GRANULAR RESOURCE DATABASES
WATSON LAKE AND LABERGE
RESOURCE MANAGEMENT AREAS
YUKON TERRITORY

0201-10603

August, 1991

EBA Engineering Consultants Ltd.

Civil, Geotechnical and Materials Engineers

August 22, 1991

Indian and Northern Affairs Canada
Les Terrasses de la Chaudiere
Ottawa, Ontario
K1A 0H4

EBA File 0201-10603

Attention: Mr. R.J. Gowan
Geotechnical Advisor
Land Management Division
Natural Resources and Economic
Development Branch

Dear Sir:

Subject: Report on the Preparation of
Granular Resource Databases
Watson Lake and Laberge Resource Management Areas
Yukon Territory

Please find enclosed fifteen (15) copies of our Report on the preparation of computerized Granular Resource Databases for the Watson Lake and Laberge Resource Management Areas, Yukon Territory. Separate and related documents include two (2) diskette copies of the dBase III+ files, and five (5) bound copies of the Source Data Sheets for each of the identified gravel pits and/or borrow areas.

We trust that you will find this information useful, and ask that you contact the undersigned if you have any questions or require additional information on any of the database components.

Yours truly,
EBA Engineering Consultants Ltd.

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

JRT/rsz

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GRANULAR RESOURCE DATABASES
WATSON LAKE AND LABERGE
RESOURCE MANAGEMENT AREAS
YUKON TERRITORY

submitted to:

INDIAN AND NORTHERN AFFAIRS CANADA
LAND MANAGEMENT DIVISION

prepared by:

EBA ENGINEERING CONSULTANTS LTD.
WHITEHORSE, YUKON

0201-10603

August, 1991

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1.0 INTRODUCTION

EBA Engineering Consultants Ltd. (EBA) was requested by Indian and Northern Affairs Canada (INAC) 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 March, 1991, under Contract No. A7134-0-0037/01-ST.

1.1 Study Areas

The study areas defined in the proposal request are the Watson Lake and Laberge Resource Management Areas (RMA's), as defined by INAC 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 report prepared in 1977 by Archer, Cathro and Associates entitled "Yukon Gravel Inventory". This Report, which covered the highways of the Yukon, was later subdivided into RMA's by INAC 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.

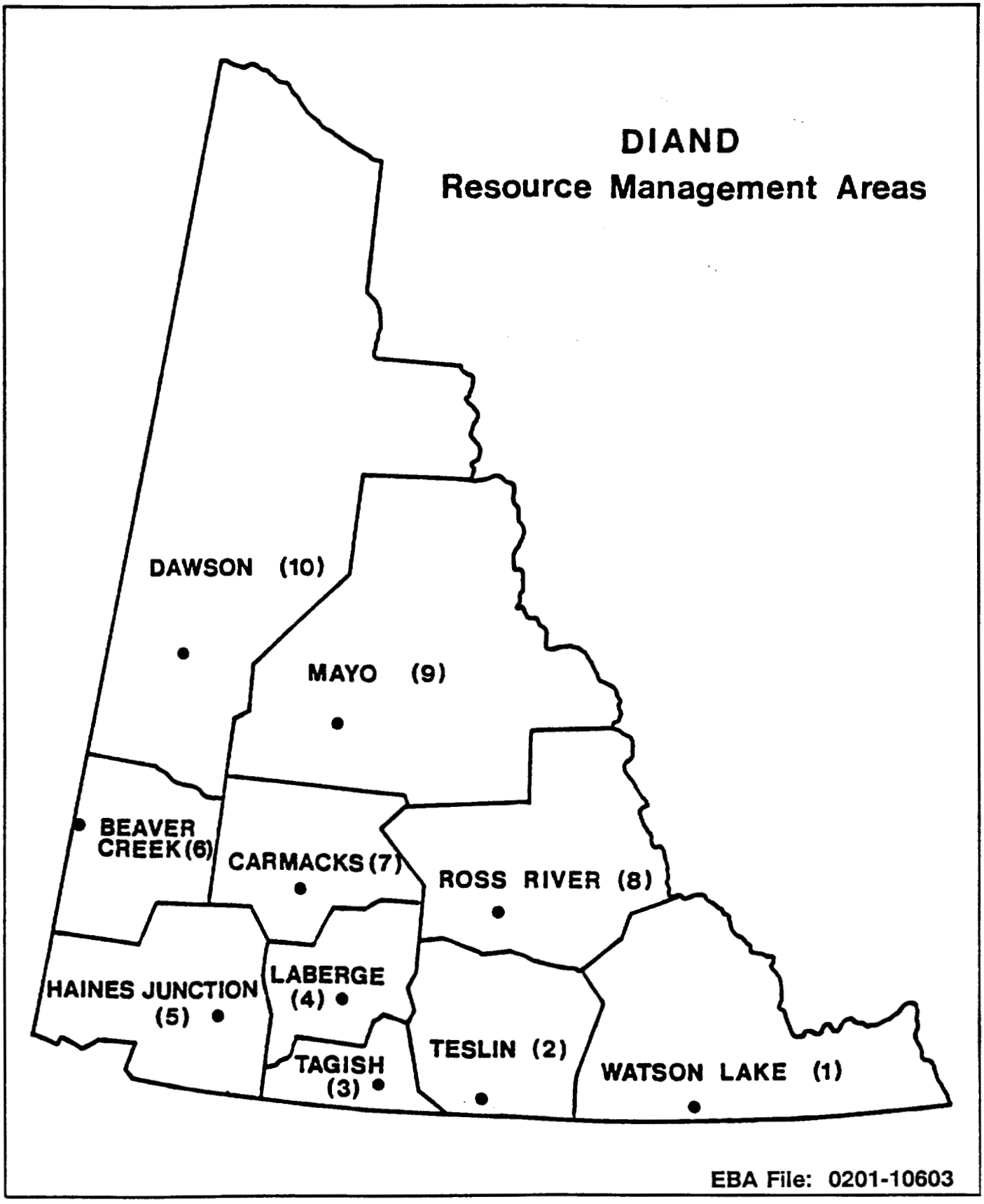


FIGURE 1: General Location Map - RMA's in the Yukon

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 information was printed out and checked for:
   - data entry errors
   - UTM coordinate accuracy
   - Consistency with the format of previously submitted databases

5. 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 location (e.g. LBRG for Laberge, WTLK for Watson Lake)
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 Watson Lake and Laberge RMA's are included as Appendices B and C of this Report, respectively.

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 designation (e.g., 01 - Alaska Hwy, 02 - Klondike Highway, 04 - Robert Campbell Highway, 10 - Nahanni Range Road)
Digit 3:	Dash separating highway designation from kilometre posting
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)

Examples are:

02-05045L	would refer to the source along the Klondike Highway at km 504.5 on the left side of the highway.
01-09472R	would refer to the source along the Alaska Highway at km 947.2 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 location, status, deposit description, material quantities, and available maps for that deposit.

All of the data for each source was summarized and tabulated on Source Database Data Sheets. All components of the Source Database Data Sheets

Structure for database: D:WLREPORT.dbf
Number of data records: 3
Date of last update : 08/23/91

Field	Field Name	Type	Width	Dec
1	STUDY_NO	Character	12	
2	YEAR	Character	13	
3	SPONSOR	Character	30	
4	SPONSOR1	Character	30	
5	SPONSOR2	Character	30	
6	REPTITLE1	Character	30	
7	REPTITLE2	Character	30	
8	REPTITLE3	Character	30	
9	REPTITLE4	Character	30	
10	CONTACT	Character	30	
11	CONTRACTOR	Character	30	
12	FILENUMBER	Character	20	
13	DATAQUALIT	Character	15	
14	LOCATIONMP	Character	40	
15	SITEPLAN	Character	30	
16	LOCMAP_NO	Character	30	

Press any key to continue...

17	SITPLAN_NO	Character	50	
18	LOCMAPFORM	Character	30	
19	SITPLAFORM	Character	30	
20	LOCMAPSCAL	Character	30	
21	SITPLASCAL	Character	30	
22	LOCMAPDIGN	Character	5	
23	SITPLADIGN	Character	5	
24	LOCMAPARCH	Character	30	
25	SITPLAARCH	Character	30	
26	MN_ZONE	Numeric	2	
27	MN_EAST	Numeric	6	
28	MN_NORTH	Numeric	7	
29	MX_ZONE	Numeric	2	
30	MX_EAST	Numeric	6	
31	MX_NORTH	Numeric	7	
32	SOURCE_NOS	Character	100	

Press any key to continue...

33	SOURCENOS2	Character	100	
34	SOURCENOS3	Character	100	
35	SOURCENOS4	Character	100	
36	SOURCENOS5	Character	100	
37	SOURCENOS6	Character	100	
38	SOURCENOS7	Character	100	
39	SOURCENOS8	Character	100	
40	SOURCENOS9	Character	100	
41	SOURCENO10	Character	100	
42	SOURCENO11	Character	100	
43	SOURCENO12	Character	100	
44	STUDY_TYPE	Character	50	
45	STUDY_SCOP	Character	50	
46	STUDY_SIZE	Character	40	
47	SURV_LEVEL	Character	60	
48	SURV_PATT	Character	40	
49	SURV_SPAC	Character	40	
50	PGM_LENGTH	Character	30	
51	SEASON	Character	30	
52	EQUIP_TYPE	Character	40	
53	PENETRAT	Character	40	
54	RESOLUTION	Character	20	
55	SAMPL_RATE	Character	40	
56	SAMPL_QUAL	Character	50	
57	SAMPL_TYPE	Character	70	
58	SAMPL_SIZE	Character	35	
59	SAMPL_SZ1	Character	35	
60	INTERP_LEV	Character	60	
61	REPORT_LEV	Character	40	
62	REPORT_DST	Character	24	
63	DAT_ARCHIV	Character	40	
64	RECORD_NO	Character	8	

Press any key to continue...

65	OTHER_REPS	Character	30
66	COMPILER	Character	30
67	COMPILE_DA	Date	8
68	COMP_PRJNO	Character	15
69	UPDATER	Character	30
70	UPDATE_DAT	Date	8
71	UPD_PROJNO	Character	15
** Total **			2879

EBA File: 0201-10603

FIGURE 2: Report Catalogue Structure

are defined in the Data Dictionary - Source Database in Appendix D. The Source Database structure is presented as 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.

3.0 DISCUSSION AND RECOMMENDATIONS

3.1 Data Reliability

A total of 313 sources were entered for the Watson Lake RMA, and 111 for the Laberge RMA. It should be noted; however, that many of these sources contain glacial till, and many may have been depleted since the original 1977 Report.

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 exist within RMA's but since no means of accessing the areas exist, existing geotechnical data is scarce or non-existent.

Structure for database: D:WLSOURCE.dbf
Number of data records: 313
Date of last update : 08/23/91

Field	Field Name	Type	Width	Dec
1	SOURCE_NO	Character	12	
2	STUDY_NO	Character	12	
3	NTS_REF	Character	8	
4	MAP_DIG_NO	Character	5	
5	LOC_MAP_SC	Character	6	
6	LOCATION	Character	25	
7	LOCATION2	Character	25	
8	MN_ZONE	Numeric	2	
9	MN_EAST	Numeric	6	
10	MN_NORTH	Numeric	7	
11	LOCAL_NAME	Character	25	
12	COR_NO_NAM	Character	50	
13	KILO_POST	Character	6	
14	OFST_DS_DR	Character	37	
15	ACCESS	Character	60	
16	DISTANCE	Character	10	

Press any key to continue...

17	CONDITION	Character	40	
18	AREA	Character	4	
19	SYTPLN_SCL	Character	6	
20	PLN_DIGINO	Character	5	
21	LND_TENURE	Character	30	
22	STATUS	Character	35	
23	STOCK_TYPE	Character	30	
24	PAST_USE	Character	30	
25	PERF_RATIN	Character	38	
26	STOCK_QUAN	Character	15	
27	INVEST_LEV	Character	25	
28	LAST_DATE	Character	4	
29	GEPHYS_DAT	Character	33	
30	THDENSITY	Character	4	
31	BHOLE_NO	Character	3	
32	TESTP_NO	Character	2	

Press any key to continue...

33	ESPOS_NO	Character	2	
34	BHOLE_DEPT	Character	14	
35	TESTP_DEPT	Character	11	
36	EXPOS_DEPT	Character	14	
37	DATAQUALIT	Character	15	
38	TOPOGRAPHY	Character	20	
39	SLOPE	Character	25	
40	DRAINAGE	Character	40	
41	VEGETATION	Character	75	
42	PERMF_FEAT	Character	60	
43	ACT_LAY	Character	11	
44	DESC_DAT	Date	8	
45	GENERIC_OR	Character	20	
46	LANDFORM	Character	20	
47	GRANULR_TP	Character	30	
48	OVRBURD_TP	Character	30	
49	GRANULR_TH	Character	14	
50	OVRBURD_TH	Character	11	
51	UNDRBUR_TP	Character	30	
52	DEV_CONSTR	Character	50	
53	DEV_POTENT	Character	15	
54	USC_NO	Numeric	3	
55	MC_NO	Character	3	
56	USC_CLASS	Character	30	
57	MC_RESULTS	Character	14	
58	SYZANAL_NO	Character	3	
59	GRAVEL	Character	8	
60	SAND	Character	8	
61	FINES	Character	8	
62	OVERSIZE	Character	8	
63	D_50	Character	17	
64	PETRO_NO	Numeric	2	

Press any key to continue...

65	PETRO_RESU	Character	60	
66	OTHERTESTS	Character	50	
67	CLASS_1	Character	27	
68	CLASS_2	Character	27	
69	CLASS_3	Character	27	
70	CLASS_4	Character	27	
71	CLASS_5	Character	27	
72	TOTAL_RECO	Character	9	
73	ANNUAL_REC	Character	9	
74	TOTAL_COLU	Character	9	
75	P_USC_NO	Numeric	3	
76	P_MC_NO	Character	3	
77	P_USCCLASS	Character	30	
78	P_MCRESULT	Character	14	
79	P_SYZANAL	Character	3	
80	P_GRAVEL	Character	8	

Press any key to continue...

81	P_SAND	Character	8	
82	P_FINES	Character	8	
83	P_OVERSIZE	Character	8	
84	P_D_50	Character	17	
85	P_PETRONO	Numeric	2	
86	P_PETRORES	Character	60	
87	P_OTHERTES	Character	50	
88	RECORD_UPD	Character	60	
89	LASTUPDATE	Date	8	
** Total **			1774	

EBA File: 0201-10603

FIGURE 3: Source Database Structure

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 INAC, 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).

4.0 DATA PRESENTATION

A typical Source Database Data Sheet is presented in Figure 4. A hard copy of the complete Source Database for each RMA is presented in a separate volume entitled "Data Presentation - Source Database Data Sheets for Watson Lake and Laberge Resource Management Areas, Yukon". In addition, all of the data from the Report Catalogue and Source Databases are presented on 1.2 MB floppy diskettes--one for Watson Lake RMA and one for Laberge RMA. Both the dBase III+ files and the R&R (Relational Report Writer) files are included on the diskette. Both of these programs are required to use and print the computerized databases.

GRANULAR RESOURCE INVENTORY
WATSON LAKE RESOURCE MANAGEMENT AREA, YUKON
SOURCE DATABASE DATA SHEET

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

SOURCE NUMBER : 01-09472R REPORT NO. : INAC77WTLK01
NTS MAP REFERENCE : 95D/4 DIGITIZ NO. : MAP SCALE : 1:50000
UTM ZONE EASTING : 8 570700 LOCATION : .4 km North of ContactCreek Bridge
UTM NORTHING : 6652800 KILOMETRE POST : 947.2
LOCAL NAMES(S) : OFFSET(m) : Right
CORRIDOR NO./NAME : Alaska Highway #01
SOURCE ACCESS :
ACCESS DISTANCE (m) : Adjacent CONDITION :
AREA (ha) : SITE SCALE: DIGITIZ NO:
LAND TENURE : STATUS :
PAST USE - SOURCE : STOCKPILE - TYPE: Gravel, Sand
PERFORMANCE RATING : - QUANTITY:

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

INVESTIGATION LEVEL : LAST INVEST. DATE :
GEOPHYSICAL DATA : TEST HOLE DENSITY (#/ha) :
BOREHOLES - NUMBER : TESTPITS - NUMBER : EXPOSURES - NUMBER :
- DEPTH (m): - DEPTH (m): - DEPTH (m) :
DATA QUALITY : SOURCE TOPOGRAPHY :
SLOPE : AREA DRAINAGE :
SOURCE VEGETATION :
PERMAFROST FEATURES :
ACTIVE LAYER (m) : GENERIC ORIGIN : DESC DATE:
LANDFORMS : UNDERBURDEN :
GRANULAR - TYPE : OVERBURDEN - TYPE :
- THICKNESS (m) : - THICKNESS (m):
DEVELOP. CONSTRAINT : DEVELOP. POTENTIAL :

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

=======NATURAL MATERIAL=======

USC NUMBER : 0 MOISTURE CONTENT NO :
- CLASS : - RESULTS:
SIZE ANALYSIS NO : GRAVEL (%): SAND (%): FINES (%): D-50 (um):
- OVERSIZE (%) : PETROGRAHIC ANALYSIS-NO. OF TESTS: 0 RESULTS:
OTHER TESTS (see DATA DICTIONARY): Tested for concrete aggregate
MATERIAL QUANTITY (All in cubic metres) CLASS 1 :
CLASS 2 :
TOTAL RECOVERABLE : CLASS 3 :
ANNUAL RECOVERABLE : CLASS 4 :
TOTAL VOLUME : CLASS 5 :

=======PROCESSED MATERIAL=======

USC NUMBER : 0 MOISTURE CONTENT NO :
- CLASS : - RESULTS:
SIZE ANALYSIS NO : GRAVEL (%): SAND (%): FINES (%): D-50 (um):
- OVERSIZE (%) : PETROGRAHIC ANALYSIS-NO. OF TESTS: 0 RESULTS:
OTHER TESTS (see DATA DICTIONARY):

RECORD UPDATED BY : EBA Engineering Consultants Ltd.
LAST UPDATE : 07/11/91
EBA PROJECT NUMBER : 0201-10603

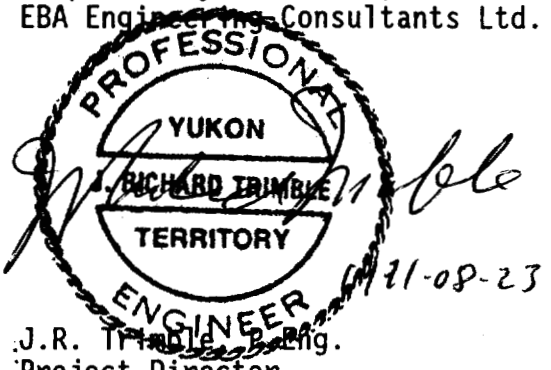
EBA File: 0201-10603

FIGURE 4: Typical Data Sheet - Source Database

5.0 CLOSURE

The information presented herein is a computerized version of data included in the 1977 Archer, Cathro & Associates Report, as previously noted, for the Watson Lake and Laberge Resource Management Areas. 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.



11-08-23

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

JRT/rsz

GRANULAR RESOURCES DATABASE

Data Dictionary

REPORT CATALOGUE

PART A: REPORT REFERENCE AND LOCATION

AA - REPORT NUMBER:

Each source has been assigned a unique up to twelve character alphanureric source number, which serves as a link to other databases. The number consists of two digits representing highway number in Province or Territory, a dash (-), five digits representing the kilometre post (to tenths, decimal suppressed) along the highway where the source islocated, and an alphabetic suffix (L-Left; R-Right; B-Both) to denote source location relative to the highway centreline while facing the direction of increasing kilometre posts. (e.g. 01-11697L)

Each source has been assigned a unique 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., borehole database). This number consists of an alphanumeric sequence of up to twelve characters. (e.g., 87-P-12)

AB - YEAR:

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

AB1 - MONTH:

The month in which the majority of the field work was completed (e.g. 07)

AC - SPONSOR:

The name of the company, department, agency or organization sponsoring the study. (e.g. Indian and Norther Affairs Canada, Yukon Transportation Engineering, Public Works Canada)

AC1 - SPONSOR JOB/FILE NUMBER:

AD - SPONSOR CONTACT NAME:

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

AE - CONTRACTOR:

The name of the prime contractor, 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:

The contractor's file number

AE2 - CONTRACTOR CONTACT NAME

AE3 - REPORT TITLE:

The title of the original report

AF1 - MINIMUM ZONE:

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

AF2 - MINIMUM EASTING:

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

AF3 - MINIMUM NORTHING:

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

AG1 - MINIMUM LATITUDE:

The latitude in decimal degrees of the southern extremity of the enclosing block (e.g. 69.72345)

AG2 - MINIMUM LONGITUDE:

The longitude in decimal degrees of the eastern extremity of the enclosing block (e.g. 135.03926)

AH1 - CENTRE LATITUDE:

The latitude in decimal degrees of the centre of the enclosing block (e.g. 70.72345)

AH2 - CENTRE LONGITUDE:

The longitude in decimal degrees of the centre of the enclosing block (e.g. 135.53926)

AI1 - CENTRE ZONE:

The UTM zone of the centre of the enclosing block (e.g. 08)

AI2 - CENTRE EASTING:

The UTM grid line of the centre of the enclosing block (e.g. 476321)

AI3 - CENTRE NORTHING:

The UTM grid line of the centre of the enclosing block (e.g. 7602500)

AJ1 - MAXIMUM ZONE:

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

AJ2 - MAXIMUM EASTING:

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

AJ3 - MAXIMUM NORTHING:

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

AK1 - MAXIMUM LATITUDE:

The latitude in decimal degrees of the northern extremity of the enclosing block (e.g. 70.72345)

AK2 - MAXIMUM LONGITUDE:

The longitude in decimal degrees of the western extremity of the enclosing block (e.g. 136.03926)

AL - GENERAL LOCATION - AREA NAME

Regional or local name in location map/plan.

AM - LOCATION MAP NUMBER:

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

AN - LOCATION MAP FORMAT:

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

AO - LOCATION MAP SCALE:

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

AP - LOCATION MAP DIGITIZER NUMBER:

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.

AQ - LOCATION MAP ARCHIVING:

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

AR - SITE PLAN/SITE NAME:

Site or block name in site plans

AS - SITE PLAN NUMBER:

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:

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 blueline).

AU - SITE PLAN SCALE:

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. 5000)

AV - SITE PLAN DIGITIZER NUMBER:

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

AW - SITE PLAN ARCHIVING:

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

AX - SOURCE NUMBERS:

A cross-reference field (to the source database, when prepared) which lists the source numbers of the sources included in the report.

AY - SURVEY LINE NUMBERS/LOCATION DETAILS:

Description of geophysical or hydrographic survey line numbers or locations, or further location details of geotechnical studies.

PART B: STUDY DETAILS

BB - STUDY TYPE:

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

BC - STUDY SCOPE:

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

BD - STUDY SIZE:

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

BE - SURVEY LEVEL:

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

BF - SURVEY PATTERN:

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

BG - SURVEY SPACING:

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

BH - PROGRAM LENGTH/SURVEY LENGTH:

The length of the field data collection or survey program, in days or showing specific dates.

BI - SEASON:

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

BJ - EQUIPMENT TYPE:

The type(s) of equipment used to collect data or obtain samples. (e.g. hand-excavated testpits; D8 cat; sonic drill; CME 750 Auger drill, etc.)

BK - PENETRATION:

The average penetration of drilling or soil sampling equipment, (e.g. 5, 7.5, 10), directly related to the equipment type.

BL - RESOLUTION:

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

BM - SAMPLING/RECORDING RATE:

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

BN - SAMPLE/RECORDING QUALITY:

A description of the relative overall quality or range in quality of the data, samples or records with regard to its use for determining subsurface stratigraphy and/or borrow quality. (e.g. poor-fair, good, disturbed, etc.)

BO - SAMPLE/RECORDING TYPE(S):

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.

BP - SAMPLE/RECORDING 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:

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

BR - REPORT LEVEL:

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

BS - REPORT DISTRIBUTION:

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

BT - DATA ARCHIVING:

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

BU - OTHER REPORTS:

Related to present report or sources covered in present report.

BY1 - COMPILER:

Record compiled by (company/name).

BY2 - COMPILE DATE:

Date record compiled.

BY3 - DATA COMPILATION PROJECT NUMBER:

BZ1 - UPDATER:

Record updated by (Company/Name).

BZ2 - UPDATE DATE:

Date record updated (most recent).

BZ3 - DATA UPDATE PROJECT NUMBER:

GRANULAR RESOURCE INVENTORY
WATSON LAKE RESOURCE MANAGEMENT AREA, YUKON
REPORT CATALOGUE DATA SHEET

========== PART A: REPORT REFERENCE AND LOCATION==========

REPORT NUMBER : INAC77WTLK01
SPONSOR : INAC
YEAR : 1977
REPORT TITLE : Yukon Gravel Inventory
Laberge
Resource Management Area

CONTACT :
CONTRACTOR : Archer, Cathro & Associates
FILE NUMBER : Y6 LA 15
DATA QUALITY : Good

LOCATION MAP : Photocopy of NTS Topographic
NUMBER : 4
FORMAT :
SCALE : 1:50,000
DIGITIZ NO. :
ARCHIVING :

SITE PLAN : Sketch and Legal
NUMBER : 19 Sketch, 16 Legal
FORMAT :
SCALE : 1:50,000 NTS
DIGITIZ NO.:
ARCHIVING :

MINIMUM ZONE : 8 MINIMUM EASTING: 348650 MINIMUM NORTHING: 6652000
MAXIMUM ZONE : 9 MAXIMUM EASTING: 570700 MAXIMUM NORTHING: 6907200

SOURCE NO(S) : 01-09472R;01-09476R;01-09595L;01-09597R;01-09602R;01-10118R;01-10143R;01-10150R;01-10164L;01-10228R;
01-10241R;01-10241L;01-10307R;01-10307L;01-10323L;01-10347L;01-10360L;01-10362R;01-10420L;01-10468L;
01-10482L;01-10513L;01-10525L;01-10547L;01-10577L;01-10604L;01-10657L;01-10722L;01-10740R;01-10765R;
01-10772L;01-10817L;01-10821R;01-10832L;01-10836L;01-10841L;01-10897R;01-10936R;01-11008R;01-11021R;
01-11039L;01-11048R;01-11068R;01-11090R;01-11121R;01-11123R;01-11125R;01-11130R;
01-11132R;01-11131L;01-11142R;01-11146R;01-11156L;01-11160R;01-11177R;01-11185R;01-11190R;01-11193R;
01-11197R;01-11211R;01-11218R;01-11220R;01-11250R;01-11253R;01-11254L;01-11261R;01-11266L;01-11266R;
01-11329R;01-11327B;01-11360L;01-11411L;01-11415L;01-11439L;01-11447L;01-11450R;01-11467L;01-11487L;
01-11490L;01-11496R;01-11499L;01-11554R;01-11557R;01-11585L;01-11590L;01-11596R;01-11610R;01-11611R;
01-11615R;01-11615L;01-11618R;01-11620R;01-11620L;01-11629R;01-11634L;01-11652R;01-11680R;
01-11685R;01-11690R;01-11697L;01-11705R;01-11705L;

========== PART B: REPORT DETAILS==========

REPORT TYPE : Delineation
REPORT SCOPE :
REPORT SIZE :
SURVEY LEVEL :
SURVEY PATTERN:
SURVEY SPACING:

PROGRAM LENGTH:
SEASON :

EQUIPMENT TYPE:
PENETRATION(m):
RESOLUTION :

SAMPLING/RECORDING

RATE :
QUALITY :
TYPE(S) :
SIZE :

COMPILER : EBA Engineering Consultants
COMPILE DATE : 91-07-31
COMPIL. PROJ. NO. : 0201-10603

INTERPRETATION/TESTING LEVEL :
REPORT LEVEL :
REPORT DISTRIBUTION :
OTHER REPORTS :
DATA ARCHIVING : INAC Land Use - Whitehorse

UPDATER: EBA Engineering Consultants UPDATE DATE: 91-07-31 UPDATER PROJECT NO.: 0201-10603

GRANULAR RESOURCE INVENTORY
WATSON LAKE RESOURCE MANAGEMENT AREA, YUKON
REPORT CATALOGUE DATA SHEET

========== PART A: REPORT REFERENCE AND LOCATION ==========

REPORT NUMBER : INAC77WTLK01
SPONSOR : INAC
YEAR : 1977
REPORT TITLE : Yukon Gravel Inventory
Laberge
Resource Management Area

CONTACT :
CONTRACTOR : Archer, Cathro & Associates
FILE NUMBER : Y6 LA 15
DATA QUALITY : Good

LOCATION MAP : Photocopy of NTS Topographic
SITE PLAN : Sketch and Legal

NUMBER : 4
FORMAT :
SCALE : 1:50,000
DIGITIZ NO. :
ARCHIVING :

NUMBER : 19 Sketch, 16 Legal
FORMAT :
SCALE : 1:50,000 NTS
DIGITIZ NO.:
ARCHIVING :

MINIMUM ZONE : 8 MINIMUM EASTING: 348650 MINIMUM NORTHING: 6652000
MAXIMUM ZONE : 9 MAXIMUM EASTING: 570700 MAXIMUM NORTHING: 6907200

SOURCE NO(S) : 04-00028L;04-00105R;04-00109L;04-00133L;04-00160L;04-00164L;04-00177L;04-00210L;04-00227L;04-00231L;
04-00243L;04-00266L;04-00275R;04-00285R;04-00337R;04-00347B;04-00372R;04-00394R;04-00401L;04-00418L;
04-00421R;04-00436R;04-00443R;04-00451R;04-00454R;04-00456R;04-00467R;04-00471R;04-00476L;04-00481B;
04-00494L;04-00497R;04-00501R;04-00517R;04-00528R;04-00535R;04-00553R;04-00572L;04-00587L;04-00594R;
04-00657B;04-00660L;04-00663L;04-00672L;04-00749L;04-00755L;04-00766L;04-00830L;04-00833R;04-00837R;
04-00842L;04-00854R;04-00861L;04-00913R;04-00924R;04-00929R;04-00930R;04-00942R;04-00956R;04-00959R;
04-01015R;04-01044R;04-01053R;04-01112L;04-01119R;04-01136R;04-01152L;04-01153R;04-01158L;04-01169R;
04-01177L;04-01188R;04-01191L;04-01192R;04-01223R;04-01237L;04-01250L;04-01256L;04-01272R;04-01278R;
04-01288L;04001296L;04-01302R;04-01307L;04-01311L;04-01318R;04-01332R;04-01342R;04-01357L;04-01360R;
04-01366R;04-01374R;04-01377R;04-01385L;04-01393R;04-01402R;04-01408R;04-01412R;04-01417R;04-01421R;
04-01434R;04-01442R;04-01445L;04-01449L;04-01469L;04-01479R;04-01484R;04-01510R;04-01527L;04-01534R;
04-01540R;04-01554L;04-01560R;04-01564R;04-01569R;04-01570L;04-01583L;04-01587R;04-01591R;04-01594L;

========== PART B: REPORT DETAILS ==========

REPORT TYPE : Delineation
REPORT SCOPE :
REPORT SIZE :
SURVEY LEVEL :
SURVEY PATTERN:
SURVEY SPACING:

PROGRAM LENGTH:
SEASON :

EQUIPMENT TYPE:
PENETRATION(m):
RESOLUTION :

SAMPLING/RECORDING

RATE :
QUALITY :
TYPE(S) :
SIZE :

COMPILER : EBA Engineering Consultants
COMPILE DATE : 91-07-31
COMPIL. PROJ. NO. : 0201-10603

INTERPRETATION/TESTING LEVEL :
REPORT LEVEL :
REPORT DISTRIBUTION :
OTHER REPORTS :
DATA ARCHIVING : INAC Land Use - Whitehorse

UPDATER: EBA Engineering Consultants UPDATE DATE: 91-07-31 UPDATER PROJECT NO.: 0201-10603

GRANULAR RESOURCE INVENTORY
WATSON LAKE RESOURCE MANAGEMENT AREA, YUKON
REPORT CATALOGUE DATA SHEET

========== PART A: REPORT REFERENCE AND LOCATION==========

REPORT NUMBER : INAC77WTLK01
SPONSOR : INAC
YEAR : 1977
REPORT TITLE : Yukon Gravel Inventory
Laberge
Resource Management Area

CONTACT :
CONTRACTOR : Archer, Cathro & Associates
FILE NUMBER : Y6 LA 15
DATA QUALITY : Good

LOCATION MAP : Photocopy of NTS Topographic
SITE PLAN : Sketch and Legal

NUMBER : 4
FORMAT :
SCALE : 1:50,000
DIGITIZ NO. :
ARCHIVING :

NUMBER : 19 Sketch, 16 Legal
FORMAT :
SCALE : 1:50,000 NTS
DIGITIZ NO.:
ARCHIVING :

MINIMUM ZONE : 0 MINIMUM EASTING: 348650 MINIMUM NORTHING: 6652000
MAXIMUM ZONE : 9 MAXIMUM EASTING: 570700 MAXIMUM NORTHING: 6907200

SOURCE NO(S) : 04-01600L;04-01602R;04-01614L;04-01622L;04-01628L;04-01632L;04-01658L;04-01663L;04-01674R;04-01679L;
04-01681L;04-01686L;04-01691R;04-01694R;04-01701L;04-01705L;04-01707L;04-01709R;04-01720L;04-01728R;
04-01747R;04-01751R;04-01758L;04-01765L;04-01784R;04-01794R;04-01814L;04-01819L;04-01834R;04-01847L;
04-01849L;04-01875R;04-01881L;04-01890L;04-01898R;04-01906R;04-01923R;04-01926R;04-01947L;04-01972L;
04-01975L;04-01980L;04-01991R;04-02013R;04-02027L;04-02030L;04-02032R;04-02043L;04-02051L;04-02057L;
04-02060L;04-02063L;04-02067R;04-02075L;04-02079L;04-02086R;04-02098B;04-02098R;04-02132R;04-02143R;
04-02145R;04-02148R;04-02155B;04-02165L;04-02174R;04-02185L;04-02192L;04-02206L;04-02217L;04-02225R;
04-02236L;04-02245L;04-02248R;04-02251R;04-02257R;04-01455L;04-01459L;10-00009R;10-00343L;10-00477B;
10-00884R;10-00936L;10-00978L;10-01018L;10-01094L;10-01340B

========== PART B: REPORT DETAILS==========

REPORT TYPE : Delineation
REPORT SCOPE :
REPORT SIZE :
SURVEY LEVEL :
SURVEY PATTERN:
SURVEY SPACING:

PROGRAM LENGTH:
SEASON :

EQUIPMENT TYPE:
PENETRATION(m):
RESOLUTION :

SAMPLING/RECORDING

RATE :
QUALITY :
TYPE(S) :
SIZE :

COMPILER : EBA Engineering Consultants
COMPILE DATE : 91-07-31
COMPIL. PROJ. NO. : 0201-10603

INTERPRETATION/TESTING LEVEL :
REPORT LEVEL :
REPORT DISTRIBUTION :
OTHER REPORTS :
DATA ARCHIVING : INAC Land Use - Whitehorse

UPDATER: EBA Engineering Consultants UPDATE DATE: 91-07-31 UPDATER PROJECT NO.: 0201-10603

GRANULAR RESOURCE INVENTORY
LABERGE RESOURCE MANAGEMENT AREA, YUKON
REPORT CATALOGUE DATA SHEET

========== PART A: REPORT REFERENCE AND LOCATION==========

REPORT NUMBER : INAC77LBRG01
SPONSOR : INAC
YEAR : 1977
REPORT TITLE : Yukon Gravel Inventory
Laberge
Resource Management area

CONTACT :
CONTRACTOR : Archer, Cathro & Associates
FILE NUMBER : Y6 LA 15
DATA QUALITY : Good

LOCATION MAP : Photocopy Topographic
SITE PLAN : Sketch and Legal

NUMBER : 4
FORMAT :
SCALE : 1:50,000
DIGITIZ NO. :
ARCHIVING :

NUMBER : 19 Sketch, 16 Legal
FORMAT :
SCALE : 1:50,000 NTS
DIGITIZ NO.:
ARCHIVING :

MINIMUM ZONE : 8 MINIMUM EASTING: 420600 MINIMUM NORTHING: 6735800
MAXIMUM ZONE : 8 MAXIMUM EASTING: 491400 MAXIMUM NORTHING: 6816000

SOURCE NO(S) : 01-14955R;01-14990R;01-15003L;01-15003L;01-15005R;01-15006L;01-15010L;01-15023R;01-15030L;01-15036L;
01-15040L;01-15063L;01-15071L;01-15079R;01-15148L;01-15185L;01-15205L;01-15213L;01-15220L;01-15228L;
01-15234L;01-15245L;01-15250L;01-15267L;01-15275L;01-15287L;01-15300R;01-15309R;01-15319R;01-15336L;
01-15351R;01-15357R;01-15367R;01-15377R;01-15383R;01-15398L;01-15402R;01-15433R;01-15484L;01-15499R;
01-15513R;01-15531R;01-15536R;01-15550R;01-15553R;01-15608L;01-15610L;01-15618L;01-15625R;01-15647R;
01-15661L;01-15670R;01-15672R;01-15679L;02-01966R;02-02018R;02-02111R;02-02126L;02-02129L;02-02131R;
02-02139R;02-02143L;02-02182R;02-02190L;02-02196L;02-02198R;02-02205L;02-02220R;02-02234L;02-02241R;
02-02265R;02-02291R;02-02336R;02-02351R;02-02361R;02-02380L;02-02384R;02-02388R;02-02390R;02-02415R;
02-02465R;02-02501R;02-02523R;02-02528R;02-02552L;02-02566R;02-02578R;02-02596R;02-02609R;02-02614L;
02-02620R;02-02622L;02-02647R;02-02660R;02-02671L;02-02675R;02-02689R;02-02693R;02-02698R;02-02703R;
02-02709R;02-02716R;02-02720R;02-02723R;02-02730R;02-02823R;02-02831L;02-02838R;02-02861R;02-02896R;
02-02900R

========== PART B: REPORT DETAILS==========

REPORT TYPE : Delineation
REPORT SCOPE :
REPORT SIZE : 328 Borrow Pits, Test Sites
SURVEY LEVEL :
SURVEY PATTERN:
SURVEY SPACING:

PROGRAM LENGTH:
SEASON :

EQUIPMENT TYPE:
PENETRATION(m):
RESOLUTION :

SAMPLING/RECORDING

RATE :
QUALITY :
TYPE(S) :
SIZE :

COMPILER : EBA Engineering Consultants
COMPILE DATE : 91-07-13
COMPIL. PROJ. NO. : 0201-10603

INTERPRETATION/TESTING LEVEL :
REPORT LEVEL :
REPORT DISTRIBUTION :
OTHER REPORTS :
DATA ARCHIVING : INAC Land Use - Whitehorse

UPDATER: EBA Engineering Consultants UPDATE DATE: 91-07-13 UPDATER PROJECT NO.: 0201-10603

GRANULAR RESOURCES DATABASE

Data Dictionary

SOURCE DATABASE

PART A: DEPOSIT LOCATION AND STATUS

AA - SOURCE NUMBER:

Each source has been assigned a unique, up to twelve character, alphanumeric source number which serves as a link to other databases. The number consists of two digits representing highway number in Province or Territory, a dash (-), five digits representing the kilometre post (to tenths, decimal suppressed) along the highway where the source is located, and an alphabetic suffix (L-Left; R-Right; B-Both) to denote source location relative to the highway centreline while facing the direction of increasing kilometre posts. (e.g. 01-11697L)

In areas not adjacent to Highways, each source has been assigned a unique 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., borehole database). This number consists of an alphanumberic sequence of up to twelve characters. (e.g.,87-P-12)

AB - REPORT NUMBER:

A unique number which identifies the study in which the source was first described in detail and provides a link to INAC's granular resource report catalogue database. This number consists of an alphabet prefix representing the sponsor of the report (4 characters), the year of the study (2 digits, century suppressed) and the geographic location or area (up to 4 characters), followed by a number from 1 to 99 to differentiate reports for the same sponsor in the same year in the same study area. (e.g. INAC77WTLK01)

AC - NTS MAP REFERENCE:

The National Topographic Series (NTS) 1:50,000 scale map reference number of the map containing the majority of the outlined deposit. (e.g. 105D/11).

AD - MAP DIGITIZER NUMBER:

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.

AE - LOCATION MAP/PLAN SCALE:

The scale, expressed in terms of the representative fraction (e.g. 1:250,000) of any small scale accompanying regional map which indicates the location of separate study/borrow sites. The denominator only of the representative fraction is given since by definition the numerator is unity. (e.g. 250,000).

The next eight fields (AF-AL) provide location details for the Source, including Universal Transverse Mercator (UTM) co-ordinates, and highway kilometre posts. In each case, the co-ordinates are normally determined for the approximate centre of the source, unless otherwise stated.

AF - MINIMUM ZONE (UTM):

The minimum UTM zone number in which the source occurs. Serves as a link to other databases.

AF1 - MINIMUM EASTING (UTM):

Minimum easting of the source (westernmost edge of source). Serves as a link to other databases.

AG - LOCATION:

The descriptive location of the source relative to a geographic feature. (e.g. 500 m north of Rat Lake).

AH - MINIMUM NORTHING (UTM):

Minimum northing of the source (southernmost edge of source). Serves as a link to other databases.

AI - LOCAL NAME(S):

Many sources are known locally by one or more 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).

AJ - CORRIDOR NUMBER AND NAME:

The number (i.e. Territorial Highway number, where appropriate) and the name of the transportation route within whose corridor the deposit occurs. (e.g. 05-Robert Campbell Highway; 00-Foothills Pipeline - Dempster Lateral).

AK - KILOMETRE-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.

AL - OFFSET: DISTANCE AND DIRECTION:

The distance in metres from the corridor centreline to the centre of the deposit and the direction, determined facing towards the increasing kilometre-post, to the deposit from the corridor. (e.g. 35L(eft); 1500-R(ight)).

AM - SOURCE 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 269).

AN - DISTANCE:

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).

AO - CONDITION:

A description of the type and condition of the access route, (e.g. seismic line; undeveloped: winter road; ice road).

AP - AREA:

The total areal extent, in hectares, of potentially usable granular resources which comprise the deposit. (e.g. 1; 10; 100).

AQ - SITE PLAN SCALE:

The scale, expressed in terms of the representative fraction (e.g. 1:10,000) of any larger scale accompanying site plan which indicates the location of boreholes/testpits/grab samples or geophysical survey grids. The denominator only of the representative fraction is given since the numerator is consistently "1" (e.g. 10000).

AR - PLAN DIGITIZER NUMBER(S):

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

AS - LAND TENURE:

The legal status of the land upon which the deposit is located. (e.g. Inuvialuit 7(1)a; Private; Territorial).

AT - STATUS:

The current status of the deposit in terms of development of granular resources. (e.g. active; inactive; abandoned; depleted; undeveloped; stripped; unproven).

AU - 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 gravel removed by YTG in 1979 for surfacing).

AV - STOCKPILE TYPE:

A qualitative description of the processed materials on site. (e.g. 38 mm screened gravel).

AW - PERFORMANCE 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; fair; good).

AX - QUANTITY

An estimate of quantity stockpiled on site, at the time of the last record update.

PART B: SOURCE INVESTIGATION AND DESCRIPTIVE INFORMATION

BB - INVESTIGATION LEVEL:

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).

BC - LAST INVESTIGATION DATE:

The year in which the most recent site investigation work was completed.

BD - GEOPHYSICAL DATA:

The type and length of any geophysical surveys completed at the deposit.
TYPE: LINE M: (e.g. EM-31 : 1550 m).

BE - TEST HOLE DENSITY

The number of boreholes (Field BF) plus the number of test pits (Field BG) divided by the estimated source area (Field AP).

SUBSURFACE DATA:

The number, range and average depth of subsurface penetration of the various site investigation methods used to define the source materials.

BF - BOREHOLES: NUMBER:

The total number of boreholes (augerings, borings, boreholes, etc.) completed and logged within, or immediately adjacent to the deposit, which provide subsurface information defining the type, extent and quality of granular materials.

BG - TESTPITS: NUMBER:

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 - EXPOSURES: NUMBER:

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.

BI - BOREHOLES: 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. 3.1-5.6-10.3).

BJ - TESTPITS: 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).

BK - EXPOSURES: 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).

BL - DATA QUALITY:

A subjective description of the usefulness of the data with respect to the preparation of the source database. (e.g. poor; fair; good; excellent).

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.

BM - 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).

BN - SLOPE:

A general description of the collective physical features, relief and contour of the area. (e.g. simple; compound; complex), degree (e.g. flat; gentle; moderate; steep; precipitous) and direction (e.g. NNW).

BO - AREA 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).

BP - 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; jackpine; willow) for each of tree cover, undercover 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).

BQ - PERMAFROST FEATURES:

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 BH's).

BR - ACTIVE LAYER THICKNESS:

A listing of the minimum, average and maximum measured thickness of the seasonally thawed and frozen active layer within and adjacent to the d 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).

BS - SITE DESCRIPTION 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, in the format; mm/dd/yy (e.g. 09/13/79 dBase III+ default format).

BT - GENERIC ORIGIN:

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).

BU - LANDFORM:

The type of surficial feature comprising the subject granular materials, with which geologic conditions are interpreted to be relatively uniform or are variable within the limits characteristic of the type of feature. (e.g. delta; esker; fan; kame; outwash plain; terrace).

SOURCE STRATIGRAPHY:

A general description of the type, 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.

BV - GRANULAR 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).

BW - OVERBURDEN TYPE:

A brief description of the type of overburden materials present over the area containing granular materials. (e.g. PEAT - over silt).

BX - GRANULAR THICKNESS:

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 a granular source, in tenths of metres. (e.g. 1.0-5.2-12.8).

BY - OVERBURDEN THICKNESS:

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).

BZ - UNDERBURDEN:

A brief description of the type of materials underlying the granular materials in the source area. (e.g. CLAY (Till) - wet).

B1 - DEVELOPMENT CONSTRAINTS:

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; socioeconomic) with details, as appropriate, on the nature and impact of the constraint.

B2 - DEVELOPMENT POTENTIAL:

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 the 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 MATERIALS QUANTITY

Part C has been subdivided into two sections:

1. Natural Material

2. Processed Material

The descriptions below apply to both types of materials. Although not changed herein, the alphabetic field identifier (CC, CD, etc.) should be changed to CCN for Natural and CCP for Processed, etc.

TEST RESULTS:

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

CC - UNIFIED SOIL CLASSIFICATION - NUMBER:

The number of samples classified under the Unified Soil Classification (USC) system, in accordance with ASTM standard D 2487. (e.g. 121).

CD - MOISTURE CONTENT (%) - NUMBER:

The number of samples for which soil Moisture Content (MC%) has been determined, in accordance with ASTM standard D2216. (e.g. 102).

CE - UNIFIED SOIL CLASSIFICATION - 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)

CF - MOISTURE (MC%): RESULTS:

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).

CG - SIZE ANALYSIS: NUMBER:

The number of samples for which particle-size analysis testing has been completed, in accordance with ASTM standards D 421 and D 422. (e.g. 11).

CH - GRAVEL(%):

The minimum, average and maximum percentage of gravel-sized material; that is, material in the Size Fraction 4.76 mm - 75 mm diam., as determined by particle-size analysis testing. (e.g. 05-45-85).

CI - SAND (Sand %):

The minimum, average and maximum percentage of sand-sized material; that is material in the Size Fraction 0.074 mm - 4.76 mm diam., as determined by particle-size analysis testing. (e.g. 25-37-52).

CJ - FINES (Fine%):

The range and average percentage of silt- and clay-sized (Fine%) material under 0.074 mm diam., as determined by particle-size analysis testing. (e.g. 02-07-12).

CK - OVERSIZE (O/S%):

The minimum, average and maximum percentage of oversized (O/S%) material; that is, cobble- and boulder-size material (Size Fraction over 75 mm diam.), in pit run material from the source, as determined by field estimates, field sieving, or laboratory testing. (e.g. 00-10-35).

CL - 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).

CM - PETROGRAPHIC NUMBER - NUMBER:

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).

CN - PETROGRAPHIC NUMBER - RESULTS:

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).

CO - OTHER TESTS:

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 are described in more detail below: (e.g. Organ_Plte-02-03.5; Durab_Index-01-0063; React_Pr_3M-01-0.08%; LA_ Abrasion-05-23.2; Sulph_Sd_Mg-03-05.8; Rel Density-03-2.64; Absorption %-06-1.11; Other Tests-11-vary).

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).

CLEANNESS(C/F):

The number and average of all results of Cleanness of Aggregate testing on samples of coarse or fine aggregate from the deposit, in accordance with California Test Method 224. (e.g. Cleanness(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 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/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 CP to CT, below), and in terms of the total (see CU) 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 a reliable material volume. The volume is estimated by projecting known parameters (typically those of 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 maximum areal extent of the deposit and the estimated relief of the geomorphic feature, with adjustments for anticipated site and deposit characteristics.

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

If only one number is shown, it is considered PROBABLE.

CP - 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.

CQ - 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.

CR - 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.

CS - 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.

CT - 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 riprap or armour stone.

CU - TOTAL VOLUME:

The calculated and/or estimated volume of all of the above classes of granular materials potentially available in the deposit.

CV - TOTAL RECOVERABLE:

The calculated or estimated volume of useable granular material form 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.

CW - ANNUAL RECOVERABLE:

The calculated or estimated volume of material which is likely to be recovered in a single extraction season, based on the maximum areal extent of usable 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.

CX - RECORD UPDATED BY:

The name of the contractor or person who originally compiled the database and a listing of contractors or persons who have subsequently undertaken significant updating of the content of the database (e.g. A. Compiler/Granular Resource Consultants Ltd./J. Doe).

CY - LAST UPDATE:

The date of the last update of the information presented for the subject granular materials deposit, presented in the format: mm/dd/yy (e.g. 12/13/87--dBase III+ default format)