

EBA Engineering Consultants Ltd.

Civil, Geotechnical and Materials Engineers



1001988



**GRANULAR RESOURCE DATABASES
FOR SIX (6)
RESOURCE MANAGEMENT AREAS
YUKON TERRITORY**

0201-11136

March, 1993



GRANULAR RESOURCE DATABASES
FOR SIX (6)
RESOURCE MANAGEMENT AREAS
YUKON TERRITORY

submitted to:

INDIAN AND NORTHERN AFFAIRS CANADA
LAND MANAGEMENT DIVISION

prepared by:

EBA ENGINEERING CONSULTANTS LTD.
WHITEHORSE, YUKON

0201-11136

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RELATED BUT SEPARATELY BOUND DOCUMENTS

Data Presentation - Beaver Creek Resource Management Area, Yukon
Data Presentation - Carmacks Resource Management Area, Yukon
Data Presentation - Dawson Resource Management Area, Yukon
Data Presentation - Ross River Resource Management Area, Yukon
Data Presentation - Tagish Resource Management Area, Yukon
Data Presentation - Teslin Resource Management Area, Yukon

1.0 INTRODUCTION

EBA Engineering Consultants Ltd. (EBA) was requested by Indian and Northern Affairs Canada (DIAND) to compile information from an existing gravel inventory study into a computerized Granular Resource Database. The work was authorized by Mr. R.J. Gowan, Geotechnical Advisor, Land Management Division, Natural Resources and Economic Development Branch in February, 1993 under Contract No. A7134-2-0064/01-ST.

1.1 Study Areas

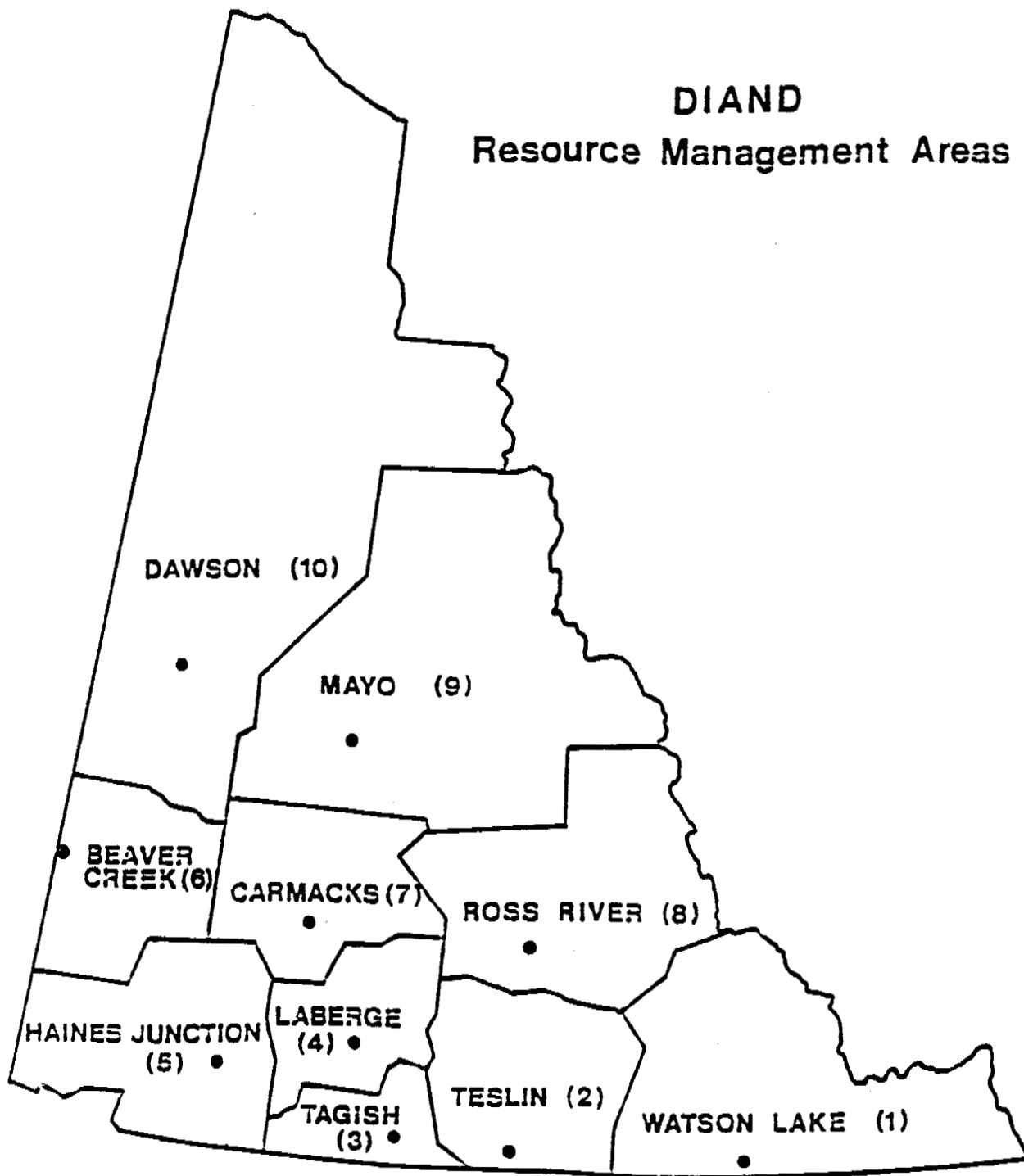
The study areas covered by the proposal request are the Beaver Creek, Carmacks, Dawson, Ross River, Tagish and Teslin Resource Management Areas (RMA's), as defined by DIAND for the Yukon Territory. Figure 1, General Location Map, shows the RMA's within the Yukon Territory.

1.2 Scope of Work

The objective of this study was to assemble and computerize a series of reports prepared in 1977 by Archer, Cathro and Associates entitled "Yukon Gravel Inventory". These reports, which covered the highways of the Yukon, were later subdivided into RMA's by DIAND staff. The following tasks were performed for the preparation of the Granular Resource Database:

1. The applicable Archer Cathro reports were obtained, and the information was entered on a computer record in the Report Catalogue Database.
2. All sources listed within the report were plotted on 1:50,000 NTS maps, and UTM coordinates were determined for the centre of each source.

DIAND Resource Management Areas



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FIGURE 1: General Location Map -
RMA's in the Yukon

3. All technical information listed in the report, for each source, was entered into the Source Database. One data sheet was prepared for each source.
4. The Yukon Government's Land Reservations book was reviewed to determine tenure and status for each source.
5. The information was printed out and checked for:
 - Data entry errors
 - UTM coordinate accuracy
 - Consistency with the format of previously submitted databases. It should be noted that the structure of all the databases was as described by DIAND in documentation received at the start of the project. This information is included as the Data Dictionary for each database.
6. A Historical Summary Database was prepared to summarize all database work done by region.
7. A "reliability check" was performed on each database by summarizing the "% unknowns" and "% n/a's" for each field.
8. A Final Report was prepared.

2.0 METHODOLOGY

2.1 Report Catalogue

The Report Catalogue consists of only one record, the Archer Cathro Report for the RMA. Standardization of input for the fields of the data sheet was controlled by the guidelines in the Data Dictionary - Report Catalogue in Appendix A.

Report numbers were assigned to each report. This identifier consists of the following:

Digits 1 - 4:	Sponsor (e.g., INAC, YTG_, PWC_)
Digits 5 - 6:	Year (century suppressed)
Digits 7 - 10	Coded project name, description or locations (e.g., DAWS for Dawson, TAGI for tagish)
Digits 11 - 12:	Numbers 1 - 99 to differentiate reports completed for the same sponsor in the same year in the same study area.

Reports are generally presented in chronological order from oldest to most recent.

A listing of the structure for the Report Catalogue is presented in Figure 2. The Report Catalogues for the RMA's are presented with the Source Databases in separate bound volumes -- one for each RMA.

2.2 Source Database

Granular resource information found in the Archer Cathro Report was entered in its entirety and each source (borrow pit) was assigned a unique source number. The alphanumeric source number is made up of the following:

Digits 1 - 2: Highway designations

- | | |
|-------------------------------|--------------------------------|
| • 01: Alaska Highway | • 07: Atlin Road |
| • 02: Klondike Highway | • 08: Tagish Road |
| • 03: Haines Road | • 09: Top of the World Highway |
| • 04: Robert Campbell Highway | • 10: Nahanni Range Road |
| • 05: Dempster Highway | • 11: The Silver Trail |
| • 06: Canol Road | |

Digit 3: Dash separating highway designation from kilometre posting

Structure for database: C:\TAGI93RP.dbf

Number of data records: 2

Date of last update : 03/29/93

Field	Field Name	Type	Width	Dec
1	STUDY_NO	Character	12	
2	YEAR	Character	13	
3	MONTH	Numeric	2	
4	SPONSOR	Character	30	
5	SPONSOR1	Character	30	
6	SPONSOR2	Character	30	
7	SP_JOB_NO	Character	15	
8	SP_CONTACT	Character	30	
9	RPTTITLE1	Character	30	
10	RPTTITLE2	Character	30	
11	RPTTITLE3	Character	30	
12	RPTTITLE4	Character	30	
13	CO_CONTACT	Character	30	
14	CONTRACTOR	Character	30	
15	CO_JOB_NO	Character	20	
16	LOCATIONMP	Character	40	
17	SITE_NAME	Character	30	
18	LOCMAP_NO	Character	30	
19	LOCAL_NAME	Character	40	
20	SIT_PL_NO	Character	45	
21	LOCMAP_FM	Character	30	
22	SIT_PL_FM	Character	30	
23	LOCMAP_SC	Character	30	
24	SIT_PL_SC	Character	30	
25	LOCMAP_DN	Character	5	
26	SIT_PL_DN	Character	5	
27	LOCMAP_ARC	Character	30	
28	SIT_PL_ARC	Character	30	
29	MN_ZONE	Numeric	2	
30	MN_EAST	Numeric	6	
31	MN_NORTH	Numeric	7	
32	MN_LAT_DEG	Numeric	10	
33	MN_LON_DEG	Numeric	10	
34	CN_LAT_DEG	Numeric	10	
35	CN_LON_DEG	Numeric	10	
36	CN_ZONE	Numeric	2	
37	CN_EAST	Numeric	6	
38	CN_NORTH	Numeric	7	
39	MX_ZONE	Numeric	2	
40	MX_EAST	Numeric	6	
41	MX_NORTH	Numeric	7	
42	MX_LAT_DEG	Numeric	10	
43	MX_LON_DEG	Numeric	10	
44	SOURCE_NO	Character	100	
45	SOURCE02	Character	100	
46	SOURCE03	Character	100	
47	SOURCE04	Character	100	
48	SOURCE05	Character	100	
49	SOURCE06	Character	100	
50	SOURCE07	Character	100	
51	SOURCE08	Character	100	
52	SOURCE09	Character	100	
53	SOURCE010	Character	100	
54	SOURCE011	Character	100	
55	SOURCE012	Character	100	
56	STUDY_TYPE	Character	50	
57	STUDY_SCOP	Character	50	
58	STUDY_SIZE	Character	40	
59	SURV_DATA	Character	100	
60	SURV_LEVEL	Character	60	
61	SURV_PATT	Character	40	
62	SURV_SPAC	Character	40	
63	PGM_LENGTH	Character	30	
64	SEASON	Character	30	
65	EQUIP_TYPE	Character	40	
66	PENETRAT	Character	40	
67	RESOLUTION	Character	20	
68	SAMPL_RATE	Character	40	
69	SAMPL_QUAL	Character	50	
70	SAMPL_TYPE	Character	70	
71	SAMPL_SIZE	Character	35	
72	SAMPL_SZ1	Character	35	
73	INTERP_LEV	Character	60	
74	RPT_LEVEL	Character	40	
75	RPT_DISTR	Character	24	
76	DATA_ARC	Character	40	
77	OTHER_RPTS	Character	30	
** Total **				3007

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FIGURE 2: Report Catalogue Structure



Digits 4 - 8: Kilometre post to tenths, decimal suppressed
(e.g., 00350 is km 35.0)

Digit 9: L, R or B (source located on left, right, or both sides of highway)

An example is:

04-03092R would refer to the source along the Robert Campbell Highway at
km 309.2 on the right side of the highway.

The data for each "source" in the database presents an accumulation of all descriptive information available in terms of source locations, status, deposit description, material quantities and maps or site plans for that deposit. If available, the site plan accompanying the description has been photocopied and included in the Source Database.

All of the data for each source was summarized and tabulated on Source Database Data Sheets. All components of the Source Database Data Sheets are defined in the Data Dictionary - Source Database in Appendix B. The Source Database structure is listed in Figure 3.

2.3 Report and Source Database Cross References

The Source Database can be cross-referenced to the Report Catalogue (or vice versa) by comparing Report Numbers on the Source Data Sheets to the Source Numbers listed on each Report Catalogue sheet.

Structure for database: C:\TAG103SC.HBI
 Number of data records: 203
 Date of last update : 03/29/93

Field	Field Name	Type	Width	Dec			
1	SOURCE_NO	Character	12		63	MC_NO	Character 3
2	SOURCE_REF	Character	12		66	USC_CLASS	Character 30
3	STUDY_NO	Character	12		67	MC_DATA	Character 14
4	STUDY_LIST	Character	10		68	SIEVE_NO	Character 3
5	STUDY_REF	Character	12		69	GRAVEL	Character 8
6	NTS_REF	Character	8		70	SAND	Character 8
7	MAP_DIG_NO	Character	5		71	FINES	Character 8
8	LOCMAP_SC	Numeric	6		72	OVERSIZE	Character 8
9	CN_ZONE	Numeric	2		73	D_50	Character 17
10	CN_EAST	Numeric	6		74	PETROG_NO	Numeric 2
11	CN_LAT_DEG	Numeric	10		75	PETROGDATA	Character 11
12	CN_LON_DEG	Numeric	10		76	OTHERTESTS	Character 50
13	LOCATION	Character	25		77	CLASS_1	Character 27
14	LOCATION2	Character	25		78	CLASS_2	Character 27
15	CN_NORTH	Numeric	7		79	CLASS_3	Character 27
16	LOCAL_NAME	Character	25		80	CLASS_4	Character 27
17	CORR_NO	Character	2		81	CLASS_5	Character 27
18	CORR_NAME	Character	50		82	TTL_RECOV	Character 9
19	KILO_POST	Character	6		83	ANN_RECOV	Character 9
20	OFFSET_DIR	Character	20		84	TTL_VOL	Character 9
21	ACCESS	Character	60		85	P_USC_NO	Numeric 3
22	ACC_LENGTH	Character	10		86	P_MC_NO	Character 3
23	OFFSET_DIS	Character	10		87	P_USC_CLAS	Character 30
24	CONDITION	Character	40		88	P_MCRESLT	Character 14
25	AREA	Character	10		89	P_SIEVE	Character 3
26	SIT_PL_SC	Character	6		90	P_GRAVEL	Character 8
27	SIT_PL_DN	Character	5		91	P_SAND	Character 8
28	LND_TENURE	Character	30		92	P_FINES	Character 8
29	STATUS	Character	22		93	P_OVERSIZE	Character 8
30	STUDY_PRI	Character	10		94	P_D_50	Character 17
31	STOCK_TYPE	Character	30		95	P_PETROGNO	Numeric 2
32	PAST_USE	Character	30		96	P_PETRORES	Character 11
33	VOL_HWY	Character	10		97	P_OTHERTES	Character 50
34	VOL_PL	Character	10		98	P_CLASS_1	Character 8
35	PERF_RATIN	Character	38		99	P_CLASS_2	Character 8
36	STOCK_QUAN	Character	15		100	P_CLASS_3	Character 8
37	INVEST_LEV	Character	25		101	P_CLASS_4	Character 3
38	INVEST_DAT	Character	4		102	P_CLASS_5	Character 8
39	GEOPH_DATA	Character	33		103	P_TTL_REC	Character 8
40	TH_DENSITY	Character	4		104	P_ANN_REC	Character 8
41	BH_NO	Character	3		105	P_TTL_VOL	Character 8
42	TP_NO	Character	2		.. Total .. 1744		
43	EX_NO	Character	2				
44	BH_DEPTH	Character	14				
45	TP_DEPTH	Character	11				
46	EX_DEPTH	Character	14				
47	DATA_QUAL	Character	15				
48	TOPOGRAPHY	Character	20				
49	SLOPE	Character	25				
50	DRAINAGE	Character	40				
51	VEGETATION	Character	75				
52	PERMAFROST	Character	60				
53	ACT_LAY	Character	11				
54	DESC_DATE	Date	8				
55	GENERIC_OR	Character	20				
56	LANDFORM	Character	20				
57	CRAN_TYPE	Character	30				
58	OB_TYPE	Character	30				
59	GRAN_THICK	Character	14				
60	OB_THICK	Character	11				
61	UB_TYPE	Character	30				
62	DEV_CONSTR	Character	50				
63	DEV_POTENT	Character	15				
64	USC_NO	Numeric	3				

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FIGURE 3: Source Database Structure

3.0 DISCUSSION AND RECOMMENDATIONS

A total of 1,200 sources were entered for all of the RMA's included herein. It should be noted, however, that many of these sources contain glacial till, others may have been depleted since the original 1977 report, and more recent work has not been included.

These databases should be considered only as the initial stage of working databases. There are other reports to be added to the Report Catalogues, as well as new and/or depleted sources to be added or removed from the Source Database. Additional soil testing completed at each source would also have to be added.

The intention of work under the present contract was to establish the initial computerized base, from which further refinements could be made.

3.2 Clarification of Sources Listed

All sources listed exist in areas along existing highway or access road corridors. In an area with numerous alluvial and glaciofluvial deposits, it is realistic to suggest that numerous other sources are present within RMA's. Existing geotechnical data is scarce or non-existent, as these areas are presently inaccessible.

3.3 Source Verification

No field work was requested as part of this study. However, to further refine the Source Database, and increase its usefulness, it is recommended that a field verification trip be conducted to assess all of the sources listed. The ones that are depleted or contain unsuitable materials could thus be flagged in the database. Discussions with local Highways personnel would also provide valuable information.

3.4 Database Management

It is essential that a Central Agency, such as DIAND, be responsible for maintaining and updating the databases and distributing updates to the users. Several revisions have been made to the structure of the database presented herein and future databases should attempt to use the same format. A consistent format will also enhance the use of granular resource information in geographic information systems (GIS). The next logical step, to enhance user friendliness, would be to combine the database with a digital map, and use with "QUIKMap" or equivalent software.

4.0 DATA PRESENTATION

Typical Report Catalogue Data Sheets and Source Database Data Sheets are presented as Figures 4 and 5, respectively. Hard copies of the complete Report Catalogue and Source Database for each RMA are presented in separate volumes entitled "Data Presentation - Report and Source Database Data Sheets for (Name) Resource Management Area, Yukon". In addition, all of the data in the databases is presented on one 360 kB floppy diskette included in the back of 12 copies of this report. Both the dBASE III+ files and the R&R (Relational Report Writer, Version 3) files are included on the diskette, and are required to use and print the computerized databases.

5.0 CLOSURE

The data entry for these six RMA's now completes the "first level" of granular resources database construction for the entire Yukon Territory. The Dawson database needs to be combined with the Yukon portion of the Dempster Highway database to be complete; and the Beaver Creek database is included in the previously submitted North Alaska Highway Corridor database. Watson Lake and Laberge were also submitted previously.

PART A: STUDY REFERENCE AND LOCATION

SITE PLAN : Sketch
NUMBER : 22 Various
FORMAT : Paper Copy
SCALE : 1:Various
DIGITIZ NO.:
ARCHIVING : DIAND Whitehorse

PART B: STUDY DETAILS

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GRANULAR RESOURCE INVENTORY
ROSS RIVER RESOURCE MANAGEMENT AREA, YUKON
SOURCE CATALOGUE DATA SHEET

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===== PART A: LOCATION AND STATUS =====
SOURCE NUMBER      : 04-03721R      STUDY NO.       : INAC77ROSS01
SOURCE REFERENCE   : n/a            STUDY LIST      : n/a
                                   STUDY REFERENCE: n/a
NTS MAP REFERENCE  : 105 K/2        DIGITIZ NO.    : MAP SCALE : 1:50000
UTM ZONE-EASTING   : 8-618950      LOCATION       : 3.3 km South of Lapie River Bridge
UTM NORTHING       : 6878000        KILOMETRE POST : 372.1
CENTRE LATITUDE    : 0              CENTRE LONGITUDE: 0
LOCAL NAMES(S)     : n/a
OFFSET DIRECTION    : Right          OFFSET DISTANCE(M): 81 m
CORRIDOR NO./NAME  : #4 Robert Campbell Highway
SOURCE ACCESS       : Poor
ACCESS DISTANCE (m): Unknown        CONDITION : Unknown
AREA (ha)           : Unknown        SITE SCALE: 1:0    DIGITIZ NO:
LAND TENURE         : Unknown        STATUS      : Inactive
STUDY PRIORITY      : High
PAST USE - SOURCE   : Borrow        STOCKPILE - TYPE: Silty Sandy Gravel
PERFORMANCE RATING  : Unknown        - QUANTITY: Unknown
EXCAVATED VOLUME FOR HIGHWAY (cu. m.): Unknown EXCAVATED VOLUME FOR PIPELINE (cu. m.): Unknown
===== PART B: SOURCE INVESTIGATION AND DESCRIPTIVE INFORMATION =====
INVESTIGATION LEVEL : Reconnaissance LAST INVEST. DATE : 1977
GEOPHYSICAL DATA   : Unknown        TEST HOLE DENSITY (#/ha) : 0
BOREHOLES - NUMBER  : 0              TESTPITS - NUMBER : 0    EXPOSURES - NUMBER : 0
    - DEPTH (m)      : n/a            - DEPTH (m) : n/a
DATA QUALITY        : n/a            SOURCE TOPOGRAPHY : Unknown
    SLOPE            : Steep Sidehill AREA DRAINAGE : Unknown
SOURCE VEGETATION    : Moderate Spruce, Poplar
PERMAFROST FEATURES : Unknown
ACTIVE LAYER (m)     : Unknown        GENERIC ORIGIN : Unknown
LANDFORMS           : Unknown        UNDERBURDEN : Unknown
GRANULAR - TYPE      : Unknown        OVERBURDEN - TYPE : Unknown
    - THICKNESS (m)  : Unknown        - THICKNESS (m) : Unknown
DEVELOP. CONSTRAINT : Unknown        DEVELOP. POTENTIAL : Unknown
===== PART C: TEST RESULTS AND MATERIAL QUANTITY =====
===== NATURAL MATERIAL =====
USC NUMBER : 0                      MOISTURE CONTENT NO : 0
    - CLASS : n/a                    - RESULTS: n/a
SIZE ANALYSIS NO : n/a  GRAVEL (%) : n/a  SAND (%) : n/a  FINES (%) : n/a  D-50 (um) : n/a
    - OVERSIZE (%) : n/a  PETROGRAPHIC ANALYSIS-NO. OF TESTS: 0  RESULTS: n/a
OTHER TESTS (see DATA DICTIONARY): n/a
MATERIAL QUANTITY (All in cubic metres)
                                CLASS 1 : Unknown
                                CLASS 2 : Unknown
                                CLASS 3 : Unknown
                                CLASS 4 : Unknown
                                CLASS 5 : Unknown
TOTAL RECOVERABLE : Unknown
ANNUAL RECOVERABLE : Unknown
TOTAL VOLUME : Unknown

===== PROCESSED MATERIAL =====
USC NUMBER : 0                      MOISTURE CONTENT NO : n/a
    - CLASS : n/a                    - RESULTS: n/a
SIZE ANALYSIS NO : n/a  GRAVEL (%) : n/a  SAND (%) : n/a  FINES (%) : n/a  D-50 (um) : n/a
    - OVERSIZE (%) : n/a  PETROGRAPHIC ANALYSIS-NO. OF TESTS: 0  RESULTS: n/a
OTHER TESTS (see DATA DICTIONARY): n/a
MATERIAL QUANTITY (All in cubic metres)
                                CLASS 1 : Unknown
                                CLASS 2 : Unknown
                                CLASS 3 : Unknown
                                CLASS 4 : Unknown
                                CLASS 5 : Unknown
TOTAL RECOVERABLE : Unknown
ANNUAL RECOVERABLE : Unknown
TOTAL VOLUME : Unknown

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FIGURE 5: Typical Data Sheet - Source Database

All of the information presented is a computerized version of data included in the 1977 Archer, Cathro & Associates report, as previously noted. Some of the RMA's contain better quality data than others, related to a "second level" of effort -- ground truthing completed under other contracts. EBA would appreciate the opportunity to update the information presented herein, using other available data and other new data as it becomes available.

Respectfully submitted,
EBA Engineering Consultants Ltd.



J.R. Trimble, P.Eng.
Project Director
Office Manager

JRT/rsz

REPORT CATALOGUE FIELD SUMMARY CHART AND DATA DICTIONARY

Part A: Study Reference and Location

Index Code	Field Name	Field Abbreviation	Field Definition
AA	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).
AB	Year	YEAR	The Calendar year in which the majority of the field work on the study was complete (e.g. 1983).
AB1	Month	MONTH	The month in which the majority of the field work was completed (e.g. 07).
AC	Sponsor	SPONSOR	The name of the company, department, agency or organization sponsoring the study (e.g. Indian and Northern Affairs Canada, Yukon Transportation Engineering, Public Works Canada).
AC1	Sponsor Job/File Number	SP_JOB_NO	The sponsor's job number.
AD	Sponsor Contact Name	SP_CONTACT	The name of the person within the sponsoring organization who might be contacted to obtain additional information on the study and/or authorization for its use.
AE	Contractor	CONTRACTOR	The name of the prime contractor, consultants or group contracted by the sponsor to undertake the study (e.g. EBA Engineering Consultants Ltd., Northern Engineering Services Company Ltd.).
AE1	Contractor Job/File Number	CO_JOB_NO	The contractor's file number.
AE2	Contractor's Contact Name	CO_CONTACT	The name of the person within the contractor organization who might be contacted to obtain additional information on the study and/or authorization for its use.
AE3	Report Title	RPT_TITLE	The title of the original report.
AF1	Minimum Zone	MN_ZONE	The UTM zone in which the southwestern corner of the enclosing block occurs.
AF2	Minimum Easting	MN_EAST	The UTM grid line of the western extremity of the enclosing block (e.g. 381987).
AF3	Minimum Northing	MN_NORTH	The UTM grid line of the southern extremity of the enclosing block (e.g. 7548335).

Index Code	Field Name	Field Abbreviation	Field Definition
AG1	Minimum Latitude	MN_LAT_DEG	The latitude in decimal degrees of the southern extremity of the enclosing block (e.g. 69.72345).
AG2	Minimum Longitude	MN_LON_DEG	The longitude in decimal degrees of the eastern extremity of the enclosing block (e.g. 135.03926).
AH1	Centre Latitude	CN_LAT_DEG	The latitude in decimal degrees of the centre of the enclosing block (e.g. 70.72345).
AH2	Centre Longitude	CN_LON_DEG	The longitude in decimal degrees of the centre of the enclosing block (e.g. 135.53926).
AI1	Centre Zone (UTM)	CN_ZONE	The UTM zone of the centre of the enclosing block (e.g. 08).
AI2	Centre Easting (UTM)	CN_EAST	The UTM grid line of the centre of the enclosing block (e.g. 476321).
AI3	Centre Northing (UTM)	CN_NORTH	The UTM grid line of the centre of the enclosing block (e.g. 7602500).
AJ1	Maximum Zone	MX_ZONE	The UTM zone in which the northeastern corner of the enclosing block occurs (e.g. 08).
AJ2	Maximum Easting	MX_EAST	The UTM grid line of the western extremity of the enclosing block (e.g. 567428).
AJ3	Maximum Northing	MX_NORTH	The UTM grid line of the northern extremity of the enclosing block (e.g. 7661560).
AK1	Maximum Latitude	MX_LAT_DEG	The latitude in decimal degrees of the northern extremity of the enclosing block (e.g. 70.72345).
AK2	Maximum Longitude	MX_LON_DEG	The longitude in decimal degrees of the western extremity of the enclosing block (e.g. 136.03926).
AL	General Location - Area Name	LOCAL_NAME	Regional or local name in location map or plan.
AM	Location Map Number	LOCMAP_NO	The map or plan 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.
AN	Location Map Format	LOCMAP_FM	The format or type of data containing the location of the study area, or series of separate detailed study/borrow sites or regional survey lines (e.g. paper copy; mylar original, folded blueprint).
AO	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).
AP	Location Map Digitizer Number	LOCMAP_DN	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 report catalogue database to INAC's spatial database system.

Index Code	Field Name	Field Abbreviation	Field Definition
AQ	Location Map Archiving	LOCMAP_ARC	The general availability and where appropriate, specific location of storage of any map or plan number of any small scale accompanying regional map or trackplot which indicates the location of the study area, or series of separate detailed study/borrow sites or regional survey lines (e.g. sponsor/contractor in-house, private/public repository, government agencies, etc.).
AR	Site Name	SITE_NAME	Site or block name in site plans.
AS	Site Plan Number	SIT_PL_NO	The map or plan number(s) of up to six larger scale accompanying local maps, site plans or trackplots which indicate the location of individual detailed study/borrow sites, boreholes/testpits/grab samples or detailed survey grids for separate study/borrow sites within the main study area.
AT	Site Plan Format	SIT_PL_FM	The format(s) or type(s) of up to six larger scale accompanying local maps, site plans or trackplots which indicate the location of individual detailed study/borrow sites, boreholes/testpits/grab samples or detailed survey grids for separate study/borrow site within the main study area (e.g. paper copy; mylar original, folded blueprint).
AU	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).
AV	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.
AW	Site Plan Archiving	SIT_PL_ARC	The general availability and, where appropriate, specific location of storage of up to six larger scale accompanying local maps, site plans or trackplots which indicate the location of individual detailed study/borrow sites, boreholes/testpits/grab samples or detailed survey grids for separate study/borrow sites within the main study area (e.g. sponsor/contractor, in-house, private/public repository, government agencies).
AX	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).
AY	Survey Line Numbers/Location Details	SURV_DATA	Description of geophysical or hydrographic survey line numbers or locations, or further location details of geotechnical studies

Part B: Study Details

Index Code	Field Name	Field Abbreviation	Field Definition
BB	Study Type	STUDY_TYPE	The type of data collected during the study or sub-study (e.g. hydrographic, geophysical, seabed sampling, geotechnical, dredging).
BC	Study Scope	STUDY_SCOPE	The areal scope of the study or sub-study (e.g. regional, site specific single site, many sites).
BD	Study Size	STUDY_SIZE	The extent of size of the study in terms of number of potential borrow sites identified, number of testpits or boreholes, or number of line kilometres of geophysical data (e.g. 21 sites; 55 BH's; 145 km).
BE	Survey Level	SURV_LEVEL	The general purpose or level of detail of the study (e.g. airphoto interpretation, reconnaissance, exploration, delineation, production).
BF	Survey Pattern	SURV_PATT	The pattern in which the individual borrow sites within the study area occur, or in which boreholes or survey lines within specific detailed study sites were laid out. (e.g. random, corridor, line, grid).
BG	Survey Spacing	SURV_SPAC	The relative (e.g. random, wide) or actual (range and/or average spacing of the survey data or study site (e.g. 250 m E-W, 500 m N-S; 10-15 km).
BH	Program Length/Survey Length	PGM_LENGTH	The length of the field data collection or survey program, in days or showing specific dates.
BI	Season	SEASON	The season of the year in which the field data collection or survey program was conducted (e.g. late summer, winter).
BJ	Equipment Type	EQUIP_TYPE	The type(s) of equipment used to collect data or obtain samples (e.g. hand-excavated testpits; D8 cat; sonic drill; CME 750 Auger Drill, etc.).
BK	Penetration	PENETRAT	The average penetration of drilling or soil sampling equipment, (e.g. 5, 7.5, 10), directly related to the equipment type.
BL	Resolution	RESOLUTION	The suitability of the data for distinguishing variations in subsurface stratigraphy, expressed in relative (e.g. poor, variable, unknown) or actual (e.g. range and/or average in tenths of metres) terms (e.g. 0.5).
BM	Sampling/Recording Rate	SAMPLE_RATE	The relative (e.g. continuous, intermittent, slow) and/or actual rate of sampling or recording (e.g. samples at 1 m intervals; chart speed).
BN	Sample/Recording Quality	SAMPLE_QUAL	A description of the relative overall quality or range in quality of the data, samples or records with regard to its use for determining subsurface stratigraphy and/or borrow quality (e.g. poor-fair, good, disturbed, etc.).
BO	Sample/Recording Type(s)	SAMPLE_TYPE	Additional details on the type(s) of samples (e.g. 75 mm diam. CRREL core, 1-2 kg grab samples, 100 mm sonic casing) or records obtained with the indicated types of equipment.

Index Code	Field Name	Field Abbreviation	Field Definition
BP	Sample/Recording Size	SAMPL_SIZE	The total number(s) of samples obtained during the study, where appropriate, and related to the Sample/Recording type(s) (e.g. 75 grabs, 15 CRREL core).
BQ	Interpretation/Testing Level	INTERP_LEV	The extent of laboratory testing of samples (e.g. routine classification testing only, concrete aggregate suitability testing); or the level of detail of the interpretation of geophysical records (e.g. field, preliminary, detailed) or geotechnical data (e.g. pit plans for 3 sources), as appropriate.
BR	Report Level	RPT_LEVEL	The type or level of detail of any report(s) resulting from the study. (e.g. annotated records, field logs/report only, summary/data compilation report, formal geophysical interpretation/geotechnical evaluation report).
BS	Report Distribution	RPT_DISTR	The extent of distribution and/of general availability of any reports resulting from the study (e.g. internal, sponsor/contractor only, specific government department/agencies/libraries, published).
BT	Data Archiving	DATA_ARC	The general availability and, where appropriate, specific location of storage of raw data obtained during the study. (e.g. sponsor/contractor in-house, private/public repository, government agencies).
BU	Other Reports	OTHER_RPTS	Related to present report or sources covered in present report, lists references in same format as study number.

SOURCE DATABASE FIELD SUMMARY CHART AND DATA DICTIONARY

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	Study List	STUDY_LIST	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.
AA3	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).
AB1	Source Reference	SOURCE_REF	A list of other source numbers related to the source described.
AB2	Study Reference	STUDY_REF	A list of other study numbers referring to reports which have more information on the source.
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).
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 block (e.g. 08).
AH2	Centre Northing (UTM)	CN_NORTH	The UTM grid line of the centre of the enclosing block (e.g. 7602500).
AH3	Centre Easting (UTM)	CN_EAST	The UTM grid line of the centre of the enclosing block (e.g. 476321).
AH4	Centre Latitude	CN_LAT_DEG	The latitude in decimal degrees of the centre of the enclosing block (e.g. 70.72345).
AH5	Centre Longitude	CN_LON_DEG	The longitude in decimal degrees of the centre of the enclosing block (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).
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 outlines; along north bank of river; follows ridge crest from KP 263.7; 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 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_TENURE	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 cu.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 Mackenzie Highway. These volumes were determined from Public Works Canada documents, correspondence and as-built maps for the Mackenzie 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. These volumes were determined from information provided by W.M. Pearce, Director, Special Projects for Interprovincial Pipeline (NW) Ltd.
AX	Performance Rating	PERF_RATING	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_DATE	The year in which the most recent site investigation work was completed.
BC	Geophysical Data	GEPH_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, test pits, 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).
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).
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	PETROG_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	PETROG_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).

Index	Field Name	Field Abbreviation	Field Definition
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).
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
CQ	Class 1	CLASS_1	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.
CR	Class 2	CLASS_2	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.
CS	Class 3	CLASS_3	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.
CT	Class 4	CLASS_4	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.
CU	Class 5	CLASS_5	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.

Index	Field Name	Field Abbreviation	Field Definition
CV	Total Volume	TTL_VOL	The calculated and/or estimated volume of all of the above classes of granular materials potentially available in the deposit.
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.
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.