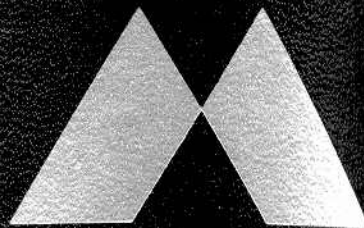


DIAND  
"COMPILATION AND CATALOGUING  
OF BEAUFORT BATHYMETRIC AND  
HIGH RESOLUTION SHALLOW  
GEOPHYSICAL SURVEY DATA" 1988



D001658



McElhanney

DOC 280117

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GEOPHYSICAL SURVEY DATA" 1988

JOB NO. 20600243 (MGL)

Submitted to:

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## 1.0 INTRODUCTION

McElhanney Geosurveys Ltd. is pleased to submit this final report to the Department of Indian Affairs and Northern Development describing the work undertaken for the compilation and cataloguing of Beaufort bathymetric and high resolution, shallow geophysical survey data. The information was compiled and catalogued in a database and in turn, this database will be used for DIAND's granular resource study. The information was collected from various companies and agencies across Canada. Our offices in Vancouver, Calgary and Dartmouth participated in this project.

## 2.0 GENERAL OVERVIEW

To commence the project, our offices contacted the main companies and agencies which have participated in the Beaufort Sea over the past decade. Table 1 is a listing of these companies, agencies and chief contacts.

TABLE 1

	<u>COMPANY</u>	<u>LOCATION</u>	<u>CONTACT(S)</u>
1)	Dome Petroleum	Calgary, AB	K. Hewitt
2)	Esso Resources	Calgary, AB	R. Runnalls/ J. Pickering
3)	Gulf Canada	Calgary, AB	B. Livingstone
4)	Canadian Hydrographic Service Pacific Region	Sidney, B.C.	D. Dobson
5)	Atlantic Geoscience Center	Dartmouth, N.S.	S. Merchant

After initial contact was completed we met with the various groups to determine the location of their geophysical and bathymetric reports. The reports were then carefully catalogued using the list of fields provided by DIAND. Section 3.0 lists each field that was used in our database compilation. dBase III PLUS was the program selected to assist use in the collection and management of our information. This is a well known program designed by Ashton-Tate, that ran on our IBM compatible 286 AT.

Upon completion of the compilation of the database, to ensure uniformity throughout, a vigorous editing process began. As the information was being collected from three different offices, it became evident that standardization of terms, expressions, etc. was essential to the understanding of the database information.

Next, the trackplots were collected from the various sources, compiled and shipped directly to Earth and Oceans Resources to assist them on their digitizing contract with DIAND.

Finally the compiled catalogue and reports were sent to the Scientific Authority; R. J. Gowan of DIAND in Hull, Quebec.

### 3.0 LIST OF FIELDS IN DATABASE

Each block of information in the database is referred to as a record. Each record was broken down into 50 unique fields. Upon commencement of the project, McElhanney realized that the addition of certain fields to the long list of fields provided by DIAND would be a benefit to all who would use the database. To DIAND's list of fields we added the following:

**TABLE 2**  
**McElhanney's Field Additions**

- |    |       |                   |
|----|-------|-------------------|
| 1) | AE1 - | SITE NAME         |
| 2) | AG1 - | MAXIMUM LONGITUDE |
| 3) | AH1 - | MINIMUM LATITUDE  |
| 4) | AJ1 - | MINIMUM LONGITUDE |
| 5) | AK1 - | MAXIMUM LATITUDE  |
| 6) | AK2 - | CENTER LATITUDE   |
| 7) | AK3 - | CENTER LONGITUDE  |
| 8) | AV -  | LINE NUMBER(S)    |
| 9) | BU -  | OTHER REPORT(S)   |

The fields AK2 - Center Latitude and AK3 - Center Longitude were added near the end of the project to assist in the determination of which surveys were in the ISSERK - ERKSAK Borrow Block as it became evident that surveys on Block Boundaries did not show up on the dBase search print-out. With the addition of fields AK2 and AK3 twice as many records (surveys) showed up on the printed list of surveys in the ISSERK - ERKSAK Borrow Block. This list was immediately provided to Earth and Oceans to assist them in their search for seismic data collected in the above Block.

The following work sheets were used to facilitate information acquisition.

**TABLE 3**  
**List of Fields - Work Sheets**

**CATALOGUE OF GRANULAR RESOURCE RELATED FIELD ACITIVITIES**

**PART A: STUDY REFERENCE AND LOCATION**

**AA - STUDY NUMBER:** \_\_\_\_\_

\_\_\_\_\_

**AB - YEAR:** \_\_\_\_\_

\_\_\_\_\_

**AC - SPONSOR:** \_\_\_\_\_

\_\_\_\_\_

**AD - CONTACT:** \_\_\_\_\_

\_\_\_\_\_

**AE - CONTRACTOR:** \_\_\_\_\_

\_\_\_\_\_

**AE1 - SITE NAME:** \_\_\_\_\_

\_\_\_\_\_

**AF - MINIMUM ZONE:** \_\_\_\_\_

\_\_\_\_\_

**AG - MINIMUM EASTING:** \_\_\_\_\_

\_\_\_\_\_

**AG1 - MAXIMUM LONGITUDE:** \_\_\_\_\_

\_\_\_\_\_

**AH - MINIMUM NORTHING:** \_\_\_\_\_

\_\_\_\_\_

**AH1 - MINIMUM LATITUDE:** \_\_\_\_\_

\_\_\_\_\_

**AI - MAXIMUM ZONE:** \_\_\_\_\_

\_\_\_\_\_

**AJ - MAXIMUM EASTING:** \_\_\_\_\_

\_\_\_\_\_

**AJ1 - MINIMUM LONGITUDE:** \_\_\_\_\_

\_\_\_\_\_

**AK - MAXIMUM NORTHING:** \_\_\_\_\_

\_\_\_\_\_

**AK1 - MAXIMUM LATITUDE:** \_\_\_\_\_

\_\_\_\_\_

**AK2 - CENTER LATITUDE:** \_\_\_\_\_

\_\_\_\_\_

**AK3 - CENTER LONGITUDE:** \_\_\_\_\_

\_\_\_\_\_

**AL - LOCATION MAP/PLAN NUMBER:** \_\_\_\_\_

\_\_\_\_\_



**AM - LOCATION MAP/PLAN FORMAT:** \_\_\_\_\_

**AN - LOCATION MAP/PLAN SCALE:** \_\_\_\_\_

**AO - LOCATION MAP/PLAN DIGITIZER NUMBER:** \_\_\_\_\_

**AP - LOCATION MAP/PLAN ARCHIVING:** \_\_\_\_\_

**AQ - SITE PLAN(S) NUMBER(S):** \_\_\_\_\_

**AR - SITE PLAN(S) FORMAT(S):** \_\_\_\_\_

**AS - SITE PLAN(S) SCALE(S):** \_\_\_\_\_

**AT - SITE PLAN(S) DIGITIZER NUMBER(S):** \_\_\_\_\_

**AU - SITE PLAN(S) ARCHIVING:** \_\_\_\_\_

**AV - LINE(S) NUMBER(S):** \_\_\_\_\_

**PART B: STUDY DETAILS**

**BB - STUDY TYPE:** \_\_\_\_\_  
\_\_\_\_\_

**BC - STUDY SCOPE:** \_\_\_\_\_  
\_\_\_\_\_

**BD - SURVEY LEVEL:** \_\_\_\_\_  
\_\_\_\_\_

**BE - STUDY SIZE:** \_\_\_\_\_  
\_\_\_\_\_

**BF - SURVEY PATTERN:** \_\_\_\_\_  
\_\_\_\_\_

**BG - SURVEY SPACING:** \_\_\_\_\_  
\_\_\_\_\_

**BH - PROGRAM LENGTH:** \_\_\_\_\_  
\_\_\_\_\_

**BI - SEASON:** \_\_\_\_\_  
\_\_\_\_\_

**BJ - EQUIPMENT TYPE:** \_\_\_\_\_  
\_\_\_\_\_

**BK - PENETRATION:** \_\_\_\_\_  
\_\_\_\_\_

**BL - RESOLUTION:** \_\_\_\_\_

\_\_\_\_\_

**BM - SAMPLING/RECORDING RATE:** \_\_\_\_\_

\_\_\_\_\_

**BN - SAMPLE/RECORD QUALITY:** \_\_\_\_\_

\_\_\_\_\_

**BO - SAMPLE/RECORD TYPE(S):** \_\_\_\_\_

\_\_\_\_\_

**BP - SAMPLE SIZE:** \_\_\_\_\_

\_\_\_\_\_

**BQ - INTERPRETATION/TESTING LEVEL:** \_\_\_\_\_

\_\_\_\_\_

**BR - REPORT LEVEL:** \_\_\_\_\_

\_\_\_\_\_

**BR1 - REPORT ARCHIVING:** \_\_\_\_\_

\_\_\_\_\_

**BS - REPORT DISTRIBUTION:** \_\_\_\_\_

\_\_\_\_\_

**BT - DATA ARCHIVING:** \_\_\_\_\_

\_\_\_\_\_

**BU - OTHER REPORT(S):** \_\_\_\_\_

\_\_\_\_\_

The following list is the structure of DIAND : DBF and ISS-ERK : DBF

**STRUCTURE FOR DATABASE: C:DIAND.dbf**

Number of data records : 90

Date of last update : 04/04/88

<u>Field</u>	<u>Field Name</u>	<u>Type</u>	<u>Width</u>	<u>Dec</u>
1	AA	Character	10	
2	AB	Character	4	
3	AC	Character	10	
4	AD	Character	20	
5	AE	Character	40	
6	AE1	Character	40	
7	AF	Character	2	
8	AG	Character	6	
9	AG1	Character	9	
10	AH	Character	7	
11	AH1	Character	8	
12	AI	Character	2	
13	AJ	Character	6	
14	AJ1	Character	9	
15	AK	Character	7	
16	AK1	Character	8	
17	AK2	Character	8	
18	AK3	Character	9	
19	AL	Character	40	
20	AM	Character	40	
21	AN	Character	7	
22	AO	Character	10	
23	AP	Character	60	
24	AQ	Character	80	
25	AR	Character	120	
26	AS	Character	45	
27	AT	Character	20	
28	AU	Character	120	
29	AV	Character	180	
30	BB	Character	120	
31	BC	Character	60	
32	BD	Character	80	
33	BE	Character	40	
34	BF	Character	40	
35	BG	Character	50	
36	BH	Character	30	
37	BI	Character	25	
38	BJ	Character	120	
39	BK	Character	120	
40	BL	Character	120	

# **STRUCTURE FOR DATABASE (Cont'd)**

<u>Field</u>	<u>Field Name</u>	<u>Type</u>	<u>Width</u>	<u>Dec</u>
41	BM	Character	60	
42	BN	Character	100	
43	BO	Character	100	
44	BP	Character	60	
45	BQ	Character	120	
46	BR	Character	100	
47	BR1	Character	120	
49	BT	Character	120	
50	BU	Character	120	
	<b>TOTAL</b>		<b>2733</b>	

#### 4.0 ISSERK AND ERKSAK BORROW BLOCKS

Initially, Isserk and Erksak were defined as two separate blocks; however, as the project progressed the boundaries of these blocks encompassed a larger and larger area. The area which is defined below, includes both the Isserk and Erksak Borrow Blocks. Their boundaries are:

N.W. COR. - LAT. 70° 20'  
- LONG. 135° 30'

S.W. COR. - LAT. 69° 45'  
- LONG. 135° 30'

N.E. COR. - LAT. 70° 20'  
- LONG. 131° 00'

S.E. COR. - LAT. 69° 45'  
- LONG. 131° 00'

Below is a list of geophysical and bathymetric surveys which were performed inside the above boundaries.

TABLE 4  
Isserk and Erksak Borrow Block Surveys

<u>YEAR</u>	<u>SPONSOR</u>	<u>SITE NAME</u>
1985	ESSO	ARNAK K-06
1983	ESSO	AMERK 0-9
1983	ESSO	NIPTERK L-19
1983	ESSO	KAUBVIK I-43
1983	ESSO	REGIONAL LINES 1983
1974	ESSO	PULLEN ISLAND GRAVEL SEARCH
1978	DOMÉ	UKALERK C-50

Isserk and Erksak Borrow Block Surveys (Cont'd)

<u>YEAR</u>	<u>SPONSOR</u>	<u>SITE NAME</u>
1978	DOME	REGIONAL LINES 1978
1981	DOME	REGIONAL LINES 1980
1980	GULF	REGIONAL LINES 1980
1981	DOME	NERLERK RIDGE BORROW SITE
1980	DOME	ISSERK BORROW STUDY
1983	GULF	REGIONAL LINES 1983
1980	DOME	UVILUK BORROW STUDY
1980	DOME	TINGMIARK & UKALERK BORROW STUDY
1980	DOME	SOUTH KAGLULIK BORROW STUDY
1982	DOME	REGIONAL LINES 1982
1982	GULF	ISSERK BORROW COMPILATION 1980-81-82
1981	GULF	REGIONAL BORROW INVESTIGATION 1981
1982	GULF	NORTH UKALERK SITE
1981	GULF	WEST TINGMIARK
1981	DOME	UVILIK P-66.
1981	GULF	KOGYUK AREA
1983	GULF	KASLUTUT
1981	GULF	SOUTH KOAKOAK 1981
1980	GULF	NORTH ISSUNGNAC WELLSITE
1980	GULF	AKPAK
1984	GULF	AMAILIGAK EAST, AMAILIGAK WEST
1981	DOME	ARLUK E-90
1982	AGC	GRID SITE 1, GRID SITE 2

As we collected and catalogued the various surveys, we realized that not all reports in this block were available or found. Below is a short list of the geophysical site surveys which we did not locate, but which were surveyed by ESSO in the early 80's. No reports were found for the four (4) site surveys in Table 5.

**TABLE 5**  
**Isserk and Erksak Borrow Block Surveys Not Catalogued**

<u>YEAR</u>	<u>SPONSOR</u>	<u>SITE NAME</u>
1980	ESSO	ISSUNGNAK 0-61
1980	ESSO	ALERK P-23
1981	ESSO	ATKINSON L-17
1982	ESSO	ITIIYOK I-27



## **5.0 TRACKPLOT COMPILATION**

The trackplots were collected in various forms. From Dome Petroleum, we collected all the trackplot bluelines from their geophysical survey reports and had them reproduced. These trackplots were immediately shipped to Earth and Oceans, in Nova Scotia, to assist in their digitizing contract. From Gulf and Esso, we collected the trackplot information on diskette as well as reproducing their trackplots on mylars and bluelines. Earth and Oceans will attempt to use the diskettes in conjunction with their computer system and this may prove invaluable for future projects of this nature. Our Dartmouth office collected the trackplots for AGC from various sources on blueline and mylar; and from Sidney, we collected the CHS field sheets and also sent them to Earth and Oceans.

N.P. Tables 6 to 10 contain lists of all trackplots collected during this project.

**TABLE 6****Dome's Trackplot List**

- 1) Banks Island
- 2) Gravel Search North - Herschel Island
- 3) Herschel Island
- 4) Nerlerk Ridge
- 5) Koakoak B-35
- 6) Siulik C-07
- 7) Kaglulik P-72
- 8) Natiak 0-44
- 9) Aiverk I-45
- 10) Kopanoar M-34
- 11) Arluk E-90
- 12) Kopanoar F-15
- 13) Isserk
- 14) Kaglulik A-75
- 15) Kenalooak J-94
- 16) Miterk I-40
- 17) Tingmiark K-91
- 18) Sissuak E-12
- 19) Natsek E-56
- 20) Ukalerk C-50
- 21) Nerlerk Ridge
- 22) Edlok Site
- 23) Nerlerk B-67

continued

**TABLE 6 (Cont'd)**

24)	Miterk	I-40
25)	Siulik	I-05
26)	Baillie Island	
27)	Kopanoar	
28)	Kogyuk	
29)	Irkaluk	C-35
30)	Puyok	C-100
31)	Silukoak	F-96
32)	Nerlerk	M-98
33)	South Kaglulik	
34)	Kaglulik	
35)	Tingmiark Ukalerk	
36)	Uviluk	
37)	Uviluk	P-66
38)	Herschel	
39)	Tarsuit	
40)	Regional Lines 1980	
41)	Koakoak	D-11 & I-04
42)	Beaufort Sea Regional Map - 1981	

**TABLE 7**

**Gulf's Trackplot List**

- 1) South Koakoak
- 2) Kogyuk
- 3) Immiugak Site
- 4) Adlartok Site
- 5) Regional Trackplot - 1985
- 6) Akpak Wellsite
- 7) Amauligak
- 8) North Issungnak Wellsite
- 9) Kaslutut
- 10) Kringalik 1981 - 82
- 11) Kugdjuk
- 12) Sauvrak
- 13) Sauvrak - Pitsiulak Area
- 14) Sauvrak - Pitsiulak Area
- 15) Regional Line Interpretations
- 16) Rufus River and Masik River Areas
- 17) Isserk
- 18) 1981 Regional Borrow Investigation
- 19) Regional Lines - 1980
- 20) North Ukalerk
- 21) Orksok
- 22) South Ukalerk Site
- 23) W. Tingmiark

TABLE 8

Esso's Trackplot List

1)	KADLUK 0-07 DRILLING SITE	1983 J10
2)		1982 E10
3)	AMERK 0-09 *	1982 E10
4)	ARNAK K-06 *	1974 J10
5)	AMERK 0-09 *	1983 J10
6)		1982 E10
7)		1977 I10
8)	ISSERK E-27, ITIYOK I-27 *	1977 I10
9)	ISSUNGNAK 0-61, 2-0-61*	1978 E10
10)	ISSERK E-27, ITIYOK I-27 *	1981 E10
11)	ARNAK L-30 *	1974 J10
12)		1978 E10
13)	ALERK P-23 *	1980 J10
14)		1977 I10
15)	AMERK 0-09 *	1980 J10
16)		1980 I10
17)	NIPTERK AREA DRILLSITE SURVEY	1983 J10
18)	KADLUK 0-07 *	1979 I10
19)	W. NIPTERK AREA #1 DRILLSITE SURVEY	1981 E10
20)	W. NIPTERK AREA #2 DRILLSITE SURVEY	1981 E10
21)	KADLUK 0-07 DRILLSITE SURVEY	1979 I10
22)	NIPTERK AREA DRILLSITE SURVEY	1979 I10
23)	KADLUK 0-07 DRILLSITE SURVEY	1981 J10
24)	KAUBVIK I-43 DRILLSITE SURVEY	1983 J10

**Esso's Trackplot List (Cont'd.)**

25)	1982 J10
26) IVIK J-26, N-17 *	1974 J10
27) UNARK L-24, L-24-2, IVIK K-54, C-52 *	1974 J10
28)	1974 J10
29)	1974 J10
30)	1981 E10
31)	1974 J10
32) PULLEN E-17 *	1974 J10
33) ISSUNGNAC 0-61, 2-0-61 *	1981 E10
34)	1974 J10
35)	1981 E10

**Note:** In all cases except where DRILLSITE SURVEY is noted in the map titles above, the map title included SITE SURVEY as a prefix, and the year plus letter/number code listed on the right. Those titles showing an asterisk indicate that the well name was not included in the actual map title but were plotted on the map sheet.

**TABLE 9**  
**Atlantic Geoscience Center**

- 1) Nahidik - 1980
- 2) Nahidik - 1981
- 3) Nahidik - 1982
- 4) Nahidik - 1983
- 5) Nahidik - 1985
- 6) Nahidik - 1986
- 7) Nahidik - 1987
- 8) Banksland - 1984
- 9) Tully - 1985
- 10) Tully - 1986

**TABLE 10**

**Canadian Hydrographic Service**

- 1) MacKenzie River Delta Hydrographic Sur.
- 2) Amundsen Gulf
- 3) MacKenzie River Hydro. Survey Olivier Is.
- 4) Summer Harbour, Wise Bay
- 5) Entrance & Approaches to Tuk Harbour
- 6) East Beaufort Sea
- 7) Herschel Is., Yukon Coast Hydro. Survey
- 8) Netserk B-44-Abandoned Artificial Island
- 9) Netserk F-40, Abandoned Artificial Island
- 10) Baille Is. Hydro. Survey, Observation Pt.
- 11) Beaufort Sea Shipping Corridor
- 12) Shoal Examinations
- 13) Herschel Is., Yukon Coast Hydro. Survey
- 14) Kugmallit Bay Hydrographic Survey
- 15) Beaufort Sea
- 16) EPS Dumpsite Surveys-Pullen & Herschel



## **6.0 LISTING OF SURVEYS BY COMPANY/AGENCY**

The following table is a listing by year, sponsor, site name and study scope for each company/agency in chronological order. This includes all reports found during our investigation.

NOGAP	Title	Consultant
A4-1	Geophysical Evaluation of Herchel Island	M.J. O'Connor & Associate
A4-2	Geotechnical Evaluation of Herchel Basin	BeauDril Limited
A4-3	Investigation of Subsurface Conditions at King Point Yukon Territory	M.J. O'Connor & Associate
A4-4	Analysis of Bathymetric Data, Western Beaufort (Yukon) Continental Shelf	Challenger Surveys and Se
A4-5	Overview of Granular Resources Potential for the Western Beaufort (Yukon) Continental Shelf	Earth & Ocean Research
A4-6	Synthesis and Interpretation of Bathymetric, Geophysical, and Borehole Data: Issigak Borrow Block	EBA Engineering Consulta
A4-7	Granular Resourch Evaluation Richards Island NWT	EBA Engineering Consulta
A4-8	Granular Resourch Potential, Proposed Mackenzie Valley Pipeline Corridor	Hardy Associates (1978) Lt
A4-9	Suitability of Beaufort Sea Granular Resources for Concrete Aggregates	Klohn Leonhoff Consulting
A4-10	Granular Resource Prospects, Mackenzie River Channel	EBA Engineering Consulta
A4-11	Computer Based Analysis of Digital Bathymetry Data, Beaufort Sea.	Challenger Surveys and Se
A4-12	Geological Reconnaissance and Mapping of Potential Quarry Rock Sources, Western Beaufort Sea Region	Golder Associates (Wester
A4-13	Investigation of Methods to Obtain Real-Time Marine Resistivity Measurements	Hardy Associates (1978) Lt
A4-14	Provision of Borehole Database Management System (NO REPORT)	EBA Engineering Consulta
<u>A4-15</u>	Compilation and Cataloging of Beaufort Bathymetric and High Resolution Shallow Geophysical Survey Data	McElhanney Geosurveys Lt
A4-16	Interpretation and Synthesis of High Resolution Reflection Seismic Data from Banks Island	Guy Fortin Engineering
A4-17	Digitization of Morphologic and Sedimentologic Data for the coast of Byam Martin Channel, N.W.T.	Eveyne C. Strong
A4-18	Granular Resources Management Strategy - South Slave Region	Thurber Consultants Limite
A4-19	Updating the Northern Granular Resource Information Mapping System	Earth & Ocean Research
A4-19	Digitization of Beaufort Granular Resource Information	Earth & Ocean Research
A4-20	Synthesis and Interpretation of Bathymetric, Geophysical, Geological and Geotechnical Data: Isserk Borrow	Earth & Ocean Research
A4-21	Synthesis and Interpretation of Bathymetric, Geophysical, Geological and Geotechnical Data: Erksak Borrow	Earth & Ocean Research
A4-22	Canadian Beaufort Sea Geotechnical And Geophysical Databases	EBA Engineering Consulta
	Beaufort Sea Geotechnical Database	EBA Engineering Consulta
	Beaufort Sea Geotechnical Database (vol 1)	EBA Engineering Consulta
	Beaufort Sea Geotechnical and Surficial Sediment Databases	EBA Engineering Consulta
	Beaufort Sea Geotechnical and Geophysical Databases	EBA Engineering Consulta
A4-23	Preliminary Assesment of Granular Material from Nerlerk Borrow Block	N
A4-24D	Alternative Geophysical Algorithms for Artic Marine Granular Resources	C-CORE
A4-25	Mackenzie Valley - Beaufort Sea Region Granular Resources Database - Maintenance and Evaluation	EBA Engineering Consulta
A4-26A	Granular Resource Requirements for Proposed Mackenzie Valley Pipelines: Technical Papers and Worksho	Stanley Associates Engine
A4-26B	Review and Assesment of Beaufort Sea Granular Resource Data	EBA Engineering Consulta
A4-26C	Granular Resources Requirements for Potential Hydrocarbon Development in the Western Region of NWT	North of 60 Engineering Ltd
A4-28	Environmental Effects of Beaufort Sea Granular Resources Development	Earth & Ocean Research
A4-30	Granular Resource potential of Beaufort Artificial Islands	Klohn Leonhoff Consulting
	Atlas of Granular Resource Information - West Canadian Arctic	Earth & Ocean Research
	Atlas of Granular Resource Information - Phase 2 West Canadian Arctic	Earth & Ocean Research
	Updating of the Northern Granular Resource Information Mapping System	Earth & Ocean Research
	Granular Resource Information Mapping System for Northern Canada Volume 4	Earth & Ocean Research

TABLE 11

Page No. 1  
03/29/88

CATALOGUE OF DOME PETROLEUM  
HIGH RESOLUTION GEOPHYSICAL  
AND BATHYMETRIC SURVEYS  
McELHANNEY GEOSURVEYS LTD.

YEAR	SPONSOR	SITE NAME	STUDY TYPE
----	-----	-----	-----
1977	DOME	KENALOOK J-94	GEOPHYSICAL, HYDROGRAPHIC
1977	DOME	KAGULIK A-75	GEOPHYSICAL, HYDROGRAPHIC
1978	DOME	UKALERK C-50	GEOPHYSICAL, HYDROGRAPHIC
1978	DOME	REGIONAL LINES 1978	GEOPHYSICAL, HYDROGRAPHIC
1978	DOME	KILANNAK M-76	GEOPHYSICAL, HYDROGRAPHIC
1978	DOME	MITERK I-40	GEOPHYSICAL, HYDROGRAPHIC
1978	DOME	NERLERK M-98	GEOPHYSICAL, HYDROGRAPHIC
1978	DOME	SILUKOAK F-96	GEOPHYSICAL, HYDROGRAPHIC
1980	DOME	TINGMIARK & UKALERK BORROW STUDY	GEOPHYSICAL, HYDROGRAPHIC, BORROW SITE STUDY, CORING
1980	DOME	TARSUIT	GEOPHYSICAL, HYDROGRAPHIC
1980	DOME	HERSCHEL ISLAND BORROW STUDY	GEOPHYSICAL, HYDROGRAPHIC
1980	DOME	SOUTH KAGLULIK BORROW STUDY	GEOPHYSICAL, HYDROGRAPHIC
1980	DOME	KAGLULIK BORROW STUDY	GEOPHYSICAL, BORROW SITE STUDY, CORING
1980	DOME	ISSERK BORROW STUDY	GEOPHYSICAL, BORROW SITE STUDY, CORING
1980	DOME	UVILUK BORROW STUDY	GEOPHYSICAL, BORROW SITE STUDY, CORING

CATALOGUE OF DOME PETROLEUM  
HIGH RESOLUTION GEOPHYSICAL  
AND BATHYMETRIC SURVEYS  
McELHANNEY GEOSURVEYS LTD.

YEAR	SPONSOR	SITE NAME	STUDY TYPE
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1981	DOME	HERSCHEL ISLAND BORROW SITES-NORTH	GEOPHYSICAL, BORROW SITE STUDY, CORING
1981	DOME	REGIONAL LINES 1981 BAILLIE ISLAND	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	REGIONAL LINES 1980	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	KOGYUK	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	NERLERK RIDGE BORROW SITE	GEOPHYSICAL, BORROW SITE STUDY, CORING
1981	DOME	HERSCHEL ISLAND SHOT POINT MAP -SOUTH	GEOPHYSICAL, BORROW SITE STUDY, CORING
1981	DOME	KOPANOAR	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	BANKS ISLAND BORROW SITE	GEOPHYSICAL, BORROW SITE STUDY, CORING
1981	DOME	PUYOK C-100	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	IRKALUK C-35	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	UVILIK P-66	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	KOAKOAK I-04	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	KOAKOAK B-35	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	NATIAK O-44	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	SIULIK C-07	GEOPHYSICAL, HYDRGRAPHIC
1981	DOME	MITERK I-40	GEOPHYSICAL, HYDROGRAPHIC

CATALOGUE OF DOME PETROLEUM  
HIGH RESOLUTION GEOPHYSICAL  
AND BATHYMETRIC SURVEYS  
McELHANNEY GEOSURVEYS LTD.

YEAR	SPONSOR	SITE NAME	STUDY TYPE
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1981	DOME	REGIONAL LINES 1981	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	KAGLULIK P-72	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	ARLUK E-90	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	KOPANOAR M-35	GEOPHYSICAL, HYDROGRAPHIC
1981	DOME	KOPANOAR F-15	GEOPHYSICAL, HYDROGRAPHIC
1982	DOME	REGIONAL LINES 1982	GEOPHYSICAL, HYDROGRAPHIC
1982	DOME	AIVERK I-45	GEOPHYSICAL, HYDROGRAPHIC
1982	DOME	SIULIK I-05	GEOPHYSICAL, HYDROGRAPHIC
1982	DOME	NERLERK B-67	GEOPHYSICAL, HYDROGRAPHIC
1985	DOME	EDLOK	GEOPHYSICAL, HYDROGRAPHIC

CATALOGUE OF GULF CANADA  
HIGH RESOLUTION GEOPHYSICAL  
AND BATHYMETRIC SURVEYS  
McELHANNEY GEOSURVEYS LTD.

YEAR	SPONSOR	SITE NAME	STUDY TYPE
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1980	GULF	REGIONAL LINES 1980	GEOPHYSICAL, HYDROGRAPHIC
1980	GULF	AKPAK	GEOPHYSICAL, HYDROGRAPHIC
1980	GULF	NORTH ISSUNGNAC WELLSITE	GEOPHYSICAL, HYDROGRAPHIC
1981	GULF	REGIONAL BORROW INVESTIGATION 1981	GEOPHYSICAL, HYDROGRAPHIC
1981	GULF	WEST TINGMIARK	GEOPHYSICAL, HYDROGRAPHIC
1981	GULF	KOGYUK AREA	GEOPHYSICAL, HYDROGRAPHIC
1981	GULF	SOUTH KOAKOAK 1981	GEOPHYSICAL, HYDROGRAPHIC
1982	GULF	ISSERK BORROW COMPILATION 1980-81-82	GEOPHYSICAL, HYDROGRAPHIC, BORROW STUDY
1982	GULF	NORTH UKALERK SITE	GEOPHYSICAL, HYDROGRAPHIC
1982	GULF	KUGDJUK	GEOPHYSICAL, HYDROGRAPHIC
1982	GULF	KRINGALIK COMPILATION 1981-1982	GEOPHYSICAL, HYDROGRAPHIC
1983	GULF	REGIONAL LINES 1983	GEOPHYSICAL, HYDROGRAPHIC
1983	GULF	KASLUTUT	GEOPHYSICAL, HYDROGRAPHIC
1984	GULF	ORKSOK	GEOPHYSICAL, HYDROGRAPHIC
1984	GULF	SAUVRAK-PITSIULAK AREA 1981, 1982, 1984	GEOPHYSICAL, HYDROGRAPHIC

CATALOGUE OF GULF CANADA  
HIGH RESOLUTION GEOPHYSICAL  
AND BATHYMETRIC SURVEYS  
McELHANNEY GEOSURVEYS LTD.

YEAR	SPONSOR	SITE NAME	STUDY TYPE
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1984	GULF	AMAILIGAK EAST, AMAILIGAK WEST	GEOPHYSICAL, HYDROGRAPHIC
1985	GULF	ADLARTOK P-09	GEOPHYSICAL, HYDROGRAPHIC
1985	GULF	IMMIUGAK I-06	GEOPHYSICAL, HYDROGRAPHIC

CATALOGUE OF ESSO RESOURCES  
HIGH RESOLUTION GEOPHYSICAL  
AND BATHYMETRIC SURVEYS  
McELHANNEY GEOSURVEYS LTD.

YEAR	SPONSOR	SITE NAME	STUDY TYPE
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1974	ESSO	PULLEN ISLAND GRAVEL SEARCH	GEOPHYSICAL GRAVEL SEARCH
1983	ESSO	NIPTERK L-19	GEOPHYSICAL, HYDROGRAPHIC
1983	ESSO	KADLUK O-07	GEOPHYSICAL, HYDROGRAPHIC, CORING
1983	ESSO	REGIONAL LINES 1983	REGIONAL GEOPHYSICAL, HYDROGRAPHIC
1983	ESSO	ISSIGAK GRAVEL SEARCH	GEOPHYSICAL, HYDROGRAPHIC, GRAVEL SEARCH
1983	ESSO	KAUBVIK I-43	GEOPHYSICAL, HYDROGRAPHIC, CORING
1983	ESSO	MINUK I-53	GEOPHYSICAL, HYDROGRAPHIC, CORING
1983	ESSO	AMERK O-9	GEOPHYSICAL, HYDROGRAPHIC
1985	ESSO	ARNAK K-06 C.O.G.L.A 9426 J1-3E	GEOPHYSICAL, HYDROGRAPHIC, CORING
1985	ESSO	CAPE DALHOUSIE -ANGASAK L-03	GEOPHYSICAL, HYDROGRAPHIC



CATALOGUE OF CANADIAN HYDROGRAPHIC  
SERVICES BATHYMETRIC SURVEYS IN THE  
BEAUFORT SEA  
McELHANNEY GEOSURVEYS LTD.

YEAR	SPONSOR	SITE NAME	STUDY TYPE
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1977	CHS	MACKENZIE RIVER DELTA HYDROGRAPHIC SUR.	HYDROGRAPHIC
1977	CHS	AMUNDSEN GULF	HYDROGRAPHIC
1978	CHS	MACKENZIE RIVER HYDRO. SURVEY OLIVIER IS	HYDROGRAPHIC
1979	CHS	SUMMER HARBOUR, WISE BAY	HYDROGRAPHIC
1979	CHS	ENTRANCE & APPROACHES TO TUK HARBOUR	HYDROGRAPHIC
1980	CHS	EAST BEAUFORT SEA	HYDROGRAPHIC
1983	CHS	HERSCHEL IS., YUKON COAST HYDRO. SURVEY	HYDROGRAPHIC
1983	CHS	NETSERK B-44-ABANDONED ARTIFICIAL ISLAND	HYDROGRAPHIC
1983	CHS	NETSERK F-40, ABANDONED ARTIFICIAL ISLAND	HYDROGRAPHIC
1983	CHS	BAILLE IS. HYDRO. SURVEY, OBSERVATION PT.	HYDROGRAPHIC
1983	CHS	BEAUFORT SEA SHIPPING CORRIDOR	HYDROGRAPHIC
1983	CHS	SHOAL EXAMINATIONS	HYDROGRAPHIC
1984	CHS	HERSCHEL IS., YUKON COAST HYDRO. SURVEY	HYDROGRAPHIC
1985	CHS	KUGMALLIT BAY HYDROGRAPHIC SURVEY	HYDROGRAPHIC
1986	CHS	BEAUFORT SEA	HYDROGRAPHIC
1986	CHS	EPS DUMPSITE SURVEYS-PULLEN & HERSCHEL	HYDROGRAPHIC

CATALOGUE OF ATLANTIC GEOSCIENCE  
CENTER HIGH RESOLUTION GEOPHYSICAL  
AND BATHYMETRIC SURVEYS  
McELHANNEY GEOSURVEYS LTD.

YEAR SPONSOR -----	SITE NAME -----	STUDY TYPE -----
1981 AGC	HERSCHEL ISLAND TO BAILLIE ISLAND	GEOPHYSICAL, HYDROGRAPHIC
1982 AGC	GRID SITE 1, GRID SITE 2	GEOPHYSICAL, GEOTECHNICAL
1984 AGC	M.V. BANKSLAND SURVEYOR-84	HYDROGRAPHIC, GEOPHYSICAL, SAMPLING, GEOTECHNICAL
1985 AGC	TULLY 85	GEOPHYSICAL, HYDROGRAPHIC
1986 AGC	NAHIDIK 1986	HYDROGRAPHIC, GEOPHYSICAL, SAMPLING, GEOTECHNICAL

## **7.0 MISSING INFORMATION**

It appears that we have located the majority of the high resolution geophysical and bathymetric surveys that have been carried out in the Beaufort Sea. Dome Petroleum has performed the majority of the work and we feel we have collected and catalogued virtually all their surveys. From Gulf Canada Resources, we found all their reports except the South Ukalerk Site and Regional Lines 1983; however, we do have the trackplots for these two surveys. From AGC and CHS, we feel we have catalogued all their surveys since 1980 and 1977 respectively. Esso Resources is the only company/agency contacted which has a great deal of information that we could not find. Esso is missing virtually all the reports from 1982 back to 1974. We searched for this large block of reports, but were unable to discover their whereabouts.

## **8.0 CONCLUSIONS AND RECOMMENDATIONS**

- 1) We conclude that we have catalogued the majority of surveys conducted in the Beaufort Sea over the past decade.
- 2) We feel we have catalogued the surveys in the ISSERK-ERKSAK BORROW BLOCKS except for the four surveys previously mentioned in Section 4, Table 5. The actual survey data may be available for these four surveys.
- 3) We feel that from talking to the various contacts that the information collected from 1980 onward will be of greater value than previously collected data.
- 4) We recommend that in the future some navigation fields should be included in the catalogue to ensure that the navigation is of a high enough quality that recovery of a certain location is possible.
- 5) We recommend in the future that updating this catalogue becomes a yearly event while the information is readily available. A yearly catalogue updating will help ensure that large blocks of information such as the Esso 1974-1982 reports are not lost.