

BEAUFORT SEA  
GEOTECHNICAL DATABASE  
(Volume I)

Prepared for:

SUPPLY AND SERVICES CANADA  
0306-34413

AUGUST, 1988



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## 1.0 INTRODUCTION

Between 1973 and 1987, over 1400 boreholes were completed in the Canadian Beaufort Sea off the MacKenzie Delta. Logs of these boreholes provide valuable records to costly and arduous geotechnical programs that were financed primarily by the oil industry. As part of NOGAP Project A4 (a Granular Resources Inventory and Management Program) Indian and Northern Affairs Canada (INAC) retained EBA Engineering Consultants Ltd. (EBA) through Supply and Services Canada (DSS) to compile a database of these borehole logs (NOGAP Sub-Project A4-22). This volume provides a summary of the information compiled and activities undertaken to complete that contract. The database and backup information required under the contract have been previously forwarded.

The project was undertaken under DSS Contract No. A0632-7-5014 dated 1988 March 22 and authorized by Mr. P. Dixon. Terms of reference were summarized in EBA Proposal No. 0306-P4226. This had been prepared after discussions outlining the general requirements of the project with Mr. R.J. Gowan (INAC) who was the technical authority for the project.

## 2.0 PROJECT OUTLINE

### 2.1 OBJECTIVES

The primary objective of the study was to compile, in a standardized (ESELog) format, a database of borehole data from the Beaufort Seabed. The intended use of the database was related to the evaluation of granular resources for construction materials. The database logs, therefore, are accurate stratigraphic and textural interpretations of the originals; however, some detailed engineering (strength, consolidation, etc.) data has been omitted.



Some of the major tasks that were required to complete the database included:

- a) Compilation of a listing or catalogue of all reports and studies containing borehole logs and gravity core data;
- b) Convert to ESELog format stratigraphic, index test (moisture contents, gradation analyses, Atterberg Limits) and permafrost data for the available logs;
- c) Check and edit the final product;
- d) Prepare floppy diskettes and one paper printout of all logs;
- e) Prepare one paper copy of those original logs containing significant engineering or foundation data that was not included in the preliminary stratigraphic database;
- f) Prepare this final report.

The project proceeded as several distinct but concurrent tasks. Information from the Erksak and Isserk Borrow Blocks was compiled separately as an initial priority sub-project, because it was required by INAC for another contract. Figure 1 shows the area included in these blocks. Separate reports including 94 and 99 boreholes for Erksak and Isserk, respectively, were submitted to DSS/INAC in early March.

In total 1288 logs were compiled in the database, inclusive of Erksak and Isserk. Originally 1197 of those were on hand because they had been logged by EBA personnel. In addition there were about 75 logs that had been logged by others that were available at EBA. These easily acquired logs and reports comprise a significant portion of the database and the catalogue of studies.

An initial listing of geotechnical reports was developed and circulated to Beaufort Sea operators and various government agencies to help identify missing data sets and to secure permission to utilize their data. As



expected the three major Beaufort Sea operators Dome Petroleum Ltd. (302 borehole logs), ESSO Resources Canada Ltd. (816 borehole logs), and Gulf Resources Canada Ltd. (165 borehole logs) held most of the data and made almost all of it available. Historically there were three other operators in the Beaufort who also collected data. These are Chevron Canada Resources Ltd., Sunoco Exploration and Production Ltd. (now Suncor) and Hudsons Bay Oil and Gas (HBOG) which is now owned by Dome. Logs from the former two have not been included in the database, whereas those from HBOG are included with those from Dome. There are approximately 147 logs which have been collected by EBA for these operators that are not included in the database.

At least two other firms have nominally been operators in the Beaufort. They are Home Oil Ltd. and Trillium Exploration Corporation. It is believed that neither of these have any borehole data not included in the database.

It should be noted that logs of shallow drop or gravity core samples and grab samples of bottom sediments have not been included in the database. Also some seismic shot-hole logs that were used in the mid-70's have been omitted, because their quality or reliability is very poor. Otherwise all logs have been reproduced essentially as they are reported, subject to some simplification to emphasize stratigraphic or index classification information at the expense of engineering design data. The reliability of the original data set, method of drilling and its original purpose should be carefully considered before using the data for any planning or engineering work. EBA does not warrant the reliability of the data contained herein nor will EBA accept any responsibility for the interpretation of others based on this data.

A listing of all reports which were identified as containing Beaufort Sea borehole data is provided in Appendix B. Those reports for which the logs were not included in the database have been uniquely identified.



## 2.2 DELIVERABLES

Specific final deliverables which were required under this contract are listed below:

- a) A catalogue of all known geological and geotechnical studies for the Erksak and Isserk Borrow Blocks prepared using dBase III + and submitted in two (2) copies on floppy disks and ten (10) copies on paper for each area;
- b) A detailed database containing all geological and geotechnical data available at EBA and on a timely basis from others for all boreholes from the Erksak and Isserk Borrow Blocks prepared using ESEBase software. It was to be presented in two (2) copies on floppy disk and in printed form for each area;
- c) A catalogue of all known geological and geotechnical studies for the southern Beaufort Sea prepared using dBase III + and arranged chronologically. It was to be submitted in two (2) copies on floppy disks with ten (10) paper copies;
- d) A database containing stratigraphic, index test and permafrost data for all boreholes in the southern Beaufort Sea prepared using ESEBase software. It was to be presented in two (2) copies on floppy disk and in printed form;
- e) A collection of photocopies of original logs foundation and detailed engineering reported in the database;
- f) A final report, in twenty-five (25) copies describing the project and summarizing significant aspects of the database.

## 2.3 PROJECT PARTICIPANTS

Personnel from both EBA's Calgary and Edmonton offices have been involved in this project. Calgary staff put together most of the data source



catalogue and Edmonton staff put together most of the borehole database and the Erksak/Isserk data.

Liaison with the Beaufort Sea operators and personnel at the Atlantic Geosciences Centre was conducted by EBA Calgary staff. The following persons must be acknowledged for their assistance:

- a) Mr. Kevin Hewitt - Dome Petroleum Ltd.
- b) Mr. Sanjay Shinde - ESSO Resources Canada Ltd.
- c) Mr. Bill Livingstone - Gulf Canada Resources Ltd.
- d) Mr. Steve Blasco - Atlantic Geosciences Centre
- e) Mr. Bob Harmes - Atlantic Geosciences Centre

#### 2.4 REPORT ORGANIZATION

The work completed under this contract has been presented in several separate submissions. These are listed below:

- a) Erksak and Isserk Borrow Blocks:
  - i) diskette presentation of catalogue of reports
  - ii) diskette presentation of borehole database
  - iii) ESELogs for 94 boreholes at Erksak and 99 boreholes at Isserk are included in two separate volumes titled: 'Compilation of Borehole Logs for the Erksak Borrow Block Beaufort Sea', and 'Compilation of Borehole Logs for the Isserk Borrow Block Beaufort Sea'
- b) Beaufort Sea Catalogue of Reports (excluding Erksak/Isserk):
  - i) diskette presentation of Beaufort Sea Geotechnical Reports
- c) Beaufort Sea Borehole Log Database (excluding Erksak/Isserk):
  - i) diskette presentation of Beaufort Sea Borehole Logs



- ii) print-out presentation in Volumes II to VIII, as follows (this report is Volume 1):
  - Volume II - Logs from Gulf Canada Resources Inc. and Indian and Northern Affairs Canada
  - Volume III - Logs from Dome Petroleum Ltd., 1974-1980
  - Volume IV - Logs from Dome Petroleum Ltd., 1981-1982
  - Volume V - Logs from ESSO Resources Canada Ltd., 1974
  - Volume VI - Logs from ESSO Resources Canada Ltd., 1975
  - Volume VII - Logs from ESSO Resources Canada Ltd., 1976
  - Volume VIII - Logs from ESSO Resources Canada Ltd., 1978-1985
- d) Photocopies of assorted engineering and foundation logs in four unnumbered volumes, as follows:
  - i) Logs from Gulf Canada Resources Inc. and Indian and Northern Affairs Canada
  - ii) Logs from ESSO Resources Canada Ltd.
  - iii) Logs from ESSO Resources Canada Ltd.
  - iv) Logs from Dome Petroleum Ltd.

### 3.0 CATALOGUE OF GEOTECHNICAL FIELD ACTIVITIES

In all 87 reports provided borehole information for the database. This number is somewhat misleading, because some reports may contain only one or two boreholes at a single site; whereas, another may contain over 200 holes dispersed over a large area. For example; Volume V, VI and VII include 217, 103, and 204 boreholes, respectively, and each of these collections represent the work carried out on one contract. In order to facilitate searching for this data, the catalogue of field activities includes 129 entries with separate entries for 'sub-projects' from smaller geographic zones.



The catalogue includes these entries, in dBase III + format, standardized according to the Data Dictionary provided in the request for proposal. Appendix A provides a copy of this Data Dictionary and selected individual catalogue reports to demonstrate the nature of information provided therein. Not all fields in the Data Dictionary have been utilized, because they were not appropriate. Only those fields shown on the examples in Appendix A have been completed. Appendix B provides a listing of all reports that contain Beaufort Sea borehole logs. These have been organized by Proprietor and Year and the Consultant/Contractor who obtained the data.

As noted previously, the database is as complete as possible with the exception of those that were not released to this project and those that were not identified. Inevitably, there may be some reports or logs that have been overlooked. It would be appreciated by the authors that anyone identifying missing data, bring it to our attention. Reports that contain borehole data which is not included in the database are also listed in the catalogue and uniquely identified.

#### 4.0 DATABASE DESCRIPTION

The Beaufort Database was prepared with ESELog, Version 2.01. As can be expected with so many logs, the original format, numbering systems, datum, etc., are not consistent. The following subsections describe some of the modifications that have been necessary to standardize the logs and fit them into the ESELog format. For reference, Figure 2 presents a typical borehole log, reproduced by the ESELog program.



#### 4.1 BOREHOLE NUMBER

Several problems were encountered when entering borehole numbers into the database. Commonly, boreholes in different areas have been given the same number (eg; 81-1). Also, some original borehole designations have more than the seven characters allowed by the ESELog program. Because of these problems, several borehole logs were renamed (renumbered) to meet the following format:

I T 8 2 - 1 1:

| Area Abbreviation | Year Drilled | Borehole Number |
|-------------------|--------------|-----------------|
| (eg; Itiyok)      | (eg; 1982)   | (eg; 11)        |

Table 1 summarizes the area abbreviations used for each block included in the database. Borehole numbers were not changed if they consisted of seven characters or less, or were not duplicated at another site.

The original borehole numbers (ie; from the original logs) are identified on the lower left of the print-out logs and in header page block J, if these have been changed.

#### 4.2 REFERENCE TO SEA LEVEL

To facilitate searching capabilities with respect to sea level or seabed, all boreholes have been referenced to a seabed at zero metres elevation. Several boreholes were logged having sea level or ice surface as the top-of-hole, while others use seabed as the top-of-hole. Borehole logs were adjusted to have seabed as top-of-hole. To allow ESEBase to provide seabed profiles, a negative water depth was entered in the 'top/hole' field of the 'index screen' for each borehole log.



#### 4.3 SAMPLE TYPE

Table 2 presents a list of sample types and corresponding abbreviations used for the database.

#### 4.4 SOIL DESCRIPTION

Many of the borehole logs are very detailed foundation logs and consequently, had to be summarized to reduce the amount of detail, as requested by INAC. The stratigraphic information on the logs has not been changed, but has been reduced to include the following components:

- o principal component (eg; Clay, Sand, Silt, etc.)
- o Unified Soil Classification (USC)
- o principal component modifier(s) (eg; silty, some sand, etc.)
- o particle shape
- o structure
- o moisture
- o consistency
- o plasticity
- o colour
- o ground ice description

#### 4.5 SOIL CLASSIFICATION DATA

Moisture contents, Atterberg Limits, limited grain size analyses and Unified Soil Classification (USC) data have been included in the database.



All moisture contents from original logs have been included, except where several moisture contents were performed on subsamples of a single sample. If the moisture contents were similar for the subsamples then only one moisture content value was recorded; however, moisture contents which varied considerably from one subsample to the next (eg; sand and clay layers within a sample) were included.

Atterberg Limits and grain size analyses were used to check and provide USC classifications. Stratigraphy entered in the 'soil description' section of ESELog have USC classifications in upper and lower case characters. Upper case characters (eg; CL), imply that there is soil test data to confirm the classification, while lower case USC classifications (eg; cl) implies that there is only the logger's estimate of the USC classification. All USC classifications have been entered in upper case characters in the 'Basic Soil Characteristics Data' file where test data is available.

All available grain size data has been included in the database. The '% Fines' field presented in the 'Basic Soil Characteristics Data' file is the total percentage of silt and clay (ie; that passing the No. 200 sieve) as determined from hydrometer and/or sieve analysis. The data collected for the 'D<sub>50</sub>' field included in the 'Basic Soil Characteristics Data' file, is presented in micro-metres. All 'D<sub>50</sub>' data calculated and presented as such were entered into the database. 'D<sub>50</sub>' data not previously presented were calculated for the remaining grain size analyses, except for the fine-grained soils where more than 50% passes the No. 200 sieve.



#### 4.6 GROUND ICE DESCRIPTION

The ground ice description standard used for this database follows the guidelines established by NRC. Ground ice information has been stored in two fields of this database. The majority of the ground ice data is located in the 'Ground Ice Description' field of the 'Scientific', 'Permafrost' and 'Rock Data' file. Because space is limited in the ground ice description field it was sometimes necessary to put additional information in the 'Soil Description' field. Both fields should be considered when performing a search for ground ice. The ground ice information entered in both fields will appear on the borehole log output.

#### 4.7 SAMPLE TEMPERATURE

Soil sample temperature has been entered in the 'Temp' field of the 'Scientific', 'Permafrost' and 'Rock Data' file. This field is presented on the borehole log.

#### 5.0 CLOSURE

Almost 1300 borehole logs from the Beaufort-MacKenzie area have been summarized in a database suitable for interpreting the distribution of granular resources and restrictions on their development. In all 100 reports were catalogued although for proprietary reasons only 87 could be accessed for borehole data. The database represents approximately 90 percent of all borehole data collected for the area prior to 1988. This information should prove to be very valuable to future Beaufort Sea resource management.



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With this report, most of the original project objectives have been met. In the future the database should be expanded to include drop/gravity core data, grab sample data and pre-1988 borehole logs that were not located or entered. Also regular maintenance of the database should include updating it annually with new borehole data. These steps will ensure that the database will be reliable for the assessment and planning of future Beaufort activities.



EBA ENGINEERING CONSULTANTS LTD.

Prepared by:

Reviewed by:



Neil R. MacLeod, P.Eng.

A handwritten signature in cursive script, reading "Tim R. Murphy".

Tim R. Murphy, P.Eng.

NRM:TRM:jms



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TABLE 2      SAMPLE TYPES AND ABBREVIATIONS  
              (ISSERK BLOCK DATABASE)



TABLE 1

## EXPLORATION BLOCK NAMES AND ABBREVIATIONS

| <u>BLOCK NAME</u>    | <u>ABBREVIATION</u> |
|----------------------|---------------------|
| Adlartok             | AD                  |
| Amauligak            | AE, AW, AF          |
| Akpak                | AK                  |
| Alerk                | AL                  |
| Aok                  | AOK                 |
| Arnak                | AR                  |
| Amerk                | AS                  |
| Nerlerk (Borrow)     | BNR                 |
| Blow River           | BR                  |
| Tingmiark (Borrow)   | BTN                 |
| Tarsiut (Borrow)     | BTAR                |
| East Amauligak       | EA                  |
| Erksak Borrow        | EK                  |
| Ernerk               | ERK                 |
| Irkuluk (Foundation) | FIRK                |
| Natiak (Foundation)  | FNAT                |
| Nerlerk (Foundation) | FNR                 |
| Garry Island         | G, GI               |
| Herschel (Borrow)    | HB                  |
| Herschel Island      | HI                  |
| Hooper/Pelly Region  | HP                  |
| Isserk (Borrow)      | IB                  |



TABLE 1  
(continued)

## EXPLORATION BLOCK NAMES AND ABBREVIATIONS

| <u>BLOCK NAME</u>     | <u>ABBREVIATION</u> |
|-----------------------|---------------------|
| Issigak (Borrow)      | IBS, IK             |
| Igaluk                | IG                  |
| Igiloliroak           | IGK                 |
| Amauligak I-06        | IM                  |
| Irkaluk               | IRK                 |
| Issungnak South       | IS                  |
| Itiyok                | IT                  |
| Kakoluk               | KA                  |
| Kogyuk                | KB, KI, KY          |
| Kadluk                | KD                  |
| Kugdjuk               | KG                  |
| Kaubvik               | KH                  |
| Kaglulik              | KK                  |
| Kaglulik South        | KS                  |
| Kilannak              | KL                  |
| Kopanoar              | KP                  |
| Kringalik             | KR                  |
| Kaslutut              | KT                  |
| Minuk                 | MK                  |
| Miterk                | MT                  |
| MacKenzie Trough West | MTW                 |

TABLE 1  
(continued)

## EXPLORATION BLOCK NAMES AND ABBREVIATIONS

| <u>BLOCK NAME</u>   | <u>ABBREVIATION</u> |
|---------------------|---------------------|
| Nektoralik          | NE                  |
| Omat (Borrow)       | OBS                 |
| Pullen Island       | PLN                 |
| Sauvrak             | PI, SK              |
| Pelly Island        | PY                  |
| Russel Inlet        | RI                  |
| South Ukalerk       | SU                  |
| Thetis Bay          | TB                  |
| Tarsiut             | TD, TW              |
| Tuktoyaktuk Harbour | TH                  |
| Tent Island         | TI                  |
| West Tingmiark      | WT                  |

TABLE 2

SAMPLE TYPES AND ABBREVIATIONS  
ISSERK BLOCK DATABASE

| <u>SAMPLE TYPE</u> | <u>ABBREVIATION</u> |
|--------------------|---------------------|
| 1) Grab            | G                   |
| 2) Thin-Wall Tube  | TWT                 |
| 3) Heavy-Wall Tube | HWT                 |
| 4) Split-Spoon     | SS                  |
| 5) Core            | C                   |
| 6) Liner           | L                   |
| 7) Piston Sample   | PIST                |
| 8) Vibrocore       | VIB                 |
| 9) Drop Core       | DC                  |
| 10) No Recovery    | NR                  |



LIST OF FIGURES

FIGURE 1 LOCATION OF ISSERK AND ERKSAK BORROW BLOCKS

FIGURE 2 TYPICAL ESELOG BOREHOLE LOG



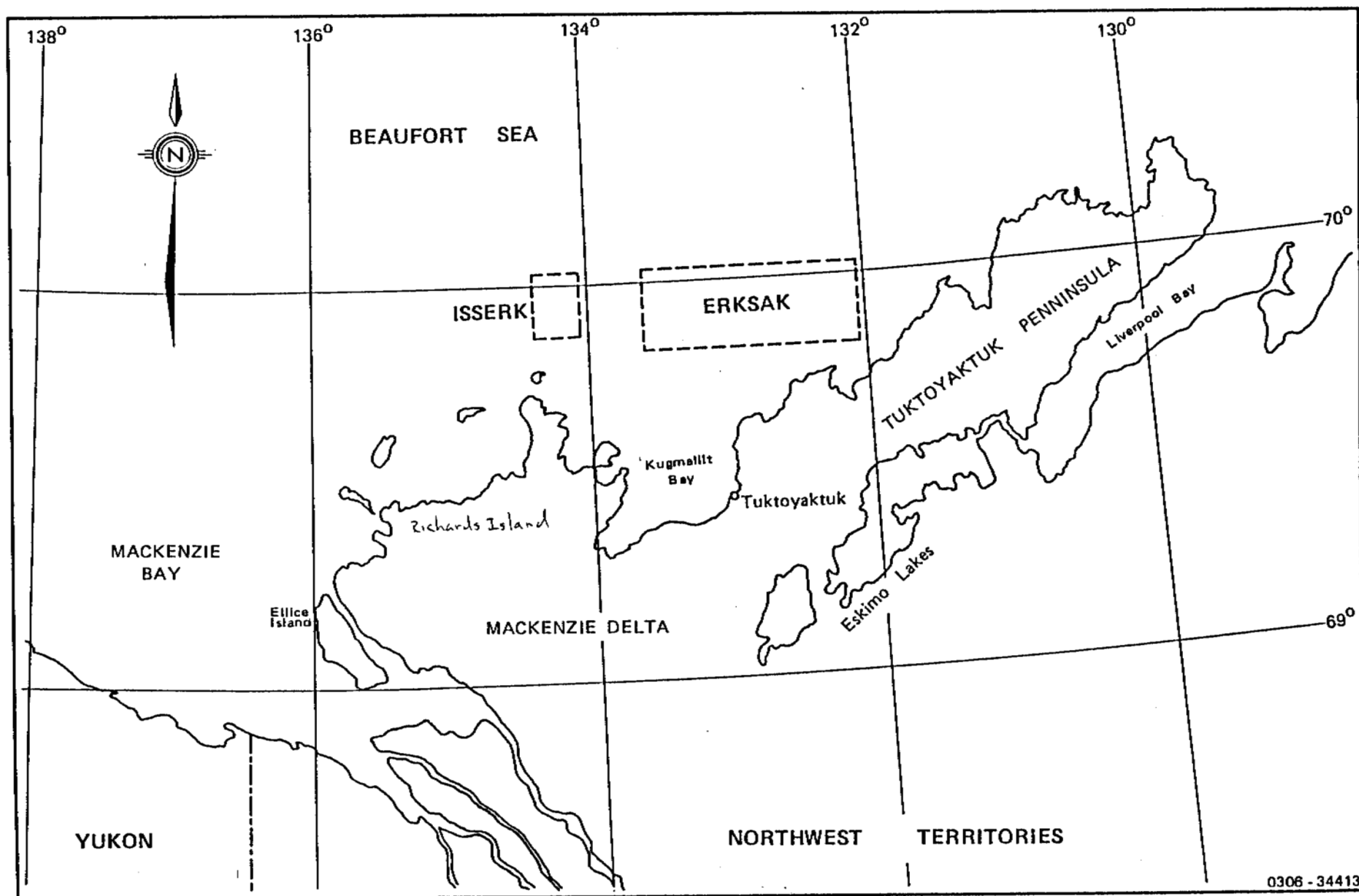
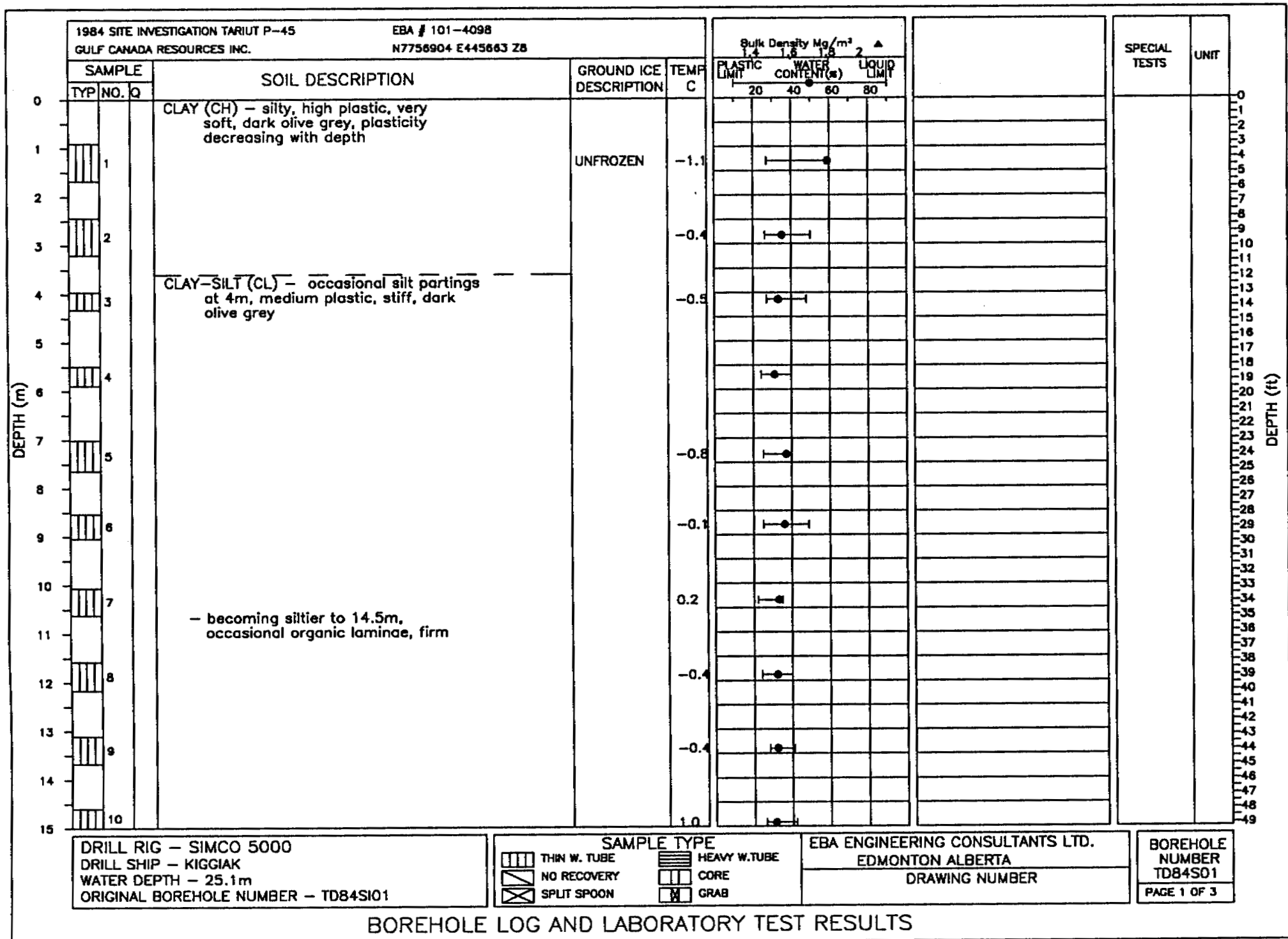
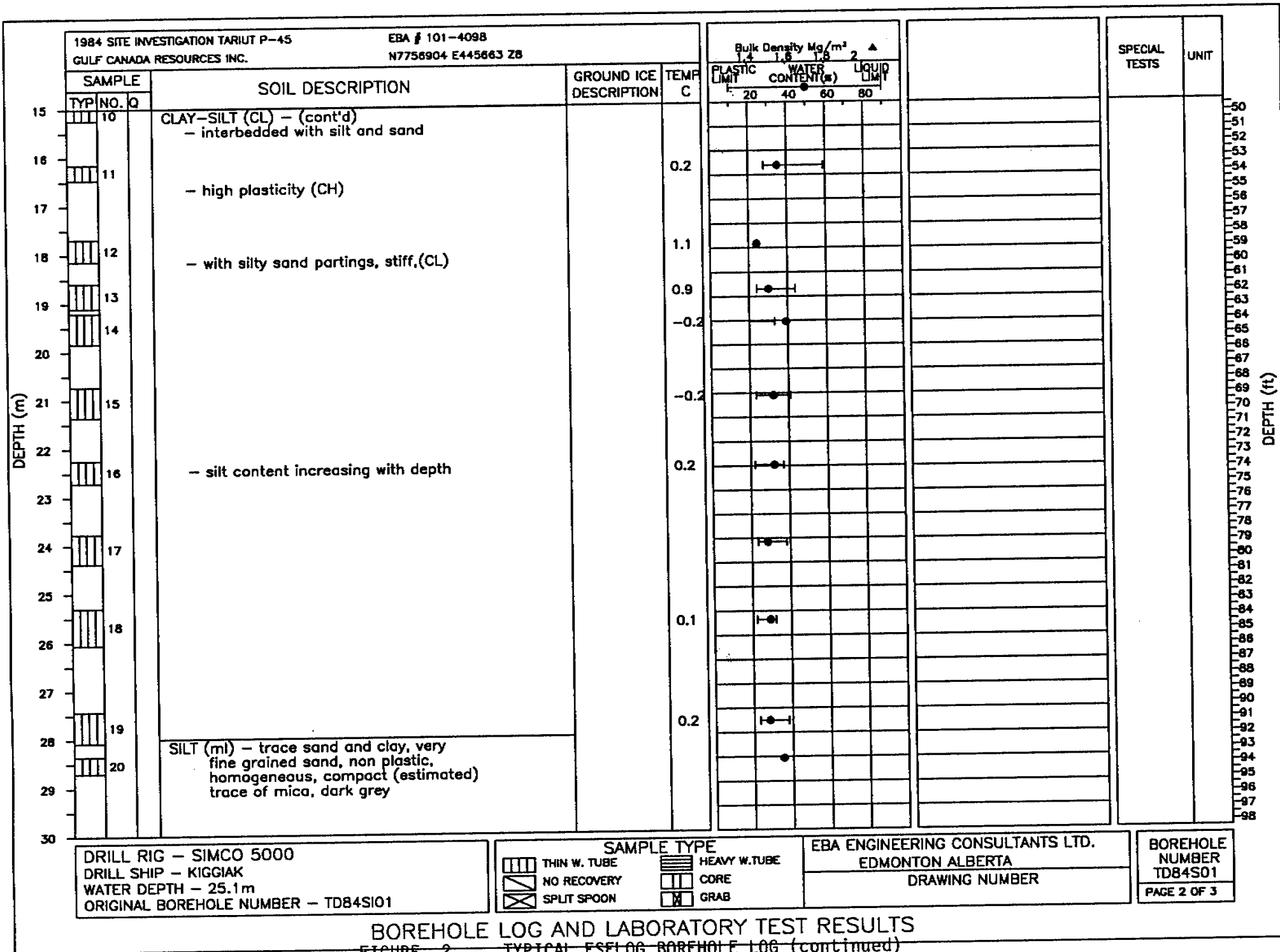


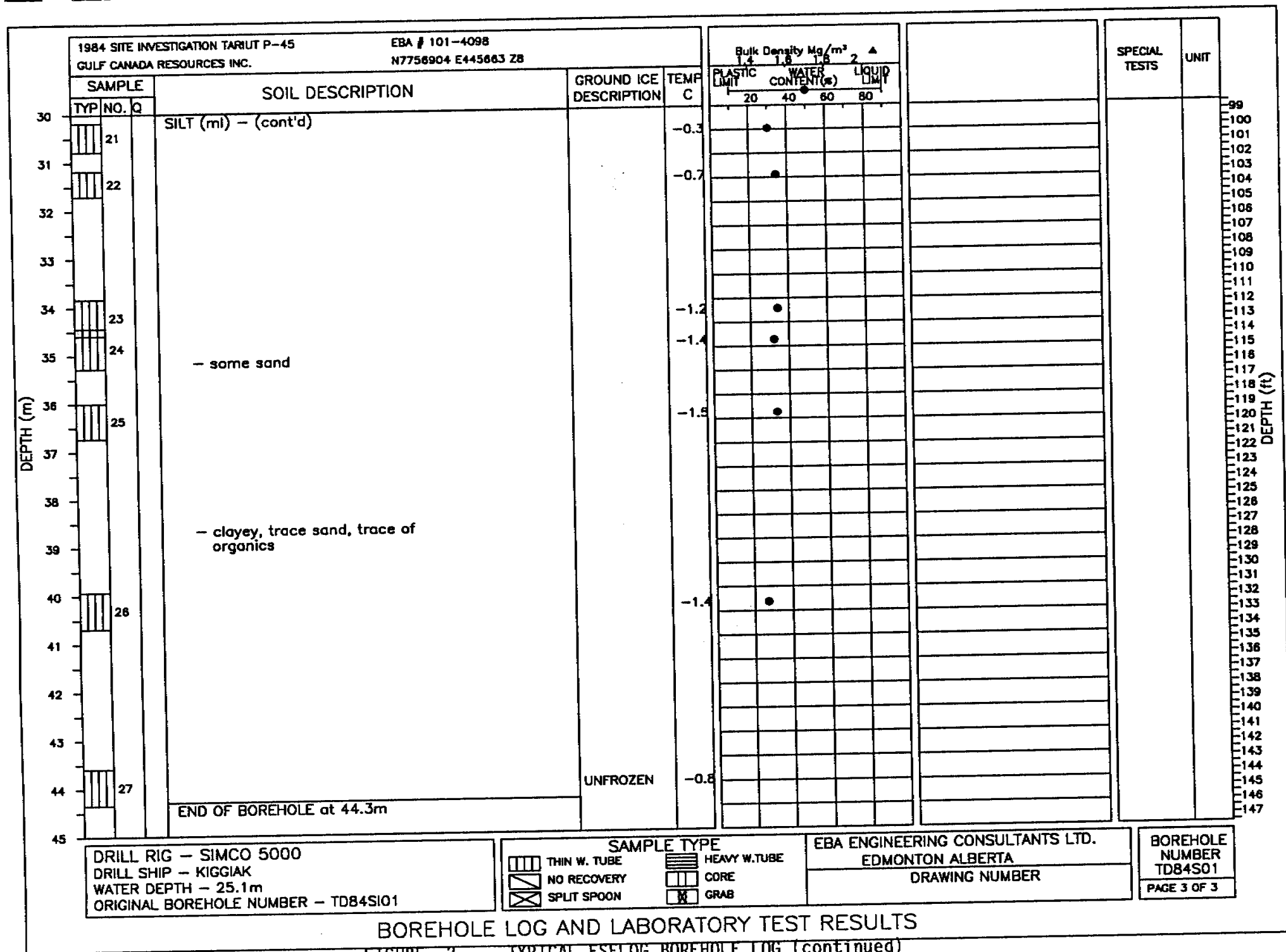
FIGURE 1  
LOCATION OF ISSERK AND ERKSAK BORROW BLOCKS



BOREHOLE LOG AND LABORATORY TEST RESULTS

FIGURE 2 TYPICAL ESELOG BOREHOLE LOG





APPENDIX A  
CATALOGUE DATA DICTIONARY  
AND  
SELECTED REPORT ENTRIES



## CATALOGUE OF GRANULAR RESOURCE RELATED FIELD ACTIVITIES

## DATA DICTIONARY

-----

## PART A: STUDY REFERENCE AND LOCATION

-----

## AA - STUDY NUMBER:

A unique study identifier number which will serve as a link to other databases (e.g. granular source inventory). This number consists of an alphabet prefix representing the database, to be assigned by INAC, a four digit study number, to be assigned by those preparing the database, and where necessary, a one digit sub-number to separate, for example, geophysical and geotechnical portions of the same study. (e.g. A-0137-1)

## AB - YEAR:

The calendar year in which the majority of the field work on the study was completed. (e.g. 1983)

## AC - SPONSOR:

The name of the company, department, agency or organization sponsoring the study. (e.g. Indian and Northern Affairs Canada, Yukon Department of Public Works, Gulf Canada, APOA, confidential)

## AD - CONTACT:

The name of the person within the sponsoring organization who might be contacted to obtain additional information on the study and/or authorization for its use.

## AE - CONTRACTOR:

The name of the prime contractor, consultant or group contracted by the sponsor to undertake the study (e.g. Ripley, Kiohn Leonoff International Ltd, Northern Engineering Services Ltd., Geotrex)

## LOCATION:

The location of the study will be identified using the Universal Transverse Mercator (UTM) co-ordinates of the southwestern and northeastern corners of a geographic block enclosing the study area. Separate data fields are included for the UTM zone and grid line of the minimum (western and southern) and maximum (eastern and northern) extremities of the block.



## STUDY CATALOGUE DATA DICTIONARY (continued)

## AF - MINIMUM ZONE:

The UTM zone in which the southwestern corner of the enclosing block occurs. (e.g. 07)

## AG - MINIMUM EASTING:

The UTM grid line of the western extremity of the enclosing block. (e.g. 381987)

## AH - MINIMUM NORTHING:

The UTM grid line of the southern extremity of the enclosing block. (e.g. 7548335)

## AI - MAXIMUM ZONE:

The UTM zone in which the northeastern corner of the enclosing block occurs. (e.g. 08)

## AJ - MINIMUM EASTING:

The UTM grid line of the western extremity of the enclosing block. (e.g. 567428)

## AK - MINIMUM NORTHING:

The UTM grid line of the northern extremity of the enclosing block. (e.g. 7661560)

## AL - LOCATION MAP/PLAN NUMBER:

The map or plan number of any small scale accompanying regional map or trackplot which indicates the location of the study area, or series of separate detailed study/borrow sites or regional survey lines (e.g. A-00087.23).

## AM - LOCATION MAP/PLAN FORMAT:

The format or type of data containing the location of the study area, or series of separate detailed study/borrow sites or regional survey lines (e.g. digital 9-track; paper copy; mylar original, folded blue-line).

## AN - LOCATION MAP/PLAN SCALE:

The scale, expressed in terms of the representative fraction (e.g. 1:250,000) of any small scale accompanying regional map or trackplot which indicates the location of the study area, or series of separate detailed study/borrow sites or regional survey lines. The denominator only of the representative fraction is given since the numerator is consistently "1" (e.g. 250000)



## STUDY CATALOGUE DATA DICTIONARY (continued)

## A0 - LOCATION MAP/PLAN DIGITIZER NUMBER:

A unique five digit identifier number, to be assigned later by INAC, which identifies a data set of points, lines, or polygons to be digitized from the location plan. This number links the study catalogue database to INAC's spatial database system. (e.g. 23467)

## AP - LOCATION MAP/PLAN ARCHIVING:

The general availability and, where appropriate, specific location of storage of any map or plan number of any small scale accompanying regional map or trackplot which indicates the location of the study area, or series of separate detailed study/borrow sites or regional survey lines (e.g. sponsor/contractor in-house, private/public repository, government agencies, name of contact).

## AQ - SITE PLAN(S) NUMBER(S):

The map or plan number(s) of up to six larger scale accompanying local maps, site plans or trackplots which indicate the location of individual detailed study/borrow sites, boreholes/ testpits/grab samples or detailed survey grids for separate study/borrow sites within the main study area (e.g. A-00087.23/00345-34.00/0000000001/0000023-A3/T100089.34/no number.).

## AR - SITE PLAN(S) FORMAT(S):

The format(s) or type(s) of up to six larger scale accompanying local maps, site plans or trackplots which indicate the location of individual detailed study/borrow sites, boreholes/ testpits/grab samples or detailed survey grids for separate study/borrow sites within the main study area (e.g. digital 9-track; paper copy; mylar original, folded blueprint).

## AS - SITE PLAN(S) SCALE(S):

The scale(s), expressed in terms of the representative fraction(s) (e.g. 1:50,000, 1:10,000) of up to six larger scale accompanying local maps, site plans or trackplots which indicate the location of individual detailed study/borrow sites, boreholes/ testpits/grab samples or detailed survey grids for separate study/borrow sites within the main study area. The denominator only of the representative fraction is given since the numerator is consistently "1" (e.g. 50000/10000)

## AT - SITE PLAN(S) DIGITIZER NUMBER(S):

A unique five digit identifier number or series of numbers, to be assigned later by INAC, which identifies a data set of points, lines, or polygons to be digitized from the site plans. This number links the study catalogue database to INAC's spatial database system.



## STUDY CATALOGUE DATA DICTIONARY (continued)

## AU - SITE PLAN(S) ARCHIVING:

The general availability and, where appropriate, specific location of storage of up to six larger scale accompanying local maps, site plans or trackplots which indicate the location of individual detailed study/borrow sites, boreholes/ testpits/grab samples or detailed survey grids for separate study/borrow sites within the main study area (e.g. sponsor/contractor in-house, private/public repository, government agencies, name of contact).

PART B: STUDY DETAILS  
-----

## BB - STUDY TYPE:

The type of data collected during the study or sub-study (e.g. hydrographic, geophysical, seabed sampling, geotechnical, dredging)

## BC - STUDY SCOPE:

The areal scope of the study or sub-study (e.g. regional, site specific - single site, many sites)

## BD - SURVEY LEVEL:

The general purpose or level of detail of the study (e.g. airphoto interpretation, reconnaissance, exploration, delineation, production)

## BE - STUDY SIZE:

The extent or size of the study in terms of number of potential borrow sites identified, number of testpits or boreholes, or total number of line kilometers of geophysical data. (e.g. 21 sites; 55 BH's; 145 km)

## BF - SURVEY PATTERN:

The pattern in which the individual borrow sites within the study area occur, or in which boreholes or survey lines within specific detailed study sites were laid out. (e.g. random, corridor, line, grid)

## BG - SURVEY SPACING:

The relative (e.g. random, wide) or actual (range and/or average) spacing of the survey data or study sites. (e.g. 250 m E-W, 500 m N-S; 10 - 15 km)

## BH - PROGRAM LENGTH:

The length, in days and shifts, of the field data collection or survey program. (e.g. 14-21)



## STUDY CATALOGUE DATA DICTIONARY (continued)

## BI - SEASON:

The season of the year in which the field data collection or survey program was conducted. (e.g. late summer, winter)

## BJ - EQUIPMENT TYPE:

The type(s) of equipment used to collect data or obtain samples. (e.g. hand-excavated testpits; D8 cat; sonic drill; boomer, side-scan and sub-bottom profiler; clam)

## BK - PENETRATION:

The relative (e.g. poor, shallow, variable) or actual (range and/or average) penetration of geophysical records or drilling equipment. (e.g. 5-7.5-10)

## BL - RESOLUTION:

The suitability of the data for distinguishing variations in subsurface stratigraphy, expressed in relative (e.g. poor, variable, unknown) or actual (e.g. range and/or average in tenths of metres) terms. (e.g. 0.5)

## BM - SAMPLING/RECORDING RATE:

The relative (e.g. continuous, intermittent, slow) and/ or actual rate of sampling or recording. (e.g. samples at 1 m intervals; chart speed)

## BN - SAMPLE/RECORD QUALITY:

A description of the relative overall quality or range in quality of the data, samples or records with regard to its use for determining subsurface stratigraphy and/or borrow quality. (e.g. sonic core - disturbed, but stratigraphically intact; augering with 1.5 m runs; side scan right channel intermittently operating; frequent acoustic voids)

## BO - SAMPLE/RECORD TYPE(S):

Additional details on the type(s) of samples (e.g. 75 mm diam. CREL core, 1-2 kg grab samples, 100 mm sonic casing) or records (e.g. analog, digital, depth corrected) obtained with the indicated types of equipment.

## BP - SAMPLE SIZE:

The total number(s) of samples obtained during the study, by type, where appropriate. (e.g. 75 grabs, 15 CREL core)



## STUDY CATALOGUE DATA DICTIONARY (continued)

## BQ - INTERPRETATION/TESTING LEVEL:

The extent of laboratory testing of samples (e.g. routine classification testing only, concrete aggregate suitability testing); or the level of detail of the interpretation of geophysical records (e.g. field, preliminary, detailed) or geotechnical data (e.g. pit plans for 3 sources), as appropriate.

## BR - REPORT LEVEL:

The type or level of detail of any report(s) resulting from the study. (e.g. annotated records, field logs/report only, summary/data compilation report, formal geophysical interpretation/ geotechnical evaluation report)

## BS - REPORT DISTRIBUTION:

The extent of distribution and/or general availability of any reports resulting from the study. (e.g. internal, sponsor/contractor only, specific government departments/agencies/libraries, published)

## BT - DATA ARCHIVING:

The general availability and, where appropriate, specific location of storage of raw data obtained during the study. (e.g. sponsor/contractor in-house, private/public repository, government agencies).



CATALOGUE OF GRANULAR RESOURCE RELATED FIELD ACTIVITIES  
BEAUFORT SEA  
STUDY DATA SHEET

## PART A: STUDY REFERENCE AND LOCATION

STUDY NO. : E-76-001-D                      YEAR: 1976              MONTH: 02  
SPONSOR : ESSO Resources Canada Ltd. (Imperial Oil Ltd.)  
CONTACT : S. Shinde  
CONTRACTOR: EBA Engineering Consultants Ltd.

## LOCATION:

GEOGRAPHIC BLOCK / REGIONAL NAME: Kannerk E-24  
MAP/PLAN (FIGURE) NUMBER : 1.1,A.1  
SCALE : 6000000,12500

MINIMUM ZONE: 08      MINIMUM EASTING: 418200      MINIMUM NORTHING: 7773000  
MAXIMUM ZONE: 08      MAXIMUM EASTING: 418400      MAXIMUM NORTHING: 7773200

## PART B: STUDY DETAILS

STUDY TYPE : geotechnical  
STUDY SCOPE : 1 site  
STUDY SIZE : 2 BHs  
SURVEY LEVEL : stratigraphy  
SURVEY PATTERN: random  
SURVEY SPACING: random

PROGRAM LENGTH: 1 day

SEASON: winter

EQUIPMENT TYPE: Becker hammer drill

PENETRATION : 16.2-17.1m  
RESOLUTION : poor

## SAMPLING/RECORDING:

RATE : 1-5m intervals  
QUALITY : disturbed

TYPE(S) : 2.4m grab samples  
SIZE : 4 grab

INTERPRETATION/TESTING LEVEL:  
soil classification

REPORT LEVEL : preliminary evaluation  
REPORT DISTRIBUTION : sponsor/contractor  
ATA ARCHIVING : sponsor/contractor



CATALOGUE OF GRANULAR RESOURCE RELATED FIELD ACTIVITIES  
BEAUFORT SEA  
STUDY DATA SHEET

## PART A: STUDY REFERENCE AND LOCATION

STUDY NO. : E-76-001-A                      YEAR: 1976              MONTH: 03  
SPONSOR : ESSO Resources Canada Ltd. (Imperial Oil Ltd.)  
CONTACT : S. Shinde  
CONTRACTOR: EBA Engineering Consultants Ltd.

## LOCATION:

GEOGRAPHIC BLOCK / REGIONAL NAME: Kugmallit D-49  
MAP/PLAN (FIGURE) NUMBER : 1.1,A.1  
SCALE : 6000000,12500

MINIMUM ZONE: 08      MINIMUM EASTING: 558900      MINIMUM NORTHING: 7725800  
MAXIMUM ZONE: 08      MAXIMUM EASTING: 560000      MAXIMUM NORTHING: 7727200

## PART B: STUDY DETAILS

STUDY TYPE : geotechnical  
STUDY SCOPE : 1 site  
STUDY SIZE : 5 BHs  
SURVEY LEVEL : foundation, stratigraphy  
SURVEY PATTERN: random  
SURVEY SPACING: random

PROGRAM LENGTH: 3 days

SEASON: winter

EQUIPMENT TYPE: Becker hammer drill

PENETRATION : 21.8-31.3m  
RESOLUTION : poor

## SAMPLING/RECORDING:

RATE : 1-5m intervals, various tests  
QUALITY : some disturbed, disturbed but stratigraphy intact,  
undisturbed  
TYPE(S) : grab, SPT, Shelby tubes, piston  
SIZE : 28 grab, 16 SPT, 11 Shelby, 3 piston

## INTERPRETATION/TESTING LEVEL:

soil classification, strength and  
consolidation characteristics

REPORT LEVEL : formal geotechnical evaluation  
REPORT DISTRIBUTION : sponsor/contractor  
DATA ARCHIVING : sponsor/contractor



APPENDIX B  
BOREHOLE LOG SOURCE REPORTS



BEAUFORT SEA PROJECTS FOR  
GULF CANADA CORPORATION

| DATE<br>(YR/MO) | REPORT TITLE                                                                     | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|----------------------------------------------------------------------------------|-----------------------|------------------------|
| 81-08           | Beaufort Sea Geotechnical Investigation - Kogyuk                                 | Golder Assoc          | 812-2102               |
| 81-09           | Beaufort Sea Geotechnical Investigation - West Amauligak                         | Golder Assoc          | 812-2102               |
| 81-09           | Beaufort Sea Geotechnical Investigation - West Tingmiark                         | Golder Assoc          | 812-2102               |
| 81-08           | Beaufort Sea Geotechnical Investigation - Kringalik                              | Golder Assoc          | 812-2102               |
| 81-09           | Beaufort Sea Geotechnical Investigation - Kringalik                              | Golder Assoc          | 812-2102               |
| 82-12           | Yukon Offshore Geotechnical Program Data Report, Stokes Point and Roland Bay     | Hardy Assoc           | CG14038                |
| 82-             | 1982 Offshore Geotechnical Site Investigation, Kogyuk Berm, Beaufort Sea         | EBA Eng               | 101-3692 *             |
| 82-             | 1982 Offshore Geotechnical Site Investigation, Hershel Borrow Site, Beaufort Sea | EBA Eng               | 101-3662               |
| 82-05           | Beaufort Sea Geotechnical Investigation, 1981 - Sauvrak                          | Golder Assoc          | 812-2102               |

Continued

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
GULF CANADA CORPORATION

| DATE<br>(YR/MO) | REPORT TITLE                                                   | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|----------------------------------------------------------------|-----------------------|------------------------|
| 82-07           | 1982 Offshore Geotechnical Site Investigation, Sauvrak Site    | EBA Eng               | 101-3641               |
| 82-08           | 1982 Offshore Geotechnical Site Investigation, Kogyuk N-67     | EBA Eng               | 101-3656               |
| 82-08           | 1982 Offshore Geotechnical Site Investigation, Kugdjuk         | EBA Eng               | 101-3657               |
| 82-08           | 1982 Offshore Geotechnical Site Investigation, North Ukalerk   | EBA Eng               | 101-3660               |
| 82-08           | 1982 Offshore Geotechnical Site Investigation, North Tingmiark | EBA Eng               | 101-3661               |
| 82-09           | 1982 Offshore Geotechnical Site Investigation, Kringalik       | EBA Eng               | 101-3658 *             |
| 82-09           | 1982 Offshore Geotechnical Site Investigation, Tarsiut F-35    | EBA Eng               | 101-3663               |
| 83-02           | 1982 Offshore Geotechnical Site Investigation, North Ukalerk   | EBA Eng               | 101-3659               |
| 83-02           | 1982 Offshore Geotechnical Site Investigation, East Amauligak  | EBA Eng               | 101-3685               |
| 83-02           | 1982 Offshore Geotechnical Site Investigation, Isserk Borrow   | EBA Eng               | 101-3686               |

Continued

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
GULF CANADA CORPORATION

| DATE<br>(YR/MO) | REPORT TITLE                                                                                 | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|----------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 83-12           | 1983 Offshore Geotechnical Site Investigation, East Amauligak Site                           | EBA Eng               | 101-3862               |
| 83-12           | 1983 Offshore Geotechnical Site Investigation, Kaslutut Site                                 | EBA Eng               | 101-3865               |
| 83-12           | 1983 Offshore Geotechnical Site Investigation, Akpak Site                                    | EBA Eng               | 101-3866               |
| 83-12           | 1983 Offshore Geotechnical Site Investigation, Ukalerk Site                                  | EBA Eng               | 101-3867               |
| 84-10           | 1984 Offshore Geotechnical Site Investigation, Herchel Island                                | EBA Eng               | 101C-4101              |
| 84-11           | 1984 Offshore Geotechnical Site Investigation, Tarsiut P-45                                  | EBA Eng               | 101C-4098              |
| 84-11           | 1984 Offshore Geotechnical Site Investigation, Erksak Borrow Site<br>and Tarsiut N-44 Island | EBA Eng               | 101C-4102              |
| 85-01           | 1984 Offshore Geotechnical Site Investigation, Amauligak A-23 and<br>F-65 Sites              | EBA Eng               | 101C-4118              |
| 85-01           | 1984 Offshore Geotechnical Site Investigation, Gulf et al.,<br>Amauligak I-65                | EBA Eng               | 101C-4141              |

Continued

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
GULF CANADA CORPORATION

| DATE<br>(YR/MO) | REPORT TITLE                                                                                                       | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|--------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 85-02           | 1984 Offshore Geotechnical Site Investigation, Sauvrak F-43                                                        | EBA Eng               | 101C-4132              |
| 85-09           | 1985 Offshore Geotechnical Site Investigation, Amauligak I-65                                                      | EBA Eng               | 101-4417               |
| 86-02           | 1985 Offshore Geotechnical Site Investigation, M2 Ice Scour Site                                                   | EBA Eng               | 101C-4425*             |
| 86-03           | 1985 Offshore Geotechnical Site Investigation, Amauligak F-24                                                      | EBA Eng               | 101-4416               |
| 86-03           | 1985 Offshore Geotechnical Site Investigation, Immiugak I-06                                                       | EBA Eng               | 101C-4422              |
| 86-03           | 1985 Offshore Geotechnical Site Investigation, I.c. I-36                                                           | EBA Eng               | 101C-4423              |
| 86-03           | 1985 Offshore Geotechnical Site Investigation, Adlartok I-01                                                       | EBA Eng               | 101C-4424              |
| 87-09           | Geotechnical Site Investigation Report, Kakoluk A-14, Beaufort Sea                                                 | AOE                   | n/a                    |
| 87-09           | Geotechnical Site Investigation Report, Kogyuk N-87, Beaufort Sea                                                  | AOE                   | n/a                    |
| 87-09           | Geotechnical Site Investigation Report, Amauligak O-07                                                             | AOE                   | n/a                    |
| 87-09           | 1987 Offshore Geotechnical Site Investigation, Proposed Production Structure Site and Pipeline Route, Beaufort Sea | EBA Eng               | 101-4724B*             |

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
ESSO RESOURCES CANADA LTD.

| DATE<br>(YR/MO) | REPORT TITLE                                                                                                                                                                     | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 74-04           | Evaluation on Offshore Borrow Resources, Beaufort Sea Project,<br>East Half                                                                                                      | EBA Eng               | E-660                  |
| 74-04           | Beaufort Sea Drilling Program, Winter 1974, Vol. 1, 2 and 3                                                                                                                      | EBA Eng               | E-660                  |
| 75-03           | Beaufort Sea Drilling Program, Winter 1975, Vol. 1 to 4                                                                                                                          | EBA Eng               | E-965.2                |
| 76-03           | Beaufort Sea Drilling Program, Winter 1976, Part 1, Vol. 1 and 2<br>Offshore Borrow Materials Inventory along the Tuktoyaktuk<br>Peninsula Between Tininerk Bay and McKinley Bay | EBA Eng               | I-1330                 |
| 76-04           | Beaufort Sea Drilling Program, Winter 1976, Part 2, Vol. 1 and 2                                                                                                                 | EBA Eng               | I-1330                 |
| 76-05           | Beaufort Sea Drilling Program, Winter 1976, Investigation of Island<br>Sites Kugmallit D-49, Arnak L-30, Isserk B-15, Kannerk E-24                                               | EBA Eng               | I-1330                 |
| 78-07           | Site Investigation for an Island at Issungnak O-61 and the<br>Preliminary Evaluation of Igiloliroak, Ernerk B-37 and the<br>Isserk Area                                          | EBA Eng               | 11-2053                |

Continued

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
ESSO RESOURCES CANADA LTD.

| DATE<br>(YR/MO) | REPORT TITLE                                                                                                                      | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 80-02           | Evaluation of In-Place Fill Properties, Issungnak 0-61                                                                            | EBA Eng               | 101-2596*              |
| 80-07           | Site Investigation for Alerk P-23                                                                                                 | EBA Eng               | 101-2721               |
| 81-04           | 1981 Winter Coring Program, Beaufort Sea, West Atkinson, Itiyok<br>Issungnak S., Nayak, Aok, Igalak, Omat, Issigak, Kadluk, Minuk | EBA Eng               | 101-3097               |
| 81-             | 1981 Winter Coring Program, Beaufort Sea                                                                                          | EBA Eng               | 101-3099               |
| 81-11           | 1981 Itiyok I-27, Issungnak S., Isserk A-49, Hooper, Pelly Region                                                                 | EBA Eng               | 101-3251               |
| 82-08           | Site Investigation in Beaufort Sea, Minuk I-53                                                                                    | Hardy Assoc           | CG-14029               |
| 82-09           | Data Report for Kadluk Borrow Investigation                                                                                       | Hardy Assoc           | CG-14029.A70D          |
| 83-02           | Kadluk 0-07 Geotechnical Design Study                                                                                             | Hardy Assoc           | CG-14029.A40D          |
| 83-07           | 1983 Offshore Geotechnical Site Investigation, Issigak Borrow Site,<br>Beaufort Sea                                               | EBA Eng               | 101-3868               |
| 83-07           | 1983 Offshore Geotechnical Site Investigation, Kaubvik Site,<br>Beaufort Sea                                                      | EBA Eng               | 101-3864*              |

Continued

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
ESSO RESOURCES CANADA LTD.

| DATE<br>(YR/MO) | REPORT TITLE                                                                                                                                   | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 83-07           | 1981 Offshore Geotechnical Site Investigation, Issigak and Omat Site, Ground Truthing for Interpretation of Shallow Seismic Data, Beaufort Sea | EBA Eng               | 101-3883               |
| 83-12           | 1983 Offshore Geotechnical Site Evaluation, Nipterk Site                                                                                       | EBA Eng               | 101-3863               |
| 84-06           | Beaufort Sea Island Construction, Review of Hydraulic Fill Behaviour                                                                           | EBA Eng               | 306-34076*             |
| 85-07           | 1985 Offshore Geotechnical Site Investigation, Arnak K-06, Beaufort Sea                                                                        | EBA Eng               | 101C-4271              |

Note: \* Indicates reports for which logs are not included in the database



BEAUFORT SEA PROJECTS FOR  
DOME/CANMAR

| DATE<br>(YR/MO) | REPORT TITLE                                                                                                         | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 74-05           | Investigation of Foundation Stability for Tent Island Drill Site                                                     | EBA Eng               | E-758a                 |
| 74-07           | Geotechnical Evaluation of the Tent Island, Blow River Area                                                          | EBA Eng               | E-758b                 |
| 75-11           | Proposed Well Location - 1                                                                                           | Geocon                | V8217                  |
| 78-08           | Geotechnical Investigation, Boring 2, Tarsiut, Beaufort Sea                                                          | McClelland            | 178-028-1              |
| 78-08           | Geotechnical Investigation, Boring 1, Ukalerk, Beaufort Sea                                                          | McClelland            | 178-028-2              |
| 78-08           | Geotechnical Investigation, Boring 3, Kopanoar, Beaufort Sea                                                         | McClelland            | 178-038-3              |
| 78-08           | Geotechnical Investigation, Boring 4, Natsek, Beaufort Sea                                                           | McClelland            | 178-038-4              |
| 78-08           | Results of Pore Water and Gas Analysis, Ukalerk, Tarsiut, Kopanoar and Natsek Borings, Beaufort Sea (Geochemical)    | McClelland            | 178-028-6              |
| 79-07           | Geotechnical Investigation, Boring 5, Kilannak A-77, Beaufort Sea                                                    | EBA Eng               | 101-2581               |
| 79-07           | Laboratory Test Data Summary, Kilannak A-77, Lat. 70° 46' 15.12" N, Long. 129° 21' 26.94" W, Phase 2 Testing Program | EBA Eng               | 101-2581               |
| 79-07           | Geotechnical Investigation, Boring 6, Kenalooak J-94, Beaufort Sea                                                   | EBA Eng               | 101-2581               |

Continued      Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
DOME/CANMAR

| DATE<br>(YR/MO) | REPORT TITLE                                                                                                                                                                                                            | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 79-07           | Geotechnical Investigation, Boring 7, _____, Beaufort Sea                                                                                                                                                               | EBA Eng               | *                      |
| 79-07           | Geotechnical Investigation, Boring 8, Nektoralik H-28, Beaufort Sea                                                                                                                                                     | EBA Eng               | 101-2581               |
| 79-07           | Laboratory Test Data Summary, Nektoralik H-28, Lat. 70° 27' 27.33" N, Long. 136° 06' 12.32" W, Phase 2 Testing Program                                                                                                  | EBA Eng               | 101-2581               |
| 79-12           | Tuktoyaktuk Harbour Approach Study, Tuktoyaktuk Channel                                                                                                                                                                 | EBA Eng               | 101-2622.3             |
| 80-03           | Geotechnical Evaluation for Dredging Program at McKinley Bay, N.W.T.                                                                                                                                                    | EBA Eng               | 101-2806.1             |
| 80-08           | Borrow Reconnaissance Program, Beaufort Sea - Kaglulik, South Kaglulik, Ukalerk & Uviluk, Kopanoar, Tarsiut, Isserk                                                                                                     | EBA Eng               | 101-2968               |
| 80-             | Geotechnical Investigation and Laboratory Testing Proposed Wellsite Locations, Beaufort Sea, 1980 - Vol. 1 - Tarsiut D-14, Vol. 2 - Tarsiut O-34, Vol. 3 - Tarsiut N-44, Vol. 4 - Kaglulik P-74, Vol. 5 - Kopanoar I-44 | EBA Eng               | 101-2941               |

Continued

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
DOME/CANMAR

| DATE<br>(YR/MO) | REPORT TITLE                                                                                                                                                                                                            | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 80-09           | 1981 Offshore Geotechnical Site Investigation, Geotechnical Properties of Seabed Clay, Vol. 1 - Tarsiut D-14, Vol. 2 - Tarsiut O-34, Vol. 3 - Tarsiut N-44, Vol. 4 - Kopanoar I-44, Vol. 5 - Kaglulik P-74              | EBA Eng               | 101-2941               |
| 80-             | 1980 Geotechnical Investigation and Laboratory Testing Proposed Wellsite Locations, Beaufort Sea. Core Photography and Radiographs, Vol. 7B - Tarsiut D14, N-44, O-34, Vol. 7C - Kaglulik P-74, Vol. 7D - Kopanoar I-44 | EBA Eng               | 101-2941               |
| 80-             | Geotechnical Investigation, Kopanoar M-13, Beaufort Sea, Offshore                                                                                                                                                       | EBA Eng               | 101-2941               |
| 80-12           | Laboratory Test Data Summary, Kopanoar I-44, Lat. 70° 23' 44" N, Long. 135° 12' 00" W                                                                                                                                   | EBA Eng               | 101-2941               |
| 81-04           | Evaluation of Relative Density of Alerk P-23 Fill by the Standard Penetration Test                                                                                                                                      | EBA Eng               | 101-3218*              |
| 81-07           | Field Report, Geotechnical Investigation, Beaufort Sea Offshore                                                                                                                                                         | EBA Eng               | 101-3210               |
| 81-07           | 1981 Offshore Geotechnical Site Investigation, Uviluk P-66, Beaufort Sea                                                                                                                                                | EBA Eng               | 101-3210               |

Continued

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
DOME/CANMAR

| DATE<br>(YR/MO) | REPORT TITLE                                                                                               | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 81-07           | 1981 Offshore Geotechnical Site Investigation, South Tarsiut Borrow Area, Beaufort Sea                     | EBA Eng               | 101-3210               |
| 81-07           | 1981 Offshore Geotechnical Site Investigation, Miterk I-40, Beaufort Sea                                   | EBA Eng               | 101-3210               |
| 81-07           | 1981 Offshore Geotechnical Site Investigation, Irkaluk B-35, Beaufort Sea                                  | EBA Eng               | 101-3210               |
| 81-07           | 1981 Offshore Geotechnical Site Investigation, Koakoak D-11 and I-4, Beaufort Sea, Vol. 1 and 2            | EBA Eng               | 101-3210               |
| 81-07           | 1981 Offshore Geotechnical Site Investigation, Subconsultant Report, Beaufort Sea (Geochemical Evaluation) | EBA Eng               | 101-3210               |
| 82-03           | Deep Geotechnical Coring Program, Tarsiut Island, Beaufort Sea                                             | EBA Eng               | 101-3430               |
| 82-07           | 1981 Offshore Geotechnical Site Investigation, Geotechnical Properties of Seabed Clay near Tarsiut Island  | EBA Eng               | 101-3443               |
| 82-08           | 1982 Offshore Geotechnical Site Investigation, Nerlerk Area, Beaufort Sea, Preliminary Field Report        | EBA Eng               | 101-3605               |

Continued

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
DOME/CANMAR

| DATE<br>(YR/MO) | REPORT TITLE                                                                                 | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|----------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 82-08           | 1982 Offshore Geotechnical Site Investigation, Baillie Island<br>Gravel Search, Beaufort Sea | EBA Eng               | 101-3605               |
| 82-08           | 1982 Offshore Geotechnical Site Investigation, Natiak O-44,<br>Beaufort Sea                  | EBA Eng               | 101-3605               |
| 82-08           | 1982 Offshore Geotechnical Site Investigation, Tingmiark Borrow<br>Area, Beaufort Sea        | EBA Eng               | 101-3605               |

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
INDIAN AND NORTHERN AFFAIRS CANADA

| DATE<br>(YR/MO) | REPORT TITLE                                                                 | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|------------------------------------------------------------------------------|-----------------------|------------------------|
| 84-12           | 1984 Offshore Geotechnical Site Investigation, Herschel Sill<br>Sites, Yukon | EBA Eng               | 101-4133               |
| 86-01           | 1984 Herschel Basin and Mackenzie Trough, West Sites                         | EBA Eng               | 101-4159               |

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
CHEVRON RESOURCES CANADA

| DATE<br>(YR/MO) | REPORT TITLE                                                                                   | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 85-04           | Offshore Geotechnical Site Investigation, Chevron-Trillium<br>Ellice L-39, Beaufort Sea        | EBA Eng               | 301-34140*             |
| 85-04           | Offshore Geotechnical Site Investigation, Chevron-Trillium<br>Russell Inlet Area, Beaufort Sea | EBA Eng               | 301-34148*             |

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
HUDSON BAY OIL AND GAS  
(included with Dome/Canmar)

| DATE<br>(YR/MO) | REPORT TITLE                                                     | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|------------------------------------------------------------------|-----------------------|------------------------|
| 74-05           | Investigation of Foundation Stability for Tent Island Drill Site | EBA Eng               | E-758                  |
| 74-07           | Geotechnical Evaluation of the Tent Island, Blow River Area      | EBA Eng               | E-758                  |

Note: \* Indicates reports for which logs are not included in the database

BEAUFORT SEA PROJECTS FOR  
SUNOCO E&P LTD.

| DATE<br>(YR/MO) | REPORT TITLE                               | NAME OF<br>CONSULTANT | CONSULTANT<br>I.D. NO. |
|-----------------|--------------------------------------------|-----------------------|------------------------|
| 74-03           | Beaufort Sea Drilling Program, Winter 1974 | EBA Eng               | E-745 *                |

Note: \* Indicates reports for which logs are not included in the database