



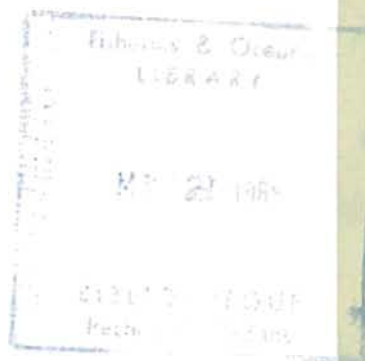
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**ARCTIC INDUSTRIAL ACTIVITIES  
COMPILATION  
VOLUME 1  
Beaufort Sea: Marine Dredging Activities  
1959 to 1982**

D.A. Taylor<sup>1</sup>, M.G. Reed<sup>1</sup>, B.D. Smiley<sup>1</sup> and G.S. Floyd<sup>2</sup>

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Sidney, B.C. V8L 3S1



**1985**

**CANADIAN DATA REPORT OF  
HYDROGRAPHY AND OCEAN SCIENCES  
NO. 32**

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## **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 rapports statistiques sont produits à l'échelon régional, mais numérotés à l'échelon national. Les demandes de rapports seront satisfaites par l'établissement auteur dont le nom figure sur la couverture et la page du titre. Les rapports épuisés sont fournis contre rétribution par des agents commerciaux.

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.

**CANADIAN DATA REPORT OF  
HYDROGRAPHY AND OCEAN SCIENCES  
NO. 32**

1985

**ARCTIC INDUSTRIAL ACTIVITIES COMPILATION**

**VOLUME 1**

**BEAUFORT SEA: MARINE DREDGING ACTIVITIES 1959 to 1982**

by

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## ABSTRACT

Taylor, D. A., M. G. Reed, B. D. Smiley, and G. S. Floyd. 1985. Arctic Industrial Activities Compilation: Volume 1; Beaufort Sea: Marine Dredging Activities 1959 to 1982. Can. Data Rep. Hydrogr. Ocean Sci. 32: (Vol. 1) 192p.

This volume is one of a group of catalogues designed to compile and summarize important descriptive details of selected industrial activities carried out in the offshore Canadian Arctic during the past two or three decades. For user convenience, the Arctic has been arbitrarily divided into seven geographical areas, incorporating where possible, major oceanographic regions. These seven areas coincide with those of a companion series, namely, the Arctic Data Compilation and Appraisal catalogues which describe historic oceanographic data (currents, hydrocarbons, whales -- to mention a few). The approach and format within and between these catalogues and series are intended to facilitate comparison among subjects and regions.

With such a large undertaking, it is not possible to provide all catalogues at once. Therefore, publications which are presently available in the series are indicated on the inside back cover of each volume.

Marine industrial development is ongoing, and further updates of these catalogue descriptions are planned. Readers are requested to submit corrections and additions by writing to the issuing establishment. Such revision will be incorporated into an interactive computer graphics and listing system, and custom reports and maps will be available upon request.

Key words: Canadian Arctic, marine industrial activities, catalogue, database.

## RÉSUMÉ

Taylor, D. A., M. G. Reed, B. D. Smiley, and G. S. Floyd. 1985. Arctic Industrial Activities Compilation: Volume 1; Beaufort Sea: Marine Dredging Activities 1959 to 1982. Can. Data Rep. Hydrogr. Ocean Sci. 32: (Vol. 1) 192p.

Le présent volume fait partie d'une série de répertoires conçus pour la compilation et le résumé des importants détails descriptifs d'activités industrielles choisies effectuées dans les eaux hauturières canadiennes de l'Arctique au cours des deux ou trois dernières décennies. Pour faciliter l'utilisation de l'ouvrage, les auteurs ont divisé arbitrairement l'Arctique en sept zones géographiques incorporant, si possible, de grandes régions océanographiques. Ces sept zones coïncident avec celles d'une série associée, les Arctic Data Compilation and Appraisal catalogues, qui décrit les données océanographiques historiques (courants, hydrocarbures, baleines, etc.). L'approche et la présentation de ces répertoires et séries visent une comparaison facile entre les sujets et les régions.

Il n'est pas possible de fournir tous les répertoires en même temps dans un

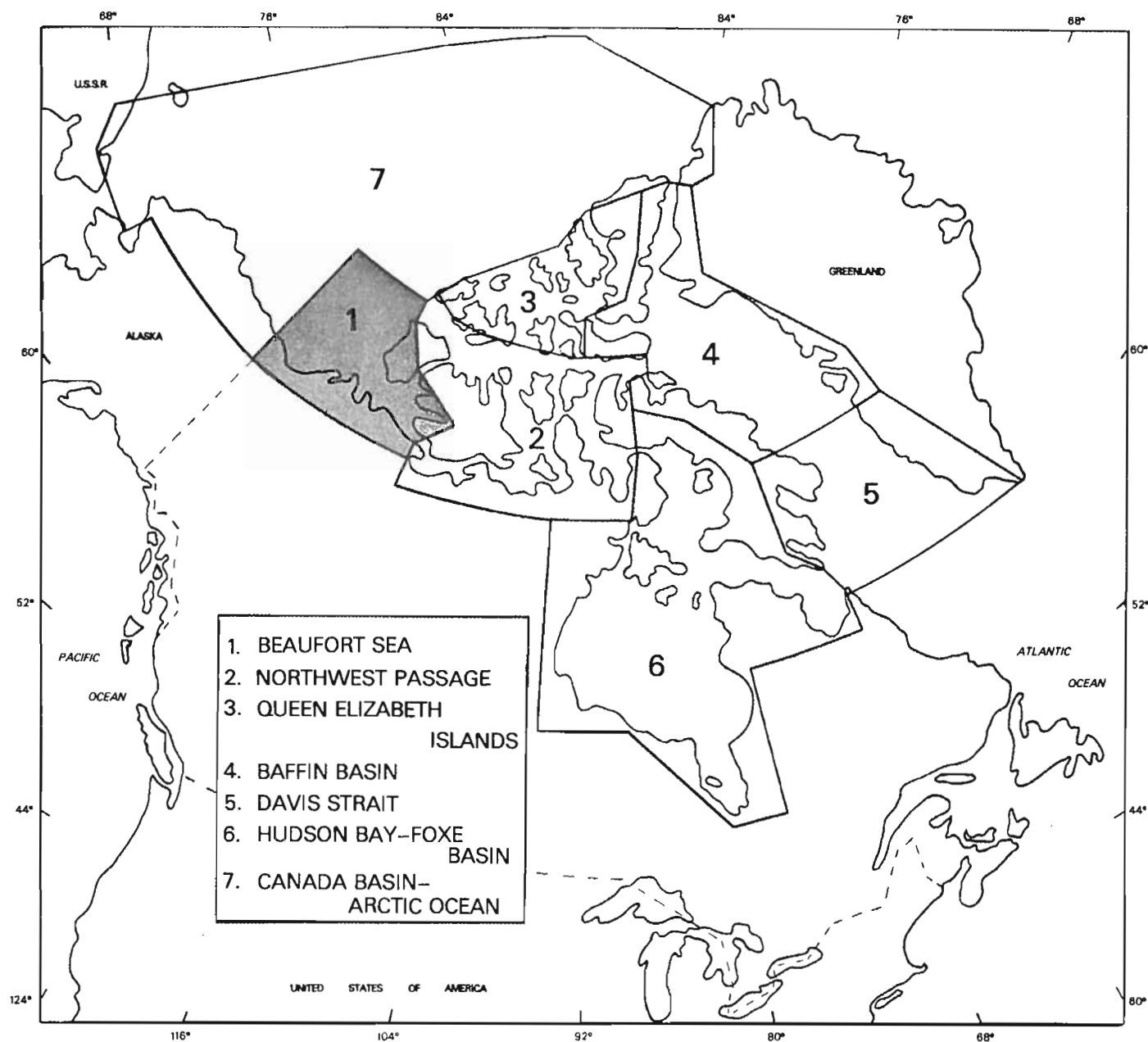
RÉSUMÉ  
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travail de telle envergure. Les ouvrages de la série actuellement disponibles sont donc indiqués au plat du verso de chaque volume.

Le développement industriel du milieu marin est une activité permanente; on prévoit donc des mises à jour des répertoires. On demande aux lecteurs de faire parvenir leurs corrections et ajouts à l'établissement d'où provient la publication. De telles révisions seront ajoutées à un système interactif de listage et de traitement des données graphiques, des cartes et des rapports spéciaux seront disponibles sur demande.

Mots-clés: Arctique canadien, activités industrielles en milieu marin, répertoire, base de données.





This map shows the approximate study area covered by this volume, shown in relationship to other arbitrary areas in other volumes of this series, and also of the companion series, the Arctic Data Compilation and Appraisal catalogues for historic oceanographic measurements.

**VOLUME ABSTRACT**

Marine dredging has occurred over the past 25 years in the Canadian Beaufort Sea. During the period 1959 to 1982, approximately 46.5 million cubic metres of seabottom materials, mostly sand, clay, and gravel, were dredged by and for petroleum companies, communities, and government development agencies. Of the oil and gas companies operating in the Region, Dome Petroleum has been the most active, requiring about 22 million m<sup>3</sup> of dredging from 1976 to 1982. The majority of recorded dredging operations (95 out of 109) were associated with the construction of artificial islands for exploratory drilling (29.0 million m<sup>3</sup>) and coastal harbours for anchorage and shorebase support (17.2 million m<sup>3</sup>).

Most offshore dredging occurred in water depths less than 50 m. Tuktoyaktuk Harbour and McKinley Bay have been locations of extensive coastal dredging (1.7 million m<sup>3</sup> and 12.8 million m<sup>3</sup> respectively). The peak of annual dredging (95% of total volume) occurred in the open water months of July to October. Annual dredging requirements exceeded 4 million m<sup>3</sup> in years since 1976, principally because of accelerated oil exploration. The most common dredge in use was a cutter suction type, specifically, the Aquarius which has dredged 34% of all Beaufort Sea requirements.

This historical dredging overview is based on the compilation and archiving of over 100 individual dredging operations reported in government and industry records to 1982. A computer database was employed to organize operation details such as company, dredge type and name, purpose and dates of dredging, load and dump site locations, volumes loaded and dumped, water depths, sources of information, and so on. A complete listing of this dredging database is provided in this report. Computer-drawn maps show the locations of all past dredging operations. Appendices include summaries of legislation applicable to Beaufort Sea dredging and a Canadian dredging perspective by region.

## ACKNOWLEDGEMENTS

The authors acknowledge the contributions and assistance given us during the research and preparation of this report. We offer special thanks to Rene Chave of Arctic Sciences Ltd. for developing and updating the computer database and maps. We are grateful to Sue Ball and Ron Pultke for their help in preparing the figures and drawings. Much appreciated advice and information were received from Sandy Sandilands, Larry Giovando, Dick Herlinveaux and Jim Vosburgh, all of the Institute of Ocean Sciences (IOS). Warren Fenton, of the Environmental Protection Service (EPS) in Yellowknife, Peter Wainwright, formally of EPS, Yellowknife and now a consultant in Nanaimo, B.C., and Alan Cornford of IOS were all instrumental in coordinating this report. Warren Fenton prepared the section on dredging legislation. The Canadian Hydrographic Service at IOS produced the photographs that appear within. Bill Livingstone of Gulf Canada Resources Inc., Daryl Butchko and Bruce Whitehouse of Esso Resources Canada Ltd., and Bill Lazenby and Ed Pessah of Dome Petroleum Ltd. were generous in providing details of company activities. Finally, the typing services of Avril Peters, Judy Pitcher, and Irene Sipila are greatly appreciated.

Funding for this work was made available through the Environmental Protection Service (EPS) in Yellowknife by the Panel on Energy Research and Development (PERD), the Institute of Ocean Sciences (IOS) in Sidney, the Career Oriented Student Employment Program (COSEP), and Northern Oil and Gas Action Plan (NOGAP).

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## 1. INTRODUCTION

Since the early 1960's, an increasing level of seabottom dredging activity has occurred in the southern Beaufort Sea, particularly around the mouth of the Mackenzie River during the open water season, and more recently further offshore, in water depths of 30 to 60 metres. Much of this marine dredging was commissioned by offshore oil and gas companies such as Dome Petroleum Ltd. (Dome), Esso Resources Canada Ltd. (Esso), and Gulf Canada Resources Ltd. (Gulf), for the construction of harbours and anchorages, breakwaters and piers, navigational channels, artificial islands for drilling, and glory holes for wellhead protection. Additional dredging has been required by local governments, principally for community landfill purposes.

Except for the more recent operations permitted under the Ocean Dumping Control Act, much of the past dredging information is scattered throughout the files and records of government regulatory agencies and oil and gas companies. This report, particularly the Operations Database and Dredging Overview sections, attempts to consolidate this information. It supplies detailed data on over one hundred marine dredging operations that occurred during the period 1959 to 1982 in the Beaufort Sea. Unfortunately, certain dredging operations are poorly documented since existing records are sometimes limited to single sentences or figures in government reports, dredge vessel records and letters. However, sufficient data is available to estimate annual and monthly total dredged volumes for the period 1972 to 1982. The data is organized in various formats and appears throughout this report as figures and tables. Table 1 offers a summary of Beaufort Sea dredging operations since 1959. Actual data listings appear in Section 4.

## 2. INFORMATION SEARCH

In May to August 1983, the two senior authors inventoried and compiled specific details on 109 Beaufort dredging operations conducted over the past 23 years (1959 to 1982). They spent a total of approximately 150 hours examining files, logs and other documentation kept in government and industry offices in Yellowknife, Calgary and Sidney. The principal agencies and companies involved and their types of records are listed in Table 2. The most important documents were dredge vessel logs, company internal correspondence, land leases and applications, dredging licenses, Ocean Dumping Control Act (ODCA) permits, government inspection reports, contractors' reports and monitoring studies. Examples of these documents are displayed in Figures 1 and 2. All dredging information was recorded on standard format sheets, for details such as company and dredge names, dates of operations, types of dredged material, volumes of sand or gravel, and water depths. In numerous cases, it was not possible to extract this level of detail from the existing documents and files. Telephone and personal interviews and mailed questionnaires were necessary to obtain this additional information from government and industry personnel directly involved in the specific dredging operations.



As part of this project, a computer database was designed and prepared using System 2000 management software. This task, together with the digitizing and plotting of dredging location maps, involved more than 250 hours of programming, data entry and revisions. The database and the System 2000 are described in Section 4.

In compiling the dredging information, certain gaps and errors became apparent. Some seemingly basic facts, such as a vessel name or type, were missing from government files or company records. Other operational details, such as type and amount of material dredged, were documented, but were inconsistent between files or records. The suspected sources of error and confusion are potentially many and varied, as follows:

Observer/instrument bias:

- poor knowledge of arctic geography;
- poor communication between contractors and companies;
- failure to attend to record details or to accurately transfer information between logs and reports;
- end-of-season haste by field personnel;
- inefficiencies due to weather (cold, darkness), isolation, and heavy seas;
- high staff turnover and inadequate training.

Record inconsistencies:

- differing regulatory requirements for report details, format, etc.;
- inconsistent enforcement of regulations by different government inspectors and between various agencies;
- poor scrutiny of industry reports by government agencies;
- inadequate training of regulatory personnel;
- little agreement on value of required information.

We alert the readers to these potential problems and caution against using details and values in this catalogue with full confidence. The Operations Database (Section 4) attempts to flag known or most obvious inconsistencies and gaps, generally in the Database instructions, but also, more specifically for each operation. However, the original source or party should be directly consulted for further verification of accuracy and precision as warranted by your intended applications of these details. Some information, such as specific borrow sites for gravel sources, was proprietary to particular companies and was, therefore, not available to be incorporated into the database. Further information and revisions to this catalogue are welcome. These should be sent to:

Department of Fisheries and Oceans  
 Ocean Information Division  
 Institute of Ocean Sciences  
 P.O. Box 6000  
 Sidney, B.C., Canada  
 V8L 4B2

Table 1. Annual volumes of Beaufort Sea dredging.

YEAR	PURPOSE	VOLUME DREDGED (M <sup>3</sup> )
1959	Harbours etc.	91,359
1960	Harbours etc.	35,057
1961	Harbours etc.	8,607
1972	Artificial islands	304,000
1973	Artificial islands	322,800
1974	Artificial islands	507,592
1975	Artificial islands	421,540
1976	Artificial islands	3,129,344
	Harbours etc.	754,051
	Glory holes	18,519
1977	Artificial islands	2,685,000
	Harbours etc.	1,056,166
	Glory holes	18,519
1978	Artificial islands	0
	Harbours etc.	450,000
	Glory holes	55,557
1979	Artificial islands	4,331,620
	Harbours etc.	3,957,000
	Glory holes	18,519
1980	Artificial islands	1,939,065
	Harbours etc.	6,223,393
	Glory holes	18,519
1981	Artificial islands	6,175,282
	Harbours etc.	4,402,250
	Glory holes	10,000
	Other	7,040
1982	Artificial islands	9,212,407
	Harbours etc.	213,269
	Glory holes	106,619
	Other	60,706
TOTAL		46,533,800

Table 2. Principal sources of historic dredging information.

Agency/Company Location	Information	Contacts/ Phone number
1. Canada Oil and Gas Lands Administration (COGLA)		
- Resource Evaluation Branch Ocean Mining Division, Ottawa, Ontario	-Dredge vessel specifications	Peter Hale (603) 993-3760
- Regional Office Yellowknife, N.W.T.	-Glory hole information	Morris Thomas (403) 920-8175
2. Department of Fisheries and Oceans (DFO)		
- Hydrographic Data Centre, Ottawa, Ontario	-Tuktoyaktuk Harbour bathymetry pre 1962	Russ McCall (613) 995-4661
- Technical Records Library, Ocean Information Division, Institute of Ocean Sciences, Sidney, B.C.	-Impact assessments -Monitoring studies -Contractor reports -Inspection reports -AWAC correspondence -COGLA Situation Reports and Weekly Reports	Brian Smiley (604) 656-8251  Dick Herlinveaux (604) 656-8268
3. Department of Indian Affairs & Northern Development (DIAND)		
- DIAND Lands, Yellowknife, N.W.T.	-Public Lands Grant Act leases, licenses and applications -Dredging Licenses	Floyd Adlem (403) 920-8165
- Land Management Division, Northern Renewable Resources Directorate, Ottawa, Ontario	-Dredgate material -Artificial island locations -Borrow sites -Authorized operating dates	Dale Longlitz (603) 997-0220 (also (403) 231-5874 in Calgary)

Table 2. Principal sources of historic dredging information.  
continued

Agency/Company Location	Information	Contacts/ Phone number
4. Environment Canada Environmental Protection Service (EPS),		
- Pollution Control Directorate, Ottawa, Ontario	-Ocean Dumping Control Act Beaufort Database	Andree Chevrier (613) 997-3352
- District Office Yellowknife, N.W.T.	-Ocean Dumping Control Act permits and applications -Public Lands Grant Act leases, licenses and applications -Industry monitoring studies -Inspection reports	Warren Fenton (403) 873-3456
5. Government of Northwest Territories, (GNWT)		
- Department of Local Government, Yellowknife, N.W.T.	-Tuktoyaktuk community dredging	Bob Milburn (403) 873-7135
6. Public Works Canada		
- Marine Division Edmonton, Alberta	-Beaufort Sea operations by Department of Public Works, 1959-61	Chris Colp (403) 420-3204 Roy McLennan (403) 420-3235
7. Transport Canada		
- Canadian Coast Guard, Navigable Waters, Vancouver, B.C.	-Navigable Waters Protection Act	John Duduman (604) 661-3146

Table 2. Principal sources of historic dredging information.  
continued

Agency/Company Location	Information	Contacts Phone number
8. Dome Petroleum Ltd. Calgary, Alberta	<ul style="list-style-type: none"> <li>-Artificial island construction</li> <li>-Borrow sites</li> <li>-Harbour, channel and mooring basin development and maintenance</li> <li>-Glory hole construction</li> <li>-Dredge vessel log books (daily/weekly operations)</li> </ul>	<ul style="list-style-type: none"> <li>Glen Burns (403) 260-8468</li> <li>John Duff (403) 260-8247</li> <li>Bill Lazenby (403) 260-8460</li> <li>John Moorlag (403) 260-8439</li> <li>Ed Pessah (403) 231-8054</li> <li>Niel Vanalstine (403) 231-5313</li> <li>John Ward (403) 231-3866</li> </ul>
9. Esso Resources Canada Ltd., Calgary, Alberta	<ul style="list-style-type: none"> <li>-Artificial island construction</li> <li>-Dredge vessel log books (daily/weekly operations)</li> <li>-Borrow sites</li> <li>-Harbour, channel and mooring basin development and maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Dave Bertram (403) 237-2231</li> <li>Helmut Bock (403) 237-2252</li> <li>Daryl Butchko (403) 237-2249</li> <li>Jim Butler (403) 237-2120</li> <li>Malcolm Comyn (403) 239-2419</li> <li>Steve Fitzmauric (403) 237-2106</li> <li>Mark Psutka (403) 237-2106</li> <li>Bruce Whitehouse (403) 237-2171</li> </ul>
10. Gulf Canada Resources Inc., Calgary, Alberta	<ul style="list-style-type: none"> <li>-Dredge vessel log books (daily/weekly operations)</li> <li>-Glory hole construction</li> <li>-Future dredging plans</li> </ul>	<ul style="list-style-type: none"> <li>Bill Livingstone (403) 233-5481</li> <li>Jim McComiskey (403) 233-5253</li> <li>Bob Morrison (403) 233-2892</li> </ul>

Table 2. Principal sources of historic dredging information.  
continued

Agency/Company Location	Information	Contacts Phone number
11.Shell Canada Resources Ltd., Calgary, Alberta	-Beaufort operations prior to 1972	Ken Simpson (403) 232-3111
12.Arctic Laboratories Ltd., Sidney, B.C.	-Monitoring studies	Dave Thomas (604) 656-7077
13.Beaver Dredging Co. Ltd., Calgary, Alberta	-Dredge vessel specifications	John Waring (403) 237-8676
14.Northern Construction Ltd., Vancouver, B.C.	-Dredge vessel specifications	Orvil Dyer (604) 685-4535
15.Peter Wainwright Nanaimo, B.C. (formally of Environment Protection Service, Yellowknife)	-Ocean Dumping Control Act permits and applications -Public Lands Grant Act leases, licenses and applications -Industry monitoring studies -Inspection reports	Peter Wainwright (604) 758-9890
16.Sceptre-Riedel-Dawson Construction Ltd., Vancouver, B.C.	-Dredge vessel specifications and operations	Bert Gill Ted Pilchak (604) 273-5521
17.Terra Surveys Ltd. Sidney, B.C.	-Artificial islands	Tony O'Connor (604) 656-0931
18.Volker Stevin Dredging and Service Canada Ltd. Calgary, Alberta	-Artificial island construction -Dredge vessel specifications and operations	Joost Brakel (403) 234-7890

HENDRIK ZANEN			TARSIUT MAINTENANCE		
LOAD	DATE	VOLUME (m <sup>3</sup> )	MATERIAL	DISCHARGE	TO DATE TOTAL VOLUME
*121	82-08-18	4292			
122	82-08-19	4201			
123	82-08-20	4489			
124	82-08-20	4481			

GEOPOTES E			TINGMIARK CLAY REMOVAL		
LOAD	DATE	VOLUME (m <sup>3</sup> )	MATERIAL	DISCHARGE	TOTAL VOLUME TO DATE (m <sup>3</sup> )
82	82-08-18	782	TINGMIARK	BY	
83		5182	CLAY		7164

INTERNAL CORRESPONDENCE	
DATE	83 - 06 - 24
TO	Bruce Runge B10
FROM	Glen Burns
SUBJECT	Construction DEPARTMENT OF FIELD OFFICE
	FILE NO.

RE: Material Source/Distribution  
1982 Dredging Season

As you requested, the following is a breakdown of the material dredged during the 1982 season.

Regards  
Glen Burns

BOEPOR SOURCE	UVILUK
UKALERK (Sand)	805,700.m3
SOUTH 50 (Sand)	43,700.m3
SOUTH TARSUIT (Gravel)	34,500.m3
BANKS ISLAND (Gravel)	55,800.m3
HERSCHEL (Gravel)	
NERLERK (Sand)	
TOTAL	

APPLICATION FOR FEDERAL CROWN LAND	
(Required in English)	
PLEASE PRINT	
File: IMIII-B	
PART I	
Mr.	
Mrs.	
Miss	
Esso Resources Canada Limited	
(Company)	
Address: 10075 Jasper Avenue, Edmonton, Alberta T5J 1S6	
Age: .....	
Occupation: .....	
Employed by: .....	
Name of Husband or Wife: .....	
(Surname) (First and middle names)	
Occupation of Husband or Wife: .....	
Employed by: .....	
I hereby make application to: J.R.S.E. the land described hereunder:	

Le 27 juin 1981		La Gazette du Canada Partie I		4131	
DEPARTMENT OF THE ENVIRONMENT		MINISTÈRE DE L'ENVIRONNEMENT			
OCEAN DUMPING CONTROL ACT		LOI SUR L'IMMERSION DE DÉCHETS EN MER			
Notice is hereby given that this permit is issued pursuant to the provisions of the Ocean Dumping Control Act, and subject to the conditions indicated:		Le public est avisé que, conformément à la Loi sur l'immersion de déchets en mer, le permis suivant est délivré sous réserve des conditions énoncées ci-après:			
PERMIT NO. 4443-01194	McKinley Bay, access channel and Mooring Basin (dredging)	PERMIS N° 4443-01194	Baie McKinley, chenal d'accès et bassin de mouillage (dragage)		
1. PERMITTEE	Canadian Marine Drilling Limited, P.O. Box 200, Calgary, Alberta T2P 2H8.	1. TITULAIRE	Canadian Marine Drilling Limited, Case postale 200, Calgary (Alberta) T2P 2H8.		
2. TYPE OF PERMIT	To dump and/or load dredged material for the purpose of dumping.	2. TYPE DE PERMIS	Permis d'immerger ou de charger des matières draguées destinées à l'immersion.		

Figure 1. Information sources: Ship logs, Internal Correspondence, Lease Application, ODC A Permit.

Indian and Northern Affairs

License No.: 3308  
File No.: 107 C/9-8

THIS DREDGING LICENSE made this 18th day of October 1982

BETWEEN

Her Majesty the Queen in right of Canada, hereinafter called "Her Majesty"

AND ESSO RESOURCES CANADA LIMITED

hereinafter called "the licensee"

WITNESSETH that in consideration of the fees, reserved and contained on the part of the licensee to be subject to the Public Lands Grants Act and the Public Lands Regulations, Her Majesty hereby demises to the licensee the use and occupation of all that certain parcel of land being composed of all that portion of the bed of the in QUAD 117 D/16, known as Sauvak Island, as shown outlined in sketch annexed hereto,

Indian and Northern Affairs

Lease No.: 3809  
File No.: 117 D/16-3

THIS LEASE made this 14th day of January, 1983,

BETWEEN

Her Majesty the Queen in right of Canada, hereinafter called "Her Majesty"

OF THE FIRST PART

AND

GULF CANADA RESOURCES INC., hereinafter called "the lessee"

OF THE SECOND PART

WITNESSETH that in consideration of the rents, covenants and rein reserved and contained on the part of the lessee to be paid, performed, and subject to the Public Lands Grants Act and the Leasing and Licensing Regulations, Her Majesty hereby demises to the lessee the use and occupation of all that certain parcel of land being composed of all that portion of the bed of the in QUAD 117 D/16, known as Sauvak Island, as shown outlined in sketch annexed hereto,

Inspection Report  
of  
Dome Petroleum Limited/Zanen Verstoep Dredging

by  
Mark Gordon  
Inspector under the Ocean Dumping Control Act  
Environmental Protection Service  
Department of the Environment  
Yellowknife, N.W.T.  
Ocean Dumping Permit: #4443-0119

**DOMES PETROLEUM LIMITED**  
**McKINLEY BAY DREDGING PROJECT**  
**WATER QUALITY MEASUREMENTS**  
**AND DREDGE SPOIL MONITORING**  
1980

**ARCTIC LABOURERS LTD.**

**epec consulting western ltd.**

September 17, 1982.

File: 6985-003-01-60

Government of the Northwest Territories  
Department of Public Works  
Engineer Division  
Yellowknife, N.W.T.  
X1A 2L9

Attention: Mr. Brian Lewis, P. Eng.,  
Project Officer

Dear Sir:

Re: Final Report, Dredging and Construction Observations of the Tuktoyaktuk Potable Water Reservoir

We are pleased to submit herewith the final report dealing with the dredging and construction related to the Tuktoyaktuk Reservoir.

The information contained within the report comes from such sources as NW Engineering, Tharber Consultants, Dome-Canada, Department of Local Government, Water and Sanitation Section, Niels Jacobsen Consulting, previous EPEC reports and the dredging and construction records of EPEC Consulting.

We would like to thank you very much for your comments and co-operation in preparation of this final report.

Yours truly,  
EPEC Consulting Western Ltd.  
D.J.P. Clark,  
Senior Projects Co-ordinator

Figure 2. Information sources: PGLA License, PGLA Land Lease, Inspection Report, Contractor Report, Monitoring Study.



### 3. DREDGING OVERVIEW

#### 3.1 Dredging operations and requirements

Dredging, the loading and subsequent disposal or placement of spoils, is required for offshore oil and gas exploration in the Beaufort Sea, and will continue to be associated with future production and shipment. At present, dredging is necessary to:

- (1) construct and maintain harbours and approaches of appropriate depth and configuration to accommodate present and future marine fleet;
- (2) provide materials used in the construction of artificial islands (foundation pads, berms and relief well spurs) for offshore platforms, and ballast for caisson platforms;
- (3) excavate glory holes at wellsites for drilling from conventional drill-ships and conical drilling units in less than 54 metres of water;
- (4) provide ice-scour protection required for production trees, subsea pipelines and other possible seafloor systems;
- (5) provide material used for landfills and land reclamation.

These purposes are described in detail in this Dredging Overview. One purpose not considered here is that of dredging to dismantle abandoned islands. The abandonment of sacrificial beach artificial islands requires the removal of all anthropogenic materials such as filter-cloth, sandbags and slope protection. As such materials are covered by sand through slumping and erosion processes, Esso's island clean-up program has typically involved a clamshell crane mounted on a spud barge to recover the buried materials. For regulatory purposes, this operation is not considered as dredging. However, where such materials are below the shoreline, the process is analogous to dredging to remove an overburden. Information such as volumes and timing was not readily available due to differences in the regulatory process, and is not included in this report.

##### 3.1.1 Harbour, channel and mooring basin construction and maintenance

Offshore exploration for oil and gas in the Beaufort Sea has necessitated the establishment of permanent support bases and harbours for Dome, Esso and Gulf. These companies have identified the following criteria for selecting support bases (Beaufort Sea/Mackenzie Delta Environmental Impact Statement Volume 2, 1982):

- (1) good deep sea access;
- (2) proximity to development areas;
- (3) good access to the Mackenzie River system;
- (4) capacity to receive medium- to long-range heavy aircraft;
- (5) potential overland access by winter or permanent road;
- (6) capability to fuel and service all types of marine traffic on a year round basis;

- (7) adequate areas for large dock, storage and lay-up areas plus associated workshops, accommodations and support facilities;
- (8) capability to handle deep draft vessels and drilling systems and aircraft larger than the jets in use in 1982.

Marine dredging activities are usually required to meet factors 1, 7 and 8 and may be involved in fulfilling items 3, 4, 5 and 6.

Suitable natural harbours are scarce in the Beaufort region, especially in the region of the Mackenzie River Delta where heavy silt loads, storm surges, and eroding coastlines are characteristic. There are few harbours with protection from winds and sea ice and with entrance passages of sufficient depth and width even for shallow draft vessels. To the east, Wise Bay on the Parry Peninsula is a good natural deep draft harbour (Figure 3). This Bay is presently used for mooring a refuelling tanker, but industry judges it too far from promising oil discoveries to serve as a permanent support base. To the west of the Mackenzie Delta, Pauline Cove on Herschel Island is another natural harbour, but it is too small for major installations and somewhat distant from the drilling sites. In 1977, the Advisory Committee on Northern Development recognized Tuktoyaktuk Harbour, Letty Harbour and King Point (Yukon Coast) as acceptable harbour sites. Thetis Bay (Herschel Island), Mason Bay (Richards Island) and McKinley Bay were also candidate sites, but were judged to have a high potential for environmental impact (Clarke, 1980) (Figure 3).

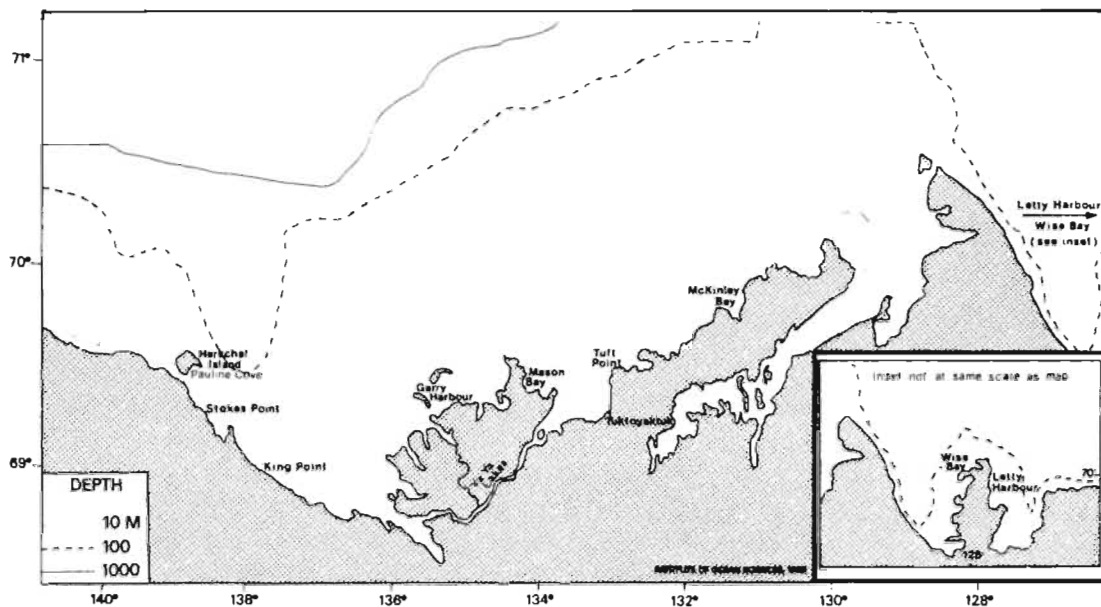


Figure 3. Present and potential harbours and support bases in the Beaufort Region.

Up to and including the winter of 1978-79, Dome/Canmar overwintered their drillships at temporary anchorages at Pauline Cove and Wise Bay. However, so that their drillships might move to drilling locations earlier in the spring and hence to lengthen the drilling season, the company decided to construct an overwintering basin at a location closer to the drilling leases and to the transition (unconsolidated) ice zone.

In June 1979, Dome/Canmar submitted an application to the federal government (Dome's initial application was rejected in 1975) to obtain the necessary permits for dredging this new access channel and vessel mooring basin in McKinley Bay and also for dredging a deeper approach channel to Tuktoyaktuk Harbour. In September, approval was granted for both programs and within a few weeks the dredge vessel Aquarius excavated nearly 3.5 million m<sup>3</sup> of material for the channel and basin in McKinley Bay (Pessah, 1982; Letter from Prather, Dome, to Bryant, EPS Yellowknife, 12/12/79). In 1980 the Aquarius worked in Tuktoyaktuk Harbour, deepening the approach channel by dredging over 350,000 m<sup>3</sup> of substrate material (Pessah, 1982). Further dredging at McKinley Bay displaced 5.5 million m<sup>3</sup>, extending the channel and mooring basin and creating a protective artificial island. In 1981 and 1982 the basin expansion operations were continued in McKinley Bay.

During the years 1976 to 1982, Esso used an embayment near Tuft Point (Tuktoyaktuk Peninsula) as a staging area, an overwintering site, and a borrow source for construction sand. In 1976, the dredge vessel Beaver Mackenzie constructed a 770,000 m<sup>3</sup> breakwater at Tuft Point in order to increase wave and ice protection to subsequent dredging operations. An additional 2 million m<sup>3</sup> of sand and gravel was dredged through 1977-79 for this breakwater's reinforcement and maintenance (Dredging license application from Shaw, Esso, to Dunlop, DIAND, 07/04/83; Letter from Bennett, Esso, to Redshaw, DIAND, 04/14/83; Imperial Oil Ltd., 1977). Esso discontinued operations at Tuft Point in 1980 but returned in 1982-83 to reconstruct the breakwater for caisson assembly activities. In 1981 and 1982, Esso dredged over 250,000 m<sup>3</sup> of material in Tuktoyaktuk Harbour for a land reclamation project.

Other companies and agencies have also dredged in Tuktoyaktuk Harbour. As early as 1959, the Federal Department of Public Works started a three year program of maintenance dredging for navigational safety at different sites in the harbour. In 1979, the Government of Northwest Territories (GNWT) used 80,000 m<sup>3</sup> of dredge material for landfill purposes. Approximately 750,000 m<sup>3</sup> of material was also needed in 1981 to construct a community water reservoir. In the same year, Arctic Transportation Company Limited (ATCL) dredged over 250,000 m<sup>3</sup> of granular material for dock construction and fill operations (Letter from Sproule to Adlem, DIAND, 04/08/82; EPEC Consulting Western Ltd., 1982; Haist and Milburn, 1980; Thurber Consultants Ltd., 1979).

At present, Tuktoyaktuk Harbour is the primary support and supply centre for offshore exploration in the Beaufort region. McKinley Bay serves as a winter anchorage and forward supply point for early and late season drilling activities. The McKinley Bay protection island now permits some ship repair and storage/accommodation for exploration. Tuft Point provides a caisson assembly site. Wise Bay, Summers Harbour and Pauline Cove continue to be used intermittently as anchorages and/or marine staging areas.

Future projections of industry include Tuktoyaktuk Harbour and McKinley Bay as essential harbours, requiring some expansion and continued maintenance. In addition, to accommodate present and projected levels of activities, industry may require a third, and possibly a fourth, harbour. Dome, Esso and Gulf have stated that one or two sites on the Yukon Coast would be optimum for the next Beaufort Sea harbour and shorebase (Beaufort Sea/Mackenzie Delta Environmental Impact Statement, Volume 2, 1982). Nearby Pauline Cove would continue as a staging area and temporary anchorage for exploration and development activities on western leases of the Mackenzie Shelf. Considerable dredging will be required to construct and maintain such artificial harbours and their approach channels. Annual dredging will also be necessary to maintain safe navigational waters in McKinley Bay and Tuktoyaktuk Harbour, and their approach channels.

Table 3 summarizes dredging operations for harbours since 1976, the earliest year that such activities were recorded.

Figures 4 to 7 summarize all known Beaufort Sea dredging operations for the construction and maintenance of harbours, approach channels, and mooring basins.

Table 3. Total volume dredged (m<sup>3</sup>) by month and year for harbours, channels, mooring basins 1976 to 1982.

YEAR	LOCATION	JUNE	JULY	AUG	SEPT	OCT	NOV	MONTH UNKNOWN	ANNUAL TOTAL (m <sup>3</sup> )
1976	McKinley Bay								
	Tuft Point		403,124					350,927	754,051
	Tuktoyaktuk								
1977	McKinley Bay								
	Tuft Point		729,996	219,159	70,845				1,020,000
	Tuktoyaktuk		36,135						36,135
1978	McKinley Bay								
	Tuft Point							450,000	450,000
	Tuktoyaktuk								
1979	McKinley Bay				1,925,000	1,502,000			3,427,000
	Tuft Point							450,000	450,000
	Tuktoyaktuk								
1980	McKinley Bay		2,331,153	2,329,013	1,199,849				5,860,015
	Tuft Point								
	Tuktoyaktuk					296,389	66,989		363,378
1981	McKinley Bay			836,736	1,394,559	1,255,105			3,486,400
	Tuft Point								
	Tuktoyaktuk	379,992	530,758					5,100	915,850
1982	McKinley Bay			23,978	4,534	14,157			42,669
	Tuft Point		22,900						22,900
	Tuktoyaktuk		138,700					9,000	147,700
MONTHLY TOTAL (m <sup>3</sup> )		379,992	4,192,796	3,408,886	4,654,787	3,087,651	66,989	1,265,028	17,056,129

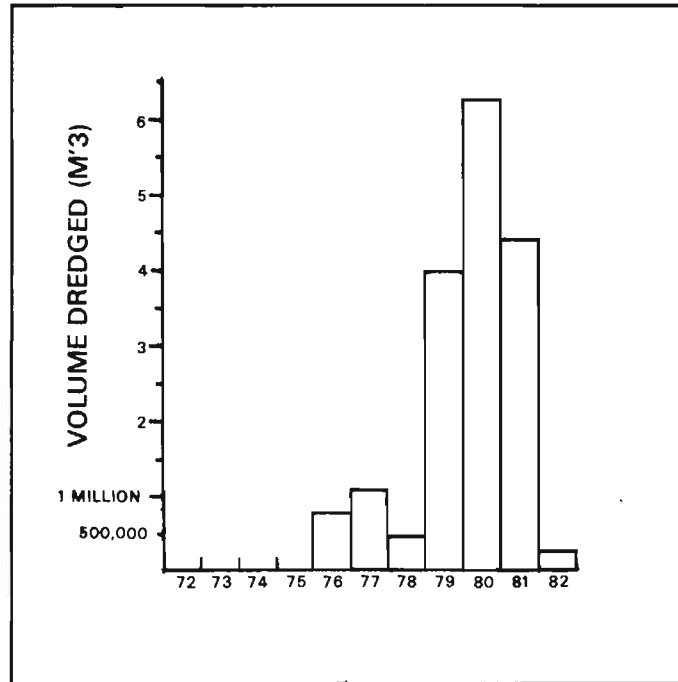


Figure 4. Total volumes dredged for harbours, channels and mooring basins per year 1972 to 1982.

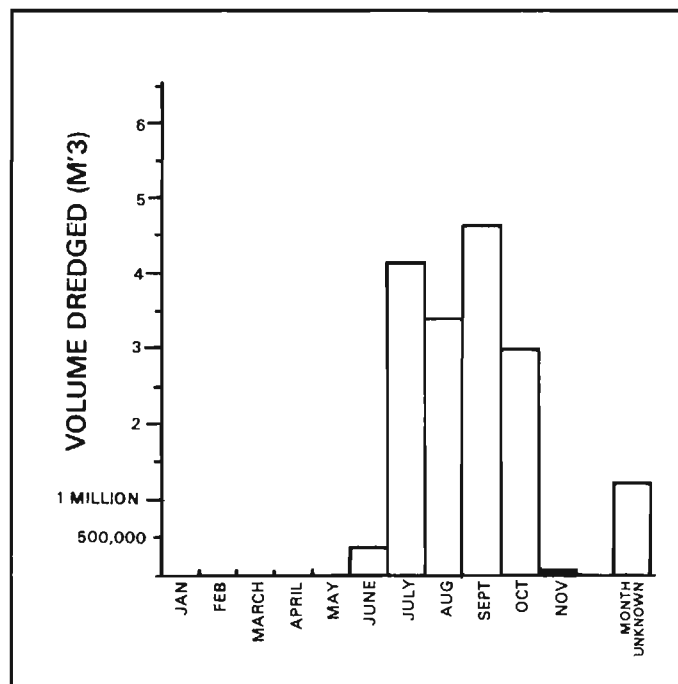


Figure 5. Total volumes dredged for harbours, channels and mooring basins per month 1972 to 1982.

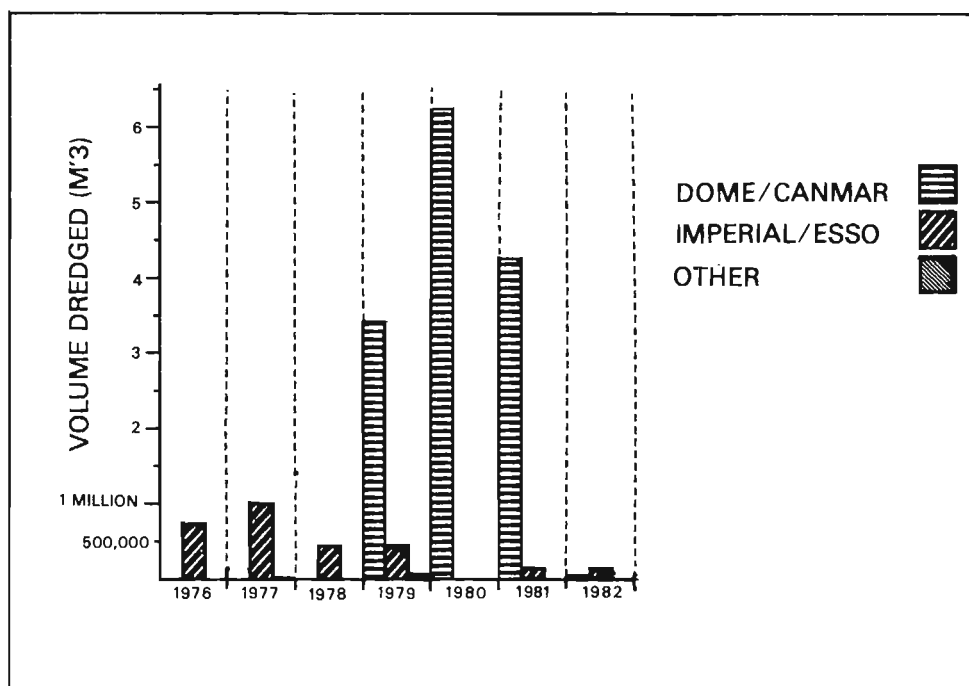


Figure 6. Volumes dredged by company/operator for harbours, channels and mooring basins 1976 to 1982.

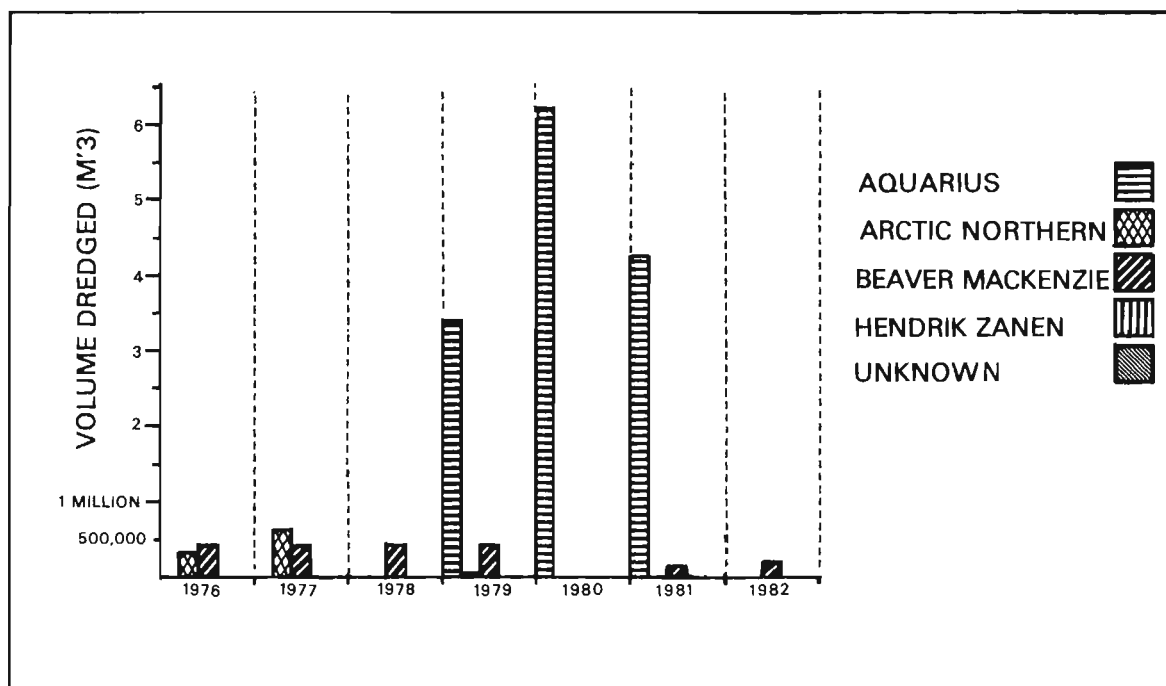


Figure 7. Volumes dredged by dredge vessel for harbours, channels and mooring basins 1976 to 1982.

### 3.1.2 Artificial island construction

Since 1972, industry has constructed offshore artificial islands in the Beaufort Sea to provide safe bottom-founded platforms for drilling, especially for winter operations. Esso has been most active in island construction, building 22 islands by 1982 in the nearshore region of the Mackenzie Shelf. Dome started to build offshore islands in 1980, in water depths greater than 20 metres, and has most recently been working at an island site in 45 metres of water. Between 1972 and 1977, companies constructed fifteen islands. Since then, the number of island platforms has declined to one per operator per year.

Island sites have been located progressively farther into deeper water, necessitating the employment of dredges using material from the sea bed. The distance a dredge must travel from a borrow site to an island location significantly affects the volume of dredging which can be accomplished each day (Figure 8). Although the number of dredges used in the Beaufort has increased from one in 1972 to the current seven, only four to five islands and two subsea berms have been built since 1979. This is due to the greater distance that a dredge must travel to obtain good construction material, to the increased volume of material that requires placement for deep water islands, the more difficult construction environments, and to various economic factors.

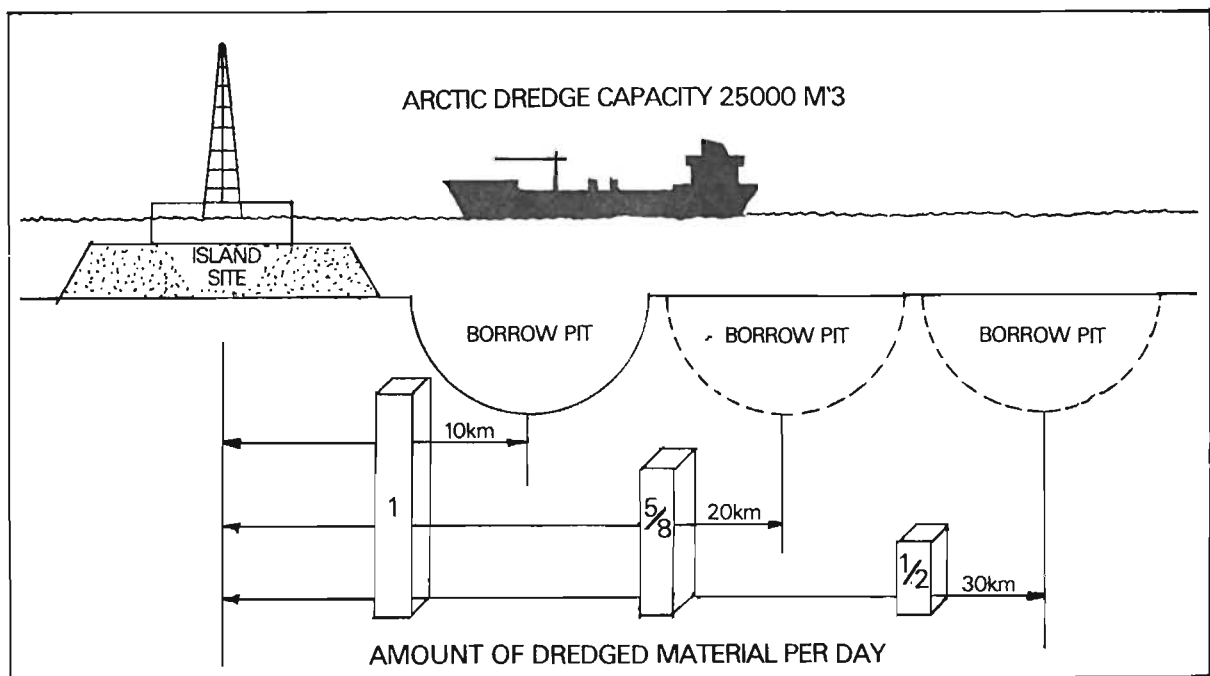


Figure 8. The daily capacity of an Arctic dredge is reduced by 50% when the borrow pit is 30 km from the construction site as compared to 10 km.

(Adapted from: Beaufort Sea/Mackenzie Delta Environmental Impact Statement, 1982, Volume 2, Fig. 4.3-26.)



Some of the first islands built by Esso were not constructed with marine dredging operations, but rather used trucked gravel from terrestrial sources such as Ya Ya Lakes in the Mackenzie Delta (Figure 3). The gravel was hauled over winter-fast ice and dumped into excavated holes in the ice. For subsequent islands constructed at sites where granular deposits were available nearby, a cutter suction dredge was used to pump fill through a floating pipeline to the site. When granular material could not be found locally, the companies hauled fill in barges or hopper dredges from other borrow areas, and placed it by bottom dumping scows or by pipeline discharge from the hopper dredges.

Several techniques are used to combat problems of island erosion. These include sandbags, gravel rip-rap, a sacrificial beach, and steel/concrete caissons. Most of the earlier islands used sandbags overlying filter cloth to protect the relatively steep (1:3), upper slopes of the island from wave and current erosion and to reduce the volume of fill required for construction. Immerk, the first sandbag-retained island, was constructed in 3.3 metres of water by Esso. During the period 1972 to 1975, eight islands were built, some in water depths up to 7.0 metres.

Industry changed building designs as it gained experience in offshore drilling and sought to explore in deeper waters. The sacrificial beach design was introduced in 1976 with the construction of Arnak L-30 and Kannerk G-42, and followed by Isserk E-27 in 1977, Issungnak O-61 in 1979, and Alerk P-23 in 1981. These types of islands are best suited to sites where sufficient quantity of suitable fill material is available close by. They are usually built in the open water season, from late July to early October, often using a high-volume, stationary dredge to excavate and place the material. Sacrificial beach islands are characterized by a long gradual "shoulder" (average slope of 1:12) around the drilling surface. During the open water season, these slopes allow storm waves to break and dissipate before they reach the drilling pad, eroding the beach but not the drilling surface. In winter, ice sheets bend and break on these slopes and consequently form a so-called "rubble field" around the island. Additional erosion protection to the islands' slope is often provided by sandbags and filter cloth on the beach and around the drilling surface (Figure 9).

Construction technology is now moving towards the use of platforms capable of operating year-round at greater depths and in more severe ice conditions. To minimize dredging and fill requirements at these depths and to reduce island erosion, the companies have developed various caisson-retained island designs. A caisson island is built by initially dredging a sand and gravel berm on the sea floor, reaching up to within 8 metres or so of the sea surface. The caisson, a ring-shaped steel or concrete structure of various sizes and shapes, is set on top of this berm. Dredges fill the caisson with sand to provide the actual platform for drilling, accommodations and storage.

In some berm constructions, clay bunds (embankments) are needed to retain the sand infill. These are dredged and precisely dumped with a trailing suction hopper dredge. The companies often use a second trailing suction hopper dredge to dredge sand and to infill within the retaining bunds.

The first caisson-retained island was built at Tarsiut, by Canadian

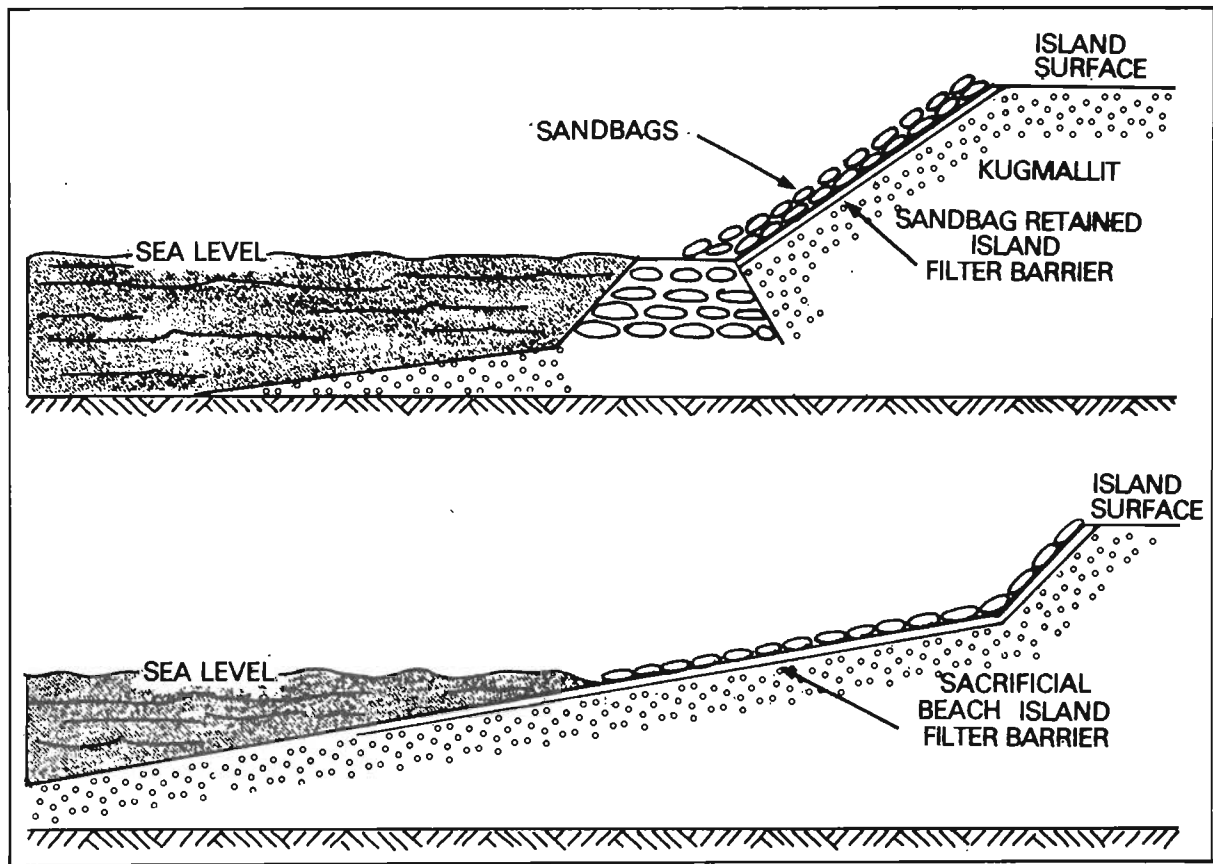


Figure 9. Sandbag-retained island and sacrificial beach island construction.

(Source: Esso, Home Oil Mackenzie Delta-Beaufort Sea 1983 Offshore Construction.)

Marine Drilling Ltd. (Canmar) for Gulf, and was ready for drilling in 1982. During 1981, Dome began to construct a Single Steel Drilling Caisson (SSDC), modifying the forward half of a 250,000 DWT tanker and placing it on the Uviluk berm in 1982.

In 1982, six islands were at various stages of construction. Esso completed Itiyok, a sacrificial beach island located in 15 metres of water. Two caisson-retained islands were started at Minuk and Kadluk, but only the latter was completed during 1982. Gulf made some modifications to and finished remedial work on Tarsiut, and completed the berm at Kogyuk N-67. Dome completed dredging and levelling the Uviluk berm in August after which the SSDC was ballasted down onto the berm site in October. Finally, two hopper dredges began work on Dome's island, Nerlerk, where 3,000,000 m<sup>3</sup> of material was dredged.

In September 1983, Esso started drilling at Kadluk 0-07, a caisson-retained island constructed in 1982-83. The company plans to drill wells from two other caisson-retained islands, Amerk and Minuk, in 1984 and 1985 respectively. Work on Amerk began in July 1983, where 967,000 m<sup>3</sup> of dredged material was deposited by November, completing 36% of the operation. The berm at Minuk was completed in 1983. In July, Esso also began construction at Nipterk, a sacrificial beach island. A total of 439,000 m<sup>3</sup> of dredged material was placed there in 1983, bringing the project to 26% of its completion. Drilling is expected to begin at Nipterk in October 1984.

Gulf's 1983 operations included the drilling of two wells using a special floating drilling ship called a Conical Drilling Unit (CDU). When a CDU is used, no dredging is required other than for glory hole excavation. Drilling at Pitsiuluk began early in September 1983. At East Amauligak, where a glory hole was started in 1982, drilling commenced in the second week of October. Another glory hole, Kugdjuk A-92, was also completed by Gulf during the 1983 operating season.

In 1983, Dome engaged in rebuilding the subsea berm at the Nerlerk site. Nerlerk B-67 experienced density problems with the berm materials (sand and clay/silt) in the summer of 1983 and the operation was suspended. At a second Nerlerk site, one mile distant from B-67, various construction techniques were investigated. However, as of December 1983, there were no definite plans to complete operations at this second site. Original plans called for the completion of a Nerlerk berm by October 1983, so that Dome could set down a SSDC during November of the same year. Since Nerlerk was not completed, Gulf employed the SSDC at their Kogyuk site, where drilling began late in October, 1983.

Nerlerk is the last berm/island that Dome plans to construct until the 1984 season. The company's long range projections however include the construction of at least one new island per year. It is anticipated that one of these exploration islands, at minimum, will eventually be upgraded to a production facility.

Table 4 summarizes artificial island dredging activities as they occurred over the period 1972 to 1982. Figures 10 to 13 illustrate annual and seasonal dredging volumes, volumes dredged by company/operator, and by dredge vessel over the same period.

Table 5 shows plans by Dome, Esso and Gulf for artificial island construction and drilling in the future.

Table 4. Total volume dredged (m<sup>3</sup>) by month and year for artificial islands 1972 to 1982.

MONTH OF OPERATION	JAN	FEB	MAR	JUNE	JULY	AUG	SEPT	OCT	MONTH UNKNOWN	TOTAL
Name and Year(s)										
Immerk B-48 1972,73					182,700	267,200	133,900		583,800	
Adgo F-28 1973						5,860	37,140			43,000
Netserk N-40 1974,75					258,842	66,918	8,740			334,500
Netserk B-44 1974					78,160	151,450	102,590			332,200
Adgo P-25 1974						6,820	23,880			30,700
Pullen E-17 1974		32,100	35,500							67,600
Pelly B-35 1974									8,054	8,054
Unark L-24 1974									45,078	45,078
Adgo C-15 1975		40,040	33,360							73,400
Ikattok J-17 1975					37,600					37,600
Kugmallit H-59 1976					83,040	183,870	35,590			302,500
Adgo J-27 1976						17,720	39,380			57,100
Isserk H-47 1976							120,034		38,610	158,644
Arnak L-30 1976					279,860	1,115,140				1,295,000

Table 4. Total volume dredged (m<sup>3</sup>) by month and year for artificial islands 1972 to 1982.  
continued

MONTH OF OPERATION	JAN	FEB	MAR	JUNE	JULY	AUG	SEPT	OCT	MONTH UNKNOWN	TOTAL
Name and Year(s)										
Kannerk G-42 1976							1,200,000			1,200,000
Sarpik B-35 1976	15,930	66,020	34,150							116,100
Isserk E-27 1977					499,773	922,952	893,182	369,093		2,685,000
Issungnak O-61 1979,80					939,880	1,634,580	2,247,530	899,010		5,721,000
Kaglulik M-64 1980							218,265	65,930		284,195
Tarslut N-44 1980,81,82				30,988	615,853	607,570	309,641	576,682		2,140,734
Alerk P-23 1981					385,000	1,085,000	210,000			1,680,000
Hiyak I-27 1981,82					454,705	1,880,487	1,301,433	604,900		4,241,525
West Atkinson L-17 1981							955,900			955,900
Uviluk P-66 1981,82				209,379	857,217	274,231	200,845	233,869		1,775,541
Nerlerk B-67 1982						465,813	1,493,337	1,306,792		3,265,942
Nerkerk F-67 1982					13,863					13,863
Nerlerk J-77 1982					157,557	99,643				257,200
Kogyuk N-57 1982					99,320	236,840	229,200	45,840		611,200

Table 4. Total volume dredged ( $m^3$ ) by month and year for artificial islands 1972 to 1982.  
continued

MONTH OF OPERATION	JAN*	FEB*	MAR*	JUNE	JULY	AUG	SEPT	OCT	MONTH UNKNOWN	TOTAL
Name and Year(s)										
Kadluk 0-17 1982						252,300	257,600			509,900
Minuk I-53 1982							29,700	171,665		201,365
MONTHLY TOTALS	15,930	138,160	103,010	240,367	4,843,370	9,274,394	10,047,887	4,273,781	91,742	29,028,641

\* Dredging on land

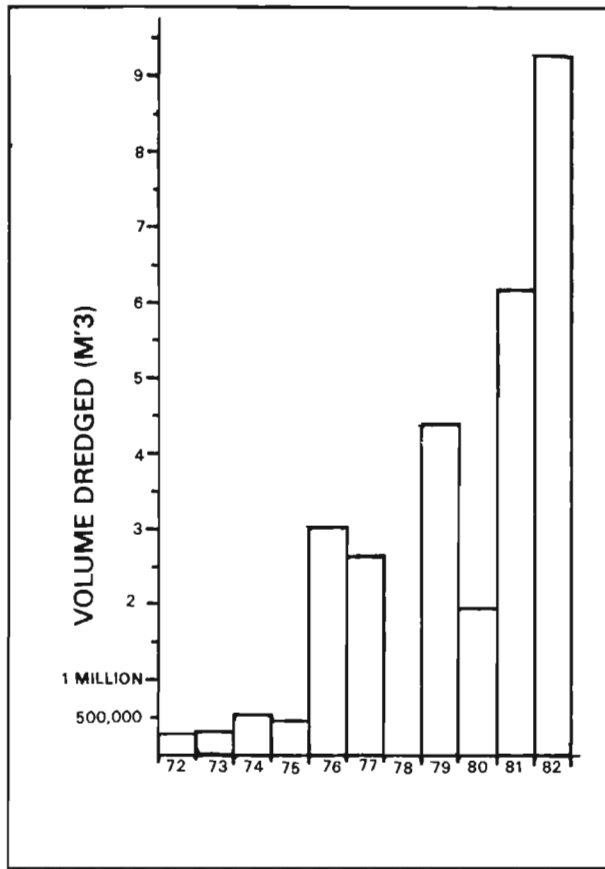


Figure 10. Total volumes dredged for artificial islands per year, 1972 to 1982.

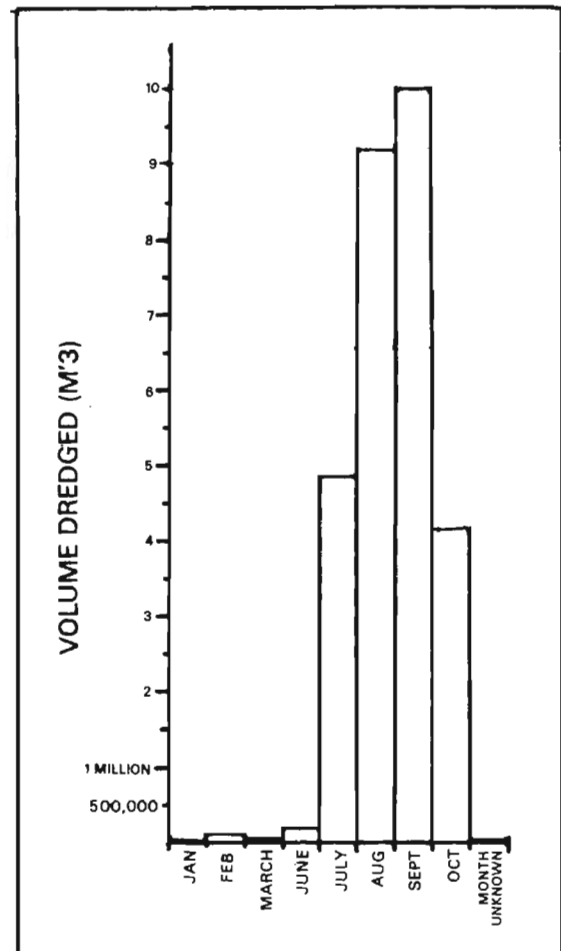


Figure 11. Total volumes dredged for artificial islands per month, 1972 to 1982.

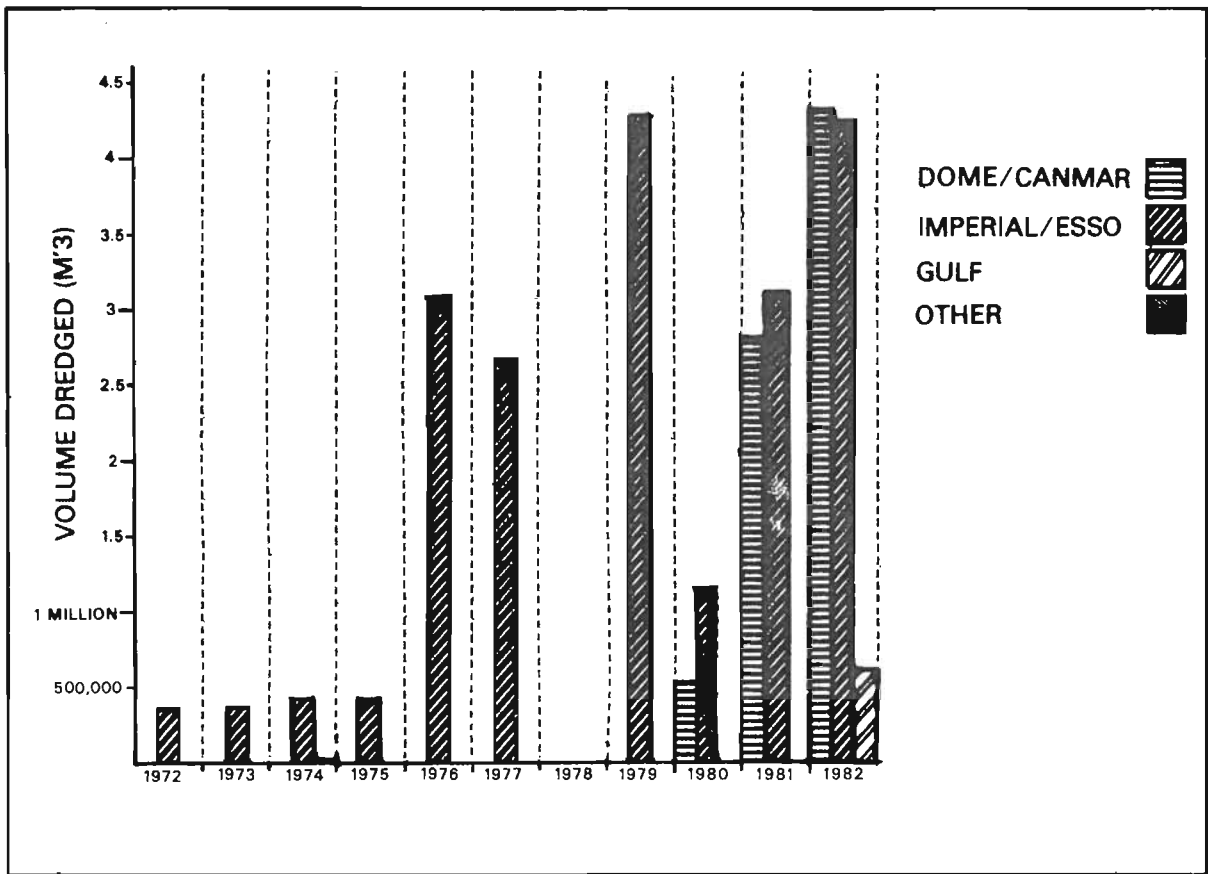


Figure 12. Volumes dredged by company/operator for artificial islands per year, 1972 to 1982.



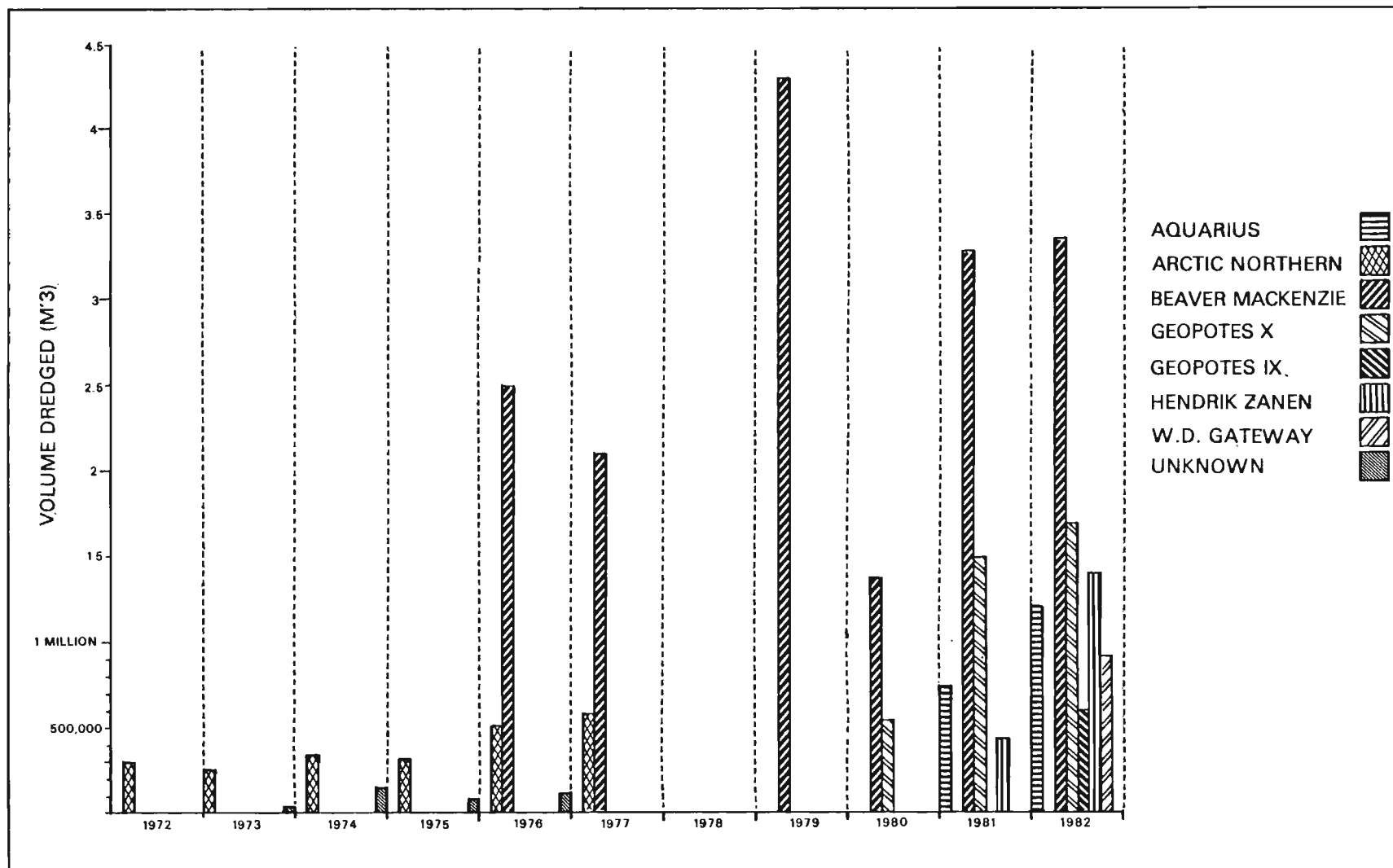


Figure 13. Volumes dredged by dredge vessel for artificial islands, 1972 to 1982.

Table 5. Future plans for artificial islands and drilling units.

Company	Construction year(s)	Location	Expected drilling date	Type of island/unit
Dome	1982-?	Nerlerk	?	SSDC
Dome	1984	?	Winter 1984	SSDC
Gulf	1983	Amauligak	August 1984	Conical Drilling Unit
Gulf	1983	Pitsiulak	July 1984	Conical Drilling Unit
Esso	1982-83	Kadluk	Winter 1983-84	Caisson-Retained Island
Esso	1983-84	Amerk	Winter 1984-85	Caisson-Retained Island
Esso	1982-85	Minuk	Winter 1985-86	Caisson-Retained Island
Esso	1983-85	Nipterk	Winter 1985-86	Sacrificial Beach Island
Esso	1983-84	Adgo	Winter 1984-85	Sacrificial Beach Island

(Sources: Bob Morrison, Gulf, 1983  
 John Ward, Dome, 1983  
 Home Oil, Esso, 1983  
 COGLA Weekly Report of Exploration, Aug. 10, 1983, Aug. 17, 1983,  
 Jan. 18, 1984.)

### 3.1.3 Wellhead burial (Glory holes)

For exploration wells drilled by drillship, Dome and Gulf dredge a cone-shaped hole called a "glory hole" in the sea floor. The drillship is connected to the wellhead by a flexible marine riser. A minimum water depth is required to allow for  $\pm 5^\circ$  tolerance (movement) of the riser's ball joint. In shallow waters (less than approximately 20 metres) a glory hole is required to artificially deepen the water in the vicinity of the wellhead.

Glory holes are also required when seabed installations may be threatened by the grounding and scraping of ice. In such cases, the wellhead equipment is placed in the hole so that the top of the blow-out preventer (BOP) is below the level of potential ice scour. Should ice approach too close to a drillship, the companies can use their quick release capability to disengage the drillship from the wellhead and move away from the threatened area, without having to abandon their uncompleted well.

The companies have different methods of dredging glory holes. Dome's operator uses a large drillbit nearly two metres in diameter. Three holes are drilled in a cloverleaf pattern resulting in the estimated displacement of a relatively-small quantity of material (between 10,000 and 20,000 m<sup>3</sup>). Gulf has used dredges (usually trailing suction hoppers, sometimes cutter suctions) and a drillship to excavate glory holes. The dredges usually excavate significantly more material than the drillships; for example, the Geopotes IX displaced 39,100 m<sup>3</sup> of material for the glory hole at East Amauligak (Bill Livingstone, Gulf, pers. comm., 1984). When dredges are used to excavate the glory hole, they repeatedly dredge overtop the specified area until the resulting hole is of required depth. In contrast, when drillships are employed the drill is able to excavate a near vertical hole, and therefore material removed is simply displaced around the top of the hole. In August 1983, Gulf operators employed a new hydraulic grab system in conjunction with dredge vessels for dredging glory holes. This system reduces the amount of material displaced to an estimated 30,000 m<sup>3</sup> (Bill Livingstone, Gulf, pers. comm. 1984).

### 3.1.4 Other potential dredging requirements

#### 3.1.4.1 Landfills

One important use of seabottom materials excavated by marine dredging operations is terrestrial landfill. For example, Tuktoyaktuk townsite is situated on a peninsular gravel bar bordered by small lakes and poorly drained tundra. The town experiences a shortage of land suitable for ongoing community and industrial development, and a shortage of nearby terrestrial sources of landfill. In the past, dredging from Tuktoyaktuk Harbour provided sand and gravel for a housing subdivision (September and October, 1979), and sand and silt for the construction of a potable water reservoir (June to September 1981). A number of dock construction operations at company bases have also used dredged material for fill. For the planned Tuktoyaktuk airport expansion, dredging from the harbour is considered as the best, most economical source of required material.

As expansion continues at existing support bases and at communities in

the Beaufort region, marine dredging operations aimed at fulfilling landfill requirements will undoubtedly increase in number and scale.

### 3.1.4.2 Subsea pipelines

Industry proposes to use small-diameter, subsea pipelines for oil gathering, water injection and gas re-injection if commercial reserves are discovered offshore. The environmental constraints of the region's oceanography and surficial geology will require that gathering and trunk pipelines be buried below the seabed as protection against ice scouring.

To achieve the required trenching depth, a dredge such as an existing cutter suction could be used in less than 20 metres of water, while a trailing suction hopper dredge would be essential for greater depths. Industry calculates that the pipeline burial trenches should be dredged to a maximum depth of 5 metres below the sea floor, and a maximum width of approximately 20 metres (Beaufort Sea/Mackenzie Delta Environmental Impact Statement, Volume 2, 1982). After pipeline installation, additional lowering could be achieved using smaller specialized equipment such as a post-trenching plow, jetting, or mechanical cutter. There are also special "subsea tractors" designed for trenching pipelines. One industry scenario of subsea gathering pipelines in support of an overland pipeline assumes the dredging of approximately 6.5 million  $m^3$  of material (Figure 14).

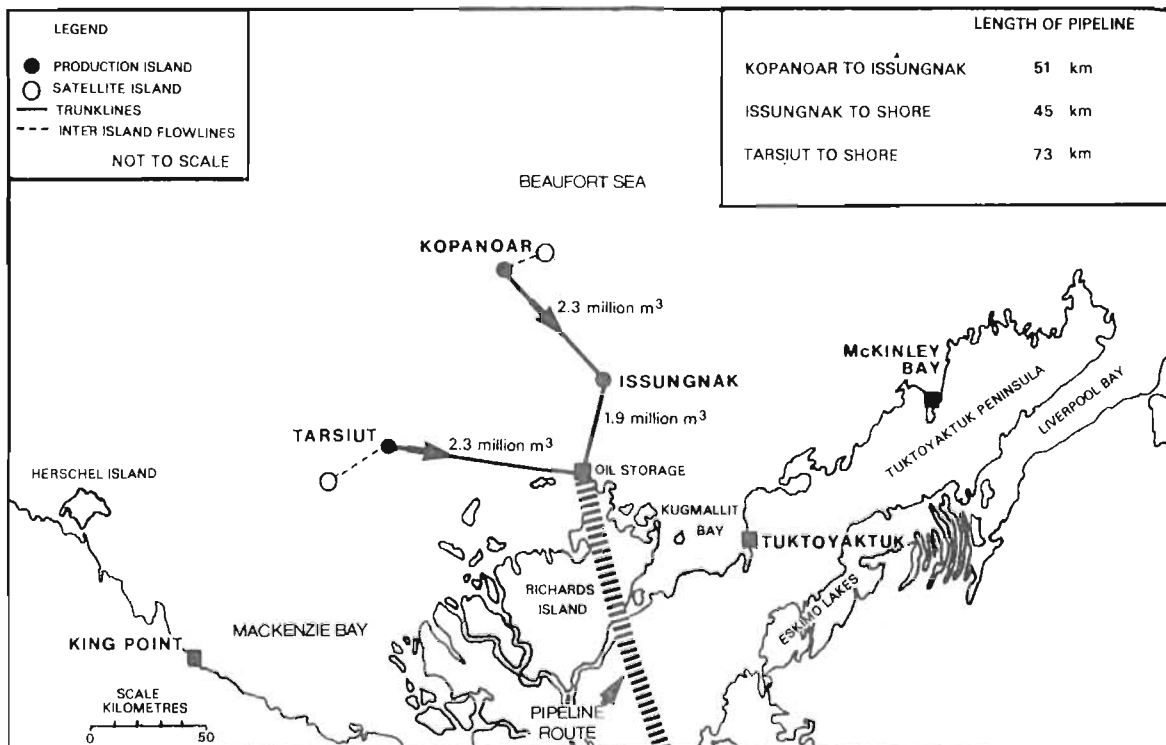


Figure 14. Proposed pipelines and associated volume of dredged material. (Adapted from: Beaufort Sea/Mackenzie Valley Environmental Impact Statement, 1982, Volume 2, Fig. 4.6-4.)

### 3.2 Types of dredges

Several types and sizes of dredges have been used in the Beaufort Sea, primarily in support of offshore island construction and for harbour and channel excavation and maintenance. Hydraulic dredges are used most extensively for large scale capital and maintenance projects, while mechanical dredges usually operate in restricted or shallow water locations, and for dredging hard or very cohesive materials.

#### 3.2.1 Hydraulic dredges

Hydraulic dredges fall into two major categories, based on mobility; cutter suction and stationary suction dredges, and trailing suction hopper dredges.

##### 3.2.1.1 Cutter suction

Cutter suction dredges are equipped at the bow with a ladder that accommodates a cutter drive, sometimes a submerged pump (or pumps), and a suction inlet. The ladder terminates with a rotating excavating tool called the cutterhead. As a unit, the entire structure can be raised or lowered to a desired dredging depth. The cutterhead is situated directly forward of the suction inlet. It dislodges seafloor material which, mixed with water, is drawn up through the suction pipe. This slurry is then pumped by pipeline either directly to the disposal site or into adjacent barges. The cutterhead allows the vessel to dredge a wide variety of materials, from sand, silt and clay to gravel and unconsolidated sedimentary bedrock.

Cutter suction dredges are also equipped with two stern-mounted spuds, one of which is lowered to act as a pivot. With the aid of anchors, cables and winches, the vessel swings about the pivot, and moves back and forth in an arc across its area of operation. Cutter suction dredges are used where the cutter head must be positioned accurately, or where sediments are deep and water depths vary. Cutter suction dredges are not suited to high traffic areas. Dredged material is passed through the vessel's pipeline over relatively short distances (about 1 km) to a disposal site.

Industry has operated two cutter suction dredges in the Beaufort region. The Aquarius (Figure 15), owned by Zanen Verstoep Ltd. of Holland, has operated since 1979 under contract to Canmar. Another, the Arctic Northern, is owned by Northern Construction of Vancouver and has been contracted to Esso (Table 6).

##### 3.2.1.2 Stationary suction

In situations where load and dump sites are in close proximity, stationary suction dredges can be employed using floating or submerged pipelines. Although a stationary suction dredge works on the same principle as a cutter suction dredge, the stationary dredge lacks an excavating tool to loosen the material, and its means of moving on site is by winches. Sand and silt are pumped, or "suctioned" from the seafloor and discharged to a pipeline for immediate disposal or into barges for transportation to more distant dump sites.

Esso has contracted two stationary suction dredges for operating in the Beaufort Sea. The Sceptre Mackenzie, owned by Sceptre-Riedel-Dawson Constructors Ltd. of Vancouver, was a hydraulic suction system temporarily assembled on a barge; it was used only during a 1979-80 island construction operation (Table 7). The Beaver Mackenzie has been active in the Beaufort Sea since 1975, and was modified to a cutter suction in 1983 (Figure 16). The vessel is owned by Westminster Dredging Company, Ltd., London, England, and is operated through Beaver Dredging Company Ltd. of Calgary.

### 3.2.1.3 Trailing suction hopper

Industry employs trailing suction hopper dredges for marine operations where borrow material is located at greater distances from the dump site. These self-propelled dredges have a large "hopper" or containment area on board, into which dredged seafloor material is pumped through a draghead. Once the hopper is filled, the vessel transports the material to the discharge site. Unloading occurs either by dumping material through bottom valves or drag arm, or by discharging the dredge spoils through pipes over the bow. These vessels can easily excavate silt, sand and gravel, but pretreatment (loosening) is usually necessary before dredging rocky or cemented material.

Five trailing suction hopper dredges have operated in the Beaufort area over the past three years. Dome/Canmar and Gulf/Beudrill have contracts with Volker Stevin Dredging Company Ltd. of Holland for the use of the Geopotes X and Geopotes IX respectively. The Geopotes X (Figure 17) arrived in the Beaufort area late in the 1980 operating season. The Geopotes IX (Figure 18) was leased in September 1981 but started operations in 1982. The Hendrik Zanen (Table 8) owned by Zanen Verstoep Ltd., was first active during 1981 on lease to Canmar. In 1982, Esso contracted the use of a trailing suction hopper dredge, the Gateway (Figure 19), owned by Beaver Dredging Ltd. Esso began operating a second trailing suction hopper dredge owned by Zanen Verstoep Ltd., the Cornelis Zanen (Figure 20), during August 1983. The Gateway, the Cornelis Zanen and the Geopotes X have the ability to discharge dredge spoils over their bows.

### 3.2.2 Mechanical dredges

Mechanical dredges are also used in dredging operations in the Beaufort Sea, primarily as support or secondary machinery for small-scale tasks. Clamshell or grapple dredges (Figure 21), directly analogous to land based cranes, have been used in operations in Tuktoyaktuk Harbour for channel maintenance, and at Tuft Point for breakwater operations. When mounted on barges, these cranes have aided in the construction and abandonment (cleanup) of artificial islands.

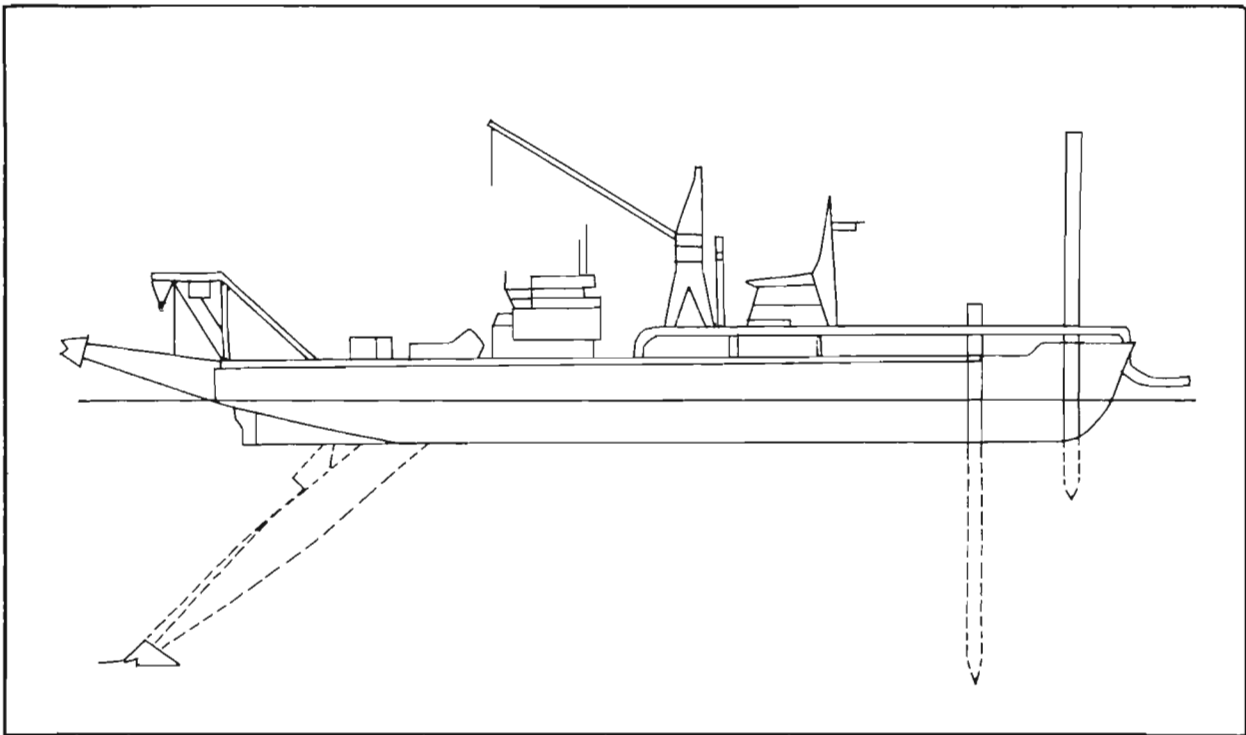
The Manitowac, for example, was used by Esso as early as 1973 to construct the Adgo F-28 island. In addition, floating dipper dredges, comparable to mechanical excavating shovels (Figure 21), are sometimes used for small-scale cleanup or fill operations.

Table 9 lists volumes dredged since 1972 by type of dredge vessel.

### 3.2.3 Future dredges

Future development of potential offshore hydrocarbons will require substantial dredging to meet the construction needs of artificial islands and seafloor trenches necessary for subsea pipelines. Industry has projected that, by the year 1995, dredging rates may reach between 60 and 70 million m<sup>3</sup> of material annually (Beaufort Sea/Mackenzie Delta Environmental Impact Statement, Volume 2, 1982) as compared to a 1982 rate of 9.6 million m<sup>3</sup>.

To accommodate their large-scale and year-round operations, Dome has designed a large capacity, hydraulic, ice-breaking hopper dredge. This so-called "Super Dredge" is to be a Class 6 icebreaker for year-round unassisted movement through ice, with a draghead and suction pipe protected from ice by moon pool enclosures. Retractable dredge pipes will extend to a water depth of 80 metres, more than twice the dredging depth of conventional hopper dredges. The hopper capacity will be 25,000 m<sup>3</sup>, two to three times greater than that of existing hopper dredges. Some components of the "Super Dredge" have been manufactured, (Figure 22) but plans for their assembly have since been deferred (John Duff, Dome. Pers. comm., 1984).



Length	107 m
Width	19.0 m
Loaded Draft (operating)	4.4 m
Deadweight	1725 metric tons
Maximum Cutter Depth	25.0 m (modified to 70 m 1982)
Cutter Diameter	2.9 m
Pump Drive	3800 H.P. x 2
Pipeline Diameter	90 cm
Pipeline (max.) Length	approx. 2 km land length, 1 km floating length
Number Engines	4
Installed Horsepower	17500
Spuds	2 (each 100 metric tons 37 m long)
Registered Ship Owner	Zanen Verstoep (Holland)

Figure 15. Cutter suction dredge Aquarius specifications.



Table 6. Cutter suction dredge Arctic Northern specifications.

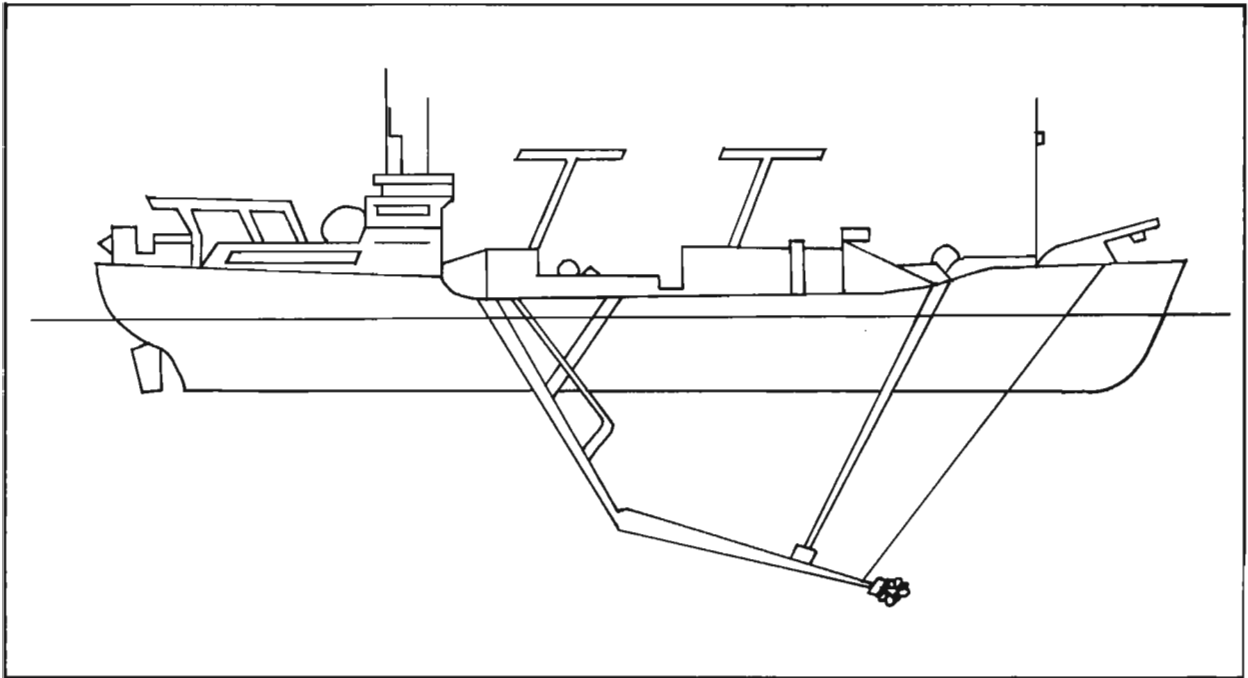
Length	35.4 m
Width	110 m
Loaded Draft (operating)	1.2 m
Deadweight	385.6 metric tons
Maximum Cutter Depth	18.3 m
Cutter Diameter	23 m
Pump Drive	2250 x 2
Pipeline Diameter	61 cm
Pipeline (max.) Length	1 km floating length
Number Engines	4
Installed Horsepower	3275
Spuds	2 (each 61 cm diam., 21.3 m)
Registered Ship Owner	Northern Construction (Vancouver, B.C.)

Table 7. Stationary suction dredge Sceptre Mackenzie specifications.

Length (barge)	76.2 m
Width (barge)	15.2 m
Draft (barge)	3.2 m
Deadweight	650 metric tons
Suction Pipe Diameter	61 cm
Pipeline (max.) Length	500.0 m
Maximum Suction Depth	57.0 m
Installed Horsepower	3200
Registered Ship Owner	Sceptre-Riedel-Dawson Constructors Ltd. (Vancouver, B.C.)

Table 8. Trailing suction hopper dredge Hendrik Zanen specifications.

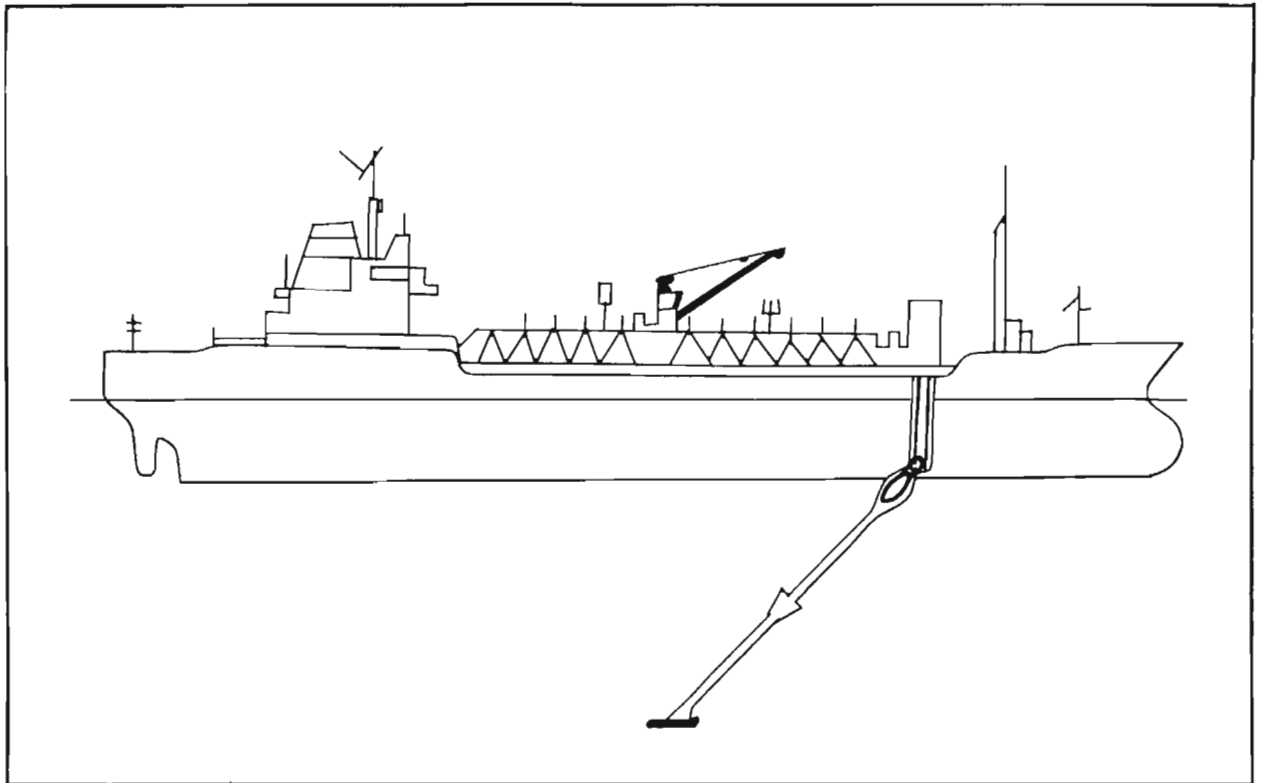
Length	121.0 m
Width	18.5 m
Loaded Draft	9.5 m
Deadweight	unavailable
Hopper Capacity	5760 m <sup>3</sup>
Dredge Depth	36.0 m
Number of Suction Pipes	2
Suction Pipe Diameter	90 cm
Sailing Speed	13 knots unloaded; 12 knots loaded
Registered Ship Owner	Zanen Verstoep (The Hague, Holland)



Length	80.0 m
Width	13.0 m
Loaded Draft	4.0 m
Deadweight	1500 metric tons (approximate)
Suction Pipe Diameter	85 cm
Pipeline (max.) Length	500 m
Maximum Suction Depth	49 m (45 m with extended pipe)
Installed Horsepower	975
Registered Ship Owner	Beaver Dredging Ltd. (Calgary, Alta.)

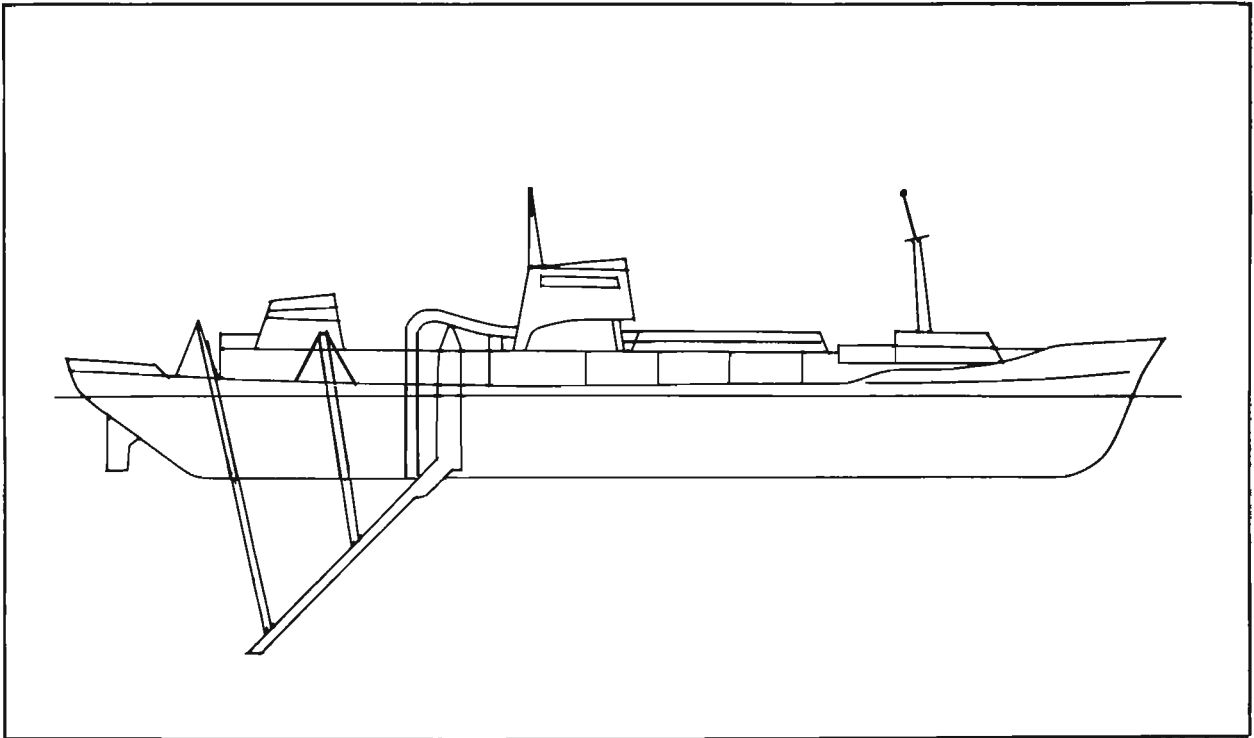
\*Modified to Cutter suction in 1983

Figure 16. Stationary suction dredge Beaver Mackenzie specifications.



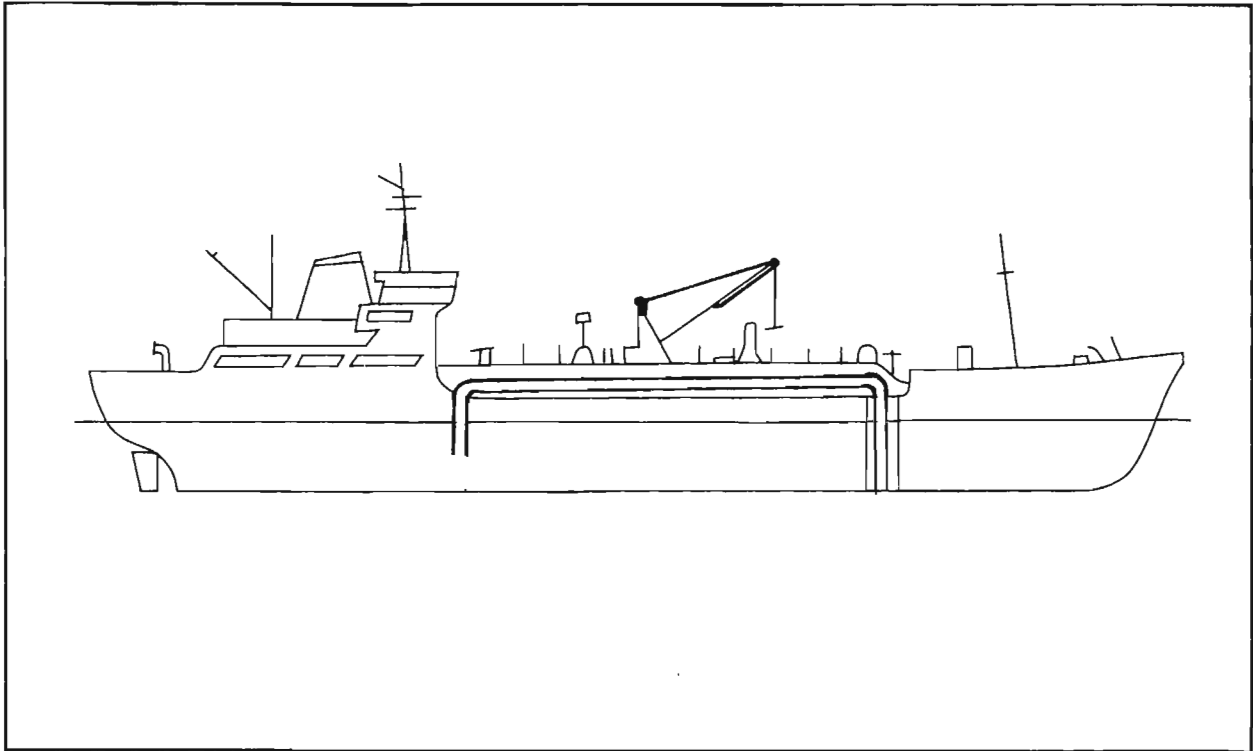
Length	135.0 m
Width	21.6 m
Loaded Draft	12.5 m
Deadweight	17170 metric tons
Hopper Capacity	9000 m <sup>3</sup>
Dredge Depth	34 m
Number of Suction Pipes	2
Suction Pipe Diameter	1.2 m
Sailing Speed	16 knots unloaded
Registered Ship Owner	Volker Stevin Dredging (Holland)

Figure 17. Trailing suction hopper dredge Geopotes X specifications.



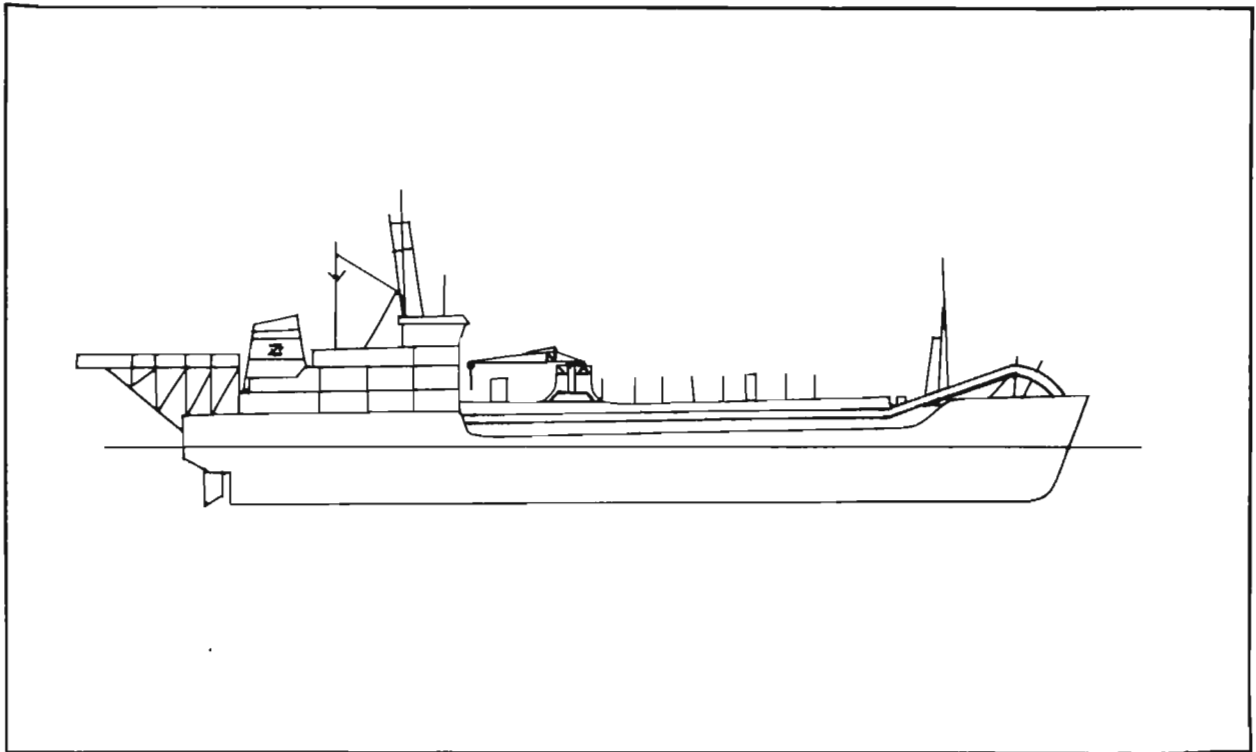
Length	128.5 m
Width	21.1 m
Loaded Draft	8.1 m
Deadweight	10558 metric tons
Hopper Capacity	6400.0 m <sup>3</sup>
Dredge Depth	35 m
Number of Suction Pipes	2
Suction Pipe Diameter	90 cm
Sailing Speed	12 knots unloaded
Registered Ship Owner	Volker Stevin Dredging (Holland)

Figure 18. Trailing suction hopper dredge Geopotes IX specifications.



Length	127.2 m
Width	19.5 m
Loaded Draft	11.2 m
Deadweight	6225 metric tons (approximate)
Hopper Capacity	6145 m <sup>3</sup>
Dredge Depth	30.0 m
Number of Suction Pipes	2
Sailing Speed	16 knots loaded
Registered Ship Owner	Beaver Dredging Ltd. (Calgary)

Figure 19. Trailing suction hopper dredge W.D. Gateway specifications.



Length	128.0 m
Width	23.0 m
Loaded Draft	9.0 m
Deadweight	unavailable
Hopper Capacity	8000m <sup>3</sup>
Dredge Depth	32.0 m (can be modified to 50.0 m)
Number of Suction Pipes	2
Sailing Speed	15.5 knots
Registered Ship Owner	Zanen Verstoep (Holland)

Figure 20. Trailing suction hopper dredge Cornelis Zanen specifications.

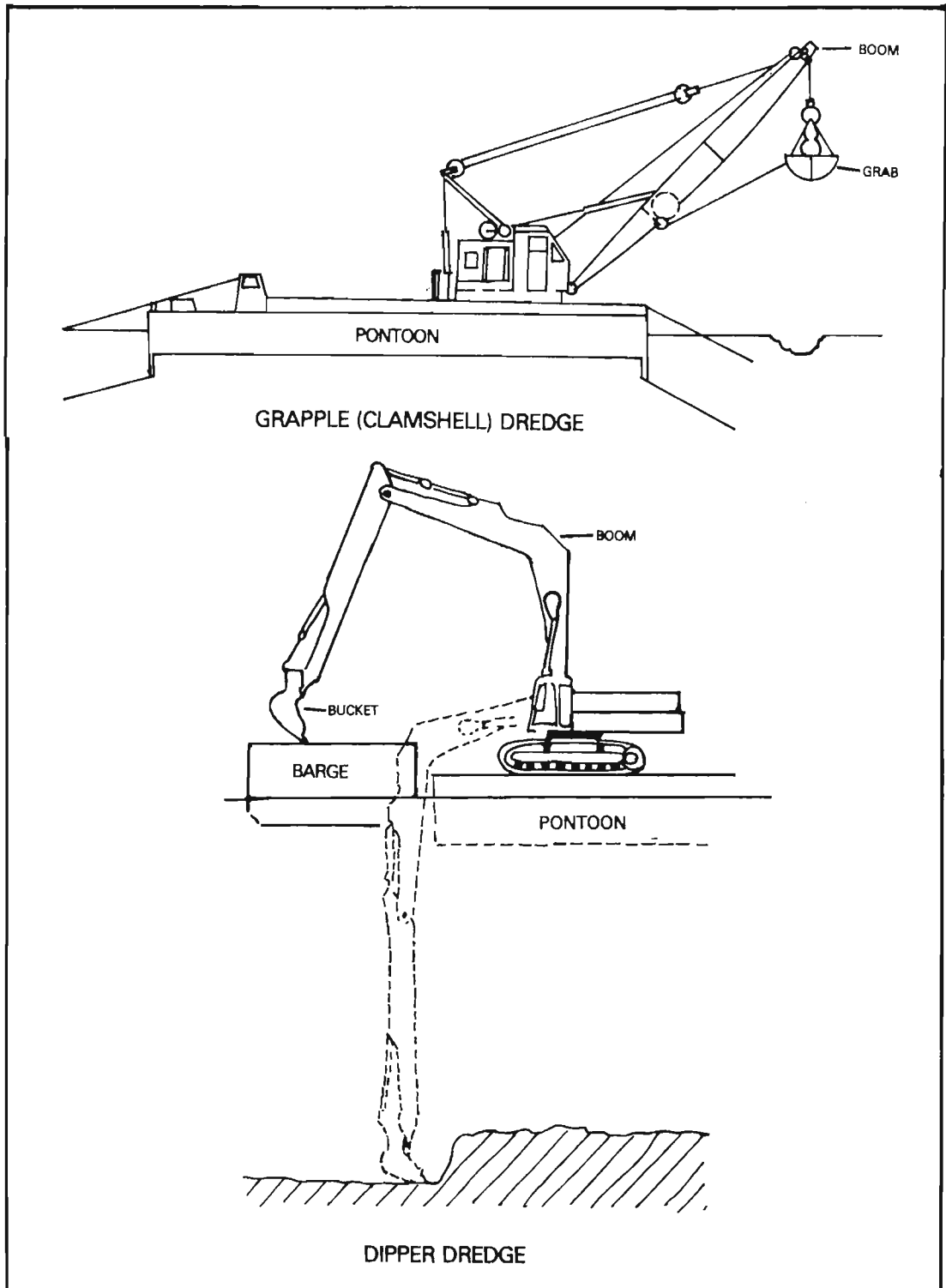


Figure 21. Mechanical dredges.  
(Source: MacLaren Plansearch Report for Public Works Canada and Transport Canada, 1982.)

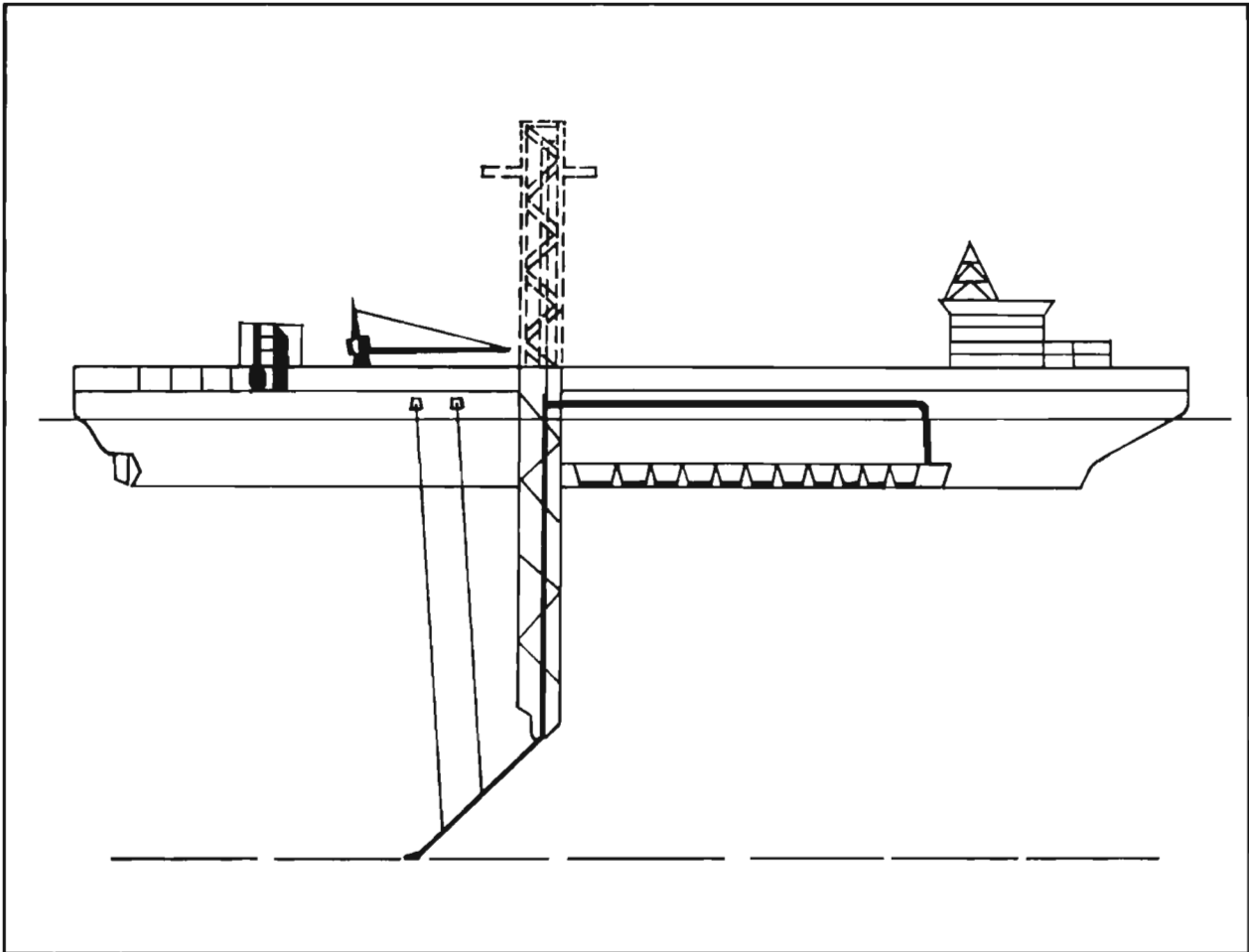
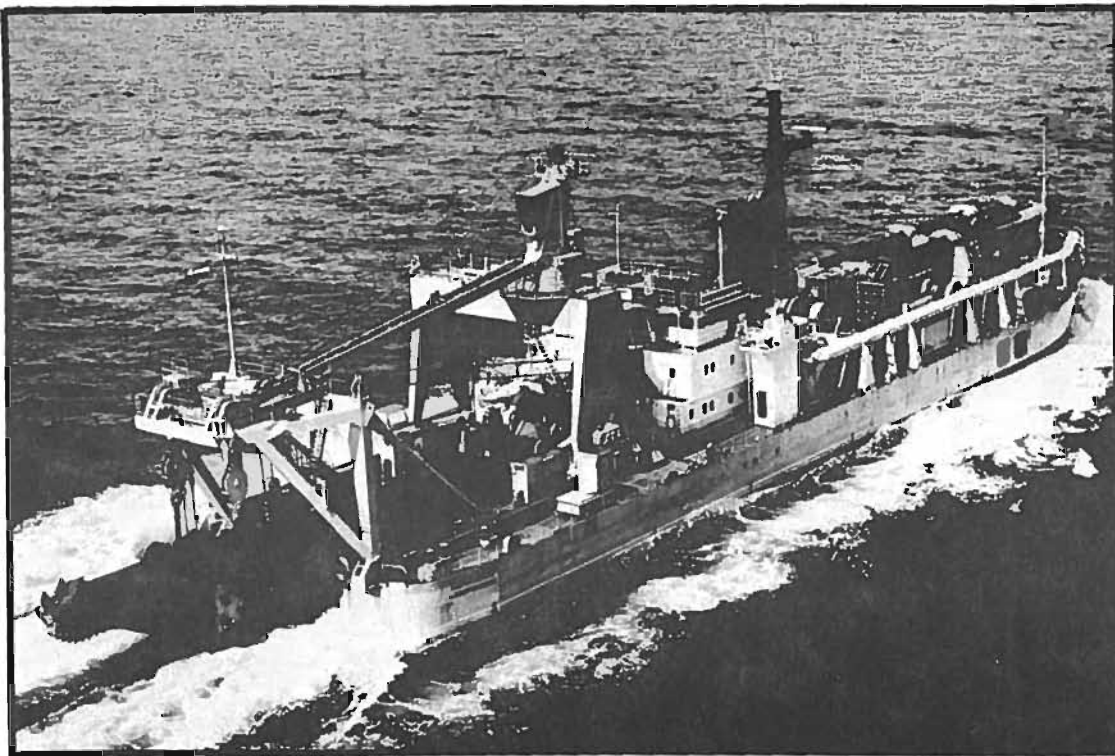


Figure 22. Dome's proposed Super dredge.



Table 9. Volumes dredged per dredge vessel type, 1972 to 1982.

Type of Dredge	Volume Dredged (M <sup>3</sup> )
Barge	7,646
Clamshell and barge	8,054
Cutter suction	20,607,211
Stationary suction	18,238,382
Trailing suction hopper	7,130,453

PHOTO 1. Aquarius (Cutter suction dredge).

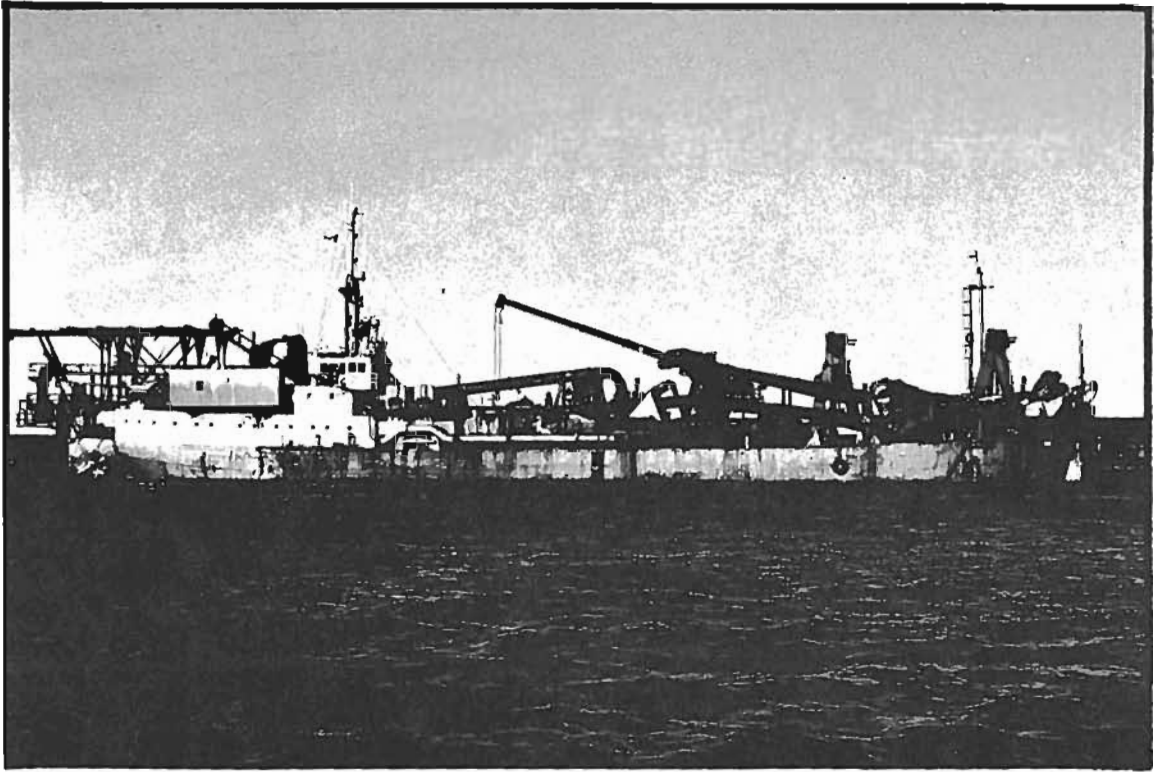


PHOTO 2. Beaver Mackenzie (Stationary suction dredge).



PHOTO 3. Hendrik Zanen (Trailing suction hopper dredge).



PHOTO 4. Geopotes IX (Trailing suction hopper dredge).



PHOTO 5. W.D. Gateway (Trailing suction hopper dredge).

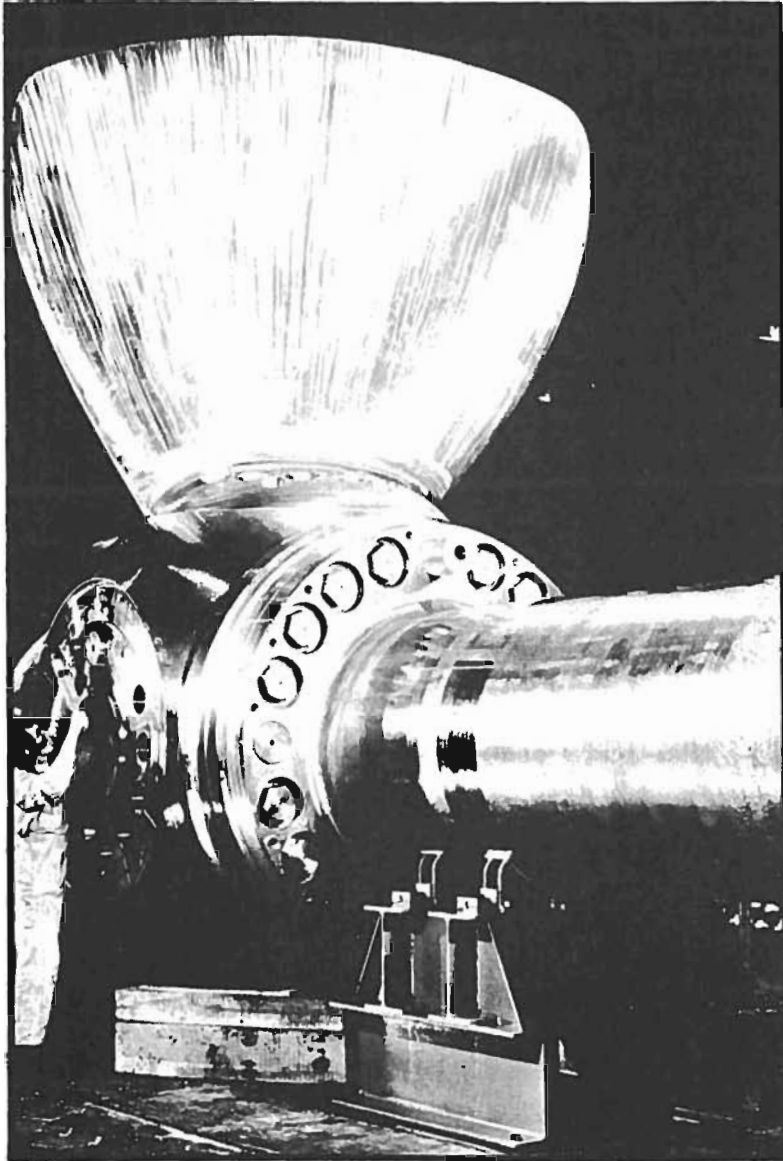


PHOTO 6. Super dredge propeller.

#### 4. OPERATIONS DATABASE

The following detailed database was produced on System 2000, a computer management system widely used in government agencies to order data and facts and to produce summaries. The Environmental Protection Service in Ottawa, for example, has produced an Ocean Dumping Control Act database on System 2000. This system was also employed to plot and compile the maps and tables in this section. This database contains descriptions of dredging operations that have occurred in the Beaufort Sea since 1959, the period 1972 to 1982 being most extensively documented.

##### 4.1 Definitions and explanations

###### (a) Operation and identification number

An individual dredging operation is defined as all the loading and dumping activities of one particular dredge vessel leased by the same company at the same location(s) within the single calendar year; the operation may, however, occur during one or more intervals (days, weeks) of continuous activity.

Each dredging operation is assigned a unique identification number, used consistently throughout this catalogue for crossreference purposes. The identification number (e.g. 76BMZ-01) is a descriptive notation comprised of the following abbreviated parameters:

- Year of operation (abbreviated) e.g. 76 represents 1976;
- Dredge vessel name, alphabetically, with abbreviations:
  - AQU - Aquarius
  - ARN - Arctic Northern
  - BMZ - Beaver Mackenzie
  - DPW - DPW 324
  - GEX - Geopotes X
  - GIX - Geopotes IX
  - HZN - Hendrik Zanen
  - SCM - Sceptre Mackenzie
  - UNK - Vessel Unknown
  - WDG - W.D. Gateway;
- Different dredging locales (sequential, 2 digit numbers):
 

If the same dredge is used by the same company during one particular year, but at several different locations, the operations are distinguished by a number 01, 02, 03, and so on.

###### (b) Year

Calendar year of all operations.

###### (c) Company and year

Name of the company which commissioned/sponsored the operation and the year of this sponsorship.

###### (d) Dredge name

Name of the dredge (vessel/barge) used (e.g. Aquarius, Geopotes X, etc.).

- (e) Dredge type  
Type of dredge technology used (e.g. cutter suction, trailing hopper, etc.).
- (f) Purpose  
General reason for dredging requirement, including the specific name of location or structure (e.g. Uviluk P-66 island construction, Tuft Point breakwater).
- (g) Load name  
Common place name of the borrow, extraction or load site (e.g. Tuk Harbour, Kugmallit Bay).
- (h) Load Latitude (Lat), Load Longitude (Long)  
Actual location of the borrow, extraction or load site, given in decimal notation (e.g. 69.420000, 132.950000); this was the necessary format for plotting dredge locations on the computer-drawn maps. To aid some readers, Appendix 7.1 lists all load (and dump) sites using the more familiar "degree, minute, and second" description.
- (i) Load Minimum (Min) Depth, Load Maximum (Max) Depth  
Actual water depth (below sea surface) of borrow, extraction or load site, given in metres. Load sites which are on land (e.g. Ya Ya Lakes area) are not and can not be assigned a value of depth.
- (j) Load sediment  
Type of material (sand, silt, gravel, etc.) loaded at borrow site.
- (k) Dump name  
Common place name of site where dredged material was unloaded. Often, the same name and location as (f).
- (l) Dump Latitude (Lat), Dump Longitude (Long)  
Actual location of the deposit or dump site, given in decimal notation (e.g. 69.420000, 132.950000); this was the necessary format for plotting dredge locations on the computer-drawn maps. Appendix 7.1 lists all dump (and load) sites using the more familiar "degree, minute, and second" description.
- (m) Dump Minimum (Min), Dump Maximum (Max) Depth  
Actual water depth (below sea surface) of dump site is given in metres. Dump sites on land (e.g. Tuk Hamlet) were not assigned a value of depth.
- (n) Dump method  
Specific method or technique by which dredge material was released at site (e.g. bottom valve, pipeline discharge, etc.).

- (o) Dump sediment  
Type of material (e.g. sand, gravel, etc.) deposited at operation site.
- (p) Island name  
Specific name of artificial island under construction or maintenance (e.g. Itiyok I-27).
- (q) Island type  
Type of island (e.g. sacrificial beach, caisson-retained, etc.) under construction or maintenance.
- (r) Island status  
Status of artificial island (active or abandoned) in November 1983. If an island operation was cancelled after initial dredging, "Island type" has been entered as NA.
- (s) Start date, Stop date  
The month/day/year of the startup and cessation of dredging activity which was more or less continuous over the period of days or weeks.

Sometimes, specific dates were not found in the records examined. In such cases, the following examples of notations are used:

01/01/1972 - the month and day are not known, but the year was recorded as 1972; one exception to this notation is 76UNK-01 which commenced on 01/01/1976;  
01/01/1900 or 1901 - the month, day, and year are not known.

- (t) Load volume, Dump volume  
The estimated amount (in cubic metres) of material removed from the borrow/load site and deposited/dumped near the same or at another location and estimated for each start/stop period as (s).
- (u) Authority reference, Amount licensed, Term start, Term complete  
Authority reference refers to the legislated authority under which the operation occurred (see Appendix 7.2).

Amount licensed refers to information contained within the authorizing document; more specifically, the amount of material licensed to be displaced.

Term start refers to information contained within the authorizing document; more specifically, the earliest licensed date that operations are allowed to begin.

Term complete refers to information contained within the authorizing document; more specifically, the licensed date by which operations must cease.



In cases where the information could not be located, the entire group of entries (Authority Reference, Amount Licensed, Term Start, Term Complete) has been left out of the dataset rather than entering repetitive lines of "Info not found in search".

(v) Remarks within datasets

In certain cases, entries within datasets have been replaced by one of three comments:

Information not found in search - This information could not be located by the authors during the document investigations or searches. In some cases, this information may exist, but time constraints did not permit extensive searches into all possible information sources.

NA (Not Applicable) - This comment appears where entries of database are not relevant to that particular dataset (e.g. Island Name). "Island Type" and "Island Status" are irrelevant to datasets dealing with harbour maintenance, and therefore, NA appears in these entry lines.

Proprietary - Where industry had information that it did not want to make public, database entries are labelled "Proprietary". This usually applies to the latitude and longitude of gravel or sand borrow sites.

(w) Glory holes

Dredging operations for construction of glory holes are noted under "Load" only.

(x) Comments

Comments include any miscellaneous information of interest or clarification pertaining only to that specific dataset.

(y) References

Information sources which provided details of each operation are listed. These include: letters, files, reports, and other documents.



To assist the reader who plans to continue using the database listings in Section 4.9, several introductory indexes and summary tables are provided. Table 10 outlines the different dredging operations and are identified by the dataset numbers according to purpose. The volumes dredged by various companies and operators are summarized in Table 11 for the period 1972 to 1982. Figures 23 and 24 depict total dredged volumes, both seasonally and annually, during this same 10-year period.

Table 10. Index of Beaufort Sea dredging operations by purpose and area.

A. HARBOUR, CHANNEL AND MOORING BASIN CONSTRUCTION AND MAINTENANCE

McKinley Bay: 79AQU-01, 80AQU-01, 81AQU-04, 82HZN-06, 82HZN-07.

Tuft Point: 76ARN-04, 76BMZ-01, 77ARN-03, 77BMZ-01, 78BMZ-01, 79BMZ-02, 82BMZ-02.

Tuktoyaktuk: 59DPW-01, 60DPW-01, 61DPW-01, 61DPW-02, 61DPW-03, 77ARN-01, 77UNK-01, 77UNK-02, 79ARN-01, 80AQU-02, 81AQU-01, 81AQU-02, 81BMZ-01, 81UNK-01, 82BMZ-01, 82UNK-02.

B. ARTIFICIAL ISLANDS

Immerk B-48:	72ARN-02, 73ARN-01
Adgo F-28:	73UNK-01, 73UNK-02
Netserk North 40:	74ARN-01, 75ARN-01, 75ARN-02
Netserk B-44:	74ARN-02
Adgo P-25:	74UNK-01
Pullen E-17:	74UNK-02
Pelly B-35:	74UNK-03
Unark L-24:	74UNK-04
Ikattok J-17:	75UNK-01
Kugmallit H-59:	76ARN-01
Adgo J-27:	76ARN-02
Isserk H-47:	76ARN-03
Arnak L-30:	76BMZ-02
Kannerk G-42:	76BMZ-03
Sarpik B-35:	76UNK-01
Adgo C-15:	75UNK-02
Isserk E-27:	77ARN-02, 77BMZ-02
Issungnak O-61:	79BMZ-01, 80BMZ-01, 80SCM-01
Kaglulik M-64:	80GEX-01, 80GEX-02
Tarsiut N-44:	80GEX-03, 80GEX-04, 80GEX-05, 81AQU-03, 81GEX-02, 81GEX-03, 81GEX-04, 81GEX-04, 81HZN-02, 81HZN-03, 81HZN-04, 81HZN-05, 82HZN-08
Alerk P-23:	81BMZ-02
Itiyok I-27:	81BMZ-03, 82BMZ-03, 82WDG-01
W. Atkinson L-17:	81BMZ-04
Uviluk P-66:	81GEX-01, 81GEX-05, 81GEX-06, 81HZN-01, 82GEX-01, 82GEX-03, 82GEX-05, 82HZN-01, 82HZN-03, 82HZN-05
Nerlerk B-67:	82AQU-02, 82GEX-06, 82HZN-09, 82HZN-10
Nerlerk F-67:	82GEX-02, 82HZN-02
Nerlerk J-77:	82GEX-04, 82HZN-04
Kogyuk N-67:	82GIX-02, 82GIX-03
Kadluk O-17:	82WDG-02
Minuk I-53:	82WDG-03

Table 10. Index of Beaufort Sea dredging operations by purpose and area.  
continued

C. GLORY HOLES

Tingmiark K-91:	76UNK-02
Kaglulik A-75:	77UNK-03
Natserk E-56:	78UNK-01
Ukalerk 2C-50:	78UNK-02
Kaglulik M-64:	78UNK-03
Koakoak O-22:	79UNK-01
Killanak A-77:	80UNK-01
N. Issungnak L-86:	81EXI-01
Kiggavik A-43:	82AQU-01
E. Amauligak I-44:	82GIX-01
Natiak O-44:	82UNK-01

D. OTHER

72ARN-01, 81BMZ-05, 82GEX-07

Table 11. Total volumes dredged (m<sup>3</sup>) by company/operator per year, 1972 to 1982.

1972	Imperial/Esso	304,000
1973	Imperial/Esso	322,800
1974	Imperial/Esso	454,460
	Sun Oil Ltd.	53,132
1975	Imperial/Esso	421,540
1976	Dome/Canmar	18,519
	Imperial/Esso	3,883,395
1977	Arcnav Marine Ltd.	7,646
	Dome/Canmar	37,038
	Imperial/Esso	3,715,000
1978	Dome/Canmar	55,557
	Imperial/Esso	450,000
1979	Dome/Canmar	3,445,519
	Government N.W.T.	80,000
	Imperial Esso	4,781,620
1980	Dome/Canmar	6,791,597
	Imperial/Esso	1,389,380
1981	Arctic Transportation Ltd.	5,100
	Dome/Canmar	7,140,998
	Gulf	10,000
	Imperial/Esso	3,438,474
1982	Arctic Transportation Ltd.	9,000
	Dome/Canmar	4,430,836
	Gulf	699,300
	Imperial/Esso	4,453,865

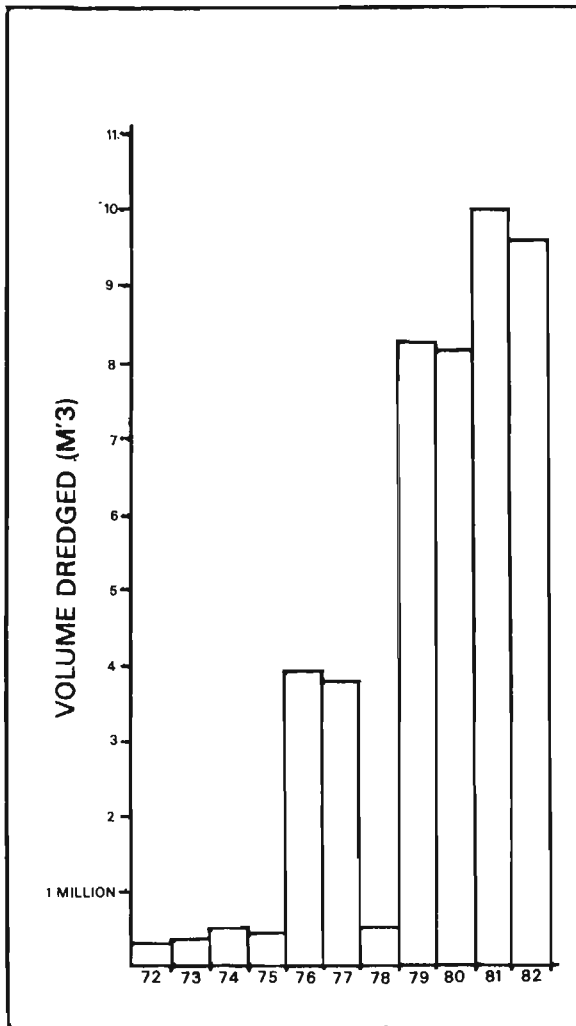


Figure 23. Total volumes dredged per year 1972 to 1982.

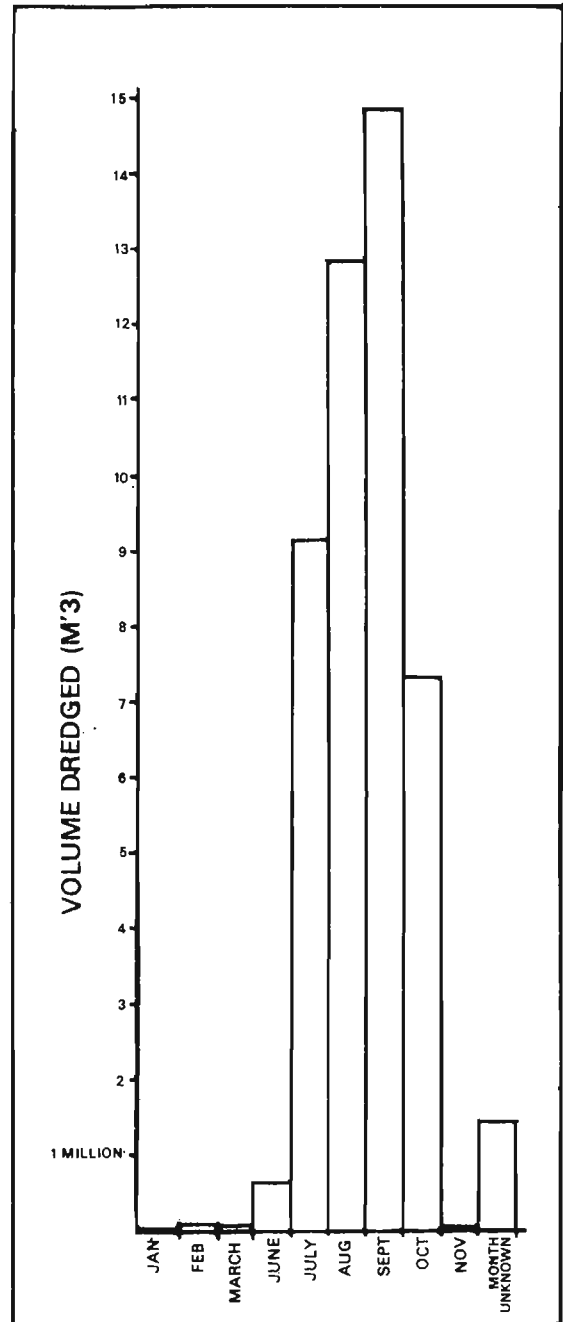


Figure 24. Total volumes dredged per month 1972 to 1982.

## 4.2 Database

DATASET NUMBER\* 59DPW-01  
 YEAR\* 1959  
 COMPANY & YEAR\* PUBLIC WORKS CANADA 1959  
 DREDGE NAME\* DPW 324  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUK HARBOUR AND CHANNEL MAINTENANCE  
 LOAD NAME\* TUK EAST CHANNEL  
 LOAD LAT\* 69.450000  
 LOAD LON\* 132.980000  
 LOAD MIN DEPTH\* .5  
 LOAD MAX DEPTH\* 2.0  
 LOAD SEDIMENT\* GRAVEL, SAND, SILT  
 DUMP NAME\* TUK EAST CHANNEL  
 DUMP LAT\* 69.450000  
 DUMP LON\* 132.980000  
 DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP METHOD\* PIPELINE DISCHARGE  
 DUMP SEDIMENT\* GRAVEL, SAND, SILT  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/22/1959  
 STOP DATE\* 07/31/1959  
 LOAD VOL\* 6974  
 DUMP VOL\* 6974

START DATE\* 08/01/1959  
 STOP DATE\* 08/31/1959  
 LOAD VOL\* 21619  
 DUMP VOL\* 21619

START DATE\* 09/01/1959  
 STOP DATE\* 09/09/1959  
 LOAD VOL\* 62766  
 DUMP VOL\* 62766

COMMENT\* LAT AND LON FOR DUMPSITE ARE APPROXIMATE.

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF THE TOTAL VOLUME DREDGED (34870 M'3) IN THE GIVEN PERIOD.

COMMENT\* DREDGE DPW 324 WAS RENAMED DPW 224.

REFERENCE\* LETTER FROM C. COLP (DEPT. OF PUBLIC WORKS, EDMONTON) TO D. TAYLOR (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 07/15/83.

\*\*\*\*\*

DATASET NUMBER\* 60DPW-01  
 YEAR\* 1960  
 COMPANY & YEAR\* PUBLIC WORKS CANADA 1960  
 DREDGE NAME\* DPW 324  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUK HARBOUR AND CHANNEL MAINTENANCE  
 LOAD NAME\* TUK EAST CHANNEL  
 LOAD LAT\* 69.450000  
 LOAD LON\* 132.980000  
 LOAD MIN DEPTH\* 2.0  
 LOAD MAX DEPTH\* 2.0  
 LOAD SEDIMENT\* GRAVEL, SAND, SILT, CLAY  
 DUMP NAME\* TUK EAST CHANNEL  
 DUMP LAT\* 69.450000  
 DUMP LON\* 132.980000  
 DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP METHOD\* PIPELINE DISCHARGE  
 DUMP SEDIMENT\* SAND, SILT, GRAVEL, CLAY  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/18/1960  
 STOP DATE\* 07/31/1960  
 LOAD VOL\* 8461  
 DUMP VOL\* 8461

START DATE\* 08/01/1960  
 STOP DATE\* 08/31/1960  
 LOAD VOL\* 18726  
 DUMP VOL\* 18726

START DATE\* 09/01/1960  
 STOP DATE\* 09/13/1960  
 LOAD VOL\* 7870  
 DUMP VOL\* 7870

COMMENT\* LAT AND LON FOR DUMPSITE ARE APPROXIMATE.

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF THE TOTAL VOLUME DREDGED (35052 M<sup>3</sup>) IN THE GIVEN PERIOD.

COMMENT\* DREDGE 324 WAS RENAMED DPW 224.

REFERENCE\* LETTER FROM C. COLP (DEPT. OF PUBLIC WORKS, EDMONTON) TO D. TAYLOR (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 07/15/83.

\*\*\*\*\*

DATASET NUMBER\* 61DPW-01  
 YEAR\* 1961



COMPANY & YEAR\* PUBLIC WORKS CANADA 1961  
 DREDGE NAME\* DPW 324  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUK HARBOUR AND CHANNEL MAINTENANCE  
 LOAD NAME\* TUK HARBOUR, HUDSON BAY CO. WHARF  
 LOAD LAT\* 69.450000  
 LOAD LON\* 133.030000  
 LOAD MIN DEPTH\* 1.5  
 LOAD MAX DEPTH\* 2.0  
 LOAD SEDIMENT\* CLAY, ROCK  
 DUMP NAME\* TUK HARBOUR, HUDSON BAY CO. WHARF  
 DUMP LAT\* 69.450000  
 DUMP LON\* 133.030000  
 DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP METHOD\* PIPELINE DISCHARGE  
 DUMP SEDIMENT\* CLAY, ROCK  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/07/1961  
 STOP DATE\* 07/24/1961  
 LOAD VOL\* 940  
 DUMP VOL\* 940

COMMENT\* LAT AND LON FOR DUMPSITE ARE APPROXIMATE.

COMMENT\* DREDGE DPW 324 WAS RENAMED DPW 224.

REFERENCE\* LETTER FROM C. COLP (DEPT. OF PUBLIC WORKS, EDMONTON) TO  
 D. TAYLOR (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 07/15/83.

\*\*\*\*\*

DATASET NUMBER\* 61DPW-02  
 YEAR\* 1961  
 COMPANY & YEAR\* PUBLIC WORKS CANADA 1961  
 DREDGE NAME\* DPW 324  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUK HARBOUR AND CHANNEL MAINTENANCE  
 LOAD NAME\* TUK HARBOUR, NTCL CAMP  
 LOAD LAT\* 69.430000  
 LOAD LON\* 132.970000  
 LOAD MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 LOAD MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 LOAD SEDIMENT\* GRAVEL, SAND  
 DUMP NAME\* TUK HARBOUR, NTCL CAMP  
 DUMP LAT\* 69.430000  
 DUMP LON\* 132.960000  
 DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH

DUMP METHOD\* PIPELINE DISCHARGE  
 DUMP SEDIMENT\* SAND, GRAVEL  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/07/1961  
 STOP DATE\* 07/24/1961  
 LOAD VOL\* 2008  
 DUMP VOL\* 2008

COMMENT\* LAT AND LON FOR DUMPSITE ARE APPROXIMATE.

COMMENT\* DREDGE DPW 324 WAS RENAMED DPW 224.

REFERENCE\* LETTER FROM C. COLP (DEPT. OF PUBLIC WORKS, EDMONTON) TO  
 D. TAYLOR (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 07/15/83.

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DATASET NUMBER\* 61DPW-03  
 YEAR\* 1961  
 COMPANY & YEAR\* PUBLIC WORKS CANADA 1961  
 DREDGE NAME\* DPW 324  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUK HARBOUR AND CHANNEL MAINTENANCE  
 LOAD NAME\* TUK EAST CHANNEL  
 LOAD LAT\* 69.450000  
 LOAD LON\* 132.980000  
 LOAD MIN DEPTH\* 1.5  
 LOAD MAX DEPTH\* 2.5  
 LOAD SEDIMENT\* SAND, GRAVEL  
 DUMP NAME\* TUK EAST CHANNEL  
 DUMP LAT\* 69.450000  
 DUMP LON\* 132.980000  
 DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP METHOD\* FLOATING PIPELINE  
 DUMP SEDIMENT\* GRAVEL, SAND  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/07/1961  
 STOP DATE\* 07/24/1961  
 LOAD VOL\* 5659  
 DUMP VOL\* 5659

COMMENT\* LAT AND LON FOR DUMPSITE ARE APPROXIMATE.

COMMENT\* DREDGE DPW 324 WAS RENAMED DPW 224.

REFERENCE\* LETTER FROM C. COLP (DEPT. OF PUBLIC WORKS, EDMONTON) TO  
D. TAYLOR (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 07/15/83.

\*\*\*\*\*

DATASET NUMBER\* 72ARN-01  
YEAR\* 1972  
COMPANY & YEAR\* IMPERIAL/ESSO 1972  
DREDGE NAME\* ARCTIC NORTHERN  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* BARGE LOADING BASE AT RAE ISLAND  
LOAD NAME\* RAE ISLAND  
LOAD LAT\* 69.540000  
LOAD LON\* 135.100000  
LOAD MIN DEPTH\* .3  
LOAD MAX DEPTH\* 1.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* RAE ISLAND  
DUMP LAT\* 69.540000  
DUMP LON\* 135.100000  
DUMP MIN DEPTH\* .3  
DUMP MAX DEPTH\* 1.0  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/08/1972  
STOP DATE\* 07/11/1972  
LOAD VOL\* INFORMATION NOT FOUND IN SEARCH  
DUMP VOL\* INFORMATION NOT FOUND IN SEARCH

START DATE\* 08/07/1972  
STOP DATE\* 08/09/1972  
LOAD VOL\* INFORMATION NOT FOUND IN SEARCH  
DUMP VOL\* INFORMATION NOT FOUND IN SEARCH

COMMENT\* NO VOLUMES GIVEN.

REFERENCE\* F.F. SLANEY AND COMPANY LTD., 1973. ENVIRONMENTAL IMPACT A  
SSESSMENT IMMERK ARTIFICIAL ISLAND CONSTRUCTION, MACKENZIE BAY,  
N.W.T. VOLUME 1, ENVIRONMENTAL STATEMENT. PREPARED FOR IMPERIAL  
OIL LTD., CALGARY. F.F. SLANEY AND COMPANY LTD.; VANCOUVER.

\*\*\*\*\*

DATASET NUMBER\* 72ARN-02  
YEAR\* 1972

COMPANY & YEAR\* IMPERIAL/ESSO 1972  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* IMMERK B-48 ISLAND  
 LOAD NAME\* IMMERK B-48 AREA  
 LOAD LAT\* 69.620000  
 LOAD LON\* 135.180000  
 LOAD MIN DEPTH\* 3.3  
 LOAD MAX DEPTH\* 3.3  
 LOAD SEDIMENT\* SAND, SILT  
 DUMP NAME\* IMMERK B-48 ISLAND  
 DUMP LAT\* 69.620000  
 DUMP LON\* 135.180000  
 DUMP MIN DEPTH\* 3.3  
 DUMP MAX DEPTH\* 3.3  
 DUMP METHOD\* FLOATING PIPELINE  
 DUMP SEDIMENT\* SILT, GRAVEL  
 ISLAND NAME\* IMMERK B-48  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED 1974

START DATE\* 07/15/1972  
 STOP DATE\* 07/31/1972  
 LOAD VOL\* 69900  
 DUMP VOL\* 69900

START DATE\* 08/01/1972  
 STOP DATE\* 08/31/1972  
 LOAD VOL\* 127300  
 DUMP VOL\* 127300

START DATE\* 09/01/1972  
 STOP DATE\* 09/26/1972  
 LOAD VOL\* 106800  
 DUMP VOL\* 106800

AUTHORITY REFERENCE\* LAND USE PERMIT N71J003  
 AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
 TERM START\* 06/30/1972  
 TERM COMPLETE\* 09/30/1972

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
 THE TOTAL VOLUME DREDGED (304000 M'3) IN THE GIVEN PERIOD.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B.SMILEY (DEPT. OF FISHERIES  
 AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL ISLAND SU  
 MMARY SUPPLEMENT.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* HOME OIL, ESSO, 1983. MACKENZIE DELTA - BEAUFORT SEA OFFSH  
 ORE CONSTRUCTION.

REFERENCE\* JIM BUTLER, ESSO , PERSONAL COMMUNICATION, 1983.

REFERENCE\* F.F. SLANEY AND COMPANY LTD., 1973. ENVIRONMENTAL IMPACT  
ASSESSMENT IMMERK ARTIFICIAL ISLAND CONSTRUCTION, MACKENZIE BAY,  
N.W.T. VOLUME 1, ENVIRONMENTAL STATEMENT. PREPARED FOR IMPERIA  
OIL LTD., CALGARY. F.F. SLANEY AND COMPANY.; VANCOUVER.

\*\*\*\*\*

DATASET NUMBER\* 73ARN-01  
YEAR\* 1973  
COMPANY & YEAR\* IMPERIAL/ESSO 1973  
DREDGE NAME\* ARCTIC NORTHERN  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* IMMERK B-48 ISLAND  
LOAD NAME\* IMMERK B-48 AREA  
LOAD LAT\* 69.620000  
LOAD LON\* 135.180000  
LOAD MIN DEPTH\* 3.3  
LOAD MAX DEPTH\* 3.3  
LOAD SEDIMENT\* SILT, GRAVEL  
DUMP NAME\* IMMERK B-48 ISLAND  
DUMP LAT\* 69.620000  
DUMP LON\* 135.180000  
DUMP MIN DEPTH\* 3.3  
DUMP MAX DEPTH\* 3.3  
DUMP METHOD\* FLOATING PIPELINE  
DUMP SEDIMENT\* SILT, GRAVEL  
ISLAND NAME\* IMMERK B-48  
ISLAND TYPE\* SACRIFICIAL BEACH  
ISLAND STATUS\* ABANDONED 1974

START DATE\* 07/07/1973  
STOP DATE\* 07/31/1973  
LOAD VOL\* 112800  
DUMP VOL\* 72580

START DATE\* 08/01/1973  
STOP DATE\* 08/31/1973  
LOAD VOL\* 139900  
DUMP VOL\* 90000

START DATE\* 09/01/1973  
STOP DATE\* 09/06/1973  
LOAD VOL\* 27100  
DUMP VOL\* 17420

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
THE TOTAL VOLUME DREDGED (279,800 M'3) IN THE GIVEN PERIOD.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* F.F. SLANEY AND COMPANY LTD., 1973. ENVIRONMENTAL IMPACT A  
SSESSMENT IMMERK ARTIFICIAL ISLAND CONSTRUCTION, MACKENZIE BAY,

N.W.T. VOLUME 1, ENVIRONMENTAL STATEMENT. PREPARED FOR IMPERIAL OIL LTD., CALGARY. F.F. SLANEY AND COMPANY LTD.; VANCOUVER.

\*\*\*\*\*

DATASET NUMBER\* 73UNK-01  
 YEAR\* 1973  
 COMPANY & YEAR\* IMPERIAL/ESSO 1973  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* CLAMSHELL AND BARGE  
 PURPOSE\* ADGO F-28 ISLAND  
 LOAD NAME\* IMMERK B-48 AREA  
 LOAD LAT\* 69.620000  
 LOAD LON\* 135.180000  
 LOAD MIN DEPTH\* 3.0  
 LOAD MAX DEPTH\* 3.3  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* ADGO F-28 ISLAND  
 DUMP LAT\* 69.450000  
 DUMP LON\* 135.850000  
 DUMP MIN DEPTH\* 2.3  
 DUMP MAX DEPTH\* 2.3  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* ADGO F-28  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED 1974

START DATE\* 08/29/1973  
 STOP DATE\* 08/31/1973  
 LOAD VOL\* 2930  
 DUMP VOL\* 2640

START DATE\* 09/01/1973  
 STOP DATE\* 09/19/1973  
 LOAD VOL\* 18570  
 DUMP VOL\* 16710

AUTHORITY REFERENCE\* LAND USE PERMIT N73J419  
 AMOUNT LICENSED\* 3822  
 TERM START\* 08/08/1973  
 TERM COMPLETE\* 12/15/1973

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* HOME OIL, ESSO, 1983. MACKENZIE DELTA - BEAUFORT SEA OFFSHORE CONSTRUCTION.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL ISLAND SUMMARY SUPPLEMENT.

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DATASET NUMBER\* 73UNK-02  
 YEAR\* 1973  
 COMPANY & YEAR\* IMPERIAL/ESSO 1973  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* CLAMSHELL AND BARGE  
 PURPOSE\* ADGO F-28 ISLAND  
 LOAD NAME\* ADGO F-28 ISLAND  
 LOAD LAT\* 69.450000  
 LOAD LON\* 135.850000  
 LOAD MIN DEPTH\* 2.0  
 LOAD MAX DEPTH\* 2.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* ADGO F-28 ISLAND  
 DUMP LAT\* 69.450000  
 DUMP LON\* 135.850000  
 DUMP MIN DEPTH\* 2.3  
 DUMP MAX DEPTH\* 2.3  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* ADGO F-28  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED 1974

START DATE\* 08/29/1973  
 STOP DATE\* 08/31/1973  
 LOAD VOL\* 2930  
 DUMP VOL\* 2640

START DATE\* 09/01/1973  
 STOP DATE\* 09/19/1973  
 LOAD VOL\* 18570  
 DUMP VOL\* 16710

AUTHORITY REFERENCE\* LAND USE PERMIT N73J419  
 AMOUNT LICENSED\* 3822  
 TERM START\* 08/08/1973  
 TERM COMPLETE\* 12/15/1973

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
 ISLAND SUMMARY SUPPLEMENT.

\*\*\*\*\*

DATASET NUMBER\* 74ARN-01

YEAR\* 1974  
 COMPANY & YEAR\* IMPERIAL/ESSO 1974  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* NETSERK NORTH-40 (NETSERK F-40)  
 LOAD NAME\* GARRY SPIT  
 LOAD LAT\* 69.520000  
 LOAD LON\* 135.670000  
 LOAD MIN DEPTH\* 1.6  
 LOAD MAX DEPTH\* 1.8  
 LOAD SEDIMENT\* SAND, GRAVEL  
 DUMP NAME\* NETSERK NORTH-40 ISLAND  
 DUMP LAT\* 69.660000  
 DUMP LON\* 135.900000  
 DUMP MIN DEPTH\* 7.0  
 DUMP MAX DEPTH\* 7.0  
 DUMP METHOD\* BARGE  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* NETSERK NORTH-40  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED SEPTEMBER 1976

START DATE\* 08/16/1974  
 STOP DATE\* 08/22/1974  
 LOAD VOL\* 8100  
 DUMP VOL\* 8100

START DATE\* 08/23/1974  
 STOP DATE\* 08/31/1974  
 LOAD VOL\* 7120  
 DUMP VOL\* 7120

START DATE\* 09/01/1974  
 STOP DATE\* 09/07/1974  
 LOAD VOL\* 8490  
 DUMP VOL\* 8490

START DATE\* 09/08/1974  
 STOP DATE\* 09/08/1974  
 LOAD VOL\* 250  
 DUMP VOL\* 250

REFERENCE\* HOME OIL, ESSO, 1983. MACKENZIE DELTA - BEAUFORT SEA OFFSHORE CONSTRUCTION.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* IMPERIAL OIL LTD., 1974. CONSTRUCTION OF DREDGED DRILLING ISLANDS FOR NETSERK B-44 AND ADGO P-25 WELLS, BEAUFORT SEA, 1974.

REFERENCE\* IMPERIAL OIL LTD. 1974. CONSTRUCTION OF DREDGED DRILLING ISLANDS FOR NETSERK B-44 AND IKATTOK J-17. IMPERIAL OIL LTD., CALGARY.



\*\*\*\*\*

DATASET NUMBER\* 74ARN-02  
 YEAR\* 1974  
 COMPANY & YEAR\* IMPERIAL/ESSO 1974  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* NETSERK B-44 ISLAND  
 LOAD NAME\* PELLY ISLAND  
 LOAD LAT\* 69.500000  
 LOAD LON\* 135.750000  
 LOAD MIN DEPTH\* 4.6  
 LOAD MAX DEPTH\* 4.6  
 LOAD SEDIMENT\* SAND, GRAVEL  
 DUMP NAME\* NETSERK B-44 ISLAND  
 DUMP LAT\* 69.550000  
 DUMP LON\* 135.930000  
 DUMP MIN DEPTH\* 4.6  
 DUMP MAX DEPTH\* 4.6  
 DUMP METHOD\* BARGE  
 DUMP SEDIMENT\* SAND, GRAVEL  
 ISLAND NAME\* NETSERK B-44  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED JULY 1976

START DATE\* 07/16/1974  
 STOP DATE\* 07/31/1974  
 LOAD VOL\* 78160  
 DUMP VOL\* 70350

START DATE\* 08/01/1974  
 STOP DATE\* 08/31/1974  
 LOAD VOL\* 151450  
 DUMP VOL\* 136310

START DATE\* 09/01/1974  
 STOP DATE\* 09/21/1974  
 LOAD VOL\* 102590  
 DUMP VOL\* 92340

AUTHORITY REFERENCE\* LAND USE PERMIT N74A790  
 AMOUNT LICENSED\* 0  
 TERM START\* 07/02/1974  
 TERM COMPLETE\* 09/15/1975

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF THE  
 TOTAL VOLUME DREDGED (332200 M<sup>3</sup>) IN THE GIVEN PERIOD.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
 ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* IMPERIAL OIL LTD., 1974. CONSTRUCTION OF DREDGED DRILLING  
ISLANDS FOR NETSERK B-44 AND IKATTOK J-17, BEAUFORT SEA, 1974

REFERENCE\* IMPERIAL OIL LTD. 1974. CONSTRUCTION OF DREDGED DRILLING  
ISLANDS FOR NETSERK B-44 AND ADGO P-25 WELLS. IMPERIAL OIL LTD.,  
CALGARY.

REFERENCE\* HOME OIL, ESSO, 1983. MACKENZIE DELTA - BEAUFORT SEA OFFSH  
ORE CONSTRUCTION.

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DATASET NUMBER\* 74UNK-01  
YEAR\* 1974  
COMPANY & YEAR\* IMPERIAL/ESSO 1974  
DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
DREDGE TYPE\* CLAMSHELL AND BARGE  
PURPOSE\* ADGO P-25 ISLAND  
LOAD NAME\* ADGO P-25 AREA  
LOAD LAT\* 69.420000  
LOAD LON\* 135.840000  
LOAD MIN DEPTH\* 1.5  
LOAD MAX DEPTH\* 1.5  
LOAD SEDIMENT\* SILT  
DUMP NAME\* ADGO P-25 ISLAND  
DUMP LAT\* 69.420000  
DUMP LON\* 135.840000  
DUMP MIN DEPTH\* 1.5  
DUMP MAX DEPTH\* 1.5  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* SILT  
ISLAND NAME\* ADGO P-25  
ISLAND TYPE\* SANDBAG RETAINED  
ISLAND STATUS\* ABANDONED 1975

START DATE\* 08/26/1974  
STOP DATE\* 08/31/1974  
LOAD VOL\* 6820  
DUMP VOL\* 6130

START DATE\* 09/01/1974  
STOP DATE\* 09/21/1974  
LOAD VOL\* 23880  
DUMP VOL\* 21470

AUTHORITY REFERENCE\* LAND USE PERMIT N74A810  
AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
TERM START\* 08/08/1973

TERM COMPLETE\* 12/15/1973

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* IMPERIAL OIL LTD. 1974. CONSTRUCTION OF DREDGED DRILLING  
ISLANDS FOR NETSERK B-44 AND IKATTOK J-17. IMPERIAL OIL LTD.,  
CALGARY.

REFERENCE\* IMPERIAL OIL LTD., 1974. CONSTRUCTION OF DREDGED DRILLING  
ISLANDS FOR NETSERK B-44 AND ADGO P-25 WELLS, BEAUFORT SEA, 1974.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DY  
NAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTI  
TUTE OF OCEANOGRAPHY, DARTMOUTH, N.S.. WOODWARD-CLYDE CONSULTANT  
S, VICTORIA.

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DATASET NUMBER\* 74UNK-02

YEAR\* 1974

COMPANY & YEAR\* IMPERIAL/ESSO 1974

DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH

DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH

PURPOSE\* PULLEN E-17 ISLAND

LOAD NAME\* YAYA LAKES

LOAD LAT\* NOT APPLICABLE

LOAD LON\* NOT APPLICABLE

LOAD MIN DEPTH\* NOT APPLICABLE

LOAD MAX DEPTH\* NOT APPLICABLE

LOAD SEDIMENT\* GRAVEL

DUMP NAME\* PULLEN E-17 ISLAND

DUMP LAT\* 69.770000

DUMP LON\* 134.330000

DUMP MIN DEPTH\* 1.6

DUMP MAX DEPTH\* 1.6

DUMP METHOD\* TRUCK

DUMP SEDIMENT\* GRAVEL

ISLAND NAME\* PULLEN E-17

ISLAND TYPE\* SANDBAG RETAINED

ISLAND STATUS\* ABANDONED JULY 1976

START DATE\* 02/01/1974

STOP DATE\* 02/28/1974

LOAD VOL\* 32100

DUMP VOL\* 29180

START DATE\* 03/01/1974

STOP DATE\* 03/31/1974

LOAD VOL\* 35500  
DUMP VOL\* 32320

AUTHORITY REFERENCE\* LAND USE PERMIT N73A652  
AMOUNT LICENSED\* 61164  
TERM START\* 02/01/1974  
TERM COMPLETE\* 12/31/1974

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
THE TOTAL VOLUME DREDGED (67600 M<sup>3</sup>) IN THE GIVEN PERIOD.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* HOME OIL, ESSO, 1983. MACKENZIE DELTA - BEAUFORT SEA OFFSHORE  
ORE CONSTRUCTION.

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DATASET NUMBER\* 74UNK-03  
YEAR\* 1974  
COMPANY & YEAR\* SUN OIL 1974  
DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
DREDGE TYPE\* CLAMSHELL AND BARGE  
PURPOSE\* PELLY B-35 ISLAND  
LOAD NAME\* YAYA LAKES  
LOAD LAT\* NOT APPLICABLE  
LOAD LON\* NOT APPLICABLE  
LOAD MIN DEPTH\* NOT APPLICABLE  
LOAD MAX DEPTH\* NOT APPLICABLE  
LOAD SEDIMENT\* GRAVEL  
DUMP NAME\* PELLY B-35 ISLAND  
DUMP LAT\* 69.570000  
DUMP LON\* 135.390000  
DUMP MIN DEPTH\* 2.0  
DUMP MAX DEPTH\* 2.0  
DUMP METHOD\* BARGE  
DUMP SEDIMENT\* GRAVEL  
ISLAND NAME\* PELLY B-35  
ISLAND TYPE\* SANDBAG RETAINED  
ISLAND STATUS\* ABANDONED 1975

START DATE\* 01/01/1974  
STOP DATE\* 01/01/1900  
LOAD VOL\* 8054  
DUMP VOL\* 8054

AUTHORITY REFERENCE\* LAND USE PERMIT N74A792  
AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
TERM START\* 02/14/1974  
TERM COMPLETE\* 10/15/1974

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DYNAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTITUTE OF OCEANOGRAPHY, DARTMOUTH, N.S..WOODWARD-CLYDE CONSULTANTS, VICTORIA.

REFERENCE\* SWAN WOOSTER ENGINEERING CO. LTD., 1982. ENVIRONMENTAL IMPACT STATEMENT; STUDY OF PRODUCTION STRUCTURES, BEAUFORT SEA OIL FIELD DEVELOPEMENT. PREPARED FOR DOME PETROLEUM LTD., ESSO RESOURCES CANADA LTD., GULF CANADA RESOURCES INC., AUGUST 1982.

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DATASET NUMBER\* 74UNK-04  
 YEAR\* 1974  
 COMPANY & YEAR\* SUN OIL 1974  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* UNARK L-24 ISLAND  
 LOAD NAME\* YAYA LAKES  
 LOAD LAT\* NOT APPLICABLE  
 LOAD LON\* NOT APPLICABLE  
 LOAD MIN DEPTH\* NOT APPLICABLE  
 LOAD MAX DEPTH\* NOT APPLICABLE  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* UNARK L-24 ISLAND  
 DUMP LAT\* 69.560000  
 DUMP LON\* 134.620000  
 DUMP MIN DEPTH\* 2.0  
 DUMP MAX DEPTH\* 2.0  
 DUMP METHOD\* TRUCK  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* UNARK L-24  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED 1976

START DATE\* 01/01/1974  
 STOP DATE\* 01/01/1900  
 LOAD VOL\* 45078  
 DUMP VOL\* 45078

AUTHORITY REFERENCE\* LAND USE PERMIT N74J698  
 AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
 TERM START\* 07/02/1974  
 TERM COMPLETE\* 05/01/1975

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* SWAN WOOSTER ENGINEERING CO. LTD., 1982. ENVIRONMENTAL IMPACT STATEMENT; STUDY OF PRODUCTION STRUCTURES, BEAUFORT SEA OIL FIELD DEVELOPEMENT. PREPARED FOR DOME PETROLEUM LTD., ESSO RESOURCES CANADA LTD., GULF CANADA RESOURCES INC., AUGUST 1982.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DYNAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTITUTE OF OCEANOGRAPHY, DARTMOUTH, N.S..WOODWARD-CLYDE CONSULTANTS, VICTORIA.

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DATASET NUMBER\* 75ARN-01  
 YEAR\* 1975  
 COMPANY & YEAR\* IMPERIAL/ESSO 1975  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* NETSERK NORTH-40 ISLAND  
 LOAD NAME\* GARRY HARBOUR  
 LOAD LAT\* 69.500000  
 LOAD LON\* 135.750000  
 LOAD MIN DEPTH\* 1.8  
 LOAD MAX DEPTH\* 1.8  
 LOAD SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 DUMP NAME\* NETSERK NORTH-40 ISLAND  
 DUMP LAT\* 69.660000  
 DUMP LON\* 135.900000  
 DUMP MIN DEPTH\* 7.0  
 DUMP MAX DEPTH\* 7.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 ISLAND NAME\* NETSERK NORTH-40  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED JULY 1976

START DATE\* 07/02/1975  
 STOP DATE\* 07/12/1975  
 LOAD VOL\* 70530  
 DUMP VOL\* 45460

REFERENCE\* IMPERIAL OIL LTD., 1975. REPORT OF 1975 SUMMER OFFSHORE CONSTRUCTION PROJECT. IOL PRODUCING DEPARTMENT, WESTERN REGION, OFFSHORE GROUP. FIELD SERVICES DEPARTMENT; EDMONTON.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* IMPERIAL OIL LTD. 1974. CONSTRUCTION OF DREDGED DRILLING ISLANDS FOR NETSERK B-44 AND IKATTOK J-17. IMPERIAL OIL LTD., CALGARY.

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DATASET NUMBER\* 75ARN-02  
YEAR\* 1975  
COMPANY & YEAR\* IMPERIAL/ESSO 1975  
DREDGE NAME\* ARCTIC NORTHERN  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* NETSERK NORTH-40 (NETSERK F-40)  
LOAD NAME\* PELLY PIT  
LOAD LAT\* 69.580000  
LOAD LON\* 135.420000  
LOAD MIN DEPTH\* 3.2  
LOAD MAX DEPTH\* 4.4  
LOAD SEDIMENT\* SAND  
DUMP NAME\* NETSERK NORTH-40 ISLAND  
DUMP LAT\* 69.660000  
DUMP LON\* 135.900000  
DUMP MIN DEPTH\* 7.6  
DUMP MAX DEPTH\* 7.6  
DUMP METHOD\* BARGE  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NETSERK NORTH-40  
ISLAND TYPE\* SANDBAG RETAINED  
ISLAND STATUS\* ABANDONED JULY 1979

START DATE\* 07/19/1975  
STOP DATE\* 07/30/1975  
LOAD VOL\* 188312  
DUMP VOL\* 122912

START DATE\* 08/01/1975  
STOP DATE\* 01/01/1901  
LOAD VOL\* 51698  
DUMP VOL\* 33168

AUTHORITY REFERENCE\* LAND USE PERMIT N74A795  
AMOUNT LICENSED\* 592000  
TERM START\* 07/02/1974  
TERM COMPLETE\* 10/01/1976

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* IMPERIAL OIL LTD., 1975. REPORT OF 1975 SUMMER OFFSHORE CO  
NSTRUCTION PROJECT. IOL PRODUCING DEPARTMENT, WESTERN REGION, OF  
FSHORE GROUP. FIELD SERVICES DEPARTMENT; EDMONTON.

REFERENCE\* IMPERIAL OIL LTD. 1974. CONSTRUCTION OF DREDGED DRILLING  
ISLANDS FOR NETSERK B-44 AND IKATOK J-17. IMPERIAL OIL LTD., CA  
LGARY.

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DATASET NUMBER\* 75UNK-01  
 YEAR\* 1975  
 COMPANY & YEAR\* IMPERIAL/ESSO 1975  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* CLAMSHELL AND BARGE  
 PURPOSE\* IKATTOK J-17 ISLAND  
 LOAD NAME\* YAYA LAKES  
 LOAD LAT\* NOT APPLICABLE  
 LOAD LON\* NOT APPLICABLE  
 LOAD MIN DEPTH\* NOT APPLICABLE  
 LOAD MAX DEPTH\* NOT APPLICABLE  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* IKATTOK J-17 ISLAND  
 DUMP LAT\* 69.280000  
 DUMP LON\* 136.300000  
 DUMP MIN DEPTH\* 2.0  
 DUMP MAX DEPTH\* 2.0  
 DUMP METHOD\* BARGE  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* IKATTOK J-17  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED JULY 1976

START DATE\* 07/01/1975  
 STOP DATE\* 07/31/1975  
 LOAD VOL\* 37600  
 DUMP VOL\* 33900

START DATE\* 01/01/1975  
 STOP DATE\* 01/01/1900  
 LOAD VOL\* 0  
 DUMP VOL\* 37000

AUTHORITY REFERENCE\* LAND USE PERMIT N75A080  
 AMOUNT LICENSED\* 52050  
 TERM START\* 06/26/1975  
 TERM COMPLETE\* 06/26/1975

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
 ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* IMPERIAL OIL LTD. 1975. REPORT OF 1975 SUMMER OFFSHORE CON  
 STRUCTION PROJECT. OIL PRODUCING DEPARTMENT, WESTERN REGION, OF  
 FSHORE GROUP. FIELD SERVICES DEPARTMENT, EDMONTON.

REFERENCE\* HOME OIL, ESSO, 1983. MACKENZIE DELTA - BEAUFORT SEA OFFSHORE CONSTRUCTION.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DY  
 NAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTI  
 TUTE OF OCEANOGRAPHY, DARTMOUTH, N.S.. WOODWARD-CLYDE CONSULTANT



S, VICTORIA.

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DATASET NUMBER\* 75UNK-02  
 YEAR\* 1975  
 COMPANY & YEAR\* IMPERIAL/ESSO 1975  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* ADGO C-15 ISLAND  
 LOAD NAME\* YAYA LAKES  
 LOAD LAT\* NOT APPLICABLE  
 LOAD LON\* NOT APPLICABLE  
 LOAD MIN DEPTH\* NOT APPLICABLE  
 LOAD MAX DEPTH\* NOT APPLICABLE  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* ADGO C-15 ISLAND  
 DUMP LAT\* 69.400000  
 DUMP LON\* 135.820000  
 DUMP MIN DEPTH\* 2.0  
 DUMP MAX DEPTH\* 2.0  
 DUMP METHOD\* TRUCK  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* ADGO C-15  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED JULY 1976

START DATE\* 02/05/1975  
 STOP DATE\* 02/28/1975  
 LOAD VOL\* 40040  
 DUMP VOL\* 36050

START DATE\* 03/01/1975  
 STOP DATE\* 03/20/1975  
 LOAD VOL\* 33360  
 DUMP VOL\* 30050

AUTHORITY REFERENCE\* LAND USE PERMIT N74A956  
 AMOUNT LICENSED\* 81677  
 TERM START\* 01/29/1975  
 TERM COMPLETE\* 01/29/1977

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* IMPERIAL OIL LTD., 1975. REPORT OF 1975 SUMMER OFFSHORE CO  
 NSTRUCTION PROJECT.OIL PRODUCING DEPARTMENT, WESTERN REGION, OF  
 FSHORE GROUP. FIELD SERVICES DEPARTMENT, EDMONTON.

REFERENCE\* LETTER FROM D. BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS, SIDNEY) RE: ARCTIC ARTIFICIAL ISLAND CONSTRUC-  
 TION SUMMARY SUPPLEMENT.

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DATASET NUMBER\* 76ARN-01  
YEAR\* 1976  
COMPANY & YEAR\* IMPERIAL/ESSO 1976  
DREDGE NAME\* ARCTIC NORTHERN  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* KUGMALLIT H-59 ISLAND  
LOAD NAME\* TUFT POINT  
LOAD LAT\* 69.670000  
LOAD LON\* 132.650000  
LOAD MIN DEPTH\* 15.0  
LOAD MAX DEPTH\* 15.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* KUGMALLIT H-59 ISLAND  
DUMP LAT\* 69.640000  
DUMP LON\* 133.460000  
DUMP MIN DEPTH\* 5.5  
DUMP MAX DEPTH\* 5.5  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* KUGMALLIT H-59  
ISLAND TYPE\* SANDBAG RETAINED  
ISLAND STATUS\* ABANDONED JUNE 1977

START DATE\* 07/18/1976  
STOP DATE\* 07/23/1976  
LOAD VOL\* 41520  
DUMP VOL\* 34175

START DATE\* 07/24/1976  
STOP DATE\* 07/31/1976  
LOAD VOL\* 41520  
DUMP VOL\* 34175

START DATE\* 08/01/1976  
STOP DATE\* 08/31/1976  
LOAD VOL\* 183870  
DUMP VOL\* 151350

START DATE\* 09/01/1976  
STOP DATE\* 09/06/1976  
LOAD VOL\* 35590  
DUMP VOL\* 29300

AUTHORITY REFERENCE\* LAND USE PERMIT N75A058  
AMOUNT LICENSED\* 220193  
TERM START\* 07/01/1976  
TERM COMPLETE\* 06/30/1978

COMMENT\* WEEKLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF THE  
TOTAL VOLUME DREDGED (302500 M<sup>3</sup>) IN THE GIVEN PERIOD.

REFERENCE\* IMPERIAL OIL LTD., 1977. REPORT ON THE 1976 ARCTIC OFFSHORE CONSTRUCTION PROGRAM. PRODUCTION DEPARTMENT, WESTERN REGION, OFFSHORE CONSTRUCTION GROUP. FIELD SERVICES, EDMONTON.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DYNAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTITUTE OF OCEANOGRAPHY, DARTMOUTH, N.S.. WOODWARD-CLYDE CONSULTANTS, VICTORIA.

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DATASET NUMBER\* 76ARN-02  
 YEAR\* 1976  
 COMPANY & YEAR\* IMPERIAL/ESSO 1976  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* ADGO J-27 ISLAND  
 LOAD NAME\* NETSERK B-44 AREA  
 LOAD LAT\* 69.550000  
 LOAD LON\* 135.800000  
 LOAD MIN DEPTH\* 4.6  
 LOAD MAX DEPTH\* 4.6  
 LOAD SEDIMENT\* GRAVEL, SAND  
 DUMP NAME\* ADGO J-27 ISLAND  
 DUMP LAT\* 69.440000  
 DUMP LON\* 135.850000  
 DUMP MIN DEPTH\* 1.8  
 DUMP MAX DEPTH\* 1.8  
 DUMP METHOD\* BARGE  
 DUMP SEDIMENT\* GRAVEL, SAND  
 ISLAND NAME\* ADGO J-27  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED SEPTEMBER 1977

START DATE\* 08/23/1976  
 STOP DATE\* 08/31/1976  
 LOAD VOL\* 17720  
 DUMP VOL\* 13650

START DATE\* 09/01/1976  
 STOP DATE\* 09/07/1976  
 LOAD VOL\* 13783  
 DUMP VOL\* 10620

START DATE\* 09/08/1976  
 STOP DATE\* 09/14/1976  
 LOAD VOL\* 13783  
 DUMP VOL\* 10620

START DATE\* 09/15/1976  
 STOP DATE\* 09/20/1976  
 LOAD VOL\* 11814  
 DUMP VOL\* 9110

COMMENT\* ALSO TOOK 40000 M'3 OF GRAVEL FROM YAYA LAKES.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
 ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DY  
 NAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTI  
 TUTE OF OCEANOGRAPHY, DARTMOUTH, N.S.. WOODWARD-CLYDE CONSULTANT  
 S, VICTORIA.

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DATASET NUMBER\* 76ARN-03  
 YEAR\* 1976  
 COMPANY & YEAR\* IMPERIAL/ESSO 1976  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* ISSERK H-47 ISLAND  
 LOAD NAME\* ISSERK H-47  
 LOAD LAT\* 69.830000  
 LOAD LON\* 134.430000  
 LOAD MIN DEPTH\* 13.0  
 LOAD MAX DEPTH\* 1.3  
 LOAD SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 DUMP NAME\* ISSERK H-47 ISLAND  
 DUMP LAT\* 69.830000  
 DUMP LON\* 134.430000  
 DUMP MIN DEPTH\* 13.0  
 DUMP MAX DEPTH\* 13.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 ISLAND NAME\* ISSERK H-47  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* OPERATION CANCELLED

START DATE\* 09/03/1976  
 STOP DATE\* 09/07/1976  
 LOAD VOL\* 13380  
 DUMP VOL\* 13380

START DATE\* 09/08/1976  
 STOP DATE\* 09/14/1976  
 LOAD VOL\* 29817  
 DUMP VOL\* 29817

START DATE\* 09/15/1976  
 STOP DATE\* 09/22/1976  
 LOAD VOL\* 45109  
 DUMP VOL\* 45109

START DATE\* 09/23/1976  
 STOP DATE\* 09/30/1976  
 LOAD VOL\* 31728  
 DUMP VOL\* 31728

START DATE\* 10/07/1976  
 STOP DATE\* 10/07/1976  
 LOAD VOL\* 38610  
 DUMP VOL\* 38610

COMMENT\* DUMP LAT AND LON ARE APPROXIMATE.

REFERENCE\* DREDGING LICENSE APPLICATION FROM M. SHAW (ESSO) TO J. DUN  
 LOP (DIAND) 07/04/83.

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DATASET NUMBER\* 76ARN-04  
 YEAR\* 1976  
 COMPANY & YEAR\* IMPERIAL/ESSO 1976  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUFT POINT BREAKWATER  
 LOAD NAME\* TUFT POINT  
 LOAD LAT\* 69.670000  
 LOAD LON\* 132.650000  
 LOAD MIN DEPTH\* 4.3  
 LOAD MAX DEPTH\* 4.6  
 LOAD SEDIMENT\* SAND, SILT  
 DUMP NAME\* TUFT POINT  
 DUMP LAT\* 69.670000  
 DUMP LON\* 132.650000  
 DUMP MIN DEPTH\* 8.0  
 DUMP MAX DEPTH\* 8.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND, SILT  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 01/01/1976  
 STOP DATE\* 01/01/1900  
 LOAD VOL\* 350928  
 DUMP VOL\* 350928

REFERENCE\* IMPERIAL OIL LTD., 1977. REPORT ON THE 1976 ARCTIC OFFSHOR

E CONSTRUCTION PROGRAM. PRODUCTION DEPARTMENT, WESTERN REGION,  
OFFSHORE CONSTRUCTION GROUP. FIELD SERVICES, EDMONTON.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

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DATASET NUMBER\* 76BMZ-01  
YEAR\* 1976  
COMPANY & YEAR\* IMPERIAL/ESSO 1976  
DREDGE NAME\* BEAVER MACKENZIE  
DREDGE TYPE\* STATIONARY SUCTION  
PURPOSE\* TUFT POINT BREAKWATER  
LOAD NAME\* TUFT POINT  
LOAD LAT\* 69.670000  
LOAD LON\* 132.650000  
LOAD MIN DEPTH\* 4.3  
LOAD MAX DEPTH\* 4.6  
LOAD SEDIMENT\* SAND, SILT  
DUMP NAME\* TUFT POINT  
DUMP LAT\* 69.670000  
DUMP LON\* 132.650000  
DUMP MIN DEPTH\* 8.0  
DUMP MAX DEPTH\* 8.0  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* SAND, SILT  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/23/1976  
STOP DATE\* 07/22/1976  
LOAD VOL\* 180709  
DUMP VOL\* 180709

START DATE\* 07/23/1976  
STOP DATE\* 07/25/1976  
LOAD VOL\* 222415  
DUMP VOL\* 222415

REFERENCE\* LETTER FROM E. BENNETT (ESSO) TO A. REDSHAW (DIAND) 04/14/  
83.

REFERENCE\* DREDGING LICENSE APPLICATION FROM M. SHAW (ESSO) TO J. DUN  
LOP (DIAND) 07/04/83.

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DATASET NUMBER\* 76BMZ-02

YEAR\* 1976  
 COMPANY & YEAR\* IMPERIAL/ESSO 1976  
 DREDGE NAME\* BEAVER MACKENZIE  
 DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* ARNAK L-30 ISLAND  
 LOAD NAME\* ARNAK L-30 AREA  
 LOAD LAT\* 69.830000  
 LOAD LON\* 133.870000  
 LOAD MIN DEPTH\* 8.5  
 LOAD MAX DEPTH\* 8.5  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* ARNAK L-30 ISLAND  
 DUMP LAT\* 69.830000  
 DUMP LON\* 133.870000  
 DUMP MIN DEPTH\* 8.5  
 DUMP MAX DEPTH\* 8.5  
 DUMP METHOD\* FLOATING PIPELINE  
 DUMP SEDIMENT\* SAND, SILT  
 ISLAND NAME\* ARNAK L-30  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED JUNE 1977

START DATE\* 07/27/1976  
 STOP DATE\* 07/31/1976  
 LOAD VOL\* 179860  
 DUMP VOL\* 156670

START DATE\* 08/01/1976  
 STOP DATE\* 08/31/1976  
 LOAD VOL\* 1115140  
 DUMP VOL\* 971330

START DATE\* 09/02/1976  
 STOP DATE\* 09/09/1976  
 LOAD VOL\* 600000  
 DUMP VOL 570000

START DATE\* 09/10/1976  
 STOP DATE\* 09/18/1976  
 LOAD VOL\* 600000  
 DUMP VOL\* 570000

AUTHORITY REFERENCE\* LAND USE PERMIT N75A981  
 AMOUNT LICENSED\* 955698  
 TERM START\* 07/01/1975  
 TERM COMPLETE\* 06/30/1977

COMMENT\* 1100952 M'3 SAND, 195 M'3 SILT.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
 ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* IMPERIAL OIL LTD., 1977. REPORT ON THE 1976 ARCTIC OFFSHORE CONSTRUCTION PROGRAM. PRODUCTION DEPARTMENT, WESTERN REGION, OFFSHORE CONSTRUCTION GROUP. FIELD SERVICES, EDMONTON.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DYNAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTITUTE OF OCEANOGRAPHY, DARTMOUTH, N.S..WOODWARD-CLYDE CONSULTANTS, VICTORIA.

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DATASET NUMBER\* 76BMZ-03  
 YEAR\* 1976  
 COMPANY & YEAR\* IMPERIAL/ESSO 1976  
 DREDGE NAME\* BEAVER MACKENZIE  
 DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* KANNERK G-42 ISLAND  
 LOAD NAME\* KANNERK G-42 AREA  
 LOAD LAT\* 70.020000  
 LOAD LON\* 131.220000  
 LOAD MIN DEPTH\* 8.5  
 LOAD MAX DEPTH\* 8.5  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* KANNERK G-42 ISLAND  
 DUMP LAT\* 70.020000  
 DUMP LON\* 131.220000  
 DUMP MIN DEPTH\* 8.5  
 DUMP MAX DEPTH\* 8.5  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* KANNERK G-42  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED 1977

START DATE\* 09/02/1976  
 STOP DATE\* 09/09/1976  
 LOAD VOL\* 600000  
 DUMP VOL\* 570000

START DATE\* 09/10/1976  
 STOP DATE\* 09/18/1976  
 LOAD VOL\* 600000  
 DUMP VOL\* 570000

AUTHORITY REFERENCE\* LAND USE PERMIT N76A338  
 AMOUNT LICENSED\* 1510768  
 TERM START\* 09/01/1976  
 TERM COMPLETE\* 09/07/1977

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF FISHERIES AND OCEANS, SYDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL ISLAND SUMMARY SUPPLEMENT.



REFERENCE\* IMPERIAL OIL LTD., 1977. REPORT ON THE 1976 ARCTIC OFFSHORE CONSTRUCTION PROGRAM. PRODUCTION DEPARTMENT, WESTERN REGION, OFFSHORE CONSTRUCTION GROUP. FIELD SERVICES; EDMONTON.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DYNAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTITUTE OF OCEANOGRAPHY, DARTMOUTH, N.S.. WOODWARD-CLYDE CONSULTANTS, VICTORIA.

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DATASET NUMBER\* 76UNK-01  
 YEAR\* 1976  
 COMPANY & YEAR\* IMPERIAL/ESSO 1976  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* SARPIK B-35 ISLAND  
 LOAD NAME\* ADGO C-15 AREA  
 LOAD LAT\* 69.400000  
 LOAD LON\* 135.820000  
 LOAD MIN DEPTH\* 1.5  
 LOAD MAX DEPTH\* 2.0  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* SARPIK B-35 ISLAND  
 DUMP LAT\* 69.400000  
 DUMP LON\* 136.390000  
 DUMP MIN DEPTH\* 4.3  
 DUMP MAX DEPTH\* 4.3  
 DUMP METHOD\* TRUCK  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* SARPIK B-35  
 ISLAND TYPE\* SANDBAG RETAINED  
 ISLAND STATUS\* ABANDONED SEPTEMBER 1976

START DATE\* 01/24/1976  
 STOP DATE\* 01/31/1976  
 LOAD VOL\* 15930  
 DUMP VOL\* 14340

START DATE\* 02/01/1976  
 STOP DATE\* 02/29/1976  
 LOAD VOL\* 66020  
 DUMP VOL\* 59420

START DATE\* 03/01/1976  
 STOP DATE\* 03/15/1976  
 LOAD VOL\* 34150  
 DUMP VOL\* 30240

AUTHORITY REFERENCE\* LAND USE PERMIT N75A183  
 AMOUNT LICENSED\* 94805  
 TERM START\* 01/15/1976  
 TERM COMPLETE\* 01/14/1978

COMMENT\* OTHER LOAD SITES ARE ON LAND.

REFERENCE\* IMPERIAL OIL LTD., 1976. CONSTRUCTION REPORT ON SARPIK B-3  
 5. PRODUCING DEPARTMENT WESTERN REGION. FIELD SERVICES DEPARTMENT;  
 EDMONTON.

REFERENCE\* HOME OIL, ESSO, 1983. MACKENZIE DELTA - BEAUFORT SEA OFFSHORE  
 CONSTRUCTION.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DYNAMICS.  
 PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTITUTE OF OCEANOGRAPHY,  
 DARTMOUTH, N.S..WOODWARD-CLYDE CONSULTANTS, VICTORIA.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

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DATASET NUMBER\* 76UNK-02  
 YEAR\* 1976  
 COMPANY & YEAR\* DOME/CANMAR 1976  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* TINGMIARK K-91 GLORY HOLE  
 LOAD NAME\* TINGMIARK K-91  
 LOAD LAT\* 70.180000  
 LOAD LON\* 132.980000  
 LOAD MIN DEPTH\* 28.0  
 LOAD MAX DEPTH\* 28.0  
 LOAD SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 DUMP NAME\* NOT APPLICABLE  
 DUMP LAT\* NOT APPLICABLE  
 DUMP LON\* NOT APPLICABLE  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* NOT APPLICABLE  
 DUMP SEDIMENT\* NOT APPLICABLE  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 08/01/1976  
 STOP DATE\* 01/01/1901  
 LOAD VOL\* 18519  
 DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 77ARN-01  
 YEAR\* 1977  
 COMPANY & YEAR\* IMPERIAL/ESSO 1977  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUK HARBOUR DOCK CONSTRUCTION AND FILL  
 LOAD NAME\* TUK HARBOUR  
 LOAD LAT\* INFORMATION NOT FOUND IN SEARCH  
 LOAD LON\* INFORMATION NOT FOUND IN SEARCH  
 LOAD MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 LOAD MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 LOAD SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 DUMP NAME\* TUK HARBOUR (LAND)  
 DUMP LAT\* 69.420000  
 DUMP LON\* 132.950000  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/04/1977  
 STOP DATE\* 07/07/1977  
 LOAD VOL\* 10000  
 DUMP VOL\* 10000

REFERENCE\* IMPERIAL OIL LTD., 1977. PROJECT SUMMARY REPORT ISSERK E-2  
 7. PRODUCTION DEPARTMENT, FRONTIER OPERATIONS, OFFSHORE CONSTRUCTION GROUP. FIELD SERVICES; EDMONTON.

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DATASET NUMBER\* 77ARN-02  
 YEAR\* 1977  
 COMPANY & YEAR\* IMPERIAL/ESSO 1977  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* ISSERK E-27 ISLAND  
 LOAD NAME\* TUFT POINT

LOAD LAT\* 69.670000  
 LOAD LON\* 132.650000  
 LOAD MIN DEPTH\* 4.3  
 LOAD MAX DEPTH\* 4.6  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* ISSERK E-27 ISLAND  
 DUMP LAT\* 69.940000  
 DUMP LON\* 134.370000  
 DUMP MIN DEPTH\* 13.0  
 DUMP MAX DEPTH\* 13.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* ISSERK E-27  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED JULY 1978

START DATE\* 07/07/1977  
 STOP DATE\* 07/31/1977  
 LOAD VOL\* 141818  
 DUMP VOL\* 39758

START DATE\* 08/01/1977  
 STOP DATE\* 08/31/1977  
 LOAD VOL\* 183180  
 DUMP VOL\* 51355

START DATE\* 09/01/1977  
 STOP DATE\* 09/30/1977  
 LOAD VOL\* 177273  
 DUMP VOL\* 49697

START DATE\* 10/01/1977  
 STOP DATE\* 10/14/1977  
 LOAD VOL\* 82729  
 DUMP VOL\* 23190

REFERENCE\* DREDGING LICENSE APPLICATION FROM M. SHAW (ESSO) TO J. DUN  
 LOP (DIAND) 07/04/83.

REFERENCE\* IMPERIAL OIL LTD., 1977. PROJECT SUMMARY REPORT ISSERK E-2  
 7. PRODUCTION DEPARTMENT, FRONTIER OPERATIONS, OFFSHORE CONSTRU  
 CTION GROUP. FIELD SERVICES; EDMONTON.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DY  
 NAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTI  
 TUTE OF OCEANOGRAPHY, DARTMOUTH, N.S..WOODWARD-CLYDE CONSULTANT  
 S, VICTORIA.

REFERENCE\* LETTER FROM E. BENNETT (ESSO) TO A. REDSHAW (DIAND) 04/14/  
 83.

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DATASET NUMBER\* 77ARN-03  
 COMPANY & YEAR\* IMPERIAL/ESSO 1977  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUFT POINT BREAKWATER  
 LOAD NAME\* TUFT POINT  
 LOAD LAT\* 69.670000  
 LOAD LON\* 132.650000  
 LOAD MIN DEPTH\* 4.3  
 LOAD MAX DEPTH\* 4.6  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* TUFT POINT  
 DUMP LAT\* 69.670000  
 DUMP LON\* 132.650000  
 DUMP MIN DEPTH\* 4.3  
 DUMP MAX DEPTH\* 4.6  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/08/1977  
 STOP DATE\* 07/14/1977  
 LOAD VOL\* 129155  
 DUMP VOL\* 129155

START DATE\* 07/15/1977  
 STOP DATE\* 07/22/1977  
 LOAD VOL\* 116660  
 DUMP VOL\* 116660

START DATE\* 07/23/1977  
 STOP DATE\* 07/31/1977  
 LOAD VOL\* 64181  
 DUMP VOL\* 64181

START DATE\* 08/01/1977  
 STOP DATE\* 08/07/1977  
 LOAD VOL\* 7314  
 DUMP VOL\* 7314

START DATE\* 08/08/1977  
 STOP DATE\* 08/14/1977  
 LOAD VOL\* 91020  
 DUMP VOL\* 91020

START DATE\* 08/15/1977  
 STOP DATE\* 08/22/1977  
 LOAD VOL\* 58310  
 DUMP VOL\* 58310

START DATE\* 08/23/1977  
 STOP DATE\* 08/31/1977

LOAD VOL\* 62515  
DUMP VOL\* 62515

START DATE\* 09/01/1977  
STOP DATE\* 09/07/1977  
LOAD VOL\* 20825  
DUMP VOL\* 20825

START DATE\* 09/08/1977  
STOP DATE\* 09/14/1977  
LOAD VOL\* -20825  
DUMP VOL\* -20825

START DATE\* 09/15/1977  
STOP DATE\* 09/22/1977  
LOAD VOL\* 53845  
DUMP VOL\* 53845

START DATE\* 09/23/1977  
STOP DATE\* 09/23/1977  
LOAD VOL\* 17000  
DUMP VOL\* 17000

REFERENCE\* DREDGING LICENSE APPLICATION FROM M. SHAW (ESSO) TO J. DUN  
LOP (DIAND) 07/04/83.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
ISLAND SUMMARY SUPPLEMENT.

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DATASET NUMBER\* 77BMZ-01  
YEAR\* 1977  
COMPANY & YEAR\* IMPERIAL/ESSO 1977  
DREDGE NAME\* BEAVER MACKENZIE  
DREDGE TYPE\* STATIONARY SUCTION  
PURPOSE\* TUFT POINT BREAKWATER  
LOAD NAME\* TUFT POINT  
LOAD LAT\* 69.670000  
LOAD LON\* 132.650000  
LOAD MIN DEPTH\* 4.3  
LOAD MAX DEPTH\* 4.6  
LOAD SEDIMENT\* SAND  
DUMP NAME\* TUFT POINT  
DUMP LAT\* 69.670000  
DUMP LON\* 132.650000  
DUMP MIN DEPTH\* 8.0  
DUMP MAX DEPTH\* 8.0  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NOT APPLICABLE

ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/10/1977  
 STOP DATE\* 07/11/1977  
 LOAD VOL\* 420000  
 DUMP VOL\* 420000

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* IMPERIAL OIL LTD., 1977. REPORT ON THE 1976 ARCTIC OFFSHORE  
 E CONSTRUCTION PROGRAM. PRODUCTION DEPARTMENT, WESTERN REGION,  
 OFFSHORE CONSTRUCTION GROUP. FIELD SERVICES; EDMONTON.

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DATASET NUMBER\* 77BMZ-02  
 YEAR\* 1977  
 COMPANY & YEAR\* IMPERIAL/ESSO 1977  
 DREDGE NAME\* BEAVER MACKENZIE  
 DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* ISSERK E-27 ISLAND  
 LOAD NAME\* ISSERK E-27 AREA  
 LOAD LAT\* 69.940000  
 LOAD LON\* 134.370000  
 LOAD MIN DEPTH\* 13.0  
 LOAD MAX DEPTH\* 13.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* ISSERK E-27 ISLAND  
 DUMP LAT\* 69.940000  
 DUMP LON\* 134.370000  
 DUMP MIN DEPTH\* 13.0  
 DUMP MAX DEPTH\* 13.0  
 DUMP METHOD\* SAND  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* ISSERK E-27  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED JULY 1978

START DATE\* 07/17/1977  
 STOP DATE\* 07/31/1977  
 LOAD VOL\* 357955  
 DUMP VOL\* 238125

START DATE\* 08/01/1977  
 STOP DATE\* 08/31/1977  
 LOAD VOL\* 739772  
 DUMP VOL\* 492122

START DATE\* 09/01/1977  
 STOP DATE\* 09/30/1977  
 LOAD VOL\* 715909

DUMP VOL\* 476249

START DATE\* 10/01/1977

STOP DATE\* 10/12/1977

LOAD VOL\* 286364

DUMP VOL\* 190504

AUTHORITY REFERENCE\* LAND USE PERMIT N76A341

AMOUNT LICENSED\* 319586

TERM START\* 09/01/1976

TERM COMPLETE\* 09/01/1977

COMMENT\* LOST VOLUME REPRESENTS TOTAL LOSS FROM BOTH TUFT POINT AND ISSERK E-27 AREA.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* IMPERIAL OIL LTD., 1977. PROJECT SUMMARY REPORT ISSERK E-27. PRODUCTION DEPARTMENT, FRONTIER OPERATIONS, OFFSHORE CONSTRUCTION GROUP. FIELD SERVICES; EDMONTON.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

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DATASET NUMBER\* 77UNK-01

YEAR\* 1977

COMPANY & YEAR\* DOME/CANMAR 1977

DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH

DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH

PURPOSE\* TUK HARBOUR DOCK CONSTRUCTION AND FILL

LOAD NAME\* UKALERK C-50

LOAD LAT\* 70.150000

LOAD LON\* 132.740000

LOAD MIN DEPTH\* 27.7

LOAD MAX DEPTH\* 27.7

LOAD SEDIMENT\* SAND

DUMP NAME\* TUK HARBOUR

DUMP LAT\* INFORMATION NOT FOUND IN SEARCH

DUMP LON\* INFORMATION NOT FOUND IN SEARCH

DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH

DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH

DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH

ISLAND NAME\* NOT APPLICABLE

ISLAND TYPE\* NOT APPLICABLE

ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/01/1977

STOP DATE\* 01/01/1901

LOAD VOL\* 18519



DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEPT. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 77UNK-02

YEAR\* 1977

COMPANY & YEAR\* ARCNV MARINE LTD. 1977

DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH

DREDGE TYPE\* BARGE

PURPOSE\* TUK HARBOUR DOCK CONSTRUCTION AND FILL

LOAD NAME\* TUK HARBOUR

LOAD LAT\* 69.450000

LOAD LON\* 133.030000

LOAD MIN DEPTH\* 4.3

LOAD MAX DEPTH\* 4.3

LOAD SEDIMENT\* SAND

DUMP NAME\* TUK HARBOUR

DUMP LAT\* 69.450000

DUMP LON\* 133.030000

DUMP MIN DEPTH\* 4.3

DUMP MAX DEPTH\* 4.3

DUMP METHOD\* BARGE

DUMP SEDIMENT\* SAND

ISLAND NAME\* NOT APPLICABLE

ISLAND TYPE\* NOT APPLICABLE

ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/27/1977

STOP DATE\* 07/08/1977

LOAD VOL\* 7646

DUMP VOL\* 7646

AUTHORITY REFERENCE\* WATER LOT LEASE #2358

AMOUNT LICENSED\* 0

TERM START\* 01/01/1999

TERM COMPLETE\* 01/01/1999

COMMENT\* THIS DREDGING WAS UNPERMITTED.

COMMENT\* DREDGED SAND WAS PLACED ON LAND, MUD FILLED IN THE SAND HOLE S.

REFERENCE\* ENVIRONMENTAL PROTECTION SERVICE, YELLOWKNIFE. NOTES ON AN UNPERMITTED DREDGING OPERATION

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DATASET NUMBER\* 77UNK-03  
 YEAR\* 1977  
 COMPANY & YEAR\* DOME/CANMAR 1977  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* KAGLULIK A-75 GLORY HOLE  
 LOAD NAME\* KAGLULIK A-75  
 LOAD LAT\* 70.570000  
 LOAD LON\* 130.860000  
 LOAD MIN DEPTH\* 27.0  
 LOAD MAX DEPTH\* 27.0  
 LOAD SEDIMENT\* GRAVEL, SAND, CLAY  
 DUMP NAME\* NOT APPLICABLE  
 DUMP LAT\* NOT APPLICABLE  
 DUMP LON\* NOT APPLICABLE  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* NOT APPLICABLE  
 DUMP SEDIMENT\* NOT APPLICABLE  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 08/01/1977  
 STOP DATE\* 01/01/1901  
 LOAD VOL\* 18519  
 DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEPT. OF FISHERIES AND OCEANS, SYDNEY) 07/06/83.

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DATASET NUMBER\* 78BMZ-01  
 YEAR\* 1978  
 COMPANY & YEAR\* IMPERIAL/ESSO 1978  
 DREDGE NAME\* BEAVER MACKENZIE  
 DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* TUFT POINT BREAKWATER  
 LOAD NAME\* TUFT POINT  
 LOAD LAT\* 69.670000  
 LOAD LON\* 132.650000  
 LOAD MIN DEPTH\* 4.3

LOAD MAX DEPTH\* 4.6  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* TUFT POINT  
 DUMP LAT\* 69.670000  
 DUMP LON\* 132.650000  
 DUMP MIN DEPTH\* 4.3  
 DUMP MAX DEPTH\* 4.6  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 01/01/1978  
 STOP DATE\* 01/01/1900  
 LOAD VOL\* 450000  
 DUMP VOL\* 450000

REFERENCE\* DREDGING LICENSE APPLICATION FROM M. SHAW (ESSO) TO J. DUN  
LOP (DIAND) 07/04/83.

REFERENCE\* LETTER FROM E. BENNETT (ESSO) TO A. REDSHAW (DIAND) 04/14/  
83.

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DATASET NUMBER\* 78UNK-01  
 YEAR\* 1978  
 COMPANY & YEAR\* DOME/CANMAR 1978  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* NATSEK E-56 GLORY HOLE  
 LOAD NAME\* NATSEK E-56  
 LOAD LAT\* 69.760000  
 LOAD LON\* 139.740000  
 LOAD MIN DEPTH\* 34.0  
 LOAD MAX DEPTH\* 34.0  
 LOAD SEDIMENT\* SILT, CLAY  
 DUMP NAME\* NOT APPLICABLE  
 DUMP LAT\* NOT APPLICABLE  
 DUMP LON\* NOT APPLICABLE  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* NOT APPLICABLE  
 DUMP SEDIMENT\* NOT APPLICABLE  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/01/1978  
 STOP DATE\* 01/01/1901  
 LOAD VOL\* 18519

DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 78UNK-02  
YEAR\* 1978  
COMPANY & YEAR\* DOME/CANMAR 1978  
DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
PURPOSE\* UKALERK 2C-50 GLORY HOLE  
LOAD NAME\* UKALERK 2C-50  
LOAD LAT\* 70.150000  
LOAD LON\* 132.730000  
LOAD MIN DEPTH\* 30.0  
LOAD MAX DEPTH\* 30.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* NOT APPLICABLE  
DUMP LAT\* NOT APPLICABLE  
DUMP LON\* NOT APPLICABLE  
DUMP MIN DEPTH\* NOT APPLICABLE  
DUMP MAX DEPTH\* NOT APPLICABLE  
DUMP METHOD\* NOT APPLICABLE  
DUMP SEDIMENT\* NOT APPLICABLE  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/01/1978

STOP DATE\* 01/01/1901

LOAD VOL\* 18519

DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 78UNK-03

YEAR\* 1978  
 COMPANY & YEAR\* DOME/CANMAR 1978  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* KAGLULIK M-64 GLORY HOLE  
 LOAD NAME\* KAGLULIK M-64  
 LOAD LAT\* 70.570000  
 LOAD LON\* 130.840000  
 LOAD MIN DEPTH\* 27.0  
 LOAD MAX DEPTH\* 27.0  
 LOAD SEDIMENT\* SAND, SILT, CLAY  
 DUMP NAME\* NOT APPLICABLE  
 DUMP LAT\* NOT APPLICABLE  
 DUMP LON\* NOT APPLICABLE  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* NOT APPLICABLE  
 DUMP SEDIMENT\* NOT APPLICABLE  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 11/01/1978  
 STOP DATE\* 01/01/1901  
 LOAD VOL\* 18519  
 DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
 T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 79AQU-01  
 YEAR\* 1979  
 COMPANY & YEAR\* DOME/CANMAR 1979  
 DREDGE NAME\* AQUARIUS  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* MCKINLEY BAY HARBOUR MAINTENANCE AND CHANNEL CONSTRUCTION  
 LOAD NAME\* MCKINLEY BAY  
 LOAD LAT\* 69.960000  
 LOAD LON\* 131.170000  
 LOAD MIN DEPTH\* 3.0  
 LOAD MAX DEPTH\* .0  
 LOAD SEDIMENT\* SAND, SILT  
 DUMP NAME\* MCKINLEY BAY  
 DUMP LAT\* 69.960000  
 DUMP LON\* 131.170000  
 DUMP MIN DEPTH\* .0

DUMP MAX DEPTH\* 7.5  
DUMP METHOD\* FLOATING PIPELINE  
DUMP SEDIMENT\* SAND, SILT  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 09/06/1979  
STOP DATE\* 09/07/1979  
LOAD VOL\* 143112  
DUMP VOL\* 143112

START DATE\* 09/08/1979  
STOP DATE\* 09/14/1979  
LOAD VOL\* 500888  
DUMP VOL\* 500888

START DATE\* 09/15/1979  
STOP DATE\* 09/22/1979  
LOAD VOL\* 598000  
DUMP VOL\* 598000

START DATE\* 09/23/1979  
STOP DATE\* 09/30/1979  
LOAD VOL\* 683000  
DUMP VOL\* 683000

START DATE\* 10/01/1979  
STOP DATE\* 10/07/1979  
LOAD VOL\* 593000  
DUMP VOL\* 593000

START DATE\* 10/08/1979  
STOP DATE\* 10/14/1979  
LOAD VOL\* 687000  
DUMP VOL\* 687000

START DATE\* 10/16/1979  
STOP DATE\* 10/22/1979  
LOAD VOL\* 222000  
DUMP VOL\* 222000

AUTHORITY REFERENCE\* ODCA PERMIT 4443-0813  
AMOUNT LICENSED\* 6500000  
TERM START\* 09/06/1979  
TERM COMPLETE\* 10/19/1979

COMMENT\* MONITORING STUDIES CARRIED OUT BY ARCTIC LABS BEGINNING 07/13/79 FOR GEOCHEMICAL PARAMETERS, 09/25/79 FOR PHYSICAL OCEANOGRAPHIC PARAMETERS.

COMMENT\* VIOLATION OF PERMIT NOTED IN 10/14/79 INSPECTION REPORT; DISCHARGE OF DREDGED MATERIAL IN OTHER THAN DESIGNATED AREA.

COMMENT\* KNOWN INSPECTION DATES: 09/09/79, 14/09/79, 17/09/79, 27/09/79

79, 14/10/79, 18/130/79.

REFERENCE\* GAZETTED PERMIT 0813.

REFERENCE\* THOMAS, D.J. 1979 DOME PETROLEUM MCKINLEY BAY DREDGING PROGRAM PHASE 1; GEOCHEMICAL BASELINE SURVEY AND ENVIRONMENTAL MONITORING DURING 1979 OPERATIONS. PREPARED FOR DOME PETROLEUM LTD., CALGARY (UNPUBLISHED MANUSCRIPT).

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DATASET NUMBER\* 79ARN-01  
 YEAR\* 1979  
 COMPANY & YEAR\* GOVT NWT 1979  
 DREDGE NAME\* ARCTIC NORTHERN  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TUK LANDFILL FOR SUBDIVISION  
 LOAD NAME\* TUK HARBOUR, SOUTH OF CONN ISLAND  
 LOAD LAT\* 69.450000  
 LOAD LON\* 133.030000  
 LOAD MIN DEPTH\* .6  
 LOAD MAX DEPTH\* 5.5  
 LOAD SEDIMENT\* GRAVEL, SAND  
 DUMP NAME\* TUKTOYAKTUK (LAND), SOUTH OF POKIAK LAKE  
 DUMP LAT\* 69.440000  
 DUMP LON\* 133.040000  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* FLOATING PIPELINE  
 DUMP SEDIMENT\* GRAVEL, SAND  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 09/24/1979  
 STOP DATE\* 09/30/1979  
 LOAD VOL\* 60000  
 DUMP VOL\* 60000

START DATE\* 10/01/1979  
 STOP DATE\* 10/02/1979  
 LOAD VOL\* 20000  
 DUMP VOL\* 20000

REFERENCE\* HAIST, G., AND B. MILBURN, (GNWT) 1980. DREDGING REDUCES COSTS OF DEVELOPED RESIDENTIAL LAND IN NORTHERN CANADA. PRESENTED AT THE NINTH WORLD DREDGING CONFERENCE, VANCOUVER, 1980.

REFERENCE\* THURBER CONSULTANTS LTD., 1979. CONSTRUCTION OBSERVATIONS DREDGED LANDFILL - TUKTOYAKTUK. PREPARED FOR DEPARTMENT OF PUBLIC WORKS, GOVT GNWT.

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DATASET NUMBER\* 79BMZ-01  
 YEAR\* 1979  
 COMPANY & YEAR\* IMPERIAL/ESSO 1979  
 DREDGE NAME\* BEAVER MACKENZIE  
 DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* ISSUNGNAK O-61 ISLAND  
 LOAD NAME\* TUFT POINT  
 LOAD LAT\* 69.670000  
 LOAD LON\* 132.650000  
 LOAD MIN DEPTH\* 4.3  
 LOAD MAX DEPTH\* 4.6  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* ISSUNGNAK O-61 ISLAND  
 DUMP LAT\* 70.000000  
 DUMP LON\* 134.310000  
 DUMP MIN DEPTH\* 19.0  
 DUMP MAX DEPTH\* 20.0  
 DUMP METHOD\* PIPELINE DISCHARGE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* ISSUNGNAK O-61  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED 1981

START DATE\* 07/09/1979  
 STOP DATE\* 07/31/1979  
 LOAD VOL\* 939880  
 DUMP VOL\* 805000

START DATE\* 08/01/1979  
 STOP DATE\* 08/31/1979  
 LOAD VOL\* 1266800  
 DUMP VOL\* 1085000

START DATE\* 09/01/1979  
 STOP DATE\* 09/30/1979  
 LOAD VOL\* 1225930  
 DUMP VOL\* 1050000

START DATE\* 10/01/1979  
 STOP DATE\* 10/22/1979  
 LOAD VOL\* 899010  
 DUMP VOL\* 770000

COMMENT\* BEAVER MACKENZIE WAS ASSISTED BY THE SCEPTRE MACKENZIE DURING  
 THIS OPERATION.

AUTHORITY REFERENCE\* LAND USE PERMIT N78A849  
 AMOUNT LICENSED\* 4900000  
 TERM START\* INFORMATION NOT FOUND IN SEARCH  
 TERM COMPLETE\* INFORMATION NOT FOUND IN SEARCH



REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
ISLAND SUMMARY SUPPLEMENT.

REFERENCE\* SWAN WOOSTER ENGINEERING CO. LTD., 1982. ENVIRONMENTAL IMP  
ACT STATEMENT; STUDY OF PRODUCTION STRUCTURES, BEAUFORT SEA OIL  
FIELD DEVELOPEMENT. PREPARED FOR DOME PETROLEUM LTD., ESSO RESO  
URCES CANADA LTD., GULF CANADA RESOURCES INC., AUGUST 1982.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* SWAN WOOSTER ENGINEERING CO. LTD., 1982. ENVIRONMENTAL IMP  
ACT STATEMENT; STUDY OF PRODUCTION STRUCTURES, BEAUFORT SEA OIL  
FIELD DEVELOPEMENT. PREPARED FOR DOME PETROLEUM LTD., ESSO RESO  
URCES CANADA LTD., GULF CANADA RESOURCES INC., AUGUST 1982.

REFERENCE\* IMPERIAL OIL LTD. 1977. REPORT ON THE 1976 ARCTIC OFFSHORE  
CONSTRUCTION PROGRAM. PRODUCTION DEPT., WESTERN REGION, OFFSHO  
RE CONSTRUCTION GROUP. FIELD SERVICES, EDMONTON.

REFERENCE\* ESSO RESOURCES CANADA LTD. 1979. ISSUNGNAK 0-61 1978 AND 1  
979 DAILY REPORTS. ESSO RESOURCES CANADA LTD., CALGARY.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
ISLAND SUMMARY.

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DATASET NUMBER\* 79BMZ-02  
YEAR\* 1979  
COMPANY & YEAR\* IMPERIAL/ESSO 1979  
DREDGE NAME\* BEAVER MACKENZIE  
DREDGE TYPE\* STATIONARY SUCTION  
PURPOSE\* TUFT POINT BREAKWATER  
LOAD NAME\* TUFT POINT  
LOAD LAT\* 69.670000  
LOAD LON\* 132.650000  
LOAD MIN DEPTH\* 4.3  
LOAD MAX DEPTH\* 4.6  
LOAD SEDIMENT\* SAND  
DUMP NAME\* TUFT POINT  
DUMP LAT\* 69.670000  
DUMP LON\* 132.650000  
DUMP MIN DEPTH\* 4.3  
DUMP MAX DEPTH\* 4.6  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 01/01/1979  
STOP DATE\* 01/01/1900  
LOAD VOL\* 450000  
DUMP VOL\* 450000

REFERENCE\* DREDGING LICENSE APPLICATION FROM M. SHAW (ESSO) TO J. DUN  
LOP (DIAND) 07/04/83.

REFERENCE\* LETTER FROM E. BENNETT (ESSO) TO A. REDSHAW (DIAND) 04/14/  
83.

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DATASET NUMBER\* 79UNK-01  
YEAR\* 1979  
COMPANY & YEAR\* DOME/CANMAR 1979  
DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
PURPOSE\* KOAKOAK O-22 GLORY HOLE  
LOAD NAME\* KOAKOAK O-22  
LOAD LAT\* 70.370000  
LOAD LON\* 134.100000  
LOAD MIN DEPTH\* 44.0  
LOAD MAX DEPTH\* 44.0  
LOAD SEDIMENT\* SAND, SILT  
DUMP NAME\* NOT APPLICABLE  
DUMP LAT\* NOT APPLICABLE  
DUMP LON\* NOT APPLICABLE  
DUMP MIN DEPTH\* NOT APPLICABLE  
DUMP MAX DEPTH\* NOT APPLICABLE  
DUMP METHOD\* NOT APPLICABLE  
DUMP SEDIMENT\* NOT APPLICABLE  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 01/01/1979  
STOP DATE\* 01/01/1900  
LOAD VOL\* 18519  
DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 80AQU-01  
YEAR\* 1980  
COMPANY & YEAR\* DOME/CANMAR 1980  
DREDGE NAME\* AQUARIUS  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* MCKINLEY BAY HARBOUR MAINTENANCE, MOORING BASIN, ACCESS CHANNE  
L  
LOAD NAME\* MCKINLEY BAY  
LOAD LAT\* 69.940000  
LOAD LON\* 131.220000  
LOAD MIN DEPTH\* 3.0  
LOAD MAX DEPTH\* 15.0  
LOAD SEDIMENT\* SAND, CLAY  
DUMP NAME\* MCKINLEY BAY, 500-600 M EAST OF DESIGNATED LOAD SITE  
DUMP LAT\* 69.940000  
DUMP LON\* 131.200000  
DUMP MIN DEPTH\* 3.0  
DUMP MAX DEPTH\* 12.0  
DUMP METHOD\* PIPELINE DISCHARGE  
DUMP SEDIMENT\* SAND, CLAY  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/04/1980  
STOP DATE\* 07/07/1980  
LOAD VOL\* 314980  
DUMP VOL\* 314980

START DATE\* 07/08/1980  
STOP DATE\* 07/14/1980  
LOAD VOL\* 774233  
DUMP VOL\* 774233

START DATE\* 07/15/1980  
STOP DATE\* 07/22/1980  
LOAD VOL\* 560260  
DUMP VOL\* 560260

START DATE\* 07/23/1980  
STOP DATE\* 07/31/1980  
LOAD VOL\* 681680  
DUMP VOL\* 681680

START DATE\* 08/01/1980  
STOP DATE\* 08/07/1980  
LOAD VOL\* 607909  
DUMP VOL\* 607909

START DATE\* 08/08/1980  
STOP DATE\* 08/14/1980  
LOAD VOL\* 571500  
DUMP VOL\* 571500

START DATE\* 08/15/1980  
 STOP DATE\* 08/22/1980  
 LOAD VOL\* 559910  
 DUMP VOL\* 559910

START DATE\* 08/23/1980  
 STOP DATE\* 08/31/1980  
 LOAD VOL\* 589694  
 DUMP VOL\* 589694

START DATE\* 09/01/1980  
 STOP DATE\* 09/07/1980  
 LOAD VOL\* 319502  
 DUMP VOL\* 319502

START DATE\* 09/08/1980  
 STOP DATE\* 09/14/1980  
 LOAD VOL\* 353395  
 DUMP VOL\* 353395

START DATE\* 09/15/1980  
 STOP DATE\* 09/22/1980  
 LOAD VOL\* 262545  
 DUMP VOL\* 262545

START DATE\* 09/23/1980  
 STOP DATE\* 09/30/1980  
 LOAD VOL\* 264407  
 DUMP VOL\* 264407

AUTHORITY REFERENCE\* ODCA PERMIT 4443-0989  
 AMOUNT LICENSED\* 4500000  
 TERM START\* 06/24/1980  
 TERM COMPLETE\* 10/30/1980

COMMENT\* MONITORING REQUIREMENTS CARRIED OUT BY ARCTIC LABS LTD. BEGINNING 07/04/1980 FOR PHYSICAL AND CHEMICAL PARAMETERS, AND BY DOME/CANMAR BEGINNING 07/20/1980 FOR BIOLOGICAL PARAMETERS.

COMMENT\* KNOWN INSPECTION DATES; 06/25/80, 07/11/80, 07/23/80, 08/13/80, 09/05/80, 09/18/80.

REFERENCE\* GAZETTED PERMIT 0989.

REFERENCE\* WARD, J.G., 1981. WILDLIFE OBSERVATIONS DURING DREDGING OPERATIONS IN MCKINLEY BAY, JULY-AUGUST 1980. DOME PETROLEUM LTD., CALGARY.

REFERENCE\* THOMAS, D.J., 1980. MCKINLEY BAY DREDGING PROJECT WATER QUALITY MEASUREMENTS AND DREDGE SPOIL MONITORING. PREPARED BY ARCTIC LABORATORIES LTD. INUVIK, N.W.T. FOR DOME PETROLEUM LTD., CALGARY.

REFERENCE\* LETTER FROM W. BRYANT (EPS YELLOWKNIFE) TO R. HOOS (DOME)

07/30/80.

REFERENCE\* DOME INTERNAL CORRESPONDENCE FROM G. GEVAERT (BEAUFORT SEA  
CONSTRUCTION) TO J.U. VAN DER WAL 10/15/80.

REFERENCE\* INSPECTION REPORT D.C. TILDEN, EPS YELLOWKNIFE, 06/25/80.

REFERENCE\* INSPECTION REPORT J. NIXON, EPS YELLOWKNIFE, 07/11/80.

REFERENCE\* INSPECTION REPORT D.C. TILDEN, EPS YELLOWKNIFE, 07/23/80.

REFERENCE\* INSPECTION REPORT J. NIXON, EPS YELLOWKNIFE, 08/13/80.

REFERENCE\* INSPECTION REPORT J. NIXON, EPS YELLOWKNIFE, 09/05/80.

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DATASET NUMBER\* 80AQU-02  
YEAR\* 1980  
COMPANY & YEAR\* DOME/CANMAR 1980  
DREDGE NAME\* AQUARIUS  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* TUK HARBOUR AND CHANNEL MAINTENANCE  
LOAD NAME\* KUGMALLIT BAY  
LOAD LAT\* 69.450000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 1.5  
LOAD MAX DEPTH\* 11.0  
LOAD SEDIMENT\* GRAVEL, SAND, SILT, CLAY  
DUMP NAME\* KUGMALLIT BAY  
DUMP LAT\* 69.470000  
DUMP LON\* 132.980000  
DUMP MIN DEPTH\* 4.0  
DUMP MAX DEPTH\* 19.0  
DUMP METHOD\* PIPELINE DISCHARGE  
DUMP SEDIMENT\* GRAVEL, SAND, SILT, CLAY  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 10/08/1980  
STOP DATE\* 10/14/1980  
LOAD VOL\* 42590  
DUMP VOL\* 42590

START DATE\* 10/15/1980  
STOP DATE\* 10/22/1980  
LOAD VOL\* 115842  
DUMP VOL\* 115842

START DATE\* 10/23/1980  
STOP DATE\* 10/31/1980

LOAD VOL\* 137957  
DUMP VOL\* 137957

START DATE\* 11/01/1980  
STOP DATE\* 11/07/1980  
LOAD VOL\* 66989  
DUMP VOL\* 66989

AUTHORITY REFERENCE\* ODCA PERMIT 4443-0990  
AMOUNT LICENSED\* 4500000  
TERM START\* 07/01/1980  
TERM COMPLETE\* 11/30/1980

COMMENT\* LOAD SITE LAT AND LON ARE FOR SITE ORIGIN ONLY, FURTHER DETAILS IN ODCA 0990.

COMMENT\* SECOND DUMP SITE 500M EAST OF DREDGED CHANNEL, FURTHER DETAILS IN ODCA 0990.

COMMENT\* KNOWN INSPECTION DATES: 06/26/80, 07/23/80, 08/12/80, 09/05/80, 09/19/80.

COMMENT\* MONITORING REQUIREMENTS CARRIED OUT BY ARCTIC LABS BEGINNING JULY 1980 FOR PHYSICAL, CHEMICAL AND BIOLOGICAL PARAMETERS.

REFERENCE\* GAZETTED PERMIT 0990.

REFERENCE\* PESSAH, E., 1982. DREDGING ACTIVITIES OF DOME PETROLEUM IN THE ARCTIC AND ITS ENVIRONMENTAL IMPACT. IN PROCEEDINGS CANADIAN SOCIETY FOR CIVIL ENGINEERING, ANNUAL CONFERENCE, EDMONTON ALTA., MAY 1982.

REFERENCE\* EPEC CONSULTING WESTERN LTD., 1982. TUK HARBOUR RESERVOIR, DREDGING CONSTRUCTION OBSERVATIONS. EPEC CONSULTING WESTERN LTD., WHITEHORSE.

REFERENCE\* APD CONSULTING ENGINEERS, 1979. ENGINEERING REPORT FOR DREDGING WORKS, TUKTOYAKTUK HARBOUR AND MCKINLEY BAY, BEAUFORT SEA. DON MILLS, ONTARIO.

REFERENCE\* DOME INTERNAL CORRESPONDENCE FROM G. GEVAERT (BEAUFORT SEA CONSTRUCTION) TO J.U. VAN DER WAL 10/15/80.

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DATASET NUMBER\* 80BMZ-01  
YEAR\* 1980  
COMPANY & YEAR\* IMPERIAL/ESSO 1980  
DREDGE NAME\* BEAVER MACKENZIE  
DREDGE TYPE\* STATIONARY SUCTION  
PURPOSE\* ISSUNGNAK 2-0-61  
LOAD NAME\* ISSUNGNAK 0-61 AREA

LOAD LAT\* 70.020000  
 LOAD LON\* 70.000000  
 LOAD MIN DEPTH\* 19.0  
 LOAD MAX DEPTH\* 20.0  
 LOAD SEDIMENT\* SAND, SILT  
 DUMP NAME\* ISSUNGNAK 0-61 ISLAND  
 DUMP LAT\* 70.000000  
 DUMP LON\* 134.310000  
 DUMP MIN DEPTH\* 19.0  
 DUMP MAX DEPTH\* 20.0  
 DUMP METHOD\* PIPELINE DISCHARGE  
 DUMP SEDIMENT\* SAND, SILT  
 ISLAND NAME\* ISSUNGNAK 0-61  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED 1981

START DATE\* 08/23/1980  
 STOP DATE\* 08/31/1980  
 LOAD VOL\* 367780  
 DUMP VOL\* 315000

START DATE\* 09/01/1980  
 STOP DATE\* 09/24/1980  
 LOAD VOL\* 1021600  
 DUMP VOL\* 875000

AUTHORITY REFERENCE\* LAND USE PERMIT N78A849  
 AMOUNT LICENSED\* 4900000  
 TERM START\* 06/05/1978  
 TERM COMPLETE\* 07/13/1983

COMMENT\* VOLUMES ARE APPROXIMATE.

COMMENT\* BEAVER MACKENZIE WAS ASSISTED BY SCEPTRE MACKENZIE DURING THIS OPERATION.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* WOODWARD-CLYDE CONSULTANTS, 1982. BEAUFORT SEA SEDIMENT DYNAMICS. PREPARED FOR GEOLOGICAL SURVEY OF CANADA, BEDFORD INSTITUTE OF OCEANOGRAPHY, DARTMOUTH, N.S..WOODWARD-CLYDE CONSULTANTS, VICTORIA.

REFERENCE\* SWAN WOOSTER ENGINEERING CO. LTD., 1982. ENVIRONMENTAL IMPACT STATEMENT; STUDY OF PRODUCTION STRUCTURES, BEAUFORT SEA OIL FIELD DEVELOPEMENT. PREPARED FOR DOME PETROLEUM LTD., ESSO RESOURCES CANADA LTD., GULF CANADA RESOURCES INC., AUGUST 1982.

REFERENCE\* ESSO RESOURCES CANADA LTD. 1979. ISSUNGNAK 0-61 1978 AND 1979 DAILY REPORTS. ESSO RESOURCES CANADA LTD., CALGARY.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF FISHERIES AND OCEANS,SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL ISLAND SUMMARY.

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DATASET NUMBER\* 80GEX-01  
 YEAR\* 1980  
 COMPANY & YEAR\* DOME/CANMAR 1980  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* KAGLULIK M-64 ISLAND (CANCELLED)  
 LOAD NAME\* KAGLULIK SOUTH 50  
 LOAD LAT\* 70.110000  
 LOAD LON\* 131.750000  
 LOAD MIN DEPTH\* 20.0  
 LOAD MAX DEPTH\* 25.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* KAGLULIK M-64 ISLAND  
 DUMP LAT\* 70.570000  
 DUMP LON\* 130.840000  
 DUMP MIN DEPTH\* 27.0  
 DUMP MAX DEPTH\* 27.0  
 DUMP METHOD\* SUCTION PIPELINE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* KAGLULIK M-64  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* OPERATION CANCELLED

START DATE\* 09/17/1980  
 STOP DATE\* 09/20/1980  
 LOAD VOL\* 43480  
 DUMP VOL\* 43480

START DATE\* 09/23/1980  
 STOP DATE\* 09/27/1980  
 LOAD VOL\* 58875  
 DUMP VOL\* 58875

START DATE\* 10/01/1980  
 STOP DATE\* 10/01/1980  
 LOAD VOL\* 14550  
 DUMP VOL\* 14550

START DATE\* 10/09/1980  
 STOP DATE\* 10/10/1980  
 LOAD VOL\* 21400  
 DUMP VOL\* 21400

AUTHORITY REFERENCE\* PLGA LIC 3523, LEASE 3522  
 AMOUNT LICENSED\* 1360000  
 TERM START\* 09/10/1980  
 TERM COMPLETE\* 09/01/1983

REFERENCE\* LETTER FROM R. HOOS (DOME) TO D. STONE (DIAND), 10/17/80.



REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 80GEX-02  
 YEAR\* 1980  
 COMPANY & YEAR\* DOME/CANMAR 1980  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* KAGLULIK M-64 ISLAND (CANCELLED)  
 LOAD NAME\* WEST 17 BORROW  
 LOAD LAT\* PROPRIETARY  
 LOAD LON\* PROPRIETARY  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* KAGLULIK M-64 ISLAND  
 DUMP LAT\* 70.570000  
 DUMP LON\* 130.840000  
 DUMP MIN DEPTH\* 27.0  
 DUMP MAX DEPTH\* 27.0  
 DUMP METHOD\* BOTTOM VALVE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* KAGLULIK M-64  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* OPERATION CANCELLED

START DATE\* 09/21/1980  
 STOP DATE\* 09/22/1980  
 LOAD VOL\* 45060  
 DUMP VOL\* 45060

START DATE\* 09/28/1980  
 STOP DATE\* 09/30/1980  
 LOAD VOL\* 70850  
 DUMP VOL\* 70850

START DATE\* 10/02/1980  
 STOP DATE\* 10/04/1980  
 LOAD VOL\* 29980  
 DUMP VOL\* 29980

AUTHORITY REFERENCE\* PLGA LIC 3523, LEASE 3522  
 AMOUNT LICENSED\* 1360000  
 TERM START\* 09/10/1980  
 TERM COMPLETE\* 09/01/1983

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 80GEX-03  
YEAR\* 1980  
COMPANY & YEAR\* DOME/CANMAR 1980  
DREDGE NAME\* GEOPOTES X  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* TARSUUT CLAY REMOVAL  
LOAD NAME\* TARSUUT N-44  
LOAD LAT\* 69.900000  
LOAD LON\* 136.190000  
LOAD MIN DEPTH\* 23.0  
LOAD MAX DEPTH\* 23.0  
LOAD SEDIMENT\* CLAY  
DUMP NAME\* TARSUUT N-44 ISLAND  
DUMP LAT\* 69.900000  
DUMP LON\* 136.190000  
DUMP MIN DEPTH\* 23.0  
DUMP MAX DEPTH\* 23.0  
DUMP METHOD\* BOTTOM VALVE  
DUMP SEDIMENT\* CLAY  
ISLAND NAME\* TARSUUT N-44  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 10/05/1980  
STOP DATE\* 10/08/1980  
LOAD VOL\* 84900  
DUMP VOL\* 84900

REFERENCE\* DOME PETROLEUM LTD., 1980. OFFSHORE ISLAND DAILY REPORT, 10/08/80.

REFERENCE\* DOME PETROLEUM LTD., 1980. ISLAND DREDGING REPORT, 1981 SEASON. NOV 6, 1981.

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 80GEX-04  
YEAR\* 1980  
COMPANY & YEAR\* DOME/CANMAR 1980  
DREDGE NAME\* GEOPOTES X  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* TARSUUT N-44 ISLAND  
LOAD NAME\* ISSERK AREA  
LOAD LAT\* 69.650000  
LOAD LON\* 134.200000  
LOAD MIN DEPTH\* 16.0

LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* TARSIUT N-44 ISLAND  
DUMP LAT\* 69.900000  
DUMP LON\* 136.190000  
DUMP MIN DEPTH\* 23.0  
DUMP MAX DEPTH\* 23.0  
DUMP METHOD\* BOTTOM VALVE AND PUMP OUT  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* TARSIUT N-44  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 10/11/1980  
STOP DATE\* 10/13/1980  
LOAD VOL\* 26690  
DUMP VOL\* 26690

START DATE\* 10/17/1980  
STOP DATE\* 10/18/1980  
LOAD VOL\* 20030  
DUMP VOL\* 20030

AUTHORITY REFERENCE\* PLGA LIC 3527  
AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
TERM START\* 09/12/1980  
TERM COMPLETE\* 09/01/1983

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 80GEX-05  
YEAR\* 1980  
COMPANY & YEAR\* DOME/CANMAR 1980  
DREDGE NAME\* GEOPOTES X  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* TARSIUT N-44 ISLAND  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* TARSIUT N-44 ISLAND  
DUMP LAT\* 69.900000  
DUMP LON\* 136.190000  
DUMP MIN DEPTH\* 23.0  
DUMP MAX DEPTH\* 23.0  
DUMP METHOD\* BOTTOM VALVE AND PUMP OUT  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* TARSIUT N-44

ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 10/15/1980  
STOP DATE\* 10/16/1980  
LOAD VOL\* 13980  
DUMP VOL\* 13980

START DATE\* 10/22/1980  
STOP DATE\* 10/22/1980  
LOAD VOL\* 7870  
DUMP VOL\* 7870

START DATE\* 10/23/1980  
STOP DATE\* 10/31/1980  
LOAD VOL\* 112020  
DUMP VOL\* 112020

AUTHORITY REFERENCE\* FLGA LIC 3527  
AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
TERM START\* 09/12/1980  
TERM COMPLETE\* 09/01/1983

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 80SCM-01  
YEAR\* 1980  
COMPANY & YEAR\* IMPERIAL/ESSO 1980  
DREDGE NAME\* SCEPTRE MACKENZIE  
DREDGE TYPE\* STATIONARY SUCTION  
PURPOSE\* ISSUNGNAK 2-0-61  
LOAD NAME\* ISSUNGNAK 0-61 AREA  
LOAD LAT\* 70.020000  
LOAD LON\* 134.310000  
LOAD MIN DEPTH\* 19.0  
LOAD MAX DEPTH\* 20.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* ISSUNGNAK 0-61 ISLAND  
DUMP LAT\* 70.020000  
DUMP LON\* 134.310000  
DUMP MIN DEPTH\* 19.0  
DUMP MAX DEPTH\* 20.0  
DUMP METHOD\* PIPELINE DISCHARGE  
DUMP SEDIMENT\* SAND, SILT  
ISLAND NAME\* ISSUNGNAK 0-61  
ISLAND TYPE\* SACRIFICIAL BEACH  
ISLAND STATUS\* ABANDONED 1981

START DATE\* 08/23/1980  
STOP DATE\* 09/25/1980

LOAD VOL\* INFORMATION NOT FOUND IN SEARCH  
 DUMP VOL\* INFORMATION NOT FOUND IN SEARCH

AUTHORITY REFERENCE\* LAND USE PERMIT N78A849  
 AMOUNT LICENSED\* 4900000  
 TERM START\* 06/05/1978  
 TERM COMPLETE\* 07/13/1983

COMMENT\* SCEPTRE MACKENZIE ASSISTED THE BEAVER MACKENZIE DURING THIS  
 OPERATION.COMBINED VOLUMES FOUND IN 80BMZ-01.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* SWAN WOOSTER ENGINEERING CO. LTD., 1982. ENVIRONMENTAL IMP  
 ACT STATEMENT; STUDY OF PRODUCTION STRUCTURES, BEAUFORT SEA OIL  
 FIELD DEVELOPEMENT. PREPARED FOR DOME PETROLEUM LTD., ESSO RESO  
 URCS CANADA LTD., GULF CANADA RESOURCES INC., AUGUST 1982.

REFERENCE\* IMPERIAL OIL LTD. 1977. REPORT ON THE 1976 ARCTIC OFFSHORE  
 CONSTRUCTION PROGRAM. PRODUCTION DEPT., WESTERN REGION, OFFSHO  
 RE CONSTRUCTION GROUP. FIELD SERVICES, EDMONTON.

REFERENCE\* ESSO RESOURCES CANADA LTD. 1979. ISSUNGNAK 0-61 1978 AND 1  
 979 DAILY REPORTS. ESSO RESOURCES CANADA LTD., CALGARY.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS,SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
 ISLAND SUMMARY.

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DATASET NUMBER\* 80UNK-01  
 YEAR\* 1980  
 COMPANY & YEAR\* DOME/CANMAR 1980  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* KILANNAK A-77 GLORY HOLE  
 LOAD NAME\* KILANNAK A-77  
 LOAD LAT\* 70.770000  
 LOAD LON\* 129.350000  
 LOAD MIN DEPTH\* 25.0  
 LOAD MAX DEPTH\* 25.0  
 LOAD SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 DUMP NAME\* NOT APPLICABLE  
 DUMP LAT\* NOT APPLICABLE  
 DUMP LON\* NOT APPLICABLE  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* NOT APPLICABLE  
 DUMP SEDIMENT\* NOT APPLICABLE  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE

ISLAND STATUS\* NOT APPLICABLE

START DATE\* 01/01/1980  
STOP DATE\* 01/01/1900  
LOAD VOL\* 18519  
DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 81AQU-01  
YEAR\* 1981  
COMPANY & YEAR\* DOME/CANMAR 1981  
DREDGE NAME\* AQUARIUS  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* TUK HARBOUR DOCK CONSTRUCTION AND FILL  
LOAD NAME\* TUK HARBOUR  
LOAD LAT\* 69.430000  
LOAD LON\* 132.980000  
LOAD MIN DEPTH\* 3.0  
LOAD MAX DEPTH\* 3.0  
LOAD SEDIMENT\* SAND, SILT  
DUMP NAME\* TUK HARBOUR  
DUMP LAT\* 69.430000  
DUMP LON\* 132.980000  
DUMP MIN DEPTH\* 10.0  
DUMP MAX DEPTH\* 18.5  
DUMP METHOD\* FLOATING PIPELINE  
DUMP SEDIMENT\* SAND, SILT  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 06/16/1981  
STOP DATE\* 06/18/1981  
LOAD VOL\* 35807  
DUMP VOL\* 35807

AUTHORITY REFERENCE\* ODCA PERMIT 4443-1208  
AMOUNT LICENSED\* 10000  
TERM START\* 06/08/1981  
TERM COMPLETE\* 11/30/1981

COMMENT\* MONITORING STUDIES CARRIED OUT BY ARCTIC LABS. LTD. BEGINING  
07/13/79 FOR GEOCHEMICAL PARAMETERS.

REFERENCE\* GAZETTED PERMIT 1208.

REFERENCE\* DOME PETROLEUM LTD., 1981. AQUARIUS 1981 DREDGING REPORT.  
BEAUFORT SEA CONSTRUCTION (DOME); CALGARY.

REFERENCE\* LETTER FROM B. WILSON (EPS, YELLOWKNIFE) TO R. HOOS (DOME)  
, 07/13/81.

REFERENCE\* LETTER FROM R. HOOS (DOME) TO W. BRYANT (EPS, YELLOWKNIFE)  
, 06/26/81.

REFERENCE\* LETTER FROM R. HOOS (DOME) TO B. WILSON (EPS, YELLOWKNIFE)  
, 08/11/81.

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DATASET NUMBER\* 81AQU-02

YEAR\* 1981

COMPANY & YEAR\* GOVT NWT AND DOME/CANMAR 1981

DREDGE NAME\* AQUARIUS

DREDGE TYPE\* CUTTER SUCTION

PURPOSE\* TUK RESERVOIR

LOAD NAME\* TUK HARBOUR

LOAD LAT\* 69.440000

LOAD LON\* 133.000000

LOAD MIN DEPTH\* 2.4

LOAD MAX DEPTH\* 5.8

LOAD SEDIMENT\* SAND, SILT, CLAY

DUMP NAME\* TUKTOYAKTUK (LAND), EAST OF TAREOKNITOK LAGOON

DUMP LAT\* 69.440000

DUMP LON\* 133.010000

DUMP MIN DEPTH\* NOT APPLICABLE

DUMP MAX DEPTH\* NOT APPLICABLE

DUMP METHOD\* FLOATING PIPELINE, SUBMERGED PIPELINE

DUMP SEDIMENT\* SAND, SILT, CLAY

ISLAND NAME\* NOT APPLICABLE

ISLAND TYPE\* NOT APPLICABLE

ISLAND STATUS\* NOT APPLICABLE

START DATE\* 06/18/1981

STOP DATE\* 06/22/1981

LOAD VOL\* 41000

DUMP VOL\* 41000

START DATE\* 06/23/1981

STOP DATE\* 06/30/1981

LOAD VOL\* 303185

DUMP VOL\* 303185

START DATE\* 07/01/1981

STOP DATE\* 07/07/1981

LOAD VOL\* 395758

DUMP VOL\* 395758

COMMENT\* TOTAL DREDGED 746443 M'3, TOTAL DUMPED 739743 M'3.

REFERENCE\* GOVT NWT APPLICATION UNDER PLGA, LETTER FROM B. MILBURN (G NWT) TO A.E. GANSKE (DIAND), 12/10/80.

REFERENCE\* EPEC CONSULTING WESTERN LTD., 1982. FINAL REPORT DREDGING AND CONSTRUCTION OBSERVATIONS OF THE TUKTOYAKTUK POTABLE WATER RESERVOIR. PREPARED FOR GOVT NWT. WHITEHORSE; EPEC CONSULTING WESTERN LTD.

REFERENCE\* GOVT GNWT, 1981. TUKTOYAKTUK POTABLE WATER RESERVOIR, DREDGING COMPONENT. SUBMITTED TO AWAC. WATER AND SANITATION SECTION OF GNWT. YELLOWKNIFE.

REFERENCE\* DOME PETROLEUM LTD., 1981. AQUARIUS 1981 DREDGING REPORT. BEAUFORT SEA CONSTRUCTION (DOME); CALGARY.

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DATASET NUMBER\* 81AQU-03  
 YEAR\* 1981  
 COMPANY & YEAR\* DOME/CANMAR 1981  
 DREDGE NAME\* AQUARIUS  
 DREDGE TYPE\* CUTTER SUCTION  
 PURPOSE\* TARSUUT N-44 ISLAND  
 LOAD NAME\* SOUTH TARSUUT BORROW  
 LOAD LAT\* PROPRIETARY  
 LOAD LON\* PROPRIETARY  
 LOAD MIN DEPTH\* 7.0  
 LOAD MAX DEPTH\* 12.0  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* TARSUUT N-44  
 DUMP LAT\* 69.900000  
 DUMP LON\* 136.190000  
 DUMP MIN DEPTH\* 23.0  
 DUMP MAX DEPTH\* 23.0  
 DUMP METHOD\* BARGE  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* TARSUUT N-44  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 07/10/1981  
 STOP DATE\* 07/31/1981  
 LOAD VOL\* 472011  
 DUMP VOL\* 293103

START DATE\* 08/01/1981  
 STOP DATE\* 08/13/1981  
 LOAD VOL\* 278915



DUMP VOL\* 173197

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
THE TOTAL VOLUME DREDGED (750.925 M'3) IN THE GIVEN PERIOD.

COMMENT\* LOCATION OF THE GRAVEL LOAD SITE IS UNAVAILABLE DUE TO PROPRIETARY RESTRICTIONS.

REFERENCE\* DOME PETROLEUM LTD., 1981. AQUARIUS 1981 DREDGING REPORT.  
BEAUFORT SEA CONSTRUCTION (DOME); CALGARY.

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DATASET NUMBER\* 81AQU-04  
YEAR\* 1981  
COMPANY & YEAR\* DOME/CANMAR 1981  
DREDGE NAME\* AQUARIUS  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* MCKINLEY BAY HARBOUR MAINTENANCE, MOORING BASIN ACCESS CHANNEL  
LOAD NAME\* MCKINLEY BAY  
LOAD LAT\* 69.940000  
LOAD LON\* 131.220000  
LOAD MIN DEPTH\* 3.0  
LOAD MAX DEPTH\* 15.0  
LOAD SEDIMENT\* SAND, CLAY  
DUMP NAME\* MCKINLEY BAY NORTH PROTECTION ISLAND  
DUMP LAT\* 69.960000  
DUMP LON\* 131.170000  
DUMP MIN DEPTH\* .0  
DUMP MAX DEPTH\* 1.5  
DUMP METHOD\* PIPELINE DISCHARGE  
DUMP SEDIMENT\* SAND, CLAY  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 08/13/1981  
STOP DATE\* 08/31/1981  
LOAD VOL\* 836736  
DUMP VOL\* 836736

START DATE\* 09/01/1981  
STOP DATE\* 09/30/1981  
LOAD VOL\* 1394559  
DUMP VOL\* 1394559

START DATE\* 10/01/1981  
STOP DATE\* 10/27/1981  
LOAD VOL\* 1255105  
DUMP VOL\* 1255105

AUTHORITY REFERENCE\* ODCA PERMIT 4443-1194

AMOUNT LICENSED\* 1000000  
 TERM START\* 07/01/1981  
 TERM COMPLETE\* 11/30/1981

COMMENT\* ALL MATERIAL DREDGED FROM MOORING BASIN IN 1981 WAS PLACED ON NORTH PROTECTION ISLAND.

COMMENT\* KNOWN INSPECTION DATES; 08/13/81, 09/10/81, 10/26/81.

COMMENT\* NORTH PROTECTION ISLAND WAS CONSTRUCTED UNDER PLGA DREDGING LICENSE AND LEASE.

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF THE TOTAL VOLUME DREDGED (626600 M<sup>3</sup>) IN THE GIVEN PERIOD.

REFERENCE\* LETTER FROM ED PESSAH (DOME) TO B. WILSON (EPS, YELLOWKNIFE) 12/28/81.

REFERENCE\* GAZETTED LICENSE 3734.

REFERENCE\* GAZETTED PERMIT 1194.

REFERENCE\* DOME PETROLEUM LTD., 1981. AQUARIUS 1981 DREDGING REPORT. BEAUFORT SEA CONSTRUCTION (DOME); CALGARY.

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DATASET NUMBER\* 81BMZ-01  
 YEAR\* 1981  
 COMPANY & YEAR\* IMPERIAL/ESSO 1981  
 DREDGE NAME\* BEAVER MACKENZIE  
 DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* TUK HARBOUR LAND RECLAMATION  
 LOAD NAME\* TUK HARBOUR  
 LOAD LAT\* 69.420000  
 LOAD LON\* 132.960000  
 LOAD MIN DEPTH\* 3.7  
 LOAD MAX DEPTH\* 7.9  
 LOAD SEDIMENT\* SAND, SILT, GRAVEL  
 DUMP NAME\* TUK HARBOUR (LAND)  
 DUMP LAT\* 69.420000  
 DUMP LON\* 132.950000  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* PIPELINE DISCHARGE  
 DUMP SEDIMENT\* SAND, SILT, GRAVEL  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/15/1981  
 STOP DATE\* 07/18/1981

LOAD VOL\* 135000  
DUMP VOL\* 115000

AUTHORITY REFERENCE\* PLGA LIC 3674  
AMOUNT LICENSED\* 250000  
TERM START\* 07/10/1981  
TERM COMPLETE\* 07/31/1981

REFERENCE\* GAZETTED LICENSE 3674.

REFERENCE\* NOTICE FROM ESSO TO DIAND RE: TUC HARBOUR DREDGING AND LAND RECLAMATION 11/17/81.

REFERENCE\* IMPERIAL OIL LTD. 1977. REPORT ON THE 1976 ARCTIC OFFSHORE CONSTRUCTION PROGRAM. PRODUCTION DEPT., WESTERN REGION, OFFSHORE CONSTRUCTION GROUP. FIELD SERVICES, EDMONTON.

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DATASET NUMBER\* 81BMZ-02  
YEAR\* 1981  
COMPANY & YEAR\* IMPERIAL/ESSO 1981  
DREDGE NAME\* BEAVER MACKENZIE  
DREDGE TYPE\* STATIONARY SUCTION  
PURPOSE\* ALERK P-23 ISLAND  
LOAD NAME\* ALERK P-23 AREA  
LOAD LAT\* 69.880000  
LOAD LON\* 132.840000  
LOAD MIN DEPTH\* 11.6  
LOAD MAX DEPTH\* 11.6  
LOAD SEDIMENT\* SAND, SILT  
DUMP NAME\* ALERK P-23 ISLAND  
DUMP LAT\* 69.880000  
DUMP LON\* 132.840000  
DUMP MIN DEPTH\* 11.6  
DUMP MAX DEPTH\* 11.6  
DUMP METHOD\* PIPELINE DISCHARGE  
DUMP SEDIMENT\* SAND, SILT  
ISLAND NAME\* ALERK P-23  
ISLAND TYPE\* SACRIFICIAL BEACH  
ISLAND STATUS\* ABANDONED 1982

START DATE\* 07/21/1981  
STOP DATE\* 07/27/1981  
LOAD VOL\* 245000  
DUMP VOL\* 215830

START DATE\* 07/28/1981  
STOP DATE\* 07/31/1981  
LOAD VOL\* 140000  
DUMP VOL\* 123330

START DATE\* 08/01/1981  
 STOP DATE\* 08/31/1981  
 LOAD VOL\* 1085000  
 DUMP VOL\* 955840

START DATE\* 09/01/1981  
 STOP DATE\* 09/06/1981  
 LOAD VOL\* 210000  
 DUMP VOL\* 185000

AUTHORITY REFERENCE\* PLGA LEASE 3520  
 AMOUNT LICENSED\* 1500000  
 TERM START\* 09/01/1980  
 TERM COMPLETE\* 09/01/1985

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* ESSO RESOURCES CANADA LTD., 1982. 1981 BEAUFORT OFFSHORE C  
 ONSTRUCTION PROJECT REPORT. PRODUCTION DEPARTMENT FIELD SERVICE  
 S. FRONTIER TECHNOLOGY; CALGARY.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
 ISLAND SUMMARY.

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DATASET NUMBER\* 81BMZ-03  
 YEAR\* 1981  
 COMPANY & YEAR\* IMPERIAL/ESSO 1981  
 DREDGE NAME\* BEAVER MACKENZIE  
 DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* ITIYOK I-27 ISLAND  
 LOAD NAME\* ITIYOK I-27 AREA  
 LOAD LAT\* 69.940000  
 LOAD LON\* 134.090000  
 LOAD MIN DEPTH\* 15.0  
 LOAD MAX DEPTH\* 15.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* ITIYOK I-27 ISLAND  
 DUMP LAT\* 69.940000  
 DUMP LON\* 134.090000  
 DUMP MIN DEPTH\* 15.0  
 DUMP MAX DEPTH\* 15.0  
 DUMP METHOD\* FLOATING PIPELINE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* ITIYOK I-27  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 07/29/1981  
 STOP DATE\* 07/31/1981

LOAD VOL\* 20785  
DUMP VOL\* 20785

START DATE\* 08/01/1981  
STOP DATE\* 08/04/1981  
LOAD VOL\* 23165  
DUMP VOL\* 23165

START DATE\* 08/11/1981  
STOP DATE\* 08/14/1981  
LOAD VOL\* 69902  
DUMP VOL\* 69902

START DATE\* 08/15/1981  
STOP DATE\* 08/22/1981  
LOAD VOL\* 145383  
DUMP VOL\* 145383

START DATE\* 08/23/1981  
STOP DATE\* 08/29/1981  
LOAD VOL\* 191177  
DUMP VOL\* 191177

START DATE\* 09/21/1981  
STOP DATE\* 09/22/1981  
LOAD VOL\* 13100  
DUMP VOL\* 13100

START DATE\* 09/23/1981  
STOP DATE\* 09/29/1981  
LOAD VOL\* 104923  
DUMP VOL\* 104923

START DATE\* 10/02/1981  
STOP DATE\* 10/07/1981  
LOAD VOL\* 76215  
DUMP VOL\* 76215

START DATE\* 10/08/1981  
STOP DATE\* 10/08/1981  
LOAD VOL\* 15875  
DUMP VOL\* 15875

REFERENCE\* ESSO RESOURCES CANADA LTD., 1982. 1981 BEAUFORT OFFSHORE C  
ONSTRUCTION PROJECT REPORT. PRODUCTION DEPARTMENT FIELD SERVICE  
S. FRONTIER TECHNOLOGY; CALGARY.

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DATASET NUMBER\* 81BMZ-04  
YEAR\* 1981  
COMPANY & YEAR\* IMPERIAL/ESSO 1981

DREDGE NAME\* BEAVER MACKENZIE  
 DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* WEST ATKINSON L-17 ISLAND  
 LOAD NAME\* WEST ATKINSON L-17 AREA  
 LOAD LAT\* 69.780000  
 LOAD LON\* 132.080000  
 LOAD MIN DEPTH\* 7.0  
 LOAD MAX DEPTH\* 7.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* WEST ATKINSON L-17 ISLAND  
 DUMP LAT\* 69.780000  
 DUMP LON\* 132.080000  
 DUMP MIN DEPTH\* 7.0  
 DUMP MAX DEPTH\* 7.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* WEST ATKINSON L-17  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED 1982

START DATE\* 09/06/1981  
 STOP DATE\* 09/07/1981  
 LOAD VOL\* 48330  
 DUMP VOL\* 40750

START DATE\* 09/08/1981  
 STOP DATE\* 09/14/1981  
 LOAD VOL\* 474900  
 DUMP VOL\* 421780

START DATE\* 09/15/1981  
 STOP DATE\* 09/21/1981  
 LOAD VOL\* 432670  
 DUMP VOL\* 379570

AUTHORITY REFERENCE\* LAND USE PERMIT N7 9A089  
 AMOUNT LICENSED\* 1000000  
 TERM START\* 07/18/1979  
 TERM COMPLETE\* 07/16/1983

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* ESSO RESOURCES CANADA LTD., 1982. 1981 BEAUFORT OFFSHORE C  
 ONSTRUCTION PROJECT REPORT. PRODUCTION DEPARTMENT FIELD SERVICE  
 S. FRONTIER TECHNOLOGY; CALGARY.

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DATASET NUMBER\* 81BMZ-05  
 YEAR\* 1981  
 COMPANY & YEAR\* IMPERIAL/ESSO 1981  
 DREDGE NAME\* BEAVER MACKENZIE

DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* ISSERK A-49 DREDGE TESTS  
 LOAD NAME\* ISSERK A-49 AREA  
 LOAD LAT\* 69.970000  
 LOAD LON\* 132.420000  
 LOAD MIN DEPTH\* 1.0  
 LOAD MAX DEPTH\* 38.0  
 LOAD SEDIMENT\* SAND, SILT, CLAY  
 DUMP NAME\* ISSERK A-49 AREA  
 DUMP LAT\* 69.970000  
 DUMP LON\* 134.420000  
 DUMP MIN DEPTH\* 1.0  
 DUMP MAX DEPTH\* 38.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND, SILT, CLAY  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 01/01/1981  
 STOP DATE\* 01/01/1900  
 LOAD VOL\* 7040  
 DUMP VOL\* 7040

REFERENCE\* ESSO RESOURCES CANADA LTD., 1982. 1981 BEAUFORT OFFSHORE C  
 ONSTRUCTION PROJECT REPORT. PRODUCTION DEPARTMENT FIELD SERVICE  
 S. FRONTIER TECHNOLOGY; CALGARY.

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DATASET NUMBER\* 81EX1-01  
 YEAR\* 1981  
 COMPANY & YEAR\* GULF CANADA 1981  
 DREDGE NAME\* EXPLORER I  
 DREDGE TYPE\* DRILLSHIP  
 PURPOSE\* NORTH ISSUNGNAK L-86 GLORY HOLE  
 LOAD NAME\* NORTH ISSUNGNAK L-86  
 LOAD LAT\* 70.090000  
 LOAD LON\* 134.450000  
 LOAD MIN DEPTH\* 26.2  
 LOAD MAX DEPTH\* 26.2  
 LOAD SEDIMENT\* SAND, SILT, CLAY  
 DUMP NAME\* NOT APPLICABLE  
 DUMP LAT\* NOT APPLICABLE  
 DUMP LON\* NOT APPLICABLE  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* NOT APPLICABLE  
 DUMP SEDIMENT\* NOT APPLICABLE  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 06/29/1981  
STOP DATE\* 06/30/1981  
LOAD VOL\* 625  
DUMP VOL\* 625

START DATE\* 07/01/1981  
STOP DATE\* 07/15/1981  
LOAD VOL\* 9375  
DUMP VOL\* 9375

REFERENCE\* BILL LIVINGSTONE, GULF, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 81GEX-01  
YEAR\* 1981  
COMPANY & YEAR\* DOME/CANMAR 1981  
DREDGE NAME\* GEOPOTES X  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* UVILUK P-66 ISLAND  
LOAD NAME\* UVILUK P-66 AREA  
LOAD LAT\* 70.260000  
LOAD LON\* 132.310000  
LOAD MIN DEPTH\* 30.0  
LOAD MAX DEPTH\* 30.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* UVILUK P-66 ISLAND  
DUMP LAT\* 70.260000  
DUMP LON\* 132.310000  
DUMP MIN DEPTH\* 31.0  
DUMP MAX DEPTH\* 31.0  
DUMP METHOD\* BOTTOM VALVE AND PUMP OUT  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* UVILUK P-66  
ISLAND TYPE\* SSDC BERM  
ISLAND STATUS\* ABANDONED 1983

START DATE\* 06/14/1981  
STOP DATE\* 06/30/1981  
LOAD VOL\* 183379  
DUMP VOL\* 183379

AUTHORITY REFERENCE\* PLGA LEASE 3690  
AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
TERM START\* INFORMATION NOT FOUND IN SEARCH  
TERM STOP\* INFORMATION NOT FOUND IN SEARCH

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.



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DATASET NUMBER\* 81GEX-02  
 YEAR\* 1981  
 COMPANY & YEAR\* DOME/CANMAR 1981  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* TARSUUT N-44 ISLAND  
 LOAD NAME\* SOUTH TARSUUT  
 LOAD LAT\* PROPRIETARY  
 LOAD LON\* PROPRIETARY  
 LOAD MIN DEPTH\* 8.0  
 LOAD MAX DEPTH\* 12.0  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* TARSUUT N-44 ISLAND  
 DUMP LAT\* 69.900000  
 DUMP LON\* 136.190000  
 DUMP MIN DEPTH\* 23.0  
 DUMP MAX DEPTH\* 23.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* TARSUUT N-44  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 06/15/1981  
 STOP DATE\* 06/30/1981  
 LOAD VOL\* 1185  
 DUMP VOL\* 1185

START DATE\* 07/01/1981  
 STOP DATE\* 07/07/1981  
 LOAD VOL\* 593  
 DUMP VOL\* 593

COMMENT\* WEEKLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF THE TOTAL VOLUME DREDGED (1778 M<sup>3</sup>) IN THE GIVEN PERIOD.

REFERENCE\* DOME PETROLEUM LTD., 1981. ISLAND DREDGING REPORT 1981 SEASON, NOVEMBER 6, 1981.

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 81GEX-03  
 YEAR\* 1981  
 COMPANY & YEAR\* DOME/CANMAR 1981

DREDGE NAME\* GEOPOTES X  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* TARSUUT N-44 ISLAND  
LOAD NAME\* HERSCHEL AREA B  
LOAD LAT\* 69.540000  
LOAD LON\* 138.800000  
LOAD MIN DEPTH\* 8.0  
LOAD MAX DEPTH\* 14.0  
LOAD SEDIMENT\* GRAVEL  
DUMP NAME\* TARSUUT N-44 ISLAND  
DUMP LAT\* 69.900000  
DUMP LON\* 136.190000  
DUMP MIN DEPTH\* 23.0  
DUMP MAX DEPTH\* 23.0  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* GRAVEL  
ISLAND NAME\* TARSUUT N-44  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 06/22/1981  
STOP DATE\* 06/30/1981  
LOAD VOL\* 3654  
DUMP VOL\* 3654

START DATE\* 07/01/1981  
STOP DATE\* 07/31/1981  
LOAD VOL\* 14161  
DUMP VOL\* 14161

START DATE\* 08/01/1981  
STOP DATE\* 08/31/1981  
LOAD VOL\* 14161  
DUMP VOL\* 14161

START DATE\* 09/01/1981  
STOP DATE\* 09/30/1981  
LOAD VOL\* 14161  
DUMP VOL\* 14161

START DATE\* 10/01/1981  
STOP DATE\* 10/30/1981  
LOAD VOL\* 14161  
DUMP VOL\* 14161

AUTHORITY REFERENCE\* GAZETTED LICENSE 3693  
AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
TERM START\* 02/02/1999  
TERM COMPLETE\* 02/02/1999

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
THE TOTAL VOLUME DREDGED (60298 M<sup>3</sup>) IN THE GIVEN PERIOD.

REFERENCE\* DOME PETROLEUM LTD., 1981. ISLAND DREDGING REPORT 1981 SEA  
SON, NOVEMBER 6, 1981.

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 81GEX-04  
YEAR\* 1981  
COMPANY & YEAR\* DOME/CANMAR  
DREDGE NAME\* GEOPOTES X  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* TARSUUT N-44 ISLAND  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* TARSUUT N-44  
DUMP LAT\* 69.900000  
DUMP LON\* 136.190000  
DUMP MIN DEPTH\* 23.0  
DUMP MAX DEPTH\* 23.0  
DUMP METHOD\* BOTTOM VALVE AND PUMP OUT  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* TARSUUT N-44  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* COMPLETED 1982

START DATE\* 06/01/1981  
STOP DATE\* 06/30/1981  
LOAD VOL\* 26149  
DUMP VOL\* 26149

START DATE\* 07/01/1981  
STOP DATE\* 07/31/1981  
LOAD VOL\* 101327  
DUMP VOL\* 101327

START DATE\* 08/01/1981  
STOP DATE\* 08/30/1981  
LOAD VOL\* 101327  
DUMP VOL\* 101327

START DATE\* 09/01/1981  
STOP DATE\* 09/30/1981  
LOAD VOL\* 101327  
DUMP VOL\* 101327

START DATE\* 10/01/1981  
STOP DATE\* 10/31/1981  
LOAD VOL\* 101327  
DUMP VOL\* 101327

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
THE TOTAL VOLUME DREDGED (431458 M'3) IN THE GIVEN PERIOD.

REFERENCE\* DOME PETROLEUM LTD., 1981. ISLAND DREDGING REPORT 1981 SEA  
SON, 6 NOV 1981.

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DATASET NUMBER\* 81GEX-05  
YEAR\* 1981  
COMPANY & YEAR\* DOME/CANMAR 1981  
DREDGE NAME\* GEOPOTES X  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* UVILUK P-66 ISLAND  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* UVILUK P-66 ISLAND  
DUMP LAT\* 70.260000  
DUMP LON\* 132.310000  
DUMP MIN DEPTH\* 31.0  
DUMP MAX DEPTH\* 31.0  
DUMP METHOD\* BOTTOM VALVE AND PUMP OUT  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* UVILUK P-66  
ISLAND TYPE\* SSDC BERM  
ISLAND STATUS\* ABANDONED 1983

START DATE\* 07/01/1981  
STOP DATE\* 07/31/1981  
LOAD VOL\* 190347  
DUMP VOL\* 190347

START DATE\* 08/01/1981  
STOP DATE\* 08/31/1981  
LOAD VOL\* 190347  
DUMP VOL\* 190347

START DATE\* 09/01/1981  
STOP DATE\* 09/30/1981  
LOAD VOL\* 190347  
DUMP VOL\* 190347

START DATE\* 10/01/1981  
STOP DATE\* 10/31/1981  
LOAD VOL\* 190347  
DUMP VOL\* 190347

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 81GEX-06  
YEAR\* 1981  
COMPANY & YEAR\* DOME/CANMAR 1981  
DREDGE NAME\* GEOPOTES X  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* UVILUK P-66 ISLAND  
LOAD NAME\* SOUTH TARSIUT  
LOAD LAT\* PROPRIETARY  
LOAD LON\* PROPRIETARY  
LOAD MIN DEPTH\* 8.0  
LOAD MAX DEPTH\* 12.0  
LOAD SEDIMENT\* GRAVEL  
DUMP NAME\* UVILUK P-66 ISLAND  
DUMP LAT\* 70.260000  
DUMP LON\* 132.310000  
DUMP MIN DEPTH\* 31.0  
DUMP MAX DEPTH\* 31.0  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* GRAVEL  
ISLAND NAME\* UVILUK P-66  
ISLAND TYPE\* SSDC BERM  
ISLAND STATUS\* ABANDONED 1983

START DATE\* 07/01/1981  
STOP DATE\* 07/31/1981  
LOAD VOL\* 9401  
DUMP VOL\* 9401

START DATE\* 08/01/1981  
STOP DATE\* 08/31/1981  
LOAD VOL\* 9401  
DUMP VOL\* 9401

START DATE\* 09/01/1981  
STOP DATE\* 09/30/1981  
LOAD VOL\* 9097  
DUMP VOL\* 9097

START DATE\* 10/01/1981  
STOP DATE\* 10/31/1981  
LOAD VOL\* 9401  
DUMP VOL\* 9401

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
THE TOTAL VOLUME DREDGED (37300 M'3) IN THE GIVEN PERIOD.

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 81GEX-07  
 YEAR\* 1981  
 COMPANY & YEAR\* DOME/CANMAR 1981  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* TARSUUT N-44 ISLAND  
 LOAD NAME\* UKALERK  
 LOAD LAT\* 69.900000  
 LOAD LON\* 136.190000  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* NORTH SPUR, TARSUUT N-44 ISLAND  
 DUMP LAT\* 68.900000  
 DUMP LON\* 136.190000  
 DUMP MIN DEPTH\* 23.0  
 DUMP MAX DEPTH\* 23.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* TARSUUT N-44  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 07/20/1981  
 STOP DATE\* 07/20/1981  
 LOAD VOL\* 16534  
 DUMP VOL\* 16534

START DATE\* 07/22/1981  
 STOP DATE\* 07/22/1981  
 LOAD VOL\* 8227  
 DUMP VOL\* 8227

AUTHORITY REFERENCE\* PLGA LIC 3527  
 AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
 TERM START\* 09/12/1980  
 TERM COMPLETE\* 09/01/1983

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
 TMENT DAILY REPORTS, 1982.

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 81HZN-01  
 YEAR\* 1981

COMPANY & YEAR\* DOME/CANMAR 1981  
 DREDGE NAME\* HENDRIK ZANEN  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* UVILUK P-66 ISLAND  
 LOAD NAME\* UKALERK  
 LOAD LAT\* 69.830000  
 LOAD LON\* 133.000000  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* UVILUK P-66 ISLAND  
 DUMP LAT\* 70.260000  
 DUMP LON\* 132.310000  
 DUMP MIN DEPTH\* 31.0  
 DUMP MAX DEPTH\* 31.0  
 DUMP METHOD\* BOTTOM DOORS, SUCTION PIPE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* UVILUK P-66  
 ISLAND TYPE\* SSDC BERM  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 06/01/1981  
 STOP DATE\* 06/30/1981  
 LOAD VOL\* 26000  
 DUMP VOL\* 26000

START DATE\* 07/01/1981  
 STOP DATE\* 07/14/1981  
 LOAD VOL\* 13000  
 DUMP VOL\* 13000

COMMENT\* WEEKLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF THE  
 TOTAL VOLUME DREDGED (39000 M<sup>3</sup>) IN THE GIVEN PERIOD.

REFERENCE\* DOME PETROLEUM LTD., 1981. ISLAND DREDGING REPORT 1981 SEA  
 SON, NOVEMBER 6, 1981.

REFERENCE\* DOME PETROLEUM LTD., 1981. HENDRIK ZANEN 1981 DREDGING REP  
 ORT. BEAUFORT SEA CONSTRUCTION; CALGARY, SEPT 20, 1981.

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DATASET NUMBER\* 81HZN-02  
 YEAR\* 1981  
 COMPANY & YEAR\* DOME/CANMAR 1981  
 DREDGE NAME\* HENDRIK ZANEN  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* TARSUUT N-44 ISLAND  
 LOAD NAME\* SOUTH TARSUUT  
 LOAD LAT\* PROPRIETARY  
 LOAD LON\* PROPRIETARY  
 LOAD MIN DEPTH\* 7.0

LOAD MAX DEPTH\* 12.0  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* TARSIUT N-44 ISLAND  
 DUMP LAT\* 69.900000  
 DUMP LON\* 136.190000  
 DUMP MIN DEPTH\* 23.0  
 DUMP MAX DEPTH\* 23.0  
 DUMP METHOD\* BOTTOM DOORS, FLOATING PIPELINE  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* TARSIUT N-44  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 07/31/1981  
 STOP DATE\* 07/31/1981  
 LOAD VOL\* 3000  
 DUMP VOL\* 3000

START DATE\* 08/01/1981  
 STOP DATE\* 08/31/1981  
 LOAD VOL\* 136343  
 DUMP VOL\* 136343

START DATE\* 09/01/1981  
 STOP DATE\* 09/30/1981  
 LOAD VOL\* 136343  
 DUMP VOL\* 136343

START DATE\* 10/01/1981  
 STOP DATE\* 10/31/1981  
 LOAD VOL\* 136343  
 DUMP VOL\* 136343

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
 THE TOTAL VOLUME DREDGED (412029 M'3) IN THE GIVEN PERIOD.

REFERENCE\* DOME PETROLEUM LTD., 1981. ISLAND DREDGING REPORT 1981 SEA  
 SON, NOVEMBER 6, 1981.

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DATASET NUMBER\* 81HZN-03  
 YEAR\* 1981  
 COMPANY & YEAR\* DOME/CANMAR 1981  
 DREDGE NAME\* HENDRIK ZANEN  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* TARSIUT N-44 ISLAND  
 LOAD NAME\* UKALERK  
 LOAD LAT\* 69.830000  
 LOAD LON\* 133.000000  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0



LOAD SEDIMENT\* SAND  
 DUMP NAME\* TARSIUT N-44 ISLAND  
 DUMP LAT\* 69.900000  
 DUMP LON\* 136.190000  
 DUMP MIN DEPTH\* 23.0  
 DUMP MAX DEPTH\* 23.0  
 DUMP METHOD\* BOTTOM DOORS, FLOATING PIPELINE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* TARSIUT N-44  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 08/01/1981  
 STOP DATE\* 08/31/1981  
 LOAD VOL\* 48035  
 DUMP VOL\* 48035

START DATE\* 09/01/1981  
 STOP DATE\* 09/30/1981  
 LOAD VOL\* 46486  
 DUMP VOL\* 46486

START DATE\* 10/01/1981  
 STOP DATE\* 10/31/1981  
 LOAD VOL\* 48035  
 DUMP VOL\* 48035

AUTHORITY REFERENCE\* PLGA LIC 3527  
 AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
 TERM START\* 09/12/1980  
 TERM COMPLETE\* 09/01/1983

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
 THE TOTAL VOLUME DREDGED (112256 M'3) IN THE GIVEN PERIOD.

REFERENCE\* DOME PETROLEUM LTD., 1981. ISLAND DREDGING REPORT 1981 SEA  
 SON, NOVEMBER 6, 1981.

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DATASET NUMBER\* 81HZN-04  
 YEAR\* 1981  
 COMPANY & YEAR\* DOME/CANMAR 1981  
 DREDGE NAME\* HENDRIK ZANEN  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* TARSIUT N-44 ISLAND  
 LOAD NAME\* HERSCHEL AREA B  
 LOAD LAT\* 69.540000  
 LOAD LON\* 138.800000  
 LOAD MIN DEPTH\* 8.0  
 LOAD MAX DEPTH\* 14.0  
 LOAD SEDIMENT\* GRAVEL

DUMP NAME\* TARSUUT N-44 ISLAND  
 DUMP LAT\* 69.900000  
 DUMP LON\* 136.190000  
 DUMP MIN DEPTH\* 23.0  
 DUMP MAX DEPTH\* 23.0  
 DUMP METHOD\* FLOATING PIPELINE  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* TARSUUT N-44  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 08/01/1981  
 STOP DATE\* 08/31/1981  
 LOAD VOL\* 4713  
 DUMP VOL\* 4713

START DATE\* 09/01/1981  
 STOP DATE\* 09/30/1981  
 LOAD VOL\* 4712  
 DUMP VOL\* 4712

START DATE\* 10/01/1981  
 STOP DATE\* 10/31/1981  
 LOAD VOL\* 4713  
 DUMP VOL\* 4713

AUTHORITY REFERENCE\* PLGA LIC 3693  
 AMOUNT LICENSED\* 200000  
 TERM START\* 08/14/1981  
 TERM COMPLETE\* 11/01/1981

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
 THE TOTAL VOLUME DREDGED (14138 M<sup>3</sup>) IN THE GIVEN PERIOD.

REFERENCE\* DOME PETROLEUM LTD., 1981. ISLAND DREDGING REPORT 1981 SEA  
 SON, NOVEMBER 6, 1981.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

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DATASET NUMBER\* 81HZN-05  
 YEAR\* 1981  
 COMPANY & YEAR\* DOME/CANMAR 1981  
 DREDGE NAME\* HENDRIK ZANEN  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* TARSUUT N-44 ISLAND  
 LOAD NAME\* ISSERK  
 LOAD LAT\* 69.650000  
 LOAD LON\* 134.200000  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0

LOAD SEDIMENT\* SAND  
 DUMP NAME\* TARSUUT N-44 ISLAND  
 DUMP LAT\* 69.900000  
 DUMP LON\* 136.190000  
 DUMP MIN DEPTH\* 23.0  
 DUMP MAX DEPTH\* 23.0  
 DUMP METHOD\* BOTTOM DOORS  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* TARSUUT N-44  
 ISLAND TYPE\* CRI BERM  
 ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 08/01/1981  
 STOP DATE\* 08/31/1981  
 LOAD VOL\* 6613  
 DUMP VOL\* 6613

START DATE\* 09/01/1981  
 STOP DATE\* 09/30/1981  
 LOAD VOL\* 6612  
 DUMP VOL\* 6612

START DATE\* 10/01/1981  
 STOP DATE\* 10/31/1981  
 LOAD VOL\* 6613  
 DUMP VOL\* 6613

AUTHORITY REFERENCE\* FLGA LIC 3527  
 AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
 TERM START\* 09/12/1980  
 TERM COMPLETE\* 09/01/1983

COMMENT\* MONTHLY TOTALS ARE APPROXIMATE. THEY REPRESENT PORTIONS OF  
 THE TOTAL VOLUME DREDGED (19838 M'3) IN THE GIVEN PERIOD.

REFERENCE\* DOME PETROLEUM LTD., 1981. ISLAND DREDGING REPORT 1981 SEA  
 SON, NOVEMBER 6, 1981.

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DATASET NUMBER\* 81UNK-01  
 YEAR\* 1981  
 COMPANY & YEAR\* ARCTIC TRANSPORTATION LTD. 1981  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* TUK HARBOUR DOCK CONSTRUCTION AND FILL  
 LOAD NAME\* TUK HARBOUR  
 LOAD LAT\* 69.420000  
 LOAD LON\* 132.990000  
 LOAD MIN DEPTH\* 3.4  
 LOAD MAX DEPTH\* 3.7  
 LOAD SEDIMENT\* GRANULAR MATERIAL

DUMP NAME\* TUK HARBOUR (LAND) WITHIN 1000 METRES OF DREDGE SITE TO THE  
NORTH WEST.

DUMP LAT\* 69.420000

DUMP LON\* 132.990000

DUMP MIN DEPTH\* 1.5

DUMP MAX DEPTH\* 3.4

DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH

DUMP SEDIMENT\* GRANULAR MATERIAL

ISLAND NAME\* NOT APPLICABLE

ISLAND TYPE\* NOT APPLICABLE

ISLAND STATUS\* NOT APPLICABLE

START DATE\* 01/01/1981

STOP DATE\* 01/01/1900

LOAD VOL\* 5100

DUMP VOL\* 5100

AUTHORITY REFERENCE\* PLGA LIC 3681

AMOUNT LICENSED\* 18000

TERM START\* 09/10/1981

TERM COMPLETE\* 10/01/1981

REFERENCE\* LETTER FROM N. GRIDLEY (AESL) TO A.E. GANKE (DIAND), 04/14  
/81.

REFERENCE\* GAZETTED LICENSE 3681.

REFERENCE\* LETTER FROM J. SPROULE TO F. ADLEM (DIAND), 04/08/82.

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DATASET NUMBER\* 82AQU-01

YEAR\* 1982

COMPANY & YEAR\* GULF CANADA 1982

DREDGE NAME\* AQUARIUS AND EXPLORER I

DREDGE TYPE\* CUTTER SUCTION

PURPOSE\* KIGGAVER A-43 GLORY HOLE

LOAD NAME\* KIGGAVER A-43

LOAD LAT\* 69.870000

LOAD LON\* 135.590000

LOAD MIN DEPTH\* 18.0

LOAD MAX DEPTH\* 18.0

LOAD SEDIMENT\* SILT, CLAY

DUMP NAME\* NOT APPLICABLE

DUMP LAT\* NOT APPLICABLE

DUMP LON\* NOT APPLICABLE

DUMP MIN DEPTH\* NOT APPLICABLE

DUMP MAX DEPTH\* NOT APPLICABLE

DUMP METHOD\* SIDE CAST

DUMP SEDIMENT\* NOT APPLICABLE

ISLAND NAME\* NOT APPLICABLE

ISLAND TYPE\* NOT APPLICABLE

ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/12/1982  
STOP DATE\* 07/21/1982  
LOAD VOL\* 49000  
DUMP VOL\* 49000

REFERENCE\* BILL LIVINGSTONE, GULF, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 82AQU-02  
YEAR\* 1982  
COMPANY & YEAR\* DOME/CANMAR 1982  
DREDGE NAME\* AQUARIUS  
DREDGE TYPE\* CUTTER SUCTION  
PURPOSE\* NERLERK B-67 ISLAND  
LOAD NAME\* NERLERK B-67 AREA  
LOAD LAT\* 70.420000  
LOAD LON\* 133.500000  
LOAD MIN DEPTH\* 45.0  
LOAD MAX DEPTH\* 45.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* NERLERK B-67 ISLAND  
DUMP LAT\* 70.430000  
DUMP LON\* 133.300000  
DUMP MIN DEPTH\* 45.0  
DUMP MAX DEPTH\* 45.0  
DUMP METHOD\* PIPELINE DISCHARGE  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NERLERK B-67  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* SUSPENDED AUGUST 1983 DUE TO GEOTECHNICAL PROBLEMS

START DATE\* 09/23/1982  
STOP DATE\* 09/30/1982  
LOAD VOL\* 356380  
DUMP VOL\* 356380

START DATE\* 10/01/1982  
STOP DATE\* 10/07/1982  
LOAD VOL\* 139440  
DUMP VOL\* 139440

START DATE\* 10/08/1982  
STOP DATE\* 10/14/1982  
LOAD VOL\* 367860  
DUMP VOL\* 367860

START DATE\* 10/15/1982  
STOP DATE\* 10/22/1982  
LOAD VOL\* 347960  
DUMP VOL\* 347960

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82BMZ-01  
YEAR\* 1982  
COMPANY & YEAR\* IMPERIAL/ESSO 1982  
DREDGE NAME\* BEAVER MACKENZIE  
DREDGE TYPE\* STATIONARY SUCTION  
PURPOSE\* TUK HARBOUR LAND RECLAMATION  
LOAD NAME\* TUK HARBOUR  
LOAD LAT\* 69.420000  
LOAD LON\* 132.960000  
LOAD MIN DEPTH\* 3.7  
LOAD MAX DEPTH\* 7.9  
LOAD SEDIMENT\* SAND, SILT, GRAVEL  
DUMP NAME\* TUK HARBOUR (LAND)  
DUMP LAT\* 69.420000  
DUMP LON\* 132.950000  
DUMP MIN DEPTH\* NOT APPLICABLE  
DUMP MAX DEPTH\* NOT APPLICABLE  
DUMP METHOD\* FLOATING PIPELINE  
DUMP SEDIMENT\* SAND, SILT, GRAVEL  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/04/1982  
STOP DATE\* 07/07/1982  
LOAD VOL\* 50436  
DUMP VOL\* 50436

START DATE\* 07/08/1982  
STOP DATE\* 07/14/1982  
LOAD VOL\* 88264  
DUMP VOL\* 88264

AUTHORITY REFERENCE\* PLGA LIC 3805  
AMOUNT LICENSED\* 115000  
TERM START\* 06/30/1982  
TERM COMPLETE\* 07/31/1982

COMMENT\* LAND RECLAMATION ON ESSO LAND LEASE 2922.

REFERENCE\* GAZETTED LICENSE 3805.

REFERENCE\* NOTICE FROM ESSO TO DIAND 12/14/82.

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DATASET NUMBER\* 82BMZ-02  
YEAR\* 1982  
COMPANY & YEAR\* IMPERIAL/ESSO 1982  
DREDGE NAME\* BEAVER MACKENZIE  
DREDGE TYPE\* STATIONARY SUCTION  
PURPOSE\* TUFT POINT BREAKWATER  
LOAD NAME\* TUFT POINT  
LOAD LAT\* 69.670000  
LOAD LON\* 132.650000  
LOAD MIN DEPTH\* 4.3  
LOAD MAX DEPTH\* 4.6  
LOAD SEDIMENT\* SAND  
DUMP NAME\* TUFT POINT  
DUMP LAT\* 69.670000  
DUMP LON\* 132.650000  
DUMP MIN DEPTH\* 4.3  
DUMP MAX DEPTH\* 4.6  
DUMP METHOD\* PIPELINE DISCHARGE  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/16/1982  
STOP DATE\* 07/21/1982  
LOAD VOL\* 22900  
DUMP VOL\* 22900

AUTHORITY REFERENCE\* FLGA LIC 3808  
AMOUNT LICENSED\* 1000000  
TERM START\* 02/02/1999  
TERM COMPLETE\* 10/30/1982

REFERENCE\* DREDGING LICENSE APPLICATION FROM M. SHAW (ESSO) TO J. DUN  
LOP (DIAND) 07/04/83.

REFERENCE\* LETTER FROM E. BENNETT (ESSO) TO A. REDSHAW (DIAND) 04/14/  
83.

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DATASET NUMBER\* 82BMZ-03  
YEAR\* 1982  
COMPANY & YEAR\* IMPERIAL/ESSO 1982  
DREDGE NAME\* BEAVER MACKENZIE

DREDGE TYPE\* STATIONARY SUCTION  
 PURPOSE\* ITIYOK I-27 ISLAND  
 LOAD NAME\* ITIYOK I-27 AREA  
 LOAD LAT\* 69.940000  
 LOAD LON\* 134.090000  
 LOAD MIN DEPTH\* 15.0  
 LOAD MAX DEPTH\* 15.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* ITIYOK I-27 ISLAND  
 DUMP LAT\* 69.940000  
 DUMP LON\* 134.090000  
 DUMP MIN DEPTH\* 15.0  
 DUMP MAX DEPTH\* 15.0  
 DUMP METHOD\* PIPELINE DISCHARGE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* ITIYOK I-27  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 07/22/1982  
 STOP DATE\* 07/31/1982  
 LOAD VOL\* 433920  
 DUMP VOL\* 251450

START DATE\* 08/01/1982  
 STOP DATE\* 08/31/1982  
 LOAD VOL\* 1222860  
 DUMP VOL\* 708620

START DATE\* 09/01/1982  
 STOP DATE\* 09/30/1982  
 LOAD VOL\* 1183410  
 DUMP VOL\* 685760

START DATE\* 10/01/1982  
 STOP DATE\* 10/13/1982  
 LOAD VOL\* 512810  
 DUMP VOL\* 297170

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
 FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
 ISLAND SUMMARY.

REFERENCE\* ESSO RESOURCES LTD., 1982. W.D.GATEWAY DAILY REPORTS, 1982.

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DATASET NUMBER\* 82GEX-01  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* GEOPOTES X



DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* UVILUK P-66 ISLAND  
 LOAD NAME\* KAGLULIK SOUTH 50  
 LOAD LAT\* 70.110000  
 LOAD LON\* 131.750000  
 LOAD MIN DEPTH\* 20.0  
 LOAD MAX DEPTH\* 25.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* UVILUK P-66 ISLAND  
 DUMP LAT\* 70.260000  
 DUMP LON\* 132.310000  
 DUMP MIN DEPTH\* 31.0  
 DUMP MAX DEPTH\* 31.0  
 DUMP METHOD\* BOTTOM VALVE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* UVILUK P-66  
 ISLAND TYPE\* SSDC BERM  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 07/06/1982  
 STOP DATE\* 07/07/1982  
 LOAD VOL\* 30861  
 DUMP VOL\* 30861

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
 TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82GEX-02  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* NERLERK F-67 ISLAND (CANCELLED)  
 LOAD NAME\* NERLERK AREA  
 LOAD LAT\* 70.340000  
 LOAD LON\* 133.330000  
 LOAD MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 LOAD MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* NERLERK F-67 ISLAND  
 DUMP LAT\* INFORMATION NOT FOUND IN SEARCH  
 DUMP LON\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP METHOD\* BOTTOM VALVE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* NERLERK F-67  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* OPERATION CANCELLED 1982

START DATE\* 07/08/1982  
 STOP DATE\* 07/08/1982  
 LOAD VOL\* 4000  
 DUMP VOL\* 4000

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 82GEX-03  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* UVILUK P-66 ISLAND  
 LOAD NAME\* UKALERK  
 LOAD LAT\* 69.830000  
 LOAD LON\* 133.000000  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* UVILUK P-66 ISLAND  
 DUMP LAT\* 70.260000  
 DUMP LON\* 132.310000  
 DUMP MIN DEPTH\* 31.0  
 DUMP MAX DEPTH\* 31.0  
 DUMP METHOD\* BOTTOM VALVE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* UVILUK P-66  
 ISLAND TYPE\* SSDC BERM  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 07/07/1982  
 STOP DATE\* 07/07/1982  
 LOAD VOL\* 8109

START DATE\* 07/09/1982  
 STOP DATE\* 07/14/1982  
 LOAD VOL\* 149115  
 DUMP VOL\* 149115  
 DUMP VOL\* 8109

START DATE\* 07/20/1982  
 STOP DATE\* 07/22/1982  
 LOAD VOL\* 49748  
 DUMP VOL\* 49748

START DATE\* 07/24/1982  
 STOP DATE\* 07/27/1982  
 LOAD VOL\* 65556  
 DUMP VOL\* 65556

START DATE\* 07/30/1982  
 STOP DATE\* 07/30/1982  
 LOAD VOL\* 24604  
 DUMP VOL\* 24604

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
 TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82GEX-04  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* NERLERK J-77 ISLAND (CANCELLED)  
 LOAD NAME\* UKALERK  
 LOAD LAT\* 69.830000  
 LOAD LON\* 133.000000  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* NERLERK J-77 ISLAND  
 DUMP LAT\* 70.450000  
 DUMP LON\* 133.280000  
 DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* NERLERK J-77  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* OPERATION CANCELLED 1982

START DATE\* 07/22/1982  
 STOP DATE\* 07/22/1982  
 LOAD VOL\* 8345  
 DUMP VOL\* 8345

START DATE\* 07/23/1982  
 STOP DATE\* 07/31/1982  
 LOAD VOL\* 104024  
 DUMP VOL\* 104024

START DATE\* 08/01/1982  
 STOP DATE\* 08/01/1982  
 LOAD VOL\* 24764  
 DUMP VOL\* 24764

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 82GEX-05  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* UVILUK P-66 ISLAND  
 LOAD NAME\* BANKS ISLAND  
 LOAD LAT\* 71.500000  
 LOAD LON\* 123.580000  
 LOAD MIN DEPTH\* 22.0  
 LOAD MAX DEPTH\* 25.0  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* UVILUK P-66 ISLAND  
 DUMP LAT\* 70.260000  
 DUMP LON\* 132.310000  
 DUMP MIN DEPTH\* 31.0  
 DUMP MAX DEPTH\* 31.0  
 DUMP METHOD\* PUMP OUT  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* UVILUK P-66  
 ISLAND TYPE\* SSDC BERM  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 08/04/1982  
 STOP DATE\* 08/04/1982  
 LOAD VOL\* 7610  
 DUMP VOL\* 7610

START DATE\* 08/06/1982  
 STOP DATE\* 08/07/1982  
 LOAD VOL\* 14438  
 DUMP VOL\* 14438

START DATE\* 08/11/1982  
 STOP DATE\* 08/14/1982  
 LOAD VOL\* 13464  
 DUMP VOL\* 13464

START DATE\* 08/15/1982  
 STOP DATE\* 08/15/1982  
 LOAD VOL\* 6969  
 DUMP VOL\* 6969

START DATE\* 08/17/1982  
 STOP DATE\* 08/17/1982  
 LOAD VOL\* 6443  
 DUMP VOL\* 6443

START DATE\* 10/08/1982  
 STOP DATE\* 10/14/1982  
 LOAD VOL\* 21806  
 DUMP VOL\* 21806

AUTHORITY REFERENCE\* PLGA LIC 3821  
 AMOUNT LICENSED\* INFORMATION NOT FOUND IN SEARCH  
 TERM START\* 02/02/1999  
 TERM COMPLETE\* 12/31/1982

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
 TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82GEX-06  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* NERLERK B-67 BERM  
 LOAD NAME\* UKALERK  
 LOAD LAT\* 69.830000  
 LOAD LON\* 133.000000  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* NERLERK B-67 ISLAND  
 DUMP LAT\* 70.430000  
 DUMP LON\* 133.300000  
 DUMP MIN DEPTH\* 45.0  
 DUMP MAX DEPTH\* 45.0  
 DUMP METHOD\* BOTTOM VALVE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* NERLERK B-67  
 ISLAND TYPE\* SSDC BERM  
 ISLAND STATUS\* SUSPENDED AUGUST 1983 DUE TO GEOTECHNICAL PROBLEMS

START DATE\* 08/20/1982  
 STOP DATE\* 08/22/1982  
 LOAD VOL\* 45650  
 DUMP VOL\* 45650

START DATE\* 08/23/1982  
 STOP DATE\* 08/31/1982  
 LOAD VOL\* 231909  
 DUMP VOL\* 231909

START DATE\* 09/01/1982  
 STOP DATE\* 09/07/1982  
 LOAD VOL\* 179265  
 DUMP VOL\* 179265

START DATE\* 09/08/1982  
 STOP DATE\* 09/14/1982  
 LOAD VOL\* 72005

DUMP VOL\* 72005

START DATE\* 09/15/1982  
 STOP DATE\* 09/22/1982  
 LOAD VOL\* 159296  
 DUMP VOL\* 159296

START DATE\* 09/23/1982  
 STOP DATE\* 09/30/1982  
 LOAD VOL\* 226880  
 DUMP VOL\* 226880

START DATE\* 10/02/1982  
 STOP DATE\* 10/07/1982  
 LOAD VOL\* 160166  
 DUMP VOL\* 160166

START DATE\* 10/16/1982  
 STOP DATE\* 10/19/1982  
 LOAD VOL\* 65094  
 DUMP VOL\* 65094

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
 TMENT DAILY REPORTS, 1982.

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

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DATASET NUMBER\* 82GEX-07  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* GEOPOTES X  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* TINGMIARK CLAY REMOVAL  
 LOAD NAME\* TINGMIARK  
 LOAD LAT\* 70.180000  
 LOAD LON\* 132.750000  
 LOAD MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 LOAD MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 LOAD SEDIMENT\* SAND, CLAY  
 DUMP NAME\* TINGMIARK  
 DUMP LAT\* 70.180000  
 DUMP LON\* 132.750000  
 DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
 DUMP METHOD\* BOTTOM VALVE  
 DUMP SEDIMENT\* CLAY, SAND  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 08/18/1982  
STOP DATE\* 08/20/1982  
LOAD VOL\* 60706  
DUMP VOL\* 60706

COMMENT\* DUMP LAT AND LON REFER TO APPROXIMATE CENTER OF TINGMIARK TR  
ACT.

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 82GIX-01  
YEAR\* 1982  
COMPANY & YEAR\* GULF CANADA 1982  
DREDGE NAME\* GEOPOTES IX  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* EAST AMAULIGAK I-44 GLORY HOLE  
LOAD NAME\* EAST AMAULIGAK I-44  
LOAD LAT\* 70.060000  
LOAD LON\* 133.710000  
LOAD MIN DEPTH\* 31.5  
LOAD MAX DEPTH\* 31.5  
LOAD SEDIMENT\* SILT, CLAY  
DUMP NAME\* NOT APPLICABLE  
DUMP LAT\* NOT APPLICABLE  
DUMP LON\* NOT APPLICABLE  
DUMP MIN DEPTH\* NOT APPLICABLE  
DUMP MAX DEPTH\* NOT APPLICABLE  
DUMP METHOD\* NOT APPLICABLE  
DUMP SEDIMENT\* NOT APPLICABLE  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 07/21/1982  
STOP DATE\* 07/31/1982  
LOAD VOL\* 4443  
DUMP VOL\* 4443

START DATE\* 08/01/1982  
STOP DATE\* 08/31/1982  
LOAD VOL\* 13774  
DUMP VOL\* 13774

START DATE\* 09/01/1982  
STOP DATE\* 09/30/1982  
LOAD VOL\* 13330  
DUMP VOL\* 13330

START DATE\* 10/01/1982  
STOP DATE\* 10/17/1982

LOAD VOL\* 7553  
DUMP VOL\* 7553

REFERENCE\* BILL LIVINGSTONE, GULF, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 82GIX-02  
YEAR\* 1982  
COMPANY & YEAR\* GULF CANADA 1982  
DREDGE NAME\* GEOPOTES IX  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* STRIPPING AT KOGYUK N-67 ISLAND  
LOAD NAME\* KOGYUK N-67  
LOAD LAT\* 70.110000  
LOAD LON\* 133.330000  
LOAD MIN DEPTH\* 15.0  
LOAD MAX DEPTH\* 20.0  
LOAD SEDIMENT\* SILT, CLAY  
DUMP NAME\* KOGYUK N-67 ISLAND  
DUMP LAT\* 70.110000  
DUMP LON\* 133.330000  
DUMP MIN DEPTH\* 20.0  
DUMP MAX DEPTH\* 28.0  
DUMP METHOD\* HOPPER DISCHARGE  
DUMP SEDIMENT\* SILT, CLAY  
ISLAND NAME\* KOGYUK N-67  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* OPERATIONAL WINTER 1983

START DATE\* 07/19/1982  
STOP DATE\* 07/23/1982  
LOAD VOL\* 38200  
DUMP VOL\* 38200

AUTHORITY REFERENCE\* PLGA LIC 3823, LEASE 3810  
AMOUNT LICENSED\* 2000000  
TERM START\* 01/14/1982  
TERM COMPLETE\* 06/01/1984

REFERENCE\* BILL LIVINGSTONE, GULF, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 82GIX-03  
YEAR\* 1982  
COMPANY & YEAR\* GULF CANADA 1982



DREDGE NAME\* GEOPOTES IX  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* KOGYUK N-67 BERM  
LOAD NAME\* KOGYUK N-67 BERM  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 15.0  
LOAD MAX DEPTH\* 20.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* KOGYUK N-67 ISLAND  
DUMP LAT\* 70.110000  
DUMP LON\* 133.330000  
DUMP MIN DEPTH\* 28.0  
DUMP MAX DEPTH\* 28.0  
DUMP METHOD\* HOPPER DISCHARGE  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* KOGYUK N-67  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* OPERATIONAL WINTER 1983

START DATE\* 07/24/1982  
STOP DATE\* 07/31/1982  
LOAD VOL\* 61120  
DUMP VOL\* 61120

START DATE\* 08/01/1982  
STOP DATE\* 08/31/1982  
LOAD VOL\* 236840  
DUMP VOL\* 236840

START DATE\* 09/01/1982  
STOP DATE\* 09/30/1982  
LOAD VOL\* 229200  
DUMP VOL\* 229200

START DATE\* 10/01/1982  
STOP DATE\* 10/06/1982  
LOAD VOL\* 45840  
DUMP VOL\* 45840

AUTHORITY REFERENCE\* PLGA LIC 3823  
AMOUNT LICENSED\* 2070000  
TERM START\* 07/23/1982  
TERM COMPLETE\* 06/01/1984

REFERENCE\* DALE LONGLITZ, 1983 SAND AND GRAVEL DIRECTORY, DIAND.

REFERENCE\* BILL LIVINGSTONE, GULF, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 82HZN-01

YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* HENDRIK ZANEN  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* UVILUK P-66 ISLAND  
 LOAD NAME\* KAGLULIK SOUTH 50  
 LOAD LAT\* 70.110000  
 LOAD LON\* 131.750000  
 LOAD MIN DEPTH\* 20.0  
 LOAD MAX DEPTH\* 25.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* UVILUK P-66 ISLAND  
 DUMP LAT\* 70.260000  
 DUMP LON\* 132.310000  
 DUMP MIN DEPTH\* 30.0  
 DUMP MAX DEPTH\* 30.0  
 DUMP METHOD\* FLOATING PIPELINE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* UVILUK P-66  
 ISLAND TYPE\* SSDC BERM  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 07/06/1982  
 STOP DATE\* 07/06/1982  
 LOAD VOL\* 12500  
 DUMP VOL\* 12500

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
 TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82HZN-02  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* HENDRIK ZANEN  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* NERLERK F-67 ISLAND (CANCELLED)  
 LOAD NAME\* NERLERK RIDGE  
 LOAD LAT\* 70.250000  
 LOAD LON\* 133.370000  
 LOAD MIN DEPTH\* 28.0  
 LOAD MAX DEPTH\* 28.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* NERLERK F-67 ISLAND  
 DUMP LAT\* INFORMATION NOT FOUND IN SEARCH  
 DUMP LON\* INFORMATION NOT FOUND IN SEARCH  
 DUMP MIN DEPTH\* 40.0  
 DUMP MAX DEPTH\* 40.0  
 DUMP METHOD\* BOTTOM VALVE  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* NERLERK F-67

ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* OPERATION CANCELLED 1982

START DATE\* 07/08/1982  
STOP DATE\* 07/08/1982  
LOAD VOL\* 9863  
DUMP VOL\* 9863

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 82HZN-03  
YEAR\* 1982  
COMPANY & YEAR\* DOME/CANMAR 1982  
DREDGE NAME\* HENDRIK ZANEN  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* UVILUK P-66 ISLAND  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* UVILUK P-66 ISLAND  
DUMP LAT\* 70.260000  
DUMP LON\* 132.310000  
DUMP MIN DEPTH\* 30.0  
DUMP MAX DEPTH\* 30.0  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* UVILUK P-66  
ISLAND TYPE\* SSDC BERM  
ISLAND STATUS\* ABANDONED 1983

START DATE\* 07/10/1982  
STOP DATE\* 07/14/1982  
LOAD VOL\* 87633  
DUMP VOL\* 87633

START DATE\* 07/15/1982  
STOP DATE\* 07/18/1982  
LOAD VOL\* 83385  
DUMP VOL\* 83385

START DATE\* 07/20/1982  
STOP DATE\* 07/22/1982  
LOAD VOL\* 51724  
DUMP VOL\* 51724

START DATE\* 07/23/1982  
STOP DATE\* 07/27/1982

LOAD VOL\* 65661  
DUMP VOL\* 65661

START DATE\* 07/30/1982  
STOP DATE\* 07/31/1982  
LOAD VOL\* 15573  
DUMP VOL\* 15573

START DATE\* 08/09/1982  
STOP DATE\* 08/31/1982  
LOAD VOL\* 3425  
DUMP VOL\* 3425

START DATE\* 09/01/1982  
STOP DATE\* 09/09/1982  
LOAD VOL\* 1401  
DUMP VOL\* 1401

START DATE\* 10/22/1982  
STOP DATE\* 10/22/1982  
LOAD VOL\* 4800  
DUMP VOL\* 4800

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82HZN-04  
YEAR\* 1982  
COMPANY & YEAR\* DOME/CANMAR 1982  
DREDGE NAME\* HENDRIK ZANEN  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* NERLERK J-77 ISLAND  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* NERLERK J-77 ISLAND  
DUMP LAT\* 70.450000  
DUMP LON\* 133.280000  
DUMP MIN DEPTH\* INFORMATION NOT FOUND IN SEARCH  
DUMP MAX DEPTH\* INFORMATION NOT FOUND IN SEARCH  
DUMP METHOD\* BOTTOM DOORS  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NERLERK J-77  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* OPERATION CANCELLED

START DATE\* 07/24/1982

STOP DATE\* 07/31/1982  
 LOAD VOL\* 45188  
 DUMP VOL\* 45188

START DATE\* 08/01/1982  
 STOP DATE\* 08/06/1982  
 LOAD VOL\* 57337  
 DUMP VOL\* 57337

START DATE\* 08/13/1982  
 STOP DATE\* 08/14/1982  
 LOAD VOL\* 17542  
 DUMP VOL\* 17542

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 82HZN-05  
 YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* HENDRIK ZANEN  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* UVILUK P-66 ISLAND  
 LOAD NAME\* SOUTH TARSIUT  
 LOAD LAT\* PROPRIETARY  
 LOAD LON\* PROPRIETARY  
 LOAD MIN DEPTH\* 7.0  
 LOAD MAX DEPTH\* 12.0  
 LOAD SEDIMENT\* GRAVEL  
 DUMP NAME\* UVILUK P-66 ISLAND  
 DUMP LAT\* 70.260000  
 DUMP LON\* 132.310000  
 DUMP MIN DEPTH\* 30.0  
 DUMP MAX DEPTH\* 30.0  
 DUMP METHOD\* SUCTION PIPELINE  
 DUMP SEDIMENT\* GRAVEL  
 ISLAND NAME\* UVILUK P-66  
 ISLAND TYPE\* SSDC BERM  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 08/05/1982  
 STOP DATE\* 08/07/1982  
 LOAD VOL\* 11933  
 DUMP VOL\* 11933

START DATE\* 08/08/1982  
 STOP DATE\* 08/08/1982  
 LOAD VOL\* 3496  
 DUMP VOL\* 3496

START DATE\* 08/10/1982

STOP DATE\* 08/10/1982  
LOAD VOL\* 3754  
DUMP VOL\* 3754

START DATE\* 08/15/1982  
STOP DATE\* 08/15/1982  
LOAD VOL\* 2951  
DUMP VOL\* 2951

START DATE\* 10/15/1982  
STOP DATE\* 10/15/1982  
LOAD VOL\* 7515  
DUMP VOL\* 7515

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82HZN-06  
YEAR\* 1982  
COMPANY & YEAR\* DOME/CANMAR 1982  
DREDGE NAME\* HENDRIK ZANEN  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* MCKINLEY BAY SSDC PAD CONSTRUCTION  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* MCKINLEY BAY  
DUMP LAT\* 69.940000  
DUMP LON\* 131.170000  
DUMP MIN DEPTH\* 6.0  
DUMP MAX DEPTH\* 8.0  
DUMP METHOD\* PIPELINE DISCHARGE  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 08/11/1982  
STOP DATE\* 08/11/1982  
LOAD VOL\* 4208  
DUMP VOL\* 4208

START DATE\* 08/16/1982  
STOP DATE\* 08/16/1982  
LOAD VOL\* 3897  
DUMP VOL\* 3897

START DATE\* 10/23/1982  
STOP DATE\* 10/25/1982  
LOAD VOL\* 14157  
DUMP VOL\* 14157

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82HZN-07  
YEAR\* 1982  
COMPANY & YEAR\* DOME/CANMAR 1982  
DREDGE NAME\* HENDRIK ZANEN  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* MCKINLEY BAY SSDC PAD CONSTRUCTION  
LOAD NAME\* KAGLULIK SOUTH 50  
LOAD LAT\* 70.110000  
LOAD LON\* 131.750000  
LOAD MIN DEPTH\* 20.0  
LOAD MAX DEPTH\* 25.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* MCKINLEY BAY  
DUMP LAT\* 69.940000  
DUMP LON\* 131.170000  
DUMP MIN DEPTH\* 6.0  
DUMP MAX DEPTH\* 8.0  
DUMP METHOD\* FLOATING PIPELINE  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NOT APPLICABLE  
ISLAND TYPE\* NOT APPLICABLE  
ISLAND STATUS\* NOT APPLICABLE

START DATE\* 08/11/1982  
STOP DATE\* 08/13/1982  
LOAD VOL\* 12467  
DUMP VOL\* 12467

START DATE\* 08/17/1982  
STOP DATE\* 08/17/1982  
LOAD VOL\* 3406  
DUMP VOL\* 3406

START DATE\* 09/15/1982  
STOP DATE\* 09/15/1982  
LOAD VOL\* 4534  
DUMP VOL\* 4534

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82HZN-08  
YEAR\* 1982  
COMPANY & YEAR\* DOME/CANMAR 1982  
DREDGE NAME\* HENDRIK ZANEN  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* MAINTENANCE AT TARSUUT N-44 ISLAND  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* TARSUUT N-44 ISLAND  
DUMP LAT\* 69.900000  
DUMP LON\* 136.190000  
DUMP MIN DEPTH\* 4.0  
DUMP MAX DEPTH\* 7.0  
DUMP METHOD\* SUCTION PIPE OVER BOW  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* TARSUUT N-44  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* DRILLING COMPLETE 1983

START DATE\* 08/18/1982  
STOP DATE\* 08/20/1982  
LOAD VOL\* 17463  
DUMP VOL\* 17463

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

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DATASET NUMBER\* 82HZN-09  
YEAR\* 1982  
COMPANY & YEAR\* DOME/CANMAR 1982  
DREDGE NAME\* HENDRIK ZANEN  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* NERLERK B-67 BERM  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND



DUMP NAME\* NERLERK B-67 ISLAND

DUMP LAT\* 70.430000

DUMP LON\* 133.300000

DUMP MIN DEPTH\* 45.0

DUMP MAX DEPTH\* 45.0

DUMP METHOD\* BOTTOM DOORS

DUMP SEDIMENT\* SAND

ISLAND NAME\* NERLERK B-67

ISLAND TYPE\* SSDC BERM

ISLAND STATUS\* SUSPENDED AUGUST 1983 DUE TO GEOTECHNICAL PROBLEMS

START DATE\* 08/21/1982

STOP DATE\* 08/22/1982

LOAD VOL\* 29213

DUMP VOL\* 29213

START DATE\* 08/23/1982

STOP DATE\* 08/31/1982

LOAD VOL\* 154810

DUMP VOL\* 154810

START DATE\* 09/01/1982

STOP DATE\* 09/07/1982

LOAD VOL\* 129770

DUMP VOL\* 129770

START DATE\* 09/08/1982

STOP DATE\* 09/14/1982

LOAD VOL\* 127729

DUMP VOL\* 127729

START DATE\* 09/15/1982

STOP DATE\* 09/15/1982

LOAD VOL\* 4939

DUMP VOL\* 4939

START DATE\* 09/17/1982

STOP DATE\* 09/22/1982

LOAD VOL\* 85376

DUMP VOL\* 85376

START DATE\* 09/23/1982

STOP DATE\* 09/30/1982

LOAD VOL\* 151697

DUMP VOL\* 151697

START DATE\* 10/02/1982

STOP DATE\* 10/07/1982

LOAD VOL\* 104339

DUMP VOL\* 104339

START DATE\* 10/08/1982

STOP DATE\* 10/14/1982

LOAD VOL\* 77653

DUMP VOL\* 77653

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
TMENT DAILY REPORTS, 1982.

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DATASET NUMBER\* 82HZN-10  
YEAR\* 1982  
COMPANY & YEAR\* DOME/CANMAR 1982  
DREDGE NAME\* HENDRIK ZANEN  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* NERLERK B-67 BERM  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* NERLERK B-67 ISLAND  
DUMP LAT\* 70.430000  
DUMP LON\* 133.300000  
DUMP MIN DEPTH\* 45.0  
DUMP MAX DEPTH\* 45.0  
DUMP METHOD\* BOTTOM DOORS  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* NERLERK B-67  
ISLAND TYPE\* SSDC BERM  
ISLAND STATUS\* BERM COLLAPSED AUGUST 1983

START DATE\* 08/13/1982  
STOP DATE\* 08/13/1982  
LOAD VOL\* 4231  
DUMP VOL\* 4231

START DATE\* 10/17/1982  
STOP DATE\* 10/19/1982  
LOAD VOL\* 44280  
DUMP VOL\* 44280

REFERENCE\* GLEN BURNS, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* DOME PETROLEUM LTD., 1982. BEAUFORT SEA CONSTRUCTION DEPAR  
TMENT DAILY REPORTS, 1982.

\*\*\*\*\*

DATASET NUMBER\* 82UNK-01

YEAR\* 1982  
 COMPANY & YEAR\* DOME/CANMAR 1982  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* NATIAK 0-44 GLORY HOLE  
 LOAD NAME\* NATIAK 0-44  
 LOAD LAT\* 70.070000  
 LOAD LON\* 137.220000  
 LOAD MIN DEPTH\* 44.0  
 LOAD MAX DEPTH\* 44.0  
 LOAD SEDIMENT\* INFORMATION NOT FOUND IN SEARCH  
 DUMP NAME\* NOT APPLICABLE  
 DUMP LAT\* NOT APPLICABLE  
 DUMP LON\* NOT APPLICABLE  
 DUMP MIN DEPTH\* NOT APPLICABLE  
 DUMP MAX DEPTH\* NOT APPLICABLE  
 DUMP METHOD\* NOT APPLICABLE  
 DUMP SEDIMENT\* NOT APPLICABLE  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 10/17/1982  
 STOP DATE\* 10/21/1982  
 LOAD VOL\* 18519  
 DUMP VOL\* 18519

COMMENT\* THIS VOLUME IS APPROXIMATE.

COMMENT\* THIS GLORY HOLE WAS ABANDONED IN 1982 AND SPUDDING WAS RESUM  
ED IN 1983.

REFERENCE\* ED PESSAH, DOME, PERSONAL COMMUNICATION, 1983.

REFERENCE\* LETTER FROM M. THOMAS (COGLA, YELLOWKNIFE) TO M. REED (DEP  
T. OF FISHERIES AND OCEANS, SIDNEY) 07/06/83.

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DATASET NUMBER\* 82UNK-02  
 YEAR\* 1982  
 COMPANY & YEAR\* ARCTIC TRANSPORTATION LTD. 1982  
 DREDGE NAME\* INFORMATION NOT FOUND IN SEARCH  
 DREDGE TYPE\* INFORMATION NOT FOUND IN SEARCH  
 PURPOSE\* TUK HARBOUR DOCK CONSTRUCTION AND FILL  
 LOAD NAME\* TUK HARBOUR  
 LOAD LAT\* 69.420000  
 LOAD LON\* 132.990000  
 LOAD MIN DEPTH\* 3.4  
 LOAD MAX DEPTH\* 3.4  
 LOAD SEDIMENT\* GRANULAR MATERIAL  
 DUMP NAME\* TUK HARBOUR (LAND) WITHIN 1000 METRES OF DREDGE SITE TO THE

## NORTH WEST

DUMP LAT\* 69.420000  
 DUMP LON\* 132.990000  
 DUMP MIN DEPTH\* 1.5  
 DUMP MAX DEPTH\* 3.4  
 DUMP METHOD\* SIDECAST  
 DUMP SEDIMENT\* GRANULAR MATERIAL  
 ISLAND NAME\* NOT APPLICABLE  
 ISLAND TYPE\* NOT APPLICABLE  
 ISLAND STATUS\* NOT APPLICABLE

START DATE\* 01/01/1982  
 STOP DATE\* 01/01/1900  
 LOAD VOL\* 9000  
 DUMP VOL\* 9000

AUTHORITY REFERENCE\* PLGA LIC 3806  
 AMOUNT LICENSED\* 12000  
 TERM START\* 07/05/1982  
 TERM COMPLETE\* 02/02/1999

REFERENCE\* GAZETTED LICENSE 3806.

REFERENCE\* AWAC MINUTES JUNE 22-23, 1982, #72.

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DATASET NUMBER\* 82WDG-01  
 YEAR\* 1982  
 COMPANY & YEAR\* IMPERIAL/ESSO 1982  
 DREDGE NAME\* W.D. GATEWAY  
 DREDGE TYPE\* TRAILING SUCTION HOPPER  
 PURPOSE\* ITIYOK I-27 ISLAND  
 LOAD NAME\* UKALERK  
 LOAD LAT\* 69.830000  
 LOAD LON\* 133.000000  
 LOAD MIN DEPTH\* 16.0  
 LOAD MAX DEPTH\* 18.0  
 LOAD SEDIMENT\* SAND  
 DUMP NAME\* ITIYOK I-27 ISLAND  
 DUMP LAT\* 69.940000  
 DUMP LON\* 134.090000  
 DUMP MIN DEPTH\* 15.0  
 DUMP MAX DEPTH\* 15.0  
 DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
 DUMP SEDIMENT\* SAND  
 ISLAND NAME\* ITIYOK I-27  
 ISLAND TYPE\* SACRIFICIAL BEACH  
 ISLAND STATUS\* ABANDONED 1983

START DATE\* 08/01/1982  
 STOP DATE\* 08/07/1982

LOAD VOL\* 176600  
DUMP VOL\* 176600

START DATE\* 08/08/1982  
STOP DATE\* 08/08/1982  
LOAD VOL\* 41700  
DUMP VOL\* 41700

START DATE\* 08/22/1982  
STOP DATE\* 08/22/1982  
LOAD VOL\* 9700  
DUMP VOL\* 9700

REFERENCE\* ESSO RESOURCES LTD., 1982. W.D.GATEWAY DAILY REPORTS, 1982.

REFERENCE\* LETTER FROM D.BUTCHKO (ESSO) TO B. SMILEY (DEPT. OF  
FISHERIES AND OCEANS, SIDNEY) 03/12/84 RE; ARCTIC ARTIFICIAL  
ISLAND SUMMARY.

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DATASET NUMBER\* 82WDG-02  
YEAR\* 1982  
COMPANY & YEAR\* IMPERIAL/ESSO 1982  
DREDGE NAME\* W.D. GATEWAY  
DREDGE TYPE\* TRAILING SUCTION HOPPER  
PURPOSE\* KADLUK O-07 ISLAND  
LOAD NAME\* UKALERK  
LOAD LAT\* 69.830000  
LOAD LON\* 133.000000  
LOAD MIN DEPTH\* 16.0  
LOAD MAX DEPTH\* 18.0  
LOAD SEDIMENT\* SAND  
DUMP NAME\* KADLUK O-07 ISLAND  
DUMP LAT\* 69.790000  
DUMP LON\* 136.000000  
DUMP MIN DEPTH\* 13.6  
DUMP MAX DEPTH\* 13.6  
DUMP METHOD\* BOTTOM DUMP, BOW DISCHARGE  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* KADLUK O-07  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* BERM COMPLETED 1983, DRILLING INITIATED SEPT. 1983

START DATE\* 08/09/1982  
STOP DATE\* 08/14/1982  
LOAD VOL\* 70900  
DUMP VOL\* 70900

START DATE\* 08/15/1982  
STOP DATE\* 08/22/1982  
LOAD VOL\* 79200

DUMP VOL\* 7 9200

START DATE\* 08/23/1982

STOP DATE\* 08/31/1982

LOAD VOL\* 102200

DUMP VOL\* 102200

START DATE\* 09/01/1982

STOP DATE\* 09/07/1982

LOAD VOL\* 102200

DUMP VOL\* 102200

START DATE\* 09/08/1982

STOP DATE\* 09/14/1982

LOAD VOL\* 71900

DUMP VOL\* 71900

START DATE\* 09/15/1982

STOP DATE\* 09/22/1982

LOAD VOL\* 59200

DUMP VOL\* 59200

START DATE\* 09/23/1982

STOP DATE\* 09/25/1982

LOAD VOL\* 24300

DUMP VOL\* 24300

AUTHORITY REFERENCE\* PLGA LIC 3825

AMOUNT LICENSED\* 600000

TERM START\* 08/01/1982

TERM COMPLETE\* 06/01/1984

REFERENCE\* ESSO RESOURCES LTD., 1982. W.D.GATEWAY DAILY REPORTS, 1982.

REFERENCE\* IMPERIAL OIL LTD., 1983. 1982 CRI CONSTRUCTION PERFORMANCE  
REPORT (DRAFT). PRODUCTION DEPARTMENT FIELD SERVICES. FRONTIER  
TECHNOLOGY; CALGARY.

\*\*\*\*\*

DATASET NUMBER\* 82WDG-03

YEAR\* 1982

COMPANY & YEAR\* IMPERIAL/ESSO 1982

DREDGE NAME\* W.D. GATEWAY

DREDGE TYPE\* TRAILING SUCTION HOPPER

PURPOSE\* MINUK I-53 ISLAND

LOAD NAME\* UKALERK

LOAD LAT\* 69.830000

LOAD LON\* 133.000000

LOAD MIN DEPTH\* 16.0

LOAD MAX DEPTH\* 18.0

LOAD SEDIMENT\* SAND  
DUMP NAME\* MINUK I-53 ISLAND  
DUMP LAT\* 69.710000  
DUMP LON\* 136.460000  
DUMP MIN DEPTH\* 14.7  
DUMP MAX DEPTH\* 14.7  
DUMP METHOD\* INFORMATION NOT FOUND IN SEARCH  
DUMP SEDIMENT\* SAND  
ISLAND NAME\* MINUK I-53  
ISLAND TYPE\* CRI BERM  
ISLAND STATUS\* BERM COMPLETED 1983, DRILLING PLANNED NOV. 1985

START DATE\* 09/27/1982  
STOP DATE\* 09/30/1982  
LOAD VOL\* 29700  
DUMP VOL\* 29700

START DATE\* 10/01/1982  
STOP DATE\* 10/07/1982  
LOAD VOL\* 64000  
DUMP VOL\* 64000

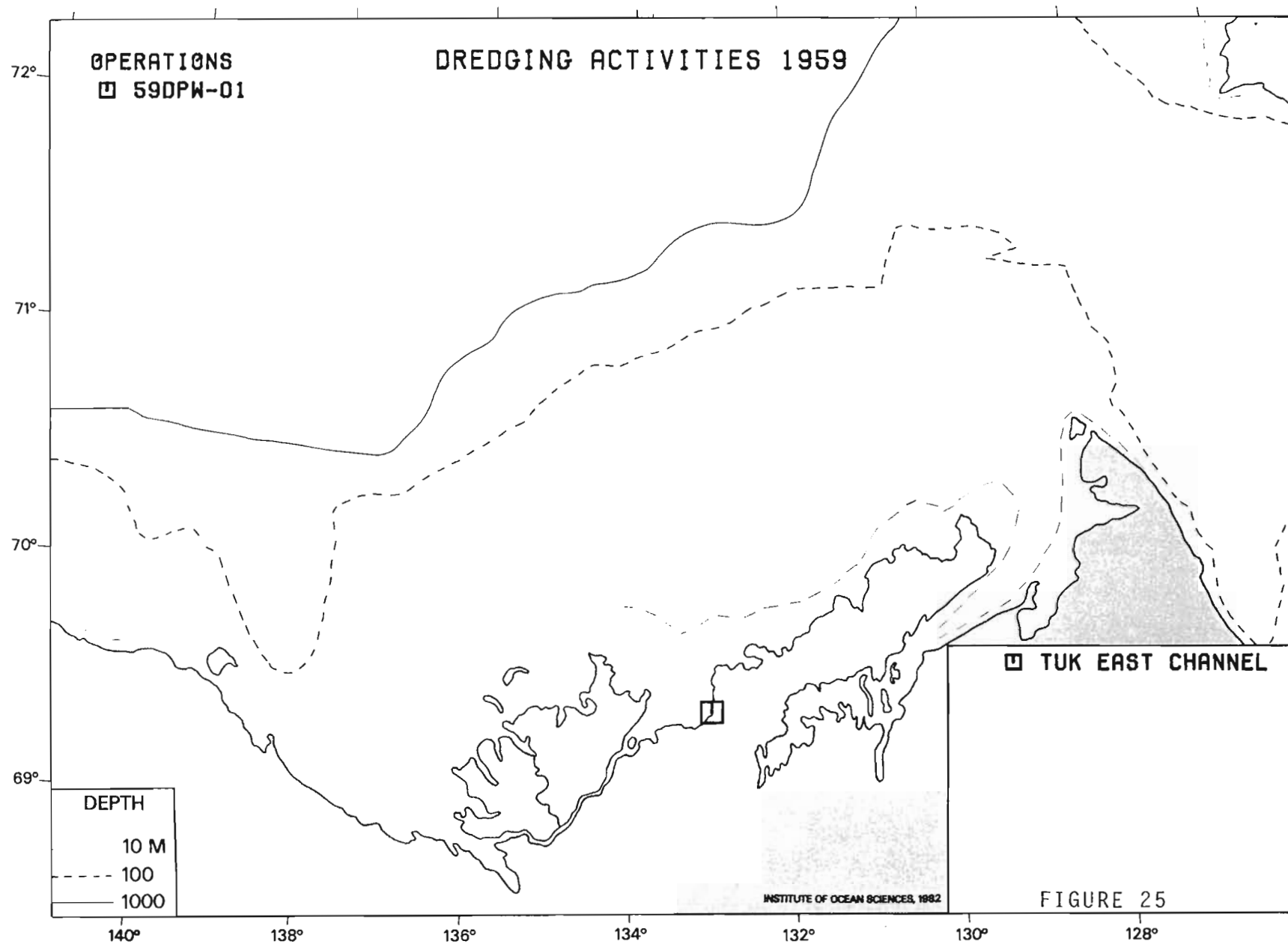
START DATE\* 10/08/1982  
STOP DATE\* 10/14/1982  
LOAD VOL\* 62817  
DUMP VOL\* 62817

START DATE\* 10/15/1982  
STOP DATE\* 10/20/1982  
LOAD VOL\* 44848  
DUMP VOL\* 44848

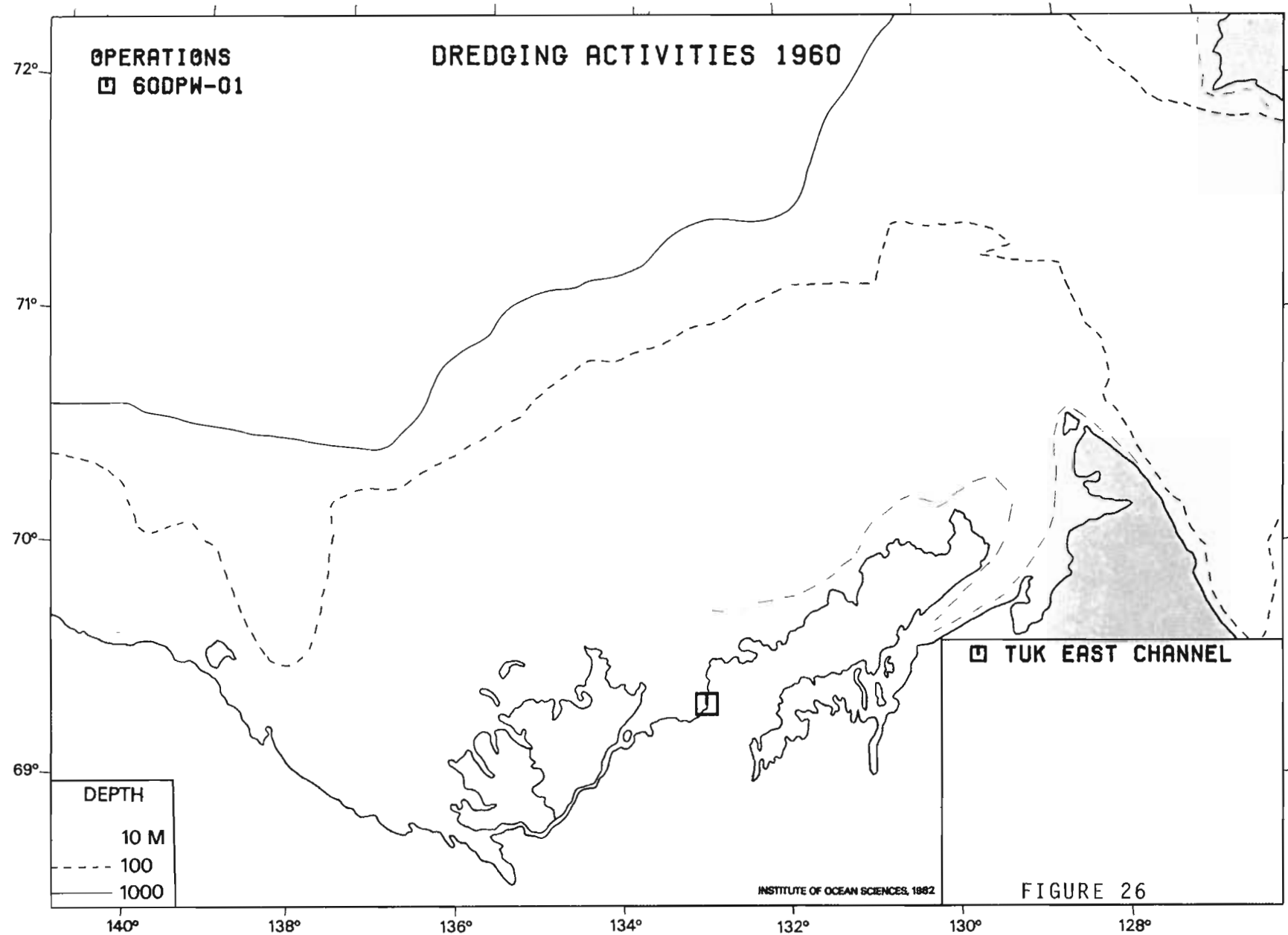
REFERENCE\* IMPERIAL OIL LTD., 1983. 1982 CRI CONSTRUCTION PERFORMANCE  
REPORT (DRAFT). PRODUCTION DEPARTMENT FIELD SERVICES. FRONTIER  
TECHNOLOGY; CALGARY.

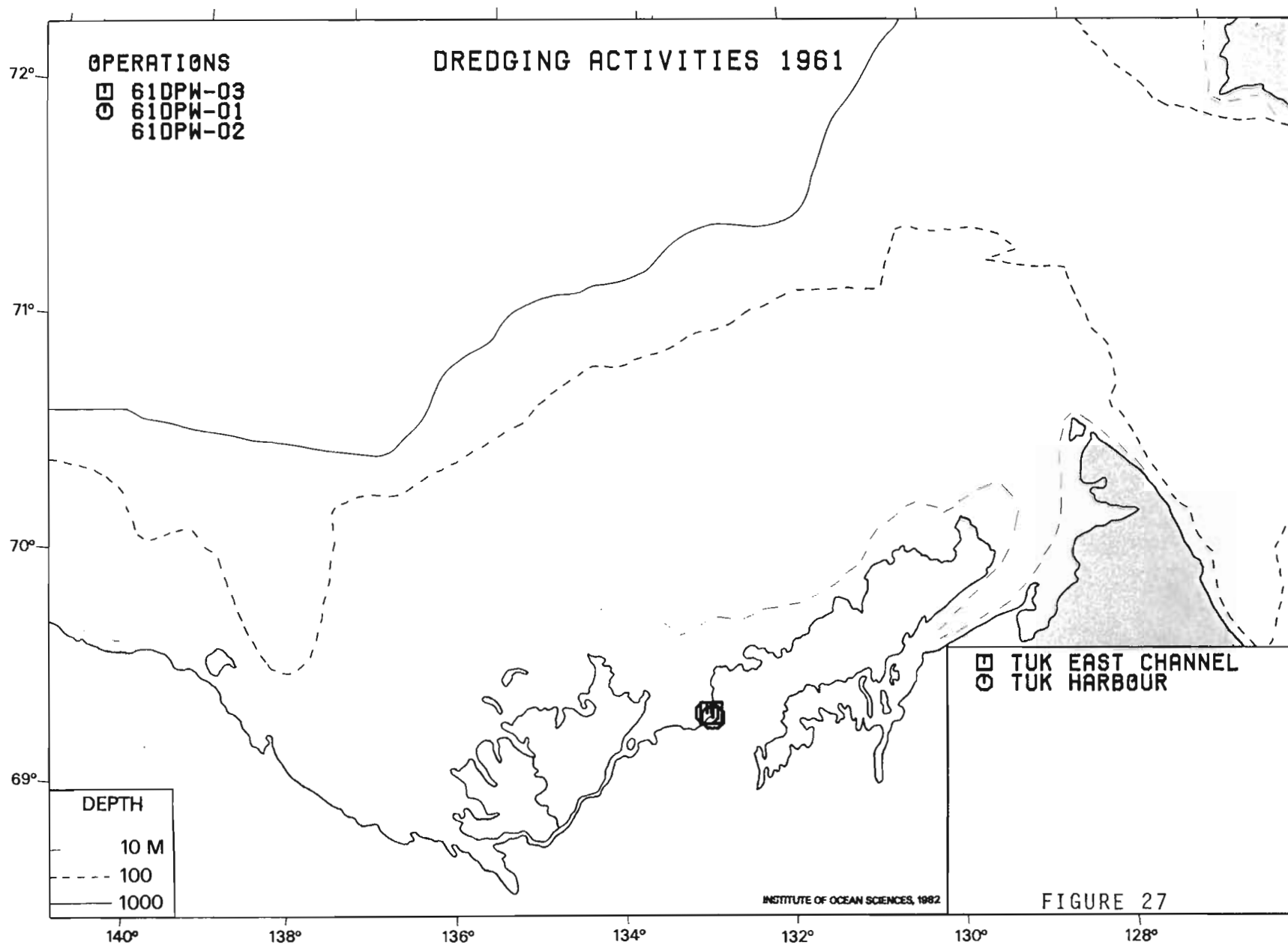
REFERENCE\* ESSO RESOURCES LTD., 1982. W.D.GATEWAY DAILY REPORTS, 1982.

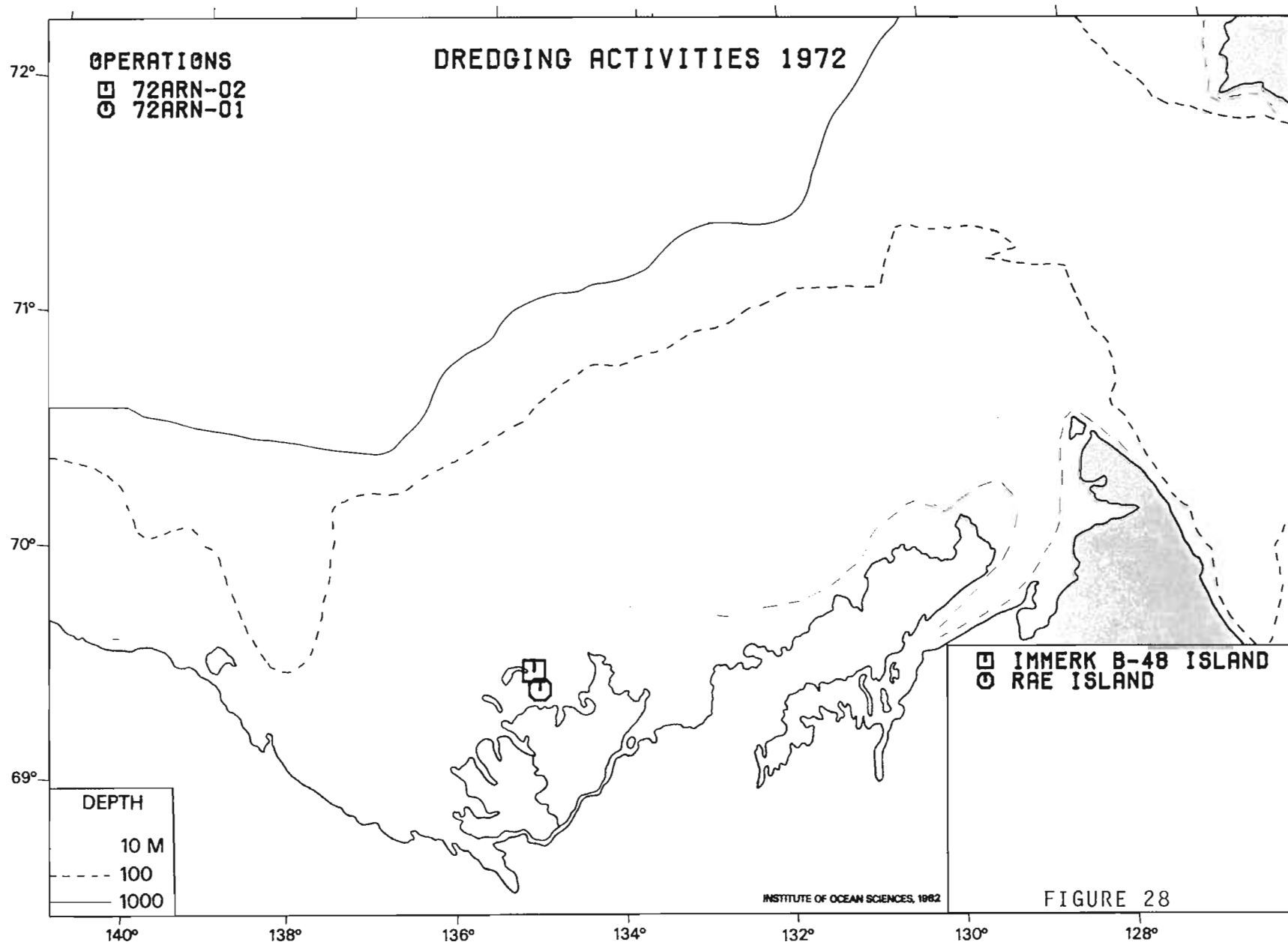
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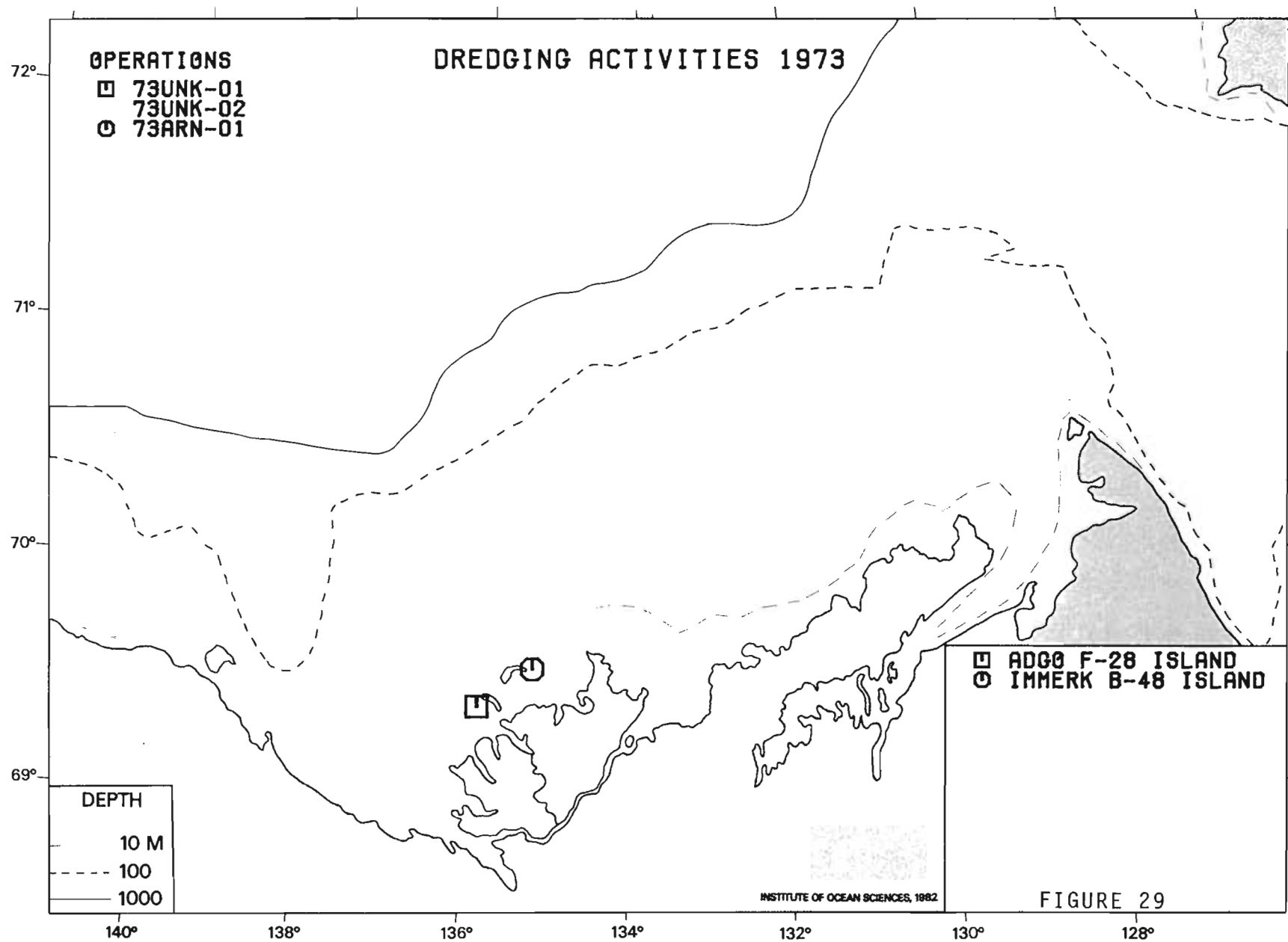


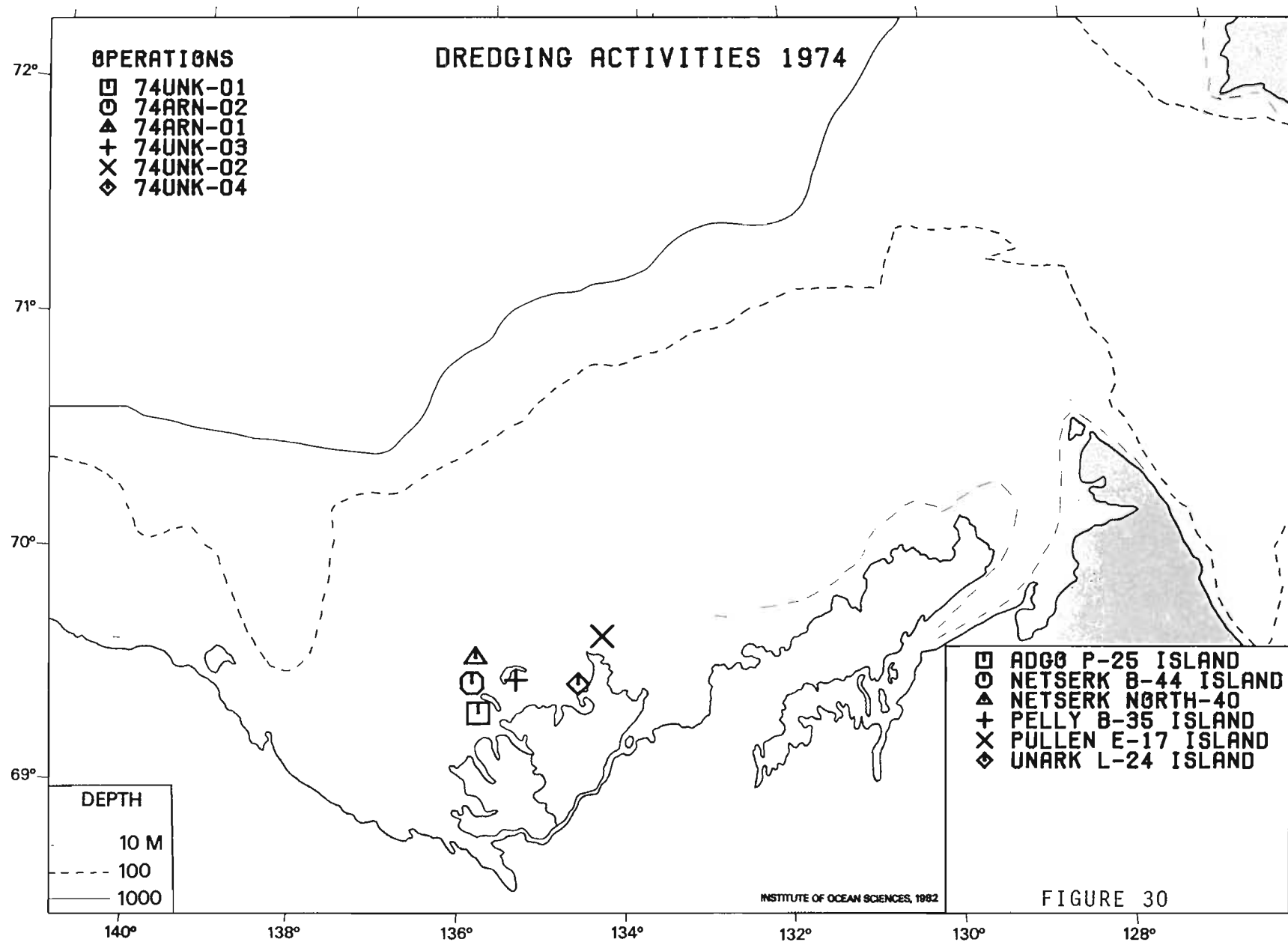


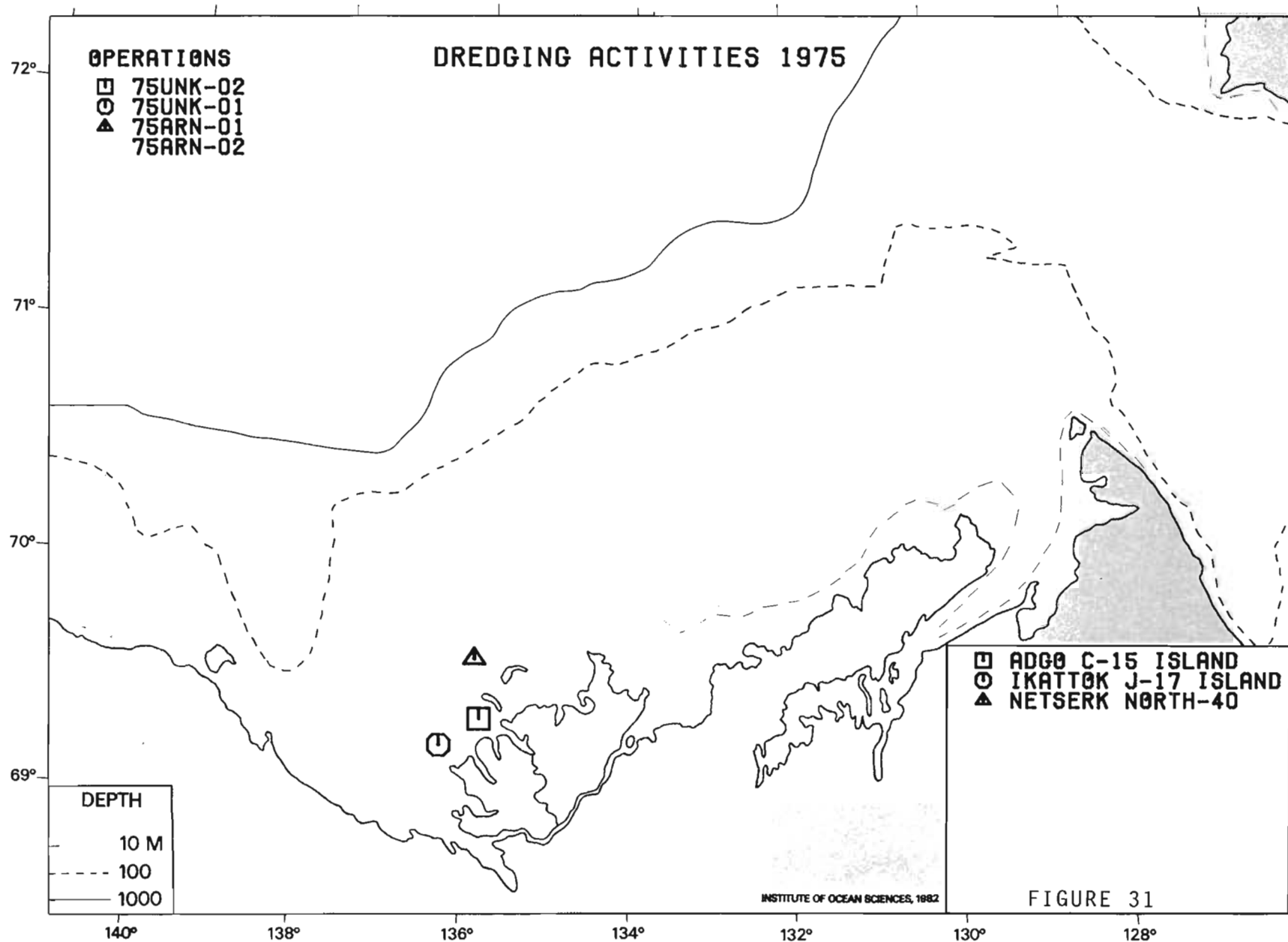


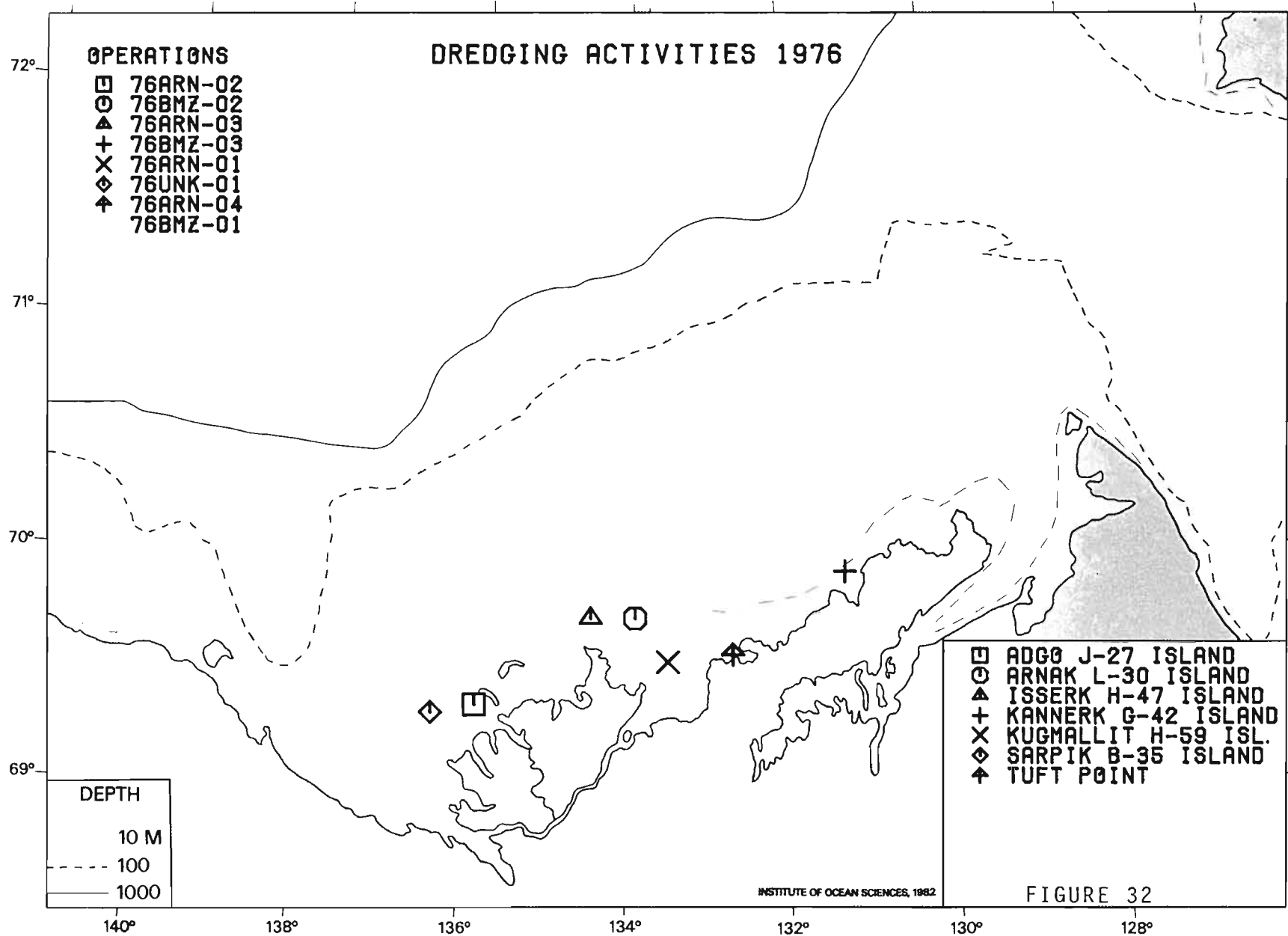


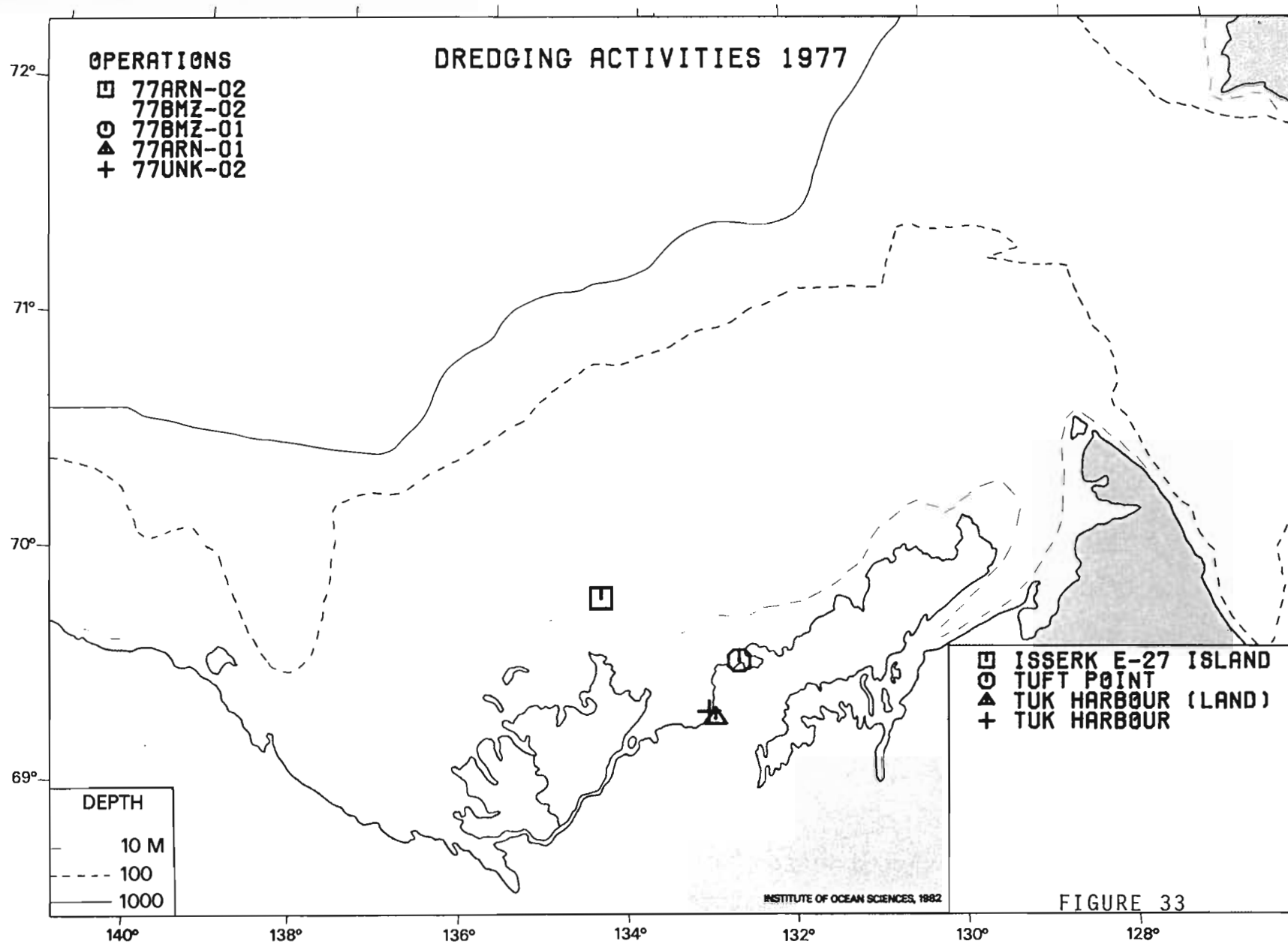




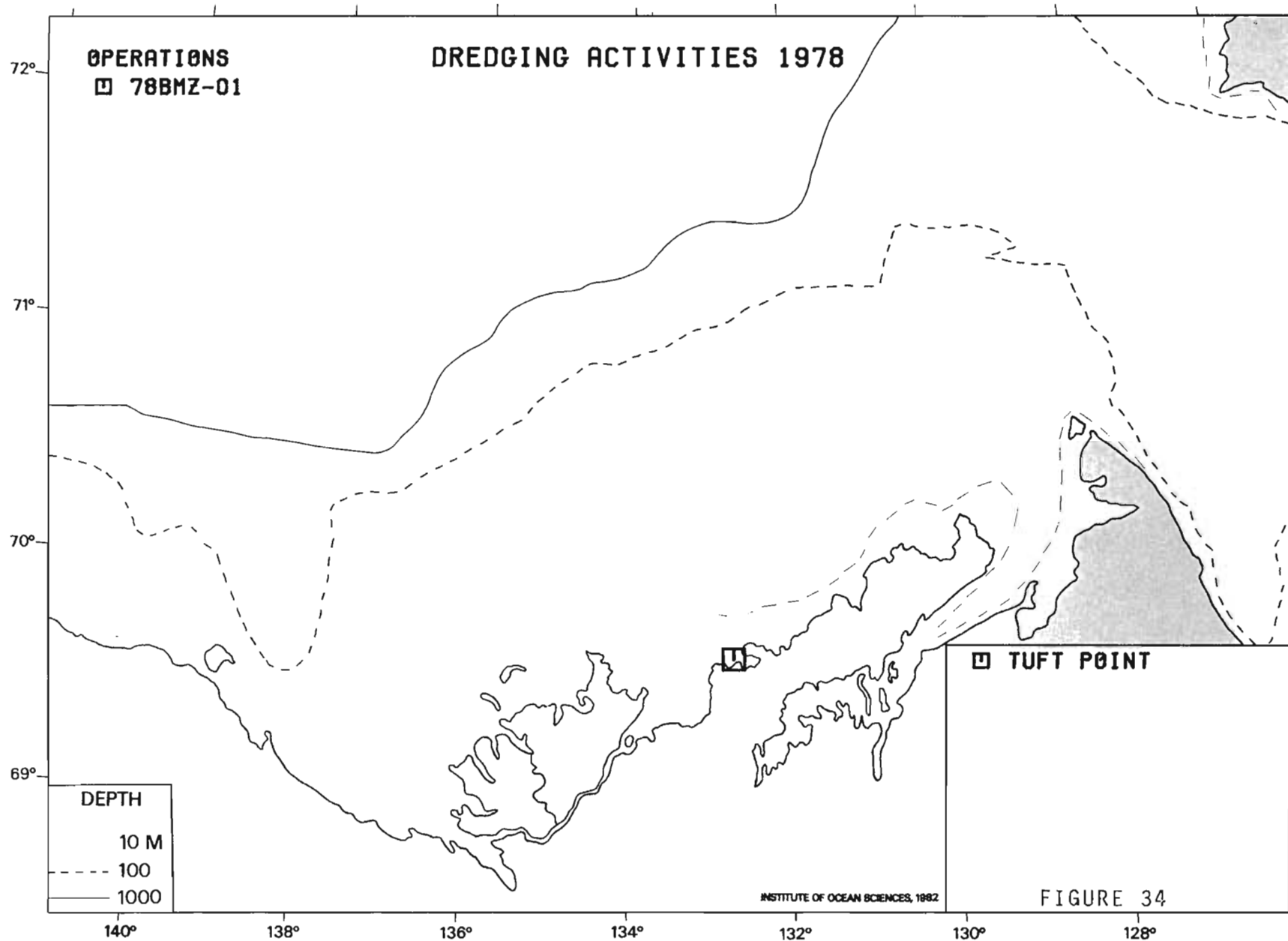


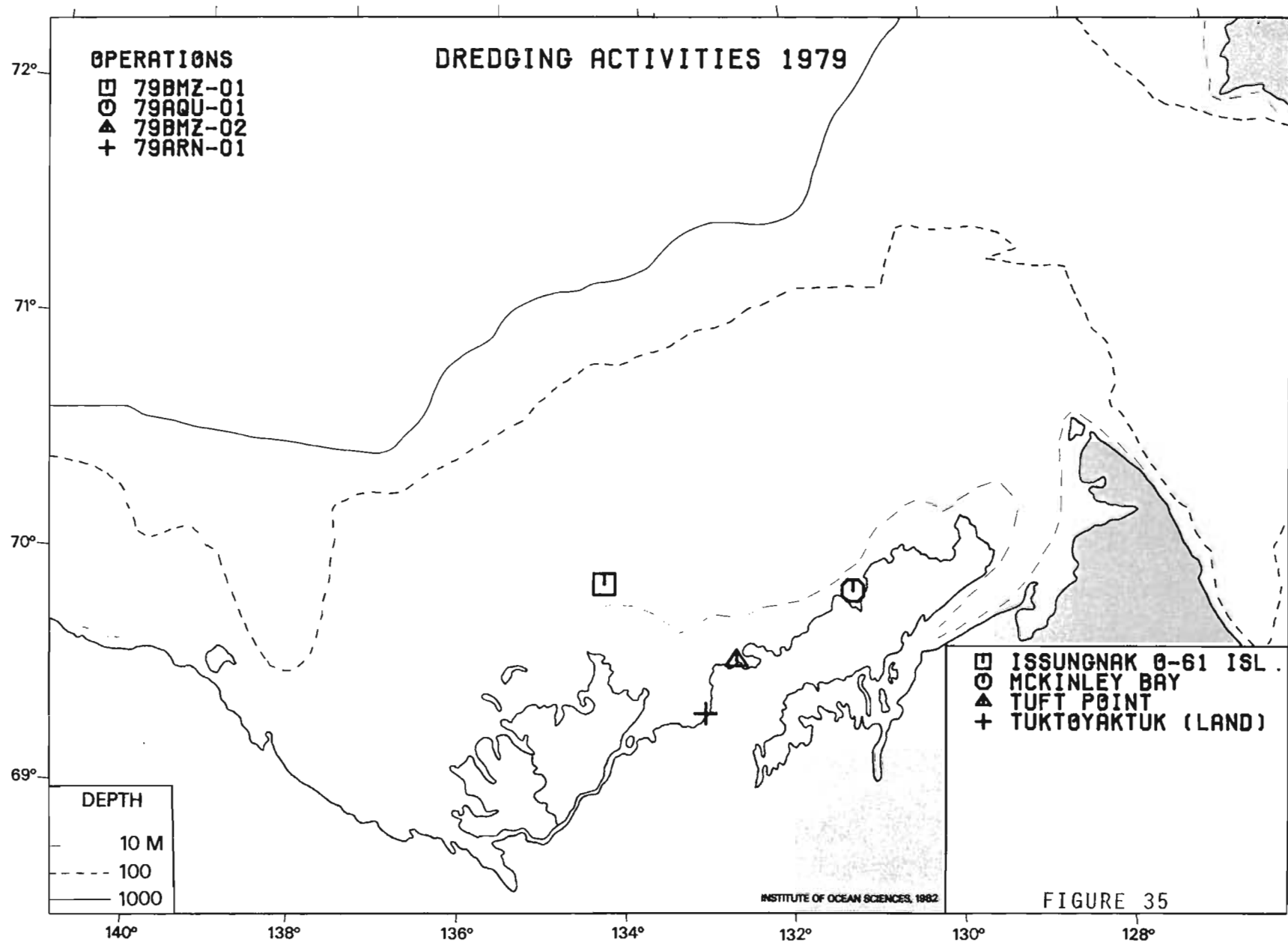


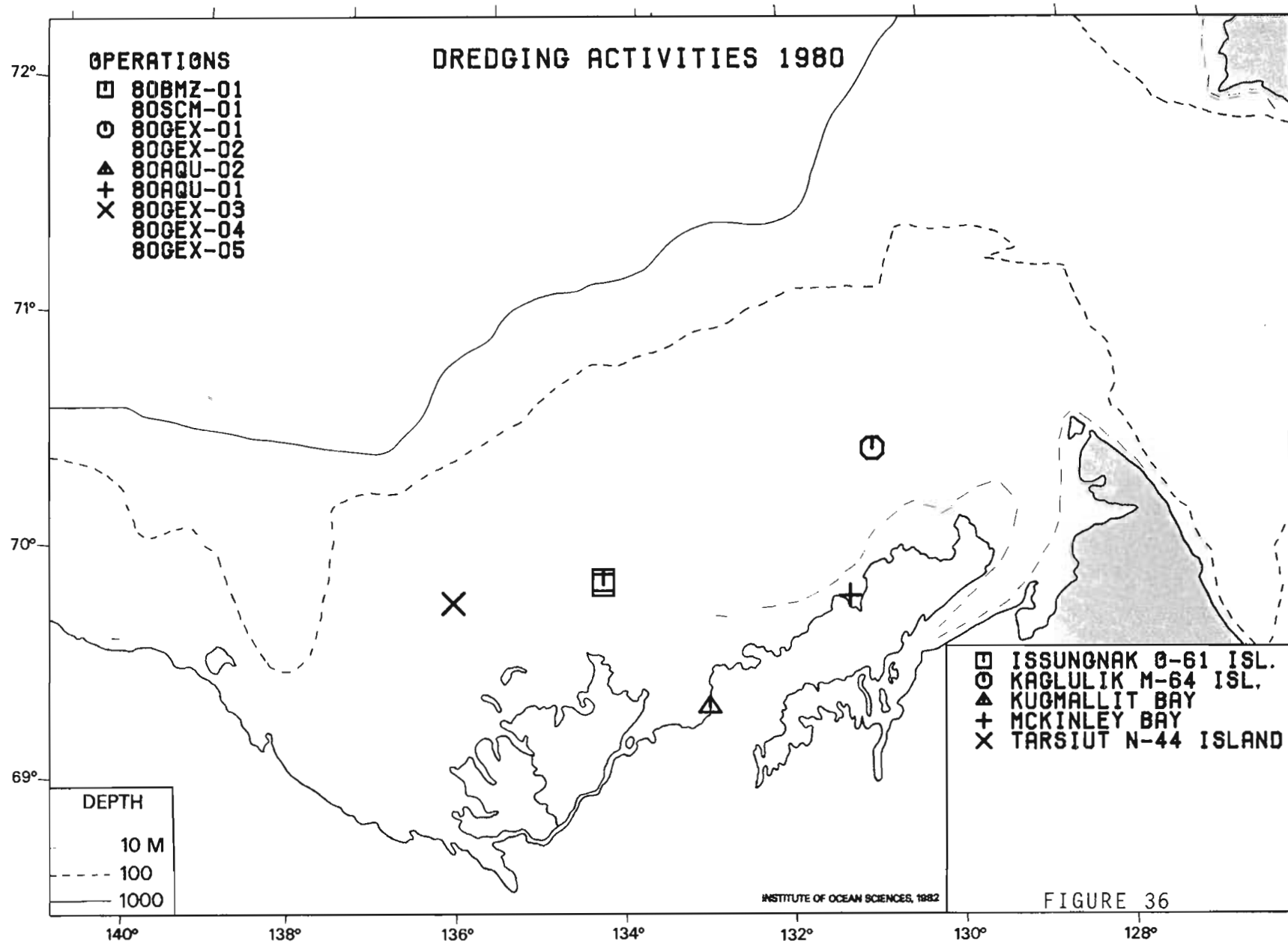


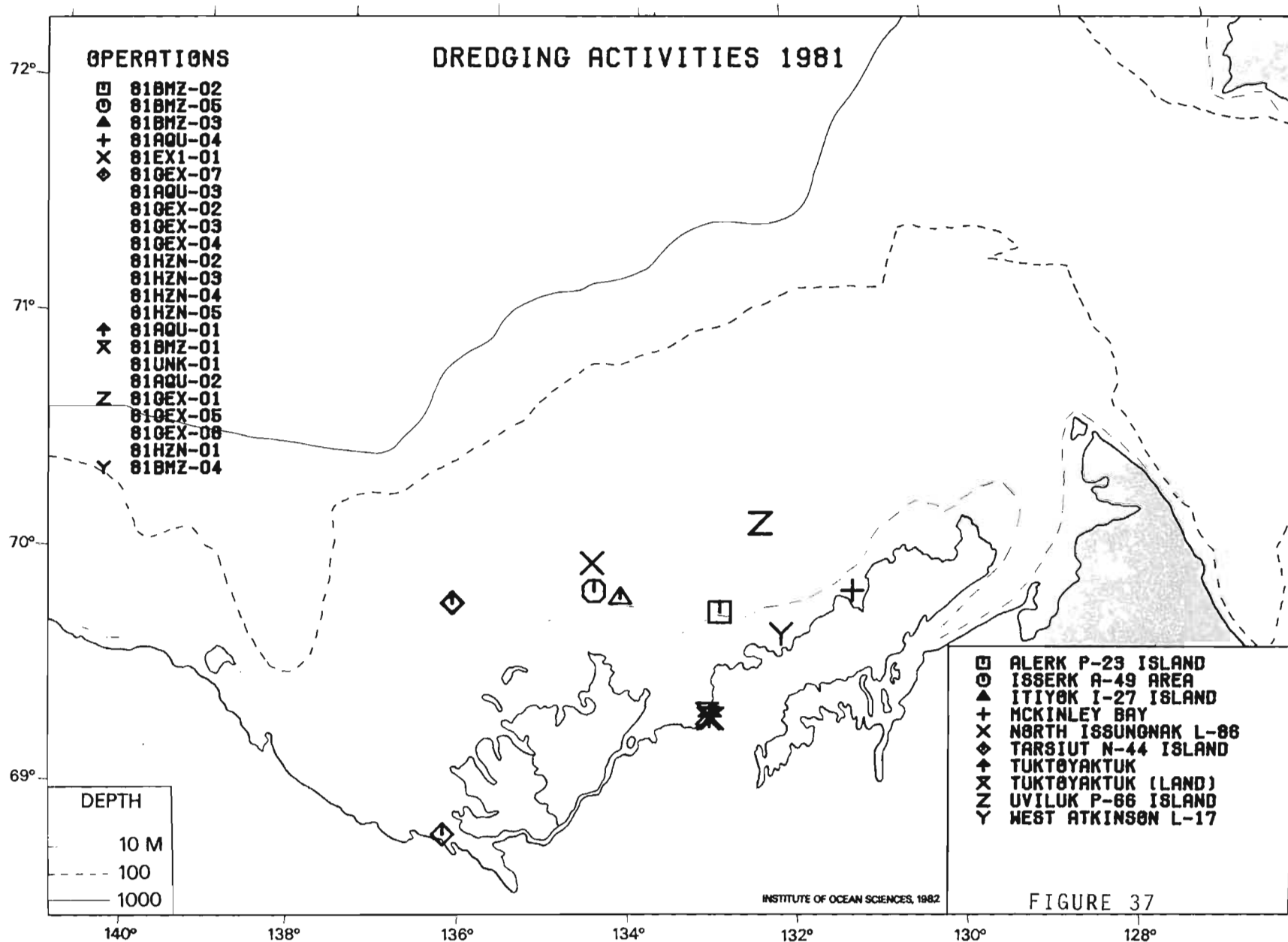


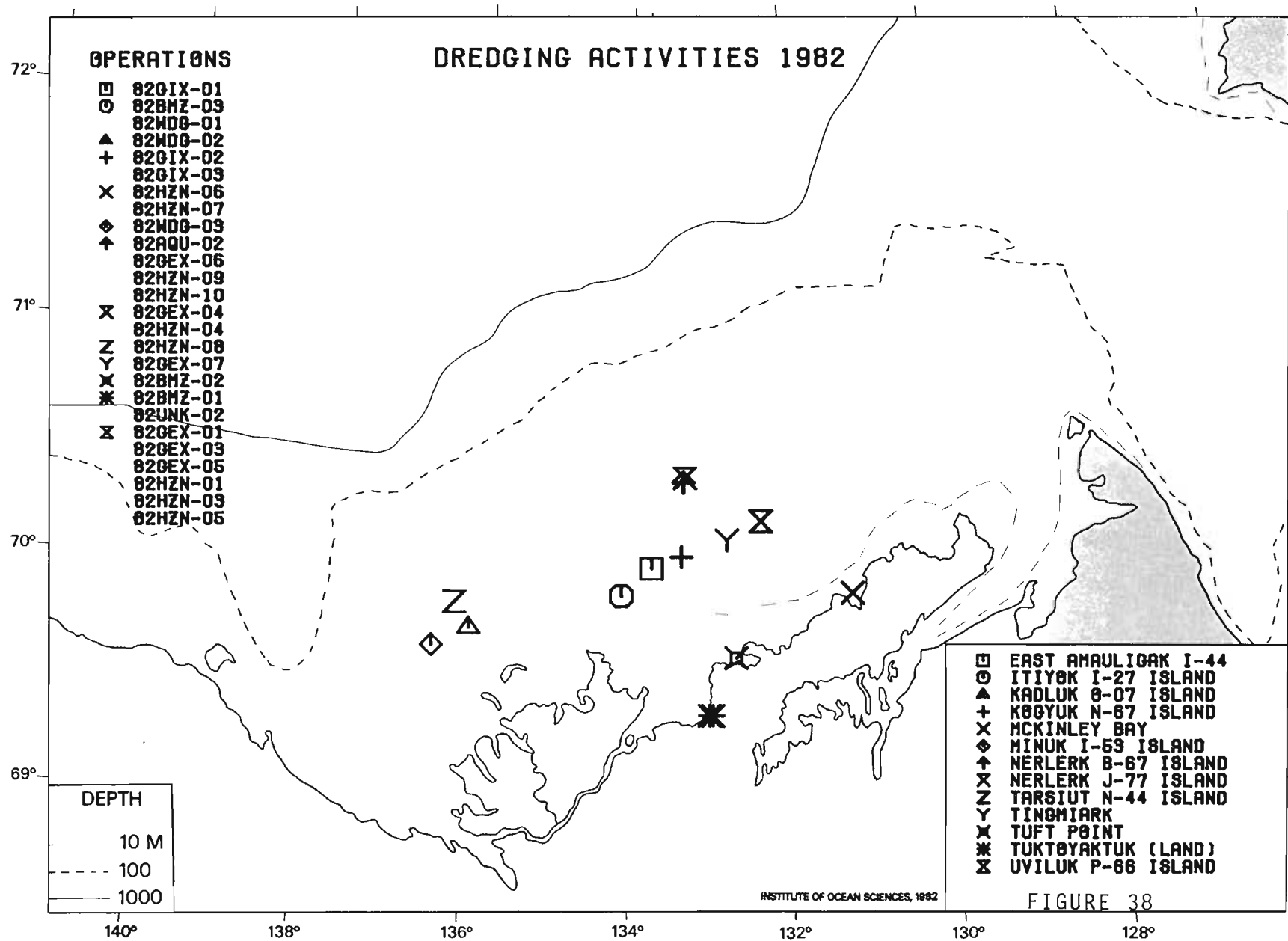


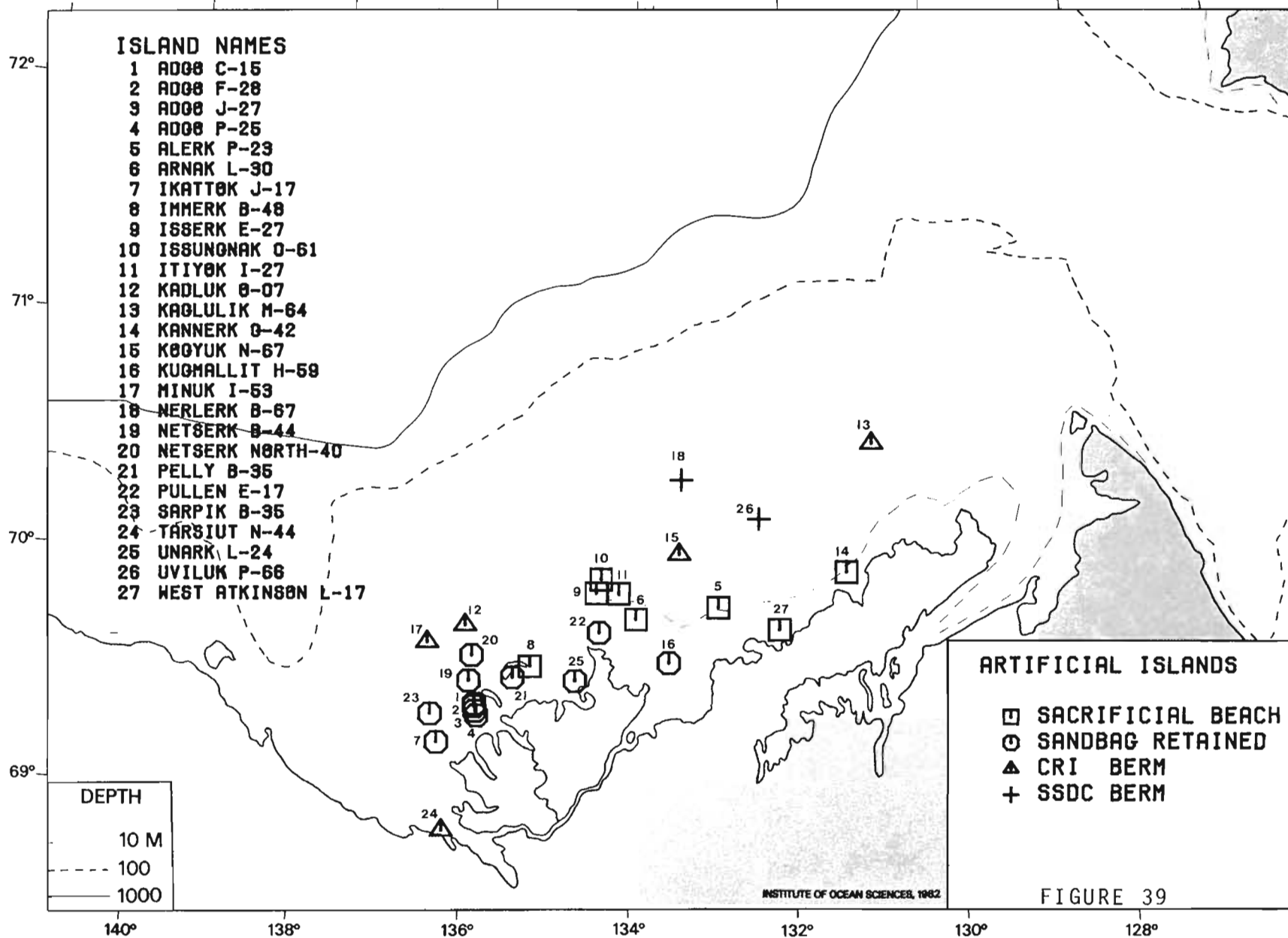


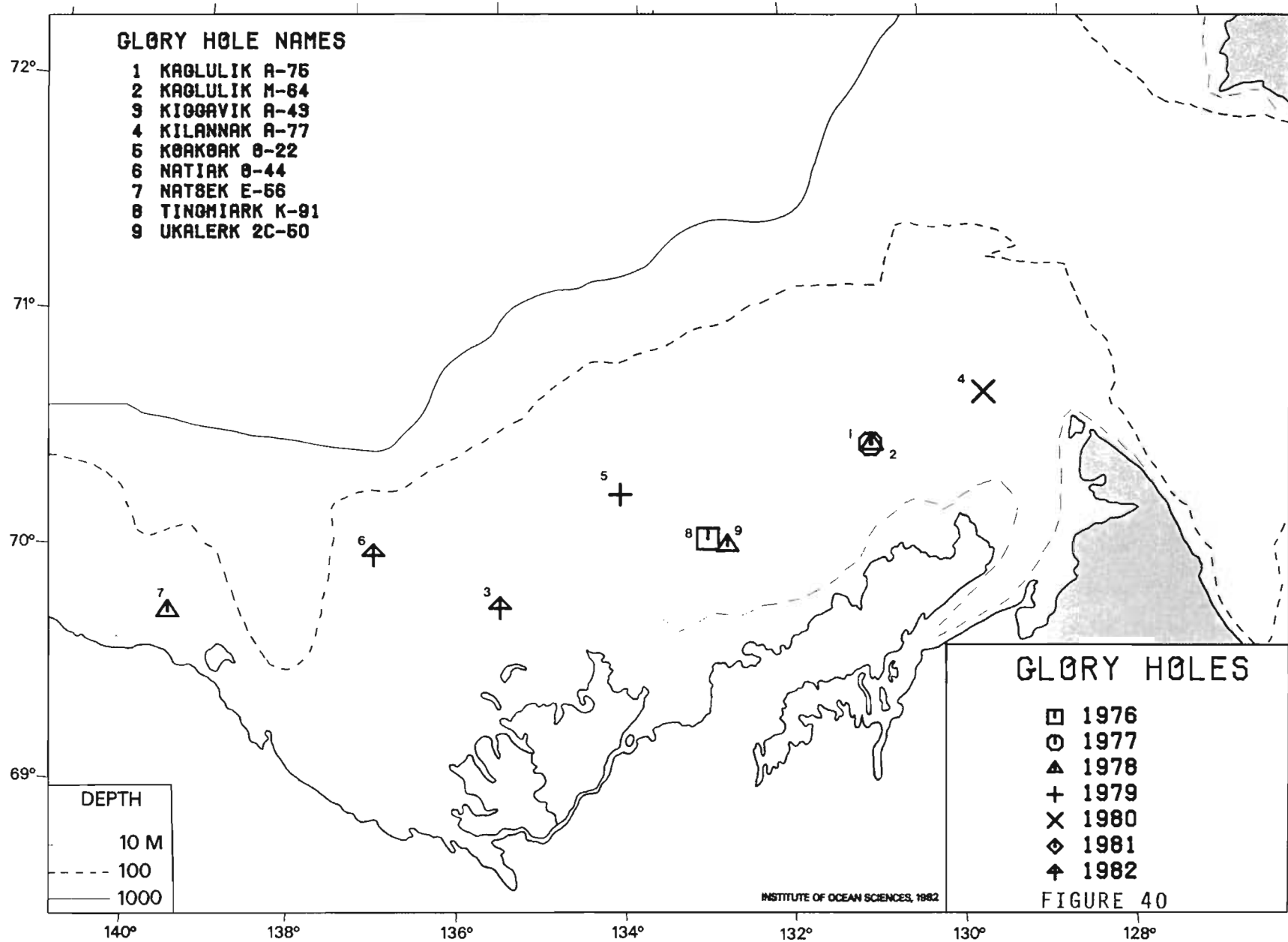


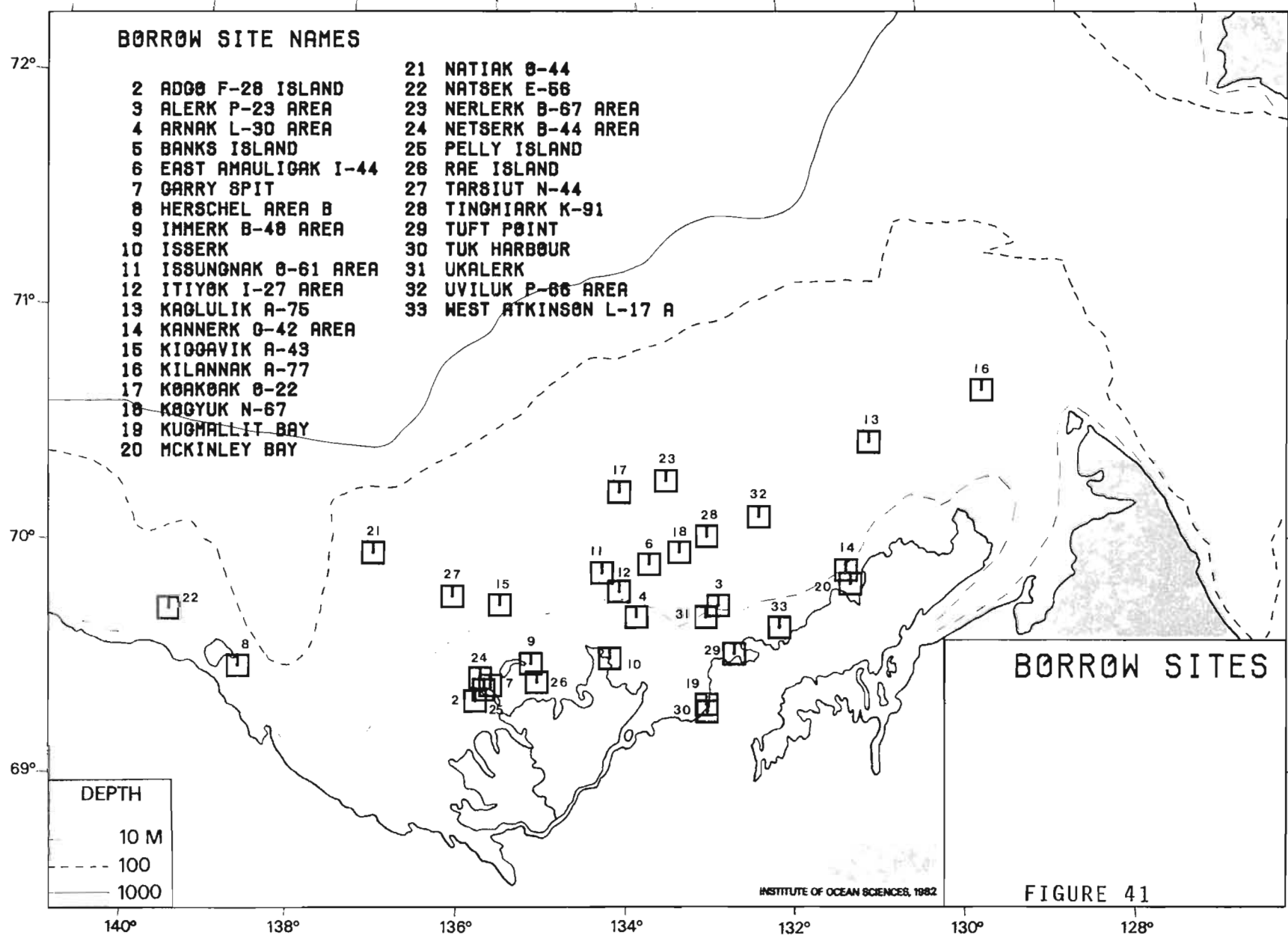














## 5. RECOMMENDATIONS

1. The past and present regulatory reporting procedures of Beaufort Sea dredging activities proved inadequate to prepare this comprehensive overview of the key operational details such as time, location and quantities. The existing systems of permits/leases/licenses/reports often provides only generalized information about projected dredging requirements, and does not provide accurate performance reports of actual dredging such as specific days of operations, quantities of materials removed including overburdens, losses and so on. At minimum, these industry and government reports must include performance specifics, for each operation, such as purpose, company name, date (day, month, year), type and name of vessel employed, type and volume (including confidence limits) of materials loaded and dumped, load and dump locations (latitude, longitude), and water depth. In addition, for purposes of environmental research, monitoring and impact assessments, the approximate area of substrate removed or covered ( $m^2$  or  $km^2$ ) should be reported.

2. The historical dredging database should be updated on an annual basis, in order to avoid the problems of locating and searching old files and reports for pertinent details, and to maintain a dependable audit of dredging operations for regulatory, planning and assessment agencies. This updating is the responsibility of the regulatory agencies: DIAND, DOE/EPS and EMR (COGLA). The lead responsibility should be assigned to one department.

3. This historical review of dredging has been archived on a computer database using System 2000 at the Institute of Ocean Sciences. This System 2000 is compatible with the ODCA (Ocean Dumping Control Act) Database in Environment Canada, Ottawa. Possibly the ODCA Database could be expanded to keep information and details on all dredging operations including those not pertaining to the Act's requirements.

4. The computer database concerning dredging should be developed and revised for use on microcomputers (such as Apple) that are commonly available in the north. This industry information and personal sorting capability should be available as a planning and regulatory tool in northern offices of interested government agencies.

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- COGLA Weekly Report of Exploration, August 10, 1983 and August 17, 1983.
- Dome Petroleum Ltd., 1980. Environmental Overview Beaufort Sea Development (Working Draft). Dome, Calgary.
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Gulf Canada Resources Inc., 1981. Project Execution Plan-Beaufort Sea Drilling Systems. Project Frontier Division, Gulf Canada Resources Inc., Calgary.

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## APPENDIX 7.1 Load (L) and Dump (D) site locations.

Dataset ID#		Location	Area	Dataset ID#		Location	Area
59DPW-01	L	69 27 00 132 58 48	Tuk East Channel	73UNK-01	L	69 37 12 135 10 48	Immerk B-48 Area
	D	69 27 00 132 58 48	Tuk East Channel		D	69 27 00 135 51 00	Adgo F-28
60DPW-01	L	69 27 00 132 58 48	Tuk East Channel	73UNK-02	L	69 27 00 135 51 00	Adgo F-28
	D	69 27 00 132 58 48	Tuk East Channel		D	69 27 00 135 51 00	Adgo F-28
61DPW-01	L	69 27 00 133 01 48	Tuk Harbour, Hudson Bay Co. Wharf	74ARN-01	L	69 31 12 135 40 12	Garry Spit
	D	69 27 00 133 01 48	Tuk Harbour, Hudson Bay Co. Wharf		D	69 39 36 135 54 00	Netserk North-40
61DPW-02	L	69 25 48 132 58 12	Tuk Harbour NTCL Camp	74ARN-02	L	69 30 00 135 45 00	Pelly Island
	D	69 25 48 132 57 36	Tuk Harbour NTCL Camp		D	69 33 00 135 55 48	Netserk B-44
61DPW-03	L	69 27 00 132 58 48	Tuk East Channel	74UNK-01	L	69 25 12 135 50 24	Adgo P-25 Area
	D	69 27 00 132 58 48	Tuk East Channel		D	69 25 12 135 50 24	Adgo P-25
72ARN-01	L	69 32 24 135 06 00	Rae Island	74UNK-02	L		Ya Ya Lakes
	D	69 32 24 135 06 00	Rae Island		D	69 46 12 134 19 48	Pullen E-17
72ARN-02	L	69 37 12 135 10 48	Immerk B-48 Area	74UNK-03	L		Ya Ya Lakes
	D	69 37 12 135 10 48	Immerk B-48		D	69 34 12 135 23 24	Pelly B-35
73ARN-01	L	69 37 12 135 10 48	Immerk B-48 Area	74UNK-04	L		Ya Ya Lakes
	D	69 37 12 135 10 48	Immerk B-48		D	69 33 36 134 37 12	Unark L-24
75ARN-01	L	69 30 00 135 45 00	Garry Harbour	76BMZ-02	L	69 49 48 133 52 12	Arnak L-30 Area
	D	69 39 36 135 54 00	Netserk North-40		D	69 49 48 133 52 12	Arnak L-30

APPENDIX 7.1 Load (L) and Dump (D) site locations.  
continued

Dataset ID#		Location	Area	Dataset ID#		Location	Area
75ARN-02	L	69 34 48 135 25 12	Pelly Pit	76BMZ-03	L	70 01 12 131 13 12	Kannerk G-42 Area
	D	69 39 36 135 54 00	Netserk North 40		D	70 01 12 131 13 12	Kannerk G-42
75UNK-01	L		Ya Ya Lakes	76UNK-01	L	69 24 00 135 49 12	Adgo C-15 Area
	D	69 16 48 136 18 00	Ikattok J-17 ,		D	69 24 00 136 23 24	Sarpik B-35
75UNK-02	L		Ya Ya Lakes	76UNK-02	L	70 10 48 132 58 48	Tingmiark K-91 (Glory Hole)
	D	69 24 00 135 49 12	Adgo C-15		D		
76ARN-01	L	69 40 12 132 39 00	Tuft Point	77ARN-01	L		Tuk Harbour
	D	69 38 24 133 27 36	Kugmallit H-59		D	69 25 12 132 57 00	Tuk Harbour (land)
76ARN-02	L	69 33 00 135 48 00	Netserk B-44 Area	77ARN-02	L	69 40 12 132 39 00	Tuft Point
	D	69 26 24 135 51 00	Adgo J-27		D	69 56 24 134 22 12	Isserk E-27
76ARN-03	L	69 49 48 134 25 48	Isserk H-47 Area	77ARN-03	L	69 40 12 132 39 00	Tuft Point
	D	69 49 48 134 25 48	Isserk H-47		D	69 40 12 132 39 00	Tuft Point
76ARN-04	L	69 40 12 132 39 00	Tuft Point	77BMZ-01	L	69 40 12 132 39 00	Tuft Point
	D	69 40 12 132 39 00	Tuft Point		D	69 40 12 132 39 00	Tuft Point
76BMZ-01	L	69 40 12 132 39 00	Tuft Point	77BMZ-02	L	69 56 24 134 22 12	Isserk E-27 Area
	D	69 40 12 132 39 00	Tuft Point		D	69 56 24 134 22 12	Isserk E-27
77UNK-01	L	70 09 00 132 44 24	Ukalerk C-50	79BMZ-01	L	69 40 12 132 39 00	Tuft Point
	D		Tuk Harbour		D	70 00 00 134 18 36	Issungnak O-61

APPENDIX 7.1 Load (L) and Dump (D) site locations.  
continued

Dataset ID#		Location	Area	Dataset ID#		Location	Area
77UNK-02	L	69 27 00 133 01 48	Tuk Harbour	79BMZ-02	L	69 40 12 132 39 00	Tuft Point
	D	69 27 00 133 01 48	Tuk Harbour		D	69 40 12 132 39 00	Tuft Point
77UNK-03	L	70 34 12 130 51 36	Kaglulik A-75 (Glory Hole)	79UNK-01	L	70 22 12 134 06 00	Koakoak 0-22 (Glory Hole)
	D				D		
78BMZ-01	L	69 40 12 132 39 00	Tuft Point	80AQU-01	L	69 56 24 131 13 12	McKinley Bay
	D	69 40 12 132 39 00	Tuft Point		D	69 56 24 131 12 00	McKinley Bay
78UNK-01	L	69 45 36 139 44 24	Natsek E-56 (Glory Hole)	80AQU-02	L	69 27 00 133 00 00	Kugmallit Bay
	D				D	69 28 12 132 58 48	Kugmallit Bay
78UNK-02	L	70 09 00 132 43 48	Ukalerk 2C-50 (Glory Hole)	80BMZ-01	L	70 01 12 134 18 36	Issungnak 0-61 Area
	D				D	70 00 00 134 18 36	Issungnak 0-61
78UNK-03	L	70 34 12 130 50 24	Kaglulik M-64 (Glory Hole)	80GEX-01	L	70 06 36 131 45 00	Kaglulik South 50
	D				D	70 34 12 130 50 24	Kaglulik M-64
79AQU-01	L	69 57 36 131 10 12	McKinley Bay	80GEX-02	L		West 17 Borrow
	D	69 57 36 131 10 12	McKinley Bay		D	70 34 12 130 50 24	Kaglulik M-64
79ARN-01	L	69 27 00 133 01 48	Tuk Harbour, S. of Conn Island	80GEX-03	L	69 54 00 136 11 24	Tarsiut N-44
	D	69 26 24 133 02 24	Tuktoyaktuk (land) S. of Pokiak Lake		D	69 54 00 136 11 24	Tarsiut N-44
80GEX-04	L	69 39 00 134 12 00	Isserk Area	81BMZ-02	L	69 52 48 132 50 24	Alerk P-23 Area
	D	69 54 00 136 11 24	Tarsiut N-44		D	69 52 48 132 50 24	Alerk P-23

APPENDIX 7.1 Load (L) and Dump (D) site locations.  
continued

Dataset ID#		Location	Area	Dataset ID#		Location	Area
80GEX-05	L	69 49 48 133 00 00	Ukalerk	81BMZ-03	L	69 56 24 134 05 24	Itiyok I-27 Area
	D	69 54 00 136 11 24	Tarsiut N-44		D	69 56 24 134 05 24	Itiyok I-27
80SCM-01	L	70 01 12 134 18 36	Issungnak 0-61 Area	81BMZ-04	L	69 46 48 132 04 48	West Atkinson L-17 Area
	D	70 01 12 134 18 36	Issungnak 0-61		D	69 46 48 132 04 48	West Atkinson L-17
80UNK-01	L	70 46 12 129 21 00	Kilannak A-77 (Glory Hole)	81BMZ-05	L	69 58 12 132 25 12	Isserk A-49 Area
	D				D	69 58 12 132 25 12	Isserk A-49 Area
81AQU-01	L	69 25 48 132 58 48	Tuk Harbour	81EXI-01	L	70 05 24 134 27 00	North Issungnak L-86 (Glory Hole)
	D	69 25 48 132 58 48	Tuk Harbour		D		
81AQU-02	L	69 26 24 133 00 00	Tuk Harbour	81GEX-01	L	70 15 36 132 18 36	Uviluk P-66 Area
	D	69 26 24 133 00 36	Tuktoyaktuk (land) E. of Tareoknitok Lake		D	70 15 36 132 18 36	Uviluk P-66
81AQU-03	L		South Tarsiut Borrow	81GEX-02	L		South Tarsiut
	D	69 54 00 136 11 24	Tarsiut N-44		D	69 54 00 136 11 24	Tarsiut N-44
81AQU-04	L	69 56 24 131 13 12	McKinley Bay	81GEX-03	L	69 32 24 138 48 00	Herschel Area B
	D	69 57 36 131 10 12	McKinley Bay North Protection Island		D	69 54 00 136 11 24	Tarsiut N-44
81BMZ-01	L	69 25 12 132 57 36	Tuk Harbour	81GEX-04	L	69 49 48 133 00 00	Ukalerk
	D	69 25 12 132 57 00	Tuk Harbour (Land)		D	69 54 00 136 11 24	Tarsiut N-44
81GEX-05	L	69 49 48 133 00 00	Ukalerk	82AQU-01	L	69 52 12 135 35 24	Kiggavik A-43 (Glory Hole)
	D	70 15 36 132 18 36	Uviluk P-66		D		



APPENDIX 7.1 Load (L) and Dump (D) site locations.  
continued

Dataset ID#	Location	Area	Dataset ID#	Location	Area
81GEX-06	L	South Tarsiut	82AQU-02	L 70 25 12 133 30 00	Nerlerk B-67 Area
	D 70 15 36 132 18 36	Uviluk P-66		D 70 25 48 133 18 00	Nerlerk B-67
82GEX-07	L 69 49 48 133 00 00	Ukalerk	82BMZ-01	L 69 25 12 132 57 36	Tuk Harbour
	D 69 54 00 136 11 24	Tarsiut N-44, North Spur		D 69 25 12 132 57 00	Tuk Harbour (land)
81HZN-01	L 69 49 48 133 00 00	Ukalerk	82BMZ-02	L 69 40 12 132 39 00	Tuft Point
	D 70 15 36 132 18 36	Uviluk P-66		D 69 40 12 132 39 00	Tuft Point
81HZN-02	L	South Tarsiut	82BMZ-03	L 69 56 24 134 05 24	Itiyok I-27 Area
	D 69 54 00 136 11 24	Tarsiut N-44		D 69 56 24 134 05 24	Itiyok I-27
81HZN-03	L 69 49 48 133 00 00	Ukalerk	82GEX-01	L 70 06 36 131 45 00	Kaglulik South 50
	D 69 54 00 136 11 24	Tarsiut N-44		D 70 15 36 132 18 36	Uviluk P-66
81HZN-04	L 69 32 24 138 48 00	Herschel Area B	82GEX-02	L 70 20 24 133 19 48	Nerlerk Area
	D 69 54 00 136 11 24	Tarsiut N-44		D	Nerlerk F-67
81HZN-05	L 69 39 00 134 12 00	Isserk	82GEX-03	L 69 49 48 133 00 00	Ukalerk
	D 69 54 00 136 11 24	Tarsiut N-44		D 70 15 36 132 18 36	Uviluk P-66
81UNK-01	L 69 25 12 132 59 24	Tuk Harbour	82GEX-04	L 69 49 48 133 00 00	Ukalerk
	D 69 25 12 132 59 24	Tuk Harbour (land)		D 70 27 00 133 16 48	Nerlerk J-77
82GEX-05	L 71 30 00 123 34 48	Banks Island	82HZN-04	L 69 49 48 133 00 00	Ukalerk
	D 70 15 36 132 18 36	Uviluk P-66		D 70 27 00 133 16 48	Nerlerk J-77

APPENDIX 7.1 Load (L) and Dump (D) site locations.  
continued

Dataset ID#		Location	Area	Dataset ID#		Location	Area
82GEX-06	L	69 49 48	Ukalerk	82HZN-05	L		South Tarsiut
		133 00 00					
	D	70 25 48	Nerlerk B-67		D	70 15 36	Uviluk P-66
		133 18 00				132 18 36	
82GEX-07	L	70 10 48	Tingmiark	82HZN-06	L	69 49 48	Ukalerk
		70 45 00				133 00 00	
	D	70 10 48	Tingmiark		D	69 56 24	McKinley Bay
		70 45 00				131 10 12	
82GIX-01	L	70 03 36	East Amauligak I-44	82HZN-07	L	70 06 36	Kaglulik South 50
		133 42 36	(Glory Hole)			131 45 00	
	D				D	69 56 24	McKinley Bay
						131 10 12	
82GIX-02	L	70 06 36	Kogyuk N-67	82HZN-08	L	69 49 48	Ukalerk
		133 19 48				133 00 00	
	D	69 59 24	Kogyuk N-67 Area		D	69 54 00	Tarsiut N-44
		133 03 36				136 11 24	
82GIX-03	L	69 49 48	Ukalerk	82HZN-09	L	69 49 48	Ukalerk
		133 00 00				133 00 00	
	D	70 06 36	Kogyuk N-67		D	70 25 48	Nerlerk B-67
		133 19 48				133 18 00	
82HZN-01	L	70 06 36	Kaglulik South 50	82HZN-10	L	69 49 48	Ukalerk
		131 45 00				133 00 00	
	D	70 15 36	Uviluk P-66		D	70 25 48	Nerlerk B-67
		132 18 36				133 18 00	
82HZN-02	L	70 15 00	Nerlerk Ridge	82UNK-01	L	70 04 12	Natiak O-44
		133 22 12				137 13 12	(Glory Hole)
	D		Nerlerk F-67		D		
82HZN-03	L	69 49 48	Ukalerk	82UNK-02	L	69 25 12	Tuk Harbour
		133 00 00				132 59 24	
	D	70 15 36	Uviluk P-66		D	69 25 12	Tuk Harbour (land)
		132 18 36				132 59 24	

APPENDIX 7.1 Load (L) and Dump (D) site locations.  
continued

Dataset ID#		Location	Area
82WDG-01	L	69 49 48	Ukalerk
		133 00 00	
	D	69 56 24	Itiyok I-27
		134 05 24	
82WDG-02	L	69 49 48	Ukalerk
		133 00 00	
	D	69 47 24	Kadluk 0-07
		136 00 00	
82WDG-03	L	69 49 48	Ukalerk
		133 00 00	
	D	69 42 36	Minuk I-53
		136 27 36	

## APPENDIX 7.2. Existing legislation applicable to Beaufort Sea dredging.

### A. Territorial Lands Act (TLA)

(first passed in 1952, latest amendments made in March 1970; administered by Department of Indian Affairs and Northern Development)

This Act oversees the disposition, administration and management of all Territorial Lands. In the Northwest Territories (N.W.T.), these lands are defined in the Northwest Territories Act and do not include offshore lands (e.g. sea bed). Occupation of land is regulated under a system of leases and licenses, referred to as a land tenure agreement. Activities carried out on unleased land are regulated under the Territorial Land Use Regulations (first passed in 1971 and amended in 1977 to include the Eastern Arctic). Land use activities are controlled under a system of land-use permits which authorize and individual or company to carry out a specific land-use operation at a specified place, during a specified period of time and subject to specific terms and conditions including provisions to allow for adequate protection of the affected environment. Because offshore lands do not fall under the jurisdiction of the Northwest Territories Act and the Territorial Lands Act, the associated Territorial Land Use Regulations do not apply to Beaufort Sea dredging.

### B. Public Lands Grant Act (PLGA)

(first passed in 1952; latest amendments made in 1982; administered by Department of Indian Affairs and Northern Development)

The Public Lands Grant Act is responsible for the disposition of Crown lands anywhere in Canada which is not already provided for in other legislation. The PLGA has been used in the Northwest Territories to regulate allocation of offshore lands such as the Beaufort Sea sea bed.

Dredging is regulated under the Public Lands Grant Act and the associated Public Lands Leasing and Licensing Regulations by:

- (a) requiring that proponents obtain a PLGA lease to "occupy" subsea "lands". The lease includes covenants that define which activities the proponent may carry out on the leased lands (i.e. construction of an island) and outlines environmental terms and conditions to be applied to that particular activity at that site. Enforcement is based upon assuring that the proponent meets the covenant of the lease. Should the proponent not meet these covenants, the company would essentially be in breach of its "contract" with the federal government to meet the conditions of that lease. DIAND could then revoke the lease which would legally mean that, if the proponent continued to carry out activities at that site, he would be doing so without legally occupying the land (i.e. he would be trespassing) and would be charged. This type of regulatory regime (i.e. leases) is usually used for the construction of artificial islands.
- (b) DIAND also issues "licenses" under the PLGA. These apply to situations where a proponent may be permitted to occupy land for

APPENDIX 7.2. Existing legislation applicable to Beaufort Sea dredging.  
continued

reasons other than to build something and where more than one proponent might be involved. An example of a situation where a licence might be used for regulating dredging could be where several companies share a dredging area for granular material.

C. Navigable Waters Protection Act (NWP)

(first passed in 1882; administered by Transport Canada, Canadian Coast Guard, Navigable Waters Protection Service)

Any dumping of fill or excavation of materials from the bed of a navigable water or construction of any "work" in a navigable water must be approved under the NWP. This approval is necessary for all dredging or construction-related dredging which occurs in "navigable waters". When a proposal to dredge is made, it is reviewed by Transport Canada and distributed to selected reviewers (including EPS) to assess its potential for interfering with navigation interests. Comments are solicited and are expected to be limited to navigation concerns. Interested agencies may pursue environmental concerns under their own respective mandates.

D. Ocean Dumping Control Act (ODCA)

(passed in 1975; administered by Environment Canada, Environmental Protection Service)

The Ocean Dumping Control Act regulates the disposal of dredge spoil. The ODCA does not apply to material dredged for the purposes of construction, such as the building of artificial islands or land reclamation projects.

Permits are required for all projects where disposal of dredged material is involved, except where the dredging is "incidental" to the exploration for sea bed mineral resources, or the volume of material dumped is judged to be inconsequential or "de minimus". In general, a volume of less than 1,000 cubic metres of dredged material is regarded "de minimus" (Environmental Protection Service Interpretation Package). Thus dredging for glory-holes could be exempted through either of the above criteria, depending upon the size of the hole.

To date, ODCA permits have generally covered two types of dumping in the Beaufort Sea :

- (a) side-cast dredging of material during access channel dredging or of material unsuitable for artificial island construction;
- (b) suction-hopper dredge disposal of material unsuitable for artificial island construction at a defined dumpsite.

Environmental controls are written into the terms and conditions of the permit. These controls generally specify that an inspector be on-site during dumping and that monitoring of dumping activity and dumped material be carried out. The controls may place restrictions on where and when dumping takes place.

## APPENDIX 7.3. Canadian dredging levels on a regional basis.

### ATLANTIC

Dredging of small fishing harbours is an important component of dredging in the Atlantic provinces. While the quantity of material dredged in each harbour is relatively small (approximately 20,000 to 50,000 cubic metres), the number of harbours is large and many harbours require annual dredging due to sediment disposition patterns in either the harbours themselves or the entrance channels. Major dredging of commercial harbours occurs mainly in New Brunswick, with the St. John Harbour being the largest maintenance project.

### QUEBEC

Large scale dredging projects take place in the St. Lawrence River. These projects are regulated by provincial legislation and by the Federal Environmental Assessment And Review Process. Major areas of dredging have included Quebec City, Trois-Rivieres, Gentilly, Sorel and Beauharnois.

### ONTARIO

Most of the dredging activity has been undertaken in the Great Lakes. This activity has been divided among projects in Lakes Ontario, Erie and Superior.

### PACIFIC

The Pacific region is responsible for 55% of the total dredging by the Department of Public Works for all of Canada. Much of this dredging can be explained by the great effort which is needed to dredge large quantities of sand and gravel from the Fraser River.

### NORTHERN AND WESTERN

The majority of large scale dredging has been conducted privately for construction of artificial islands as oil-drilling platforms in the Beaufort Sea. In terms of quantity, these projects have been some of the largest in Canada.

### SUMMARY

Large volumes of material are being dredged by private firms in the Pacific and Arctic regions, whereas much of the dredging in the Great Lakes and the Atlantic region is carried out for and/or by government agencies.

APPENDIX 7.4. Major international dredging activities and dredged material volumes.

<u>Region</u>	<u>Maintenance</u>	<u>Construction</u>	<u>Total</u>	<u>% Total</u>
	* (m <sup>3</sup> )	** (m <sup>3</sup> )		
Northern Europe	5 467 700	12 353 300	17 821 000	21
Mediterranean	2 000	2 247 400	2 249 400	3
Africa	9 998 200	9 494 900	19 493 200	24
Southern Asia	3 176 700	18 587 100	21 763 800	27
Southeast Asia	1 335 800	343 500	1 679 400	2
East Asia	492 300	10 576 500	11 068 800	14
South Pacific	541 100	3 709 900	4 251 000	5
North America	2 082 100	1 042 800	3 125 000	4
Caribbean	48 900	253 100	302 000	0.003
	<hr/>	<hr/>	<hr/>	<hr/>
	23 144 800	58 608 400	81 753 600	100%
*Maintenance Volumes for 1979				
**Construction Volumes for 1975 to 1979				

(Source: MacLaren Plansearch, 1982.)