 21	50 48	? ?	CT12 CT12	

BOTTLE/CTD DATA SET NUMBER: 79-0010 YEAR:1979 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY	/ HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S		NSTR	INT NO HR
MCKINLEY BAY MCKINLEY BAY MCKINLEY BAY MCKINLEY BAY		69 58.60 69 58.60	131 07.50 131 07.50 131 07.50 131 07.50	79 79	09 25 09 25 09 25 09 25	?	4666	? ? ?	X X X X	X	CT12 CT12 CT12 CT12	

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MCKINLEY BAY	567890112345678901232222222223E3333EEFABCD	58.60 69.58.60 69.58.60 69.58.60 69.58.60 69.58.60 69.58.60 69.58.80 69.58.80 69.56.	131 07.50 131 07.50	79 09 25 ? 79 09 26 16 ? 79 09 26 16 ? 79 09 27 79 09	66816767887788862776435776457817230975	??????????????????????????????????????	X CT12 X X X X X X X X X X X X X X X X X X X

BOTTLE/CTD DATA SET NUMBER: 79-0026 YEAR:1979 VESSEL/AGENCY: DOME

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	DEPTH	PARAM MEAS C S		INT NO HR
MCKINLEY BAY		70 02.5	131 13.4	79 12 13 ?	?	?	X	X YSI	

BOTTLE/CTD DATA SET NUMBER: 79-0037 YEAR:1979 VESSEL/AGENCY: DFO

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AREA	STN	LAT DEG MIN	LÖN DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
TUK. COASTLINE	2 4 22A 23 30 31A 31A 22A 23 31 31A			79 06 28 ? 79 06 28 ? 79 07 18 ? 79 07 19 ? 79 07 19 ? 79 07 19 ? 79 07 19 ? 79 07 19 ? 79 08 01 ? 79 08 01 ? 79 08 04 ? 79 08 07 ? 79 08 07 ? 79 08 07 ?	???????????????????????????????????????	RS53 RS53 RS53 RS53 RS53 RS53 RS53 RS53	

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TUK. COASTLINE TUK. COASTLINE

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BOTTLE/CTD DATA SET NUMBER: 80-0002 YEAR:1980 VESSEL/AGENCY: CANMAR

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
	222222222222222244444555555555555555555	70 43.60 133 58.10 70 20.40 134 10.80 70 51.60 129 16.80 70 51.60 129 16.80 70 51.60 129 16.80 70 51.60 129 16.80 70 51.60 129 16.80 70 20.40 134 10.80	80 08 01 23 80 08 02 15 80 08 02 15 80 08 02 15 80 08 02 15 80 08 02 15 80 08 10 09 80 08 12 13 80 08 12 14 80 08 23 11 80 08 23 11 80 08 23 11 80 08 23 11 80 08 23 11 80 08 23 11 80 08 23 11 80 08 23 11 80 08 27 19 80 08 27 19 80 09 15 09 80 07 14 15 80 07 16 19 80 07 16 19 80 07 12 19 80 07 22 19 80 07 24 19 80 07 25 19 80 07 29 19 80 07 29 19 80 07 29 19 80 07 29 19 80 07 20 19 80 07 21 19 80 07 22 19 80 07 25 19 80 08 21 15 80 08 08 13 15 80 08 08 13 15 80 08 08 13 15 80 08 08 13 15 80 08 08 13 15 80 08 09 16 80 08 09 16 80 08 09 16 80 08 13 15 80 08 13 15 80 08 09 16 80 08 09 16 80 08 09 16 80 08 13 15	??????????????????????????????????????	X X X X X X X X X X X X X X X X X X X	

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BOTTLE/CTD DATA SET NUMBER: 80-0003 YEAR:1980 VESSEL/AGENCY: ARCTIC LAB

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DA [*] MO	TE DY	HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
MCKINLEY BAY	CEBADEDC	69 58. 69 57. 70 00. 70 03. 69 56. 69 57. 69 56. 69 58.	131 10. 131 14. 131 06. 131 05. 131 11. 131 14. 131 11. 131 10.	80 80 80 80 80 80 80	07 07 07 07 07 08 08 08	04 04 05 05 05 10 10	02 00 02 04 21 22	11 3 8 9 5 9 4 10	11 4 10 10 5 10 4 10	X X X X X X	X CT12 X CT12 X CT12 X CT12 X CT12 X CT12 X CT12 X CT12 X CT12	

MCKINLEY BAY A	70 00. 70 03. 70 00. 70 03. 69 58. 69 56. 69 57. 70 00. 69 56. 69 57. 69 58. 70 03.	131 06. 131 05. 131 06. 131 05. 131 10. 131 11. 131 14. 131 14. 131 14. 131 10. 131 10.	80 08 11 00 80 08 11 01 80 09 09 21 80 09 (9 23 80 09 10 01 80 09 10 02 80 09 10 03 80 09 26 10 80 09 26 16 80 09 26 17 80 09 26 18 80 09 26 21	8 9 8 8 10 4 11 9 5 20 9 8	20	X X CT12 X X CT12
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BOTTLE/CTD DATA SET NUMBER: 80-0004 YEAR:1980 VESSEL/AGENCY: ARCTIC LAB

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR		WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. HARBOUR	756154553275555665545352115756551235544756551253545 43 66 5 62 3 7 6 57 34 6 5 7 3 4.5 6 5 7 3 4.5	69 26.20 69 27.30 69 26.79 69 26.79 69 26.79 69 26.79 69 27.49 69 27.30 69 29 29 29 29 29 29 29 29 29 29 29 29 29	132 58.69 132 57.89 132 59.69 133 01.09 132 59.50 132 58.49 132 58.49 132 58.39 132 58.49 132 58.69 132 58.69 132 59.59 132 59.59 133 08.09 132 59.59 132 59.10 132 58.10	80 07 10 10 80 07 10 11 80 07 10 12 80 07 10 15 80 07 10 16 80 07 10 20 80 08 12 16 80 08 13 16 80 08 13 19 80 08 13 20 80 08 13 21 80 08 13 22 80 08 13 22 80 08 14 20 80 08 14 20 80 08 14 20 80 08 14 20 80 08 15 20 80 08 16 80 08 17 80 09 05 11 80 09 05 11 80 09 05 17 80 09 06 09 80 09 06 10 80 09 24 20 80 09 25 14 80 09 24 20 80 09 25 17 80 09 25 20 80 09 25 20	1008400871600322255727007458062290579281954101116	101255127110905512255?21101955105522590172055215920127	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	X X CT122 X X X X X X X X X X X X X X X X X X	

BOTTLE/CTD DATA SET NUMBER: 80-0016 YEAR:1980 VESSEL/AGENCY: DOME

AREA	STN	LAT DEG MIN E	LON DEG MIN	DATE YR MO DY HR		WATER DEPTH (M)	PARAM MEAS C S		INT NO HR
MCKINLEY BAY	\$	70 02.00 1 70 02.00 1	131 10.50 131 10.50 131 10.50 131 10.50 131 10.50 131 10.50 31 10.50	80 04 03 11 80 04 04 00 80 04 05 00 80 04 06 00 80 04 06 22 80 04 07 00 80 04 07 21 80 04 08 00 80 04 09 00 80 04 10 00 80 04 11 00 80 04 12 00 80 04 13 00 80 04 13 00 80 04 29 00 80 04 29 00 80 04 30 18 80 05 02 00 80 05 03 00	12???? 13?014?????????? 133??	???????????????????????????????????????	X.	X YSI X YSI	

BOTTLE/CTD DATA SET NUMBER: 80-0025 YEAR:1980 VESSEL/AGENCY: LGL

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM INSTR MEAS C S T	INT NO HR
TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF YUKON COAST YUKON COAST YUKON COAST TUK. SHELF YUKON COAST YUKON COAST	1239 109 1045 6789 10	69 56. 70 00. 70 01. 69 07. 69 09. 69 07. 69 09. 69 56. 70 04. 69 59. 69 56. 69 59. 69 07. 69 09.	134 23. 134 16. 134 04. 138 00. 138 00. 138 00. 138 55. 134 19. 133 56. 134 18. 134 18. 138 00.	80 08 14 13 80 08 14 14 80 08 14 15 80 08 20 18 80 08 20 20 80 08 21 19 80 08 21 21 80 08 24 17 80 08 26 17 80 08 27 03 80 08 27 04 80 08 27 05 80 09 06 20 80 09 06 22	? 12 ? 20 ? 20 ? 7 ? 17 ? 26 ? 17 ? 19 ? 14 ? 16	X X HYDR	

BOTTLE/CTD DATA SET NUMBER: 80-0028 YEAR:1980 VESSEL/AGENCY: DOME

AREA	STN	LAT DEG MIN	LON DEG MIN		ATE O DY	HR	CAST TO (M)	WATER DEPTH (M)	ME	AS	INSTE T	R INT HR	NO
MCKINLEY BAY		70 02.5	131 13.4	80 08	6 19	?	?	15	Χ		X YSI		

BOTTLE/CTD DATA SET NUMBER: 80-0041 YEAR:1980 VESSEL/AGENCY: SEATECH

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	NT NO HR
KUGMALLIT BAY	0123456 01234560123456012	69 27.* 69 27.	133 05.* 133 05.	80 09 20 20 80 09 20 20 80 09 20 21 80 09 20 21 80 09 20 21 80 09 20 21 80 09 20 22 80 09 21 17 80 09 21 21 80 09 21 22 80 09 21 23 80 09 23 19 80 09 23 20 80 09 24 20 80 09 24 20 80 09 24 20	5.002272700006260000030000000 5.443323668229645444044448656		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X YSI X YSI X YSI X YSI X YSI X X YSI X X YSI X X YSI X X YSI X X YSI YSI YSI YSI YSI YSI YSI YSI YSI YSI	
		*NOM I NAL	LOCATION						

BOTTLE/CTD DATA SET NUMBER: 81-0001 YEAR:1981 VESSEL/AGENCY: IOS

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DATE MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PAR ME C	AM AS S	INSTR	INT NO HR
BEAUFORT SEA	22 21 33 33 33 35 51 81 11 23 23 24 25 44 20 20 20 20 20 20 20 20 20 20 20 20 20	71 42.39 72 24.79 73 01.19 72 25.89 71 44.00 71 34.89 71 13.09 71 05.50 71 54.79 71 06.00 70 32.89 71 13.09 70 45.00 70 22.00 70 13.80 69 53.00 69 53.00 69 54.09 71 04.49 70 54.29 71 08.00 70 58.20 71 04.80 70 35.39	136 02.79 137 29.19 134 50.20 133 11.30 131 29.90 131 05.49 130 42.49 130 20.00 129 48.40 131 04.00 140 47.00 139 46.30 139 03.80 135 04.30 134 13.20 137 06.79 138 44.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 137 45.00 138 59.50	811 811 811 811 811 811 811 811 811 811	03 18 03 18 03 20 03 21 03 21 03 21 03 21 03 22 03 24 03 25 03 26 03 26 03 27 03 27 03 27 03 27	21 19 18 19 12 23 00 19 12 20 00	1030 1040 1040 1030 980 585 187 55 1040 1045 910 64 330 415 41 185 58 463 86 63 58	1960 2465 2623 1943 985 187 57 57 57 27123 1096 415 5085 463 463 58 58	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X GLDL X GLDL	

BEAUFORT SEA BEAUF		43 45 54 56 219 220 390 390 21 22 1045 2200 1045 2500 1045 1457 17 17 307 77 225 41 41 17 18 80 81 626 629 945 470 100 101 60 470 1040 1963 1035 1615 935 935 90 90 315 315 77	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XX GLDL XX GLD
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BOTTLE/CTD DATA SET NUMBER: 81-0002C YEAR:1981 VESSEL/AGENCY: CANMAR

AREA		STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO	TE DY	HR	CAST TO (M)	WATER DEPTH (M)	PAR ME C		INSTR	INT HR	NO
BEAUFORT BEAUFORT BEAUFORT BEAUFORT	SEA SEA SEA SEA SEA SEA	KOPAN KOAKO ISSUN KENAL KENAL IRKAL	70 21.88 70 05.53 70 43.73 70 43.73	135 12.20 134 06.82 134 26.75 133 58.47 133 58.47 134 10.58	81 81 81	07 07		??????	?????	?????	X X X X X	X	CTD CTD CTD CTD CTD CTD		

BOTTLE/CTD DATA SET NUMBER: 81-0003 YEAR:1981 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DA' MO		HR	CAST TO (M)	WATER DEPTH (M)	PARA MEA C S	AS	INSTR	INT HR	NO
TUK. SHELF		70 01.* 70 01. 70 01. 70 01. 70 01. 70 01. 70 01. 70 01.	134 19.* 134 19. 134 19. 134 19. 134 19. 134 19. 134 19.	81 81 82	03 05 07 09 10 02 04	10	???????	??????	??????	X X X X X	X X X X X X	CT12 CT12		

BOTTLE/CTD DATA SET NUMBER: 81-0013 YEAR:1981 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR		WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. HARBOUR	1112511736143A6A187243A172554BA63AAB2174A74A17A17A17A17	69 27.10 69 27.10 69 27.59 69 27.59 69 27.10 69 69 27.10	132 59.50 132 59.50 132 58.79 133 00.49 133 00.49 133 00.59 133 00.59 133 00.00 132 59.50 132 59.69 133 01.20 133 01.20 133 01.20 133 01.20 133 01.20 133 01.70 133 01.70 133 01.70 133 01.89 133 01.49 133 00.49 133 01.59 133 01.59 133 00.59 133 00.59 133 00.59 133 00.59	81 06 21 21 81 06 21 23 81 06 22 02 81 06 22 04 81 06 22 05 81 06 22 05 81 06 22 06 81 06 22 06 81 06 22 08 81 07 04 01 81 07 04 01 81 07 04 01 81 07 04 03 81 07 04 05 81 07 04 07 81 07 04 07 81 07 04 11 81 07 04 12 81 07 07 04 81 07 07 04 81 07 07 03 81 07 07 04 81 07 07 04 81 07 07 04 81 07 07 02 81 07 07 03 81 07 07 03 81 07 07 04 81 07 07 05 81 07 07 05 81 07 07 05 81 07 07 15 81 07 07 15 81 07 07 17 81 07 07 18 81 07 07 17 81 07 07 18 81 07 07 17 81 07 07 18 81 07 07 18 81 07 07 17 81 07 07 18 81 07 07 17 81 07 07 18 81 07 07 18 81 07 07 08 81 07 07 08 81 07 08 00 81 07 08 00 81 07 08 00 81 07 08 00	10010011281016011099191689190007326363091113011201131114114	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	X CT122	

BOTTLE/CTD DATA SET NUMBER: 81-0015 YEAR:1981 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	
MCKINLEY BAY		70 01.6	131 13.0	81 04 21 ?	12 18	CT12

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2	2	Q
v	~	υ

TUK. SHELF MCK INLEY BAY MCK INLEY BAY TUK. SHELF TUK. SHELF	70 00.9 70 01.6 70 01.6 70 00.9 70 00.9 70 00.9 70 00.9 70 00.9 70 00.9 70 00.9 70 00.9 70 00.9 70 00.9	134 19.3 131 13.0 131 13.0 134 19.3 134 19.3	81 05 16 ? 81 05 17 ? 81 05 17 ? 81 05 29 ? 81 05 29 ? 81 06 16 ? 81 06 16 ? 81 06 16 11 81 06 16 15 81 06 16 20 81 06 20 ? 81 07 25 20 81 07 26 02 81 07 26 14 81 09 26 ?	22527275555 172755551888 1817	18 18 18 18 18 18 18 18 18 18 18 18 18	CT12 CT12 CT12 CT12 CT12 CT12 CT12 CT12
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BOTTLE/CTD DATA SET NUMBER: 81-0018 YEAR:1981 VESSEL/AGENCY: SEQUEL

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY	HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S		INT NO HR
TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF HERSCHEL IS. TUK. SHELF	TBN-1 TBN-2 TBSC1 TBSC2 DS3 DS4 DS5 DS5 DS9 DS10 TN-1 TN-2 TS-1 TS-1 TS-3 TW-1 TW-3	69 53.77 69 53.52 69 52.17 69 53.82 69 53.82	135 55.50 135 58.20 136 02.60 138 48.40 138 47.60 138 36.00 138 36.30 138 35.20 138 35.65 138 44.80 136 11.65 136 11.73 136 11.73 136 11.65 136 11.65 136 11.65 136 11.65 136 11.65 136 11.65 136 11.65 136 11.65	81 09 11 81 09 11 81 09 11 81 09 12 81 09 13 81 09 13 81 09 14 81 09 14 81 09 14 81 09 22 81 09 22	?????????????????????????	????22143153???????????????	?????33254264????????????????	X X X X X X X X X X X X X X X X X X X	? ?? ?? X BOTT ? ? ? ? ? ? ? ? ?	

BOTTLE/CTD DATA SET NUMBER: 81-0027 YEAR:1981 VESSEL/AGENCY: SEQUEL,LGL

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. SHELF	N-1 1-2 1-2 1-2 1-2 1-2 1-2 1-1 1-1 1-1 1	69 50.7 69 55.6 70 02.0 70 09.5 70 02.0 69 36.4 70 10.0 70 05.2 70 00.5 69 55.6 69 50.7 70 02.8 70 00.3	133 20.0 133 22.8 133 55.0 134 29.5 133 55.0 133 04.8 133 28.5 133 25.6 133 23.3 133 22.8 133 20.0 134 30.0	81 08 01 01 81 08 01 15 81 08 05 17 81 08 06 16 81 08 06 19 81 08 10 18 81 08 11 18 81 08 11 21 81 08 12 01 81 08 12 04 81 08 12 06 81 08 14 22 81 08 18 06	???????????????????????????????????????	20 14 20	X X X X X X X X X X X X X X X X X X X	X HYDR X HYDR	

TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF	N-10 N-11 N-12 N-13 L-1	70 02.6 70 08.3 69 57.3 69 52.0 69 55.6	134 48.5 134 38.3 133 52.0 134 49.0 133 22.8	81 08 19 21 81 08 24 22 81 08 25 03 81 08 25 20 81 09 06 18	? 27 ? 30 ? 17 ? 11 ? 20	X X X X	X HYDR X HYDR X HYDR X HYDR X HYDR	
BOTTLE/CTD DATA		NUMBER: 8		<u>.</u>	affan (m. 1944) am van Am 1944 (m. 1944)			·
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH	PARAM H MEAS C S		INT NO HR
KUGMALLIT BAY LIVERPOOL BAY		69 26.* 69 22. *NOMINAL	132 58.* 131 00.	81 06 01* 81 06 01	? ?		X ? X ?.	· .
BOTTLE/CTD DATA YEAR:1982	A SET N VESSEL/	NUMBER: 8	32-0003 SL					
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S		INT NO HR
AMUNDSEN GULF AM	4128 4129 4130 4131 4132 4133 4135 4136 4137 4138 4139 4144 4145 4147 4147 4148 4150 4151 4152	70 23.28 70 37.90 70 51.30 71 03.50 70 36.58 70 07.38 70 32.58 71 22.08 71 00.30 70 33.40 69 51.68 69 37.58 70 26.90 70 47.58 69 14.78 69 19.28 69 38.00 71 33.40 71 34.18	3 124 20.50 3 124 14.70 3 123 29.90 3 123 29.90 3 123 54.68 3 120 54.68 3 120 25.08 3 120 03.80 3 120 03.80 3 121 44.00 3 121 52.08 3 122 11.88 3 122 11.88 3 123 11.8 36.50 3 118 36.50 3 118 32.00 4 117 49.58 4 117 27.50 4 17 49.58 4 117 08.78 4 120 17.20 4 19 57.58 4 19 25.20	82 03 29 18 82 03 29 19 82 03 29 20 82 03 29 21 82 03 39 22 82 03 30 20 82 03 30 21 82 03 30 22 82 03 30 23 82 03 31 17 82 03 31 19 82 03 31 20 82 03 31 21 82 03 31 22 82 03 31 23 82 04 01 00 82 04 01 17 82 04 01 19 82 04 01 19 82 04 01 19 82 04 01 21 82 04 02 17 82 04 02 17 82 04 02 20	58 62 185 187 467 467 454 454 263 239 394 394 313 313 119 123 315 316 472 90 94 308 310 437 438 390 391 278 280 47 52 182 184 334 335 226 229 174 177 91 95 148 152 104 108	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X GLDL X GLDL	
BOTTLE/CTD DATA YEAR:1982 V		IUMBER: 8 AGENCY: D	2–0032 F0			<u> </u>		
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	MEAS	INSTR T	INT NO HR
TUK. HARBOUR TUK. HARBOUR TUK. HARBOUR TUK. HARBOUR		69 26. 69 26. 69 26. 69 26.	132 58. 132 58. 132 58. 132 58.	82 07 27 ? 82 07 29 ? 82 08 06 ? 82 08 11 ?	21 ? 21 ? 21 ? 21 ?	X	X CT12 X CT12 X CT12 X CT12	

BOTTLE/CTD DATA SET NUMBER: 82-0093 YEAR:1982 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)			INT NO HR
TUK. SHELF		70 01. 70 01.	134 19. 134 19.	82 02 ? ? 82 04 ? ?	? ?	X X	X CT12 X CT12	

BOTTLE/CTD DATA SET NUMBER: 82-0094 YEAR:1982 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
HERSCHEL IS. HERSCHEL IS. HERSCHEL IS. HERSCHEL IS.	C-2 D-2 D-7 D-8	69 32.60 69 27.08	138 48.70 138 47.70 138 35.50 138 34.20	82 09 03 ? 82 09 03 ? 82 09 04 ? 82 09 05 ?	12 11 10 11	13 12 11 12	X X X	X BOTT X BOTT X BOTT X BOTT	

BOTTLE/CTD DATA SET NUMBER: 82-0095 YEAR:1982 VESSEL/AGENCY: EPS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO
YUKON COASTAL	S6 S5 S8 S8 S1 K8 K7 K6 K1 K3 K2	69 19.8 69 20.0 69 20.8 69 21.1 69 22.9 69 20.4 69 06. 69 06. 69 06. 69 06. 69 06. 69 06.	138 42.2 138 42.2 138 43.0 138 44.1 138 46.3 138 46.2 137 57. 137 57. 137 57. 137 57. 137 57. 137 57. 137 57.	82 08 05 00 82 08 05 01 82 08 05 02 82 08 05 04 82 08 05 04 82 08 05 20 82 08 05 22 82 08 06 20 82 08 06 21 82 08 06 21 82 08 07 00 82 08 07 18 82 08 07 19 82 08 07 19 82 08 07 22	5555520555555853 444463244444223	???????????????????????????????????????	X	X YSI X YSI	

BOTTLE/CTD DATA SET NUMBER: 82-0097A YEAR:1982 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER PARAM TO DEPTH MEAS (M) (M) C S	
TUK. SHELF	TE1	69 53.82 136 11.48	82 07 24 ?	11 12 X	BOTT
TUK. SHELF	TE2	69 53.82 136 10.78	82 07 24 ?	21 22 X	BOTT
TUK. SHELF	TE3	69 53.82 136 06.87	82 07 24 ?	21 22 X	BOTT
TUK. SHELF	TS1	69 53.77 136 11.65	82 07 24 ?	9 10 X	BOTT
TUK. SHELF	TS2	69 53.52 136 11.65	82 07 24 ?	22 23 X	BOTT

TUK. SHELF	TS3 TW1 TW2 TW3 TN3 TN1 TN2 TBC1 TBC2 TBC3 TBE1 TBE2 TBN1 TBSC TBW1	69 53.82 69 53.82 69 55.45 69 55.45 69 54.12 69 45.25 69 45.25 69 45.80 69 44.10 69 44.10	7 136 11.65 2 136 11.82 2 136 12.42 2 136 16.33 5 136 11.65 7 136 11.65 2 136 11.65 0 135 54.80 6 135 56.40	82 07 24 ? 82 07 24 ? 82 07 24 ? 82 07 24 ? 82 07 28 ? 82 07 28 ? 82 07 29 ? 82 07 31 ? 82 07 31 ? 82 07 31 ? 82 07 31 ? 82 07 31 ? 82 07 31 ? 82 07 31 ? 82 07 31 ? 82 07 31 ?	20 9 23 24 23 9 22 6 7 7 10 11 7 7	24 10 23 7 8 11 11 12 8	X X X X X X X X X X X X	BOTT BOTT BOTT BOTT BOTT BOTT BOTT BOTT	
BOTTLE/CTD DAT YEAR:1982		NUMBER: 8 'AGENCY: D							•
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)		PARAM MEAS C S		INT NO HR
KUGMALLIT BAY LIVERPOOL BAY		69 26.* 69 22. *NOMINA	132 58.* 131 00. L DATES, LO		?	?		X ? X ?	
BOTTLE/CTD DAT	A SET N VESSEL/	IUMBER: 8 AGENCY: C	2-0118 ANMAR						
AREA	STN	LAT DEG MIN	LON DEG MIN		TO		PARAM MEAS C S		INT NO HR
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA	NERLK IRKAL KENAL KIGGA ORVIL AIVER	70 34.08 70 43.73 69 52.30 70 22.82	133 29.73 134 10.22 133 58.47 133 55.30 136 30.90 133 42.00	82 07 04 ? 82 07 26 ? 82 07 27 ? 82 08 23 ? 82 08 29 ? 82 10 05 ?	?????	??????	X X X X X	X CTD X CTD X CTD X CTD X CTD X CTD	
	· · · · · · · · · · · · · · · · · · ·	معادر ہے کہ اس سے محد مساسر			· .				
BOTTLE/CTD DAT YEAR:1982	A SET N VESSEL/	UMBER: 8 AGENCY: A	2-0119 RCTIC LAB.			<u> </u>			
	A SET N VESSEL/ STN	UMBER: 8 AGENCY: A LAT DEG MIN	2-0119 RCTIC LAB. LON DEG MIN	DATE YR MO DY HR		WATER DEPTH (M)	PARAM MEAS C S		INT NO HR

BOTTLE/CTD DATA SET NUMBER: 83-0047 YEAR:1983 VESSEL/AGENCY: EPS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	TO DE		ARAM MEAS S T	INSTR	INT I HR	NO
YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL YUKON COASTAL	\$6 \$5 \$4 \$3 \$8 \$2 \$1	69 19.8 69 20.0 69 20.8 69 21.5 69 22.1 69 20.9 69 20.4	138 42.2 138 42.2 138 43.0 138 44.1 138 46.3 138 46.2 138 44.2	83 08 02 16 83 08 03 01 83 08 03 02 83 08 04 13 83 08 04 15 83 08 04 16 83 08 04 18	4.5 5 4.5 5 4.5 5 4.5 5 3.0 3 2.5 3	.0 X .0 X .0 X	X X X X	YSI YSI YSI YSI YSI YSI		

BOTTLE/CTD DATA SET NUMBER: 83-0058 YEAR:1983 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR		WATER PARA DEPTH MEA (M) C S	AS HR
TUK. SHELF	123456789012345678901234123456789012345	70 05. 70 06. 70 04. 70 04. 70 05. 70 04. 69 36. 69 33. 70 03. 70 04. 70 05. 70 06. 70 07. 70 08. 70 09. 70 09.	134 31. 134 25. 134 27. 134 27. 134 21. 134 05. 134 07. 134 37. 133 13. 133 14. 133 13. 133 14. 133 13. 133 14. 133 05. 133 09. 133 09. 133 09. 133 09. 133 04. 133 10. 133 10. 133 10. 133 13. 133 13. 133 13. 133 14. 133 15. 133 17. 133 18. 133 19. 133 19. 134 19. 135 19. 136 19. 137 19. 138 19. 139	83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 21 ? 83 08 22 ? 83 08 23 ? ?	000000000000000000000000000000000000000	??????????????????????????????????????	X BOTT

BOTTLE/CTD DATA SET NUMBER: 83-0065 YEAR:1983 VESSEL/AGENCY: ARCTIC LAB.

AREA S	TN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	MEAS		INT NO HR
TUK. SHELF	6543A2111098A76543213543	69 55.84 69 51.98 69 48.62 69 43.25 69 31.31 69 53.82 69 45.51 69 33.33 69 54.64 69 52.19 69 47.34 69 48.91 69 47.34 69 48.91 69 48.91 69 48.91 69 48.91 69 48.91 69 48.91 69 49.91 69 49.91		83 07 20 ? 83 07 20 ? 83 07 20 ? 83 07 20 ? 83 07 20 ? 83 07 21 ? 83 07 23 ? 83 07 23 ? 83 07 23 ? 83 07 23 ? 83 07 23 ? 83 07 25 ? 83 07 25 ? 83 07 25 ? 83 07 25 ? 83 07 25 ? 83 07 25 ? 83 07 25 ? 83 07 25 ? 83 07 25 ?	? 5.5 ? 5.6 ? 4.3 ? 11	X	CT12 C	12 4

BOTTLE/CTD DATA SET NUMBER: 83-0068 YEAR:1983 VESSEL/AGENCY: DFO

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		INSTR	INT NO HR
LIVERPOOL BAY		69 22. 69 22.	131 00. 131 00.	83 06 11 ? 83 09 12 ?	? ?	X	?	

BOTTLE/CTD	DATA	SET	NUMBER:	83-0069
YFAR - 1983	VF	SSFI	/AGENCY -	CANMAR

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S T	INSTR INT NO HR
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA	NATIA HAVIK SIULK ARLUK AIVRK	70 20.18 70 24.63 70 19.38	137 13.12 132 13.08 134 30.67 135 26.53 133 42.35	83 07 19 ? 83 07 26 ? 83 07 27 ? 83 07 31 ? 83 08 03 ?	? ? ? ? ? ? ? ? ? ?	X X X X X X	CTD CTD CTD CTD CT12

BOTTLE/CTD DATA SET NUMBER: 84-0043 YEAR:1984 VESSEL/AGENCY: ARCTIC LAB.

AREA STN LAT LON PATE CAST WATER PARAM INSTR INT NO DEG MIN DEG MIN PR MO DY HR TO DEPTH MEAS TO WATER PARAM INSTR INT NO DEPTH MEAS TO DEPTH

BOTTLE/CTD DATA SET NUMBER: 84-0044 YEAR:1984 VESSEL/AGENCY: SEQUEL

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	TO D	ATER PAR EPTH ME (M) C		INT NO
TUK. SHELF	1 2 3 4 A A A 7 8 9 3 1 2 3 3 4 5 6 7 8 9 4 1 2 3 ME1 2 3 MEE 5 6 7 8 MEB	69 35.64 69 39.46 69 39.46 69 32.50 69 33.01 69 38.01 69 53.25 69 54.05 69 53.75 69 52.80 69 56.80 70 01.60 70 05.80 70 15.85 70 20.02 70 16.70 70 08.68 70 09.50 70 02.18 70 09.50 70 09.50 70 09.50 70 09.50 70 09.60 69 59.20 69 57.45	133 13.31 133 19.54 133 08.70 133 17.72 133 31.31 132 56.60 132 55.60 132 55.61 132 24.48 132 11.45 131 48.00 131 31.50 131 16.95 131 01.00 130 50.80 130 34.70 130 18.40 130 13.60 130 13.60 131 02.52 131 03.60 131 03.50 131 07.00 131 08.50 131 06.20	84 07 10 ? 84 07 10 ? 84 07 10 ? 84 07 10 ? 84 07 18 ? 84 07 18 ? 84 07 18 ? 84 07 19 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 20 ? 84 07 21 ? 84 07 21 ? 84 07 21 ? 84 07 21 ?	????????????????????????????????	?561???????????????????????????????????	LDLDLDLDLDLDLDLDLDLDLDLDLDLDLDLDLDLDLD	

BCTTLE/CTD DATA SET NUMBER: 84-0045 YE 1984 VESSEL/AGENCY: ARCTIC LAB.

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. SHELF	PITSI PITSI PITSI PITSI PITSI PITSI PITSI PITSI PITSI PITSI PITSI AMAUL	69 54.23 69 54.23 70 03.52 70 03.52	136 45.58 136 45.58 137 42.75 133 42.75	84 07 05 ? 84 07 06 ? 84 07 07 ? 84 07 08 ? 84 07 10 ? 84 07 11 ? 84 07 12 ? 84 07 13 ? 84 07 16 ? 84 07 17 ? 84 07 18 ? 84 07 18 ? 84 09 18 ? 84 09 18 ? 84 09 18 ? 84 09 19 ? 84 09 19 ? 84 09 20 ? 84 09 23 ?	???????????????????????????????????????	?????????????????????????	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X CTD	

BOTTLE/CTD DATA SET NUMBER: 84-0047 YEAR:1984 VESSEL/AGENCY: EPS

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	TO DE	ATER PARAM EPTH MEAS (M) C S		INT NO HR
YUKON COASTAL	K1234 K45 K567 K51233 K5568	69 06. 69 06. 69 06. 69 06. 69 06. 69 06. 69 20.4 69 20.9 69 21.5 69 20.8 69 20.0 69 19.8 69 22.1	137 57. 137 57. 137 57. 137 57. 137 57. 137 57. 137 57. 137 57. 138 44.2 138 44.1 138 43.0 138 42.2 138 42.2 138 46.3	84 08 01 ? 84 08 01 ? 84 08 01 ? 84 08 01 ? 84 08 01 ? 84 08 01 ? 84 08 01 ? 84 08 01 ? 84 08 06 ? 84 08 06 ? 84 08 06 ? 84 08 06 ? 84 08 06 ? 84 08 06 ?	~~~~~~~~~~~~	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	X YSI X YSI	

BOTTLE/CTD	DATA	SET	NUMBER:	84-0048
YI AR: 1984	VE	SSEL	./AGENCY:	CANMAR

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO D	Y HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA	HAVIK AIVRK NATIA ARLUK SIULK	70 24.73 70 03.95 90 19.38	132 13.08 133 42.33 137 13.12 135 26.52 134 30.67	84 07 04 84 07 29 84 09 02 84 09 12	? ?	? ? ? ?	? ? ? ?	X X X X	X CT12 X CTD X CTD X CTD X CTD	

BOTTLE/CTD DATA SET NUMBER: 84-0049 YEAR:1984 VESSEL/AGENCY: 10S

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)		INT NO HR
HERSCHEL CANYON HIGH CONTROL M'CLURE STRAIT	108 J04 J01 H11 H07 H05 J02 J03 106 105 K00 H02 K01 I01 B07 B08	70 50.0 70 26.4 70 15.4 70 00.2 69 58.6 70 01.1 70 16.8 70 19.6 70 02.9 69 23.3 69 56.4 69 27.2 69 26.3 74 24.5 74 30.7	139 30.2 137 40.7 137 45.4 137 45.3 138 14.4 138 35.2 137 25.0 137 26.7 138 47.1 138 35.1 138 43.8 139 06.0 138 46.8 138 01.3 123 58.0 123 42.0	84 04 01 20 84 04 01 22 84 04 02 20 84 04 02 22 84 04 02 22 84 04 02 23 84 04 04 18 84 04 04 18 84 04 04 21 84 04 04 22 84 04 04 04 23 84 04 06 19 84 04 06 20 84 04 20 19 84 04 20 20	? 1506 505 506 70 74 83 87 204 208 263 268 67 70 143 148 456 457 285 288 11 16 108 110 54 56 51 56 263 265 370 372	X	

BOTTLE/CTD DATA SET NUMBER: 85-0007 YEAR:1985 VESSEL/AGENCY: LGL

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR	INT NO HR
MACKENZ IE BAY	F1N F15	69 47.1 69 43.2 69 39.0 69 36.7 69 36.2 69 32.0 69 22.1 69 23.6 69 17.7 69 23.5 69 26.5 69 07.6 69 07.6 69 07.6 69 16.3 69 16.3 69 16.5	138 24.7 138 33.1 138 41.5 138 49.9 138 50.4 138 27.1 138 35.0 138 53.2 138 53.2 138 21.2 138 20.9 138 12.4 137 55.7 138 04.1 138 01.2 137 59.8 137 38.0 137 46.9 138 16.2 138 16.2 138 11.5	85 08 23 18 85 08 23 19 85 08 23 21 85 08 23 22 85 08 23 23 85 08 25 19 85 08 25 21 85 08 25 23 85 08 26 00 85 08 26 15 85 08 26 16 85 08 27 19 85 08 27 21 85 08 28 19 85 08 28 21 85 08 29 17 85 08 29 17 85 08 29 17 85 08 29 18	50075500550006050 331575950006050 12130	16 10 7 10 6 51 56 63 7	X	4021 4021 4021 4021 4021	

BOTTLE/CTD DATA SET NUMBER: 85-0017 YEAR:1985 VESSEL/AGENCY: DFO

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	INT NO HR
TUK. SHELF SEA BEAUFORT SEA	51234567 551555555 5000000000000000000000000000	0.0.0.0.5.5.2.2.2.8.8.9.6.3.6.5.8.8.1.7.0.5.1.8.1.7.9.5.6.7.4.8.8.1.5.7.0.7.6.1.5.9.2.0.2.0.7.5.3.0.3.3.3.0.9.2.8.6.1.2.0.7.6.9.9.9.6.9.9.9.9.9.9.9.9.9.9.9.9.9.9	132 36.0 0 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3	85 03 25 18 85 03 25 20 85 03 27 00 85 03 27 21 85 03 27 22 85 03 27 22 85 03 27 22 85 03 27 22 85 05 17 22 85 05 17 85 05 18 85 05 18 85 05 18 85 05 18 85 05 18 85 05 19 85 07 22 85 08 10 02 85 08 11 11 19 85 08 12 85 08 12	????????????????????????????????4974675483????????????????????????????????????	1044585955798071998887812158290734662439524659550003626379415676	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	??????????????????????????????????????	

BOTTLE/CTD DATA SET NUMBER: 85-0031 YEAR:1985 VESSEL/AGENCY: LGL

AREA	STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO		HR		WATER DEPTH (M)				HR	NO
HERSCHEL	13	69 52.8	140 55.2	85	09	18	23	38	?	Х	Χ	CT12		

BOTTLE/CTD DATA SET NUMBER: 85-0032 YEAR:1985 VESSEL/AGENCY: IOS

AREA		STN	LAT DEG MIN	LON DEG MIN	YR	DAT MO		HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	T	NSTR	INT HR	NO .
BEAUFORT BEAUFORT	SEEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA		71 31.3 70 42.3 70 37.6 70 27.2 70 13.0 70 30.2 70 16.4 70 10.2 70 03.5 71 25.4 71 22.1 71 17.8 71 10.5 71 02.2 70 42.5 71 41.1 70 58.9 71 09.7	133 21.5 136 17.1 136 06.5 135 55.4 135 38.0 140 15.0 140 35.4 140 44.4 140 49.7 131 01.4 130 55.0 130 42.0 130 23.4 130 02.8 133 16.5 134 22.4 133 22.6 133 41.9	85555555555555555555555555555555555555	03 03 03 03 03 03 03 03 03 03 03 03 03 0	???????????????????????????????????????	????????????????????	1100 710 370 566 46 563 45 47 332 221 74 48 38 56 1397 71 553	1107 710 370 58 48 566 56 48 51 335 226 78 50 41 58 1397 75 555	× × × × × × × × × × × × × × × × × × ×	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX			

BOTTLE/CTD DATA SET NUMBER: 85-0033 YEAR:1985 VESSEL/AGENCY: CANMAR

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST WATER TO DEPTH (M) (M)	PARAM MEAS C S	INSTR T	INT NO HR
BEAUFORT SEA BEAUF	SKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKKK	70 19.39 135 26.53 70 23.88 7 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 69 38.87 137 45.47 70 26.83 140 14.37 69 45.83 140 14.37 69 45.83 140 14.37 69 45.83 140 14.37 69 45.83 140 14.37 69 45.83 140 14.37 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.18 132 13.08 70 20.68 133 19.47 70 26.68 13	85 09 29 15 16 85 10 03 14 15 15 10 04 15 15 10 04 15 15 10 04 15 15 10 04 15 15 10 04 15 15 10 04 15 15 10 04 15 15 10 04 15 15 10 05 15 10 10 10 10 10 10 10 10 10 10 10 10 10	\$	***************************************	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	

TUK. SHELF AKPAK 70 14.87 134 09.38 85 07 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? X X GLDL BEAUFORT SEA 1 69 38.2 133 17.5 86 09 10 14 ? 6 X X GLDL BEAUFORT SEA 2 69 44.0 133 18.8 86 09 10 17 ? ? X X AML BEAUFORT SEA 3 69 50.1 133 21.0 86 09 10 19 ? ? X X GLDL BEAUFORT SEA 4 69 55.2 133 23.2 86 09 11 00 ? 21 X X AML BEAUFORT SEA 4 69 55.2 133 23.2 86 09 11 00 ? 21 X X AML BEAUFORT SEA 4 69 55.2 133 23.2 86 09 11 01 ? 21 X X AML BEAUFORT SEA 7 70 12.8 133 33.6 86 09 11 09 ? ? X X AML BEAUFORT SEA 7 70 12.8 133 33.6 86 09 11 09 ? ? X X AML BEAUFORT SEA 10 70 28.9 133 52.8 86 09 12 02 ? 66 X X GLDL BEAUFORT SEA 11 70 33.5 133 59.6 86 09 12 07 ? ? X X AML BEAUFORT SEA 11 70 33.5 133 59.6 86 09 12 07 ? ? X X GLDL BEAUFORT SEA 11 70 33.5 133 59.6 86 09 12 07 ? ? X X GLDL BEAUFORT SEA 13 70 44.2 134 18.0 86 09 12 07 ? ? X X GLDL BEAUFORT SEA 14 70 49.2 134 18.0 86 09 12 10 ? ? X X GLDL BEAUFORT SEA 14 70 49.2 134 18.0 86 09 12 10 ? ? X X GLDL BEAUFORT SEA 16 70 54.6 134 24.8 86 09 12 11 ? ? X X X GLDL BEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL BEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL BEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL BEAUFORT SEA 17 71 04.6 134 38.0 86 09 13 03 ? 1200 X X GLDL	AREA	STN	LAT DEG MIN	LON N DEG MIN	DATE YR MO DY HR	CAST WATER P TO DEPTH (M) (M) C	MEAS	INT N HR
YEAR: 1985 VESSEL/AGENCY: GULF	F BANKS IS. F BANKS IS. F BANKS IS. F BANKS IS.	B10 B10 B11 B12 B13 B13	74 16.7 74 16.7 74 19.4 74 10.1 74 11.8 74 11.8	7 125 18.5 7 125 18.5 1 128 39.9 125 41.0 8 126 08.8 126 08.8	85 04 23 21 85 04 23 21 85 05 03 16 85 05 03 19 85 05 03 21 85 05 03 22	2 62 Y	X CTD X CTD X CTD X CTD X CTD	
DEG MIN DEG MIN YR MO DY HR TO DEPTH MEAS (M) (M) (M) C S T TUK. SHELF AKPAK 70 14.87 134 09.38 85 07 ? ? ? ? X X CTD TUK. SHELF AKPAK 70 14.87 134 09.38 85 08 ? ? ? ? X X CTD BOTTLE/CTD DATA SET NUMBER: 96-0003 YEAR: 1986 VESSEL/AGENCY: IOS AREA STN LAT LON DEG MIN YR MO DY HR TO DEPTH MEAS (M) (M) C S T BEAUFORT SEA 1 69 38.2 133 17.5 86 09 10 14 ? 6 X X GLDL SEAUFORT SEA 2 69 44.0 133 18.8 86 09 10 17 ? ? X X AML SEAUFORT SEA 3 69 50.1 133 21.0 86 09 10 19 ? ? X X AML SEAUFORT SEA 4 69 55.2 133 23.2 86 09 11 00 ? 21 X X AML SEAUFORT SEA 4 69 55.2 133 23.2 86 09 11 01 ? 21 X X AML SEAUFORT SEA 7 70 12.8 133 33.6 86 09 11 01 ? 21 X X AML SEAUFORT SEA 9 70 23.2 133 46.0 86 09 11 09 ? ? X X AML SEAUFORT SEA 1 70 33.5 133 59.6 86 09 12 02 ? 62 X X GLDL SEAUFORT SEA 1 70 33.5 133 59.6 86 09 12 02 ? ? X X AML SEAUFORT SEA 12 70 39.0 134 06.0 86 09 12 07 ? ? X X AML SEAUFORT SEA 12 70 39.0 134 06.0 86 09 12 07 ? ? X X AML SEAUFORT SEA 12 70 39.0 134 06.0 86 09 12 07 ? ? X X AML SEAUFORT SEA 13 70 44.2 134 12.0 86 09 12 10 ? ? X X GLDL SEAUFORT SEA 15 70 54.6 134 24.8 86 09 12 11 ? ? X X X GLDL SEAUFORT SEA 15 70 54.6 134 24.8 86 09 12 11 ? ? X X X GLDL SEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL SEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL SEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL SEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL SEAUFORT SEA 17 71 04.6 134 38.0 86 09 13 03 ? 1200 X X GLDL								·
BOTTLE/CTD DATA SET NUMBER: 96-0003 YEAR: 1986	AREA	STN		LON DEG MIN	DATE YR MO DY HR	TO DEPTH N	MEAS .	INT NO
AREA STN LAT LON DEG MIN YR MO DY HR TO DEPTH MEAS (M) (M) C S T SEAUFORT SEA 1 69 38.2 133 17.5 86 09 10 14 7 6 X X GLDL (M) (M) C S T SEAUFORT SEA 2 69 44.0 133 18.8 86 09 10 17 7 7 X X AML (M) (M) C S T SEAUFORT SEA 3 69 50.1 133 21.0 86 09 10 19 7 7 X X GLDL (M)	K. SHELF K. SHELF	AKPAK AKPAK	70 14.8 70 14.8	7 134 09.38 7 134 09.38	8 85 07 ? ? 8 85 08 ? ?	? ? X ? ? X	X CTD X CTD	
REAUFORT SEA 2 69 44.0 133 18.8 86 09 10 17 ? X X AML SEAUFORT SEA 3 69 50.1 133 21.0 86 09 10 19 ? X X GLDL SEAUFORT SEA 4 69 55.2 133 23.2 86 09 11 00 ? 21 X X AML SEAUFORT SEA 4B 69 55.2 133 23.2 86 09 11 01 ? 21 X X AML SEAUFORT SEA 7 70 12.8 133 33.6 86 09 11 19 ? 51 X X AML SEAUFORT SEA 9 70 23.2 133 46.0 86 09 11 19 ? 51 X X AML SEAUFORT SEA 9 70 23.2 133 46.0 86 09 11 00 ? X X AML SEAUFORT SEA 10 70 28.9 133 52.8 86 09 12 02 ? 62 X X GLDL SEAUFORT SEA 11 70 33.5 133 59.6 86 09 12 02 ? 60 X X GLDL SEAUFORT SEA 12 70 39.0 134 06.0 86 09 12 07 ? X X GLDL SEAUFORT SEA 13 70 44.2 134 12.0 86 09 12 07 ? X X GLDL SEAUFORT SEA 14 70 49.2 134 18.0 86 09 12 10 ? X X GLDL SEAUFORT SEA 15 70 54.6 134 24.8 86 09 12 11 ? ? X X GLDL SEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL SEAUFORT SEA 16 70 59.6 134 31.2 86 09 12 12 ? 280 X X GLDL SEAUFORT SEA 17 71 04.6 134 38.0 86 09 13 03 ? 1200 X X GLDL		STN	DEG MIN	DEG MIN	YR MO DY HR	TO DEPTH M (M) (M) C	EAS S T	INT NO
EAUFORT SEA 19 70 32.2 136 36.8 86 09 13 07 ? ? X X GLDL EAUFORT SEA 20 70 27.0 136 30.8 86 09 13 08 ? 69 X X GLDL EAUFORT SEA 21 70 21.5 136 25.5 86 09 13 10 ? ? X X GLDL EAUFORT SEA 22 70 16.4 136 19.2 86 09 13 11 ? ? X X GLDL EAUFORT SEA 23 70 11.2 136 13.6 86 09 13 13 ? 48 X X GLDL EAUFORT SEA 24 70 05.8 136 08.0 86 09 13 14 ? 39 X X GLDL EAUFORT SEA 25 70 00.2 136 02.0 86 09 13 15 ? ? X X GLDL EAUFORT SEA 26 69 54.8 135 55.2 86 09 13 19 ? 20 X X GLDL EAUFORT SEA 27 69 49.4 135 49.2 86 09 13 20 ? 12 X X GLDL EAUFORT SEA 28 69 44.4 135 43.2 86 09 14 00 ? ? X X GLDL EAUFORT SEA 29 69 04.8 137 42.8 86 09 14 06 ? 12 X X GLDL EAUFORT SEA 29 69 04.8 137 42.8 86 09 14 06 ? 12 X X GLDL EAUFORT SEA 29 69 04.8 137 42.8 86 09 14 06 ? 12 X X GLDL EAUFORT SEA 29 69 04.8 137 42.8 86 09 14 06 ? 12 X X GLDL EAUFORT SEA 29 69 04.8 137 42.8 86 09 14 06 ? 12 X X GLDL EAUFORT SEA 29 69 04.8 137 42.8 86 09 14 06 ? 12 X X GLDL EAUFORT SEA 30 69 10.8 137 48.0 86 09 14 08 ? 27 X X GLDL	AR: 1986 AREA JFORT SEA JFORT SEA JFORT SEA JFORT SEA UFORT SEA UFORT SEA UFORT SEA UFORT SEA UFORT SEA JFORT SEA	/ESSEL/ STN 1234B7901123115678901223	AGENCY: LAT DEG MIN 69 38.2 69 44.0 69 55.2 70 12.8 70 23.2 70 23.2 70 23.2 70 33.5 70 39.0 27.0 59.6 71 04.6 70 37.4 70 37.4 70 21.5 70 11.2	LON DEG MIN 133 17.5 133 18.8 133 21.0 133 23.2 133 23.2 133 33.6 133 46.0 133 52.8 133 59.6 134 12.0 134 12.0 134 12.0 134 12.0 134 38.0 136 36.8 136 36.8 136 36.8 136 36.8 136 36.8	YR MO DY HR 86 09 10 14 86 09 10 17 86 09 10 19 86 09 11 00 86 09 11 00 86 09 12 02 86 09 12 05 86 09 12 07 86 09 12 07 86 09 12 10 86 09 12 11 86 09 12 11 86 09 13 03 86 09 13 05 86 09 13 07 86 09 13 07 86 09 13 10 86 09 13 11 86 09 13 11	TO DEPTH M (M) (M) C ? 6 X ? ? 21 X ? 21 X ? 51 X ? 62 X ? 62 X ? 7 ? X ? 80 X ? 7 ? X ? 280 X ? 7 ? X ? 69 X ? 7 ? X ? 69 X ? 7 ? X	EAS S T X GLDL X AML X GLDL	INT NO HR

BOTTLE/CTD DATA SET NUMBER: 86-0004 YEAR:1986 VESSEL/AGENCY: LGL

		*							
AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S T	INSTR	INT NO HR
MACKENZ IE BAY	51AB2ABAB334ABCDEDCBA9BA8 555555555555555555555555555555555555	69 59.0 70 02.0 70 05.0 70 09.0 70 12.0 70 15.0 70 22.0 70 25.0 70 32.0 70 32.0 70 38.0 70 34.0 70 44.0 70 49.0 70 34.0 70 34.0 70 31.0 70 28.0 70 25.0 70 25.0 70 31.0 70 31.0 70 31.0 70 31.0 70 28.0 70 25.0 70 21.3 70 19.0 70 15.6 70 12.3	131 26.6 131 26.5 131 26.5 132 52.5 132 52.5	86 08 28 14 86 08 29 14 86 08 29 15 86 08 29 16 86 08 29 18 86 08 29 22 86 08 29 23 86 08 29 23 86 08 29 23 86 08 29 23 86 08 30 01 86 08 30 03 86 08 30 03 86 08 30 03 86 08 30 12 86 08 30 14 86 08 30 14 86 08 30 17 86 08 30 17 86 08 30 17 86 08 30 17 86 08 30 17 86 08 30 17 86 08 30 18 86 08 30 21	9 13 15 19 22 67 37 84 42 33 44 49 33 36 33 33 33 33 33 33 33 33 33 33 33	0????????????????????????????	x x	ST12 ST12 ST12 ST12 ST12 ST12 ST12 ST12	

MACKENZIE BAYY
77.77.77.77.77.77.77.77.77.77.77.77.77.
3.3.3.3.3.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4
5.5.5.5.5.5.0.0.0.0.0.0.0.0.0.0.0.0.0.0
22001010338990001100338990001101033381190001112344489990111123331100338933111000013331110000133311100001333111000013331110000111111
573601953938583158214558824019860814571939922503477411991114477774497971054201302738 222111 1212233455556655555555543333221 11111222333333444445555555555666666555553443221
??767?????????????????????????????????

22121212121212121212121212121212121212

				343			
MACKENZ IE BAY	2 2700CBA 3 3 A 2 7 A 8 A 9 A 10 A B 10 A 10 A 10 A 10 A 10 A 10 A	$\frac{4448901123103591827286543211001355555325811210120742735579112026011173}{6696699999999999999999999999999999999$	133 58.0 0 9 1 6 2 8 4 5 5 5 6 6 8 6 9 1 6 2 8 4 6 6 7 1 5 2 9 8 6 8 6 9 1 6 2 8 4 6 6 7 1 5 2 9 8 6 8 6 9 1 6 2 8 4 6 6 7 1 5 2 9 8 6 2 8 4 6 6 7 1 5 2 2 8 3 3 7 5 2 2 8 3 3 7 5 2 2 8 5 5 9 5 6 9 5 9 6 8 6 8 6 9 5 6 8 6 8 6 9 5 6 8 6 8 6 9 6 8 6 8 6 8 6 8 6 8 6 8 6 8	86 09 05 06 86 09 05 15 86 09 05 15 86 09 05 19 86 09 05 19 86 09 05 19 86 09 05 22 22 86 09 05 22 22 86 09 06 07 86 09 06 10 86 09 06 11 86 09 07 08 86 09 07 11 86 09 08 86 86 86 86 86 86 86 86 86 86 86 86 86	101133672291100312144933622944716881311672219122911010245131413111311112229120911004513333333332222447168813222221316674310966653431010101010101010101010101010101010101	?1?3??????????????????????????????????	22222222222222222222222222222222222222

BOTTLE/CTD DATA SET NUMBER: 86-0008 YEAR:1986 VESSEL/AGENCY: LGL

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR		PARAM MEAS C S	, HR
HERSCHEL	. 1	69 35.7	139 31.6	86 09 04 17	15 17	Х	X CT12

				344				
HERSCHEL HERSCHEL	2A 3B	69 35.2 69 37.7	139 27.9 139 27.3	86 09 04 20 86 09 04 21	13	15 24	X	X CT12 X CT12
HERSCHEL	4C	69 38.9	139 28.5	86 09 04 21	8	25	X	X CT12
HERSCHEL HERSCHEL	2 10	69 40.3 69 38.1	139 28.4 140 49.4	86 09 04 22 86 09 07 17	7	25 12	X	X CT12 X CT12
HERSCHEL HERSCHEL	11 T4–3	69 38.7 69 55.0	140 52.4 140 55.8	86 09 07 19 86 09 10 19	14 28	15 43	X	X CT12 X CT12
HERSCHEL HERSCHEL	T4-4 T4-5	70 07.1	140 52.6 140 34.2	86 09 11 00 86 09 11 20	21	53 180	χ̈́	X CT12

BOTTLE/CTD DATA SET NUMBER: 86-0010 YEAR:1986 VESSEL/AGENCY: IOS

AREA		STN	LAT DEG M			ON MIN	YR	DAT MO		HR	CAST TO (M)	WATER DEPTH (M)	PARAI MEAS C S		NSTR	I NT HR	NO
BEAUFORT S	SESSEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA		70 41 70 31 69 53 71 38 71 24 71 11 70 50 70 29 70 23 70 05 69 57 71 45 70 59 54 70 43 70 23	2144366819068655083	129 139 140 140 139 134 133 133 139 133	13.26 02.65 03.65 09.18 09.18 09.18 09.44 01.54 01.45 01	86 86 86 86 86 86 86 86 86 86 86 86 86 8	04 04 04 04 04 04 04 04 04 04 04 04 04 0	?????????????????????	???????????????????????????????????????	600 66 49 18 860 300 53 26 10 1530 415 54 49 47 1495 650 76 17 1490 58	78 19 1650	X	X X X X X X X X X X X X X X X X X X X	CTD CCTD CCTD CCTD CCTD CCTD CCTD CCTD		

11.2 CURRENT-METER DATA

The listings contain the following information:

AREA

General area of station.

STN

Station number; wherever possible it is the station number assigned in the original data source. Multiple meters are differentiated as 1.1, 1.2, 1.3, for example.

LAT, LONG

In degrees and minutes.

START/STOP

Year, month and day instrument recorded over. If the data represent a single current profile, then the start and stop dates will be the same.

EFF LEN

Effective record length, days of both speed and direction data. May be blank if not obvious from the available documentation.

DT (MN)

Sampling rate in minutes.

DEPTHS-INSTR/WATER Instrument and water depth, in metres.

INSTR TYPE

Instrument type:

AAND - Aanderaa RCM-4 or RCM-5 AMF - AMF vector averaging

BEND - Bendix BR - Braincon

CMDR - CMDR (modified to record on Aanderaa-type tape)

CUSH - Cushing electromagnetic

DOWS - Dows - Deep Ocean Work System vector-measuring

ENDE - Endeco GEOD - Geodyne

GO - General Oceanics HYDR - Hydrowerstatten

HYPR - Hydro Products (Savonius rotor/vane)

HYTC - Hytech

MARA - Marine Advisors

M-MC - Marsh McBirney electromagnetic

NEYR - Neyrpic CM

NB - Neil Brown acoustic

OSS4 - Ocean Systems model S4 electromagnetic

RICH - Richardson SETR - Sea-Track

ADDIT SENSOR

Other parameters measured - pressure, temperature, conductivity. Each measurement is qualified by one of the following:

X - measurements of this parameter were made

Blank entries indicate unavailable or inapplicable data.

? indicates information not in our data base, but often available in the reference cited in section 10.3.

CURRENT METER YEAR:1970			R: 70-000 CY: AIDJEX												
AREA	(1TC	LAT DEG MIN	LON DEG MIN		TAR' MO			STO MO		EFF LEN	DT MN	DEI INSTR	PTHS WATER		ADDIT SENSOR PTC
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN		72 00. 72 00. 72 00. 72 00. 72 30. 72 30. 72 30. 72 30.	144 00. 144 00. 144 00. 144 00. 135 00. 135 00. 135 00.	70 70 70 70 70 70	03 03 03 03 03 03 03	12 12 12 12 12 12	70 70 70 70 70 70	????????	??????	?????????	???????	10 40 150 500 10 40 150 500	? ? ? ? ? ? ? ?	? ? ? BR ? ?	
CURRENT METER I YEAR: 1970	DATA S VES	ET NUMBER	R: 70-000		В10)									:
AREA	STN	LAT DEG MIN	LON DEG MIN		ART MO			TOP MO		EFF LEN			THS WATER		ADDIT SENSOR P T C
TUK. SHELF TUK. SHELF	1 2	69 39.49 69 51.69) 133 40.00) 134 22.69	70 70	07 07	16 24	70 70	07 07	17 25	2 2	60 60	1 1		HY?R HY?R	
CURRENT METER D YEAR:1970		ET NUMBER SEL/AGENC												÷.	
AREA	STN	LAT DEG MIN	LON DEG MIN	ST. YR I	ART MO[ΟY		TOP VIO I		EFF LEN		DEP INSTR \		TYPE	ADDIT SENSOR P T C
HERSCHEL IS. HERSCHEL IS. MACKENZIE BAY	1 2 2 9 19	69 30. 69 30. 69 20. 69 20. 69 42. 69 37. 69 37.	138 40. 138 40. 138 16. 138 16. 133 18. 125 49. 125 49.	70 70 70 70 70 70 70	04 (?	? ? ? ? ?	70 70 70 70 70 (? ? ? ? 05 ?	? ? ? ? 04 ?	????????	15 15 15 15	3 12 3 33 4 5 17	16 39 39 7 22	GEOD GEOD GEOD GEOD GEOD GEOD GEOD	
URRENT METER DA	ATA SE VESS	T NUMBER: EL/AGENCY	71-0003 ': AIDJEX	*		<u></u>									
AREA	STN	LAT DEG MIN	LON DEG MIN	STA YR M				OP Ю D		EFF D LEN M		DEPT NSTR W		TYPE S	ADDIT SENSOR T C

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
CANADA BASIN		74 04. 74 04. 74 04. 74 04. 74 04. 74 04. 74 04. 74 04. 74 04.	131 23. 131 23. 131 23. 131 23. 131 23. 131 23. 131 23. 131 23. 131 23.	71 03 17 71 03 17 71 03 17 71 03 17	71 04 01 71 04 01 71 04 01 71 04 01 71 04 02 71 04 07 71 04 07 71 04 07 71 04 07	? 10 ? 20 ? 20 ? 20 ? 20 ? ? ? ? ? ?	50 ? 10 ? 10 ? 150 ? 300 ? 5 ? 7 ? 11 ? 19 ?	AAND BR BR BR BR ? ?

CAHADA BASIN 74 04. 131 23. 71 03 21 71 04 07 ? ? 32 ? ? CAHADA BASIN 74 04. 131 23. 71 03 21 71 04 07 ? ? 75 ? ?		347			
			32 75	?	? ?

CURRENT METER	DATA SET	NUMBER:	73-0001
YEAR: 1973	VESSEL	/AGENCY:	SLANFY

AREA	STN LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
MACKENZIE BAY	1 69 37.2 2 69 37.0 3 69 37.2 SS 69 37.5 5D 69 36.9 6C 69 39.5 7B 69 35.7	134 40.0 134 40.6 134 41.2 134 41.0 134 35.0 134 43.5 134 33.2	73 03 21 73 03 21 73 03 21		? ? ? ? ? ? ? ? ? ? ? ?	? ? ? ? ? ? ? ? ? ? ? ?	? ? ? ? ? ?

CURRENT METER DATA SET NUMBER: 74-0001 YEAR:1974 VESSEL/AGENCY: SLANEY

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C

MACKENZIE BAY 801 69 36.5 134 39.9 74 04 14 74 04 14 ? ? ? ? HYPR

CURRENT METER DATA SET NUMBER: 74-0003 YEAR:1974 VESSEL/AGENCY: ARCTICUS

		· -		
AREA	STN LAT LON DEG MIN DEG MIN	START STOP YR MO DY YR MO DY	EFF DT DEPTI LEN MN INSTR W	
MACKENZIE BAY	16 69 37.0 135 10.4 15 69 31.2 134 56.3 14 69 34.1 134 37.7 1 70 01. 134 38. 8 69 32.9 135 56.9 10 69 32.2 135 44.3 18 69 33.8 135 23.5 16 69 37.0 135 10.4 13 69 35.9 134 48.7 14 69 34.1 134 37.7 15 69 31.2 134 56.3 56 69 20.2 135 47.2 24 69 38.6 135 32.2 17 69 40.0 135 12.8 16 69 37.0 135 10.4 18 69 33.8 135 23.5 14 69 34.1 134 37.7 15 69 31.2 134 56.3 16 69 37.0 135 10.4 18 69 33.8 135 23.5 14 69 34.1 134 37.7 15 69 31.2 134 56.3 13 69 35.9 134 48.7 56 69 20.2 135 47.2 22 69 25.0 135 52.3 25 69 26.5 135 33.4 5 69 32.9 135 56.9 4 69 53.7 134 36.3 16 69 37.0 135 10.4 22 69 25.0 135 52.3 18 69 33.8 135 23.5	74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 15 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 21 74 07 22 74 07 22 74 07 22 74 07 22 74 07 22 74 07 22 74 07 22 74 07 22 74 07 22 74 07 23 74 07 22 74 07 23 74 08 05 74 08 05 74 08 05 74 08 05 74 08 05 74 08 05 74 08 06 74 08 06 74 08 06 74 08 06 74 08 06 74 08 06 74 08 06 74 08 07 74 08 07 74 08 08	??????????????????????????????????????	? HYPR ? HYPR

CURRENT METER DATA SET NUMBER: 74-0005 YEAR:1974 VESSEL/AGENCY: IOS

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
MACKENZIE BAY BEAUFORT SEA			137 09.20 128 31.49			53 30 96 30		AAND X X

CURRENT METER DATA SET NUMBER: 74-0019 YEAR:1974 VESSEL/AGENCY: SLANEY

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO D	STOP Y YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY	PELLY	69 34.17	134 37.00 135 23.50 135 31.25	74 02 '	7 74 03 ?	? ? ? ? ? ?	? ?	HYPR HYPR HYPR

CURRENT METER DATA SET NUMBER: 75-0004 YEAR:1975 VESSEL/AGENCY: ARCTICUS

AREA	STN LAT DEG MIN	LON DEG MIN	START STOP YR MO DY YR MO DY	EFF DT LEN MN	DEPTHS INST ADDIT INSTR WATER TYPE SENSOR P T C
MACKENZIE BAY	16 69 37.1 12 69 42.2 11 69 49.1 73 69 40.4 74 69 35.7 75 69 31.5 77 69 33.9 2 69 48.8 26 69 44.7 62 69 32.7 7 66 9 37.1 12 69 49.1 21 69 54.9 11 69 49.1 21 69 32.7 9 69 32.7 9 69 32.7 9 69 32.7 9 69 32.7 9 69 44.9 73 69 40.4 74 69 35.7 75 69 31.5 76 69 33.9 79 69 44.7 76 69 44.7 76 69 44.7	135 10.5 134 35.8 134 36.3 133 20.5 133 06.5 133 30.6 133 25.6 133 58.2 134 49.0 135 57.0 135 57.0 136 09.2 133 09.5 133 09.5 133 09.5 133 134 21.3 134 21.3	75 07 10 75 07 10 75 07 11 75 07 11 75 07 13 75 07 13 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 15 75 07 18 75 07 18 75 07 18 75 07 18 75 07 28 75 07 28 75 07 28 75 07 28 75 07 28 75 07 28 75 07 30 75 07 30 75 07 31 75 07 31 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 16 75 08 20	??????????????????????????????????????	7

CURRENT METER DATA SET NUMBER: 75-0007 YEAR:1975 VESSEL/AGENCY: 10S

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
BEAUFORT SEA	5 8 9 10 11 13 13	70 24.09 70 23.10 71 12.89 70 43.69 71 18.59 71 00.20 70 07.90 70 07.90	136 45.69 131 19.89	75 04 29 75 08 03 75 04 26 75 04 26 75 04 25 75 04 25 75 04 26 75 08 06	75 08 02 75 09 10 75 08 04 75 08 05 75 08 04 75 08 04 75 07 29 75 09 08	191 30 96 30 39 30 101 30 102 30 102 30 102 30 95 30 34 30 100 30	64 67 64 67 74 77 42 45 53 56 39 41 30 33 30 33	AAND X X

CURRENT METER DATA SET NUMBER: 75-0011 YEAR:1975 VESSEL/AGENCY: SLANEY

AREA	STN LAT DEG MIN	LON DEG MIN	START STOP YR MO DY YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
TAGLU—RICHARDS	1 69 22.4 1 69 22.4 1 69 22.4 3a 69 24.7 6 69 24.6 7 69 24.6 8 69 24.5 9 69 23.0 9 69 23.0 12 69 21.4 12 69 21.4 12 69 21.7 14 69 22.0 15 69 22.0 15 69 22.0 18 69 22.0 18 69 22.5 19 69 22.5	134 53.1 134 53.1 134 50.6 134 50.7 134 50.7 134 49.5 134 49.5 134 56.6 134 56.6	75 06 10 75 06 10 75 06 20 75 06 20 75 09 27 75 09 27 75 06 20 75 06 20 75 09 27 75 09 27 75 06 20 75 06 20 75 09 27 75 09 27 75 06 20 75 06 20 75 09 27 75 09 27 75 06 20 75 06 20 75 09 27 75 09 27 75 06 20 75 06 20 75 09 27 75 09 27 75 06 10 75 06 10 75 09 27 75 09 27 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 28 75 09 28 75 06 10 75 06 10 75 09 27 75 09 27	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	???????????????????????????????????????	HYPR HYPR HYPR HYPR HYPR HYPR HYPR HYPR

CURRENT METER DATA SET NUMBER: 76-0001 YEAR:1976 VESSEL/AGENCY: CANMAR

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF	KPN KPN TNG	70 22.92 70 23.02 70 10.59	135 05.57 135 05.57 135 05.57 132 58.92 132 58.92	76 09 04 76 08 29 76 08 22	76 09 27 76 09 25 76 10 13	14 60 20 60 10 60 45 60 51 60	8 57 54 57 8 28	HYPR CUSH HYPR CUSH HYPR

CURRENT METER DATA SET NUMBER: 76-0003

YEAR:1976	VESSEL/AGENCY:	SLANEY		
AREA	STN LAT DEG MIN DI	LON EG MIN	YR MO DY YR MO DY LEN MN INSTR WATER TYPE SE	DDIT ENSOR T C
KUGMALLIT BAY	ARNAK 69 49. 13	33 45. 33 45. 33 45. 33 45. 33 45. 33 45. 33 45. 33 45. 33 45.	76 07 29 76 07 29	

KUGMALLIT BAY	ARNAK 69 49.	133 45.	76 09 05 76 09 05	??	?	? HYPR
KUGMALLIT BAY	TUFT 69 42.	132 35.	76 07 17 76 07 17	? ?	?	? HYPR
KUGMALLIT BAY	TUFT 69 42.	132 35.	76 07 18 76 07 18	? ?	?	? HYPR
KUGMALLIT BAY	TUFT 69 42.	132 35.	76 07 19 76 07 19	? ?	?	? HYPR
KUGMALLIT BAY	TUFT 69 42.	132 35.	76 07 20 76 07 20	? ?	?	? HYPR
KUGMALLIT BAY	TUFT 69 42.	132 35.	76 09 02 76 09 02	7 7	7	? HYPR

CURRENT METER DATA SET NUMBER: 77-0004 YEAR:1977 VESSEL/AGENCY: CANMAR

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY '	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
BEAUFORT SEA	NKT NKT KPN KPN UKL UKL KGL KGL	70 28.58 70 28.58 70 22.92 70 22.92 70 22.92 70 09.07 70 09.07	136 16.85 136 16.85 135 05.57 135 05.57 135 05.57 132 43.13 132 43.13 130 51.22	77 07 31 77 09 11 77 07 28 77 08 04 77 08 02 77 07 26 77 07 26 77 07 26 77 07 26 77 07 26 77 07 26 77 07 26	77 10 12 77 10 12 77 10 12 77 09 27 77 09 28 77 09 30 77 09 07 77 10 02	16 60 30 60 70 60 7 60 61 60 57 60 33 60 2 60 2 60 9 ?	10 64 62 64 3 57 10 57 50 57 3 29 10 29 3 27	CUSH HYPR HYPR CUSH HYPR CUSH HYPR CUSH HYPR CUSH HYPR ?

CURRENT METER DATA SET NUMBER: 77-0009A YEAR:1977 VESSEL/AGENCY: IMPERIAL IMMERK

AREA	STN LAT DEG MIN	LON I DEG MIN	START STOP YR MO DY YR MO DY	EFF DT LEN MN	DEPTHS INST ADDIT	DR
TUK. SHELF TUK. SHELF	022-1 69 56.6 022-2 69 56.6 022-3 69 57.4 022-4 70 00.3 112-1 69 56.3 112-2 69 56.3 112-3 69 56.3 202-1 69 56.3 202-2 69 55.4 202-3 69 55.4 202-3 69 55.4 292-1 69 56.5 292-2 69 56.5 292-3 69 56.6 022-3 69 56.3 112-4 69 56.3 112-1 69 56.3 112-2 69 56.3 112-3 69 56.3 112-4 69 56.3 112-4 69 56.3 202-3 69 55.4 202-4 69 56.3 202-4 69 56.3 202-3 69 56.3 202-4 69 56.3 202-4 69 56.3 202-4 69 56.3 202-2 69 56.3 202-3 69 56.3	133 21.1 133 20.2 133 16.7 133 21.0 133 21.7 133 21.6 133 21.6 133 21.6 133 22.6 133 22.1 133 24.3 133 20.7 133 21.7 133 21.7 133 21.7 133 21.7 133 21.7 133 21.7 133 22.1 133 22.1	77 07 28 77 07 28 77 07 31 77 07 31 77 07 31 77 07 27 77 07 31 77 07 28 77 07 31 77 07 28 77 07 28 77 07 28 77 07 28 77 07 27 77 07 26 77 07 27 77 07 26 77 07 26 77 07 27 77 07 27 77 07 31 77 07 31 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 30 77 07 32 77 08 29 77 08 27 08 29 77 08 29 77 08 29 77 08 29 77 08 29 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26 77 08 26	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	? ? HYPR ? ? HYPR ? ! HYPR	

CURRENT YEAR: 197			SET NU SSEL/A			78-000 CANMAR												
ÁREA	1	STN	LA DEG			ON MIN		STAR MO)P) DY		: DT		PTHS WATE		T ADDIT E SENSON P T C
BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT	SEA SEA SEA SEA	KPI TR NRL UKL	C 69 4 N 70 2 F 69 5 - 70 2 - 70 0	2.92 5.00 7.78 9.08	135 136 133 132	05.5 20.2 29.7 43.8	7 78 0 78 3 78 0 78	07 08 08 07	24 21 08 15	78 78 78 78	09 09 08 09	23 01 10 25	51 11 3 70	60 60 60 60 60	12 12 12 12 12 12	5 2 4 2	4 HYP 7 HYP 3 HYP 7 HYP 9 HYP 7 HYP	त त २ २
CURRENT N			ET NUN			9-0003 ANMAR	3			<u> </u>								
AREA		STN	LAT DEG N		-	N MIN		ΓART MO			STOF MO	DY	EFF LEN			PTHS WATER		ADDIT SENSOR PTC
BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT BEAUFORT	SEA SEA SEA SEA SEA	KPN KPN KNK TRT NRL	69 45 70 22 70 23 70 43 69 54 70 27 70 09	2.92 3.71 3.61 4.14 7.78	135 135 133 136 133	05.57 12.04 58.11 20.34 29.73	79 79 79 79 79	08 10 09 07 07	11 13 14 15 14	79 79 79 79 79	09 10 10 10 10	10 18 14 15 18	27 6	60	12 12 12 12 12 12 12	57 58 68 23 52	M-M HYPR HYPR HYPR HYPR HYPR	
CURRENT M YEAR: 1979			ET NUM SEL/AG			 					-							
AREA	•	STN ,	LAT DEG M		LO DEG		ST YR	ART MO			TOP MO		EFF			THS WATER		ADD IT SENSOR P T C
BEAUFORT : BEAUFORT : BEAUFORT :	SEA	CMB CMB CMB CMB	70 49 70 55 70 36 70 30	.10 .80 .39 .20	131 130 132 130	01.79 33.00 23.39 47.50	79 79 79 79	11 2 12 (12 (12 1	27 01 06 15	79 79 79 79	11 12 12 12	30 05 10 23	4 5 5 9	1 1 1	20 20 20 20	48 48	AAND AAND AAND AAND	
CURRENT ME YEAR: 1979	ETER D	ATA SE VESS	T NUME	BER:	79- DOM	-0026 Æ			·		<u>.</u> .					· ·	- W-F P W-F I	
AREA		STN	LAT DEG MI	N D	LON EG M	11N 1	STA YR M	RT 10 D	Y Y	ST /R M	OP O D	Υ	EFF D	OT IN II	DEPT NSTR V	THS VATER	INST TYPE	ADDIT SENSOR P T C
MCKINLEY B MCKINLEY B MCKINLEY B	3AY		70 02. 70 02. 70 02.	5 1 5 1 5 1	31 1 31 1 31 1	3.4 3.4 3.4	79 1 79 1 79 1	2 0 2 0 2 0	9 7 9 7 9 7	'9 1 '9 1 '9 1	2 1 2 1 2 1	999	? 1 ? 1 ? 1	0	2.1 7.6 13.7	24 24 24	RCM4 RCM4 RCM4	X X X X ·

CURRENT METER YEAR:1980	DATA SET NUMBEI VESSEL/AGEN		2		
AREA	STN LAT DEG MIN	LON DEG MIN	START STOP YR MO DY YR MO DY	EFF DT DEPTHS INST ADD LEN MN INSTR WATER TYPE SEN P 1	
TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF	KENAL 70 43.6 KILAN 70 51.6 KOAKO 70 20.4 KOPAN 70 22.9 ORVIL 70 20.4 ORVIL 70 20.4	129 16.8 134 10.8 135 05.6 136 39.0	80 09 15 80 09 18 80 07 16 80 09 17 80 07 14 80 09 19	28 60 12 ? HYPR 4 60 12 ? HYPR 50 60 12 ? HYPR 65 60 12 ? HYPR 26 60 12 ? HYPR 9 60 12 ? M-M	
CURRENT METER YEAR: 1980	DATA SET NUMBER VESSEL/AGENO		SA		
AREA	STN LAT DEG MIN	LON DEG MIN	START STOP YR MO DY YR MO DY	EFF DT DEPTHS INST ADD LEN MN INSTR WATER TYPE SEN P T	ISOR
MCKINLEY BAY MCKINLEY BAY MCKINLEY BAY	70 02.5	131 13.4	80 04 06 80 04 12 80 04 06 80 04 12 80 04 06 80 04 12	? 10 7.0 ? RCM4 \	X X X
CURRENT METER YEAR:1980	DATA SET NUMBER VESSEL/AGENO		В		
AREA	STN LAT DEG MIN	LON DEG MIN	START STOP YR MO DY YR MO DY	EFF DT DEPTHS INST ADD LEN MN INSTR WATER TYPE SEN P T	SOR
MCKINLEY BAY MCKINLEY BAY MCKINLEY BAY MCKINLEY BAY MCKINLEY BAY	70 02.5 70 02.5 70 02.5 70 02.5 70 02.5	131 13.4 131 13.4 131 13.4	80 05 01 80 05 03 80 05 01 80 05 03	7 1 2.8 ? RCM4 X ? 10 8.0 ? RCM4 X ? 7 5.5 ? CUSH ? 7 5.5 ? CUSH ? 7 5.5 ? CUSH	X
	DATA SET NUMBER VESSEL/AGENO				resouteth mine
AREA	STN LAT DEG MIN	LON DEG MIN	START STOP YR MO DY YR MO DY	EFF DT DEPTHS INST ADD LEN MN INSTR WATER TYPE SEN P T	SOR
BEAUFORT SEA					

CURRENT METER DATA SET NUMBER: 81-0002A YEAR:1981 VESSEL/AGENCY: ASL

YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C DEPTHS INST ADDIT AREA STN LAT LON DEG MIN DEG MIN

25 AAND X X X 25 AAND X X X TRT 69 53.80 136 11.59 81 01 18 81 08 04 UVK 70 15.60 132 18.69 81 01 19 81 08 04 ? 30 ? 30 BEAUFORT SEA 19 BEAUFORT SEA 19

CURRENT METER DATA SET NUMBER: 81-0002B YEAR:1981 VESSEL/AGENCY: ASL

AREA STN LON START STOP EFF DT **DEPTHS** INST ADDIT LAT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

TUK. SHELF TRT 69 57.6 136 12.0 81 08 11 82 09 24 408 60 27 30 AAND X X X

CURRENT METER DATA SET NUMBER: 81-0002C YEAR:1981 VESSEL/AGENCY: CANMAR

START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA STN LON DEG MIN DEG MIN TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF IRKAL 70 34.13 134 10.58 81 09 IRKAL 70 34.13 134 10.58 81 09 ISSUN 70 01. 134 19. 81 07 ? 81 10 ? 81 10 ? 81 10 12 ????? ??? 25 12 25 12 ???????? ISSUN 70 01. KOAKO 70 20. KOAKO 70 20. ? 81 ? 81 ???? 134 19. 81 07 10 81 07 134 11. 10 25 12 TUK. SHELF 134 11. 81 07 7 81 10 ??? KOAKO 70 20. 134 11. 81 07 7 81 10 KOPAN 70 23. 135 06. 81 07 7 81 10 KOPAN 70 23. 135 06. 81 07 7 81 10 KENAL 70 43.73 133 58.47 81 09 05 81 09 KILAN 70 51. 129 17. 81 07 7 81 09 KILAN 70 51. 129 17. 81 07 7 81 09 TUK. SHELF 23 12 TUK. SHELF TUK. SHELF TUK. SHELF TUK. SHELF ??? ACM2 χ 13

CURRENT METER DATA SET NUMBER: 81-0016 YEAR:1981 VESSEL/AGENCY: ARCTIC SC.LTD.

START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA STN LAT LON DEG MIN DEG MIN

BEAUFORT SEA BEAUFORT SEA 5 5 16 AAND X X 12 AAND X X A 69 59.03 134 21.00 81 08 08 81 09 20 15 43 B 69 55.03 132 42.00 81 08 08 81 09 20 C 69 48.33 131 59.82 81 08 08 81 09 26 11 7 5 43 8 ENDE 49 30 BEAUFORT SEA C 69 48.33 131 59.82 81 08 08 81 08 16 8 DOWS BEAUFORT SEA 8

CURRENT METER DATA SET NUMBER: 82-0117 VESSEL/AGENCY: ASL AREA STN LAT LON EFF DT DEPTHS INST ADDIT START STOP DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR 16 DOWS X X 7 NB X 3.5 DOWS X 13 ENDE X 134 20.0 134 23.2 136 03.0 136 03.0 82 08 05 82 09 05 82 08 05 82 09 14 82 08 06 82 09 05 82 08 05 82 09 25 TUK. SHELF 1 69 59.0 2 69 56.4 6 TUK. SHELF TUK. SHELF 3 69 46.0 CURRENT METER DATA SET NUMBER: 82-0118 VESSEL/AGENCY: CANMAR AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR ORVIL 70 22.82 136 30.90 82 09 01 82 NERLK 70 27.80 133 29.73 82 07 22 82 KENAL 70 43.73 133 58.47 82 07 22 82 KIGGA 69 52.30 133 55.30 82 07 30 82 TARSI 69 57.6 135 51.3 82 ? ? 82 TUK. SHELF ACM2 60 XXX ? 60 ? 60 ? 60 ? 60 ? ? TUK. SHELF TUK. SHELF AAND ??? ? AAND TUK. SHELF AAND 20 AAND CURRENT METER DATA SET NUMBER: 83-0067 YEAR:1983 VESSEL/AGENCY: ARCTIC LAB. LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C AREA STN KADLK 69 45.03 136 06.08 83 08 06 83 09 07 KADLK 69 44.88 136 06.10 83 07 30 83 09 09 TUK. SHELF ? 2 ? 2 12 ACM2 CURRENT METER DATA SET NUMBER: 83-0069 YEAR:1983 VESSEL/AGENCY: CANMAR START STOP DEPTHS INST ADDIT LAT LON EFF DT AREA STN DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

SIULK 70 24.63 134 30.67 83 08 02 83 ? ARLUK 70 19.38 135 26.53 83 08 18 83 ? UVILK 70 15.80 132 18.75 83 10 11 83 ? NERLK 70 26.02 133 19.47 83 07 25 83 ?

? 60 ? 60

? 60

? 60

? ACM2 ? ACM2

? ACM2

ACM₂

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BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA

BEAUFORT SEA

CURRENT METER DATA SET NUMBER: 84-0029

YEAR: 1984

AREA

VESSEL/AGENCY: ASL

START STOP EFF DT DEPTHS INST ADDIT AREA STN LAT LON DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

AMERK 69 56.97 133 30.42 84 07 31 84 09 26 AMERK 69 57.08 133 30.53 84 07 24 84 09 27 NIPTK 69 50.07 133 26.55 84 08 05 84 09 26 NIPTK 69 49.93 135 26.58 84 07 23 84 09 26 TUK. SHELF 19.5 7.0 TUK. SHELF 65 30 22.5 ENDE TUK. SHELF 53 15 65 30 14.6 NB 14.3 ENDE

CURRENT METER DATA SET NUMBER: 84-0045 YEAR:1984 VESSEL/AGENCY: ARCTIC LAB.

LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA STN

TUK. SHELF AKAUL 70 03.5 133 42.75 84 08 08 84 09 18 5. 32 ? ? ACM2 X

CURRENT METER DATA SET NUMBER: 84-0048 YEAR:1984 VESSEL/AGENCY: CANMAR

STN

LAT LON START STOP EFF DT DEPTHS INST ADD IT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR PTC NATIA 70 03.95 137 13.12 84 09 15 84 ? SIULK 70 24.63 134 30.67 84 08 03 84 ? ARLUK 70 19.38 135 26.52 84 08 03 84 ? AIVRK 70 24.73 133 42.33 84 08 03 84 ? HAVIK 70 20.18 132 13.08 84 07 13 84 ? X X X X ? AAND BEAUFORT SEA ? 60 ? 60 ? 60 ? 60 BEAUFORT SEA AAND ? ACM2 ? ACM2 ? ACM2 BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA ? ? ? ??? BEAUFORT SEA UVILK 70 15.77 132 18.68 84 01 01 84 ? ACM2

CURRENT METER DATA SET NUMBER: 84-0049 YEAR:1984 VESSEL/AGENCY: 10S YEAR: 1984

LAT LON START INST ADDIT STN STOP EFF DT **DEPTHS** AREA YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN B07 74 24.8 123 53.1 X X X X X X X X M'CLURE STRAIT 84 04 11 85 05 02 ? 60 36 ? AAND B07 74 24.8 H01 70 01.7 H01 70 01.7 84 04 11 85 05 02 84 03 27 85 08 17 84 03 27 85 08 17 ? 60 ? 60 ? 60 123 53.1 138 33.8 ? AAND ? AAND M'CLURE STRAIT 96 252 274 HERSCHEL CAN. HERSCHEL CAN. 138 33.8 ? AAND 84 03 27 85 08 17 HERSCHEL CAN. H02 69 57.9 137 49.0 7 60 102 ? AAND

CURRENT METER DATA SET NUMBER: 85-0029
YEAR:1985 VESSEL/AGENCY: ARCTIC LAB.

START STOP EFF DT DEPTHS INST ADDIT
YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR
P T C LON AREA STN LAT DEG MIN DEG MIN 7.6 AAND X X X 7.6 OSS4 X X X 12.2 AAND X X X 12.2 ACM2 X X X ARNAK 69 48.1 ARNAK 69 48.1 NIPT 69 48.8 NIPT 69 48.8 TUK. SHELF TUK. SHELF TUK. SHELF 85 08 27 85 10 03 85 08 27 85 10 03 85 08 25 85 10 14 85 08 25 85 10 14 0 30 38 1 133 50.0 6 133 49.9 135 25.5 38 1 51 30 51 3 4.8 TUK. SHELF

CURRENT METER DATA SET NUMBER: 85-0030 YEAR:1985 VESSEL/AGENCY: DOBROCKY

START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR LAT LON AREA STN DEG MIN DEG MIN 85 08 27 85 09 14 85 08 29 85 09 11 85 08 30 85 09 06 85 08 30 85 09 06 85 08 30 85 09 06 2.2 4.1 ? .7 621 X 6 635 X 5 AAND X 69 06. 137 57. 137 57. KING POINT 2.7 ??? ? 69 06. KING POINT 5.6 KING POINT 137 57. 69 06. 69 06. 137 57. 137 57. 10 AAND X 15 AAND X ? KING POINT ? KING POINT 69 06.

CURRENT METER DATA SET NUMBER: 85-0032 YEAR:1985 VESSEL/AGENCY: IOS

AREA	STN LAT DEG MIN	LON DEG MIN	START STOP YR MO DY YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
BEAUFORT SEA	1 70 10.5 2 70 16.7 3 70 12.8 4 70 34.9 5 70 36.8 6 70 42.9 7 70 58.9 8 71 03.3 9 71 10.2 10 71 22.8 11 71 41.3 12 71 11.5 13 71 18.8 14 71 22.1	140 41.2 140 33.6 135 34.1 135 58.3 136 04.5 133 07.0 133 22.1 133 31.8 133 41.2 133 53.2 134 18.5 130 23.1 130 42.0 130 53.5	85 03			AAND X X

CURRENT METER DATA SET NUMBER: 85-0033 YEAR:1985 VESSEL/AGENCY: CANMAR

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C

CURRENT METER DATA SET NUMBER: 85-0037 YEAR:1985 VESSEL/AGENCY: GULF

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

TUK. SHELF AMAUL 70 04. 140 15. 85 09 06 85 ? ? ? ? 27 32 ?

CURRENT METER DATA SET NUMBER: 86-0003 YEAR:1986 VESSEL/AGENCY: IOS

BEAUFORT SEA

AREA STN LAT LON START STOP EFF DT

LAT LON START STOP EFF DT DEPTHS INST ADD IT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

21 AAND

PIC.

4 69 55.2 133 23.2 86 09 10 86 09 15 5 ?

CURRENT METER DATA SET NUMBER: 86-0009 YEAR:1986 VESSEL/AGENCY: SEACONSULT

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

MACKENZIE BAY T1--1 69 44.49 134 36.41 86 08 17 86 09 24 ? 15 9.5 10. 635 X

CURRENT METER DATA SET NUMBER: 86-0011 YEAR:1986 VI SSEL/AGENCY: IOS

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

AMUNDSEN GULF 69 15. 117 20. 86 04 ? 86 08 ? ? ? ? ? ?

11.3 WATER-LEVEL DATA

The listings contain the following information:

AREA

General area of station.

STN

Station number; generally as assigned by the originating

agency.

LAT, LONG

in degrees and minutes.

START/STOP

Year, month and day instrument recorded over.

EFF LEN

Effective record length in days.

DT (MN)

Sampling rate in minutes. A zero value implies

continuous sampling.

DEPTHS-INSTR/WATER Instrument and water depth, in metres.

INSTR TYPE

Instrument type:

AAND - Aanderaa

AM12 - Applied Microsystems Ltd. 12A

AML - Applied Microsystems Ltd.

BASS - Bass Engineering optical lever

FOXB - Foxboro

HWK - HWK float

LEGE - Lege

LEOP - Leopold Stevens

LEWI - Lewis Guage (10S)

MECH - shore-based gauge, temporary or permanent

OTT - Ott gauge, either float or potentiometric

OTTB - Ottboro

RICH - Richard

SDAT - SeaData bottom wave and/or water level sensor

STAF - Tide staff

STEV - Stevens

TG2A - Aanderaa TG2A

TG3A - Aanderaa TG3A

TG4A - Aanderaa TG4A

UBC - Univ. of British Columbia gauge

WLR5 - Aanderaa WLR5

750A - Applied Microsystems Ltd. 750A

ADDIT SENSOR

Parameters measured qualified by :

X - measurements of this parameter were made

Blank entries indicate unavailable or inapplicable data.

? indicates information not in our data base, but often available from the reference cited in section 10.3.

In cases where water-level data have been collected intermittently or continuously over more than one year, one I.D. number has been used to represent the entire data set.

WATER LEVEL DATA SET NUMBER: 14-0002 YEAR:1914 VESSEL/AGENCY: CAN. ARCT C EXP.

EFF DT DEPTHS INST ADDIT AREA STN LAT LON START STOP YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN. DEG MIN

BANKS ISLAND 71 58. 125 00. 14 12 26 15 01 30 35 7 ? STAF

WATER LEVEL DATA SET NUMBER: 33-0004 YEAR:1933 VESSEL/AGENCY: CHS

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

? 7 TUKTOYAKTUK 6485 69 26.0 133 00.0 33 07 ? 33 08 ?

WATER LEVEL DATA SET NUMBER: 51-0004

VESSEL/AGENCY: CHS YEAR:1951

DEPTHS AREA STN LAT LON START STOP EFF DT INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

AMUNDSEN GULF 6350 69 21.00 124 04.00 51 08 17 51 10 13 57 60 ? MECH

WATER LEVEL DATA SET NUMBER: 52-0004 YEAR:1952 VESSEL/AGENCY: CHS

YEAR: 1952

STOP LAT EFF DT DEPTHS INST ADDIT LON START **AREA** STN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN PTC

? MECH 6350 69 21.00 124 04.00 52 08 01 52 10 12 72 60 AMUNDSEN GULF 6485 69 26.0 133 00.0 52 07 6525 69 34.0 138 55.0 52 08 TUKTOYAKTUK HERSCHEL IS.

WATER LEVEL DATA SET NUMBER: 54-0001 VESSEL/AGENCY: CHS YEAR: 1954

LON START STOP EFF DT DEPTHS INST ADDIT STN LAT AREA YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN PTC-

AMUNDSEN GULF 6350 69 21.0 124 04.0 54 07 ? 54 10 ? ? ? ? WATER LEVEL DATA SET NUMBER: 55-0002 VESSEL/AGENCY: CHS YEAR: 1955

AREA STN LAT LON EFF DT **DEPTHS** INST ADDIT **START** STOP YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

AMUNDSEN GULF 6340 69 48.58 122 39.40 55 07 25 55 08 19 26 60 ? MECH

WATER LEVEL DATA SET NUMBER: 56-0004 VESSEL/AGENCY: CHS

AREA STN LAT **DEPTHS** LON START STOP EFF DT INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

TUKTOYAKTUK 6485 69 26.0 133 00.0 56 06 ? 57 09 ? ? ? 7 ?

WATER LEVEL DATA SET NUMBER: 59-0004 YEAR:1959 VESSEL/AGENCY: CHS

LAT **AREA** STN LON START STOP EFF DT **DEPTHS** INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

TUKTOYAKTUK ? 6485 69 26.0 133 00.0 59 09 ? 60 12 ?

WATER LEVEL DATA SET NUMBER: 61-0002 YEAR: 1961 VESSEL/AGENCY: CHS

TUKTOYAKTUK

START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA STN LAT LON DEG MIN DEG MIN

184 60

? MECH

6485 69 25.00 132 58.00 61 01 01 61 12 02 6485 69 25.00 132 58.00 61 12 13 62 05 16 6485 69 25.00 132 58.00 62 05 08 62 12 31 6485 69 25.00 132 58.00 63 01 01 63 12 31 6485 69 25.00 132 58.00 64 01 01 64 08 30 6485 69 25.00 132 58.00 64 09 07 64 09 15 6485 69 25.00 132 58.00 64 09 21 65 08 31 6485 69 25.00 132 58.00 65 09 30 66 06 29 6485 69 25.00 132 58.00 66 11 16 66 12 30 TUKTOYAKTUK 336 60 ? MECH TUKTOYAKTUK TUKTOYAKTUK 155 60 MECH ? MECH ? MECH 238 60 365 60 243 60 TUKTOYAKTUK TUKTOYAKTUK ? MECH ? MECH TUKTOYAKTUK TUKTOYAKTUK TUKTOYAKTUK 9 60 345 60 ? MECH ? MECH 2 58.00 65 09 30 66 06 29 2 58.00 66 11 16 66 12 30 2 58.00 67 01 01 67 02 28 3 58.00 67 03 09 68 02 27 5 58.00 68 08 17 69 04 08 5 58.00 69 08 01 69 10 30 2 58.00 70 01 27 70 05 21 3 58.00 70 11 09 71 04 29 5 58.00 71 07 12 72 03 12 4 48.00 72 07 13 72 07 24 5 58.00 72 08 07 72 08 26 5 58.00 73 01 01 73 07 06 5 58.00 73 08 03 74 01 19 5 58.00 74 02 10 74 04 25 5 8.00 74 05 02 74 06 01 273 60 TUKTOYAKTUK TUKTOYAKTUK TUKTOYAKTUK 6485 69 25.00 132 6485 69 25.00 132 6485 69 25.00 132 45 60 59 60 MECH MECH 356 60 ? MECH 6485 69 25.00 132 6485 69 25.00 132 6485 69 25.00 132 6485 69 25.00 132 6485 69 25.00 132 6485 69 25.00 132 6485 69 25.00 132 6485 69 25.00 132 TUKTOYAKTUK TUKTOYAKTUK TUKTOYAKTUK TUKTOYAKTUK 235 60 MECH 91 60 115 60 ? MECH ? MECH 172 60 ? MECH ? MECH TUKTOYAKTUK 245 60 MECH 12 60 20 60 TUKTOYAKTUK TUKTOYAKTUK ? MECH ? MECH ? MECH ? MECH ? MECH ? MECH TUKTOYAKTUK TUKTOYAKTUK TUKTOYAKTUK 132 132 6485 69 25.00 187 60 6485 69 25.00 170 60 6485 69 25.00 132 58.00 74 02 10 74 04 6485 69 25.00 132 58.00 74 05 02 74 06 6485 69 25.00 132 58.00 74 07 27 75 01 75 60 31 60 TUKTOYAKTUK

TUKTOYAKTUK	6485 69 25.00 132 58.00 75 6485 69 25.00 132 58.00 76 6485 69 25.00 132 58.00 76 6485 69 25.00 132 58.00 76 6485 69 25.00 132 58.00 76 6485 69 25.00 132 58.00 76 6485 69 25.00 132 58.00 77 6485 69 25.00 132 58.00 77 6485 69 25.00 132 58.00 78 6485 69 25.00 132 58.00 78 6485 69 25.00 132 58.00 78 6485 69 25.00 132 58.00 78 6485 69 25.00 132 58.00 79 6485 69 25.00 132 58.00 79 6485 69 25.00 132 58.00 79 6485 69 25.00 132 58.00 79 6485 69 25.00 132 58.00 80 6485 69 25.00 80 6485 69 25.00 132 68 6485 69 25.00 80 6485 69 25.00 80 6485 69 25.00 80 6485 69 25.00 80 6485 69 25.00 80 6485 69 25.00 80 6485 69 25.00 80 6485 69 25.00 80 6485 69 6	02 20 75 06 13 114 07 06 75 07 30 25 08 02 75 11 28 119 01 01 76 01 02 2 01 05 76 02 29 56 03 04 76 06 21 110 05 23 76 06 18 27 09 02 76 12 30 120 02 08 77 05 31 113 07 04 77 07 13 10 02 14 78 06 30 137 07 05 78 08 04 31 08 06 78 10 14 70 01 01 79 02 27 58 03 14 79 04 01 19 04 13 79 06 19 68 09 04 80 11 02 60 09 04 80 11 02 60 00 06	60
WATER LEVEL DAT YEAR:1963	A SET NUMBER: 63-0003 VESSEL/AGENCY: CHS		
AREA	STN LAT LON STA	ART STOP EFFI NO DY YR MO DY LEN I	DT DEPTHS INST ADDIT IN INSTR WATER TYPE SENSOR P T C

MACKENZIE BAY 36525 68 39.0 134 05.0 63 07 ? 64 08 ? MACKENZIE BAY 36600 67 27.0 133 45.0 63 09 ? 64 09 ?

WATER LEVEL DATA SET NUMBER: 64-0003 YEAR:1964 VESSEL/AGENCY: CHS

AREA STN LAT LON DEG MIN DEG MIN

START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

MACKENZIE BAY

6498 69 29.00 135 40.00 64 07 06 64 09 01

56 60

? MECH

WATER LEVEL DATA SET NUMBER: 65-0001 YEAR:1965 VESSEL/AGENCY: CHS

AREA

LON STN LAT DEG MIN DEG MIN START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C

MACKENZIE BAY

6498 69 29.00 135 40.00 65 07 03 65 08 31

60 60

? MECH

WATER LEVEL DATA SET NUMBER: 66-0001 YEAR:1966 VESSEL/AGENCY: CHS

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATE		ADDIT SENSOR P T C
CAPE PARRY	6360 6360 6360 6360 6360 6360 6360 6360	70 08.95 70 08.95	124 40.05 124 40.05	67 01 01 68 01 01 70 01 01 71 01 01 71 07 08 71 08 30 72 02 29 72 05 13 73 03 21 73 05 14 73 11 05 74 07 12 74 12 28 75 04 14 75 05 01 75 07 12 76 05 12 76 05 13 76 05 23 76 07 05 77 07 05 78 07 05 78 07 07 78 07 07 07 07 78 07 07 07 07 07 78 07 07 07 07 07 07 08 78 07 07 07 07 07 07 07 07 07 07 07 07 07	67 12 31 68 12 31 69 12 31 70 12 31 71 07 02 71 08 22 71 10 31 72 03 01 73 06 13 73 06 13 73 08 15 74 02 16 74 09 06 74 11 04 75 03 26 75 04 26 75 06 25 75 09 16 76 05 17 76 06 13 76 08 20 76 09 16 77 09 05 78 04 04 78 06 01 78 09 13 80 01 15 80 02 17 80 11 18 81 03 30	160 660 660 660 660 660 660 660 7 30 135 660 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260 660 7 30 1260	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	?? MECHHHECHHHECHHHECHHHECHHHECHHHECHHHECH	

WATER LEVEL DATA SET NUMBER: 66-0002 YEAR:1966 VESSEL/AGENCY: CHS

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT
DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR
P T C

WATER LEVEL DATA SET NUMBER: 70-0004 YEAR:1970 VESSEL/AGENCY: CHS

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C

AMUNDSEN GULF 6367 69 59.00 126 55.00 70 07 22 70 08 20 30 60 ? MECH

WATER LEVEL	DATA SET	NUMBER:	71-0002
YEAR: 1971	VESSEL	_/AGENCY:	CHS

AREA	STN	LAT DEG MIN	LON DEG MIN	STAF YR MO			TOP MO		EFF LEN		DEF INSTR	THS WATER	YPE	ADDIT SENSOR P T C
LIVERPOOL BAY ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES MCKINLEY BAY	6461 6462 6463	69 32.0 69 34.0 69 34.0 69 33.0 69 57.00	131 06.0 131 17.0 131 24.0 131 33.0 131 28.00	71 07 71 07 71 07 71 07 71 07	7 ? 7 ? 7 ? 7	71	09 08 07	? ? ? 02	? ? ? 58	? ? ? 60	???	? ? ? ? ?	? ? ? ? MECH	

WATER LEVEL DATA SET NUMBER: 72-0009 YEAR:1972 VESSEL/AGENCY: CHS

AREA	STN LAT DEG MIN	LON DEG MIN	START STOP YR MO DY YR MO DY	EFF DT LEN MN	DEPTHS INSTR WAT	INST ADD! ER TYPE SENS P T	OR
SACHS HARBOUR	6424 71 58.00 6424 71 58.00	125 15.00 125 15.00	73 01 12 73 05 02 73 05 23 73 05 24 73 05 27 73 06 15 73 07 07 74 06 21 74 07 07 74 12 29 75 01 07 75 02 02 75 02 09 75 03 21 75 03 24 75 05 16 75 05 20 75 05 25 75 06 06 75 09 19 75 10 10 75 11 07 75 11 10 75 11 28 75 12 03 76 02 08 76 12 03 76 02 08 76 12 03 76 02 08 76 02 13 76 02 18 76 02 20 76 03 20 76 03 28 76 04 06 76 05 11 76 05 31 76 09 06 76 11 22 76 11 25 76 12 19 77 03 21 77 04 05 76 05 17 77 06 06 77 07 05 77 08 10 77 08 23 77 09 03 77 09 13 77 10 12 79 07 09 79 09 06 79 09 16 79 09 24 80 01 31 80 03 13 80 03 27 80 09 22 80 06 09 80 06 21 80 09 05 80 12 03 80 09 05 80 12 03 80 09 05 80 12 03 80 09 05 80 12 03	179 111 200 660 660 660 660 660 660 660 660 660	???????????????????????????????????????	?? MECHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH	

YEAR: 1972		NUMBER: L/AGENCY		0010										••		
AREA	STN	LAT DEG MIN		ON MIN		TAR MO			STO MO	P DY	EFF LEN		DE INSTR	PTHS WATER		ADDIT SENSOR P T C
AMUNDSEN GULF LIVERPOOL BAY LIVERPOOL BAY LIVERPOOL BAY LIVERPOOL BAY TUK. PENINSULA TUK. PENINSULA MACKENZIE BAY	6442 6444 6455 6472 6476	69 59.0 70 33.0 69 45.0 69 43.0 70 16.0 69 57.0 69 57.0	128 130 130 129 131 131	00.0 33.0 39.00 28.00 28.00	72 72 72 72 72 72	09 08 07 08 08 08	10 ? 03 07 14	72 72 72 72 72 72	09 08 09 08 09	? 01 10 01	? 28 4 17	60 ?	? ? ? ? ? ? ?	7	MECH ? ? MECH	
WATER LEVEL DATYEAR: 1973		NUMBER: L/AGENCY		0004	v .	-			4.	·					·	
AREA	STN	LAT DEG MIN		ON MIN		TAR MO			STOI MO	DY	EFF LEN		DEI INSTR	PTHS WATER		ADDIT SENSOR P T C
AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF LIVERPOOL BAY MACKENZIE BAY TUK. SHELF	6340 6385 6445 6525	69 37.00 69 48.50 70 02.2 70 31.00 69 34.19 70 07.6	3 122 7 117 0 128 9 138	39.40 19.29 21.00 54.70	73 73 73 73	07 07 07 09	25 15 01 26	73 73 73 74	09 07 07 08	09 31 29 01	47 17	60 60 60 60 30	? ? ? 760 ?	? ? ?	MECH MECH MECH MECH AAND	хх
						*										
WATER LEVEL DAY		NUMBER: L/AGENCY		0019 NEY		· · · · · · · · · · · · · · · · · · ·			-		· ·	·			•	
			: SLA	NEY ON		TART MO			STOI MO		EFF .EN			PTHS WATER		ADDIT SENSOR P T C
YEAR:1973	VESSE	L/AGENCY	LO DEG	NEY ON	YR	МО	DY	YR	МО	DY	EN	MN		WATER		SENSOR
YEAR: 1973 AREA RICHARDS—TAGLU WATER LEVEL DAT	STN TA SET	L/AGENCY LAT DEG MIN 69 22.	134	ON MIN 54.	YR	МО	DY	YR	МО	DY	EN	MN	INSTR	WATER	TYPE	SENSOR
YEAR: 1973 AREA RICHARDS—TAGLU WATER LEVEL DAT	STN TA SET	L/AGENCY LAT DEG MIN 69 22. NUMBER: L/AGENCY:	LO DEG	DN MIN 54.	YR 73	MO 05	30 _.	YR 73	10 5TOF	DY 06	130	MN ?	INSTR	?	RICH	SENSOR

WATER LEVEL DATA SET NUMBER: 75-0007 YEAR: 1975 VESSEL/AGENCY: CHS

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
TUK. SHELF KUGMALLIT BAY MACKENZIE BAY DEMARCATION B.	5 8 9 10 11 13 6488 6503	70 24.09 71 12.89 70 43.69 71 18.59 71 00.20 70 07.90 69 25.19 68 46.19 59 34.19	131 19.89 131 14.69 128 54.50	75 08 03 75 04 26 75 04 25 75 04 25 75 08 06 75 07 31 75 07 13	75 09 19 75 08 04 75 08 05 75 08 05 75 08 05 75 09 09 76 05 04 75 12 18 75 09 07	95 15 38 15 100 15 101 15 101 30 101 15 33 15 269 60 133 30 47 10 17 30	65 67 75 77 43 45 54 56 40 41 31 33 7 7	AAND X UBC X AAND AAND LEWI TG2A

WATER LEVEL DATA SET NUMBER: 75-0008 YEAR:1975 VESSEL/AGENCY: CHS

AREA	STN	LA DEG			N MIN		TART MO			STOF MO		EFF LEN	-		PTHS WATER	TYPE	ADDIT SENSOR P T C
TUK. PENINSULA LIVERPOOL BAY AMUNDSEN GULF TUK. PENINSULA MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY	6447 6476 6498 6499 6515	70 3 70 1 69 5 69 2 69 2	1.30 4.30 6.69 9.0 6.79 6.79	128 127 131 135 135 138	02.00 21.19 38.49 24.60 40.0 36.19 25.79 25.79	75 75 75 75 75 75 75	09 07 07 07 07 06	01 22 10 7 14 23	75 75 77 75 75	09 09 09 09 08 07	17 18 14 18 ? 25 15	65 12 53 65 7 41 12 62	60 60 60 60 60 60	????????	?????	MECH MECH MECH ? MECH MECH MECH MECH	

WATER LEVEL DATA SET NUMBER: 75-0011 YEAR:1975 VESSEL/AGENCY: SLANEY

START STOP EFF DT DEPTHS INST ADDIT
YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR
P T C LON AREA STN DEG MIN DEG MIN

TAGLU-RICHARDS TAGLU 69 22.2 134 54.8 75 05 22 75 09 28 172 0 0 ? STEV

WATER LEVEL DATA SET NUMBER: 75-0042 YEAR:1975 VESSEL/AGENCY: AQUATIC ENV

LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C AREA

MACKENZIE DELT CAMP1 68 46.8 136 00.0 75 07 01 75 09 22 84 7 MACKENZIE DELT CAMP2 69 04.9 134 49.5 75 07 02 75 09 22 83 7 ? STAF ? STAF

WATER LEVEL DAT YEAR:1976		NUMBER: L/AGENCY:	76-0002 CHS				ē						
AREA	STN	LAT DEG MIN	LON DEG MIN	STAF YR MO	RT D DY	STO YR MO)P). DY	EFF LEN	DT MN	DE INSTR	PTHS WATE		ADDIT SENSOR P T C
AMUNDSEN GULF BANKS ISLAND BANKS ISLAND LIVERPOOL BAY ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES ESKIMO LAKES KUGMALLIT BAY TUKTOYAKTUK MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY	6420 6436 6445 6464 6466 6468 6484 6485 6489 6490	71 32.00 72 37.00 70 31.00 69 32.00 69 23.00 69 08.00 69 26.00 69 27.0 69 17.00 69 00.00 69 13.00	116 51.00 123 47.00 125 09.00 128 31.00 131 06.00 132 28.00 132 54.00 133 02.00 133 00.0 134 40.00 135 06.00 135 36.00	76 07 76 07 76 07 76 07 76 07 76 07 76 07 76 07 76 07 76 07 76 07 76 07 76 07 76 07	31 31 31 10 10 10 15 19 19 19	76 09 76 09 76 09 76 09 76 09 76 09 76 09 76 09 76 09 76 09 76 09 76 09 76 09 76 09	10 10 10 10 10 10 10 10 10 10 10 10 10 1	40 40 28 59 59 59 57 7 53	60	??????????????????????????????????????		7 TG3A 7 TG1A 7 TG1A 7 MECH 7 MECH 7 MECH 7 MECH 7 MECH 7 MECH 9 MECH	X X
	·												
WATER LEVEL DAT YEAR: 1977		NUMBER: L/AGENCY:	77-0005 CHS										
AREA	STN	LAT DEG MIN	LON DEG MIN	STAR YR MO		STO YR MO		EFF LEN	DT MN		PTHS WATER		ADD IT SENSOR P T C
KUGMALLIT BAY LIVERPOOL BAY MACKENZIE BAY AMUNDSEN GULF CAPE PARRY TUKTOYAKTUK	6499 6315 6330	70 31.00	133 02.00 128 31.00 135 36.00 116 51.0 124 40.3 133 00.0	77 07 77 07 77 07 77 07	24 05 26 27	77 09 77 09	08 08 09 24	?	60	?????		MECH MECH MECH TG1A TG2A	X
			* .			N.							
WATER LEVEL DAT YEAR:1978						·							
AREA	STN	LAT DEG MIN	LON DEG MIN	STAR YR MO							PTHS WATER		ADD IT SENSOR P T C
CAPE PARRY	6330	70 08.9	124 40.3	78 07	24	78 08	30	?	30	?	. 1	' TG2A	X
WATER LEVEL DAT YEAR:1979		NUMBER: _/AGENCY:		بین ده در کشتین هی									
AREA	STN	LAT DEG MIN	LON DEG MIN	STAR YR MO	T DY	STO YR MO	P DY	EFF LEN	DT MN	DEI INSTR	PTHS WATER		ADDIT SENSOR P T C

6330 70 08.9 124 40.3 79 08 24 80 08 04

CAPE PARRY

? TG2A X

? 30

WATER LEVEL DATA SET NUMBER: 80-0011B YEAR:1980 VESSEL/AGENCY: CHS

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT
DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR
P T C

CAPE PARRY 6330 70 08.9 124 40.3 80 08 04 81 07 27 ? 30 ? TG2A X

WATER LEVEL DATA SET NUMBER: 81-0017 YEAR:1981 VESSEL/AGENCY: CHS

AREA	STN	LAT DEG MIN	LON DEG MIN	STAR YR MO		STOI 'R MO		EFF LEN			PTHS WATER		ADDIT SENSOR P T C
LIVERPOOL BAY LIVERPOOL BAY TUK. PENINSULA TUK. PENINSULA MACKENZIE BAY CAPE PARRY	6472 6476 6476 6499	70 31.0 70 16.0 69 57.0 69 57.0 70 08.9	128 21.0 129 39.0 131 28.0 131 28.0 135 36.0 124 40.3	81 07 81 07 81 07 81 08 81 07 81 07	23 8 18 8 10 8 17 8	1 11 1 09 1 10 1 11	12 10 16 06	117 112 55 67 112 ?	60 60 60	?????	? ? ?	AAND AAND AAND AAND AAND TG3A	x x

WATER LEVEL DATA SET NUMBER: 82-0004 YEAR:1982 VESSEL/AGENCY: 10S

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
AMUNDSEN GULF PR. WALES STR. AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF AMUNDSEN GULF	6395 6380	71 26.0 72 15.0 71 37.0 70 44.0 70 41.8 69 38.0	121 32.0 120 09.0 117 52.0 117 45.0 114 16.3 117 00.0	82 03 29 82 03 29 82 03 30 82 03 28 82 03 31 82 03 31	82 05 01 82 05 ? 82 05 01 82 05 02	? 15 ? 15 ? 15 ? 15 ? 15 ? 15	? ? ? ? ? ?	TG3A X X AML X X TG2A X TG3A X X AML X X TG5A X

WATER LEVEL DATA SET NUMBER: 82-0006 YEAR:1982 VESSEL/AGENCY: CHS

AREA	STN	LAT DEG MIN	LON DEG MIN	START YR MO DY	STOP YR MO DY	EFF DT LEN MN	DEPTHS INSTR WATER	INST ADDIT TYPE SENSOR P T C
CAPE PARRY SACHS HARBOUR	6361 6424 6485		124 41. 125 15. 133 01.	82 09 20 82 09 21 82 08 28	83 08 04	? 30 ? 30 ? 30	? ? ? ? ? ? ? ?	AML X X TG3A X X AML X X

WATER LEVEL DATA SET NUMBER: 83-0017B

YEAR:1983 VESSEL/AGENCY: CHS

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

WATER LEVEL DATA SET NUMBER: 84-0045 YEAR:1984 VESSEL/AGENCY: ARCTIC LAB.

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

TUK. SHELF AMAUL 70 03.5 133 42.75 84 08 08 84 09 18 32 ? ? WLR5 X

WATER LEVEL DATA SET NUMBER: 84-0046 YEAR:1984 VESSEL/AGENCY: ASL

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT
DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

TUK. SHELF NIPTK 69 49.85 135 25.53 84 07 23 84 09 26 65 15 14.8 14.8 SDAT X

WATER LEVEL DATA SET NUMBER: 85-0029 YEAR:1985 VESSEL/AGENCY: ARCTIC LAB.

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

TUK. SHELF ADGO 69 28.84 135 52.14 85 08 15 85 09 27 44 15 2.7 2.7 SDAT X MACKENZIE DEL. TAGLU 69 22.0 134 57.2 85 05 09 85 10 14 ? 10 ? 10 WLR5 X

WATER LEVEL DATA SET NUMBER: 85-0032 YEAR:1985 VESSEL/AGENCY: 10S

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C

15 AAND X X 14 AAND X X 221 TG5A X 46 AAND X NP020 69 30.6 NC020 70 17.8 138 58.9 129 35.5 ? 86 04 ? 86 04 ? 86 04 ? 86 04 85 03 85 03 BEAUFORT SEA BEAUFORT SEA 15 ????? ???? 388 14 NC180 71 18.8 NP050 70 10.5 KC050 70 42.9 BEAUFORT SEA BEAUFORT SEA BEAUFORT SEA 130 42.0 85 03 387 221 140 41.2 85 03 262 46 133 07.0 54 AAND

WATER LEVEL DATA SET NUMBER: 86-0009 YEAR:1986 VESSEL/AGENCY: SEACONSULT

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C

11.4 WAVE DATA

The listings contain the following information:

AREA

Area

STN

Station number; generally as assigned by the originating

agency.

LAT, LONG

in degrees and minutes.

START/STOP

Year, month and day instrument recorded over.

EFF LEN

Effective record length in days.

DT (MN)

Sampling rate in minutes.

DEPTHS-INSTR/WATER Instrument and water depth, In metres.

INSTR TYPE

Instrument type:

621 - SeaData 621 DWCM wave/current sensor

635 - Sea Data pressure recorder 635-9, -11 or -12

650 - SeaData pressure recorder 650B-7

WRDR - Datawell waverider

WRIP - WRIPS w/Internal Sea Data recorder

WTRK - Endeco wave-track

WVEC - WAVEC

750A - Applied Microsystems wave burst recorder

ADDIT SENSOR

Parameters measured qualified by:

X - measurements of this parameter were made

Blank entries indicate unavailable or inapplicable data.

? Indicates information not entered into our data base, but often available from the original data report (section 10.3).

WAVE DATA SET NUMBER: 70-0071 YEAR:1970 VESSEL/AGENCY: MEDS

AREA STN LAT LON START STOP EFF DT **DEPTHS** INST ADD T YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

HERSCHEL IS 098 69 30.00 138 40.00 70 08 01 70 08 30 30 ? 0 50 WRDR

WAVE DATA SET NUMBER: 74-0126

YEAR: 1974

VESSEL/AGENCY: MEDS

DEPTHS LAT LON STOP EFF DT **AREA** STN START INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

PTC

003 69 53.80 135 57.20 74 08 26 74 08 30 TUK. SHELF 04 ? 0 21 WEDR

WAVE DATA SET NUMBER: 75-0146 YEAR:1975 VESSEL/AGENCY: MEDS

INST ADDIT LAT LON START STOP EFF DT **DEPTHS** AREA DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

TUK. SHELF 003 69 53.80 135 57.20 75 08 08 75 09 06 29 21 WRDR

WAVE DATA SET NUMBER: 76-0001 YEAR:1976 VESSEL/AGENCY: CANMAR

YEAR:1976

INST ADDIT LON START STOP EFF DT **DEPTHS** AREA STN LAT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

TUK. SHELF 006 70 09.08 132 57.08 76 08 20 76 10 04 45 ? 0 29 WRDR

WAVE DATA SET NUMBER: 76-0123

VESSEL/AGENCY: MEDS YEAR: 1976

> INST ADDIT STOP EFF DT DEPTHS LON START AREA STN LAT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

15 WRDR 15 WRDR TUK. SHELF 025 69 58.08 134 59.00 76 08 08 76 10 09 050 69 57.08 133 50.08 76 08 08 76 10 08 TUK. SHELF

WAVE DATA SET NUMBER: 77-0004

VESSEL/AGENCY: CANMAR

START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA STN LAT LON DEG MIN DEG MIN

TUK. SHELF 192 70 11.30 132 45.20 77 08 07 77 10 02 193 70 23.90 135 06.00 77 08 07 77 10 01 34 WRDR 64 WRDR

WAVE DATA SET NUMBER: 77-0009B YEAR:1977 VESSEL/AGENCY: ESSO

AREA STN LAT LON START EFF DT DEPTHS INST ADDIT STOP DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

TUK. SHELF 194 69 57 50 134 26 00 77 08 11 77 09 16 36 ? 14 WRDR

WAVE DATA SET NUMBER: 77-0123 VESSEL/AGENCY: GULF YEAR: 1977

> LAT LON START STOP EFF DT DEPTHS INST ADDIT AREA YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

190 70 03.50 133 38.00 77 08 15 77 10 13 191 70 08.40 136 24.80 77 08 16 77 10 10 59 ? 55 ? TUK. SHELF 33 WRDR TUK. SHELF 43 WRDR

WAVE DATA SET NUMBER: 78-0001 YEAR:1978 VESSEL/AGENCY: CANMAR

DEPTHS INST ADDIT AREA STN LAT LON START STOP EFF DT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

192 70 10.05 132 44.00 78 07 22 78 10 04 193 70 22.90 135 05.60 78 09 02 78 10 04 196 70 34.10 130 51.40 78 08 31 78 09 01 74 33 02 TUK. SHELF 000 31 WRDR 57 WRDR 27 WRDR TUK. SHELF

WAVE DATA SET NUMBER: 78-0113 YEAR:1978 VESSEL/AGENCY: MEDS

STOP EFF DT **DEPTHS** INST ADDIT AREA STN LON START

YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

198 70 04.00 132 27.00 78 08 04 78 08 13 09 ? 24 WRDR TUK. SHELF

WAVE DATA SET NUMBER: 79-0003 YEAR:1979 VESSEL/AGENCY: CANMAR

LAT EFF DT **DEPTHS** INST ADDIT AREA STN LON START STOP YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

TUK. SHELF TUK. SHELF 200 70 31.12 133 20.08 79 08 03 79 09 10 201 69 58.13 136 36.15 79 08 13 79 09 18 46 WRDR 0 30 WRDR

WAVE DATA SET NUMBER: 79-0120 VESSEL/AGENCY: MEDS YEAR: 1979

LAT LON START STOP EFF DT DEPTHS INST ADD IT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR **AREA**

198 70 03.33 133 59.60 79 08 19 79 10 15 TUK. SHELF 24 WRDR

WAVE DATA SET NUMBER: 80-0002

VESSEL/AGENCY: CANMAR YEAR: 1980

LAT LON START STOP EFF DT DEPTHS INST ADD IT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR EFF DT **AREA**

TUK. SHELF 200 70 05.00 136 40.00 80 08 11 80 09 18 201 70 34.00 134 35.00 80 08 16 80 09 13 202 70 18.00 136 36.00 80 08 15 80 09 07 50 WRDR 28 24 60 WRDR TUK. SHELF

WAVE DATA SET NUMBER: 81-0002C YEAR:1981 VESSEL/AGENCY: CANMAR

LON " **DEPTHS** - AREA LAT START STOP EFF DT INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR DEG MIN DEG MIN

201 70 05.00 134 26.00 81 07 28 81 08 31 202 70 46.00 129 21.00 81 08 05 81 08 14 196 70 28.00 134 06.00 81 08 07 81 10 06 TUK. SHELF 27 WRDR 09 60 25 WRDR 0 TUK. SHELF TUK. SHELF 0 60 WRDR 204 69 53.00 136 11.00 81 08 13 81 08 15 20 WRDR

WAVE DATA SET NUMBER: 82-0117 VESSEL/AGENCY: ESSO YEAR: 1982

START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA LAT LON DEG MIN DEG MIN

205 69 56.97 134 29.67 82 08 23 82 09 26 54 ? 0 14 WRDR TUK. SHELF

WAVE DATA SET NUMBER: 82-0118 YEAR:1982 VESSEL/AGENCY: CANMAR START EFF DT DEPTHS INST ADDIT **AREA** STN LAT LON STOP DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR 196 70 24.80 133 27.00 82 07 27 82 08 25 196 70 22.50 136 32.00 82 09 01 82 09 29 201 70 35.00 134 14.00 82 07 28 82 08 21 201 70 26.50 133 59.00 82 09 02 82 09 29 202 70 44.00 133 50.00 82 07 22 82 07 27 204 69 53.40 135 59.50 82 07 30 82 08 20 204 69 50.70 136 00.00 82 09 01 82 09 29 206 69 58.10 131 12.65 82 08 07 82 10 06 TUK. SHELF TUK. SHELF TUK. SHELF 29 28 52 WRDR ??????? 58 WRDR 24 27 58 WRER 000 TUK. SHELF 60 WRER TUK. SHELF TUK. SHELF 71 WRER 20 WRER 05 21 28 TUK. SHELF 21 WRI R MCKINLEY BAY 8 WRDR WAVE DATA SET NUMBER: 83-0067 VESSEL/AGENCY: ARCTIC LAB. YEAR: 1983 LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA 208 69 44.97 136 05.22 83 08 24 83 09 09 209 69 56.06 133 30.50 83 07 31 83 08 17 TUK. SHELF 16 0 12 WRDR 18 WAVE DATA SET NUMBER: 83-0069 YEAR:1983 VESSEL/AGENCY: CANMAR LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR EFF DT **AREA** STN TUK. SHELF 196 70 19.42 135 26.53 83 09 09 83 09 12 200 70 24.44 133 42.33 83 08 17 83 08 30 201 70 04.95 137 13.12 83 08 11 83 09 10 202 70 24.62 134 30.68 83 08 23 83 08 27 13 30 000 50 WRDR TUK. SHELF 42 WRDR TUK. SHELF 52 WRDR

WAVE DATA SET NUMBER: 83-0070 YEAR:1983 VESSEL/AGENCY: GULF

AREA STN LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C

TUK. SHELF 207 69 55.72 136 47.72 83 08 25 83 09 05 10 ? 0 30 WRDR

WAVE DATA SET NUMBER: 84-0045

YEAR: 1984 VESSEL/AGENCY: MEDS

LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR P T C AREA STN

TUK. SHELF HERSCHEL IS. 69 55. 69 30. 84 08 06 84 08 17 84 08 09 84 08 18 12 ? 9 ? 136 25. 138 40.

WAVE DATA SET NUMBER: 84-0046 YEAR:1984 VESSEL/AGENCY: ASL

LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA STN

209 69 57.00 133 30.50 84 08 05 84 10 05 61 7 69 49.73 135 26.38 84 08 18 84 08 21 3 ? TUK. SHELF 0 21 WRDR TUK. SHELF 15 WRDR

WAVE DATA SET NUMBER: 85-0029 YEAR:1985 VESSEL/AGENCY: ARCTIC LAB.

START STOP EFF DT DEPTHS INST ADDIT AREA STN LAT LON

DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR

ADGO 69 28.84 135 52.14 85 08 15 85 09 27 44 15 2.5 2.7 SDAT X TUK. SHELF

WAVE DATA SET NUMBER: 85-0030

VESSEL/AGENCY: DOBROCKY YEAR:1985

LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR STN AREA

69 06. 85 08 27 85 09 14 85 08 29 85 09 11 KING POINT KING POINT 137 57. 137 57. ? ? 1.8 2.7 621 X ? ? 4.0 5.6 635 X

69 06.

WAVE DATA SET NUMBER: 85-0033 YEAR:1985 VESSEL/AGENCY: CANMAR

LAT LON START STOP EFF DT DEPTHS INST ADDIT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA

ADLAR 69 38.87 137 45.47 85 08 15 85 09 11 27 ? 0 EDLOK 69 45.83 140 14.37 85 08 23 85 09 11 19 ? 0 TUK. SHELF 68 WRDR 35 WRDR TUK. SHELF

WAVE DATA SET NUMBER: 86-0009 YEAR:1986 VESSEL/AGENCY: SEACONSULT

LAT LON START STOP EFF DT DEPTHS INST ADD IT DEG MIN DEG MIN YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA

MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY MACKENZIE BAY T1-1 69 44.49 134 36.41 86 08 17 86 09 24 T1-2 69 44.54 134 36.67 86 08 18 86 09 24 T1-2 69 44.54 134 36.67 86 08 18 86 09 24 T1-2 69 44.54 134 36.67 86 08 18 86 09 24 10. 635 ??? ???? 9.5 6. 635 6. 635 6. 650 4.5 5.5 4.5

WAVE DATA SET NUMBER: 86-0014

YEAR: 1986

VESSEL/AGENCY: ARCTIC LAB.

START STOP EFF DT DEPTHS INST ADDIT YR MO DY YR MO DY LEN MN INSTR WATER TYPE SENSOR AREA STN LAT LON DEG MIN. DEG MIN

TUK. SHELF AMAUL 70 05.67 133 48.27 86 08 08 86 09 14 33 WRDR 0 -

11.5 AIDJEX 1975 - 1976 TEMPERATURE-SALINITY DATA

This section contains listings of all the AIDJEX 1975-1976 temperature-salinity data, even those stations outside the boundaries of this data compilation.

The format of the T/S data listing is the same as in Section 11.1. The station letters CB, BF, SB and BB signify camps Caribou, Blue Fox, Snowbird and Big Bear, respectively.

BOTTLE/CTD DATA SET NUMBER: 75-0005 YEAR:1975 VESSEL/AGENCY: AIDJEX

AREA	STN	LAT LON DEG MIN DEG MIN	DATE YR MO DY HR	CAST TO (M)	WATER DEPTH (M)	PARAM MEAS C S	INSTR T	I NT HR	NO
CANADA BASIN	CBCBCBCBCBCBCBCBCBCBCBCBCBCBCBCBCBCBCB	75 32.44 143 59.55 75 30.62 143 54.64 75 28.35 143 50.67 75 30.32 144 0.67 75 31.51 144 25.04 75 29.98 144 45.71 75 27.95 144 44.42 75 30.04 144 39.68 75 30.06 144 30.32 75 29.78 144 52.49 75 30.34 144 30.72 75 29.78 144 52.49 75 30.34 144 33.72 75 29.78 144 52.49 75 30.34 144 33.72 75 29.78 144 52.49 75 30.28 145 14.20 75 33.64 145 35.08 75 37.02 145 51.13 75 40.07 146 7.12 75 41.21 146 241.99 75 41.21 146 241.99 75 42.49 146 53.59 75 43.31 147 12.41 75 43.00 147 28.87 75 43.31 147 12.41 75 43.00 147 28.87 75 36.48 147 47.89 75 36.48 147 47.89 75 35.64 147 42.43 75 35.73 147 47.89 75 35.80 147 48.08 75 35.80 147 48.08 75 35.81 147 57.80 75 36.82 148 52.85 75 36.95 149 9.16 75 43.91 149 20.51 75 43.91 149 20.51 75 43.91 149 20.51 75 43.91 149 20.51 75 43.91 148 30.33 75 39.23 148 42.36 75 36.82 148 52.85 75 36.82 148 52.85 75 36.82 148 52.85 75 36.82 149 5.79 75 43.81 149 20.51 75 43.91 149 20.51 75 43.91 149 20.51 75 43.91 149 23.57 75 41.48 149 10.56 75 42.32 149 5.79 75 43.81 145 52.85 75 36.81 145 7.71 75 38.86 145 10.19 75 40.55 146 41.57 75 40.55 146 41.57 75 41.48 149 10.56 75 43.91 145 23.81 75 50.79 147 42.00 75 43.81 145 5.79 75 43.81 145 7.71 75 38.86 145 10.19 75 40.55 145 10.19 75 40.55 145 19.10 75 40.55 145 19.10 75 40.55 145 19.10 75 40.55 145 19.10 75 40.55 145 19.10 75 40.55 145 19.10 75 40.55 145 19.10	75 05 14 06 75 05 17 18 75 05 17 18 75 05 17 18 75 05 19 18 75 05 21 18 75 05 21 18 75 05 22 18 75 05 23 18 75 05 23 18 75 05 23 18 75 05 24 18 75 05 27 18 75 05 27 18 75 05 28 18 75 05 27 18 75 05 28 18 75 05 29 18 75 05 30 18 75 06 01 18 75 06 02 18 75 06 03 18 75 06 04 17 75 06 07 18 75 06 07 18 75 06 11 18 75 06 12 18 75 06 13 18 75 06 14 18 75 06 15 18 75 06 21 18 75 06 22 18 75 06 23 18 75 06 23 18 75 06 18 18 75 06 23 18 75 06 24 18 75 06 23 18 75 06 24 18 75 06 27 18 75 06 28 18 75 06 29 18 75 06 21 18 75 06 21 18 75 06 22 18 75 06 23 18 75 06 24 18 75 06 27 18 75 07 07 18 75 07 07 18 75 07 07 18 75 07 12 18 75 07 13 18 75 07 12 18 75 07 13 18 75 07 22 18 75 07 22 18 75 07 23 18 75 07 24 18 75 07 24 18 75 07 25 18 75 07 26 18	741 7365 7465 7465 7465 7465 7465 7465 7465 74	??????????????????????????????????????	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		

			380		? X	X STD
BASSINNINININININININININININININININININ	CB138 75 57 6 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	37. 144. 144. 144. 144. 144. 144. 144. 14	75 75 75 75 75 75 75 75 75 75 75 75 75 7	7300495883243009458837788773113889093158850958889647139998802012098929482008820732887328773277331388909892931587732773277327733890989293948200887732773277328773389098929394820088773277327733890989293948200887732773277328889618819998802012009892948200880200887732773288896188199088020120098929482008802008877327732888961881990880201200989294820088020088020088929482008802008008	??????????????????????????????????????	THE

		381		
CANADA BASIN	CB297 73 21.85 141 36.2 CB298 73 4.61 141 14.7 CB299 72 58.64 141 10.6 CB300 72 47.69 141 10.6 CB301 72 47.15 141 6.7 CB306 72 49.30 141 12.7 CB306 72 49.30 141 12.7 CB307 72 50.57 141 10.6 CB311 72 51.17 141 4.0 CB312 72 52.60 140 55.8 CB318 72 52.60 140 48.3 CB318 72 52.60 140 48.3 CB320 72 52.55 140 47.8 CB322 72 52.55 140 47.8 CB328 72 52.69 140 48.3 CB328 72 52.69 140 48.3 CB330 72 51.17 140 58.6 CB332 72 52.11 141 21.8 CB331 72 47.43 141 121.8 CB331 72 47.43 141 121.8 CB334 72 47.43 141 121.8 CB336 72 47.43 141 121.8 CB341 72 43.10 141 21.8 CB341 72 43.10 141 21.8 CB345 72 43.10 141 21.8 CB355 72 43.11 141 21.8 CB356 72 47.43 141 141 21.8 CB357 72 43.11 141 21.8 CB358 72 51.71 141 22.8 CB358 72 43.10 141 21.8 CB359 72 44.02 141 21.8 CB351 72 43.11 141 21.8 CB355 72 43.12 141 21.8 CB356 72 47.43 141 141 21.8 CB357 73 13.11 141 21.8 CB358 73 12.85 142 23.8 CB368 73 12.31 142 21.8 CB358 73 7.33 142 23.8 CB368 73 1.23 142 23.8 CB369 73 14.32 142 55.8 CB368 73 12.85 142 53.8 CB390 73 13.24 142 53.8 CB390 73 13.24 142 55.8 CB398 73 12.94 143 18.8 CB390 73 13.24 142 55.8 CB400 73 13.81 142 59.6 CB401 73 13.81 142 59.6 CB402 73 12.94 143 18.8 CB406 73 1.94 143 10.8 CB407 73 13.81 142 55.8 CB408 73 1.94 143 18.8 CB408 73 1.94 143 18.8 CB409 73 13.81 142 59.6 CB418 73 2.97 142 56.8 CB418 73 3.37 142 56.8 CB420 73 3.36 142 55.8 CB420 73 3.37 142 56.8 CB430 73 14.32 143 55.8 CB430 73 5.68 142 48.3 CB440 73 1.64 143 7.9 CB441 73 3.61 143 59.6 CB442 73 3.61 143 59.6 CB442 73 3.61 143 59.6 CB444 73 2.07 143 18.8 CB456 73 3.79 142 55.8 CB456 73 3.79 142 55.8 CB466 73 3.79 142 55.8 CB466 73 3.79 143 143 18.8 CB466 73 3.79 143 143 18.8 CB466 73 3.21 143 18	75 10 23 23 20 53 34 8 8 9 9 23 20 53 34 8 8 9 9 9 4 0 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8	735 735 737 742 7743 7742 7743 7744 7744 7744 7	STORES OF THE PROPERTY OF THE

			OO		382 76 01 07 06	740	? X	X STD
CANADA BAS CANADA BAS CANADA BAS	IN	CB468 CB470 CB472	73 5.02 73 6.52 73 6.40	143 32.53 143 36.03 143 34.83	76 01 01 22 76 01 02 05	745 753	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB474 CB476	73 7.44 73 8.93	143 38.10 143 43.58	76 01 02 18 76 01 03 07	741 739	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB478 CB480	73 11.00 73 14.62	143 48.61 143 54.31	76 01 03 19 76 01 04 06	740 742	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB482 CB484	73 18.68 73 21.42	144 2.98 144 8.79	76 01 04 18 76 01 05 05	742 745	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB486 CB488	73 22.55 73 22.64	144 11.11 144 10.82	76 01 05 18 76 01 06 05	2973 745	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB490 CB492	73 22.82 73 23.44	144 8.83 144 7.69	76 01 06 18 76 01 07 06	744 753	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB494 CB496	73 23.90 73 24.16	144 9.14 144 8.90	76 01 07 18 76 01 08 06	741 743	? X ? X	X STD X STD X STD
CANADA BAS	IN IN	CB498 CB500	73 23.53 73 19.82	144 10.48 144 10.90	76 01 08 18 76 01 09 18	742 741 741	? X ? X ? X	X STD X STD
CANADA BAS	IN	CB502 CB504	73 17.36 73 12.13	143 57.30 143 35.99	76 01 10 18 76 01 11 19 76 01 12 19	736 738	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB506 CB508	73 8.56 73 8.57 73 8.58	143 26.69 143 26.51 143 26.47	76 01 13 05 76 01 13 18	744 743	? X ? X	X STD X STD
CANADA BAS	1N	CB510 CB512 CB514	73 8.59	143 26.50 143 27.29	76 01 14 06 76 01 14 18	743 743	? X ? X	X STD X STD
CANADA BAS CANADA BAS CANADA BAS	١N	CB515 CB517	73 10.37 73 10.63	143 28.39 143 29.08	76 01 15 06 76 01 15 18	743 495	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB519 CB521	73 9.55 73 8.46	143 26.64 143 23.48	76 01 16 06 76 01 16 18	742 743	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB523 CB525	73 8.69 73 8.84	143 23.65 143 25.72	76 01 17 06 76 01 17 18	743 741	? X ? X ? X	X STD X STD X STD
CANADA BAS CANADA BAS	IN	CB527 CB529	73 8.39 73 8.16	143 26.26 143 26.14	76 01 18 06 76 01 18 18	741 741 743	? X ? X ? X	X STD X STD
CANADA BAS	IN	CB530 CB531	73 7.93 73 7.51	143 26.03 143 23.47	76 01 19 06 76 01 19 19 76 01 20 18	743 744	? X ? X	X STD X STD
CANADA BAS	IN	CB533 CB534	73 6.91	143 17.17 143 17.29 143 18.96	76 01 21 06 76 01 21 18	743 742	? X ? X	X STD X STD
CANADA BAS	1N	CB535 CB536	73 6.74 73 5.98 73 5.62	143 25.90 143 26.76	76 01 22 07 76 01 22 19	2966 744	? X ? X	X STD X STD
CANADA BAS CANADA BAS CANADA BAS	IN	CB538 CB539 CB541	73 4.94 73 4.24	143 28.30 143 28.36	76 01 23 05 76 01 23 18	743 742	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB542 CB544	73 4.07 73 3.44	143 26.97 143 24.74	76 01 24 05 76 01 24 18	744 742	? X ? X	X STD X STD
CANADA BAS	IN IN	CB545 CB547	73 3.22 73 2.92	143 24.27 143 24.56	76 01 25 05 76 01 25 19	743 743	? X ? X ? X	X STD X STD X STD
CANADA BAS	IN IN	CB549 CB551	73 2.87 73 2.86	143 24.59 143 24.62	76 01 26 05 76 01 26 18 76 01 28 06	743 2967 102	? X ? X ? X	X STD X STD
CANADA BAS	IN	CB552 CB553	73 2.84 73 2.86	143 24.53 143 24.64 143 27.56	76 01 28 06 76 01 29 05 76 01 29 19	742 741	? X ? X	X STD X STD
CANADA BAS	IN	CB555 CB556	73 3.05 73 3.19 73 3.17	143 27.56 143 34.60 143 37.78	76 01 23 13 76 01 30 05 76 01 30 08	738 737	? X ? X	X STD X STD
CANADA BAS	IN	CB558 CB559 CB561	73 3.17 73 3.59 73 4.37	144 1.20 144 10.90	76 01 31 05 76 01 31 18	744 744	? X ? X	X STD X STD
CANADA BAS CANADA BAS CANADA BAS	IN	CB563 CB565	73 5.65 73 6.53	144 13.04 144 14.15	76 02 (1 05 76 02 (1 19	744 745	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB567 CB569	73 .6.82	144 12.23 144 7.24	76 02 C2 05 76 02 02 18	745 2988	? X ? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB570 CB572	73 6.76 73 6.29	143 59.53 144 2.01	76 02 03 18 76 02 04 06	745 745	? X ? X	X STD X STD X STD
CANADA BAS	IN IN	CB574 CB576	73 5.53	144 1.22 144 2.31	76 02 04 18 76 02 05 06	745 744 744	7 X 7 X 7 X	X STD X STD
CANADA BAS	IN IN	CB578 CB580	73 2.59	144 2.97 143 58.51	76 02 05 18 76 02 06 18 76 02 07 06	744 744 744	? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB582 CB584	73 0.22	143 50.14 143 39.94 143 19.15	76 02 07 18 76 02 10 05	745 2988	? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB586 CB594	72 55.04		76 02 12 18 76 02 13 06	746 745	? X ? X	X STD X STD
CANADA BAS	1N	CB596 CB598 CB600	72 54.91	143 16.08 143 16.28	76 02 13 18 76 02 14 06	746 740	? X	X STD X STD
CANADA BAS CANADA BAS CANADA BAS	IN	CB610 CB632	72 54.89	143 16.21 143 16.14	76 02 16 18 76 02 22 18	248 745	? X	X STD X STD
CANADA BAS CANADA BAS	IN	CB634 CB636	72 54.89 72 54.90	143 16.23 143 16.22	76 02 23 06 76 02 23 18	744 744	? X ? X ? X	X STD X STD X STD
CANADA BAS	1N 1N	CB638 CB640	72 54.89 72 54.90	143 16.15 143 16.32	76 02 24 05 76 02 24 18	2989 745 745	? X ? X ? X	X STD X STD X STD
CANADA BAS	IN IN	CB642 CB647	72 56.83	143 16.31 143 14.35	76 02 25 06 76 02 27 18 76 02 28 06	745 745 746	? X ? X	X STD X STD
CANADA BAS	! N ! N	CB649 CB651	72 56.43	143 13.57 143 13.74 143 14.78	76 02 28 18 76 02 29 07	747 745	? X ? X	X STD X STD
CANADA BAS		CB653 CB655	72 56.94 72 58.12	143 14.78 143 17.06	76 02 29 18	746	Ż X	X STD

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CANADA BASIN CANADA BASIN	CB657 CB659	72 59.36 72 59.26	143 20.16 143 21.26	76 03 01 08 76 03 01 18	746 745	? X ? X ? X	X STD X STD X STD
CANADA BASIN	CB663	72 56.44	143 41.61	76 03 05 18	746	? X	X STD
CANADA BASIN	CB664	72 56.16	143 39.91	76 03 06 06	745		X STD
CANADA BASIN	CB666	72 56.13	143 39.05	76 03 06 18	745	? X	X STD
CANADA BASIN	CB668	72 57.65	143 49.87	76 03 07 18	742	? X	
CANADA BASIN	CB670	72 58.31	144 0.80	76 03 08 06	744	? X	X STD
CANADA BASIN	CB672	72 58.42	144 9.40	76 03 08 18	745	? X	X STD
CANADA BASIN	CB674	72 58.81	144 16.90	76 03 09 05	1968	? X	X STD
CANADA BASIN	CB676	72 58.70	144 24.60	76 03 10 06	745	? X	X STD
CANADA BASIN	CB678	72 58.62	144 27.70	76 03 10 18	745	? X	X STD
CANADA BASIN	CB680	72 58.33	144 28.82	76 03 11 06	744	? X	X STD
CANADA BASIN	CB682	72 58.31	144 28.67	76 03 11 18	745	? X	X STD
CANADA BASIN	CB684	72 58.14	144 29.24	76 03 12 06	745	? X	X STD
CANADA BASIN	CB686	72 58.08	144 29.28	76 03 12 20	745	? X	X STD
CANADA BASIN	CB687		144 29.43	76 03 12 22	131	? X	X STD
CANADA BASIN	CB688	72 58.05	144 28.64	76 03 13 06	744	? X	X STD
CANADA BASIN	CB690	72 57.80	144 29.37	76 03 13 18	746	? X	X STD
CANADA BASIN CANADA BASIN	CB692 CB694	72 56.88 72 56.21	144 27.25 144 25.91	76 03 14 06 76 03 14 10	745 129	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	CB696 CB698	72 55.05 72 52.51 72 51.44	144 23.84 144 20.53 144 18.82	76 03 14 18 76 03 15 06 76 03 15 11	744 495 346	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	CB700 CB702 CB704	72 49.73 72 48.69	144 16.70 144 15.21	76 03 15 18 76 03 15 23	744 149	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	CB704 CB706 CB708	72 48.26 72 47.62	144 14.62 144 14.71	76 03 16 06 76 03 16 18	744 744	? X ? X	X STD X STD
CANADA BASIN	CB710	72 44.90	144 14.03	76 03 17 06	743	? X	X STD
CANADA BASIN	CB712	72 43.39	144 10.21	76 03 17 18	743	? X	X STD
CANADA BASIN	CB714	72 43.34	144 9.85	76 03 18 06	744	? X	X STD
CANADA BASIN	CB716	72 43.34	144 9.94	76 03 18 18	745	? X	X STD
CANADA BASIN	CB718	72 43.33	144 10.00	76 03 19 06	745	? X	X STD
CANADA BASIN	CB720	72 43.35	144 10.10	76 03 19 18	745	? X	X STD
CANADA BASIN	CB722	72 43.36	144 9.92	76 03 20 06	126	? X	X STD
CANADA BASIN	CB724	72 43.34	144 10.01	76 03 20 18	743	? X	X STD
CANADA BASIN	CB727	72 43.36	144 9.76	76 03 21 07	394	? X	X STD
CANADA BASIN	CB729	72 43.34	144 9.85	76 03 22 06	744	? X	X STD
CANADA BASIN	CB731	72 43.33	144 10.03	76 03 22 18	744	? X	X STD
CANADA BASIN	CB733	72 43.30	144 9.84	76 03 23 18	746	? X	X STD
CANADA BASIN	CB735	72 43.33	144 9.68	76 03 24 06	745	? X	X STD
CANADA BASIN	CB737	72 43.34	144 9.82	76 03 24 18	744	? X	X STD
CANADA BASIN	CB739	72 43.37	144 9.74	76 03 25 18	745	? X	X STD
CANADA BASIN	CB741	72 43.37	144 9.60	76 03 26 06	744	? X	X STD
CANADA BASIN	CB743	72 43.36	144 9.47	76 03 26 18	744	? X	X STD
CANADA BASIN	CB745	72 43.38	144 9.53	76 03 27 08	745	? X	X STD
CANADA BASIN	CB747	72 43.34	144 9.58	76 03 27 18	746	? X	X STD
CANADA BASIN	CB749	72 43.33	144 9.72	76 03 28 06	741	? X	X STD
CANADA BASIN	CB751	72 43.36	144 9.55	76 03 28 18	745	? X	X STD
	CB753	72 43.37	144 9.47	76 03 29 07	745	? X	X STD
CANADA BASIN	CB757 CB759	72 43.37 72 43.38	144 9.55	76 03 30 06 76 03 30 18	745 745	? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	CB761 CB763			76 03 31 06 76 03 31 18 76 04 01 06	745 744 745	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	CB765 CB767 CB769	72 43.37	144 9.03 144 9.54 144 9.53	76 04 01 06 76 04 01 18 76 04 02 06	745 745 745	? X ? X	X STD X STD
CANADA BASIN	CB773	72 43.36	144 9.53	76 04 02 18	744	? X	X STD
CANADA BASIN	CB773		144 9.46	76 04 03 06	745	? X	X STD
CANADA BASIN CANADA BASIN	CB775 CB777	72 43.36	144 9.43 144 9.64	76 04 03 18 76 04 04 06	745 745 745	? X ? X ? X ? X	X STD X STD
CANADA BASIN	CB779	72 43.36	144 9.42	76 04 04 18	994	? X	X STD
CANADA BASIN	CB781		144 13.43	76 04 05 06	744	? X	X STD
CANADA BASIN	CB783	72 42.83	144 15.45	76 04 05 18	744	? X	X STD
CANADA BASIN	CB785		144 17.08	76 04 06 06	745	? X	X STD
CANADA BASIN	CB787		144 17.92	76 04 06 18	745	? X	X STD
CANADA BASIN	CB790		144 17.65	76 04 07 06	745	? X	X STD
CANADA BASIN	CB792	72 42.84	144 17.73	76 04 07 18	745	? X	X STD
CANADA BASIN	CB794	72 42.84		76 04 08 06	744	? X	X STD
CANADA BASIN	CB796	72 43.31	144 18.99	76 04 08 18	745	? X	X STD
CANADA BASIN	CB798	72 45.33	144 23.24	76 04 09 06	744	? X	X STD
CANADA BASIN	CB800	72 44.21	144 25.90	76 04 10 06	744	? X	X STD
CANADA BASIN	CB802		144 29.14	76 04 10 19	745	? X	X STD
CANADA BASIN	CB804	72 43.07	144 33.55	76 04 11 06	744	? X	X STD
CANADA BASIN	CB806	72 43.46	144 43.60	76 04 11 18	992	? X	X STD
CANADA BASIN	CB808	72 44.57	144 53.27	76 04 12 06	743	? X	X STD
CANADA BASIN	CB810		144 55.54	76 04 12 18	744	? X	X STD
CANADA BASIN CANADA BASIN	CB812 CB814	72 44.38 72 44.18	144 54.29 144 52.36	76 04 13 06 76 04 13 18	744 744	? X ? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	CB818 CB820		144 33.18 144 26.17	76 04 15 18 76 04 16 18	744 744	? X	X STD X STD
CANADA BASIN	CB822	72 45.50	144 26.15	76 04 17 18	743	? X	X STD
CANADA BASIN	CB824		144 27.26	76 04 18 06	744	? X	X STD
CANADA BASIN	CB826	72 45.40	144 29.11	76 04 18 18	993	? X	X STD

		72 45.08	144 34.19	384 76 04 19 06	744	? X	X STD
BASSINNINNINNINNINNINNINNINNINNINNINNINNIN	024468921234567890112345678901223456789012334567890123445678900123456789000123456789000123456789000123456789000000000000000000000000000000000000	72 443.63 72 443.657 72 72 72 72 72 72 72 72 72 72 72 72 72 7	144444444455533.7.7305884466466521553.5.5.5.5.6.2.2.5.5.8.2.2.5.5.8.2.5.5.8.2.5.5.6.8.2.9.7.2.3.5.3.8.2.2.5.5.8.2.2.5.5.8.2.2.5.5.8.2.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3.3	76 76 76 76 76 76 76 76 76 76 76 76 76 7	7444 7444 7444 7444 7444 7444 7444 744	???????????????????????????????????????	PDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD

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CANADA BASIN CANADA BASIN	BF 71 BF 72	76 13.73 142 38.59 76 7.52 142 31.96 75 59.74 142 35.29	75 07 19 18 75 07 20 18 75 07 21 18	730 733 731	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BF 73 BF 74 BF 75	75 59.74 142 33.29 75 53.08 142 37.03 75 48.26 142 41.90	75 07 22 18 75 07 23 18	730 731	; X 7 X 7 X	X STD X STD
CANADA BASIN	BF 76	75 44.86 142 48.04	75 07 24 18	731	? X	X STD
CANADA BASIN	BF 77	75 42.43 142 53.61	75 07 25 18	731	? X	X STD
CANADA BASIN	BF 78	75 40.48 142 56.87	75 07 26 18	728	? X	X STD
CANADA BASIN	BF 79	75 38.59 142 55.93	75 07 27 18	731	? X	X STD
CANADA BASIN CANADA BASIN	BF 80 BF 81	75 36.32 142 50.77 75 33.27 142 24.05	75 07 28 18 75 07 29 18	731 730	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BF 82 BF 83 BF 84	75 25.81 142 3.23 75 20.06 141 41.20 75 14.61 141 19.85	75 07 30 18 75 07 31 18 75 08 01 18	731 729 730	? X ? X	X STD X STD
CANADA BASIN	BF 86	75 10.36 141 10.39	75 08 02 18	731	? X	X STD
CANADA BASIN	BF 88	75 7.28 140 59.58	75 08 03 18	731	? X	X STD
CANADA BASIN	BF 90	75 6.04 140 38.75	75 08 04 21	728	? X	X STD
CANADA BASIN	BF 92	75 6.77 140 10.92	75 08 06 04	728	? X	X STD
CANADA BASIN CANADA BASIN	BF 94 BF 96	75 5.53 140 7.43 75 4.70 139 59.57 75 4.66 139 47.50	75 08 06 18 75 08 07 18 75 08 08 18	733 728 732	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BF 97 BF 98 BF 99	75 4.66 139 47.50 75 2.62 139 11.37 74 57.28 138 49.06	75 08 09 18 75 08 10 18	731 733	? X ? X	X STD X STD
CANADA BASIN	BF100	74 53.91 138 30.65	75 08 11 18	731	? X	X STD
CANADA BASIN	BF101	74 50.48 138 5.90	75 08 12 18	732	? X	X STD
CANADA BASIN	BF102	74 53.98 137 46.93	75 08 13 18	727	? X	X STD
CANADA BASIN	BF103	74 50.36 137 15.41	75 08 14 18	727	? X	X STD
CANADA BASIN	BF104	74 49.82 137 8.12	75 08 15 18	728	? X	X STD
CANADA BASIN	BF105	74 48.29 137 3.25	75 08 16 18	731	? X	X STD
CANADA BASIN	BF106	74 43.10 137 7.94	75 08 17 18	731	? X	X STD
CANADA BASIN	BF107	74 40.53 137 12.83	75 08 18 18	731	? X	X STD
CANADA BASIN	BF108	74 39.00 137 22.78	75 08 19 18	676	? X	X STD
CANADA BASIN	BF109	74 40.96 137 46.88	75 08 20 18	731	? X	X STD
CANADA BASIN	BF110	74 42.04 138 6.70	75 08 21 18	732	? X	X STD
CANADA BASIN CANADA BASIN	BF112 BF114	74 40.05 138 11.60 74 35.86 138 10.00	75 08 22 18 75 08 23 18 75 08 24 18	73 0 73 8 73 3	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BF116 BF118 BF120	74 35.79 138 14.04 74 34.43 137 56.14 74 35.95 137 54.50	75 08 24 18 75 08 25 18 75 08 26 18	733 733 733	? X ? X	X STD X STD
CANADA BASIN	BF122	74 33.06 137 30.74	75 08 27 18	7 3 0	? X	X STD
CANADA BASIN	BF124	74 24.58 136 59.27	75 08 28 18	7 3 2	? X	X STD
CANADA BASIN	BF126	74 22.21 136 40.33	75 08 30 ?	731	? X	X STD
CANADA BASIN	BF128	74 16.54 136 35.06	75 08 30 18	733	? X	X STD
CANADA BASIN	BF130	74 10.82 136 30.99	75 08 31 18	737	? X	X STD
CANADA BASIN	BF132	74 3.47 136 13.08	75 09 01 18	735	? X	X STD
CANADA BASIN	BF134	74 0.66 136 13.29	75 09 02 18	729	? X	X STD
CANADA BASIN	BF136	74 0.92 136 13.02	75 09 03 18	733	? X	X STD
CANADA BASIN	BF138	74 1.52 136 5.18	75 09 04 18	734	? X	X STD
CANADA BASIN	BF140	73 58.79 136 6.16	75 09 05 18	735	? X	X STD
CANADA BASIN	BF142	73 54.37 136 17.95	75 09 06 18	734	? X	X STD
CANADA BASIN CANADA BASIN	BF144 BF146	73 52.00 136 28.57 73 50.22 136 15.88 73 48.92 135 21.28	75 09 07 18 75 09 08 18 75 09 10 18	149 733 731	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BF150 BF152 BF154	73 49.90 135 3.11 73 50.68 134 47.65	75 09 10 18 75 09 11 18 75 09 12 18	733 729	? X	X STD X STD
CANADA BASIN	BF156	73 50.53 134 32.08	75 09 13 18	481	? X	X STD
CANADA BASIN	BF158	73 49.10 134 21.58	75 09 14 18	731	? X	X STD
CANADA BASIN CANADA BASIN	BF160 BF162	73 48.38 134 32.18 73 49.41 134 41.47	75 09 15 18 75 09 16 18 75 09 17 18	731 730 483	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BF164 BF166 BF168	73 50.73 134 45.06 73 54.19 134 39.23 73 50.55 134 58.46	75 09 17 18 75 09 18 18 75 09 19 18	731 239	? X ? X	X STD X STD
CANADA BASIN	BF170	73 47.81 134 57.23	75 09 20 18	729	? X	X STD
CANADA BASIN	BF172	73 46.61 134 33.28	75 09 21 18	729	? X	X STD
CANADA BASIN	BF174	73 42.88 134 12.50	75 09 22 18	730	? X	X STD
CANADA BASIN	BF176	73 40.46 134 24.44	75 09 23 18	730	? X	X STD
CANADA BASIN	BF178	73 36.34 134 11.39	75 09 24 18	727	? X	X STD
CANADA BASIN	BF180	73 30.79 134 0.16	75 09 25 18	730	? X	X STD
CANADA BASIN	BF182	73 26.56 133 59.88	75 09 26 18	730	? X	X STD
CANADA BASIN	BF184	73 23.69 133 55.08	75 09 27 18	731	? X	X STD
CANADA BASIN	BF186	73 21.70 133 50.12	75 09 28 18	741	? X	X STD
CANADA BASIN	BF188	73 20.66 133 51.68	75 09 29 18	741	? X	X STD
CANADA BASIN	BF190	73 21.98 134 0.70	75 09 30 18	740		X STD
CANADA BASIN CANADA BASIN	BF192 BF194	73 23.52 134 20.38 73 24.24 134 36.31 73 30.16 135 3.57	75 10 01 18 75 10 02 18 75 10 04 18	732 732 729	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BF198 BF200 BF202	73 30.16 135 3.57 73 32.18 135 14.44 73 32.99 135 21.99	75 10 04 18 75 10 05 18 75 10 06 18	742 740	? X ? X	X STD X STD
CANADA BASIN	BF204	73 30.76 135 25.53	75 10 07 18	728	? X	X STD
CANADA BASIN	BF206	73 27.33 135 23.74	75 10 08 18	730	? X	X STD
CANADA BASIN CANADA BASIN	BF208 BF210	73 25.92 135 21.61 73 24.70 135 20.63	75 10 09 18 75 10 10 18 75 10 11 18	732 730 742	? X ? X ? X	X STD X STD X STD
CANADA BASIN	BF212	73 22.72 135 24.20	10 10 11 10	176	; ^	V 01D

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CANADA BASIN CANADA BASIN	SB237 SB238	74 13.48	141 45.71 141 55.54	75 10 04 18 75 10 05 18	721 737	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB239 SB240	74 14.65	142 6.71 142 10.73	75 10 06 18 75 10 07 18	741 738	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB241 SB242	74 11.69	142 10.80 142 11.84	75 10 08 18 75 10 09 18	740 742	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB243 SB245	74 6.70	142 10.40 142 5.01	75 10 10 18 75 10 11 18	742 737	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB247 SB249	74 5.44	141 38.75 141 45.10	75 10 12 18 75 10 13 18	741 741	? X ? X	X STD X STD
CANADA BASIN	SB251 SB253	74 5.61	141 53.58 142 12.55	75 10 14 18 75 10 15 18	741 739	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB255 SB257	74 2.97	142 34.27 142 34.92 142 36.73	75 10 16 18 75 10 17 18 75 10 18 18	739 685 736	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB259 SB261 SB263	74 3.77	142 54.69 143 6.46	75 10 10 16 75 10 19 18 75 10 20 18	740 741	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB265 SB267	74 5.07	143 11.11 143 10.16	75 10 21 18 75 10 22 18	731 727	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB269 SB271	74 4.46	143 13.88 143 35.06	75 10 23 18 75 10 24 18	723 723	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB273 SB275	74 5.19	143 25.87 143 6.44	75 10 25 18 75 10 26 19	723 723	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB277 SB279	73 54.03	142 52.97 143 1.29	75 10 27 18 75 10 28 18	727 723	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB281 SB283	73 36.48	143 9.31 143 3.89	75 10 29 18 75 10 30 18	726 574	? X	X STD X STD
CANADA BASIN CANADA BASIN	SB285 SB287	73 32.02	143 3.74 142 58.44	75 10 31 18 75 11 01 18	724 721	? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	SB289 SB291	73 32.86	142 57.88 142 59.52 143 1.72	75 11 02 18 75 11 03 18 75 11 04 18	723 742 741	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB293 SB295 SB297	73 36.64	143 1.72 143 1.31 142 49.42	75 11 04 18 75 11 05 18 75 11 06 18	741 739	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB299 SB302	73 41.41	142 39.34 142 34.28	75 11 07 18 75 11 09 18	741 741	? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ? ?	X STD X STD
CANADA BASIN CANADA BASIN	SB304 SB306	73 43.25	142 32.57 142 32.00	75 11 10 18 75 11 11 18	741 693	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB308 SB310	73 42.11	142 34.56 142 50.87	75 11 12 18 75 11 13 18	742 741	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB312 SB314	73 32.49 73 30.22	143 9.48 143 10.73	75 11 14 18 75 11 15 18	723 742	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB316 SB318	73 29.92	143 8.27 143 8.72	75 11 16 18 75 11 17 18	739 741	? X	X STD X STD
CANADA BASIN CANADA BASIN	SB320 SB322	73 29.90	143 8.47 143 8.72	75 11 18 18 75 11 19 18	240 667	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB324 SB326	73 42.89	143 20.47 143 42.23	75 11 20 18 75 11 21 18 75 11 22 18	735 736 741		X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB328 SB330 SB332	73 52.22	143 53.63 144 2.70 144 10.01	75 11 22 18 75 11 23 18 75 11 24 18	740 742	? X ? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB334 SB336	73 53.91	144 26.15 144 42.44	75 11 25 18 75 11 26 18	740 738	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	SB338 SB340	74 0.76	144 48.02 144 53.54	75 11 27 19 75 11 28 18	741 741	? X ? X	X STD X STD

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CANADA A BASSIIN NINNINNINNINNINNINNINNINNINNINNINNIN	24468024668256679024468002466024668913357913357913353556667902466802466802466890113353556667902466802466802466891133573556667902466890246689024668911335558888888888888888888888888888888	73 56 16 17 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	3.645.466.152.886.06.837.39.06.65.73.486.154.56.15.20.00.00.00.20.56.06.57.348.183.488.31.444.444.444.444.444.444.444.444.444.	75 75 75 75 75 75 75 75 75 75 75 75 75 7	77777777777777777777777777777777777777	??????????????????????????????????????	

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CANADA BASIN CANADA BASIN CANADA BASIN	SB513 SB515 SB517	73 41.59 73 41.60	144 43.45 144 43.37 144 43.48	76 02 21 18 76 02 22 18 76 02 23 18	747 746 745	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB519 SB521 SB522	73 44.68 73 44.26	144 43.59 144 40.58 144 40.11	76 02 24 18 76 02 27 18 76 02 28 18	746 746 741	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB524 SB525 SB526		144 45.15 144 45.25 144 44.68	76 03 01 18 76 03 02 18 76 03 03 18	741 741 743	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB527 SB528 SB529	73 43.16	145 10.33 145 6.10 145 3.71	76 03 05 05 76 03 06 06 76 03 06 18	744 742 749	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	SB530 SB550	73 22.09	145 23.06 145 34.24 145 33.70	76 04 01 ? 76 04 07 06 76 04 07 18	787 758 757	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB552 SB554 SB556	73 21.98 73 22.48	145 33.24 145 34.71	76 04 08 06 76 04 08 18	760 757	? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB558 SB560 SB562	73 24.81 73 23.44	145 38 68 145 39 53 145 42 68	76 04 09 06 76 04 09 18 76 04 10 05	756 757 757	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB564 SB566 SB568		145 48.01 145 55.76 146 5.00	76 04 10 18 76 04 11 06 76 04 11 18	757 756 757	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB570 SB572 SB574	73 23.80 73 24.02 73 23.98	146 12.69 146 13.04 146 12.59	76 04 12 05 76 04 12 18 76 04 13 06	758 762 757	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB576 SB578 SB580	73 23.78 73 23.56	146 10.98 146 9.34 146 5.93	76 04 13 18 76 04 14 06 76 04 14 18	756 756 756	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	SB582 SB584	73 23.87 73 24.64	145 57.05 145 51.82	76 04 15 06 76 04 15 18 76 04 16 06	756 762 756	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB586 SB588 SB590	73 25.52	145 44.67 145 43.67 145 43.58	76 04 16 18 76 04 17 06	756 756	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB592 SB594 SB596	73 25.87 73 25.79	145 43.92 145 44.47 145 45.70	76 04 17 18 76 04 18 05 76 04 18 18	756 756 756	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB598 SB600 SB602	73 25.51 73 24.91 73 23.98	145 50.04 145 53.45 145 58.65	76 04 19 06 76 04 19 18 76 04 20 06	756 756 755	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	SB604 BB 4 BB 5	73 23.74 99 59.99 99 59.99	146 0.74 99 59.99 99 59.99	76 04 20 18 75 04 04 06 75 04 05 06	756 997 999	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 6 BB 7 BB 8	99 59.99 99 59.99 99 59.99	99 59.99 99 59.99 99 59.99	75 04 06 06 75 04 06 17 75 04 07 05	727 991 976	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 9 BB 10 BB 13	99 59.99 99 59.99 99 59.99	99 59.99 99 59.99 99 59.99	75 04 07 17 75 04 08 05 75 04 09 06	971 730 975	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 14 BB 22 BB 24	99 59.99 99 59.99 76 21.11	99 59.99 99 59.99 145 20.99	75 04 09 18 75 04 10 17 75 04 11 05	179 731 728	? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	BB 28 BB 30	76 21.37 76 21.20	145 15.33 145 15.41 145 16.15	75 04 12 05 75 04 12 16 75 04 13 05	729 728 730	? X ? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 32 BB 34 BB 35	76 21.33 76 21.53	145 17 15 145 17 78	75 04 13 17 75 04 13 21	873 731	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 37 BB 39 BB 43	76 25.07 76 29.94	145 20.45 145 30.50 145 34.48	75 04 14 05 75 04 14 17 75 04 15 17	745 729 739	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 45 BB 47 BB 49	76 30.15 76 30.66	145 20.95 145 11.92 145 0.61	75 04 16 05 75 04 16 17 75 04 17 05	726 729 724	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 51 BB 53 BB 55	76 29.00	144 55.60 144 49.16 144 45.32	75 04 17 16 75 04 18 04 75 04 18 17	731 2927 2996	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 57 BB 59 BB 61	76 28.85	144 38.43 144 32.96 144 26.77	75 04 19 04 75 04 19 17 75 04 20 04	727 725 725	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 63 BB 65 BB 67	76 28.73 76 29.31	144 25.40 144 26.40 144 27.91	75 04 20 17 75 04 21 04 75 04 21 17	742 497 727	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 69 BB 71 BB 73	76 29.13	144 31.43 144 35.62 144 33.77	75 04 22 04 75 04 22 17 75 04 23 04	727 728 728	? X ? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	BB 75 BB 77	76 26.45 76 26.23	144 31.23 144 29.65 144 30.19	75 04 23 17 75 04 24 03 75 04 24 17	745 729 730	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 79 BB 81 BB 83	76 25.98 76 25.79	144 28.39 144 27.82	75 04 25 03 75 04 25 17	712 727	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB 84 BB 86 BB 89	76 26.65	144 26.95 144 26.88 144 23.40	75 04 26 04 75 04 26 18 75 04 27 17	725 727 729	? X ? X ? X	X STD X STD X STD

CANADA BASIN	BB 91	76 25.23 1	144 21.17	75 04 28 05	724	? X	X STD
CANADA BASIN CANADA BASIN	BB 93 BB 95	76 25.14 1 76 25.20 1	144 20.42 144 18.09	75 04 28 17 75 04 29 05	726 726	? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	BB 97 BB 99	76 26.87 1	144 16.49 144 7.52	75 04 29 17 75 04 30 04	726 724	? X	X STD X STD
CANADA BASIN CANADA BASIN	BB103 BB105		143 40.01 143 39.77	75 05 01 05 75 05 01 17	730 727	? X	X STD X STD
CANADA BASIN CANADA BASIN	BB107 BB111	76 27.17	143 40.88 143 50.70	75 05 02 04 75 05 03 04	725 728	? X ? X	X STD
CANADA BASIN CANADA BASIN	BB115 BB117	76 25.78	144 2.80 144 8.47	75 05 04 04 75 05 04 17	724 727	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB119 BB121	76 25.54	144 19.00 144 33.13	75 05 05 04 75 05 05 17	727 727	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB123 BB125	76 26.19	144 44 21 144 55 79	75 05 06 04 75 05 06 17	725 725	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB127 BB129	76 27.52 76 27.83	145 3.56 145 7.29	75 05 07 04 75 05 07 17	726 726	7 X 7 X	X STD X STD X STD
CANADA BASIN CANADA BASIN	BB131 BB133	76 28.11	145 9.42 145 12.29	75 05 08 04 75 05 08 17	725 723	7 X 7 X 7 X	X STD X STD
CANADA BASIN CANADA BASIN	BB135 BB137	76 29.66	145 14.36 145 13.97	75 05 09 04 75 05 09 17	727 728	? X	X STD X STD
CANADA BASIN CANADA BASIN	BB139 BB141	76 29.11	145 12.83 145 10.33	75 05 10 04 75 05 10 17	726 727	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB143 BB145	76 26.11	145 7.75 145 5.26	75 05 11 04 75 05 11 17	2925 727 726	? X ?· X	X STD X STD
CANADA BASIN CANADA BASIN	BB147 BB149	76 23.23	145 6.58 145 7.33	75 05 12 04 75 05 12 17	726 726 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB151 BB153	76 18.88	145 10.91 145 13.87	75 05 13 04 75 05 13 18 75 05 14 04	726 725	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB155 BB157	76 15.64	145 10.47 145 4.93	75 05 14 04 75 05 14 17 75 05 15 04	726 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB159 BB161	76 12.20	144 57.24 144 53.83	75 05 15 07 75 05 15 17 75 05 16 04	726 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB163 BB165	76 11.47	144 55.91 144 54.08 144 56.89	75 05 16 17 75 05 17 04	725 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB167 BB169	76 15.43	144 56.89 145 7.13 145 17.81	75 05 17 17 75 05 18 04	2926 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB171 BB173	76 16.54	145 17.01 145 28.48 145 39.16	75 05 18 17 75 05 19 04	726 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB175 BB177 BB179	76 14.68	145 43.86 145 46.51	75 05 19 17 75 05 20 04	726 725	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB181 BB183	76 12.55	145 45.82 145 43.13	75 05 20 17 75 05 21 05	726 727	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB185 BB187	76 12.27	145 39.64 145 35.15	75 05 21 17 75 05 22 05	728 725	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB189 BB191	76 14.17 1	145 30.18 145 24.77	75 05 22 17 75 05 23 05	725 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB193 BB195	76 14.56 1	145 21.79 145 18.53	75 05 23 17 75 05 24 05	726 725	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB197 BB199	76 13.56 1 76 13.88 1	145 16.84 145 15.77	75 05 24 17 75 05 25 05	2923 499	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB201 BB203	76 14.74 1 76 15.44 1	145 16.39 145 21.95	75 05 25 17 75 05 26 05	727 726	? X ? X ? X ? X ? X ? X	X STD X STD X STD
CANADA BASIN CANADA BASIN	BB205 BB207	76 14.60 1	145 32.18 145 43.60	75 05 26 17 75 05 27 05	725 726	7 X 7 X	X STD X STD X STD
CANADA BASIN CANADA BASIN	BB209 BB213	76 17.49 1	145 54.04 146 14.77	75 05 27 17 75 05 28 17	727 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB215 BB217	76 20.88 1	146 24.87 146 34.42	75 05 29 05 75 05 29 18	726 726 726	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB219 BB221	76 23.83	146 43.88 146 50.69	75 05 30 05 75 05 30 16	724 725	; X ; X	X STD X STD
CANADA BASIN CANADA BASIN	BB223 BB225	76 25.75 1	147 6.13 147 10.30	75 06 01 05 75 06 01 17 75 06 02 05	726 723	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB227 BB229	76 26.12 1	147 17.46 147 22.23	75 06 02 05 75 06 02 17 75 06 03 17	727 725	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB231 BB233	76 27.68	147 32.32 147 40.38 147 49.72	75 06 04 05 75 06 04 17	728 2935	? X ? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB235 BB237	76 27.82	147 59.29 148 5.26	75 06 05 05 75 06 05 17	727 726	? X	X STD X STD
CANADA BASIN CANADA BASIN	BB239 BB241	76 26.99	148 11.21 148 15.96	75 06 06 05 75 06 06 17	724 726	? X ? X	X STD X STD
CANADA BASIN CANADA BASIN	BB243 BB245 BB247	76 25.69 1	148 22.21 148 25.63	75 06 07 05 75 06 07 17	725 2922	? X	X STD X STD
CANADA BASIN CANADA BASIN	BB249 BB251	76 24.46	148 28.40 148 30.79	75 06 08 05 75 06 08 17	725 736	? X	X STD X STD
CANADA BASIN CANADA BASIN CANADA BASIN	BB253 BB255	76 21.79 1	148 29.87 148 28.01	75 06 09 05 75 06 09 17	726 726	? X	X STD X STD
CANADA BASIN CANADA BASIN	BB257 BB259	76 20.59 1 76 20.00 1	148 26.24 148 22.62	75 06 10 05 75 06 10 17	726 729	? X	X STD X STD
CANADA BASIN CANADA BASIN	BB261 BB263	76 19.02 1	148 16.31 148 14.05	75 06 11 05 75 06 11 17	727 724	? X ? X	X STD X STD

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	BB265 76 19. BB267 76 19.		75 06 12 05 75 06 12 17	725 724	? X ? X	X STD X STD
CANADA BASIN E	BB271 76 18.	51 148 21.84	75 06 13 17	725	? X	X STD
	BB273 76 18. BB275 76 19.		75 06 14 05 75 06 14 17	725 2926	? X ? X	X STD X STD
	BB277 76 20.	57 148 24.70	75 06 15 05	726	? X	X STD
	BB279 76 20.		75 06 15 17	724 725	? X ? X	X STD X STD
	BB281 76 20. BB283 76 20.		75 06 16 05 75 06 16 17	723 724	Ŷ Ŷ	X STD
CANADA BASIN	BB285 76 22.	27 148 42.31	75 06 17 05	723 726	? X ? X	X STD X STD
	BB287 76 24. BB289 76 24.		75 06 17 17 75 06 18 05	725 725	? X	X STD
CANADA BASIN E	BB291 76 22.	73 149 10.18	75 06 18 17	724 498	? X ? X	X STD X STD
	BB293 76 20. BB295 76 19.		75 06 19 05 75 06 19 17	725	? X	X STD
CANADA BASIN	BB297 76 20.		75 06 20 05 75 06 20 17	725 725	? X ? X	X STD X STD
	BB299 76 20. BB301 76 20.		75 06 20 17 75 06 21 05	725 725	γχ	X STD
CANADA BASIN	BB303 76 21.		75 06 21 17	2925	? X ? X	X STD X STD
	BB305 76 24. BB307 76 25.	22 149 31.36 33 149 27.73	75 06 22 05 75 06 22 17	725 725	? X ? X	X STD
CANADA BASIN	BB309 76 26.	08 149 28.09	75 06 23 05	724	? X	X STD X STD
	BB311 76 26. BB331 76 27.		75 06 23 17 75 06 24 05	725 725	? X ? X	X STD X STD
CANADA BASIN	BB333 76 26.	66 149 42.88	75 06 24 17	725	? X	X STD X STD
	BB335 76 25. BB337 76 24.		75 06 25 05 75 06 25 17	728 724	? X ? X	X STD X STD
CANADA BASIN I	BB339 76 24.	39 149 24.38	75 06 26 05	714	? X	X STD
	BB341 76 24. BB342 76 27.		75 06 26 19 75 06 28 05	724 722	? X ? X	X STD X STD
CANADA BASIN I	BB344 76 28.	13 149 10.16	75 06 28 17	724	? X	X STD
	BB347 76 26. BB349 76 28.		75 06 29 17 75 06 30 05	756 755	? X ? X	X STD X STD
CANADA BASIN	BB351 76 31.	79 148 44.96	75 06 30 17	756	? X	X STD
	BB353 76 33. BB355 76 32.		75 07 01 05 75 07 01 17	755 756	? X ? X	X STD X STD
CANADA BASIN I	BB357 76 32.	36 148 24.65	75 07 02 05	755	? X	X STD
	BB359 76 32. BB361 76 32.		75 07 02 17 75 07 03 05	754 754	? X ? X	X STD X STD
CANADA BASIN	BB362 76 33.	83 147 44.08	75 07 04 05	725	? X	X STD
	BB364 76 31. BB365 76 27.		75 07 04 17 75 07 05 17	725 2921	? X ? X	X STD X STD
CANADA BASIN I	BB367 76 22.	19 146 47.82	75 07 06 17	723	? X	X STD X STD
CANADA BASIN E	BB370 76 23. BB372 76 20.		75 07 10 05 75 07 10 17	722 722	? X ? X	X STD
CANADA BASIN	BB374 76 18.		75 07 11 05	724	? X	X STD
	BB376 76 18. BB378 76 18.		75 07 11 17 75 07 12 05	724 721	? X ? X	X STD X STD
0, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,		36 145 6 50 24 145 9 64	75 07 12 17 75 07 13 05	2924 722	? X ? X	X STD X STD
	BB382 76 20. BB384 76 20.		75 07 13 17	726	? X	X STD
CANADA BASIN	BB386 76 21.		75 07 14 04 75 07 20 05	722 746	? X ? X	X STD X STD
CANADA BASIN	BB391 75 57.		75 07 20 16	745	? X	X STD
	BB393 75 53. BB395 75 49.		75 07 21 05 75 07 21 17	745 745	? X ? X	X STD X STD
CANADA BASIN E	BB397 75 46.	99 145 0.61	75 07 22 04	442	? X	X STD
	BB399 75 43. BB401 75 42.		75 07 23 04 75 07 23 17	745 761	? X ? X	X STD X STD
CANADA BASIN E	BB403 75 41.	63 145 9.14	75 07 24 04	746	? X	X STD
	BB405 75 41. BB407 75 41.		75 07 24 17 75 07 25 05	745 745	? X ? X	X STD X STD
CANADA BASIN	BB409 75 41.	33 145 24.13	75 07 25 17	462	? X	X STD
	BB411 75 39. BB413 75 37.		75 07 26 04 75 07 26 17	616 695	? X ? X	X STD X STD
CANADA BASIN E	BB415 75 35.	68 145 24.25	75 07 27 04	747	? X	X STD
	BB421 75 22. BB423 75 18.	51 144 41.75 23 144 30.38	75 07 30 04 75 07 30 18	743 746	? X ? X	X STD X STD
CANADA BASIN E	BB425 75 15.	35 144 21.50	75 07 31 05	709	? X	X STD
	BB427 75 10. BB429 75 8.		75 08 01 04 75 08 01 17	742 744	? X	X STD X STD
CANADA BASIN	BB431 75 5.	77 143 44.42	75 08 02 04	591	? X	X STD
	BB433 75 4. BB434 75 2.	36 143 39.55 11 143 28.91	75 08 02 16 75 08 03 17	590 589	? X ? X	X STD X STD
CANADA BASIN E	BB436 75 1.	14 143 21.99	75 08 04 03	592	? X	X STD
	BB438 75 1. BB440 75 3.	56 143 14.80 53 142 58.42	75 08 04 17 75 08 05 05	590 610	? X ? X	X STD X STD
CANADA BASIN	BB442 75 4.	14 142 47.73	75 08 05 16	593	? X	X STD
		95 142 44.99 77 142 42.01	75 08 06 04 75 08 06 17	590 591	? X ? X	X STD
CANADA BASIN	BB448 74 59.	80 142 38.32	75 08 07 04	590	? X	X STD X STD
	BB450 74 59. BB451 74 58.		75 08 07 17 75 08 08 03	591 591	? X ? X	X STD

			554			V OTD
CANADA BASIN	BB453	74 58.82 142 26.07	75 08 08 16	590	? X ? X	X STD
CANADA BASIN	BB457	74 55.63 141 47.85	75 08 09 17	589	? X	X STD
CANADA BASIN	BB459	74 52.91 141 36.17	75 08 10 04	586	? X	X STD
CANADA BASIN	BB461	74 44.00 141 17.35	75 08 11 17	588	? X	X STD
CANADA BASIN	BB463	74 41.88 141 8.29	75 08 12 04	587	? X	X STD
CANADA BASIN	BB465	74 40.55 140 57.63	75 08 12 17	590	? X	X STD
CANADA BASIN	BB467	74 40.65 140 50.53	75 08 13 04	590	? X ? X	X STD
CANADA BASIN	BB469	74 43.48 140 28.87	75 08 14 04	590	? X	X STD
CANADA BASIN	BB471	74 41.39 140 16.63	75 08 14 17	589		X STD
CANADA BASIN	BB473	74 41.34 140 13.14	75 08 15 04	589	? X ? X	X STD
	BB475	74 42.97 140 14.77	75 08 15 17	589	? X	X STD
CANADA BASIN	BB477	74 44.00 140 13.35	75 08 16 17	590	? X	X STD
CANADA BASIN	BB479	74 41.68 140 16.60	75 08 17 05	588	? X	X STD
CANADA BASIN	BB481	74 40.08 140 24.14	75 08 17 17	591	? X	X STD
CANADA BASIN	BB483	74 39.61 140 29.12	75 08 18 04	588	? X	X STD
CANADA BASIN		74 39.16 140 29.12	75 08 18 16	591	? X	X STD
CANADA BASIN	BB485		75 08 19 05	590	Ż X	X STD
CANADA BASIN	BB487	· · · · · · · · · · · · · ·	75 08 19 17	590	Ż X	X STD
CANADA BASIN	BB489		75 08 20 05	588	? X	X STD
CANADA BASIN	BB 491		75 08 20 03	589	Ż X	X STD
CANADA BASIN	BB493	74 40.19 141 14.18	75 08 21 04	588	Ż X	X STD
CANADA BASIN	BB495	74 40.43 141 22.90	75 08 21 16	590	Ż X	X STD
CANADA BASIN	BB497	74 40.36 141 26.39	75 08 22 04	590	żΧ	X STD
CANADA BASIN	BB499	74 39.00 141 25.88		592	Ż X	X STD
CANADA BASIN	BB501	74 37.38 141 22.28		589	? X	X STD
CANADA BASIN	BB503	74 35.29 141 16.99		591	żχ	X STD
CANADA BASIN	BB505	74 32.78 141 13.24		594	? X	X STD
CANADA BASIN	BB507	74 31.69 141 11.60	75 08 24 04 75 08 24 17	610	? Ŷ	X STD
CANADA BASIN	BB509	74 31.34 141 9.22			? X	X STD
CANADA BASIN	BB511	74 30.71 140 48.69	75 08 25 17	588 590	?	X STD
CANADA BASIN	BB513	74 31.07 140 43.84	75 08 26 04		? X	X STD
CANADA BASIN	BB515	74 33.40 140 43.34	75 08 26 17	588	?	X STD
CANADA BASIN	BB517	74 34.24 140 34.27	75 08 27 04	589	ź Ŷ	X STD
CANADA BASIN	BB519	74 29.87 140 19.63	75 08 27 17	588	ź Ŷ	X STD
CANADA BASIN	BB521	74 25.43 140 6.00	75 08 28 04	589		X STD
CANADA BASIN	BB525	74 22.45 139 42.58	75 08 29 04	583	? X ? X	X STD
CANADA BASIN	BB527	74 19.24 139 32.96	75 08 29 17	589		X STD
CANADA BASIN	BB529	74 11.81 139 25.90	75 08 31 05	589	? X ? X	X STD
CANADA BASIN	BB530	74 8.49 139 19.08	75 09 01 03	593	? X	X STD
CANADA BASIN	BB531	73 52.73 137 27.17	75 09 21 06	492 728	ź Ŷ	X STD
CANADA BASIN	BB535	73 49.43 136 52.15	75 09 22 04		? X	X STD
CANADA BASIN	BB537	73 48.34 136 47.79	75 09 22 18	727	? X ? X	X STD
CANADA BASIN	BB539	73 47.67 136 52.53	75 09 23 03	721	÷ 🗘	X STD
CANADA BASIN	BB541	73 45.97 137 3.79	75 09 23 18	727	? X ? X	X STD
CANADA BASIN	BB543	73 44.47 137 0.70	75 09 24 03	727	.	X STD
CANADA BASIN	BB545	73 41.43 136 47.78	75 09 24 18	729	? X ? X	X STD
CANADA BASIN	BB547	73 38.69 136 36.35	75 09 25 04	726	? X	X STD
CANADA BASIN	BB549	73 35.80 136 36.03	75 09 25 17	728	? X	
CANADA BASIN	BB551	73 30.34 136 29.50	75 09 28 03	726	? X	X STD X STD
CANADA BASIN	BB553	73 28.82 136 24.05	75 09 28 18	729	? X	V 21D
CANADA BASIN	BB555	73 28.50 136 24.48	75 09 29 03	722	? X	X STD
CANADA BASIN	BB557	73 28.44 136 24.54	75 09 29 17	2933	? X	X STD
CANADA BASIN	BB559	73 28.76 136 23.48	75 09 30 02	729	? X ? X	X STD
CANADA BASIN	BB561	73 30 30 136 33 71	75 09 30 16	724	? X	X STD
CANADA BASIN	BB562	73 31.10 136 42.88	75 10 01 03	725	? X	X STD

11.6 AIDJEX 1975-1976 PROFILING CURRENT-METER DATA

This section lists the profiling current meter stations collected during AIDJEX 1975-1976. All the stations are presented, even those outside the boundaries of this compilation.

The following headings are used:

AREA

General area of station.

STN

Station number; CB - Caribou Camp BF - Blue Fox Camp SB - Snowbird Camp BB - Big Bear Camp

LAT, LONG

In degrees and minutes.

YR MO Year Month Day

DY HR

Hour (GMT)

PROFILE TO

Maximum data depth (m); * indicates a time series of

measurements.

PARAM MEAS

Parameters measured - pressure, current speed, and

direction. Qualification symbols are:

X - measurements of this parameter were made

INSTR

Instrument type:

TSK - Tsurumi-Seiki Co.

PROFILING CURRENT METER DATA SET NUMBER: 75-0005 YEAR:1975 VESSEL/AGENCY: AIDJEX

AREA	STN	LAT DEG MIN	LON DEG MIN	DATE YR MO DY HR	PROFILE TO (M)	PARAM MEAS P S	INSTR D
INNINININININININININININININININININI	1234567890112345671890123456789031233456678900000000000000000000000000000000000	744 6.51 6.74 1.0 0.57 7.74 4.1 1.0 0.57 7.75 7.75 7.75 7.75 7.75 7.75 7.	143 49.49.49.49.49.49.49.49.49.49.49.49.49.4	7 6 23 3 22 1 23 2 23 22 22 22 22 22 22 22 22 22 22 2	190 2130 194 190 190 190 190 190 190 190 190 190 190	<pre>xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx</pre>	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CANADA BASIN	CB 72	72 44.25	141 23.05	397 - 7 5 11 14 18	197	Х	Χ	X TSK
CANADA BASIN CANAD	774756778901223445667899999999999999999999999999999999999	73 1.46 73 5.58 73 6.16 73 6.77 73 7.38 73 7.64 73 13.39 73 73 73 73 73 73 73 73 73 73 73 73 73 7	141 141 141 141 141 141 141 141 141 141	669961777757757757757757757757757757757757757	211222222 12111111121238800006055080000000000000000840000900008000006500360 211222222 121111111212221221211112222222	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

3	9	8

TSK 196 76 2 20 73 73 7.70 143 38.82 CANADA BASIN TSK 76 195 8.86 43.30 **CB156** 143 BASIN CANADA TSK 21 193 76 **CB157** 73 11.99 143 50.06 CANADA BASIN TSK 196 73 14.76 143 54.58 76 6 **CB158** BASIN CANADA TSK 58.18 76 73 73 143 16.60 **CB159** CANADA BASIN TSK 193 20 76 **CB160** 19:50 144 4.04 CANADA BASIN 73 21.83 73 22.54 73 22.64 73 22.89 73 23.94 TSK 198 144 9.75 76 Я **CB161** CANADA BASIN **TSK** 11.09 76 5 19 200 144 CANADA BASIN CB162 TSK 76 20) 10.78 6 **CB163** 144 BASIN CANADA TSK 200 20 144 8.48 76 6 **CB164** BASIN CANADA 200 **TSK** 20 76 144 8.85 BASIN CB165 CANADA TSK 76 76 9 195 11.16 73 22.84 144 CANADA BASIN **CB166** TSK 192 73 73 21.95 18.81 17.38 12.05 7.15 9 6 144 **CB167** CANADA BASIN ž 197 TSK 10 144 76 **CB168** CANADA BASIN 22 7 TSK 52.60 43.08 177 73 73 73 73 76 10 143 BASIN **CB169** CANADA TSK CB170 CB171 76 11 192 143 16.66 CANADA BASIN 192 TSK 12 10.83 143 33.06 76 CANADA BASIN TSK 8 200 8.56 143 26.43 76 13 CB172 CANADA BASIN TSK 26.41 26.49 76 13 19 200 143 8.58 **CB173** 73 73 73 73 73 CANADA BASIN õ 200 TSK 76 14 CB174 CB175 8.59 143 BASIN CANADA TSK 14 200 9.22 143 27.23 76 19 CANADA BASIN **TSK** 200 10.44 143 28.65 76 15 CANADA BASIN **CB176** 76 76 χ TSK 9 200 15 **CB177** 10.50 143 28.77 CANADA BASIN 15 20 26 2 TSK 196 73 73 73 73 10.50 **CB178** 143 29.06 CANADA BASIN **TSK** 24.63 24.24 200 143 76 **CB179** BASIN CANADA TSK 22 200 76 26 2.85 **CB180** 143 CANADA BASIN TSK 73 73 73 2.84 28 8 200 X X X 143 24.70 76 CANADA BASIN CB181 200 TSK 143 24.66 76 28 20 CANADA BASIN **CB182** TSK TSK 76 76 83 29 200 CB183 CB184 24.67 143 2.86 CANADA BASIN 30 187 XXXXXXXXX 73 73 73 73 73 3.19 143 32.79 CANADA BASIN TSK 1.71 5 191 76 31 CB185 CB186 3.61 144 BASIN CANADA TSK 144 76 1 31 20 11.74 4.62 CANADA BASIN TSK 76 190 2 1 10 6.00 6.75 CB187 144 13.73 BASIN CANADA TSK 187 -23 144 13.60 76 **CB188** BASIN CANADA X **TSK** 76 76 144 12.29 9.79 2 4 192 73 73 73 6.82 BASIN CB189 CANADA TSK 2 11 190 2 CB190 6.84 144 BASIN CANADA TSK 191 6.82 144 7.37 76 2 17 CB191 CANADA BASIN TSK 5.06 76 22 192 73 73 73 6.85 144 BASIN CB192 CANADA TSK 76 2 190 CB193 CB194 6.82 6.79 5 144 1.89 BASIN CANADA **TSK** 10 190 144 0.06 76 BASIN CANADA TSK 59.48 0.33 200 73 73 73 73 76 3 16 143 6.76 BASIN CB195 CANADA TSK 76 3 23 191 144 **CB196** 6.70 BASIN CANADA TSK 200 4 6.40 76 **CB197** 144 1.85 CANADA BASIN 200 TSK 5.95 10 1.67 144 76 4 BASIN **CB198** CANADA TSK TSK 1.26 1.28 CB199 CB200 CB201 73 73 5.84 5.71 76 16 200 144 BASIN CANADA 2 4 22 200 76 144 CANADA BASIN TSK 2.49 2.71 2.90 200 144 73 5.56 76 CANADA BASIN TSK 76 10 200 73 73 73 144 **CB202** 5.41 BASIN CANADA TSK 2 200 X X X 16 CB203 CB204 5.20 4.73 76 5 144 CANADA BASIN **TSK** 23 192 3.36 3.71 144 76 5 CANADA BASIN TSK 76 6 4 192 73 73 144 4.11 CANADA BASIN **CB205 TSK** 10 191 CB206 CB207 CB208 2.05 2 76 6 3.28 144 CANADA BASIN **TSK** 76 76 59.19 191 143 6 16 73 2.66 CANADA BASIN TSK 143 55.15 6 22 190 73 73 2.36 CANADA BASIN CB206 CB209 CB210 CB211 CB212 CB214 TSK 7 4 7 10 191 76 1.86 143 51.14 CANADA BASIN TSK 188 Ź3 1.17 143 46.12 76 CANADA BASIN 0.30 59.53 58.77 58.25 57.58 TSK 40.40 37.06 189 143 76 2 17 73 72 CANADA BASIN TSK 7 22 190 76 143 CANADA BASIN 194 TSK 72 72 72 72 76 76 6 8 143 34.33 CANADA BASIN 190 TSK 143 32.45 8 10 CANADA BASIN 2 TSK CB214 CB215 CB216 CB217 CB218 CB219 CB220 29.89 27.27 76 76 8 16 192 143 CANADA BASIN 192 TSK 72 56.99 72 56.38 72 55.99 8 22 143 CANADA BASIN TSK 24.05 21.65 190 143 76 9 4 CANADA BASIN TSK 76 76 2 9 10 190 143 CANADA BASIN 2 9 2 10 TSK 200 72 55.71 72 55.68 72 55.71 143 143 9 23 19.28 CANADA BASIN 200 **TSK** 19.18 76 CANADA BASIN TSK 72 55.71 72 55.68 72 55.69 72 55.69 76 76 2 10 200 CB221 CB222 CB223 10 19.21 143 CANADA BASIN 2 10 19 2 10 22 2 11 4 200 143 19.31 CANADA BASIN TSK 200 143 143 19.30 76 CANADA BASIN TSK 200 76 19.42 CB224 CB225 CANADA BASIN TSK 19.31 19.32 200 76 11 10 55.68 143 72 72 72 72 72 72 CANADA BASIN 2 11 2 11 2 12 TSK 200 143 16 55.67 CB226 CANADA BASIN TSK 190 55.64 143 19.04 76 CB227 CB228 CB229 CB230 CB231 CB232 CB233 CB234 CB235 CB236 TSK CANADA BASIN 55.55 55.21 76 192 18.39 143 CANADA BASIN 12 190 11 143 76 CANADA BASIN TSK 192 143 76 16.83 22222222 16 55.10 CANADA BASIN TSK 16.12 76 200 72 72 54.91 143 TSK CANADA BAS!N 200 76 54.92 143 16.14 CANADA BASIN TSK 200 54.92 16.18 76 143 72 CANADA BASIN TSK 143 76 13 16 200 16.05 72 72 54.91 CANADA BASIN TSK 76 76 13 XXX 23 200 16.13 54.90 143 CANADA BASIN TSK 200 14 5 72 72 72 54.89 143 16.26 CANADA BASIN TSK 10 200 143 16.06 54.90 CANADA BASIN CB237

CANADA BASIN CB238 72 54.89 143 16.14 76 2 14 16 200 X X X TS CANADA BASIN CB239 72 54.90 143 16.14 76 2 14 22 200 X X X TS	K
CANADA BASIN CB240 72 54.93 143 16.02 76 2 16 4 200 X X X TS CANADA BASIN CB241 72 54.87 143 16.26 76 2 16 11 200 X X X TS	
CANADA BASIN CB242 72 54.91 143 16.23 76 2 16 16 200 X X X TS CANADA BASIN CB243 72 54.91 143 16.16 76 2 16 22 200 X X X TS	
CANADA BASIN CB244 72 54.89 143 16.02 76 2 17 5 200 X X X TS	K
CANADA BASIN CB246 72 54.90 143 16.16 76 2 17 16 200 X X X TS	K
CANADA BASIN CB247 72 54.89 143 16.23 76 2 18 5 200 X X X TS CANADA BASIN CB248 72 54.89 143 16.13 76 2 18 10 200 X X X TS	K
CANADA BASIN CB249 72 54.89 143 16.21 76 2 18 16 200 X X X TS CANADA BASIN CB250 72 54.89 143 16.16 76 2 18 22 200 X X X TS	
CANADA BASIN CB251 72 54.89 143 16.08 76 2 19 5 200 X X X TSI CANADA BASIN CB252 72 54.90 143 16.24 76 2 19 10 200 X X X TSI	
CANADA BASIN CB253 72 54.89 143 16.27 76 2 19 16 200 X X X TSI CANADA BASIN CB254 72 54.90 143 16.06 76 2 19 23 200 X X X TSI	K
CANADA BASIN CB255 72 54.89 143 16.44 76 2 20 4 200 X X X TSI	K
CANADA BASIN CB256 72 54.88 143 16.13 76 2 20 10 200 X X X TSI CANADA BASIN CB257 72 54.90 143 16.01 76 2 20 16 200 X X X TSI	K
CANADA BASIN CB258 72 54.90 143 16.15 76 2 20 22 200 X X X TSI CANADA BASIN CB259 72 54.89 143 16.13 76 2 21 5 200 X X X TSI	K
CANADA BASIN CB260 72 54.91 143 16.18 76 2 21 10 200 X X X TSI CANADA BASIN CB261 72 54.90 143 16.31 76 2 21 16 200 X X X TSI	
CANADA BASIN CB262 72 54.89 143 16.15 76 2 21 23 200 X X X TSI CANADA BASIN CB263 72 54.89 143 15.96 76 2 22 5 200 X X X TSI	
CANADA BASIN CB264 72 54.90 143 16.20 76 2 22 12 200 X X X TS	K
CANADA BASIN CB266 72 54.89 143 16.09 76 2 22 22 200 X X X TSI	K
CANADA BASIN CB267 72 54.89 143 16.23 76 2 23 5 200 X X X TSI CANADA BASIN CB268 72 54.88 143 16.21 76 2 23 10 200 X X X TSI	K
CANADA BASIN CB269 72 54.88 143 16.18 76 2 23 16 200 X X X TSI CANADA BASIN CB270 72 54.90 143 16.24 76 2 23 22 200 X X X TSI CANADA BASIN CB271 72 54.89 143 16.19 76 2 24 5 200 X X X TSI	
CANADA BASIN CB271 72 54.89 143 16.19 76 2 24 5 200 X X X TSI CANADA BASIN CB272 72 54.88 143 16.23 76 2 24 10 200 X X X TSI	
CANADA BASIN CB273 72 54.90 143 16.24 76 2 24 16 200 X X X TSI CANADA BASIN CB274 72 54.89 143 16.28 76 2 24 22 200 X X X TSI	K
CANADA BASIN CB275 72 54.89 143 16.29 76 2 25 4 200 X X X TSI	K
CANADA BASIN CB277 72 54.91 143 16.35 76 2 25 19 200 X X X TSI	K
CANADA BASIN CB278 72 54.88 143 16.23 76 2 26 8 200 X X X TSI CANADA BASIN CB279 72 54.91 143 16.13 76 2 26 19 200 X X X TSI	K
CANADA BASIN CB280 72 56.49 143 16.38 76 2 27 7 200 X X X TSI CANADA BASIN CB281 72 56.75 143 14.11 76 2 27 20 200 X X X TSI	K
CANADA BASIN CB282 72 56.39 143 13.41 76 2 28 8 200 X X X TSI CANADA BASIN CB283 72 56.41 143 13.72 76 2 28 19 200 X X X TSI	
CANADA BASIN CB284 72 56.99 143 14.85 76 2 29 8 200 X X X TSI CANADA BASIN CB285 72 59.36 143 20.14 76 3 1 7 200 X X X TSI	Κ
CANADA BASIN CB286 72 59.35 143 21.00 76 3 1 16 200 X X X TSI CANADA BASIN CB287 72 59.07 143 21.06 76 3 2 7 200 X X X TSI	K
CANADA BASIN CB288 72 58.19 143 19.41 76 3 2 20 200 X X X TS	K
CANADA BASIN CB290 72 58.03 143 21.92 76 3 3 21 200 X X X TS	K
CANADA BASIN CB291 72 58.57 143 28.28 76 3 4 4 189 X X X TSI CANADA BASIN CB292 72 58.44 143 32.85 76 3 4 10 190 X X X TSI	K
CANADA BASIN CB293 72 57.78 143 41.12 76 3 4 21 189 X X X TSI CANADA BASIN CB294 72 56.79 143 42.84 76 3 5 7 200 X X X TSI	K
CANADA BASIN CB295 72 56.37 143 41.05 76 3 5 20 200 X X X TS	
CANADA BASIN CB297 72 56.14 143 38.88 76 3 6 20 200 X X X TSI CANADA BASIN CB298 72 56.60 143 42.66 76 3 7 7 190 X X X TSI	K
CANADA BASIN CB299 72 57.87 143 51.57 76 3 7 19 188 X X X TS	Κ
CANADA BASIN CB300 72 58.30 144 1.72 76 3 8 7 200 X X X TSI CANADA BASIN CB301 72 58.49 144 10.96 76 3 8 20 190 X X X TSI	K
CANADA BASIN CB302 72 58.81 144 18.21 76 3 9 7 191 X X X TSI CANADA BASIN CB303 72 58.88 144 20.90 76 3 9 16 173 X X X TSI	K
CANADA BASIN CB304 72 58.85 144 22.22 76 3 9 23 180 X X X TSI CANADA BASIN CB305 72 58.78 144 24.06 76 3 10 4 191 X X X TSI CANADA BASIN CB306 72 58.71 144 25.87 76 3 10 10 190 X X X TSI	K
CANADA BASIN CB306 72 58.71 144 25.87 76 3 10 10 190 X X X TSF CANADA BASIN CB307 72 58.57 144 27.84 76 3 10 19 190 X X X TSF	
CANADA BASIN CB308 72 58.31 144 28.96 76 3 11 8 190 X X X TSK CANADA BASIN CB309 72 58.30 144 28.62 76 3 11 20 190 X X X TSK	
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CANADA BASIN CB312 72 58.07 144 29.32 76 3 13 8 190 X X X TSK	(
CANADA BASIN CB314 72 57.01 144 27.52 76 3 14 4 190 X X X TSK	(
CANADA BASIN CB315 72 56.19 144 25.88 76 3 14 10 189 X X X TSK CANADA BASIN CB316 72 55.26 144 24.36 76 3 14 16 190 X X X TSK	
CANADA BASIN CB317 72 53.98 144 22.61 76 3 14 23 190 X X X TSK CANADA BASIN CB318 72 52.68 144 21.27 76 3 15 5 190 X X X TSK	(
CANADA BASIN CB319 72 51.54 144 19.05 76 3 15 10 189 X X X TSK CANADA BASIN CB320 72 50.03 144 17.07 76 3 15 16 188 X X X TSK	

	400	190 X X X	(TSK
BASSINNINNINNINNINNINNINNINNINNINNINNINNIN	CB334 72 43.36 144 9.94 76 3 20 8 CB335 72 43.34 144 9.90 76 3 20 20 CB336 72 43.28 144 10.18 76 3 21 8 CB337 72 43.34 144 9.97 76 3 21 20 CB338 72 43.34 144 9.97 76 3 22 27 CB339 72 43.34 144 9.97 76 3 22 27 CB339 72 43.31 144 9.97 76 3 22 20 CB340 72 43.31 144 9.97 76 3 22 20 CB341 72 43.33 144 9.82 76 3 24 7 CB341 72 43.33 144 9.82 76 3 24 7 CB341 72 43.33 144 9.82 76 3 24 7 CB343 72 43.33 144 9.82 76 3 25 19 CB346 72 43.37 144 9.45 76 3 25 19 CB347 72 43.36 144 9.47 76 3 26 8 CB347 72 43.36 144 9.47 76 3 26 20 CB348 72 43.38 144 9.50 76 3 27 7 CB349 72 43.38 144 9.50 76 3 27 7 CB349 72 43.38 144 9.50 76 3 27 7 CB349 72 43.38 144 9.50 76 3 28 9 CB350 72 43.38 144 9.53 76 3 29 9 CB355 72 43.37 144 9.53 76 3 29 19 CB356 72 43.37 144 9.53 76 3 29 19 CB356 72 43.37 144 9.53 76 3 29 19 CB356 72 43.37 144 9.53 76 3 29 19 CB356 72 43.37 144 9.53 76 3 29 19 CB356 72 43.37 144 9.53 76 3 29 19 CB356 72 43.36 144 9.63 76 3 30 19 CB356 72 43.36 144 9.61 76 3 30 19 CB356 72 43.36 144 9.63 76 4 1 1 8 CB356 72 43.36 144 9.57 76 3 3 29 19 CB357 72 43.36 144 9.57 76 3 30 19 CB358 72 43.37 144 9.58 76 4 1 1 8 CB358 72 43.37 144 9.53 76 4 2 7 CB357 72 43.36 144 9.63 76 4 1 1 8 CB358 72 43.37 144 9.55 76 4 2 7 CB357 72 43.36 144 9.50 76 4 2 7 CB357 72 43.36 144 9.50 76 4 1 1 9 CB357 72 43.36 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 2 7 CB357 72 43.36 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.55 76 4 2 7 CB357 72 43.36 144 9.50 76 4 1 1 9 CB357 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB357 72 43.36 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB358 72 43.37 144 9.50 76 4 1 1 9 CB359 72 43.38 144 17.80 76 4 1 1 9 CB350 72 43.37 144 9.50 76 4 1 1 9 CB357 72 43.39 144 144 52.59 76 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	200	ĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸĸ

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CANADA 3ASIN CANADA 3ASIN CANADA BASIN	CB404 BF 1 BF 2 BF 3 BF 5 BF 5 BF 10 BF 11 BF 11 BF 13	72 43.50 77 16.04 77 16.37 77 17.20 77 18.27 77 18.10 77 16.10 77 15.14 77 13.51 77 11.77 77 9.79 77 7.16 77 5.05 77 3.08	144 53.02 143 30.12 143 34.58 143 37.25 143 36.12 143 29.59 143 29.59 143 23.52 143 23.36 143 22.52 143 25.72 143 25.72 143 20.15	76 75 75 75 75 75 75 75 75 75 75 75 75	4 22 8 8 9 9 19 8 7 9 19 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	200 200 200 190 200 191 192 190 200 184 200 190	X	××××××××××××××××××××××××××××××××××××××	X TSK X TSK
CANADA BASIN	BF 14 BF 15 BF 16 BF 17 BF 19 BF 20 BF 22 BF 23 BF 25 BF 27 BF 28	77 1.16 76 59.67 76 56.38 76 55.49 76 56.44 76 59.33 76 59.62 76 59.32 76 58.41 76 56.66 76 55.81 76 54.79 76 55.32	143 13.35 143 6.12 143 4.61 143 4.34 143 6.45 143 17.11 143 23.53 143 23.53 143 42.34 143 47.33 143 47.33 143 48.10 143 44.67 143 39.45	75 75 75 75 75 75 75 75 75 75 75 75 75 7	5 14 20 5 15 21 5 1 15 16 21 5 1 16 17 7 18 18 19 20 21 5 1 20 21 21 21 21 21 21 21 21 21 21 21 21	190 190 190 190 190 190 190 200 200 200 190	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X TSK X TSK
CANADA BASIN	BF 29 BF 30 BF 32 BF 32 BF 35 BF 35 BF 36 BF 39 BF 40 BF 42 BF 43	76 56.82 76 56.28 76 56.47 76 57.83 76 58.13 76 57.90 76 57.90 76 58.35 76 58.97 77 0.60 77 1.81	143 35.45 143 27.94 143 23.01 143 17.78 143 16.39 143 11.97 143 13.38 143 16.16 143 30.65 143 36.02 143 48.21 143 56.53 144 11.46 144 19.62	75 75 75 75 75 75 75 75 75 75 75 75 75 7	21 50 51 5 6 3 5 1 5 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	190 200 200 190 200 200 190 200 191 190 190 186 180	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X TSK X TSK
CANADA BASIN	BF 44 45 BF 46 47 48 BF 51 BF 52 BF 55 55 57 BF 55 57 BF 58	77 6.23 77 6.24 77 6.20 77 6.32 77 7.08 77 7.44 77 7.27 77 6.98 77 5.87	144 30.62 144 37.18 144 44.40 144 47.01 144 55.01 144 59.70 145 7.69 145 17.78 145 21.01 145 28.58 145 33.84 145 44.72 145 59.38	75 75 75 75 75 75 75 75 75 75 75 75 75 7	29 21 5 21 5 21 5 21 5 21 5 21 5 21 5 21	180 192 190 190 190 190 190 190 190 190	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X TSK X TSK
CANADA BASIN	BF 59 BF 60 BF 61 BF 62 BF 66 BF 66 BF 70 BF 71 BF 73	77 5.15 77 3.67 77 2.79 77 1.40 76 55.83 76 53.91 76 53.27 76 52.31 76 51.66 76 50.97 76 49.26 76 47.94	146 3.85 146 11.66 146 15.17 146 19.86 146 22.70 146 22.10 146 21.22 146 19.07 146 11.26 146 10.30 146 10.53 146 888 146 14.65	75 75 75 75 75 75 75 75 75 75 75 75 75 7	5 21 5 20 5 5 5 1 5 21 5 21 5 21 5 21 5	190 200 193 190 200 200 200 200 200 190 190 200	X	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF 74 BF 75 BF 76 BF 77 BF 78 BF 79 BF 80 BF 81 BF 82	76 47.78 76 48.04 76 48.30 76 48.78 76 48.71 76 48.52 76 49.44 76 51.93	146 15.37 146 15.92 146 14.89 146 21.05 146 23.98 146 25.55 146 29.09 146 42.10 146 50.74	75 75 75 75 75 75 75 75 75 75	6 14 5 6 14 21 6 15 5 6 15 21 6 16 20 6 17 5 6 18 5	200 190 200 200 200 190 190 191 190	X X X X X X X	X X X X X X X X X	X TSK X TSK X TSK X TSK X TSK X TSK X TSK X TSK X TSK

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CANADA BASIN	BF160	75 39.59 75 38.33 75 37.57 75 36.15	142 57.05 142 55.41 142 53.43 142 48.90 142 35.40	75 75	7 27 5 7 27 21	190	X X X X X	X X X X	X TSK

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CANADA BASIN	BF1687 BF1688 BF177178 BF17778 BF17778 BF17778 BF17	75 24.89 75 22.57 75 19.42 75 17.57 75 17.57 75 19.44 77 75 5.99 77 75 5.99 77 75 75 75 75 75 75 75 75 75 75 75 75 7	142 14.54 141 59.91 141 59.95 141 37.85 141 29.77 141 15.15 141 8.42 140 56.96 140 50.20 140 25.61 140 57.25 139 54.59 139 23.94 139 56.51 138 34.86 138 39.75 138 34.86 138 39.75 137 56.25 137 56.25 137 16.51 137 56.97 137 16.51 137 17.03 137 16.51 137 17.03 137 17.03 137 17.03 137 187 137 19.60 137 19.60 137 19.60 137 19.80 137 19.80 138 8.94	75555555555555555555555555555555555555	515151515152525151525151525151115111151111222333445667788999900011111112223334456677889999000111111122233344566778899990001111111222233344566677889999000111111122223334456667788999900011111111222233344566677889999000011111112222333445666778899990000111111112222333445666778899990000111111112222333445666778889888888888888888888888888888888	190 190 190 190 190 190 190 190 190 190	***************************************	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF192 BF193 BF194 BF195 BF196 BF197 BF198 BF199	74 53.94 74 53.08 74 51.86 74 51.86 74 50.08 74 50.22 74 50.27 74 54.41	138 34.86 138 25.38 138 19.06 138 17.60 138 1.63 137 56.51 137 56.25 137 39.72	75 75 75 75 75 75 75 75	8 11 11 8 11 21 8 12 5 8 12 6 8 12 21 8 13 5 8 13 5 8 13 21	100 190 190 100 160 157 114 190	X X X X X X X	XXXXXXXXXX	X TSK X TSK X TSK X TSK X TSK X TSK X TSK X TSK X TSK
CANADA BASIN	BF201 BF202 BF203 BF204 BF205 BF206 BF207 BF208 BF209	74 50.37 74 50.09 74 49.54 74 49.66 74 49.80 74 49.17 74 48.49 74 45.91	137 16.78 137 11.22 137 7.03 137 6.56 137 5.97 137 5.94 137 1.93 137 1.28	75 75 75 75 75 75 75 75 75	8 14 16 8 14 21 8 15 6 8 15 8 8 15 5 8 16 6 8 16 21 8 17 5	190 190 * 190 190 * 190 200	X X X X X X X X	XXXXXXX	X TSK X TSK X TSK X TSK X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF211 BF212 BF213 BF214 BF215 BF216 BF217 BF218	74 42.73 74 41.72 74 40.29 74 39.50 74 39.39 74 40.24 74 40.92 74 41.72	137 9.60 137 11.87 137 12.96 137 16.51 137 25.78 137 33.20 137 51.29 137 58.09	75 75 75 75 75 75 75 75	8 17 21 8 18 5 8 18 20 8 19 5 8 19 21 8 20 5 8 20 21 8 21 5	190 190 190 200 200 200 200 190	X X X X X X	XXXXXXX	X TSK X TSK X TSK X TSK X TSK X TSK X TSK X TSK X TSK
CANADA BASIN	BF220 BF221 BF222 BF223 BF224 BF225 BF226 BF227 BF228	74 41.76 74 39.30 74 37.79 74 35.05 74 35.67 74 35.67 74 35.92 74 34.08 74 33.67	138 10.86 138 13.25 138 10.45 138 11.32 138 12.50 138 4.85 137 52.84 137 52.88	75 75 75 75 75 75 75 75 75	8 22 6 8 22 21 8 23 21 8 24 21 8 24 21 8 25 21 8 25 21 8 26 5	200 190 200 190 190 180 190	X X X X X X X X X X X X	XXXXXXXXX	X TSK X TSK X TSK X TSK X TSK X TSK X TSK X TSK
CANADA BASIN	BF229 BF230 BF231 BF232 BF233 BF235 BF236 BF237 BF238	74 32.30 74 28.19 74 24.17 74 24.33 74 22.53 74 20.03	137 51.75 137 44.74 137 27.63 137 15.61 136 56.31 136 49.12 136 42.02 136 37.56 136 36.28 136 33.03	75 75 75 75 75 75 75 75 75 75	8 26 21 8 27 5 8 27 20 8 28 6 8 28 21 8 29 5 8 29 23 8 30 5 8 30 21 8 31 5	190 180 140 180 190 150 190 200 200	X X X X X X X X X X	XXXXXX	X TSK X TSK
CANADA BASIN	BF239 BF240 BF241 BF242 BF243 BF244 BF245 BF246 BF247 BF248	74 10.01 74 7.81	136 32.00 136 23.54 136 13.20 136 11.77 136 9.78 136 9.63 136 12.39 136 13.53 136 13.53 136 12.16	75 75 75 75 75 75 75 75 75 75 75	8 31 21 9 1 17 9 1 21 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	200 200 100 200 190 100 200 200 100 200	X X X X X X X X X X	XXXXXXXXXX	X TSK X TSK
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CANADA BASIN NA CANADA BASIN N	BF 332 73 18.93 135 27.10 76 10 14 21 BF 333 73 18.93 135 27.10 76 10 15 5 21 BF 334 73 21.62 135 45.54 75 10 15 21 BF 334 73 21.62 135 45.54 75 10 16 20 BF 336 73 24.47 136 1.19 75 10 16 20 BF 37 73 24.78 136 1.99 75 10 17 25 BF 339 73 21.36 136 1.91 75 10 18 2 2 BF 339 73 21.36 136 1.01 75 10 18 7 BF 340 73 20.31 3136 11.70 75 10 18 7 BF 340 73 20.31 3136 11.70 75 10 18 7 BF 340 73 20.22 138 23.86 75 10 19 2 3 BF 341 73 20.13 136 11.70 75 10 20 2 1 BF 341 73 20.22 136 30.72 75 10 20 21 BF 345 73 21.44 136 32.31 75 10 20 2 1 BF 345 73 21.44 136 32.31 75 10 21 2 5 BF 345 73 21.44 136 32.31 75 10 22 2 1 BF 345 73 21.22 136 35.67 75 10 22 2 1 BF 345 73 21.52 136 34.44 75 10 21 2 1 BF 347 73 22.85 136 41.38 75 10 23 2 3 BF 343 73 20.26 138 34.29 75 10 22 2 1 BF 347 73 22.51 316 41.38 75 10 23 2 3 BF 355 73 25.25 136 46.05 75 10 24 2 1 BF 355 73 22.75 136 46.05 75 10 24 2 1 BF 355 73 22.27 136 46.05 75 10 24 2 1 BF 355 73 24.05 138 23.75 10 27 5 10 25 21 BF 355 73 25.02 136 27.62 75 10 29 5 BF 355 73 20.70 136 12.53 75 10 27 5 10 BF 355 73 20.70 136 12.53 75 10 29 5 BF 355 73 20.70 136 12.53 75 10 29 5 BF 355 73 25.02 136 27.62 75 10 29 2 1 BF 356 73 13.81 136 18.88 75 10 29 5 BF 356 73 13.81 136 18.88 75 10 29 5 BF 356 73 25.75 10 36 28.27 75 10 29 2 1 BF 356 72 57.56 136 22.57 75 10 30 25 2 BF 356 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 356 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 10 30 25 BF 357 72 57.56 136 22.57 75 11 2 2 1 BF 357 72 57 15 10 25 2 1 BF 357 72 57 15 10 25 2 1	200

CANADA BASIN BF4422 CANADA BASIN BF4422 CANADA BASIN BF4422 CANADA BASIN BF4423 CANADA BASIN BF4424 CANADA BASIN BF4425 CANADA BASIN BF4426 CANADA BASIN BF4426 CANADA BASIN BF4433 BF4433 BF4433 BF4434 BF4433 BF4433 BF4434 BF4436 CANADA BASIN BF4436 CANADA BASIN BF4436 CANADA BASIN BF4444 BF4444 BF4444 BF4444 BF4444 BF4444 BF4444 BF4455 CANADA BASIN BF4455 CANADA BASIN BF4466 CANADA BASIN BF4476 CANADA BASIN BF4477 BF4481 BF
73 5.39 136 38.34 73 5.66 136 38.83 73 5.92 136 39.53 73 6.56 136 40.25 73 8.07 136 44.13 73 8.67 136 54.13 73 8.67 136 55.89 73 8.67 136 55.89 73 8.15 136 58.01 73 8.67 136 55.89 73 8.15 136 58.01 73 8.15 136 58.01 73 8.15 136 47.11 72 57.05 136 47.11 72 57.10 136 47.11 72 57.10 136 47.11 72 57.10 136 47.11 72 57.27 136 46.64 72 58.04 136 47.72 72 57.27 136 46.64 72 58.04 136 41.50 72 57.26 136 41.50 72 56.63 136 40.65 72 56.63 136 55.38 72 57.26 136 40.65 72 56.63 136 55.38 72 57.26 136 55.38 72 57.26 136 55.38 72 56.63 137 14.90 72 57.33 137 14.90 72 55.31 137 23.09 72 55.33 136 58.38 72 55.55 137 15.58 72 55.55 137 15.58 72 55.33 136 58.38 72 55.55 137 14.90 72 55.33 137 22.07 73 1.59 137 14.90 74 255.55 137 15.58 75 255.51 137 23.09 77 255.31 137 20.57 72 55.31 137 20.57 73 10.50 137 20.55 73 10.75 137 51.76 73 10.75 137
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CANADA BASIN	899012234456678990112341567899011234456678990122344566789901233445667899012334456678990123345667899012334566789901233456678990123345667899012334566789901233456678990123345667899012334566789901233456678990123345678990123345667899012334567899012345678990012345678990000000000000	72 53.15 72 53.16 72 53.16 72 53.16 72 53.18 72 55.55 72 55.55 72 57.75 72 57.75 72 58.16 72 56.96 72 56.96 72 55.66 72 55.66 72 55.66 72 55.55 72 57.25 72	137 37.64 137 28.20 137 19.84 137 11.33 137 11.25 137 11.25 137 11.25 137 12.83 137 12.83 137 12.83 137 12.83 137 11.52 137 11.52 137 11.52 137 11.59 137 11.59 137 12.83 137 11.59 137 11.59 137 12.83 137 11.59 137 11.59 137 12.83 137 12.83 137 12.83 137 12.83 137 12.83 137 12.83 137 12.93 137 12.93 137 12.93 137 12.93 137 10.11 137 10.17 137 10.19 137 10.11 137 10.11 137 10.11 137 10.22 137 10.32 137 12.22 137 12.22 137 27.73 137 48.93 137 47.07 137 48.93 137 47.07 137 48.93 137 47.07 137 39.76 137 39.76	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	21717171111111111111111111111111111111	90000000000000000000000000000000000000	***************************************	**************************************	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF565 BF566 BF567 BF568 BF569 BF570	72 47.16 72 47.16 72 47.18 72 47.16 72 47.16 72 47.15 72 47.16 72 47.16 72 47.16 72 47.16 72 47.16 72 47.16 72 47.16 72 47.16	136 57.89 136 57.81 136 58.29 136 57.99 136 57.97 136 57.80 136 57.90	76 76 76 76 76 76 76	2 13 5 2 13 21 2 14 5 2 14 21 2 15 5 2 15 21	200 200 200 200 200 200 200	X X X X	X X X	X TSK X TSK X TSK X TSK X TSK X TSK X TSK

CANADA BASIN	BF581	72 47.15	136 57.96	108 76	2 21 5 2 21 21	200 200	X X	X X	X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF582 BF583 BF584 BF585	72 47.16 72 47.17 72 47.16 72 47.16	136 57.79 136 57.92 136 57.85 136 57.95	76 76 76 76 76	2 21 21 2 22 5 2 22 21 2 23 5 2 23 21	200 200 200 200	X X X	X X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF586 BF587 BF588 BF589	72 47.15 72 47.15 72 47.16 72 47.15	136 57.89 136 57.93 136 57.90 136 58.03	76 76 76	2 24 5 2 24 21 2 25 5	200 200 200	X X X X	XXXX	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF590 BF591 BF592 BF593	72 47.14 72 47.16 72 47.15 72 47.39	136 57.70 136 58.05 136 57.90 136 58.44	76 76 76 76	2 25 21 2 26 5 2 26 21 2 27 5	200 200 200 190	X X X	XXXX	X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN	BF594 BF595 BF596	72 47.95 72 47.81 72 47.81 72 47.81	136 56.24 136 56.14 136 55.94 136 56.25	76 76 76 76	2 27 21 2 28 5 2 28 21 2 29 5	200 200 200 200	X X X X	X X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF597 BF598 BF599 BF600	72 48.83 72 49.74 72 50.14	136 59.28 137 1.79 137 2.39	76 76 76 76	2 29 21 3 1 5 3 1 21 3 2 5	200 190 200 200	X X X	X X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF601 BF602 BF603 BF604	72 50.17 72 49.47 72 49.04 72 48.93	137 2.77 137 0.59 137 0.41 137 1.45	76 76 76	3 2 21 3 3 5 3 3 21	190 200 200	X X X	XXX	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF605 BF606 BF607 BF608	72 49.70 72 49.75 72 49.04 72 47.93	137 7.52 137 16.32 137 18.83 137 15.67	76 76 76 76	3 4 6 3 4 21 3 5 5 3 5 21	190 190 200 190	X X X	XXXX	X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN	BF609 BF610 BF611 BF612	72 47.55 72 47.48 72 47.47 72 47.53	137 13.66 137 12.51 137 13.00 137 14.71	76 76 76 76	3 6 5 3 6 21 3 7 5 3 7 21	200 200 200 190	X X X X	X X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF613 BF614 BF615	72 47.61 72 48.00 72 48.15 72 48.10	137 18.13 137 22.51 137 23.60 137 23.29	76 76 76 76	3 8 5 3 8 21 3 9 5 3 9 21	200 190 200 200	X X X	X X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF616 BF617 BF618 BF619	72 48.11 72 48.09 72 48.10	137 23.25 137 23.36 137 23.31	76 76 76 76	3 10 5 3 10 21 3 11 5 3 11 21	200 200 200 200	X X X	XXXX	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF620 BF621 BF622 BF623	72 48.10 72 48.10 72 48.10 72 48.09	137 23.35 137 23.23 137 23.13	76 76 76	3 12 5 3 12 21 3 13 5	190 200 190 200	X X X X	X X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF624 BF625 BF626 BF627	72 48.07 72 47.99 72 47.07 72 46.28	137 23.17 137 22.51 137 19.33 137 16.61	76 76 76 76	3 14 5 3 14 20 3 15 5	190 190 190	X X X X	XXXX	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF628 BF629 BF630 BF631	72 45.19 72 45.06 72 45.06 72 44.26	137 13.67 137 13.03 137 13.27 137 11.90	76 76 76 76	3 15 21 3 16 5 3 16 21 3 17 7	200 200 200 190	X X X	X X X	X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN	BF632 BF633 BF634 BF635	72 43.39 72 43.39 72 43.39 72 43.39	137 9.79 137 9.98 137 9.89 137 9.88	76 76 76 76	3 17 21 3 18 5 3 18 21 3 19 5	200 200 200 200	X X X	X X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF636 BF637 BF638	72 43.39 72 43.38 72 43.38	137 9.90 137 10.11 137 9.89	76 76 76 76	3 19 21 3 20 5 3 20 21	200 200 200 200	X X X	X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF639 BF640 BF641 BF642	72 43.39 72 43.38 72 43.05 72 43.04	137 9.90 137 9.37 137 9.43	76 76 76	3 21 20 3 22 5 3 22 21	200 200 200 200	X X X X X X	XXXX	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF643 BF644 BF645 BF646	72 43.03 72 43.02 72 42.99 72 43.01	137 9.48 137 9.45 137 9.33 137 9.38	76 76 76 76	3 23 21 3 24 5 3 24 21	200 200 200	X	XXXX	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF647 BF648 BF649 BF650	72 43.03 72 43.03 72 43.03 72 43.03	137 9.48 137 9.26 137 9.32 137 9.26	76 76 76 76	3 25 5 3 25 21 3 26 5 3 26 21	200 200 200 200	X X X	X X X	X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN	BF651 BF652 BF653 BF654	72 43.05 72 43.01 72 43.05 72 43.03	137 9.30 137 9.27 137 9.31 137 9.34	76 76 76 76	3 27 5 3 27 21 3 28 5 3 28 21	200 200 200 200	X X X X X X	XXXXXXXXXXX	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF655 BF656 BF657	72 43.05 72 43.05 72 43.03	137 9.37 137 9.42 137 9.23 137 9.23	76 76 76 76	3 29 5 3 29 21 3 30, 5 3 30 21	200 200 200 200	X X X	X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN CANADA BASIN CANADA BASIN	BF658 BF659 BF660 BF661	72 43.04 72 43.06 72 43.03	137 9.31 137 9.33 137 9.15 137 9.27	76 76 76 76	3 31 5 3 31 21 4 1 5 4 1 21	200 200 200 200	X X X	X X X	X TSK X TSK X TSK X TSK
CANADA BASIN CANADA BASIN	BF662 BF663		137 9.25	76	4 2 5	200	Х	X	X TSK

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CANADA BASIN NA CANADA BASIN N	455678990123445677789012334567889012334567890123456789011234567890112322222222233323456788901234444466666666666666666666666666666666	72 72 72 72 72 72 72 72 72 72 72 72 72 7	147 31.18 147 30.37 147 34.07 147 36.60 147 41.52 147 40.13 147 26.18 147 23.33 147 27.69 148 17.51 148 22.74 148 23.11 148 23.11 148 23.11 148 21.53 148 17.91 148 17.91 148 17.91 148 17.91 148 17.91 148 17.91 148 7.20 148 7.37	766666666666666666666666666666666666665555	2151515151515171515 5151517051517051515151687775767775585858585858585555555555	22222222222222222222222222222222222222	***************************************	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CANADA BASIN	SB 47	76 17.34	149 23.51	75	5 29 20	197	X X X TSK X X X TSK
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12. INACCESSIBLE DATA SETS

12.1 OCEANOGRAPHIC DATA COLLETED USING SUBMARINES

As early as 1931, when the <u>Nautilus</u> attempted to enter the Arctic Ocean, submarines have been used to make oceanographic observations in Arctic waters. In the 1940's, new sonar techniques allowed submarines to operate safely under the polar ice. LaFond (1960) and Lyon (1961, 1963, 1984) summarized the early U.S. Navy operations in the Arctic Ocean. At least two submarines (USS <u>Skate</u> 1958/59/62; USS <u>Seadragon</u> 1960/62) are known to have passed through the area of this data inventory and no doubt there were many more. Birch et al. (1984) identified at least five data sets in the Canada Basin region, obtained using submarines. Unfortunately most of the oceanographic data collected using these vessels is confidential.

This section has been included mainly to alert the reader to the existence of these data, even though they are not available at present.

12.2 SOVIET OCEANOGRAPHIC STUDIES

Soviet oceanographic data collection within the Arctic Ocean falls into two main categories. First are the drifting ice islands which were first used in 1937. Since 1954 operations have been continuous in that at least one ice island has been occupied at all times. The only Soviet ice island known to have entered the bounds of this inventory was NP-22 in 1978. Although it is unclear whether or not oceanographic data were collected at this time, the trajectory is shown on the 1978 map. Data were collected from this ice island, just north of this inventory's boundaries (data set 73-0034, refer to Birch et al. 1984).

The second major method of Soviet arctic data collection is through the use of aircraft. In 1948, the Soviet-All-Union Arctic Institute (VAI) began using aircraft to land on the ice and to make observations. These expeditions, lasting about six weeks each spring, and often for a shorter period during the fall, are termed the Sever (North)-series. Timofeyev (1960) lists many of the early Sever-series station locations. Only one (spring 1956, 56-0012) falls within this inventory's boundaries, however there may be other more recent stations.

12.3 OIL COMPANY DATA

Oceanographic data collected by some of the oil companies has been difficult to obtain. They are often reluctant to release information until after the confidentiality period has expired. Mr. Spedding at ESSO has been very helpful in supplying information, and Canmar delivers a yearly archival tape containing their data. The Gulf data were more difficult to obtain. Some information was gleaned from reports submitted to COGLA, however in general it was not possible to properly rate or inventory these data. Mr. B.D. Wright at Gulf Canada, Calgary, may be able to provide more information.

Appendix 1

Comments on methods and data quality, by data set.

DATA SET 14-0001 Canadian Arctic Expedition

The Canadian Arctic Expedition (Stefansson 1921) was equipped to measure currents and water level. The December 1914 to January 1915 water-level data are presented by Dawson (1920), data set 14-0002, but no details on current or other data during the April to August 1914 period have been found.

DATA SET 14-0002 Canadian Arctic Expedition

Water levels were monitored using a tide scale at Cape Kellett. From December 26 to January 14 and again from January 17 to 21 and 27 to 30, readings were taken every four hours. During January 15 to 16 and January 22 to 26 readings were every 15 minutes. The location was "in bay on south side of the cape, 8 h. 19 m West" (Dawson, 1920). For this inventory, a location of 71°58'N, 125°W has been used.

Water-level data were similarly obtained 20 miles to the north of Cape Kellett, every 15 minutes during January 22 to 26.

DATA SET 16-0002 Canadian Arctic Expedition

There was mention of current and hydrographic data being collected during this year of the Canadian Arctic Expedition (Dawson, 1920), however no details have been found.

DATA SET 33-0004 Canadian Hydrographic Service

These are the first recorded water-level data from Tuktoyaktuk. No details were available, however Mr. Fred Stephenson of Tides and Currents, Institute of Ocean Sciences may have more information regarding these data.

DATA SET 35-0001 St. Roche

T/S data, as well as collections of biological material, were collected by personnel aboard the R.C.M.P. vessel <u>St. Roche</u> while on patrol duty (Tully, 1952). Instruments were supplied by the Pacific Biological Station at Nanaimo. The data and samples were deposited with the Pacific Biological Station in 1938.

DATA SET 37-0001 St. Roche

See 35-0001.

DATA SET 40-0010 St. Roche

Apparently Larsen of the RCMP, using the vessel <u>St. Roche</u>, made measurements of currents and water level during the summer of 1940. The reference (Larsen, 1945) had not yet been obtained to verify this.

DATA SET 50-0001 Burton Island

Details of the measurement methods and accuracies were not given in the report. The entries in Table 1 were made assuming standard practice for the time. 146 bathythermographs and 37 hours of Ekman current observations (not included in the report) were also taken.

DATA SET 51-0002 Cancolim II

Estimates of precision and accuracy were not given in the report; entries in Table 1 were made assuming standard practice for the time.

DATA SET 51-0004 Canadian Hydrographic Service

Water-level data were obtained during the summers of 1951 (51-0004), 1952 (52-0004) and 1954 (54-0001) at Paulatuk on Darnley Bay, Amundsen Guif. For further details, contact Mr. Fred Stephenson of Tides and Currents, Institute of Ocean Sciences.

DATA SET 52-0001 Cancolim II

Salinity, temperature and oxygen measurements are reported as having oceanographic practice taken using standard at the time: wer**e** measured temperatures using reversing thermometers and bathythermographs, while salinity and oxygen samples were drawn from bottles and titrated on board. Problems encountered with the thiosulphate standard rendered the oxygen data suspect; the requirements of a rapid survey reduced the accuracy of the sailnity titrations. The reduced accuracies were responsible for the '1' rating. Numerical estimates of precision and accuracy were not given; probable values are listed in Table 1.

DATA SET 52-0004 Canadian Hydrographic Service

The exact dates for stations 6485 and 6525 are unclear. Contact Mr. Fred Stephenson of Tides and Currents, Institute of Ocean Sciences for further details.

DATA SET 53-0004 Canadian Hydrographic Service

The record is only 3 days long, and no information as to the exact location or measurement method is given. Therefore it has not been plotted in Section 9 or listed in Section 10.

DATA SET 54-0001 <u>Labrador</u>

See 51-0004.

DATA SET 55-0016 Burton Island

The data are on file with MEDS and the National Oceanographic Data Centre (NODC), however no documentation regarding methods or data quality has been found.

DATA SET 56-0004 Canadian Hydrographic Service

Water-level data were collected at Tuktoyaktuk from June 1956 to September 1957. Further details regarding these data may be obtained from Mr. Fred Stephenson of Tides and Currents, Institute of Ocean Sciences.

DATA SET 56-0012 Soviet Aircraft Landings

This station was part of the spring '56 Soviet Sever (North)-Series, a yearly spring and (often) fall operation. No details are available. There may have been more stations not listed in Timofeyev (1960).

DATA SET 59-0004 Canadian Hydrographic Service

These water-level data for Tuktoyaktuk span the September 1959 to December 1960 period. For further details, contact Mr. Fred Stephenson of Tides and Currents, Institute of Ocean Sciences. Immediately following these data, a permanent water-level installation was established (61-0002) by which the water level is continuously monitored.

DATA SET 59-0014 U.S. Aircraft Landings

Winter temperature/salinity data were required for use in sea-level studies. Between February and May 1958, 22 stations were occupied off Point Barrow (not within this study area). The pattern was expanded during the winter of 1959 (59-0014) and an additional 22 stations were occupied. Apparently only one was within these study boundaries.

Landings on the ice were made using light planes. Nansen bottles and reversing thermometers were used to collect data. Beal (1968a) does not discuss the data or results. Station locations were estimated to the nearest 1 minute latitude and 5 minutes longitude from Figure 7 of Beal (1968a). It was arbitrarily assumed that the winter stations were occupied in March. The actual number of stations may be more than shown here; Beal indicated 22 stations in 1959.

DATA SET 62-0001 Salvelinus

Estimates of precision and accuracy shown in Table 1 were assumed from the description of methods in the report.

DATA SET 62-0003 NRC

The data taken with the portable sallnometer were of low precision. A high number of errors were detected in a computer scan (Cornford et al, 1982) and led to the assignment of a 1 rating.

DATA SET 63-0002 NRC

The data taken with the portable salinometers were of low precision (as for set 62-0003). However a low number of errors were found in a computer scan, which allowed the assignment of a 3 rating.

DATA SET 63-0003 Richardson

Mr. Fred Stephenson of Tides and Currents, Institute of Ocean Sciences, should be contacted if further details regarding these water-level data are required. The water-level locations are within the Mackenzie Delta, too far south to show up on any of the plotting maps.

DATA SET 64-0003 Canadian Hydrographic Service

Some doubts as to the quality of this particular record have been expressed by Canadian Hydrographic Service personnel. It was among those rejected for analysis by Henry and Foreman (1977).

DATA SET 66-0011 Inuvik Res. Lab.

Beluga whales, while trapped in the Eskimo Lake, were monitored over the winter of 1966-67. Water temperatures and chloride content were measured using unspecified methods (HIII, 1967). By taste, the surface waters appeared to be fresh.

DATA SET 69-0017 Arctic Biological Station

Apparently temperature data were collected, however a copy of the reference (Sergeant and Hoek, 1974) could not be obtained in time to include the data in this inventory.

DATA SET 70-0001 AIDJEX Pilot Project

The AIDJEX program involved three pilot studies (1970, 1971 and 1972), a lead experiment off Point Barrow in 1974, and the main experiment of 1975-76.

The 1970 pilot study was in cooperation with the Polar Continental Shelf Project and covered the period March 12 - April 5. Its main camp was within a Canadian hydrographic survey camp (Camp 200) located approximately 240 miles north of Tuktoyaktuk. The camp location was initially 72.5°N, 135°W and ended at 72°N, 144°W.

Temperature and salinity data were collected using Nansen bottles and reversing thermometers. Synoptic hydrographic casts were planned to 500 m at three stations spaced in a triangle with sides of approximately 10, 20 and 30 km. One 3-station and nine 2-station synoptic casts were obtained.

Erratic salinity values of uncertain origin were found during analysis of these data (Coachman and Newton, 1972). The most likely cause was thought to be poor temperature control of the samples in the tents on the ice. Salinity values suspected of being erroneous have been deleted from the DATA SET by its originators.

Hydrographic Stations

		<u>C-200</u>	Leo	Aquarius
March	24	1330 1630	1430	1330
March	26	1030 1330	1030	
• •		1630	1630	
March	27	1030	1030	
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March	29	1030	1030	
		1330	1330	
	•	1630	1630	
March	30	1030	1030	
		1335	-	d (

Braincon meters (models 316 Histogram, 381 Histogram and 573 digital) were suspended beneath the Ice at depths of 10, 40, 150 and 500m. The 381 meters experienced clock-drive mechanism failures in water colder than 0°C and the digital meters failed to record direction.

Measurements of boundary-layer currents were obtained using downward-facing masts mounted with three mechanical current meters, developed by J.D. Smith. Masts were deployed at 5 locations down to 17.7 m beneath the ice. The current meter dates and locations we have used are March 12 and the start/stop locations of the ice floe. Dr. H. Melling of IOS has expressed doubts concerning the quality of the data, thus the "1" rating.

DATA SET 70-0003 Richardson

These data are believed to be of low precision, but have not been fully investigated as to data quality.

DATA SET 70-0004 Canadian Hydrographic Service .

There are some inconsistencies in the reported coordinates (Henry and Foreman 1977).

DATA SET 70-0005 OSI for Imperial Oil Ltd.

Geodyne Model 102 current meters were moored under the ice for periods of approximately two months. The Geodyne 102 is a rotor and vane type meter. Data were recorded internally on photographic film every 15 minutes. Threshold speed was given as 0.05 knots or 2.5 cm/sec.

Direction of flow was determined using an internal magnetic compass. Direction response tended to be siuggish due to the weak horizontal component of the magnetic field at these latitudes. Many of the speeds were less than the instrument threshold. No actual estimates of the accuracy were provided in the OSI (1970) report. Station coordinates were not provided either. For the purposes of this inventory, they were estimated (to ± 2 minutes) from a figure in the OSI (1970) report. Actual deployment dates were not stated either, except that they were "installed during the period February 23 to April 7 1970, and recovered during the period April 30 to June 1 1970."

DATA SET 70-0071 MEDS

When the oil companies began exploring for hydrocarbons in the Beaufort Sea, the government (MEDS) supplied Waverider buoys for deployment near the drilling vessels. The data were then forwarded to MEDS in Ottawa for analysis. The oil company responsible for the 1970 data was probably either ESSO or Gulf; the data and analysis results are on file at MDS (98-1M). The MEDS summary indicates at 0-50% success rate and a spectral analysis.

The location, as in file 98-1M, of 69°N 139°W, plots on land. Apparently the coordinates have been rounded off to the nearest degree. That same year, OSI deployed some current meters for ESSO (70-0005) near Herschel Island at 69°30'N and 138°40'W. Based on this, we have plotted the 1970 wave data at 69°30'N and 138°40'W.

DATA SET 71-0002 Canadian Hydrographic Service

For further information about these water-level data contact Mr. Fred Stephenson, Tides & Currents at Institute of Ocean Sciences.

DATA SET 71-0003 2nd AIDJEX Pilot Study

The second AIDJEX pilot study was conducted from Camp 200, operated by the Polar Continental Shelf Project. The interior flow field was studied by personnel from the University of Washington (L.K. Coachman, J.D. Smith and J.L. Newton), and K. Hunkins from Lamont investigated the boundary-layer currents near the water-ice interface.

The University of Washington measurements covered the period from March 16 to April 2, 1971 and consisted of hydrographic casts, current meter measurements, ice-motion measurements and weather observations.

Nasen casts were made at the main and two secondary camps 4 times per day. Reversing thermometers were used and water samples were sent to Seattle for salinity determination. Five current-meter records were obtained between 10 and 400 m depths using Braincon 316 and Aanderaa RCM 4 current meters. The meters were suspended beneath the ice.

The Lamont program involved Savonius-rotor current meters mounted on inverted masts at fixed depths. The fixed meters were at 5, 7, 11 and 19 m on one mast and at 32 and 75 m on the other. Directional reference was through surface orientation. Current profiles were also made by lowering a meter by hand. Temperature profiles were made using a thermistor. Camp location was 74°05'N, 131°23'W on March 18; 73°44'N, 131°08'W on April 7.

DATA SET 71-0018A,B Freshwater Institute

The appropriate reference report (Brunskill et al, 1973) could not be obtained in sufficient time for these data to be inventoried. The senior author of that report, Dr. G.J. Brunskill, is with DFO-Winnipeg, phone (204)949-5000.

DATA SET 72-0003 Slaney

This was a pollution testing program, part of a larger environmental survey of the Mackenzie Delta area (see also 72-0006 and 72-0007). Nineteen different sites were sampled during March through September, however water samples were obtained at four sites only; 4, 7, 8 and 9. Conductives were measured using a Conductivity Bridge Model RC 16B2. However, the tabulated data (Appendix 6.2-2 of Slaney 1973a) contain no temperature data, so the salinity cannot be computed. This is the reason for the '0' rating. The station locations were estimated from a figure in the report.

DATA SET 72-0006 Slaney

This was part of an environmental field program in the Taglu-Richards Island, Mackenzie Delta area, by F.F. Slaney for Imperial OII Ltd. (See also 72-0003 and 72-0007). Temperature-salinity data were collected along Harry and East channels of the Mackenzie River Delta, using a Sproule Electrolytic conductivity cell (Model EBB/10) and an A.R.A. remote thermistor.

DATA SET 72-0007 Slaney

This study was designed to assess the impact of artificial island construction upon east Mackenzie Bay. The survey period extended from early June to mid-September 1972, and is reported in Slaney (1973a).

Currents

Twenty-nine current measurements were taken at 18 stations between August 15 - 19. An SK70 Helix meter, made by Hilger and Watts of London, was used to obtain current data near surface and bottom. Direction could only be estimated for surface values, by judging the vane orientation. These data are not plotted.

Temperature-Salinity

Temperature-salinity data were obtained on-site using a TDC meter (Martek Instruments Inc., Newport Beach, California). Nearshore estuarine data were collected by a separate crew using an A.R.A. thermistor and a Sproule Electrolytic Conductivity Cell (Model EBB/10).

No estimates are given for data quality (Sianey, 1973a). The rating of '3' indicates the data are probably up to the standards considered normal using these types of instruments.

Data from the nearshore estuarine data (Stations 1-12, August 13-20) are reported in Appendix 3 of Slaney (1973a), without locations, however, and have not been plotted in this inventory.

DATA SET 72-0012 Freshwater Institute See 71-0018A.B.

DATA SET 72-0118

Mann (1974) presents temperature-salinity data from shallow, Yukon coastal stations, collected during a fisheries survey. No details on methods or accuracy are provided. Similar data were also collected in 1973 (73-0023).

DATA SET 73-0001 Slaney

Temperatures were measured using a remote thermistor, while conductivities were obtained using a Sproule Electrolytic Conductivity cell (model EBB/10). Current speeds were determined using a SK70 Helix meter while the current directions were estimated using a Chesapeake Bay institute drag. No estimates of accuracy were provided (Slaney, 1974a).

DATA SET 73-0004 Canadian Hydrographic Service

At one site north of Pullen Island, a water-level gauge was deployed by Jim Galloway of UBC. The data are on file at Tides and Currents, IOS. The station 13, offshore site, is part of the Beaufort Sea Project mooring program; see also 74-0005 and 75-0007.

DATA SET 73-0016 Slaney

This was a pre-dredging survey of three potential gravel borrow areas in Tuktoyaktuk Harbour. Surface temperature-salinity data were obtained using unspecified (Slaney 1973c) methods. A nominal location (69°25'N, 133°W) has been used for this inventory.

DATA SET 73-0019 Slaney

Conductivity values are reported without accompanying temperatures (Slaney, 1974c). Since conductivity is temperature dependent, a '0' rating has been assigned and these stations have not been plotted.

Channel flow measurements were also made and a water level gauge was maintained near the TAGLU G-33 site (estimated location $69^{\circ}22'N$, $134^{\circ}54'W$).

DATA SET 73-0023 Aquatic Environments Ltd.

Temperature-salinity data were collected along the Yukon coast as part of a fisheries survey connected to an overall environmental impact assessment program. The summer 1973 survey extended from late June until late September, with sampling every 2 to 3 weeks. The data are presented in Figure 4 and Appendix 5 of Mann (1974). No details regarding methods or accuracles were provided. The BS station is 1/4 mile north of the Stokes Point Lagoon.

Similar data were obtained in Clarence Lagoon in 1972 (72-0118).

DATA SET 73-0034 Soviet Ice Station NP-22

This ice island was first occupied in September 1973 and by 1976 had moved into the Beaufort Sea Gyre. MEDS has data (MEDS #90NP77022) covering the July 1977 to March 1978 period when the island was Just north of 75° latitude (and not yet within the bounds of this data inventory). Although no data have been found within this study area, the ice island did pass through the very northwestern-most portion, and data may exist in the Soviet archives.

DATA SET 73-0125 Arctic Biological Station

Temperature-salinity data were collected using a YSI-33, while doing fisheries research in Kugmallit Bay. Station locations were extracted from Figure 1 of Galbraith and Fraser (1974).

DATA SET 73-0126 Dept. of Environment

The appropriate report (Jones and Kendel, 1973) was not obtained in time for these data to be included in this inventory.

DATA SET 74-0001 Slaney

Current-profile data were obtained using a Savonius rotor HydroProducts meter. These instruments have a magnetic compass for direction determination. A YSI SCT model 33 was used to collect temperature-salinity data. No estimates of accuracy were provided (Slaney 1974a).

DATA SET 74-0002 Institute of Ocean Sciences

The current-profile locations have not been plotted but are in the area defined by the temperature-salinity stations.

DATA SET 74-0003 Slaney

The temperature-salinity data were obtained using a YSI SCT meter, accurate to \pm 0.5°C and \pm 0.7 $^{\circ}$ /oo. Spot current measurements were also made of surface and bottom current, using a HydroProducts model 465A. Surface readings were visually averaged over a one-minute period.

Some water-level readings were obtained at the Langley Base camp using a staff, however no details are provided in Slaney (1975).

DATA SET 74-0005 Institute of Ocean Sciences

The directional distributions of the bottom currents are exceptionally narrow; some doubts have been expressed as to their validity.

DATA SET 74-0007B Arctic Biological Station

Station 20, the latitude and longitude for which were taken from Hunter and Leach (1983), plots on land.

DATA SET 74-0009 Slaney

This is a follow-up of the 1972 (72-0003) and 1973 (73-0019) surveys. The data are primarily temperature measurements (thermistor) of water samples collected within the delta. Current speeds were also measured within some of the channels. No station coordinates were provided (Slaney, 1974d) so these stations have not been plotted in this inventory.

DATA SET 74-0019 Slaney

No exact dates for station occupations were given in the report. The latitude/longitude of the drill sites have been used as nominal profiting current meter locations. No calibration or precision information was provided.

DATA SET 74-0020 Freshwater institute

No exact station locations were given, nor were water depths or some sampling depths. Some salinities reports only as >1. Some conductivities were reported without temperatures, resulting in the '1' rating.

DATA SET 74-0021 Dept. of Environment

No exact dates for station occupations were given in the report. No calibration or precision information was given for the instrument used. The precision in Table 1 has been assumed from manufacturer's specifications.

DATA SET 74-0022 Aquatic Environments Ltd.

The data appear to be from near-surface samples. No estimates of accuracy are provided.

DATA SET 74-0027A Dickins, Arctic Laboratories, NORCOR

This was a study of the interaction of crude oil with Arctic sea ice, as part of the Beaufort Sea Project. Mr. D.F. Dickins was resident engineer. In August 1974 a camp was established at Balaena Bay and oil was injected under the ice during several tests between October 1974 and May 1975.

Water temperature and salinity were monitored between August 1974 and July 1975 using Van Dorn water samplers. Salinities were determined using an American Optical Refractometer and a Yellow Springs Instrument Co. model 33 meter (accuracy about \pm 1.0 $^{\circ}$ /oo). Temperatures were monitored using Yellow Springs Instruments thermistors (\pm .05°C).

Exact dates and locations of measurements were not supplied in Norcor (1975), therefore nominal monthly stations at 70°02'N, 124°54'W have been used in this inventory.

DATA SET 74-0027B CCIW/Beaufort Sea Project

Beaufort Sea Project G2b was conducted from the field camp established by Norcor (74-0027A). The study addressed the problem of light intensity under set ice containing oil (Adams, 1974). A Hydrolab multiparameter unit used a thermistor to measure temperature and a four electrode conductivity sensor. It appears that vertical profiles, and possibly near-bottom time-series, of temperature-salinity were obtained, although this is not clear from the report. For the purposes of this report a normal location (70°02'N, 124°54'W) and date (September 10) have been plotted and listed.

DATA SET 74-0126 MEDS

This relatively short Waverider record was analysed at MEDS. Spectral analyses were performed and the summary indicates a 50-80% success rate.

DATA SET 75-0001 Institute of Ocean Sciences

The authors of the data report state that temperatures measured by the Hydrolabs were frequently below the freezing point of seawater and that results from that instrument should be regarded as qualitative rather than quantitative. The comments above do not apply to the remainder of this data set. The current profile location has not been plotted or listed in this inventory.

DATA SET 75-0004 Slaney

The current data are from profiles using a surface-readout HydroProducts 465A, between July 10 and August 20, 1975.

DATA SET 75-0005 AIDJEX Main Experiment

A. CTD Data/Bauer et al, (1980a, b, c, and d)

At four ice camps, 1391 CTD casts were made during the main AIDJEX experiment from April 1975 to April 1976. Casts were made at least once a day from 0 to 750 m at all camps and weekly casts to 3000 m were made at the main camp. Severe ice activity caused abandonment of the main camp (Big Bear) during October 1975. Between casts, time series were recorded at fixed depths in the pycnocline; these data are still being processed (Manley, personal communication).

Plessy 9040 STD's were used, except at the Carlbou camp, where the STD sensor was replaced by a CTD 9040 sensor in January 1976. The data were corrected for the different response times of the temperature and conductivity sensors, by varying a lag correction until one value gave nearly congruent traces for descending and ascending casts.

A salinity drift occurred when the STD was stopped for bottle samples. This was corrected in an unspecified manner. Static calibration was provided using bottle samples and reversing thermometers. At the satellite camps, generally 2 bottles were taken with each cast. At the main camp, a rosette sampler allowed up to 10 bottles per station; the average being 4. Salinities were determined at the main camp using a Guildline Autosal salinometer, except over the summer of 1975 when a backup Hytech salinometer was used. Differences between bottle data and CTD were typically ± 0.001 to ± 0.047 /oo of and ± 0.024 to ± 0.044 °C.

The data were simultaneously recorded on analog chart recorders. In 67% of the profiles, the digital data logger failed to function properly and the analog traces were manually digitized to provide temperature and conductivity data. Accuracy using this method was typically ± 0.025 to $\pm 0.050^{\circ}$ /oo and ± 0.037 to $\pm 0.059^{\circ}$ C. All station headers are listed in Section 11.5.

B. Current Profiles/Manley et al. (1980)

Profiles of relative current speed and direction were recorded about twice daily between surface and 200 m at each of the 4 camps. In total, 2084 current profiles were made and 1174 were useable. Current time series were also recorded: 9 at camp Caribou, 2 at Blue Fox, 17 at Snowbird and 28 at camp Big Bear. The instrument used was a Tsurumi-Seiki Co. Ltd. (TSK) unit with a Savonius rotor, directional vane and pressure sensor. Direction was referenced to an internal magnetic compass; internal friction on the directional system was minimized. This was considered important because of the weak horizontal component of the earth's magnetic field. Analog charts were manually digitized to provide as much detail as possible. Absolute velocities were determined by vector addition of the ice velocity based on the precise satellite navigation.

The Savonius rotors were sluggish, probably due to bearing drag. In order to calibrate them, they were compared with the more accurate readings of the 30 m fixed-mast velocity sensors. All the current profile station headers are listed in Section 11.6.

C. Fixed Current Meters

Fixed-mast current meters were suspended beneath the Ice at each camp at depths of 2 and 30 m below the base of the Ice. The Instruments were HydroProducts with Savonius rotors. The direction sensors were referenced to the instrument case, which was referenced to the camp azimuth and therefore, true north. The data was recorded at 30-second intervals on the data logger as well as on a multipoint recorder. No data reports are yet available for this data, but hourly-averaged values can be obtained from NODC.

DATA SET 75-0007 Institute of Ocean Sciences

The directional distributions of the bottom currents are exceptionally narrow; some doubts have been expressed as to their validity.

DATA SET 75-0011 Slaney for Imperial Oil Ltd.

Imperial Oil Ltd., while planning for a gas plant at Taglu D-43, Richards Island-MacKenzie Delta, commissioned F.F. Slaney and Co. Ltd. to do a hydrologic survey. Results of the study are reported in Slaney (1976b) and include temperature/salinity, current, water-level, bathymetric, ice and water chemistry data. Sampling covered four periods: late winter, break-up, summer and freeze-up. Where possible, station locations matched those of a 1972-73 survey (72-0007 and 73-0019).

The stilling well, containing the Stevens Type F Model 68 water-level recorder, was approximately three quarters mile east-northeast of the D-43 well site, at the junction of Harry and Seal channels (estimated position of 69°22.2'N, 134°54.8'W).

Channel flow measurements were taken during winter (April), open water and freeze-up, mainly in Harry and Kuluarpak channels (often same locations as in 1973). Measurements at several depths and several cross-channel locations, allowed accurate estimates to be made of the flow rates.

Water temperatures were measured using a hand-held Lambrecht thermometer, and T/S using a YSI SCT meter, generally at 0.2 m depth.

DATA SET 75-0024 Freshwater Institute

No exact station locations were provided nor were water depths or some sampling depths. Some salinities were reported only as >1 and some conductivities without temperatures.

DATA SET 75-0025 Dept. of Environment

No calibration or precision information was given for the instrument used. The precision in Table 1 has been assumed from manufacturer's specifications. A rating of 2 has therefore been given to this data set.

DATA SET 75-0026 NORCOR

Measurements were made at control sites and at sites artificially contaminated by crude oil. Only the control stations have been included here.

DATA SET 75-0028 Inland Waters Division

Measurements were made at control sites and at sites artificially contaminated by crude oil. Only the control stations have been included here.

DATA SET 75-0042 Aquatic Environments Ltd.

Fisheries investigations were conducted along the proposed Arctic Gas Cross Delta pipeline route in the Mackenzie Delta (DeGraaf & Machniak, 1977). Physical and chemical parameters were also measured, and benthos examined.

Water levels were monitored once daily at Camps | and | l using staffs. Also measured daily at the camps were water temperature (maximum-minimum thermometer), O₂ and transparency. Conductivity was measured at 3 to 7 day intervals using a Beckman RB4-25° solubridge. Temperature and conductivity were also measured at various other locations within the Delta.

The Camp I and II locations were estimated from Figures 2 and 3 of DeGraff & Machniak (1977). The other T/S sampling locations have not been listed or plotted in this inventory, but are tabulated in the same reference.

DATA SET 75-0043 Beak Consultants Ltd.

T/S data were obtained near a Canmar barge in Tuktoyaktuk Harbour on July 20, 1975. The appropriate report (Beak, 1975) could not be obtained in time for these data to be included in the inventory.

DATA SET 75-0047 Arctic Biological Station

Apparently temperature data were collected by Mr. D.E. Sergeant of the Arctic Biological Station. It doesn't appear that a report was ever published.

DATA SET 75-0050 Slaney

As part of the white whale study for Imperial Oil Ltd., Slaney personnel made observations of temperature and water level. The report (Slaney, 1976) could not be obtained to verify these data. This survey appears to coincide with data set no. 75-0004, also by Slaney and the possibility exists that they are the same data sets.

DATA SET 75-0146 MEDS

The MEDS summary indicates a spectral analysis with 50-80% success.

DATA SET 76-0001 Canmar

When Canadian Marine Drilling Ltd. (Canmar) began drilling in the Beaufort Sea in 1976, federal environmental regulations specified that water column, current, and wave measurement be made. The raw data are contained in a series of unpublished technical reports (Canmar 1977a, 1977b, 1979, and 1980). The 1975-1980 temperature-salinity (T/S) data were re-processed by Lemon and Kowalski (1982), and the 1976-1979 current-meter data by Fissel (1981). Analyses of the Waverlder data are on file at the Marine Environmental Data Services (MEDS) in Ottawa.

In 1976 T/S profiles were made at two sites:

- 1. Kopanoar M-13; 21 profiles taken between August 14 and October 9.
- 2. Tingmiark K-91; 35 profiles taken between August 8 and October 12.

A bathythermograph (Wallace and Tiernan) was used to obtain temperature profiles accurate to $\pm 0.1^{\circ}\text{C}$. Water samples were analysed for salinity and turbidity but no information on methods or accuracies has been found.

Current measurements were obtained from drillships at both the Kopanoar and Tingmiark sites. The near-surface and mid-depth meters (3, 8 m depth) were oriented using fixed attachments to the ship, but may have been affected by wave motion and flow distortion by the ship.

The near-bottom current meters used magnetic compasses for direction and could be in error by \pm 30 degrees or more (Fissel, 1981).

Waverider data were obtained from August 20 to October 4 near the Tingmlark site. The data are believed to be unreliable as the MEDS analysis summary indicates a 0% analysis success.

Hourly Sea State

As well as the T/S profile, moored current-meter, and Waverlder data, hourly observations of wave period, significant wave height, wave direction, sea temperature, roll, pitch and heave were logged on the bridge of most drillships (The <u>Explorer III</u> had no roll and pitch sensors so these were not logged at the sites this vessel was drilling at). These data are not included in the listings of this inventory, but are in the series of Canmar Technical Reports titled "Environmental observations in the Beaufort Sea-1976-Sea State", and are also on file at Dome's Data Centre.

DATA SET 76-0002 Canadian Hydrographic Service

Some concern exists regarding the consistency of the reported coordinates (Henry and Foreman, 1977).

DATA SET 76-0003 Slaney for imperial Oil Ltd.

A blo-physical study was conducted at the Arnak L-30 artificial island, as well as at the Tuft Point borrow (as in borrow the sand for our island) site (Slaney 1977c). F.F. Slaney and Co. Ltd. made measurements at Arnak L-30 using the M.V. <u>Articus</u> and <u>J.S. Keen</u> from July 28 to September 6, 1976. Data from Tuft Point were obtained during July 17-20 and September 1-3, 1976, using the M.V. <u>Articus</u>.

Temperature-salinity data were obtained using a Yellow Springs Instrument Co. meter and a Lambrecht standard mercury centigrade thermometer. Current profile data were also obtained using HydroProducts 951 and 952 meters. Nominal locations of 69°49'N and 133°45'W for Arnak, and 69°42'N and 132°35'W for Tuft Point, were used to plot the current profile stations.

DATA SET 76-0004 Slaney

No information regarding the current-profile data were available and they have not been inventoried.

DATA SET 76-0036 Slaney for Gulf Oil Canada Ltd.

This was part of a pre-development survey of the Hans Bay (Eskimo Lake) region by F.F. Sianey for Gulf Oil Canada. Gulf planned to develop natural gas reserves in this area. Most of the data are from lakes and streams near the southwest end of the Eskimo Lakes. Temperature—sailnity data were collected in Hans Bay, Hans Creek, Zed creek and in and around Parsons Lake, using a Yellow Springs Instrument Company conductivity

bridge supplemented by a hand-held mercury thermometer. Sub-surface water samples were obtained using a van Dorn bottle. Temperatures were stated to be accurate to ± 0.1 °C, however no accuracy value was given for conductivity.

Station locations are not specified but are plotted in Map 1.1 of Slaney (1977d), and the data are tabulated in Table 2.3 of Chambers and Bradley (1976). Since the Hans Bay data are of most interest to oceanographers, only these stations were inventoried using a nominal location of 68°52'N, 133°26'W.

DATA SET 76-0123 MEDS

MEDS analyses of these data include spectral analyses, with 50-80% success rate. These locations are within ESSO acreage and the data may have been collected by them.

DATA SET 77-0001 Slaney

Temperature-salinity profiles were obtained using a Hydrolab TC-2 meter. The TC-2 temperatures were calibrated against a Lambrecht mercury thermometer. Apparently no checks were made of the accuracy of the TC-2 salinities. Sampling was conducted from a float-equipped helicopter. If water conditions would not permit landing, then surface data only were collected while hovering.

DATA SET 77-0002 Aquatic Environments Ltd.

Water samples were collected from "below the surface" at 12 stations (Aquatic Environments Ltd., 1977). Later lab analyses included specific conductivity (Beckman RB4-250 Solubridge), salinity (chloride titration), and temperature (pocket thermometer). No estimates of precision or accuracy were given in the report.

DATA SET 77-0004 Canmar

1977 was Dome's second year of drilling in the Beaufort Sea. As In 1976 (76-0001) T/S profiles, current and wave data were collected.

Temperature-Salinity Data

T/S data were obtained at the following sites:

	Site	VESSEI	Dates
1.	Kaglulik A-75	Explorer	July 10-28
2.	Kopanoar M-13	Explorer II	July 26-Oct 1
3.	Natsek E-56	Explorer	Oct 6-18
4.	Nektoralik K-59	Explorer III	July 30-0ct 16
5.	Nerlerk J-88	Explorer	Oct 11-18
6.	Tingmiark		Sept 20-24
7.	Ukalerk C-50	Explorer	July 21-Sep 29, Oct 22.

At Kaglulik and Nektoralik a bathythermograph was used to measure temperatures, and bottles were used to obtain salinity samples. At the other sites a Hydrolabs TC-2 meter provided both temperature and salinity measurements. The accuracies of the data obtained are not known (Lemon & Kowalski, 1982).

Current Data

Moored current-meter data were obtained at four sites (Kopanoar, Nektoralik, Ukalerk, and Kaglulik). The near-surface data may be contaminated by wave motion and vessel induced flow, while near-bottom meters probably have relatively large uncertainties in direction (Fissel, 1981). Fissel also found that the mid-depth meter and Ukalerk may have been improperly aligned.

Wave Data

Waverider data were obtained at two sites, and are on file at MEDS (files 192, 193). The summary indicates a success rate of 80-100%.

Hourly Sea State

As well as the temperature-salinity profile, moored current-meter, and Waverider data, hourly observation of wave period, significant wave height, wave direction, sea temperature, roll, pitch, and heave were logged on the bridge of most driliships (The Explorer had no roll and pitch sensors to these were not logged at the sites this vessel was drilling at). These data are not included in the listings of this inventory, but are in the series of Canmar Technical Reports titled "Environmental observations in the Beaufort Sea-1977-Sea State", and are also on file at Dome's Data Centre.

DATA SET 77-0005 Canadian Hydrographic Service See 76-0002.

DATA SET 77-0009A Envirocon Ltd. for Imperial Oil Ltd.

Stations locations were not specified (Envirocor, 1977) but have been estimated from Figure 3.1 in that report. The current data were obtained using a HydroProducts 960-S profiling current meter (Savonius rotor type).

DATA SET 77-0009B ESSO

Wave data collected at the isserk shoal had only a 0-50% success, based on the MEDS analyses.

DATA SET 77-0010 Seakem

Water and sediment samples from Tingmiark and Ukalerk were obtained for trace metal and ion analysis. Conductivities were also measured using a bridge, but since no accompanying temperature data were provided (Thomas, 1977) it is not possible to convert these to salinity.

DATA SET 77-0020 DFO

During a fishery investigation in Mackenzie Bay, T/S data were also apparently collected. Details of such data were not available at the time of this inventory.

DATA SET 77-0123 MEDS/Gulf

Waverider data were collected near two of the Gulf drill sites. The MEDS analysis summary indicates an 80-100% success rate.

DATA SET 78-0001 Canmar

As in 1976 (76-0001) and 1977 (77-0004), Canmar collected oceanographic data while drilling in the Beaufort Sea. The profile data are discussed by Lemon and Kowalski (1982) and the current meter data by Fissel (1981).

Dates

Temperature-Salinity Data

T/S data were obtained at the following sites: Vessel

1.	Kaglulik A-75	Explorer III	July 13-Aug 7
2.	Kopanoar M-13	+	July 29-Oct 9
з.	Natsek E-56		July 15-Sept 26
4.	Nerlerk M-98	•	Aug 9-11
5.	Tarsiut A-25		Aug 20-Sept 6
6.	Ukalerk 2C-50		July 18-Oct 10

Lemon and Kowalski (1982) reprocessed these data but were unable to obtain a copy of the appropriate Canmar technical report. Therefore the methods used and quality of these data are uncertain.

Current Data

Current-meter data were obtained at the six sites at 12 m depth using HydroProducts (Savonious rotor/vane) meters. The data may be contaminated by wave motion. Fissel (1981) discusses this and other possible errors in the data.

Wave Data

Wave data were obtained at three sites using WaverIder buoys. The data and analyses are in files 196-2M, 193 and 192 at MEDS. One of the records has only 0-50% success rate (192), whereas the other two have 80-100%.

Hourly Sea State

As well as the temperature-salinity profile, moored current-meter, and Waverider data, hourly observation of wave period, significant wave height, wave direction, sea temperature, roll, pitch, and heave were logged on the bridge of most drillships (The Explorer had no roll and pitch sensors to these were not logged at the sites this vessel was drilling at). These data are not included in the listings of this Inventory, but are in the series of Canmar Technical Reports titled "Environmental observations in the Beaufort Sea-1978-Sea State", and are also on file at Done's Data Centre.

DATA SET 78-0019 Seakem for Canmar

CTD data were obtained at the Kaglulik A-75 drill site after a flow of water from the drill hole had occurred. Profiles were made as near to a rising bubble train as possible. It is not stated (Thomas, 1978b) whether the recorded times are local or GMT.

Freshwater Institute, DFO DATA SET 78-0031

Temperature-salinity data were collected just below the surface using a YSI meter or a Beckman RS5-3 portable salinometer. During the fall, salinities were also determined from water samples using a Guildline Autosal Model 8400 salinometer.

Station locations have been estimated, to the nearest minute, from the station location map in Lawrence, Lacho and Davies (1984).

DATA SET 78-0113 MEDS

The location (70°04'N, 132°27'W) is within Dome's acreage, however the station designation 198-issungnak is a Guif site, suggesting that the longitude in MEDS files may be wrong. A Waverider was deployed at 198-issungnak site in 1979 (79-0120), at 70°03'N, 133°59'W. The longitude value of 133°59'W puts the location within Guif acreage, closer to the actual issungnak drill site.

DATA SET 79-0003 Canmar

In their fourth consecutive summer of operation (see also 76-0001, 77-0004 and 78-0001) Canmar obtained T/S profile data at the following sites.

	Site		Dates
1.	Kenalooak		Sept 14-Oct 20
2.	Kopanoar		Oct 10-19
3.	Natsek E-56	100	Aug 15-0ct 7
4.	Nerlerk		July 16-0ct 21
5.	Tarsiut		July 14-Oct 17
6.	Ukalerk		July 12-Aug 8

Temperature-Salinity Data

Three instruments were used; a Hydrolabs TC-2 analogue meter, a Hydrolabs 4021 digital meter, and an Applied Microsystems CTD12. Manufacturer's specifications for precision are:

TC-2: ±0.5°C, ±1.5°/oo 4021: ±0.2°C, ±1.0°/oo CTD12: ±0.02°C, ±0.07°/oo

These data were reprocessed by Lemon and Kowalski (1982).

Current Data

Current data were obtained at 12 m depth near each of the drill sites. The data may be contaminated by wave motion and vessel-induced flows (Fissel, 1981).

Wave Data

Waverider buoys were moored at two sites. The data and analyses are in files 200 and 201 at MEDS, and have an 80-100% and 50-80% success rate respectively.

Hourly Sea State

As well as the temperature-salinity profile, moored current-meter, and Waverider data, hourly observation of wave period, significant wave height, wave direction, sea temperature, roll, pitch, and heave were logged on the bridge of most driliships (The Explorer had no roll and pitch sensors to these were not logged at the sites this vessel was drilling at). These data are not included in the listings of this inventory, but are in the series of Canmar Technical Reports titled "Environmental observations in the Beaufort Sea-1979-Sea State", and are also on file at Dome's Data Centre.

DATA SET 79-0009 Arctic Lab. Ltd.

Two CTD profiles were obtained as part of an in-situ primary productivity study to determine the effects of discharged drilling fluid.

DATA SET 79-0026 DOME/OII Under Ice Study

During the winter of 1979/80 Dome Petroleum undertook to simulate a sub-sea blow-out under first year ice. The test site was approximately 8 km offshore McKinley Bay. Three discharges, each of about 6 m³ of oil, took place: Phase 1 December 13, Phase 2 April 10, and Phase 2a May 2.

Physical oceanographic measurements included temperature, salinity and currents. Various contractors were involved, including Arctic Laboratories, C-Core, Nordco, and DF Dickens Engineering. Phase 3 during May through July 1980 involved monitoring and cleanup.

The first discharge, Phase I-December 1979, has been assigned the identifier 79-0026. Salinity profiles were obtained using a YSI model 33 SCT probe, while thermistor chains provided temperature data. For this inventory, one nominal station has been used. Moored current meters recorded temperature and salinity, however currents were generally below the threshold value of the instruments.

The second discharge, Phase 2 - April 10, 1980, is designated 80-0016A. T/S profiles were obtained using the YSI model 33 SCT meter, and moored current meters monitored the current as well as T/S.

During Phase 2a (May 2 1980; 80-0016B) similar methods were used. Cushing electro-magnetic current meters (model 600) were also used in an attempt to observe flow in the vertical plane. Water-level data were also obtained, April 30 - May 5, apparently using a lead-line.

Follow-up monitoring and clean-up continued during May through July (80-0028). T/S data were collected during this period but details were not evident in Dickins & Buist (1981).

For the purposes of this inventory, nominal test site locations have been used.

DATA SET 79-0037 Freshwater Institute, DFO

Temperature-salinity data were obtained with a Beckman RS5-3 meter, and some water samples underwent salinity determination using a Guildline Autosal 8400.

Station locations were not provided, except as a map presentation (Lawrence, Lacho and Davies, 1984) and they have not been plotted in this inventory.

This survey was one of a number of inter-related studies carried out by DFO (see 79-0039). Temperature data from freshwater lakes have not been included in this inventory.

DATA SET 79-0121 C-CORE

Six hundred and thirty drift cards were released during September 1979 from six sites in the Beaufort Sea. All the cards were recovered to the west, mostly along the north and northwest coasts of Alaska, Yukon and the Northwest Territories (Diemand, Reimer and Barrie, 1982).

DATA SET 80-0002 Canmar

Temperature-Salinity Data

In Canmars fifth consecutive year of operation (see also 76-0001, 77-0004, 78-0001, and 79-0003), T/S profiles were obtained at intervals of one to nine days, from the Canmar drill ships while drilling proceeded during the summer and fall of 1980:

- 1. Kenalooak 2J-94, 16 profiles taken between August 1 and 31,
- 2. Kilannak A-77, 1 profile taken July 2, 1980 and 3 profiles taken in mid-September, 1980.
- 3. Koakoak 0-22, 38 profiles taken between July 14 and October 3, 1980.
- 4. Kopanoar 1-44 and 21-44, 40 profiles taken between July 14 and September 28, 1980.
- 5. Orvilruk 0-3, 25 profiles taken between July 17 and September 7, 1980.
- 6. Tarslut A-25, 8 profiles taken between July 11 and 29, 1980.

The data were collected using Hydrolab CTD probes (no model stated). Salinities were also determined using an Applied Microsystems CTD-12 and the Hydrolab conductivities were calibrated using the CTD-12 salinities. The accuracy of the Hydrolab temperature data is believed to be about ± 0.2 to ± 0.5 °C, whereas the salinity data is probably accurate to ± 0.07 00 when properly calibrated, but only ± 1.0 to ± 1.5 00 when not.

Lemon and Kowalski (1982) reprocessed the 1976-1980 Canmar driliship data, edited and removed obvious errors. Their report includes time series plots of all profiles.

Current Data

Current meters were moored at five of the sites, all at 12 m depth. These data are not reported in Fissel (1981), but are listed in the Canmar Technical Report titled "Environmental observations in the Beaufort Sea - 1980 - Sea Currents". At the Orvilruk site, two different types of meters were used: we have assumed that the HydroProducts was deployed August 1-26 then replaced with the Marsh-McBirney for the September 1-9 period.

As with the 1976-1979 data discussed by Fissel (1981), the 1980 data may be contaminated by wave motion and vessel-induced flows.

Wave Data

Apparently Waverider data were collected at three sites (files 200, 201 and 202 at MEDS). The MEDS summary shows good (80-100%) success rate for all three records

Hourly Sea State

As well as the temperature-salinity profile, moored current-meter, and Waverider data, hourly observation of wave period, significant wave height, wave direction, sea temperature, roll, pitch, and heave were logged on the bridge of most driliships (The Explorer had no roll and pitch sensors to these were not logged at the sites this vessel was drilling at). These data are not included in the listings of this inventory, but are in the series of Canmar Technical Reports titled "Environmental observations in the Beaufort Sea-1980-Sea State", and are also on file at Dome's Data Centre.

DATA SET 80-0003 Arctic Laboratories for Dome Petroleum Ltd.

Water quality measurements (dissolved oxygen, temperature, salinity and water transparency) were monitored at five stations in McKinley Bay during the 1980 dredging operations. The times provided in Thomas (1980) and listed in the inventory, are not specified as to the time zone used. Also station coordinates were not specified; we have estimated them from Figure 1 of Thomas (1980).

DATA SET 80-0016 Dome Petroleum

Salinity values were not reproducible by the original investigators. It was thought that the cause was ice crystallizing in the conductivity ceil. (In the investigator's opinion, the salinity profiles are still useful in a relative sense.) Because the cause of the salinity errors was not definitely found, the possibility of an instrument malfunction affecting the temperature remains. The temperature data have therefore been given a rating of 1. These stations were not plotted.

DATA SET 80-0028 Dome Petroleum

Not enough information could be obtained, regarding methods and data quality, to rate these data.

DATA SET 80-0041 Dobrocky Seatech Ltd.

Temperature-salinity data were obtained in Tuktoyaktuk Harbour and on a line extending 6 km offshore into Kugmallit Bay. Station locations are plotted in Figure 1 of Byers and Kashino (1980) but for this inventory a nominal location of 69°27'N, 133°5'W was used.

DATA SET 80-0110 Freshwater Institute, DFO See 79-0037; stations are not plotted.

DATA SET 81-0002A Arctic Sciences Ltd. for Dome Petroleum Ltd.

Aanderaa current meters were deployed during January 16 at 19 m depth under the ice near the Tarsiut and Uviluk drill sites. The Tarsiut data is unreliable after May 5 when the instrument settled on bottom for six-days. Even after it rose to its designed depth, mud fouling interfered with proper operation.

While a mooring at the Kopanoar site was not recovered, a current profile on January 19 was obtained using an Endeco current meter.

DATA SET 81-0002B Arctic Sciences Ltd. for Dome Petroleum Ltd.

Over a year's worth of near-bottom current data were obtained from near the Tarsiut drill site. The data are generally of good quality. Extended periods of zero measured speed were recorded, although these may merely indicate currents less than the instrument threshold (approximately 2.2 cm/sec).

DATA SET 81-0002C Canmar

While the drillships <u>Explorer</u>! through IV were drilling during the July to October period, current, CTD and wave data were collected. Also at each vessel, weather, ice conditions, and sea state (including sea-surface-temperature) were regularly monitored.

Currents

A summary note (call no. 20.0 IN 90 1981 at Ocean Information Library, IOS — author unknown) states that current meters were "deployed and operated at 12 metre and 25 metre depths at Irkaluk, Issungnak and Koakoak. At Kopanoar, meters were operated at 12 and 23 metre depths. An instrument was also deployed at 12 m for a brief period at Kenalooak and two meters, at 13 m and 18 m operated at Kilannak. Both Kilannak meters, as well as the lower meters at Koakoak and Kopanoar, recorded internally". However the data tape, containing all the '81 Canmar data, contains current—meter data from Kenalooak only. It is not yet clear if current data exist for the other sites although they have been listed and plotted in this inventory.

CTD

CTD data were obtained at the Kenalooak, Kopanoar, Issungnak, Koakoak, and Irkaiuk sites. Multiple casts were generally made, however information was generally available only regarding the first profile. Some of the data is questionable, for example, salinities of 47 /oo were recorded at the Kenalooak site on September 23. The instrument type was not evident from the data tape. Contact Mr. Vanderkooy at Dome (403-231-8010) for further details.

Wave

Wave data were collected near the <u>Explorer III</u> (MEDS file 196-2m), <u>Explorer ?</u> (MEDS file 201), <u>Explorer IV</u> (MEDS file 202) and the Tarslut site (MEDS file 204). Data and analyses results are on file at MEDS.

Data Availability and Quality

The 1981-85 data were archived on 9-track tapes, and sent to COGLA. Dr. H. Melling of IOS also has copies. The data quality is generally unknown. In an analysis of the 1976-79 Canmar data, Fissel (1981) found that little or no editing had been done to the data. Similarly the T/S data from 1976-1980 required editing (Lemon & Kowalski, 1982).

DATA SET 81-0003 Arctic Laboratories Ltd.

Oceanographic sampling was conducted near issungnak during two winters and the summer of 1981-1982. Most stations were profiled with an Applied Microsystems CTD-12 (some stations had bottles only - temperature from reversing thermometers and salinity from salinometer). The CTD-12 data were checked against the salinometer and reversing thermometer values.

The CTD-12 and a thermistor chain were also moored from July 24 to September 23 1981, with good data recovered for the July 24 - August 30 period.

It was not clear from Erickson et al. (1983) exactly where the T/S data were collected. Therefore nominal dates and locations were used in this inventory.

DATA SET 81-0006 Canmar

No information was available regarding these data.

DATA SET 81-0013 Arctic Laboratories Ltd.

Data were collected to determine the impact of dredging operations in Tuktoyaktuk Harbour. T/S profiles were obtained using an Applied Microsystems CTD-12. Quality control was monitored using water bottle salinities. Salinometer derived values agreed to within 0.70/oo of those from the CTD-12 (Erickson & Pett, 1981).

DATA SET 81-0015 Arctic Laboratories Ltd.

Biological-chemical studies were carried out at the Issungnak artificial Island and in McKinley Bay. Ice covered (April - June) and open water (July-September) conditions were monitored. Water sample salinities were also determined using a Guildline 8400 salinometer. The CTD-12 temperature calibration for the May 1981 data was incorrect and the data are good in a relative sense only (Pett, Acreman and Vickers, 1981).

Latitude/longitudes are those obtained for the chemical data inventory (Thomas, Macdonald and Conford, 1982), from figures in the data report of Pett, Acreman and Vickers (1981).

DATA SET 81-0016 Arctic Sciences Ltd. for ESSO Resources

Two different instrument types were used to measure currents. The Endeco 105 is a neutrally buoyant impelier-type meter that was tethered to the mooring with a 5-foot long line. This meter is designed to move with the wave-induced orbital motion so that wave-related currents are not measured. The Aanderaa RCM-4 meters are affected by wave motion, therefore these instruments were used only at the deeper locations. Even at depths of 12 and 16 m there was still evidence of wave contamination in the records (Fissel & Birch, 1982). During extreme wind events the measured currents may be overestimated by as much as 50%.

DATA SET 81-0018 Arctic Laboratories Ltd. for Dome Petroleum

During a biological and chemical study of the Tarslut site, bottom water salinities were measured (Thomas et al. 1982). Water samples were collected less than 1 metre off bottom. The method used to determine salinity was not obvious from the report.

Similar bottom water salinitles were obtained near Herschel Island (Heath & Thomas, 1984). A bench salinometer was used, therefore we suspect that a salinometer was also used for the Tarsiut samples.

DATA SET 81-0029 Dept. of Fisheris and Oceans

During a three-year fishery survey, surface water-temperatures were recorded at each site. See also (82-0111 and 83-0068). The type of thermometer used was not specified (Gillman and Kristofferson, 1984) although it was probably an ordinary hand-held thermometer. Station locations are plotted in Gillman & Kristofferson (1984); for this inventory, nominal locations were used.

During June to September T/S data were also collected in Tuktoyaktuk Harbour. Enquiries to Mr. Larry deMarch at DFO Winnipeg have, as yet, failed to result in any details.

DATA SET 82-0004 10S

Water-level data were obtained in Amundsen Gulf, probably to complement T/S data collected in that area (82-0003) and also as part of a survey of the Prince of Wales Strait area (see NW Passage inventory 82-0004). For further details regarding these water-level data, contact Mr. Fred Stephenson, Tides and Currents, Institute of Ocean Sciences.

DATA SET 82-0093 Arctic Laboratories Ltd. See 81-0003.

DATA SET 82-0094 Arctic Laboratories Ltd.

This was the second year (see also 81-0018) of a study of the impact of marine gravel dredging on the zoobenthos on a shallow ridge near Herschel Island. Bottom water samples were obtained 1 metre off bottom using a water sampler and the salinities were later determined using a Guildline Autosal 8400 salinometer.

DATA SET 82-0095 EPS

Chemical, sediment, and biological data were obtained for a baseline survey of the Yukon coastal region (Allan and MacKenzle-Grieve, 1983). Surface temperatures were measured using a standard centigrade thermometer, while a YSI model 33 meter provided profiles of temperature and conductivity. Station locations were estimated from figures 2 and 3 of the report. Follow-up surveys were conducted in 1983 (83-0047) and 1984 (84-0047).

DATA SET 82-0097A Arctic Laboratories for Dome Petroleum

A biological and chemical survey was made around the Tarsiut N-44 artificial Island, and the south Tarsiut borrow area. A similar study had been made in 1981 (81-0018). Bottom water salinity was determined for samples obtained using a Niskin bottle 1 m off bottom. The method of salinity determination was not specified (Heath and Thomas, 1983).

DATA SET 82-0105 Dept. of Fisherles and Oceans

The required information was not obtained in time to include these data in this inventory.

DATA SET 82-0110 Arctic Laboratories Ltd.

The appropriate reference was not obtained in time for these data to be inventoried.

DATA SET 82-0111 Freshwater Institute

This was the second year of a three-year fishery survey (see also 81-0029 and 83-0068). Nominal locations and dates were used for plotting purposes. Surface temperatures were measured using unspecified methods.

DATA SET 82-0117 Arctic Sciences Ltd. for ESSO

The compass channel of the DOWS current meter at site 1 (Issungnak) falled after five days. From then until recovery, speed, temperature and pressure values (but no direction) are available.

At site 3 (Kadluk) one of the rotors on the DOWS meter fouled after about 5 days. From that point on the speed and direction data are unreliable.

Current profiles were also made at sites 1 and 3 using an Endeco 110 meter. Data from the Waverider buoy deployed 5 km west of the Isserk shoal for the period August 3 to September 25, were sent to MEDS for analysis.

DATA SET 82-0018 Canmar

As usual, current, T/S, and wave data were collected at or near the drill ships. Also at each vessel, weather, ice conditions and sea state (including SST) were monitored.

Current Data

Current meters were deployed near the Orvilruk, Nerlerk, Kenalooak, and Kiggivak drill sites. Details are unavailable but the data may required editing before use (see comments under 81-0002c). Apparently 35 days of current data were also obtained near the Tarsiut site (Myers & Kirby, 1982).

CTD Data

CTD data were obtained from the drill ships at the Orvilruk, Nerlerk, Kenalooak, Irkaluk, Kiggivak and Alverk drill sites. Only the date of the first profile at each site are listed here, however, generally several profiles were obtained at each site. Data quality is not known.

Wave Data

Wave data were collected near the <u>Explorer IV</u>, in McInley Bay, and at Tarslut. The data are on file at MEDS (Nos. 202, 206 and 205 respectively). Myers and Kirby give the station 204 Tarslut location as 69°57'N, 135°05'W for the September period, as opposed to 69°51'N, 136°W on the MEDS file.

Water Pressure

Hydrostatic pressure was also recorded at the bottom of the East calsson at Tarsiut. These data are not included here but are plotted in Myers and Kirby (1982).

DATA SET 82-0119 Arctic Laboratories Ltd.

These data were part of a continuing program, since 1978 (78-0002) to monitor the Tingmiark K-91 drill site for leakage of formation water. Fifteen CTD profiles were made near the drill site. For this inventory a nominal location of $70^{\circ}10.6'N$ and $130^{\circ}58.9'W$ has been assigned to each station.

DATA SET 83-0027 LGL Ltd.

Temperature data were collected during a whale and mammal survey. No further details were availble at the time this inventory was completed.

DATA SET 83-0047 EPS

This was a follow-up survey near Stokes Point in which water quality and biology were compared to data from 1982 (82-0095). The same stations were sampled as in 1982 and again a YSI-33 meter was used. Station locations are estimates from figures in the report. Data were obtained from surface and 0.5 metres above bottom. Instrument calibration and accuracy were not reported. Similar sampling was again performed in 1984 (84-0047).

DATA SET 83-0054 EPS

No details regarding these data were available; contact the EPS in Whitehorse, (403)667-6487.

DATA SET 83-0058 Arctic Laboratories Ltd.

The project goal was to relate water colour and temperature patterns in the Beaufort Sea to the distribution of bowhead whales. Aircraft and satellite sensory methods were used, while surface data were obtained for calibration. Sample bottles were lowered while the helicopter hovered over the station. An AES sea temperature thermometer (0.1°C graduations) was immediately inserted into the sample upon retrieval. Salinity was determined later using a Guildline Autosal Salinometer (Borstad, 1985).

DATA SET 83-0059 Simon Fraser University

No details were available. A letter to Mr. Albright at SFU failed to induce a response.

DATA SET 83-0067 Arctic Laboratories Ltd.

The Neil Brown current-meter data are presented in de Lange Boom & Juszko (1983), whereas the Waverider data were analysed by MEDS. The wave data from station 208 (Kadluk) are apparently no good, as the MEDS summary indicates a 0% success rate.

DATA SET 83-0068 Freshwater Institute

This was the third year of a three-year fishery survey (see also 81-0029 and 82-0111). At all stations surface temperatures were measured using an unspecified method. Nominal dates and location were used here for plotting purposes.

DATA SET 83-0069 Canmar

During 1983 oceanographic data were obtained at the following sites:

Well Site	Latitude Longitude	Rig	Data Type
Alverk 21-45	70°24.73′N 133°42.35′W	Explorer IV	CTD
Uviluk P-66	70°15.8′N 132°18.75′W	CBIR#2	СМ
Natiak 0-44	70°03.95′N 137°13.12′W	Explorer	CTD
Havik B-41	70°20.18'N 123°13.08'W	Explorer III	CTD
Siulik I-05	70°24.63′N 134°30.67′W	Explorer IV	CTD and CM
Arluk E-90	70°19.38′N 134°26.53′W	Explorer III	CTD and CM
Nerlerk B-67	70°26.02′N 133°19.47′W	?	СМ

Multiple CTD profiles were made at each site, generally at intervals of a couple of days; only the first is listed here. An Applied Microsystems CTD-12 was used, and one or more other units of unknown types. The current-meter record lengths were unavailable.

The data quality is unknown; see comments under 81-0002c. Wave data were also collected at the Siulik site (MEDS file #202).

DATA SET 83-0070 Gulf

Waverider data collected at MEDS station 207 (near Pitsiulak A-05 drill site) was apparently of no use, since the MEDS summary indicates a 0% success.

It is not known what other physical oceanographic data were collected by Gulf. Deven's (1985) mentions that one of four instrument moorings, deployed in 1983, was recovered in 1984. MacLaren Plansearch helped in this search, therefore it seems logical that they were the primary oceanographic contractors in 1983.

DATA SET 84-0017 Borstad

Surface temperature data were derived from the NOAA 7 Advanced Very High Resolution Radiometer (AVHRR) data. Useful, cloud-free images were obtained for August 22 and September 8, 11 and 12. Ground truthing was achieved using sea-surface temperature data from drill ships in the area. Due to the limited number of calibration points and position errors of 1-2 km on the images, the temperature data are believed to be accurate to only $\pm 1.0^{\circ}$ C (Harwood & Borstad, 1985).

DATA SET 84-0032 DFO

A letter to Mr. Larry deMarch at DFO Winnipeg, regarding these and other data (85-0014, 85-0017) has till now gone unanswered.

DATA SET 84-0043 Beaufort Sediment Dynamics Study

Guildline (may have been AML CTD-12) CTD profiles were obtained at 4 stations off Kugmallit Bay. Locations for these stations were not provided (Nadeau, 1984). A 12-hour station near Pullen Island was sampled using reversing thermometers and a refractometer.

DATA SET 84-0045 Arctic Laboratories for Gulf

The 1984 oceanographic program for Gulf was severely affected by ice conditions. Three Waverider buoys were lost and one current meter was not recovered. Only one of four moorings deployed in 1983 was recovered.

Real-time current and water-level data were obtained at Amauligak during August 8-20 and August 31 - September 18. This real-time ice-resistant oceanographic telemetry (RIOT) buoy, developed by Artic Laboratories, incorporates a Neil-Brown ACM-2 current meter and an Aanderaa WLR-5 tide gauge. A current meter moored 1.0 km SE of Amauligak on August 7, was to record until November, however it is not known if it was successfully recovered in 1985.

A Waverider buoy deployed at Tarsiut on August 6, was recovered Just west of Amauligak on August 17. Additional Waverider data were obtained in Herschel Basin between August 9-18 (nominal location used: 69°30'N, 138°40'W).

CTD data, presumably using Arctic Labs CTD-12, were obtained from the Kulluk: daily July 5-18 at Pitslulak A-05; weekly during August and daily September 13-23 at Amauligak.

Oceanographic data may have been collected at the Tarslut P-45 site (69°54.92'N, 136°25.07'W) from the Molikpaq during the September - December drilling operations, however this section of the report by Devenis (1985) was not obtained in time for the inventory. Attempts were made to obtain wave data, but met with little success due to ice conditions.

DATA SET 84-0046 Esso

Near-surface and near-bottom currents were measured at the Amerk 0-09 and the Nipterk L-19/Kaubvik 1-43 drill sites. The Endeco 105 records from both sites had periods, up to five days, of unvarying direction which may have been due to compass sticking. The acoustic current-meter at the Nipterk/Kaubvik site was found to have a shift in the calibration of one of the sensor pairs. This may have reduced the overall data accuracy slightly (Birch, Fissel & Wilton, 1984b).

Three days of Waverider data were also obtained, however a SeaData 635-11 bottom pressure record was of limited value due to air bubbles in the pressure port. The 635-11 did produce lower frequency (tidal) information.

DATA SET 84-0047 EPS

This was the third consecutive-year survey of the Stokes Point Region (see also 82-0095 and 83-0047) and the second of King Point (82-0095). As in the other years a YSI-33 meter was used and the same stations were occupied. Only a draft report was available, and the exact dates and depths are not indicated. The Stokes Point station were sampled August 6-7, the King Point August 1-2. Samples were from near-surface and 0.5 m off bottom, in water about 5 m deep. Instrument calibration and accuracy was not stated.

DATA SET 84-0048 Canmar

The summer '84 oceanographic data collected by Canmar are summarized as follows:

Well Site	Latitude Longitude	RIg	Data Type
Natiak 0-44	70°03.95′N 137°13.12′W	Explorer II, I	CTD and CM
Siulik I-05	70°24.63′N 134°30.67′W	Explorer IV	CTD and CM
Arluk E-90	70°19.38′N 135°26.52′W	Explorer III	CTD and CM
Aiverk 21-45	70°24.73′N 133°42.35′W	Explorer I, IV	CTD and CM
Havik B-41	70°20.18′N 132°13.08′W	Explorer II, III	CTD and CM

Uviluk P-66

70°15.77'N 132°18.68'W

7

CM.

Multiple CTD profiles were made using an Applied Microsystems CTD-12, as well as other unidentified units. Only the first profile at each site are listed here.

The duration of the current records is not known. The data are on tapes at COGLA and with Dr. Melling at IOS. Data quality is unknown.

No drifters were deployed due to heavy ice concentrations around the drillships.

it is not known if wave data were also collected.

DATA SET 84-0049 IOS

Aanderaa current meters were moored in Herschel Canyon as part of an over-winter study of shelf and transport processes.

CTD profiles were obtained in April 1984 when the moorings were deployed, but apparently not in August 1985 when they were recovered.

The data are being processed (contact Mr. Perkin, IOS).

DATA SET 85-0006 ESL

Information regarding these data were not obtained in time for inclusion in this inventory. Contact Mr. J. McDonald at 604-656-0881.

DATA SET 85-0007 LGL for DIAND

During a bowhead whale survey T/S profiles were obtained using a Hydrolab 4021. The salinity data were unreliable due to instrument malfunction.

Several NOAA satellite images (18, 20, 21, 24, 26, and 28 August, 1985) were also digitally processed and calibrated for temperature and turbidity, using the ship-based measurements.

DATA SET 85-0014 DFO

See 84-0032.

DATA SET 85-0016 Simon Fraser University

See 83-0059.

DATA SET 85-0017 Freshwater Institute

The report (Hopky, Chiperzak and Lawrence, 1986) was not obtained in time to rate these data.

DATA SET 85-0019 Archipelago Marine Research

No details were available. Contact Archipelago Marine Research (604-382-4535).

DATA SET 85-0029 Arctic Laboratories for Esso Resources

Current data were obtained from two sites (Arnak and Nipterk/Kaubvik), and a pressure sensor (635-11) at the Adgo site provided tidal and wave measurements. A water-level gauge was also deployed near the Taglu drill site.

Arnak: an Aanderaa current-meter and an InterOcean S4 electromagnetic current meter were moored closely together, both at approximately 5 m depth (Arctic Lab., 1985a). The Aanderaa provided essentially no useful speed and direction data, whereas the S4 meter operated well. The temperature and salinity sensors on the Aanderaa did provide data during the deployment period, August 28 to October 3.

Nipterk: an Aanderaa RCM-4 and a Neil Brown ACM-2 were deployed at the same location. The Neil Brown data were very good, however, the Aanderaa encoder was erratic resulting in poor depth, temperature and conductivity data; the direction channel was corrected and the speed channel was unaffected.

Adgo: a SeaData 635-11 wave and tide pressure sensor was moored on bottom between August 15 and October 1. Some energy amplification occurred at high frequencies, but in general the data are of good quality.

Taglu: the data from the Aanderaa WLR-5 water-level gauge near the TAGLU site is of poor quality with about a 57% good-data return. The tape ree! had been installed in a reversed position.

DATA SET 85-0030 Dobrocky Seatech Ltd.

Dobrocky Seatech Ltd. was contracted by the Geological Survey of Canada to study sediment transport at King Point on the Yukon Coast, as part of the Northern Oil and Gas Action Program (NOGAP).

Aanderaa current meters with wave zone rotors were moored in water depths up to 15 m, and two SeaData directional wave and current sensors were moored in water depths of 2.7 and 5.6 m.

Of the five Aanderaa meters, only three were recovered, and only two of these had recorded useful data.

Apparently the data from one of the SeaData recorders is of little value. Further enquiries should be directed to Dr. Harper of Dobrocky Seatech (902-463-4099).

DATA SET 85-0031 LGL Bowhead Whale Study

Most of the data are from west of 141°W. No reversing bottles were used for calibration. Temperatures were compared with those obtained from surface using a Hydrolab meter. Satellite imagery, combined with the boat-based data, were used to produce SST maps.

This was the first of a two year study. See also 86-0008.

DATA SET 85-0032 10S

This was part of an ice motion program. Current-meters and water level gauges were moored over-winter near the Beaufort Sea over the outer half of continental shelf and the upper slope. Two shore water level gauges were also maintained. CTD data were collected during deployment (85-0032) and recovery (86-0032). An archive of rectified, navigated AVHRR images was acquired during the 12 months of the project, and is being used to derive ice coverage and ice displacement data. The data are in the process of being analysed and further enquiries should be directed towards Dr. H. Melling at 10S.

DATA SET 85-0033 Canmar

The summer '85 oceanographic data collected by Canmar are summarized as follows:

Well Site	Latitude Longitude	Rig	Data Type
Arluk E-90	70°19.39′N 135°26.53′W	Explorer III, IV	CTD
Adlartok N-09	69°38.87′N 137°45.47′W	Explorer III	CTD and CM

It is not whether or an ACM2 at depth was

Edlok N-56	69°45.83′N 140°14.37′W	Explorer IV	cTD. It is clear whet not an AC 5m depth recovered.
Havik B-41	70°20.18′N 132°13.08′W	Explorer I,II,III	CTD
Nerlerk J-67	70°26.68′N 133°19.47′W	Kulluk	CTD

The header information were extracted from the Canmar data archival tape (Steen 1986). Documentation received from Dome claims that two current-meter records were obtained, however the tape contains only one.

An AML CTD-12 was used; the time zone recorded for the CTD profiles is not specified.

No drifters were deployed due to heavy ice concentrations around the drillships.

DATA SET 85-0036 IOS

CTD profiles were obtained after recovery of the year-long current and thermistor moorings near Banks Island. The data are being analysed and further enquiries should be directed toward Mr. Perkin at IOS.

DATA SET 85-0037 Gulf

Gulf operated at three drillsites in 1985: Amauligak I-65 using the mobile arctic calsson $\underline{\text{Molikpaq}}$, and $\underline{\text{Akpak 2P-35}}$ and $\underline{\text{Aagnerk E-56}}$ using the conical drilling unit $\underline{\text{Kulluk}}$.

At the Amauligak site, the real-time current (Nell Brown ACM-2) and water-level (Aanderaa WLR-5) buoy was used. However, a flaw in the wiring of the buoy resulted in minimal data recovery. A near-bottom (5 m off bottom) current meter was deployed 1.5 nautical miles SW of Amauligak on September 6. The record length and data quality are unknown.

Due to heavy ice, no moorings were deployed at the Akpak site, however CTD data were collected when ice conditions permitted.

It is not known what, if any, data were collected at the Aagnerk drill site.

DATA SET 86-0003 IOS (Ocean Chemistry)

A comprehensive CTD survey was carried out during this first year of the NOGAP program. An Anderaa current meter was also moored for five days. The CTD profiles included transmissivity, and sediment traps were also moored. The data are in the process of being analysed.

Satellite images are also being processed to produce maps of sea-surface-temperature.

For further details contact Dr. Macdonald of Ocean Chemistry at IOS.

DATA SET 86-0004 LGL and Arctic Sciences Ltd. for DIAND

Ten cross-shelf transects were completed. Vertical profiles of temperature, salinity and transmissivity were obtained using an Applied Microsystems STD-12. Also, while underway, continuous measurements of surface temperature were made using a Hydrolab TC-2 meter. Digital analysis of satellite imagery (3, 5, 6 and 8 September, 1986) will provide SST maps, ground-truthed with the ship's STD data.

The STD, calibrated using bottle salinities and temperatures from reversing thermometers, had an overall accuracy of ± 0.03 °C and ± 0.1 /oo.

DATA SET 86-0005 MacLaren Plansearch for Esso

These data were in the process of being analysed. Contact Mr. Spedding of Esso (403-259-0335).

DATA SET 86-0006 Arctic Laboratories Ltd.

No details were available. Contact Mr. Thomas of Arctic Laboratories (604-656-7077).

DATA SET 86-0007 Arctic Laboratories Ltd. See 86-0006.

DATA SET 86-0008 LGL Bowhead Whale Study

Most of the stations are west of 141°W, near Barter Island. Data depth was restricted by a temperature limitation of -0.35°C within the CTD. This was the lowest temperature the instrument could record.

Satellite imagery, combined with the boat-based data, are to be used to produce sea-surface-temperature maps for 26 August and 6, 8, 10, 14 and 26 September.

These data are to be presented (1987) for a report by LGL which will also include the 1985 results (85-0031).

DATA SET 86-0009 Seaconsult

SeaData 635-9, 635-11, 635-12 and 650B-7 pressure sensors were moored near bottom off Richards Island as part of a sediment transport study. The 635-12 also recorded current data. The data are being processed (Hodgins et al, in print).

DATA SET 86-0010 IOS

This was part of the second year of the Ice motion program (see also 85-0032). While recovering the moorings in the spring of 1986, CTD profiles were made. Only the approximate locations of the current-meters have been plotted. The data are being processed and enquiries should be directed towards Dr. H. Meiling at IOS.

DATA SET 86-0011 IOS

Current meters and WOTAN units were moored at two sites near the entrance to Dolphin and Union Strait. The data are being processed; contact Dr. Farmer at IOS. For plotting purposes, a nominal location of 69°15'N and 117°20'W has been assigned.

DATA SET 86-0013 Canmar

One current-meter record obtained by Canmar during the 1986 drilling season was subsequently lost in the mail. It is not known if any other oceanographic data were obtained. Contact Mr. Vanderkooy at (403) 231-3000.

DATA SET 86-0014 Arctic Laboratories for Gulf

Wave data were collected (85% acceptable) over the August 8-September 14 period near the Amauligak 1-65b site.

It is not known if other oceanographic data were also collected.

Appendix 2

Addresses of Information Sources

Arctic Biological Station
Fisheries and Marine Service
Dept. of Environment
P.O. Box 400,
Ste. Anne de Believue, P.Q. H9X 3L6

Arctic ice Dynamics Joint Experiment (AIDJEX)
(Originally centered at the University of Washington, Seattle, the project is now disbanded. Most oceanographic data were filed at NODC, the remainder are being processed at Lamont-Doherty Geological Observatory, Palisades, N.Y. - contact Dr. T.O. Manley).

Arctic Laboratories Ltd. 2045 Mills Road Sidney, B.C. V8L 3S1 Contact Mr. P. Erickson (604) 656-7077

Canadian Hydrographic Service (CHS) (For the western arctic data, contact Tidal Information at the Institute of Ocean Sciences, Sidney, B.C.)

Canadian Marine Drilling Ltd. (CANMAR) see Dome Petroleum

Canadian Oil and Gas Lands Administration (COGLA)
Physical Environment Division
355 River Road
Ottawa, Ontario K1A 0E4
Contact Mr. A.O. Mycyk (613) 993-3760

Dome Petroleum Ltd.
Beaufort Sea Division
P.O. Box 200
Calgary, Alberta T2P 2H8
Contact Mr. Nick Vanderkooy (403) 231-8010

Environmental Sciences Ltd.
2035 Mills Road
Sidney, B.C. V8L 3S1
Contact Mr. J. McDonald (604) 656-1922

Esso Resources Canada Limited
Research Department
339-50th Avenue S.E.
Calgary, Alberta T2G 2B3
Contact Mr. L.G. Spedding (403) 259-0335

Freshwater Institute
Dept. Fisherles and Oceans, Western Region
501 University Crescent
Winnipeg, Manitoba R3T 2N6
Contact Mr. L. deMarch (204) 949-5000

Gulf Canada Resources Inc.
Frontier Development Division
401 9th Avenue S.W.
P.O. Box 130
Calgary, Alberta T2P 2H7
Contact Mr. B.D. Wright (403) 233-3896

Institute of Ocean Sciences P.O. Box 6000 9860 West Saanich Rd. Sidney, B.C. V8L 4B2

Contact: Frozen Sea Research - Dr. Humphrey Melling (604) 356-6552 Ocean Chemistry - Dr. Rob Macdonald (604) 356-6409 Tides & Currents - Mr. Fred Stephenson (604) 356-6364

LGL Limited
Environmental Research Associates
22 Fisher Street
P.O. Box 457
King City, Ontario LOG 1K0
Contact Dr. R.A. Davis (416) 833-1244

Marine Environmental Data Services (MEDS)
Dept. of Fisheries and Oceans
12th Floor - 200 Kent Street
Ottawa, Ontario K1A 0E6
Phone: (613) 995-2041

National Oceanographic Data Center (NODC) NOAA, Code D761 2001 Wisconsin Avenue N.W. Washington, D.C. 20235 Phone: (202) 634-7500

Seakem Oceanography Ltd. 2045 Mills Road P.O. Box 2219 Sidney, B.C. V8L 3S1 Contact Mr. D.J. Thomas (604) 656-0881

U.S. Naval Oceanographic Office Washington, D.C.
U.S.A. 20390

Appendix 3

Abbreviations used in this report.

ABS, Arc. Blol.

Stn. Arctic Biological Station

AGC Atlantic Geoscience Centre, Bedford Institute of Oceanography

AIDJEX Arctic ice Dynamics Joint Experiment

BIO Bedford Institue of Oceanography

BT Bathythermograph

CANMAR Canadian Marine Drilling Ltd. (subsidiary of Dome Petroleum Ltd.)

CHS Canadian Hydrographic Service

CM Current meter

CODC Canadian Oceanographic Data Centre

COGLA Canadian Oll and Gas Lands Administration

DFO Department of Fisheries and Oceans

DIAND Department of Indian Affairs and Northern Development

EPS Environmental Protection Service

ESRF Environmental Studies Revolving Fund

FRBC Fisherles Research Board Canada

GSC Geological Survey of Canada

10S Institute of Ocean Sciences

MEDS Marine Environmental Data Services Branch, Dept. of Fisheries and

Oceans, Ottawa

MOT, DOT Ministry of Transport, Dept. of Transport; now Transport Canada

NODC National Oceanographic Data Center

NOGAP Northern Oil and Gas Action Program

OERD Office of Energy, Research and Development

T/S, TS Temperature-Salinity

USCG United States Coast Guard

USGS United States Geological Survey

USNHO United States Navy Hydrographic Office, Washington

USNOO United States Naval Oceanographic Office, Washington

XBT Expendable Bathythermograph

Chemical/Biological Terms

Ag Silver

alkt Alkalinity (total)

As

Arsenic

BEC Benzene extractable compounds

BOD Biological oxygen demand

C Carbon

Ca Cadmium

CaCO₃ Calcium carbonate
CH₃ Methyl (mercury)

CH4 Methane
CI Chlorine

Chl.a Chlorophy!! a

Co Cobalt

CO₂ Carbon dloxide

C14 Radioactive isotope of carbon, C14

Cr Chromium
Cu Copper

DB Lead

DNA Deoxyribonucieic acid

DOC Dissolved organic carbon

F Fluorine

Fe Iron

H Hydrogen

HC Hydrocarbons

HCB Hexachlorobenzene

He Helium

HEC Hexane extractable compound

Hg Mercury

KME Kraft mill effluent

Mg Manganese N Nitrogen И3 Azine Ne Neon инз . Ammonia Νi Nickel N02 Nitrite M03 Nitrate 02 Dissolved molecular oxygen ORP Oxygen reduction potential Ρ Phosphorous Pb Lead **PCB** Polychlorinated biphenyls The negative logarithm of the hydrogen-ion concentration рΗ P0C particulate organic carbon P04 Phosphate RNA Ribonucleic acid Se Selenium SI Silicon S102 Silica \$103 Silicate SPM Suspended particulate matter TDN Total dissolved nitrogen TDP Total dissolved phosphorus TOC Total organic carbon Vanadium Zinc Zn

OTHER PUBLISHED CATALOGUES IN THE ADCAP SERIES

Cornford, A.B., D.D. Lemon, D.B. Fissel, H. Melling, B.D. Smiley, R.H. Herlinveaux and R.W. Macdonald. 1982. Arctic Data Compilation and Appraisal. Volume 1. Beaufort Sea: Physical Oceanography--Temperature, Salinity, Currents and Water Levels. Cdn. Data Report Hydrogr. Ocean Sciences. No. 5, Vol. 1, 279 p.

Thomas, D.J., R.W. Macdonald and A.B. Cornford. 1982. Arctic Data Compilation and Appraisal. Volume 2. Beaufort Sea: Chemical Oceanography. Cdn. Data Report Hydrogr. Ocean Sciences. No. 5, Vol. 2, 243 p.

Birch, J.R., D.B. Fissel, D.D. Lemon, A.B. Cornford, K.A. Lake, B.D. Smiley, R.W. Macdonald and R.H. Herlinveaux. 1983. Arctic Data Compilation and Appraisal. Volume 3. Northwest Passage: Physical Oceanography--Temperature, Salinity Currents and Water Levels. Cdn. Data Report Hydrogr. Ocean Sciences. No. 5, Vol. 3, 262 p.

Thomas, D.J., R.W. Macdonald, A.G. Francis, V. Wood and A.B. Cornford. 1983. Arctic Data Compilation and Appraisal. Volume 4. Northwest Passage: Chemical Oceanography. Cdn. Data Report Hydrogr. Ocean Sciences. No. 5, Vol. 4, 200 p.

Birch, J.R., D.B. Fissel, D.D. Lemon, A.B. Cornford, R.H. Herlinveaux, R.A. Lake and B.D. Smiley. 1983. Arctic Data Compilation and Appraisal. Volume 5. Baffin Bay: Physical Oceanography--Temperature, Salinity, Currents and Water Levels. Cdn. Data Report Hydrogr. Ocean Sciences. No. 5, Vol. 5, 372 p.

Fissel, D.B., L. Cuypers, D.D. Lemon, J.R. Birch, A.B. Cornford, R.A. Lake, B.D. Smiley, R.W. Macdonald and R.H. Herlinveaux. 1983. Arctic Data Compilation and Appraisal. Volume 6. Queen Elizabeth Islands: Physical Oceanography—Temperature, Salinity, Currents and Water Levels. Cdn. Data Report Hydrogr. Ocean Sciences. No. 5, Vol. 6, 214 p.

Birch, J.R., D.B. Fissel, A.B. Cornford and H. Melling. 1984. Arctic Data Compilation and Appraisal. Volume 7. Canada Basin-Arctic Ocean: Physical Oceanography--Temperature, Salinity, Currents and Water Levels. Cdn. Data Report Hydrogr. Ocean Sciences, No. 5, Vol. 7, 624 p.

Harwood, L.A., L.A. Turney, L. de March, B.D. Smiley and P. Norton. 1986. Arctic Data Compilation and Appraisal. Volume 8. Beaufort Sea: Biological Oceanography--Seals, 1826-1985. Cdn. Data Report Hydrogr. Ocean Sciences, No. 5, Vol. 8, (Part 1, 352 p.; Part 2, 301 p.)

Woods, S. and B.D. Smiley. 1987. Arctic Data Compilation and Appraisal. Volume 9. Beaufort Sea: Biological Oceanography--Bacteria, Plankton and Epontic Community, 1914 through 1985. Cdn. Data Report Hydrogr. Ocean Sciences, No. 5. Vol. 9, 412p.

Norton, P., B.D. Smiley and L. de March. 1987. Arctic Data Compilation and Appraisal. Volume 10. Beaufort Sea: Biological Oceanography--Whales, 1848-1983. Cdn. Data Report Hydrogr. Ocean Sciences, No. 5. Vol. 10, 407p.

Wainwright, P.F., B.D. Smiley and A. Blyth. 1987. Arctic Data Compilation and Appraisal. Volume 11. Beaufort Sea: Biological Oceanography--Marine Zoobenthos, 1914 to 1986. Can. Data Rep. Hydrogr. Ocean Sci. No. 5. Vol. 11, 367p.