

# **GRANULAR RESOURCES INVENTORY**

~~**PROGRAM: DATABASE UPDATING**~~

**AND FIELD DATA COLLECTION**

**SUMMER 1993**



D003852

**Written By:**

**Stephen Harrison**

**August 25, 1993**

**Land Management Division**

**Department of Indian Affairs and Northern Development**

September 27, 1993

Bob

Harry's Work-Term Report

I am impressed with Harry's report. It is clear and well laid out. I have noted a few things on the paper itself. I would suggest a small paragraph at the beginning putting the inventory in the context of the overall granular program.

*Betty Ann*

Betty Ann

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*6PS!*



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## **ACKNOWLEDGEMENTS**

**The Field Data Checking Program was completed with the assistance of the following people:**

**Bob Gowan - Geotechnical Advisor, DIAND Headquarters**

**Ervin Allen - RMO, Fort Smith District Office**

**Odiel Vandenberghe - District Manager, Fort Smith District Office**

**Andrew Forbes - Senior RMO, Hay River Sub-District Office**

**Norman McCowan - RMO, Hay River Sub-District Office**

**Fred Lamb - Project Manager-Highway Operations Division, GNWT**

**Arthur Boutilier - Head-Projects and Planning, DIAND Yellowknife**

**Jim Umpherson - Regional Manager, DIAND Yellowknife**

**Mike Collie - RMO, Inuvik District Office**

**Stephen Deschene - RMO, Inuvik District Office**

what is the relationship of the two clauses?

1

## SECTION 1.0 - INTRODUCTION

The Department of Indian Affairs and Northern Development (DIAND) is responsible for managing granular resources on federally-controlled lands in Yukon and Northwest Territories (NWT). Recently, (the pressures on public supplies of granular materials on crown lands have increased due to land use concerns and native land claims.) Ownership of and responsibility for the management of granular resources has changed in recent years due to land claims settlement agreements reached between the Federal government and various native organizations. These agreements have resulted in large portions of granular resources becoming privately owned. This has created a greater demand on the remaining crown land reserves, and an increased need for more effective management of those resources. As a result, a significant effort is now required to expand and update the granular resources information base.

As part of the DIAND Granular Program, the In support of this, the Land Management Division, Natural Resources and Environment Branch is undertaking <sup>the compilation of a</sup> Northern Granular Resources Inventory Program. The main objective of this program is to guarantee that adequate resource information is available to support the management of northern granular resources. Over the past several years, a significant effort has been put towards compiling existing granular resources information into a series of standardized computerized databases based on the numerous consultant's

industry  
gov't

reports that have been written. These databases will make the data more accessible to potential users resulting in more effective management of the resource.

?

The northern granular resources inventory is made up of four relational databases, linked by two distinctive key fields. All of the databases <sup>are</sup> generated using the Database Management System (DBMS) *FoxPro 2.0* and consist of the following components:

- 1. Report Catalogue** - This contains a listing of all available granular materials reports and studies for the area under investigation. This database consists of both bibliographic data as well as an initial evaluation of the extent and usefulness of the data in the reports.
- 2. Deposit Database** - Data for specific sources (existing pits and undeveloped deposits) that were obtained from the reports listed in the Report Catalogue are included in this database. For each site, a comprehensive description including deposit location and status, investigation and description information as well as test results and material quantity is assembled (See Appendix A for a complete explanation of the fields and definitions contained within the deposit database).
- 3. Borehole Database** - Geotechnical borehole data from reports listed in the Report Catalogue and for sources listed in the Deposit Database is included in this segment. Included is a description of the borehole, stratigraphic data and laboratory results.

A complete borehole log, and other graphical or tabular output can also be created with the borehole database software - *ESEBase* (See Section 4.3 - Recommendations regarding the *ESEBase* software).

*to just for the studies  
to provide (other granular  
to produce life?)*

4. Geographic Database - This database contains information needed to display the locations of the studies, sources or boreholes on a map using the *inFOcus/QUIKMap* desktop mapping system (See section 2.3 for a discussion of the *inFOcus/QUIKMap* system). It includes plotting instructions for symbols and labels, including size, colour and orientation.

*A more detailed description of the Northern Granular Resources Inventory Program and the associated databases is provided in Gowan (1993). ← what is this?*

The information contained within these databases is based on reports and studies spanning the last two decades. The basic information regarding location, site description and geological conditions remain valid for most deposits. Where extensive site development has occurred, some of the facts assembled regarding current lab analysis, reserve estimations and deposit status are out-of-date. To obtain the most current information available on granular sources, a Database Updating/Pilot Field Data Checking Program was conducted in Summer, 1993. This trial program consisted of creating new databases, updating and reviewing existing ones using available consultants reports and field checking of data. The field portion of the program consisted of travelling to the offices of Regional Management

*[may be  
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differences?  
D.A.D. District offices (1st visited)*

*D.I. we can't put in place some mechanisms  
for keeping data bases up-to-date?*

Officers (RMO) in the NWT in order to review each granular source and update the deposit database. The RMOs look after field operations and are most aware of the present status of the granular sources.

The South Slave and Inuvik Districts were selected for the pilot program based on interest expressed by local RMOs in updating the deposit inventory. For the Inuvik District, a deposit database existed prior to Summer, 1993 and was largely compiled under funding provided by the Inuvialuit Final Agreement Implementation Program (IFAIP)-Task 7, and by the Northern Oil and Gas Action Program (NOGAP)-Project A4. For the South Slave District, digitized outlines of 42 deposits had been compiled, but a deposit database had not yet been completed.

This report describes the preparations that were required for the office and field portions of the pilot program in NWT, examines the effectiveness of the data collection procedure and suggests short, medium and long term recommendations regarding the future direction of both the Field Checking Program as well as the Northern Granular Resources Inventory ~~Program.~~

## **SECTION 2.0 - OFFICE PREPARATIONS**

The office portion of the project involved initiating granular databases for the South Slave Management Region, the creation of working copy Deposit Summary Sheets for each site in the South Slave and Inuvik districts and the development of regional deposit maps for each management district. The Deposit Sheets were required for the field portion of the study (Section 3.0).

### **2.1 - SOUTH SLAVE GRANULAR DATABASE**

A deposit database was compiled for the South Slave Management Region using several consultant's reports written for DIAND over the past twenty years. These reports, authored by Bird & Hale Ltd. in 1974, Ripley, Klohn & Leonoff Ltd. in 1978 and Thurber Consultants Ltd. in 1987 examined existing granular sources as well as identifying prospective new deposits. In total, 125 existing and prospective deposits were catalogued into the deposit database.

The quality and usefulness of the data obtained was very good. Although some of the reports themselves are somewhat dated, information pertaining to geographic location, source description, stratigraphy and lab analysis is still applicable. However, much of the initial information regarding current reserves, access, status and land tenure is now out of

date. With the reconstruction of highways between Alberta, Hay River and Yellowknife, many new sources of granular material have been identified and need to be catalogued in ~~in~~ to the deposit database.

## 2.2 - DEPOSIT SUMMARY SHEETS

To assist in the gathering of information while in the districts, one page Deposit Summary Sheets for each source were developed using the *FoxPro 2.0 Reportwriter*. This *FoxPro* feature allows user selected database fields to be organized into an easily readable format. For the purposes of the field program, all database fields were organized onto a one page report (See Appendix B for an example). However, due to the powerful information managing capabilities of *FoxPro 2.0*, any number of types of reports can be produced both easily and quickly. For example, reports could be produced only for deposits which are currently active and with a reserve of more than 100 000 m<sup>3</sup> with the following "for" clause:

```
REPORT FORMAT C:\DATALINK\REPDEP.FRX FOR status = "active"  
AND ttl_vol > 100000
```

Or, summary reports containing only a few specific fields of information based on a specific geographical region can be produced with a similarly small amount of effort.

## 2.3 - REGIONAL DEPOSIT MAPS

To aid in deposit identification while in the districts, regional deposits maps were created using the Northern Granular Resources Desktop Mapping System. This Geographical Information System (GIS) is based on *inFOcus/QUIKMap* created by Earth and Ocean Research Ltd.

In general, GISs are computerized systems used to store, manipulate, study, and show geographical information. It's most important function is to provide a method of examining the vast amounts of data collected. Objects in the real world, such as roads, rivers, coastlines and borehole locations can be represented as separate layers of information or combined for interpretation and study purposes.

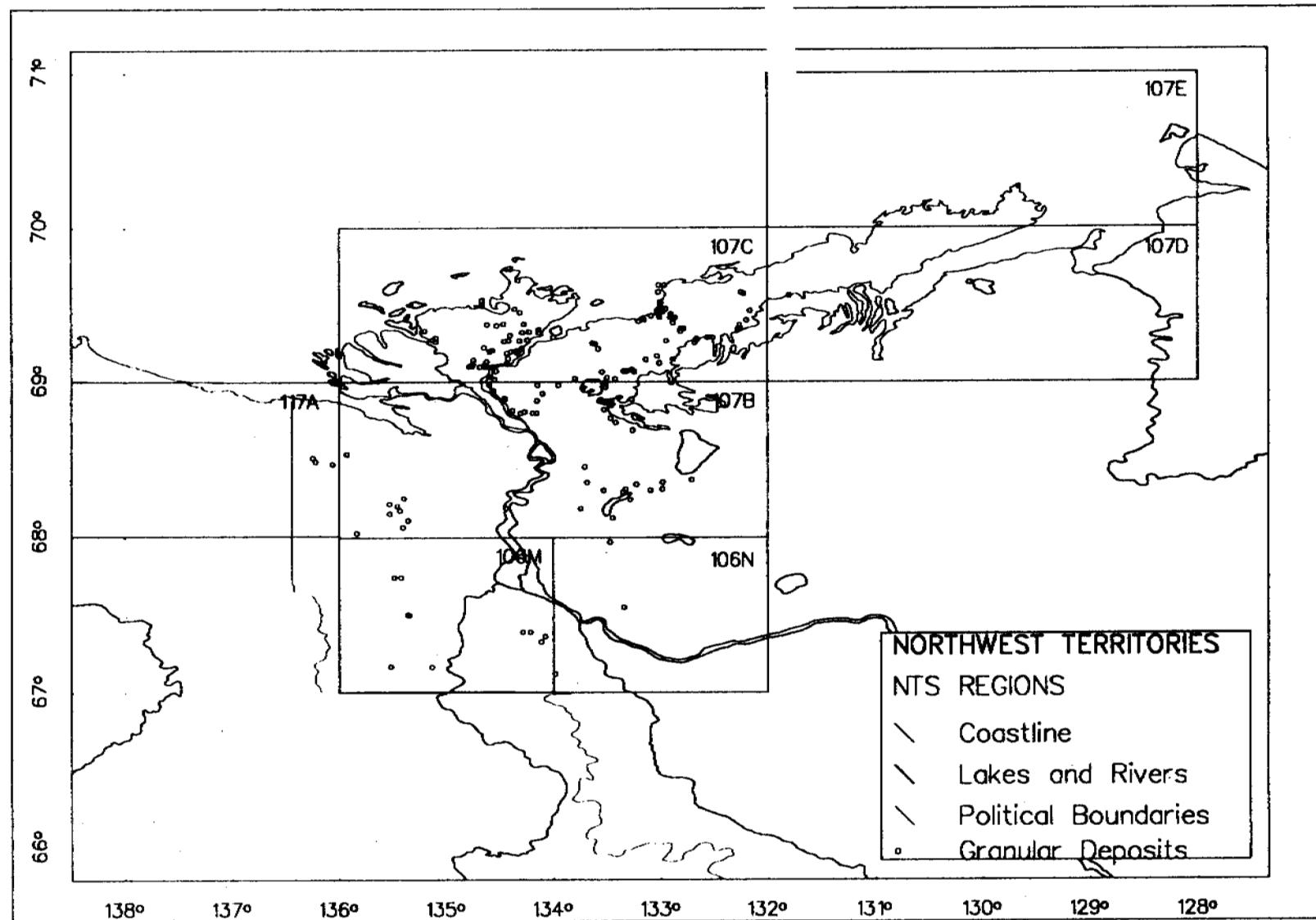
*needs  
some  
adjusting*

The Northern Granular Resources Desktop Mapping System uses the data contained within the deposit database and combines it with plotting instructions to form a geographical database. This enables the granular sources to be displayed on a series of basemaps. The system has the ability of displaying detailed site plans of a deposit if that level of data is available. The ability to examine and develop sites from a desktop computer has exciting possibilities. For example, Regional Management Officers could examine various potential sites as well as different pit development strategies for each site based on the current demand for specific granular materials and deposit stratigraphy in order to devise the most

**efficient extraction plan; all of this before visiting a site for inspection resulting in saved time and money.**

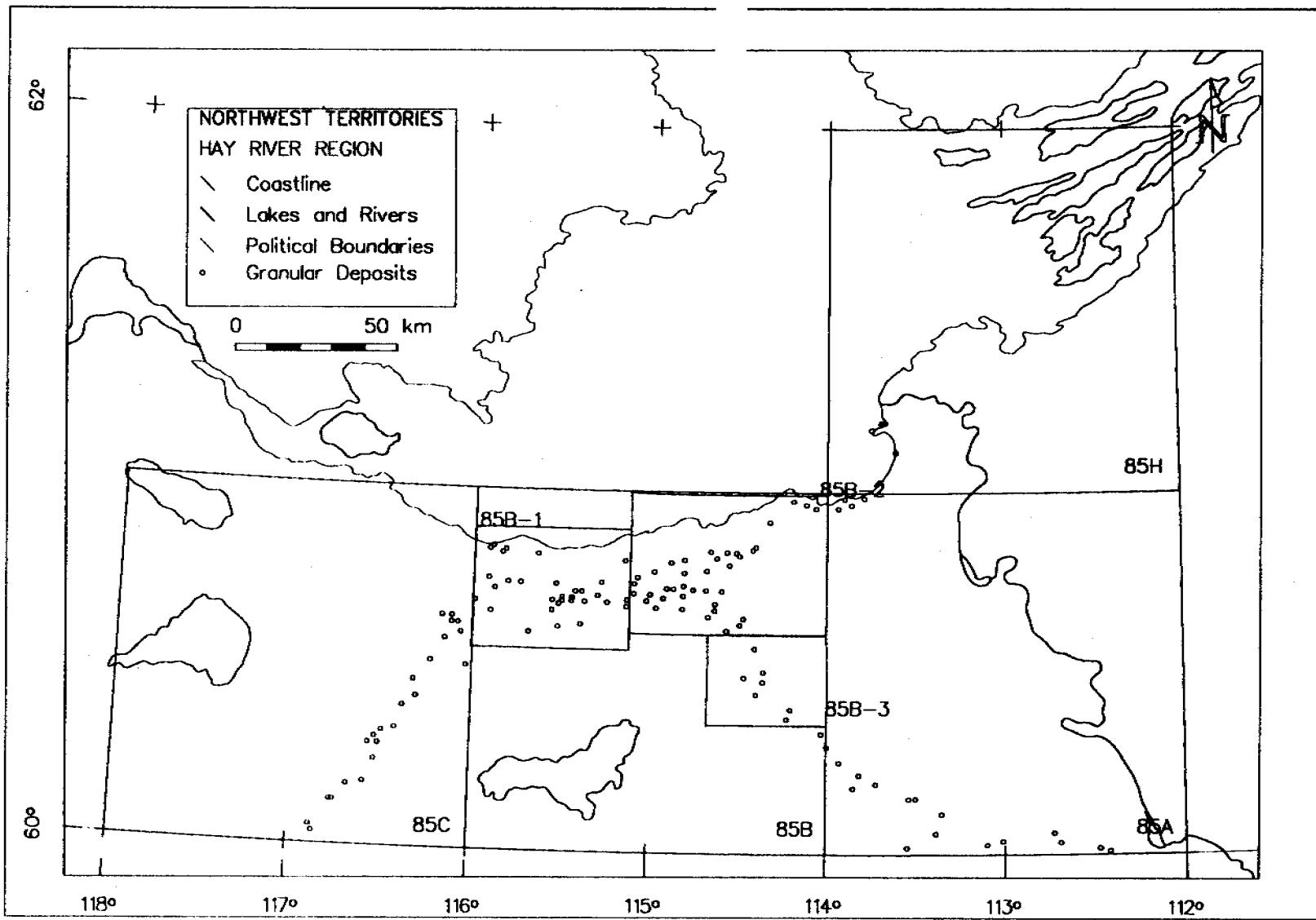
**For the purposes of the field program, District Deposit Maps were created showing all recorded sites within that region (See figure 2.1,2.2). The District maps were then broken down into several local maps (See figure 2.3) with each deposit labelled with it's associated source name from the deposit database. This enables individual deposits to be easily identified, compared with the full-sized NTS map sheets maintained by the Districts and cross-referenced with the Deposit Summary Sheets.**

**FIGURE 2.1 - INUVIK DISTRICT GRANULAR DEPOSITS**

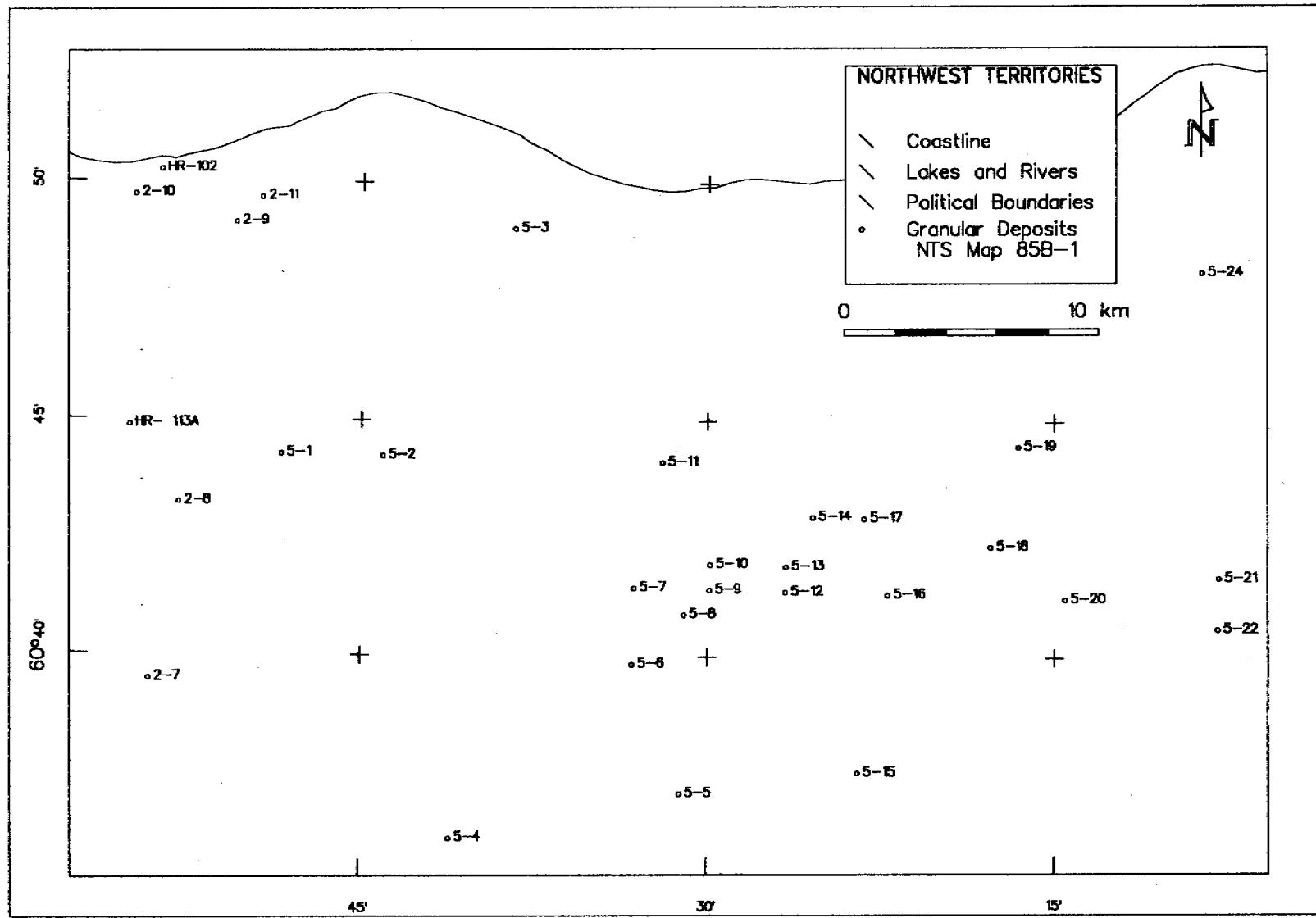


not a very  
good legend<sup>6</sup>

**FIGURE 2.2 - SOUTH SLAVE DISTRICT GRANULAR DEPOSITS**



**FIGURE 2.3 - SOUTH SLAVE GRANULAR DEPOSITS:LOCAL MAP**



## **SECTION 3.0 - FIELD PROGRAM EVALUATION**

The field portion of the program commenced on July 18, 1993. A laptop computer with *inFOcus/QUIKMap* and the databases was taken along to minimize the amount of time required to add the new information to the main system upon return and to demonstrate the system's capabilities. The field program consisted of travelling to the district offices in Fort Smith and Inuvik as well as the sub-district office in Hay River. Also, a brief meeting was held at the regional office in Yellowknife. An evaluation of the usefulness of the Field Data Checking Program based upon each office is given below as well as an account of the meeting with regional officials in Yellowknife. Several questions and recommendations were raised regarding the databases and the GIS system. These concerns are addressed in the following sections.

### **3.1 - FORT SMITH DISTRICT OFFICE**

Four days were spent in Fort Smith updating the granular databases. A meeting was held with the RMO and the district manager to discuss with them the purpose of the trip as well as give a demonstration of database and GIS systems. Both were interested in the Northern Granular Resources Inventory Program. Reports by Hardy Associates Ltd. and Ripley, Klohn & Leonoff for the South Slave region were added into the databases. As well, several local sites were visited to obtain additional information regarding current activity,

status, location, access, etc. Each of these sites was photographed for documentation purposes and copies can be obtained from the Geotechnical Advisor at DIAND Headquarters. In total, 6 additional sites and updated information for 4 others in the region were catalogued. See Appendix B for the updated deposit summary sheets. The RMO offered to continue to gather additional information regarding granular sources as part of his site inspection, sending that data to DIAND Headquarters to be added into the database. Having district involvement in data collection is the best way of maintaining an up-to-date database. A database of current land use permits was also obtained for future use.

### **3.2 - HAY RIVER SUB-DISTRICT OFFICE**

Approximately one week was spent in Hay River adding information to the databases. The GIS and database systems were shown to RMOs. They suggested that the usefulness of the current basemaps could be increased with the addition of more geographic features such as roads, towns and railways. These features could be added by digitizing existing maps. These additions would make deposit identification easier since a great number of the granular sources are located close to these features. The possibility of adding these objects is discussed in Section 4.1. In addition, they inquired whether detailed basemaps for specific Districts could be purchased. The Department of Energy, Mines and Resources has produced digitized NTS maps at the 1:250000 scale for all of Canada. Some of these may be available at DIAND's GIS and Special Projects Division in Yellowknife.

In total, additional data on 40 granular sources was added to the deposit database (See Appendix B). Data on many of these deposits was obtained at the Department of Transportation (DOT) office. The Project Manager - Highway Operations Division made available all data on Highways pits in the region. He is very interested in receiving any granular materials report produced by DIAND for the South Slave region.

The Senior RMO has agreed to continue to gather information related to granular sources in the district. This will ensure that the database is as up-to-date as possible. As well, a land use permit file was acquired for future use.

### **3.3 - YELLOWKNIFE REGIONAL OFFICE**

On Friday July 30, a meeting was held with the Regional Manager and the Head of Projects and Planning to discuss the Data Checking Program and show them the capabilities of the *inFOcus/QUIKMap* system. Both were pleased with the chance to review the Northern Granular Resources Inventory Program as well as discover some of the capabilities of the GIS system. The Head of Projects and Planning was concerned about the resolution capabilities of *inFOcus* for the purposes of identifying deposit ownership. The key to having correct maps regarding the placement of deposits lies not with the GIS system itself, but with the accuracy of the original data. If co-ordinates for deposits and land boundaries are recorded in the same level of accuracy, resolution problems will not occur. For example, if the boundary of a land claim is defined using 1:250000 maps, then

deposits should be digitized at this or a more detailed scale. To date, most deposits have been digitized from 1:60000 or larger scale, so this should not be a problem. If the boundary line between two separate regions occurs at UTM 660050 Easting, all deposits close to this boundary line must be recorded with equal or greater accuracy. That is, their Eastings must also be recorded to 10's of metres or less (eg. 660030 for a deposit to the west of the boundary and 660060 for a deposit east of the boundary).

Obtained from The Head of Projects and Planning was a listing of all reports dealing with granular resources in NWT that are available at the Yellowknife office. This list will be valuable for future database compilation (See Section 4.1).

### **3.4 - INUVIK DISTRICT OFFICE**

In Inuvik, eight days were spent updating the granular databases. Assistance was extended by RMOs in data collection. In total, 32 new deposits were identified and 20 others were updated (See Appendix B). Reports by EBA Engineering Consultants Ltd., Ripley, Klohn & Leonoff Ltd. and Hardy BBT Ltd. were entered into the report catalogue. Also, several sites along the Dempster highway and west of the town of Aklavik were examined and catalogued into the database.

The RMO(Collie) working with granular sources has offered to continue to gather data for the deposit database, sending it to the Geotechnical Advisor to be entered into the deposit database. Also, a copy of quarry and land use permits was obtained for future use.

## SECTION 4.0 - RECOMMENDATIONS

Based upon my discussions with RMOs and regional officials, I have listed several short, medium and long term recommendations concerning the Pilot Field Data Collection Program, the deposit database and the *inFOcus/QUIKMap* system. These recommendations are aimed at improving the Northern Granular Resources Inventory Program.

### 4.1 - SHORT TERM RECOMMENDATIONS

1. Presently, not all regions of the North have databases within the Northern Granular Resources Inventory Program. Databases for the Yellowknife District as well as for the Baffin and Keewatin Districts should be compiled. Initially, granular materials reports located at DIAND Headquarters and the Yellowknife Regional office (a complete list is available from the Geotechnical Advisor) could be used. The search for information could then be expanded to include GNWT DOT, Public Works Canada, The Department of Transportation and Municipal and Community Affairs (MACA).
  
2. In order to increase the usefulness of the basemaps within the *inFOcus/QUIKMap* system, additional geographical features should be added. The proximity of many of the granular sources to towns, roads and railways (in southern NWT) make the addition of these features to the basemaps worthwhile. Due to the sparse nature of

populated centres and lack of extensive roads, this task could be completed in a relatively short period of time. Most features could be digitized from paper copy NTS maps at the appropriate scale (1:50000 or 1:250000).

3. In the deposit database, the field - REPORT NUMBER lists the contractor who authored the report. However, for the databases covering the areas visited, this field has not been utilized. Currently, some of the information that should occur in this field has been incorrectly placed in the field - STUDY NUMBER. This problem can easily be corrected by referencing STUDY NUMBER in the deposit database with STUDY NUMBER in the report catalogue in order to determine the correct report author.

#### 4.2 MEDIUM TERM RECOMMENDATIONS

1. One of purposes for the field program was to show RMOs the potential usefulness of the *inFOcus/QUIKMap* system as it applies to resource management and planning. Due to time considerations, only a limited examination of the system's abilities could be explored. To overcome this problem, a trial disk could be developed and sent to the districts. This program would be a self-contained computerized demonstration that would lead the user through a series of local granular deposits showing the deposit database, a site plan of each deposit based on stratigraphy and borehole logs

via *ESEBase*. This more developed GIS application will give RMOs a better understanding of the capabilities of the *inFOCUS/QUIKMap* system.

**2. Based on the actions of the District and Regional officials, the new data that has been collected and the program whereby district RMOs will assist in collection of new information, the Trial Field Data Checking Program has been a success. As a result, a similar program should be examined for other selected areas within the Northwest Territories and Yukon. The involvement of all of the districts in the collection of data will result in the Northern Granular Resources Inventory Program meeting it's objective - ensuring that adequate scientific and technical information is available for the proper management of northern granular resources.**

#### **4.3 - LONG TERM RECOMMENDATIONS**

**1. Discussions with the RMO in Inuvik have revealed a need to adopt a standard naming convention for granular sources. Currently, deposits are named according to nearby kilometre posts, names adopted by various reports, etc. This method does result in different reports referring to the same source using different names (See South Slave reports by Thurber(1987) and RKL(1974)). Perhaps a single naming convention for all of the North is not feasible or practical. However, it might be possible to adopt one style of naming deposits based on local districts.**

- 2. Complete borehole databases should be compiled for each District using *ESEBase* - the geotechnical borehole database. The addition of borehole data and other lab analysis to the computerized system will help complete the information and permit modelling of source development and extraction operations.**
  
- 3. A complete series of NTS digitized maps should be acquired for use in conjunction with the *inFOcus/QUIKMap* system. These maps would yield a greater amount of geographical detail than the currently available basemaps provide.**

## BIBLIOGRAPHY

- Eddy, Brian 1993. Northern Granular Resources Desktop Mapping System - User's Guide. Report to Department of Indian Affairs and Northern Development.
- ESL Environmental Sciences Limited. 1990. QUIKMap - Version 2.50 USER'S GUIDE. Sidney, British Columbia.
- Gowan, Robert J. 1990. Northern Granular Resources Inventory Program. Technical paper in Workshop Proceedings: Granular Resources Requirements for Proposed Mackenzie Valley Pipeline. Stanley Associates Engineering Ltd.
- Paquette, Carlene. 1993. Granular Resource Management Program Database Standardization and Documentation. Report prepared for Department of Indian and Northern Affairs.

## APPENDIX A - DEPOSIT DATABASE SUMMARY CHART

### Part A: Deposit Location and Status

Index	Field Name	Field Abbreviation	Field Definition
AA1	Study Number	STUDY_NO	Each source has been assigned a unique study identifier number, to serve as a link to other databases (e.g. the report catalogue, and ESEBase borehole database). This number identifies the study in which the source was first described in detail and provides a link to INAC's granular resource study catalogue database. The number consists of an alphabet prefix representing the sponsor of the report (4 characters), the year of the study (2 digits), and the geographic location or area (up to 6 characters), (e.g. INAC87PL).
AA2	Report Number	REPORT_NO	Each source has been assigned a unique report identifier number, to serve as a link to other databases (e.g. the report catalogue, and ESEBase borehole database). This number consists of an alphabet prefix representing the contractor who authored the report (4 characters), the year of the report (2 digits), and the geographic location or area (up to 6 characters), (e.g. EBA87PL).
AA3	Study Order	STUDY_ORDR	A unique study identifier number which serves as a link to other databases (e.g. Report Catalogue, ESEBase Borehole database). This number consists of an eight character field, with the first four characters an alphabetic prefix representing the geographical location of the database, followed by a dash and a three digit study number. The three digit number is derived from the chronological listing of all reports containing granular resource data from the study area. (e.g. NAHC-001: North Alaska Highway Corridor - earliest report) This field is used with transportation corridors.
AA4	Study Reference	STUDY_REF	A list of other study numbers referring to reports which have more information on the source.
AB1	New Source Number	N_SOURCE_N	New source number assigned to the source by the original database creator to avoid confusion and create unique source identification numbers.
AB2	Source Number(s)	SOURCE_NO	Each source has been assigned a unique source identifier number, normally the number of the source in the original study which located the source, which will serve as a link to other databases (e.g. ESEBase borehole database). This number consists of an alphanumeric sequence of up to twelve digits (e.g. 87-P-12).
AB3	Source Reference	SOURCE_REF	A list of other source numbers related to the source described.
AC	NTS Map Reference	NTS_REF	The National Topographic Series (NTS) 1:50,000 scale map reference number of the map containing the majority of the outlined deposit (e.g. 107A/15).
AD	Local Names	LOCAL_NAME	Many sources are known locally by a name or more than one names, rather than the designated source number. Although these names may vary over time or be duplicated between sources, they should be recorded as is (e.g. Callison Pit).

Index	Field Name	Field Abbreviation	Field Definition
AE	Map Digitizer Number	MAP_DIG_NO	A unique five digit identifier number, to be assigned by INAC, which identifies a data set of points, lines, or polygons to be digitized from the location plan. This number links the granular deposit database to INAC's spatial database system.
AF	Location Map/Plan Scale	LOCMAP_SC	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).

The next thirteen fields provide location details for the source, including Universal Transverse Mercator (UTM) coordinates, and highway kilometre posts. In each case, the coordinates are normally determined for the approximate centre of the source, unless otherwise stated.

Index	Field Name	Field Abbreviation	Field Definition
AG	Location	LOCATION	The descriptive location of the source relative to a geographic feature (e.g. 500m north of Rat Lake).
AH1	Centre Zone (UTM)	CN_ZONE	The UTM zone of the centre of the enclosing boundary (e.g. 08).
AH2	Centre Northing (UTM)	CN_NORTH	The UTM grid line of the centre of the enclosing boundary (e.g. 7602500).
AH3	Centre Easting (UTM)	CN_EAST	The UTM grid line of the centre of the enclosing boundary (e.g. 476321).
AH4	Centre Latitude	CN_LAT_DEG	The latitude in decimal degrees of the centre of the enclosing boundary (e.g. 70.72345).
AH5	Centre Longitude	CN_LON_DEG	The longitude in decimal degrees of the centre of the enclosing boundary (e.g. 135.53926).
AI1	Corridor Number	CORR_NO	The number (i.e. Territorial Highway number, e.g YT #5, where appropriate).
AI2	Corridor Name	CORR_NAME	The name of the transportation route within whose corridor the deposit occurs (e.g. Robert Campbell Highway; Foothills Pipeline - Dempster Lateral).
AJ	Kilometre-Post	KILO_POST	The kilometre-post (KP) of the point along the transportation corridor at which access is relatively direct to the deposit, or the most nearly adjacent point on the corridor to the location of the deposit.
AK1	Offset Distance	OFFSET_DIS	The distance in meters from the corridor centreline to the centre of the deposit, determined facing towards the increasing kilometre-post (e.g. 35; 1500).
AK2	Offset Direction	OFFSET_DIR	The direction from the corridor to the deposit, determined facing towards the increasing kilometre-post (e.g. L[eft]; R[ight]).
AL	Access Length	ACC_LENGTH	The distance along the above described access route from the corridor to the deposit. Ideally, this should be the same as the offset distance; however, where this is not possible due to steep slopes or rivers, the access distance can vary significantly from offset (e.g. 40; 1250).

Index	Field Name	Field Abbreviation	Field Definition
AM	Source Access	ACCESS	A short description of the most practical route leading from the corridor to the deposit. Where the access route does not lead directly from the corridor to the source, the KP of the corridor at the location of the access route should be given (e.g. series of seismic cutlines; along north bank of river; follows ridge crest from KP 265.7; shorter but steeper alternative at KP 576).

Index	Field Name	Field Abbreviation	Field Definition
AN	Condition	CONDITION	A description of the type and condition of the access route (e.g. seismic line; undeveloped; winter road; ice road).
AO	Area	AREA	The total areal extent, in hectares, of potentially usable granular resources which comprise the deposit (e.g. 1; 10; 100).
AP	Site Plan Scale	SIT_PL_SC	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).
AQ	Site Plan Digitizer Number	SIT_PL_DN	A unique five digit identifier number or series of numbers, to be assigned by INAC, which identifies a dat set of points, lines or polygons to be digitized from the site plans. The number links the report catalogue database to INAC's spatial database system.
AR	Land Tenure	LAND_TENUR	The legal status of the land upon which the deposit is located (e.g. Inuvialuit 7(1)a; private; Territorial).
AS	Status	STATUS	The current status of the deposit in terms of development of granular resources (e.g. active; inactive; abandoned; depleted; undeveloped; stripped; unproven).
AS1	Priority for Future Study	STUDY_PRI	Priority of granular source to receive further study (e.g. high).
AT	Stockpile Type	STOCK_TYPE	A qualitative description of the processed materials on site (e.g. 38mm screened gravel).
AU	Stockpile Quantity	STOCK_QUAN	An estimate of the quantity stockpiled at a site, at the time of the last record update.
AW	Past Use	PAST_USE	A summary of any known previous source development or exploitation activity in terms of type and amount of material removed and use of material (e.g. 12,000 cd.m of silty sand removed by YTG in 1979 for gravel surfacing).
AW1	Excavated Volume for Highway	VOL_HWY	This is an estimate of the volume of material which was removed from the deposit for the construction of the highway.
AW2	Excavated Volume for Pipeline	VOL_PL	This is an estimate of the volume of material which was removed from the deposit for the construction of the Interprovincial Pipeline.
AX	Performance Rating	PERF_RATIN	A summary of any known assessment of the performance of previously used material from the source (e.g. poor binding, segregates with minimal traffic).

## Part B: Source Investigation and Description Information

Index	Field Name	Field Abbreviation	Field Definition
BA	Investigation Level	INVEST_LEV	The greatest level of detail of previous site investigation work at the subject deposit (e.g. airphoto interpretation; reconnaissance; exploratory drilling; delineation drilling; production drilling).
BB	Last Investigation Date	INVEST_DAT	The year in which the most recent site investigation work was completed.
BC	Geophysical Data	GEOPH_DATA	The type and length of any geophysical surveys completed at the deposit in format: TYPE: LINE LENGTH (e.g. EM-31 : 1550 m).
BD	Test Hole Density	TH_DENSITY	The number of boreholes plus the number of test pits divided by the estimated source area (Field AP). Exposures are uncommon, but are added to test holes when they are present.

**Subsurface Data:** The number, and range and average depth of subsurface penetration of various site investigation methods.

Index	Field Name	Field Abbreviation	Field Definition
BE	Boreholes: Number	BH_NO	The total number of boreholes (augerings, borings, coreholes, etc.) completed and logged within, or immediately adjacent to the deposit, which provide subsurface information defining the type, extent and quality of granular materials.
BF	Boreholes: Depth	BH_DEPTH	A listing of the minimum, average and maximum depth of penetration of the total collection of boreholes for the deposit, in tenths of metres (e.g. 03.1-05.6-10.3).
BG	Testpits: Number	TP_NO	The total number of hand- or equipment-excavated testpits or trenches completed and logged within, or immediately adjacent to the deposit, which provide subsurface information defining the type, extent and quality of granular materials.
BH	Testpits: Depth	TP_DEPTH	A listing of the minimum, average and maximum depth of penetration of the total collection of testpits for the deposit, in tenths of metres (e.g. 0.5-2.6-5.3).
BI	Exposures: Number	EX_NO	The total number of natural or man-made exposures or outcrops (e.g. on steep slopes, stream-banks; or exposed pit faces, cutbanks), within, or immediately adjacent to the deposit, which have been logged to provide subsurface information defining the type, extent and quality of granular materials.
BJ	Exposures: Depth	EX_DEPTH	A listing of the minimum, average and maximum depth of subsurface materials exposed in the total collection of exposures for the deposit, in tenths of metres (e.g. 01.5-06.1-15.0).
BK	Data Quality	DATA_QUAL	A subjective description of the usefulness of the data with respect to the preparation of the source database.

**Source Description:** A brief summary of the physical setting of the deposit which will aid in the analysis and understanding of the type, extent, quality and uniformity of the available granular materials and the suitability of the deposit for development and exploitation.

Index	Field Name	Field Abbreviation	Field Definition
BL	Generic Origin	GENERIC_OR	The environment of deposition or geologic process believed to be responsible for the formation of the subject surficial feature or deposit comprised of granular materials (e.g. alluvial; fluvial; glacial; glaciofluvial; glaciomarine; lacustrine).
BM	Landform	LANDFORM	The type of surficial feature comprising the subject granular materials, within which geologic conditions are interpreted to be relatively uniform or are variable within limits characteristic of the type of feature (e.g. delta; esker; fan; kame; outwash plain; terrace).
BN	Topography	TOPOGRAPHY	A general description of the collective physical features, relief and contour of the area (e.g. flat, gently rolling, rolling, hummocky, undulating, ridged, dissected, plateau, mountainous).
BO	Slope	SLOPE	A general description of the slopes on and immediately adjacent to the deposit in terms of type (e.g. simple; compound; complex), degree (e.g. flat; gentle; moderate; steep; precipitous) and direction (e.g. to NNW).
BP	Area Drainage	DRAINAGE	A general description of the general direction and apparent condition (e.g. well, moderate; poor; saturated; flooded) of surface and subsurface drainage at the site (e.g. SSE-moderate, flooded to S).
BQ	Vegetation	VEGETATION	A general description of the most significant features of the vegetation cover on and immediately adjacent to the deposit which may provide an indication of the type of materials within the deposit, the presence or absence of permafrost or wet conditions, or potential site development or restoration difficulties. Vegetation should be described, as appropriate, in terms of age, size or complexity (e.g. mixed; sapling; mature), density (e.g. nil; sparse; moderate; dense) and type (e.g. poplar; black/white spruce; jack pine; willow) for each tree cover, understorey and ground cover (e.g. mature mixed poplar and white spruce to 15 m, few tamarack /sparse poplar saplings /dense bearberry, sparse sphagnum and sedges).
BR	Permafrost Features	PERMAFROST	A general description of surface and/or subsurface features which demonstrate or indicate the presence of permafrost conditions within or adjacent to the deposit (e.g. low-centre polygons and thermokarst to W; sparse stunted black spruce and thick sphagnum; trace Vx in 2 BHs).
BS	Active Layer Thickness	ACT_LAY	A listing of the minimum, average and maximum measures thickness of the seasonally thawed and frozen active layer within and adjacent to the deposit, determined from the boreholes, testpits, probings and exposures which encountered apparently perennially frozen materials, in tenths of metres (e.g. 0.2-1.0-1.8).
BT	Site Description Date	DESC_DATE	The date on which the site description was completed, or where more than one site visit was involved, the date upon which the maximum active layer thickness was measured, presented in the format: yy-mm-dd (e.g. 79-09-13).

**Source Stratigraphy:** A general description of the type and range and average thickness of the main surficial materials units comprising the granular source, based on subsurface information from only those boreholes, testpits and exposures which encountered granular materials.

Index	Field Name	Field Abbreviation	Field Definition
BU	Granular Type	GRAN_TYPE	A brief description of the type of granular materials encountered within the area delineated as a granular source (e.g. GRAVEL AND SAND - well-graded; SAND - gravelly, some silt).

Index	Field Name	Field Abbreviation	Field Definition
BV	Granular Thickness	GRAN_THICK	A listing of the minimum, average and maximum thickness of granular materials over the deposit, determined from the boreholes, testpits and exposures in the area delineated as the granular source, in tenths of metres (e.g. 01.0-05.2-12.8).
BW	Overburden Type	OB_TYPE	A brief description of the type of overburden materials present over the area containing granular materials (e.g. PEAT - over silt).
BX	Overburden Thickness	OB_THICK	A listing of the minimum, average and maximum thickness of overburden materials over the deposit, determined from the boreholes, testpits and exposures which encountered granular materials, in tenths of metres (e.g. 0.0-1.2-2.8).
BY	Underburden Type	UB_TYPE	A brief description of the type of materials underlying the granular materials in the source area. (e.g. CLAY (till) - wet).
B1	Development Constraints	DEV_CONSTR	A general indication of any potential constraints to short or long term development of the source, expressed in terms of the type of constraint, (e.g. access; materials; drainage; permafrost; environmental; socio-economic) with details, as appropriate, on the nature and impact of the constraint.
B2	Development Potential	DEV_POTENT	A summary comment, expressed in qualitative terms, of the general suitability of the deposit for development. The potential is based essentially on the anticipated overall extent and quality of available granular materials, but also considers the level of detail of existing site investigation, the presence, extent and type of overburden, drainage and permafrost conditions, other surface or sub-surface characteristics and general accessibility (e.g. unknown; unsuitable; poor; fair; good; excellent).

### Part C: Test Results and Material Quantity

**Test Results:** A summary of the cumulative results of laboratory testing, completed in accordance with ASTM or CSA standard testing procedures, of samples from the deposit in terms of test name, number of samples tested, and ranges and averages of test results.

Index	Field Name	Field Abbreviation	Field Definition
CA	Unified Soil Classification: Number	USC_NO	The number of samples classified under the Unified Soil Classification (USC) system, in accordance with ASTM standard D 2487 (e.g. 121).
CB	Unified Soil: Class	USC_CLASS	The range and most common material types sampled from the deposit as classified by the Unified Soil Classification (USC) system and presented in the order: poorest/most/best (e.g. SM-SP/SP-GP/GW-..).
CC	Moisture (%): Number	MC_NO	The number of samples for which soil Moisture Content (MC%) has been determined, in accordance with ASTM standard D 2216 (e.g. 102).
CD	Moisture (MC%): Results	MC_DATA	The range and average soil Moisture Content (MC%), based on percentage of dry soil weight, for the collection of samples tested, presented in the format: minimum-average-maximum MC% (e.g. 03-12-021).
CE	Sieve Analysis: Number	SIEVE_NO	The number of samples for which particle-size analysis testing has been completed, in accordance with ASTM standards D 421 and D 422 (eg. 111).

Index	Field Name	Field Abbreviation	Field Definition
CF	Oversize (O/S %)	OVERSIZE	The range and average percentage of oversized (O/S %) material; that is, cobble- and boulder-size material (Size Fraction over 75mm diameter), in pit run material from the source, as determined by field estimates, field sieving, or laboratory testing (e.g. 00-10-35).
CG	Gravel (Grav %)	GRAVEL	The range and average percentage of gravel-sized (Grav %) material; that is, material in the Size Fraction 4.76 mm - 75 mm diameter, as determined by particle-size analysis testing (e.g. 05-45-85).
CH	Sand (Sand %)	SAND	The range and average percentage of sand-sized (Sand %) material; that is, material in the Size Fraction 0.074 mm - 4.76 mm diameter, as determined by particle-size analysis testing (e.g. 25-37-52).
CI	Fines (Fine %)	FINES	The range and average percentage of silt- and clay-sized (Fine %) material; that is, material in the Size Fraction under 0.074 mm diameter, as determined by particle-size analysis testing (e.g. 02-07-12).
CJ	D-50	D_50	The range and average Median Diameter (D-50), in microns, of samples subjected to particle-size analysis testing (e.g. 00210-01200-03600).
CK	Petrogr. No.: Number	PETRO_NO	The number of samples for which Petrographic Analysis testing has been completed to determine the Petrographic Number (PN) of samples from the deposit, in accordance with CSA standard A23.2, Appendix B (e.g. 01,10).
CL	Petrogr. No.: Results	PETRO_DATA	The range and average Petrographic Number (PN) for the deposit, based on petrographic analysis, for the above collection of samples, presented in the format: minimum-average-maximum (e.g. 102-114-123).
CM	Other Tests	OTHERTESTS	A listing of up to eight other types of tests conducted on samples from the deposit, the number of samples tested, and the average values of the test results, presented in the format: test (11 digits)-number (2 digits)-average results (4 digits). Typical entries, described in more detail below, include: (e.g. Organ_Plate-02-03.5; Durab_Index-01-0063; React_Pr_3M-01-0.08%; LA_Abrasion-05-23.2; Sulph_Sd_Mg-03-05.8; RelDensity-03-2.64; Absorption%-06-1.11; Other Tests-11-vary).

### Test Summary Chart

Test Name	Field Definition
Absorption%	The number and average of all results, expressed in terms of weight percentage, of all Absorption testing on samples from the deposit, in accordance with CSA standard A23.2-12A (e.g. Absorption%-12-01.1).
Cleaness(C/F)	The number and average of all results for Cleaness of Aggregate testing on samples of coarse or fine aggregate from the deposit, in accordance with California Test Method 224 (e.g. Cleaness(C)-04-50.5).
Durab_Index	The number and average of all results of durability index testing on samples from the deposit (e.g. Durab_Index-03-65.3).
LA_Abrasion	The number and average of all results, expressed in percentage of weight loss, of Los Angeles (LA) Abrasion Testing on samples from the deposit, in accordance with CSA A23.2-16A (e.g. LA Abrasion-03-26.3).

Test Name	Field Definition
Organ_Plate	The number and average of all results, expressed in terms of reference plate number, of Organic Plate testing on samples from the deposit (e.g. Organ Plate-05-03.2).
Org_Content	The number and average of all results, expressed in terms of percentage weight loss, of Organic Content testing, in accordance with the Alaskan test method (e.g. Org Content-12-00.5).
Sulph_Sd_Mg Sulph_Sd_Na	The number and average of all results, expressed in percentage weight loss, of all Sulphate Soundness (Magnesium or Sodium, Mg/Na) testing on samples from the deposit, in accordance with CSA standard A23.2-9A (e.g. Sulph Sd Na-02-03.2).
React_PR/MB_3M/6M/12/18	The number and average of all results, expressed in terms of percentage expansion, of alkali-aggregate reactivity testing on concrete prisms, or mortar bars, after three, six, twelve or eighteen months, in accordance with CSA A23.2-14A-M77 or ASTM C-227, respectively (e.g. React_Mb_3M-02-.085).
Rel_Density	The number and average of all results, expressed in terms of saturated surface dry conditions, of all Relative Density testing on samples from the deposit, in accordance with CSA standard A23.2-12A (e.g. Rel Density-12-2.62).

**Material Quantity (all in cubic metres):** Calculated and/or estimated volumes of granular material contained in the deposit, expressed in terms of DIAND-designated material classes, and in terms of confidence level of the quantities determined in accordance with the following definitions:

**Class:** DIAND has developed a simple classification system for granular resources, presented in the draft Territorial and Public Lands Pits and Quarries Regulations, which considers both the Unified Soil Classification of materials, and their most suitable end use. The quantity estimates should be given, where possible, in terms of each of the five material classes, as defined in each class field (see CQ to CU below), and in terms of the total (see CV) for the deposit.

**Proven Volume:** Material in each class whose occurrence, distribution, thickness and quality is supported with a high degree of confidence by ground truth such as geotechnical drilling, test pitting, and/or exposed stratigraphic sections. The thickness of material encountered in a borehole is usually extrapolated to a radius not exceeding 50 metres around the hole, with adjustments applied by assessing landform type and anticipated or known deposit homogeneity.

**Probable Volume:** Material in each class whose existence and extent is inferred on the basis of several types of direct and indirect evidence, including topography, landform characteristics, airphoto interpretation, extrapolation of stratigraphy, geophysical data and/or limited sampling. Additional investigation is needed to determine reliable material volume. The volume is estimated by projecting known parameters (typically those proven resources) over the entire deposit, with adjustments for landform type, anticipated homogeneity and other site characteristics such as ice content and drainage.

**Prospective Volume:** Material in each class whose existence is merely speculated on the basis of limited indirect evidence, such as airphoto interpretation and/or general geological considerations. The volume is typically estimated for the geomorphic feature, with adjustments for anticipated site and deposit characteristics.

The material quantities are presented in the following format: CLASS: PROVEN/PROBABLE/PROSPECTIVE VOLUMES.

Index	Field Name	Field Abbreviation	Field Definition
CN	Class 1	CLASS1	The calculated and/or estimated volumes of excellent quality granular material, consisting of clean, well-graded, structurally sound sands and gravels suitable for use as high quality surfacing materials, or as high quality asphalt or concrete aggregate, with a minimum of processing.
CO	Class 2	CLASS2	The calculated and/or estimated volumes of good quality granular material, consisting of well-graded sands and gravels with varying, limited quantities of silt (fines), and suitable for use as good quality base and surface course aggregates, embankment or structure-supporting fill. May be suitable for production of concrete aggregate with extensive processing except where deleterious material is present.
CP	Class 3	CLASS3	The calculated and/or estimated volumes of fair quality granular material, consisting of generally poorly-graded sands and gravels with or without substantial quantities of silt (fines), and suitable for fair quality general fill (subbase, base, embankment fill) for roads, flexible foundation pads, or lay-down yards.
CQ	Class 4	CLASS4	The calculated and/or estimated volumes of poor quality granular material, consisting of generally poorly-graded, silty fine sands with minor gravels, with or without weak particles and deleterious materials, and suitable for marginal general (non-structural) fill.
CR	Class 5	CLASS5	The calculated and/or estimated volumes of fair to excellent quality bedrock, felsenmeer, talus or similar extremely coarse granular material, suitable for quarrying and processing to produce potentially excellent construction materials ranging from general fill, to concrete aggregate, building stone, and erosion control materials such as rip rap or armour stone.
CS	Total Volume	TTL_VOL	The calculated and/or estimated volume of all of the above classes of granular materials potentially available in the deposit.
CT	Proven Volume	PROV_VOL	The volume of material from all classes whose occurrence, distribution, thickness and quality is supported with a high degree of confidence by ground truth such as geotechnical drilling, test pitting, and/or exposed stratigraphic sections. The thickness of material encountered in a borehole is usually extrapolated to a radius not exceeding 50 metres around the hole, with adjustments applied by assessing landform type and anticipated or known deposit homogeneity.
CU	Probable Volume	PROB_VOL	The volume of material from all classes whose existence and extent is inferred on the basis of several types of direct and indirect evidence, including topography, landform characteristics, airphoto interpretation, extrapolation of stratigraphy, geophysical data and/or limited sampling. Additional investigation is needed to determine reliable material volume. The volume is estimated by projecting known parameters (typically those proven resources) over the entire deposit, with adjustments for landform type, anticipated homogeneity and other site characteristics such as ice content and drainage.
CV	Prospective Volume	PROS_VOL	The volume of material from all classes whose existence is merely speculated on the basis of limited indirect evidence, such as airphoto interpretation and/or general geological considerations. The volume is typically estimated for the geomorphic feature, with adjustments for anticipated site and deposit characteristics.
CW	Total Recoverable	TTL_RECov	The calculated or estimated volume of useable granular material from the deposit, based on the maximum areal extent of useable material in the deposit, and the anticipated maximum recoverable thickness, as determined from test pit and borehole information or inferred from assessment of deposit and site characteristics.

Index	Field Name	Field Abbreviation	Field Definition
CX	Annual Recoverable	ANN_RECov	The calculated or estimated volume which is likely to be recovered in a single extraction season, based on the maximum areal extent of useable material in the deposit, and the anticipated maximum thickness of annual thawing of surficial materials, as determined from test pit and borehole information or inferred from assessment of deposit and site characteristics.

## APPENDIX B - UPDATED DEPOSIT SUMMARY SHEETS

***** PART A:LOCATION AND STATUS *****			
STUDY NUMBER :INAC98DEMP	LOCAL NAMES :	NEW SOURCE NUMBER : NTS MAP REFERENCE :106M/7 MAP DIGITIZER NUMBER : MAP LOC./PLAN SCALE : 50000	
SOURCE NUMBER(S) :KM-97			
STUDY ORDER :			
STUDY REFERENCE :			
SOURCE REFERENCE :			
----- Location Details -----			
LOCATION :16 km E of Ft. McPherson		CENTRE ZONE(UTM) : 8	
CORRIDOR NAME: Dempster highway		CENTRE EASTING(UTM) : 517200	
CORRIDOR NUMBER :8		CENTRE NORTHING(UTM) :7482500	
OFFSET DISTANCE :		OFFSET DIRECTION :R	
ACCESS LENGTH :		KILOMETRE-POST :97	
SOURCE ACCESS :none			
CONDITION :	DIGITIZER NUMBER :		
LAND TENURE :Gwich'in Land	STATUS :undeveloped		
STOCKPILE TYPE :	SITE PLAN SCALE :		
PAST USE :	AREA :		
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0		
PERFORMANCE RATING :	-FOR PIPELINE : 0		
	PRIORITY FOR FUTURE STUDY :low		
***** PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION *****			
INVESTIGATION LEVEL :Exploration		LAST INVESTIGATION DATE :1989	
GEOPHYSICAL DATA :		TEST HOLE DENSITY :	
----- Subsurface Data -----			
BOREHOLES:NUMBER :2	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :poor
BOREHOLES:DEPTH :6.1//6.1	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	
----- Source Description -----			
ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/15/89	GENERIC ORIGIN :glaciofluvial	
SLOPE :fairly flat		LANDFORM :esker	
AREA DRAINAGE :poor		TOPOGRAPHY :gently rolling	
VEGETATION :black spruce			
PERMAFROST FEATURES :visible ice			
----- Source Stratigraphy -----			
GRANULAR TYPE :sandy GRAVEL	OVERBURDEN THICKNESS :1.2//1.5		
GRANULAR THICKNESS :3.4//4.0	OVERBURDEN TYPE :organics over silt		
DEVELOP. POTENTIAL :poor	UNDERBURDEN TYPE :silt		
DEVELOP. CONSTRAINTS :permafrost			
***** PART C:TEST RESULTS AND MATERIAL QUALITY *****			
----- Test Results -----			
UNIFIED SOIL:CLASS :			
CLASSIFICATION # :			
PETRO NO. :0	MOISTURE(%):NUMBER :	D-50	
SIEVE ANAL. # :0	MOISTURE(%):RESULTS :	OVERSIZE(%):	
PETROGR. NO.:RESULTS :		GRAVEL(%):	
OTHER TESTS :		SAND(%):	
		FINES(%):	
----- Material Quantity -----			
CLASS 1 :	TOTAL VOLUME :15000	PROSPECTIVE VOLUME :	
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :	
CLASS 3 :15000	PROBABLE VOLUME :15000	ANNUAL RECOVERABLE :	
CLASS 4 :			
CLASS 5 :			

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :IANC89DEMP  
 SOURCE NUMBER(S) :KM-43.8  
 STUDY ORDER :  
 STUDY REFERENCE :  
 SOURCE REFERENCE :

LOCAL NAMES :Midway Lake

NEW SOURCE NUMBER :  
 NTS MAP REFERENCE :106M/3  
 MAP DIGITIZER NUMBER :  
 MAP LOC./PLAN SCALE : 50000

----- Location Details -----

LOCATION :along the Dempster highway at km 43.8  
 CORRIDOR NAME: :Dempster highway  
 CORRIDOR NUMBER :8  
 OFFSET DISTANCE :600  
 ACCESS LENGTH :600  
 SOURCE ACCESS :constructed haul road

CENTRE LATITUDE : 0.00000  
 CENTRE LONGITUDE : 0.00000  
 CENTRE ZONE(UTM) : 8  
 CENTRE EASTING(UTM) :481645  
 CENTRE NORTHING(UTM) :7456517  
 OFFSET DIRECTION :R  
 KILOMETRE-POST :43.8

CONDITION :excellent  
 LAND TENURE :Gwich'in Land  
 STOCKPILE TYPE :20 mm crushed  
 PAST USE :borrow site/crushed gravel  
 STOCKPILE QUANTITY :2000  
 PERFORMANCE RATING :good

DIGITIZER NUMBER :  
 STATUS :active;developed  
 SITE PLAN SCALE :2000  
 AREA :10  
 EXCAVATED VOLUME-FOR HIGHWAY : 0  
 -FOR PIPELINE : 0  
 PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Delineation Drilling  
 GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1989  
 TEST HOLE DENSITY :1.1

----- Subsurface Data -----

BOREHOLES:NUMBER :26 TESTPITS:NUMBER :2  
 BOREHOLES:DEPTH :1.2-6.6-18.3 TESTPITS:DEPTH :3.7//6.7  
 EXPOSURES:NUMBER :  
 EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :07/15/89  
 SLOPE :moderate to N  
 AREA DRAINAGE :poor  
 VEGETATION :Willows  
 PERMAFROST FEATURES :visible ice,Vs,Vr,Vx  
 GENERIC ORIGIN :glaciofluvial  
 LANDFORM :terrace  
 TOPOGRAPHY :undulating

----- Source Stratigraphy -----

GRANULAR TYPE :GRAVEL AND SAND - some silt  
 GRANULAR THICKNESS :0.0-4.6-15.6  
 DEVELOP. POTENTIAL :good  
 DEVELOP. CONSTRAINTS :permafrost, water table  
 OVERBURDEN THICKNESS :0.0-1.5-4.0  
 OVERBURDEN TYPE :peat,organic silt,clay,ice  
 UNDERBURDEN TYPE :clay

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :sc/sc-sm/gw  
 CLASSIFICATION # :81  
 PETRO NO. : 0  
 SIEVE ANAL. # : 84  
 PETROGR. NO.:RESULTS :  
 OTHER TESTS :  
 MOISTURE(%):NUMBER :84  
 MOISTURE(%):RESULTS :05-12-31  
 D-50 :  
 OVERSIZE(%) :  
 GRAVEL(%) :0-28-76  
 SAND(%) :22-55-79  
 FINES(%) :01-17-42

----- Material Quantity -----

CLASS 1 :  
 CLASS 2 :  
 CLASS 3 :500000  
 CLASS 4 :  
 CLASS 5 :

TOTAL VOLUME :500000  
 PROVEN VOLUME :  
 PROBABLE VOLUME :500000

PROSPECTIVE VOLUME :  
 TOTAL RECOVERABLE :  
 ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC89DEMP  
SOURCE NUMBER(S) :KM-99.7  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106M/7  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 50000

----- Location Details -----

LOCATION :17.7 km E of Ft. McPherson  
CORRIDOR NAME: Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :  
ACCESS LENGTH :  
SOURCE ACCESS :none

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) :519900  
CENTRE NORTHING(UTM) :7482000  
OFFSET DIRECTION :R/L  
KILOMETRE-POST :99.7

CONDITION :  
LAND TENURE :Gwich'in Land  
STOCKPILE TYPE :  
PAST USE :  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :undeveloped  
SITE PLAN SCALE :12200  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Delineation Drilling  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1989  
TEST HOLE DENSITY :1.3

----- Subsurface Data -----

BOREHOLES:NUMBER :27 TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :fair  
BOREHOLES:DEPTH :1.2//7.9 TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS :  
SLOPE :unknown  
AREA DRAINAGE :poor  
VEGETATION :black spruce  
PERMAFROST FEATURES :visible ice veins

SITE DESCRIPTION DATE :07/15/89

GENERIC ORIGIN :glacial  
LANDFORM :  
TOPOGRAPHY :gently rolling

----- Source Stratigraphy -----

GRANULAR TYPE :silty SAND AND GRAVEL  
GRANULAR THICKNESS :0.7-2.8-4.9  
DEVELOP. POTENTIAL :poor to fair  
DEVELOP. CONSTRAINTS :permafrost

OVERBURDEN THICKNESS :0.3-0.8-1.2  
OVERBURDEN TYPE :organics and silt  
UNDERBURDEN TYPE :silt and clay

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :SMorSc/SMorSc/gm  
CLASSIFICATION # :51  
PETRO NO. : 0 MOISTURE(%):NUMBER :51 D-50 :  
SIEVE ANAL. # : 51 MOISTURE(%):RESULTS :06-12-24 OVERRSIZE(%):  
PETROGR. NO.:RESULTS : GRAVEL(%):01-31-52  
OTHER TESTS :Atterberg Limit:18 SAND(%):31-43-58  
FINE(%):12-26-46

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :200000  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :200000  
PROVEN VOLUME :  
PROBABLE VOLUME :200000

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC89DEMP	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :KM-115.2		NTS MAP REFERENCE :106M/8
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 50000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :along the Dempster highway at km 115.2,33-37 km E of Ft. McPherson	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) : 532200
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) : 7475850
OFFSET DISTANCE :0	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :0	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :none	KILOMETRE-POST :115.2
	OFFSET DIRECTION :R/L

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :Crown	STATUS :Undeveloped
STOCKPILE TYPE :	SITE PLAN SCALE :
PAST USE :	AREA :25
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Exploration/Delineation	LAST INVESTIGATION DATE :1989
GEOPHYSICAL DATA :	TEST HOLE DENSITY :1.1

----- Subsurface Data -----

BOREHOLES:NUMBER :40	TESTPITS:NUMBER :1	EXPOSURES:NUMBER :1	DATA QUALITY :fair
BOREHOLES:DEPTH :0.9-5.1-11.0	TESTPITS:DEPTH :/0.6/	EXPOSURES:DEPTH :/1.0/	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/15/89	GENERIC ORIGIN :glaciofluvial
SLOPE :irregular		LANDFORM :kames, eskers
AREA DRAINAGE :poor		TOPOGRAPHY :gently rolling
VEGETATION :black Spruce		
PERMAFROST FEATURES :visible ice		

----- Source Stratigraphy -----

GRANULAR TYPE :gravelly, silty SAND	OVERBURDEN THICKNESS :0.0-0.5-1.5
GRANULAR THICKNESS :0.6-4.9-11.0	OVERBURDEN TYPE :organics
DEVELP. POTENTIAL :poor to fair	UNDERBURDEN TYPE :ice;silt
DEVELP. CONSTRAINTS :permafrost; restoration problems	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :sc-sm/sw-gm/gw-gm		D-50 :
CLASSIFICATION # :67		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER :79	GRAVEL(%) :03-24-55
SIEVE ANAL. # : 75	MOISTURE(%):RESULTS :02-12-22	SAND(%) :31-58-85
PETROGR. NO.:RESULTS :		FINES(%) :06-21-44
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :500000	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :500000	PROBABLE VOLUME :500000	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC98DEMP	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :KM-132.0		NTS MAP REFERENCE : 106N/5
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 50000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :10 km west of Arctic Red River; along Dempster Highway at km 132.0	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster highway	CENTRE EASTING(UTM) : 545100
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) : 7478450
OFFSET DISTANCE :150	OFFSET DIRECTION :L
ACCESS LENGTH :	KILOMETRE-POST :132.0
SOURCE ACCESS :none	

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :undeveloped
STOCKPILE TYPE :	SITE PLAN SCALE :12200
PAST USE :	AREA :1.0
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Delineation Drilling	LAST INVESTIGATION DATE :1989
GEOPHYSICAL DATA :	TEST HOLE DENSITY :5

----- Subsurface Data -----

BOREHOLES:NUMBER :5	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :poor
BOREHOLES:DEPTH :3.0-4.1-9.1	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/15/89	GENERIC ORIGIN :glaciofluvial
SLOPE :very gentle		LANDFORM :kame
AREA DRAINAGE :poor		TOPOGRAPHY :gently rolling
VEGETATION :		
PERMAFROST FEATURES :ice viens		

----- Source Stratigraphy -----

GRANULAR TYPE :gravelly sand	OVERBURDEN THICKNESS :0.0-0.2-0.6
GRANULAR THICKNESS :1.2-2.7-5.9	OVERBURDEN TYPE :organics
DEVELP. POTENTIAL :poor	UNDERBURDEN TYPE :ice
DEVELP. CONSTRAINTS :permafrost, restoration problems	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		
CLASSIFICATION # :		
PETRO NO. :0	MOISTURE(%):NUMBER :7	D-50 :
SIEVE ANAL. # :0	MOISTURE(%):RESULTS :09-14-22	OVERSIZE(%) :
PETROGR. NO.:RESULTS :		GRAVEL(%) :
OTHER TESTS :		SAND(%) :
		FINES(%) :

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :100000	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :40000	PROBABLE VOLUME :100000	ANNUAL RECOVERABLE :
CLASS 4 :60000		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC89DEMP	LOCAL NAMES :Arctic Red River	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :KM-141		NTS MAP REFERENCE : 106N/5
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 50000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :W side of Arctic Red River; along the Dempster at km 141	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) : 552329
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) : 7470734
OFFSET DISTANCE :100	OFFSET DIRECTION :L
ACCESS LENGTH :100	KILOMETRE-POST :141.0
SOURCE ACCESS :access road off Dempster	

CONDITION :all year	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :active
STOCKPILE TYPE :pit run gravel	SITE PLAN SCALE :12200
PAST USE :borrow	AREA :8
STOCKPILE QUANTITY :500	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :poor to fair	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Delineation Drilling	LAST INVESTIGATION DATE :1989
GEOPHYSICAL DATA :	TEST HOLE DENSITY :0.9

----- Subsurface Data -----

BOREHOLES:NUMBER :7	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :poor
BOREHOLES:DEPTH :2.4-6.0-9.1	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/15/89	GENERIC ORIGIN :fluvial
SLOPE :towards river		LANDFORM :gravel terrace
AREA DRAINAGE :poor		TOPOGRAPHY :dissected
VEGETATION :black spruce, alders		
PERMAFROST FEATURES :ice encountered		

----- Source Stratigraphy -----

GRANULAR TYPE :silty gravel	OVERBURDEN THICKNESS :0.2-0.6-1.5
GRANULAR THICKNESS :0.8-1.7-3.1	OVERBURDEN TYPE :organics/clay
DEVELOP. POTENTIAL :poor	UNDERBURDEN TYPE :shale
DEVELOP. CONSTRAINTS :Permafrost;nearing depletion	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER :6	GRAVEL(%) :
SIEVE ANAL. # : 0	MOISTURE(%):RESULTS :07-11-15	SAND(%) :
PETROGR. NO.:RESULTS :		FINES(%) :
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :100000	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :100000	PROBABLE VOLUME :100000	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC89DEMP	LOCAL NAMES :Arctic Red River	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :146.8		NTS MAP REFERENCE :106N/5
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 50000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :N side of Arctic Red River along the Dempster highway at km 146.8	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: :Dempster	CENTRE EASTING(UTM) :552663
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) :7485737
OFFSET DISTANCE :335	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :335	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :pit entrance	OFFSET DIRECTION :R
	KILOMETRE-POST :146.8

CONDITION :all year	DIGITIZER NUMBER :
LAND TENURE :Guich'in	STATUS :active
STOCKPILE TYPE :20 mm pit run gravel	SITE PLAN SCALE :12200
PAST USE :borrow and crush site	AREA :5
STOCKPILE QUANTITY :4500	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :fair	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Exploration Drilling	LAST INVESTIGATION DATE :1989
GEOPHYSICAL DATA :	TEST HOLE DENSITY :0.2

----- Subsurface Data -----

BOREHOLES:NUMBER :1	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :poor
BOREHOLES:DEPTH :-6.1-	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/15/89	GENERIC ORIGIN :fluvial
SLOPE :		LANDFORM :gravel bench
AREA DRAINAGE :		TOPOGRAPHY :dissected
VEGETATION :black spruce and poplar		
PERMAFROST FEATURES :visual ice		

----- Source Stratigraphy -----

GRANULAR TYPE :sand over gravel	OVERBURDEN THICKNESS :-0.3-
GRANULAR THICKNESS :-2.1-	OVERBURDEN TYPE :organics
DEVELOP. POTENTIAL :fair	UNDERBURDEN TYPE :shale
DEVELOP. CONSTRAINTS :Permafrost	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		
CLASSIFICATION # :		
PETRO NO. : 0	MOISTURE(%):NUMBER :2	D-50 :
SIEVE ANAL. # : 0	MOISTURE(%):RESULTS :6.0-7.5-9.0	OVERSIZE(%) :
PETROGR. NO.:RESULTS :		GRAVEL(%) :
OTHER TESTS :		SAND(%) :
		FINES(%) :

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :11000	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :11000	PROBABLE VOLUME :11000	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC89DEMP	LOCAL NAMES :	NEW SOURCE NUMBER : NTS MAP REFERENCE :106N/14 MAP DIGITIZER NUMBER : MAP LOC./PLAN SCALE : 50000
SOURCE NUMBER(S) :KM-204.08		
STUDY ORDER :		
STUDY REFERENCE :		
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :70 km N of Arctic Red River	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) : 564200
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) : 7540800
OFFSET DISTANCE :	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :none	OFFSET DIRECTION :R/L KILOMETRE-POST :204.08

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :undeveloped
STOCKPILE TYPE :	SITE PLAN SCALE :
PAST USE :	AREA :20
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Exploration/Delineation	LAST INVESTIGATION DATE :1989
GEOPHYSICAL DATA :	TEST HOLE DENSITY :1.5

----- Subsurface Data -----

BOREHOLES:NUMBER :29	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :poor
BOREHOLES:DEPTH :3.0-4.3-6.1	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/15/89	GENERIC ORIGIN :glaciofluvial
SLOPE :towards creek		LANDFORM :creek bed
AREA DRAINAGE :poor		TOPOGRAPHY :gently rolling
VEGETATION :Black Spruce		
PERMAFROST FEATURES :visable ice		

----- Source Stratigraphy -----

GRANULAR TYPE :gravelly sand	OVERBURDEN THICKNESS :0.0-0.1-0.2
GRANULAR THICKNESS :0.7-2.3-5.2	OVERBURDEN TYPE :organics
DEVELOP. POTENTIAL :poor	UNDERBURDEN TYPE :sandy silt
DEVELOP. CONSTRAINTS :Permafrost;restoration problem	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :cl/sc	D-50 :
CLASSIFICATION # :2	OVERSIZE(%):
PETRO NO. : 0	GRAVEL(%):04-08-12
SIEVE ANAL. # : 2	SAND(%):28-39-50
PETROGR. NO.:RESULTS :	FINES(%):38-53-68
OTHER TESTS :	

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :273400	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :39600	PROBABLE VOLUME :273400	ANNUAL RECOVERABLE :
CLASS 4 :233800		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC98DEMP	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :KM-215.5		NTS MAP REFERENCE :107B/2W
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 50000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :along the Dempster @ km 215.5	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) : 563004
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) : 7548389
OFFSET DISTANCE :700	OFFSET DIRECTION :R
ACCESS LENGTH :500	KILOMETRE-POST :215.5
SOURCE ACCESS :haul road off Dempster	

CONDITION :all year	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :inactive
STOCKPILE TYPE :	SITE PLAN SCALE :12200
PAST USE :borrow pit	AREA :1.0
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Exploration/Delineation	LAST INVESTIGATION DATE :1989
GEOPHYSICAL DATA :	TEST HOLE DENSITY :1.5

----- Subsurface Data -----

BOREHOLES:NUMBER :5	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :fair
BOREHOLES:DEPTH :3.0-4.6-6.1	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/15/93	GENERIC ORIGIN :glacial
SLOPE :		LANDFORM :
AREA DRAINAGE :poor, pit filled with water		TOPOGRAPHY :undulating
VEGETATION :willow, poplar and black spruce		
PERMAFROST FEATURES :Black Spruce, Perched Water		

----- Source Stratigraphy -----

GRANULAR TYPE :silty sand, some gravel	OVERBURDEN THICKNESS :0.2-0.2-0.2
GRANULAR THICKNESS :1.1-2.8-5.1	OVERBURDEN TYPE :organics and silt
DEVELOP. POTENTIAL :poor to fair	UNDERBURDEN TYPE :silt
DEVELOP. CONSTRAINTS :Permafrost, very silty	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :sm/sm-sc/sm-sc		D-50 :
CLASSIFICATION # :2		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER :6	GRAVEL(%) :07-11-15
SIEVE ANAL. # : 2	MOISTURE(%):RESULTS :09-13-17	SAND(%) :53-56-58
PETROGR. NO.:RESULTS :		FINES(%) :27-34-40
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :108000	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :108000	ANNUAL RECOVERABLE :
CLASS 4 :108000		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC89DEMP	LOCAL NAMES :	NEW SOURCE NUMBER : NTS MAP REFERENCE :107B/2E MAP DIGITIZER NUMBER : MAP LOC./PLAN SCALE : 50000
SOURCE NUMBER(S) :KN239.6		
STUDY ORDER :		
STUDY REFERENCE :		
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :along Dempster Highway @ km 239.6 in Territorial Park	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: :Dempster Highway	CENTRE EASTING(UTM) :566600
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) :7567200
OFFSET DISTANCE :100 m	OFFSET DIRECTION :R
ACCESS LENGTH :100 m	KILOMETRE-POST :239.6
SOURCE ACCESS :pit entrance off highway	

CONDITION :all year	DIGITIZER NUMBER :
LAND TENURE :Territorial Parkland	STATUS :inactive
STOCKPILE TYPE :	SITE PLAN SCALE :12200
PAST USE :Borrow source	AREA :20
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Exploration/Delineation	LAST INVESTIGATION DATE :1989
GEOPHYSICAL DATA :	TEST HOLE DENSITY :1.7

----- Subsurface Data -----

BOREHOLES:NUMBER :34	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :fair
BOREHOLES:DEPTH :2.4-4.6-9.1	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/15/89	GENERIC ORIGIN :glaciofluvial
SLOPE :gentle to the west		LANDFORM :
AREA DRAINAGE :poor		TOPOGRAPHY :gently rolling
VEGETATION :poplar, spruce, grass		
PERMAFROST FEATURES :perched water in existing pit		

----- Source Stratigraphy -----

GRANULAR TYPE :gravelly sand	OVERBURDEN THICKNESS :0.2-0.2-0.6
GRANULAR THICKNESS :1.0-2.7-8.6	OVERBURDEN TYPE :organics and silt
DEVELOP. POTENTIAL :poor	UNDERBURDEN TYPE :ice, silt and silty sand
DEVELOP. CONSTRAINTS :permafrost;on parkland	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :sc/gm-gp/gw-gm		
CLASSIFICATION # :47		D-50 :
PETRO NO. : 0	MOISTURE(%):NUMBER :59	OVERSIZE(%):
SIEVE ANAL. # : 56	MOISTURE(%):RESULTS :5-14-34	GRAVEL(%):02-20-53
PETROGR. NO.:RESULTS :		SAND(%):34-54-76
OTHER TESTS :		FINES(%):07-26-58

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :239500	PROSPECTIVE VOLUME :
CLASS 2 :15000	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :52500	PROBABLE VOLUME :239500	ANNUAL RECOVERABLE :
CLASS 4 :172000		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC89DEMP  
SOURCE NUMBER(S) :KM-240.5  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :Cabin Creek Area

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :107B/7  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 50000

----- Location Details -----

LOCATION :  
CORRIDOR NAME: :Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :200 m  
ACCESS LENGTH :200 m  
SOURCE ACCESS :access off highway

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) : 570239  
CENTRE NORTHING(UTM) : 7569940  
OFFSET DIRECTION :R  
KILOMETRE-POST :240.5

CONDITION :good  
LAND TENURE :crown  
STOCKPILE TYPE :  
PAST USE :borrow pit.  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :developed;inactive  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Exploration/Delineation  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1989  
TEST HOLE DENSITY :1

----- Subsurface Data -----

BOREHOLES:NUMBER :19 TESTPITS:NUMBER :1  
BOREHOLES:DEPTH :1.5-4.3-9.1 TESTPITS:DEPTH :1.2 EXPOSURES:NUMBER :  
EXPOSURES:DEPTH : DATA QUALITY :fair

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :07/15/89  
SLOPE :gentle to the west  
AREA DRAINAGE :poor to good  
VEGETATION :Black Spruce  
PERMAFROST FEATURES :perched water in pit;Black Spruce  
GENERIC ORIGIN :glaciofluvial  
LANDFORM :kame  
TOPOGRAPHY :hummocky

----- Source Stratigraphy -----

GRANULAR TYPE :silty sand, some gravel  
GRANULAR THICKNESS :1.0-2.3-5.9  
DEVELOP. POTENTIAL :fair to good  
DEVELOP. CONSTRAINTS :permafrost  
OVERBURDEN THICKNESS :0.0-0.5-3.0  
OVERBURDEN TYPE :organics and silt  
UNDERBURDEN TYPE :silt, clay

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :sc/sm/sw  
CLASSIFICATION # :19  
PETRO NO. : 0  
SIEVE ANAL. # : 21  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :35  
MOISTURE(%):RESULTS :3-14-25

D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :01-17-34  
SAND(%) :33-63-69  
FINES(%) :02-36-53

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :156000  
CLASS 4 :361600  
CLASS 5 :

TOTAL VOLUME :517000  
PROVEN VOLUME :  
PROBABLE VOLUME :517000

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC89DEMP  
SOURCE NUMBER(S) :KM-252.4  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :Campbell Creek

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :107B/7  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 50000

----- Location Details -----

LOCATION :Campbell Creek  
CORRIDOR NAME: :Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :1000  
ACCESS LENGTH :  
SOURCE ACCESS :none

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) : 572700  
CENTRE NORTHING(UTM) : 7576750  
OFFSET DIRECTION : S  
KILOMETRE-POST : 252.4

CONDITION :  
LAND TENURE :Crown  
STOCKPILE TYPE :  
PAST USE :  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :Undeveloped  
SITE PLAN SCALE :12200  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :Exploration Drilling  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1989  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :1 TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :poor  
BOREHOLES:DEPTH :/1.4/ TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :07/15/89 GENERIC ORIGIN :glaciofluvial  
SLOPE :gentle to the west LANDFORM :  
AREA DRAINAGE :fair to poor TOPOGRAPHY :undulating  
VEGETATION :Black Spruce;moss  
PERMAFROST FEATURES :Black Spruce

----- Source Stratigraphy -----

GRANULAR TYPE :sandy gravel OVERBURDEN THICKNESS :0.2  
GRANULAR THICKNESS :/1.2/ OVERBURDEN TYPE :organics  
DEVELOP. POTENTIAL :fair UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :permafrost

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :/gm-gw/  
CLASSIFICATION # :1  
PETRO NO. : 0  
SIEVE ANAL. # : 1  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :1  
MOISTURE(%):RESULTS :-6.0-

D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :60  
SAND(%) :32  
FINES(%) :8

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :10000  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :10000  
PROVEN VOLUME :  
PROBABLE VOLUME :10000

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC72FM  
SOURCE NUMBER(S) :FM-504  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :Shiltee Rock

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106M  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 0

----- Location Details -----

LOCATION :adjacent to the Peel River at Shiltee Rock, 16 km south of Fort McPherson  
CORRIDOR NAME: Dempster  
CORRIDOR NUMBER :5  
OFFSET DISTANCE :  
ACCESS LENGTH :  
SOURCE ACCESS :by barge in the summer; along river in winter by truck

CENTRE ZONE(UTM) : 8

CENTRE EASTING(UTM) :504000  
CENTRE NORTHING(UTM) :7464000  
OFFSET DIRECTION :R  
KILOMETRE-POST :

CONDITION :  
LAND TENURE :Gwich'in  
STOCKPILE TYPE :  
PAST USE :  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :undeveloped  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :sieve analysis; testpits  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1972  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :09/05/72 GENERIC ORIGIN :bedrock erosion  
SLOPE : LANDFORM :talus slope  
AREA DRAINAGE :  
VEGETATION :sparse spruce and hardwood  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE :porous coarse sandstone OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :sandstone  
DEVELP. POTENTIAL : UNDERBURDEN TYPE :  
DEVELP. CONSTRAINTS :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0 MOISTURE(%):NUMBER : D-50  
SIEVE ANAL. # : 0 MOISTURE(%):RESULTS : OVERSIZE(%):  
PETROGR. NO.:RESULTS :  
OTHER TESTS : GRAVEL(%):  
SAND(%):  
FINES(%):

----- Material Quantity -----

CLASS 1 : TOTAL VOLUME :154000 PROSPECTIVE VOLUME :154000  
CLASS 2 : PROVEN VOLUME :  
CLASS 3 : PROBABLE VOLUME :  
CLASS 4 :  
CLASS 5 :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC72FM  
SOURCE NUMBER(S) :FM-501A  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106M  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :11 east of Fort McPherson  
CORRIDOR NAME: Dempster Highway  
CORRIDOR NUMBER :5  
OFFSET DISTANCE :  
ACCESS LENGTH :  
SOURCE ACCESS :south from highway along seismic line

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) :517500  
CENTRE NORTHING(UTM) :7478500  
OFFSET DIRECTION :R  
KILOMETRE-POST :

CONDITION :summer only  
LAND TENURE :Gwich'in Lands  
STOCKPILE TYPE :  
PAST USE :  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :undeveloped  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :test pits;sieve analysis  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1972  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER :5 EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH :0.8-6.0-12 EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :09/05/72 GENERIC ORIGIN :glaciofluvial  
SLOPE :well sloped LANDFORM :skame  
AREA DRAINAGE :good TOPOGRAPHY :hummocky morainal  
VEGETATION :spruce  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE :sand & silt;trace gravel OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL :general fill UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :lengthy access;small size;prohibitive clearing and restoration costs

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :ml-sm-gm  
CLASSIFICATION # :5  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

D-50 :  
OVERSIZE(%):  
GRAVEL(%):  
SAND(%):  
FINES(%):

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :20000  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :20000  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC72FM	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :FM-502		NTS MAP REFERENCE :106M
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 250000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :adjacent to Stony Creek, about 7 km above its junction with peel river	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) : 500000
CORRIDOR NUMBER :5	CENTRE NORTHING(UTM) : 7471000
OFFSET DISTANCE :	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :road constructed from Fort McPherson	KILOMETRE-POST :

CONDITION :winter only	DIGITIZER NUMBER :
LAND TENURE :Gwich'in Land	STATUS :undeveloped
STOCKPILE TYPE :	SITE PLAN SCALE :
PAST USE :	AREA :
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :testpits;siev analysis	LAST INVESTIGATION DATE :1972
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :2	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :/2.0/	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :09/05/72	GENERIC ORIGIN :fluvial
SLOPE :		LANDFORM :inactive flood plain
AREA DRAINAGE :		TOPOGRAPHY :broad flat valley
VEGETATION :poor		
PERMAFROST FEATURES :spruce, aspen and alder		

----- Source Stratigraphy -----

GRANULAR TYPE :sand and gravel	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :< 1.0 m	OVERBURDEN TYPE :little or no overburden
DEVELP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :gp-gp-gp		D-50 :
CLASSIFICATION # :2		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER :	GRAVEL(%) :
SIEVE ANAL. # : 0	MOISTURE(%):RESULTS :	SAND(%) :
PETROGR. NO.:RESULTS :		FINES(%) :
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :154000	PROSPECTIVE VOLUME :154000
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC72FM  
SOURCE NUMBER(S) :FM-500  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :Peel Plain

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106M  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 50000

----- Location Details -----

LOCATION :on Peel plain about 6 km NE of Fort McPherson  
CORRIDOR NAME :Dempster Highway  
CORRIDOR NUMBER :5  
OFFSET DISTANCE :1.3 km  
ACCESS LENGTH :1.3 km  
SOURCE ACCESS :access road 6 km NE of junction leading to the community

CENTRE LATITUDE : 0.00000 CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) :509000  
CENTRE NORTHING(UTM) :7484000  
OFFSET DIRECTION :L  
KILOMETRE-POST :

CONDITION :all year  
LAND TENURE :  
STOCKPILE TYPE :  
PAST USE :shale fill for Dempster constr  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :  
DIGITIZER NUMBER :  
STATUS :active  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site inspection,testpits by RKL(1972)  
GEOPHYSICAL DATA :  
LAST INVESTIGATION DATE :1972  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER :1  
BOREHOLES:DEPTH : TESTPITS:DEPTH :/8.0/ EXPOSURES:NUMBER :  
EXPOSURES:DEPTH : DATA QUALITY :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :09/05/72  
SLOPE :  
AREA DRAINAGE :poor  
VEGETATION :black spruce;poplar;birch - 30 % density  
PERMAFROST FEATURES :  
GENERIC ORIGIN :  
LANDFORM :shale/sandstone rock  
TOPOGRAPHY :

----- Source Stratigraphy -----

GRANULAR TYPE :bedrock  
GRANULAR THICKNESS :  
DEVELOP. POTENTIAL :good access  
DEVELOP. CONSTRAINTS :  
OVERBURDEN THICKNESS :1.0 m  
OVERBURDEN TYPE :high-ice-content silt  
UNDERBURDEN TYPE :bedrock

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :  
D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :770000

TOTAL VOLUME :770000  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :770000  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC72FM	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :FM-503		NTS MAP REFERENCE :106M
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 250000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :14.5 km east of Fort McPherson	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) : 518000
CORRIDOR NUMBER :5	CENTRE NORTHING(UTM) : 7482000
OFFSET DISTANCE :2400	OFFSET DIRECTION :R
ACCESS LENGTH :	KILOMETRE-POST :
SOURCE ACCESS :south from Dempster along cleared seismic line for 2 km passing within 1 km of western edge of sourc	

CONDITION :undeveloped access	DIGITIZER NUMBER :
LAND TENURE :Gwich'in	STATUS :undeveloped
STOCKPILE TYPE :	SITE PLAN SCALE :
PAST USE :	AREA :
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :sieve analysis;testpits	LAST INVESTIGATION DATE :1972
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :09/05/72	GENERIC ORIGIN :glaciofluvial
SLOPE :moderate		LANDFORM :two small eskers
AREA DRAINAGE :good		TOPOGRAPHY :
VEGETATION :spruce and aspen		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :well graded gravel to silts	OVERBURDEN THICKNESS :/1.0/
GRANULAR THICKNESS :0//4.0	OVERBURDEN TYPE :peat & gravel
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :length of access;variable material	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :ml-gm-gm		
CLASSIFICATION # :2		D-50 :
PETRO NO. : 0	MOISTURE(%):NUMBER :8	Oversize(%) :
SIEVE ANAL. # : 0	MOISTURE(%):RESULTS :8.9-14.7-30.5	GRAVEL(%) :
PETROGR. NO.:RESULTS :		SAND(%) :
OTHER TESTS :		FINES(%) :

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :38500	PROSPECTIVE VOLUME :38500
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC72FM  
SOURCE NUMBER(S) :FM-505  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106M  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :on peat plain, about 1.5 km SE of Fort McPherson  
CORRIDOR NAME: :Dempster highway  
CORRIDOR NUMBER :5  
OFFSET DISTANCE :  
ACCESS LENGTH :  
SOURCE ACCESS :along Dempster

CENTRE LATITUDE : 0.00000 CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8 CENTRE EASTING(UTM) :506000  
CENTRE NORTHING(UTM) :7479500  
OFFSET DIRECTION :L  
KILOMETRE-POST :

CONDITION :all year  
LAND TENURE :Commissioners Land  
STOCKPILE TYPE :  
PAST USE :borrow pit for Dempster Constr  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :mostly depleted;currently inactive  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :testpits;sieve analysis LAST INVESTIGATION DATE :1972  
GEOPHYSICAL DATA : TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER :1 EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH ://10.0 EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :09/05/72 GENERIC ORIGIN :  
SLOPE : LANDFORM :bedrock of Plain  
AREA DRAINAGE :water within the pit TOPOGRAPHY :rolling morainal  
VEGETATION :light cover of spruce and birch  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE :soft and silty shale OVERBURDEN THICKNESS :  
GRANULAR THICKNESS :3.0//10.0 OVERBURDEN TYPE :  
DEVELP. POTENTIAL : UNDERBURDEN TYPE :bedrock  
DEVELP. CONSTRAINTS :shale easily decomposes;suitable for poor quality general fill

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :shale  
CLASSIFICATION # :  
PETRO NO. : 0 MOISTURE(%):NUMBER : D-50 :  
SIEVE ANAL. # : 0 MOISTURE(%):RESULTS : OVERSIZE(%) :  
PETROGR. NO.:RESULTS : GRAVEL(%) :  
OTHER TESTS : SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 : TOTAL VOLUME :5000 PROSPECTIVE VOLUME :  
CLASS 2 : PROVEN VOLUME : TOTAL RECOVERABLE :5000  
CLASS 3 : PROBABLE VOLUME : ANNUAL RECOVERABLE :

CLASS 4 :

CLASS 5 :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-242.2  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :107B/7  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 0

----- Location Details -----

LOCATION :along Dempster Highway @ km 242.2  
CORRIDOR NAME: :Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :100  
ACCESS LENGTH :100  
SOURCE ACCESS :access road

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) :571380  
CENTRE NORTHING(UTM) :7571103  
OFFSET DIRECTION :R  
KILOMETRE-POST :242.2

CONDITION :all year  
LAND TENURE :crown  
STOCKPILE TYPE :  
PAST USE :  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :undeveloped  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :08/05/93 GENERIC ORIGIN :  
SLOPE : LANDFORM :  
AREA DRAINAGE : TOPOGRAPHY :  
VEGETATION :spruce  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :< 1.0 m  
GRANULAR THICKNESS : OVERBURDEN TYPE :silty sand  
DEVELOP. POTENTIAL :good access UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0 MOISTURE(%):NUMBER : D-50 :  
SIEVE ANAL. # : 0 MOISTURE(%):RESULTS : OVERSIZE(%):  
PETROGR. NO.:RESULTS : OTHER TESTS : GRAVEL(%):  
OTHER TESTS : TOTAL VOLUME : SAND(%):  
PROVEN VOLUME : FINES(%):  
PROBABLE VOLUME :

----- Material Quantity -----

CLASS 1 : TOTAL VOLUME : PROSPECTIVE VOLUME :  
CLASS 2 : PROVEN VOLUME : TOTAL RECOVERABLE :  
CLASS 3 : PROBABLE VOLUME : ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-235.3  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :107B/2E  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :along the Dempster @ km 235.3  
CORRIDOR NAME :Dempster highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :250 m  
ACCESS LENGTH :250 m  
SOURCE ACCESS :access road off Dempster

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) : 565953  
CENTRE NORTHING(UTM) : 7566156  
OFFSET DIRECTION :R  
KILOMETRE-POST :235.3

CONDITION :all year  
LAND TENURE :crown  
STOCKPILE TYPE :crushed 0.5" gravel  
PAST USE :GWT Stockpile  
STOCKPILE QUANTITY :10000  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :active  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :08/05/93 GENERIC ORIGIN :bedrock  
SLOPE : LANDFORM :outcrop  
AREA DRAINAGE :  
VEGETATION :spruce  
PERMAFROST FEATURES :

TOPOGRAPHY :gently rolling

----- Source Stratigraphy -----

GRANULAR TYPE :shale  
GRANULAR THICKNESS :  
DEVELOP. POTENTIAL :  
DEVELOP. CONSTRAINTS :

OVERBURDEN THICKNESS :  
OVERBURDEN TYPE :  
UNDERBURDEN TYPE :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-230.1  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :along Dempster Highway @ km 230.1  
CORRIDOR NAME: :Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :1000  
ACCESS LENGTH :1000  
SOURCE ACCESS :access road off Dempster

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) : 565297  
CENTRE NORTHING(UTM) : 7563068  
OFFSET DIRECTION :R  
KILOMETRE-POST :230.1

CONDITION :all year  
LAND TENURE :crown  
STOCKPILE TYPE :pit-run shale  
PAST USE :  
STOCKPILE QUANTITY :500  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :mostly depleted  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :08/05/93 GENERIC ORIGIN :bedrock  
SLOPE : LANDFORM :outcrop  
AREA DRAINAGE :  
VEGETATION :spruce and poplar  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE :shale bedrock  
GRANULAR THICKNESS :  
DEVELOP. POTENTIAL :low  
DEVELOP. CONSTRAINTS :

OVERBURDEN THICKNESS :  
OVERBURDEN TYPE :  
UNDERBURDEN TYPE :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-193.0  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106N/14  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :along Dempster @ km 193.0  
CORRIDOR NAME: :Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :200  
ACCESS LENGTH :200  
SOURCE ACCESS :access road off Dempster

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) :556835  
CENTRE NORTHING(UTM) :7528319  
OFFSET DIRECTION :R  
KILOMETRE-POST :193.0

CONDITION :all year  
LAND TENURE :crown  
STOCKPILE TYPE :  
PAST USE :borrow pit  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :inactive;depleted  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :08/05/93 GENERIC ORIGIN :  
SLOPE : LANDFORM :  
AREA DRAINAGE :poor - pit filled with water TOPOGRAPHY :  
VEGETATION :spruce and poplar  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL :poor UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER : 0-50 :  
MOISTURE(%):RESULTS : OVERSIZE(%) :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-210.5  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106N  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :along the Dempster at km210.5  
CORRIDOR NAME: :Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :200 m  
ACCESS LENGTH :200 m  
SOURCE ACCESS :access road off Dempster

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) :563943  
CENTRE NORTHING(UTM) :7544180  
OFFSET DIRECTION :R  
KILOMETRE-POST :210.5

CONDITION :all year  
LAND TENURE :crown  
STOCKPILE TYPE :  
PAST USE :borrow pit  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :inactive;depleted  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :08/05/93 GENERIC ORIGIN :  
SLOPE : LANDFORM :  
AREA DRAINAGE :poor - pit filled with water TOPOGRAPHY :  
VEGETATION :spruce and poplar  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL :poor UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :KM-187.0		NTS MAP REFERENCE :106N
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 250000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :along the Dempster at km 187.0	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) :552076
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) :7521552
OFFSET DISTANCE :300 m	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :300 m	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :access road off Dempster	OFFSET DIRECTION :L
	KILOMETRE-POST :187.0

CONDITION :all year	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :inactive;depleted
STOCKPILE TYPE :	SITE PLAN SCALE :
PAST USE :borrow pit	AREA :
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit	LAST INVESTIGATION DATE :1993
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :08/05/93	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :poor - pit filled with water		TOPOGRAPHY :
VEGETATION :		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :
DEVELOP. POTENTIAL :poor	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		
CLASSIFICATION # :		
PETRO NO. : 0	MOISTURE(%):NUMBER :	0-50 :
SIEVE ANAL. # : 0	MOISTURE(%):RESULTS :	OVERSIZE(%) :
PETROGR. NO.:RESULTS :		GRAVEL(%) :
OTHER TESTS :		SAND(%) :
		FINES(%) :

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-178.2  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106N  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :long Dempster Highway at km 178.2  
CORRIDOR NAME :Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :50  
ACCESS LENGTH :50  
SOURCE ACCESS :access road just off Highway

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) :548447  
CENTRE NORTHING(UTM) :7516002  
OFFSET DIRECTION :R  
KILOMETRE-POST :178.2

CONDITION :all year  
LAND TENURE :crown  
STOCKPILE TYPE :  
PAST USE :borrow pit  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :depleted;stockpile site for GNWT  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :08/05/93  
SLOPE :  
AREA DRAINAGE :poor - pit filled with water  
VEGETATION :  
PERMAFROST FEATURES :

GENERIC ORIGIN :  
LANDFORM :  
TOPOGRAPHY :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL :low UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0 MOISTURE(%):NUMBER : D-50 :  
SIEVE ANAL. # : 0 MOISTURE(%):RESULTS : OVERSIZE(%) :  
PETROGR. NO.:RESULTS :  
OTHER TESTS :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 : TOTAL VOLUME : PROSPECTIVE VOLUME :  
CLASS 2 : PROVEN VOLUME : TOTAL RECOVERABLE :  
CLASS 3 : PROBABLE VOLUME : ANNUAL RECOVERABLE :

CLASS 4 :  
CLASS 5 :

\*\*\*\*\* PART A:LOCATION AND STATUS \*\*\*\*\*

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-166.2  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106N  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :along the Dempster Highway at km 166.2  
CORRIDOR NAME: Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :100  
ACCESS LENGTH :100  
SOURCE ACCESS :access road off Dempster

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) : 548914  
CENTRE NORTHING(UTM) : 7504781

CONDITION :all year  
LAND TENURE :crown  
STOCKPILE TYPE :pit run  
PAST USE :borrow pit  
STOCKPILE QUANTITY :50  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :inactive  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

\*\*\*\*\* PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION \*\*\*\*\*

INVESTIGATION LEVEL :site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :08/05/93  
SLOPE :  
AREA DRAINAGE :poor - pit filled with water  
VEGETATION :  
PERMAFROST FEATURES :

GENERIC ORIGIN :  
LANDFORM :  
TOPOGRAPHY :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL :low UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :

\*\*\*\*\* PART C: TEST RESULTS AND MATERIAL QUALITY \*\*\*\*\*

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

D-50 :  
OVERSIZE% :  
GRAVEL% :  
SAND% :  
FINES% :

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) : KM-156.6  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE : 106N  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 0

----- Location Details -----

LOCATION : along the Dempster at km 156.6  
CORRIDOR NAME: Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :  
ACCESS LENGTH :  
SOURCE ACCESS : access road off Dempster

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) : 551499  
CENTRE NORTHING(UTM) : 7495682  
OFFSET DIRECTION : R  
KILOMETRE-POST : 156.6

CONDITION : all year  
LAND TENURE : Gwich'in  
STOCKPILE TYPE :  
PAST USE :  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS : inactive;depleted  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY : low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL : site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE : 1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE : 08/05/93 GENERIC ORIGIN :  
SLOPE : LANDFORM :  
AREA DRAINAGE : poor - pit filled with water TOPOGRAPHY :  
VEGETATION :  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL : UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0 MOISTURE(%):NUMBER : D-50 :  
SIEVE ANAL. # : 0 MOISTURE(%):RESULTS : OVERSIZE(%) :  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 : TOTAL VOLUME : PROSPECTIVE VOLUME :  
CLASS 2 : PROVEN VOLUME : TOTAL RECOVERABLE :  
CLASS 3 : PROBABLE VOLUME : ANNUAL RECOVERABLE :

CLASS 4 :  
CLASS 5 :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-122.4  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106M/8  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 250000

----- Location Details -----

LOCATION :along Dempster at km 122.4  
CORRIDOR NAME: Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :250  
ACCESS LENGTH :250  
SOURCE ACCESS :access road

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) : 536390  
CENTRE NORTHING(UTM) : 7474164  
OFFSET DIRECTION :R  
KILOMETRE-POST :122.4

CONDITION :all year  
LAND TENURE :Gwich'in Land  
STOCKPILE TYPE :  
PAST USE :borrow pit  
STOCKPILE QUANTITY :  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :inactive  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :08/05/93 GENERIC ORIGIN :  
SLOPE : LANDFORM :  
AREA DRAINAGE :poor - pit filled with water TOPOGRAPHY :  
VEGETATION :  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL :poor UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :pit depleted

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :KM-81		NTS MAP REFERENCE :106M
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 0
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :along Dempster highway at km 81 south of Ft. McPherson	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) : 506185
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) : 7475124
OFFSET DISTANCE :100	OFFSET DIRECTION :L
ACCESS LENGTH :100	KILOMETRE-POST :81
SOURCE ACCESS :access road	

CONDITION :all year	DIGITIZER NUMBER :
LAND TENURE :Block land Transfer - Ft. McPh	STATUS :active
STOCKPILE TYPE :pit run gravel	SITE PLAN SCALE :
PAST USE :borrow pit	AREA :
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit	LAST INVESTIGATION DATE :1993
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :08/05/93	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :		TOPOGRAPHY :
VEGETATION :		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :sand and gravel	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :organics/silt
DEVELP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER :	GRAVEL(%) :
SIEVE ANAL. # : 0	MOISTURE(%):RESULTS :	SAND(%) :
PETROGR. NO.:RESULTS :		FINES(%) :
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :KM-66.6  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :106M  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 0

----- Location Details -----

LOCATION :along Dempster highway at km 66.6  
CORRIDOR NAME :Dempster Highway  
CORRIDOR NUMBER :8  
OFFSET DISTANCE :1400  
ACCESS LENGTH :1400  
SOURCE ACCESS :access road

CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
CENTRE ZONE(UTM) : 8  
CENTRE EASTING(UTM) : 500886  
CENTRE NORTHING(UTM) : 7465022  
OFFSET DIRECTION :R  
KILOMETRE-POST : 66.6

CONDITION :all year  
LAND TENURE :Gwich'in Land  
STOCKPILE TYPE :0.5" crushed gravel  
PAST USE :borrow pit  
STOCKPILE QUANTITY :1200  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :inactive;current stockpile site  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 0  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :low

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1993  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :  
BOREHOLES:DEPTH :

TESTPITS:NUMBER :  
TESTPITS:DEPTH :

EXPOSURES:NUMBER :  
EXPOSURES:DEPTH :

DATA QUALITY :

----- Source Description -----

ACTIVE LAYER THICKNESS :  
SLOPE :  
AREA DRAINAGE :  
VEGETATION :  
PERMAFROST FEATURES :

SITE DESCRIPTION DATE :08/05/93

GENERIC ORIGIN :  
LANDFORM :  
TOPOGRAPHY :

----- Source Stratigraphy -----

GRANULAR TYPE :  
GRANULAR THICKNESS :  
DEVELOP. POTENTIAL :poor  
DEVELOP. CONSTRAINTS :

OVERBURDEN THICKNESS :  
OVERBURDEN TYPE :  
UNDERBURDEN TYPE :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 0  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :KM-24.0		NTS MAP REFERENCE :106M
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 0
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :along the Dempster Highway at km 24.0	CENTRE ZONE(UTM) : 8
CORRIDOR NAME: Dempster Highway	CENTRE EASTING(UTM) : 464423
CORRIDOR NUMBER :8	CENTRE NORTHING(UTM) : 7451533
OFFSET DISTANCE :100	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :100 m	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :access road	KILOMETRE-POST :24.0
OFFSET DIRECTION :R	

CONDITION :all year	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :active
STOCKPILE TYPE :crushed rock at km 28.8L/23.5R	SITE PLAN SCALE :
PAST USE :borrow pit at km 23.5R	AREA :
STOCKPILE QUANTITY :20000	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :site visit	LAST INVESTIGATION DATE :1993
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :08/05/93	GENERIC ORIGIN :bedrock
SLOPE :steep		LANDFORM :outcrop
AREA DRAINAGE :		TOPOGRAPHY :hilly
VEGETATION :		
PERMAFROST FEATURES :visible ice		

----- Source Stratigraphy -----

GRANULAR TYPE :bedrock	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER :	GRAVEL(%) :
SIEVE ANAL. # : 0	MOISTURE(%):RESULTS :	SAND(%) :
PETROGR. NO.:RESULTS :		FINES(%) :
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC84FS	LOCAL NAMES :close to Foxhole Pit	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :BorrowArea_A		NTS MAP REFERENCE :85A
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 0
SOURCE REFERENCE :5-69		

----- Location Details -----

LOCATION :30 km west of Fort Smith & 2 km N of Highway 5 along old Foxhole Rd.	CENTRE ZONE(UTM) :12
CORRIDOR NAME: Highway 5	CENTRE EASTING(UTM) :417000
CORRIDOR NUMBER :5	CENTRE NORTHING(UTM) :6654500
OFFSET DISTANCE :5000	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :5000	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :access directly from Foxhole Rd. thru existing pit	OFFSET DIRECTION :L
	KILOMETRE-POST :233

CONDITION :good	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :active
STOCKPILE TYPE :crushed	SITE PLAN SCALE :2000
PAST USE :road maintenance	AREA :10.5
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :low to medium

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :test pits, lab analysis	LAST INVESTIGATION DATE :1984
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :11	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :1.1-1.6-3.0	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :11/29/83	GENERIC ORIGIN :glaciofluvial
SLOPE :3 degrees to NW		LANDFORM :groundmoraine
AREA DRAINAGE :well drained		TOPOGRAPHY :gently sloping
VEGETATION :trees		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :medium gravel	OVERBURDEN THICKNESS :0.3 m
GRANULAR THICKNESS :1.0-1.5 m	OVERBURDEN TYPE :organic rich silt,sand,gravel
DEVELOP. POTENTIAL :fair quality	UNDERBURDEN TYPE :limestone/dolomite bedrock
DEVELOP. CONSTRAINTS :Lab results suggest material unsuitable for concrete or asphalt aggregate	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		
CLASSIFICATION # :		
PETRO NO. : 1	MOISTURE(%):NUMBER :6	D-50 :
SIEVE ANAL. # : 6	MOISTURE(%):RESULTS :2.0-3.0-7.0	OVERSIZE(%):
PETROGR. NO.:RESULTS :PN value of 213		GRAVEL(%):54-57-61
OTHER TESTS :		SAND(%):34-39-41
		FINES(%):03-04-05

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :20500	TOTAL RECOVERABLE :105000
CLASS 3 :	PROBABLE VOLUME :80000	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC84FS	LOCAL NAMES :beside Berton's Pit	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :BorrowArea_B		NTS MAP REFERENCE :85A
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 0
SOURCE REFERENCE :5-69		

----- Location Details -----

LOCATION :30 km west of Fort Smith and 2 km N of Highway 5 along old Foxhole Rd.	CENTRE ZONE(UTM) :12
CORRIDOR NAME: :Highway 5	CENTRE EASTING(UTM) :416800
CORRIDOR NUMBER :5	CENTRE NORTHING(UTM) :6654300
OFFSET DISTANCE :5000 m	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :5000 m	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :access via Foxhole Road	OFFSET DIRECTION :L
	KILOMETRE-POST :233

CONDITION :good	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :active
STOCKPILE TYPE :	SITE PLAN SCALE :2000
PAST USE :road maintenance	AREA :2.5
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :test pits, lab analysis	LAST INVESTIGATION DATE :1984
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :12	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :0.7-1.5-2.1	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :12/01/83	GENERIC ORIGIN :glaciofluvial
SLOPE :slopes gently to NW		LANDFORM :groundmoraine
AREA DRAINAGE :well drained		TOPOGRAPHY :gently sloping, flat
VEGETATION :muskeg to NW,		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :fine, poorly graded gravel	OVERBURDEN THICKNESS :cleared
GRANULAR THICKNESS :1.2	OVERBURDEN TYPE :
DEVELOP. POTENTIAL :fair quality	UNDERBURDEN TYPE :clay
DEVELOP. CONSTRAINTS :lab results suggest material unsuitable for concrete or asphalt agg.	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		
CLASSIFICATION # :		
PETRO NO. :1	MOISTURE(%):NUMBER :3	D-50 :
STIEVE ANAL. # :3	MOISTURE(%):RESULTS :2.4-3.0-6.5	OVERSIZE(%) :
PETROGR. NO.:RESULTS :PN value of 212		GRAVEL(%) :47-62-72
OTHER TESTS :		SAND(%) :25-36-51
		FINES(%) :2 (av.)

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :11800	TOTAL RECOVERABLE :29800
CLASS 3 :	PROBABLE VOLUME :18000	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :INAC84HR  
 SOURCE NUMBER(S) :BorrowArea\_C  
 STUDY ORDER :  
 STUDY REFERENCE :  
 SOURCE REFERENCE :5-70

LOCAL NAMES :beside existing MOT Pit

NEW SOURCE NUMBER :  
 NTS MAP REFERENCE :85A  
 MAP DIGITIZER NUMBER :  
 MAP LOC./PLAN SCALE : 0

----- Location Details -----

LOCATION :along highway 5 @ km 232.5-234.5  
 CORRIDOR NAME: :Highway 5  
 CORRIDOR NUMBER:5  
 OFFSET DISTANCE :along highway  
 ACCESS LENGTH :0  
 SOURCE ACCESS :Highway 5 - all year

CENTRE LATITUDE : 0.00000 CENTRE LONGITUDE : 0.00000  
 CENTRE ZONE(UTM) :12 CENTRE EASTING(UTM) :421000  
 CENTRE NORTHING(UTM) :6653000  
 OFFSET DIRECTION :R  
 KILOMETRE-POST :233

CONDITION :  
 LAND TENURE :crown  
 STOCKPILE TYPE :19 mm crushed  
 PAST USE :Highways Dept.road maintenance  
 STOCKPILE QUANTITY :22000  
 PERFORMANCE RATING :

DIGITIZER NUMBER :  
 STATUS :active  
 SITE PLAN SCALE :2000  
 AREA :  
 EXCAVATED VOLUME-FOR HIGHWAY : 0  
 -FOR PIPELINE : 0  
 PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :test pits, lab analysis  
 GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1984  
 TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER :6 EXPOSURES:NUMBER : DATA QUALITY :  
 BOREHOLES:DEPTH : TESTPITS:DEPTH :0.9-1.5-3.0 EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :12/30/83 GENERIC ORIGIN :glaciofluvial  
 SLOPE : LANDFORM :groundmoraine  
 AREA DRAINAGE :well drained TOPOGRAPHY :gently sloping  
 VEGETATION :mostly cleared of overburden and brush  
 PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE :coarse,poorly graded material OVERBURDEN THICKNESS :0.6  
 GRANULAR THICKNESS :0.8-2.4 OVERBURDEN TYPE :organic debris,clay,silt,grav.  
 DEVELOP. POTENTIAL : UNDERBURDEN TYPE :  
 DEVELOP. CONSTRAINTS :Lab results suggest material unsuitable for concrete or asphalt agg.

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS	:gm - only a few samples	D-50	:
CLASSIFICATION #	:3	OVERSIZE(%)	:
PETRO NO.	: 1	MOISTURE(%):NUMBER	:4
SIEVE ANAL. #	: 4	MOISTURE(%):RESULTS	:3.4-4.3-4.8
PETROGR. NO.:RESULTS	:PN value of 268	GRAVEL(%)	:52-57-61
OTHER TESTS	:	SAND(%)	:36-39-42
		FINES(%)	:03-04-06

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :128000	TOTAL RECOVERABLE :12800
CLASS 3 :	PROBABLE VOLUME :undeter.	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
 SOURCE NUMBER(S) :1-KM87.1  
 STUDY ORDER :  
 STUDY REFERENCE :  
 SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
 NTS MAP REFERENCE :  
 MAP DIGITIZER NUMBER :  
 MAP LOC./PLAN SCALE : 0

----- Location Details -----

LOCATION :along highway 1 @ km 87.4 west of Enterprise  
 CORRIDOR NAME: :Highway 1  
 CORRIDOR NUMBER :1  
 OFFSET DISTANCE :along highway  
 ACCESS LENGTH :along highway  
 SOURCE ACCESS :access road

CENTRE LATITUDE : 0.00000 CENTRE LONGITUDE : 0.00000  
 CENTRE ZONE(UTM) : 0 CENTRE EASTING(UTM) : 0  
 CENTRE NORTHING(UTM) : 0  
 OFFSET DIRECTION :R  
 KILOMETRE-POST :87.4

CONDITION :  
 LAND TENURE :crown;reserve  
 STOCKPILE TYPE :crushed 19 mm gravel  
 PAST USE :highways  
 STOCKPILE QUANTITY :25300  
 PERFORMANCE RATING :

DIGITIZER NUMBER :  
 STATUS :active  
 SITE PLAN SCALE :  
 AREA :  
 EXCAVATED VOLUME-FOR HIGHWAY : 3000  
 -FOR PIPELINE : 0  
 PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :  
 GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1991  
 TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
 BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :07/28/93  
 SLOPE :  
 AREA DRAINAGE :  
 VEGETATION :poplar;jack pine  
 PERMAFROST FEATURES :

GENERIC ORIGIN :  
 LANDFORM :  
 TOPOGRAPHY :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
 GRANULAR THICKNESS : OVERBURDEN TYPE :  
 DEVELOP. POTENTIAL : UNDERBURDEN TYPE :  
 DEVELOP. CONSTRAINTS :

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
 CLASSIFICATION # :  
 PETRO NO. : 0 MOISTURE(%):NUMBER :5 D-50 :  
 SIEVE ANAL. # : 8 MOISTURE(%):RESULTS :4.1-5.0-5.8 OVERSIZE(%) :  
 PETROGR. NO.:RESULTS :  
 OTHER TESTS : GRAVEL(%) :28-40-48  
 SAND(%) :47-52-64  
 FINES(%) :07-08-09

----- Material Quantity -----

CLASS 1 : TOTAL VOLUME : PROSPECTIVE VOLUME :  
 CLASS 2 : PROVEN VOLUME : TOTAL RECOVERABLE :  
 CLASS 3 : PROBABLE VOLUME : ANNUAL RECOVERABLE :  
 CLASS 4 :  
 CLASS 5 :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER : LOCAL NAMES : NEW SOURCE NUMBER :  
SOURCE NUMBER(S) : 1-KM100.8 NTS MAP REFERENCE :  
STUDY ORDER : MAP DIGITIZER NUMBER :  
STUDY REFERENCE : MAP LOC./PLAN SCALE : 0  
SOURCE REFERENCE :

----- Location Details -----

LOCATION : along highway 1 @ km 100.8 CENTRE ZONE(UTM) : 0  
CORRIDOR NAME: :Highway 1 CENTRE EASTING(UTM) : 0  
CORRIDOR NUMBER :1 CENTRE NORTHING(UTM) : 0  
OFFSET DISTANCE :along highway OFFSET DIRECTION :R  
ACCESS LENGTH :along highway KILOMETRE-POST :100.8  
SOURCE ACCESS :

CONDITION : DIGITIZER NUMBER :  
LAND TENURE :crown;reserve STATUS :active  
STOCKPILE TYPE :pitrun;crushed 19 mm SITE PLAN SCALE :  
PAST USE : AREA :0.04  
STOCKPILE QUANTITY :1600 EXCAVATED VOLUME-FOR HIGHWAY : 0  
PERFORMANCE RATING : -FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :reserves unknown LAST INVESTIGATION DATE :1991  
GEOPHYSICAL DATA : TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :07/28/93 GENERIC ORIGIN :  
SLOPE : LANDFORM :  
AREA DRAINAGE : TOPOGRAPHY :  
VEGETATION :black spruce;poplar  
PERMAFROST FEATURES :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL : UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :high water table

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS : D-50 :  
CLASSIFICATION # :  
PETRO NO. : 0 MOISTURE(%):NUMBER :  
SIEVE ANAL. # : 0 MOISTURE(%):RESULTS :  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

OVERSIZE(%) :  
GRAVEL(%) :  
SAND(%) :  
FINES(%) :

----- Material Quantity -----

CLASS 1 : TOTAL VOLUME : PROSPECTIVE VOLUME :  
CLASS 2 : PROVEN VOLUME : TOTAL RECOVERABLE :  
CLASS 3 : PROBABLE VOLUME : ANNUAL RECOVERABLE :  
CLASS 4 :  
CLASS 5 :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :1-KM102.1  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 0

----- Location Details -----

LOCATION :along highway 1 @ km 102.1  
CORRIDOR NAME: :Highway 1  
CORRIDOR NUMBER :1  
OFFSET DISTANCE :30  
ACCESS LENGTH :30  
SOURCE ACCESS :short access road off highway 1

CENTRE ZONE(UTM) : 0  
CENTRE EASTING(UTM) : 0  
CENTRE NORTHING(UTM) : 0  
CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
OFFSET DIRECTION :R  
KILOMETRE-POST : 102.1

CONDITION :  
LAND TENURE :crown;reserve  
STOCKPILE TYPE :crushed 50 mm gravel  
PAST USE :highways  
STOCKPILE QUANTITY :20000  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :active  
SITE PLAN SCALE :  
AREA :  
EXCAVATED VOLUME-FOR HIGHWAY : 16500  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :sieve analysis  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1984  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS : SITE DESCRIPTION DATE :07/28/93  
SLOPE : GENERIC ORIGIN :  
AREA DRAINAGE : LANDFORM :  
VEGETATION :tall mature jack pine  
PERMAFROST FEATURES :

TOPOGRAPHY :

----- Source Stratigraphy -----

GRANULAR TYPE : OVERBURDEN THICKNESS :  
GRANULAR THICKNESS : OVERBURDEN TYPE :  
DEVELOP. POTENTIAL : UNDERBURDEN TYPE :  
DEVELOP. CONSTRAINTS :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0 MOISTURE(%):NUMBER :21 0-50 :  
SIEVE ANAL. # : 21 MOISTURE(%):RESULTS :3.1-5.0-10.3 OVERSIZE(%) :  
PETROGR. NO.:RESULTS : GRAVEL(%) :50 av.  
OTHER TESTS : SAND(%) :40 av.  
FINES(%) :08-10-12

----- Material Quantity -----

CLASS 1 : TOTAL VOLUME : PROSPECTIVE VOLUME :  
CLASS 2 : PROVEN VOLUME : TOTAL RECOVERABLE :  
CLASS 3 : PROBABLE VOLUME : ANNUAL RECOVERABLE :  
CLASS 4 :  
CLASS 5 :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :Hart Lake	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :	1-KM131.6	NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :	CENTRE ZONE(UTM) :	0
CORRIDOR NAME:	CENTRE EASTING(UTM)	0
CORRIDOR NUMBER :	CENTRE NORTHING(UTM)	0
OFFSET DISTANCE :	KILOMETRE-POST	131.6
ACCESS LENGTH :	0	
SOURCE ACCESS :	OFFSET DIRECTION	IR
Hart Lake access road,then access road to pit	EXCAVATED VOLUME-FOR HIGHWAY	205000
	-FOR PIPELINE	0

CONDITION :	DIGITIZER NUMBER :	
LAND TENURE :	STATUS :active	
STOCKPILE TYPE :	SITE PLAN SCALE :	
PAST USE :	AREA :0.10	
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY	205000
PERFORMANCE RATING :	-FOR PIPELINE	0
	PRIORITY FOR FUTURE STUDY :	

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :	LAST INVESTIGATION DATE :
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE :07/28/93	GENERIC ORIGIN :
SLOPE :	:steep ridge to north	LANDFORM :
AREA DRAINAGE :		TOPOGRAPHY :
VEGETATION :	:poplar;jack pine;black spruce	
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :
DEVELP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%):
PETRO NO. :	0	GRAVEL(%):50 av.
SIEVE ANAL. # :	35	SAND(%):39 av.
PETROGR. NO.:RESULTS :		FINES(%):11 av.
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :1-KM150		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :along highway 1 @ km 150	CENTRE ZONE(UTM) : 0
CORRIDOR NAME: :Highway 1	CENTRE EASTING(UTM) : 0
CORRIDOR NUMBER :1	CENTRE NORTHING(UTM) : 0
OFFSET DISTANCE :75 m	CENTRE LONGITUDE : 0.00000
ACCESS LENGTH :75 m	OFFSET DIRECTION :L
SOURCE ACCESS :off Highway 1	KILOMETRE-POST :150

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown;reserve	STATUS :active
STOCKPILE TYPE :19 mm crushed gravel	SITE PLAN SCALE :
PAST USE :highways	AREA :
STOCKPILE QUANTITY :16000	EXCAVATED VOLUME-FOR HIGHWAY : 20000
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :GNWT - gradation estimates	LAST INVESTIGATION DATE :1984
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :8	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :1.4-2.5-3.2	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :		TOPOGRAPHY :
VEGETATION :black spruce;poplar		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :	OVERBURDEN THICKNESS :0.1-0.4
GRANULAR THICKNESS :	OVERBURDEN TYPE :topsoil
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :bedrock
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%):25 av.
PETRO NO. : 0	MOISTURE(%):NUMBER :	GRAVEL(%):35 av.
SIEVE ANAL. # : 0	MOISTURE(%):RESULTS :	SAND(%):35 av.
PETROGR. NO.:RESULTS :		FINES(%):5 av.
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :Kakisa	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :1-KM167.2		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :along Highway 1 @ km 167.2	CENTRE ZONE(UTM) : 0
CORRIDOR NAME: :Highway 1	CENTRE EASTING(UTM) : 0
CORRIDOR NUMBER :1	CENTRE NORTHING(UTM) : 0
OFFSET DISTANCE :along highway	CENTRE LONGITUDE : 0.00000
ACCESS LENGTH :along highway	OFFSET DIRECTION :R
SOURCE ACCESS :	KILOMETRE-POST :167.2

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown;reserve	STATUS :active
STOCKPILE TYPE :crushed gravel	SITE PLAN SCALE :
PAST USE :highways	AREA :0.25
STOCKPILE QUANTITY :21000	EXCAVATED VOLUME-FOR HIGHWAY : 15000
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :GNWT Highways	LAST INVESTIGATION DATE :1984
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :10	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :1.8-3.4-5.2	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :swamp near by		TOPOGRAPHY :
VEGETATION :jack pine;poplar		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER :	GRAVEL(%) :66-72-76
SIEVE ANAL. # : 11	MOISTURE(%):RESULTS :	SAND(%) :18-22-25
PETROGR. NO.:RESULTS :		FINES(%) :04-06-08
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :1-KM155.9		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :along highway 1 @ km 155.9	CENTRE ZONE(UTM) : 0
CORRIDOR NAME: Highway 1	CENTRE EASTING(UTM) : 0
CORRIDOR NUMBER :1	CENTRE NORTHING(UTM) : 0
OFFSET DISTANCE :600 m	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :600 m	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :access road off Highway 1	KILOMETRE-POST : 155.9
	OFFSET DIRECTION : L

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown;reserve	STATUS :active
STOCKPILE TYPE :crushed gravel	SITE PLAN SCALE :
PAST USE :highways	AREA :0.05
STOCKPILE QUANTITY :2000	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :GNWT Highways	LAST INVESTIGATION DATE :1984
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :swampy area		TOPOGRAPHY :
VEGETATION :low vegetation;some jack pine and poplar		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER : 2	GRAVEL(%) : 52 av.
SIEVE ANAL. # : 2	MOISTURE(%):RESULTS : 1.2 av.	SAND(%) : 42 av.
PETROGR. NO.:RESULTS :		FINES(%) : 4 av.
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :  
SOURCE NUMBER(S) :1-KM183  
STUDY ORDER :  
STUDY REFERENCE :  
SOURCE REFERENCE :

LOCAL NAMES :

NEW SOURCE NUMBER :  
NTS MAP REFERENCE :  
MAP DIGITIZER NUMBER :  
MAP LOC./PLAN SCALE : 0

----- Location Details -----

LOCATION :along highway 1 @ km 183  
CORRIDOR NAME: Highway 1  
CORRIDOR NUMBER :1  
OFFSET DISTANCE :0  
ACCESS LENGTH :0  
SOURCE ACCESS :along highway

CENTRE ZONE(UTM) : 0  
CENTRE EASTING(UTM) : 0  
CENTRE NORTHING(UTM) : 0  
CENTRE LATITUDE : 0.00000  
CENTRE LONGITUDE : 0.00000  
OFFSET DIRECTION :R  
KILOMETRE-POST :183

CONDITION :  
LAND TENURE :crown;reserve  
STOCKPILE TYPE :pitrun;crushed gravel  
PAST USE :highways  
STOCKPILE QUANTITY :21000  
PERFORMANCE RATING :

DIGITIZER NUMBER :  
STATUS :active  
SITE PLAN SCALE :  
AREA :0.08  
EXCAVATED VOLUME-FOR HIGHWAY : 10000  
-FOR PIPELINE : 0  
PRIORITY FOR FUTURE STUDY :

===== PART B: SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :GNWT - sieve analysis  
GEOPHYSICAL DATA :

LAST INVESTIGATION DATE :1989  
TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER : TESTPITS:NUMBER : EXPOSURES:NUMBER : DATA QUALITY :  
BOREHOLES:DEPTH : TESTPITS:DEPTH : EXPOSURES:DEPTH :

----- Source Description -----

ACTIVE LAYER THICKNESS :  
SLOPE :  
AREA DRAINAGE :  
VEGETATION :spruce;jack pine;poplar  
PERMAFROST FEATURES :

SITE DESCRIPTION DATE : / /

GENERIC ORIGIN :  
LANDFORM :  
TOPOGRAPHY :

----- Source Stratigraphy -----

GRANULAR TYPE :  
GRANULAR THICKNESS :  
DEVELOP. POTENTIAL :  
DEVELOP. CONSTRAINTS :

OVERBURDEN THICKNESS :  
OVERBURDEN TYPE :  
UNDERBURDEN TYPE :

===== PART C: TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :  
CLASSIFICATION # :  
PETRO NO. : 0  
SIEVE ANAL. # : 16  
PETROGR. NO.:RESULTS :  
OTHER TESTS :

MOISTURE(%):NUMBER :  
MOISTURE(%):RESULTS :

D-50 :  
OVERSIZE(%) :  
GRAVEL(%) :35-46-55  
SAND(%) :42-47-51  
FINES(%) :05-07-08

----- Material Quantity -----

CLASS 1 :  
CLASS 2 :  
CLASS 3 :  
CLASS 4 :  
CLASS 5 :

TOTAL VOLUME :  
PROVEN VOLUME :  
PROBABLE VOLUME :

PROSPECTIVE VOLUME :  
TOTAL RECOVERABLE :  
ANNUAL RECOVERABLE :

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :1-KM191.6		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :	CENTRE ZONE(UTM) :	0
CORRIDOR NAME: :Highway 1	CENTRE EASTING(UTM) :	0
CORRIDOR NUMBER :1	CENTRE NORTHING(UTM) :	0
OFFSET DISTANCE :	CENTRE LATITUDE : 0.00000	
ACCESS LENGTH :	CENTRE LONGITUDE : 0.00000	
SOURCE ACCESS :access via Fire Tower Road	OFFSET DIRECTION :L	
	KILOMETRE-POST :	191.6

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown;	STATUS :active
STOCKPILE TYPE :	SITE PLAN SCALE :5000
PAST USE :highways	AREA :56he
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 1000
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :GNWT Granular Investigation	LAST INVESTIGATION DATE :1990
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :30	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :1.0-3.0-4.6	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :good drainage		TOPOGRAPHY :
VEGETATION :		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :interbedded sands and gravels	OVERBURDEN THICKNESS :0.1-0.4
GRANULAR THICKNESS :	OVERBURDEN TYPE :sand and gravel with organics
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :sp/gp/gw		
CLASSIFICATION # :30		
PETRO NO. :0	MOISTURE(%):NUMBER :	D-50 :
SIEVE ANAL. # :0	MOISTURE(%):RESULTS :	Oversize(%):15 av.
PETROGR. NO.:RESULTS :		GRAVEL(%):50 av.
OTHER TESTS :LA Abrasion %loss:25		SAND(%):30 av.
		FINES(%):5 av.

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :1000000	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :1-KM196.5		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :along highway 1 @ km 196.5 beside old telegraph line	CENTRE ZONE(UTM) : 0
CORRIDOR NAME: Highway1	CENTRE EASTING(UTM) : 0
CORRIDOR NUMBER :1	CENTRE NORTHING(UTM) : 0
OFFSET DISTANCE :	CENTRE LONGITUDE : 0.00000
ACCESS LENGTH :	KILOMETRE-POST : 196.5
SOURCE ACCESS :access road off highway	OFFSET DIRECTION :L

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown;	STATUS :
STOCKPILE TYPE :crushed material	SITE PLAN SCALE :
PAST USE :highways	AREA :
STOCKPILE QUANTITY :22000	EXCAVATED VOLUME-FOR HIGHWAY : 1000
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :active

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :GNWT sieve analysis	LAST INVESTIGATION DATE :
GEOGRAPHICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :		TOPOGRAPHY :
VEGETATION :		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%):
PETRO NO. : 0	MOISTURE(%):NUMBER :	GRAVEL(%): 50-55-56
SIEVE ANAL. # : 8	MOISTURE(%):RESULTS :	SAND(%): 37-39-42
PETROGR. NO.:RESULTS :		FINES(%): 06-08-11
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :1-KM216.1		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :along Highway 1 @ km 216.1	CENTRE ZONE(UTM) : 0
CORRIDOR NAME: :Highway 1	CENTRE EASTING(UTM) : 0
CORRIDOR NUMBER :1	CENTRE NORTHING(UTM) : 0
OFFSET DISTANCE :	OFFSET DIRECTION :L
ACCESS LENGTH :	KILOMETRE-POST :216.1
SOURCE ACCESS :access road off highway 1	

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :active
STOCKPILE TYPE :pitrun & 18 mm crushed gravel	SITE PLAN SCALE :
PAST USE :highways	AREA :
STOCKPILE QUANTITY :3000	EXCAVATED VOLUME-FOR HIGHWAY : 1000
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :	LAST INVESTIGATION DATE :
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :		TOPOGRAPHY :
VEGETATION :		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%):
PETRO NO. : 0	MOISTURE(%):NUMBER :	GRAVEL(%): 52
SIEVE ANAL. # : 1	MOISTURE(%):RESULTS :	SAND(%): 44
PETROGR. NO.:RESULTS :		FINES(%): 04
OTHER TESTS :		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :1-KM245.6		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :along highway 1 @ km 245.6	CENTRE ZONE(UTM) : 0
CORRIDOR NAME: Highway 1	CENTRE EASTING(UTM) : 0
CORRIDOR NUMBER :1	CENTRE NORTHING(UTM) : 0
OFFSET DISTANCE :40 m	CENTRE LATITUDE : 0.00000
ACCESS LENGTH :40 m	CENTRE LONGITUDE : 0.00000
SOURCE ACCESS :access via highway 1	OFFSET DIRECTION :SL
	KILOMETRE-POST :245.6

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :active
STOCKPILE TYPE :spitrun & crushed gravel	SITE PLAN SCALE :20
PAST USE :highways	AREA :0.04
STOCKPILE QUANTITY :300	EXCAVATED VOLUME-FOR HIGHWAY : 1000
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :GNWT Highways - sieve analysis	LAST INVESTIGATION DATE :1986
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :		TOPOGRAPHY :
VEGETATION :		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :	OVERBURDEN THICKNESS :
GRANULAR THICKNESS :	OVERBURDEN TYPE :
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :		D-50 :
CLASSIFICATION # :		OVERSIZE(%) :
PETRO NO. : 0	MOISTURE(%):NUMBER :	GRAVEL(%) :
SIEVE ANAL. # : 45	MOISTURE(%):RESULTS :	SAND(%) :
PETROGR. NO.:RESULTS :		FINES(%) :
OTHER TESTS :sieve data within specifications		

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :Bluefish	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :3-KM44		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE :
SOURCE REFERENCE :		0

----- Location Details -----

LOCATION :	CENTRE ZONE(UTM) :	0
CORRIDOR NAME: :Highway 3	CENTRE EASTING(UTM) :	0
CORRIDOR NUMBER :3	CENTRE NORTHING(UTM) :	0
OFFSET DISTANCE :70 m	CENTRE LATITUDE : 0.00000	
ACCESS LENGTH :70 m	CENTRE LONGITUDE : 0.00000	
SOURCE ACCESS :access road off highway 3	OFFSET DIRECTION :R	
	KILOMETRE-POST :44	

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :active;stockpiling site
STOCKPILE TYPE :	SITE PLAN SCALE :
PAST USE :	AREA :5 he
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :GNWT - Granular Investigation	LAST INVESTIGATION DATE :1990
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :80	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :
SLOPE :		LANDFORM :
AREA DRAINAGE :		TOPOGRAPHY :
VEGETATION :		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :stratified sand and gravel	OVERBURDEN THICKNESS :0.1-0.7-2.5
GRANULAR THICKNESS :variable	OVERBURDEN TYPE :sand & clay
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :clay
DEVELOP. CONSTRAINTS :	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :sp/sp-gm/gm	D-50 :
CLASSIFICATION # :80	OVERSIZE(%) :variable
PETRO NO. : 0	GRAVEL(%) :4-40
SIEVE ANAL. # : 14	SAND(%) :26-87
PETROGR. NO.:RESULTS :	FINES(%) :1-9
OTHER TESTS :	

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :
CLASS 3 :	PROBABLE VOLUME :83000	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		

===== PART A:LOCATION AND STATUS =====

STUDY NUMBER :	LOCAL NAMES :	NEW SOURCE NUMBER :
SOURCE NUMBER(S) :3-KM80		NTS MAP REFERENCE :
STUDY ORDER :		MAP DIGITIZER NUMBER :
STUDY REFERENCE :		MAP LOC./PLAN SCALE : 20000
SOURCE REFERENCE :		

----- Location Details -----

LOCATION :off Highway 3 at km 80	CENTRE ZONE(UTM) : 0
CORRIDOR NAME: Highway 3	CENTRE EASTING(UTM) : 0
CORRIDOR NUMBER :3	CENTRE NORTHING(UTM) : 0
OFFSET DISTANCE :	OFFSET DIRECTION :
ACCESS LENGTH :	KILOMETRE-POST :80
SOURCE ACCESS :access at km 80	

CONDITION :	DIGITIZER NUMBER :
LAND TENURE :crown	STATUS :active
STOCKPILE TYPE :	SITE PLAN SCALE :
PAST USE :	AREA :
STOCKPILE QUANTITY :	EXCAVATED VOLUME-FOR HIGHWAY : 0
PERFORMANCE RATING :	-FOR PIPELINE : 0
	PRIORITY FOR FUTURE STUDY :high

===== PART B:SOURCE INVESTIGATION AND DESCRIPTION INFORMATION =====

INVESTIGATION LEVEL :EBA - preliminary investigation	LAST INVESTIGATION DATE :1987
GEOPHYSICAL DATA :	TEST HOLE DENSITY :

----- Subsurface Data -----

BOREHOLES:NUMBER :	TESTPITS:NUMBER :37	EXPOSURES:NUMBER :	DATA QUALITY :
BOREHOLES:DEPTH :	TESTPITS:DEPTH :	EXPOSURES:DEPTH :	

----- Source Description -----

ACTIVE LAYER THICKNESS :	SITE DESCRIPTION DATE : / /	GENERIC ORIGIN :glaciofluvial till
SLOPE :		LANDFORM :
AREA DRAINAGE :		TOPOGRAPHY :
VEGETATION :		
PERMAFROST FEATURES :		

----- Source Stratigraphy -----

GRANULAR TYPE :sand and gravel	OVERBURDEN THICKNESS :0.2-0.6
GRANULAR THICKNESS :	OVERBURDEN TYPE :topsoil
DEVELOP. POTENTIAL :	UNDERBURDEN TYPE :clay
DEVELOP. CONSTRAINTS :blend of lower clay till needed to increase amount passing 200 sieve	

===== PART C:TEST RESULTS AND MATERIAL QUALITY =====

----- Test Results -----

UNIFIED SOIL:CLASS :	D-50 :
CLASSIFICATION # :	OVERSIZE(%):
PETRO NO. :0	MOISTURE(%):NUMBER :
SIEVE ANAL. # :1	MOISTURE(%):RESULTS :
PETROGR. NO.:RESULTS :LA Ab-20.7% loss by B grading:Mg Sd-coarse:0.09%, fine:0.21%	SAND(%):56.4
OTHER TESTS :	GRAVEL(%):40.1
	FINES(%):3.5

----- Material Quantity -----

CLASS 1 :	TOTAL VOLUME :	PROSPECTIVE VOLUME :
CLASS 2 :	PROVEN VOLUME :	TOTAL RECOVERABLE :160000
CLASS 3 :	PROBABLE VOLUME :160000	ANNUAL RECOVERABLE :
CLASS 4 :		
CLASS 5 :		